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CREFC | WORLD

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Introduction for CREFC World Launch Issue

Lisa Pendergast | *President & CEO* | CRE Finance Council

Dear CREFC Members and Industry Colleagues,

Today marks both a homecoming and a new beginning. With the launch of the new iteration of **CREFC World**, we're returning to our roots while embracing the future of industry communication. Twenty-seven years ago, we published the first issue of **CMBS World** in response to the market turmoil of 1998. That inaugural publication filled a critical void, specifically —in that there was no dedicated forum for the emerging CMBS market to share knowledge, debate best practices, and build community.

Through the years, our publication evolved along with the market. When the industry expanded beyond CMBS, we became CRE Finance World in 2010, reflecting the broader integration of all types of commercial real estate finance into our coverage. When the market demanded deeper expertise over broader coverage, we shifted in 2020 to CRE and Multifamily Finance: In the Spotlight. This new publication delivers focused thought leadership pieces that dive deep into critical issues facing our industry.

Each transformation of our CREFC member publications taught us something essential. We learned that our members value both diversity of perspective and depth of analysis. We discovered that digital delivery expands our reach while maintaining the highest quality content. Most importantly, we confirmed that, regardless of format, our community depends on timely, forward-thinking content that helps navigate increasingly complex markets.

CREFC World represents the union of these lessons. We're returning to a multi-article format that reflects today's evolving market dynamics and accompanying viewpoints. We're remaining fully digital as we acknowledge how our members consume information today. We're publishing bi-annually to ensure each issue delivers maximum value without overwhelming busy volunteer market professionals (and their inboxes). And we're emphasizing forward-looking content because in today's market understanding what's coming next matters as much as understanding what's happened before and now.

To the Editorial Board members, past and present, who have guided us through each iteration, to the authors who have shared their expertise, and to you, our readers, who have made this publication essential to the industry, we say Thank You. Your contributions have built something enduring: a trusted platform for the commercial real estate finance community to connect, learn, and lead.

Welcome to CREFC World. The name honors its heritage while the content drives our future. Submissions will open in January for those interested in contributing to our Spring 2026 issue.

Be Well,

Lisa Pendergast
President & CEO,
CRE Finance Council

Power Is the New Location: How a $50 Billion Securitization Market Is Reshaping CRE Finance

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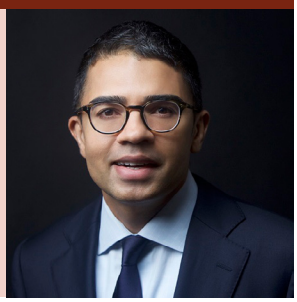

One company's trillion-dollar bet is reshaping commercial real estate. OpenAI, the creator of ChatGPT, is reportedly pursuing up to $1 trillion in data center investment through recently announced agreements with NVIDIA, AMD, and Broadcom. For those in CRE finance, that number should command attention—not because it's likely to materialize in full, but because it signals where capital is flowing and why.

Consider the context: across Big Tech, capital expenditure in 2025 has reached $364 billion for the top four U.S. hyperscalers alone, and CreditSights projects 2026 spend exceeding $600 billion as artificial intelligence drives infrastructure demand. These aren't speculative projections from consultants angling for engagement fees—they're disclosed capex figures from companies with the balance sheets to back them up.

For CREFC members, this matters for a straightforward reason: data centers have evolved from a niche property type to a mature securitized market, with over $50 billion in issuance since 2021. Annual issuance is projected to reach $30–40 billion by 2026–27, per Morgan Stanley, with potential spread widening as supply tests investor appetite.

This isn't a primer on data center engineering or a pitch for the asset class. It's an attempt to answer the question we've heard from members over the past year: what do I actually need to understand to evaluate these transactions? The answer starts with a fundamental shift in how we think about real estate value.

The Fundamental Shift: Megawatts Over Square Feet

Traditional real estate trades on location and square footage. Data centers trade on power measured in megawatts. A single hyperscale facility can draw over 100 MW—roughly the consumption of 80,000 homes. With AI increasing load requirements, grid interconnection and availability are often the primary constraints on development timelines. This reality is reshaping CRE decision-making, forcing market participants to understand utility interconnection and power contracts as deeply as they once understood location demographics.

Think of it this way: for a traditional office building, you'd never close a loan without confirming the property had reliable utility service. But "reliable utility service" meant little more than checking that the lights turn on. For a data center, power isn't a commodity input—it's the product. The building serves as a delivery mechanism for electricity to servers. If power fails for even a few minutes, entire operations can be disrupted, triggering penalties, tenant departures, and collateral impairment.

The geographic implications are significant. Markets are increasingly differentiated by their electrical infrastructure rather than traditional real estate fundamentals. Northern Virginia, with 2,500 MW of current capacity, faces severely constrained grid interconnections—utilities in the region have pushed back delivery dates for high-capacity power connections, with many 50+ MW requests effectively deferred beyond 2026. Phoenix has available power but faces water constraints for cooling. Silicon Valley? Constrained on essentially everything, with queue times exceeding five years.

Equipment bottlenecks compound these challenges. Electrical switchgear now has lead times of 52–70 weeks. Transformers? 70–100 weeks. Generators run 40–52 weeks. The development sequence that worked for decades in CRE—find land, design building, seek tenants, arrange power—no longer applies. Today's requirement begins with securing power through utility agreements or on-site generation commitments. Only with power secured can developers credibly approach anchor tenants, whose commitments then enable land acquisition at prices justified by the revenue certainty.

Power Is the New Location: How a $50 Billion Securitization Market Is Reshaping CRE Finance (cont.)

Why Securitization Scaled So Fast

In 2021, technology companies self-funded 80% of data center development, viewing these facilities as strategic assets too essential to entrust to third parties. By 2025, that equation has reversed, with 60% of development involving institutional capital as even the deepest-pocketed tech giants recognize they cannot fund infrastructure expansion alone.

Why did securitization scale so quickly to fill the gap? Three reasons stand out. First, the demand signal left the theoretical and became contractual. Long-dated, high-credit leases with known power profiles are securitization-friendly—exactly what investment-grade hyperscalers provide. Second, program design met issuer needs. The master-trust model in ABS allows modular issuance (public series, private sidecars, variable funding notes), while SASB (single-asset, single-borrower) transactions remain the workhorse for large, discrete portfolios. Third, investor education moved fast. Once investors learned to read "MW-based occupancy" and anticipated repayment date (ARD) math, they stopped mapping every number back to offices and warehouses. They started pricing the asset class on its own terms.

The numbers reflect this transformation. Total issuance through mid-November 2025 reached $23.8 billion—with $11.2 billion in ABS and $12.6 billion in CMBS—more than double full-year 2024 volume. Average deal size has grown to approximately $1.1 billion, up from $630 million in 2024 and $320 million during the 2022 trough.

The recent Blackstone/QTS transaction illustrates the scale: BX 2025-VOLT, a floating-rate SASB backed by approximately 10 QTS data centers across multiple U.S. markets, priced at $3.46 billion—the year's largest data center CMBS. The D notes were reportedly nearly 23x oversubscribed, indicating strong investor appetite for exposure to the sector, even at subordinate levels.

But investor enthusiasm shouldn't obscure the concentration risk embedded in these markets. The top five tenants—Amazon, Microsoft, Google, Meta, and Oracle—account for 73% of 2025 leasing activity. These are among the world's strongest credits, with ratings from BBB+ to AAA, but the tenant base is narrow. If hyperscaler capex slows—and recent AI stock corrections suggest investors are growing more skeptical of the return on these investments—the ripple effects would be significant.

ABS vs. CMBS: Choosing the Right Structure

The choice between ABS and CMBS structures has become increasingly sophisticated, and understanding the distinction matters for anyone evaluating these transactions. Both structures finance the same underlying assets, but the collateral pledged, investor base, and analytical framework differ materially.

In CMBS transactions, what's pledged is a mortgage on real estate, along with associated cash flows and assignment of leases. Typical advance rates run 65–70% LTV. The collateral pool is fixed—tax rules governing CMBS trusts prevent the addition of new assets. Investors are the same CMBS SASB/large-loan buyers familiar to CREFC members. The documentation runs 200–300 pages and uses relatively standard terms. The structure works best for fixed assets with stable, predictable cash flows.

In ABS transactions, the pledge is broader: equity in the operating company, cash flows, mortgages on real property, and assignment of leases. Advance rates typically range from 75–80% of cash flow (note that this metric differs from LTV, and the two aren't directly comparable). The structure allows adding assets that meet defined criteria, making it better suited for diverse pools and changing asset bases. Variable funding notes enable revolving draws. The documentation runs to 500+ pages and features complex waterfall mechanics—the investor base skews toward structured-finance ABS buyers, including esoteric ABS specialists rather than traditional CRE-focused investors.

The February 2025 Switch transaction (SWCH 2025-DATA) exemplifies the CMBS approach: $2.4 billion backed by three Nevada data centers with fee-simple interests, issued as a green-labeled CMBS under Switch's Green Financing Framework. The September 2025 QTS Phoenix ABS—approximately $600 million, backed by a single 36 MW Phoenix data center with a single hyperscale tenant under a triple-net lease—illustrates the ABS approach, with a five-year anticipated repayment date and an S&P A-rating. The choice often depends on whether the sponsor needs flexibility for growth or prefers the simpler documentation of fixed-pool structures.

Power Is the New Location: How a $50 Billion Securitization Market Is Reshaping CRE Finance (cont.)

How Rating Agencies Evaluate These Assets

Understanding how rating agencies approach data center securitizations requires recognizing a fundamental analytical divergence—between viewing these assets as real estate versus viewing them as operating platforms.

In CMBS, agencies view the collateral primarily as real estate—valuing it based on in-place leases, market rents, operating expenses, and data-center market fundamentals; "dark value" is typically used as a sensitivity/floor rather than a primary sizing input. The cap rate determines current property value for leverage and sizing purposes. S&P, Moody's, Fitch, KBRA, and Morningstar DBRS all apply their existing large-loan CMBS methodologies with data center-specific adjustments.

In ABS, agencies view the collateral more as a business platform—valuing the durability of contractual cash flows, the quality of the tenant base, and the enterprise's terminal value at the ARD. The cap rate here typically determines terminal or residual value, informing refinancing and take-out assumptions rather than current property value. S&P's "utility score" methodology and KBRA's AANOI (Annualized Adjusted Net Operating Income) approach reflect this operational lens.

Comparing CMBS and ABS cap rates without this context can be misleading. You're essentially comparing apples to oranges.

Despite methodological differences, the agencies converge on several key risk factors. Power security emerges as paramount: executed utility agreements with defined capacity and delivery timelines provide the foundation for any investment-grade rating. Backup power redundancy must meet minimum standards—commonly N+1 for hyperscale power systems (with 2N in select deployments/rooms), meaning every critical electrical component (generators, UPS systems, switchgear) has a fully redundant backup capable of carrying the entire load—with sufficient fuel storage for extended grid outages. The 2021 Texas freeze demonstrated that a 48-hour backup may not be enough when the grid goes down for days.

Tenant quality assessment goes beyond simple credit ratings. Agencies may assess "dark value" as one sensitivity (e.g., a large-tenant vacancy at lease expiry), but sizing is driven primarily by sustainable NCF, market depth/lease rollover, re-tenanting time and costs, and required capex. For hyperscale properties, agencies also consider the facility's role in the tenant's network architecture and the presence of proprietary equipment that would be costly to relocate. Colocation properties require detailed analysis of tenant diversification, with agencies stress-testing scenarios in which multiple tenants vacate simultaneously. Importantly, agencies do not apply a "look-through" credit enhancement in the manner sometimes assumed—tenant quality informs net cash flow (NCF) projections and renewal assumptions rather than providing direct rating uplift.

When agencies reference "occupancy" in this sector, read it as percent of MW sold or metered—not suites filled. Equipment age and condition have become increasingly critical as technological change accelerates. Properties with aging MEP systems—the mechanical, electrical, and plumbing infrastructure that keeps a data center running—face heightened scrutiny. Facilities with average MEP ages exceeding seven years are subject to closer review, while those over 10 years may struggle to achieve investment-grade ratings without committed capital improvement programs. The shift toward liquid cooling for AI workloads has introduced new complexity, with agencies evaluating not just current specifications but the feasibility and cost of future upgrades. Reserve requirements vary widely—from $2/kW/month for long-term investment-grade hyperscale leases to $18/kW/month for older colocation facilities.

A Skeptic's Checklist

The sustainability of current growth rates deserves serious scrutiny. OpenAI's trillion-dollar ambitions would require roughly $800 billion in funding after partner contributions—a scale that dwarfs the entire dot-com IPO era. The precise numbers are debatable; the magnitude is not.

Three technological shifts could fundamentally alter market dynamics. The liquid cooling transition, already underway, enables ten times the power density of traditional air cooling but renders much existing infrastructure obsolete. Retrofit costs of $50–100 million per 10-MW facility create a challenging economic equation for older properties. Quantum computing, likely five to seven years from commercial deployment, requires entirely different cooling approaches and could reshape demand patterns, though most experts expect complementary rather than replacement dynamics. Edge computing continues to accelerate, potentially redistributing processing away from centralized facilities.

The power reality itself presents challenges. Under Bank of America's base-case scenario, U.S. data center demand grows from 220 terawatt-hours in 2025 to 322 terawatt-hours by 2030—manageable with significant grid investments. The high-case scenario reaching 500 terawatt-hours would require infrastructure buildout that may not be feasible given permitting, equipment, and labor constraints. Creative solutions are emerging—15+ small modular reactor projects are in development, though they're unlikely to be available before 2029–2030. On-site gas turbines with carbon capture offer nearer-term solutions at higher cost. But the gap between demand projections and supply reality remains substantial. Beware the "bragawatts"—projects touting capacity without dated utility commitments or credible delivery paths.

Power Is the New Location: How a $50 Billion Securitization Market Is Reshaping CRE Finance (cont.)

What This Means for CREFC Members

For lenders entering this market, the underwriting shift is fundamental. Power must take precedence over traditional property considerations. Verified utility agreements with defined capacity and delivery schedules provide the foundation for any credible underwriting. Expansion rights secured through options or utility commitments can significantly enhance collateral value, particularly in power-constrained markets. Tenant and operator quality assessment extends beyond credit ratings to operational capabilities—track records of 99.99% or better uptime (less than 53 minutes of downtime annually) separate tier-one operators from aspirants.

Key structural protections gaining market acceptance include cash flow sweeps triggered when debt yields fall below specified thresholds (commonly in the 8–9% range, though deal-specific), replacement reserves commonly $3–$8/kW/month (deal-specific; observed range $2–$18), major lease approval rights to prevent adverse selection, and minimum rating requirements for tenant substitution. These protections reflect lessons learned from the rapid maturation of this market.

For investors, market entry considerations reflect the sector's complexity. Partnering with established operators for initial investments provides essential learning opportunities while reducing execution risk. Focusing on power-secured opportunities eliminates the primary development risk. Geographic diversification beyond the top five markets can unlock attractive opportunities with less competition, though it requires careful analysis of local power grids and fiber infrastructure. The value-add retrofit strategy—targeting properties with aging MEP systems for modernization—can potentially generate returns in the 12–15% range for those with the technical expertise to execute.

The Bottom Line

Data centers don't overturn CRE fundamentals so much as reorder them. Location still matters, but power is the new location. Credit still matters, but concentration and contract design redefine it. Value still hinges on cash flow and replacement cost, but MEP and cooling technology determine who earns tomorrow's rent.

The financing structures have matured rapidly—the market has evolved from experimental to institutional in just five years, with standardized documentation and established investor bases. But the technology risk is real. Today's state-of-the-art facility can become tomorrow's stranded asset if operators can't navigate the ongoing evolution from air to liquid cooling and beyond.

If you can read a utility interconnection study with the same fluency you once read a rent roll—and then translate that into structure (triggers, reserves, ARD paydown, and refinance math)—you're not just covering a new sector. You're underwriting the infrastructure that powers the digital economy.

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Real Merge Ahead: The AI-Driven Convergence of CRE and Infrastructure

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Please note this analysis is largely based on data through year end 2024 and may not reflect recent 2025 market shifts or updates to planned projects, unless stated otherwise.

Key Takeaways

- **The rise of artificial intelligence (AI) is creating an immense demand for the physical infrastructure that supports it, particularly data centers**
- **As the demand for data centers evolves and new data centers are delivered, their appearance is driving a "real merge" across previously distinct asset classes, property types, and financing structures**
- **The current data center development pipeline is robust; initial estimates of how many more are needed suggest we are far from reaching "peak" demand, given the new, larger requirements for data center sites, power, and cooling capacity**
- **While there are many opportunities, the data center market also creates significant risks, including the potential for job displacement due to AI, growing local political opposition to new projects, and the substantial environmental impact from electricity and water consumption.**

Only the Beginning of Massive Innovation

The rise of artificial intelligence (AI) is poised to bring about lasting changes, fundamentally reshaping every facet of the economy and society. The adoption of AI across various industries, as companies seek greater efficiencies from new applications built on this technology, is creating unprecedented demand for the physical infrastructure that enables it: data centers. This dynamic is driving what can be described as a "real merge" - a convergence of physical space, labor, capital, and financial markets that were once distinct. This transformative process is not a fleeting trend but a paradigm shift that is only just beginning.

While AI is new, massive technological change is not. To understand the long-term trajectory of the full potential of AI, it can be helpful to place it in a historical context and compare to another modern profound technological change – the internet. The modern internet (i.e., World Wide Web) was invented in 1989 and proliferated through the early 1990s. The internet created a communication connection and effectively helped to catalogue known information across the globe. However, adoption and application of the new technology was not instantaneous. Mosaic, the first browser with graphical images embedded in text, which helped fuel web adoption, was not launched until 1993. And it took nearly four years from the launch of the internet before the first recorded e-commerce sale occurred in 1994 (a CD of Sting's "Ten Summoner's Tales"). It was around the same time as this first e-commerce sale, Amazon and eBay were founded.

Fast-forwarding closer to the present to draw parallels. The launch of OpenAI's ChatGPT happened in late 2022. If the AI timeline were to be compared to the internet's from the early 1990s, we are at the dawn of America Online's (AOL) mass-market expansion. It was nearly impossible to foresee the internet's full impact on our lives today, yet it has since reshaped nearly every personal and professional domain since, and the same can be expected of AI (at least in the author's opinion). Yes, there were bumps along the way for the internet, and the same companies that started the internet age are not the same which shaped it, nor those which dominate today; but the underlying technological innovation, the internet itself, stuck around, and so will AI.

Real Merge Ahead: The AI-Driven Convergence of CRE and Infrastructure (cont.)

The Creative-Destructive Power

New technologies follow a clear development cycle. They are first created, then made accessible, before undergoing a period of testing and exploration, and finally reaching widespread adoption and integration (when they are "normalized", or viewed as standard or baseline). Currently, AI appears to be in the very initial testing phase (Figure 1).

Similar to the J-curve seen across commercial real estate (CRE) development or any large capital investment, it takes time before showing clear positive returns. AI is currently in this negative return portion, requiring massive capital expenditures to build out the necessary physical infrastructure and applications, which then will yield positive returns further out on the timeline. Initial estimates through mid-year 2025, suggest that the capital investment needed is in the hundreds of billions of dollars more, suggesting that the capital outflows are only starting. If the AI and data center buildout follows the J-curve, the providers or sources of funds (e.g., investors) will need to have high-conviction and ample patience, until returns become more readily apparent.

Another characteristic of profound technological innovation is that it is creative-destruction. When innovative technology removes existing inefficiencies and barriers, it can threaten the existing industries and processes, while creating opportunities for new entrants and processes. Then as barriers fall and new participants / processes enter, this can then lead to increased competition. This competition eventually results in a new period of market concentration and the establishment of new high barriers to entry.

As another example and parallel from the internet's history, this creative destruction can be seen as the internet created the gig economy. Gig workers hired for short-term, project-based tasks instead of traditional full-time employment were connected to these paid tasks by digital, internet-based platforms. While this added flexibility for workers to pick up additional income-earning opportunities could be seen as a positive, it also introduced significant earnings and income volatility. AI may see the birth of something similar, but possibly more transformative, a "spark economy". Unlike the gig economy, where people were still needed as an input to fulfill the service or good paid for, in the spark economy, fewer people will be needed - a mere idea and sufficient computing power are all that is needed to create value. As an example, in the spark economy, if somebody has a good business idea, they may no longer need to hire legal, marketing, sales, etc. professionals to get their business idea off the ground, which might be great for the entrepreneur, but is a loss for the lawyer, marketer, sales representative that they would have paid for service. While this is fascinating to think through, and try to anticipate the impact to the economy, that will be reserved for another time.

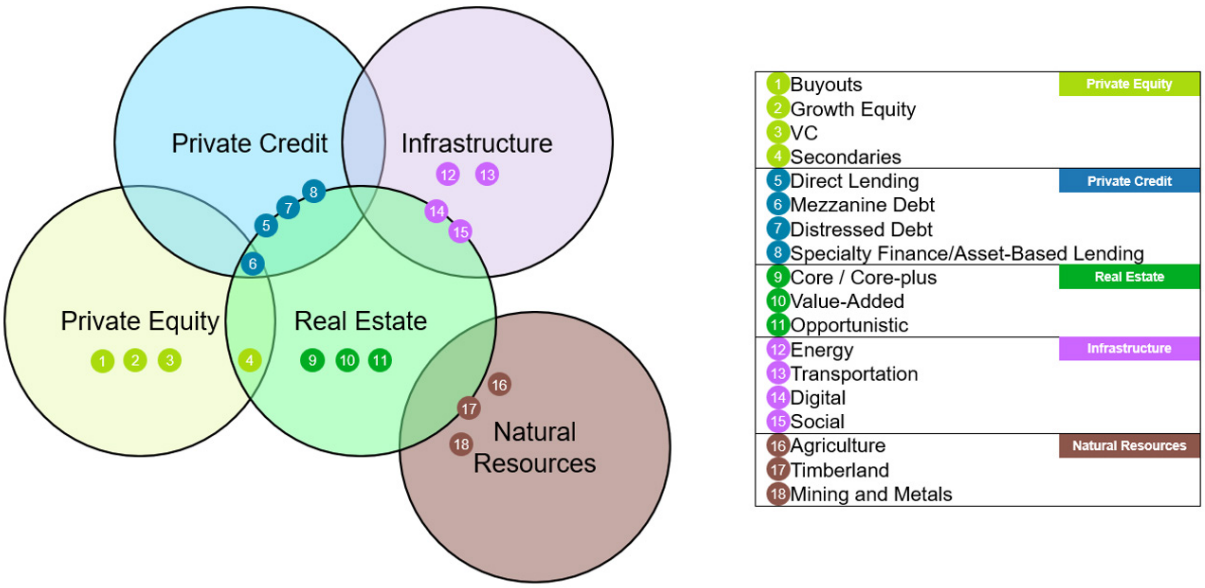
FIGURE 1
Development Cycle For AI

Real Merge Ahead: The AI-Driven Convergence of CRE and Infrastructure (cont.)

