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REAL ESTATE

RealAccess

Global insights for real estate investors

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As you will read in this issue, we believe that even in times of economic uncertainty, real estate continues to deliver opportunity to investors. While the real estate market continues to evolve, nimble, experienced investors are finding new ways to generate returns:

- Using technology to enhance the value of our properties
- Sourcing transactions with individual competitive characteristics
- Investing in new sectors that benefit from non-cyclical income revenue streams

Nuveen could not do any of this without an exceptional team of professionals. Nuveen Real Estate benefits from a team of over 350 real estate investment professionals supported by an additional 380 employees in offices around the world. From specialists in property technology to location-specific sector specialists around the globe, we are focused on providing access to the most promising segments of the market for our investors.

Sincerely,

Carly Tripp
Global CIO, Nuveen Real Estate

Continuing to deliver

Investors have long held steady on reasons to allocate to private real estate. Do these factors still hold true?

See "Hardball: Does real estate have what it takes?"

02

A highly curated investment approach

Today's markets require specialized strategies to seek alpha while not overpaying for high demand assets.

See "Stay nimble in today's markets"

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Why self-storage?

Self-storage has the potential to help drive performance and income for investors.

See "Overflow... the growth of self-storage"

08

Technology unlocks efficiencies

Innovation improves buildings while enhancing their value and potential income.

See "Proptech is now mission critical"

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Thriving industrial real estate

The area around Riverside, CA, benefits from strong growth in its economy, population and retail sales.

See "CityWatch: California's Inland Empire"

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PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Hardball: Does real estate still have what it takes?

For years, investors have held steady on their reasons to allocate to private real estate: return potential, income, volatility management, inflation hedging and diversification. But the current environment is testing every asset class. Can real estate continue to deliver?

Can real estate income keep pace with inflation?

Generally, rents rise with inflation, driving income up at a similar pace. However, in certain sectors with high vacancy rates (enclosed malls or central business district office towers), landlords may find it challenging to raise rents.

The key to the inflation hedge is understanding the demand dynamics and vacancy rates of individual markets. Consider medical office properties in high growth cities and suburbs. Or housing properties in the U.S. Sun Belt. Real estate can keep pace with inflation assuming it is the right building, in the right location with sufficient demand to support higher rents.

Is there any upside left to capture?

The pandemic accelerated many real estate trends. For example, e-commerce grew dramatically during the lockdowns and drove up demand for industrial space. However, we expect returns to reset to more typical levels, or even below average in some sectors. While those sectors will impact the overall market average, we still see opportunity in strategic market segments.

Sector dispersion has been a long-term trend, and active managers are building portfolios accordingly. Short-term returns will likely be driven by non-cyclical properties less affected by downturns: medical offices, data centers or self-storage. Active portfolio management will be key to driving performance in a slow growth economy.

U.S. fundamentals are generally healthy
Low vacancy rates in many sectors will sustain real estate rents and valuations, especially in the most vibrant cities.

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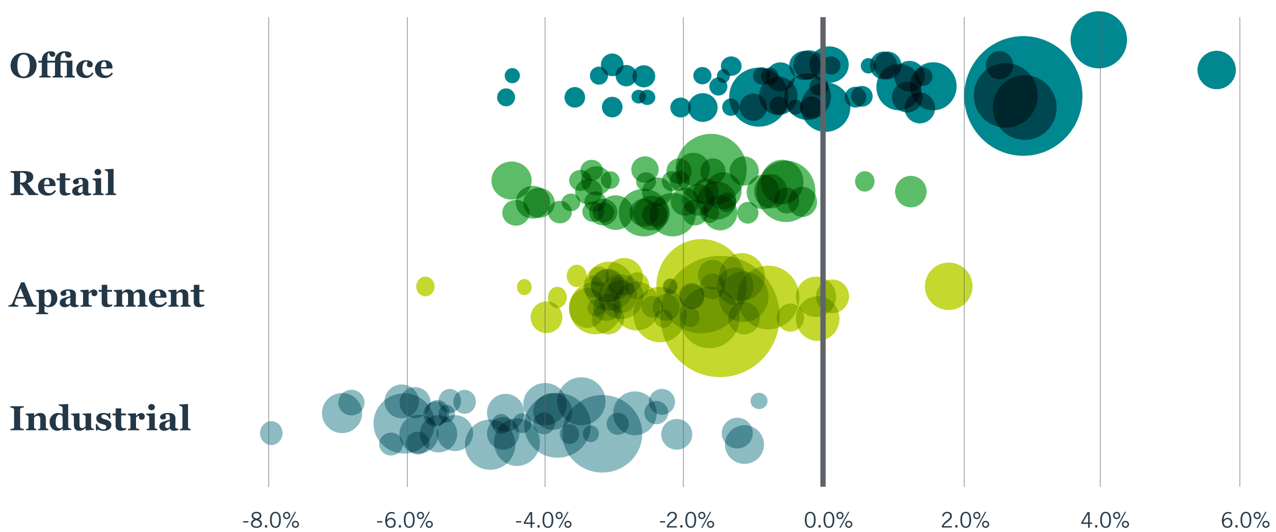
LOW VACANCY RATES SHOULD SUSTAIN REAL ESTATE RENTS AND VALUATIONS

