SUMMIT

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SUMMIT

AFIRE is the association for international real estate investors focused on commercial property in the United States.

ABOUT

Summit Journal is the official publication of AFIRE, the association for international real estate investors focused on commercial property in the United States.

Established in 1988 as an essential forum for real estate investment thought leadership, AFIRE provides a forum for its senior executive, institutional investor, investment manager, and service provider members to help each other become Better Investors, Better Leaders, and Better Global Citizens through conversations, research, and analysis of real estate capital markets, cross-border issues, policy, economics, technology, and management. AFIRE has nearly 180 member organizations from 25 countries representing approximately US$3 trillion in assets under management.

Learn more at afire.org/summit

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About the cover: In-progress exterior construction of 1900 Crystal Drive at National Landing in Arlington, VA. Spring 2023. Photo by Benjamin van Loon.

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CONTACT

AFIRE
510 King Street, Suite 240
Alexandria, VA 22314
+1 202 312 1400 | info@afire.org
www.afire.org

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University of Chicago,
Booth School of Business

NOTE FROM THE EDITOR

ISSUE 12

Some economic forecasters are still planning on the likelihood of a recession coming sooner than later. Should investors in commercial mortgages worry?

Since AFIRE first started publishing this journal in 2018, nobody could have foreseen the tumultuous years just around the corner. We had relative calm throughout 2019, and corresponding excitement about ascendent asset types and market opportunities. Then 2020 and 2021 happened, as a sort of 24-month year.

The world started to settle into a post-pandemic mindset throughout 2022, while still facing some of the latent challenges of the pandemic, including continued supply chain challenges, climate crises, and a global shift in live-work-play attitudes and preferences.

And now we're in 2023, publishing our twelfth issue of Summit in the wake of several high-profile bank failures, inflationary stressors, and a sea-change in the dominant categories of commercial real estate, as office falls even further out of favor—for now (p. 6).

The main challenge of publishing this journal the past few years has been separating the sensational from the substantive. But the shared philosophy of the AFIRE membership—to become better investors, leaders, and global citizens—and our collective practice of long-term (and in some cases, multi-generational) investment and value creation has served as a dependable editorial criterion, allowing AFIRE to continue publishing original insights and ideas with a shelf life that extends well beyond the next deal.

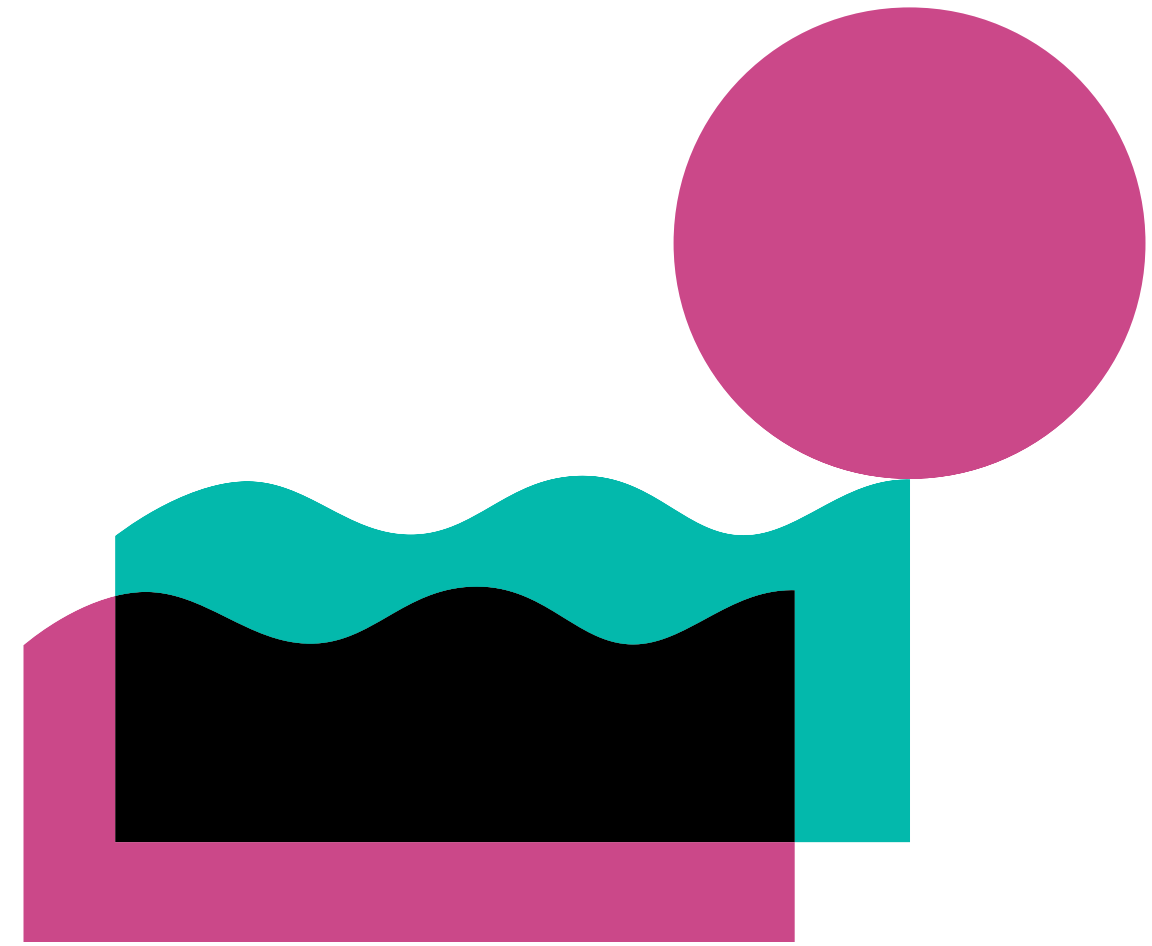
This consistency has not only allowed Summit Journal to mature and test new ideas, but also to earn global recognition as a leading association publication, even beyond real estate. For example, Summit earned its fifteenth top award in March 2023, this one from the International and European Association Awards, naming Summit the Best Information/Publishing Product. Judges noted that Summit is "a good magazine that looks appealing and well written. This is an example for all organizations that publish a journal."

It sounds like we're tooting our own horn here, but the real leadership and value of Summit comes directly from our contributors—researchers, experts, and thought leaders operating at all sides of the commercial real estate investment ecosystem. And while their ideas might occasionally contradict each other (as they should), taken together, they represent key voices in the ongoing conversation to find and create long-term value in a world seemingly (and lately) defined by vacillation.

This latest issue of Summit Journal represents the latest entry in this ongoing conversation, providing insights (and potential solutions) for the nascent office crisis (p. 22, p. 28, and p. 70); timely reminders on cap rates (p. 88), debt (p. 38), and rescue capital (p. 82); and perspectives on industry diversity (p. 74), ESG (p. 64), and other adjacent trends that will define the shape of real estate in the years to come.

Thanks, as always, for reading and being part of this vital conversation.

Benjamin van Loon
Editor-in-Chief, Summit Journal
AFIRE



CONTRIBUTORS

AEGON ASSET MANAGEMENT (P.44)
aegonam.com

Martha S. Peyton, PhD
Managing Director of Real Assets Applied Research

AFIRE (P. 6)
afire.org

Gunnar Branson
CEO and Publisher

Benjamin van Loon
Communications Director
and Editor-in-Chief

BARINGS (P.38)
barings.com

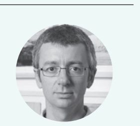
Dags Chen, CFA
Head of U.S. Real Estate Research
and Strategy

CHATHAM FINANCIAL (P. 14)
chathamfinancial.com

Matt Pomeroy, MAI
Director, Valuation, Reporting, and Analytics

Jackie Bowie
Managing Partner, Board Member,
Head of EMEA

CHERRE (P.50)
cherre.com



Ron Bekkerman
Strategic Advisor

JLL (P.70)
jll.com

Mark Zettl
President, Property Management

LAKEMONT GROUP (P.22)
lakemontgroup.com

Joshua Harris, PhD
CRE

LASALLE INVESTMENT MANAGEMENT (P. 60)
lasalle.com

Brian Klinksiek
Global Head of Research & Strategy

MCGILL UNIVERSITY (P.50)
mcgill.ca

Maxime C. Cohen
Professor

MSCI REAL ASSETS (P. 18)
msci.com/our-solutions/real-assets

Jim Costello
Chief Economist

NAREIM (P.74)
nareim.org

Zoe Hughes
CEO

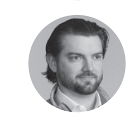
NEW YORK LIFE REAL ESTATE INVESTORS (P.28)
newyorklifeinvestments.com

Stewart Rubin
Senior Director,
Head of Strategy and Research

Dakota Firenze
Senior Associate

PILLSBURY WINTHROP SHAW PITTMAN LLP (P.82)
pillsburylaw.com

Andrew Weiner
Partner, Real Estate



Joshua M. R. Becker
Counsel, Tax

TENNEY 110 (P.50)
tenney110.com

Donal Warde
Entrepreneur in Residence

UNIVERSITY OF CHICAGO (P.88)
uchicago.edu

Joseph L. Pagliari, Jr., Ph.D. CFA, CPA
Clinical Professor of Real Estate
Booth School of Business

EDITORIAL BOARD

AFIRE INTERNATIONAL INVESTOR SURVEY: Q1 2023 PULSE REPORT

Gunnar Branson
CEO
AFIRE

Benjamin van Loon
Editor-in-Chief
Summit Journal

The US market shows stability as a preferred global destination for investment with allocations up 6% from 2022, relative to a 5% decline in European investment.

For more than thirty years, the AFIRE International Investor Survey has gathered the opinions of AFIRE members, comprised of 180 institutional investors, pension funds, asset managers, and other leading global organizations from nearly two dozen countries with approximately US$3 trillion AUM.

The results of this annual process produce this benchmark report; a useful tool for understanding the goals, challenges, and long-term thinking underscoring the international view of commercial real estate opportunities in the US.

As in 2022, AFIRE has conducted this survey with the PwC LLP research team, guided by the AFIRE Research Committee, providing a snapshot of broad, institutional thinking at a given point in time: early 2023.

Acknowledging that opinions can shift rapidly, AFIRE has made all efforts to adapt this survey and meet the needs of our changed real estate environment—an age of economic uncertainty, heightened risk, shifting opportunity, and necessary innovation.

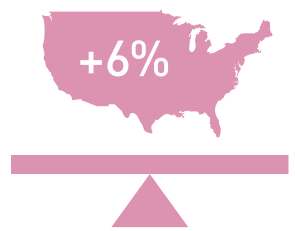
With continued interest rate increases and the alarming bank failures in the first few months of this year, opinions may have become more negative since this we asked questions in January. However, compared to other regions, the US remains attractive for cross border investment. Global real estate allocations marginally increased from 2022 compared to European investment (p. 9). Even before the fall of Silicon Valley Bank and Credit Suisse, four in ten investors forecast market decline in US real estate allocation for 2023, rising to over half holding this view for global investment.

Significant changes brought by the pandemic are impacting investor preferences and approach to risk. There is growing uncertainty about the future of office, ESG's effect on valuation, housing affordability and the dramatic decline in debt availability.

As the crisis of the pandemic continued to subside in late 2022 and into early 2023, New York regained top US spot for investment in 2023. The last time it held this ranking was in early 2020, before the pandemic. As such, New York displaces previous top three cities from past several years: Atlanta, Austin, and Boston. While it remains to be seen if this indicates a renewed faith in gateway markets, secondary and tertiary market trends continue to be key to the broader US market. Internationally, London remains the top global city for planned investment.

Collectively, these and other findings reported here illustrate how the future of office, affordable financing, and heightened sustainability/ESG issues will be key in shaping future success in US commercial real estate.

2023



US MARKET SHOWS STABILITY

as a preferred global destination for investment with allocations increased from 2022 (+6%), relative to European investment (-5%).

Property type preferences are in flux, with

MULTIFAMILY + INDUSTRIAL SHOWING STRENGTH,

as office struggles as the leading area of concern among investors (22%).

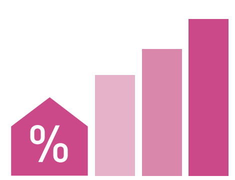
NEW YORK RETURNS TO THE #1 SPOT FOR PREFERRED INVESTMENT

among US cities, up from ranking fifth in 2022. London remains top among global cities.

US investor sentiment

TOWARDS HOSPITALITY RISES

as attractive for investment (43%).



CONTINUED INTEREST RATE RISES

weigh on access to capital, limiting access to reasonable financing and impeding transactions (97% net agree).

ESG/Sustainability remains

A TOP 3 AREA OF CONCERN

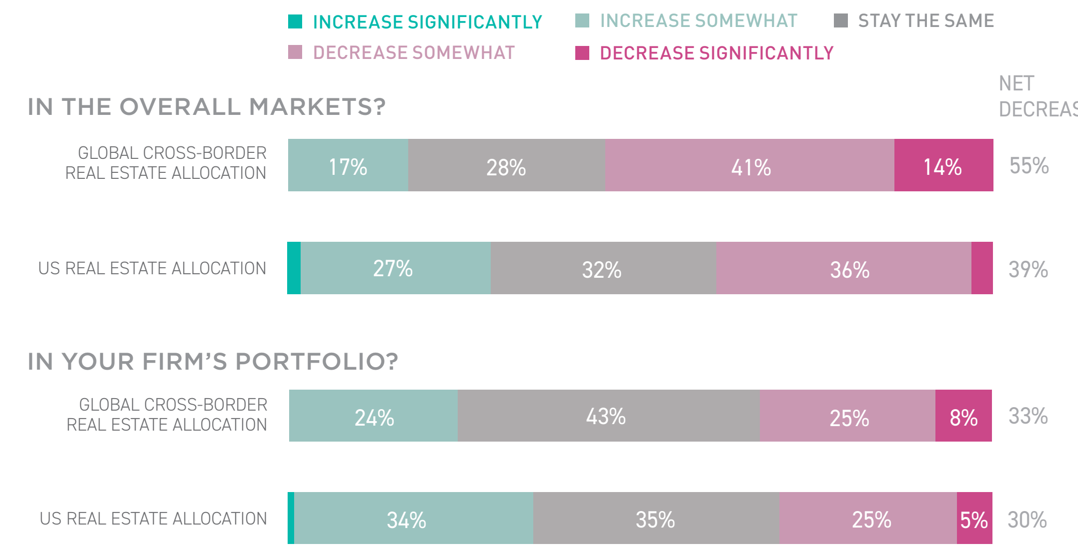
among investors, including a large majority (86%) who agree that climate risks are not yet reflected in valuations.

AFIRE members, by definition, focus on long term, even multi-generational investments. An intense focus on emerging and future trends is essential.

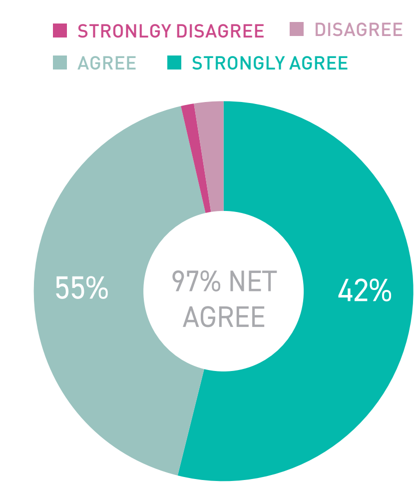
The pressure to anticipate and understand a fast changing landscape is tremendous as investors make decisions today that inform performance for years or decades to come.

The current unsettled economy dominates current thinking for investors, with access to availability and pricing of debt making transactions very difficult (97%). Over half think it will be 7–12 months before the US Federal Reserve halts interest rate rises, with half also believing US interest rates will not begin to decline for at least another year.

HOW DO YOU EXPECT REAL ESTATE ALLOCATIONS TO CHANGE IN 2023?



THE AVAILABILITY AND PRICING IS MAKING TRANSACTIONS VERY DIFFICULT

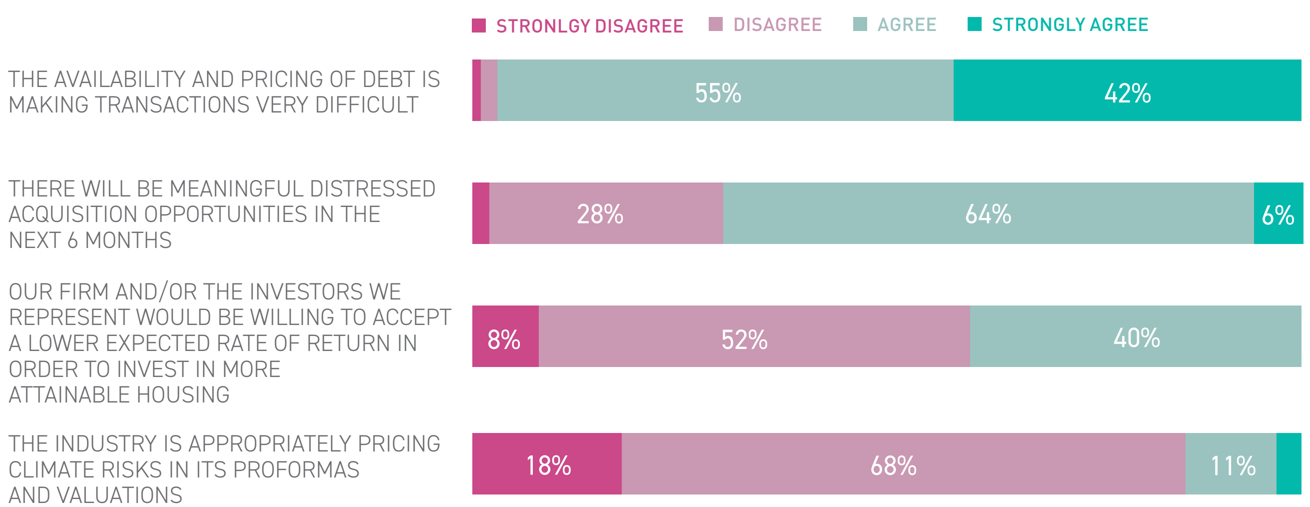


Practically all respondents (97%) agree that the availability and pricing of debt is impeding transactions, while 70% anticipate meaningful distressed acquisition opportunities in the next six months.

A clear majority (86%) of investors believe that the industry is not pricing climate risks into proformas and valuations, with just one in seven agreeing that climate risks are priced appropriately.

In the coming years, it is likely that considerations concerning preferred asset types, geographical markets, and other hard and soft factors will be upended as the investment ecosystem incorporates increasingly sophisticated tools to account for these increasingly heightened risks.

AGREEMENT WITH FUTURE TRENDS

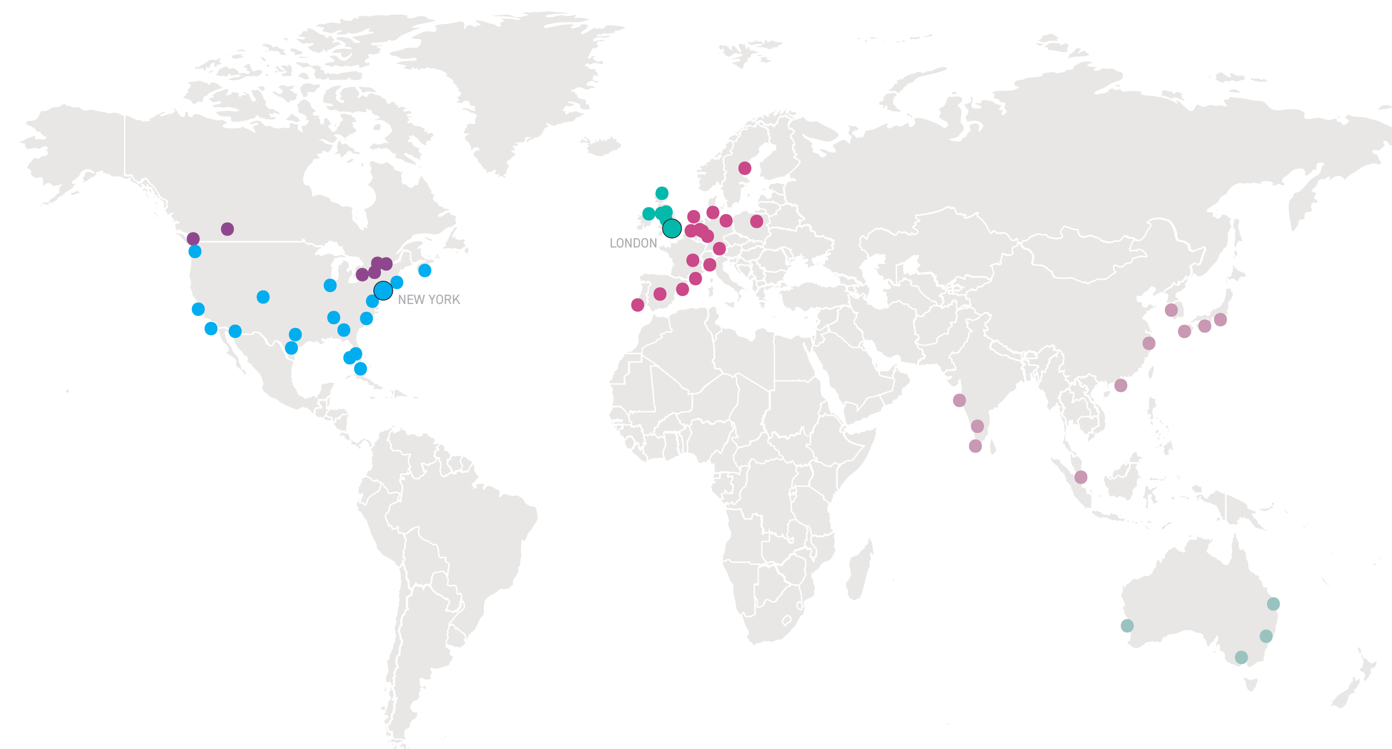


97% NET agree the availability and pricing of debt is making transactions very difficult

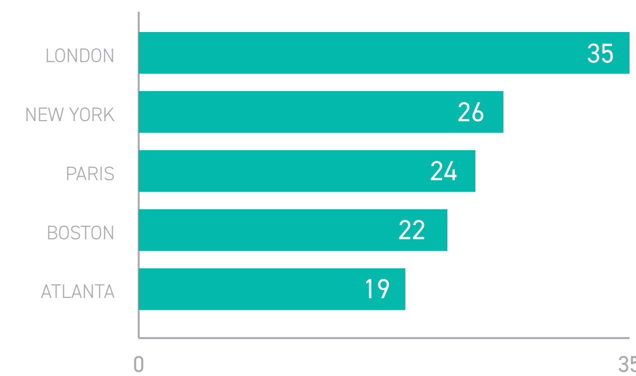
While survey data of recent years has pointed to the growth of secondary and tertiary markets, this year's survey sees a resurgence of gateway markets.

Globally, London remains the top global city for planned investment in 2023, with New York regaining pole position (from sixth) within the US.

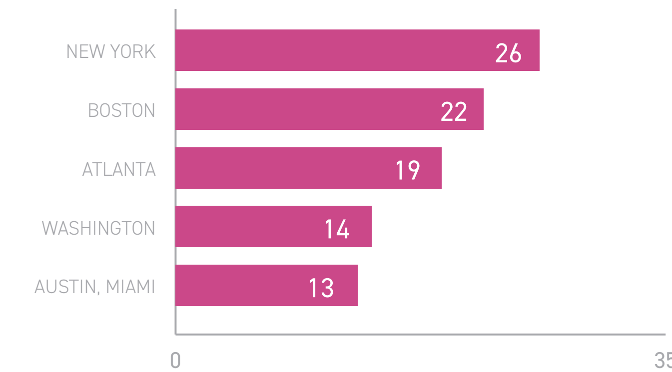
Boston (22%), Atlanta (19%), and Washington (14%) round out the top four US cities.



TOP 5 GLOBAL CITIES BY MENTION



TOP 5 US CITIES BY MENTION

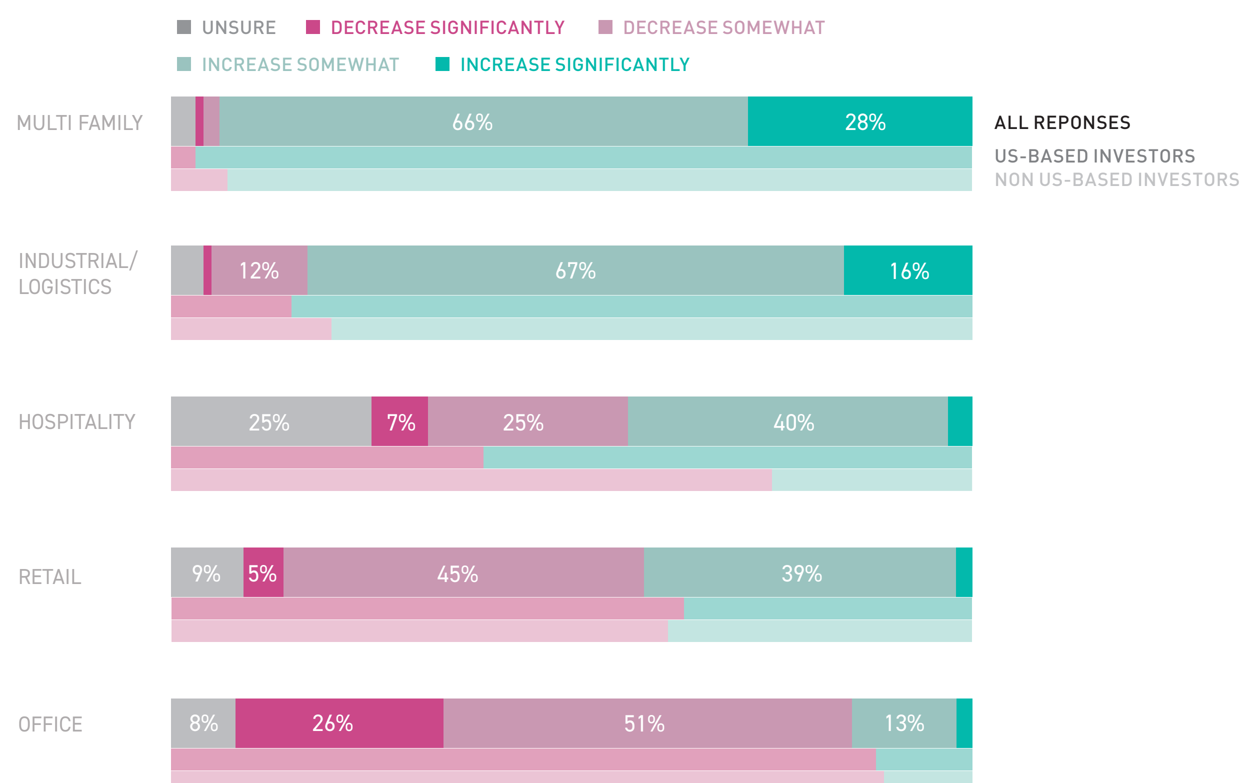


Investor support for multifamily has been a continuing trend, and in this year's survey some 40% agree they would be willing to accept a lower expected rate of return in order to invest in more attainable housing.

With this increasing focus on attainable housing as a backdrop, respondents were asked to identify their most favored property types for 2023. Investors identified multifamily and industrial to be the most attractive, with 94% of investors seeing the property type as attractive or very attractive as a product type for US real estate investment.

With Americans again on the move and travel rebounding, investors view hospitality as a top three attractive destination for investment, with US investors in particular showing greater inclination (61%) over non-US investors (25%).

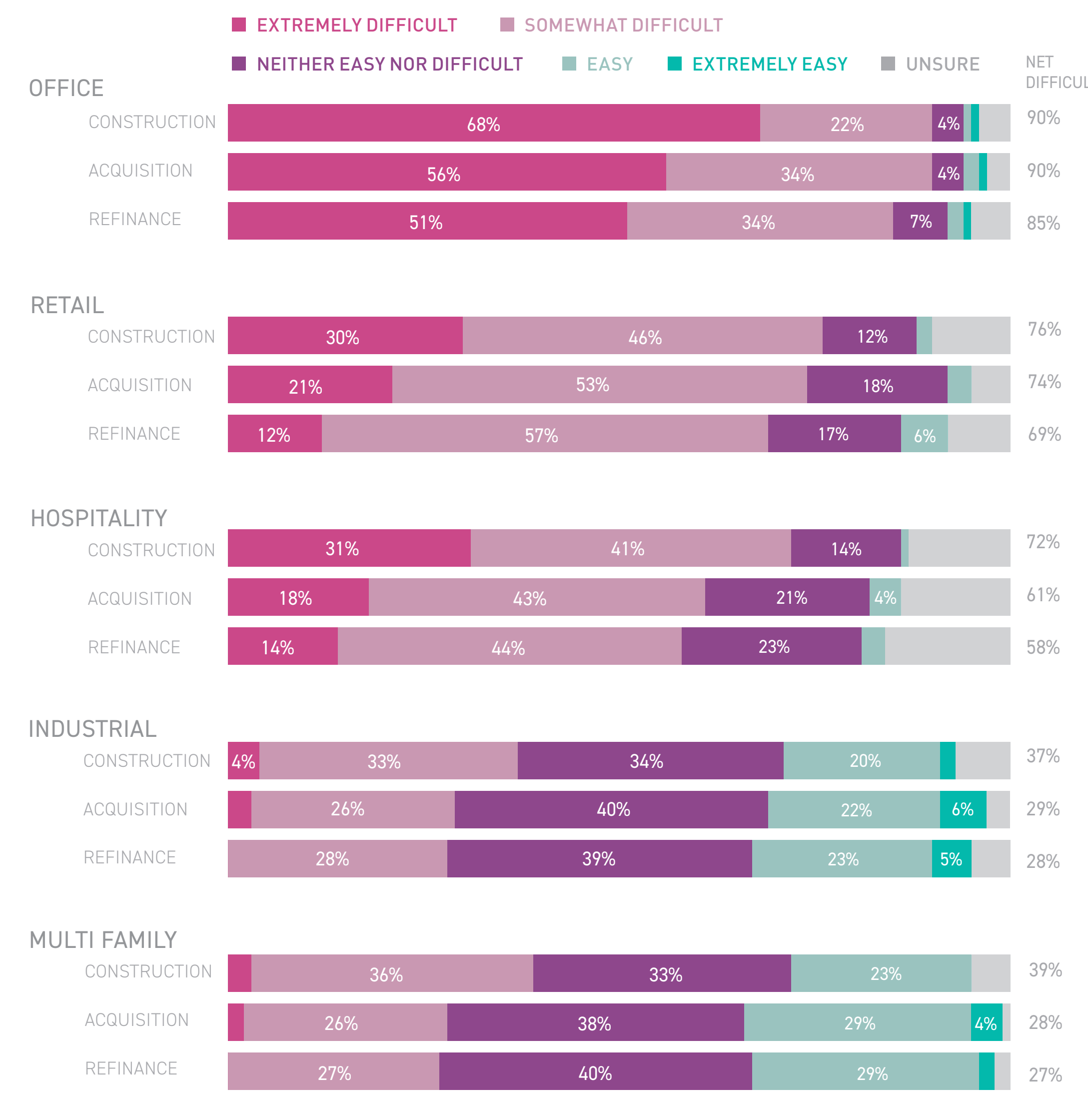
ATTRACTIVENESS OF PRODUCT TYPES FOR US REAL ESTATE INVESTMENT



As lending and capital financing sees continued headwinds, essentially all (97%) investor respondents agree that the availability and pricing of debt is impeding transactions.