A Confluence of Market Definitions

The scope of what is considered "CRE" has expanded ever since it was considered an institutional asset class. The past two decades alone have seen many "non-traditional" sectors added to the broader CRE definition (e.g., seniors housing, student housing, single-family rentals, built-to-rent, short-term rentals, industrial outdoor storage, life sciences). Data centers look to be the latest and could be the most significant "new" sector. But data centers do more than create a new sub-category of CRE, data centers serve as a critical linchpin that connects the existing CRE universe to the infrastructure universe. This convergence is not a future possibility, it is already happening, with many investment teams and capital allocators restructuring their organizations to prepare for this asset class merge. The once clear delineation between two distinct asset classes is now getting blurred, and if data centers proliferate, the entire "traditional" view of markets (Figure 2) may be completely reenvisioned.

FIGURE 2
A "Traditional" View Of Private Markets



Sources: Altus Group's Research Team

Real Merge Ahead: The AI-Driven Convergence of CRE and Infrastructure (cont.)

Data Center Development Landscape

In the spring of 2025, McKinsey projected that data centers will require $6.7 trillion in capital investment worldwide to keep pace with AI's demand growth. The consultant estimates that data centers handling AI workloads will drive 77% of that near $7 trillion figure, while those powering traditional information technology (IT) applications account for much of the remaining. While the McKinsey report and estimates do not have a regional or country breakout, the US is likely a massive market for the capital investment, given its existing share of global data centers, the number of US-domiciled AI firms, and the recent prioritization of AI by the White House. Already, in Q3 2025, the data center development pipeline is enormous (Figure 3) – totaling more than 150 projects, more than $325 billion (estimated) in planned projects, 180 million additional square feet of data center space, and nearly 25 gigawatts (GW) of additional power capacity.

FIGURE 3

Planned / Announced Data Center Projects

	Projects or Properties				Power Capacity (MW)				SF/MW			
	Count	Total SF	Average SF	Median SF	Total	Average	Median	Prop. Range	Total	Average	Median	Minimum
East North Central												
Chicago	17	6,217,240	621,724	400,000	1,872	125	72	20 - 600	3,322	8,044	8,333	3,553
Columbus	13	6,005,000	750,625	256,000	1,549	221	10	10 - 1000	3,877	6,730	6,960	5,000
Mid-Atlantic												
New York	7	335,000	111,667	85,000	103	15	15	1 - 30	3,243	5,222	5,667	3,333
Mountain												
Phoenix	18	16,937,000	940,944	624,000	1,988	153	49	14 - 768	8,520	8,763	6,667	5,000
Pacific												
Portland	12	5,453,000	681,625	627,500	790	88	48	16 - 196	6,903	9,122	9,472	5,000
CA Bay Area	20	5,661,384	297,968	257,000	712	37	32	9 - 99	7,956	11,443	7,500	3,389
South Atlantic												
Atlanta	20	20,035,000	1,054,474	660,000	2,174	121	78	4 - 700	9,218	7,944	9,429	3,472
NOVA+DC	15	102,011,136	6,800,742	2,700,000	4,305	431	224	42 - 1144	23,696	15,802	7,330	3,333
West South Central												
Dallas Fort Worth	18	6,802,675	377,926	267,000	963	60	43	9 - 220	7,064	6,466	6,188	2,907
Other	**16**	**10,679,920**	**1,334,990**	**300,000**	**10,655**	**820**	**188**	**30 - 4500**	**1,002**	**5,494**	**4,975**	**1,000**
National	**156**	**180,137,355**	**1,429,662**	**439,000**	**25,110**	**198**	**60**	**1 - 4500**	**7,174**	**8,918**	**6,980**	**1,000**

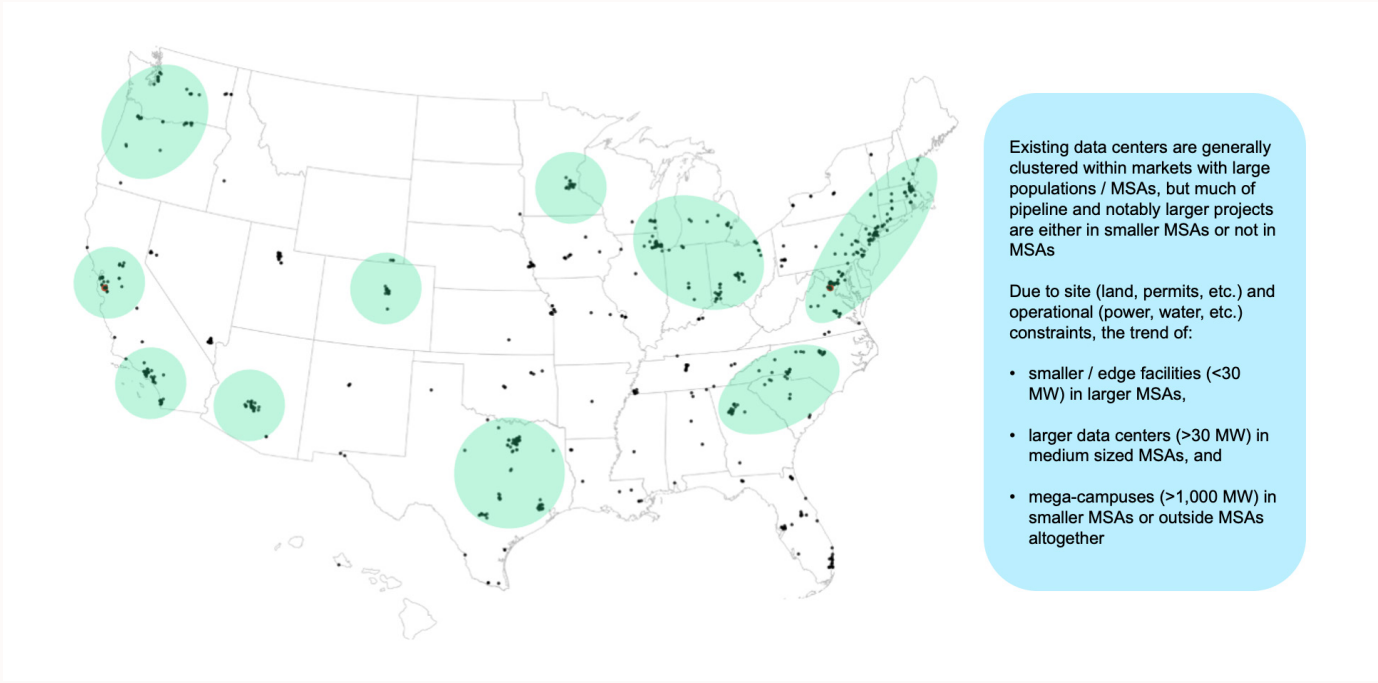
Note: The table shows an aggregation of announced / reported projects as of the end of 2024 for select markets; some of the power capacity and square footage are estimates; may not be comprehensive

Sources: Census Regions / Divisions; Altus Group's Research Team

Real Merge Ahead: The AI-Driven Convergence of CRE and Infrastructure (cont.)

While data centers might be relatively new to the more traditional CRE crowd, they aren't new and have been around for many decades. What is new is the surging demand for more, and this demand is not for the data center of yesteryear and is driving fundamental shifts in where, and at what scale, new facilities are being built. Existing data centers are typically clustered near major metropolitan statistical areas (MSAs), but a few notable shifts are underway due to site and operational constraints (Figure 4). The emerging trend shows smaller and edge facilities (<30 megawatts (MW)) being developed in larger MSAs, while larger data centers (>30 MW) are being constructed in medium-sized MSAs, and the largest mega-campuses (>1,000 MW) are being developed or are planned in smaller MSAs or outside of MSA boundaries altogether. This change in geography is a direct result of the industry adapting to the physical demands of AI, which prioritize access to cheap, abundant power and available land over proximity to population centers. This means that a data center's value is no longer determined by traditional CRE attributes but by its connection to the energy, fiber, and cooling networks, redefining what constitutes a "prime" location.

FIGURE 4
Data Center Development From 1990-2024



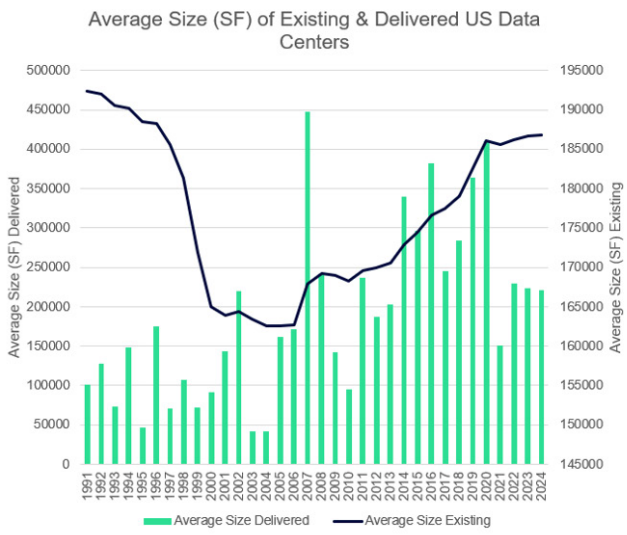
Note: Each black dot is an existing data center developed between 1990-2024 identified in the Altus Group data set, the green shaded areas are key development regions for data center development
Sources: Altus Group data; Altus Group's Research Team

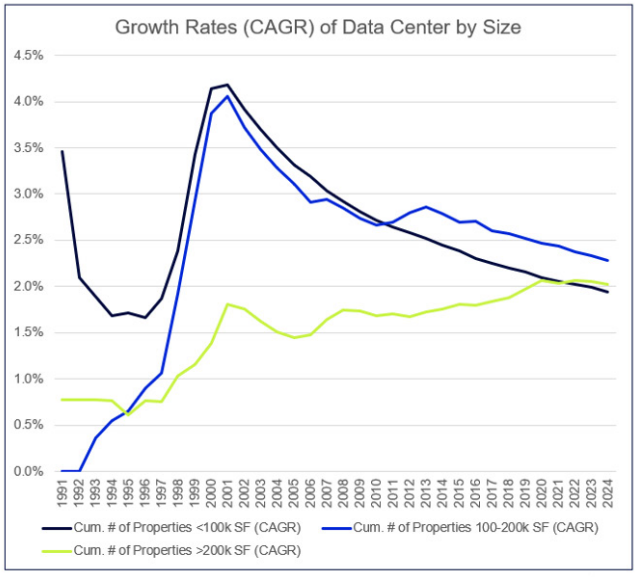
Real Merge Ahead: The AI-Driven Convergence of CRE and Infrastructure (cont.)

The physical scale of data centers has also evolved considerably (Figure 5). The data center of today is not the same as the one from the early 2000s. Where older facilities might have been 100-150,000 square feet (SF), today's typical data center requires more than 200,000 SF. This increase in size is a direct response to the substantial increase in power requirements from new technology. An early 2000s data center might have had a capacity of 5-20 MW, whereas a modern facility needs 4 to 5 times as much, ranging from 20-100 MW. The growth rates of larger facilities have continuously compounded over time, surpassing the growth rates of smaller formats.

While the location and size trends in data centers are emerging, and markets are shifting markets based on site specifics (e.g., land, power, cooling capacity), the forecasts and massive development pipeline appear to make one thing clear: more data centers are on the way.

FIGURE 5
Size Of Delivered US Data Centers (1991-2024)





Sources: Altus Group data; Altus Group's Research Team

Real Merge Ahead: The AI-Driven Convergence of CRE and Infrastructure (cont.)

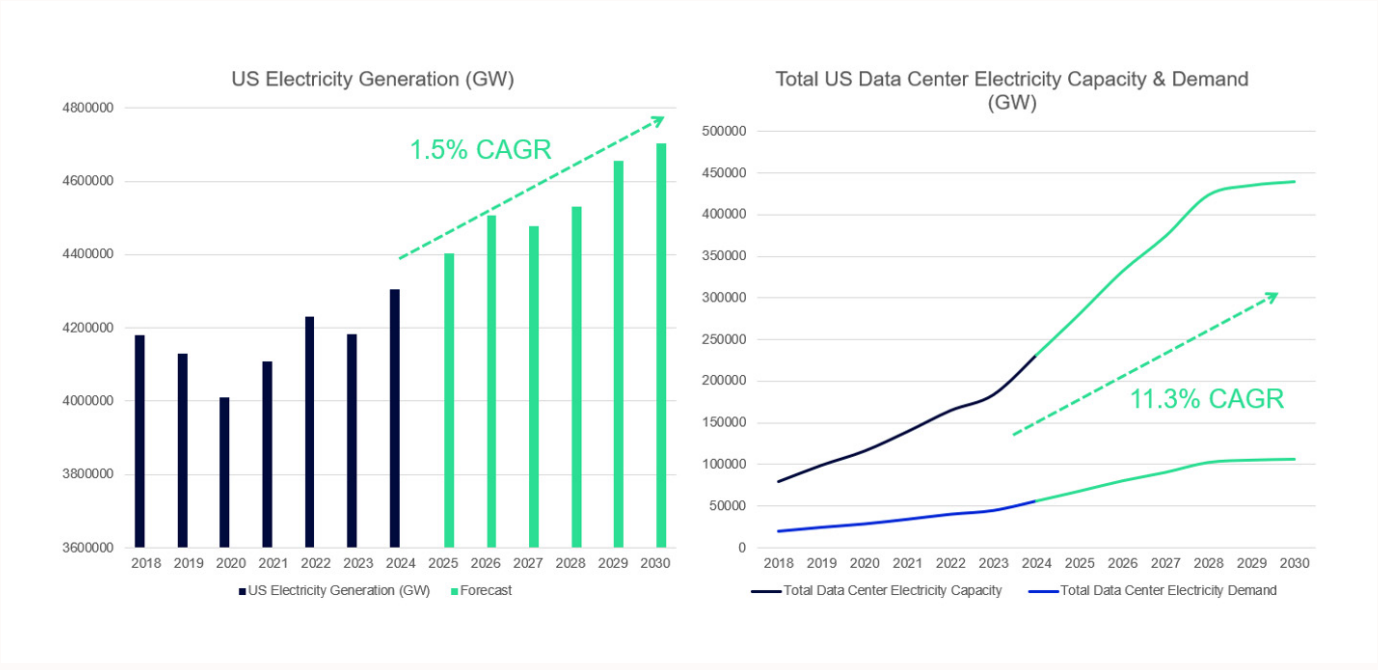
Quantifying the Demand: Are We Headed for "Peak" Data Centers?
With a massive amount of capital already allocated to building more US data centers, a critical question for the industry is whether the market is heading toward a supply glut, or asked another way: are we headed towards "peak" data centers - where there is overcapacity that creates rents that cannot support the development costs?

While a seemingly simple question to ask, it is not one which is easily answered, given the myriad of variables, factors, and scenarios on both supply and demand side of the equation.

However, to explore potential answers to the question, we built off of an existing study by a Lawrence Berkeley National Laboratory (LBNL) 2024 report which looks at the power consumption of data centers. The report, which uses a bottom-up modeling approach based on detailed equipment data, analyzes historical energy consumption at US data centers and projects future use through 2028.

The LBNL report found that data center electricity use, which was 1.9% of total US electricity consumption in 2018, rose to 4.4% by 2023. The report forecasted that this share could reach between 6.7% and 12% by 2028. Building on these projections and using US Energy Information Administration data, forecasts for overall US electricity generation, data center power capacity and demand were created (Figure 6). While total US electricity generation is projected to grow at a modest 1.5% compound annual growth rate (CAGR), data center capacity and demand are expected to grow at an explosive 11.3% CAGR through 2030.

FIGURE 6
US Electricity Generation, Data Center Capacity And Demand



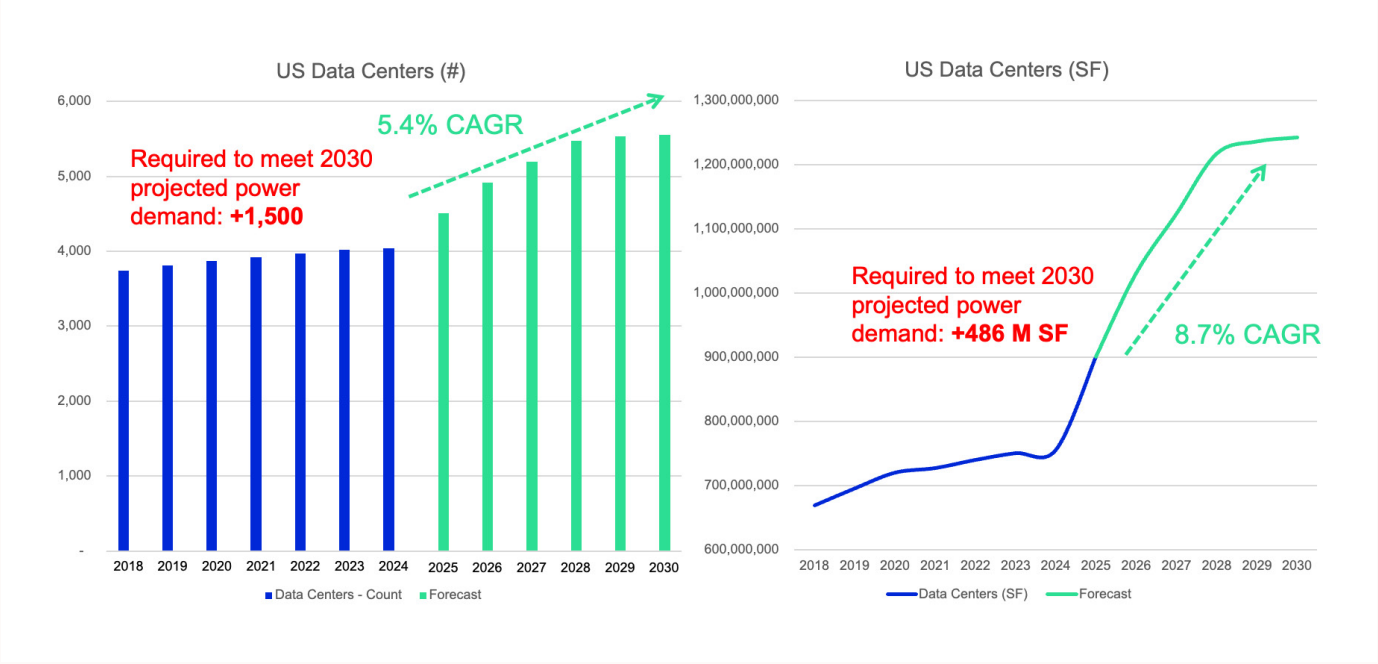
Sources: Altus Group data; Altus Group's Research Team estimations

Real Merge Ahead: The AI-Driven Convergence of CRE and Infrastructure (cont.)

Next, by translating these data center power needs into physical space requirements (and incorporating the recent trends seen in data center development discussed previously), a clearer picture of future data center demand emerges (Figure 7). Based on current trends in data center size and power density, the US will need approximately 1,500 new data centers - a 30% increase over today's existing stock - or an additional 486 million square feet of space - a 50% increase - to meet projected demand by 2030. These figures provide a definitive answer to the question of whether the market is reaching a "peak." Assuming current trends hold, a significant and sustained build-out is required, and there is no "peak" in sight.

This suggests that even with all announced projects delivered, the market will still have a substantial supply gap to close in just a few years. The primary risks for data center investment are therefore not on the demand side but on the supply side, centered on whether the industry can overcome the inherent challenges of site acquisition, permitting, and construction to meet this demand before it outstrips available capacity.

FIGURE 7
Implied New Data Centers To Meet Demand



Sources: Altus Group data; Altus Group's Research Team estimations

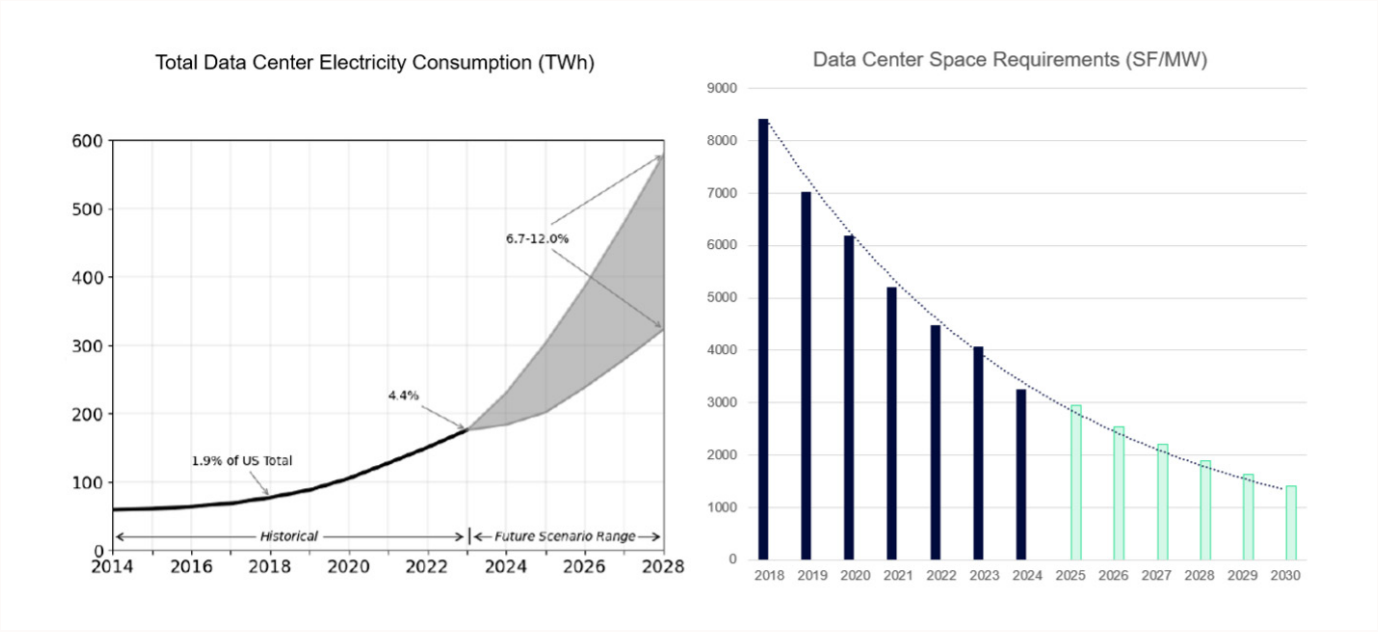
Real Merge Ahead: The AI-Driven Convergence of CRE and Infrastructure (cont.)

