

## Demographic Oriented Real Estate Investing and The Virtus Real Estate Capital Strategy

This paper is the fourth iteration of a series Virtus Real Estate Capital (“Virtus” or “VRE”) has published since 2006 outlining our investment strategy. In 2006, we penned the seminal paper that laid out the cycle-resilient investment strategy we’ve been executing over the last two decades. While our North Star of investing exclusively in cycle-resilient real estate has not changed, nor will it ever change, the execution of that strategy has evolved materially through the years. As such, we have updated this paper every 6 to 7 years. There’s nothing magical about these periods, but it does seem long enough to observe broader cycles and short enough to communicate the evolutionary steps of the Virtus strategy. To fully appreciate those steps, you can access the prior versions here:

- [2006](#)
- [2012](#)
- [2018](#)

While there is plenty of overlap with the property sectors we identified many years ago, today we talk about the Virtus targeted sectors as primarily, albeit not exclusively, focused on four general sectors with specific property types in each sector:

- Healthcare (including medical outpatient buildings, Current Good Manufacturing Practice (“cGMP”) facilities, specialty healthcare, and senior living)
- Education (including early education, primary education through charter schools, university infrastructure, and student housing)
- Storage (primarily self-storage)
- Middle-Income workforce housing (including multifamily targeting renters earning between 60% and 80% of Area Median Income and Build-to-Rent single-family properties)

There have certainly been plenty of names describing these sectors through the years. Whereas we originally termed them demographic-driven real estate in 2006, they have been referred to as “recession-resilient, cycle-resilient, needs-based, niche, social infrastructure, alternative, or defensive,” and the most recent one we heard from one of our colleagues at a large capital advisory firm, “GDP Neutral” property types. **Regardless of what you call them, or what marketing spin you put on it, we aim to invest in built space whose tenant demand is essentially evergreen.** That is to say, tenancy demand tends to be at least less correlated, and in some cases non-correlated with broader business cycles, when compared to traditional property sectors, aka- “Basic Food Group” sectors (office, retail, industrial, traditional multifamily, and often hospitality/lodging categories get included). As such, the Virtus targeted sectors

tend to be more insulated from economic cycles, capital market cycles, and Black Swan events than traditional property sectors.

As an investment manager, this strategy allows us to insulate our investors from macro uncontrollable risks, so we can focus our resources on things we actually can control or at least greatly influence, such as property selection, physical plant quality, management and marketing processes, and especially the people executing the business plans at each property. It's not all unicorns and rainbows in these sectors where an investor can just make a "beta punt" and have consistent outcomes, which we'll talk about throughout this paper. **But our view has been clear through the years, and it remains today, that with the right team, resources, and execution, a cycle-resilient strategy can deliver superior risk-adjusted returns compared to traditional real estate investment strategies.**

## 1. Executive Summary

Considering the length of this paper, we thought it would be accommodating to include a few bullets on our conclusions.

- Demographics have evolved through the years globally and throughout the U.S., which can meaningfully influence demand for different categories of built space.
- While there are many ways to analyze performance (property level, public REIT performance, private funds performance, etc.), all of which are included herein, current and historical data continues to support the notion that cycle-resilient property types, particularly the four primary sectors Virtus targets, live up to their billing and provide greater downside protection during periods of contraction and dislocation with the most prescient evidence coming from the last three major contractions:
  - Global Financial Crisis (2008 - 2010)
  - COVID-19 Pandemic (2020)
  - The Great Tightening (2022 – 2024)
- However, that greater downside protection does NOT necessarily have to mean one needs to sacrifice upside performance, which is seemingly contrary to investing 101.
- Although all the targeted sectors have expressed their resilience with more consistent tenancy demand, they still have their own cycles that need to be considered, such as new supply risk, entrance pricing, operational challenges, and the like (investment fundamentals can still wax and wane in these sectors despite their perennial tenant demand).
- Investor demand for these property types has increased precipitously since we first transitioned into the cycle-resilient segments in 2006, and while that has presented increased risks and opportunities, on balance, Virtus views it as a positive trend.
- Of the U.S. demographic trends originally identified, most but not all are still relevant, specifically Baby Boomers, Millennials/Echo Boomers, and Latinos; and others have emerged.

- The property type demands of these major, undeniable demographic trends have likewise evolved in some cases and simply matured with the aging of the specific demography in other cases.
- While Virtus has been overall successful at identifying and executing cycle-resilient opportunities through the years, we have been wrong plenty of times, some opportunities never materialized, and we have missed opportunities that ultimately materialized due to our strict adherence to remaining focused on cycle-resilient sectors.
- While there is a greater opportunity to invest at scale today compared to the past, it remains quite difficult to invest large sums of capital in any one of the targeted verticals, some more than others, if one is thoughtful about their execution.
- Multiple notable trends are arising from the COVID-19 pandemic and the “Great Tightening” of the Fed that have taken place in these property types in recent years:
  - After the longest bull market in recorded history for most any interest rate-sensitive asset class, including real estate, the markets abruptly turned negative (temporarily) early in the COVID-19 pandemic, and especially after the Great Tightening.
  - While new investors have been increasing their exposure to alternative sectors for years, there is greater motivation to rotate away from Basic Food Group sectors and toward the more cycle-resilient sectors post-COVID and the more recent downturn brought on by the Great Tightening.
  - Many alternative property types have adopted a more “institutionalized” approach as larger LPs enter the market and implement their standards.
  - Despite the resilience of these sectors, performance by investors, especially generalist investors, has been mixed.
- Employing a relative value strategy across cycle-resilient sectors has been valuable in mitigating risks and finding opportunities for outsized growth, because fundamentals can still wax and wane even in cycle-resilient sectors.
- To optimize risk/reward ratios throughout investment cycles in these categories, being hands-on with domain experts who understand the nuances and idiosyncrasies of each sector is indispensable.
- The remainder of this paper proceeds as follows. Section 2 reviews historical performance across cycles. Sections 3 and 4 examine global and U.S. demographic trends shaping long-term demand. Sections 5 through 8 connect those trends to property-level fundamentals across Virtus’s target sectors. We conclude with implications for portfolio construction and execution.

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## 2. Looking Back

The first task any good investment manager should do is periodically review their guiding strategy to confirm (or more importantly refute) the validity of said strategy, especially from confirmation bias. Generally, a full market cycle of five to six years can provide sound, but not completely directive, data to guide us through these reviews. Looking back over the last five or six years, investors around the world have experienced high highs and low lows, with euphoric pricing and credit availability in 2019 and again in 2021, yet extreme capital market dislocation and property performance disruption for SOME real estate sectors through the COVID-19 pandemic and the “Great Tightening” between March of 2022 and August 2023 (when the Fed increased Fed Funds rates by 500 bps), both of which still affect our markets today. Although the last white paper touched briefly on REIT performance throughout the Global Financial Crisis (“GFC”), we feel it is relevant to revisit the effects of the GFC on REIT and property-level performance, as well as following the two more recent crises.

### 2.1. REIT Performance

**REIT performance has historically been far more correlated to public stock performance than actual property level performance or private equity real estate performance, which is how the vast majority of the U.S. commercial real estate market is owned.** Admittedly, there has been a recent phenomenon where REITs and public equities’ performance has decoupled, with REITs being more correlated to the 10-Year Treasury given the extreme interest rate increases during the Great Tightening.



Figure 1 Source: Green Street

We view this as mostly a short-term phenomenon, and as interest rates come down (Fed Funds began declining in August of 2024 and the 10-year Treasury began declining in 2H23), the

correlation between REITs and the S&P 500, for example, will increase. What may hold this back is the fact that today, alternative property sectors now comprise nearly 50% of public REIT net asset value ("NAV"). **Because many of these alternative sectors, including several in which Virtus traffics, tend to have low or no correlation to broader capital markets, it is likely the NAREIT and S&P500 correlation will NOT return to its historic levels between 0.75 and 0.85.**



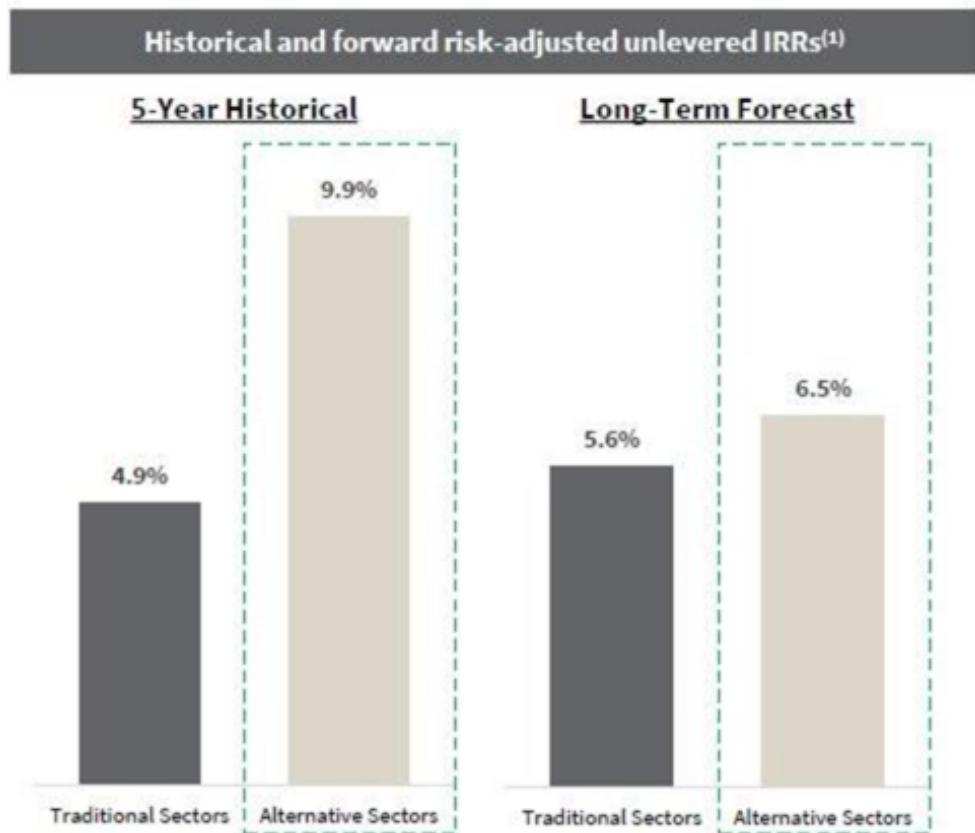
**Figure 2** Source: NCREIF, Green Street, SNL Financial

(1) Alternatives include senior living, self-storage, medical office, manufactured housing, and life science and data centers. Traditional services include retail, office, multifamily, lodging, and industrial.

This was always the rub with public REITs—they were the highest performing public market asset class for decades, but with the highest volatility, and they were highly correlated to the stock market (rather than broader real estate market performance), thus defeating some of the benefits of diversification. **But that was when REITs were primarily comprised of traditional Basic Food Group sectors, and now it's split between lower correlated alternative sectors (some alternative sectors are lower correlated, some are not correlated, and some are still highly correlated to broader capital markets) and traditional sectors, so correlations should generally be lower going forward.** This is good news for "main street investors" who can't access

high-quality private real estate funds and investments, because they can access greater diversification in their public markets portfolio with more REIT exposure.

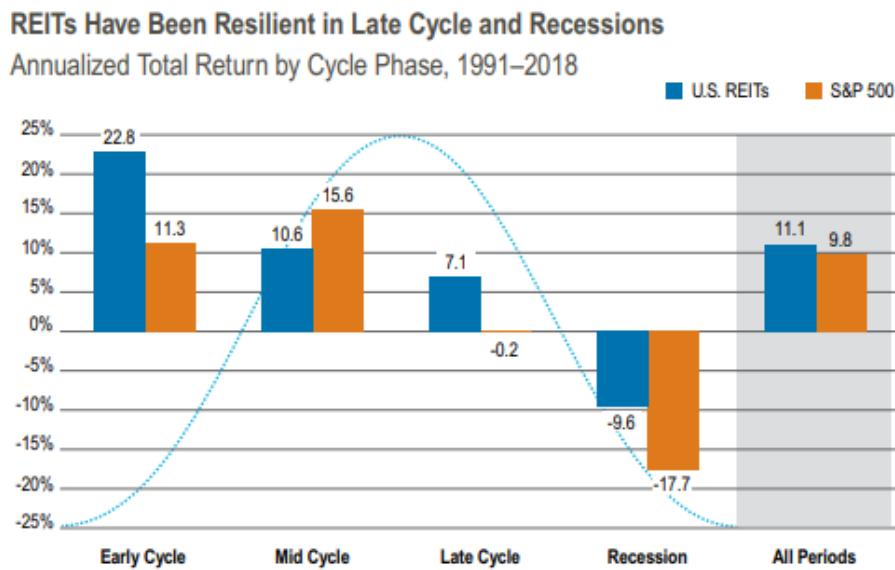
Further, not only have the alternative sectors generally had better performance than traditional sectors in terms of valuation movements up and down, but their **NOI growth has also been superior and is projected to sustain that edge going forward.**



**Figure 3** Source: NCREIF, Green Street, SNL Financial

(1) Alternatives include senior living, self-storage, medical office, manufactured housing, and life science and data centers. Traditional services include retail, office, multifamily, lodging, and industrial.

Since the last version of our white paper in 2018, both the pandemic and the sudden rise of interest rates have further unveiled what we believe to be cycle-resilient and demographic-driven real estate through examining the relative returns of different REITs. These more recent economic downturns are similar, but not quite comparable, to what investors noticed in the Great Financial Crisis ("GFC") of 2008. Looking back on performance during this period, REITs have proven to be resilient in late cycles and recessions, as U.S. REITs outperformed the S&P 500 in both late cycles and recessions between 1991-2018, which can be seen in Figure 4. To be sure, **public REITs have historically been the highest performing public market asset class, but with the greatest volatility in returns, and during what turned out to be a ~ 40-year "bond bull" with falling interest rates and only temporary periods of interest rate increases.**



**Figure 4** Source: *A REIT Defense for the Late Cycle*

Although the aggregate mean comparison between REIT performance and the stock market over these years may indicate a lucrative opportunity for investors, it is crucial to note that late cycles and recessions can cause divergent performance for either of the above metrics, as NAREIT exemplified positive REIT returns in only 77% of rising rate periods. Clearly, REITs are a safer bet for investors in rate-tightening cycles than the conventional stock market, but they do not show uniform positive returns in these cycles.

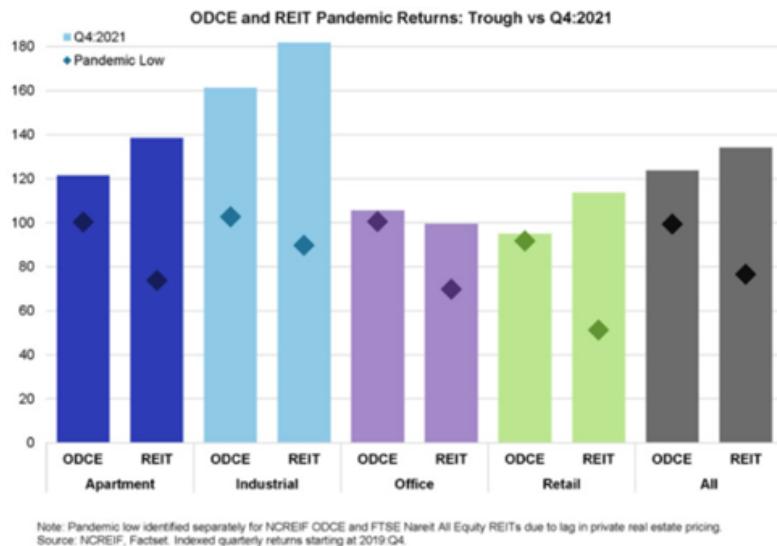
The comparison of REIT performance in the GFC and performance in the past five plus years (encapsulating both COVID and the Great Tightening) contains some parallels, but they are not exactly akin to each other. This is primarily due to current investors learning from past mistakes and utilizing lower leverage-to-equity ratios in their deals. As we can see from NAREIT's quarterly tracker, shareholders have increased their equity holdings to total assets by over 10% since the onset of the GFC, meaning a simultaneous decline in leverage to total assets occurred as well.

### Shareholders' Equity to Total Assets



**Figure 5** Source: *NAREIT T-Tracker Quarterly Operating Performance Series*

Due to investors' "smartening up" and decreasing their overall leverage following the GFC, the REIT market has positioned itself to be slightly more resilient than it was before and during the onset of the GFC. Although investors were better defended against rising interest rates because of this, no one could have expected the COVID-19 pandemic with its devastating effects on our overall economy. As seen below, ODCE and REIT returns rose relatively quickly following the pandemic low in the majority of the Basic Food Groups.



**Figure 6** Source: *NAREIT How REITs and Private Real Estate Performed Through the Pandemic*

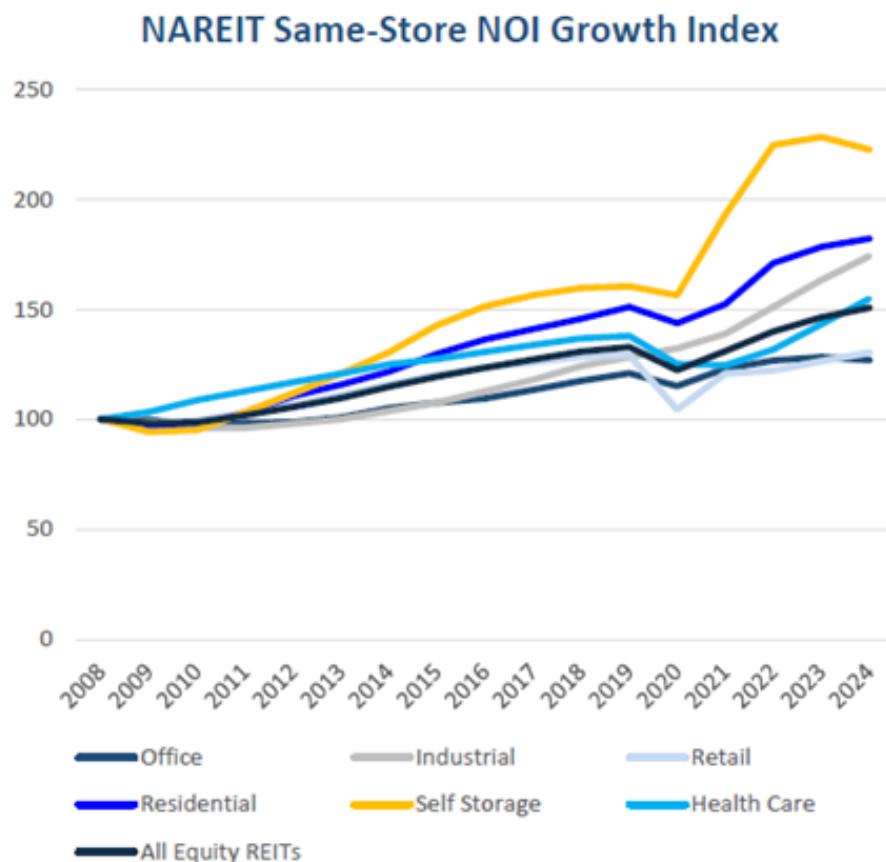
Note that the term used above was "relative," as these returns were not in lockstep with historical REIT and ODCE returns. However, this chart was provided to show the elevated resilience of both trackers due to shifting investor goals with their equity-to-debt ratios. **Additionally, we need to consider the fact that REIT returns are not necessarily indicative of actual real estate market conditions**, because they are influenced more by external factors such as investor sentiment, capital market momentum, and monetary policy.

What is particularly relevant to this paper is how different property types performed within REITs during periods of distress and dislocation. As you'll see in the section below.

## 2.2. Property Level Performance

When considering how real estate is performing, one typically looks to property-level metrics such as valuation, economic occupancy, vacancy rates, concessions, delinquency rates, and other loss-to-lease factors. Lender default rates and recovery rates per property type can additionally be illustrative factors for performance. **Regardless of which variable(s) you consider, we generally think of real estate performance in two terms: property-level performance and market performance as measured by valuation changes.** From the perspective of property-level performance, the most relevant variable to measure over market cycles is net operating income ("NOI"). In considering just property-level revenue, the leading indicator over time is effective gross income per rentable square foot, but that is a measure that is surprisingly not widely communicated. Instead, economic occupancy can be telling, even though it can be manipulated by adjusting asking rents. Economic occupancy is simply the percentage of money

a property owner collects divided by the amount of money they would collect if the property were 100% leased at “street rental rates” (with no concessions, delinquencies, or loss-to-lease included in the property). We maintain that this is a much more indicative metric for performance than physical occupancy, which can be manipulated significantly more than economic occupancy, because different owners calculate physical occupancy differently and by property type (some include occupied space by non-paying tenants, those who are in default, or those who aren’t yet paying rent as part of their agreed-upon lease).

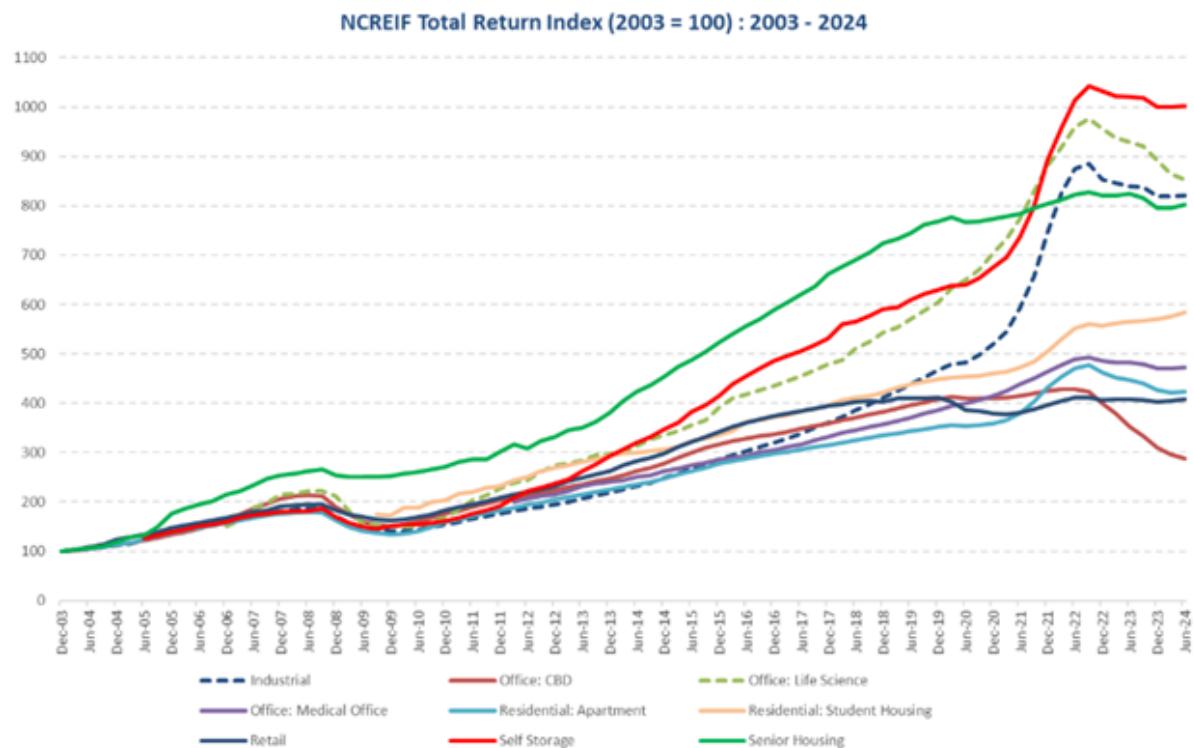


**Figure 7** Source: NAREIT

As an owner, we only really care about how much we collect, i.e., how much rental income and fees are collected compared to the total potential performance of said property. At the end of the day, Net Operating Income (“NOI”) is ultimately the primary measurement of performance for income-producing real estate at the property level, because it includes actual collected revenue minus property operating expenses, holding any borrowing costs neutral. The NAREIT Same-Store NOI Growth Index shows that sectors aligned with the Virtus strategy, such as self-storage, residential, and healthcare, have outperformed traditional sectors like office and retail over the past 15 years. **This demonstrates that cycle-resilient, needs-based property types have delivered stronger and more consistent income growth through multiple economic cycles.**

This chart of the NCREIF Total Return Index (2003–2024) highlights the consistent outperformance of property sectors that align with Virtus’s resilient investment thesis. During major periods of market stress, such as the Global Financial Crisis, the COVID-19 downturn, and the

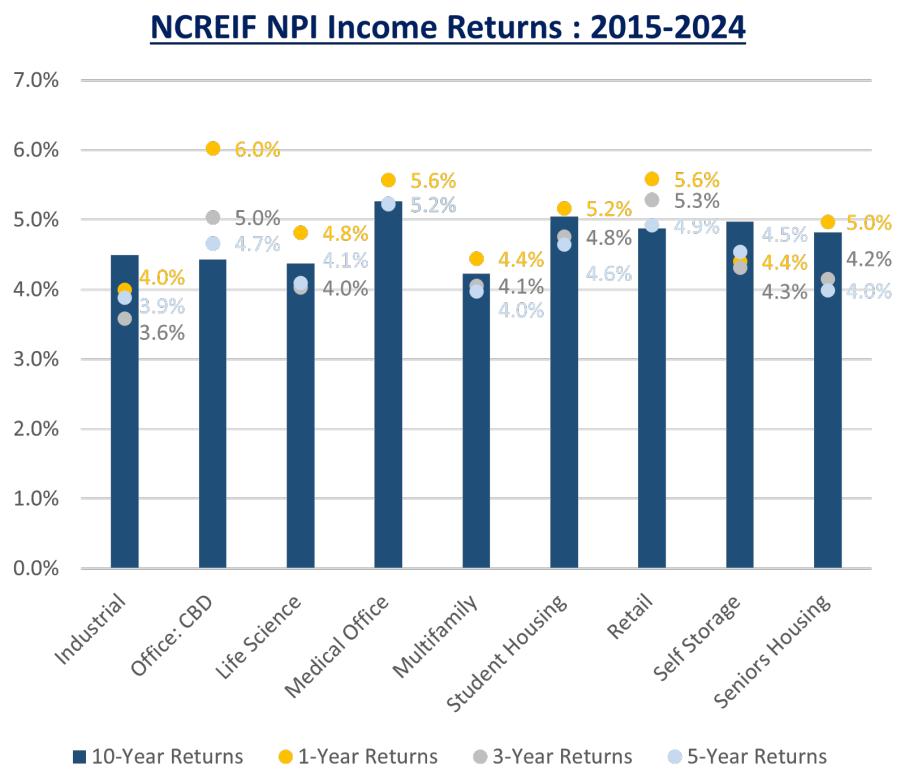
subsequent era of monetary tightening, sectors like medical outpatient buildings, senior living, and self-storage demonstrated stronger relative performance compared to traditional property types like retail, office (CBD), and even industrial.



**Figure 8** Source: NCREIF

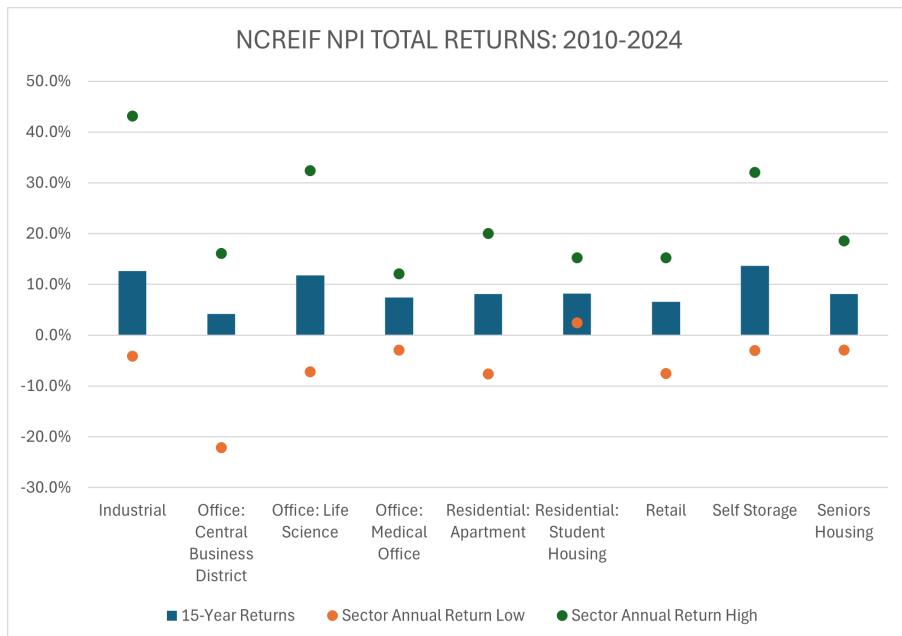
**While many conventional sectors saw sharp drawdowns and slower recoveries, these resilient property types not only weathered the volatility with less downside but also delivered superior long-term compounding growth.** This underscores the defensiveness and durability of sectors tied to essential services and stable demand drivers, reinforcing Virtus's focus on investing in property types that remain robust across cycles.

Income stability has been a defining feature of these categories. The National Property Index (NPI) measures the performance of stabilized commercial real estate assets. Its data is sourced from stabilized properties held in core PERE funds, making it representative of institutional quality, low-risk assets held for long-term income and appreciation. From 2015 through 2024, the NCREIF NPI Income performance remained consistently strong, generally between 4 - 6%, even as the cost of capital, inflation, and policy conditions changed dramatically. Sectors aligned with essential use needs—MOBs, senior living, and self-storage maintained income returns above 5 % across the period, reflecting their ability to sustain rent collections and occupancy through a range of economic climates. By contrast, office and retail properties, which are more dependent on discretionary business and consumer activity, exhibited sharper income declines and slower recoveries.