Market vacancies relative to pre-pandemic averages, top 50 U.S. cities

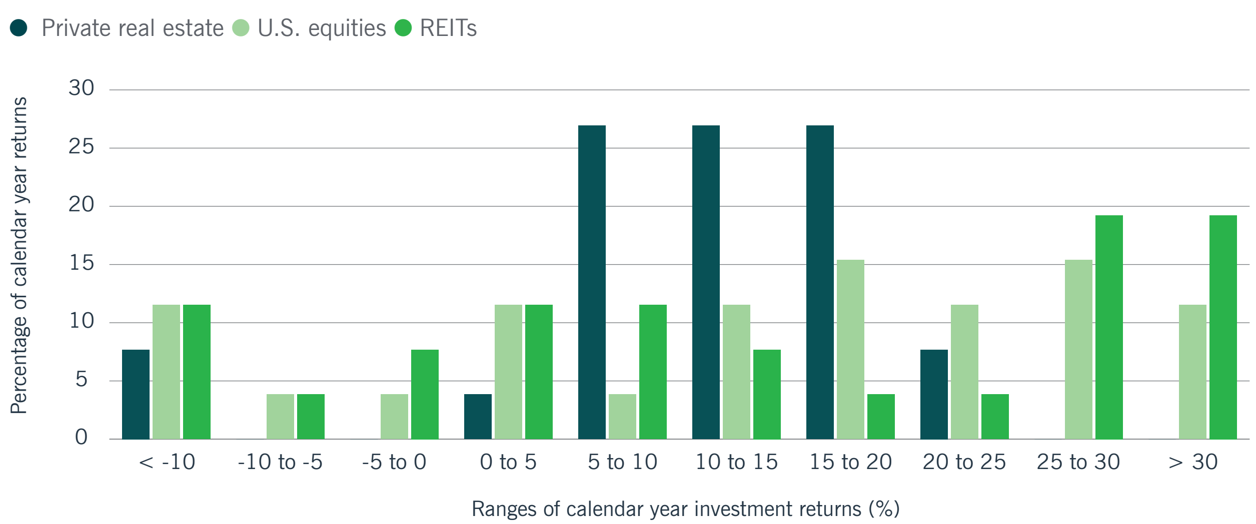


Data source: CoStar, Nuveen Real Estate Research, 11 May 2022. **Past performance does not predict or guarantee future results**. Pre-pandemic average from 2000 – 2019. Bubble size denotes relative asset value of markets.

Does the promise of managing volatility still hold true?

Many investors allocate to real estate as a steady source of total return, and they have been surprised by outsized performance over the past few years. However, that is not the norm. As a real asset, real estate values are generally more stable than traditional equity investments. In fact, in the past 40 years, annual private real estate index performance has been negative in only two years. In the same period, more traditional asset types have seen multiple years of negative performance.