The Nuanced Reality: Caveats, Risks, and Societal Impacts

A proper analysis of the data center market must move beyond a simple narrative of growth and acknowledge the inherent risks and opposing forces. One significant risk lies in the non-linear dynamics of demand and supply. While demand for data center capacity is growing exponentially, the physical space required per unit of power is collapsing exponentially due to technological innovation (Figure 8). This introduces a fundamental uncertainty, as future innovations (everything from chips, models, power, cooling, space configurations, etc.) could render current facilities less efficient or even obsolete, a critical consideration for investors with long-term horizons. This non-linearity introduces greater volatility and makes long-term modeling a complex challenge with many potential scenarios and outcomes.

FIGURE 8

Projected Power And Space Requirements For Data Centers (2025-2030)



Sources: Lawrence Berkeley National Laboratory, "2024 United States Data Center Energy Usage Report" (2024); US Energy Information Administration; Altus Group data; Altus Group's Research Team estimations

Real Merge Ahead: The AI-Driven Convergence of CRE and Infrastructure (cont.)

Additionally, while the growth of AI brings many promises of efficiencies across the economy and our collective personal lives, it also introduces many potential headwinds that are difficult to factor into a simplified forecast analysis. To name a few:

- Labor market impact: A 2017 US Chamber of Commerce report estimated that the average data center employs 1,688 local workers during construction, only about 10% of these jobs - 157 total - become permanent post-delivery. This temporary job creation from the physical build-out contrasts sharply with the broader, permanent job displacement driven by the technology itself and could potentially drive great inequality within the US population.
- Political (local, national) support and resistance: As the societal impacts of AI, such as job displacement and increased energy demand, become more apparent, there is a possibility that the current tech-enabling policy agenda at the federal level could shift to be less supportive of further development. There is already a growing list of projects delayed or canceled due to local opposition groups. If this trend were to continue, it could lead to political and regulatory changes that would directly challenge the data center build-out.
- Environmental impact: The environmental impact of large-scale data centers, particularly their substantial electricity and water consumption, is a growing concern that cannot be ignored. While AI's growth is renewing the effort to explore and discuss nuclear energy, it remains a sensitive topic which if adopted would likely have many ramifications for surrounding markets.

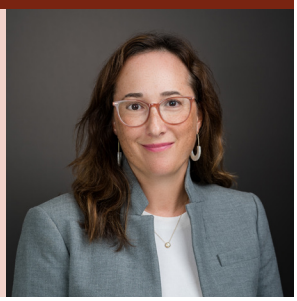
Conclusion: A New Frontier for Commercial Real Estate

The demand for data centers, driven by the adoption of AI, is just getting started. The rise of AI has shone a spotlight on this once-niche sector, positioning data centers as a critical linchpin between the broader real asset ecosystem and the real economy. The evidence overwhelmingly suggests that the market is not headed for a "peak," and a massive build-out of new facilities is required to meet projected demand.

For experienced CRE professionals, this is not merely an opportunity to participate in a new sector; it is a call to enable a new era of technology. The "real merge" means that success in the data center market requires a new, hybrid approach that blends traditional real estate expertise with an understanding of infrastructure, technology, and capital markets. It necessitates a long-term, patient commitment to the J-Curve investment cycle and a willingness to navigate the risks inherent in non-linear market dynamics. By providing the physical space and power required for the AI revolution, CRE professionals are in a unique position to shape the future of both the built environment and the global economy.

C-PACE: From Alternative to Essential in Today's Capital-Constrained CRE Market

Kate Cusack | *Managing Director, Head of Production* | Nuveen Green Capital



The commercial real estate finance landscape has faced a significant recalibration in recent years. Rising interest rates, tightening credit markets, and evolving risk appetites among traditional lenders have converged to challenge the status quo of deal origination and capital stack structuring. Amid these headwinds, new tools and strategies have moved to the forefront, with Commercial Property Assessed Clean Energy (C-PACE) financing emerging as one of the most innovative and compelling options for owners, developers, and Sponsors seeking to unlock liquidity and maximize value.

As the industry focuses on resilience, sustainability goals, and innovative capital solutions, C-PACE offers a unique blend of flexibility and cost-efficiency that can help the real estate industry navigate volatility while driving success in an increasingly complex market. These advantages have resulted in remarkable growth in the C-PACE industry, both in deal size, as well as in cumulative originations, which now total over $10 billion.

The C-PACE Primer: What Sets It Apart

C-PACE, now available in nearly 40 states, is a state policy-enabled commercial real estate financing mechanism designed to facilitate energy efficiency, renewable energy, and resiliency measures for commercial properties. C-PACE funding is non-recourse capital that is repaid through an assessment on the property tax bill, typically with a term that stretches over 20 to 30 years.

Key features that distinguish C-PACE in the marketplace:

- Long-term, fixed-rate structure: The extended amortization period and fixed-rate terms allow borrowers to match financing costs with expected savings from building upgrades, improving project IRRs and cash flows.
- Non-recourse and off-balance sheet treatment: Repayment obligations are secured by the property, not the borrower or operator.
- Transferability: The assessment "runs with the land," meaning that obligations transfer to future owners.
- Fills gaps: C-PACE can fill gaps in the capital stack, funding up to 35% of total project costs and often sitting alongside conventional senior debt, mezzanine, or equity.

The result is a product that under the right circumstances can facilitate capital investment in assets that otherwise might face prohibitively expensive or limited traditional financing – particularly in periods of market constraint.

Credit Constraints: The New Normal in CRE Capital Markets

The last few years have reshaped lending norms for CRE. With monetary policy pivoting decisively toward inflation containment, rates have increased at a pace not seen in four decades. Traditional lenders have tightened underwriting, increased loan covenants, and retreated to lower leverage, higher margin standards.

The reverberations are visible across property types:

- Transactions have slowed, as buyers struggle to complete deals at higher all-in costs and with smaller loan proceeds.
- Refinancings demand more equity or face significant interest rate step-ups.
- Many value-add and transitional assets, particularly in office and hospitality, struggle to secure affordable bridge capital.

Yet, the need for property upgrades – to meet sustainability objectives, regulatory demands, and market preferences – has never been more acute. Building owners seeking to reposition, re-tenant, or simply maintain compliance find themselves facing a capital access paradox: more urgent demand, but less supply.

C-PACE: Unlocking Flexibility in the Modern Capital Stack

C-PACE addresses these constraints in several targeted ways. Its flexible structure means it can be deployed at multiple points in an asset's lifecycle – from new construction and major redevelopments, to retrofits and repositionings, and at all stages of construction – new, ongoing, or recently-completed.

There are several scenarios where C-PACE can enhance sponsor flexibility and accretive value:

C-PACE: From Alternative to Essential in Today's Capital-Constrained CRE Market (cont.)

New Construction and Redevelopment
Developers of ground-up or major renovation projects have watched construction loan terms compress and leverage points decline, forcing additional equity or more expensive capital into the mix. In these scenarios, C-PACE offers a meaningful alternative.

Projects can add C-PACE proceeds to the capital stack that:

- Reduce senior lender exposure
- Replace more expensive debt, improving overall cost of capital
- Extend amortization, matching project stabilization timelines

Lenders are increasingly recognizing C-PACE's benefits — enabling stabilization and asset quality, with a growing base of institutions incorporating C-PACE into their underwriting for both new builds and extensive rehabilitation projects.

Capital for Distressed and Transitional Assets
In today's environment, not every property faces a clean path to refinance or repositioning. Transitional assets in hospitality, office, or retail, especially those facing cash flow pressure or deferred maintenance needs, find traditional debt either unavailable or uneconomical.

Because of its non-recourse, assessment-based structure, even distressed assets can access C-PACE capital where conventional financing may be unavailable. This flexibility is increasingly critical as sponsors and servicers seek creative solutions for legacy assets caught in the credit squeeze.

Sustainability, Compliance, and Value Enhancement
Pressure to advance decarbonization and sustainability goals now affects nearly every CRE asset class. Local mandates (NYC's Local Law 97, Boston's BERDO, D.C.'s BEPS, etc.) and investor preferences have made energy efficiency and climate resilience synonymous with property value and liquidity.

C-PACE uniquely positions owners to monetize these upgrades – not just for compliance, but for enhanced tenant demand, regulatory readiness, and eventual exit value. By collateralizing the investment through a long-term assessment, owners sidestep near-term cash flow constraints and maximize value accretion.

Deployment Flexibility: Mid-Construction Through Stabilization, C-PACE fills these gaps with flexibility
Shrinking loan proceeds from senior lenders, stubbornly high construction costs, and ongoing uncertainty have created a financing squeeze for new builds and in-progress redevelopments. Deals stall, cost overruns mount, and many developers find themselves needing fresh capital to cross the finish line, but with few attractive sources available.

Mid-Construction Capital: Sponsors can secure low-cost, fixed-rate C-PACE funds during construction to cover overruns, fund working capital, or replenish reserves — without requiring new equity injections or expensive bridge debt.

Post-Completion Recapitalization: In most states, C-PACE can be applied up to three years after project completion. This "look-back" provision means property owners can tap into C-PACE to pay down construction debt, restructure their capital stack as markets evolve, or restore liquidity — all with the certainty of fixed-rate, non-recourse repayments.

Accretive Impact and the Road Ahead
C-PACE's value proposition is increasingly being accepted:

For Sponsors: It can preserve equity, reduce the weighted average cost of capital, and offer clarity and certainty in uncertain times.

For lenders: It can de-risk senior positions by addressing critical deferred maintenance and upgrades that protect collateral and potentially boosting long-term value.

For communities: It can drive sustainable, resilient development, preserve landmarks, and build economic opportunity and jobs — all through the use of private capital.

Industry acceptance continues to grow, with more states streamlining legislation, more lenders embracing C-PACE's structural advantages and gaining comfort with C-PACE's underwriting and lien priority, and more Sponsors taking advantage of its stability and cost effectiveness.

Looking Forward:
The increasing sophistication of capital markets, combined with the growing institutional focus on sustainability and resiliency, indicates a new phase of expansion for C-PACE. While some industry perspectives are still shaped by misconceptions —particularly around its integration with senior financing and market scalability — the rapid refinement of C-PACE legislation and underwriting processes points toward a clarifying and maturing market. By embracing C-PACE, the commercial real estate (CRE) industry can not only bridge critical financing gaps but also proactively address evolving asset quality and compliance standards.

401(k) Private Asset Freedom Creates CRE Finance Opportunity

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Carl Lammers | *Partner* | Frost Brown Todd LLP
Douglas Walter | *Partner* | Frost Brown Todd LLP



On August 7 2025, President Trump issued an executive order directing expanded access to alternative assets in 401(k) plans (the "Order")[1], expressly including "direct and indirect interests in real estate, including debt instruments secured by direct or indirect interests in real estate". If effectively implemented, the Order could represent a transformational shift for commercial real estate finance, unlocking access to portions of the $13 trillion currently held in defined contribution retirement plans[2] for commercial real estate (CRE) investments.

The Shifting Legal Landscape

This is not the first development in recent years seeking to change the regulatory landscape surrounding retirement fund investments. The Department of Labor (DOL) published an Informational Letter in June 2020 which indicated that, under certain circumstances, professionally managed 401(k) funds could allocate funds to private equity investments without violating the fiduciary duties under Section 403 and 404 of ERISA.[3] However, this guidance was followed in 2021 by Biden administration guidance that cautioned against such investments for most plan sponsors.[4] The Order, and the subsequent releases from the Department of Labor, expressly rescinded the more restrictive guidance, effectively restoring the 2020 framework while directing the DOL to develop "appropriately calibrated safe harbors" for plan fiduciaries within 180 days.[5] It is not yet clear what forms those safe harbors would take. But, with approximately 3 years remaining under this administration, there is more time for implementation without an imminent risk of another administration again changing course.

Market Dynamics Favor Alternative CRE Strategies

The business cases for CRE inclusion in 401(k) plans are myriad. From the investors' and plan administrators' perspectives, commercial real estate historically demonstrates low correlation with traditional stock and bond markets, providing crucial diversification that can reduce portfolio volatility while potentially enhancing returns. Institutional investors typically allocate between 5-20% of their portfolios to real estate. Most 401(k) participants, however, have zero direct exposure to this asset class, although some have interests through mutual funds that hold stakes in REITs.

Recent surveys indicate that as many as 45% of investors participating in defined contribution retirement plans would invest in private equity and private debt if given the opportunity, and 77% would increase their contributions to those plans.[6] If defined contribution retirement plan investors' allocations followed institutional investors' allocations, that would unlock another $650 billion to $2.6 trillion in capital for CRE investment previously unavailable. For a sense of scale, the Mortgage Bankers Association (MBA) reports that as of the end of the second calendar quarter of 2025, an aggregate of $4.88 trillion in commercial and multifamily mortgage debt was outstanding.[7] Even on the conservative end of the estimates, the potential impact for CRE investment is apparent.

[1] Democratizing Access to Alternative Assets for 401(K) Investors – The White House

[2] US Retirement Assets Rise to $45.8T in Q2 | PLANADVISER

[3] Information Letter 06-03-2020 | U.S. Department of Labor

[4] U.S. Department of Labor Supplement Statement on Private Equity in Defined Contribution Plan Designated Investment Alternatives | U.S. Department of Labor

[5] US Department of Labor rescinds 2021 supplemental statement on alternative assets in 401(k) plans | U.S. Department of Labor

[6] Nearly half of retirement plan participants would invest in private assets, finds Schroders | News | Institutional Real Estate, Inc.

[7] Commercial and Multifamily Mortgage Debt Outstanding Increased in Second-Quarter 2025 | MBA

401(k) Private Asset Freedom Creates CRE Finance Opportunity (cont.)

From the perspective of CRE asset managers, the opening of 401(k) markets represents a generational opportunity to access stable, long-duration capital at an unprecedented scale. This retirement capital offers uniquely attractive characteristics, including predictable inflows from participant contributions, extended investment horizons aligned with 20–40-year retirement timelines, and reduced redemption volatility compared to institutional investors who face quarterly performance pressures. Further, the democratization of CRE investing would allow asset managers to dramatically expand their investor base from the relatively small pool of institutional investors to millions of individual retirement savers. The strategic imperative is clear: CRE managers who successfully adapt their capabilities for this new market would have access to a powerful capital generation engine.

Industry Stakeholders Cautiously Embrace Opportunities

While the Order has gotten the attention of many participants in the CRE market, there has been some skepticism that change will happen quickly due to legal obligations of plan fiduciaries, and the attendant risk associated with existing ERISA frameworks. The risk of litigation limits what plan fiduciaries are willing to do, and it is likely that major changes will not occur to the investment landscape until the DOL issues its official guidance in response to the Order.

Instructive here is one long-running lawsuit that may finally have been decided in favor of plan fiduciaries that offered alternative investments. In *Anderson v. Intel Corp. Inv. Policy Comm., 137 F.4th 1015 (9th Cir. 2025)*, plan investment fiduciaries of two defined contribution plans (including a 401(k) plan) offered exposure to hedge and private equity funds through the plans' target date and global diversified funds. When those investments failed to match stock market gains over a specific period, a class action lawsuit suit was filed against the committee for breach of fiduciary duties of prudence and loyalty under ERISA. In May of this year, the Ninth Circuit affirmed the district court's decision to dismiss the lawsuit, ruling that the duty of prudence is prospective, based on the fiduciary's evaluation of the investment opportunity and determined at the time of the decision to offer the option. The duty is not retrospective, determined based on performance after the option was made available. The court also held that the plaintiff failed to provide a meaningful benchmark fund for return and fee comparison purposes and that the plaintiff's generalized claims that exposure to hedge and private equity funds as being too risky and expensive is not enough to show lack of prudence.

While the *Intel* decision does not undermine the Order and supports increasing the availability of alternative assets to defined contribution plan participants, it also illuminates the chilling effect a lack of a regulatory safe harbor and settled case law has had on plan fiduciaries. Here, Intel ultimately won (barring a further appeal) but had to litigate the claims for years. Moreover, this case is only binding on courts within the Ninth Circuit, leaving open the possibility of splits in other Circuits and persistent risks to plan fiduciaries who offer alternative investments without a safe harbor.

Despite the risks outlined above, several large advisors, including BlackRock[8], have announced plans to develop products that incorporate alternative assets. Other major industry players have expressed enthusiasm at the new opportunities being afforded, while also cautioning that changes may not happen quickly.[9] Turning that enthusiasm into action, however, is another matter.

Open Questions and Next Steps

Although the Order is unambiguous evidence of the current administration's desire to move forward on this issue, a number of items will need to be resolved to truly facilitate sweeping changes to 401(k) plan investments. The complex regulatory environment surrounding such investments make it necessary for the Secretary of Labor to coordinate with other governmental bodies, including the Treasury and Securities and Exchange Commission (SEC), a concept that is expressly noted in the Order. The extent to which we will have clear cross-agency alignment is yet to be determined.

Assuming the agencies are ultimately aligned, perhaps the most crucial open questions are how far the agencies will go, and how fast they will get there. At this stage, we do not have clear expectations on what form any safe harbor guidance would take, which could have a significant impact on industry uptake. The DOL response could come in the form of additional guidance, which could be helpful but may not be sufficient to induce more risk adverse players to wholeheartedly embrace alternative investments. As we have already seen, guidance can quickly shift with changes in the political landscape, which could represent an unstable base to build on. Alternatively, and preferably for plan fiduciaries, the Department could engage in formal rulemaking procedures. Such formal rulemaking may also be subject to future changes, and is likely to be more time-consuming, but would likely prove easier to rely on than less rigorous methods.

[8] Trump 401(k) Order Opens Door for Crypto, Private Equity and Real Estate - The New York Times

[9] Apollo, Blackstone, Carlyle, KKR enthusiastic about 401(k) plan executive order | PE Hub

401(k) Private Asset Freedom Creates CRE Finance Opportunity (cont.)

It is also important to consider what parameters could be placed on alternative investments and to what extent they may require entirely new CRE investment vehicles to practically resolve. Merely stating that such alternative investments do not automatically violate fiduciary duties does not mean that every investment will be deemed appropriate. At the highest level, we may anticipate safe harbor guidance to place caps on alternative asset allocations in total, and it would not be surprising if those caps were lower than the percentage of investments typically allocated to real estate, given the context.

There are many open questions that will need to be explored, and addressed, for the CRE debt and equity markets to most efficiently utilize the possible new source of capital. For example:

- Should there be restrictions or guidance regarding what property types are appropriate for investment? Perhaps safe harbors would favor "core" assets like multifamily, industrial, and grocery- or big box-anchored retail while limiting more cyclical sectors or newer classes, such as hospitality and data centers, respectively.
- Should regulations permit investment only in stabilized assets? Or might they permit some degree of bridge and construction lending and development investments under certain conditions? The latter would align more closely with historic private equity funds' return expectations, while the former could require new private equity funds focused on generally safer investments with lower yields.
- Should leverage magnifiers, such as warehouse and repurchase facilities for CRE lenders, be permitted? While these facilities are commonplace in CRE finance and can boost returns, they also introduce the risk of losing performing assets through cross-collateralization.
- Will the new guidance favor CRE debt investments over equity? How much consideration should be given to an individual investment's place in the capital stack?
- What is the process for and how often will CRE investments be valued? Is daily valuation, similar to standard 401(k) investments, possible? Is there ability to structure CRE investments to maintain sufficient liquidity to satisfy plan distributions?

Depending on the answers to these questions, it may be necessary to go even further in depth, evaluating prudent investments standards with respect to loan-to-value ratios, debt service coverage ratios and other metrics CRE professionals are accustomed to using.

Each of these questions revolve around the central tension between risks and returns that plan fiduciaries must tackle. Fortunately, balancing risk and reward is not new for plan fiduciaries. One very popular 401(k) investment option is "target date" retirement funds, which seek to balance risk and return in order to maximize growth over an investment horizon that targets a certain retirement age. Target date funds typically start with allocations that support higher risk and higher returns, such as high growth stocks, while the investor has time to recover losses long before retirement age, shifting to safer investments, such as government bonds, as they approach the target retirement date. Target date fund managers could mirror that profile and initially skew CRE investments towards higher yield positions, such as CRE equity, preferred equity and mezzanine loan investments, and shifting to lower risk, lower yield positions with more predictable cash flows and lower volatility, such as senior mortgage debt instruments, as the fund approaches the target retirement date.

This tension between risk and reward will be key to determining which CRE sectors will most feel the impacts of the Order and any ensuing regulations. For example, in recent years there has been a significant shift in the Commercial Mortgage-Backed Securities (CMBS) market toward 5-year loan terms. Could an influx of capital, with different investment horizons and return targets shift the tide back to 10-year paper through increased demand?

The exact nature of any regulatory changes and safe harbors will have a significant impact on which portions of the risk-reward spectrum currently held in defined contribution plans will be supplemented with CRE investments. While funds seeking high returns may look to invest in riskier CRE spaces, such as construction and bridge loans or preferred equity investments, that will likely require regulatory support to gain significant traction and prevent the chilling effect of lawsuits like *Intel*.

Regardless of what property types and investments will be permitted, diversification will continue to be prudent, whether with respect to geographic markets, asset classes and other considerations aimed at preventing concentrated exposure that could jeopardize investment outcomes. Depending on the ultimate federal guidance, it is possible that existing institutional CRE funds cannot simply be repackaged for 401(k) inclusion but an entirely new generation of CRE investment fund will emerge. Some fiduciaries may await emergence of such "retirement-ready" CRE vehicles with features suitable for 401(k) investments before making these options available. Others are also likely to take a wait-and-see approach, taking time to observe the results of any initial fallout, including participant feedback, litigation outcomes, and regulatory enforcement patterns, before committing their own resources to implementation.

It may also be worth considering the extent to which existing investment fiduciaries (and their advisors) are well-situated to evaluate real estate investments, given the historical lack of inclusion of these assets. Fortunately, there already are sophisticated asset managers who

401(k) Private Asset Freedom Creates CRE Finance Opportunity (cont.)

understand CRE investment and can partner with plan fiduciaries, who understand the fiduciary standards. This will create an opportunity for enterprising advisors looking to leverage these changes into business opportunities. Other parties will have an opportunity to advise on participant communication strategies. This will include crafting adequate disclosures for complex alternative investments aimed at retail investors with varying financial sophistication. Still others can expect to advise on the evolving regulatory guidance and market best practices in this unprecedented transformation of retirement investing.