US based investors are more optimistic (64%) than non-US investors (58%) towards overall expectations of lending for real estate, with meaningfully high optimism among US investors (61%) versus non-US investors (35%) for lending from non-institutional, non-bank lenders. Availability for lending for construction for office ranked most difficult (90%), likewise for acquisition (90%), and refinance (85%).

HOW WOULD YOU CURRENTLY RATE AVAILABILITY OF LENDING FOR REAL ESTATE CONSTRUCTION, ACQUISITION, AND REFINANCE?



VALUATION CHALLENGE

Matt Pomeroy, MAI
Director, Valuation, Reporting, and Analytics
Chatham Financial

Jackie Bowie
Managing Partner, Board Member, Head of EMEA
Chatham Financial

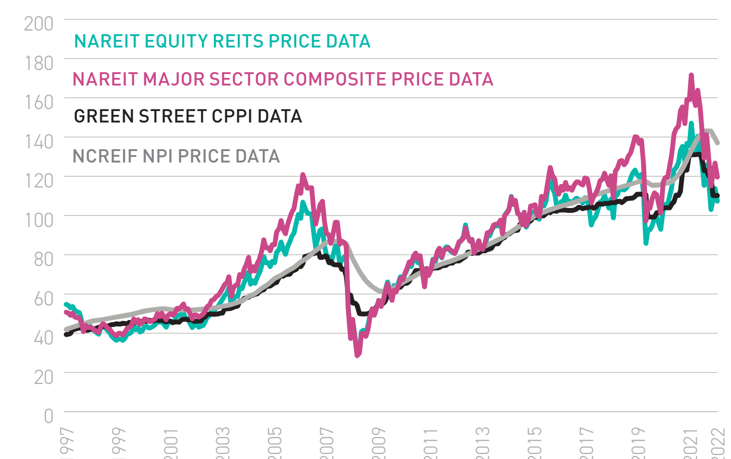
There is a growing variance between valuations and real-time pricing. Can the global institutional real estate industry achieve universal standards and consistency?

Commercial and multifamily real estate market conditions through the first quarter of 2023 have shown that the market must address and better align disparate approaches to underwriting and calculating returns and current real estate valuation practices.

Through an increase in market volatility and interest rates, as well as a reduction in investment sales volume and observable data points, we've seen a growing variance between valuations and real-time pricing.

PUBLIC AND PRIVATE REAL ESTATE PRICES ('15 = 100)

Source: NAREIT, Green Street, NCREIF



This variance results in inconsistencies and material disagreements among market participants, including investment managers, valuation service providers, consultants, and auditors. Investors in private real estate investment vehicles and separately managed accounts may be most affected by this disconnect. Their investment values, returns, and performance may be impacted or misrepresented.

Our observation is that investment underwriting and fund returns are most often calculated with consideration of the impacts of leverage. However, current market standard valuation practices are almost always conducted on an unlevered basis, with debt and derivative valuations layered in separately. Adding debt and derivative marks to market valuations may be appropriate in a stabilized market environment. The components, however, become disconnected when property valuations lag real-time market shifts, as we've seen the past few quarters. Reconciliation will best be found in evolving commercial real estate valuation practices toward consideration of levered equity methods with more timely inputs, even if they are less directly observable yet more indicative of market dynamics when sale transaction data is not available.

When interest rates rise as they have, existing loans are marked to market, which has a positive impact on net asset value. However, if property values don't also commensurately decline, as would be expected if the cost of capital has increased, the implied levered equity yields compress to levels that are inconsistent, sometimes wildly so, with expected levered equity yields.

When property values (and unlevered yields, or discount rates) don't change in a volatile market because of lack of transaction data points, two issues are created: 1) NAVs may go up or stay level when intuition tells us they should be declining, and 2) implied levered equity yields compress to levels that are inconsistent with market expectations. To clarify, the levered equity yield is a variable in the weighted average cost of capital formula that includes unlevered discount rates and interest rates.

Simply, if property values and unlevered returns are fixed, as interest rates go up, the only place to account for this increase in the cost of financing is a reduction in the equity position's return. Given the current market volatility and rising interest rates, it is reasonable to expect that levered equity return expectations may not only remain steady but potentially increase, considering the challenges that these economic factors can pose to commercial real estate occupiers.

Debt and derivative information is available at more frequent intervals. Interest rate and foreign exchange hedge information is essentially measurable up-to-the-minute, even in volatile market conditions. Debt interest rates essentially are measurable up to the week or more frequently. The problem is not in the greater observability and timeliness of debt and hedge valuations, but rather that property valuations do not consider this information. It is the lag (or absence) of timely asset valuation updates, due to the application of outdated market standard valuation practices, that are the problem.

This is not to assume that real estate should now be considered a liquid asset class, but rather that a more data-driven valuation technique can yield more frequent and more accurate valuation updates, particularly when done considering the impact of leverage via a levered equity approach.

So, what's the solution? We contend that a concerted and concentrated global effort between some of the largest real estate investment managers, valuation service providers, auditors, and the valuation industry organizations is the only path to redefining and aligning valuation practices for more timely, accurate, and consistent results across the global commercial real estate industry.

Across every other industry, we see aggregation and integration of timely data, predictive algorithms (dare we say *artificial intelligence?)*, open source code, and consistency of key data structures and definitions. In the global institutional real estate industry, we still struggle at times with global standards and consistency of data definitions.

Although incremental change and broader consideration of leverage in property valuations would be valuable, this is not a challenge to be solved and implemented by a few market participants, and then gradually adopted across the industry. Consistency in approach is best for all market participants, especially large investors who are assessing performance across various investment managers.

The bottom line is that more timely, consistent, data-informed valuations that are more aligned with how investments are priced and monitored (inclusive of leverage considerations) are better for the industry, for valuation service providers, investment managers, and ultimately those providing the capital fueling this market: institutional and retail investors.

ABOUT THE AUTHORS

Matt Pomeroy, MAI, is Director of Valuation, Reporting, and Analytics, and Jackie Bowie is Managing Partner, Board Member, Head of EMEA, for Chatham Financial, a global financial risk management firm.

Across every other industry, we see aggregation and integration of timely data, predictive algorithms (dare we say artificial intelligence?), open source code, and consistency of key data structures and definitions.

REVIEWER RESPONSE

The authors do an excellent job at exploring one facet of an issue that everyone in the real estate industry is struggling with – valuations that accurately reflect current market conditions. It is not surprising that the valuation industry is not well-adapted to a rising rate environment after a multidecade secular downtrend in interest rates.

The authors discuss the issues with unlevered valuations and explain the challenges when there are few comparable transactions, and the cost of debt is driving real time pricing. Timely cost of debt data is easily available, and yet property valuations fail to fully take it into account. They flag two serious issues in inaccurate asset valuations: net asset values are incorrect, and implied equity yields falsely go down.

The authors make the bold recommendation for a global synchronized effort to evolve the valuation industry to use more up-to-date data and to include the effect of leverage. It would be interesting to hear how likely the authors believe such a change could be and what steps would need to be taken to enact it.

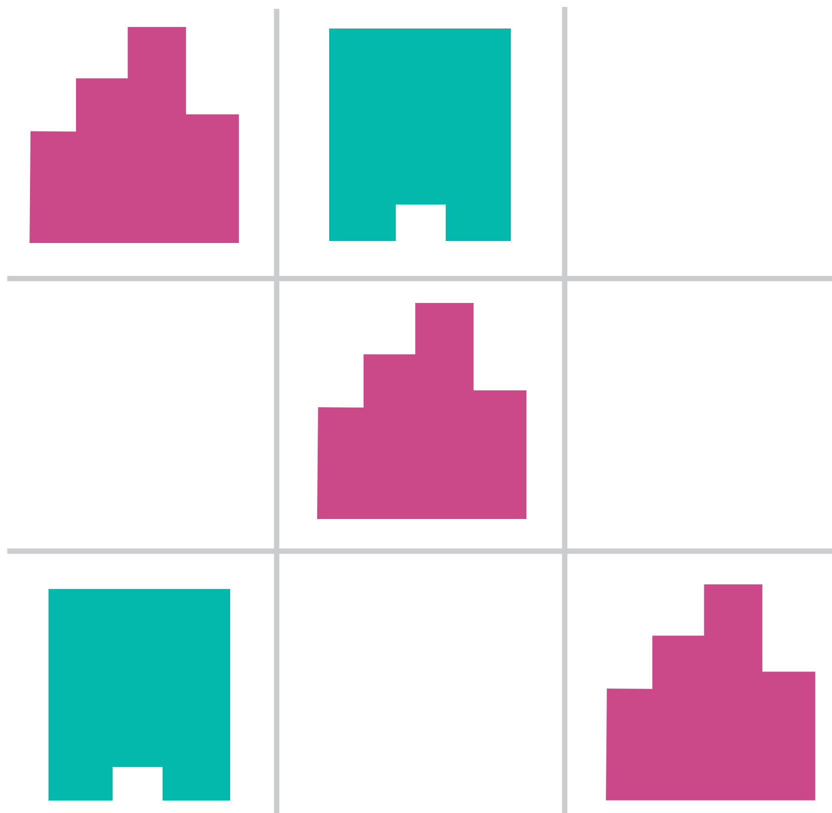
Further exploration could look at the incentives behind market participants seeking higher or lower valuations in addition to simply being "accurate". Are there market forces that are benefiting from out-of-date valuations and therefore will resist the bold reforms to the industry suggested by the authors?

Lastly, the suggestion that the current disconnect between valuation practices and calculating returns exists largely as a result of rapidly changing interest rates implies that valuations will automatically self-correct when rates stabilize. Is the industry's current dislocation a function of the current market conditions? Or is a permanent change to valuations required?

– Peter Grey-Wolf
Vice President, Wealthcap
Member, Summit Journal Editorial Board

The bottom line is that more timely, consistent, data-informed valuations that are more aligned with how investments are priced and monitored (inclusive of leverage considerations) are better for the industry.

CONVERSION CALCULATOR



Jim Costello
Chief Economist
MSCI Real Assets

Converting offices to residential uses is an expensive process—but there is a precedent for office conversions that tends to ignore all the regulatory niceties.

Converting offices to residential uses is an expensive process that may not be feasible unless current owners take a significant loss.[1] Developers would need to purchase old office buildings at a discount to deal with the high costs of regulatory burdens that make it complicated to deliver new apartments.

Still, there is a precedent for conversions in the past at a lower price point that ignored all the regulatory niceties.

CONVERSIONS OF ERAS PAST

People are endlessly creative and can find solutions to challenges when incentivized properly. That mix of incentives and creativity is what drives markets. Contrast this view with the notion that office buildings in New York could not be used for housing because floorplates are too large, or plumbing is too complicated, or amenities are lacking. Similar objections were raised in the past about lofts in SoHo.

I was thinking about this issue on a recent walk in SoHo, where I stopped at a bakery to buy some expensive vegan treats for a friend. This sort of conspicuous consumption was not a hallmark of this area in the not-so-distant past. While I was in high school in suburban Chicago, Martin Scorsese painted a picture of the SoHo area in the early 1980s in the movie *After Hours,* which follows the travails of a Manhattan office worker stuck in the neighborhood after work. The area was rather gritty then.

Looking through the archives of the *Village Voice,*[2] studio apartments could be found in SoHo for less than $600 per month. On StreetEasy today, studios go for $2,500 to $3,500 per month.[3] Combine that rental increase with investors valuing every dollar of income more as interest rates fell, and asset values have climbed close to 800% since the 1980s. But that kind of growth only came at the tail end of the true transformation of SoHo. By the 1980s, many of those loft spaces were finally legal residences, but in the previous twenty years, they were not.

REGULATIONS DID NOT STOP LOFT CONVERSIONS

What is now a chic, expensive way of life was once illegal and potentially dangerous. The start of industrial decline in Manhattan in the 1950s and a threat by Robert Moses to put a highway just north of the area helped to drive many of these buildings into disrepair. In the book *The Lofts of SoHo*, Aaron Shkuda notes that artists had moved into these open spaces in the 1950s and 1960s when residential occupancy was illegal.

People respond to economic incentives, and partially abandoned loft spaces were inexpensive, presenting an opportunity. Sure, a shower might be jury-rigged, a toilet might be shared with neighbors, a fire escape might not be stable, but if the price was right, artists were willing to put up with the complications for a chance to be in New York and around other creative people. A series of political battles over the course of a decade brought loft-living into various states of legality, until loft living for non-artists was finally made legal in 1976.

Surely such a thing could not happen today, right? Regulation is too tight fisted, and offices are different than lofts, right? Maybe.

On the regulation side, the New York Post paints a picture of a city that is barely governable. Weed legalization was met with an explosion of new shops in Manhattan[4] with no regulation or oversight in a city unable to shut down these new businesses. Technological changes of ride sharing decimated the heavily regulated taxi industry[5] before the city stepped in and recognized this new form of transit with rules approving what were facts on the ground. And hotel market regulations were widely ignored as AirBnB moved to provide lodging services with New York trying to regulate the industry after the fact.[6]

Why should New York suddenly be able to regulate one land use in the city when it has been shown to be powerless many times before? The story of New York is one where government is often catching up to the reality of citizen demands, recognizing on a governmental level what consumers already figured out years earlier.

The story of New York is one where government is often catching up to the reality of citizen demands, recognizing on a governmental level what consumers already figured out years earlier.

REAL ESTATE SHAPES ART

Ok, great: regulation is a speedbump to the retransformation of the city where clever people, incentivized properly, would find workarounds. But office buildings in Midtown Manhattan with low ceiling heights would arguably not work for the large canvases and art produced forty years ago.

The layouts of offices are not like lofts, I get that. Would the art of Alex Katz, Chuck Close, Jean Michel Basquiat, and others have worked without the high-clearance heights? Would the music that worked well in lofts with high ceilings work as well in tighter surroundings? Perhaps not. But would the real estate shape the art?

I am by no means an expert in music or art, but as much as I can, I talk with and listen to people who are. These people make the depredations of city life worthwhile. Musician David Byrne is certainly an expert in music and in his book *How Music Works*, he describes how, over the history of humanity, real estate has always shaped what music was popular. What worked in a concert hall in Vienna would not work in CBGBs, and what worked in CBGBs would not work in a stadium concert. There are a variety of musicians with different styles. Some might thrive in a setting of a half-demolished office space.

Low ceiling heights with long corridors might not work for the giant canvases and music of past generations, but maybe digital art would thrive in such a setting. Imagine NFT artists in a collective setting with musicians repurposing old office equipment for musical purposes.[7] I do not know. I am not an artist and cannot pretend to know what styles would be popular. But incentivized with affordable real estate in Manhattan, some artists would certainly use the opportunity to be creative in new and different ways.

Incentivized with affordable real estate in Manhattan, some artists would certainly use the opportunity to be creative in new and different ways.

Cities are dynamic places that work by clustering people and amplifying their creative energy.

BALANCING DYNAMISM AND REGULATION

Sure, a semi-gutted office space in Midtown with shared bathrooms may not work as a residential unit for the current crop of investment bank analysts. But for artists and musicians eager to be in the city and around others in a creative scene, maybe they rent an affordable space for some performances. And if they happen to live in that same space—at times with a wink and a nod thanks to an extra service fee paid in cash or crypto under the table to a property manager of a building in the limbo of a foreclosure process—who is going to know?

Cities are dynamic places that work by clustering people and amplifying their creative energy. The fact that New York City has played catch up to changes in the past is in some ways a reflection on the entrepreneurial and artistic exuberance of the people who call New York home. Some level of regulation is needed to balance the conflicting interests between residents of the city and protecting the health and safety of all. Nobody wants another Ghost Ship disaster.[8]

Perhaps with memories of the challenges of loft conversions from the 1950s to the 1980s, the City of New York acts efficiently to reduce the regulations around conversions, making it possible to reuse older buildings without as much red tape—and associated costs. Perhaps.

But if a mass of dead office buildings gets caught in foreclosure limbo and the city does not figure out a regulatory framework quickly, history suggests that someone will see an opportunity and get ahead of any government planning.

ABOUT THE AUTHOR

Jim Costello is Chief Economist for MSCI Real Assets. MSCI is a leading provider of critical decision support tools and services for the global investment community.

NOTES

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UNDERWRITING ROADBLOCKS

Joshua Harris, PhD
CRE
Lakemont Group and Fordham University

A new model for underwriting offices, based on a framework commonly seen in hospitality assets, can maximize value by giving occupiers what they want.

It is becoming a universally accepted reality that many office assets are potentially impaired for the long-run due to shifts in tenant demand, rising costs of capital, and an overall fear that oversupplied markets will equate to a protracted period of falling effective rents and NOIs.

This article offers a potential solution to this problem—and slightly contrarian take—by arguing that office assets are largely in trouble because the traditional framework for leasing, underwriting, and valuation is finally obsolete.

A new model, based on a framework commonly seen in hospitality assets, that focuses on maximizing current revenues (as opposed to long Weighted Average Lease Terms) from rents and ancillary revenues can maximize value by giving occupiers what they want. An increasingly outdated underwriting model is proving to be a large roadblock for innovation, but there is a potential new framework that can be adapted by owners, equity investors, and lenders to make such repositions feasible.

THE TRADITIONAL OFFICE MODEL IS EVOLVING—AND OWNERS ARE UNAWARE (FOR NOW)

While much of the current talk of office distress is blamed on changes in work trends due to the pandemic, the office model has been undergoing significant change for well over a decade. These changes, which include open-plan layouts, open addressing, and even flexible work-from-home arrangements, were kicked off by post '08-GFC cost saving measures and accelerated by technological advances (i.e., smart phones, thin laptops, and fast home WiFi).

Tenant Demands and Landlord Expectations are Mismatched

The fundamental problem is that landlords and tenants have never been more mismatched in their desires for leasing office space. Landlords want long-term leases with escalating rents that shift as much operational cost exposure to tenants as possible, while tenants want short-term, highly flexible arrangements that acknowledge the general level of uncertainty in managing a knowledge-based enterprise with shifting employee preferences and work patterns.

Said simply, landlords are seeking to maximize long-term value and tenants are seeking to optimize short-term needs. This is not an intractable problem, however; if landlords adapt their offerings to the needs of their customers, they could potentially make greater revenues and thus profits. The issue is not willingness or ability to pay, it is willingness to accept a fixed offering for a fixed term.

Traditional Underwriting Standards and Framework are a Roadblock

The above should be no surprise to anyone in the real estate industry. Coworking operators have literally built businesses on capturing the consumer surplus between landlord needs and tenant desires (i.e., leasing long from landlord and renting short to users for a markup). Thus, why haven't landlords just cut out the coworking middlemen?

Underwriting standards, and specifically Weighted Average Lease Term (WALT) is a key metric in office underwriting. With WALT, longer the better; when an asset's remaining WALT falls too low (generally under five years) its value and salability can be substantially impacted. As a result, landlords seek to force long-term leases while rejecting short-term offers, often at great costs (i.e., large tenant improvement allowances and free rent periods as incentives to lease). In fact, the aversion to short WALTs is so strong, assets have been known to trade for higher prices with vacancy (as can be leased long-term) than with comparable space leased with short expirations. This mindset and reliance on such underwriting standards must be changed if the office market is to stabilize and maximize values going forward.

The hospitality industry offers the most useful guide for making adaptations to the office standards and are thus the basis for the ideas presented herein.

THE NEW UNDERWRITING MODEL FOR OFFICE ASSETS

The current office underwriting standards must be augmented and replaced. While long-term credit leases will certainly remain valuable, income generated via shorter-term leases and ancillary/service offerings (meaning non-rent) must be more equally valued when making leasing and management decisions. The hospitality industry offers the most useful guide for making adaptations to the office standards and are thus the basis for the ideas presented herein.

Total Revenues Matter, Weighted Average Lease Term Does Not

The single biggest change needed to the office underwriting standard is the recognition of total revenues irrespective of source. Meaning, whether via leases of one day, one year, or twenty years, the most important metric is how much actual cash is collected. Further, revenues from parking, vendor arrangements, and ancillary services also count as equally as dollars from space rented via leases. This is the basis of underwriting in hospitality assets and, to a greater extent, multifamily (though customs and regulations preclude much flexibility in offering shorter than a year leases in most instances).

Thus, an underwriter would look at an asset's trailing income history and make forward projections based on economic and market variables to generate a multi-year forecast. This could supplement or outright supplant the current lease-by-lease renewal analysis generally preformed and made easy by software platforms like Argus.

Why Hospitality Values RevPAR, and Office Owners Should Too

The hotel industry has long valued Revenue Per Available Room-night (RevPAR) as a preferred metric of analyzing "top-line" revenue generation by an asset (or market). This metric takes the total room revenue collected/forecasted and divides by the available number of room nights and thus automatically factors rate charged and actual occupancy.

A similar metric such as Revenue Per Available Foot (RevPAF[1]) needs to become a standard in office underwriting. However, while the hotel metric generally only accounts for room revenues (omitting food and beverage, event rentals, etc.), an office building's total revenues regardless of source (i.e., rent and services) should be factored as the ability to generate bottom-line NOIs will depend more on total revenue collections than simply looking at pure rental revenues. This metric would make better apples-to-apples comparisons of buildings and give owners better incentives to invest in revenue generating activities via rents and services to maximize profits.

Potential for Long-Term Value Creation

While co-working operators have experienced tumultuous financial results, they have in fact proven a successful operating model. Tenant experience matters, flexibility can be priced at a premium, and many users (including Fortune 100 firms) will actually forego privacy of a sperate office environment if the space meets the overall needs of their employees.

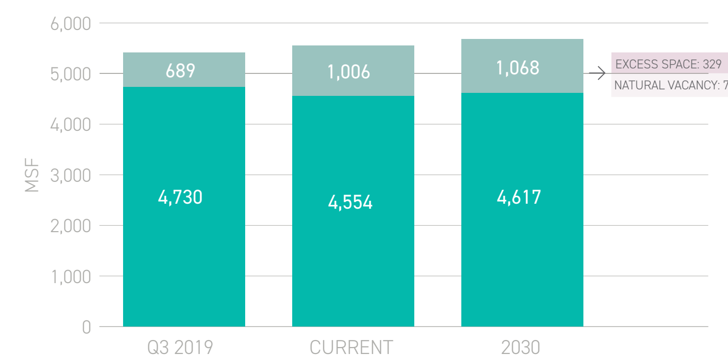
But the most important thing office landlords must learn from co-working is that space that can be "common" should be common (or at least tenants should have the option to use as such, for a fee). This includes breakrooms, open seating areas, conference rooms, and even private offices (rented daily/monthly as needed). These flexible arrangements can generate revenue premiums, thus maximizing RevPAF and overall office values.

SUCCESSFULLY REPOSITIONING TROUBLED OFFICE ASSETS

At present, it is difficult to estimate how many troubled office assets there are or will be in the coming years, yet capital markets and owners have begun to realize that substantial impairments and devaluations are likely underway as a result of shifting demand. Cushman and Wakefield has estimated that an additional 330 million square feet of office space will be vacant due to hybrid working by 2030.[2] Further, their report identifies approximately 3.4 billion SF of commodity office space they call "The Middle"; a set which represents about 60% of all US office space that most stands to benefit from a hospitality transition.

EXHIBIT 1: U.S. OCCUPIED INVENTORY & VACANT OFFICE SPACE. COMPARISON OF PRE-PANDEMIC, CURRENT AND 2030 OFFICE INVENTORIES

Source: Cushman & Wakefield Research



The first step is the easiest to implement, but the most difficult to mentally accept; that is, the willingness to lease space on short-term basis to more tenants, including those without the traditional credit profile sought by institutional investors.

Implementing a New Leasing Framework

The first step is the easiest to implement, but the most difficult to mentally accept; that is, the willingness to lease space on short-term basis to more tenants, including those without the traditional credit profile sought by institutional investors. This is a necessary reality, and adoption of the hospitality underwriting framework discussed herein should make it less painful.

The are other upsides, besides higher immediate occupancies and cashflow; mainly, the landlord's ability to regain control of capital expenditure cycles as short-term tenants cannot (and will not) demand large tenant improvement or free rent packages. These factors have led office assets to underperform other asset classes for years.

Creating Monetizable Common and Shared Spaces

The use of short-term leases alone will not necessarily restore values or grow profitability, for that to happen, landlords must look at revenue maximization by monetizing common and shared spaces. This will be more difficult as it requires on-site management infrastructure to support such operations, however technology has made this far easier in current years than ever before.

Current operators and managers may chose to partner or sub-contract with existing co-working operators, while others will see the long-term value in creating such platforms themselves. For some assets, this will yield substantially higher RevPAFs than utilizing simple fixed-address leases alone.

Creating and Enhancing Ancillary Revenue Streams

The hospitality industry has long understood that room-night revenue is just one potential profit center in operating a hotel asset. In many ways, office buildings and hotels have similar fundamentals to allow for ancillary revenue streams to become profit centers. These include food and beverage sales, event space rental, technology fees, and even ad hoc professional services such as executive assistance, design and graphics, and so forth.

While many buildings have food vendors and other such items, these are generally separate leases or concessions with minimal revenue impacts. Under an enhanced hospitality model, the landlord would own the vendor/concessions (or joint venture with revenue share) and thus be better aligned to offer greater services to users and employees of the building, leading to higher overall revenue and profit maximization.

WILL INVESTORS AND LENDERS ACCEPT THE NEW MODEL?

The final question and concern office owners face in adopting any of the ideas proposed herein is simple: will the intuitional investors and lenders accept such new models?

Given the wide ownership of office assets and loans secured by office buildings, investors and lenders will likely need to do so to maintain and restore values of their existing assets. In fact, lenders who regain ownership of highly vacant office buildings may be the class of owner most likely to embrace such non-standard leasing and operating tactics.

With the benefit of time comes hindsight, and hindsight could offer proof if such methods worked. If an owner can show a successful one- to three-year operating history by utilizing more short-term leases and generating more service revenues, then it is likely that buyers, lenders, and appraisers will believe it has greater growth potential as well. Unfortunately, there is no short-term magic solution being offered.

The office industry is at a point of decision: does it attempt to force its customers into offerings they increasingly do not want, or does it accept the new reality and tailor solutions that meet the needs, aspirations, and desires of its occupants?

As is often the case, those owners and managers that move first may gain a substantial advantage over those who wait.

ABOUT THE AUTHOR

Joshua Harris, PhD, CRE, is an Adjunct Professor at the Fordham Real Estate Institute and Managing Partner for Lakemont Group, a boutique real estate and economic consulting firm.

NOTES

[1] Note, this term, RevPAF, has been widely used by Green Street Advisors as a market metric for years. This article is proposing the use of a such a metric in the management and underwriting of office buildings. While these concepts are very similar, the author is not attempting to suggest the specific use of the Green Street Advisors methodology or anyone else's.

[2] Cushman & Wakefield. "Obsolescence Equals Opportunity." Cushman & Wakefield, 2020, https://www.cushmanwakefield.com/en/united-states/insights/obsolescence-equals-opportunity.

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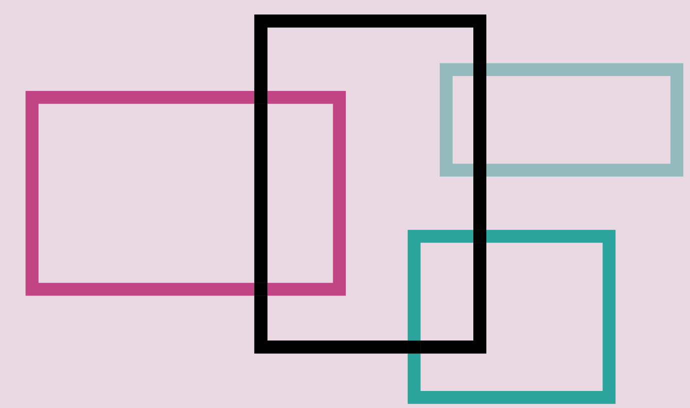
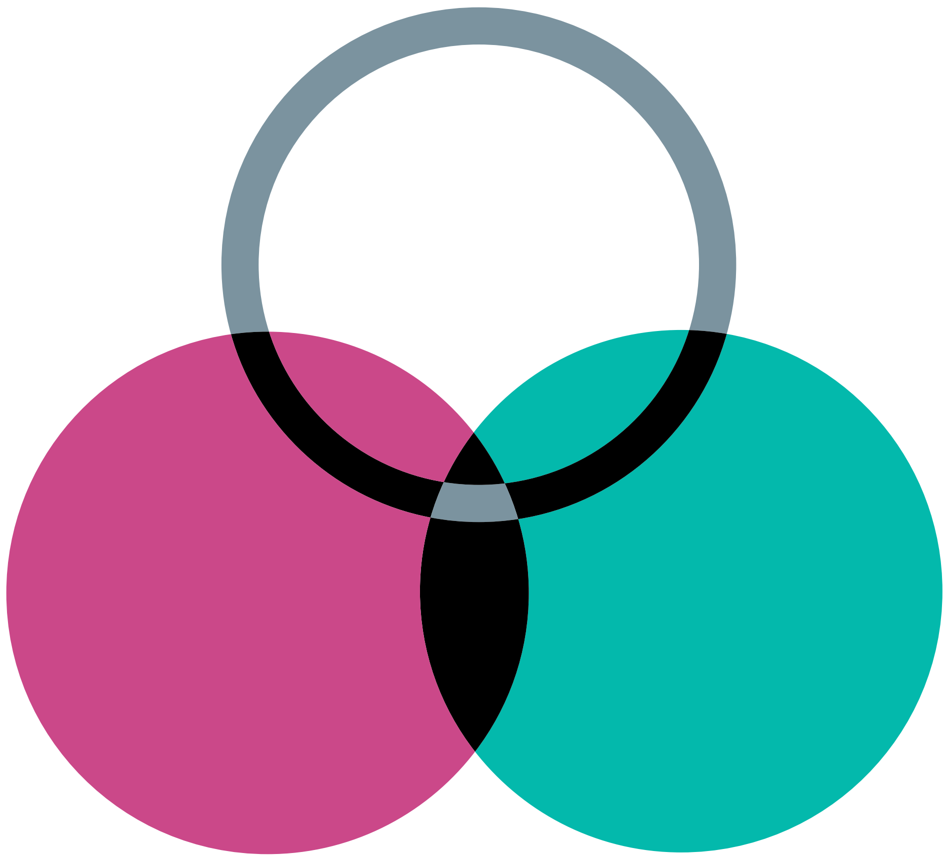
The office industry is at a point of decision: does it attempt to force its customers into offerings they increasingly do not want, or does it accept the new reality and tailor solutions that meet the needs, aspirations, and desires of its occupants?