PRIVATE REAL ESTATE HAS PROVIDED MORE CONSISTENT RETURNS



Data source: Morningstar. 31 Jul 2022. Calendar year returns 1996 – 2021. **Past performance does not predict or guarantee future results. Representative indexes: REITs:** FTSE Nareit All Equity REITs Index; **U.S. equities:** S&P 500 Index; **private real estate:** NCREIF Fund ODCE Index.

What is driving high housing prices and rents?

Housing prices in many parts of the U.S. have been driven by a supply/demand imbalance. Supply chain issues and labor shortages slowed production in many key markets. Meanwhile, demand grew as people were no longer constrained by an office location, opting to move to fast-growing Sun Belt markets.

This imbalance has created an opportunity for institutional investors. Previously, institutions made up only 2% of the single family rental housing market, but that number could double in the coming decade. Professional investors are creating new supplies of housing where the local market could not meet demand. We believe new housing supply will continue evolving as millennials seek alternative ways to enter the housing market: renting for longer, purchasing town homes or condominiums, or renting single-family homes for the long-term.

What would a recession mean for real estate?

While we do anticipate slower rates of growth for real estate, fundamentals remain strong.

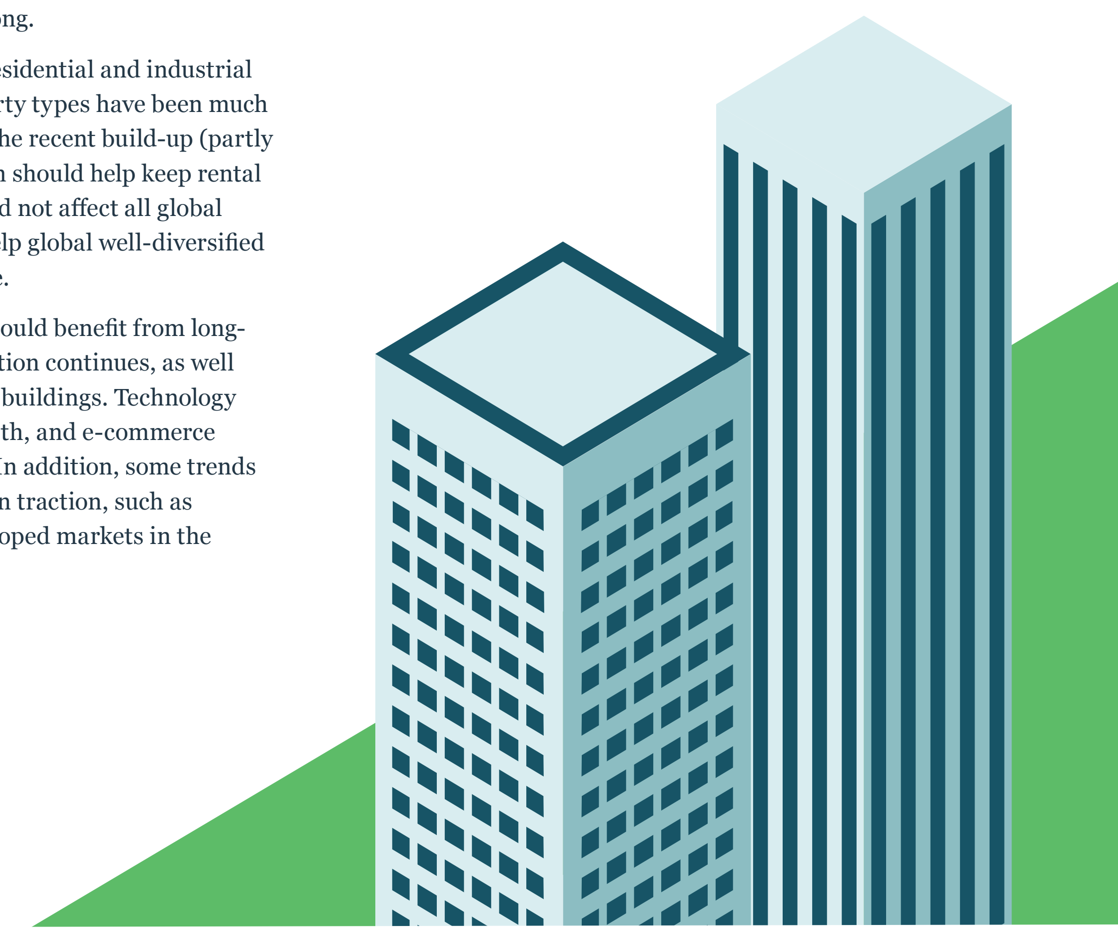
Vacancies are at record lows in residential and industrial sectors. Developers across property types have been much more supply-disciplined during the recent build-up (partly due to supply chain issues), which should help keep rental levels high. And a recession would not affect all global markets equally, which should help global well-diversified investors achieve a smoother ride.