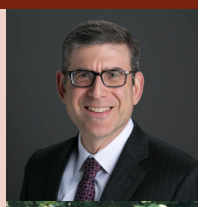
Conclusion

The Order signals a real opportunity but is not by itself a practical opening of the proverbial floodgates. Over the next several months, the pace and shape of change will hinge on the ultimate DOL safe harbor guidance alongside the industry's tolerance for fiduciary and litigation risk. Expect adoption to arrive in phases: first through tightly risk-bounded structures and conservative allocations, then, if the framework proves durable, broader participation. Those who prepare now have the chance to set the standards others follow and, given the magnitude of the opportunity, there should be no shortage of those willing to take the risks inherent with being an early mover.

As this is an emerging issue, be alert for future installments analyzing these issues as federal guidance begins taking shape.

Dallas – The Buckle of the Sunbelt and America's Fastest Growing Financial Center

Stewart Rubin | *Head of Strategy and Research, Senior Director* | New York Life Real Estate Investors
Marshall Swett | *Associate, Strategy and Research* | New York Life Real Estate Investors



Dallas-Fort Worth (DFW) is an economic powerhouse with a large, diversified economy spanning sectors such as finance, technology, wholesale trade, transportation, warehousing, and health care. DFW is the fifth-largest metropolitan area in the U.S. by GDP, with an output of over $744 billion in 2023. Strategically located in the center of the country, the metro serves as a major hub for trade, transportation, and distribution.

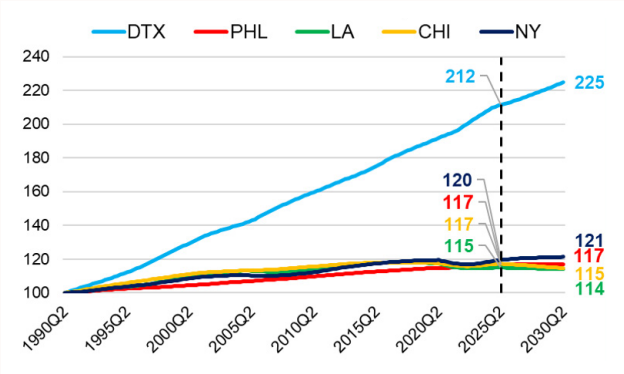
DFW is the largest metro within the state of Texas, which hosts the second most corporate headquarters of Fortune 500 companies behind only California. Forty percent of Fortune 500 companies headquartered in Texas are based in the DFW Metroplex, including Exxon Mobil, McKesson, AT&T, Caterpillar, American Airlines, Southwest Airlines, and Charles Schwab.

Population

Over the past three decades, Dallas-Fort Worth has undergone a structural transformation in its demographic and employment profile, leaving peer metros and the nation behind across key growth measures. Since 1990, DFW's total population has surged 112%, nearly tripling the national growth rate of 37%. In contrast, New York and Philadelphia grew just 20% and 17%, respectively, while Chicago and Los Angeles grew 17% and 15%.

That growth has not been limited to overall headcount; it has been concentrated in economically vital cohorts as well. The important 25 to 34-year-old age group, often associated with early career development, household formation, and long-term community roots, has grown by 53% in DFW since 1990, far outpacing the national gain of just 7%.

EXHIBIT 1
Population Growth & Projections by MSA
(Indexed, 1990Q2=100)



Source: Oxford Economics. As of Q2 2025 (Future data based on projections.)

Dallas – The Buckle of the Sunbelt and America's Fastest Growing Financial Center (cont.)

Meanwhile, peer metros have experienced meaningful declines in this segment: New York declined by 8%, Chicago and Philadelphia by 13%, and Chicago by 19%.

DFW also leads in overall employment growth, with total nonfarm jobs increasing by 116%, more than twice the national gain of 46%. By comparison, New York and Philadelphia posted job growth of 26% and 25%, respectively; Chicago grew by 21%, and Los Angeles by just 17%. By every measure: population, young talent, and total employment, DFW has decisively outperformed both its peer metros and the broader U.S. economy.

Looking ahead to 2030, projections indicate that DFW's momentum will continue to distinguish it from other financial hubs. The region's total population is expected to surpass 9 million, reflecting an additional 6% increase from 2025 levels. While modest compared to past gains, this still exceeds projected growth in Chicago, Los Angeles, New York, and Philadelphia, all of which are forecast to grow by less than 2%.

Even more telling is the outlook for the 25 to 34-year-old demographic. DFW is expected to see an increase of 8% in this critical age group, while all four peer metros are projected to experience further declines. This anticipated inflow of young, economically active residents points to a sustained pipeline of talent, renters, consumers, and homebuyers.

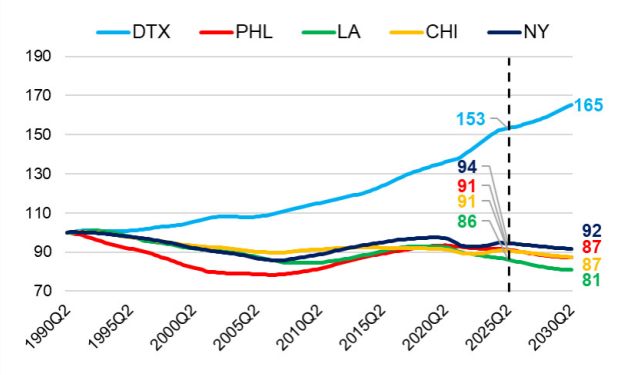
Employment forecasts reinforce this trend. DFW is projected to add another 237,000 jobs by 2030, pushing total employment growth to 5% from 2025, again outpacing all four peer metros and the U.S. average. As other large cities contend with stagnation or demographic headwinds, DFW appears positioned to remain one of the nation's most dynamic labor markets.

With these tremendous gains come growing pains such as congestion and strain on public infrastructure, but the region is investing to keep pace. Mobility 2050 was adopted on June 12, 2025, to guide a wide range of projects across various modes[1], and major milestones ahead include the opening of DART's 26-mile Silver Line[2] and the completion of TxDOT's $1.74B I-635 East reconstruction[3].

EXHIBIT 2

Age 25–34 Growth & Projections by MSA

(Indexed, 1990Q2=100)

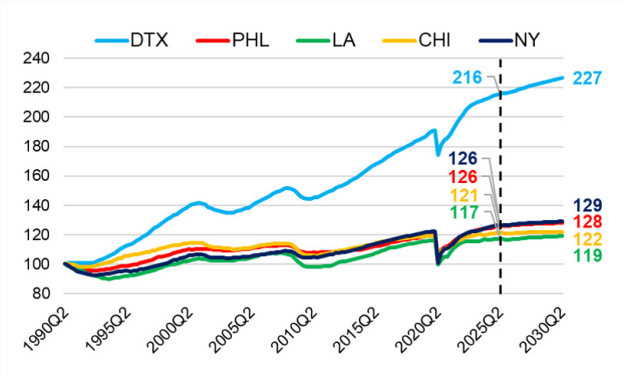


Source: Oxford Economics. As of Q2 2025 (Future data based on projections.)

EXHIBIT 3

Nonfarm Payroll Growth & Projections by MSA

(Indexed, 1990Q2=100)



Source: Oxford Economics. As of Q2 2025 (Future data based on projections.)

[1] Mobility 2050, North Central Texas Council of Governments, 2025.

[2] "Silver Line Launches Oct. 25, Connecting Seven Cities and DFW Airport with Modern, Reliable Transit," Dallas Area Rapid Transit, October 8, 2025.

[3] 635 East, Texas Department of Transportation, 2025.

Dallas – The Buckle of the Sunbelt and America's Fastest Growing Financial Center (cont.)

Like other Sun Belt markets, DFW's population boom fueled a surge in construction, leading to a surplus in the multifamily sector. The metro delivered 19.9% of its total multifamily inventory in the past six years and now has an 11.9% vacancy rate, compared to 8.2% nationally. Rents have also lagged the U.S. average, declining by 1% over the past year. Despite these near-term supply pressures, strong demographic and employment growth are expected to sustain long-term demand for multifamily investment in DFW.

Finance Sector

Dallas-Fort Worth's economy was historically anchored in the energy sector, serving as the financial and logistical hub for the East Texas oil boom of the 1930s, when local banks and investors financed exploration and refining across the region. As oil markets fluctuated, the city deliberately diversified, leaning into its central location and financial infrastructure to build strengths in banking, insurance, and real estate.

Decades after the oil boom, DFW remained heavily concentrated in energy, with a 1990 location quotient (LQ) of 5.18 in oil and gas extraction, meaning the region had more than five times its share of those jobs compared to the nation. At the same time, its economy was beginning to broaden, with a finance, insurance, and real estate (FIRE) LQ of 1.30 and a professional and business services (PBS) LQ of 1.07. In 2025, DFW has diversified away from over reliance in oil and gas extraction reflected in a lower (but still substantial) LQ of 2.18. The metro has pivoted towards FIRE and PBS as evidenced by LQs of 1.58 and 1.27 respectively.

DFW has developed into the second largest U.S. financial services hub, trailing only New York City, adding over 59,200 finance sector jobs since late 2019[4]. DFW's advantages include lower taxes, more affordable cost of living compared to New York or Los Angeles, central location, and strong air transportation linkages to the rest of the nation. Many finance sector companies have relocated to DFW in the past several years from other states with less favorable regulatory and taxation policies. For example, Charles Schwab relocated their headquarters from San Francisco to Tarrant County, TX (Fort Worth). The relocation in 2021, followed its acquisition of TD Ameritrade—bringing around 4,500 employees with it. Goldman Sachs and Wells Fargo had announced construction of Dallas regional campuses for 5,000 and 4,000 workers, respectively by 2025. In March 2023, Fisher Investments announced moving its headquarters from Camas, Washington, to Plano, Texas. JPMorgan Chase expanded in Plano with nearly 13,0000 employees now based there - more than in New York – since a doubling of its workforce post 2017-2024. Wells Fargo and Bank of America have announced and rolled out major office expansions around Dallas, following similar trends seen with other Wall Street banks[5].

DFW is the fastest growing financial center in the U.S. among metros with over 100,000 finance, insurance, and real estate (FIRE) jobs. Since the first quarter of 2008, the number of FIRE jobs grew over 64%, making it the second largest hub in the county, behind only New York and ahead of Chicago, Los Angeles, and Philadelphia. DFW FIRE jobs grew more than five times as fast as the rate of growth at the national level over this 17-year period. Since the onset of the pandemic, DFW's FIRE employment has grown at more than four times the national rate—the fastest among all U.S. metros and even outpacing emerging finance hubs such as Charlotte, Tampa, Atlanta, and Miami.

[4] "Welcome to Y'all Street: Texas' Burgeoning Financial Hub," The Wall Street Journal, August 2024.

[5] "Dallas' Y'all Street Rivals New York," Axios Dallas, August 16, 2024.

Dallas – The Buckle of the Sunbelt and America's Fastest Growing Financial Center (cont.)

Over the past 35 years, DFW has steadily climbed the ranks of major U.S. finance hubs, surpassing several legacy metros on its way to becoming the second-largest FIRE employment market in the country. In 1990, DFW ranked fifth with 158,000 FIRE jobs, trailing Philadelphia (195,000), Chicago (290,000), Los Angeles (364,000), and New York City (830,000). However, that landscape has since shifted.

DFW overtook Philadelphia in 2004, as the latter added only 25,000 jobs over the period. Chicago, with similarly modest growth, was surpassed in 2019. Los Angeles, which shed 45,000 jobs since 1990, fell behind DFW in 2020. While New York remains firmly in the top spot, its growth has been minimal, up just 3%, or 21,000 jobs, over 35 years. DFW now stands at 397,000 FIRE jobs, reflecting a 151% increase.

EXHIBIT 4

Finance, Insurance, and Real Estate (FIRE) Employment by MSA Pre-GFC, Pre-Covid and Now

Rank	Industry	Workers (000s)			Growth	
		2008Q1	2020Q1	2025Q2	2008Q1-2025Q2	2020Q1-2025Q2
	United States	***8,271***	***8,853***	***9,246***	***11.8%***	***4.4%***
1	Dallas-Fort Worth-Arlington, TX	241	333	397	64.5%	19.3%
2	San Antonio-New Braunfels, TX	67	96	104	54.7%	8.3%
3	Charlotte-Concord-Gastonia, NC-SC	83	110	127	52.4%	15.6%
4	Tampa-St. Petersburg-Clearwater, FL	102	128	148	44.9%	15.8%
5	Phoenix-Mesa-Scottsdale, AZ	152	207	216	42.1%	4.2%
6	Atlanta-Sandy Springs-Roswell, GA	166	184	216	29.9%	17.0%
7	Miami-Fort Lauderdale-West Palm Beach, FL	178	195	226	26.6%	15.8%
8	Houston-The Woodlands-Sugar Land, TX	148	172	186	26.2%	8.4%
9	Detroit-Warren-Dearborn, MI	108	127	133	23.3%	5.2%
10	Denver-Aurora-Lakewood, CO	99	116	117	18.9%	1.6%
11	Minneapolis-St. Paul-Bloomington, MN-WI	135	160	146	7.9%	-9.0%
12	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	220	222	232	5.4%	4.5%
13	New York-Newark-Jersey City, NY-NJ-PA	814	812	851	4.5%	4.8%
14	Washington-Arlington-Alexandria, DC-VA-MD-WV	155	164	160	3.0%	-2.3%
15	Chicago-Naperville-Elgin, IL-IN-WI	324	329	325	0.3%	-1.0%
16	Boston-Cambridge-Newton, MA-NH	193	192	189	-1.7%	-1.5%
17	Seattle-Tacoma-Bellevue, WA	107	105	103	-3.7%	-2.0%
18	San Francisco-Oakland-Hayward, CA	142	147	132	-7.1%	-10.4%
19	Los Angeles-Long Beach-Anaheim, CA	358	348	308	-14.1%	-11.7%

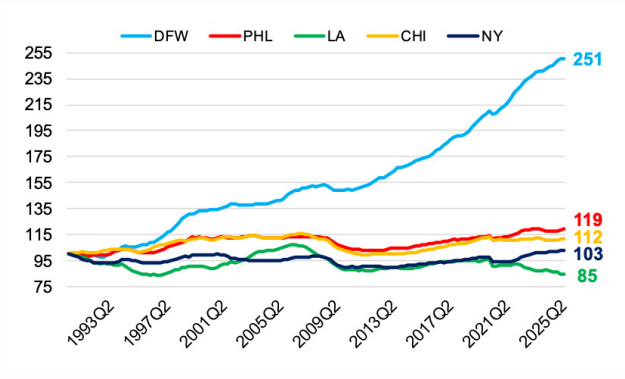
Source: Oxford Economics. As of Q2 2025

Dallas – The Buckle of the Sunbelt and America's Fastest Growing Financial Center (cont.)

EXHIBIT 5

Jobs in Finance, Insurance, & Real Estate

Employment – FIRE, indexed to Q2 1990

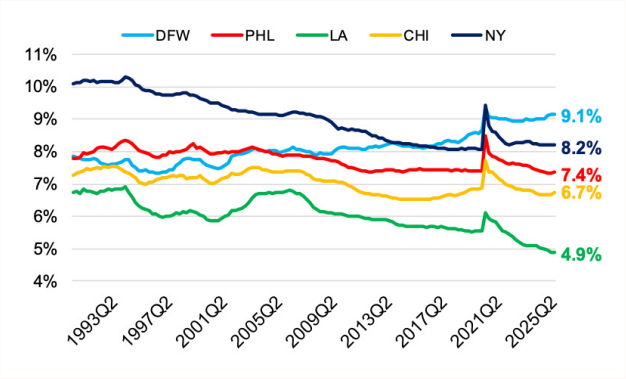


Source: Oxford Economics. As of Q2 2025

EXHIBIT 6

Jobs in Finance, Insurance, & Real Estate

Employment – FIRE, as a % if Total Employment



Source: Oxford Economics. As of Q2 2025

By comparison, Philadelphia grew 19% to 232,000, Los Angeles declined 15% to 308,000, and Chicago rose only 12% to 325,000, underscoring the exceptional scale of DFW's expansion. In addition, DFW is the only one of these five metros where FIRE employment has grown as a share of total employment since 1990; FIRE jobs now account for 9.1% of the region's workforce, the highest share among the group.

In terms of job concentration, DFW now has the second highest[6] LQ in the country among metros with 100,000 or more FIRE jobs at 1.58, trailing only Tampa at 1.63. By comparison, New York stands at 1.42, followed by Philadelphia 1.27, Chicago 1.16, and Los Angeles 0.84.

[6] For metros that include more than 100,000 finance jobs

Dallas – The Buckle of the Sunbelt and America's Fastest Growing Financial Center (cont.)

EXHIBIT 7

Finance, Insurance, and Real Estate (FIRE) Employment by MSA Pre-GFC, Pre-Covid and Now

Rank	Industry	Location Quotient		
		2008Q1	2020Q1	2025Q2
	United States	**1.00**	**1.00**	**1.00**
1	Tampa-St. Petersburg-Clearwater, FL	1.41	1.56	1.63
2	Dallas-Fort Worth-Arlington, TX	1.32	1.48	1.58
3	Charlotte-Concord-Gastonia, NC-SC	1.35	1.49	1.56
4	Phoenix-Mesa-Scottsdale, AZ	1.33	1.60	1.51
5	San Antonio-New Braunfels, TX	1.31	1.52	1.49
6	New York-Newark-Jersey City, NY-NJ-PA	1.52	1.39	1.42
7	Miami-Fort Lauderdale-West Palm Beach, FL	1.24	1.22	1.29
8	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1.30	1.27	1.27
9	Minneapolis-St. Paul-Bloomington, MN-WI	1.24	1.37	1.25
10	Denver-Aurora-Lakewood, CO	1.31	1.28	1.23
11	Atlanta-Sandy Springs-Roswell, GA	1.13	1.09	1.19
12	Boston-Cambridge-Newton, MA-NH	1.32	1.18	1.18
13	Chicago-Naperville-Elgin, IL-IN-WI	1.19	1.18	1.16
14	Detroit-Warren-Dearborn, MI	0.93	1.06	1.11
15	San Francisco-Oakland-Hayward, CA	1.14	1.00	0.93
16	Houston-The Woodlands-Sugar Land, TX	0.94	0.92	0.92
17	Los Angeles-Long Beach-Anaheim, CA	1.04	0.95	0.84
18	Seattle-Tacoma-Bellevue, WA	1.00	0.85	0.82
19	Washington-Arlington-Alexandria, DC-VA-MD-WV	0.86	0.83	0.80

Source: Oxford Economics. As of Q2 2025

Dallas – The Buckle of the Sunbelt and America's Fastest Growing Financial Center (cont.)

FIRE Employment Growth Relative to Total Employment

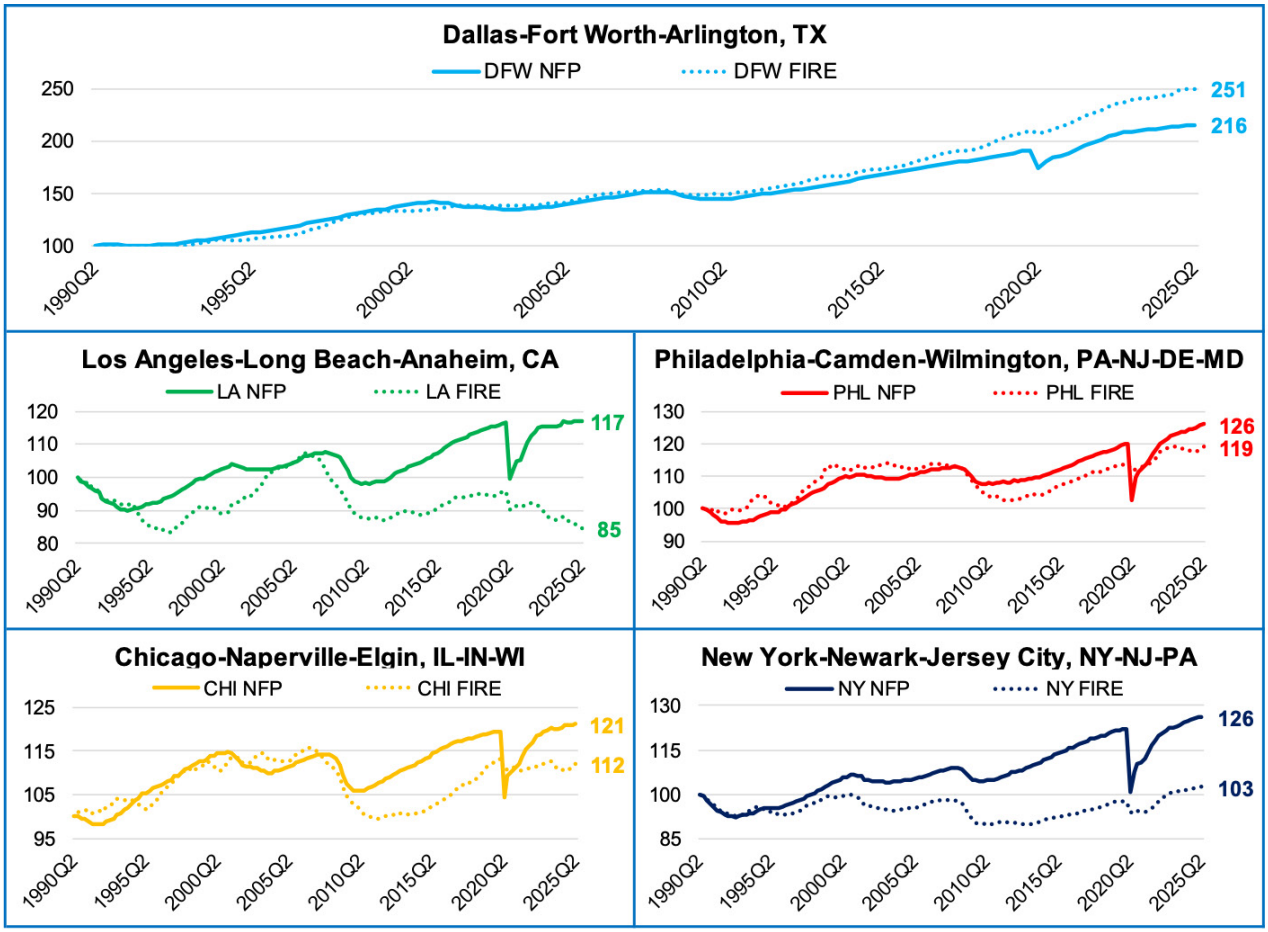
Dallas-Fort Worth is the only one of the top five finance hubs where FIRE employment growth has outpaced total nonfarm job growth since 1990, expanding 151% compared to 116%, a 35 percentage-point difference. In contrast, FIRE job growth lagged overall employment in every other major metro: Philadelphia's FIRE growth trailed by 7%, Chicago by 9%, New York by 23%, and Los Angeles by 32%.