VACANT SPACE



Stewart Rubin
Senior Director, Head of Strategy and Research
New York Life Real Estate Investors

Dakota Firenze
Senior Associate
New York Life Real Estate Investors

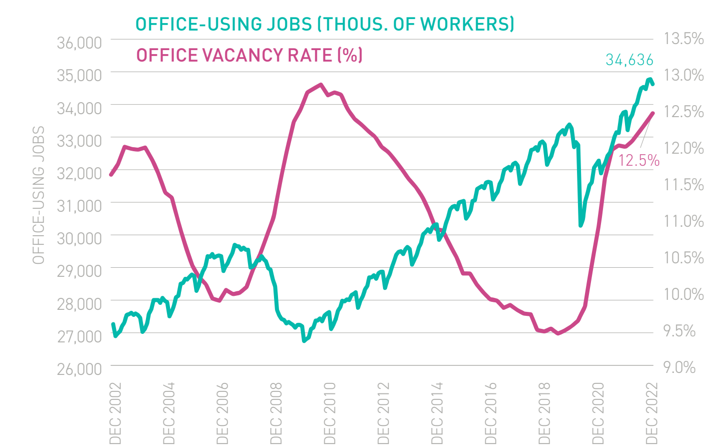
Although there used to be a logical inverse relationship between the change in office-using jobs and office vacancy rates, that relationship broke down in the wake of COVID.

When it comes to office usage, in place of citing the examples of *incongruity or incongruous* put forth by the Merriam Webster dictionary, we will give our own example: Incongruity has manifested when there is a positive change in office-using jobs over a given time period, accompanied by an *increase* in office vacancy and a simultaneous *decrease* in office inventory per office-using job.

Although in the past there was the logical inverse relationship between the change in office-using jobs (OUJ) and change in office vacancy rates, that relationship broke down in the wake of COVID lockdowns.

EXHIBIT 1: US OFFICE-USING JOBS AND OFFICE VACANCY RATES:

Source: BLS; as of December 2022. CoStar Group, as of Q4 2022.

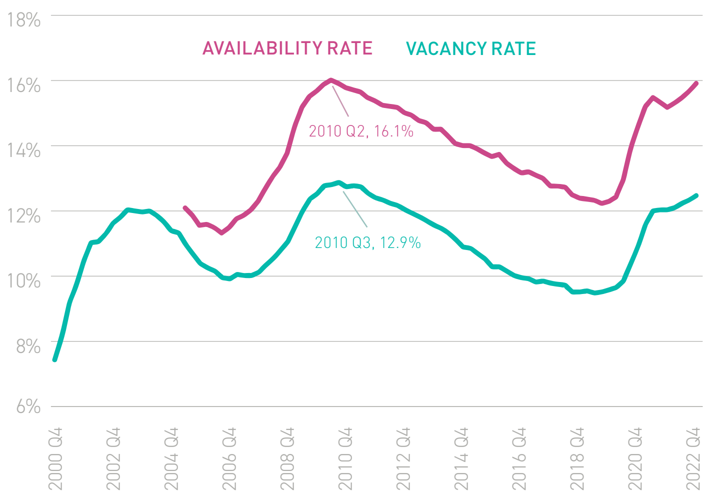


The number OUJs increased from 32,743,000 as of March 2020 to 34,636,000 as of December 2022; a 12.8% increase in 33 months' time. Historically, that has signaled greater office demand and a lower vacancy rate. But not this time.

The office vacancy rate increased from 9.6% as of Q1 2020 to 12.5% by the end of Q4 2022, according to CoStar data. A starker manifestation of this trend was in the availability rate (includes space for sublease) which increased from 12.4% to 16% during the same period. Office leasing volume, including new leases and renewals, for full year 2022, was 71% of the pre-COVID 2019 average. Additions to inventory did not account for the higher vacancy rate. According to CoStar data, office inventory per office-using job decreased by 3.3% during roughly the same time.

EXHIBIT 2: US OFFICE VACANCY RATE AND AVAILABILITY RATE

Source: CoStar Group, as of Q4 2022



The numbers become more interesting when analyzed on the metro level. We have divided the top 75 metro areas into six categories and found the following: of the top 75 office markets analyzed by the Strategy and Research Group (SRG) of New York Life Real Estate Investors, forty office markets[1], plus the US national average, meet the following conditions:

1. **Positive** change in *office-using jobs* from 2019 average to December 2022
2. **Increase** in *office vacancy rates* from 2019 average to Q4 2022
3. **Decrease** in *office inventory per office-using job* from 2019 to 2022 Q4

As detailed in *Exhibit 3*, this group of forty office markets will be referred to as Category 1 and it constitutes 79% of total office space across the 75 largest US markets. Categories 2 and 3 represent a similar dynamic, and constitute another 6% and 5%, respectively. Combined, these three categories constitute 90% of total office space. The following table summarizes the findings in this report.

+ Positive change in office-using jobs from 2019 average to December 2022

Increase in office vacancy rates from 2019 average to Q4 2022

Decrease in office inventory per office-using job from 2019 to 2022 Q4

EXHIBIT 3: OFFICE MARKET CATEGORIZATIONS

	1	2	3	4	5	6
Change in Office-Using Jobs 2019 average to December 2022	+	+	–	–	+	–
Change in Vacancy Rate 2019 average to 2022 Q4	+	+	+	+	–	–
Change in Office Inventory per Office-Using Job 2019 to 2022 Q4	–	+	+	+	–	+
Incongruous (I), Moderately Incongruous (MI), Congruous (C), or Anomaly (A)	I	I	MI	C	C	A
# of Markets in Each Category	40	7	6	13	6	3
% of Top 75 U.S. Market Total Office Inventory	79%	6%	5%	6%	3%	1%

EXHIBIT 4: CATEGORY 1 TABLE (FORTY MARKETS; INCLUDES 79% OF TOP US MARKET OFFICE SPACE)

Source: U.S. Bureau of Labor Statistics data as of December 2022. CoStar Group data as of Q4 2022.

	OFFICE-USING JOBS	OFFICE VACANCY RATE			OFFICE INVENTORY PER OFFICE-USING JOB (SF)		
Metro	% Change	2019 Avg.	2022 Q3	% Difference	2019 Inventory Per OUJ	2022 Inventory Per OUJ	% Change 2019-2022
AUSTIN, TX	26.2%	8.1%	13.7%	5.5%	382	332	-13.1%
JACKSONVILLE, FL	19.3%	8.3%	9.1%	0.7%	361	312	-13.4%
RALEIGH, NC	18.4%	4.9%	8.6%	3.7%	416	366	-12.0%
DALLAS-FORT WORTH, TX	17.9%	14.6%	17.2%	2.6%	389	339	-12.8%
CHARLESTON, SC	14.0%	5.6%	7.2%	1.7%	400	362	-9.3%
ATLANTA, GA	11.5%	11.6%	14.1%	2.5%	392	363	-7.4%
TAMPA, FL	11.4%	7.3%	8.9%	1.6%	317	291	-8.3%
CHARLOTTE, NC	11.4%	7.0%	11.8%	4.8%	369	349	-5.5%
SEATTLE, WA	11.0%	5.8%	10.6%	4.8%	406	383	-5.8%
NASHVILLE, TN	10.7%	5.8%	11.3%	5.6%	353	337	-4.7%
DENVER, CO	10.1%	9.8%	14.6%	4.8%	404	375	-7.2%
MIAMI, FL	9.6%	8.3%	9.4%	1.1%	159	149	-6.4%
SAN JOSE, CA	9.6%	9.2%	12.0%	2.8%	347	335	-3.4%
KNOXVILLE, TN	9.1%	4.0%	4.2%	0.3%	415	377	-9.0%
ORLANDO, FL	8.3%	6.4%	8.2%	1.9%	294	281	-4.4%
SAN DIEGO, CA	8.0%	9.3%	10.9%	1.6%	329	311	-5.7%
HOUSTON, TX	7.4%	15.9%	18.8%	2.8%	483	460	-4.7%
BOSTON, MA	6.9%	7.1%	9.6%	2.6%	582	560	-3.7%
SAN ANTONIO, TX	6.8%	8.8%	11.8%	3.0%	339	329	-3.1%
PHOENIX, AZ	6.5%	11.8%	15.0%	3.3%	306	297	-3.1%
INDIANAPOLIS, IN	6.1%	7.6%	8.7%	1.1%	420	401	-4.6%
PORTLAND, OR	6.0%	7.1%	11.8%	4.7%	381	369	-3.2%
SAN FRANCISCO, CA	6.0%	6.3%	16.4%	10.1%	235	229	-2.6%
UNITED STATES	5.3%	9.5%	12.5%	3.0%	249	241	-3.3%
PHILADELPHIA, PA	4.1%	8.3%	10.3%	2.0%	437	421	-3.8%
LEHIGH VALLEY, PA	3.6%	7.7%	8.2%	0.5%	450	441	-2.0%
MEMPHIS, TN	3.4%	9.6%	10.7%	1.1%	443	432	-2.5%
PROVIDENCE, RI	3.1%	5.1%	5.5%	0.5%	504	489	-3.1%
BIRMINGHAM, AL	3.1%	9.1%	11.1%	2.0%	483	466	-3.6%
LOS ANGELES, CA	2.9%	10.1%	14.4%	4.3%	276	271	-1.9%
LOUISVILLE, KY	2.9%	5.5%	7.1%	1.6%	420	413	-1.6%
PITTSBURGH, PA	2.9%	7.5%	11.0%	3.6%	503	499	-0.7%
NEW YORK, NY	2.7%	8.0%	12.3%	4.3%	358	353	-1.4%
COLUMBIA, SC	2.4%	5.8%	8.4%	2.6%	393	390	-0.7%
DETROIT, MI	2.1%	9.7%	12.3%	2.6%	363	358	-1.3%
SAINT LOUIS, MO	1.7%	7.1%	10.2%	3.1%	432	428	-0.9%
CHICAGO, IL	1.5%	11.7%	15.1%	3.4%	407	407	-0.1%
ALBANY, NY	1.5%	3.9%	4.3%	0.4%	625	620	-0.8%
WASHINGTON, DC	1.2%	12.7%	15.5%	2.8%	507	506	-0.1%
CINCINNATI, OH	0.2%	8.9%	10.1%	1.1%	405	401	-1.1%
BALTIMORE, MD	0.0%	10.2%	11.4%	1.2%	444	442	-0.5%

Another seven office markets[2] meet the first two criteria…

1. **Positive** change in office-using jobs from 2019 average to December 2022
2. **Increase** in office vacancy rates from 2019 average to 2022 Q4
3. … but experienced an ***increase*** in office inventory per office-using job of less than 2.7%.

Effectively, in these markets, vacancy rates remain elevated despite a nominal increase in office inventory.

EXHIBIT 5: CATEGORY 2 TABLE (SEVEN MARKETS; 6% OF TOP US MARKET OFFICE SPACE)

	OFFICE-USING JOBS	OFFICE VACANCY RATE			OFFICE INVENTORY PER OFFICE-USING JOB (SF)		
Metro	% Change	2019 Avg.	2022 Q3	% Difference	2019 Inventory Per OUJ	2022 Inventory Per OUJ	% Change 2019-2022
SALT LAKE CITY, UT	4.6%	6.0%	10.3%	4.3%	355	365	2.7%
GREENVILLE, SC	1.9%	6.4%	7.8%	1.4%	341	341	0.1%
OKLAHOMA CITY, OK	1.5%	7.9%	9.6%	1.7%	533	533	0.0%
SACRAMENTO, CA	1.3%	8.8%	10.5%	1.7%	531	536	0.9%
GRAND RAPIDS, MI	1.3%	5.1%	6.7%	1.7%	373	374	0.3%
EL PASO, TX	0.6%	4.8%	5.6%	0.8%	448	452	0.9%
MINNEAPOLIS, MN	0.1%	7.8%	10.8%	3.0%	382	384	0.6%

An additional six office markets[3] meet the following criteria:

1. **Negative** change in office-using jobs
2. **Increase** in office vacancy rates greater than the decline in office-using jobs
3. **Increase** in office inventory per OUJ

EXHIBIT 6: CATEGORY 3 TABLE: (SIX MARKETS; 5% OF TOP US MARKET OFFICE SPACE)

	OFFICE-USING JOBS	OFFICE VACANCY RATE			OFFICE INVENTORY PER OFFICE-USING JOB (SF)		
Metro	% Change	2019 Avg.	2022 Q3	% Difference	2019 Inventory Per OUJ	2022 Inventory Per OUJ	% Change 2019-2022
DAYTON, OH	-0.3%	7.0%	7.7%	0.7%	542	543	0.2%
KANSAS CITY, MO	-0.9%	6.7%	10.1%	3.4%	443	453	2.4%
HARTFORD, CT	-1.1%	8.1%	10.0%	1.9%	510	515	1.0%
RICHMOND, VA	-1.2%	6.6%	8.2%	1.6%	381	384	0.8%
TULSA, OK	-1.3%	9.6%	11.4%	1.8%	558	571	2.3%
COLUMBUS, OH	-1.9%	6.9%	10.0%	3.1%	399	414	3.8%

An additional number of office markets (currently 13 markets)[4] performed in a generally expected manner and meet the following criteria:

1. **Negative** change in office-using jobs
2. **Increase** in office vacancy rates less than the decline in office-using jobs
3. **Increase** in office inventory per office-using job

EXHIBIT 7: CATEGORY 4 TABLE (THIRTEEN MARKETS; 6% OF TOP U.S. MARKET OFFICE SPACE)

	OFFICE-USING JOBS	OFFICE VACANCY RATE			OFFICE INVENTORY PER OFFICE-USING JOB (SF)		
Metro	% Change	2019 Avg.	2022 Q3	% Difference	2019 Inventory Per OUJ	2022 Inventory Per OUJ	% Change 2019-2022
VENTURA, CA	-1.0%	10.5%	11.1%	0.6%	339	339	0.0%
CLEVELAND, OH	-2.1%	7.2%	8.3%	1.1%	455	461	1.2%
GREENSBORO, NC	-2.4%	8.1%	8.6%	0.5%	455	470	3.3%
MILWAUKEE, WI	-3.3%	8.3%	10.2%	1.9%	412	427	3.7%
STAMFORD, CT	-3.6%	10.6%	13.4%	2.7%	599	623	4.1%
NORFOLK, VA	-3.7%	7.5%	7.7%	0.2%	334	353	5.9%
HONOLULU, HI	-3.9%	6.3%	7.1%	0.8%	354	369	4.2%
OMAHA, NE	-4.0%	5.7%	7.7%	2.0%	352	383	8.8%
FRESNO, CA	-4.5%	6.8%	8.5%	1.7%	533	570	6.9%
ROCHESTER, NY	-5.6%	9.2%	9.4%	0.2%	529	563	6.5%
BUFFALO, NY	-6.2%	7.2%	7.3%	0.1%	422	450	6.6%
BAKERSFIELD, CA	-7.0%	7.0%	8.2%	1.2%	423	462	9.3%
TUCSON, AZ	-7.6%	7.9%	10.4%	2.6%	386	425	10.1%

An additional relatively small office markets (currently 6 markets)[5] performed in the expected manner and meet the following criteria:

1. **Positive** change in office-using jobs
2. **Decrease** in office vacancy rates
3. **Decrease** in office inventory per office-using job

EXHIBIT 8: CATEGORY 5 TABLE (SIX MARKETS; 3% OF TOP US MARKET OFFICE SPACE)

	OFFICE-USING JOBS	OFFICE VACANCY RATE			OFFICE INVENTORY PER OFFICE-USING JOB (SF)		
Metro	% Change	2019 Avg.	2022 Q3	% Difference	2019 Inventory Per OUJ	2022 Inventory Per OUJ	% Change 2019-2022
MCALLEN, TX	13.3%	5.3%	4.6%	-0.7%	454	409	-10.1%
INLAND EMPIRE, CA	12.3%	6.9%	6.0%	-0.9%	355	320	-9.9%
SARASOTA, FL	6.8%	4.8%	3.5%	-1.3%	430	409	-4.9%
NEW ORLEANS, LA	4.4%	6.6%	6.4%	-0.2%	466	444	-4.6%
LAS VEGAS, NV	3.1%	11.5%	9.4%	-2.1%	307	303	-1.2%
BATON ROUGE, LA	2.1%	7.6%	6.8%	-0.8%	374	370	-0.8%

The remaining relatively small office markets (currently three markets)[6] performed in the expected manner and meet the following criteria:

1. **Negative** change in office-using jobs
2. **Decrease** in office vacancy rates
3. **Increase** in office inventory per office-using job

EXHIBIT 9: CATEGORY 6 TABLE (THREE MARKETS; 1% OF TOP US MARKET OFFICE SPACE)

	OFFICE-USING JOBS	OFFICE VACANCY RATE			OFFICE INVENTORY PER OFFICE-USING JOB (SF)		
Metro	% Change	2019 Avg.	2022 Q3	% Difference	2019 Inventory Per OUJ	2022 Inventory Per OUJ	% Change 2019-2022
WORCESTER, MA	-0.6%	8.4%	8.0%	-0.3%	684	692	1.1%
ALBUQUERQUE, NM	-1.2%	6.5%	4.9%	-1.6%	435	441	1.3%
NEW HAVEN, CT	-1.8%	8.0%	7.4%	-0.5%	774	786	1.5%

CATEGORY 1 MARKETS ACCOUNT FOR 79% OF US OFFICE INVENTORY

Categories 1–3 represent 53 of the 75 markets and constitute 90% of the presented US office inventory. Categories 1–4 are 66 of the 75 markets. Those 66 markets constitute 96% of the presented US office inventory. Markets that fall into category 5 are mostly small, less consequential office markets. The automobile commutes in most category 4 and 5 markets are relatively short and therefore commuting to the office is relatively easy. Accordingly, these markets are likely to have lower work-from-home rates and higher occupancy levels. Anomalies are more likely in small markets. That is the case with category 6 in which there was a negative change in office-using jobs, a decrease in office vacancy rates and an increase in office inventory per office-using job.

PRIMARY REASON FOR INCONGRUITY

Office-using jobs growth and occupancy decline incongruity manifested in metros representing 90% of US office inventory which includes categories 1– 3. These metros generally include the largest and most important office markets in the US.

So, what is the reason this historically reliable relationship, which had office vacancy declining when OUJ increased, broke down in the wake of the pandemic? Remote Work.

According to data from Kastle Systems, physical office occupancy is only 50.4% of pre-Covid levels.[7] This number has barely improved from the 47.5% level recorded in September 2022. Many companies do not have the need to lease as much office space as in the past and others have gone fully remote.

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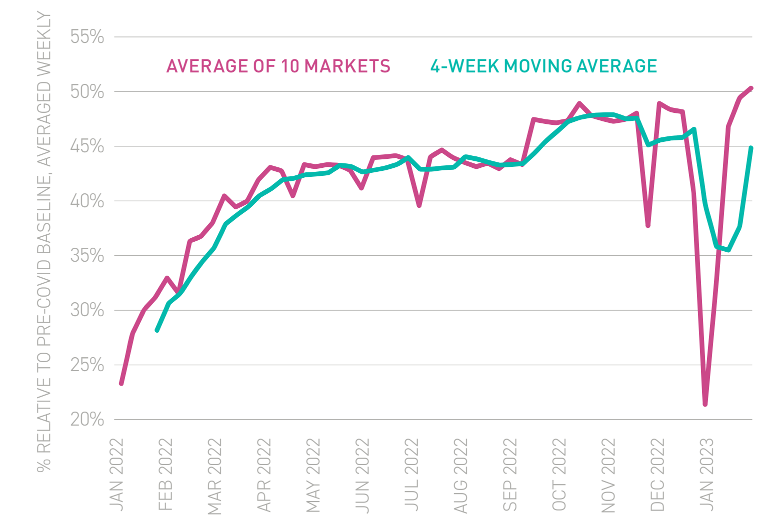
EXHIBITS 10 AND 11: KASTLE SYSTEMS OFFICE BACK-TO-WORK BAROMETER

Source: Kastle Systems Back-to-Work Barometer

KASTLE SYSTEMS – OFFICE BACK TO WORK BAROMETER
% RELATIVE TO PRE-COVID BASELINE, AVERAGED WEEKLY FOR WEEK OF:

CITY	Sep 14 2022	Nov 2 2022	Nov 9 2022	Nov 16 2022	Nov 23 2022	Nov 30 2022	Dec 7 2022	Dec 14 2022	Jan 4 2023	Jan 11 2023	Jan 18 2023	Jan 25 2023
AUSTIN	60.5	61.9	62.2	62.7	48.2	65.7	65.1	63.7	43.8	65.1	65.1	67.7
HOUSTON	56.8	56.9	56.6	58.5	46.1	58.6	59.6	58.8	43.9	60.0	60.9	60.3
DALLAS	54.9	52.9	53.8	54.0	42.9	56.0	53.0	53.7	40.7	53.1	54.3	53.5
CHICAGO	45.0	45.4	46.0	46.0	35.1	48.7	48.1	48.5	33.2	48.1	50.7	50.6
AVERAGE OF 10 MARKETS	**47.5**	**47.3**	**47.5**	**48.1**	**37.8**	**49.0**	**48.4**	**48.2**	**32.8**	**46.9**	**49.5**	**50.4**
LOS ANGELES	45.6	45.0	44.7	46.1	38.2	45.9	45.3	44.8	32.9	43.5	47.3	48.0
NEW YORK	46.6	46.7	47.2	47.6	36.7	49.6	47.8	48.1	30.9	45.6	47.2	47.5
WASHINGTON, D.C.	44.7	43.9	44.7	44.6	34.0	45.1	45.2	45.3	30.7	44.7	45.7	46.9
SAN FRANCISCO	40.7	40.6	41.6	43.1	32.7	42.2	41.8	42.5	20.8	35.8	43.3	45.9
PHILADELPHIA	40.7	40.3	40.9	41.2	35.3	42.7	41.1	41.5	32.2	42.1	42.8	42.7
SAN JOSE	39.5	39.8	37.5	37.0	29.1	35.7	36.6	35.5	18.8	31.0	38.2	41.1



Source: Kastle Systems Back to Work Barometer.

The Kastle System data is supported by looking at public transportation ridership levels in New York, Washington, DC, Chicago, Boston, and San Francisco. The ridership data tracks well directionally with the data provided by Kastle Systems. Public transportation ridership data shows that the commuter rail systems in New York are outperforming those in other cities in terms of percentage of riders returning since the start of the pandemic.

The average weekday ridership of Metro North and the LIRR in November were 68% and 67% of the levels noted in November 2019, respectively.[8] Ridership levels of the MBTA in Boston reached 60% for the same period.[9] However, ridership levels in Washington D.C., Chicago, and San Francisco are not as positive. During November 2022, the ridership levels in these three cities averaged only 42% of their pre-pandemic levels, with San Francisco performing the worst at 34%.[10]

The resulting landscape has shifted and according to CoStar, there is more than 400 million square feet of "missing" demand for office space based on expected leasing activity had historical trends prevailed. In addition, office tenants are focused on high-quality, newly constructed space. The office market is not only challenged by remote work, but also from functional obsolescence in older class B buildings, environmental mandates, and higher interest rates.

THE TRUE IMPACT OF REMOTE WORK

The incongruity manifested in the positive change in office-using jobs, combined with the increase in office vacancy rates and the decrease in office inventory per office-using job is a glaring indicator of the impact of remote work on the office market.

Increased Remote Work appears to be a consequential secular change – but the full scope of the outcome is still not known, and the true magnitude may not be known for years. As elevated levels of Remote Work extends in to its fourth year, it appears clear—at the very least—that it will be difficult to reverse completely.

ABOUT THE AUTHOR

Stewart Rubin is Senior Director and Head of Strategy and Research, and Dakota Firenze is a Senior Associate, for New York Life Real Estate Investors, a division of NYL Investors LLC, a wholly-owned subsidiary of New York Life Insurance Company.

NOTES

[1] In Q3 2022, forty-four of the top seventy-five markets fell into this category, while forty-two markets qualified in Q2 2022, and in twenty-four markets in Q1 2022. Overall, more markets were classified as Category 1 than at the beginning, indicating the incongruity became starker in 2022.

[2] In Q3 2022, four of the top seventy-five markets fell into this category, while six markets qualified in Q2 2022, and nine markets in Q1 2022.

[3] In Q3 2022, six of the top seventy-five markets fell into this category, while six markets qualified in Q2 2022, and eleven markets in Q1 2022.

[4] In Q3 2022, sixteen of the top seventy-five markets fell into this category, while fourteen markets qualified in Q2 2022, and twenty-five markets in Q1 2022.

[5] In Q3 2022, five of the top seventy-five markets fell into this category, while six markets qualified in Q2 2022 and Q1 2022.

[6] In the first three quarters of 2022, three of the top seventy-five markets fell into this category as well.

[7] Data as of January 30, 2023. Kastle Systems data is collected by keycard, fob and KastlePresence app access data from the 2,600 buildings and 41,000 businesses that Kastle Systems secures across 47 states. The Barometer weekly report summarizes access control data among Kastle System's business partners in ten major metro areas, not a national statistical sample. Charted percentages reflect unique authorized user entries in each market relative to a pre-COVID baseline, averaged weekly.

[8] MTA. "COVID-19 Ridership Trends." Metropolitan Transportation Authority, accessed May 2, 2023. https://new.mta.info/coronavirus/ridership.

[9] MBTA. "Performance Dashboard: Ridership." MBTA Back on Track, 1 Nov. 2022, https://mbtabackontrack.com/performance/#/detail/ridership/2022-11-01////all.

[10] Washington Metropolitan Area Transit Authority. "November 2022 Ridership Snapshot." WMATA Ridership Portal, accessed May 3, 2023, https://www.wmata.com/initiatives/ridership-portal/upload/November-2022-Ridership-Snapshot.pdf.; Chicago Transit Authority. "Ridership Reports." TransitChicago.com, https://www.transitchicago.com/ridership/; San Francisco Bay Area Rapid Transit District. "Ridership Reports." Bay Area Rapid Transit, https://www.bart.gov/about/reports/ridership.

REVIEWER RESPONSE

The authors highlight what is the critical threshold problem as it relates to the office sector; that is, the seemingly fractured relationship between office-using job growth and office demand stemming from hybrid/work-from-home.

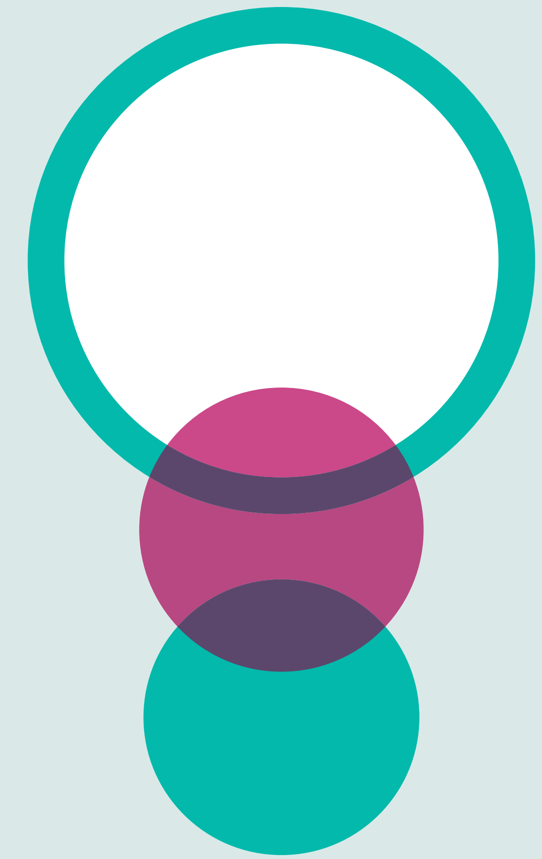
They go on to categorize markets based on their post-pandemic change in these jobs, office vacancy trajectory and office inventory-to-job density. In short, absent a few tertiary outliers, the takeaway is simple—new supply notwithstanding, the vast majority of institutionally investable office markets are weaker despite pertinent job growth.

There is another element to this dynamic that helps further complete the puzzle - namely, that the relationship between job growth and office demand growth had already been waning over the last 20 years as a result of companies' densification efforts. Between 2002-09, the multiplier between demand growth and job growth was 1.5; between 2010-19, it had fallen by roughly half, to 0.88.

It would be interesting to see how the job-demand growth multiplier has changed over time at a market level and then compare that trajectory to the most recent period—would this would show certain markets experienced a greater acceleration in the breakdown of the relationship than others?

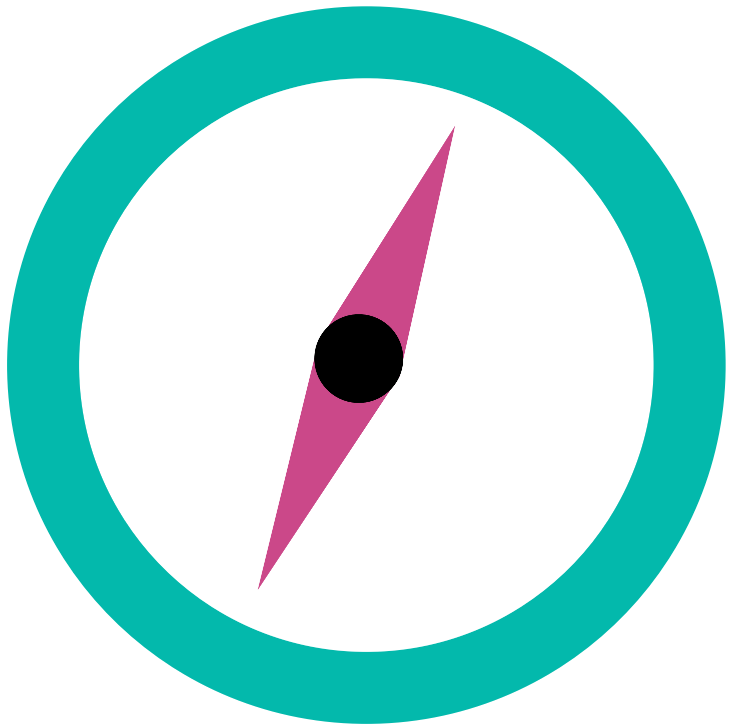
– Sabrina Unger
Managing Director, Head of Research and Strategy, American Realty Advisors

Member, Summit Journal Editorial Board



Increased Remote Work appears to be a consequential secular change – but the full scope of the outcome is still not known, and the true magnitude may not be known for years.