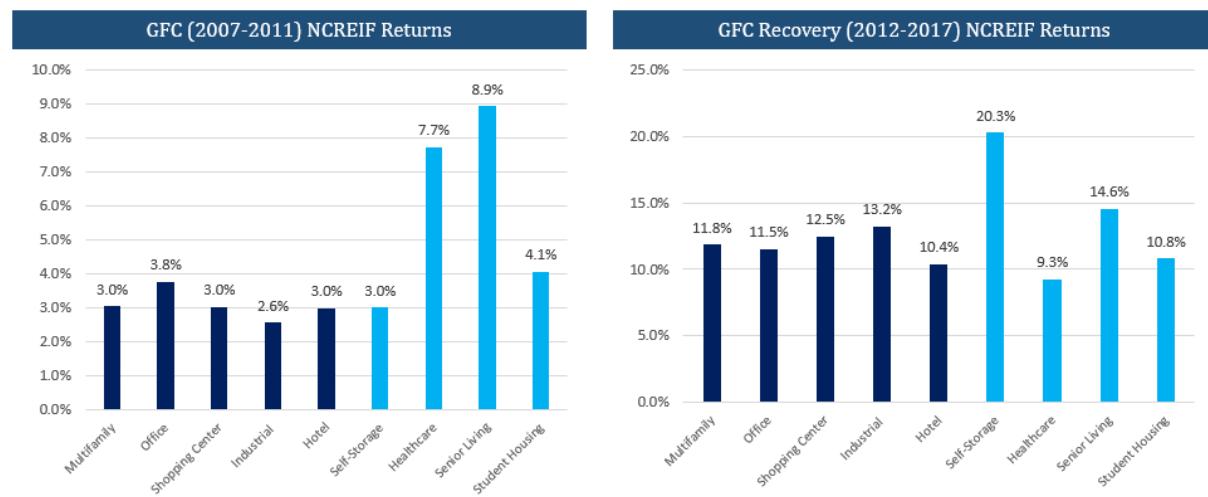
**Figure 9** Source: NCREIF- Expanded NPI Returns

Figure 10 shows long-term total returns for each sector in the NCREIF Property Index from 2010 through 2024. While traditional sectors such as office and retail experienced wide swings between their best and worst annual performance, the more needs-based sectors recorded higher average returns with less volatility.



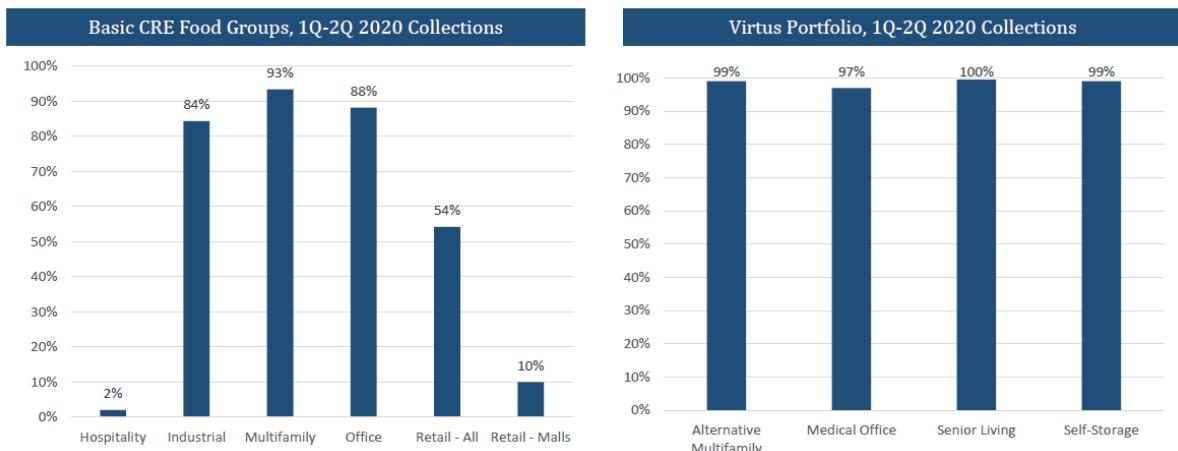
**Figure 10** Source: NCREIF- Expanded NPI Returns

Looking back at the GFC, while traditional property types suffered steep losses in both net operating income and valuation, needs-based assets delivered total returns roughly 2 - 3 times higher. Their performance reflected the fact that demand for these sectors does not contract in line with GDP. During the recovery from 2012 through 2017, these same sectors continued to lead the market, compounding their early advantage as investors sought stable income streams with lower volatility. Similar patterns reappeared in the aftermath of the COVID downturn. Even as traditional sectors experienced sharp disruptions in rent collections and valuation, Virtus-aligned categories recovered quickly, often returning to pre-pandemic occupancy and revenue levels within a year.



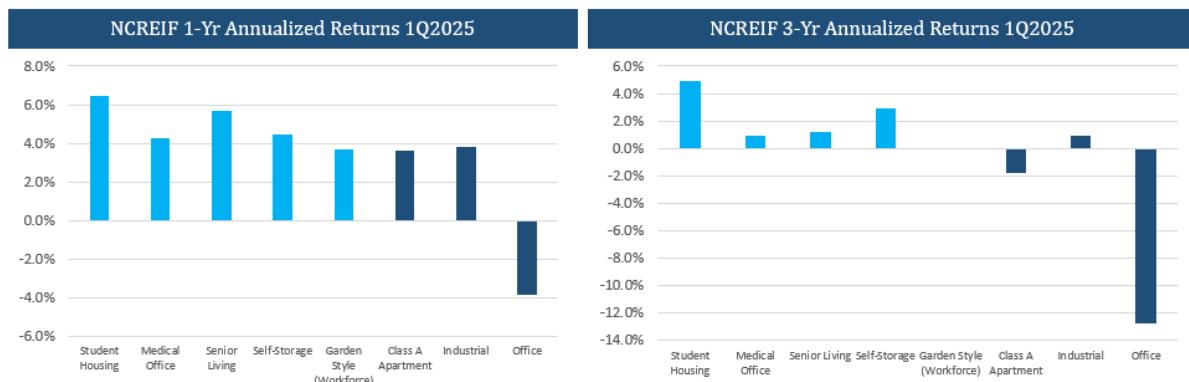
**Figure 11** Source: NAREIT T-Tracker

Another metric for cycle resiliency is collection rates even during economic downturns, and on this measure, our portfolio demonstrated remarkable strength throughout the COVID pandemic. While many traditional property types struggled, with mall collections averaging just 10% and overall retail collections around 54%, our needs-based and alternative assets maintained exceptionally high performance. **Across the Virtus portfolio, collections for medical office, senior living, and self-storage ranged from 97 to 100%, and our middle-income workforce housing and student housing books achieved a 99% collection rate during a global pandemic.** These results underscore the stability and defensive nature of essential use real estate, where demand remains consistent regardless of broader market stress.



**Figure 12** Source: National Association of Real Estate Investment Management (NAREIM) Member Survey Report, April 2020

The same story has repeated through the most recent tightening cycle. While higher interest rates in 2023 and 2024 caused widespread repricing across the real estate landscape, sectors grounded in durable tenant demand again showed greater stability. Our sectors continued to generate positive total returns and maintain their unlevered income yields. In contrast, traditional sectors remained deeply negative, reflecting weaker fundamentals and structural shifts in demand. Three-year rolling NPI returns confirm this divergence, with cycle resilient property types sustaining positive growth even as most cyclical sectors fell below zero.



**Figure 13** Source: NCREIF- Expanded NPI Returns

Virtus's own portfolio experience mirrors this pattern. Since 2018, the Virtus Core Plus portfolio has consistently outperformed the ODCE index, both in annual results and on a cumulative basis. Even during the dislocation of 2023 and 2024, when valuations across much of the market contracted, our Core Plus portfolio maintained positive cumulative growth. Taken together, our sectors have proven less sensitive to the business cycle, less volatile during liquidity shocks, and more reliable in preserving and compounding income.

## Time-Weighted Return Comparison: Virtus Core-Plus Portfolio vs. ODCE

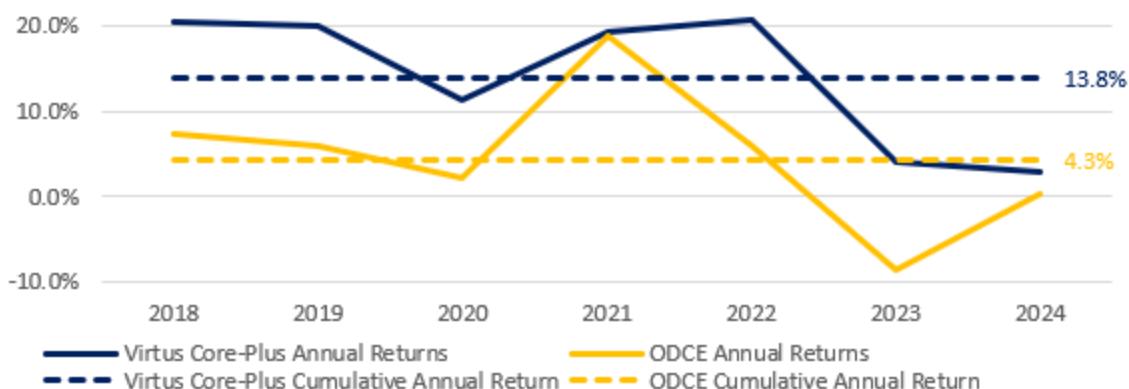


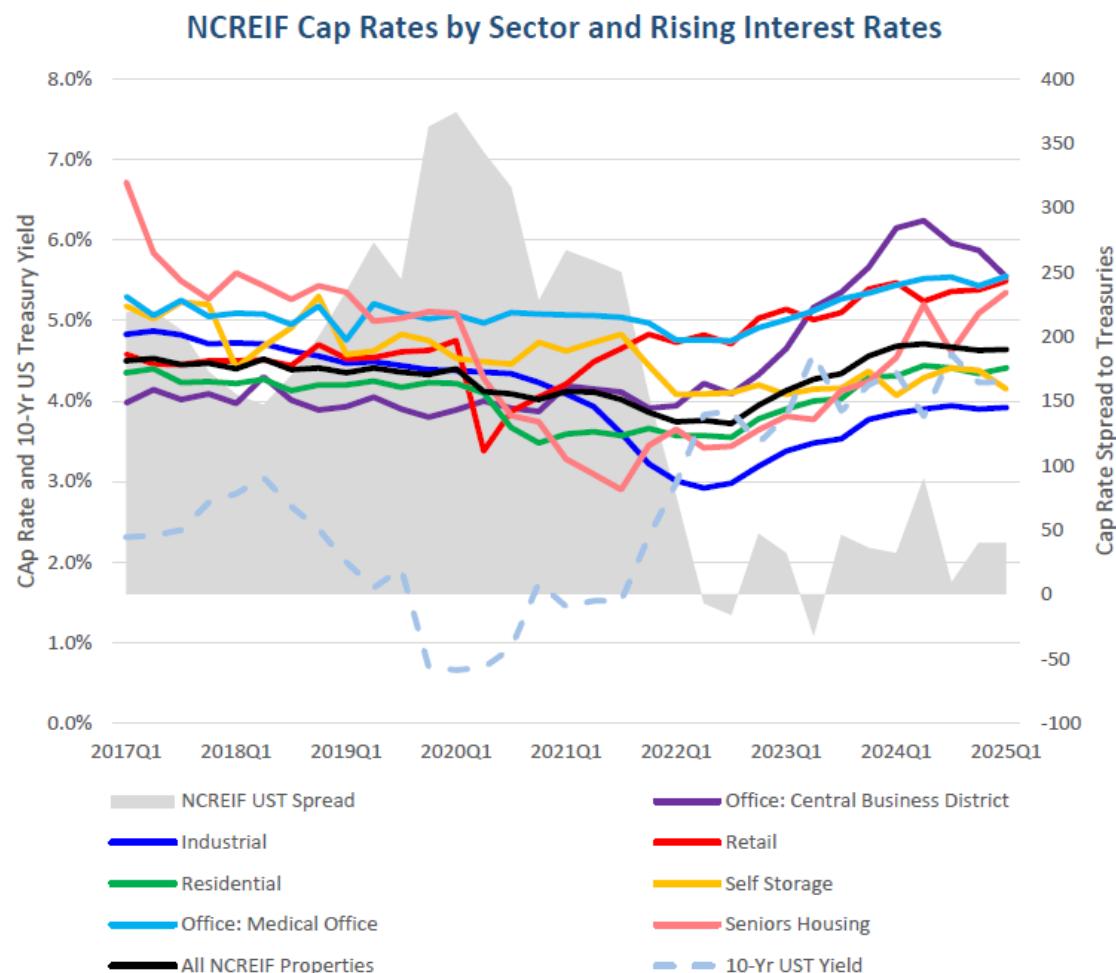
Figure 14 Source: Virtus

Turning to valuation metrics for a measurement of overall real estate market health, the best measurement is typically the consideration of capitalization ("cap") rate volatility during the period. While it is true that cap rates can be influenced by several external factors like inflation rates, borrowing costs, and overall capital flows, the market trends and cycles of cap rate volatility generally consider this, albeit on a lagging basis. **For sure, property investment is the most hyper-customized investment class, with literally every property being unique. So, property-specific conditions and factors can greatly influence a cap rate measurement for a specific property.** In our analysis, we hold those factors constant and attempt to illustrate only the movement in cap rates attributable to broader market conditions, mostly by comparing a hypothetical class-A stabilized core property's cap rate at different time periods as representative of that particular property sector's value changes, all other things being equal.

**Looking at our four targeted property sectors, from peak to trough, cap rates generally increased between ~ 75 bps and ~ 150 bps during the Great Recession. If we compare that to Basic Food Groups, the dispersion was generally between ~ 200 bps and ~ 400 bps.** This is particularly meaningful when you consider that many traditional property sectors and the more cyclical categories of alternative sectors often experience the double-whammy of simultaneous declines in NOI with expanding cap rates during economic downturns.

**This is one of the biggest reasons focusing on cycle-resilient sectors can at least insulate a property owner from property-level revenue declines during economic downturns, thus leading to less total erosion in value when there is a simultaneous expansion in cap rates resulting from capital market and liquidity declines.** Economic and capital market conditions are often interrelated during good and bad times, although not necessarily perfectly aligned in timing. Our CIO often reminds our investment teams that "capital chases fundamentals." If property-level fundamentals are declining, there is often a corresponding yet typically lagging decline in investor demand for that property type. The reverse is also true when economic conditions are constructive. **In sum, property-level performance ultimately correlates to changes in cap rates, even though there's not necessarily a perfect one-for-one correlation between declining NOI and expanding cap rates during challenging periods.**

I think this is one reason why cycle-resilient sectors' cap rates have historically been fairly immune to periods of rising interest rates in the U.S. As you'll see in the following charts, before the Great Tightening, there's not much correlation between cap rates and interest rates for cycle-resilient sectors, even though interest rates very much influence cap rates in more cyclical property sectors. I'm not suggesting there hasn't been any correlation between interest rate movements and cap rates in cycle-resilient sectors, but what has been, has mostly been counteracted by stable property-level revenue as well as an overall growth in investor demand for these more resilient sectors through the years. But even the most stable and resilient property sector, such as MOBs, for example, weren't immune to the massive and speedy increases in interest rates resulting from the Great Tightening.

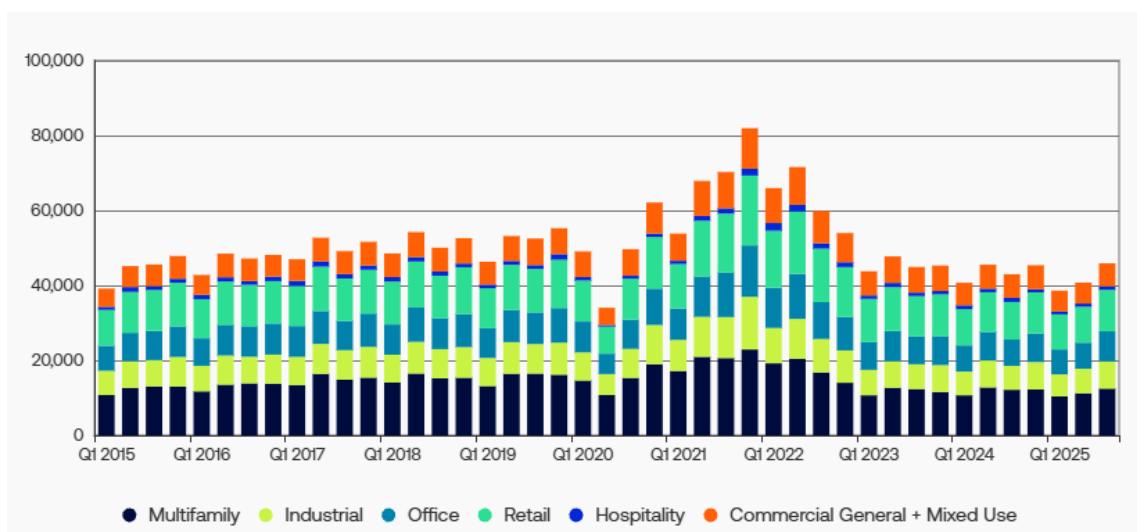


**Figure 15** Source: NCREIF Expanded NPI Returns for cap rates; FRED data for 10-Yr UST Yield

How might the above cap rate movements compare to cap rate swings more recently? The 4<sup>th</sup> quarter of 2021 or perhaps the first quarter of 2022 represented the peaks of most property sectors' valuations in the U.S., although the office sector likely peaked in 2019 before COVID and years before the explosion of e-commerce. While 2020 was pretty disastrous with temporary widespread capital markets distress, the market rapidly refluenced with unprecedented government stimulus and loose monetary policy, driving interest rates toward their lowest historical

levels. **Simultaneously, some sectors, such as industrial and multifamily, experienced historically high rental rate increases. It was the perfect storm leading to peak valuations in several sectors.** Admittedly, we as a firm struggled investing in that environment, as we have always been biased toward being a value investor, and our investment pacing was substantially lower than we expected. The few deals we did invest in were out-of-market deals with some type of angle or inside relationship that led to better bases and/or investment terms than were generally available in the broader market. **Market terms generally did not underwrite, even with nearly free credit available, due to euphorically high pricing in most, but not all, property sectors in 2021 and 2022.**

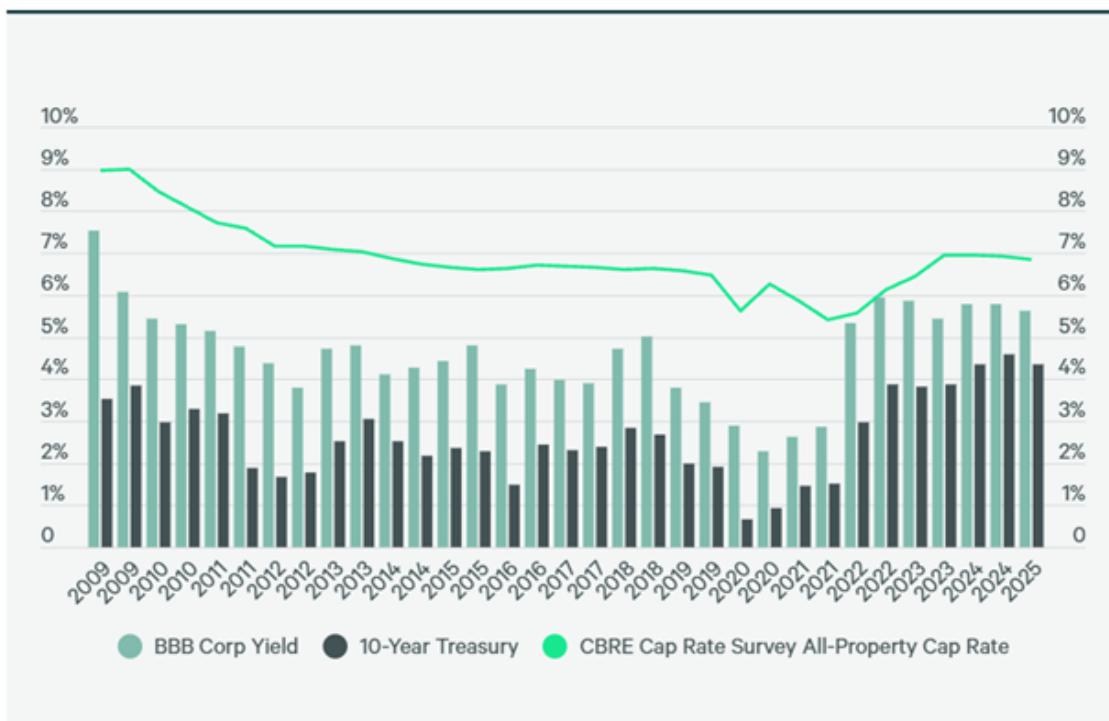
When the Fed began increasing Fed Funds, and SOFR (the base rate for most variable commercial real estate debt in the U.S.) followed suit, along with Treasury rates (the base rate for most fixed-rate commercial real estate debt in the U.S.), property values and transaction volume plummeted. As we've heard many say, it wasn't so much the amount of interest rate increases (~ 500 bps for Fed Funds), it was the speed and abruptness of that increase as the Fed was trying to rein in inflation to its 2% long-term PCE target. A 5.33% Fed Funds effective rate as of August 2024 is a mere 72 bps above its long-term historical average of 4.61% (today we sit at just above 4%). It has been 45+ years since we've experienced an increase of this speed and magnitude, with the closest comparison being between the late 1970s and early 1980s under Volcker's watch, when the U.S. was experiencing hyper-inflation and ultimately a Fed Funds rate increasing ~ 1,500 bps to 20%+.



**Figure 16** Total Number of Properties Transacted  
Source: [Altus Group](#)

What few properties traded hands were at much lower valuations and hence higher cap rates than what was seen in 2021 or even 2019, immediately before COVID. The graph below illustrates the correlation between interest rates and cap rates.

According to CBRE's cap rate survey, after cap rates blew out in 2008 and 2009 to their highest levels in recent years due to the GFC, interest rates fell and cap rates compressed for nearly 12 years in a row (a duration never before seen in the modern era) until the onset of COVID in March of 2020, when they increased abruptly but only briefly until unprecedented stimulus by



Source: CBRE Econometric Advisors, H1 2025.

**Figure 17** Source: [CBRE](#)

the U.S. government drove interest rates down again and cap rates with them through the end of 2021. As the Great Tightening took hold in 2022, cap rates began their expansion materially, and transaction volume fell more than in recorded history. It is this author's opinion that the above graph does not fully reflect the expansion of cap rates in the market, especially for certain sectors that are secularly impaired.

That is actually the bigger story here than even the wild swings in interest rates and cap rates over the last two decades, that the U.S. real estate market has become more sophisticated and hyper-segmented. **This has led to bifurcated performance across commercial real estate. From an attribution perspective, the most important factor to consider in commercial real estate investing, especially over the last several years, has been market selection and, especially, property sector selection. There have been clear winners and clear losers.** As we wrote in our 2025 Market Outlook ([link to paper](#)), our view is that property values in the U.S. bottomed in the 3<sup>rd</sup> or 4<sup>th</sup> quarter of 2023. It's just that transaction volume has remained low, and funds marks for MOST funds remain disconnected from property value reality even in today's market. It's certainly narrowed, but likely not fully reflective, factual values.

When turning to the cap rate comparison from valley to peak by property sector, you see a wide difference by property sector. The following comes from a compilation of data sources internally and externally and was reported at our Annual General Meeting in September of 2024:

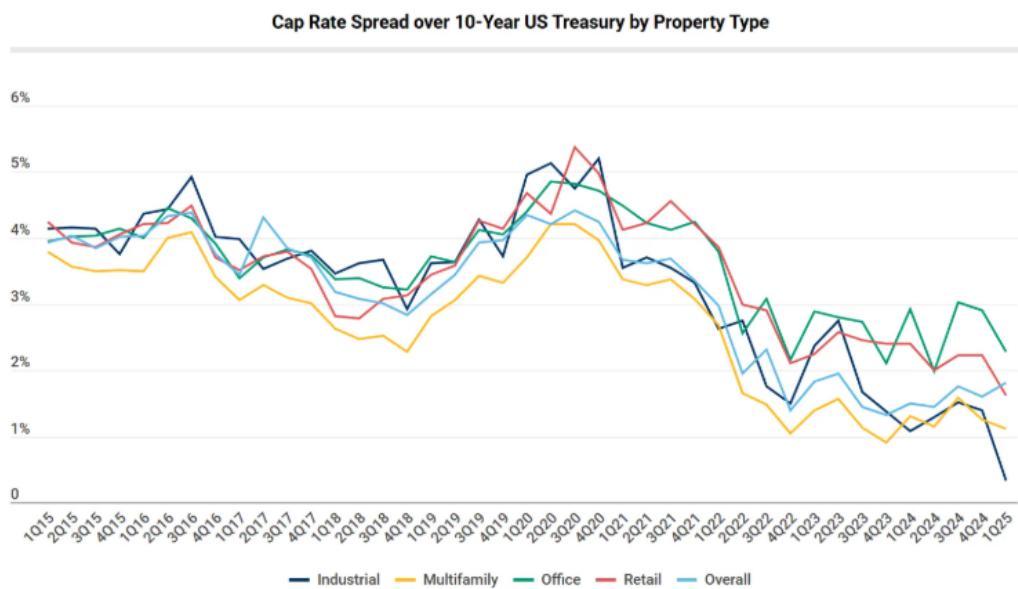
Cap Rates Before and After		
"Basic Food Group" Property Sectors Class-A Core Stabilized Cap Rate Comparison		
Property Type	4Q21	3Q24
Office	4.75 - 5.5%	10.0 - 12.0%+
Retail	6.5 - 7.0%	7.0 - 8.0%
Industrial	2.75 - 4.0%	5.5% - 6.0%
Multifamily	3.75 - 4.25%	5.25 - 6.0%

Needs-Based Property Sectors Class-A Core Stabilized Cap Rate Comparison		
Property Type	4Q21	3Q24
Medical Outpatient	4.0 - 4.5%	5.50 - 6.00%
Senior Living	N/A	6.75 - 7.75%
Life Sciences	4.75 - 5.25%	5.75 - 6.50%
Self-Storage	4.5 - 5.00%	5.50 - 6.0%
Early Education	5.25 - 5.75%	6.25 - 7.25%
Student Housing	4.0 - 4.75%	5.25 - 5.75%
Middle-Income Workforce Housing	3.75 - 4.25%	4.75 - 5.70%

**Figure 18** Source: Source: CoStar, Greenstreet, W&D, JLL, and Virtus direct observations and closed transactions

**It's no surprise that the cycle-resilient segments yet again demonstrated valuation stability compared to traditional sectors, like they did during the GFC, even though the economic backdrop was different.** During the GFC, it was a broad-based "Great Recession," causing downturns in property performance combined with valuation decreases. During the Great Tightening, other than a mild, short-lived technical recession in early 2022, the Fed navigated a soft landing with positive GDP throughout the period. But the Fed increased Fed Funds rates at a speed and quantum we haven't experienced since the 1976 – 1981 period to combat rampant inflation, thus increasing other interest rates, including the 10 Year Treasury, which has historically been correlated to traditional property sector cap rates:



Source: FRED, TreppCRE, Trepp Research

**Figure 19** Source: CRE Daily using FRED, TreppCRE and Trepp Research

For the cycle-resilient sectors Virtus targets, property-level performance is more stable, driving more stability of valuations, and unlike the GFC, there are many more investors trafficking in these sectors who recognize their defensive nature. During the GFC, perhaps 5 - 10% of transaction volume was in alternative sectors, inclusive of most of the Virtus targeted sectors except middle-income workforce housing, which often gets lumped in with multifamily, even though it tends to be more resilient than traditional multifamily. Today, it's closer to 15 - 20% and increasing. The graph below is only through 2024, but given the data our property teams are reporting, and what is being absorbed from 3rd party sources, the percentage of alternative transactions continued increasing throughout 2025, likely close to a ~ 20% mark.



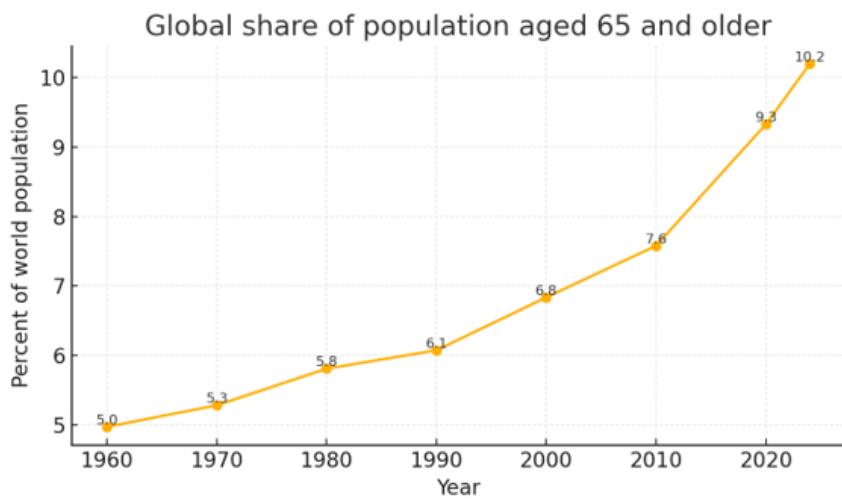
**Figure 20** Source: *JLL Research, Real Capital Analytics*

### 3. Global Demographic Trends

Across the world, demographic forces are reshaping the foundations of growth and policy. Age structures are tilting toward older cohorts as fertility continues to decline, while populations concentrate in cities and cross-border migration rises in absolute numbers. These trends interact to redefine labor supply, investment patterns, consumer demand, housing and infrastructure requirements, and the sustainability of social protection systems.