We believe real estate markets should benefit from long-term structural trends. Urbanization continues, as well as the drive for more sustainable buildings. Technology should continue driving job growth, and e-commerce supports growing market share. In addition, some trends favoring local real estate may gain traction, such as re-shoring of production to developed markets in the U.S. and Europe.

How will rising rates affect real estate?

Historical data going back to the 1970s show that real estate tends to perform relatively well in rising rate environments in absolute terms, but even more so relative to interest-rate sensitive assets. Since 1977, U.S. core real estate (as measured by NCREIF ODCE) has averaged annualized returns of 12.6% during rate hike cycles and 10.2% in the year following.

Even in this rising rate environment, we believe private real estate offers opportunity. Public REITs behave very differently compared to private real estate because values may be influenced more by equity market sentiment. Public REITs have significantly higher volatility and offer shallower markets, as not all property types are represented in REITs in all markets. In Europe and Asia-Pacific, REIT markets are a small fraction of the size of private markets.



Stay nimble in today's markets

Today's markets require specialized strategies to seek alpha while not overpaying for high demand assets. Nuveen's acquisitions team enlists sector specialists to implement a nimble, highly curated investment approach.

One National is a 300,000 square foot industrial property, 100% leased to a credit-worthy e-commerce tenant, located strategically in the high-barriers-to-entry market of Boston, Massachusetts.

The property was purchased off-market for an ***acquisitions cap rate of 5.5%****, approximately 50 basis points outside of where it would have traded if the deal had gone to market.*

An institutional investor may seek large portfolio transactions to deploy capital quickly and gain scale in a sector. This is particularly true with single family rental homes, smaller industrial properties, medical offices and self-storage facilities where the overall deal size may be smaller. These investors will likely pay a portfolio premium as a trade-off for accessing a large number of properties in a desired sector.

Nuveen takes a different approach.

BUILDING PORTFOLIOS

Nuveen acquires small deals, one by one. While this strategy can be challenging to execute, aggregating a portfolio in this fashion may offer more favorable pricing by avoiding a portfolio premium.

This strategy also allows us to control portfolio quality and reduce the risk of taking on subpar assets or locations that are sometimes part of pre-assembled portfolios.

FLYING UNDER THE RADAR

We also focus on deals of less than $50 million. These small deals don't always appear on the radar of institutional investors, but may be too large for high-net-worth individuals. We believe this sweet spot provides exceptional value with less competition.

In addition, smaller deals are generally more liquid. Once an asset has achieved its target, these deals are easier to sell without an outsized impact on the portfolio.

OFF-MARKET SOURCING

Nuveen Real Estate benefits from a team of more than 350 real estate investment professionals supported by an additional 380 employees in offices around the world. Located in more than 30 cities, these professionals offer unparalleled boots-on-the-ground experience. These regional experts are further divided by sector. By coupling local market knowledge and sector specialists, we may achieve larger deal flow, better off-market deal sourcing and exceptional pricing execution.

By focusing on off-market deals, we believe we can achieve value for investors and increase our ability to drive performance.

PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

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Overflow… *the growth of self-storage*

It's a familiar problem: overflowing closets, packed garages and bedrooms transforming into home offices. Where do we put all that extra stuff? No wonder self-storage has been one of the best performing real estate sectors over the past several decades.

As one of the world's largest private owners of self-storage facilities, Nuveen has acquired more than $1 billion of self-storage assets across the firm since the beginning of 2020 alone.

Why do we like the sector?