HIKING TRAILS



Dags Chen, CFA
Head of U.S. Real Estate Research and Strategy
Barings

Under the shadow of a slow-burning bank crisis in 2023, should institutional investors consider allocating to short duration real estate debt.

Starting in 2022, the US Federal Reserve (Fed) began the most aggressive policy rate tightening schedule since the early 1980s. The rapid rise in interest rates has left few asset classes unscathed, and public equity and bond returns in 2022, as measured by a variety of benchmarks, were among the worst of the past several decades.

Observers noted that the Fed tends to "hike until something breaks"—an oversimplification that nevertheless resonated following several high-profile bank failures in March 2023. There is no definitive resolution yet to what some have framed as a slow-burning bank crisis.

REALIGNING VALUES

Just as public real estate equity and debt have been impacted by Fed policy rate hikes, private core real estate equity and fixed-rate core real estate debt are experiencing substantial asset value correction. The Gilberto-Levy Index of senior, fixed-rate core mortgage (GL-1) posted a total return of -9.0% in 2022, while the total return for the NCREIF Property Index of core property fell by -3.5%. Both annual performances were the worst in over a decade.

Historically, private real estate debt as an asset class is noted for its depth and stability of income throughout cycles. Recent events have reawakened concerns over the stability of the global financial system, and with each passing moment, it becomes clearer that uncertainty over inflation, monetary policy, and ultimately, asset valuations will take time to resolve. In the meantime, the most significant casualty of the current market environment has been liquidity. Against the backdrop of heightened uncertainty, this article will explore what makes real estate debt—floating rate debt, in particular—well-suited to the structural and cyclical dynamics associated with the current dislocation and its aftermath.

DIMINISHED LIQUIDITY, MATURITY WALL, AND "HIGHER FOR LONGER"

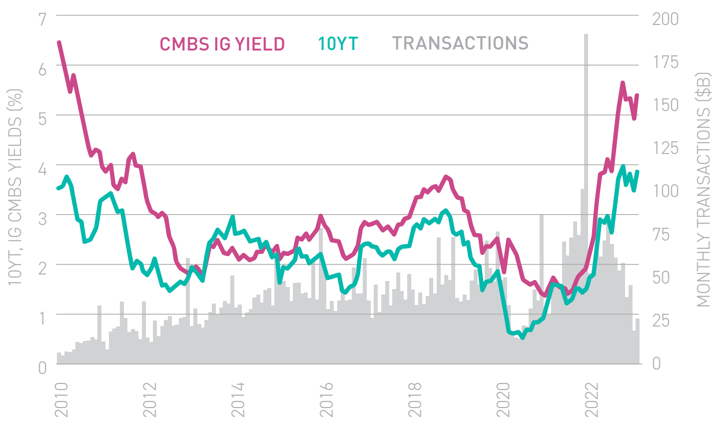
A hallmark of the present dislocation in financial markets is the resilience of the underlying economy. Supply chain disruptions aside, a tight labor market and ample firm and household balance sheets have been a catalyst for spending on wages, goods, and services. The Fed finds itself in a predicament where its two primary mandates of low unemployment and price stability are now in opposition to one another.

Thus far, capital markets have borne the brunt of this policy stance as long-duration asset classes have seen values decline given the intensity of monetary tightening. However, nominal rental growth at the property level has benefitted from real demand growth as well as higher inflation. Though baseline scenarios may have weakened due to concerns over systemic stability, downside scenarios still point to a modest recession relative to historical downturns over the past 25 years. Real estate incomes generally could see manageable impacts *even in the event of a recession*, given a labor market that has stayed historically tight.

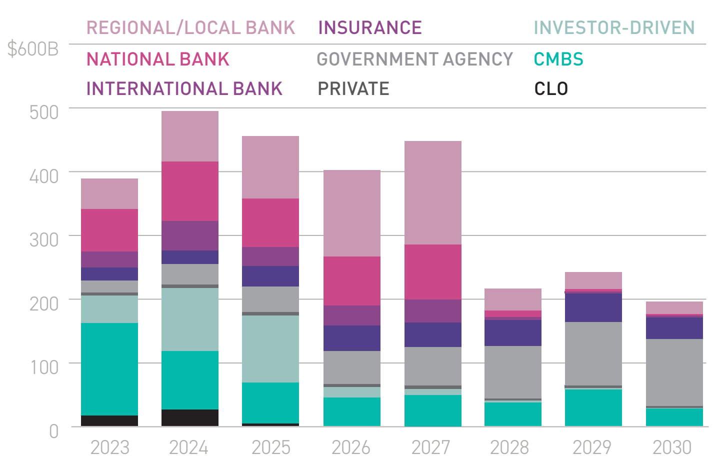
As policy rates and market uncertainty have risen, transactional liquidity has once again bottomed, falling once again to pandemic lows. Commercial mortgage lending standards are tightening in response to an increasing probability of recession. Furthermore, regional banks which have done proportionately more lending in times of dislocation are likely to step back following the high-profile failures of Silicon Valley Bank (SVB) and Signature Bank—and the likelihood of greater regulatory scrutiny on banks with less than $250 billion total assets is a primary area of concern.

EXHIBIT 1: BORROWERS NEEDING TO REFINANCE OVER NEAR-TERM FACE HIGH RATES, HIGH SPREADS, AND LOW LIQUIDITY

Sources: Bloomberg, RCS



VOLUME OF MATURING COMMERCIAL PROPERTY LOANS BY LENDER TYPE



While delinquencies and defaults are currently low, they are likely to rise. Borrowers have tried to "kick the can" when they could, finding temporary workarounds to stave off foreclosure and hoping for transaction activity to normalize.

With base rates higher and sources of capital drying up, borrowing costs rise and demand for leverage declines. However, there is a significant wall of maturity that needs to be refinanced. Some of these loans will not be able to be refinanced without significant paydowns of principal. Some properties that have been significantly impaired due to post-pandemic structural demand shifts, such as "commodity office", will end as foreclosures or distressed sales. While delinquencies and defaults are currently low, they are likely to rise. Borrowers have tried to "kick the can" when they could, finding temporary workarounds to stave off foreclosure and hoping for transaction activity to normalize. That strategy was passable when the Fed was accommodative, but much less so now that the FOMC has repeatedly communicated that it needs to keep its policy rate "higher for longer" in order to quash inflation and drive out speculative investment fostered by a decade of inexpensive debt.

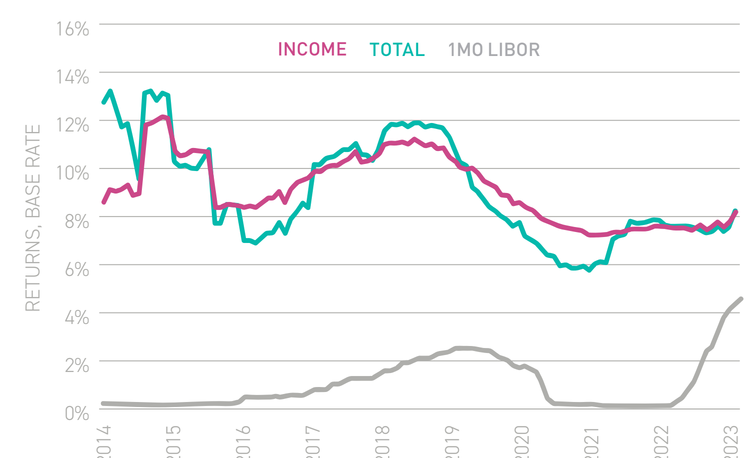
REAWAKENING TO DURATION RISK

Declining interest rates over the past four decades have been a tailwind to refinancing. Accelerated inflation has forced the Fed to raise policy rates above their zero bound, causing bonds and bond-like instruments with long durations to fall in value. Duration risk measures the sensitivity of a bond's price to changes in the underlying rate. SVB's sudden failure was tied to duration risk. When the bank attempted to sell some of its holdings of long-dated US Treasury bonds and mortgage-backed securities, the mark-to-market effect exposed SVB's capital base to a dramatic decline in the value of its fixed income portfolio directly related to tighter monetary policy. Since SVB's failure, emergency public sector measures have been implemented to provide banks with liquidity.

Interest rate volatility and spiking policy rates have re-awakened investors to the duration risk embedded within their portfolios. When interest rates are low, the impact of duration risk is amplified. Floating rate debt minimizes duration risk, although lenders are exposed to a decline in interest rates, which forward curves anticipate. When liquidity is scarce and an economic recession is an increasingly more likely proposition, lenders can charge higher spreads over reference rates. The persistence of inflation is weaning borrowers off their expectations that interest rates will soon normalize at a lower level. Even after the Fed lowers its policy rate as price pressures are gradually contained, investors have realized that risk premiums should be higher going forward. When appropriately structured, floating rate real estate debt has demonstrated a durable income stream coupled with a meaningful illiquidity premium, which is uniquely suited for periods of elevated volatility.

EXHIBIT 2: FLOATING RATE DEBT FUND ANNUALIZED RETURNS POISED TO RISE, STAY ELEVATED

Source: John B. Levy Co.



Interest rate volatility and spiking policy rates have re-awakened investors to the duration risk embedded within their portfolios.

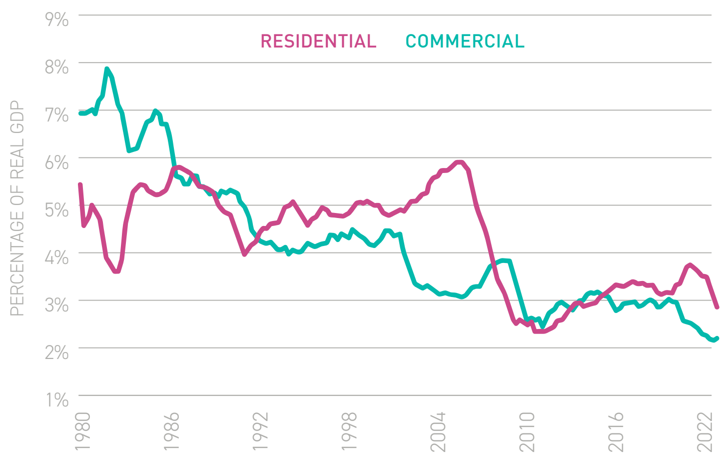
CONSTRUCTION NEEDED

Building construction encompasses a variety of risks including regulatory, counterparty, capital markets, and event risks. Even during the best of times, real estate development is a highly complex endeavor. Surging labor and materials prices and supply chain disruptions have wreaked havoc on construction budgets and timelines. Yet, as a percentage of real GDP, both residential and non-commercial structures investment is at multi-year lows. The presently depressed level of real estate construction will not address the varied, secular demand tailwinds most readers are familiar with. Numerous themes including undersupply of rental residential, onshoring/re-shoring, green buildings, and post-pandemic STEM offices have been explored in depth by various authors in this publication. The scale of these opportunities is massive— to raise construction activity to its long-run historical average percentage of GDP would mean almost $700 billion of additional investment over the past five years.[1]

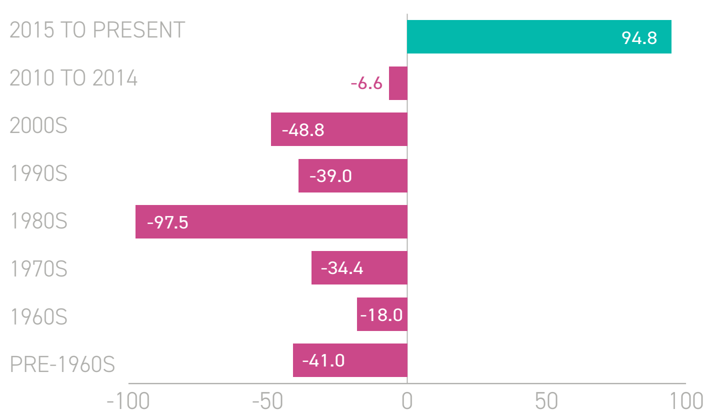
Construction lending can provide risk-mitigated exposure at significantly higher spreads relative to publicly traded bonds. Elevated project costs have actually been a headwind for development. The case for replacing or readapting the US' aging building stock is clear. In the current environment, a loan's spread is locked as uncertainty remains high and debt funding remains scarce, but funds over the next few years as both macro and project-specific risks diminish. Anecdotally, project costs have stabilized allowing planners more clarity over the near term. If the case for a modest recession plays out, then construction or redevelopment projects beginning now could deliver into a tenant demand recovery.

EXHIBIT 3: CONSTRUCTION SPENDING HAS DECLINED, BUT THE NEWEST BUILDINGS ARE MOST IN DEMAND
Source: BEA, CBRE.

BUILDING CONSTRUCTION AS A % OF REAL GDP



NET OFFICE ABSORPTION BY VINTAGE (FROM Q1 2022 TO Q4 2022)



NO EASY SOLUTIONS FOR WHAT LIES AHEAD

Following a 40-year "bond bull market" characterized by falling debt costs, we may be entering a new inflation and interest rate regime—the effects of which have already been severe to say nothing of what lies ahead. Investing during moments of dislocation and volatility is easier in theory than in practice. Importantly, while there are asset classes like real estate debt that are better suited for the deployment of capital during volatile and uncertain periods, they are neither antidotes to nor insulated from the potentially momentous impacts that a change from "lower for longer" to "higher for longer" will have on asset values, debt costs, and risk tolerance over the medium term. Furthermore, broad segments of the economy remain highly resource constrained. Infrastructure projects, for example, have pulled away labor from private construction projects.

Private lenders including real estate debt capital providers have relied heavily on portfolio leverage usually in the form of credit and/or loan facilities in order to achieve their target returns. Until recently, these were available at accretive borrowing costs. Certain real estate lenders have found themselves squeezed both by the lack of borrower demand for more expensive debt and reduced availability of portfolio leverage at an accretive rate, although higher base rates and lending spreads have eased the dependence upon additional leverage.

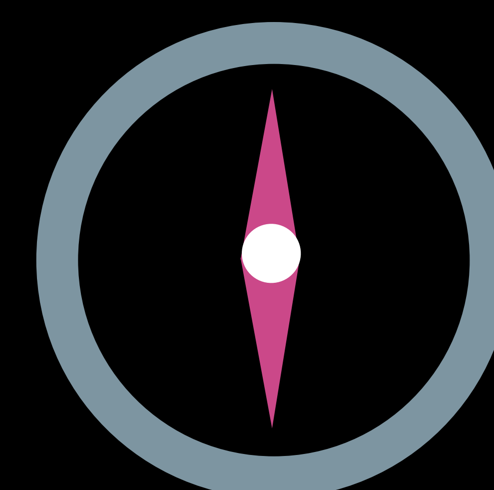
ABOUT THE AUTHOR

Dags Chen is Managing Director and Head of U.S. Real Estate Research and Strategy for Barings Real Estate, a global real estate platform with extensive capabilities across both debt and equity strategies.

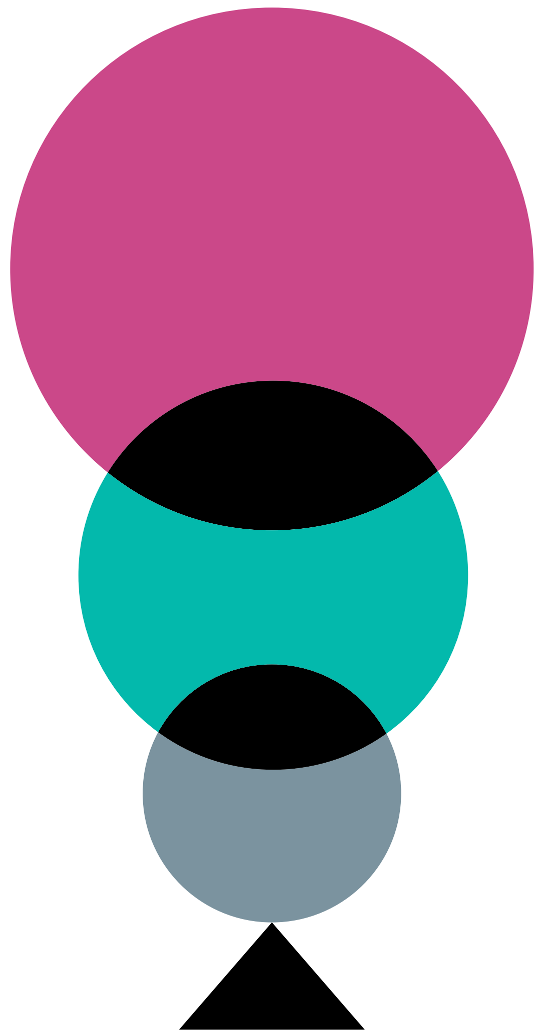
NOTES

[1] Source: BEA, Barings Real Estate Research. As of Q4 2022.

When appropriately structured, floating rate real estate debt has demonstrated a durable income stream coupled with a meaningful illiquidity premium, which is uniquely suited for periods of elevated volatility.



RECESSION PREPPING



Martha S. Peyton, PhD
Managing Director, Real Assets Research
Aegon Asset Management

Some economic forecasters are still planning on the likelihood of a recession coming sooner than later. Should investors in commercial mortgages worry?

Economic forecasters surveyed for the January 2023 Blue Chip Economic Indicators assigned a 58% probability to a recession in 2023 with most expecting it to be "mild."[1] Should investors in commercial mortgages worry?

In this article, we examine recent US commercial mortgage loan (CML) credit performance and the potential for excess additions to property supply that might threaten credit performance in the quarters ahead. A look back at the 2001 and 2008 recessions suggest that a short, mild recession, as in 2001, could have a minimal negative impact on property performance. As such, there is likely little cause for concern—except in the office sector. While new office supply is minimal, tenants continue to grapple with work-from-home uncertainty.

And as we progress through 2023, investors continue to ponder the possibility of recession in response to the upward push in interest rates that the US Federal Reserve initiated last year to quell inflation. The Fed's projections call optimistically for a "soft-landing" with very weak but still positive annual economic growth in 2023. That outlook could encompass the two-quarters of negative GDP growth envisioned by many private sector forecasters.[1]

Weak economic growth through 2023 may dampen demand for space throughout the four major property sectors in the commercial property universe, but it will take time to play out. As it does, any negative impact on the net operating income (NOI) of property owners will affect their ability to make mortgage payments.

CREDIT METRICS GENERALLY FAVORABLE THROUGH 2022

Credit performance for commercial mortgages in the later part of 2022 was very solid. As shown in *Exhibit 1*, current delinquency rates vary by originators and property sectors. (Note that life company and Freddie Mac delinquencies are so low that they are almost invisible on the chart.) The variation among originators occurs largely due to different risk/return profiles for the end investors, which results in different underwriting via higher or lower leverage, longer or shorter interest-only periods, and varying property type allocation, among others—all of which impact the risk of default. Overall, these readings represent recovery from the COVID recession when lodging- and retail-sector delinquencies reached double-digit readings, particularly for mortgages in CMBS securitizations.

EXHIBIT 1: COMMERCIAL/MULTIFAMILY MORTGAGE DELINQUENCY RATES

Source: Mortgage Bankers Association, 3Q 2022.

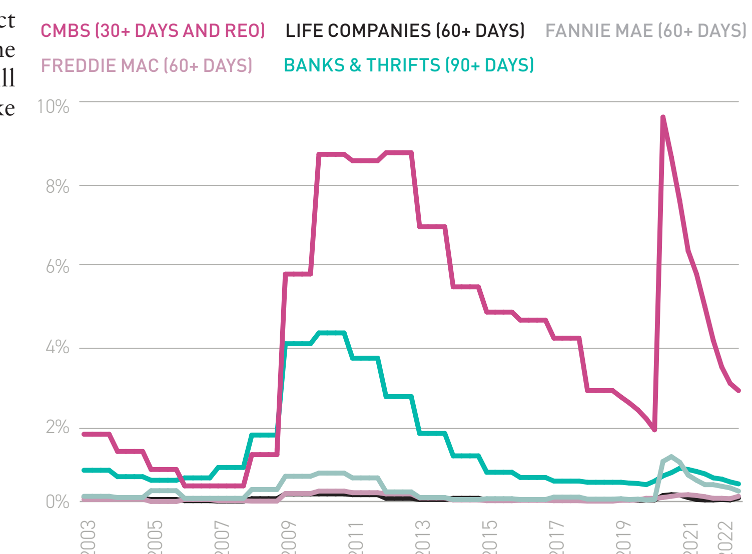


EXHIBIT 2: MBA 2022 YEAR-END DELINQUENCY RATE BY PROPERTY SECTOR (30 DAYS OR MORE)

Source: Mortgageorb. January 17, 2023.

MBA 2022 YEAR-END DELINQUENCY BY PROPERTY SECTOR	
Lodging	6.1%
Retail	5.4%
Office	1.6%
Industrial	0.3%
Multifamily	0.5%

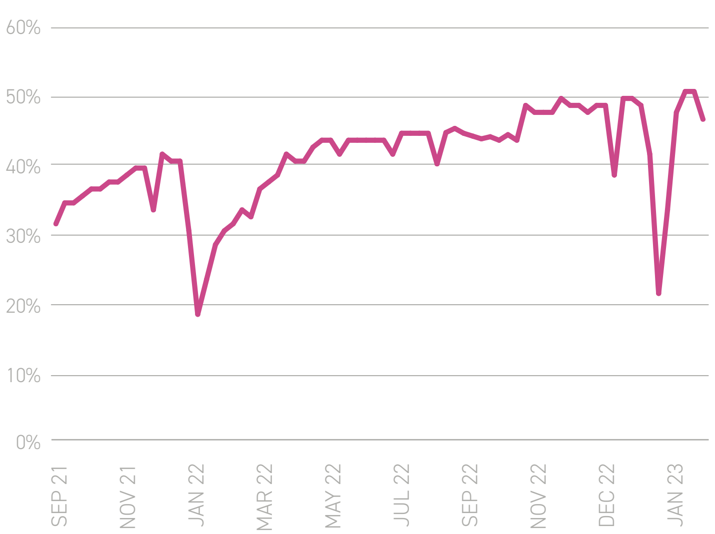
DIFFERENCES IN DELINQUENCY RATES REFLECT PROPERTY SECTOR AND TIMING

Lodging and retail sector mortgages suffered disproportionately during the COVID recession because consumers prioritized shopping online, tourist travel collapsed, and business travel dropped to a bare minimum. The pattern of credit problems within these sectors reflected the degree of impairment in NOIs versus the financial burden of the mortgage debt. Mortgages maturing during the COVID recession were also problematic if lenders were unable or unwilling to extend maturities.

The economic weakening expected into 2023 is unlikely to have a similar disproportionate focus on lodging and retail sectors, which have largely recovered. The focus for a possible 2023 recession appears to be on mortgages secured by office properties. As shown in *Exhibit 3,* office use has not recovered from the COVID recession when work-from-home became necessary and pervasive to avoid contagion.

EXHIBIT 3: KASTLE BACK-TO-WORK BAROMETER

Source: Kastle Back to Work Barometer, February 1, 2023.



In the aftermath of the pandemic, employers are struggling to bring staff back to their desks while accommodating some of the desire among employees for flexibility to work from home at least some of the time. As a result, office tenants are recalibrating how much space is needed for this more flexible approach to office attendance. At the same time, expectations of an economic slowdown are eroding plans for business expansion and the tech sector separately is restructuring, downsizing, and giving up its glut of office space. And so far, the highest quality office space seems to be suffering the least.

With office leases being generally long term, credit distress among office mortgages will likely play out slowly as leases expire without tenants renewing in full. The pattern of credit problems that emerge will reflect the degree of impairment in NOIs versus the financial burden of the mortgage debt. Mortgages maturing during the uncertain period ahead will also be problematic if lenders are unable or unwilling to extend maturities.

Beyond the difficulties confronting the office sector, credit risk is also increasing for mortgages originated at the peak of the property valuation cycle in 2022. By year-end 2022, property values tracked by the MSCI-RCA Commercial Property Price index were up from their pre-COVID March 2020 level by 52% for industrial, 31% for multifamily, 19% for office, and 22% for retail.[2] Beyond the generalities associated with each property sector, any increase in risk will depend on the characteristics of each specific mortgage.

Evaluating prospects for an increase in CML risk through the quarters ahead requires examination of the degree of leverage, strength of property cash flow and debt coverage, and the timing of lease rollovers ahead.

This analysis requires consideration of property quality and competitiveness with its peers, the timing of tenant rollover, capacity of the market to generate competitive new supply, and the expertise of property managers.

PARSING LEVERAGE AND DEBT COVERAGE THROUGH MATURITY

Evaluating prospects for an increase in CML risk through the quarters ahead requires examination of the degree of leverage, strength of property cash flow and debt coverage, and the timing of lease rollovers ahead.

At origination, lenders will calibrate loan-to-value ratios and debt service coverage requirements that are within their risk tolerances. Beyond these calculations, lenders are well-advised to consider the vulnerability of each property to downside risks to value and cash flow *over the entire term of the mortgage.*

This analysis requires consideration of property quality and competitiveness with its peers, the timing of tenant rollover, capacity of the market to generate competitive new supply, and the expertise of property managers. Evaluation of climate risk is also becoming important. We believe property leverage should be low enough to withstand evolving risks with a cushion for the unknowable.

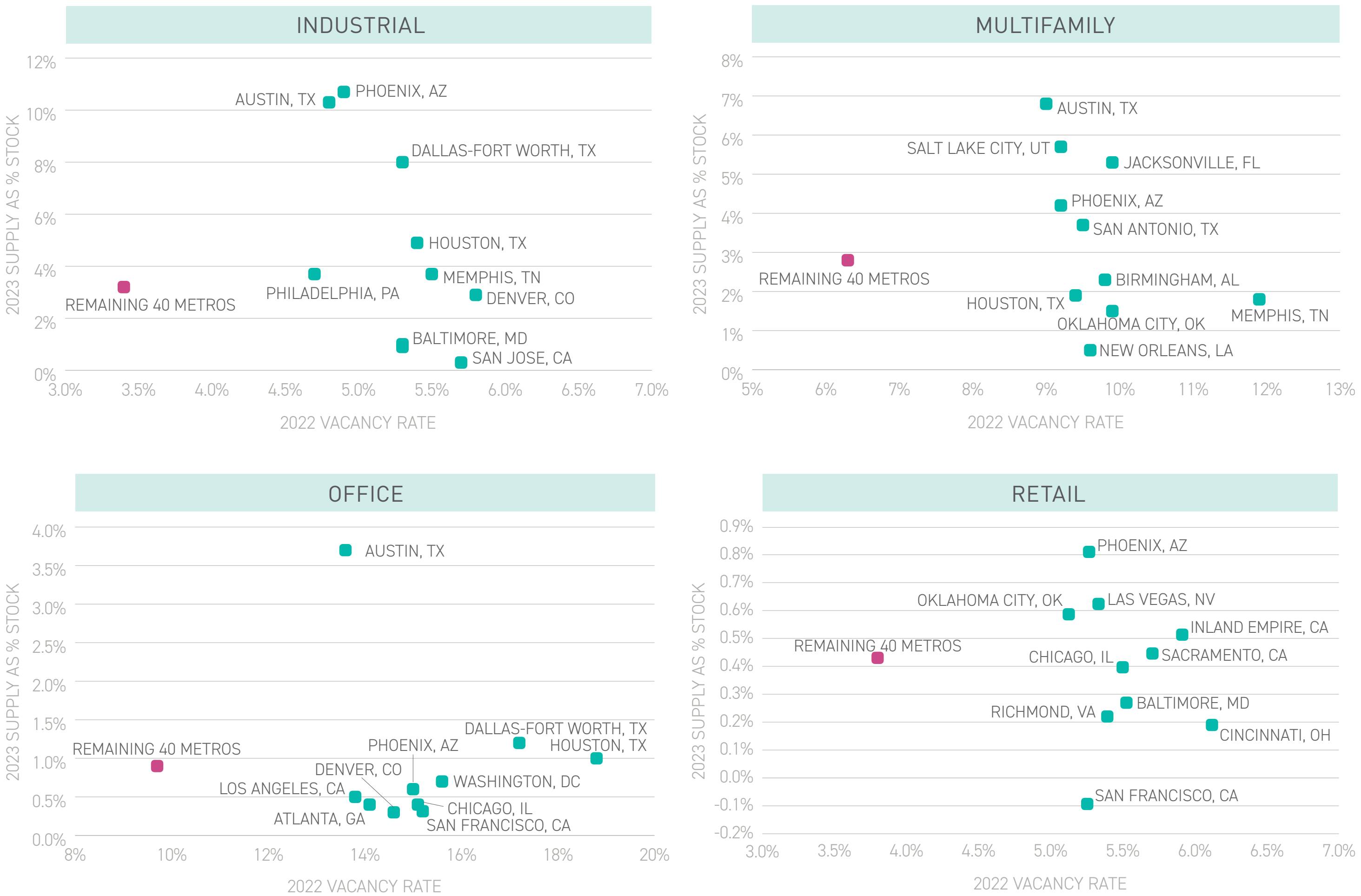
VULNERABILITY TO RECESSION VARIES WIDELY ACROSS SECTORS AND LOCALES

A crucial component of property-by-property credit risk evaluation is examination of current excess supply in each property's metro area.[3] The most concerning source of excess supply that might threaten CML credit is newly–constructed supply that will become available as the economy weakens. For metros with low vacancy rates, new supply might be digested without disrupting credit performance. But, if vacancy rates are already high, absorption might create winners and losers. *Exhibit 4* summarizes our examination of the fifty largest US metros identifying the ten with the highest year-end 2022 vacancy rates and their supply addition expected for 2023, compared to the average year-end vacancy rate and supply addition for the remaining forty metros.