#### 3.1. The World Is Aging Fast

The global share of people aged 65 and older has more than doubled since 1960 and now accounts for more than one in ten people worldwide. It rose from 7.58% in 2010 to 10.20% in 2024, surpassing 9.33% in 2020 despite elevated mortality of 70+ year-olds during the pandemic. This reflects decades of falling fertility and rising life expectancy. The pace of aging differs widely: Europe and East Asia are already heavily skewed toward older cohorts, while much of Africa remains youthful.

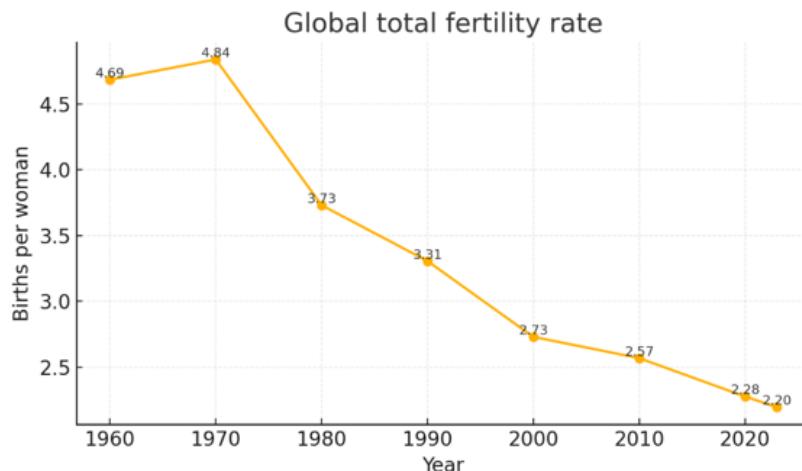


**Figure 21** Source: [World Bank](#)

Aging intensifies pressure on pension and health systems and shifts spending toward care, medical services, and housing suited for older adults. It also constrains growth in the working-age population, limiting potential output unless offset by later retirement, higher productivity, or targeted immigration.

### 3.2. Fertility Continues To Fall And Is Now Near The Replacement Rate Globally

Global fertility has been falling for six decades and now hovers just above two births per woman. Most of the world's population lives in countries below replacement fertility. The drivers include reduced rates of or later marriage, higher female education and labor force participation, rising housing and childcare costs, and changing preferences. The world average declined from 2.57 births per woman in 2010 to 2.20 in 2023. The pandemic briefly slowed the pace of decline but did not reverse it.

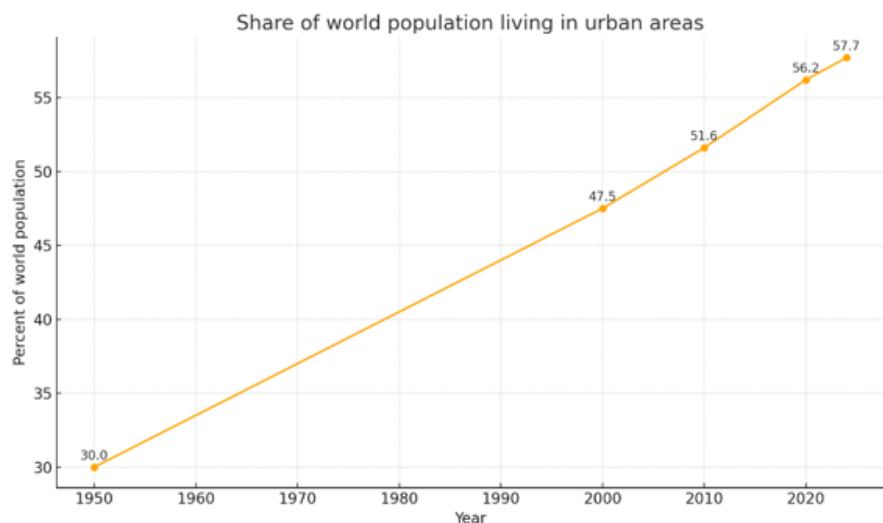


**Figure 22** Source: [World Bank](#)

Countries with very low fertility will need to rely on longer working lives, productivity gains, and immigration to sustain labor supply. They will also require greater investment in housing suited to smaller households and in products and services tailored to older populations, from healthcare to age-friendly housing. By contrast, countries where fertility remains higher will see stronger demand for schools, entry-level jobs, affordable family housing, and related infrastructure to support growing youth and young adult cohorts.

### 3.3. Urbanization Continues To Accelerate

The shift from rural to urban living is a defining feature of modern demography. The world crossed the halfway urban mark in the late 2000s. Urbanization has advanced most rapidly in Asia and Africa, driven by scale effects, wage differentials, and network advantages that continue to attract migrants. The share of people living in cities rose from 51.6% in 2010 to 56.2% in 2020, reaching 57.7% in 2024.



**Figure 23** Source: [World Bank](#)

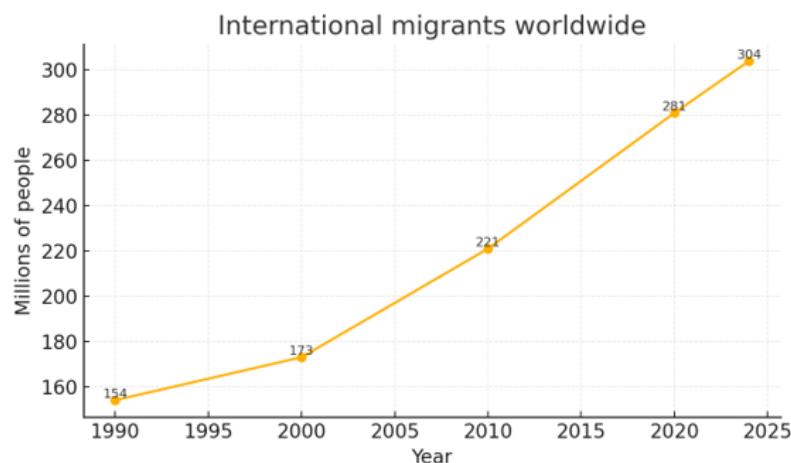
Net migration to cities remains a powerful force, especially where urban shares started lower, and youth populations are large. This creates intense demand for transport, utilities, affordable housing, and climate adaptation in urban centers. Economies that plan land use and infrastructure wisely can turn this demand into sustained opportunities for investment, stronger business activity, and long-term growth. For sure, COVID and the sustained shift to work-from-home spurred a wave away from dense urban cores, but not away from major urban metros overall. That is to say, suburban areas of major metros have been the net beneficiaries.

### 3.4. Cross-Border Migration Is Rising In Scale While Policies Tighten

Migration has increased for decades in level terms, even as the share of migrants in the world population has moved only gradually. By 2024, the stock of international migrants exceeded 300 million. Destination countries are increasingly experimenting with new frameworks—ranging

from points-based systems to student visa limits, asylum rule reforms, and stronger border enforcement. Legal migration to advanced economies reached record highs in 2023 before a wave of policy adjustments sought to redirect or slow certain flows.

Migration can help offset workforce decline in aging economies and support growth, but it also raises distributional pressures in labor markets, housing, and services. Policy volatility raises compliance costs and planning risks for sectors that rely heavily on migrant labor, including healthcare, construction, logistics, technology, and higher education. At the same time, rising inflows create opportunities for investment in housing, infrastructure, and integration services in receiving regions.



**Figure 24** Source: [United Nations International Migrant Stock 2024](#)

Migration remains a structural force shaping economies and markets. Its steady rise creates both friction and opportunity, and its interaction with aging populations and declining fertility will profoundly influence most developed economies. Politics, education, investments, and growth will all be affected by this, making it one of the most defining issues of the current time.

## 4. U.S. Demographic Trends

Global forces such as aging populations, urbanization, and migration are reshaping real estate markets everywhere. While the U.S. shares many of these dynamics, certain patterns stand out as either uniquely American or difficult to measure in terms of their long-term impact on built space demand. Some of these trends warrant closer attention.

### 4.1. Loneliness Epidemic

A growing share of Americans are spending more of their lives in isolation. Although divorce rates have declined, marriage rates are significantly lower than they were a decade ago, fertility remains well below replacement levels, and in 2023, the U.S. Surgeon General officially declared loneliness and social disconnection a public health crisis. This is a pandemic in its own right. In the past year alone, the nation has witnessed extreme events carried out by individuals deeply

affected by prolonged isolation and the erosion of in-person social ties. Time spent alone has been rising for years and surged dramatically during the pandemic.

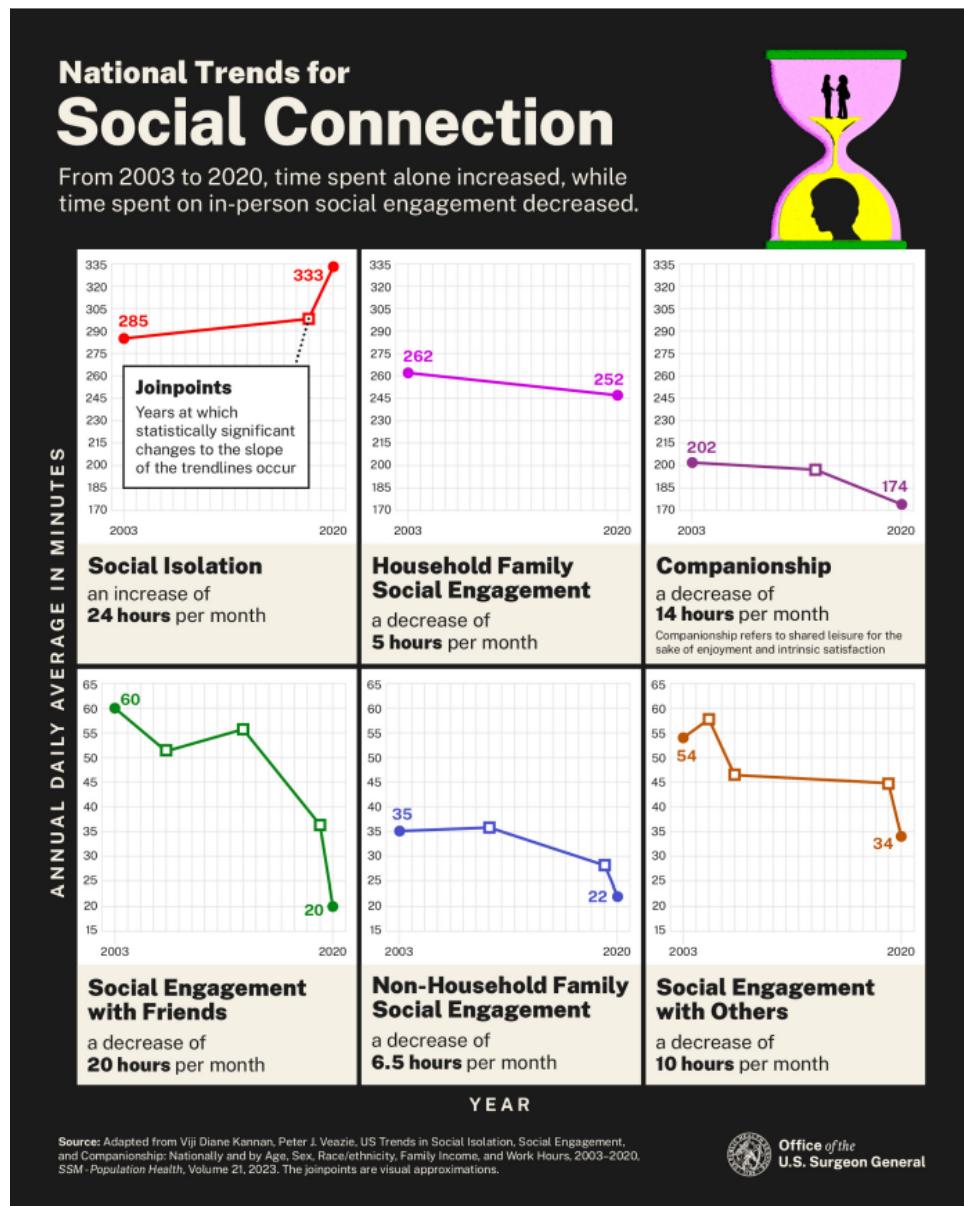
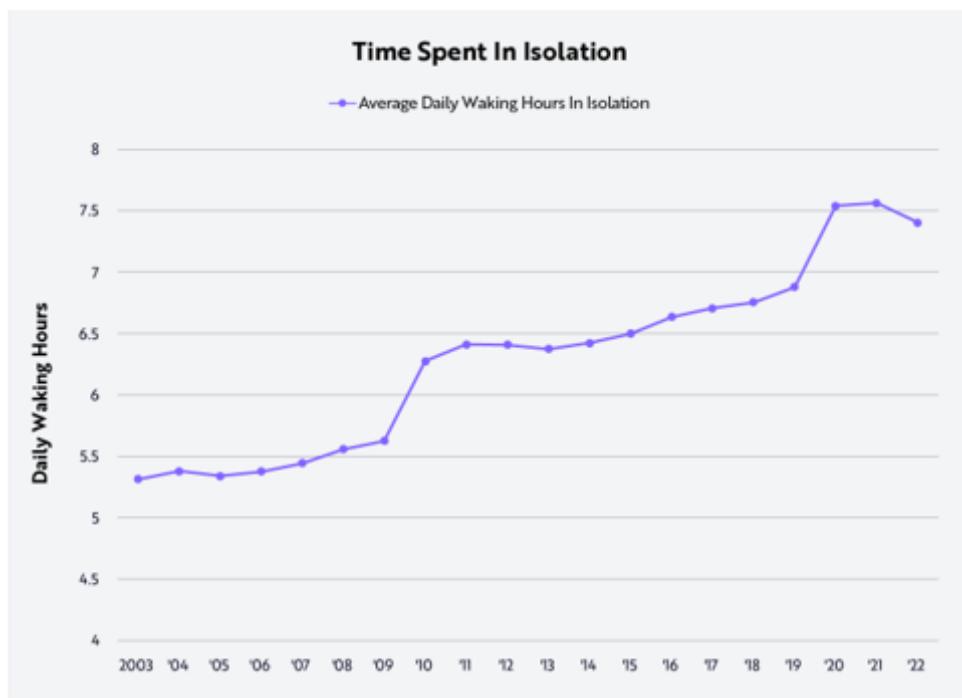


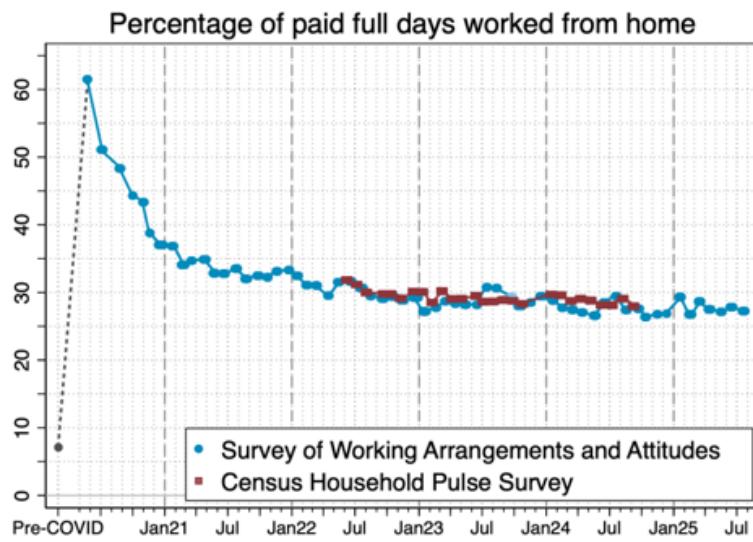
Figure 25 Source: *The U.S. Surgeon General's Advisory*

The U.S. Surgeon General's 2023 report shows just how profound this shift has become. From 2003 to 2020, time spent alone increased by 24 hours per month, while all forms of in-person social engagement declined sharply. Engagement with friends fell by 20 hours per month, family interaction within households dropped by 5 hours per month, and companionship, a measure of shared leisure and intrinsic satisfaction, fell by 14 hours per month. Together, these figures illustrate a society that is spending more time in solitude and less time in social connection across nearly every dimension of daily life.



**Figure 26** Source: ARK Invest with source data from American Time Use Survey

Remote and hybrid work accelerated this shift. WFH Research found that by mid-2023, about 28% of paid workdays were done from home, far above the pre-pandemic baseline of 5 - 7% and below the near-60% peak in 2020. Employers have pushed for a return to offices, but a new equilibrium has emerged in which fully in-person work is now confined only to select occupations.



**Figure 27** Source: WFH Research

Digital substitution adds another layer. The rise of AI and immersive online platforms provides new forms of productivity and entertainment, but also risks deepening what some observers call “AI psychosis,” which is the replacement of human contact with machine interaction. Together, these forces reinforce a trajectory of greater social isolation that reverberates across demography and the economy.

Additionally, Americans are taking longer to form households and are marrying less often than a decade ago. The national marriage rate remains near historic lows (CDC: 6.1 per 1,000 in 2023, 6.8 in 2010, 8.0 in 2000). At the same time, the median age at first marriage reached 30.2 for men and 28.6 for women in 2024, close to the highest on record.

## The age of first marriages has steadily increased since the late 1950s.

Median age of first marriage by sex, 1890–2024

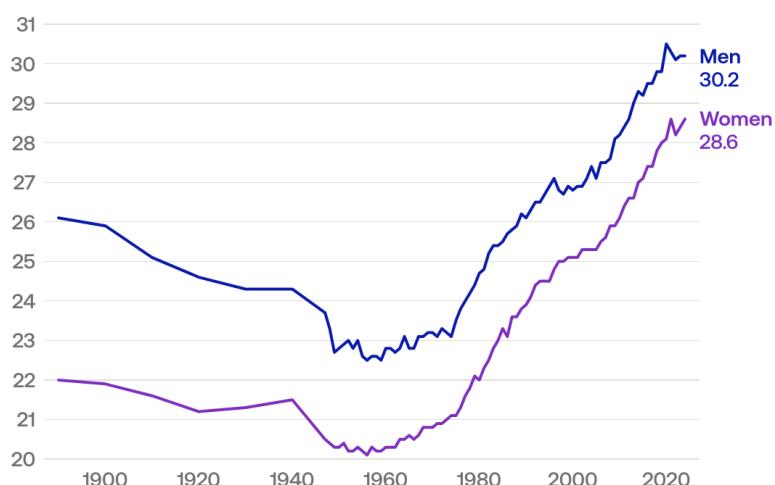
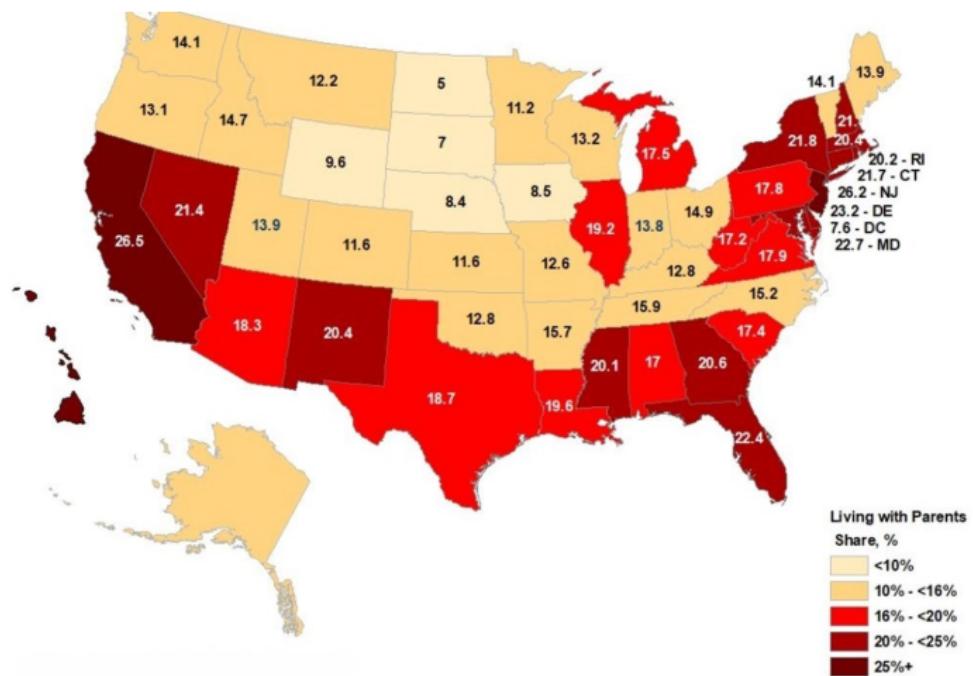


Figure 28 Source: USA Facts using U.S. Census Bureau Data

Household composition has shifted materially since 2000. Per U.S. Census Bureau reports from 2001 and 2024, family households fell from 69% to 64% by 2024, while nonfamily households rose from ~ 31% to 36%. Within families, married-couple households declined from 52% of all households in 2000 to about 47% in 2024. Over the same period, one-person households increased from 26% to 29%. Together, these shifts signal a long-run diversification away from the mid-century nuclear family norm toward more single-person, cohabiting, and multi-generational arrangements.

Delayed launching reinforces the trend. Adults ages 25 – 34 living with a parent rose from roughly 9% in 2000 (12% of men, 5% of women) to 16% in 2024. This rise varies widely by place, with some states at 25%+. The map below illustrates the geography of co-residence, which interacts with later partnering and longer periods outside marriage to reshape how and where new households form.

### Percent of Young Adults Ages 25-34 Living with Parents



**Figure 29** Source: [National Association of Home Builders](#)

Affordability dynamics are reinforcing these shifts in tenure. Through 2024, 30-year mortgage rates hovered around 7%, and the typical monthly payment on a median-priced home (~\$412,778) ran about \$2,703, versus an average national rent of \$1,979—a gap of roughly 37%. That spread is keeping many would-be first-time buyers out of ownership longer and channelling demand into rentals. The result is persistent support for multifamily absorption and a pronounced expansion in build-to-rent (“BTR”) supply, with a record ~ 39,000 single-family BTR completions in 2024.

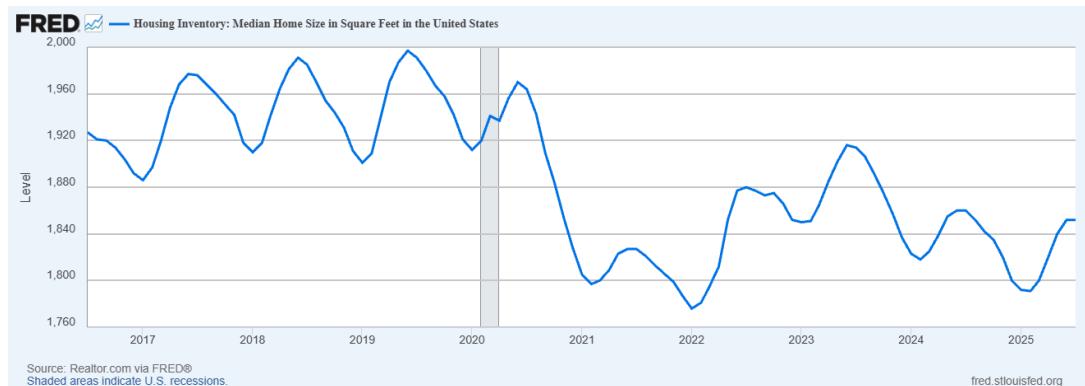
### Homebuying Costs Continue to Rise

	2021	2023	2024
Interest Rate (Percent)	2.96	6.81	6.72
Median Home Price (Dollars)	357,100	394,100	412,500
Downpayment & Closing Costs	23,210	25,620	26,810
Total Monthly Costs	2,050	3,150	3,270
Mortgage Payment	1,445	2,480	2,570
Other Costs	600	670	700
Required Annual Income	79,330	121,860	126,670

**Figure 30** Source: [Joint Center for Housing Studies of Harvard University](#)

A society in which individuals feel increasingly isolated and self-sufficient will have profound implications for built space demand. **Housing demand is likely to tilt toward smaller units**

that cater to single-person or non-traditional households (albeit with increased demand for a dedicated workspace given work-from-home forces), while at the same time driving renewed interest in community-oriented amenities that recreate 'third places' for connection outside the home and workplace.

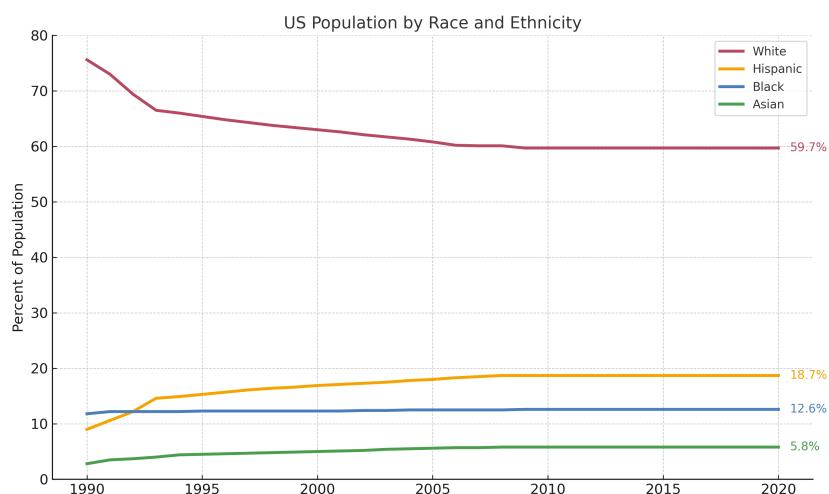


**Figure 31** Median Home Size  
Source: *FRED*

Retail centers, fitness clubs, and cultural venues may find renewed relevance as social anchors. **Employers and institutions**, recognizing the costs of disengagement, are also likely to devote greater resources to designing purposeful in-person interactions and **cultivating workplace community**, both as a means of countering isolation and as a strategy to enhance talent retention and productivity.

#### 4.2. The Country Is More Racially And Ethnically Diverse, And That Will Keep Rising

The U.S. is becoming markedly more diverse. Between 2010 and 2020, the non-Hispanic White share fell from 63.7% to 57.8%, while multiracial, Hispanic, Black, and Asian populations grew, especially among younger cohorts. In 2023, the immigrant population posted its largest increase in more than two decades, adding to workforce diversity and reshaping consumer demand. With school-age populations already majority non-White, these shifts will accelerate as younger generations age into the labor market and mainstream consumption.



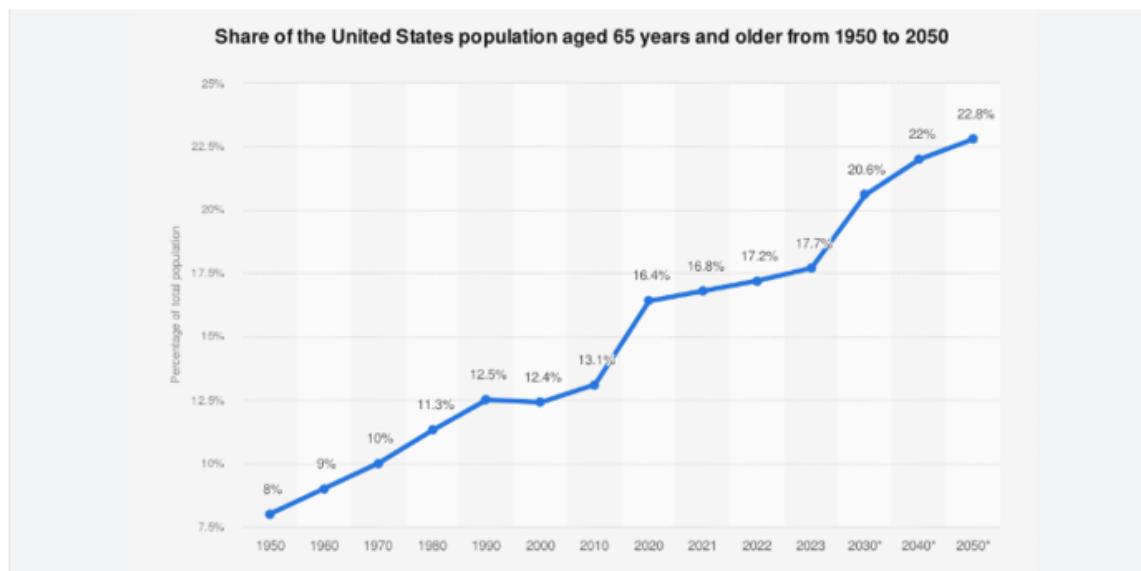
**Figure 32** Source: *National Center for Education Statistics*

Virtus anticipated these dynamics in earlier editions of this paper, noting that the rapid growth of the Latino population would carry distinct implications for built space demand. In student housing, Latino households often display different preferences around affordability, family proximity, and unit configuration. In self-storage, increased utilization patterns reflect multi-generational living arrangements and housing transitions, while in middle-income workforce housing, demand is shaped by larger household sizes and strong community networks. Recognizing these distinctions early allowed Virtus to better assess localized demand drivers rather than relying solely on headline demographic growth.

Looking ahead, this trend will only intensify as the U.S. becomes more diverse. For investors and developers, the future of built space demand will depend on a nuanced understanding of cultural preferences, community structures, and affordability constraints. The rapid growth of Hispanic and Asian populations, alongside rising Black and multiracial cohorts, is reshaping the demographic profile of America. **Diversity is not only altering who makes up the population, but also redefining the kinds of housing, amenities, and commercial spaces that will be most valued in the decades ahead.**

#### 4.3. The Population Is Older, With More People Past Traditional Retirement Ages

Like much of the world, the U.S. population is steadily growing older. By 2024, there were 61.2 million people age 65 and older compared with 73.1 million under 18. Overall growth is slowing as fertility remains low and the Baby Boomer generation continues to move into the 65+ range. Longevity is also improving for many groups, which further raises old-age dependency and shifts spending toward healthcare, care services, and adapted housing. This dynamic was highlighted in the earlier version of this paper, where Baby Boomers were identified as a distinct target group and are discussed in more detail later in this paper.