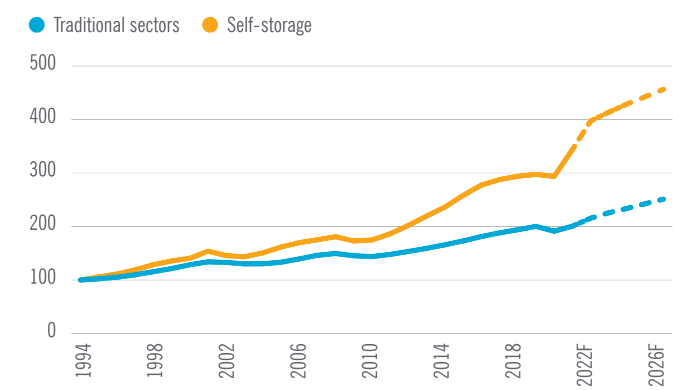
UNCORRELATED TO ECONOMIC CYCLES

Consumer demand for self-storage has never been higher. The sector's income growth is quite resilient, in part because its demand drivers are non-cyclical and uncorrelated to the economy. Sector performance has remained strong throughout market cycles, even performing exceptionally well during the pandemic.

Going forward, the sector is projected to continue outperforming due to its favorable growth forecast and low cap-ex profile relative to traditional sectors.

SELF-STORAGE HAS A FAVORABLE GROWTH FORECAST

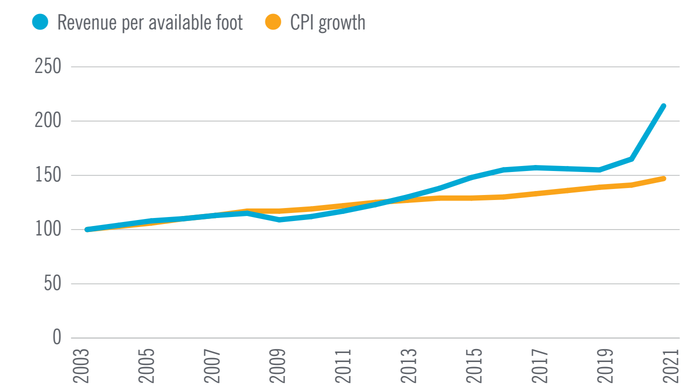
Net operating income growth (basis points)



Data source: Green Street, July 2022. **Past performance does not predict or guarantee future results.** Note: 1994=100. Net Operating Income (NOI) is operating revenue minus operating expenses.

MONTHLY LEASES CREATE A HEDGE AGAINST INFLATION

Self-storage RevPAF growth vs CPI growth (basis points)



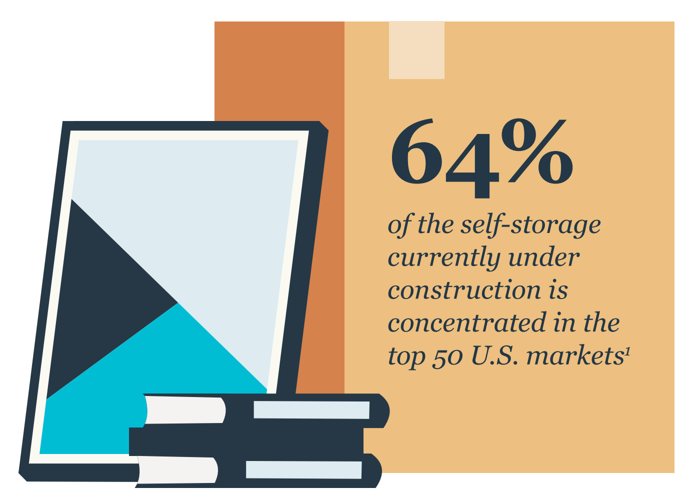
Data source: Green Street, U.S. Bureau of Labor Statistics, July 2022. **Past performance does not predict or guarantee future results.** Indexed growth: 2003=100. Revenue per available foot (RevPAF) represents occupancy rates times effective rent, and is a measure of property earnings.