DFW's growth in Office Using Jobs (OUJ) extends well beyond finance. Office-using employment (which includes Professional and Business

EXHIBIT 8

Total Nonfarm Payroll (NFP) vs Finance, Insurance, & Real Estate (FIRE) Growth

(Indexed, 100=1990Q2)



Source: Oxford Economics. As of Q2 2025

Dallas – The Buckle of the Sunbelt and America's Fastest Growing Financial Center (cont.)

Services "PBS", Information as well as FIRE) has surged 186% since 1990, far outpacing peer markets including Philadelphia 37%, Chicago 31%, New York 27%, and Los Angeles 11%.

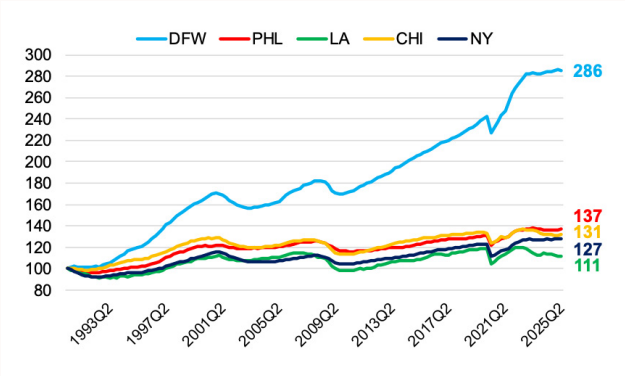
The office sector faces ongoing challenges from remote work, a higher cost of capital, and the rise of artificial intelligence. Although DFW is not immune to these headwinds, its bright growth prospects place it in a favorable position to better handle these challenges.

However, within the metro area, the northern suburbs are outperforming the central business districts (CBDs) in occupancy and leasing velocity. The DFW office market is predominantly suburban, with the Dallas and Fort Worth CBDs accounting for only 10.6% of the metro's total office inventory. Over the past 12 months, the Dallas CBD recorded negative net absorption, and the Fort Worth CBD posted only modest gains, while northern Dallas suburbs saw strong absorption as a percentage of their inventory—Preston Center at 3.6%, Allen/McKinney at 2.8%, and Upper Tollway/West Plano at 1.8%. Each of these submarkets also maintains higher office occupancy rates than the CBDs.

EXHIBIT 9

Office Using Jobs

Employment – Office aggregate (incl. information), indexed to Q2 1990



Source: Oxford Economics. As of Q2 2025

Stock Exchanges and Courts

The newly created *Texas Stock Exchange* (TXSE) is scheduled to launch trading operations in 2026. Although this new exchange will be fully virtual, it will be based in Dallas[7]. It aims to offer less regulation, lower fees, and lower compliance costs compared to the New York Stock Exchange (NYSE) and Nasdaq. In a significant move, NYSE announced in March 2025 the relocation of its Chicago-based electronic trading platform to Dallas. Rebranded as NYSE Texas, this transition marks a strategic pivot for the iconic institution[8]. Texas is now home to more NYSE-listed companies than any other state, with an aggregate market capitalization exceeding $3.7 trillion[9]. Not to be left out, Nasdaq also announced plans in March 2025 to establish a regional headquarters in Dallas[10]. With over 200 Nasdaq-listed companies already based in Texas, the move underscores the state's growing role as a critical node in the national financial system. This expansion reflects Nasdaq's broader strategy to decentralize operations and align itself with the shifting geography of American enterprise.

Another sign of Texas's rising prominence as a business center is the creation of the *Texas Business Courts*, established as an alternative to the *Delaware Court of Chancery* system. Texas now offers a new institutional framework for handling complex business litigation. In June 2025, Governor Abbott also signed reform laws to limit shareholder lawsuits. The new laws require plaintiffs to hold at least a 3% ownership to sue, restricting access to director communications, signaling an even more management-level protective posture. The Texas Business Court is not just symbolic—it may become a credible, practical alternative to Delaware's Court of Chancery, backed by recent legislative support, rich powers, and emerging case law. As more companies mind the balance between governance predictability and legal risk, Texas is positioning itself at the forefront of corporate judicial innovation.

[7] TXSE is backed by $161 million in funding from prominent financial players such as BlackRock, Citadel Securities, and Charles Schwab. See "Texas Stock Exchange Raises $161M from BlackRock and Citadel," *U.S. News Money*, January 2025.

[8] "NYSE Texas Opens in Dallas," Fox 4 News, March 25, 2025.

[9] "Why the NYSE Moved to Texas," Texas Standard, March 2025.

[10] Nasdaq to Establish Regional HQ in Dallas," WFAA News, March 2025

Dallas – The Buckle of the Sunbelt and America's Fastest Growing Financial Center (cont.)

Conclusion

Dallas-Fort Worth has emerged as the most dynamic and rapidly evolving financial hub in the United States. DFW has surpassed legacy markets to become the nation's second-largest hub for finance, insurance, and real estate jobs and its financial sector is the fastest growing in the county[11]. Its exceptional demographic and job growth, favorable business climate, and central geographic position have created a compelling environment for both talent and capital. DFW's rise is driven by structural advantages—affordability, accessibility, and regulatory clarity—as well as the deliberate migration of firms seeking long-term competitiveness outside traditional financial centers. The region's momentum is reflected in major corporate relocations, an influx of young talent, and the development of key financial infrastructure—including the Texas Business Courts, Texas Stock Exchange, and branches of the NYSE and NASDAQ.

Investors have taken notice of DFW's strength, as it led the nation in multifamily transaction volume for the past four years. In the industrial sector, the metro ranked among the top three markets for transaction volume during the same period. The office sector consistently placed within the top five, while retail ranked within the top six, underscoring the region's broad-based investment appeal.

Disclosures

[11] For metros with more than 100,000 FIRE jobs

Bankruptcy Remote Entities in Capital Markets: The Evolution of SPE Independent Director Requirements

Joseph Philip Forte

The landscape of bankruptcy remote special purpose entities (SPE) in commercial real estate finance has undergone significant market adoption since the savings and loan crisis. The role and fiduciary duties of independent directors in SPEs, have become critically important structures in real estate finance. This analysis examines the historical SPE requirements, the challenges posed by the Corporate Family Doctrine, and the implications of a recent judicial decision for structured finance.

The Rise of SPEs in Commercial Real Estate Finance

Bankruptcy remote SPEs have long been an integral structural necessity in capital markets transactions to obtain more desirable credit rating agency (CRA) investment grade ratings. The advent of commercial mortgage securitization in the wake of the S&L crisis introduced real estate lawyers and their clients to the CRA requirements for borrowers to be organized as SPEs for the first time.

The CRAs each independently developed additional organizational provisions and prophylactic covenants for the new entrants. These must be incorporated in two areas: the borrower's organization documents and the lender's mortgage loan documents. These provisions are required for an entity to be considered a SPE and bankruptcy remote for purposes of the credit rating process and necessary for broader market acceptance. The CRAs often mandate that an SPE borrower must have an "independent director or member" whose affirmative vote would be required to authorize a voluntary bankruptcy filing by a borrower.

The Corporate Family Doctrine Challenge

In nearly four decades, bankruptcy remote SPE borrowers have become a commonplace requirement for commercial mortgage loan transactions. They are now regularly required in the primary and secondary mortgage markets as well as the capital markets. However, there had not been a definitive case that directly addressed the ability of an SPE entity to limit the independent member's fiduciary duty solely to the debtor and its creditors while eliminating any fiduciary duty or liability to the members of the SPE entity.

GGP CASE

To the contrary, in 2009 during the Global Financial Crisis, General Growth Properties (GGP) filed for voluntary bankruptcy jointly with hundreds of its single asset bankruptcy remote SPE subsidiaries including its property-specific subsidiaries. For procedural purposes, the court consolidated the filings giving GGP access to an existing centralized cash management system and allowed it to use the cash flow from its property-specific SPEs' properties in its Chapter 11. The creditors objected arguing that the property-specific entities were solvent, legally separate and their assets isolated from GGP.

In its decision, the bankruptcy court decided that pursuant to Delaware law independent members of a solvent SPE entity only owe fiduciary duties to the entity and its members and the only time that they can consider the interests of the creditors is when the entity is insolvent. Moreover, the consequence of the court's application of the Corporate Family Doctrine allowed the parent entity to present the interests of the corporate group as a whole for consideration in spite of the creditors' objections to the SPE subsidiaries' being permitted to file for voluntary bankruptcy when the hundreds of individual SPE subsidiaries were actually not in the so-called "zone of insolvency." See Forte, Leonard and Burce, "The GGP Bankruptcy So Far: Grounds for Concern, Sources for Hope" CRE Finance World, Summer 2009 for a detailed discussion of the case.

After the GGP decision, SPE entity governing documents were generally modified to include: limitation of fiduciary duties to the borrower and its creditors and waiver of any fiduciary duty or liabilities to members and affiliates, requiring independent directors to be sourced only from nationally recognized corporate service providers and which directors can be fired only for cause and after notice. These are the provisions that are the subject of this article.

Working Around GGP

A recent Bankruptcy case has provided important clarity to addressing the certain provisions in the SPE borrower organization documents and the lender loan documents. On the motion of the mortgagee to dismiss a Debtor's voluntary bankruptcy filing made without the required

Bankruptcy Remote Entities in Capital Markets: The Evolution of SPE Independent Director Requirements (cont.)

affirmative consent of the SPE's independent manager, a Bankruptcy Court dismissed the filing for cause. In re 301 WN. Ave., LLC, 666 B.R. 583 (Bankr. N.D. Ill. 2025). However, the court did not impose the requested bar on the Debtor's refiling with the required independent member's consent.

The Court conducted a detailed analysis of the relevant provisions of the mortgage loan and SPE organization documents, applicable Delaware LLC law, and the facts provided in the motion and reply papers. Based on this analysis, the Court held that the SPE borrower had no authority to file for voluntary bankruptcy without the required affirmative vote of the independent member consenting to the filing.

Key Court Findings

In rendering its decision, the Bankruptcy Court's memorandum opinion undertakes a detailed factual journey through the process of the authorization for the Debtor's voluntary filing:

- The mortgage loan and SPE organization documents "speak for themselves" with respect to Debtor's authority and the independent member's obligations.
- The other LLC members failed to inform or confer with the independent member about the intended filing.
- They also failed to request the independent member's required consent to authorize the filing.
- The independent member's resignation post-bankruptcy filing did not constitute acquiescence in the filing.
- The backdating of her resignation to before the filing is consistent with the independent member's repudiation of the earlier unauthorized filing.
- The Debtor's LLC Agreement ("Agreement") did not impermissibly restrict its right to file for bankruptcy by requiring the independent member to participate and affirmatively consent.
- Such a requirement is not presumptively void.
- The Agreement imposed fiduciary obligations on the independent member to consider the Debtor's interests when deciding whether to vote to file for relief under the Bankruptcy Code.
- The Agreement did not require the independent member to consider the economic interests of the LLC members or third parties.
- The independent member expressly only owes a fiduciary duty to the Debtor and its creditors, which is consistent with Delaware law.

Market Reaction and Implications for Structured Finance

This decision represents the first full-throated ratification of what (until now apparently only) Delaware permits: the waiver of fiduciary duties to LLC members. This development serves as the magic bullet post-GFC intended to neutralize the "corporate family doctrine" that powered the 2009 GGP bankruptcy fiasco. The court's holding is clear: to the extent the LLC Agreement restricts or eliminates the Independent Manager's fiduciary duty to the Members, it is entirely consistent with Delaware law and cannot be construed to contravene public policy. It is an important decision for structured finance.

This decision provides legal counsel with a reasoned roadmap for drafting SPE entity formation agreements. It shows how to avoid the GGP "corporate family doctrine" by limiting the independent member's fiduciary duty to the Debtor and its creditors only. The decision also demonstrates how to expressly eliminate any fiduciary obligation to any third parties, including shareholders and members of the SPE entity, when drafted consistent with Delaware law.

To be clear, this workaround to the Corporate Family Doctrine would only be effective if the SPE is formed under Delaware Law. The SPE organization agreement must also expressly incorporate the permitted fiduciary duty and liability limitations. The State of Texas recent entry into the formation of SPEs is problematic for market acceptance.

Texas Emerges as an Alternative Jurisdiction

Earlier this year, the State of Texas took a significant legislative step in its continuing efforts to become an alternative business-friendly jurisdiction for the formation of LLCs and LLPs. Texas amended its Business Organizations statute to allow for the elimination of fiduciary duties from the respective formation agreements of SPEs.

Both LLCs and LLPs are now expressly permitted to eliminate all duties and liabilities of the managers, managing members or general partners. This includes duties of loyalty, care and good faith. The only requirement is that such eliminations must be expressly stated in the entity governing documents.

Delaware's law differs significantly from the new Texas law. Delaware expressly prohibits the waiver of the implied covenant of good faith and fair dealing. Without that explicit statutory prohibition in Texas, it remains unclear how Texas courts will rule. This uncertainty leaves investors at risk, without recourse, for mismanagement, self-dealing, non-disclosures and self-interested transactions.

Investors and lenders must conduct in-depth due diligence for Texas entities. Investors will need to focus on incorporating contractual protections as well as explicit remedies. Unless an investor can obtain these contractual protections, it faces a "Hobson's Choice" of state of formation, ie no choice at all.

Bankruptcy Remote Entities in Capital Markets: The Evolution of SPE Independent Director Requirements (cont.)

Conclusion

The *301 WN. Ave.* decision provides the structured finance market with much-needed clarity on the enforceability of independent director provisions. Delaware law offers a tested framework for limiting fiduciary duties within carefully crafted parameters. Meanwhile, the emergence of Texas as an alternative jurisdiction with broader waiver provisions presents significant risks and uncertainties for investors. As the commercial real estate finance market continues to evolve, careful structuring of SPEs and selection of appropriate jurisdictions will remain critical. These elements are essential to achieving defensible bankruptcy remoteness while balancing the interests of all stakeholders.

Beyond the Cycle: How Structural Trends Are Redefining Multifamily CRE Performance

Brian Bailey | *Head of Research* | Trimont

Multifamily has faced significant headwinds over the last three years. Higher interest rates, elevated levels of inflation driving up operating expenses, renter unaffordability, rent regulations and overbuilding in some markets have constrained short-term performance and may alter long-run trends.

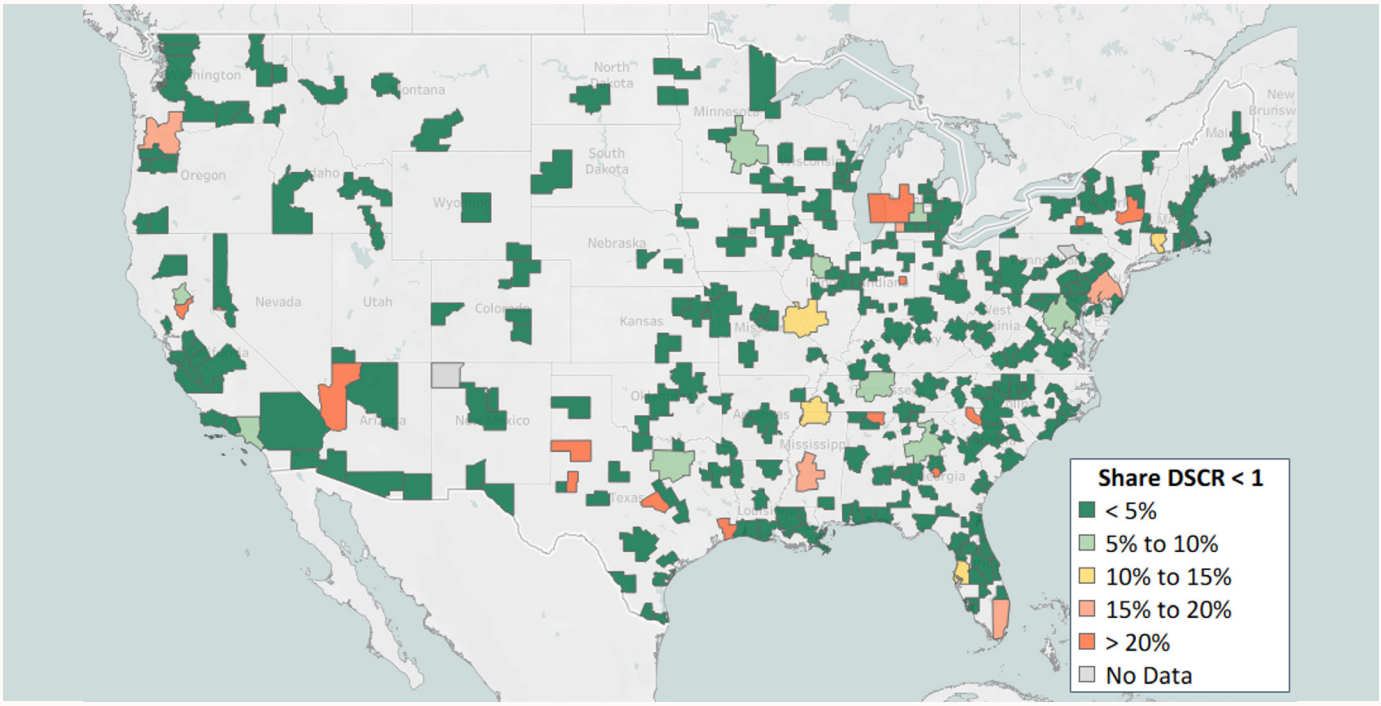
Although the sector has so far weathered the storm with only modest levels of distress, the recovery will be determined by factors such as population growth along with local economic trends. Will those trends help performance or produce more headwinds in 2026?

The outcome is important for owners and lenders alike. Recent declines in net operating incomes (NOI) have led to a host of financial issues, including the ability to refinance maturing loans. Several markets in the Southeast and Texas already have more than 15% of multifamily properties with debt-service coverage levels (DSCR) of less than one. Consequently, it is important for multifamily property owners to understand how these factors affect performance and NOIs.

FIGURE 1

Share of Multifamily CMBS Properties with DSCR < 1

Trimont Research's *Multifamily Market Risk Matrix* tracks these trends across a spectrum of indicators for over 300 markets nationwide in near real-time.



Source: Trepp; Trimont Research

Beyond the Cycle: How Structural Trends Are Redefining Multifamily CRE Performance (cont.)

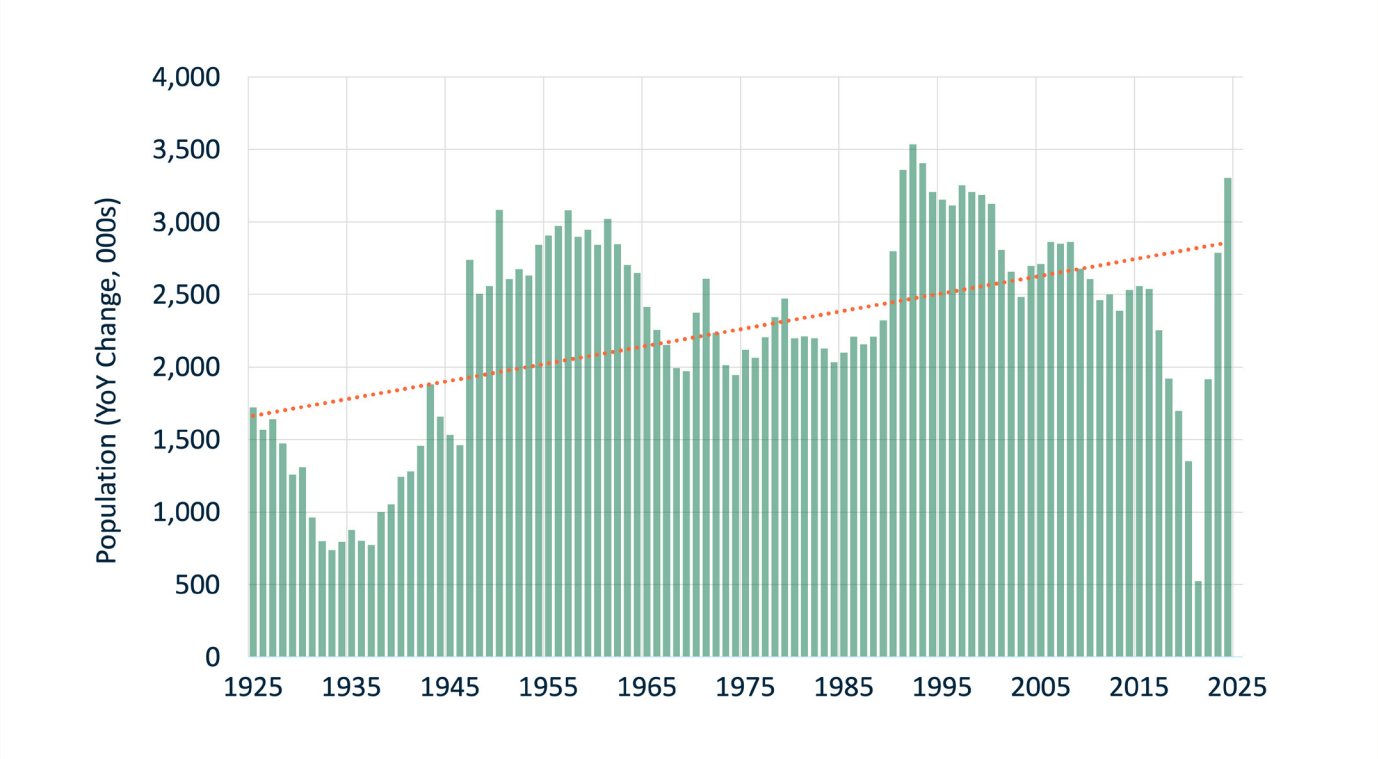
Demographics

Demographics are arguably the most influential factor in analyzing structural trends within the multifamily market. Over the long term, demographic factors set the parameters for market conditions and growth opportunities. This broad category encompasses population growth, migration patterns, household formation rates, age distribution, and vital statistics such as birth rates. Demographic trends can vary significantly across regions—some areas experienced population peaks early in the last century, while others have seen their populations double in the past decade.

A rising population creates opportunities for multifamily development beyond replacing existing housing stock. Over the past century, the nation's population has generally trended upward, although there have been periods of sharp deviation. For example, the Great Depression of the 1930s saw sharply reduced birth rates and slower population growth, while the post-World War II Baby Boom (1945–1964) marked a dramatic increase. These demographic shifts have had lasting impacts on multifamily demand and development patterns.