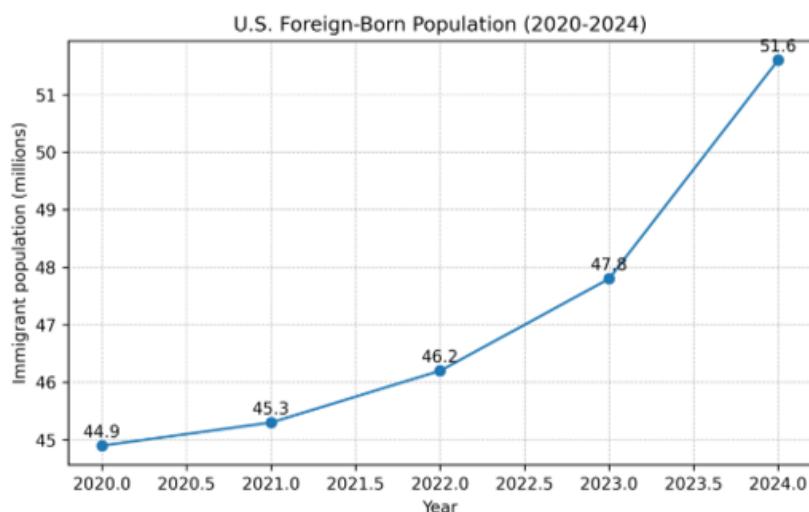


**Figure 33** Source: US Census Bureau; ChildStats.gov

**Aging will expand demand for home care, assisted living, digital monitoring, and technologies that support independent living, as well as broader investments in health and housing systems designed for older populations.**

#### 4.4. Immigration As A Demographic Driver

Immigration has become the primary source of U.S. population growth. In 2023, the country recorded its largest increase in the immigrant population in more than two decades, offsetting low fertility rates. While net inflows support labor supply and consumption, public sentiment has shifted, and polls in 2024 showed a majority of Americans favoring lower immigration levels. This creates uncertainty over future policy direction even as demand for workers in healthcare, logistics, construction, and technology continues to rise. For sure, the present executive administration has taken a markedly different approach to immigration policy than the last administration.



**Figure 34** Source: *Pew Research Center*

Immigration has a direct impact on the size and composition of the workforce, and it underpins housing demand in gateway regions. The Harvard Joint Center for Housing Studies reports that immigrants have especially been responsible for a large share of household growth in recent years, particularly in metros where native-born household formation has slowed. Immigrant households have strengthened rental demand and stabilized housing markets in areas that might otherwise have faced population stagnation. Similarly, recent analysis highlights that immigrants increasingly settle in suburban areas of large metros and in smaller, more affordable cities, spreading population and economic growth beyond traditional gateways such as New York, Los Angeles, and Miami (Brookings Institution, 2024).

A 2024 review by Home Stratosphere found that immigration has measurably shaped both housing demand and prices in recent years. As new arrivals compete for housing in tight urban markets, they contribute to rising rents and home values, particularly in fast-growing metro regions. Yet the broader effect of immigration extends beyond prices. Immigrants bring cultural

and linguistic diversity that influences consumer preferences, neighborhood identity, and the types of services and retail spaces that emerge to meet demand.

Annual net domestic migration, international migration, and natural increase, selected metro areas, 2020-21 to 2023-24



Source: William H. Frey analysis of Census Bureau vintage 2024 estimates, released March 13, 2025

Note: Official names of metropolitan areas are abbreviated.

B | Brookings Metro

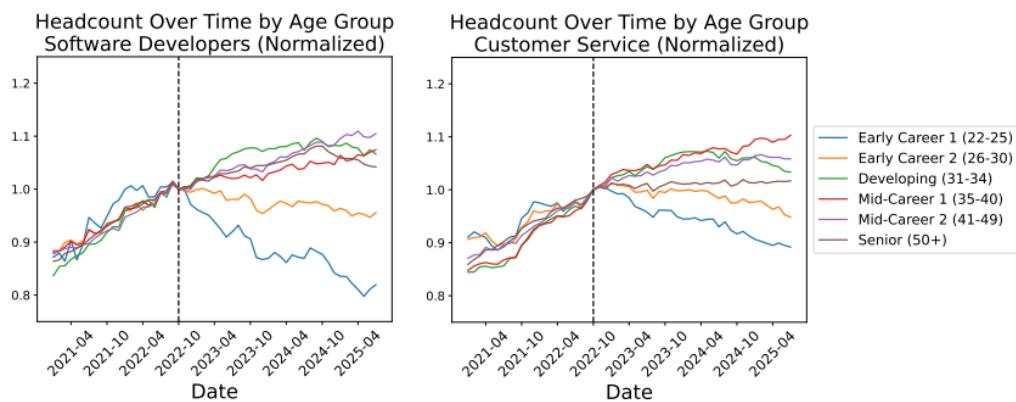
Figure 35 Source: Brookings Institution

Looking ahead, the trajectory of immigration will define the pace and pattern of built space demand in the U.S. Sustained inflows will help offset population aging and maintain demand for multifamily housing, local services, and industrial facilities tied to labor-intensive sectors, but also increase competition for housing in supply-constrained regions. A slowdown in immigration, by contrast, would weaken housing absorption, reduce the labor pool for construction and logistics, and slow demand for urban and suburban development. Ultimately, the trajectory of immigration will be a key determinant of both the scale and the type of housing, commercial, and industrial space required in the U.S. economy over the next decade.

#### 4.5. Job Creation And Destruction Due To Artificial Intelligence

Artificial Intelligence (AI) is already leaving a clear mark on the macro data. In the first half of 2025, investment tied to AI, particularly in data centers, information-processing equipment, and software, was a dominant engine of U.S. growth. Harvard professor Jason Furman recently noted that AI accounted for nearly all GDP growth during that period. Major financial institutions likewise attribute a measurable boost to 2025 GDP from the ongoing data-center super-cycle, while business coverage has underscored the sector's outsized power demands and emerging grid constraints.

**Artificial Intelligence (AI) is also reshaping the labor market in visible and uneven ways.** The near-term impact is most evident among younger workers in roles that are highly exposed to AI automation. Using payroll data covering about 25 million U.S. workers, [Brynjolfsson, Chandar, and Chen \(2025\)](#) show that employees aged 22 to 25 in the most AI-exposed jobs saw employment fall roughly 13% relative to older workers in those same occupations between late 2022 and mid-2025. Even after accounting for differences across firms and time, the decline for the youngest cohort remains large and statistically significant. The researchers also find that automation-oriented uses of AI are linked to early-career job losses, while augmentation-oriented uses are not, and that by mid-2025, about 46% of adults were using large language models at work.

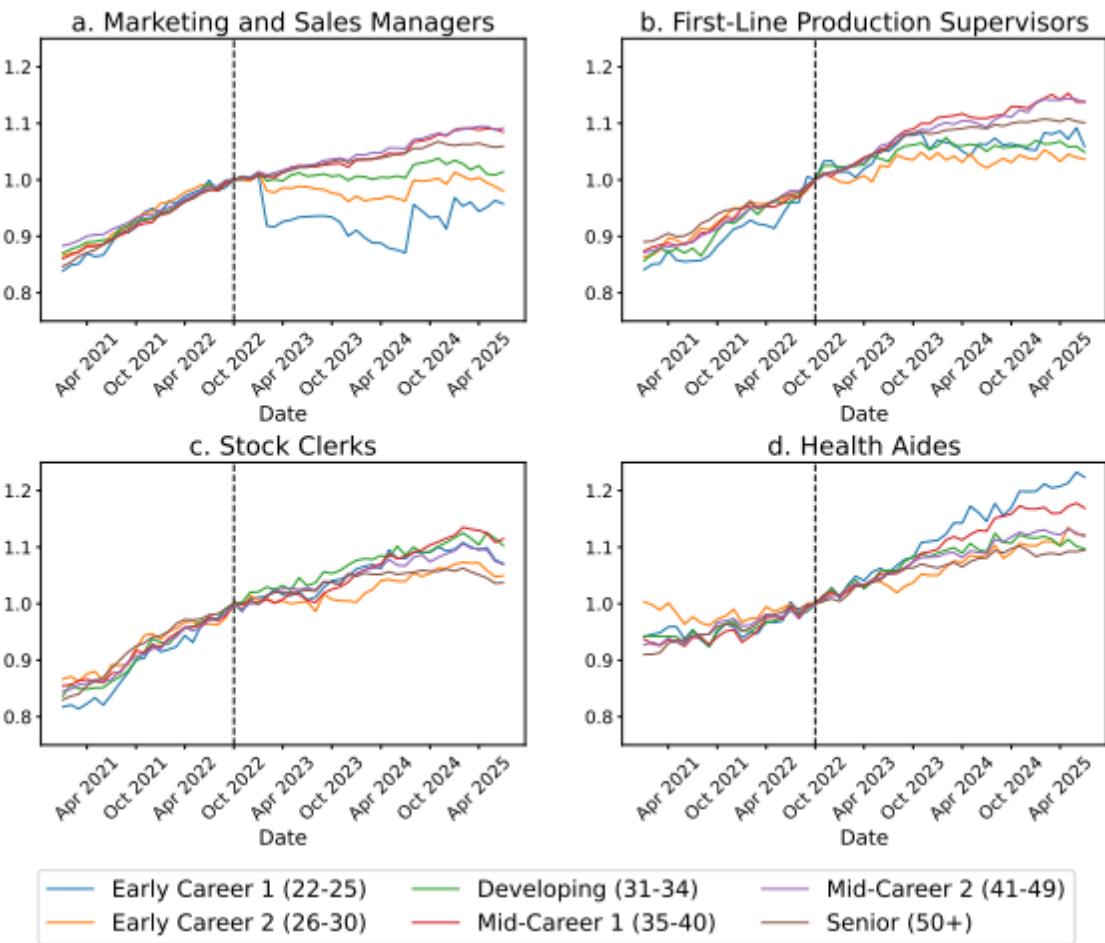


**Figure 36** Source: [Brynjolfsson, Chandar, and Chen \(2025\)](#)

The figures below illustrate how these shifts are playing out across job types and age groups. Software development and customer service, two fields with heavy AI exposure, show clear declines among early-career workers after 2022. Younger employees in these roles have seen the sharpest drops, reflecting automation's rapid reach into digital and routine tasks. In contrast, marketing managers, production supervisors, stock clerks, and health aides, occupations that depend on physical presence, people skills, or essential services, continue to show stable or rising employment across all age groups.

**This divergence reinforces a central pillar of the Virtus strategy.** While AI is reshaping the economy, eliminating some jobs, reinventing others, and creating entirely new categories of work, **essential workers remain indispensable**. The nurses, technicians, educators, logistics operators, and service professionals who sustain daily life cannot be replaced by algorithms or remote automation. These are the workers who form the backbone of local economies and typically fall within the 60 – 80% area median income (AMI) range that our middle-income workforce housing serves.

Over the medium term, more jobs are expected to be created than lost. The World Economic Forum's [Future of Jobs 2025 report](#) estimates that by 2030, about 170 million new roles could be added worldwide while around 92 million may disappear, resulting in a net gain of roughly 78 million jobs. The strongest growth is expected in customer service, marketing and sales, software, and R&D. But realization depends on retooling: the same report stresses large reskilling requirements and sequencing risks during the transition.



**Figure 37** Source: [Brynjolfsson, Chandar, and Chen \(2025\)](#)

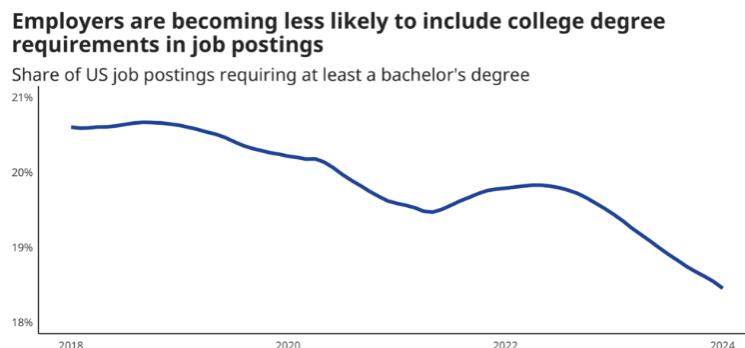
This transition to an AI-native economy will likely be one of the most disruptive labor shifts in modern history. Adjustment will be difficult, and growth will not reach all workers or regions at the same time. Some groups will benefit early while others face displacement. The social response may lean toward stronger public support systems or temporary redistributive measures, and may even take the form of renewed interest in socialist policies and leaders. The recent election of Zohran Mamdani in New York is an early example of that shift.

The impact AI will have on the labor market will likely be every bit as profound as the Industrial Revolution. The unemployment rate will likely increase materially in the short term, especially for entry-level white-collar positions and other roles more directly usurped by AI. This shift in the labor markets could lead to social upheaval, especially for younger workers. However, labor markets will respond, labor participants will retool, and AI, combined with a fully aligned and native AI labor force, have the ability to generate outsized GDP growth and overall economic prosperity for the broader labor force. The U.S. labor force will likely take a step backward in the short-term for the opportunity to take three steps forward in the intermediate and long-term.

As this transition unfolds, the implications for built space demand will be profound. In the near term, automation and remote productivity may further reduce demand for traditional office space, while rapid AI adoption drives unprecedented growth in data centers and power infrastructure. Over time, as new industries emerge and the workforce retools, spatial needs

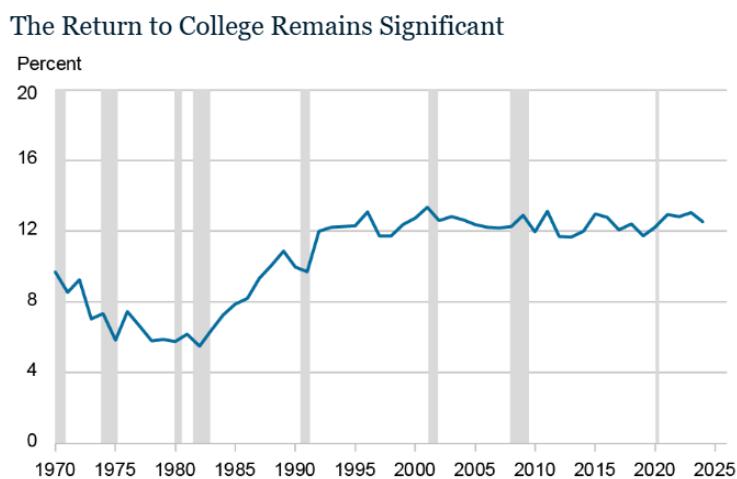
are likely to shift again. Manufacturing and logistics footprints may evolve to support AI-driven production and distribution, while residential demand could disperse more widely as work becomes less tied to specific locations. **The most resilient real estate will be that which adapts to this new geography of work, serving both the digital economy and the essential workers who continue to anchor communities in place.**

Additionally, this retooling should dispel fears about the value of a university degree. The New York Fed's 2025 update shows the college wage premium is still positive on average, but dispersion is wide, and underemployment among recent grads sits around four in ten, highlighting mismatches during this transition. Employers are becoming more flexible about credentials, with the share of job postings requiring a bachelor's degree now below 19 percent. Yet this shift does not diminish the relevance of higher education—it redefines it. Universities are adapting by embedding industry certificates, micro-credentials, and applied learning tracks such as Google Career Certificates into degree pathways, emphasizing practical skills and the ability to learn alongside AI tools.



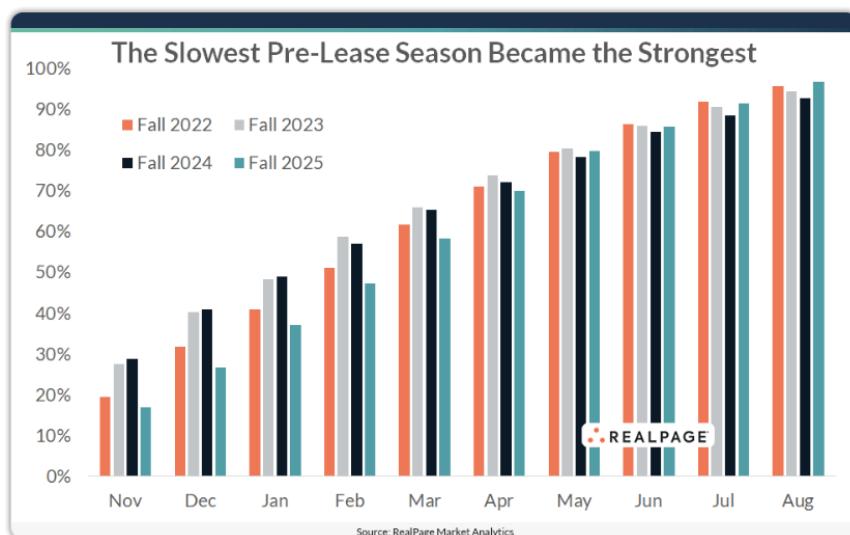
**Figure 38** Source: *Economic Research by Indeed*

Even as credential pathways evolve, universities remain the core infrastructure for talent formation. The return to college continues to deliver strong long-term earnings advantages, and enrollment levels have stabilized after pandemic declines. **With hybrid instruction, expanded online content, and stronger partnerships with employers, the modern university is transforming into a lifelong learning platform rather than a one-time credentialing stop.**



**Figure 39** Source: *Federal Reserve Bank of New York*

These dynamics support steady housing demand near campuses. Pre-leasing for Fall 2025 reached record levels above 90% nationally, even as rent growth normalized from prior peaks. The consistency of these figures underscores that student housing remains a durable, income-producing asset class. As universities anchor local economies and broaden their role in retooling and reskilling the workforce, purpose-built student housing will continue to play a central role in meeting both educational and community needs. Despite the Fall 2025 academic year starting with the slowest leasing velocity seen since before COVID, final occupancy rates ended up being the highest.



**Figure 40** Source: [Real Page Analytics Blog](#)

AI is no longer a thing of the future. It is here, and it is already reshaping the economy in real time. The speed and scale of this transformation are altering labor markets, capital flows, and productivity dynamics across every sector. Real estate, as the physical container of the real economy, cannot remain insulated from these changes. As certain industries cool and others overheat, space demand will shift accordingly, some sectors contracting as automation takes hold, others expanding as new forms of production, infrastructure, and human capital investment emerge. Understanding where this heat will concentrate and where it will fade is now central to strategic positioning. For investors, developers, and policymakers alike, the challenge is to align built space with the contours of an economy being redefined by AI.

## 5. Today's Major Macro Trends Influencing Built Space Demand

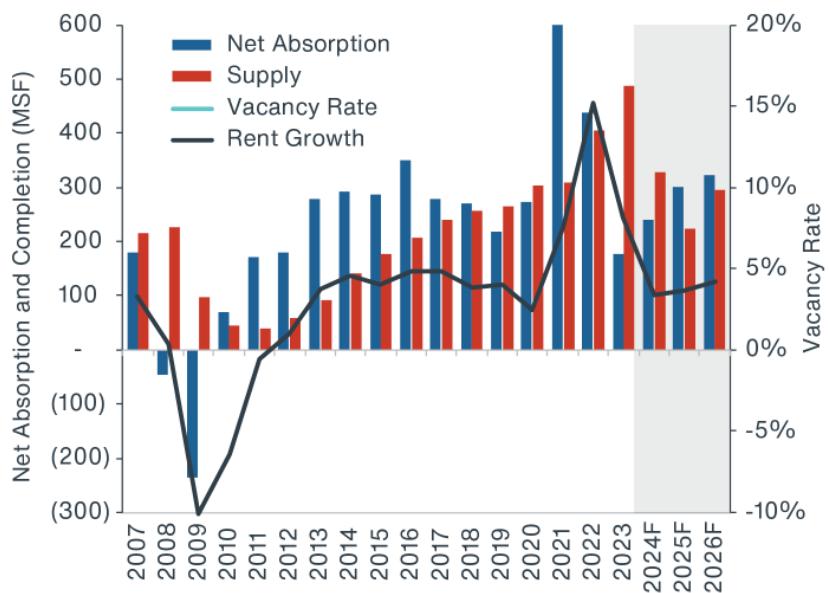
The fundamental question when looking at macro trends that can drive improved investment outcomes is whether that macro trend is both sustainable and secular (long-term)? If it's only short-term or is volatile with the ability to quickly reverse course, then there's no enduring value when trying to predict future demand patterns of particular property types. Even worse is betting on past performance in a product type whose demand drivers are coming to an end. In other words, you don't want to be the proverbial buggy whip salesman at the turn of the 20th century when the automobile was about to replace the horse-drawn carriage as the primary

means of transportation. We have written about these trends many times in the past, but it's worth quickly referencing some of the more well-known trends here.

### 5.1. Rise of E-Commerce, Onshoring, And Artificial Intelligence

Without a doubt, the rise of e-commerce has been one of the most impactful factors on built space demand so far in the 21<sup>st</sup> century. Brick and mortar retail was already oversupplied in many places, with nearly 10x the amount of square feet per capita in the U.S. as in Europe, its closest demographic and socioeconomic counterpart. When e-commerce moved from the fringes to the mainstream as a way to acquire goods and eventually services, this transferred much of the consumer demand away from physical settings. For sure, we will always need physical retail offerings, some settings more than others, but there is little to stop e-commerce from being a meaningful way to access goods and services.

FIGURE 4: U.S. INDUSTRIAL FUNDAMENTALS:  
NET ABSORPTION, SUPPLY, VACANCY & RENT GROWTH



Source: CBRE-EA, Clarion Partners Investment Research, Q1 2024.

Figure 41 Source: *Clarion Partners*

As retail suffered due to the explosion of e-commerce, industrial properties became the beneficiary. The demand for warehouse, distribution centers, terminals, and other logistics built space exploded, and set the industrial property type on a direction never before seen. The irony is that before e-commerce, industrial demand was the most volatile of the Basic Food Group property types. As referenced above, it got hit the hardest in terms of tenant and investor demand during the GFC, and it took the longest to recover, because demand for industrial space was highly correlated to the broader business cycle. **This is why Virtus would have never seriously considered the traditional industrial segment for investment. It was the antithesis of**

the Virtus cycle-resilient criteria, but it's certainly hard to argue the amazing success the industrial segment has had in the last decade.

As consumer demand for e-commerce got pulled forward several years during the COVID lockdowns, even with new industrial supply exploding with construction starts at a nominal scale never seen, rental rate growth skyrocketed. Pretty rare to have substantial new supply and elevated rental rate growth occur at the same time, as they're usually negatively correlated (rental housing was another example of this unusual phenomenon during the pandemic, discussed later).

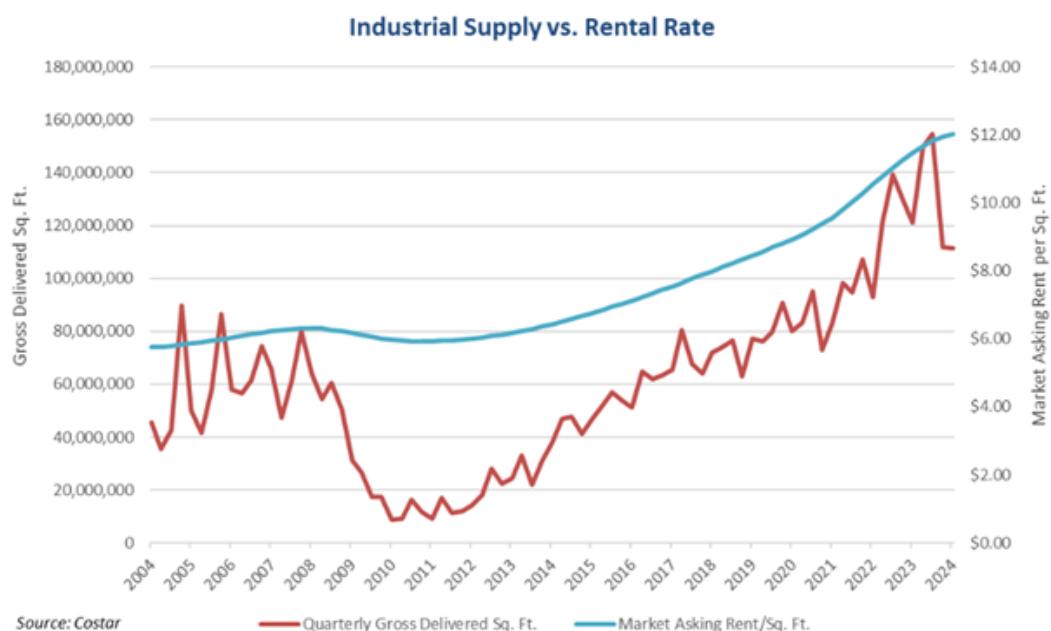


Figure 42 Source: CoStar

Even now, as industrial demand from e-commerce is slowing from its euphoric levels in 2021, another demand driver for industrial has emerged in recent years: onshoring. As has been written about many times, “deglobalization” will be a boon for industrial demand in countries that are macroeconomic net winners, such as the U.S. With a higher percentage of goods and services being produced and distributed in-country, onshoring and near-shoring, this will create further demand for logistics space, some of which we've already begun to see. This is very much a political hot topic, and it plays well with voters, even well beyond the populist voter blocks.

The scale of onshoring can be seen in the figure below, taken from [Reshoring Initiative 2024 Annual Report Including 1Q2025 Insights](#). Job announcements are the key metric for measuring reshoring and foreign direct investment (FDI) because they directly reflect the long-term impact on employment and local economies. When companies commit new capital to U.S. facilities, they typically announce the number of jobs expected to be created, making this a leading indicator of both industrial activity and built space demand. As the chart shows, annual job announcements surged from under 100,000 in 2019 to nearly 350,000 in 2022, before moderating to still-elevated levels in 2023 and 2024. **This surge underscores how supply chain realignment, industrial policy, and corporate strategy are driving a new wave of production**

back to the U.S., reshaping labor demand and the need for domestic manufacturing and logistics space.

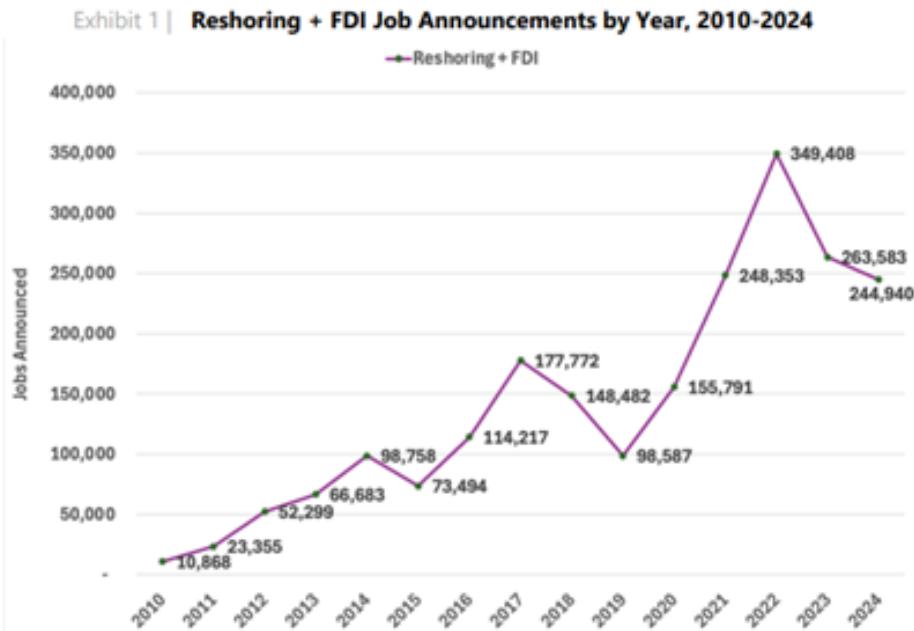


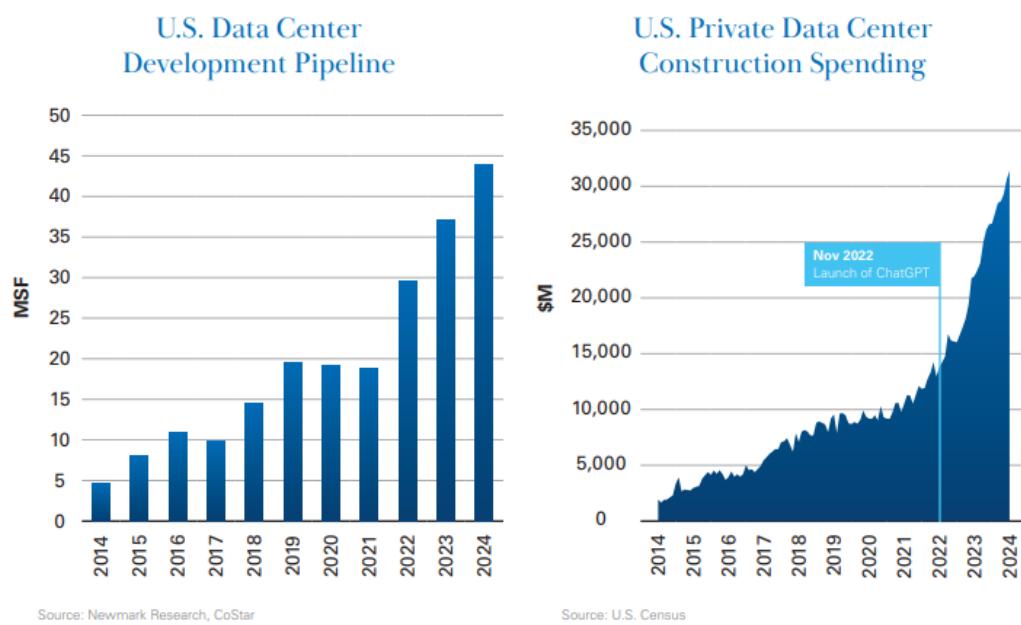
Figure 43 Source: *Reshoring Initiative*

It's unfortunate, because if we take a more global rather than just a country-centric view of economic advancement and prosperity, the rise of capitalism and globalization has literally pulled billions of people around the globe out of poverty and into the middle class. Free trade and greater macroeconomic connectivity with reduced barriers for trade and business ultimately drive global prosperity. Conversely, deglobalization and trade barriers ultimately hinder broad economic growth, and global GDP will slow. There's not much data to argue against this purely economic point. However, if we remove our economist hat for a moment, there is a very real concern of security. As Peter Zeihan wrote (paraphrasing) in The End of the World Is Just the Beginning, the U.S. is no longer willing to be the world's police, using its mighty navy to keep waterways and global trade routes open and safe, along with its other vast resources to support free trade at the scale it has done since World War II. Further, given several other legitimate bilateral security concerns with countries, such as China, Russia, and North Korea, to name a few, the U.S. wants to bring more goods and services production within its borders (onshoring) or at least near its borders (near-shoring). **The reality is that the U.S. is in a unique position to onshore at a greater scale than others due to its vast natural resources, massive economic capacity, and defense capabilities, including having oceans between it and its major rivals and enemies.** For the time being, the U.S. will be the tallest ant in the ant pile, and the industrial sector is likely to benefit. Having said that, politics can change and policy with it, and perhaps the broader trend away from globalization in the present moment will reverse course as more global leaders begin realizing how destructive it is to global prosperity and are likewise able to better address the security concerns brought on by certain countries and regions.