BENEFITS FROM ECONOMIES OF SCALE

Self-storage is one of the few property types that takes advantage of real economies of scale. Institutional managers have a considerable edge over their smaller peers because they:

- Operate sophisticated revenue management systems that drive revenue
- Market at scale to save costs and increase tenant traffic
- Use capital to maintain high-quality facilities

Monthly leases create an inflation hedge, as management groups can adjust rents more frequently than other tenant contracts. Additionally, self-storage facilities require limited ongoing capital expenditure to maintain. This is attractive, as cap-ex is one of the biggest drags on prospective returns.



OPPORTUNITIES ARISE IN SMALLER, OVERLOOKED MARKETS

Institutional managers are continually challenged to find new opportunities at a reasonable price. Secondary and tertiary markets, like smaller cities in the Sun Belt and Midwest, may offer opportunities because they benefit from:

- Less operating competition from large national players
- More opportunities to buy from mom-and-pop sellers
- Less expected future supply

The large public REITs are concentrated in the top 25 markets, and most new developments nationally target primary markets.

However, half of the self-storage industry is still owned and operated by smaller groups. The average individual self-storage asset is relatively small, at about $10 million. It takes a great deal of work to acquire assets on a one-off basis, so many institutional managers are willing to pay a premium for larger, multi-building portfolios.

We are working to build value for shareholders by aggregating smaller assets into regional or national portfolios that take advantage of economies of scale. Market data has shown that such portfolios may trade 20% to 25% higher versus assets transacted on an individual basis.[2]

Nuveen remains focused on accessing the sector in a way that drives investor value and acquires high-quality, long-term assets. We believe self-storage has the potential to help drive performance and income for our real estate investors for years to come.

PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Proptech is now *mission critical*

Technology and innovation improve the buildings Nuveen owns while enhancing their value and potential income for our clients. Technologies that unlock greater efficiencies and value for the real estate industry, known as proptech, were once considered nice-to-have amenities. However, in today's market, proptech has become mission critical for operations.

Technology and real estate have fundamentally different time horizons. We expect constant upgrades to our smartphone apps and demand far-reaching high-speed internet access, while the real estate lifecycle can span decades. But real estate providers are now expected to provide the same higher levels of customer service delivered in the consumer world.

Proptech drivers at a glance

The real estate industry has come to understand that technology has the power to improve net operating income, grow assets under management and attract and retain top talent. Proptech has been influenced by three primary drivers: **consumer behaviors, efficiency enablers and technological advancements.**

CONSUMER BEHAVIORS

Real estate practitioners quickly developed technologies to replace in-person workflows during the pandemic. However, once the benefits of such technologies are understood, they tend to have staying power.

To close real estate transactions remotely, agents relied on virtual tour technology, occupiers adapted to touchless access control and e-signatures became commonplace.

EFFICIENCY ENABLERS

Existing technologies and tools are being applied to the built world in novel ways. These tools improve the efficiency of workflows, provide actionable insights to make better investment and operational decisions, and prove critical to managing the carbon footprint.

Consider climate technology. Nuveen is renovating properties with more efficient climate control systems, light filtering windows or solar powered energy generation.