More recently, the pace of U.S. population growth began to slow noticeably during the 2010s —a trend that was largely overshadowed by the sharp decline in population gains during the pandemic. Still, growth rebounded in 2023 and 2024. Incredibly, *all* states, led by the Carolinas, Florida, and Texas, reported positive net migration during this time. *How can this possibly be?* To answer, consider that the U.S. is

FIGURE 2
100 Years of U.S. Demographics



Source: U.S. Census Bureau; Trimont Research

Beyond the Cycle: How Structural Trends Are Redefining Multifamily CRE Performance (cont.)

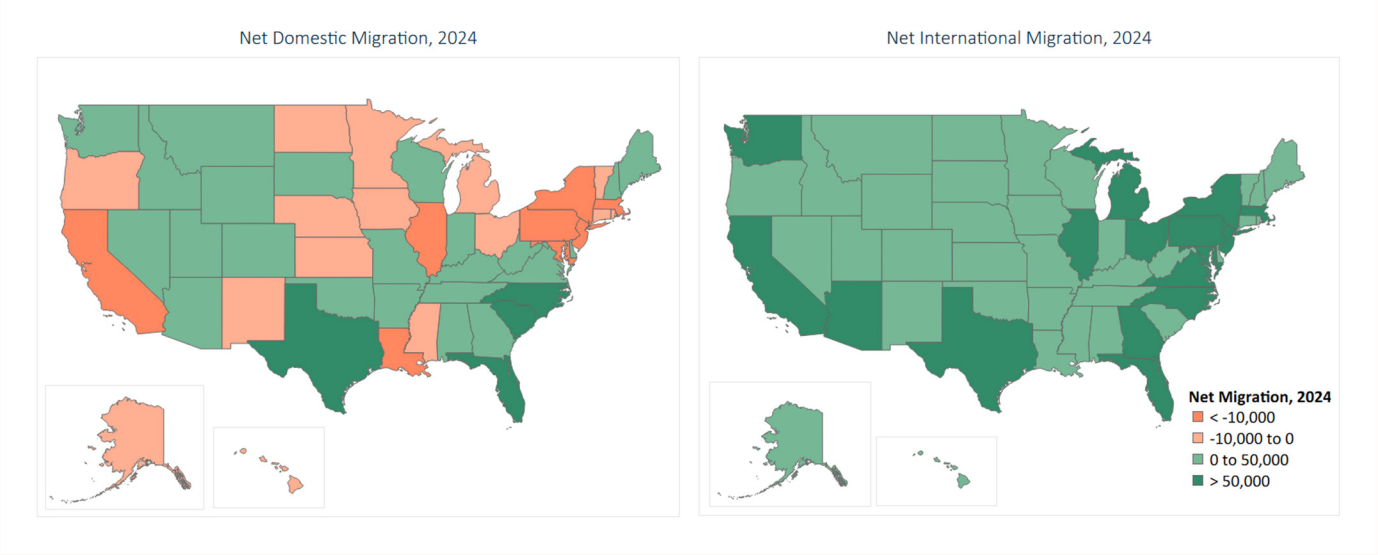
not a closed market; net migration is not a zero-sum game, where one state's gain automatically means another state's loss. Net migration has two components: *domestic* and *international*. This distinction is crucial to interpreting the migration trends of 2024. The nation's population surged by more than 3.4 million in 2024, the second-highest annual increase on record (surpassed only by the 3.5 million gain in 1992). However, if we focus solely on domestic migration, the picture changes: each year between 2021 and 2024, approximately half of all states experienced negative net domestic migration. What set 2024 apart was that international net migration more than offset these domestic losses, resulting in positive total net migration for every state.

The events of 2024 should loom large in the minds of CRE market participants and beg the question: *will this trend continue?* The real answer is strictly a policy issue and well beyond the scope of this article. For us, asking "when will we find out?" will have to suffice.

The **U.S. Census Bureau** provides intercensal estimates of national and state population and demographic components of population change each year as of 1-July. The 2025 estimates are expected to be released in December 2025, with county and metropolitan area estimates for 2025 due to release in March 2026.

Still, tapping alternative and higher-frequency data sources can provide us with valuable clues ahead of the official releases. One such source is Placer.ai, which analyzes foot traffic data collected from cell phone tracking. In a recent analysis, Placer.ai estimated year-over-year population growth as of June 2025, revealing significant variability in

FIGURE 3
Net Domestic Migration and Net International Migration, 2024



Beyond the Cycle: How Structural Trends Are Redefining Multifamily CRE Performance (cont.)

growth rates across different markets within each state. These findings suggest that opportunities for multifamily development and investment are likely present in several states, supported by localized population trends. Conversely, there are markets where population growth is weak or even negative but units under construction as a share of total inventory is above 10%. This trend of healthy rates of new construction in markets where population growth is weak, could lead to further supply imbalance and the need for an extended recovery period.

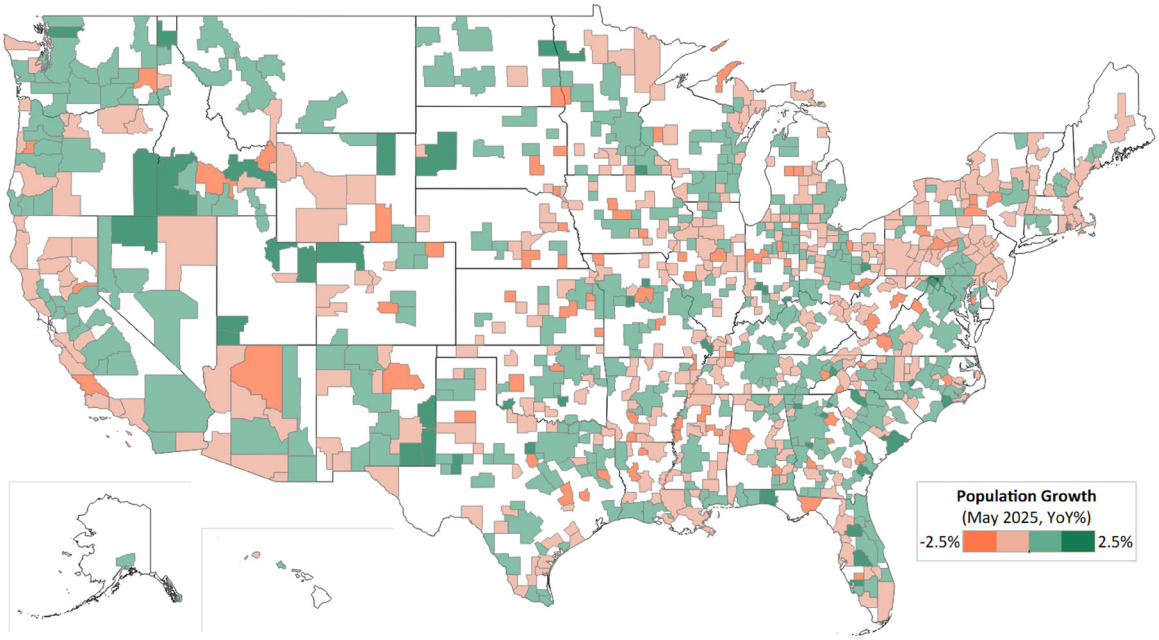
Opportunities using high frequency data can also be tracked within markets using household formation rates. Trimont Research has derived these rates from HUD aggregated U.S. Postal Service administrative data on address vacancies, which clearly show that demographic trends are certainly not uniform within a single market; individual pockets of growth can exist at the ZIP code-level.

Other Structural Trends

In addition to demographics, several other factors can influence the long-term development of multifamily CRE. One takeaway is clear from the data: individual markets are not homogenous. While over-arching metrics can affect localities, markets at the very local level require a nuanced appreciation of local data.

Green Street Advisors (GSA) grades multifamily CRE conditions at the market, submarket, and ZIP code levels for the top 50 and a set of tertiary markets. To accomplish this, it rates several structural factors, including regulations, fiscal health, geographic proximities, etc. Although a multifamily market may receive an overall 'A' rating, ZIP code-level ratings typically cover a range of grades, reflecting the diversity of local conditions. Moreover, since the grade covers a spectrum of metrics, a

FIGURE 4
Population Growth

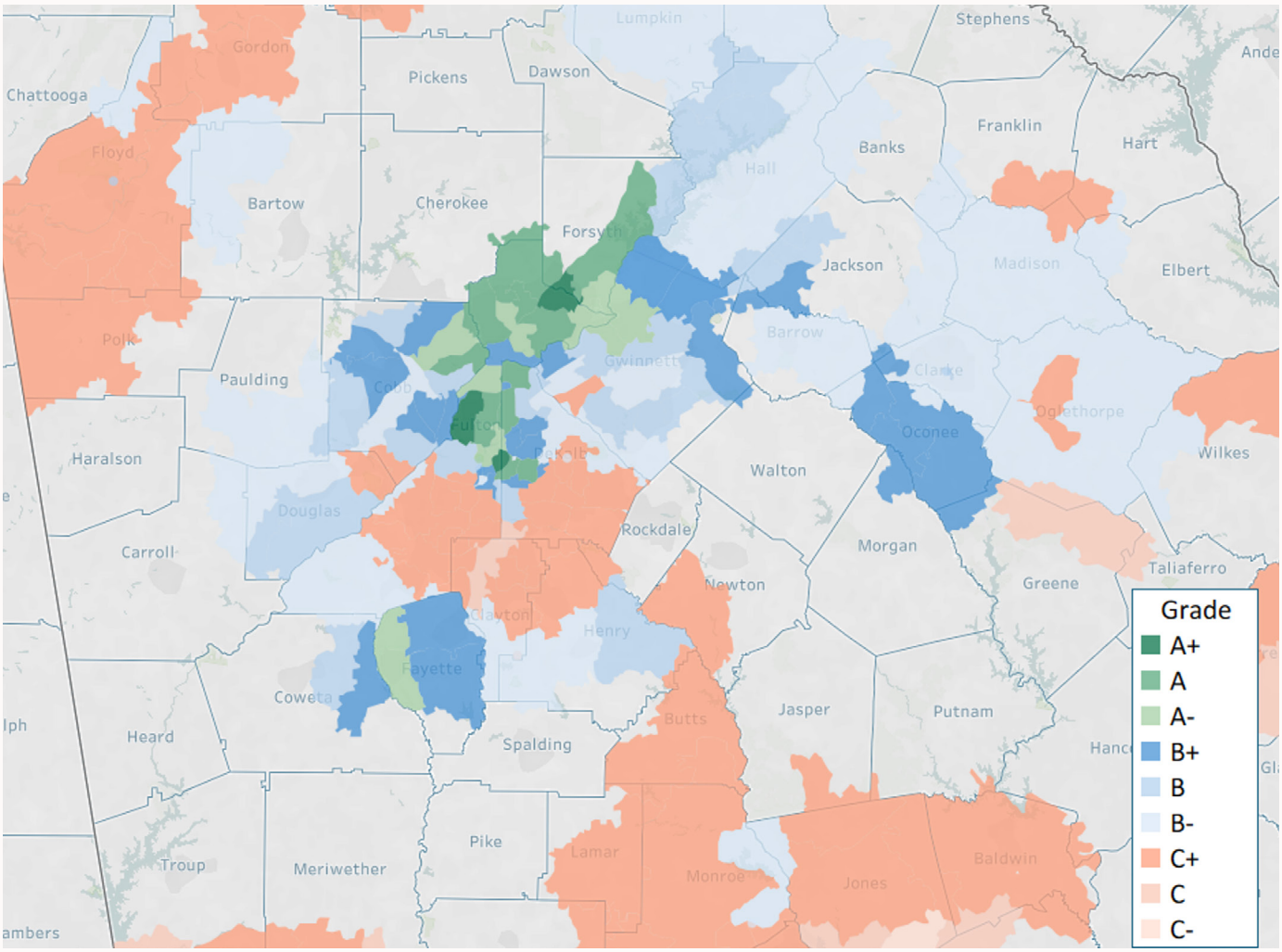


Beyond the Cycle: How Structural Trends Are Redefining Multifamily CRE Performance (cont.)

market could score well in one and poorly in another yet still receive an overall healthy grade.

Atlanta's multifamily market is a good case in point. The overall market is currently rated as a 'B+' by GSA and scores well across several structural factors except for low 'Supply Barriers.' At the ZIP code-level, grades are a mixed bag: North Fulton county ZIP codes are generally A-rated while most of Gwinnett and Cobb counties are B-rated. The same could be said for the New York market, which receives an overall 'A' grade. Despite the market scoring poorly in some structural metrics, New York's other attributes more than balance out the grade. Like Atlanta, ZIP code-level grades run the gamut from 'A' to 'C.' Once again, these examples underscore the necessity for very localized knowledge and data that can accurately assess structural trends.

FIGURE 5
Atlanta's Multifamily Market Grade by ZIP Code



Source: Green Street Advisors; Trimont Research

Beyond the Cycle: How Structural Trends Are Redefining Multifamily CRE Performance (cont.)

Prices of Substitutes

Residents in any given market can choose from a variety of housing options, from single-family residences to large multi-unit properties, and often weigh the cost of homeownership in their decision to buy or rent. In markets with low home ownership affordability, we will see greater demand for rental properties as the cost of buying rises out-of-reach. The ***Federal Reserve Bank of Atlanta's*** Home Ownership Affordability Monitor (HOAM) does just this calculating the share of median income a household needs to spend to afford a market's median priced home. If a household needs to spend more than 30% of its income to purchase a home (HUD standards), the market is considered 'unaffordable.' In such markets, residents may find even Class A apartments a more affordable alternative than purchasing a home.

Evolved Underwriting

Amid shifting demographics, market dynamics and structural trends, how does underwriting accuracy need to evolve? Evolution in our analysis requires us to look beyond current methods and seek enhanced data. To become more data driven, we must seek more granular insights. There are three areas that can be addressed to improve accuracy.

1. **Elevate demographic analysis** – Go beyond top-line numbers and drill the individual components. Use alternative datasets (foot traffic counts, occupied residences and business) to identify shifts early.
2. **Recalibrate market exposure** – Prioritize submarkets with strong affordability-driven domestic demand and lower amounts of new supply.
3. **Incorporate policy risk into underwriting** – Varying materials costs and population shifts require shifting assumptions. In addition, indirect consequences must also be considered.

These adjustments to underwriting should improve accuracy and establish an improved foundation for project performance, which should mitigate some of the multifamily market volatility.

Conclusion

Multifamily conditions heading into 2026 present a mixed bag of performance. Some good, some not so good, and a lot of uncertainty. Accurate, localized data is essential to assessing multifamily market opportunities, both cyclical and structural trend analysis are equally as important in this endeavor. Perhaps most important in structural trends analysis is understanding how demographic forces can shape market conditions. Building in markets with weak or negative population may be higher risk projects, requiring additional due diligence.

Still, supply growth is slowing in many regions, affordability pressures persist, and cyclical rent growth remains muted. Because demographic and other structural factors can vary widely across a single market, a nuanced, data-driven approach is vital to making informed decisions in multifamily CRE. These dynamics need to be reflected in updated underwriting practices which incorporate greater emphasis on demographic analysis, market exposure and evaluating policy changes.

Natural Disasters and Real Estate: The Unprecedented Rise in Insurance Costs

Peter Muoio, PhD | *Head of SitusAMC Insights* | SitusAMC
Jen Rasmussen, PhD | *Vice President, SitusAMC Insights* | SitusAMC

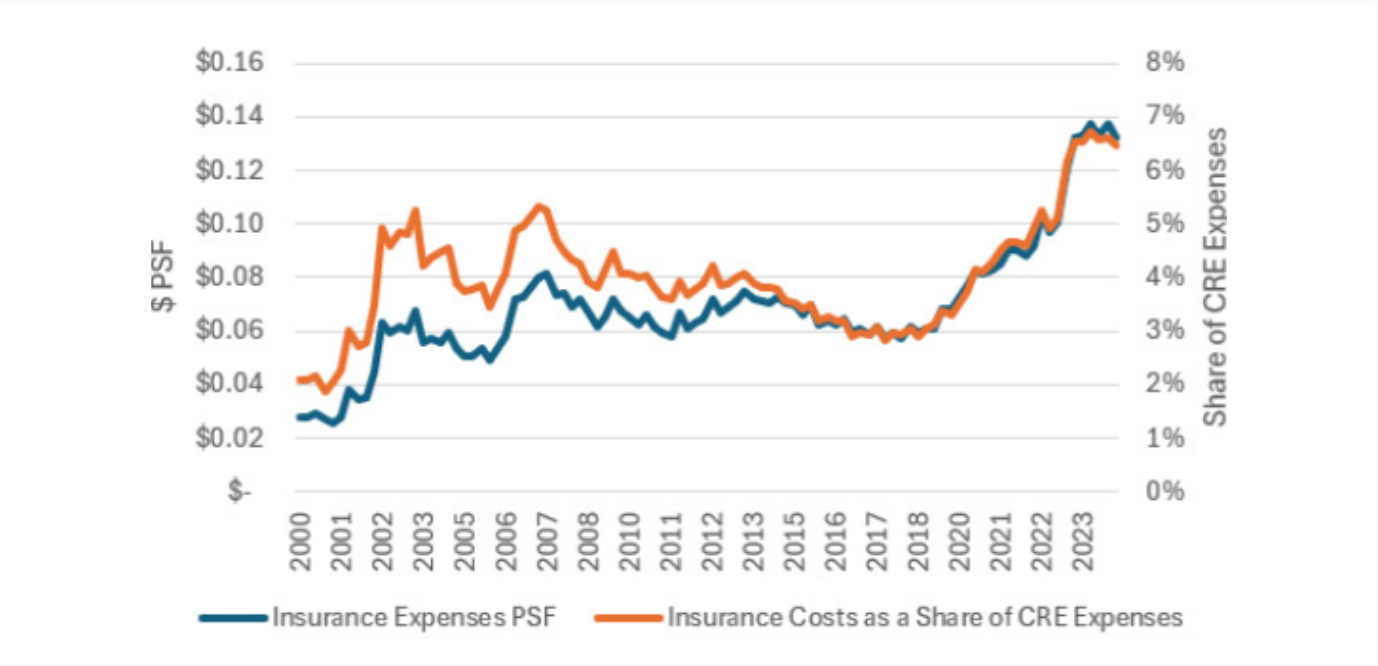
The U.S. has seen a steady increase in weather-related disasters—up 15% between 2021 and 2024, with annual damages of more than $17 billion.

That has led to soaring insurance premiums as the quantity and severity of natural disasters escalates. SitusAMC analyzed the rise in costs for commercial real estate (CRE) owners since 2019, highlighting the states and property sectors hardest hit by the trend.

Insurance **costs have surged**, with premiums rising an average of 15% annually since 2019, more than doubling the 6% pre-2019 long-term average based on NCREIF Property Index expense data. By Q4 2024, insurance expenses hit $0.13 per square foot (PSF), nearing all-time highs.

Insurance costs as a share of CRE expenses experienced **equally explosive growth**. They now account for 6.5% of total operating expenses across all CRE sectors, up a significant 190 basis points (bps) from 4.6% at the beginning of 2022 and hovering near the historic high. This increase underscores the growing impact of insurance as a significant CRE expense, even when accounting for inflation in other operational expenses.

FIGURE 1
CRE Insurance Expenses PSF; Insurance as a Share of CRE Expenses



Sources: NCREIF, SitusAMC Insights

Natural Disasters and Real Estate: The Unprecedented Rise in Insurance Costs (cont.)

On the positive side, insurance costs have plateaued in recent years, with year-over-year expense growth decelerating for three consecutive quarters and declining in Q4 -- the first year-over-year decline seen in over six years. However, the overall trend highlights the increasingly critical role of strategic asset management in maintaining property performance and returns.

Coastal States Are Hardest Hit

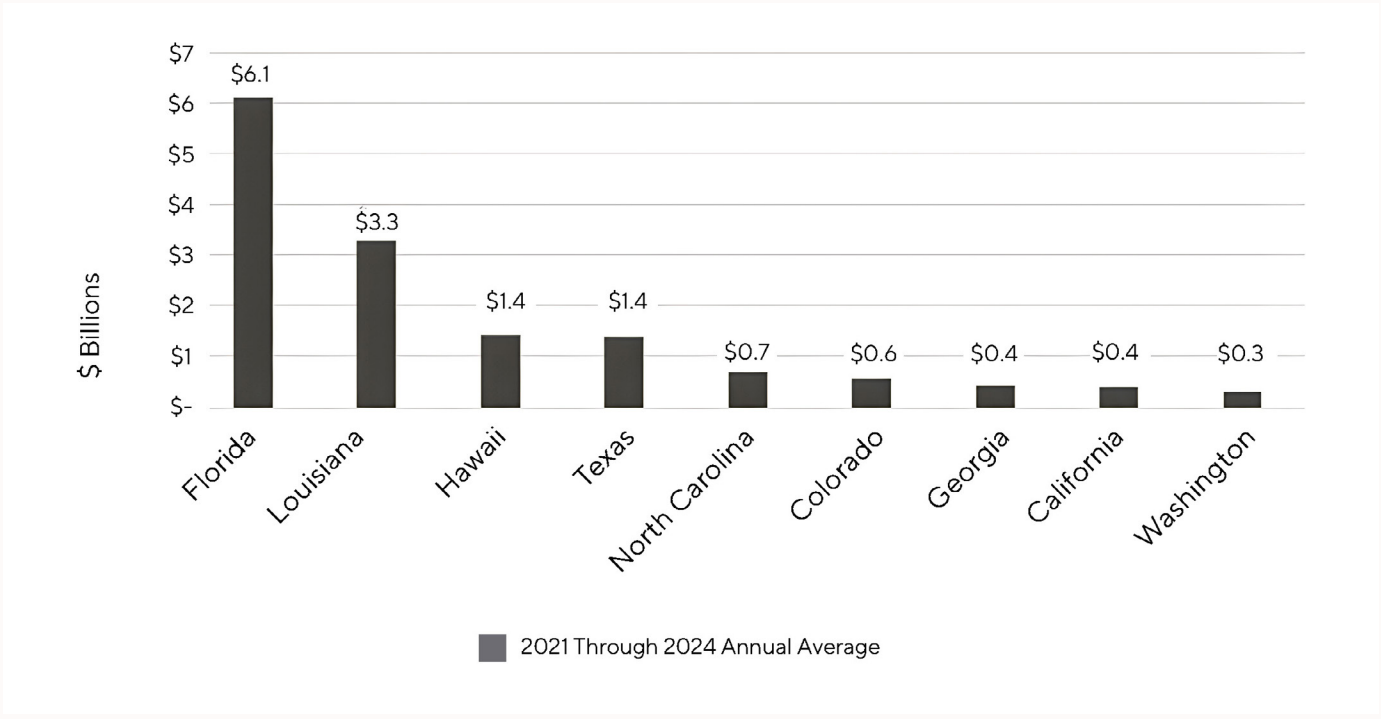
While insurance costs vary sharply by location, **California, Florida** and **New York** are market leaders in growing CRE insurance premiums. Coverage is becoming increasingly difficult to secure as insurers retreat from markets with heightened exposure to natural disasters, with nonrenewal rates climbing, especially in parts of the central, southern and western U.S.