For these reasons and others, Virtus has analyzed multiple times through the years whether it should enter the industrial sector. The reality is we're late, and more importantly, we don't

have an edge over the competition in the mainstream segments of industrial. It's also arguable whether the macro demand drivers of industrial will ever NOT be tied to the broader business cycle. That is to say, at its root, much of the industrial built space demand still generally relies on a healthy economy and a healthy consumer to be successful. If/when the U.S. enters a recession or the mighty American consumer retreats, part of industrial demand will retreat with it. Not exactly recession-resilient as Virtus originally targeted. Certainly, there are parts of the vast industrial landscape that are more recession- or cycle-resilient than others, such as cold-storage and cGMP buildings (Virtus is already an active investor in healthcare-related cGMP facilities), to name a few. Plus, some are still quite niche and not fully institutionalized, which is why Virtus has made forays into some of these more resilient and niche segments of the broader industrial universe.

The biggest trend, and perhaps a paradigm shift, comes from the rapid emergence of AI and its deepening influence on everyday life. To support the enormous computational power required by AI, data centers have become one of the most structural and enduring drivers of industrial land demand. These facilities now share many of the same spatial and infrastructure characteristics as industrial properties. They require large parcels of land, abundant and reliable electricity, extensive cooling systems, strong network connectivity, and a durable shell design that can support heavy mechanical and electrical infrastructure. [McKinsey](#) projects that global demand for data center capacity will need to grow at an annual rate of 19 to 22% through 2030 to keep pace with AI workloads, a level of growth that implies massive investment in energy systems, infrastructure, and real estate.

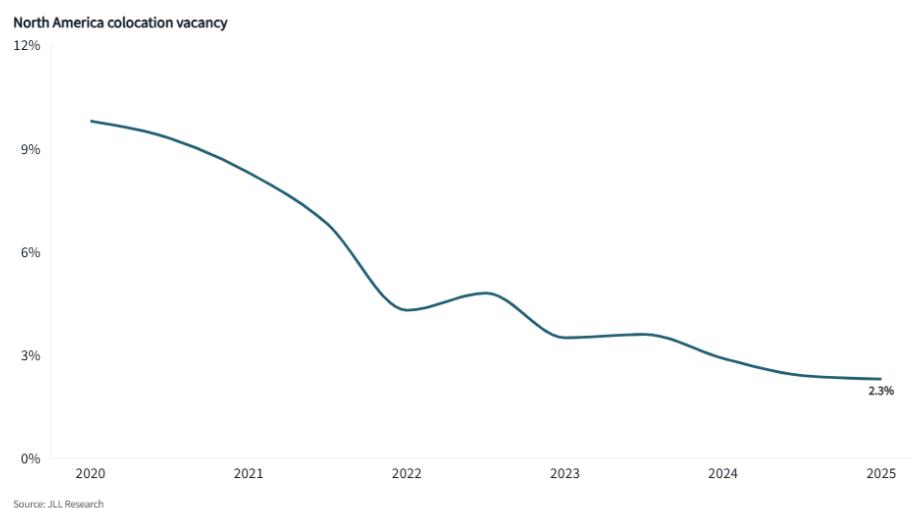


**Figure 44** Source: [Newmark Research](#)

In North America, the market is already under significant pressure. [CBRE's North America Data Center Trends H1 2025 report](#) finds that vacancy in primary data center markets has fallen to a record low of about 1.6%, even as construction deliveries reach historic highs. Lease rates

for large-scale projects of ten megawatts or more are rising sharply, with some markets reporting double-digit increases. [JLL](#) also notes that colocation vacancy has dropped to around 2.3% across North America, reflecting high preleasing activity and growing competition for available capacity. Together, these trends show how capital is being committed earlier in the development cycle and how limited power availability and land constraints are driving scarcity in this emerging infrastructure asset class.

These forces suggest that even if e-commerce and onshoring eventually slow, the momentum behind AI and data centers is likely to continue fueling industrial real estate demand. This new wave of growth feels more durable because digital infrastructure has become deeply intertwined with how modern economies, companies, and workers function.



**Figure 45** Source: [JLL Research](#)

Still, it would be premature to assume that data centers will remain an unbroken growth story. Their energy consumption is immense, and the sector faces questions about sustainability and grid capacity. At the same time, rapid advances in semiconductor design, model optimization, and edge computing could reduce the size and computing power required for AI operations. These technological and policy uncertainties mean that while data centers are reshaping industrial land use and capital allocation today, their long-term trajectory will depend on how innovation, regulation, and energy systems evolve in the years ahead.

Virtus first considered data centers as a niche investment theme in 2006. Back then, the few players who knew about this narrow niche often referred to them as Enterprise or Internet Data Centers, “EDCs or IDCs”. They were often converted from other product types, such as mid or big-box retail to IDCs. The combination of now special-purpose real estate with very expensive buildout and essentially the FF&E (Furniture, Fixtures, and Equipment) having a very short useful life (like servers) made the space a very risky investment proposition. Further, data center demand, then and now, remains highly correlated to technology capex spending, which is about the least cycle resilient play one could make. Having said that, had we foreseen the explosion of e-commerce and now AI, perhaps we would have rethought our cycle-resilient mantra.

## 5.2. Work-From-Home And Virtual Meetings

The work-from-home phenomenon, remote work, and hybrid models have had massive impacts on both office demand in the U.S. and housing typology and location. This is very different than in many other countries. As we travel the globe seeing investors (I'm currently writing this section, returning from the Middle East, where Virtus recently opened our first international office), it's amazing to witness the stark contrast in work and housing patterns. For example, in Seoul, one of the densest, most populated cities in the world, office vacancy rates are near all-time lows, 2 - 3%, rental rate growth is skyrocketing, and class-A core office properties trade for 4-caps or less. The situation couldn't be more different in the U.S., where vacancy rates have hit all-time highs, 20%+, weighted average lease terms ("WALT") are falling, rental rate growth has gone negative when considering concessions, let alone the massive tenant improvement ("TI") costs borne by the landlord. What's more, there arguably has been no sector in the modern era that has had a reversal of fortune in terms of investor demand at the speed and scale as has occurred with office.

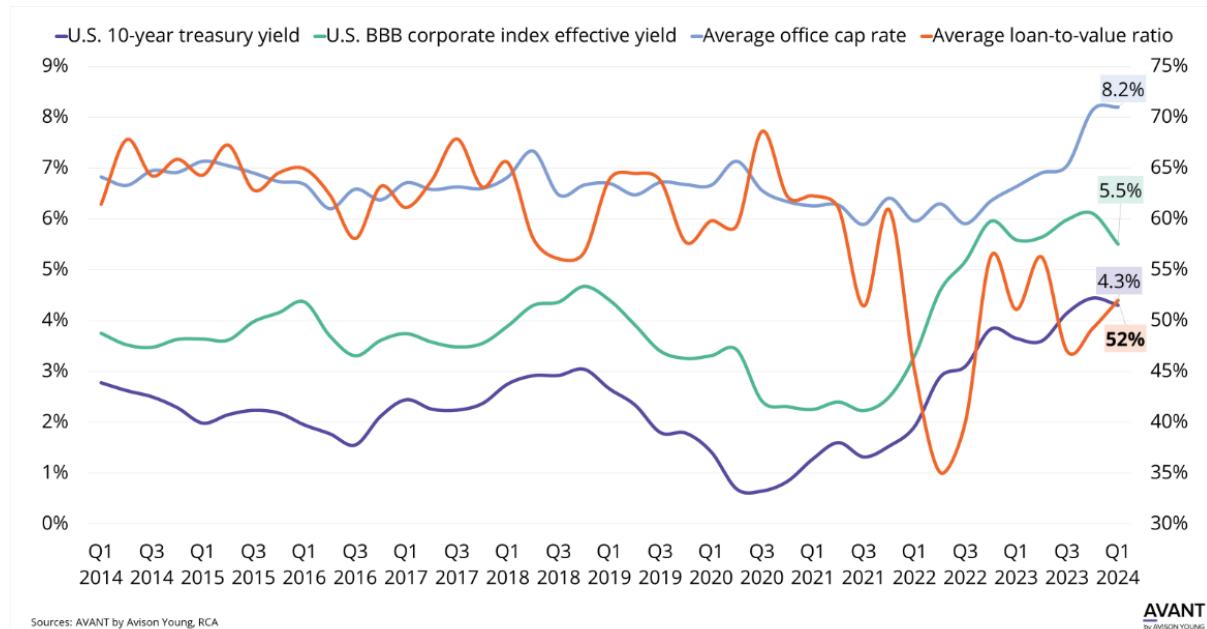
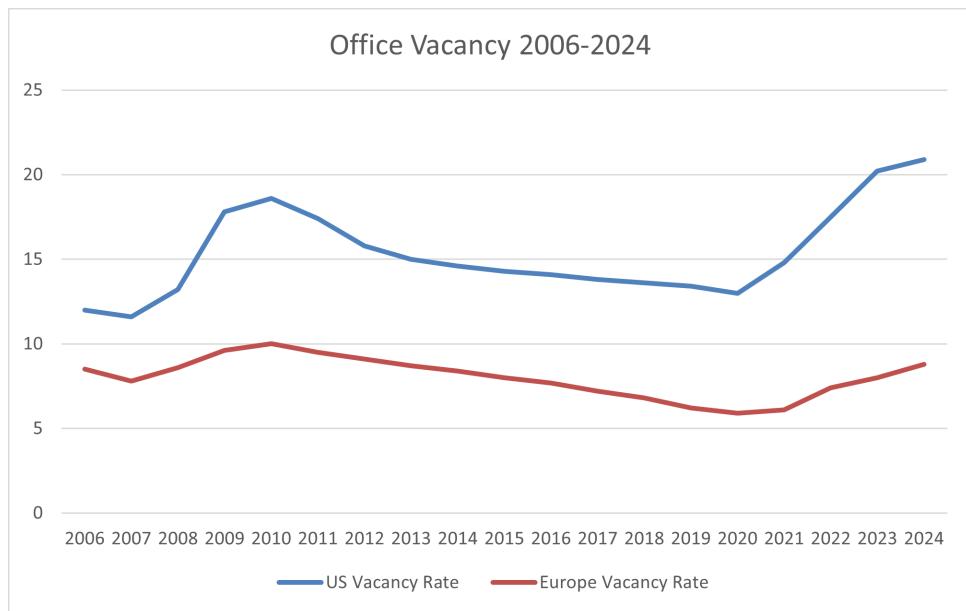


Figure 46 Source: [Avison Young](#)

No doubt, investor demand for office wasn't exactly proliferating before COVID, but it was relatively stable, much of which was being propped up by offshore investors with the belief that the office space was a safe asset class. Cap rates generally traded in the 5 - 6% range, and in some cases reached down into the ~ 4% range for trophy assets in gateway markets. Today, class-A core office buildings are in the 7 - 9%+ cap rate range (with a few exceptions of outsized values for the very highest demand office buildings in select locations of Manhattan or similar), and non-core often suffer wider yields than that. There have been story after story recently of office buildings that traded for pennies on the dollar just a few years ago, are already back in default with their lender, and you essentially can't give the building away.

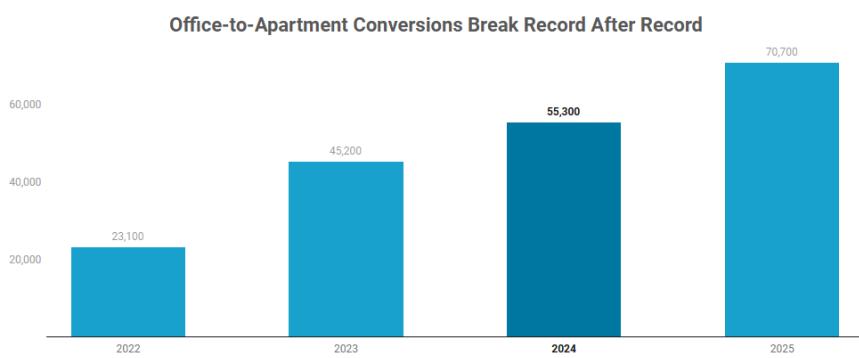
For example, there was an office trade in St. Louis last year, one of the tallest buildings downtown, the former One AT&T Center at 44 stories. The property traded in 2022 to a distressed



**Figure 47** Source: *JLL Research, Cushman & Wakefield, and BNP Paribas Real Estate*

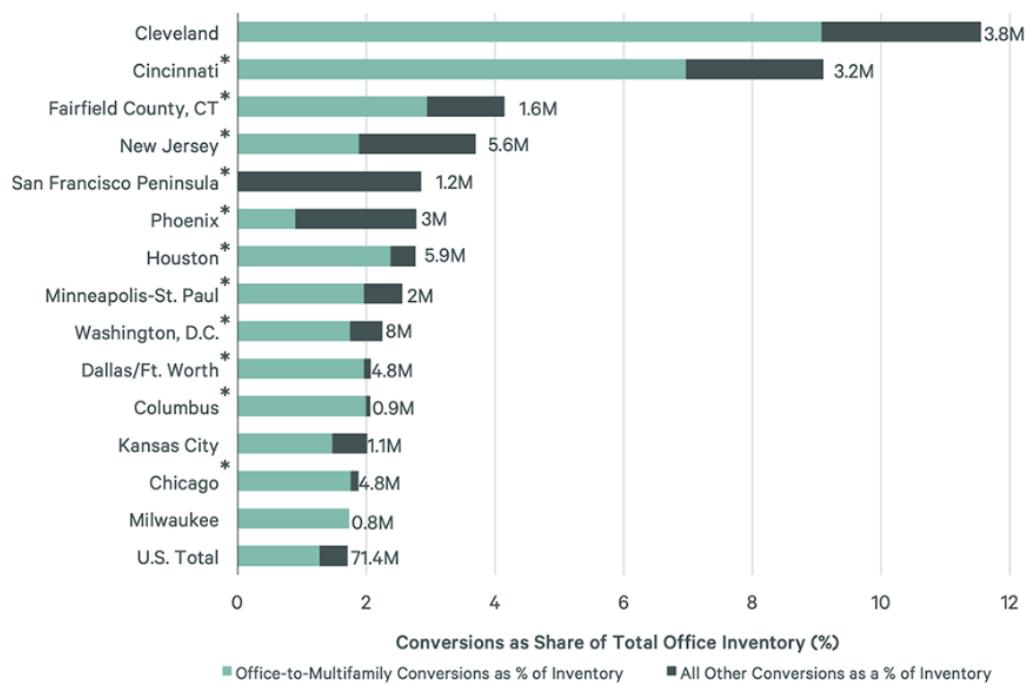
buyer for approximately \$3.50 psf (per square foot), with the bondholders of the Commercial Mortgage-Backed Securities (CMBS) loan having a nearly \$123 million loss at the time. Amazingly, even at \$3.50 psf with a plan to convert it to a mixed-use building mostly comprised of residential units, the business plan never materialized, and the building was sold in April of 2024 for a mere \$2.50 psf. On a per-square-foot basis, the tower's value over 18 years dropped from about \$140 to \$2.50, according to CoStar data. Yes, this is an extreme example, but it's not an isolated incident, and we are likely years away from the woes of the office industry being over, contrary to recent news feeds.

Many companies have downsized their office footprints, leading to higher vacancy rates and reduced demand for traditional office space. Businesses have shifted to hybrid models, requiring less space overall. This is a secular, not a temporary shift as shown earlier in figure 27. It has begun creating a wide divide between the have-nots (the vast majority of commoditized office space) and the haves (the small minority with the best locations, modern amenities, and design). Much of commoditized office space will likely be converted to alternate uses, such as residential or storage, redeveloped, or sit at perennially low occupancies.



**Figure 48** Source: *Rent Cafe*

Some companies are reimagining office designs to create apartments, data centers, and collaborative spaces, promoting flexibility and enhancing employee experience, rather than maintaining large individual workspaces and especially fewer closed-off offices. Demand for both private work areas for individual concentration work, as well as more space for collaboration. Overall, the data shows that only about 2% of total office space is being converted into apartments today, though that share is likely to rise as housing demand grows and high office vacancies make conversions more financially attractive.

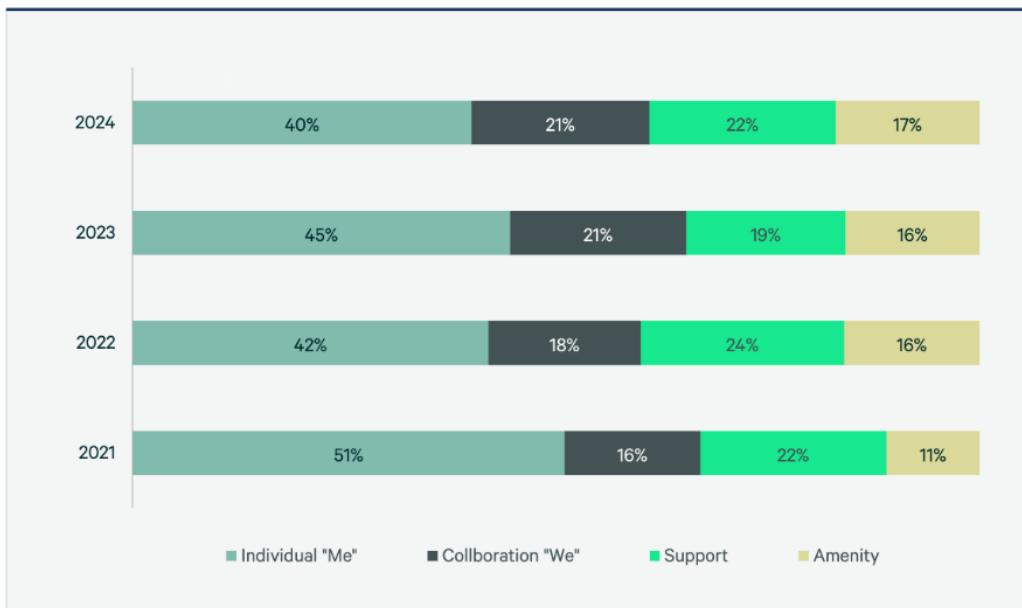


Note: Data labels indicate total square footage of conversions planned or underway. Includes markets with an office inventory > 30 MSF.

**Figure 49** Source: CBRE as of Q3 2024

For new office space or office space being modernized, the demand for modern amenities and office setup is changing radically. Inside the office suite, tenants continue to push for more open floor plans, visibility, and natural light. Gone are the days of having robust office tenant demand for just having a building with some elevators and common bathrooms. Modern office buildings (and older buildings needing to upgrade to compete) have gyms, showers, coffee bars, spaces for gatherings and socializing for tenant use, covered and/or structured parking, and EV chargers.

As our current office lease was renewing, we recently took a tour of office buildings in downtown Austin. As you might imagine, this also included several sub-lease spaces, given the high direct vacancy rate and significant amount of sub-lease space available in the market. Bear in mind that Austin was one of the top office markets in the country for years until just recently. One such building was built in just the last few years, and a long-term lease was executed with a very large tech tenant. That tenant never took occupancy, and this beautiful class-A+ 700,000-square-foot building has been vacant for the last few years. That tenant is looking to sublease the space and finally agreed to multi-tenant the space after trying unsuccessfully to sublease



Source: CBRE Workplace & Occupancy Benchmarking Program, 2024.

**Figure 50** Workplace planning trends  
Source: [CBRE](#)

to a large user(s). This building has every amenity one could ask for, is arguably the most aesthetically pleasing building in downtown, is in one of the best locations in downtown Austin, and Austin still retains its ranking near the top of the U.S. in terms of immigration, economic growth, desirability for quality of life, and business-friendly environment. Even with all these things going for this building, it will be years, if ever, before this tech giant will ever recover its lost cost of occupancy.

### 5.2.1. The Evolving Impact Of Remote And Hybrid Work Beyond The Office

From a housing perspective, this is very much influencing typology and demand for modern amenities. Because Americans are spending significantly more time at home than pre-COVID, both working from home and having family or personal time, there is a push toward more robust amenity packages as discussed in section 4.1. In order to balance affordability, this is often seen more prevalently in suburban and exurban locations. Because workers don't have to commute into town as often for in-office work, and many central business districts (CBDs) don't hold the allure and draw they once did, you often see homes with more play space or apartment dwellers who historically wanted a one bedroom unit now opting for two bedroom units, a one-study, or at least a one bedroom unit with a dedicated work area, often with a built-in desk, similar to what we've been building in some of our student housing properties for years. Likewise, they want their landlord to offer a robust amenity package, because they're spending more time in their home setting, including electronic Amazon package lockers, gyms, pools, coworking space, and socialization opportunities (coffee bars, planned resident life activities, like happy hours, running groups, etc.).

The acceptability of virtual meetings to replace many in-person meetings has likewise caused a monumental shift in built space demand, as business travel remains far below pre-pandemic levels and continues to weigh on business-oriented hospitality. While some, including [Deloitte's 2025 Corporate Travel Study](#), predict continued recovery in corporate travel volumes, the pace has slowed, and many large companies are intentionally cutting down on travel. **From our vantage, it's hard to envision business travel ever returning to prior trajectories.** In our own organization, for instance, domestic fundraising travel has decreased materially. Introductory meetings and many general update discussions with investors are now routinely held via Zoom or Teams rather than face-to-face. As I often tell our investor relations team, relationships can start virtually and information can be shared virtually, but relationships are built in person. Whether LPs conduct much of their due diligence virtually before visiting in person or our team travels for final meetings, travel velocity and expenditures remain muted compared to a decade ago and likely will for years to come.

As I talk to colleagues and leaders of major businesses across many industries, it's clear that business travel is up from the anemic levels immediately after COVID hit, but it's still a far cry from the levels most of us were traveling pre-COVID. Ironically, I'm writing this section of the paper sitting in the Singapore airport, but we're a bit of an anomaly when it comes to travel. Our team visits our properties more regularly than most, and we try to visit our investors more regularly than most (in person), including overseas. We're doing our small part to fuel business travel revenue, but most are still tracking at a more moderate level.

In summary, the work-from-home trend has influenced real estate dynamics across various sectors, prompting shifts in demand, design, and utilization of space. The full impact continues to evolve as companies and individuals adapt to new working environments and preferences.

## 6. Evolution of Original Virtus Investment Criteria

Since the early days of Virtus, we have always been clear about the high-level investment criteria for any property investment we'd consider. Virtus pursues opportunities we find most compelling based on demographic research, supply and demand metrics, and operational valuation/upside. Regardless of the property type or status, in the early papers, we spelled out that each of our property investments must meet the four original Virtus acquisition criteria:

1. **Asset type and investment strategy for the property must be viable not only during flat or improving market trends, but also when market trends are deteriorating.**
2. **To protect invested capital, there must be AT LEAST one structural risk mitigant (such as current cash flow), a credible performance guarantee, and/or additional collateral.**
3. **Returns must be commensurate with private equity real estate risk by generating (at a MINIMUM) a gross ROI of 2x and 20% IRR on a diversified basis at the fund level.**
4. **The day-to-day execution of the Virtus value-add model will be conducted by the highest quality niche-focused operating partners as third-party property managers or joint venture owner operators.**

It's worthwhile to address each of these today.

- 1. Asset type and investment strategy for the property must be viable not only during flat or improving market trends, but also when market trends are deteriorating.**

No change. This one remains today and will remain in the future.

- 2. To protect invested capital, there must be AT LEAST one structural risk mitigant (such as current cash flow), a credible performance guarantee, and/or additional collateral.**

No change. This one remains today and will remain in the future. Another way of stating this criterion is we always want a "plan B" (and often plans C and D) to recover our invested capital if the base case business plan (plan A) doesn't work. In other words, we hate binary deals where there's only one way out. These criteria, combined with the first criteria, are the primary reasons we have protected invested capital so well through the years and why our win/loss ratio is so high and we've never had a losing fund, despite plenty of challenging market conditions.

- 3. Returns must be commensurate with private equity real estate risk by generating (at a MINIMUM) a gross ROI of 2x and 20% IRR on a diversified basis at the fund level.**

This criterion has changed through the years from three different perspectives. First, we now also manage an Enhanced Core strategy, which is a lower-risk strategy targeting lower returns, so this criterion does not apply to that strategy. Interestingly, the Enhanced Core strategy does target property-level returns well above a 2.0x ROI, albeit over a longer duration (usually 8 – 10 years) and with the majority of returns paid in current yield, thus a lower targeted IRR (10% - 12%+).

Second, the real estate investment market overall has enhanced liquidity since this criterion was initially penned a couple of decades ago. The market capitalization of private real estate in the U.S. is ~ \$120 trillion as of this writing, which is almost the same market capitalization of the entire world's stock markets combined. Even though only \$40 - \$50 trillion is considered investment real estate, the overall market depth, breadth, and liquidity have improved dramatically over the last couple of decades, thus de-risking the asset class to a degree. As such, lower returns may be considered by some to be more acceptable. **Overall, real estate as a private markets asset class certainly has plenty of risk, but it has a lower risk profile due to enhanced liquidity, the downside protection of a real asset, income profile, and additional factors, than the other private markets asset classes, such as private equity, venture capital, energy, etc.** (see also our recent paper on private market performance: [link](#)).

Third, one of the things we learned in building out diversified fund portfolios is that you can optimize performance over the long haul by having a combination of risk/return profiles in a fund, rather than exclusively targeting higher risk opportunistic deals above a 20% IRR and 2.0x ROI. For example, starting a value-add and opportunistic fund with lower-returning deals that have higher current yield, but perhaps only 15 - 18% targeted IRRs, can actually enhance the net total return of the portfolio to the investor by decreasing the J-curve, rather than if you initially focused only on higher return potential distressed or development deals with little to no yield.