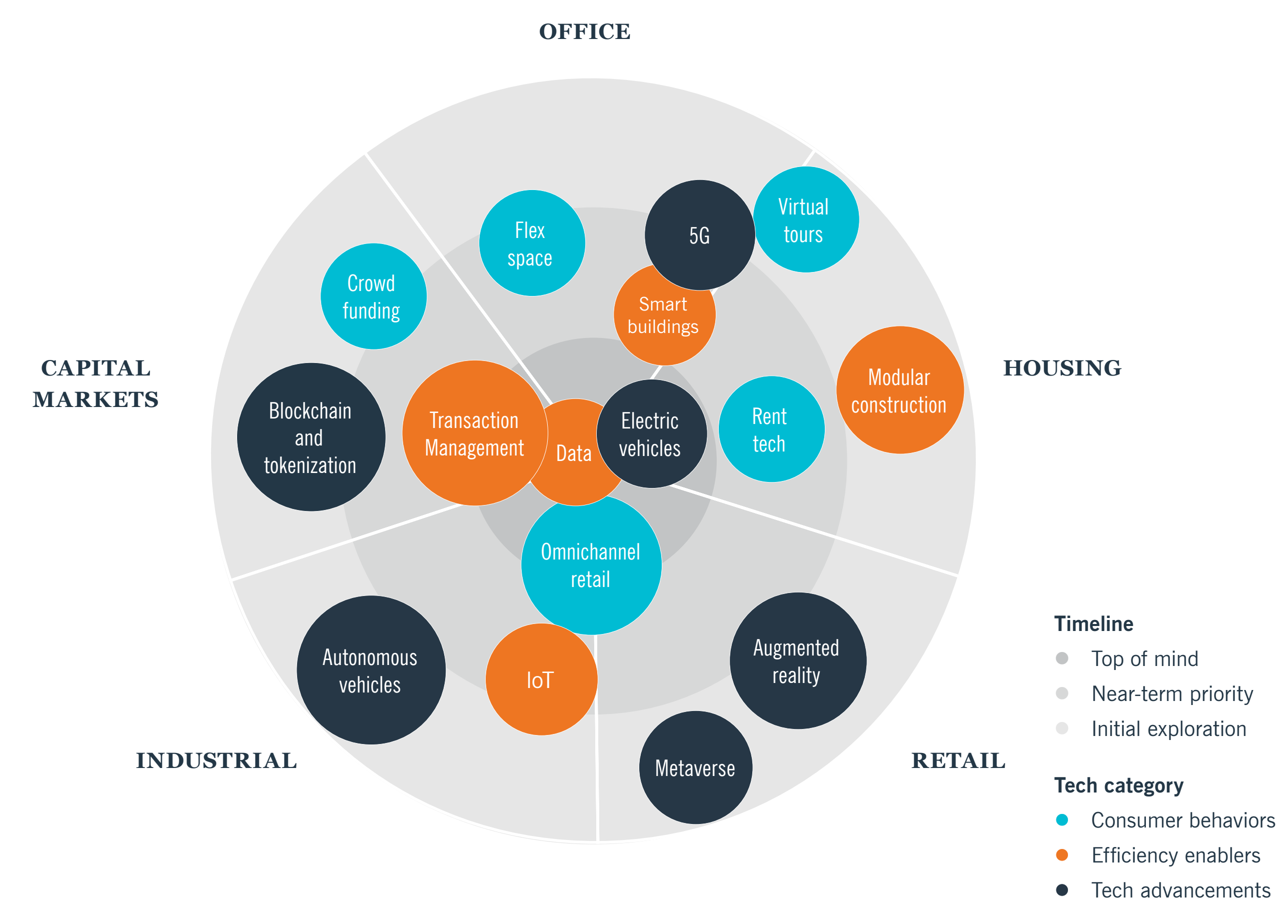
TECH ADVANCEMENTS

Real estate owners, tenants and investors are demanding more from their properties. New technologies in various stages of adoption may be years away from going mainstream, but real estate practitioners should understand their future significance for the built world.

Blockchain, the metaverse and autonomous vehicles will significantly impact the (not so distant) future of real estate.

THE CIRCLE OF PROPTECH DISRUPTION

Some proptech ideas are in the initial exploration phase, while others are top of mind.



Thriving industrial real estate

Our research team analyzed more than 4,000 cities and identified the top 2% we believe are most attractive to people and businesses, today and in the future. California's Inland Empire is one of those cities.

The area around Riverside, California, benefits from strong growth in its economy, population and retail sales. For real estate investors, perhaps the most attractive quality is the proximity to the two largest U.S. ports: Los Angeles and Long Beach. It also serves as a key e-commerce distribution hub in Southern California.

Vacancy

1.6%

The lowest rate among the top 50 largest U.S. industrial markets.[3]

Rental rate growth

19.9%

Second only to Miami among the largest industrial markets.[4]

Total return

79%

Consistently outpacing the national average.[5]