In 2024, the National Centers for Environmental Information (NCEI) recorded 66,760 weather-related disasters, up from 58,060 in 2021. Property damage caused by these events varies by year and state, but total damage has averaged over $17 billion annually during that period. Florida suffered the highest property damage in both 2022 and 2024, totaling more than $24 billion, primarily due to Hurricanes Ian, Helene, and Milton.

California had seen relatively low property damage despite the floods in 2023, until early this year, when the Palisades and Eaton wildfires broke out near Los Angeles. Damage is difficult to estimate, but a recent evaluation by UCLA's Anderson School put total property and capital losses between $76 billion and $131 billion.

Other **southern coastal states**, such as **Louisiana and Georgia**, are at similar risk of hurricanes, while western states regularly face flash flood and wildfire risks. Unsurprisingly, these states average some of the highest property damage from natural disasters per year. The Midwest is plagued by hail, which causes a large proportion of that region's property damage; however, the Midwest states suffer much less financial damage from weather-related events on average.

FIGURE 2
Property Damage



Natural Disasters and Real Estate: The Unprecedented Rise in Insurance Costs (cont.)

The frequency and severity of natural disasters is exacerbated by climate change. Warmer temperatures lead to more hurricanes, greater risk of drought, and rising sea levels. In 2021, the NCEI recorded 39 hurricanes, and from January through November 2024 that number doubled. From 2010 to 2019, 30 major hurricanes (category 3 or higher) struck the U.S., according to the National Hurricane Center. The first half of this decade alone has already seen 21 major hurricanes. Moreover, rising sea levels expose additional areas to flooding and tidal waves.

As stated above, as of Q4 2024, California, Florida and New York saw the highest CRE insurance expenses. In the table below, red cells indicate higher (more burdensome) values, while green cells indicate lower (less burdensome) values. States that have seen recent jumps in insurance costs include Virginia and Utah, where CRE insurance costs have risen 55% and 69%, respectively, between Q1 2022 and Q4 2024. Insurance as a share of CRE expenses is highest in California and Florida. These two states lead the nation in both insurance costs and insurance as a share of costs.

FIGURE 3
CRE Insurance Expenses and Insurance as a Share of CRE Expenses

	CRE Insurance Expenses			Insurance as a Share of CRE Expenses		
State*	PSF Q4 2024 ↓	3-yr change	1-yr change	Share Q4 2024	3-yr change (bps)	1-yr change (bps)
CA	$ 0.25	51%	0%	10.52%	264	3
FL	$ 0.23	56%	-3%	11.85%	333	12
NY	$ 0.17	20%	-7%	2.69%	29	(24)
WA	$ 0.13	42%	-3%	6.42%	132	(52)
MA	$ 0.12	51%	3%	2.86%	52	3
VA	$ 0.12	55%	13%	4.50%	147	53
DC	$ 0.11	50%	1%	1.97%	58	(1)
SC	$ 0.11	60%	-15%	9.06%	348	(88)
TX	$ 0.11	37%	-2%	6.04%	162	(38)
CO	$ 0.10	59%	3%	4.46%	151	8
OR	$ 0.09	49%	-10%	5.41%	127	(80)
NC	$ 0.08	31%	-3%	5.53%	143	(28)
UT	$ 0.08	69%	11%	5.27%	147	(34)
MD	$ 0.07	36%	3%	4.95%	156	(5)
IL	$ 0.07	50%	-4%	3.39%	109	(20)
AZ	$ 0.07	26%	-6%	5.49%	187	(51)
MN	$ 0.06	4%	-26%	2.25%	(5)	(84)
GA	$ 0.06	57%	2%	5.59%	169	1
NV	$ 0.06	36%	3%	5.14%	121	(1)
NJ	$ 0.06	24%	-5%	4.64%	76	(33)
PA	$ 0.06	53%	2%	5.66%	101	(76)
TN	$ 0.05	44%	-7%	6.55%	247	72
MO	$ 0.05	45%	0%	6.96%	252	77
OH	$ 0.04	26%	-3%	5.19%	64	(63)
IN	$ 0.03	38%	-9%	5.75%	42	(69)
KY	$ 0.03	43%	-7%	6.63%	144	(86)

Natural Disasters and Real Estate: The Unprecedented Rise in Insurance Costs (cont.)

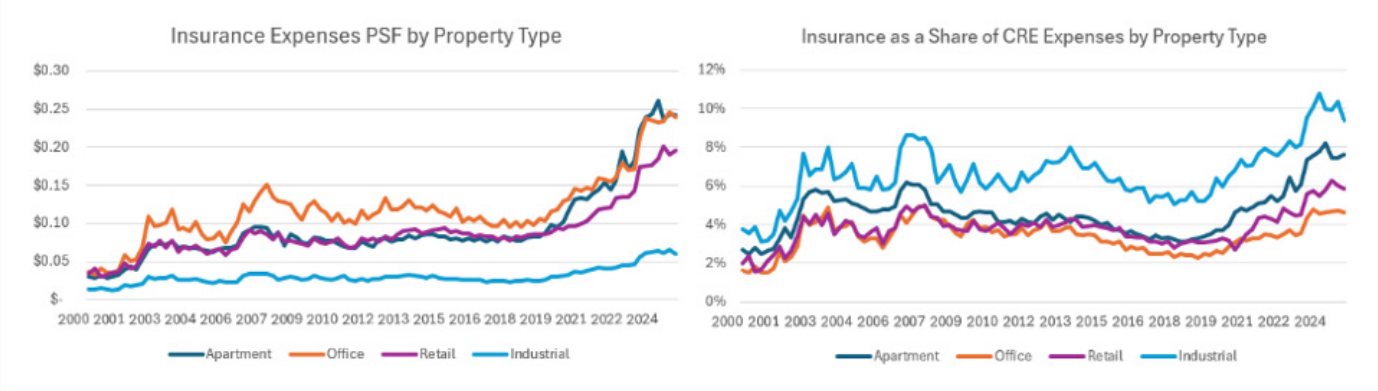
Apartment and Retail Sectors Bear the Brunt of Rising Costs

Individual asset classes have largely mirrored these broader trends in CRE insurance cost growth. In particular, insurance expenses for the apartment and retail sectors have risen even faster than the explosive 49% growth for all CRE sectors over the past three years, jumping 68% for the apartment sector and 61% for the retail sector. In Q4 2024, apartment and office insurance expenses averaged $0.24 PSF, the retail sector averaged $0.20 PSF and the industrial sector averaged $0.06 PSF.

Looking at insurance as a share of expenses by property type, the industrial sector has historically seen the highest proportion of insurance costs (9.4% in Q4 2024), followed by apartment (7.6%), retail (5.8%), and office (4.6%). While all four property types have seen insurance as a share of expenses rise dramatically in recent years, since late 2023, these figures have dropped from historical highs, especially for the industrial sector, which declined from 10.8% in Q4 2023 to 9.4% in Q4 2024, a notable 140 bps drop.

FIGURE 4

Insurance Expenses PSF by Property Type and Insurance as a Share of CRE Expenses by Property Type



FEMA produces a National Risk Index, which illustrates the riskiest markets across 18 natural hazards. Ratings are based on the expected annual loss due to these hazards, along with social vulnerability (susceptibility of social groups to disproportionate effects from natural hazards) and community resilience (the ability of a community to prepare for and recover from natural hazards). Using these data, SitusAMC Insights calculated a population-weighted climate risk score for the top 51 markets that we cover. Of the top 10 riskiest markets, all were located in California or Florida, except for Seattle (due to avalanche and landslide risk). Lowest-risk markets were primarily in the Midwest and inland Eastern States.

FIGURE 5

Highest Ranked Markets and Lowest Ranked Markets

Highest Ranked Markets	Lowest Ranked Markets
Los Angeles, CA	Pittsburgh, PA
San Bernardino/Riverside, CA	Columbus, OH
Miami, FL	Cleveland, OH
Orange County, CA	Cincinnati, OH
Oakland-East Bay, CA	Suburban Virginia, VA
Fort Lauderdale, FL	Indianapolis, IN
Palm Beach, FL	Atlanta, GA
San Diego, CA	Nashville, TN
Seattle, WA	Charlotte, NC
San Jose, CA	Raleigh-Durham, NC

Natural Disasters and Real Estate: The Unprecedented Rise in Insurance Costs (cont.)

The Role of Reinsurance in Rising Costs

One of the primary ways that real estate market participants can mitigate losses and decrease premiums is through reinsurance on their policies – effectively insurance for insurance. As the Chicago Federal Reserve notes, the use of reinsurance is especially useful when policies are concentrated geographically or bonded together in some way that exposes the joint policies to significant risk. Multifamily, condo, and homeowners' insurance for South Florida is a particularly salient example of this risk, and reinsurance is common – estimated as high as 92% by the Chicago Federal Reserve – in the property insurance market, where geographically grouped policies are common.

In times of catastrophe, whether from hurricanes, floods, fires, earthquakes or numerous other disasters, insurers will draw on reinsurance policies to remain financially solvent. By distributing risk, these policies allow insurers to take on more high-risk policies while keeping portfolio risk tempered – hence their popularity by high-risk insurers in catastrophe-prone areas. However, expense growth in the reinsurance industry has continued to outpace revenue growth, and reinsurers are passing along more cost increases to insurers, threatening the ability of small insurers to operate.

Insurers that are exposed to catastrophe-prone properties are significantly more likely to use non-proportional reinsurance – reinsurance that covers a policy above a certain claim amount. This type of reinsurance is particularly burdensome on reinsurers, even when a layering approach is used. This means premiums charged are often higher than quota reinsurance, for which a reinsurer receives a percentage of a premium, and pays out that same percentage if a claim occurs.

Rising reinsurance pricing likely stems from, in part, the spate of natural disasters that have struck the U.S. over the past few years. In 2024, reinsurers increased the price of reinsurance premiums for insurers by up to 15% for loss-affected accounts, and up to 10% for no-loss accounts at mid-year reinsurance policy renewals. But growth in capital softened rates some by the end of the year, according to Fitch Ratings and AM Best.

The health of the reinsurance market is directly tied to the costs real estate owners may see in the near future. With a robust reinsurance market, insurers will be able to shield themselves from risk and extend more affordable policies to property owners. But if catastrophes continue to worsen in certain areas of the country, reinsurance premiums will necessarily rise to compensate for the additional risk, or insurance premiums will have to cover more risk previously covered by reinsurance. So far, capital in the reinsurance industry has notched gradual increases despite a blip in 2022, recently measured at $715 billion in the first three quarters of 2024. But ongoing risks do present capital threats, and therefore a more risk-averse reinsurance market.

Managing the Direct and Indirect Costs of Insurance Inflation

Investors, owners, landlords, and tenants in the real estate industry are grappling with how to manage these costs while still maintaining adequate property coverage. Mitigating the costs of insurance comes down to two factors: direct and indirect costs. The direct cost is the premium on the balance sheet, while indirect costs, including financial exposures from uncovered claims, are difficult to determine and often result in muddied projections. More advanced and accurate valuations are needed to quantify direct and indirect costs and allow for negotiation on better pricing and coverage for their clients.

Property insurance expense increases will vary in the context of the state of the market. Premiums on properties inside catastrophe-prone zones with an unfavorable risk profile should be expected to rise 5% to 15%, according to the USI Market Outlook for 2025. However, properties inside catastrophe zones with a minimal loss history may see premiums decrease as much as 10%, although they could increase 5% at the higher end. In markets expected to see rate increases, the investment environment can mitigate the damage that insurance rate hikes have on valuations.

Certain markets may have strong enough rent growth to compensate for jumps in operating expenses; insurance premium increases can be baked into cap rates. For some properties, insurance occupies only a small part of total expenses – sometimes as low as 2% – meaning property managers can offset a rise in insurance rates via moderate reductions elsewhere. Additionally, institutional investors can use their financial clout to negotiate lower premium increases. These trends have tempered inflated insurance rates and possible future rate hikes as a major issue for appraisers. Since rents have significantly cooled from their record highs in 2021 and 2022, and the U.S. is facing potential economic headwinds, however, mounting and accelerating expenses could make a more noticeable impact on property owners' financials.

Given the pressures in the property insurance market, real estate investors and underwriters should remain attuned to the impact of elevated insurance costs on NOI. For many commercial properties, particularly retail, office and industrial, the use of triple net leases negates much of the concern around rising insurance rates for landlords and property owners. But for multifamily and hotel owners, mounting insurance costs are more difficult to pass on to tenants and guests, and several states regulate the extent to which insurers can pass through costs.

The difficulty with estimating the cost pressures associated with property insurance is the multivariate ways costs can rise for policyholders,

Natural Disasters and Real Estate: The Unprecedented Rise in Insurance Costs (cont.)

depending on location, age, size, and other property characteristics. Many of the current insurance cost pressures are happening in markets with significant exposure to natural disasters, and where past events have left markets deprived of insurance alternatives. But even then, a policy's susceptibility to price increases rests on a unique set of characteristics. For instance, a property in the flood plain will usually be at higher risk for insurance rate hikes, but the increased risk exposure to floods can be offset for properties that conform to more stringent building codes.

The temptation in times of rising insurance costs to switch to other policy plans, however, also comes with caution. The structure of the insurance market – particularly admitted vs. non-admitted carrier options – means a cheaper alternative will almost always exist. Even outside of the private market, several states have robust state insurers of last resort that can provide relatively comprehensive plans if property owners cannot find affordable alternatives.

Insurance providers are financially strained under several pressures, and in an attempt to reduce potential payouts, are decreasing coverage limits and sub-limits within policies. Carriers are also reviewing claims history and payout trends to further remove and limit future policies from paying out coverage. Should insurance price hikes resume, it is not prudent to consider only direct costs when evaluating an insurance policy. Insurance coverage is a promise to pay when a loss occurs, so with increasing property risk exposure, real estate investors need to read the fine print to know what is covered.

The Interplay Between Market-Rate and Affordable Housing Rents

Paul Fiorilla | *Director of Research* | Yardi Matrix
Jacob Gonzalez | *Senior Analyst* | Yardi Matrix

The growing number of households that are rent-burdened has put a spotlight on housing costs and led policymakers to implement programs intended to produce more affordable housing. The federal tax bill signed into law this spring, for example, permanently increases funding for the Low Income Housing Tax Credit (LIHTC) program by 12%, which will provide $14 billion of tax credits annually to be allocated among the states annually. The Opportunity Zone program, which provides tax incentives to build housing in low-income areas, also was extended and revamped.

Because the need for housing that is affordable to low- and middle-income families is so great, it is important that the allocated funds be spent wisely. One way to increase efficiency is to use data to ensure that projects are delivered to locations with both strong demand and less robust competition from market-rate properties.

While that sounds simple, the competitiveness between market-rate and fully- affordable housing (defined by Yardi Matrix as properties where at least 90% of units have income restrictions tied to subsidies) vary across cities and even within individual metros. Based on a review of Yardi Matrix's national database that encompasses 120,000 multifamily properties (26,000 fully affordable) with 23 million units (3.5 million fully affordable), a comparison of rents at -market-rate to fully-affordable housing helps us to draw a few main conclusions:

- In some metros, a large percentage of market-rate property advertised rents are competitive with fully affordable housing property rents, while in others there is very little competition between the two.
- Within each metro, the level of competitiveness varies by submarket, depending on factors such as the cost of market-rate rents, the amount of supply, the age of the multifamily stock, and the income of residents within each immediate area.
- The level of competitiveness is a key component in affordable housing performance. The occupancy rates of fully affordable properties are generally higher in metros in which market-rate rents are less competitive with affordable rents.

Why Is This Analysis Relevant?

Market-rate properties that are competitive with affordable properties serve overlapping income groups and may compete for the same tenants. We define competitiveness using an affordability index developed by Matrix, which is based on the federal calculation of Area Median Income (AMI). We determine the AMI level at which rents are considered "affordable" based on the government's standard that housing costs should not exceed 30% of gross household income. When rents at market-rate and fully affordable properties are "affordable" to households earning similar incomes (<10% difference in AMI), we deem that to be competitive. The full methodology is in the appendix at the end of the report.

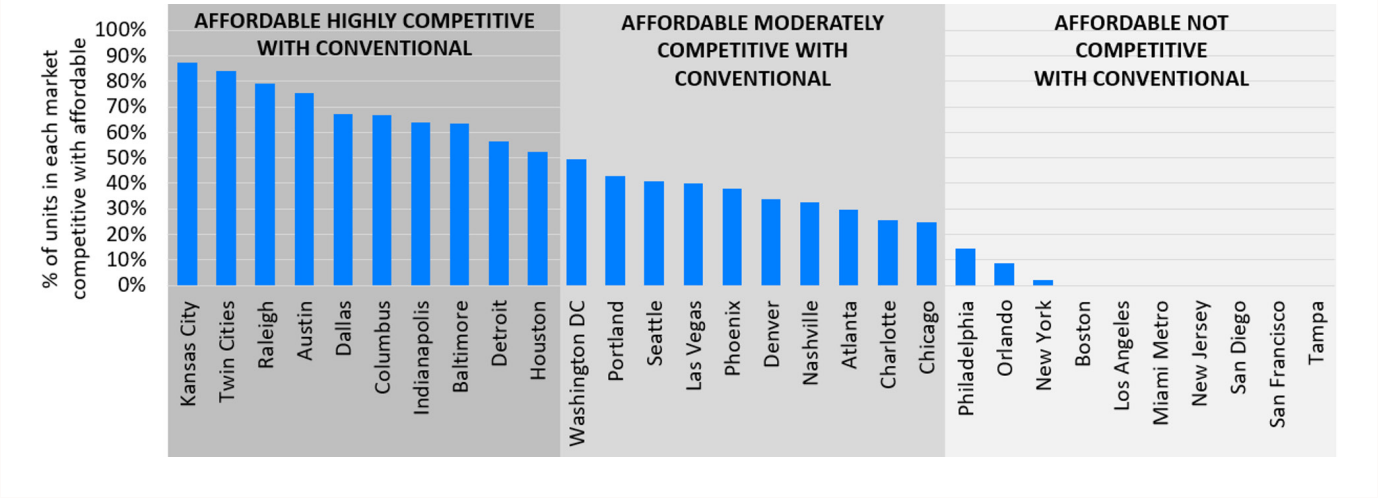
Why Competitiveness Varies by Metro

The Matrix methodology for assessing competitiveness between market-rate and affordable properties finds a wide range of outcomes at the metro level. Among the top-30 U.S. metros:

The Interplay Between Market-Rate and Affordable Housing Rents (cont.)

- One-third are highly competitive, with at least 50% of conventional units competing with fully affordable housing.
- Another third is moderately competitive, with 25% to 50% of market-rate units in competition, and
- The remaining third has less than 25% in competition (including seven metros with zero competitiveness). While each metro has its own unique drivers, there are a few factors that correlate to the competitiveness between market-rate and affordable multifamily.

FIGURE 1
Percentage of Market-Rate Stock in Competition with Fully Affordable Developments based on AMI%



Source: Yardi Matrix

Market-Rate Vs. Affordable

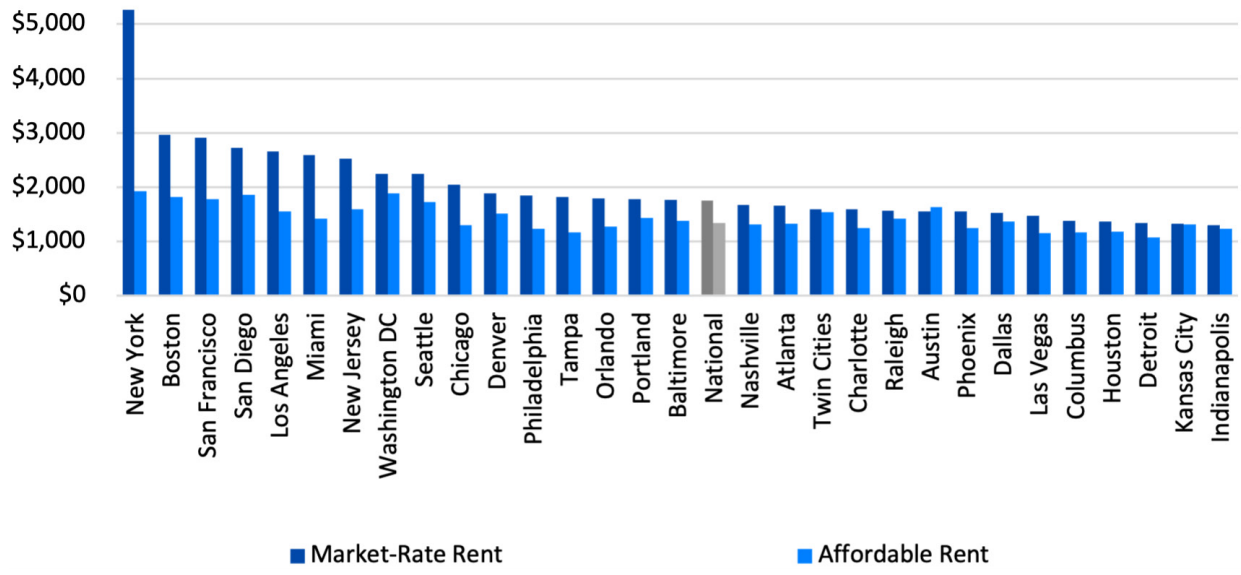
One key factor influencing competitiveness is the absolute level of market rents. In metros where average advertised rents exceed $2,500 (New York City, San Francisco, Los Angeles, Miami, San Diego, Boston, and New Jersey) market-rate properties rarely compete with affordable housing. In contrast, metros with average rents below $1,500 (Las Vegas, Columbus, Houston, Detroit, Kansas City, and Indianapolis) tend to show moderate to high levels of competitiveness.

Nationally, the average market-rate rent is $1,754, which is 31.2% higher than the $1,337 average maximum allowable rent of fully affordable properties. However, the difference varies greatly by market. Miami's average $2,586 market-rate rents are 82.1% higher than the $1,420 fully affordable average, and Los Angeles's $2,653 market-rate average is 70.5% higher than the $1,556 affordable average.