**Today, our funds are constructed as a best ideas strategy where we are always looking to optimize risk/reward ratios across a variety of risk levels.** As of this writing, we are currently investing out of our ninth closed-end value-add and opportunistic fund. That fund will have a combination of deal profiles as follows, from lower to higher risk: preferred equity, light value-add, value-add, distressed/turnaround, and development. Targeted gross property level returns to the Fund will generally range anywhere from 15 - 25% IRR and 1.5x to 2.5x ROI. **Having the ability to not only pivot allocations across our different property sectors, but also pivot the targeted risk profile within each sector to where we view the best risk-adjusted return opportunity at the time has been very valuable in enhancing net returns, and especially in managing risk and increasing downside protection.**

4. **The day-to-day execution of the Virtus value-add model will be conducted by the highest quality niche-focused operating partners as third-party property managers or joint venture owner operators.**

While this is generally still applicable, Virtus has evolved into a hybrid capital allocator and operator model. **We have brought much of the property value creation in-house through the years, whereas early days we tended to rely on outsourcing that exclusively to third parties, whether on a joint venture basis or third-party property manager basis.** Today, we have four ways of executing property-level business plans. We have assets where (1) there is no third party involved, (2) we have many assets where we own the asset 100% outright and play an active role alongside the third party property manager, (3) we have assets under a typical joint-venture ("JV") structure with Virtus being the majority investor with majority control, and (4) we have investments where Virtus will sit in a superior position in the capital stack, such as preferred equity. Regardless of which of these four models is used, Virtus has learned to play a much more active role in quality control and assuring property-level business plans are executed. This is why we have created a large team of domain specialists in each of our categories, managing a more moderate pool of capital with higher personnel to property investment ratios than our peers. **As such, we can be more "in the weeds" when it comes to creating and executing the property-level business plans. This affords us better deal origination and greater flexibility as to how property-level operations are executed, which we've found to improve outcomes.**

Another area we've changed our thinking in terms of the qualification of property managers or operating partners is the stage of the operator's development and their focus. Initially, our thinking was we only wanted to work with single property specialists as our property managers and/or JV partners (we wanted them to be myopically focused on the targeted property sector) who had a minimum of 10 years of experience as an operating business, with the idea being we wanted their business to have experienced downturns and recovered from them. **While this seems sound on paper and applies to most of our operator relationships we've had through the years and to this day, we missed a couple of things.** First, there have been some operators who have expanded their capabilities. For example, we have some operators who now manage both student housing properties and market-rate multifamily properties. Those are two fundamentally different businesses, and several operators tried to do both and failed at at least one of them. There are a small number of capable operators who have expanded by building out

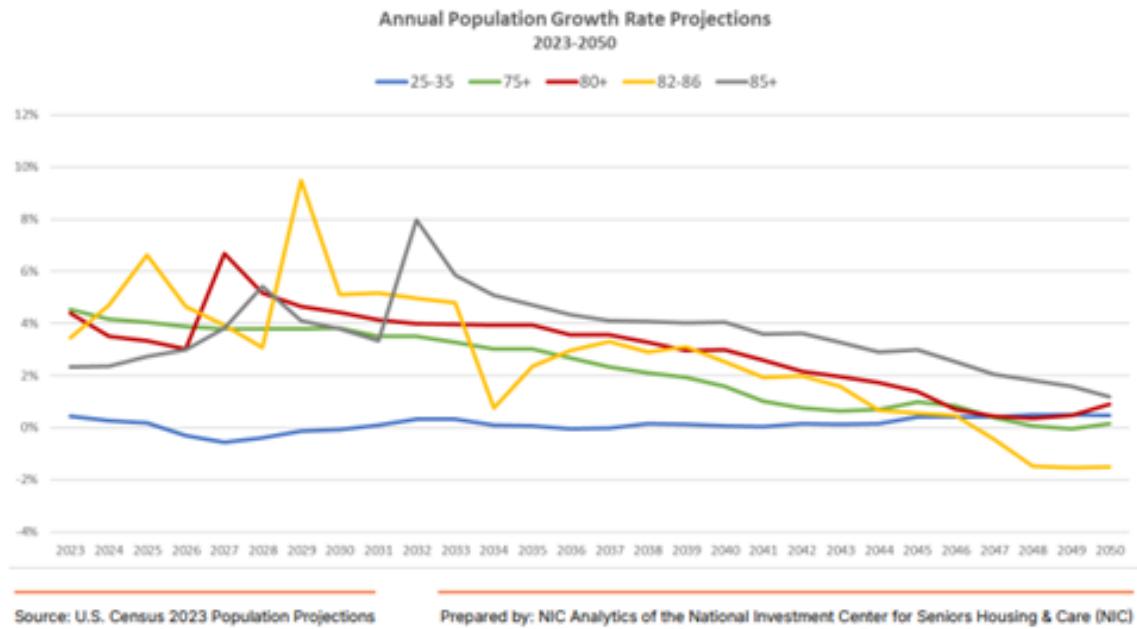
different teams and operations for the two different sectors, with specialists for each, while still benefiting from the combined economies of scale advantages. In the past, we would have immediately vetoed these operators. Likewise, there are “emerging” operators who are spin-outs of larger, more established platforms that have very high ceilings and potential that we would have immediately vetoed. Some of the top operators in our targeted sectors today, we first met many years ago when they were emerging, and our criteria wouldn’t let us work with them at the time. Today, we are less constrained by these hard and fast rules. We can now better discern who these high-quality operators are, whether they’re emerging (yet with the chops and capabilities to be great), or they have more than one line of operating business (typically no more than two, and the property types relate). **Because our team has grown both in quality and quantity through the years, and we now have decades of lessons learned, we not only have a better picker when it comes to choosing operators on the front end (if we’re using a third party at all), we are more involved with property operations to buttress the operator’s capability, and we can make pivots where needed compared to the original Virtus model, which was more passive than we are today.**

## 7. Original Demographic Trends and Their Current Conditions

There were four major demographic trends identified in the first 2006 whitepaper:

1. The growth of the Baby Boomer population, which is the largest demographic trend in the history of the U.S., with 78 million members at its peak, was born between 1946 and 1964.
2. The emergence of the Millennial or Echo Boomer population (essentially the children of the Baby Boomers), which is the second largest demographic trend in the history of the U.S. with 74 million members born between 1977 and 1994 (note that some demographers, as well as data produced by the Bureau of Labor Statistics have since modified the birth years of this demographic cohort, and consider the Millennial population even larger than the Baby Boomers).
3. The Latino demographic, with 52,000,000 documented Hispanics in the U.S., is the largest minority ethnicity at 17% of the total population, and also by far the fastest growing ethnicity in the U.S.
4. The Transitory Nature of the American Worker demographic, which referred to increased migratory velocity in the U.S. at the time, as well as the major population shift from the northern part of the U.S. into the Sunbelt, with a secular growth of major metros emerging in the southern part of the U.S.

Nineteen years later, these trends have evolved, and their demand for select property types has both persisted and, in other cases, changed through the years. That is to say, property demand patterns have changed as the demographic has changed. In some cases, the demographic has aged out of demanding a particular property, and in other cases, aged into a different property type. Or certain trends that existed in 2006 no longer exist today, and others



**Figure 51** Source: U.S. Census

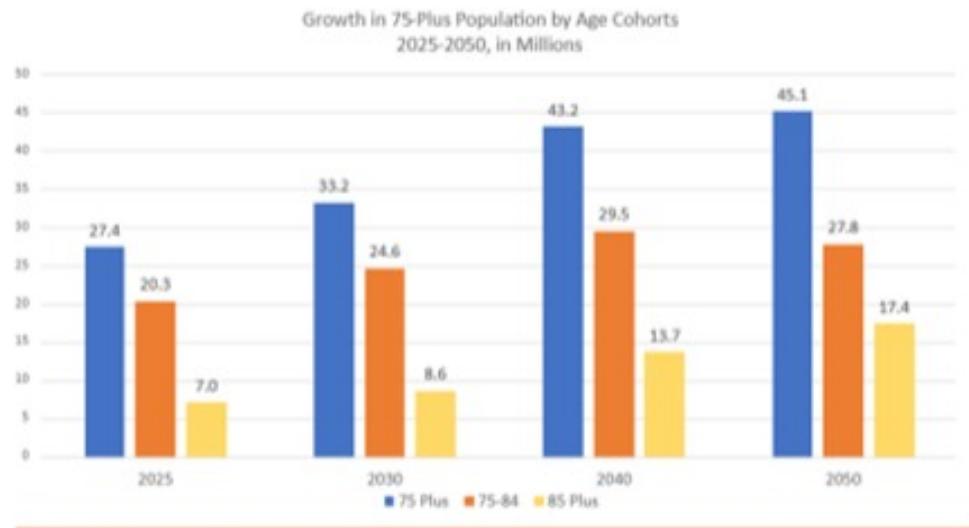
have emerged in their place. In this section, we discuss the original demographic trends and examine how they relate to each of our property types today.

The figure above highlights the projected population growth rates across age groups through 2050, with a clear surge in older cohorts. Over the next two decades, the 75+ population will expand at the fastest pace, reflecting the aging of the Baby Boom generation into advanced ages. While the 25 - 35 group grows little and in some years even contracts, the 75+, 80+, and 85+ groups continue to climb sharply before gradually tapering off mid-century. This dynamic underscores a major demographic transformation: older adults will represent the most rapidly expanding share of society, reshaping demand for healthcare, housing, financial services, and caregiving. Recognizing this shift is essential for any forward-looking investment strategy, particularly as Baby Boomers transition into the age ranges with the highest consumption of medical, housing, and supportive services.

## 7.1. Baby Boomers

In looking at the Baby Boomer population (“Boomers”), as of this writing, the oldest Boomers are now 79 years old, and the youngest Boomers are turning 61 years old. Historically, Boomers drove demand for numerous of our targeted property types, such as most of our healthcare sectors, as well as self-storage. While all of our healthcare sectors still benefit from this major demographic trend, tenant demand for several segments of healthcare real estate has changed. Without a doubt, the aging of the American population, which has been called the “Silver Tsunami,” continues to drive the need for greater healthcare infrastructure across the board. Likewise, as wellness, life expectancy (yes, there has been a recent blip where life expectancy for the first time has not expanded in recent years due to certain health endemics) and improved quality, not

just quantity of life, there continues to be a greater need to build out healthcare infrastructure as we care for this massive demographic in their later years.

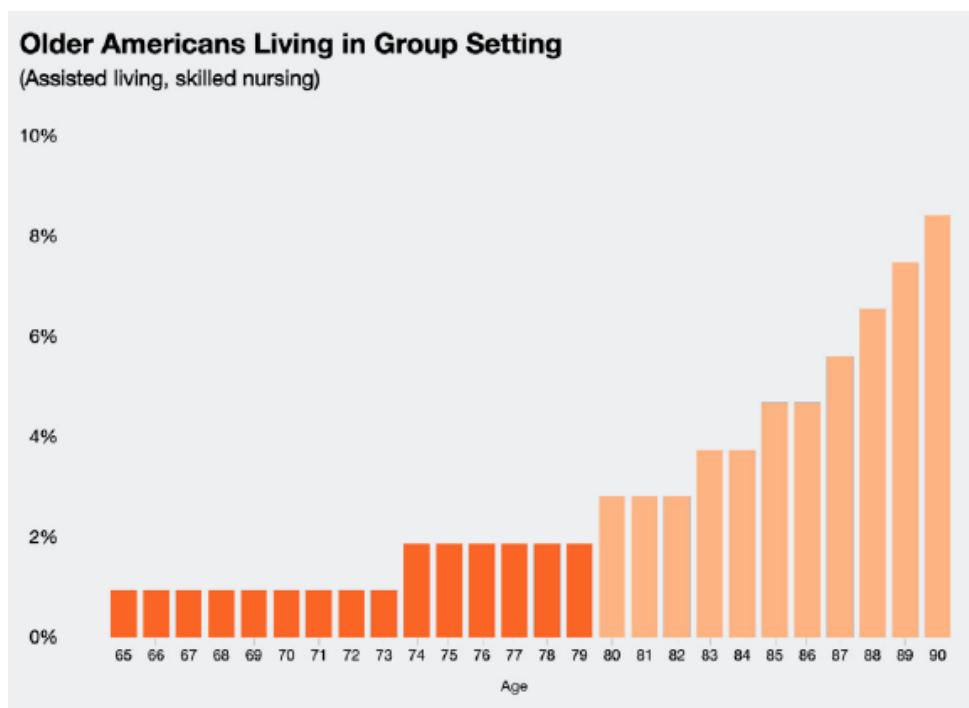


Source: U.S. Census 2023 Population Projections

Prepared by: NIC Analytics of the National Investment Center for Senior Housing & Care (NIC)

**Figure 52** Source: U.S. Census

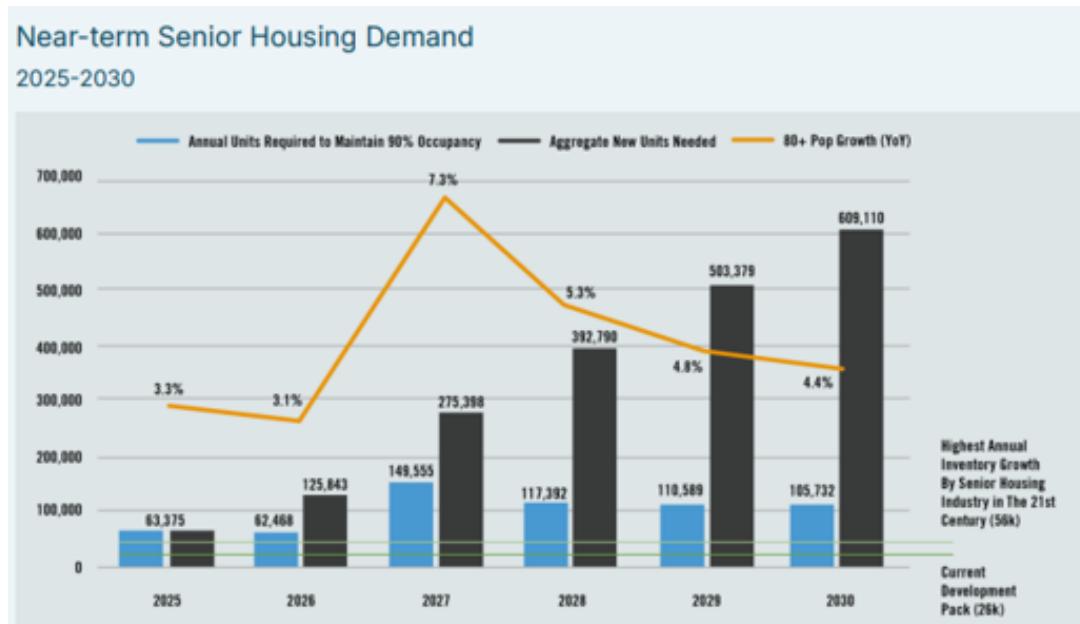
However, when turning to senior living, what many have missed through the years is that with these advances in healthcare, people have been entering different categories of senior living later and later. Today, the Boomer generation is mostly relevant to the active adult segment of senior living, where the average age of entrance of a tenant is 72 years old, and the average age of the existing rent rolls of active adult communities across the country is 74 years old.



**Figure 53** Source: ULI PwC Emerging Trends in Real Estate 2022

Most Boomers are not yet accessing needs-based senior living where food service and especially care services such as Assistance with Daily Living needs ("ADLs") are required, which you begin to see in independent living, but especially in assisted living and memory care, where the average age of entrance is between 82 and 86 years old, depending upon the segment. **We don't actually reach peak demographic demand for needs-based senior living in the U.S. until 2043.**

According to NIC MAP data, maintaining 90% occupancy by 2030 will require senior living development at nearly 2x the historical peak pace and more than 3.5x the current pace. With construction near record lows, the industry faces a widening supply gap as the 80+ population surges.

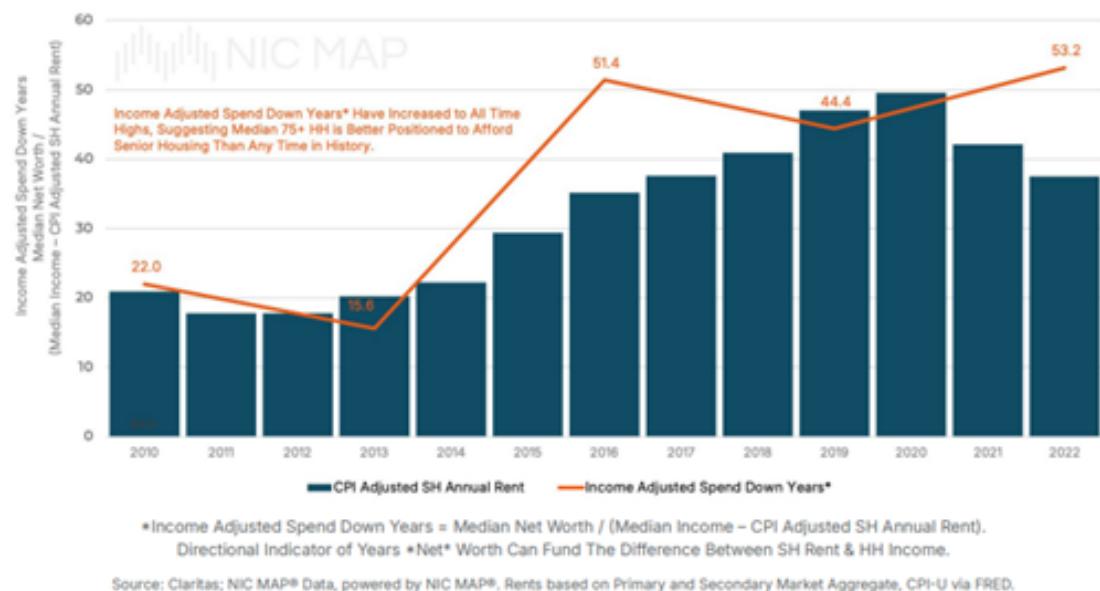


**Figure 54** Source: NIC MAP

Baby Boomers hold a uniquely strong financial position compared to prior generations entering retirement. Many in this cohort have accumulated substantial wealth through decades of homeownership, equity market participation, and access to defined benefit pensions or retirement savings accounts. Rising home values in particular have provided a significant store of wealth that can be unlocked to fund senior living, whether through sales, reverse mortgages, or downsizing. As the chart shows, the number of "income-adjusted spend-down years" has climbed to record highs, meaning that households aged 75 and older now have a larger buffer of net worth relative to the cost of senior living than ever before. This translates into greater affordability and flexibility when making care and housing decisions.

Equally important is the income security that many Boomers enjoy. Social Security remains a stable base of income, supplemented by private pensions, IRAs, and 401(k) accounts that expanded with the growth of retirement savings vehicles in the 1980s and 1990s. Combined with the fact that Boomers represent the wealthiest generation in U.S. history, holding over half of all household wealth, they are far better equipped to cover the costs of medical services, assisted living, and long-term care. This financial advantage not only improves individual access to higher quality options but also broadens the potential market for senior living providers, care

technology, and community-based services. For investors, the Boomers' accumulated wealth means sustained and growing demand for senior living and related services over the coming decades.



**Figure 55** Source: NIC MAP

Senior living operates as a combined real estate and services model, with property types defined by the level of care they are licensed and equipped to provide. As individuals age, their needs typically progress along a continuum of increasing support. On the lower end are active adult and age-restricted communities that focus on housing with little or no care. Independent living adds meals, social programs, and light support services. As residents require more help, assisted living provides daily living support, such as medication management, dressing, grooming, incontinence support, and transportation. Memory care facilities specialize in cognitive support, while continuing care retirement communities (CCRCs) and especially skilled nursing facilities represent the highest level of hands-on and medical care. Boomers' aging chiefly increases needs-based senior living demand as detailed in 8.1.2.

On the other hand, Boomers are past their peak accumulation years. Many are empty nesters or have already downsized, reducing their demand for self-storage and multifamily housing, though Boomers are often a meaningful percentage of tenants in BTR communities. Other drivers now support those sectors, but Boomers no longer play the same role they once did.

In conclusion, Boomers remain central to the trajectory of the American economy. They are wealthier, healthier, and longer-lived than previous generations, and their transition into advanced ages will continue to fuel demand for healthcare services, housing solutions, and community-based amenities. While their role in accumulation-driven markets is fading, their impact on healthcare infrastructure and senior living is only beginning. **For the next two decades, Baby Boomers will remain the most significant demographic force in shaping investment strategies and economic outcomes tied to aging.**

### Millennial Timeline: From Student Housing to Peak Storage & Middle-Income Workforce Housing Demand

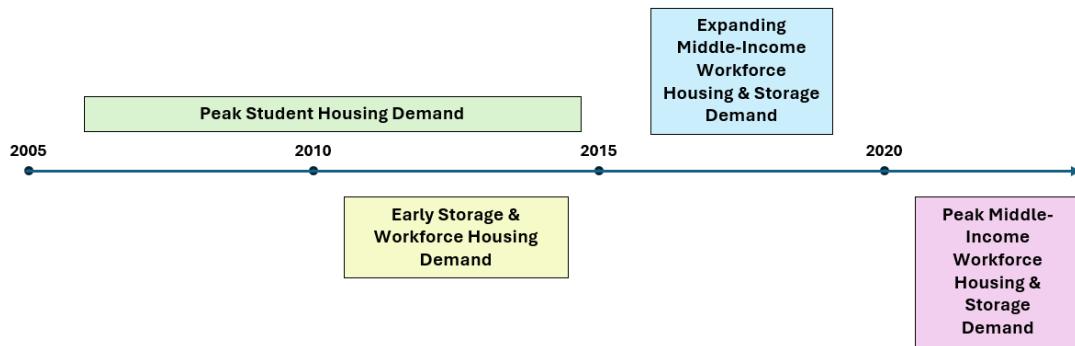


Figure 56 Source: Virtus

## 7.2. Millennials

Similar to Boomers, Millennials, the children of the Boomers, drove demand for several of the Virtus property types, student housing being the primary, and self-storage being the secondary early on, and later middle-income workforce housing.

Student housing demand is obviously highly correlated to university enrollment growth (more details below in the student housing section on how demand patterns have changed for different housing types). As you'll see in the graph below, university enrollment reached its peak in 2009 - 2010 in the U.S., with 22 million university students attending 4,000+ universities.

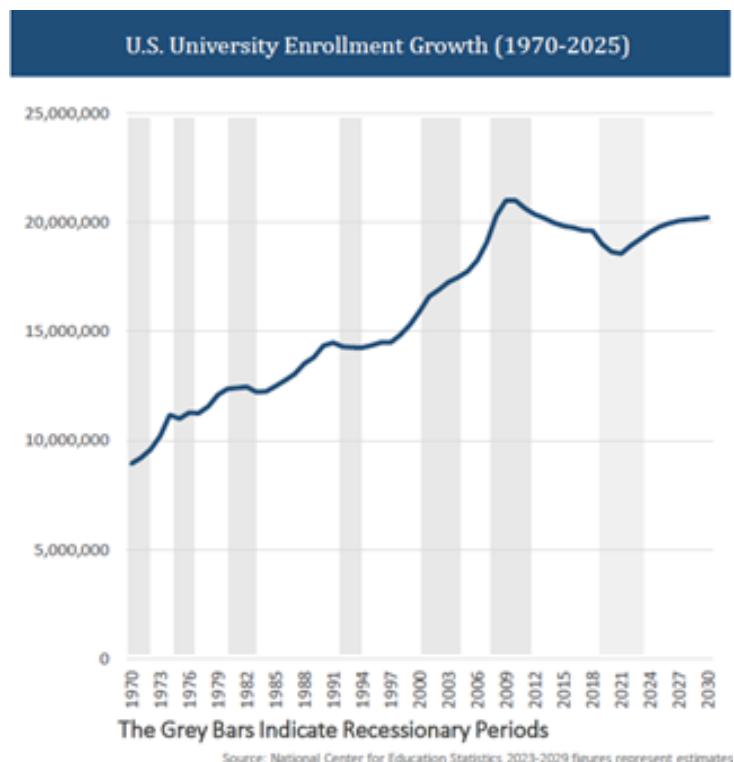
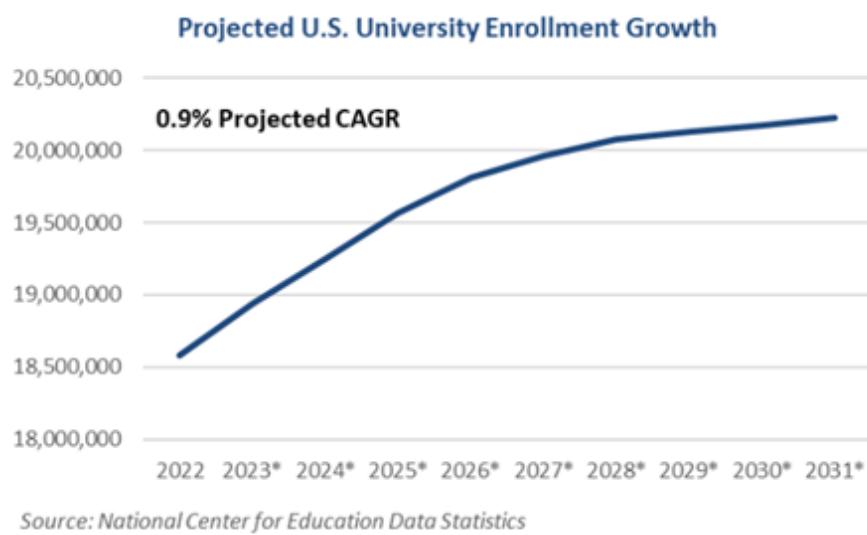


Figure 57 Source: National Center for Education Statistics

There were two reasons for this. The Millennial population reached peak university years (generally 18 – 26, when you include graduate school for some) shortly before this, with the

last Millennial being born in 1994 (certain demographers have pushed this out to 1997 in recent years). Second, high school matriculation rates to universities peaked at 72% at this time. In other words, the percentage of high school graduates attending university reached its crescendo as a confluence of relative university affordability and the broad-based belief that a university education was the key to success in the U.S. proliferated. Ever since 2015, the Millennial population in universities has been declining as they age out of the university setting and into the workforce, a significant driver of our middle-income workforce housing strategy. Plus, skyrocketing costs of attending universities, along with more prospective students and their parents, have led to alternative paths into successful careers. For the 2025/2026 school year, total university enrollment sits at 18.3 million students across the U.S. ([source](#)), and is expected to grow at just a 0.9% CAGR for the foreseeable future.



**Figure 58** Source: National Center for Education Data Statistics

Millennials were heavy users of self-storage during their college years, moving frequently between dorms, off-campus housing, and their parents' homes. On average, they relocated about twice per year, often acting as vagabonds with Ikea furniture and other belongings that needed to be stored for varying periods of time.

In their post-college years, they continued this high mobility, taking new jobs across the country and viewing the entire U.S. as their job marketplace. Shorter average tenures at employers compared with prior generations reinforced the transitory nature of the American worker. The growth of the gig economy also pushed many Millennials to juggle multiple roles, from freelancing to side hustles, which created additional demand for storage space for tools, inventory, and work materials. As they moved through life stages such as relocating for jobs, pursuing further education, or starting families, the need for flexible and temporary storage solutions became even more significant.

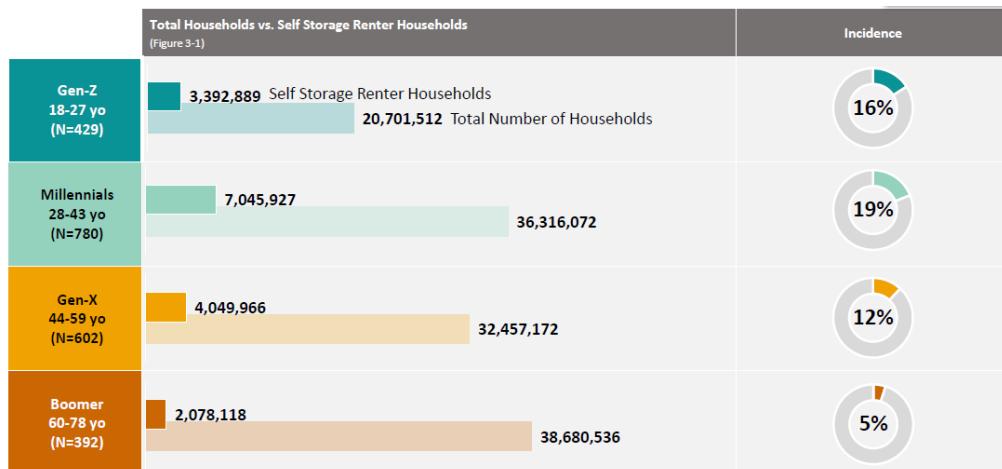


Figure 59 Source: [Self Storage Association](#)

In recent years, however, this pattern has slowed as migration trends eased and more Millennials began forming families and putting down roots. Despite stereotypes, they too aspire to have families, own homes, and build community. They are moving less often, but like their parents in pursuit of the American dream, they continue to accumulate possessions, a trend that benefits self-storage. That said, their accumulation does not compare to that of the Boomer generation, which still holds more than half of total U.S. household net worth and all the belongings that come with it, much of which eventually finds its way into self-storage units.

As Millennials entered the workforce, this clearly drove demand for rental housing across the U.S., especially middle-income workforce housing, as this massive demographic came of age. Because of higher employment turnover, delay in family formation compared to earlier generations, and decreasing home ownership affordability, rental housing utilization rates increased. In recent decades, approximately 1/3 of households have been renters. Perhaps the most striking evidence of shifting social and economic patterns is captured in the chart below. The data for this figure is based on estimates and isn't perfect. But it certainly feels accurate. Taking these numbers at face value, in 1950, more than half of all 30-year-olds in the U.S. were both married and homeowners. By 2025, that figure is projected to fall to just 13%. **This collapse is not a small adjustment but a profound demographic and cultural transformation.**

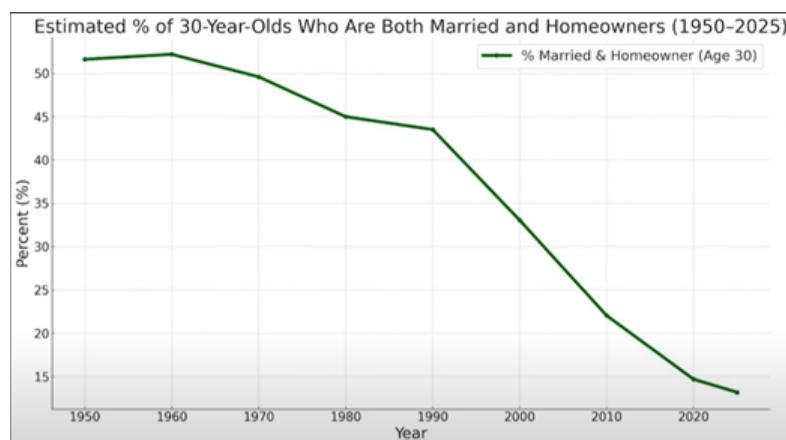
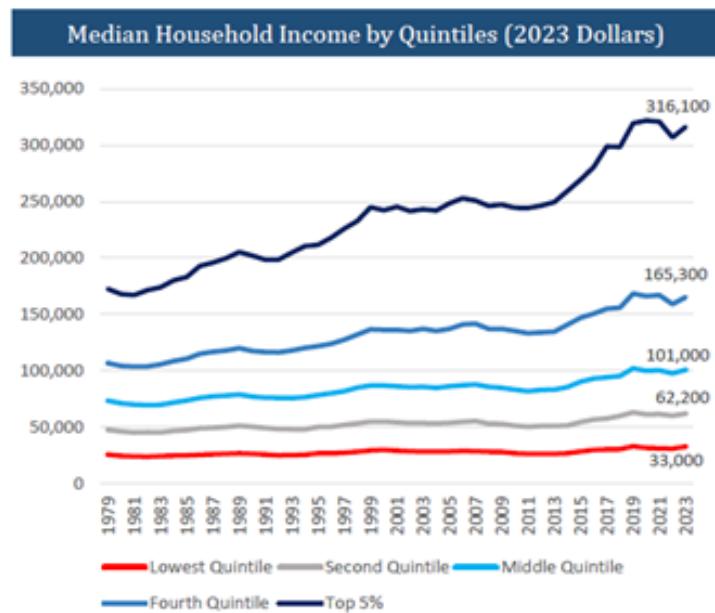


Figure 60 Source: This graph created by Nathan Halberstadt and shared on X shows homeownership amongst married people in their 30s.