New development

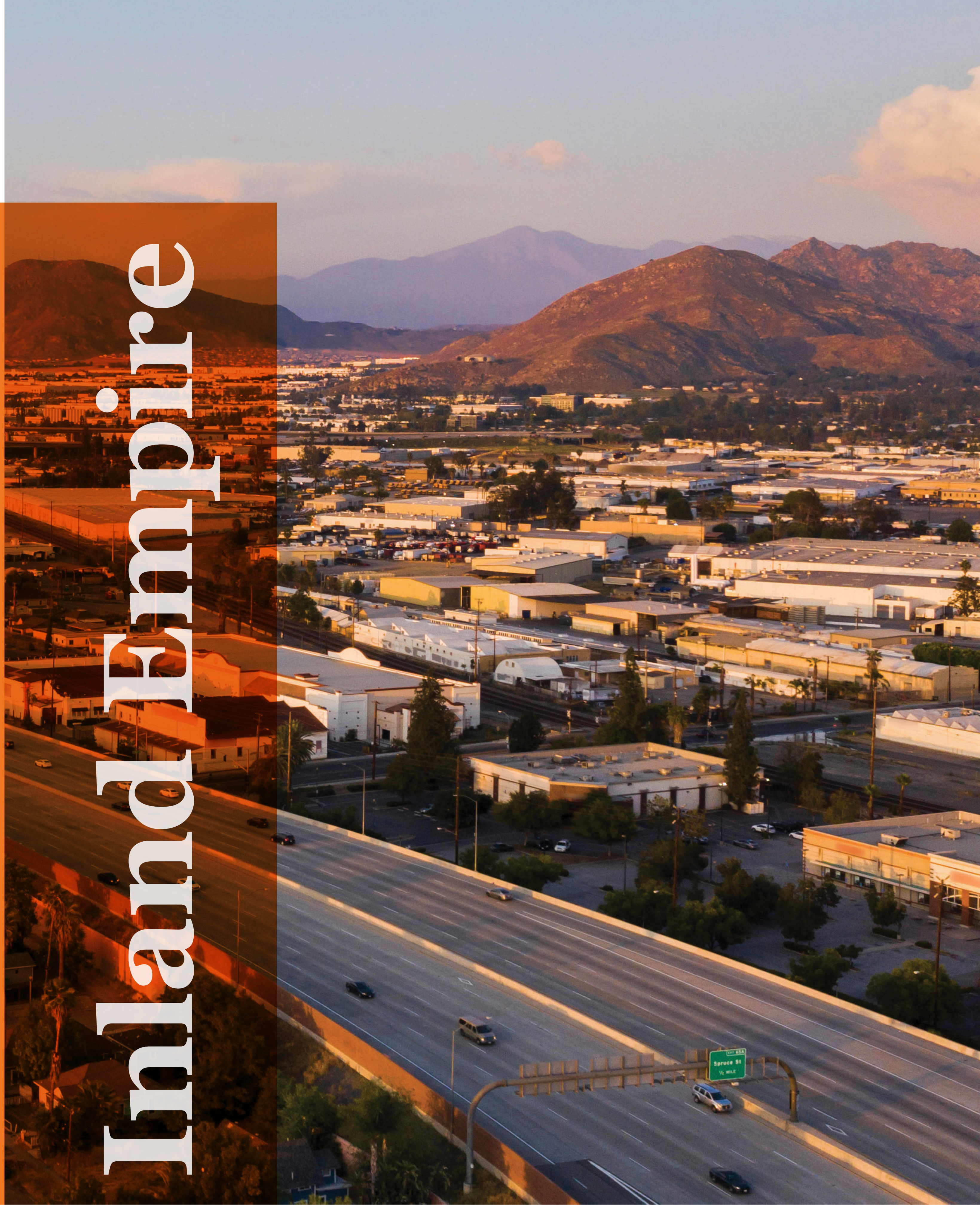
17.7 million square feet

Slower development supports higher rents for existing buildings.[6]

Leasing

25.6 million square feet

Fifth highest among all industrial markets.[7]



PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

For more information, please visit nuveen.com.

Endnotes

Sources

1 Data source: Radius+, July 2022.

2 Data source: CoStar, July 2022.

3 Data source: Costar, 30 Jun 2022.

4 Data source: Costar. Growth over the last 12 months.

5 Data source: National Council of Real Estate Investment Fiduciaries (NCREIF). Return over the last 12 months.

6 Data source: Costar. Development over the last 12 months, down from a 5-year average of 23.7k sq. ft.

7 Data source: Costar. Net absorption, which equals net of new leases and move outs, over the last 12 months.

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