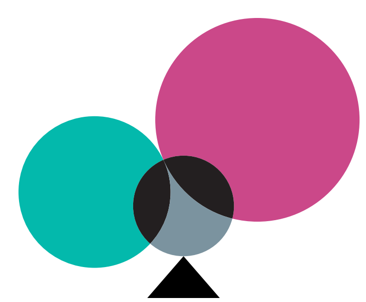
As shown, there is wide variation across property sectors and metros but generally supply inflows are modest for 2023. Several metro areas are worth monitoring, however, including Austin's relatively booming inflow across industrial, multifamily, and even office sectors. Phoenix bears monitoring as well, especially in the industrial sector.

EXHIBIT 4: TOP 50 US METRO 2022 VACANCY RATE AND 2023 SUPPLY AS PERCENTAGE OF STOCK

Sources: CoStar Realty Information Inc. December 31, 2022.



The capacity to absorb space also differs by property sector and metro. It will reflect the vulnerability of a metro's economy to weakening economic growth along with the structural forces affecting each metro's business composition and demographics. Vulnerability to weakening growth might be similar to the pattern revealed in past recessions. This pattern is shown in *Exhibit 5*, which contains the change in vacancy rates and NOI in the two years following the beginnings of the 2001 and 2008 recessions. (We examine two years to account for the lag in property responses to recession. Results are calculated for the top 50 metros arranged in groups of 10 ranked by vacancy rate change.)



The capacity to absorb space also differs by property sector and metro.

EXHIBIT 5: TOP 50 US METRO CHANGES IN VACANCY RATES AND NOI DURING 2001 AND 2008 RECESSIONS

Sources: CoStar Realty Information Inc. December 31, 2022.

	2001 RECESSION			
	% CHANGE IN NOI			
Rank by Vacancy Change	Industrial	Multi-Family	Office	Retail
Top 10	2.6%	8.5%	-2.9%	1.8%
Second 10	4.4%	9.2%	1.1%	2.5%
Third 10	6.5%	10.2%	2.8%	3.7%
Fourth 10	8.2%	10.1%	-0.9%	3.3%
Bottom 10	3.1%	11.0%	1.9%	2.9%

	2008 RECESSION			
	% CHANGE IN NOI			
Rank by Vacancy Change	Industrial	Multi-Family	Office	Retail
Top 10	-10.1%	-12.9%	-13.8%	-11.4%
Second 10	-7.9%	-12.7%	-12.2%	-8.8%
Third 10	-7.7%	-12.7%	-11.0%	-8.6%
Fourth 10	-7.9%	-12.5%	-10.6%	-8.9%
Bottom 10	-7.4%	-12.7%	-10.6%	-8.1%

Current expectations point to a short and mild 2023 recession more similar to the one in 2001.

The historical results are interesting in that they demonstrate that all recessions are not alike. The 2001 recession produced less than a 2% loss in real GDP over its eight months and without significant negative impact on NOIs, except for office properties.[4] The metros with the most severe office vacancy rate increases suffered an average of 2.9% decline in NOI. In contrast, the 2008 recession produced a loss in real GDP in excess of a 4% decline in GDP over its eighteen-month duration, and produced severe negative impact on NOIs across all four major property sectors.[5]

Current expectations point to a short and mild 2023 recession more similar to the one in 2001. If this scenario occurs, the negative impact on NOIs might well be modest and aligned with excess supply and structural woes in the office sector.

Regulatory changes affecting originators after the Great Financial Crisis (GFC) also provide reassurance that delinquencies will remain more modest than the GFC record. The changes enforce more conservative underwriting among the regulated originators leaving high-risk lending to non-regulated entities. Notable regulatory enhancements include the requirement that CMBS originators or another party retain a slice of the credit risk and that life company originators hold capital based on annually updated leverage and debt coverage metrics.

LOOKING AHEAD AT 2023

The outlook from the February 2023 Blue Chip Economic Indicators survey suggests that commercial mortgage credit risk in the quarters ahead will be cushioned by the relatively low vacancy rates and modest supply pipelines reviewed in this paper. While a small number of US metros will be faced with excess supply flows in the face of waning economic growth, the more pressing concern is the unsettledness in the office sector.

In addition, mortgages originated at the peak of the property valuation cycle in 2022 might also be a concern if the original underwriting was especially optimistic. Maturing mortgages are a challenge if the property fundamentals have weakened but extending the maturity dates should relieve some of the heat.

Altogether, CML credit risk prospects for 2023 will vary mostly by property sector and the fundamental characteristics of individual properties. These expectations reinforce the value of portfolio diversification: by property sector, origination and maturity dates, metro area, and property fundamental characteristics.

ABOUT THE AUTHOR

Martha Peyton, PhD, is Managing Director of Real Assets Applied Research for Aegon Asset Management, the global investment management brand of Aegon Group.

NOTES

1 Wolters Kluwer. Blue Chip Economic Indicators. February 10, 2023.

2 MSCI Real Capital Analytics. December 31, 2022.

3 The focus on metro market is dictated by the metro scope of demand which is driven by metro area economic vitality. Within metros, excess supply in any individual submarket will be corrected by rent reductions which will equilibrate demand across submarkets while accounting for the value of each submarket's specific attributes. We can assume that this process works because the federal government identifies the counties to be included in each metro by assessing their economic and social integration.

4 CoStar Realty Information Inc. December 31, 2022.

5 US Bureau of Economic Analysis. Gross Domestic Product. January 26, 2023.

MEASURING GENTRIFICATION

Ron Bekkerman
Strategic Advisor
Cherre

Donal Warde
Entrepreneur in Residence
Tenney 110

Maxime C. Cohen
Professor
McGill University

Though gentrification has often been analyzed at the macroeconomic level, it has not been extensively studied at the microeconomic level using large-scale granular data. But that could change.

Gentrification is regarded as one of the main driving forces of the real estate industry: investors look for neighborhoods that start gentrifying, with the intention to invest in them and, ultimately, generate high returns.

Despite the fact that a lot of research has been done on gentrification at the macroeconomic level, it has not been extensively studied at the microeconomic level using large-scale granular data. This article attempts to correct that. starting with an examination of how gentrification can be measured at a neighborhood level and utilized to compare between neighborhoods. We then investigate whether gentrification positively affects neighborhood development.

Specifically, we propose a Normalized Gentrification Index (NGI) of a neighborhood. Depending on the underlying data availability, the NGI can be computed at any level of granularity: for US states, counties, metropolitan areas, submarkets, zip codes, census tracts, and so forth.

In this initial study, we chose to focus on the level of counties. We constructed a dataset of 630 US counties for which we had enough data to compute NGI values for each year between 2008 and 2021 and demonstrate their usefulness for real estate investors. We identified a statistical connection between the dynamics of NGI over time and the key performance metric of counties, measured by their residential property prices. We illustrated our findings on two use cases. While we chose residential property prices due to the data abundance, these findings may also be relevant for multifamily, which remains a dominant institutional asset class.

NICHE TRANSFORMATION

In recent years, multifamily investors have experienced a stronger bull market as compared to other asset classes.[1] However, as the rising tide has lifted (almost) all boats, a potentially receding tide necessitates a more selective investment strategy.

Just as asset allocation is a primary driver of portfolio returns in a mixed asset class portfolio (e.g., stocks, bonds, etc.),[2] selection decisions at the metropolitan statistical area (MSA) level or county level drive the bulk of returns within the real estate investment universe, with individual asset selection relegated to the second place in the return composition hierarchy. Our analysis indicates that—in the majority of cases—a residential property's price can be predicted within a 20% margin solely based on its county, which validates the importance of county-level selection.

Real estate portfolio management can be enhanced by a proactive, "top-down" market selection approach highlighting locations with potential for above-market return profiles. "Bottom-up" individual investment-level strategies can be supplemented rather than replaced with these analyses. Knowledge of high-potential target counties within the investable universe can ultimately be an alpha enhancer in a competitive investment market.

But there are more than 3,000 counties in the US, so where shall we start?

Our goal is to go beyond trailing signals and momentum-driven strategies and to attempt to create forward-looking signals that may present above-average returns in future years. Specifically, can individual- or family-level wealth inflows predict residential real estate price patterns?

RETHINKING POPULATION DATA

Our primary model in this analysis can be characterized as the gentrification of a neighborhood, which is defined as the net wealth inflow relative to the wealth of the neighborhood. We propose an NGI of a neighborhood and use it to compare different neighborhoods.

The NGI is calculated as the difference between the estimated wealth excess of the in-migration and out-migration of the focal county. Counties with a high NGI have positive wealth inflows, meaning that when we estimate the wealth of in-migrants and out-migrants, there is a net increase. And vice versa for negative NGIs. We consider our NGI as a a proxy for gentrification measure.

Obviously, NGI does not fully explain property price changes. In our dataset of 630 US counties, the NGI variation from 2010 to 2020 only weakly correlates with residential price change ($r = 0.293$), which has a marginally higher correlation compared to a simple demographic indicator such as a population increase estimate ($r = 0.177$). However, population changes are measured at a very low cadence (typically, once a decade) and cannot reliably be predictive. NGI, in contrast, can be measured quarterly. Moreover, we report a statistical connection between NGI and property price increase, which indicates a predictive power that NGI has on prices. While NGI is not yet fully studied, our first results look promising.

County-level housing supply can often be inelastic, which we assumed would increase prices as new residents bid up the existing real estate inventory. As expected, population growth is more correlated with residential real estate prices in high-barrier-to-entry markets that are characterized by low growth in new housing units.

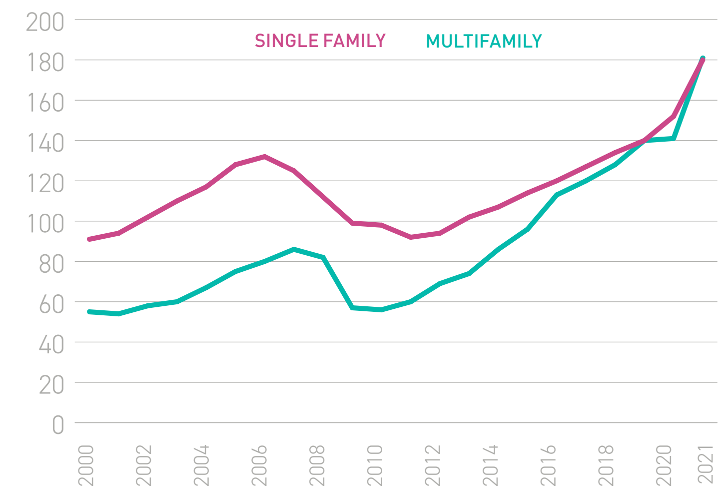
However, as we analyzed the NGI of these counties based on the bifurcation between high- and low-barrier-to-entry counties, counterintuitively, we saw that the NGI had a stronger relationship with low-barrier-to-entry markets than high-barrier-to-entry markets (if we consider only low-barrier-to-entry counties, the correlation goes up from 0.293 to 0.456).

There are several potential explanations for this dynamic. Firstly, in supply-constrained markets, the utility of adding the wealth dimension to the net population growth may be reduced, because the primary effect will be on adding incremental demand, irrespective of wealth levels. Secondly, elastic supply markets may be lower-cost markets, which are more sensitive to incremental wealth inflows, because the economic effect of this net wealth addition might be more significant throughout the county. To illustrate these dynamics, we have analyzed two counties representing strictly divergent trends: Pinal County, AZ and Cape May County, NJ.

Our empirical study focuses on the statistical connection between NGI and single-family price dynamics, primarily because we have a large number of single-family transactions that ensure statistical significance. We claim that our results are likely to be valid for the multifamily asset class as well. While there are two orders of magnitude fewer multifamily transactions than single-family transactions (at the per-county per-year level), multifamily prices and single family prices highly correlate ($r = 0.9$). *Exhibit 1* illustrates of the similarity of median prices per square foot in the multifamily and single-family markets nationwide.

Knowledge of high-potential target counties within the investable universe can ultimately be an alpha enhancer in a competitive investment market.

EXHIBIT 1: MEDIAN PRICE PER SQUARE FOOT, MULTIFAMILY AND SINGLE-FAMILY



The NGI is calculated as the difference between the estimated wealth excess of the in-migration and out-migration of the focal county.

WHAT IS A NORMALIZED GENTRIFICATION INDEX?

Intuitively, the gentrification of a neighborhood depends on both inbound and outbound migration; namely, a neighborhood is gentrifying if higher-income people are moving into it and/or lower-income people are moving out. The notions of "richer" and "poorer," for the sake of this article, are relative to the average wealth of the neighborhood's residents.

Gentrification is cyclic: while richer people are moving in and becoming residents, the average level of wealth of the neighborhood residents rises until it becomes high enough so that people moving in are no longer richer than the average, and then the opposite process of "de-gentrification" starts until the average wealth goes down, for the gentrification to pick up again.

We measure gentrification by utilizing the notion of "wealth excess" of a household i with respect to the average wealth $\widehat{W}_n$ of a household in neighborhood n. We define the wealth excess of household i in neighborhood n as $WE_{i,n} = S(W_i - \widehat{W}_n)$, where W_i is an estimated wealth of i, and S is a smoothing function that levels down extreme differences between W_i and $\widehat{W}_n$. Smoothing is necessary to take care of edge cases and data issues as explained below. We highlight that $WE_{i,n}$ might be negative if i is poorer than the average in n.

We use a propriety algorithm to estimate household wealth, which bases our estimation on home values, as homeownership is typically the primary source of wealth for a family. For the purposes of this analysis, if we could not obtain the value of a family's home, we approximate it with an average home value in the same neighborhood.

For each neighborhood n and a certain time period (typically, one year), we define an incoming wealth excess as the sum of wealth excesses of families moving into the neighborhood: $WE_n^{in} = \sum_i^{k_n^{in}} WE_{i,n}$, where k_n^{in} is the number of families that moved into the neighborhood over the year. Analogously, wealth excess of families moving out of the neighborhood is defined as $WE_n^{out} = \sum_i^{k_n^{out}} WE_{i,n}$, where k_n^{out} is the number of families that moved out of the neighborhood over the year. The gentrification index of the neighborhood is then defined as the difference between the incoming wealth excess and the outgoing wealth excess: $GI_n = WE_n^{in} - WE_n^{out}$.

Because neighborhoods are different in size and overall wealth, GI values of neighborhoods are not necessarily on the same scale and therefore cannot be used for neighborhood comparisons. To enable such comparisons, we normalize the GI of a neighborhood by the collective wealth WE_n of the neighborhood's residents. We then define the NGI of neighborhood n as: $NGI_n = GI_n / S(W_n)$ Note that we apply the same smoothing function S to W_n, to ensure that both the numerator and the denominator are consistent with each other.

As mentioned, the NGI of a neighborhood will be positive if many richer families are moving in, and many poorer families are moving out. It will be around zero if few families are moving in and out, or those moving families are of average wealth. The index will be negative if many poorer families are moving in, and many richer families are moving out. Note that if the smoothing function S was not applied, the NGI value might have been primarily influenced by very few wealth excess values $WE_{i,n}$ if they are truly outstanding. For example, if the wealth of a family happens to be estimated at three orders of magnitude compared to the average wealth of a neighborhood's residents, then this family's wealth excess would be the dominant factor in the neighborhood's NGI, which is obviously an undesired outcome.

DATASET

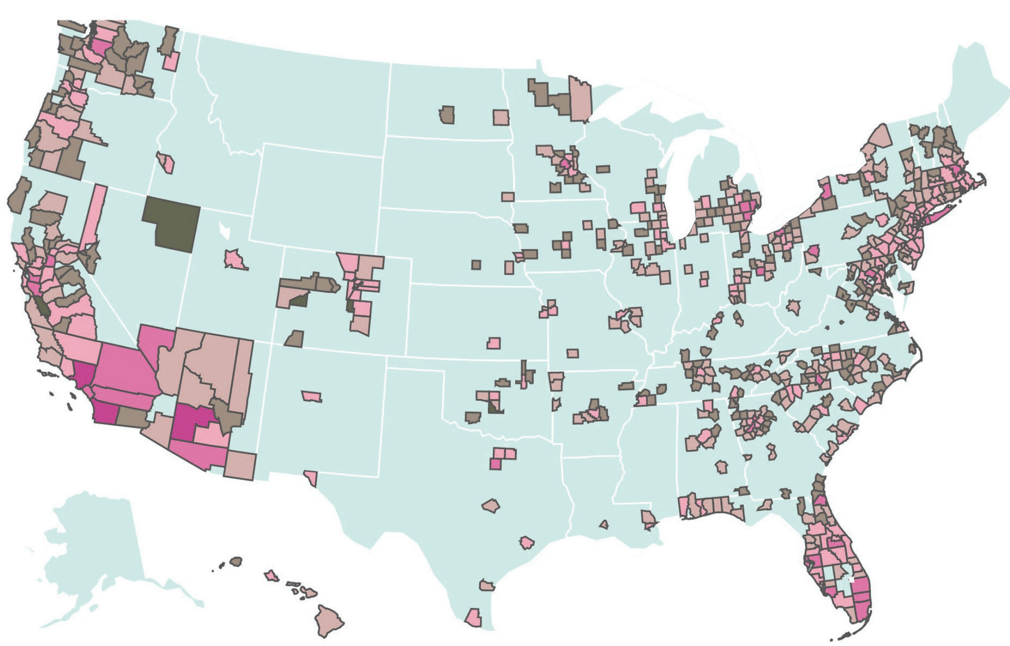
NGI can be defined for "neighborhoods" at any level of granularity, such as MSAs, zip codes, and census tracts. In this work, we analyze NGIs at the coarse level of counties.

Out of 3,243 US counties and county equivalents, we select only the counties for which we have enough assessed property value data, transaction price data, and relocation data. We also make sure that assessed property values are not too low when averaged over all properties in a county (low average values per square foot might be due to a data artifact) and that property values and transaction prices would be in the same ballpark (very large difference between them would be caused by another data artifact). The selection process resulted in a dataset with 630 counties, covering the majority of the largest US counties that are also attractive destinations for investment capital. Out of the 398 largest US counties reported by the World Population Review,[3] 334 counties are present in our dataset. Those that are not present are either located in non-disclosure states (so they lack transaction price data) or their data is only partially populated in public data sources. For example, assessed property value data of Cook County, IL (the second largest US county) is populated only from 2017. *Exhibit 2* shows our dataset of 630 counties displayed on the map, where the color represents the size of the county in terms of the number of residential properties.

Our relocation dataset consists of 14.4M relocation records spread over the 2000-2021 time period. Each record contains the name of a person, their previous address, their new address, and the year of the relocation. Names of people are not used in this research. The relocation dataset was constructed from public data sources (property sale transactions and property tax records) using a proprietary record-matching algorithm. Each address is associated with the name of the county it belongs to.

Our relocation dataset is only a subset of all US relocations. However, it does not show a selection bias: on the 630 counties, the Pearson correlation between the number of relocations into a county and the size of the county (measured in the number of residential properties) is high (r = 0.855). The correlation between the number of relocations out of a county and the size of the county is even higher (r = 0.94).

EXHIBIT 2: OUR DATASET OF 630 COUNTIES. THE COLOR REPRESENTS THE COUNTY SIZE AS MEASURED BY THE NUMBER OF RESIDENTIAL PROPERTIES



RESULTS

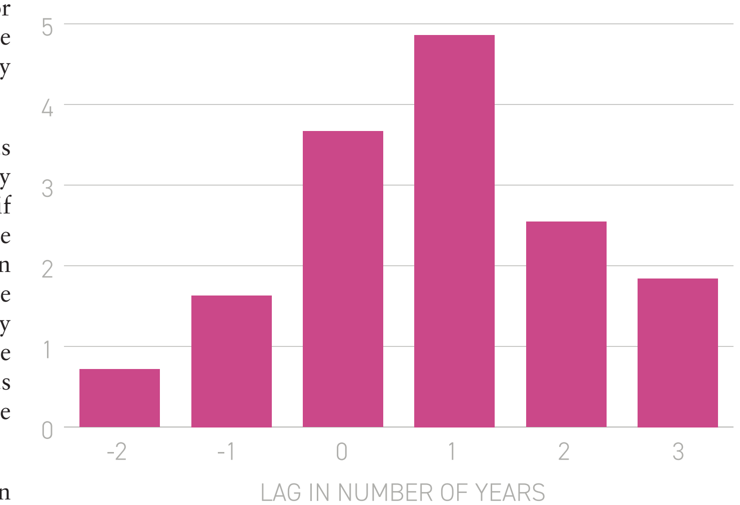
In this paper, we do not attempt to identify the causal effect that the NGI of counties might have on county development. While we leave that for future work, we focus here on measuring correlations, which would indicate statistical connections between NGI and county characteristics.

More specifically, our study aims at establishing a connection between NGI and single-family residential property price variation. For each county in our dataset, we built two time series: the yearly values of a county's NGI, and the yearly relative change of median property prices in the county. While the former time series is quite self-explanatory, we next elaborate on the latter. For county c and each pair of consecutive years $t-1$ and t, we calculate the median price of transactions P^c_{t-1} and P^c_t, and establish a yearly price change as $\Delta P_t = (P^c_t - P^c_{t-1})/P^c_{t-1}$.

Analogously, we establish a nationwide median price change as $\Delta P^N_t = (P^N_t - P^N_{t-1})/P^N_{t-1}$. The yearly relative change of median property prices for county c is then defined as $\Delta P^c_t - \Delta P^N_t$. For example, if prices in county c rose by 10% from one year to the next, while the nationwide prices rose by 18%, then the relative price growth in county c was 10% - 18% = -8%, that is, the growth was negative relative to the nationwide growth. If, however, the prices in county c rose by 2% from one year to the next, while the nationwide prices fell by 3%, then the relative price growth in county c was 2% - (-3%) = 5%, so the relative growth may be larger than the absolute growth.

For each county in our dataset, we computed the Pearson correlation between the two time series, and counted the number of counties for which the correlation was strictly positive (r > 0.5) as well as the number of counties for which it was strictly negative (r < -0.5). We then report on the ratio between those two numbers. We repeat this process for cases when the two time series lag relative to each other, both positively and negatively. A positive lag of 1 means that the NGI time series starts one year earlier than the price change time series, and also ends one year earlier. A negative lag of 1 means that the NGI time series starts one year later than the price change time series and also ends one year later. Lags of -2, 2, and 3 are defined analogously *(Exhibit 3).*

EXHIBIT 3: RATIO OF NUMBER OF COUNTIES WITH POSITIVELY TO NEGATIVELY CORRELATED NGI SCORES AND RELATIVE MEDIAN PROPERTY PRICE CHANGES



As we can see, for a lag of 0 (i.e., both time series start and end in the same year), there are 3.7 times more strictly positively correlated time series than strictly negatively correlated ones. This implies that property prices fluctuate similarly to the NGI values for 3.7 times more counties than those for which the prices fluctuate differently from the NGI values.

Remarkably, for a lag of 1 (i.e., NGI values precede price changes by one year), this ratio grows to 4.9: property prices follow NGI values almost five times more often than they don't follow NGI values. The growth of this ratio from 3.7 to 4.9 indicates some predictive power of the NGI.

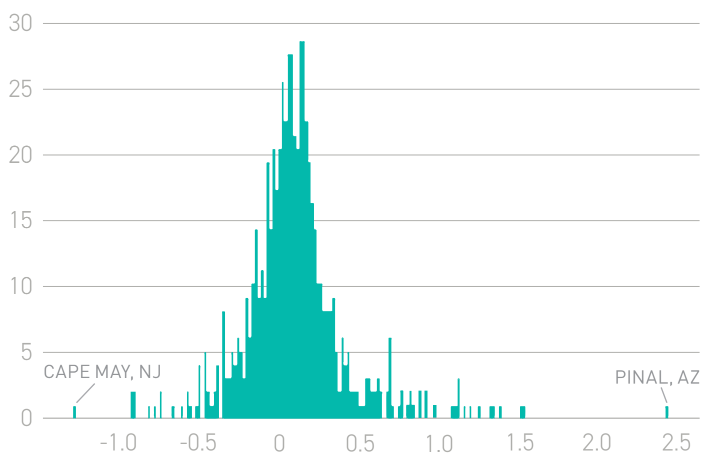
For a lag of two years, the ratio drops significantly to 2.5, that is, although we can still see more counties in which prices follow NGIs two years later, the number of such counties is not much larger than the number of counties in which prices do not follow NGIs. For a lag of three years, the ratio falls even more, down to 1.8. Remarkably, it is still above 1 (i.e., there are more counties in which prices follow NGIs even three years after).

Negative lags (i.e., price changes precede NGIs by one or two years) show a different picture: while for a lag of -1 there are insignificantly more counties where NGIs follow prices than those where NGIs do not (the ratio is 1.6), for a lag of -2 this ratio drops to 0.7, which means that there are more counties for which NGIs do not follow prices than those for which NGIs do. This implies that property price changes have little to no predictive power over NGI values.

CASE STUDIES

Given the selected 630 counties, the histogram of their NGI values (averaged over the years) is reported below:

EXHIBIT 4: HISTOGRAM OF NGI AVERAGES FOR 630 US COUNTIES



As we can see, the majority of average NGI values fall around zero (with a mean of 0.09 and a standard deviation of 0.34), while some of the counties are truly outstanding. Specifically, Pinal County of Arizona has exceptionally high NGI values (with an average of 2.4), while Cape May County in New Jersey has very low NGI values (with an average of -1.3).

Yearly NGI values of Pinal County, AZ are shown on the top panel in *Exhibit 5*. We can see that they are consistently positive, with two peaks in 2009 and 2017. The bottom panel illustrates the relocation numbers, in and out of Pinal County (positive numbers represent inbound traffic, whereas negative numbers correspond to outbound traffic). We show the relocation numbers relative to the inbound relocation in 2008.

Arizona has exceptionally high NGI values (with an average of 2.4), while Cape May County in New Jersey has very low NGI values (with an average of -1.3).

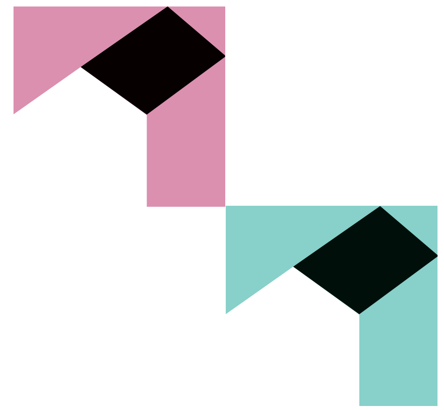
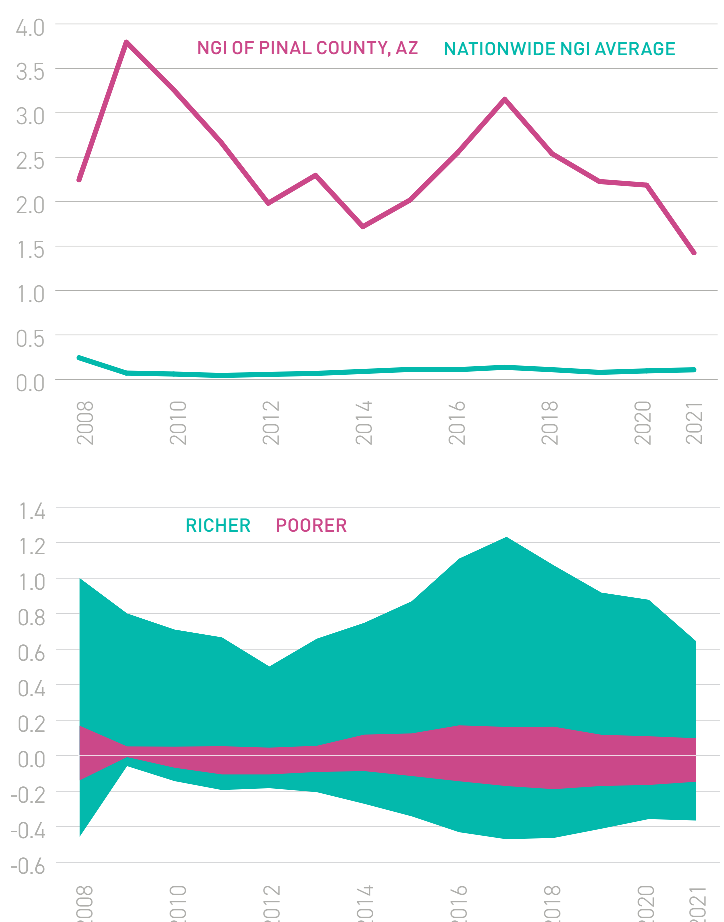


EXHIBIT 5: PINAL COUNTY, AZ: NGI AND THE RELATIVE NUMBER OF RICHER AND POORER PEOPLE MOVING IN AND OUT

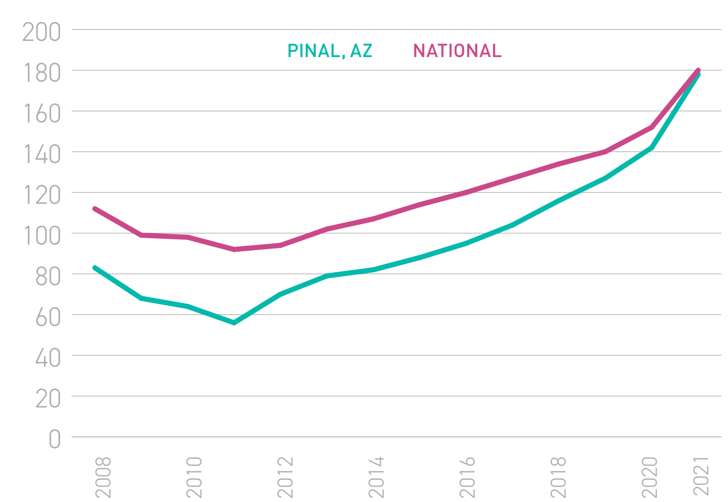


From the bottom panel in *Exhibit 5*, it is clear that the inbound traffic is substantially stronger relative to the outbound traffic, which is primarily defined by the richer cohort: the number of richer people relocating into Pinal County is significantly greater than the number of richer people relocating out of it. As for the poorer population, the trend is reversed: the number of poorer people relocating into Pinal County is slightly smaller than the number of poorer people relocating out of it. This is consistent with our intuition on the factors that would make NGI values high. The majority of high-end inbound traffic comes from the nearby city of Phoenix, followed by California and (with a substantial gap) by the states of Washington and Colorado. The high-end outbound traffic is mostly within Arizona.

The peak in 2009 is explained by an almost non-existent outbound traffic. The peak in 2017 is associated with a very strong inbound traffic, specifically among the richer population. A certain decline of NGI from 2017 to 2021 is likely caused by an overall decline in relocations. We note, however, that there is no direct connection between the number of relocations and the value of NGI, because NGI takes into account the wealth excess those relocations bring in and out of the county. Specifically, if fewer people move in but they bring more capital, the NGI values may be higher than when more people move in, but they bring less capital.