Income growth in the U.S. has been profoundly uneven for decades. Unless a household falls within the top quintile, income gains have not kept pace with inflation, or certainly the rapid rise in housing prices. For Millennials in particular, this imbalance has resulted in diminished savings capacity, delayed wealth building, and worsening barriers to homeownership. **The outcome is a generation that rents longer, often out of necessity rather than choice, and struggles to access the traditional pathways to financial security that earlier cohorts relied upon.**



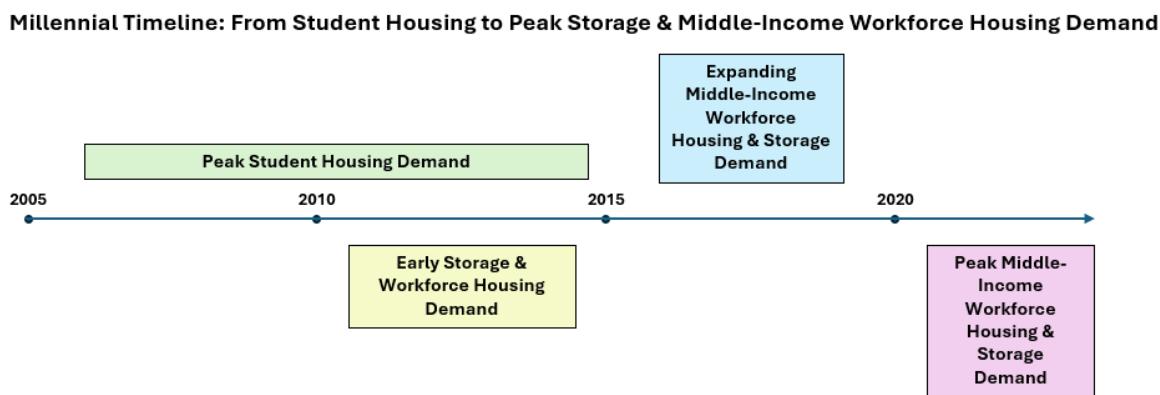
**Figure 61** Source: Census Bureau. *Historical Income Tables: Households. Table H-1. Income Limits for Each Fifth and Top 5 Percent*

This structural gap underscores the urgent need for middle-income workforce housing. With a growing share of the population locked out of ownership and unable to keep pace with escalating housing costs, demand is rising for rental solutions that provide stability, affordability, and access to community without requiring entry into a prohibitively expensive ownership market.

Urban areas tend to have a higher percentage of renters than rural areas, and the renter cohorts are the largest in the highest cost-of-living urban areas, historically being the coastal or Gateway markets (see a deeper dive on this in our New Gateways whitepaper here: [link](#)).

The sheer numbers of Americans entering the workforce, combined with other factors, leave us with a meaningful shortfall of rental housing in the U.S. today, especially for lower-income and middle-income workers. Yes, there are pockets of oversupply due to temporary hyper-building in certain high-growth sunbelt markets, especially as liquidity was pushed into the market by the Fed. However, the housing stock remains undersupplied relative to the population size, as you'll see in the following section. Estimates range between 2,000,000 and 7,000,000 housing units of shortfall in the U.S. One of the few areas that the Trump and Harris campaigns, and more recently Elizabeth Warren and Tucker Carlson, normally on opposite ends of the political spectrum, could agree on was the shortfall of U.S. housing, leading to a lack of affordability. **They had different approaches for improving affordability and increasing housing stock over time, but the reality is that even though this is a national problem, solving the problem must be done at a local level.** Communities need to get past NIMBYism, and municipalities need to

improve zoning and create policies more accommodating to new construction (see the three-part Virtus Housing affordability series here for more details: [part 1](#), [part 2](#), and [part 3](#)). The most widely accepted shortfall guesstimate is 3,000,000 units. As of this writing, there are only  $\sim 1,000,000$  units under construction in the U.S., with multifamily being only 250,000 of those units. As capital markets become more accommodative and interest rates decrease, we can likely return to a run rate of  $\sim 1,500,000$  annual units of total supply. Even at this increased rate of delivery, it will be years before we can fill the 3,000,000 residential units of undersupply in the U.S., given we need  $\sim 1,000,000$  units delivered annually to maintain supply and demand neutrality.



**Figure 62** Source: *Virtus*

### 7.3. Latinos

Latinos or Hispanics, often referred to as Latinx, were a meaningful target demographic of our original cycle-resilient property strategy. Although still meaningful, admittedly, it hasn't translated into as big an opportunity as originally expected. While we were correct in predicting the emergence of the Hispanic consumer, this didn't always translate into built space needs. For example, we spent quite a bit of effort trying to identify universities that would have outsized enrollment growth due to an increasing number of Hispanics attending college. We figured that housing would be undersupplied in those markets, and that would create an opportunity for student housing investment. Even though the trend was accurate with millions of Hispanics attending universities, often the first in their families, they didn't access purpose-built student housing as much as we expected, and the high-growth universities with higher percentages of Hispanic students have struggled to be considered institutional quality student housing markets, which affects liquidity at exit.

One overarching theme we knew existed was around the idea of acculturation, that is, the rate at which a minority ethnicity adapts to the ways and culture of the pre-existing community. We wrote about this in the earlier versions of this whitepaper series, but what we didn't fully appreciate was the speed at which the acculturation occurred. This meant that the Hispanic consumer, with substantial growth in purchasing power, tended to be less interested, at least over time, in specialized built space that narrowly targeted them as a consumer. We

thought Hispanic-targeted retail, banking services, and the like would be compelling niche areas of investment, underserved and growing. No doubt, opportunities existed, but they were less investable than originally predicted for a few different reasons.

The Latino demographic was relevant for self-storage, being a very high user of self-storage, both as retail and commercial users. Because Hispanics often have tight-knit families and a higher concentration of family members under a single roof, combined with higher migratory rates for employment opportunities, they'd often use self-storage temporarily. Where we saw some of the biggest uses that we didn't initially identify were for commercial purposes. This was especially prevalent during the Global Financial Crisis. Much of the construction industry and household services industry is powered by the Latin workforce. During the downturn of the GFC, we began to notice many of these contractors moving out of their office and flex office space in favor of lower-cost self-storage units to store their equipment. This trend stuck well after the post-GFC recovery, given the relatively low cost yet convenient access of self-storage units. At many of the self-storage properties we've owned through the years, the busiest time of day is early in the morning, when many of the contractors arrive at the facility to pick up their equipment for the day.

Where the Latino demographic was most impactful on the Virtus investment strategy was housing. Our original target was Latino concentrated multifamily, typically identifying submarkets in urban areas that had at least a 75% concentration of Hispanics, good access to mass transit, and ideally walkability to schools, retail, and other services. **Our belief early on, which eventually was proven out, is that the Latino can be an ideal tenant in rental housing, yet most landlords historically discouraged or ignored the Latino renter.** We knew Latinos used rental housing at a significantly higher rate than their Caucasian counterparts. We also knew they'd have more family members in a single unit, which also meant more potential income earners to pay rent. And because the family unit is usually so important, making sure the rent got paid was paramount, thus typically leading to lower default rates than their Caucasian counterparts earning the same wage. We also found that Hispanics often repaired their own units when items broke, which could be good sometimes and bad other times. Our investments in Latino concentrated multifamily (2011 - 2016) turned out to be quite successful, and we became effective in how best to market to the Hispanic consumer and provide more fitting property management services. Simple things like accepting cash for rent payments at the time, allowing more renters per unit (and charging a premium for the additional wear and tear), marketing in Spanish, recognizing that mobile versus desktop was the best way to digitally communicate, and having property managers who could understand the Hispanic renter's needs, materially increased property performance. However, the scale of opportunity was limited when we focused primarily on institutional-quality rental housing that had good exit liquidity.

What emerged from this early strategy focus on Latino-targeted multifamily was a broader-based focus on workforce housing. Initially, the target was more blue-collar housing, but over time, we saw a bigger opportunity in grey-collar housing, which we now refer to as middle-income workforce housing. **We took the trends and lessons learned in Latino-targeted multifamily, combined with the Millennial and transitory nature of the American worker trends, and developed our middle-income workforce housing strategy.** Kevin White, now our CIO, was the

real driver behind this. Before joining Virtus in 2011, Kevin had been in acquisitions for a multifamily shop mostly focused on broader workforce housing. That experience, combined with the demographic top-down methodology Virtus employs, sparked the move into providing high-quality but affordable housing primarily targeting grey-collar tenants, such as healthcare workers, teachers, first responders, and other public sector workers. This was an important transition because middle-income workforce housing has been our largest allocation in recent years, from development to value-add to core and core-plus acquisitions. **Other than self-storage, middle-income workforce housing has been our highest-performing property type through the years, yet it has significantly more capacity and scale than self-storage.**

Latino Timeline: From Student Housing to Peak Storage & Middle-Income Workforce Housing Demand

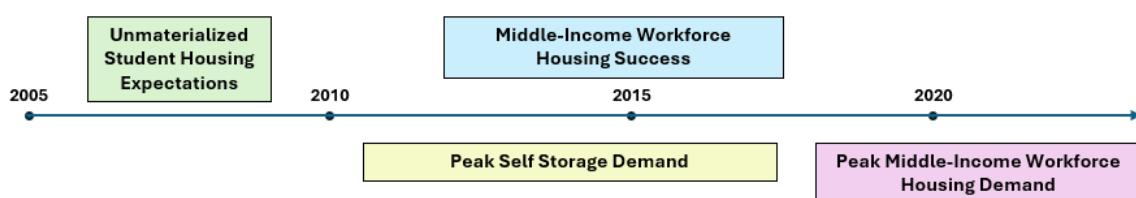


Figure 63 Source: Virtus

#### 7.4. Transitory Nature Of The American Worker

This segment is less a demographic trend and more of a broader macro trend that expressed itself early on in a couple of different ways. First, in 2006, we identified increased migratory rates. Simply put, Americans were moving more often than ever before, and they weren't only moving within their communities. Many were moving regionally, and in some cases across the country. Second, there was a fundamental population shift that was already underway from the major population centers of the north into the south, generally, and especially the Sunbelt region. This started in the 1960s and 1970s when air conditioning started to become more ubiquitous in the south, but then it gained far greater momentum decades later for a whole host of reasons around natural resources, politics, cost of living, immigration, transportation, and climate, to name a few. This trend is well known, and it persists today, even in a post-COVID world, as some Americans boomerang back to the northern part of the U.S. **The fact of the matter is the Sunbelt has been, and will continue to be, where much of the growth of the U.S. population and economy is centered.**

Interestingly, the migratory rates we originally identified in 2006 began slowing about ten years later, ahead of the most unusual migratory trends that COVID sparked beginning in 2020. Shortly after COVID hit in March of 2020, migration fell to its lowest level in decades with stay-in-place mandates. Then it exploded radically in two ways. First, there was a massive move from the city centers of major urban areas into the suburbs, where it was easier to socially distance and have an improved quality of life. This trend, which seemed short-term, brought on by the pandemic, has now become a secular trend. Remote working, improved infrastructure

and services in the suburbs, including the rise of mini-city centers in suburban locales, lower cost of living, and, in some cases, higher quality of life, have pushed more Americans from the urban core to suburban areas. There certainly has been a reversion of this trend back to the urban core in some metros, but minimal in other metros.

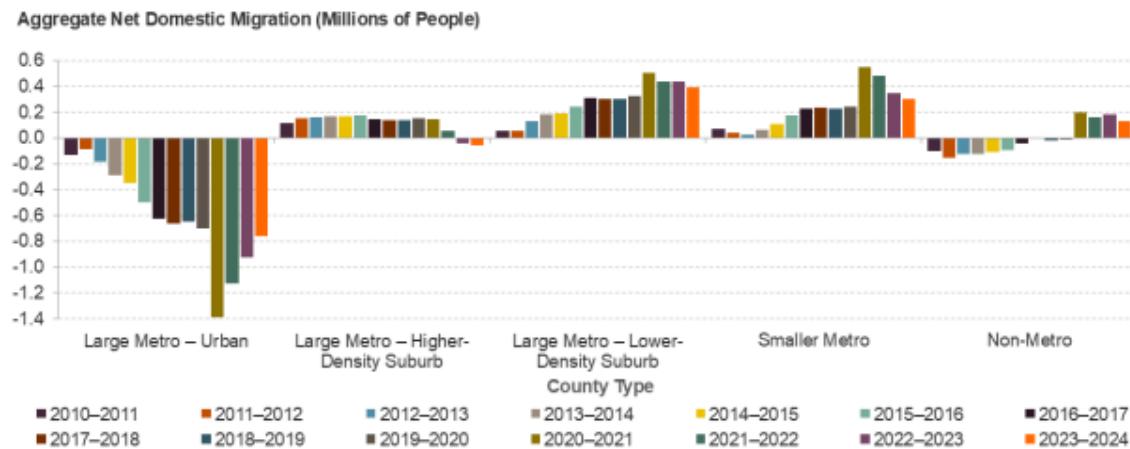


Figure 64 Source: *Harvard Joint Center for Housing Studies*

**This is a local phenomenon within a metro, and to be sure, more Americans by percentage will continue living in major metros, but in more diffuse suburban and sometimes exurban locations.**

Second, during the pandemic, there was a wholesale move of many Americans fleeing urban areas where the policies and politics were perceived to be stifling Americans and the personal freedoms most Americans hold valuable. Florida has been a major beneficiary of this trend, receiving many Americans from the north, especially from New York and Chicago. It's not just people who have been relocating to Florida; it's major employers. Some people have reverted to the north, but the employers are here to stay with lower cost of operation, a more friendly business climate, and greater access to their growing workforce needs.

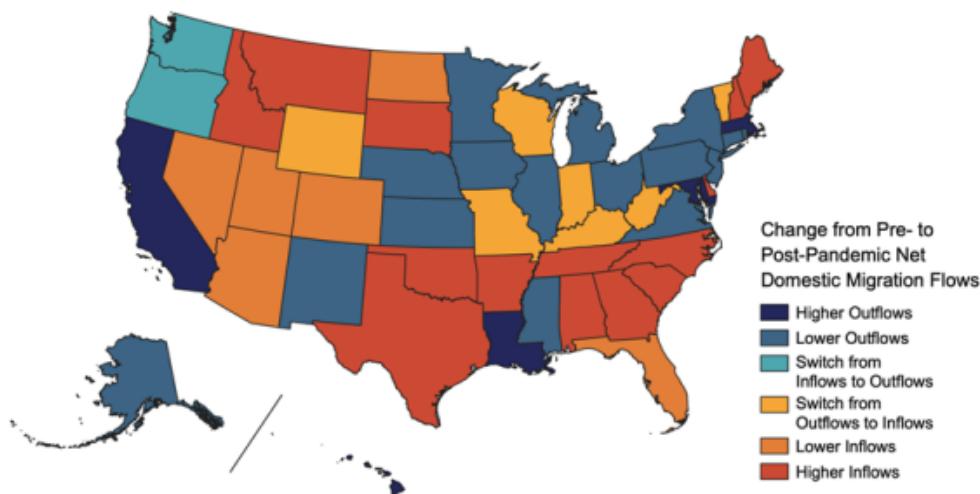


Figure 65 Source: *Harvard Joint Center for Housing Studies*

Likewise, Texas has been a beneficiary of this same trend, although Texas was already the highest growth state in terms of population, employers, and GDP, well before anyone ever heard of the novel Coronavirus. People and employers from all over the country have been flocking to Texas for decades, and COVID catalyzed that in-place trend further. What's been amazing about Texas is how long its growth has persisted even as the scale of its population and economic productivity have soared almost geometrically. If Texas were a country (many of us Texans already think it is and believe in the great "Republic of Texas"), it would be the 8th largest economy in the world with \$2.7T GDP and 32 million people. California is 5<sup>th</sup>, but the gap is narrowing rapidly.

Likewise, there have been other regional beneficiaries, such as Arizona and Nevada, accepting many former Californians and businesses relocating to friendlier conditions. This too was happening well before COVID, but accelerated further.

## 8. Demographics and Other Major Demand Drivers of Virtus Targeted Sectors

As indicated above, most of the trends identified in the original 2006 whitepaper are still relevant today, although their demand for certain property types is expressed differently. In addition, new demand drivers and trends have emerged. As follows is a summary of those drivers for each of the four major Virtus target sectors and their respective underlying property types.

### 8.1. Healthcare

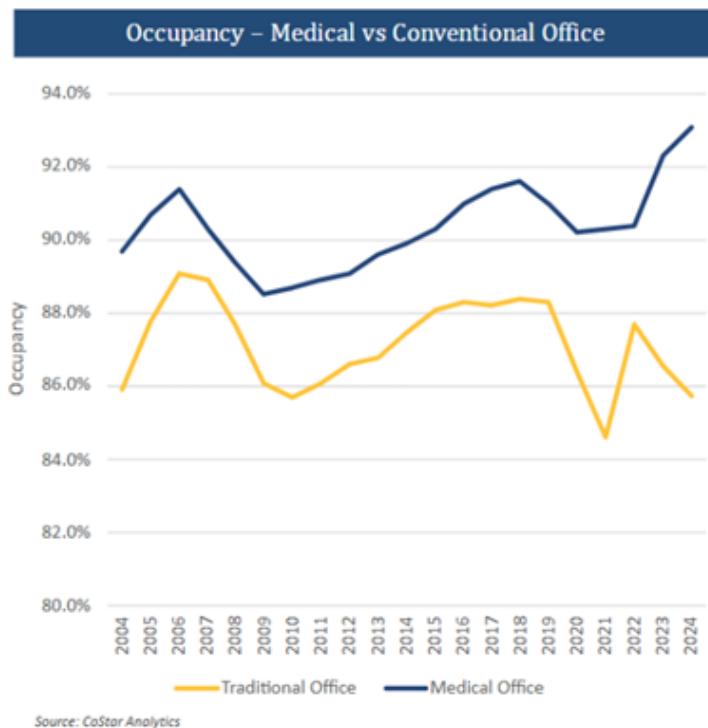
As mentioned previously, tenant demand for healthcare real estate is broadly driven by the aging of the American population, most pronounced by the massive Boomer demographic. However, there are other forces at work that go well beyond just the Silver Tsunami.

#### 8.1.1. Medical Outpatient Buildings

Medical Outpatient Buildings ("MOB"), formerly known as Medical Office Buildings, are the most directly impacted by the massive Boomer population, because according to the Centers for Medicare and Medicaid Services 2020 study (expenses have only increased per capita since then), annual healthcare expenditures per capita for Americans 65 and older is 2.5x that of adults under 65 and spend 3x to 5x that of children under 18. No doubt, EVERYONE goes to the doctor from infants to the elderly, so the reality is ALL demographics are relevant to the need for healthcare infrastructure, such as MOBs. And the need for healthcare delivery is clearly perennial, with no correlation to market cycles or Black Swan events. Even the Great Pandemic, a perfect example of a Black Swan event that was on virtually nobody's radar screen (other than Bill Gates, apparently), actually increased the need for healthcare delivery. **There have been no individual events that have decreased healthcare demand.**

MOBs have traditionally been somewhat correlated to traditional office occupancy, where MOBs slightly outperformed their Basic Food Group counterparts in conventional office spaces. **However, during the post-COVID period, MOBs diverged materially in performance from traditional office.** Looking toward occupancy as a preliminary performance metric, it is clear that MOBs have always had stronger fundamentals relative to traditional offices, but that divergence

has been amplified through the Pandemic, as is seen in the sharp drop in traditional office occupancy around 2020.

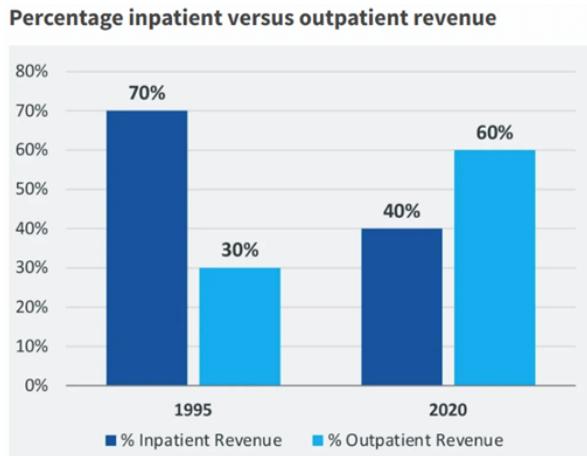


**Figure 66** Source: CoStar Analytics

However, there are a great number of impactful yet disruptive trends making MOB investment more complex than traditional office investment. This is due in part to an abstruse and constantly shifting regulatory landscape. Federal reimbursement rates for procedures are under strong pressure to keep costs contained. Meanwhile, **the entire industry is shifting to a value-based care delivery framework that has upended multiple stable business models attuned to less codified service-based delivery frameworks**. There are also certain healthcare-built space categories tied to specific technologies that can be disrupted, which can also usurp demand for certain specialty property types in healthcare. And although AI will likely not completely remove certain provider categories, AI will decrease the demand for certain provider categories and the built space occupied by those providers (think radiology as an example).

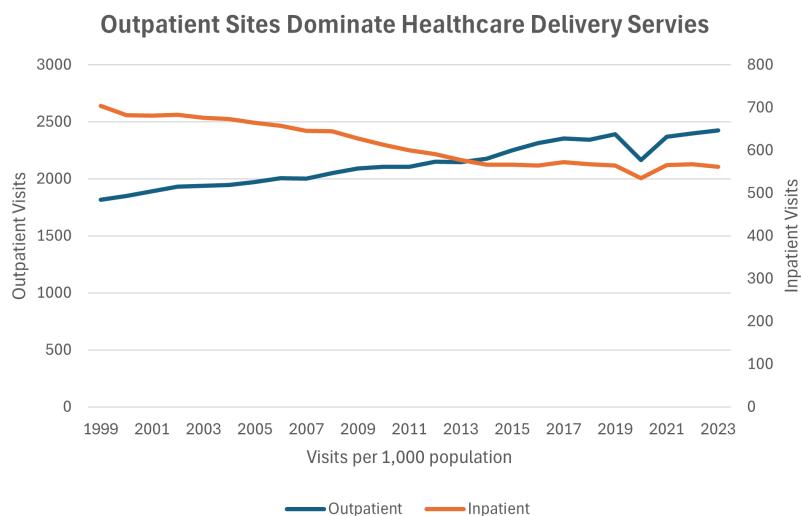
MOB investors need to understand how these trends impact overall demand in the area as well as the competitive power of their tenant base. That being said, there are attractive rewards for investors who engage in proper due diligence processes, considering that MOB tenants tend to be much “stickier” than other office tenants and show very high renewal rates (85% on average). This is partially due to the market loss incurred from relocating a practice and losing their existing customer/client base, but also due to the specialized fit-out requirements most medical practices have and the extensive tenant improvements that go along with them. **In summary, healthcare tenants rarely go out of business because of perennial demand for their services, and switching costs for leaving their space are typically prohibitively high, which leads to a very resilient rent roll in a stabilized MOB.**

In an effort to make healthcare more accessible and convenient, and especially more affordable, healthcare delivery in this country has been moving from inpatient toward outpatient settings for many years, with a large portion (more than 60% by revenue) of healthcare now delivered in an outpatient setting.



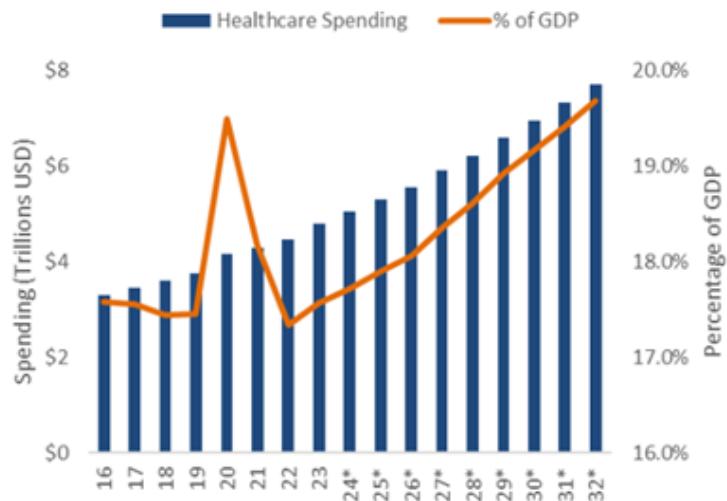
**Figure 67** Source: *HealthCare Financial Management Association*

Regardless of accessibility and convenience, the ultimate driver of this trend is to decrease costs. Because of the high cost of capex and operational costs of inpatient settings, along with Medicare, Medicaid, and commercial health insurers driving patients toward lower cost settings, the momentum toward outpatient settings is irreversible. This is further exacerbated by the low operating margins prevalent in hospital settings. A “healthy” hospital, pun intended, operates at only 5 - 7% operating margins, razor-thin compared to many other industries. This is why the majority of hospitals in this country are operated by health systems that are funded by the public sector and/or philanthropic dollars, such as the myriad of faith-based hospital systems. It’s extraordinarily difficult for a purely private sector hospital operator to survive, let alone thrive, in a low-margin and, what can be, a very volatile business with multiple uncontrollable inputs and difficult collections, despite broader perennial patient demand for your service.



**Figure 68** Source: *Kaiser Family Foundation*

When looking at the nominal projected expenditures and percentages of our total GDP in the U.S., it is daunting. This is why the entire healthcare system is in a constant state of disruption and innovation. **The fact of the matter is, it's untenable for our healthcare expenses to continue increasing at the rate they otherwise would without innovation and efficiency measures to drive down costs.**



**Figure 69** Source: US Center for Medicare & Medicaid Services

The ultimate outpatient trend is, of course, telehealth and other virtual delivery mechanisms, where healthcare advice and a growing number of medical tests can be administered without seeing a healthcare professional in a physical setting. There are also limited cases where healthcare providers come to the patient's home, such as the White Glove Service, et al, that have been tried. Unfortunately, this can often be incongruent with driving down costs, given the logistical challenges and inability of a healthcare provider to efficiently administer to multiple patients in a concise timeframe. One could argue that as health knowledge continues to be disintermediated and more ubiquitously accessible outside of a physical healthcare setting, even demand for outpatient infrastructure, such as MOBs, will decrease. However, the sheer demographics combined with the need to have a literal high-touch of service between a provider and their patient, overwhelm the reduction in physical space needs that one would otherwise expect from greater virtual healthcare delivery. **Most providers view telehealth and other virtual delivery mechanisms as a complement to, not a replacement for, in-person patient visits, procedures, and surgeries in outpatient settings.**

There are many niche property types within the medical outpatient industry, including Long-Term Acute Care Facilities, Surgery Centers, Imaging Centers, and facilities specializing in various forms of outpatient treatment such as Inpatient Rehabilitation Facilities ("IRFs"). Some of these property types are particularly well-positioned to take advantage of the transition from service-based to value-based standards. Virtus is likely to invest in several of these categories, each of which comes with its own risks and rewards. Although there are tactical opportunities by sourcing under-performing properties and enhancing their income through the Virtus value-add strategy, the MOB segment presents a wealth of core and core-plus risk profile deals that offer compelling yields, less leasing risk, and what we usually believe is the most defensive

income stream offered in commercial real estate. One of the benefits of being able to invest across the risk spectrum in MOB is that we become more strategic to our operating partners and the healthcare systems that we also serve. **By being able to offer a more comprehensive and synergistic investment strategy, sourcing has been enhanced across both our value-add and our core strategies.**

**In summary, MOB investment will remain ripe for years to come for those who can stay ahead of the constantly evolving healthcare landscape. Virtus will focus primarily on defensive income streams available in stabilized high-quality buildings in our core and core-plus strategy, while remaining nimble in seeking out higher risk-adjusted return scenarios for our value-add and opportunistic strategy.**

### 8.1.2. Senior Living

One of the evident beauties of the senior living sector is its high rates of clear and foreseeable demand growth. Every potential customer is alive today, we have concrete data supporting when they will be aging into prime demand years, and there is an abundance of them. As annual rates of senior population growth exceed 3.0% (which is over 3x the national growth rate for the entire population), the “Silver Wave” of Boomers reaching old age is at a scale not before seen in the U.S. Additionally, the demand for this product is generally non-correlated to conventional housing fundamentals – especially in the more needs-based parts of the acuity spectrum, such as assisted living.

There are significant opportunities across the senior living acuity spectrum, which is generally categorized into six groupings of properties based on the level of care offered at the property.



Figure 70 Source: Virtus

- Active Adult: Level of Care- **Very Low**
  - Healthy adults with lifestyle focus
  - No medical oversight with multiple facilities
  - Usually single-family homes, condos, or apartments
- Independent Living: Level of Care- **Low**
  - Seniors who are independent but prefer a supportive community
  - Minimal or optional assistance with daily activities
  - Access to dining, housekeeping, and recreational programs
  - Typically, apartments or single-family homes with communal amenities

- Assisted Living: Level of Care- **Moderate to High**
  - Support provided for activities such as bathing and dressing
  - Medication management is available
  - Staff on site for assistance and safety
  - Private apartments with shared dining and activity spaces
- Memory Care: Level of Care- **High**
  - Specialized support for individuals with cognitive impairment
  - Secure environment focused on safety and consistency
  - Structured daily programs tailored to memory needs
  - Staff trained in dementia specific communication
- Skilled Nursing: Level of Care- **Very High**
  - Licensed medical care provided twenty-four hours a day
  - Rehabilitation services, including physical and occupational therapy
  - Appropriate for individuals with complex medical conditions
  - Private or shared rooms in a clinical care environment
  - Mostly funded by Medicare and Medicaid.