On the other end of the spectrum, in some metros the difference in rents between market-rate and affordable units is minimal. For example, the average market-rate rent in Austin is $1,553, or 4.8% less than the average $1,631 average maximum allowable rent at affordable units. In the Twin Cities, the average $1,590 market-rate rent is only 3.3% higher than the $1,539 average affordable rent, while in Indianapolis, the $1,302 market-rate average is only 5.5% higher than the $1,234 affordable average.

The Interplay Between Market-Rate and Affordable Housing Rents (cont.)

FIGURE 2
Market-Rate vs Fully Affordable Rents



Analyzing Supply Growth

Another correlation is the amount of supply growth. Markets such as Austin and Dallas, which are among the leaders in annual apartment deliveries, have fostered a competitive environment for owners. Austin has added roughly 25% to multifamily stock over the last three years, leading the average market-rate advertised rent to drop by 13%. Consequently, in Austin, multifamily properties in all but the highest end of the luxury scale are competitive in price to fully affordable properties.

On the other end of the spectrum, in markets such as New York City, Los Angeles, San Diego and Philadelphia, which trail the national average in deliveries as a percentage of stock, most market-rate apartments are not competitive with fully affordable properties. To be sure, some of the factors overlap, as the lack of supply growth contributes to the overall expense of market-rate rents.

A third correlating factor is the age of multifamily stock within a metro. Our competitiveness methodology groups market-rate properties in each metro into four quality categories (from high to low):

- Discretionary,
- Upper mid-range,
- Low mid-range and
- Workforce.

New construction is concentrated in higher-end luxury segments, so metros with a larger percentage of apartment stock built over the last 10-20 years usually have a higher proportion of luxury market-rate apartments that are not competitive with affordable units. An example includes Miami, where 59% of market-rate stock is in the two highest quality categories (discretionary and upper mid-range).

The Interplay Between Market-Rate and Affordable Housing Rents (cont.)

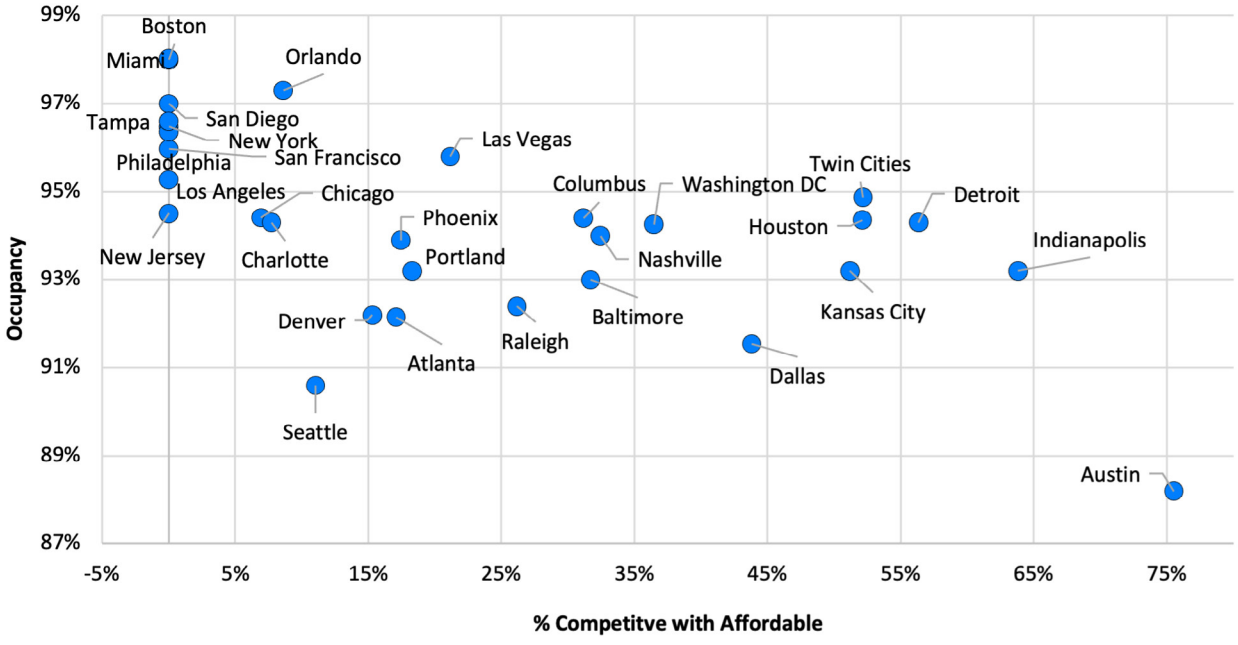
Conversely, some metros have a large percentage of market-rate apartment stock that was built decades ago and now are classified in the lower-quality scale categories. These units tend to be more competitive with affordable units due to lower rents that come from age, property quality, and (sometimes) deteriorating neighborhoods. One market example of this phenomenon is Detroit, where half of the total market-rate stock is classified by Matrix as workforce, the lowest quality level. Those workforce units in Detroit are deemed competitive with fully affordable housing. Another example is Baltimore, where 56% of total market-rate stock is in the two lowest quality levels -- low mid-range and workforce. Those properties are deemed competitive with affordable units.

Competitiveness is important because it correlates to demand for affordable housing. A rule of thumb is that renters are more likely to choose to live in a market-rate property if rents are within 10% of affordable housing rents. That is critical at a time when a growing number of renter households across the country pay more than 30% of their income on rents, fueling demand for lower-cost units and lower-cost markets.

Matrix Expert occupancy rate data confirm the link between competitiveness and performance. Metros in the Matrix top-30 with high advertised rents and low competitiveness scores recorded occupancy rates of 95.0% or more in fully affordable properties. The average occupancy rate was 97.0% or higher in fully affordable units in less competitive markets such as Miami, Boston, Orlando, and San Diego.

The converse is true as well. The fully-affordable occupancy rate is only 88% in Austin, where three quarters of market-rate properties are competitive with fully-affordable units due to the rapid supply growth in both segments. Metros with high competitiveness scores and rents below the national average generally record fully affordable occupancy rates between 93% and 94%.

FIGURE 3
% of Conventional Stock in Competition with Affordable based on Rent Premiums

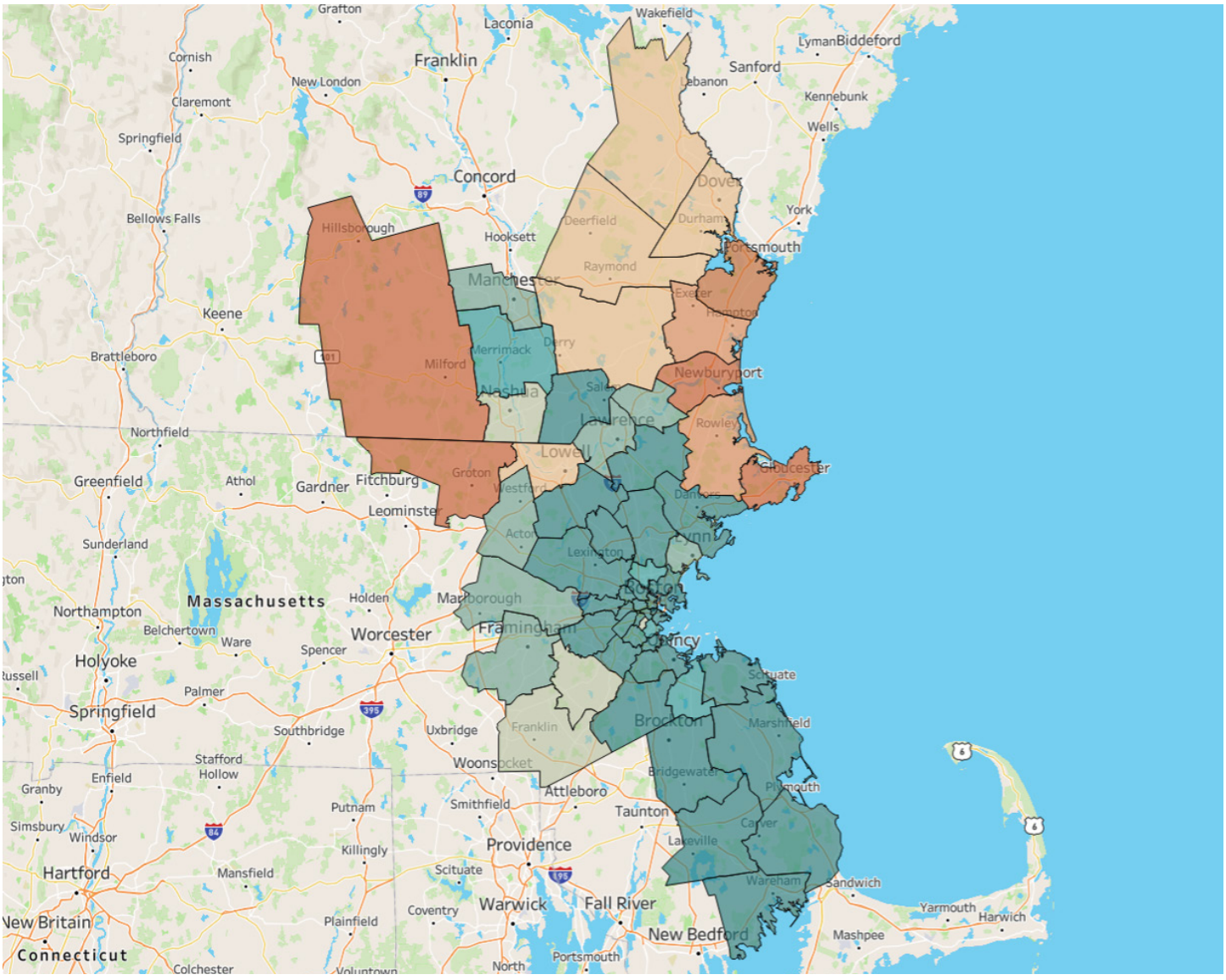


The Interplay Between Market-Rate and Affordable Housing Rents (cont.)

Competitiveness Submarket Analysis

Our metro-level analysis has established a wide variation between metros regarding competitiveness. A deeper review of each market reveals that there is a similar variation within each metro. In other words, competitiveness between market-rate and fully-affordable properties is not consistent within metros. That makes it incumbent on affordable housing developers to underwrite submarkets where they plan to build.

Studying the submarkets of a few metros with different competitive profiles provides context. Boston has a 0% metro-level competitive score, meaning very few market-rate properties are competitive with affordable. Looking at the competitive landscape by submarket, we find markets near the city center are less competitive with affordable, while submarkets at the edge of the metro are more competitive.



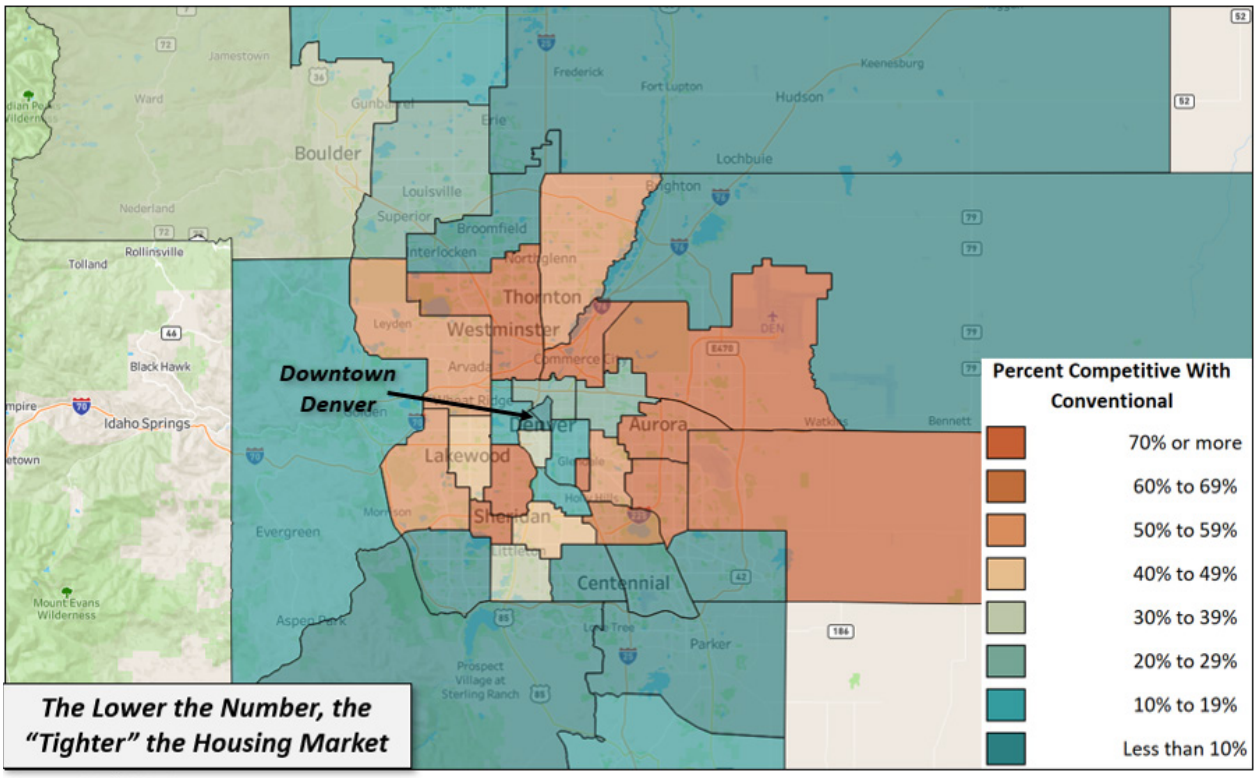
The Interplay Between Market-Rate and Affordable Housing Rents (cont.)

Boston's average maximum allowable rent in fully affordable properties is $1,819 per month, well above the $1,337 national affordable housing average, owing to the high income of Boston households. Despite that, market-rate apartments in high-end downtown and inner-ring submarkets such as Cambridge and Somerville are not competitive with affordable properties as advertised rents average more than $3,000.

The story, however, is different in the outer suburbs to the north such as Amesbury/Newburyport, or Townsend, which have higher competitiveness scores. Although the $1,700-plus average fully-affordable rent is still above the national average in those submarkets, rents in market-rate apartment stock are much less pricey due to the long commute to the city center and the age of much of the apartment stock. In Amesbury, for example, more than 40% of the stock is classified at the workforce-quality level.

Denver lies in the middle of the competitiveness scale, with one-third of market-rate units deemed competitive with fully affordable. Denver's less competitive submarkets are located in the downtown and outer suburbs, where the average market-rate rent in higher quality types tops $2,500. That's well above the average affordable rent of roughly $1,300 due to the lower AMI of households in those submarkets.

FIGURE 4
The Lower the Number, the "Tighter" the Housing Market

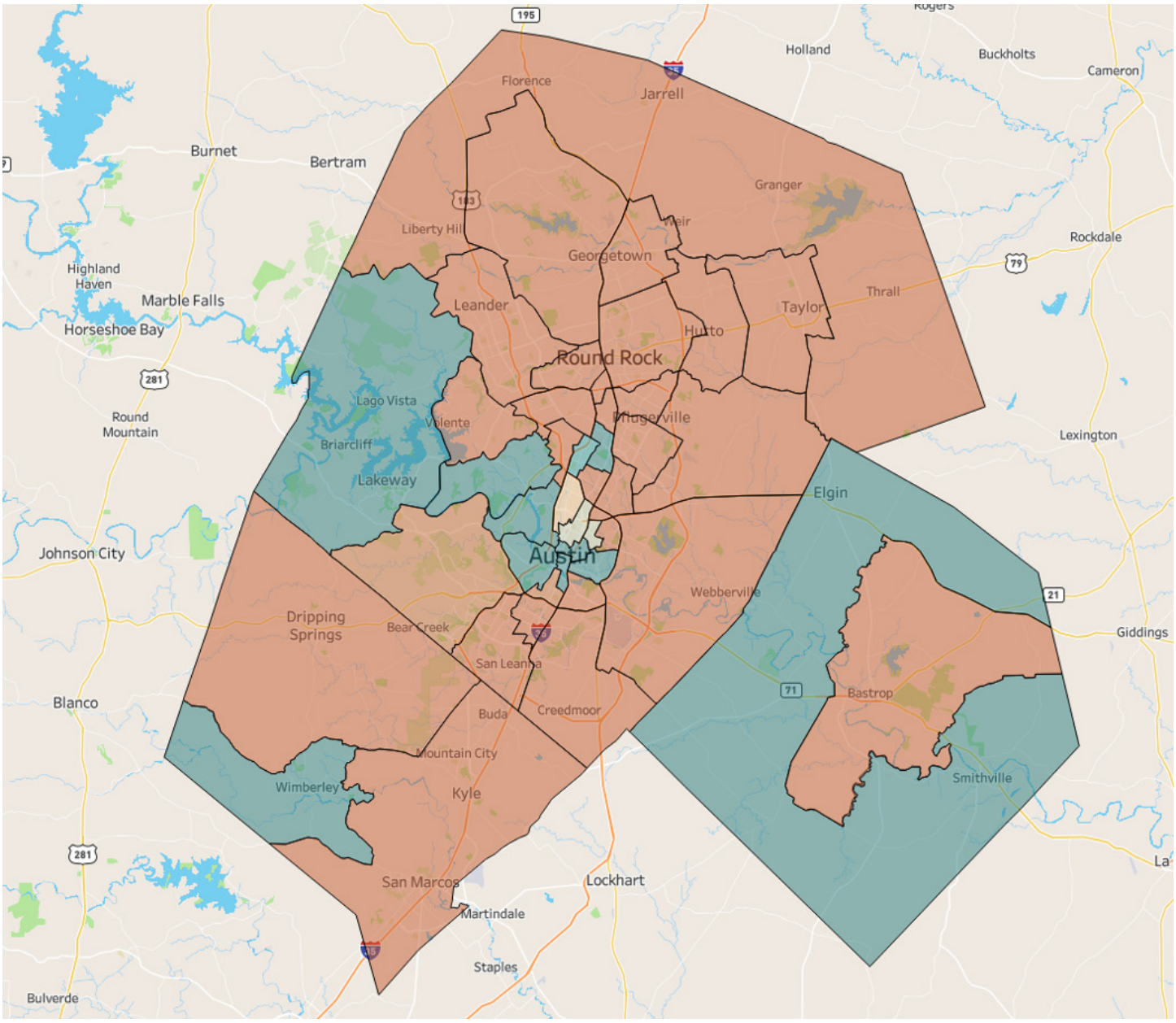


Source: Yardi Matrix

The Interplay Between Market-Rate and Affordable Housing Rents (cont.)

A contrast occurs in Denver's higher-end suburbs such as Lakewood, Aurora, and Cherry Creek, where household incomes are higher, leading to higher rents in fully-affordable units. In those submarkets, the average rent in fully-affordable apartments is between $1,500 and $1,800, but most of the apartment stock is newer and higher quality with rents averaging more than $2,000 per month.

Austin, as noted, is among the most competitive markets. In large swaths of the suburbs, market-rate properties are highly competitive because the influx of supply in recent years has led advertised rents to fall. However, there are pockets of less competitive submarkets such as the downtown or the West End where the spate of new luxury market-rate units has raised the average rent relative to affordable apartment stock.



The Interplay Between Market-Rate and Affordable Housing Rents (cont.)

Competitiveness Key to Affordable Development

Although the affordable housing construction market is set to enjoy increased funding thanks to the increase in LIHTC and hundreds of other state and local programs to incentivize development, significant challenges exist. Because construction and financing costs have risen in recent years, and the value of tax credits has declined, each dollar deployed for affordable housing builds fewer units.

Another issue is that affordable properties, on average, cost more to build per unit than market-rate housing. Why? One reason is that many jurisdictions place extra regulatory requirements on affordable housing, such as high environmental standards and requiring more expensive union labor. Another factor is that affordable developments have higher soft costs such as legal and consulting fees because projects increasingly require developers to layer subsidies and grants into their financing, which requires that more parties be involved in these transactions.

A recent study by the Boston mayor's office found that large public development projects (50,000 square feet or more) cost $624 per square foot to build, more than 50% more than the $406 per square foot for private developments.

> **"Affordable housing consistently costs more to build across housing typologies and does not capture the same economies of scale as the private market," the report said. "Key driving differences include divergent incentive models, higher soft costs, and longer development periods."**

The upshot is that to ensure that dollars are spent wisely and serve the purpose for which they are intended, affordable-housing developers must analyze every relevant factor, including – and especially – metrics such as the competitiveness of the submarkets in which they build.

Appendix

The methodology for the Matrix competitiveness index is explained here.

The four property quality types that are embedded in Matrix are:

- Discretionary equivalent to A+, A apartments).
- Upper Mid-Range (A-, B+).
- Low Mid-Range (B, B-).
- Workforce - Upper (C+, C).

For each metro, we calculated the average advertised rent in each of the quality segments and the share of apartment units comprised by each quality segment. To use Austin as an example, the average fully affordable maximum rent is $1,631 (10% of stock in the metro), while the advertised averages in the market-rate segments are:

- $1,915 for Discretionary, which comprises 22% of stock in the metro.
- $1,659 for Upper Mid-Range, which comprises 46% of stock in the metro.
- $1,296 for Low Mid-Range, which comprises 17% of stock in the metro.
- $1,190 for Workforce – Upper, which comprises 5% of stock in the metro.

Using the government's definition of "affordability" (when housing costs consume 30% or more of household income), we calculated the percentage of area median income it would take to "afford" the rent in each quality segment before they become cost burdened. In the example of Austin:

- Households that earn 68% of the AMI could afford the average rent of a Discretionary property.
- Households that earn 58% of the AMI could afford the average rent of an Upper Mid-Range property.
- Households that earn 46% of the AMI could afford the average rent of a Lower Mid-Range property.
- Households that earn 44% of the AMI could afford the average rent of a Workforce – Upper property.
- Households that earn 58% of the AMI could afford the average rent of a Fully Affordable property.

Housing quality categories were deemed "competitive" with fully affordable when the percentage of households that could afford the average rent for market-rate units fell below 10% of the same calculation for fully-affordable units. We further credited all of the properties within the quality category to be competitive with affordable. To use the Austin example, Upper Mid-Range (46% of total stock), Low Mid-Range (17%), and Workforce–Upper (5%) were all considered competitive with affordable. Totaling the percentage of stock in those categories, we determined that 68% of multifamily properties in Austin are competitive with fully affordable units.

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