In terms of residential property prices, we can see a very healthy growth starting from 2011, as shown in *Exhibit 6*.

EXHIBIT 6: PINAL COUNTY, AZ: MEDIAN RESIDENTIAL PROPERTY PRICES PER SQUARE FOOT



While on the nationwide level property prices doubled since 2011, in Pinal County they trebled, and reached the national average pricing in 2021. Note that the NGI time series of Pinal County does not correlate with its property price time series (r = -0.4), however, exceptionally high NGI values suggest a strong gentrification, which is likely to lead to a high appreciation.

As we could expect, Cape May County, NJ behaves very differently from Pinal County, AZ. Cape May's NGI values are overly negative (upper *Exhibit 7* panel), and this is due to a very strong inbound traffic of people who are less wealthy than Cape May residents (bottom *Exhibit 7* panel). Cape May is a luxurious resort community on the Southern coastline of NJ, with home prices being significantly above the national medians *Exhibit 8*. With the majority of inbound traffic coming from the nearby counties of Pennsylvania and New Jersey, Cape May's wealth is just greater than that of most of its neighbors and, thus, the county cannot be further gentrified.

EXHIBIT 7: CAPE MAY COUNTY, NJ: NGI AND THE RELATIVE NUMBER OF RICHER AND POORER PEOPLE MOVING IN AND OUT

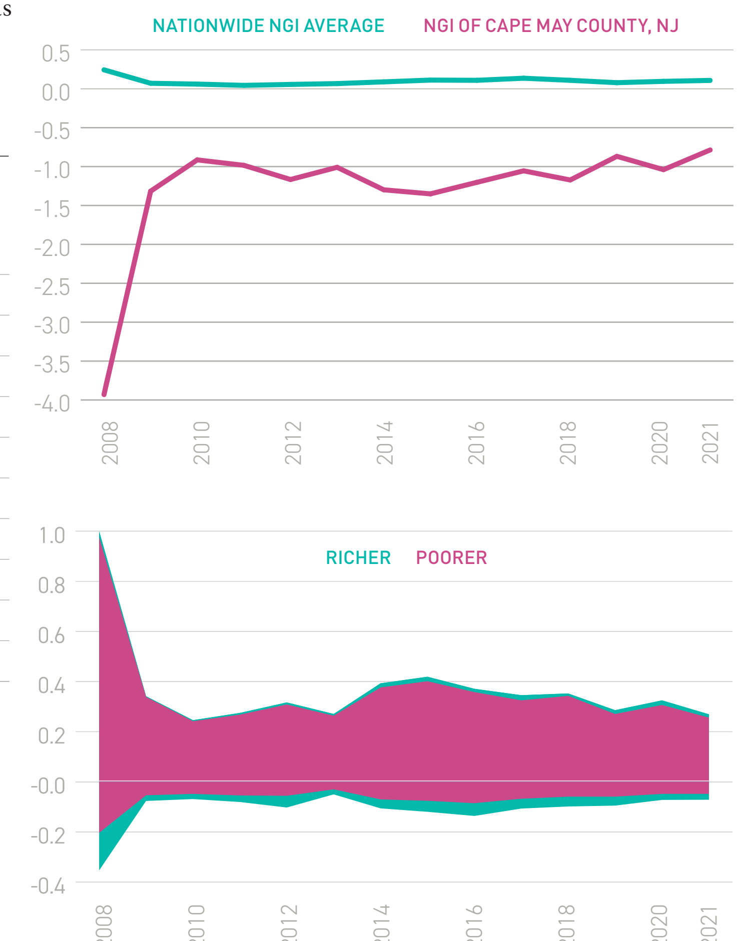
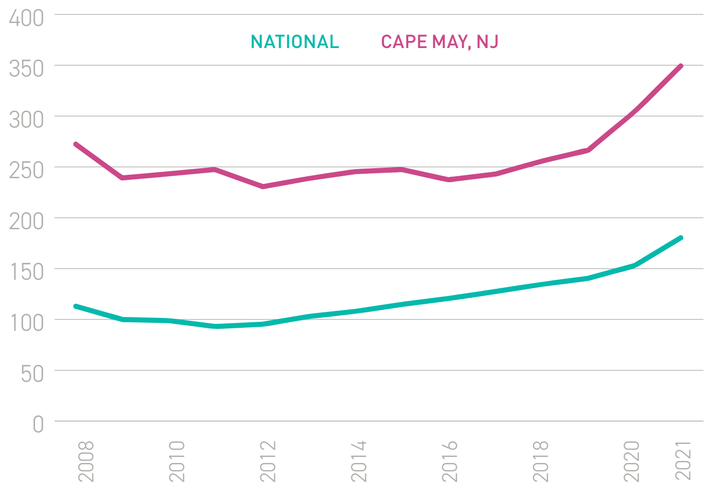


EXHIBIT 8: CAPE MAY COUNTY, NJ: MEDIAN RESIDENTIAL PROPERTY PRICES PER SQUARE FOOT



The lack of gentrification ultimately affects the home price dynamics. Overall, the prices rise in Cape May slower than the nationwide average. Nevertheless, they kept relatively unchanged during the 2009-2011 recession (when nationwide prices slipped), and then rose faster in 2020 during the pandemic. Their counter-cyclical behavior is in compliance with the resort, get-away nature of the county.

THE FUTURE OF GENTRIFICATION RESEARCH

Our proposed NGI provides a useful tool for real estate investment managers to optimize their investment decisions. National population and income levels can obfuscate significant variation between counties within the US, which offer abundant opportunities to identify and take advantage of county-level trends.

Just as prudent multifamily owners underwrite the creditworthiness of a potential renter (as opposed to immediately accepting), migration patterns can be subject to comparable financial underwriting of households who change counties. Such an analysis can impact our understanding of the materiality of each move and its potential influence on the real estate market of a given county.

Future research on this topic may include a deeper analysis of explanations for why the NGI seems to have predictive power, and the variation of such predictions across different market characteristics, such as differences between in-state and out-of-state moves, and comparing NGI values with real estate pricing forecasts.

ABOUT THE AUTHORS

Ron Bekkerman is a Strategic Advisor and a former Chief Technology Officer of Cherre, a leading real estate data platform. Donal Warde is an Entrepreneur in Residence at Tenney 110, a PropTech venture studio, and worked in private equity real estate for several years. Maxime C. Cohen is the Scale AI Chair Professor of Retail and Operations Management and Director of Research at McGill University.

NOTES

[1] CBRE. "Steady Investment Activity Shows Commercial Real Estate Resilience," CBRE Insights, accessed April 24, 2023, https://www.cbre.com/insights/viewpoints/steady-investment-activity-shows-commercial-real-estate-resilience.

[2] Brinson, Gary P., L. Randolph Hood, and Gilbert L. Beebower. "Determinants of Portfolio Performance." Financial Analysts Journal 51, no. 1 (January/February 1995): 133-138. https://www.cfainstitute.org/en/research/financial-analysts-journal/1995/determinants-of-portfolio-performance.

[3] World Population Review. "List of Counties in the United States." Accessed April 24, 2023. https://worldpopulationreview.com/us-counties.

REVIEWER RESPONSE

Based on evidence that allocation decisions represent the primary driver of return in mixed-asset portfolios, the authors put forth a top-down approach to achieving outperformance in multifamily investment, given the strong (0.90) correlation between home prices and those of multifamily assets. Getting to this involved the creation of a database with two primary elements: annual changes in the price of single-family homes in US counties from 2008 to 2021 compared with an index that measures changes in the wealth of a county. Their wealth index, which they call a Normalized Gentrification Index or NGI, is calculated by comparing the wealth of people moving into and out of a county with that of current residents. The authors back into a county's wealth based on the assumption that home values are the primary source of wealth for the typical household. While this analysis uses county data, they posit that their methodology can be applied to any geography.

The authors find only a weak correlation between wealth inflows and residential price changes, with an *r* of 0.293, but this well exceeds the correlation between population growth and residential price change of 0.177. That said, they did see utility in the use of the NGI in predicting home price movements, especially when lagged a year. Then "property prices follow NGI values almost five times more often than they don't follow NGI values."

This is a provocative paper on many levels, including the use of the term gentrification in their title and their index. That highly charged term aside, investors are indeed seeking ways to use data science to achieve outperformance and the potential for applying readily available data on home prices and some proxy for growth in a location (be it population increases, median household income gains, or the author's net wealth index) is high.

– Mary Ludgin, PhD
Senior Managing Director, Global Head Investment Research, Heitman

Member, Summit Journal Editorial Board

National population and income levels can obfuscate significant variation between counties within the US, which offer abundant opportunities to identify and take advantage of county-level trends.

THE FUTURE IS...EUROPEAN?

Brian Klinksiek
Global Head of Research & Strategy
LaSalle Investment Management

Even as the US has exported trends that have transformed global property markets, several key trends originating in Europe are likely to shape property in the US and globally in the years ahead.

The opportunity to take ideas and best practices from one part of the world and implement them in another is, alongside diversification benefits, one of the great advantages of investing real estate capital across borders. Cyclical and secular themes tend to go global, albeit with leads and lags. Having a global perspective can give an investor an early-mover advantage over other players.

Historically, a common (but not exclusive) pattern has been for concepts to debut in US before emerging elsewhere. This was mirrored in my own career trajectory, which was shaped by the export of American business models. I moved from Chicago to London in 2009, and later to Hong Kong, to help my colleagues implement strategies in sectors that were established in the US but had been nascent elsewhere, such as multifamily apartments and self-storage. LaSalle has long tracked these differences in sector institutionalization and maturity on its "Going Mainstream" framework.[1]

The flow of ideas from the US continues, as evidenced by its leading example in the maturation of bourgeoning sectors, such as life sciences and single-family rental. But we are also seeing a growing "reverse" flow, as several key trends that are especially advanced in Europe are likely to shape property in the US and globally in the years ahead. For example, sustainability standards and asset repurposing are arguably trends for which it makes sense to look to the European example for clues on how they might play out in the US.

DO AS THE AMERICANS DO—A WINNING STRATEGY?

American leadership in global property trends goes back at least to the mid-1990s, when a cohort of investment bankers moved from New York to Europe to help clean up non-performing loans from European bank balance sheets. Aided by European political integration, they kicked off a process of breaking down the barriers between once siloed domestic property markets. This is well chronicled by my friend Andrea Carpenter in her book, *High Rise and Fall: The Making of the European Real Estate Industry*. Many of the leading investment managers in Europe, including my firm LaSalle, have roots in this story.

A common thread running through many of the real estate ideas imported to Europe from the US is the diversification of the investable universe into new property types. Build-to-rent (BTR) residential and purpose-built student accommodation (PBSA) are European terms for concepts that originated in America. Investors who took early positions in these sectors (and other imports) in Europe were rewarded for being leaders.

Some secular trends in the US have also been harbingers for shifts in Europe. Take the growth of e-commerce. Americans' adoption of online shopping took off earlier than in Continental Europe. This helped explain the sustained liftoff of long-stagnant logistics rent growth in the US around 2015, even as industrial rents in Europe remained flat for years longer (they only surged around 2021).[2] With so many examples to point to, it seems that a great way to succeed in European property investing has been to import ideas from America.[3]

AMERICA'S FUTURE LOOKING A LITTLE MORE EUROPEAN

For a range of reasons, including historical and political factors, there now appear to be several themes on which European property markets are leading those in North America. Investors in the US real estate looking for resilient investment strategies would be wise to take note of this "counter flow" of potential investable themes. There are at least four important examples of this:

#1: Regulation and Pricing of Carbon Transition Risk

Europe leads in the *regulation and pricing of carbon transition risks* in real estate. Green Street Advisors has developed a "green regulation score" that is intended to capture the aggregate degree of government regulation of building emissions. By this measure, the most tightly regulated US cities (New York City and Washington, DC) are roughly tied with the least regulated major European country (Italy). The highest score of any country (the Netherlands) is more than four times higher than the GDP-weighted US average.

The federal structure of the US government, along with significant ideological divisions, means that significant variation in the degree of green regulation will likely persist at the state and city level. But policies such as New York City's Local Law 97, which taxes building carbon emissions, may be a sign of things to come for many US metros.

But regulation is only one piece of the overall "green premium" topic. Greater tenant and investor discernment between buildings with different green credentials in Europe is part and parcel of higher sustainability awareness. Europe leads in the transparency of green factors, as illustrated by divergences in the sustainability transparency sub-scores in the JLL/LaSalle Global Real Estate Transparency Index (GRETI).[4] This means that, at present, we see a deeper and broader opportunity for brown-to-green strategies in Europe than the US. But strategies that take advantage of green premiums should be expected to become more important in many US markets in the years ahead.

Greater tenant and investor discernment between buildings with different green credentials in Europe is part and parcel of higher sustainability awareness.

#2: Climate-Resistant Infrastructure

Greater European awareness of climate mitigation also carries over into differing progress on climate adaptation. As noted in a 2022 joint LaSalle and Urban Land Institute (ULI) study, "How to Choose, Use, and Better Understand Climate-Risk Analytics"[5], investors are grappling with a deluge of new data on physical climate risks. These data highlight a large number of cities facing risk from rising sea levels, especially when factoring in the possibility of storm surge. Usefully, European countries have a long history of building infrastructure protecting cities from storms and sea levels.

For example, the Dutch have been re-shaping their coastline and building levees from at least the seventeenth century. Their expertise has grown into world-leading expertise in coping with the interface of land and sea. In the late 1970s, Dutch companies helped the UK build the Thames Barrier, which today prevents high tides from causing flooding in Central London.

While climate data providers do not currently do a good job of factoring in the benefits of climate-resilient infrastructure, investors must consider the impact of this infrastructure on risk. A property located close to sea level but protected by levees and barriers is a different proposition than a wholly unprotected one. There are many US cities and towns which will face more frequent and severe flooding events if they do not build infrastructure like the Netherlands and other European countries have long done.

#3: Repurposing Assets and Mixing Space Uses

Our tracking of the post-pandemic balance of in-person versus virtual interaction points to a robust resumption of social activities such as dining out, as compared to a much weaker recovery of daily office attendance in many markets. To be successful, cities will require a vibrant mixture of live, work, and play. The monocultures of office space that characterize many parts of US downtowns are not likely to entice people back into cities. In contrast to the US, Europe has a long and deep history of repurposing assets from one use to another, and a tradition of mixing uses.

A recent and highly salient example is the sharp reduction in office vacancy rate in Amsterdam in the 2010s, as redundant office buildings were converted into housing. But those looking for use conversion to be a panacea for surging office market vacancy in the US are likely to be disappointed. Differences in planning systems and physical building footprints in Europe versus the US constrain the feasibility of change-of-use projects. However, it is likely that repurposing plays will represent an increasingly important strategy in North America.

#4: Interventionist Policies

It is a widely held stereotype that European economies are highly regulated, while the US operates on a *laissez faire* model. But recent developments suggest that American policy has become more interventionist, underscoring that, as in Europe, investors are wise to consider the property market implications of policy shifts.

The recent trio of major Federal policy bills—the Infrastructure Act, the CHIPS Act, and the Inflation Reduction Act—feel almost like French-style *dirigisme* in their scope and impact. Each has the potential to drive the location and path of economic activity, and thus influence real estate demand. In a narrower real estate context, the regulation of residential rents, a long-standing feature of many European housing markets, has increased in prevalence on the US. The impact of policy changes should never be overlooked.

Monitoring the strong, cross-border flow of ideas is likely to improve the chances of success for cross-border investors. Macro trends, cyclical patterns, and operating models tend to emerge in one part of the world, and yet eventually find applicability in others. The US has often long been at the forefront of property market trends, but there are increasingly evident themes which seem likely to flow the other way. Globally minded investors, and the global investment managers that serve them, should be strongly positioned to capitalize on these dynamics.

In contrast to the US, Europe has a long and deep history of repurposing assets from one use to another, and a tradition of mixing uses.

ABOUT THE AUTHOR

Brian Klinksiek is Global Head of Research & Strategy for LaSalle Investment Management, one of the world's leading real estate investment managers across a wide range of investment strategies. Brian's colleagues Eduardo Gorab, Rich Kleinman, Daniel Mahoney, and Julie Manning also contributed to this article.

NOTES

[1] "Going Mainstream: Niche Property Types and Their Path to Market Acceptance," LaSalle Investment Management, February 2016.

[2] The UK, like the US, was also a leader in e-commerce adoption, and especially so in the emergence of online grocery delivery models. Logistics rental growth spiked in the UK after it did in the US, but before the rest of Europe.

[3] This is not to say that ideas flowed exclusively from the US to Europe. Indeed, US real estate industry standards have taken cues from the UK's transparent performance measurement and its dynamic valuation practice.

[4] Global Real Estate Transparency Index, JLL and LaSalle, 2002.

[5] "How to choose, use and better understand climate-risk analytics," Urban Land Institute and LaSalle Investment Management, September 2022.

REVIEWER RESPONSE

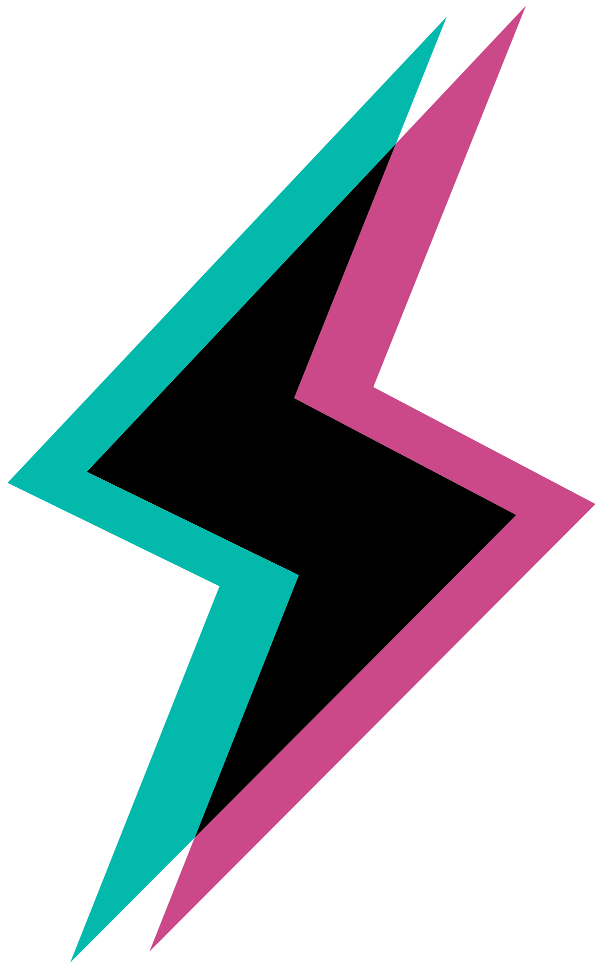
The author begins by acknowledging that 'sticks and bricks' innovation typically originates in the US and exports globally, providing astute investors with an investment and diversification edge. From his global perspective, perched in London, the author then observes that there are four "reverse themes" from Europe that might impact US real estate markets. While the US real estate exports are capitalistic in origin – how to innovate and make more money – the reverse themes from Europe originate from different sources. Both #1: Regulation and Pricing of Carbon Transition Risk and #4: Interventionist Policies are induced by regulation. These have succeeded in Europe, but the author acknowledges that fractured politics in the US may inhibit uniform implementation across states. Another key driver for both themes is "greater tenant and investor discernment" which – from this reviewer's perspective – is in its nascent stages in the US markets.

Theme #3: Repurposing Assets and Mixing Space Uses is interesting. Yes, Europe has a deep history of repurposing assets, but this is driven to a certain degree by availability of space. The analog in the US is most likely limited to dense urban settings, as opposed to large swathes of the country where space is abundant and the real estate calculus different. Lastly, Theme #2: Climate-Resistant Infrastructure is the one that might get the most attention in the US markets. This is not because the US real estate community is jumping on the climate change / ESG bandwagon, but rather because the increasing cost to the physical asset – both in terms of weather-related capex costs and unsustainably increasing insurance costs – is impacting returns. Anything that hits the bottom line surely deserves attention! Overall, the article provides an insightful look at key themes across Europe that may impact US real estate and is indeed useful to the astute investor looking to be at the forefront of change.

– Thomas Brown
Partner,
LGT Capital Partners

Member, Summit Journal
Editorial Board

CULTURE SHOCK



AFIRE ESG Committee

AFIRE's ESG Committee outlines the challenge and importance of translating ESG practices and policies across borders—especially with how much progress needs to be made in the US.

While environmental, social, and governance (ESG) goalsetting and performance is now ubiquitous globally, the state of USG standardization and reporting in the US lags behind Europe and Canada. This inconsistency leaves investors with unique diligence and measurement challenges and can potentially cause US property to become too obsolete for global capital.

In addition to outlining the brief history of this imbalance, this article details the vision of AFIRE's nascent ESG Committee, and is a call to action for investors and ESG experts to eschew the political noise surrounding ESG performance to advance standards that serve communities, investors, and the environment.

ESG IN THE US

ESG in the US departs from other comparable economies enough to create some culture shock for non-US-based investors—similar to the pitfalls of translating terminology (what's the "American" word for SFDR?), measurement systems (how do you measure success in carbon reduction or reporting compliance?), and cultural norms (why does ESG matter to your community?).

Translating ESG to the US is a clear opportunity to improve the bottom-line while increasing sustainability. This is the time for global investors to lead the way beyond their own borders.

Environmental alarms triggered by climate change as well as an energy crisis in Europe prompted by Russia's war on Ukraine, are driving increased demand for ESG investments in the US and abroad. In fact, sustainable investing has grown significantly in recent years, with assets under management in the US reaching $17.1 trillion in 2020, up from $12 trillion in 2018, according to the US SIF Foundation.[1]

Meanwhile, social issues such as diversity, equity, and inclusion (DEI) have also gained prominence in the ESG landscape, especially in the US, as the Black Lives Matter movement spurred companies to examine and improve their diversity and inclusion practices.

Despite a lag in ESG standardization, companies in the US are expanding their efforts. More companies are disclosing their ESG performance to investors and the public while some have explicitly set their own ESG goals. Investors are driving the trend as they pay close attending to companies' commitment to sustainability and social responsibility.

Despite areas of promising growth, there remain structural and systemic challenges to the future of broader ESG engagement in the US—especially with uneven standards across organizations. For example, there is no standardization of ESG reporting, which makes it difficult for investors to compare the ESG performance of different companies. There is also a lack of clear regulations around ESG investing, which can make it difficult for investors to understand what constitutes a truly ESG-focused investment. The US has also experienced the start of a legislative backlash to institutional ESG considerations, as several states have recently introduced or passed legislation to rollback ESG progress.

However, most state-level opposition to ESG standards in the US is a result of momentary political fashion and not aligned with the growing consensus that ESG performance is investment performance. It is therefore crucial for international investors to understand the more structural impediments to ESG if they seek more sustainable investment opportunities.

> Most state-level opposition to ESG standards in the US is a result of momentary political fashion and not aligned with the growing consensus that ESG performance is investment performance.

CHALLENGES TO ESG IN THE US

WEAK REPORTING STANDARDS

Currently, there is no standardized set of ESG reporting requirements that companies must adhere to in the US, which creates inconsistencies in reporting across different companies and industries. Several different sets of ESG reporting standards have been developed by different organizations and initiatives such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD).

While these organizations and initiatives have made significant progress in developing ESG reporting standards, there is still a lack of uniformity. That creates confusion for companies and investors alike. While this is a global issue, it is especially problematic in the US where the regulatory framework is a patchwork of local and state mandates as well.

REGULATORY COMPLEXITY

Firms in the US may face different requirements depending on the state or municipality in which they operate. This differing and overlapping regulations can confuse investors as they evaluate the impact of investments.

For example, some states may require companies to disclose more information about their environmental practices, while others may focus more on social or governance issues. This makes it difficult for investors to assess the overall ESG performance of a company and leads to inconsistencies in reporting.

While there are some regulations in place that require companies to disclose certain ESG-related information, these regulations are not uniform and may vary depending on the industry or the state in which the company operates. Additionally, there is no central regulatory body overseeing ESG reporting in the US, which can lead to inconsistencies in reporting and a lack of accountability.

POLITICAL CLIMATE

ESG in the US is increasingly a point of political contention, complicating efforts to introduce broader ESG standardization and regulation. For example, the Trump administration rolled back a number of environmental regulations, which provided some short-term tax and financial benefits to business with certain practices, but also had a negative impact on companies' environmental risk and the overall state of ESG in the US, such as the recent derailment disaster in East Palestine, Ohio.[2]

Several state lawmakers have attempted to limit the use of ESG factors by proposing bills that prohibit retirement plans, such as 401(k)s, from considering ESG factors in their investment decisions. For example, in 2020, the Department of Labor proposed a rule that would have required retirement plans to choose investments based solely on their financial returns and not take into account non-financial factors such as ESG criteria; however, this rule was later withdrawn by the Biden administration.

Most recently, at least eighteen US states have placed legislative limits on ESG, including limiting their state governments and public dollars from investing with managers with certain ESG policies, with significant implications. As one example, analyst Econsult Solutions Inc. found that Florida's consideration of anti-ESG restrictions could cost taxpayers more than $350 million in municipal bond interest rates, as the selection of bond brokers would be meaningfully limited.[3]

OPPORTUNITIES FOR ESG LEADERSHIP

Both foreign investors and US real estate managers and their partners can help close the gap left by undefined reporting standards, laissez faire regulation, and discordant politics. This sort of concentrated corporate collaboration is often effective and instigating larger political and governmental change, where lawmaker opposition to corporate citizenship will eventually meet the will of its citizenry. Most importantly, this effort should be an ongoing dialogue.

> AFIRE and its partners can fill a void by focusing specifically on the challenge of translating ESG across borders.

ENGAGEMENT

AFIRE is well-positioned as a standard bearer for engagement between foreign investors and US firms. With the recent creation of AFIRE's ESG Committee comes the opportunity to facilitate meaningful discussion around the challenges of ESG integration in the US, and to move that dialogue forward.

While dialogue with individual firms around ESG policies and procedures is accretive to due diligence, targeted engagement alone is unlikely to bring investors and US firms into alignment on ESG. Instead, we believe AFIRE members can utilize the AFIRE network and forum to facilitate a consistent program dedicated to the ESG dialogue and furthering member partnerships and learning. To that end, AFIRE and its partners can fill a void by focusing specifically on the challenge of translating ESG.

STANDARDIZATION

As a means of providing a central resource for ongoing dialogue, the ESG has created a living "Guide to ESG" at afire.org, collecting and sharing high-quality, advanced resources on ESG assessment and implementation.

But this is only the start. It's critical for ESG experts in real estate, especially in the US, to provide a type of "translation service" for foreign investors who do not have a comprehensive understanding of the US investing climate—and for US managers seeking to expand their foundational ESG knowledge and develop institutional ESG programs for prospective investors.

While most available resources are not targeted at solving the translation challenges, there are several organizations investors and managers could consult for further exploration, and for filling in the knowledge (and data) gaps for varied ESG standards:

1. **Sustainability Accounting Standards Board:** Now functioning as part of the International Financial Reporting Standards (IFRS) Foundation, the SASB is a nonprofit organization that provides ESG reporting standards across 77 industries, including real estate and real estate services, to help companies disclose their sustainability risks and opportunities to investors.
2. **Principles for Responsible Investment:** PRI is a global network of investors, supported by the UN, working together to put the organization's six principles of responsible investment into practice. PRI offers guidance and tools for investors to integrate ESG factors into their investment decisions and actively engage with companies to promote ESG practices.
3. **Global Reporting Initiative:** Founded in Boston in 1997, GRI is an independent international organization that helps companies and organizations understand and communicate their sustainability impacts by utilizing the organization's modular system of interconnected "universal, sector, and topic" ESG standards. Organizations typically use the GRI Standards to prepare a sustainability report in accordance with the GRI standards or use selected standards to disclose information for specific users or purposes.
4. **Carbon Disclosure Project:** CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts. Each year, CDP takes the information supplied in its annual reporting process and scores companies and cities based on their journey through disclosure and towards environmental leadership. CDP also offers an independent scoring methodology, which is used to measure corporate and city progress and incentivize action on climate change, forests and water security.
5. **MSCI ESG Research:** MSCI ESG Research provides ESG ratings and analysis on over 8,500 companies worldwide. Institutional investors can use MSCI ESG ratings to evaluate the ESG performance of companies they are considering investing in and to benchmark their portfolios against ESG indices.

Each organization operates under a different model of reporting and performance. For example, as of 2021, the SASB had more than 3,000 signatories employing its standards, whereas the GRI counts more than 40,000 organizations from 160 countries utilizing its standards.

As a further complication: a company may use the SASB standards to identify material ESG issues in their business and markets, use the GRI framework to report on their sustainability impacts, and participate in the CDP to disclose their carbon emissions and climate risks. Similarly, organizations may use the PRI's guidance and tools to integrate ESG factors into their investment decisions, use MSCI ESG ratings to evaluate the ESG performance of their investments, and rely on CDP data to evaluate the carbon footprint of their portfolios.

ESG professionals, as technicians, are typically versed in the intricacies, interconnections, and data expectations of ESG performance and reporting across multiple organizations and sponsors. But on their own, technicians cannot bridge the gap between technical know-how and broader investment decision-making. In this sense, ESG "takes a village," but when villages reach such a large scale—as is the case for the global ESG movement—village communities tend to self-organize into smaller hovels, further complicating the path towards a common language (and standards).

WHAT STATES COULD LOSE IN ADOPTING ANTI-ESG LEGISLATION

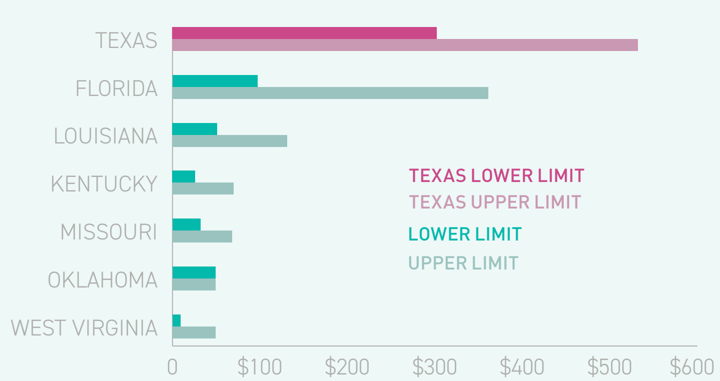
In 2021, the State of Texas ratified a model "Anti-ESG" legislation that prohibited cities from entering into bond agreements with banks and financial firms with strong ESG standards for their own investment strategies. This led to the exit of several municipal bond underwriters from the state, and as a result, Texas issuers likely incurred $300-$500 million in additional interest on the $31.8 billion borrowed during the first eight months following enactment of the legislation.[4]

With this model legislation as reference, Econsult Solutions, an economic consultancy, developed a report in 2023 running scenarios on several states considering similar Anti-ESG legislation: Florida, Louisiana, Kentucky, Missouri, Oklahoma, and West Virginia.[5] That is, if a given state were to implement Texas-style Anti-ESG bond market restrictions on their own municipalities, the costs of borrowing to that state's taxpayers would be $X more than the actual cost of their completed bond deals.

If all six states were to ratify these same laws, *taxpayers would see $700 million in additional costs*—with Florida standing bear more than $360 million on its own.

EXHIBIT 1: ESTIMATED TAXPAYER COSTS OF "ANTI-ESG" BOND DEALS ($ MILLIONS)

Source: Econsult Solutions, Inc.



The AFIRE ESG Committee will identify trends, emerging standards, and employ the resources available to our association—including technology, data, subject matter experts, and insights from adjacent industries and markets.

AN INITIAL STATEMENT OF PURPOSE

AFIRE's ESG Committee does not suggest that one set of standards or reporting criteria are superior to any other, nor is it our aim to be the source of yet another set of ESG standards. Instead, we recognize that the world of global capital and investment, especially in real estate, is at a major turning point; climate crises are rapidly advancing, energy usage and innovation are rapidly evolving, and a new generation of consumers, pensioners, and investors are taking seriously (and fully conscious of) the environmental, social, and political challenges of the coming decades. ESG performance has emerged as a practicable, quantifiable way to monitor how an organization and its investments are performing in the face of this tripartite challenge—but ESG reporting and accountability are already complicated, and not getting any easier.

Against this background, the ESG Committee is acting as a living resource—and providing a growing list of living tools and resources—for both US- and non-US-based investors to translate ESG across borders. We will identify consolidating trends, emerging standards, and employ the resources available to our association—including technology, data, subject matter experts, and insights from adjacent industries and markets—to further enhance the global mission of AFIRE: to become better investors, better leaders, and better global citizens.

To learn more, visit afire.org/esg

NOTES

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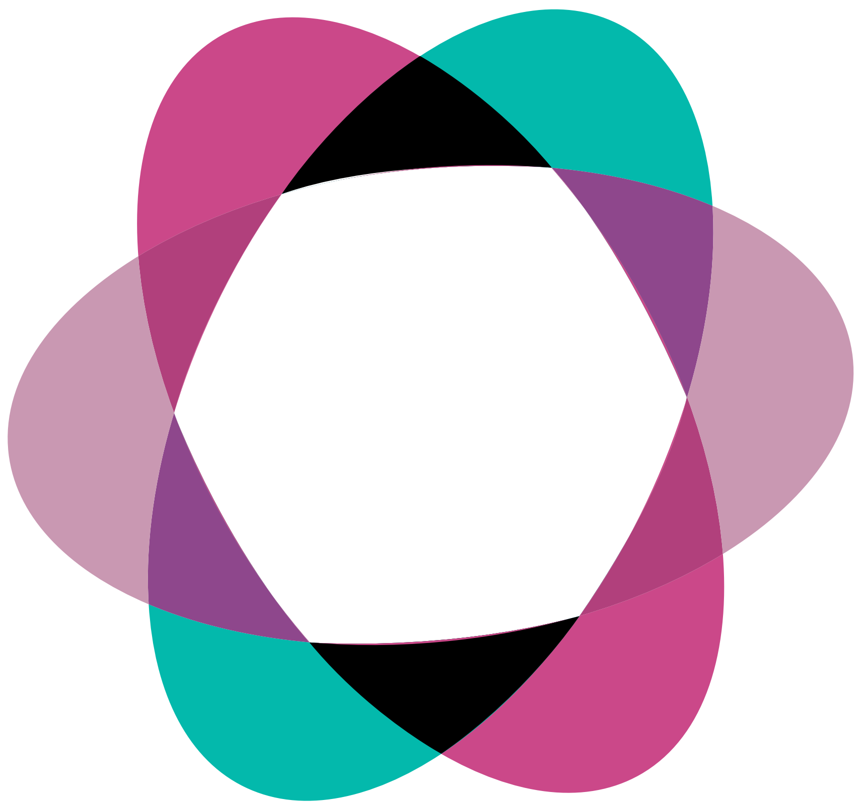
FINE TUNING



Mark Zettl
President, Property Management
JLL

Investors and asset managers that approach buildings with a global reach alongside local expertise help fuel unified property experiences across international portfolios.

Delivering a uniformly wonderful property experience across geographies and cultures can be a daunting endeavor without the right foundation in place. Investors and owners of regional or global commercial real estate portfolios face similar challenges as hotel brands when they seek to build value in their assets, particularly in times of uncertainty: How do they differentiate their properties for their guests and create an enduring appeal while consistently adding value?

For hotels, service is the bedrock of differentiation. Luxury hotelier Ritz-Carlton puts a symbolic $2,000 in every employee's hand, every day, and encourages employees to use that money—or its equivalent in resources—to solve a guest problem without having to send the decision up the managerial flagpole. Embassy Suites, part of the Hilton brand that caters to business travelers, has embraced the "make it right" motto to consistently exceed guest expectations, whether that's more choices for on-site dining or an evening reception that gives travelers the opportunity to mingle.

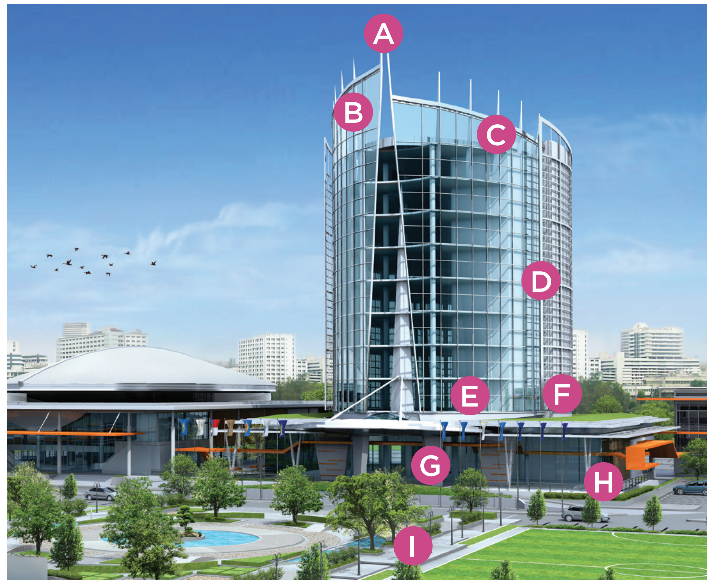
CRE owners also need to drive loyalty through compelling, consistent tenant and visitor experiences, while also making buildings more valuable through sustainable, efficient operations. Shifting to a coordinated property management approach can help deliver in these areas, if the approach is built on the four critical pillars of people, technology, flexibility, and sustainability.

Together, these fundamentals deliver the remarkable and nuanced experience that make a building or environment great.

PEOPLE FIRST, EVERYTHING ELSE SECOND

Having a global portfolio requires being attuned to different cultural expectations, societal shifts, work preferences, language and legislation barriers, and more. Investors and owners must enlist the right mix of people with global and local perspectives to fulfill the promise of their property. That means not only having the right individuals involved, but having the resources and market penetration to bring together unique viewpoints and areas of expertise, particularly where multiple asset types co-exist within a property.

From boots-on-the-ground staffing to behind-the-scenes strategists, the right property management solution employs a people-first mindset that is steeped in intercultural competence. When people are engaged through a hospitality-backed approach, they will be comfortable—and they will want to stay for the long term.



From spaces to places with purpose
Transforming office buildings into destinations

A: Utilize smart building technology
B: Make use of open rooftop space
C: Create opportunities for rooftop revenue
D: Design and offer cross-functional, flexible workspaces
E: Elevate common areas and tenant lounges
F: Encourage health and wellness opportunities
G: Make the lobby a "place of impact"
H: Increase tenant satisfaction with food and beverage amenities
I: Set up and expand outdoor social areas

TECHNOLOGY DRIVES EXPERIENCE

In combination with experienced staff, technology can customize and improve tenant and visitor experiences while also providing new intelligence about property operations. While tenant experience apps expedite visitor registration and offer on-demand services for office and other workers, state-of-the-art technology infrastructure synchronizes systems—from internet access to parking and EV charging stations—to give visitors, tenants, and residents control over their experience across a mixed-use property.

Skilled property managers and innovative technology will ensure continuity in the building and give all people a seamless experience as they navigate every corner of the property.

One game changer is the implementation of an integrated approach across an entire portfolio of properties. When JLL expanded its strategic partnership with Manulife Investment Management in 2023, assuming property management and building operations responsibility for 195 office, industrial, multifamily, and retail properties across Canada, we knew there was a unique opportunity to bring together experts in management, proptech, and sustainability to drive technology innovation portfolio-wide.

First, Manulife Investment Management implemented a standard building operations and tenant experience platform across its entire portfolio. Consistent data collection, experience-based brand building and intelligent decision-making capabilities are just a few of the benefits of the technology, especially when combined with other core property management fundamentals.

By adopting a standard building operations and tenant experience platform across its entire portfolio, Manulife Investment Management will be able to create a data set that will inform a number of strategic pilot projects with JLL Technologies. Together, we are creating a virtual innovation lab involving various assets, with a special emphasis on implementing climate-positive initiatives that can be rolled out portfolio-wide to steer net-zero carbon performance by 2050.

TO STAY OR GO: FLEXIBILITY DRIVES OCCUPANCY DECISIONS

Today's worker preferences are nearly unrecognizable from those reported just three to five years ago, and flexibility is the number-one priority as hybrid working continues to be popular. Global research on flexible space shows that 41% of tenants expect to increase their use of flex space in their near-term business strategy.[1] Now, landlords must decipher the implications and processes for adding flexible space options to their buildings.

Allowing shorter leases, adding traditional flex operator spaces, and white-labeling a flexible space offering are all options that land on the desks of CRE owners and investors. Scaling the right solution across a portfolio must be done quickly and efficiently, as prospective tenants may not wait.

The move to flexibility has also led to more mixed-use properties, which require seamless connectivity among office tenants, consumers, multifamily residents, and the surrounding community. It falls to the property manager to establish and maintain operational, technical, and social connections and consistent experiences even as the property use evolves.

With more novel services in demand across property types, from pop-up shops to pickleball tournaments, property management is evolving into experience management, aligning with property owners and end-users to shape desirable space with a clear purpose that engages the community, creates new revenue streams, and attracts and retains tenants. With no signs of slowing down, the move to flexibility will require a greater emphasis on hospitality, putting the property managers in the drivers' seat for creating destination-worthy spaces.

CARBON CONFUSION

The pressure on building owners and investors to commit to more sustainable building management and construction practices is mounting. In fact, one driving force behind greener buildings continues to be occupiers with net-zero pledges. According to a JLL report, one-third of corporate real estate leaders in Asia Pacific are planning to exit carbon-inefficient buildings by 2025 as sustainability becomes an increasingly decisive factor in leasing criteria.[2]

Most building owners and property managers recognize the need to develop and initiate a net-zero action plan, but a confusing array of regulations, pathways, and metrics—constantly changing and varying from state to state and country to country—are holding up progress. Even establishing the baseline of a single property's current carbon emission is a head-scratching exercise based on guesswork, and it's particularly daunting for an entire portfolio.

Firms with a global mindset, and technological capabilities, have the real-time data, technology, and other resources to devise and implement an informed sustainability and decarbonization strategy, portfolio wide. Once the baseline emissions are established, AI-backed technology can be deployed to ensure that buildings perform at peak efficiency to meet net zero goals.

> Firms with a global mindset and technological capabilities have the real-time data, technology, and other resources to devise and implement an informed sustainability and decarbonization strategy, portfolio-wide.

CENTRALIZED PROPERTY MANAGEMENT BENEFITS THE COMMERCIAL REAL ESTATE INDUSTRY

We are increasingly seeing a shift to coordinated property management as owners and investors seek to gain economies of scale and bolster margins across geographies and asset types.

In 2021, Ivanhoé Cambridge transitioned operations of its Canadian shopping centers to JLL, in part to align and standardize its business model globally and drive sustainable real estate goals.

One of the immediate benefits of this project was the establishment of a Centre of Excellence for Sustainability in CRE, located in Quebec, that would not only support Ivanhoé Cambridge's sustainability efforts, but will help drive transformation throughout the CRE space. With an emphasis on speeding up the adoption of new processes, technologies, research ideas, and projects throughout retail, industrial, office, and multi-family segments, the Centre acts as a pipeline to fast-track development of new research, ideas, startups and scale-ups.

JLL has already leveraged the insights of the Centre with other global clients, including Manulife Investment Management, connecting the dots on collaboration and technology innovation that help drive successful programs.

EVERY PROPERTY CAN MEET THE GOLD STANDARD

Whether a real estate portfolio contains multifamily, office properties, malls, or warehouses, the most important lesson is that buildings must be operated in a way that builds value, especially if that value is derived from a standout experience that people covet.

Bringing hospitality lessons to bear and backing them with the best people, technology, and sustainability solutions is the most direct path to a successful investment property. A single-source property management solution with the depth of experience and global resources will illuminate that path with opportunity.

ABOUT THE AUTHOR

Mark Zettl is President, Property Management, of JLL, a leading professional services firm that specializes in real estate and investment management.

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ACCESSING SUCCESS

Zoe Hughes
CEO
NAREIM

A recent DEI survey in real estate shows that the art of talking and listening helps boost recruitment, retention, and employee engagement. And it's free to implement.

As almost all commercial real estate organizations across the US adopt and implement DEI policies and strategies, it's important to ask: what is the actual goal of diversity, equity, and inclusion (DEI)?

Is it for raising capital from institutional investors? For ticking a box? For marking a moment in time? Because everyone else is doing it?

According to a recent survey co-sponsored by NAREIM, DEI is ultimately about how firms can recruit the best talent to their organizations, how they better retain that talent, and how they make employees feel included and part of the mission of the business. And that's not just something that is delivered only for women and people of color. That's something that everybody on the team wants.

It's one of the reasons why the adoption of DEI policies and strategies in North America has grown so exponentially since 2020, especially with the triune cultural catalysts of COVID, working from home, and the murder of George Floyd.

As firms look to their employees and their health, wellness, engagement, and productivity in a post-COVID world, DEI provides a helpful framework for shaping talent and HR strategies. It provides a playbook for organizations as they look to further develop and train their teams—and helps the best talent rise to the top. It's a valuable tool—and potentially ESG attribute—to build an organization able to withstand the challenges of the next years and decades.

But what exactly do we mean when we talk DEI strategy?

The great news is DEI strategies and policies are fairly straightforward, and inexpensive, to implement. In this article, we detail five policies that are not only keys to DEI success, but will help US-based real estate organizations as they look to recruit, retain, and engage all their talented workers.

HOW DOES CRE PERFORM IN RELATION TO DEI?

The recent 2022 Global Real Estate DEI Survey, sponsored by NAREIM alongside ANREV, INREV, Ferguson Partners, NCREIF, PREA, REALPAC, and ULI, tracks gender and ethnicity metrics across job functions and seniority across the industry, globally.

The survey represented around 357,000 full-time employees (FTEs), $2.34 trillion AUM, and a cross section of the commercial real estate industry in terms of size, region, and business classification. It also brought together participation from 192 unique organizations which provided 210 submissions detailing their DEI practices in North America (81.4% of respondents), Europe (12.4%), and Asia- Pacific (6.2%). Data was collected between July 28 and October 7, 2022.

DEI is Really Important:

As shown in *Exhibit 1*, around 95% of commercial real estate firms globally address DEI via either a formal program (i.e., a fully documented, holistic approach approved by senior management and adopted to ensure direction and accountability) or through less formal initiatives and policies.

That figure increases to 98% to 99% as you look to the largest organizations with the largest AUM. For North America, more than 70% of firms have a formal DEI committee responsible for developing, implementing and/or reviewing DEI strategies or initiatives, a figure that again increases among firms with more employees and greater AUM.

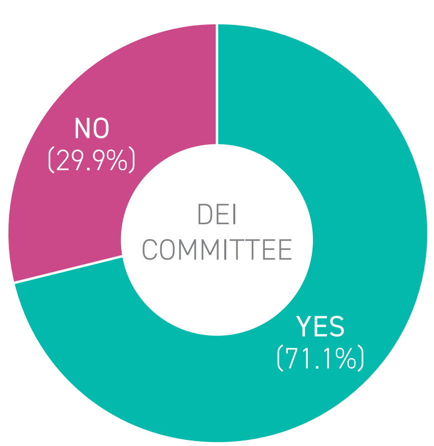
EXHIBIT 1: HOW DOES YOUR COMPANY ADDRESS DEI?

Source: The Global Real Estate DEI Survey 2022

		We have a formal DEI program in place at our company	We do not have a formal DEI program, but we enact some DEI initiatives and/or policies to improve DEI at our company	We do not have a DEI program
All respondents		53.6%	41.7%	4.7%
REGION	Asia-Pacific	61.5%	38.5%	–
	Europe	50.0%	50.0%	–
	North America	56.1%	38.6%	5.3%
# OF FTEs (GLOBAL)	Less than 50 employees	42.1%	47.4%	10.5%
	50-149 employees	34.2%	63.4%	2.4%
	150-599 employees	52.8%	41.5%	5.7%
	600 employees and greater	75.0%	23.3%	1.7%
GROSS AUM (GLOBAL)	Less than $3 billion AUM	45.5%	40.9%	13.6%
	$3-$9.9 billion AUM	45.8%	50.0%	4.2%
	$10-$29.9 billion AUM	42.9%	57.1%	–
	$30 billion AUM and greater	72.7%	27.3%	–

EXHIBIT 2: DOES YOUR COMPANY HAVE A FORMAL DEI COMMITTEE RESPONSIBLE FOR DEVELOPING, IMPLEMENTING AND/OR REVIEWING DEI STRATEGIES OR INITIATIVES?

Source: The Global Real Estate DEI Survey 2022



In North America, more than 70% of firms have a formal DEI committee responsible for developing, implementing and/or reviewing DEI strategies or initiatives.

Representation of Women and People of Color is Improving

When you look at the DEI Survey between 2021 and 2022, there is a steady trend towards increased representation of women, across all regions globally, and for people of color in North America. In North America, representation of women increased most significantly at the board level, increasing from 21.4% in 2021 to 25.4% in 2022.

For people of color, which includes any employee who is Hispanic or Latino, Black or African American, Native Hawaiian or other Pacific Islander, Asian, Aboriginal/Indigenous/Native American, or multiracial (two or more races), representation increased the most at the senior-level.

EXHIBIT 3: NORTH AMERICA GENDER BREAKDOWN, BY SENIORITY, YOY 2021-2022

Source: The Global Real Estate DEI Survey 2022

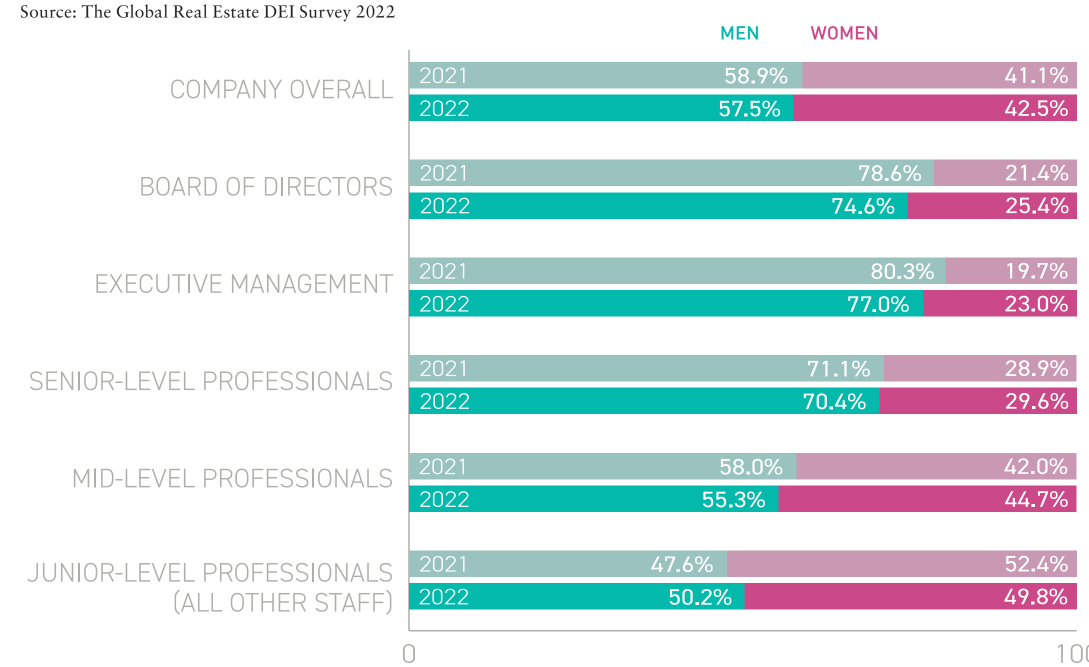
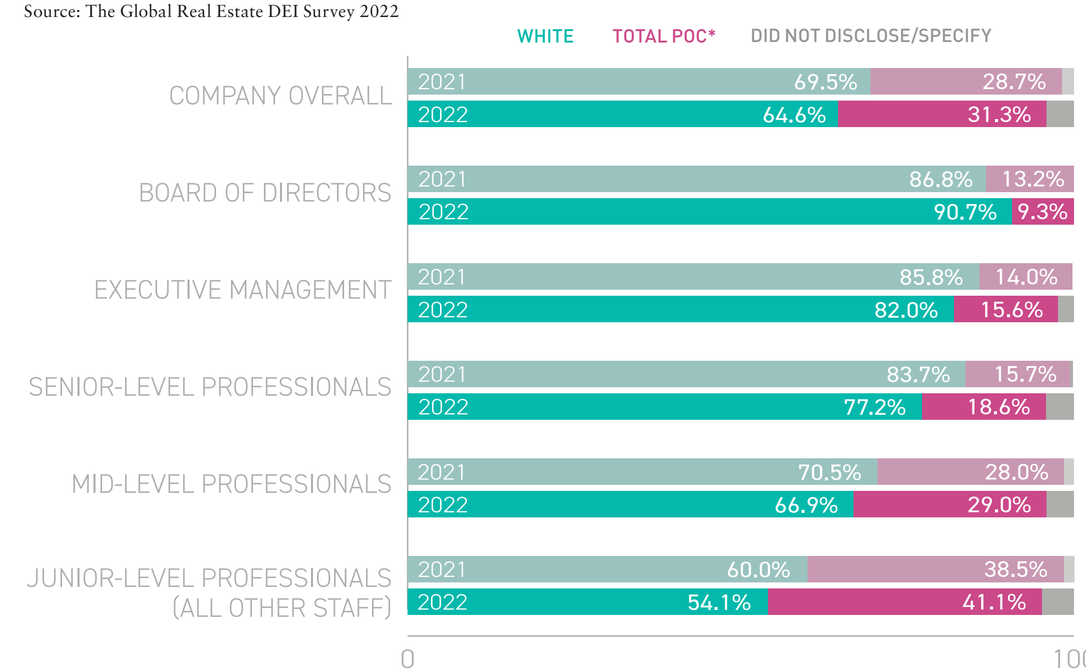


EXHIBIT 4: NORTH AMERICA ETHNICITY BREAKDOWN, BY SENIORITY, YOY 2021-2022

Source: The Global Real Estate DEI Survey 2022



* TOTAL POC – includes any employee who is hispanic or latino, black or african american, native hawaiian or other pacific islanders, asian, aboriginal/indigenous/native american, or mltiracial (two or more reaces):

DEI is also About Access to Wealth-Generation and P&L-Facing Opportunities:

Women in North America dominate the roles of administration, HR, and marketing, while men dominate engineering/maintenance, transactions, and securities. For people of color, the top three roles are technology, accounting, and engineering/maintenance while white professionals dominated transactions, capital markets, and capital raising and IR.

It's a similar story when we look to carried interest and promotes. Almost 78% of carried interest in North America is awarded to men compared to 22% for women. When we think about DEI, it's also about understanding access to wealth generating jobs and opportunities to be a part of the CRE P&L.

EXHIBIT 5: DIVERSITY IN CRE ROLES: GENDER

Source: The Global Real Estate DEI Survey 2022

MEN 57%		WOMEN 43%	
Engineering/Main.	93.3%	Administration	89.5%
Transactions	80%	HR	88.1%
Securities	79.8%	Marketing	77.1%
Portfolio Mgt	76.4%	ESG	74.9%
IT Technology	75.7%	Property Mgt	60.7%
Capital Markets	75.3%	Accounting	60.5%
Research	74.9%	Leasing	58.4%
Development	72%	Capital Raising & IR	56.8%
Const/Architecture	71.5%	Legal & Compliance	53.2%
Asset Mgt	70.7%	Finance	36.9%

EXHIBIT 6: DIVERSITY IN CRE ROLES: ETHNICITY

Source: The Global Real Estate DEI Survey 2022

WHITE		PoC	
Transactions	83%	IT Technology	44%
Capital Markets	78%	Accounting	44%
Capital Raising & IR	76%	Engineering/Main.	43%
Asset Management	75%	Property Mgt	41%
Const/Architecture	74%	Administration	40%
Development	73%	Finance	36%
Portfolio Mgt	73%	ESG	34%
Marketing	72%	Leasing	34%
Legal & Compliance	72%	HR	30%
HR	70%	Securities	29%

As firms look to their employees and their health, wellness, engagement, and productivity in a post-COVID world, DEI provides a helpful framework for shaping talent and HR strategies.

SO HOW DO FIRMS IMPLEMENT DEI STRATEGY?

There is actually one simple idea that is the backbone of all corporate DEI policies, according to the DEI Survey: communication.

It sounds too basic, but it is the fundamental strategy organizations adopt when they look to improve DEI in terms of recruitment, retention, training, and inclusivity. Examples include:

- Hiring more diverse candidates. That means communicating your corporate values.
  - As we look to improve the number of underrepresented groups within our candidate pools, it's important to reach out to new universities, to different parts of CRE, and to outside the industry.

    There is some amazing work being undertaken by diversity-focused groups and CRE firms promoting commercial real estate and real estate investment management to high school and college students. But it's also about how the corporation talks about itself. As we look to the next generation of talent, jobs are not just about collecting a paycheck, they're also about values and having a mission. Communicating what your organization stands for as a business is critical to attracting talent, both young and old.
- The key to retention is clear job specs and evaluations. That means better communication.
  - Year after year, the DEI Survey provides quantifiable evidence that the most impactful way to retain diverse talent is to conduct job performance reviews and evaluations based on well-defined, pre-determined criteria, and that job roles have clear responsibilities at the outset.

    Employees and the best talent want to know precisely how they get ahead, and what the milestones are to achieve that. If we muddy the water by not being clear, by not outlining the path to progress, that talent will start looking for other roles where they can forge ahead. And evaluations come down to communication.

Inclusivity is the key to recruiting and retaining the best talent. And that cuts across gender and ethnicity. When employees feel heard and respected, they will stay.

- Being an inclusive leader or organization is about understanding the other point of view. That means listening more.
  - Inclusivity is the key to recruiting and retaining the best talent. And that cuts across gender and ethnicity. When employees feel heard and respected, they will stay. That doesn't mean all recommendations by your women's affinity group or your black or LGBTQ employee resource group (ERG) need to be adopted. But they do need to be heard and respected for potentially being different.

    During the history of the DEI Survey, organizations have listed policies they deem successful in creating a more inclusive workplace and culture. More often than not, those policies come down to communication and listening. For example, providing prayer and meditation spaces; providing more PTO to ensure a work-life balance; promoting events to celebrate/inform about specific groups; volunteering; and allowing employees to participate in internal and external affinity groups or ERGs. It's about communication and the art of listening and hearing someone's else point of view. Even if you cannot provide a solution immediately. The act of listening and hearing someone goes a long way.

ADVICE FROM THE FRONT LINES

At the end of March 2023, NAREIM hosted its second Black Real Estate Roundtable meeting in Atlanta where almost 60 black professionals gathered to share their advice on mentoring, sponsorship, career pivots, and lessons learned over their years in real estate investment management.

The key takeaway from that cross-industry affinity group was to build relationships before you need them. To communicate more, and listen more.

"Don't take your relationships for granted and understand the power of relationships," said one speaker. "Build relationships before you need them. It's a simple philosophy."

With black professionals representing less than 7% of the commercial real estate industry, according to the DEI Survey 2022, there are career development hurdles facing each individual, including tokenism, a sense of isolation, imposter syndrome, less access to wealth-generating roles in CRE – and a lack of psychological safety.

> Be intentional in relationship building. Go to lunch, follow-up, talk with people internally and externally to the organization and expand the pool of people to talk to. "Fish in different locations," said one speaker.

But veterans offered some excellent advice to those making talent decisions in CRE:

- Be intentional in relationship building. Go to lunch, follow-up, talk with people internally and externally to the organization and expand the pool of people to talk to. "Fish in different locations," said one speaker.
- Keep networking and building relationships so that you can find someone to be your advocate, your sponsor. And remember that sponsors don't have to look like you. And it can be powerful when they don't.
- Do more than just your job. Show the curious mind to managers and your organization. Communicate and talk about what you want to achieve.
- Invite analysts to sit in on every call. "I want them to hear what we are talking about, to absorb," said one member.
- Your level of self-awareness has a direct impact on how others think about you. Understand the other point of view and hear what they have to say as well.

As we look to DEI, as we look to better engaging all our employees, our talent and creating a foundation for successful, thriving businesses for generations to come – communication is key. And everybody benefits.

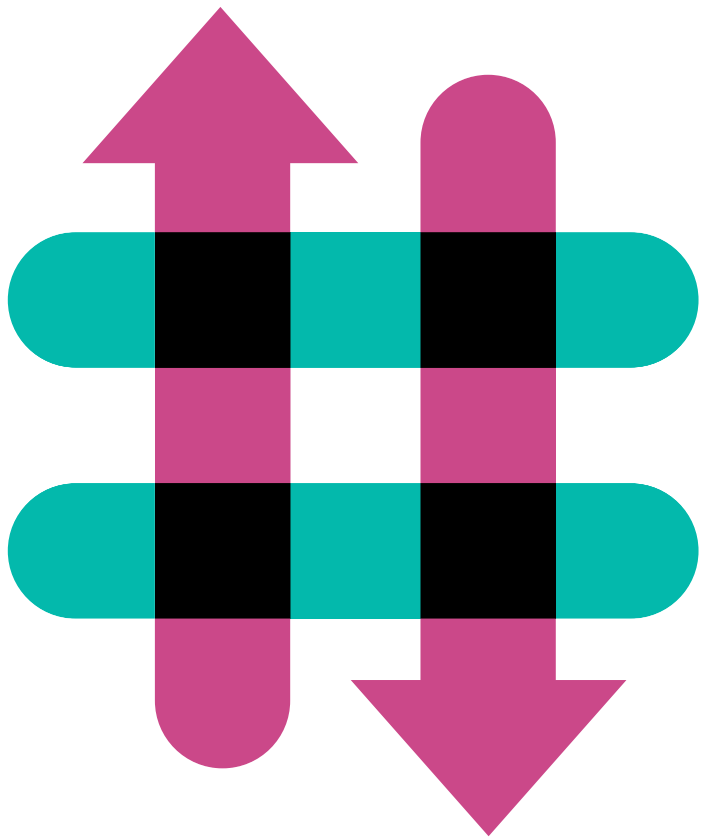
Note: The 2023 Global Real Estate DEI Survey will begin data collection in July 2023. Contact Sonya Nicks at Ferguson Partners to participate: snicks@fergusonpartners.com

ABOUT THE AUTHOR

Zoe Hughes is the CEO of the National Association of Real Estate Investment Managers (NAREIM), which represents real estate investment management firms with combined assets under management of more than $2 trillion.

It's about communication and the art of listening and hearing someone's else point of view.

RESCUE CAPITAL



Andrew Weiner
Partner, Real Estate
Pillsbury Winthrop Shaw Pittman LLP

Joshua M. R. Becker
Counsel, Tax
Pillsbury Winthrop Shaw Pittman LLP

Hard times make for opportunistic strategies and rescue capital could see increased adoption in the current climate. How should investors prepare?

In the past seventeen months, the climate for real estate ownership and investment has shifted dramatically for the worse, ending a remarkably favorable investment climate since the Great Financial Crisis.

The real estate industry faces a toxic stew of rising inflation and interest rates, a scarcity of financing, and the tightening of underwriting criteria of both lenders and would-be investors. More troubling, the future of the office, retail, hospitality, and residential sectors is no longer easily predictable, and the trendlines now skew to the negative, given a potential cyclical downturn combined with longer term secular changes due to remote work, internet sales, changing travel patterns, and an increasing treatment of housing as a public utility.

THE CURRENT STAGE

Many properties are already "below water" on a current and prospective basis, giving rise to a wave of distressed debt transactions and properties being surrendered to lenders, even by established real estate players. However, many other properties, while still generating positive net cash flow (even taking current debt service into account), face a large gap in their capital structure and a projected drop in occupancy and rental income that, if not addressed, may or will result in catastrophe.

But why?

First, the cash flow of these "zombie" properties is fragile. The demand (and price) for office space in new leases projects to be materially less than for leases entered into pre-2022. The long-term prognosis for retail is unclear. Hospitality trends are at best opaque. Housing is being impacted by governmental initiatives to reduce or cap rents or deter evictions.

Contemporaneously, terms of available financing are unlikely in many cases to generate sufficient principal to refinance existing debt. This is particularly the case for development properties or properties under construction, properties with impending vacancies, and properties refinanced at the valuations characteristic of the years immediately preceding 2022.

Third, there are few flight capital or "Prince Charming" investors ready to purchase properties at prices that will solve these problems.

Fourth, many properties need substantial capital infusions for lease-up, repositioning, upgrades, or environmental retrofitting. Ground-leased properties may face substantial rent resets, and "B" and "C" properties are especially vulnerable.

Fifth, some ownership groups are unable to provide additional capital, even where the return might justify the investment (for example, fund owners facing redemption calls or trigger dates for liquidation).

On the other hand, up to $200 billion has reportedly been stockpiled by investors, including funds and family offices, to fill the emerging equity gap. This so-called "rescue capital" is not necessarily focused on property purchases, but may elect to negotiate an acquisition of a substantial (and usually preeminent) equity interest in existing property owners, sometimes with full control rights, sometimes not.

PLACING RESCUE CAPITAL

The key to these rescue capital deals is that they are opportunistic investments, with considerable risk and with proposed returns consistent with the risks assumed. The days of core, core-plus, or even value-add capital seem somewhat remote.

We are seeing a return to deal structures and approaches similar to those in the early Reagan presidency, with equity squeeze-downs, "debt-flavored" equity, "equity-flavored" debt, split debt-equity investments, conversion rights, and the like. Moreover, these are not "win-win" transactions. Existing capital will be impaired, perhaps severely. Many of these transactions will provide existing ownership with the equity equivalent of a "hope note," so that they are effectively subordinated to a return on and perhaps of any new money invested.

Why would existing ownership cooperate? One reason is that the alternative may be a total loss or years of litigation with lenders. Reputational risk may be at stake. There may be tax benefits to a rescue capital solution. The new investor may be willing to allow management rights and fee income to remain with existing management. And, at bottom, a "hope note" may be preferred to wipe-out.

Up to $200 billion has reportedly been stockpiled by investors, including funds and family offices, to fill the emerging equity gap.

NEGOTIATIONS AND CONSIDERATIONS

Rescue capital transactions are complex. Joint venture agreements are complicated to negotiate *ab initio* and even more difficult to restructure, where there are clear winners and serious losers and less security of outcome.

1. Given the sensitivity of rescue capital negotiations, both non-disclosure agreements and agreements negating oral agreements should be considered before discussions are commenced.

2. Underwriting is more complicated. The new investor must not only perform due diligence on a property, but on the historic operation of the entity's business and the peculiar liabilities and tax attributes of the entity, most of which would not be relevant in a property sale. The existing ownership must be vetted on a know-your-client basis. The new investor is concerned with undisclosed (e.g., tax) matters that are not easily diligenced.

3. Representations and warranties are more extensive and contentious, covering matters not usually mentioned in a property purchase. Someone is generally left liable for these expanded representations and warranties that, due to their nature, usually have a longer survival period and greater potential damages. Indemnities, security, and reserves are often required, which some existing owners *cannot* provide, and which others *will not* provide. Representation and warranty insurance, or tax insurance, can often fill this gap, although many real estate professionals are not experienced with these products. In corporate transactions this insurance has become widely used.

4. In the current environment, projections of future net revenues, capital expenditures, and financing, and requirements for future capital inputs, may be somewhat speculative. Yet the new waterfall and the commitment of the new investor are harder to negotiate without some consensus on these items.

The real estate industry faces a toxic stew of rising inflation and interest rates, a scarcity of financing, and the tightening of underwriting criteria of both lenders and would-be investors.

The key to these rescue capital deals is that they are opportunistic investments, with considerable risk and with proposed returns consistent with the risks assumed.

5. If the new investor proposes to invest without a refinancing of the existing indebtedness, then each existing lenders is a party to the negotiation. Some lenders are more willing to negotiate than others. CMBS lenders will operate through special servicers, which generally creates a substantial fee burden whether or not the negotiation is successful. Mezzanine lenders who are "out-of-the-money" may be understandably cranky. However, there is market evidence that, in the current environment, some institutional lenders see it advantageous to cooperate with rescue capital sources to create a stable borrower and less distressed loan.

6. The rescue capital transaction may, without lender consent, constitute a default under existing loan documents by violating "due-on-sale," "due on encumbrance," "no change in control" or other covenants. Even more seriously, the transaction terms may create guarantor liability under so-called "non-recourse carve-out" guaranties. Lender waiver of the provisions is generally required. In one instance, a would-be rescuer was sued for tortious interference with contractual relations by non-consenting lenders.

7. Responsibility for guaranties will be a negotiating issue. Does the "new money" need to join in or execute a new guaranty or a replacement or supplemental guaranty? The guarantor(s) will want a guaranty fee, or an indemnity from non-guarantors.

8. Management and rights must be negotiated. Does existing management continue or is it replaced? What about manager-affiliates? Can management (whether the existing group or the "new money" group) be replaced? Does existing management get removed if it fails to meet agreed projections? Who controls day-to-day operations and who participates in major decisions? How are deadlocks broken? Buy-sells and forced sales are frequent strategies adopted in newly formed joint ventures, but may not be palatable in rescue capital situations.

9. The new waterfall for distributions is a crucial negotiation. To some extent, it depends on the amount, timing and application of new money. Since many joint ventures have complicated waterfalls, with preferred returns, IRR based floors, promotes, fees and the like; rejiggering them in the cathected and uncertain environment of a work-out is not a simple task.

10. The rights of new money to determine the investment period will be negotiated. Some investors (and sometimes existing sponsors or investors) will require the right to terminate the investment after a prescribed period. Similarly, control over the nature and timing of future recapitalization or refinancing may be a discussion point.

11. Transfer rights are particularly important. The parties may discuss puts, calls, drag-along rights, tag-along rights, ROFOs, ROFRs and the like. Conversely, restrictions on the rights of transfer of direct or indirect interests will have to be negotiated.

NEW MONEY

The attributes of the new money are a principal discussion point. Existing lenders may have prohibited debt financing, and a violation of this prohibition may bring on liability to guarantors. However, some new money sources (particularly foreign investors) may prefer to invest so as to obtain characterization as "debt" for tax or accounting purposes, or may just want equity rights so "debt-like" that it possible for the "equity" to be recharacterized as "debt."

For example, some preferred equity investors will want fixed payment dates and maturity dates for their returns on and of capital contributions and debt-like remedies, the right to replace management, or so-called "equity kickers". Some money sources will insist on treatment as equity, particularly to benefit from the tax provisions (i.e., depreciation) that follow.

There may be a complex tax discussion, as the rescue capital investor may propose to maximize its tax position, which may disadvantage certain existing investors. Negotiations will focus on who has the ability to make certain elections and decisions regarding where tax attributes are allocated (for example, depreciation, tax credits, and "phantom income") and whether distributions will be made to cover taxable income or gain generated by the transaction. New investors may want to design an exit strategy as a tax-free redemption, but that may impose adverse tax consequence on the original investors.

In some jurisdictions, rescue capital transactions will be subject to transfer taxes (particularly where 50% of more of the equity is transferred), or a reassessment of the property for property tax purposes (as with California's Prop 13). New York State is proposing a tax on preferred equity.

Bankruptcy and insolvency risks and opportunities must also be taken into account. One particularly sensitive issue is determining who can and cannot make a bankruptcy election, and whether this provision is enforceable. In some cases, a "friendly" bankruptcy sale may be precipitated for the principal purpose of avoiding transfer tax.

RETHINKING STRATEGY

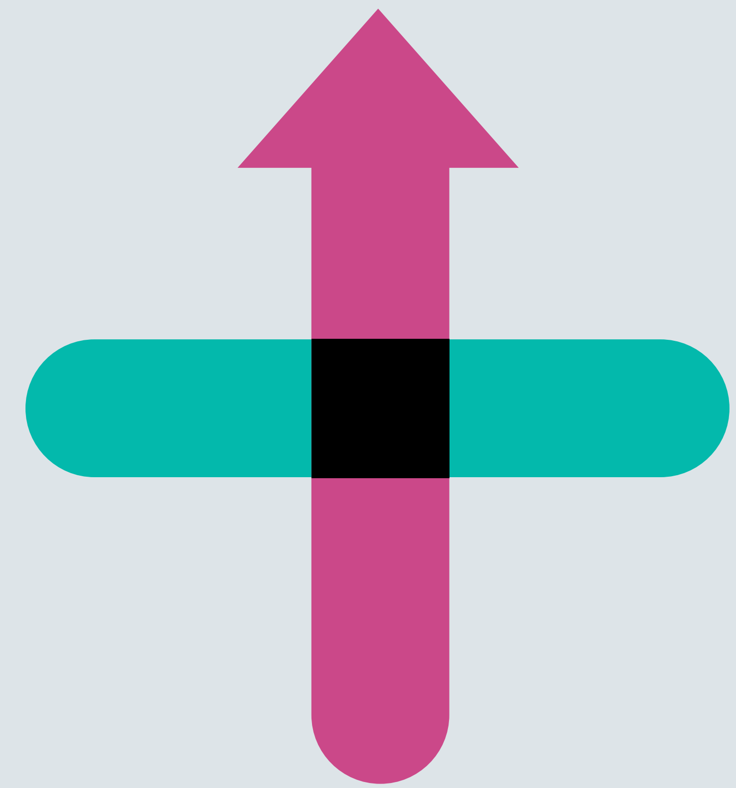
Hard times make for hard choices and opportunistic strategies. The rescue capital approach will be increasingly adopted in the current challenging environment for real estate ownership and investment.

It requires significant expertise and complex analysis to achieve a satisfactory conclusion for any of the parties. And experienced advisors are very helpful, particularly where deal structures reemerge that were unfamiliar in the past few sunny decades.

ABOUT THE AUTHORS

Andrew Weiner is a Partner in the Real Estate Group and Josh Becker is a Counsel in the Tax Group for Pillsbury Winthrop Shaw Pittman LLP, a full-service, global law firm with an industry focus on investment activities in all asset classes, energy and natural resources, and financial services. Both are based in New York City.

Hard times make for hard choices and opportunistic strategies.



The rescue capital approach will be increasingly adopted in the current challenging environment for real estate ownership and investment.

CONVEX CURVES

Joseph L. Pagliari, Jr., Ph.D, CFA, CPA
Clinical Professor of Real Estate
University of Chicago, Booth School of Business

The recent rise in interest rates has led to dramatically lowered transaction volumes, which has heightened uncertainty around today's market-clearing cap rates.

The recent rise in interest rates has, among other things, led to dramatically lowered transaction volumes which, in turn, has led to much uncertainty about today's market-clearing capitalization rates – as well as where such rates will come to rest in the future.

This note addresses two aspects of the uncertainty surrounding (current and future) cap rates; in particular, the non-linear relationship between prices and cap rates leads to: 1) price convexity and 2) skewed v. symmetrical volatility estimates.

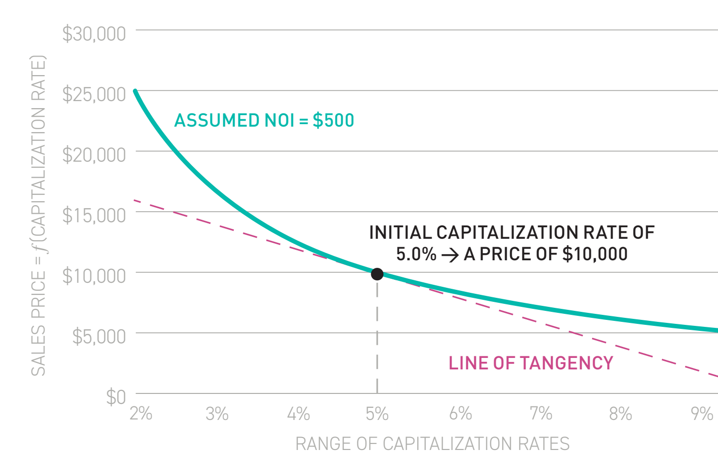
PRICE CONVEXITY

Like other income-generating assets, commercial property prices reflect "convexity" with regard to changes in cap rates (just as fixed-income prices reflect convexity with regard to changes in interest rates).[1]

As illustrated in *Exhibit 1*, convexity implies that the dollar change in property values is greater for a given basis-point change in cap rates when cap rates are low and, conversely, the dollar change in property values is lesser for a given basis-point change occurs when cap rates are high.

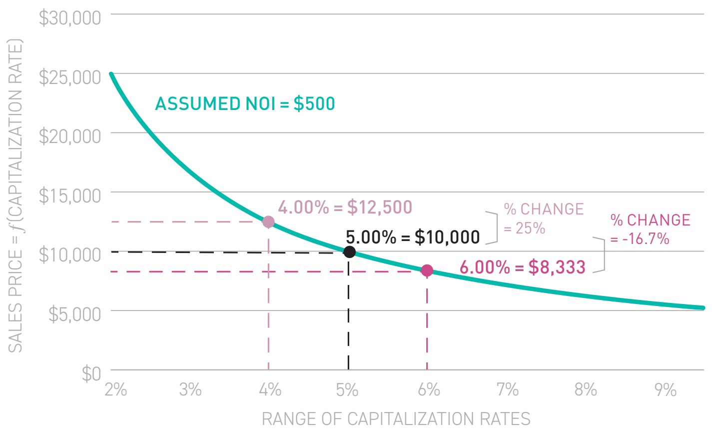
In other words, the relationship between the dollar value of price changes is non-linear (and convex) with regard to the basis-point change in cap rates.[2] For purposes of illustration, let's assume certain real estate investors (and lenders) are either: estimating today's market-clearing cap rate to equal 5%, or forecasting an ending (or reversionary) cap rate of 5%.[3] In either case (depending on the investor's objectives), let's assume net operating income (NOI) of $500 so that the property's price (today or in the future) equals $10,000:[4]

EXHIBIT 1: ILLUSTRATION OF SALES PRICE CONVEXITY



Let's revisit this simple illustration of price convexity by considering a 100 basis-point change in the cap rate, from the assumed starting point of a 5% initial cap rate, as shown in *Exhibit 2*.

EXHIBIT 2: ILLUSTRATION OF SALES PRICE CONVEXITY—REVISITED



As indicated in *Exhibit 2*, decreasing the initial cap rate by 100 basis points results in an ending cap rate of 4% and an increase in the sales price to $12,500, for an increase of 25% from initial estimate of $10,000.

Meanwhile, increasing the initial cap rate by 100 basis points results in an ending cap rate of 6% and a decrease in the sales price to approximately $8,333, for a decrease of approximately 16.7%.

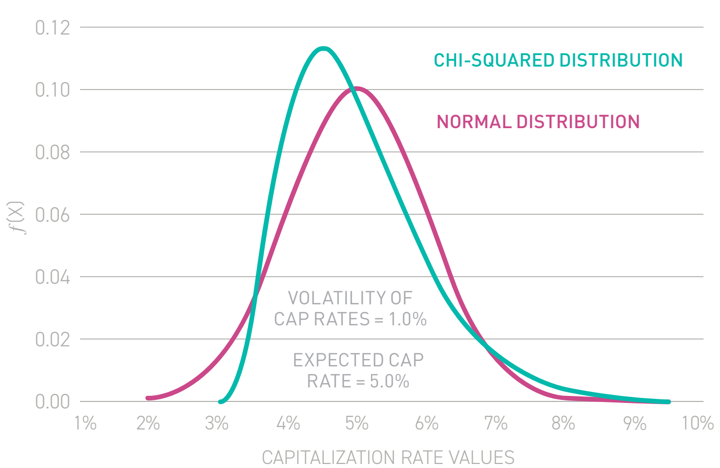
This difference (i.e., 25% v. -16.7%) illustrates the convexity in real estate prices for a given change in cap rates. Said another way, convexity implies that the percentage change in price varies with a constant change (measured in basis points) in cap rates.

Given today's conversations about the potential increases in interest rates and cap rates, the convexity in real estate prices suggests that the fall (measured by the percentage change) in prices due to rising cap rates is less than the earlier benefits associated with heretofore falling cap rates. This is, of course, "cold comfort" to investors (and lenders).

SKEWED V. SYMMETRICAL VOLATILITY ESTIMATES

The importance of convexity is also highlighted when we consider the distribution of potential (current and/or reversionary) cap rates. As suggested earlier, such distributions may not be normally distributed. So as an illustration, let's compare the hypothetical in which the distribution of cap rates is modeled by the symmetrical normal distribution and by the asymmetrical chi-squared (or χ^2) distribution, where both distributions[5] have the same expected value and the same volatility: $\mu = 5\%$ and $\sigma = 1\%$ (these values were arbitrarily chosen – investors should select parameters consistent with their expectations), as shown in *Exhibit 3:*

EXHIBIT 3: PROBABILITY DENSITY FUNCTIONS OF CAPITALIZATION RATES: NORMAL V. CHI-SQUARED DISTRIBUTIONS WITH EQUIVALENT μ AND σ



Other asymmetrical distributions are, of course, possible and would also serve to help make the points below.[6] While both distributions have (by design) the same first two moments ($\mu = 5\%$ and $\sigma = 1\%$), the chi-squared distribution displays positive skewness: fewer instances of extremely low cap rates and a mode of ≈4.5% (as compared to a mean of 5%). On the other hand, the normal distribution displays the familiar bell-shaped (symmetrical) distribution, but importantly includes greater instances of extremely low cap rates. It is these extremely low cap rates that produce correspondingly extremely high property prices. The two distributions' far-right tails (i.e., high cap rates) ae similar, and therefore produce similar estimates of extremely low property prices.

Against this backdrop of price convexity and capitalization-rate dispersion, let's consider the potential dispersion in (current and/ or reversionary) property values, as shown in *Exhibit 4:*

EXHIBIT 4: PROBABILITY DENSITY FUNCTIONS OF SALES PRICE: BASED UPON NORMAL V. CHI-SQUARED CAP-RATE DISTRIBUTIONS WITH EQUIVALENTT μ AND σ

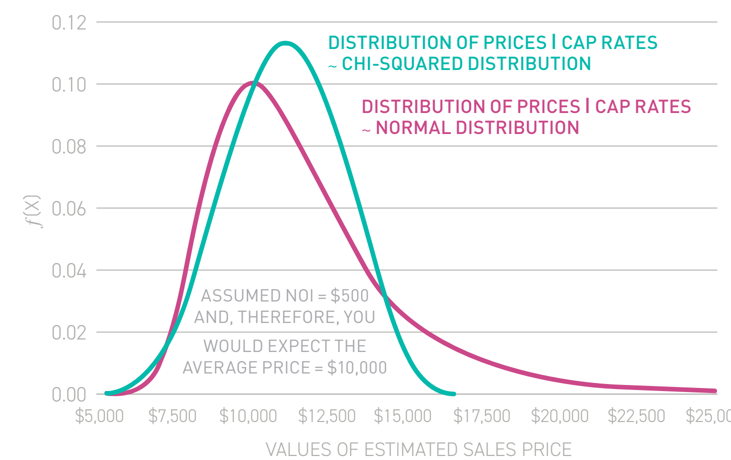
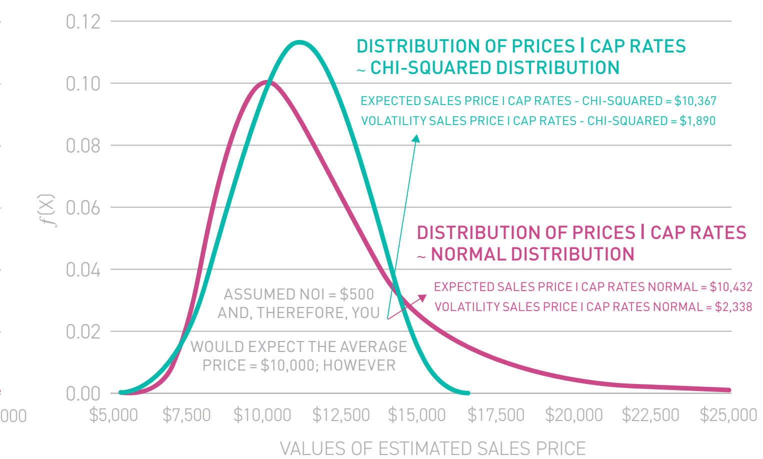


EXHIBIT 5: PROBABILITY DENSITY FUNCTIONS OF SALES PRICE: BASED UPON NORMAL V. CHI-SQUARED CAP-RATE DISTRIBUTIONS WITH EQUIVALENT μ AND σ



At first blush, it's a bit surprising that the symmetrical distribution of cap rates (i.e., the normal distribution) produces the positively skewed distribution of prices (i.e., extremely high prices).[7] Given today's investment climate, the exceedingly high prices associated with the normal distribution seem unattainable.

Instead, it is the asymmetrical chi-squared (or χ^2) distribution (i.e., with its fat right-tail) of cap rates that produces a near-symmetrical distribution of potential sale prices.

The interplay of price convexity and the assumed dispersion of cap rates also produces interesting first-two moments (μ and σ), under the two distributions, for estimated sales prices, as shown in *Exhibit 5:*

Consider the summary statistics for each distribution, starting with the expected values: the expected property price is approximately \$10,432 under the normal distribution and \$10,367 under the chi-squared distribution.

Note that the expected prices are higher than the estimated price (\$10,000) assuming no uncertainty (or dispersion) in anticipated cap rates. The difference is due to the combination of price convexity and uncertainty. (This is another example of the adage associated with non-linear relationships: “The expectation of the average differs from the average expectation.”)

Additionally, the standard deviation of property prices is approximately \$2,338 under the normal distribution, but only \$1,890 under the chi-squared distribution; on a relative basis, the volatility of property prices is greater under the normal distribution (i.e., the coefficient of variation (σ/μ) ≈22.4% for the normal distribution and ≈18.2% for the χ^2 distribution).

APPLICATIONS

Among many potential ramifications of the dynamics discussed here, consider four:

1. the lender’s estimate of its collateral value (the non-recourse lender effectively provides the borrower with a put option),
2. the developer’s estimate of land value is essentially a call option on the value of the future to-be- built project *vis-à-vis* the all-in costs of development,
3. the levered equity investor essentially owns a call option on the property’s value relative to the loan balance, and
4. the expected value of the general (or operating) partner’s carried interest is also a call option on the property’s future profitability.

The expected value of all such options depends on the volatility of the underlying asset.

Investors (and lenders and modelers) beware!

ABOUT THE AUTHORS

Joseph L. Pagliari Jr., Ph.D., CFA, CPA, is Clinical Professor of Real Estate at the University of Chicago, Booth School of Business and focuses his research and teaching efforts on issues broadly surrounding institutional real estate investment.

NOTES

[1] For example, see: Oleg Sydyak, “Chapter 7: Interest Rate Risk Management and Asset Liability Management,” Handbook of Fixed-Income Securities, P. Veronesi, ed., Hoboken (NJ): John Wiley & Sons, 2016.

[2] One way to think about convexity is to contrast it with the slope of the line of tangency for a given combination of cap rates and sale prices. This line is illustrated in Exhibit 1 (via the dashed gray line) for an assumed initial cap rate of 5%. More specifically, consider [image supplied separately]

[3] Year-end cap rates by property type are estimated to range from a low of 4.6% (industrial) to a high of 7.6% (office) – see: Green Street, Cap Rate Observer, December 2022.

[4] For purposes of this illustration, it is assumed that net operating income is constant and, therefore, independent of the level of and/or change in cap rates. In practice, this may not necessarily be the case. However, introducing some dependency would complicate the analysis and potentially detract from the main points made herein.

[5] The chi-squared distribution has the convenient property such that its expected value equals the degrees-of- freedom parameter (v) and its variance equals twice this value (i.e., $\mu = E(x) = v$ and $\sigma 2 = Var(x) = 2v$); additionally, its mode = max(v – 2, 0). In the present illustration, the parameters of the normal distribution (i.e., $x \sim N(\mu, \sigma 2)$ where set equal to a chi-squared distribution with 8 degrees of freedom – so that both distributions have identical first two moments: $\mu = 8$ and $\sigma 2 = 16 \rightarrow \sigma = 4$; while the normal distribution’s mode = μ, the chi-squared distribution’s mode = 6 (in this example) $\neq \mu$. Then, both distributions were rescaled such that, for each, $\mu = 5\%$ and $\sigma = 1\%$.

[6] Other continuous asymmetrical distributions to consider include: beta, gamma and Weibull. In all instances, how the distribution is parameterized effects the degree of asymmetry. While investors/modelers tend to utilize continuous distributions, there is nothing sacrosanct about their use; discrete distributions can also be used.

[7] It is not all that surprising when you consider that the sales price is merely the inverse of the random variable: cap rate, which is assumed to be normally distributed in one version of this analysis. Such transformations are not invariant with respect to their densities. The density of the inverted random variable will differ from the density of the original random variable.

Convexity implies that the dollar change in property values is greater for a given basis-point change in cap rates when cap rates are low and, conversely, the dollar change in property values is lesser for a given basis-point change occurs when cap rates are high.

IN MEMORIAM

Andrea Marie Chegut, PhD (1981–2022)

Watch a crowd on a city street. The more faces there are, the more they look the same. No questions or curiosity, just one step in front of another. Minds focused on what happened before or what might happen after.

But not Andrea.

She noticed things. When everyone else looked down, she looked somewhere else. She knew there was more to find. She asked questions. She found answers.

Andrea looked up, and for a time, we all looked with her—and were better for it.

Andrea Marie Chegut was the Director and Co-Founder of the MIT Real Estate Innovation Lab, Co-Founder of MIT DesignX, and Research Scientist at MIT. Her passion for creating a better world through a deeper understanding of innovation in the built environment, urban economics, and real estate was reflected in her courses at MIT. She was a world-recognized thought leader who generously shared her knowledge at numerous conferences, seminars, and events across the globe. She believed deeply in people, possibilities, creativity, and truth.

Raised on Sanibel Island, Florida, Andrea received undergraduate degrees in philosophy and economics from the College of Charleston in Charleston, South Carolina and went on to achieve her masters in economics and law at Utrecht University in the Netherlands. She joined MIT in 2013 as a Visiting Researcher at the Center for Real Estate after completing her PhD in financial economics at Maastricht University.

Andrea co-founded the MIT Real Estate Innovation Lab in 2016. Measuring the financial and economic performance of innovation in real estate, planning, and design, Andrea led a team of interdisciplinary researchers in a variety of initiatives, such as the MIT Tech Tracker, a public information and analytics webtool that uses proprietary algorithms to provide insight into the real estate industry; UnReal Estate, an exploratory project examining virtual spaces and how they translate into real world assets and economies; and *The Value of Design: Design Agency in a Market Economy*, a book based on a series of research papers within the Lab that identifies design metrics to link design to financial outcomes. Research from the Lab has been cited in several academic journals as well as the *New York Times, Forbes, Financial Times,* and *Politico*.

She leaves behind her husband, Daniel Fink; their young daughter, Athalia; and countless friends, family and colleagues who will deeply miss her brilliant spirit, remarkable mind, and steadfast loyalty.

Let's keep looking where Andrea looked.

Let's keep asking questions.

Let's find out what she saw before we noticed.

When everyone else looked down, she looked somewhere else. She knew there was more to find. She asked questions. She found answers.

Please consider a donation to the Andrea Chegut Fellowship Fund at MIT? https://giving.mit.edu/search/node/3317520

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