With that being said, Virtus has historically found two of the six categories most compelling:

- **Assisted Living ("AL")**, which provides fairly high acuity care to seniors who need assistance with activities of daily living. These facilities are almost completely uncorrelated to traditional housing fundamentals, although local home values may have a small impact on the seniors who need to liquidate their estates to enter a facility. Still, this impact is less pronounced than in lower acuity facilities. AL properties often include Memory Care ("MC") units, which cater to residents suffering from some form of dementia who also require assistance with activities of daily living needs.
- **Independent Living ("IL")** is the other category within senior living that Virtus invests in. Very few seniors can actually afford the exorbitant rates in luxury facilities, which also compete with Class A multifamily and condos for fully independent seniors. Offering lower rates and even services on an a la carte basis significantly expands the universe of prospective tenants to include those who can afford a monthly rent level that is much lower than the costs of all-inclusive high service properties. This segment of the market also has the greatest growth potential if operators can achieve greater cost efficiencies; IL provides a viable living option for the abundance of senior households priced out of private pay AL/MC facilities but unable to qualify for subsidized care.

We would like to note that Virtus focuses primarily on properties that have at least two, if not all three, offerings: IL, AL, and MC. This allows the resident to age in place, which has the following benefits to all parties:

- The resident doesn't have as difficult a transition moving from one unit to another or even one wing to another, compared to having to leave an IL and move to a completely different AL community (big transitions are typically very challenging for most elders);
- Community services and benefits can often be broader, given the size of the property;
- The average length of stay is longer, and thus the ownership has greater rent roll stability and reduced turn costs;
- There are greater operational economies for ownership, which is even more important today, given lower operating margins attributable primarily to enhanced labor costs; and
- There tends to be greater liquidity and depth of demand from the buyer's pool for multi-acute buildings.

Virtus focuses primarily on rental-based models because we have found that tenant demand for entrance fee models where a large fee is collected up-front is too susceptible to the volatilities of the housing market, capital markets, and overall economic health of an area. This is because the senior typically must liquidate assets to pay the hefty up-front fee and ongoing monthly fees to afford these properties.

There are two primary risks of investing in senior living, especially needs-based senior living, such as IL/AL/MC: new supply and high operational intensity. Since senior living typically offers real estate services, a roof over the tenant's head, programming/hospitality, and at least food service, as well as often care services supporting ADLs, the owner charges rent and fees based on all the services provided. **Naturally, this results in revenue per square foot being extremely high, which is why stabilized IL/AL/MC properties have historically typically sold for a premium to replacement cost.** Plus, a developer can often build to very high untrended yields on construction costs ("UYOC"), often 9% - 11%, with significant spread to stabilized cap rates. This, in turn, invites new supply from developers, which in some cases results in tangible oversupply in select submarkets. To combat this risk, Virtus primarily focuses on owning properties where the demand drivers are growing substantially and in high-barrier-to-entry markets where it's difficult for new supply to come online, or we focus on more affordable communities that can be purchased at a material discount to replacement cost, leading to a natural barrier to entry.

Senior living properties consistently showed exemplary returns in comparison to Basic Food Groups until the COVID-19 pandemic rocked global markets. As tenants at these properties are more at-risk to major health complications stemming from COVID, defensive operational expenditures went through the roof while occupancy declined significantly. Due to the elevated services components associated with Independent Living ("IL") and Assisted Living ("AL"), which are illustrated in the chart below, increased operational expenditures can be detrimental to owners and investors alike.

	Traditional Multifamily	Active Adult	Independent Living	Assisted Living	
Average Property Size	50-500 Units	120-200 Units	100-250 Units	50-100 Units	
Average Rent / Month	~\$2,000	~\$2,300	~\$3,900	~\$6,100	
Average Occupancy	Mid-90%	Mid-90%	High-80%	Mid-80%	
Average Resident Turnover	~50%	20-30%	~40%	~45%	
NOI Margin	55-70%	60-65%	~37%	~25%	
Pre-Covid Historical NOI Growth	4%	5-7%	1-3%*	1-3%*	
Average Resident Age	early-30s	72-74 Years	83 Years	85 Years	
Average Length of Stay	2-3 Years	~5 Years	~2.5 Years	~2 Years	
Services	Shelter Activities, Recreation Transportation, Laundry Meals Included in Rent ADL Assistance Dementia Care Skilled Nursing	Real Estate Component <div style="border: 1px dashed blue; padding: 2px;">No Activities Provided No Services Offered</div>	Real Estate Component No Services Offered	Real Estate Component <div style="background-color: #c00000; color: white; padding: 2px;">Services Component</div>	Real Estate Component <div style="background-color: #c00000; color: white; padding: 2px;">Services Component</div>

\*Average historical NOI growth pre-Covid for WELL/VTR SHOP segment. REITs do not break out AL vs IL NOI growth so includes all senior housing subtypes.  
 Source: ASHA, NIC MAP © Data and Analysis Service, and Green Street.

**Figure 71** Source: NIC MAP, Green Street, and ASHA

By far, the biggest challenge of investing in “private pay needs-based senior living,” IL/AL/MC, is the operational intensity of the property. As our CIO often quips, “senior living is an operating business with some real estate around it, while everything else we invest in is real estate with some operations inside of it.” Some of our senior living communities can literally have 10x the number of staff of even one of our larger middle-income housing properties. Think of a full-service hospitality, and then add in labor staffing, caregivers to care for the most fragile members of society. Of course, the big difference between hospitality and senior living is that the latter has evergreen demand while the former is highly cyclical. Regardless, the operational challenges, especially skyrocketing wage pressure, is why Virtus didn’t really make a new IL/AL/MC investment between 2018 and until recently in 2025. Now that the headwinds of COVID are behind the industry, operations and labor have stabilized, new construction starts are anemic, demand is undeniable, and entrance pricing has retracted, Virtus began adding to its senior living portfolio with new investments earlier this year.

Although operational expenditures increased across the board for senior living properties, the needs-based nature of the sector proves to drive continued demand. Increased homeownership prices coupled with an aging population have been the primary drivers in the continued attraction to senior living, leading to an estimated 17.2 million addressable renters in this sector by 2028. Additionally, market occupancy has significantly increased over the last two years due to simultaneous strong demand and weak new supply delivered.

While the fundamentals of IL/AL/MC are as good as we’ve ever seen because of the operational risks, we generally require a higher rate of return for our senior living properties, even stabilized “core” properties, and thus, have only invested out of our value add/opportunistic funds. One area of senior living with strong demographic demand that is relevant to our core and core-plus strategy is Active Adult, specifically acquiring stabilized high-quality assets. These properties are essentially multifamily or BTR communities, but managed and marketed towards the active senior. Once a high-quality Active Adult community is stabilized, the income stream tends to be more resilient and often with higher rental rate growth potential than traditional

### Senior Housing Fundamentals | Primary Markets | 1Q06 – 2Q24

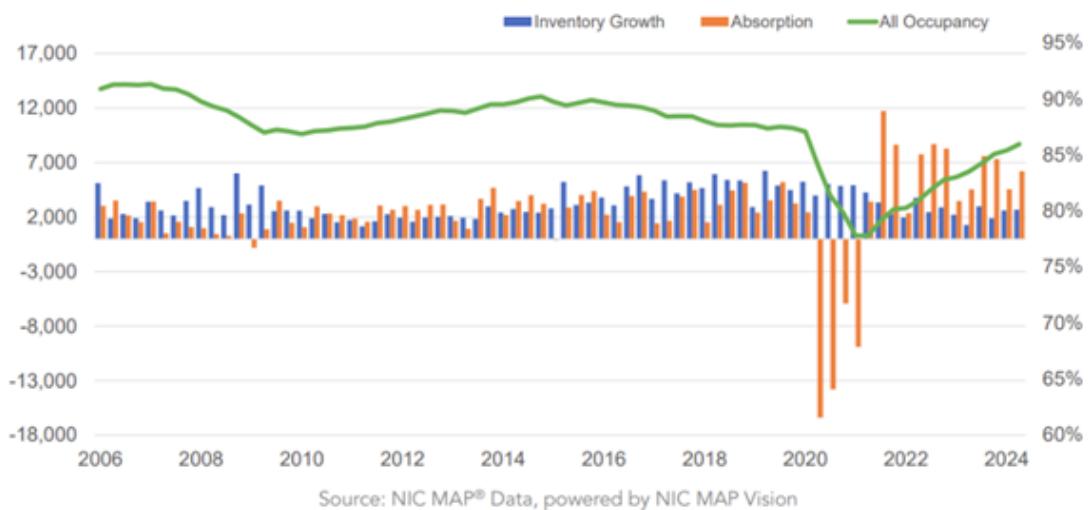


Figure 72 Source: NIC MAP

multifamily, because the average length of stay is 3x longer and turnover costs are materially less. Further, Active Adult has a natural barrier to entry for new construction because typical Active Adult prospective tenants take so long to lease a unit (long sales cycle), stabilizing a new development takes materially longer, which makes development deals difficult to pencil because returns are typically too low to justify development risk.

**While the sector can be dauntingly complex and segmented to newcomers, senior living will continue to be an exceedingly rewarding opportunity for investors who have done their homework, invested in their people, grown their industry roots, and play an active role in quality control and operations.**

## 8.2. Self-Storage

The self-storage industry benefits from multifaceted demand drivers and an extremely diverse customer base. In bull markets, consumers generally purchase more goods, needing places to store the excess. This often includes larger specialty items such as boats and recreational vehicles that can't remain at home. In bear markets or economic downturns, there is more transition with people consolidating households and downsizing or moving for jobs. Additionally, myriad industries and small businesses rely on commercial self-storage for aspects such as inventory management and equipment storage. **The income profile of storage customers is informative for investors: higher-income homeowners, in addition to lower-income renters, are both overrepresented in most storage properties, and it is this “barbell” distribution of tenants that has likely pushed the sector’s outperformance in both good times and bad.**

As discussed above, a useful (yet not completely reliable for strategic investors like Virtus) metric for analyzing a given property type's performance is the examination of REIT performance. As shown below, the major players in self-storage experienced abysmal returns regarding move-in rent growth since interest rates began to climb in 1Q22.

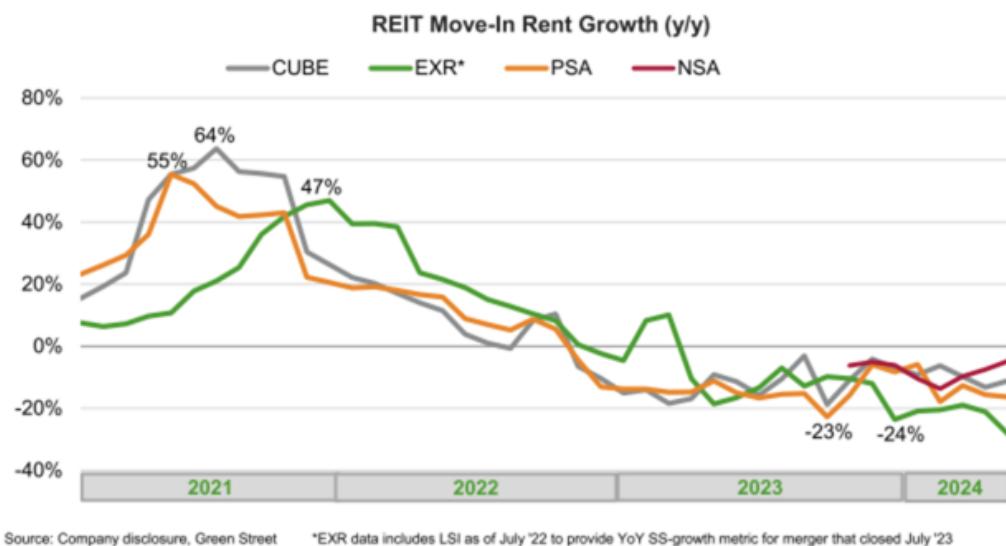


Figure 73 Source: Green Street

Following extensive data analysis and market research, we have found that self-storage has a more correlative relationship with interest rates than we previously held. Although our theory stipulated above regarding multifaceted demand in the storage space during bull and bear markets still holds, we believe this theory is somewhat eroding as elevated interest rates (in comparison to the historically low rates we were used to in 2009-2016) become “the norm” for storage investors. As housing transaction volume was driven to a nearly 30-year low in 2023 (mainly due to interest rates), storage move-in rent growth declined, albeit in a lagging manner.

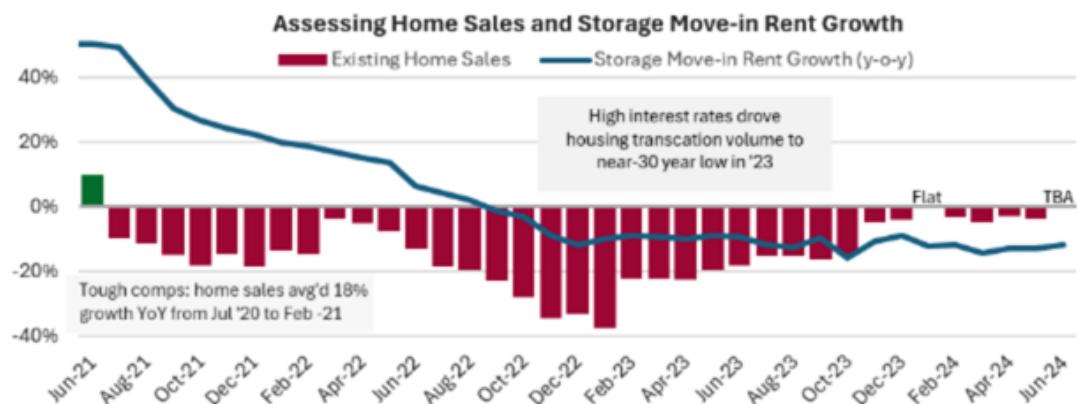


Figure 74 Source: Virtus

That is to say, self-storage demand has become more correlated with housing transaction activity. While the movements associated with for-sale housing activity represent only one of several demand drivers, it's become more relevant, given the expanded supply picture that has grown in earnest over the last decade. Admittedly, the outlook for storage demand in the next few years is quite positive, but Virtus is going to continue targeting tactical opportunities that offer significant advantages over market-rate investment opportunities. For example, Virtus has made or will soon make preferred equity investments or convert distressed office buildings

to self-storage in high-quality locations, both of which strategies reduce our basis and last-dollar risk of the investment.

### 8.3. Education

Education real estate continues to evolve alongside demographic and policy trends. Demand for student housing remains supported by steady college enrollment at high ROI universities and renewed campus life, while early education centers are expanding their footprint as public funding and parental choice drive new facility development across many states. Having said that, the opportunity in Charter Schools has waned. Despite massive macro tailwinds for enrollment and Virtus having had great returns in the space in the past, the high-quality schools and operators that Virtus targets now receive most of their funding from public finance in the form of low-cost municipal bonds and/or philanthropic contributions. So while the top-down trends remain compelling, the investment opportunity no longer is.

#### 8.3.1. Student Housing

Student housing has been a high-performing industry that was once extremely niche; now, myriad institutional investors have “hopped on the train” of student housing investment. In our 2006 and 2012 white papers, we predicted that student housing assets would comprise the largest set of assets in the portfolio. This prediction held for the initial few years following 2012, and the firm has had success in beating our rather conservative projections for capital appreciation and NOI growth while benefiting from strong yields. The yields and NOI growth we have achieved are attributed to our diligence and initiative in finding off-market deals with NOI growth potential; however, we cannot take full credit for the capital appreciation we have achieved. Valuations have been buoyed by new institutional entrants, major players in conventional multifamily, hotel, and hospitality operators trying their hand in the space (with extremely mixed results), and even foreign investors, who accounted for nearly half of deal volume during parts of 2017. However, these same new entrants tendering highly attractive offers for our existing assets have also become competitors for the most obvious deals in the sector. Due to this trend, Virtus has pivoted to a more strategic and selective view over the last decade.

Due to new supply being so impactful in each university micro market, Virtus has made several active pivots through the years. After building one of the largest student housing portfolios in the country from 2010 to 2015, Virtus sold its entire portfolio by the end of 2017 to several large investors, making a foray into the space. The decision was driven by our concerns about valuations and the increase in new supply. While being quiet in the space from 2017 - 2020, we pushed hard into the space as new supply abated and valuations came down. After being extremely active between 2020 - 2024, we became more tactical and measured moving into the 2024 - 2025 school year again due to supply concerns and affordability.

The student housing sector still has an exceptional number of demand drivers, making it attractive. **Enrollment in our target markets is consistently projected to remain strong solely based on the pipeline of domestic students, although international enrollment growth has been a hugely impactful force in both overall enrollment and demand for housing.** In the event

of a downturn, enrollment has historically been countercyclical as graduate students and non-traditional undergraduates have lower opportunity costs for pursuing education and postponing employment. Additionally, many universities we invest in have almost completely ceded over housing services and development to the private sector, indicating further investment opportunities. Finally, the cultural expectations around university housing have largely shifted away from "Spartan" dormitories towards the more tailored and amenity-rich experience that private, purpose-built housing offers. We have seen this trend be taken too far in recent years, especially in low-barrier markets where overzealous developers have chosen to participate in an amenities "arms race". The development boom that began in 2015, retreated immediately after COVID, and is now increasing again, has included resort-style luxury pools, state-of-the-art fitness centers, golf simulators, tanning beds, and a whole host of other frills. Many of these projects have been poor performers for both their developers and their immediate competitors, though they may present us with attractive future opportunities when debt maturities force a sale.



**Figure 75** Source: College House

To summarize, we believe the current student housing landscape is largely about finding a middle ground in both market and asset selection. The major Tier I public universities, which offer the best value proposition to students and their parents, have often been beset by overdevelopment and overvaluation, since many of these universities are found in low-barrier-to-entry college towns. We generally avoid low-value Tier II or Tier III schools, especially certain private universities, that are ripe for disruption from other education models in an era of greater focus on student debt and the ROI of a college degree. Not to mention, the enrollment trends in smaller secondary universities have been lower, as can be seen below, with lower enrollment growth and year-on-year occupancy growth.

Enrollment Threshold	Avg. Enrollment	Avg. Enrollment Growth %	# of Markets	2025 Occupancy	YoY Occupancy Growth %	2025 Avg. Rate	YoY Avg. Rate Growth %
Tier 1: >25K	44.9K	+3.8%	106	92.3%	-0.4%	\$1062	+2.9%
Tier 2: 10K-24.9K	16.3K	+0.5%	107	91.1%	-0.3%	\$806	+2.7%
Tier 3: < 10K	7.4K	-3.3%	68	84.9%	-2.6%	\$795	+7.5%

**Figure 76** Source: College House

Similarly, investors must be mindful of finding assets that have a truly compelling value proposition for students – avoiding overpaying for grand new assets that student budgets won't support, but also steering clear of properties that have been pushed toward obsolescence by new development.

Today, Virtus is more highly targeted with its student investments. Of the nearly 4,000 schools in the U.S., the Virtus student housing team only considers ~ 65 universities as investable, and at any given time, they only have 8 – 12 target markets. These target markets move around based on supply dynamics, affordability, and positioning of the university. The affordability factor has become a much greater point of analysis in recent years as rents skyrocketed in the most desirable markets over the last several years after COVID, when construction starts retreated, yet enrollment grew at select universities that Virtus targets. This affordability issue was exacerbated in urban university markets, especially those that saw substantial new deliveries of multifamily units. Historically, as new POSH/PBSA supply came online, it would pull students from traditional multifamily; however, the reverse occurred temporarily the last two years, because concessions in market-rate multifamily were so significant, the gap widened to the point that some students were willing to live farther away from campus and deal with renting by-the-unit rather than by-the-bed.

For building typology and location, we tend to focus on three categories: 1. Class-A, usually high-density Type I construction in an irreplaceable location, what we have long referred to as a "fall out of bed" location due to its immediate proximity to campus; 2. Below replacement cost value-add product that is a meaningful discount to the class-A, but still purpose-built and of institutional quality, usually on the university shuttle route; and 3. Cottage-style student housing, what we refer to as student neighborhoods, with individual homes or duplexes/triplexes, yet with all the student amenities and still rent-by-the-bed (think BTR for students with tons of amenities). These categories tend to have the most perennial demand and can defend well against new supply.

How we play in different universities and by different risk profiles varies widely. To mitigate the supply risks, it tends to be quite surgical, rather than blanketed.

**What separates Virtus from the other players in our current market is our in-depth specialization in the space, where we have superior market knowledge simply by being around longer, as members of our team started in the student space in 1992. Additionally, the delta between our firm and other key players materializes through our willingness to spend more time down**

**in the markets and working closely with university officials and on-the-ground property personnel to genuinely understand the university's needs, student psychographics, and the market risks that may not be apparent to the naked eye.**

### **8.3.2. Early Education**

Early Ed centers, often referred to as daycare centers or preschools, are schools that provide care and education for children from birth to five years old. These centers generally offer structured programs designed to support holistic child development, which includes cognitive, social, emotional, and physical growth. Quality early education is crucial for child development, leading to better educational outcomes, higher graduation rates, and improved social skills. Critical brain development occurs in early childhood, helping to close the achievement gap between different socioeconomic groups and preparing children for future academic success and social integration. Another critical function of Early Ed properties is that they serve as an outsourced daycare that keeps a child safe during the workday, so that the parent(s) may be productive in the workplace until the child reaches primary education.

The average cost for early education in the U.S. varies significantly based on the type of care, the child's age, and geographic location. However, we felt it would be prudent to include some key data points about this property type:

- Preschool Costs: as mentioned above, the spread in cost across the U.S. can vary widely, with most state-level averages ranging from \$4,460 to \$13,158 per year, which shakes out to approximately \$372 to \$1,097 monthly.
- Center-Based Care Costs: for infants, the cost of center-based care ranges from \$5,760 in cheaper states to \$24,081 in more expensive markets like Washington, D.C.; for four-year-olds, the cost ranges from \$4,493 to nearly \$19K yearly.
- **General Childcare Costs: On average, families spend about \$12,120 annually on infant care and \$10,000 per year on toddler care.**

The above market is experiencing robust growth driven by changing family dynamics and workforce patterns. Even though the U.S. fertility rate is still significantly below the birth replacement rate of 2.1 children per mother, the utilization rate of outsourced childcare continues increasing due to certain demographic and labor force participation for American families.

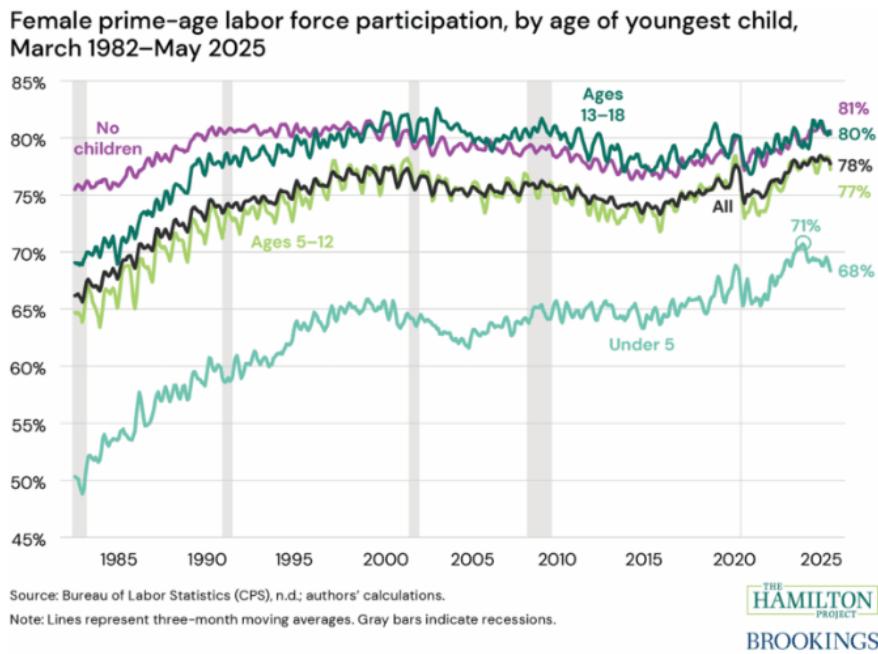


Figure 77 Source: *Hamilton Project using BLS data*

Beyond the increased utilization rate of outsourced childcare, the primary driver of outsourced early education is the increasing labor force participation of parents, particularly mothers. The labor force participation rate for mothers with children under three years old nearly doubled from 1975-2011, which shows a significant increase in workforce engagement, indicating a higher demand for quality childcare services. Additionally, the rise in single-parent households has augmented the need for early education services. In the U.S., the percentage of children living with married parents dropped 12 percentage points from 1980-2021, with about a quarter of American children now living in single-parent homes. Additionally, with the increase of dual-income households (66% in recent years compared to ~ 50% in 1980), outsourced childcare is indispensable, especially considering this trend mainly reflects a necessity for two incomes rather than a choice.

#### Living arrangements of children: 1960 to present

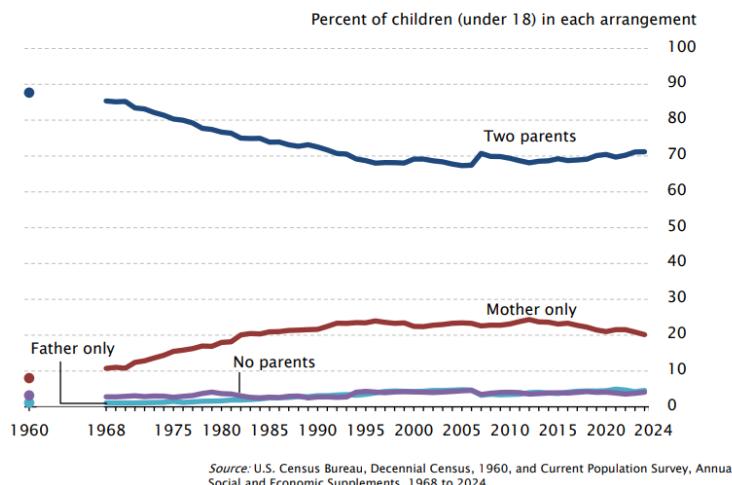


Figure 78 Source: *U.S. Census Bureau*

Demand for Early Ed services remains consistent regardless of economic conditions, as children continue to be born or are brought into the U.S. and require both care and education. Early Ed supports the workforce by enabling parents to work, which is crucial during economic downturns when dual incomes become increasingly critical. The need for a skilled Early Ed workforce ensures steady job demand, while government support and funding further contribute to the sector's stability and growth potential, making Early Ed resilient to economic cycles.

After a perfunctory decline in total enrollment during the early days of Covid-19, when many schools were affected by smaller operators closing or being acquired by larger operators, demand for outsourced childcare has continued its previous long-term growth trajectory. Although the market is growing, it remains highly fragmented, with significant distinctions between large operators and independent providers. For example, nine out of the top eleven for-profit chains by capacity are now backed by private equity firms. These large chains are primarily partnered with enterprise PE firms to acquire school operations, but they need real estate partners to fund their facility's needs. Due to the increased economics of their roll-up strategy, these operators often prefer to allocate their capital efficiently by investing in the operational aspects of their business ("OpCo"). The result is that they typically do not own their real estate.

In contrast with these institutional operators, most Early Ed centers are currently managed by smaller operators. Although they offer more flexibility in their operations and curricula, these smaller entities often face challenges with regulatory and licensing burdens, standardization of best practices, and especially accessing capital for growth. These entities usually have lower valuation multiples than their institutional counterparts, which presents significant opportunities for consolidation, as large operators are increasingly acquiring smaller centers to achieve economies of scale and improve operational efficiencies. We believe the current market dislocation, influenced by macroeconomic and broader capital markets uncertainties, has created opportunities for acquisitions at attractive valuations, particularly for larger transactions. This should allow investors in the present market to capitalize on mispricing and acquire valuable assets at lower costs.

**At Virtus, we have determined that Early Ed opportunities are the most attractive when they are purpose-built, which are typically of higher physical plant quality and situated in more ideal locations compared to repurposed retail facilities. There are multiple transaction types we consider in the Early Ed space, including a sale-leaseback, operator takeover, and build-to-suit ("BTS") properties. Regardless of the transaction type, Virtus puts a large degree of emphasis on purpose-built schools that are of high physical plant quality in upper-middle-income and upper-end submarkets. This elevated quality attracts discerning parents and gives the operator more flexibility and pricing power to effectively manage the school.**

#### **8.4. Middle-Income Workforce Housing And BTR**

Middle-Income workforce housing, or quality affordable housing for the mass renter market, has become a primary focus for Virtus in the last ten years. Virtus has long suspected that there

are significant needs-based opportunities within the nation's housing stock that offer better risk-adjusted returns than conventional multifamily. However, unlike more obvious asset classes like self-storage, it is difficult to define how such a subsector can be identified and/or demarcated. Even seemingly clear-cut concepts like "affordable housing" are somewhat porous and refer to a variety of different kinds of projects, especially depending on who you speak to. That being said, Virtus has expanded into assets we are calling middle-income workforce housing in recent years with great success.

How do we effectively define middle-income workforce housing, and why is it a distinct asset class? In essence, these assets are the result of growing construction costs and stagnating incomes. Even in the most attractive markets, it is simply not feasible to develop market-rate products that offer rents attainable by median-income renters.

As we noted in our previous white paper, the total addressable market (TAM) for middle-income workforce housing is only increasing as time goes on. Unfortunately, the American housing crisis has not abated, despite significant growth in new construction. As is evident in the charts below, both low and middle-income renters are experiencing an increase in housing cost burdens. These factors create a compelling environment for middle-income workforce housing investment, should you choose a prudent and experienced investor.

#### Renter Cost Burdens Are Rising Fastest Among Middle-Income Households

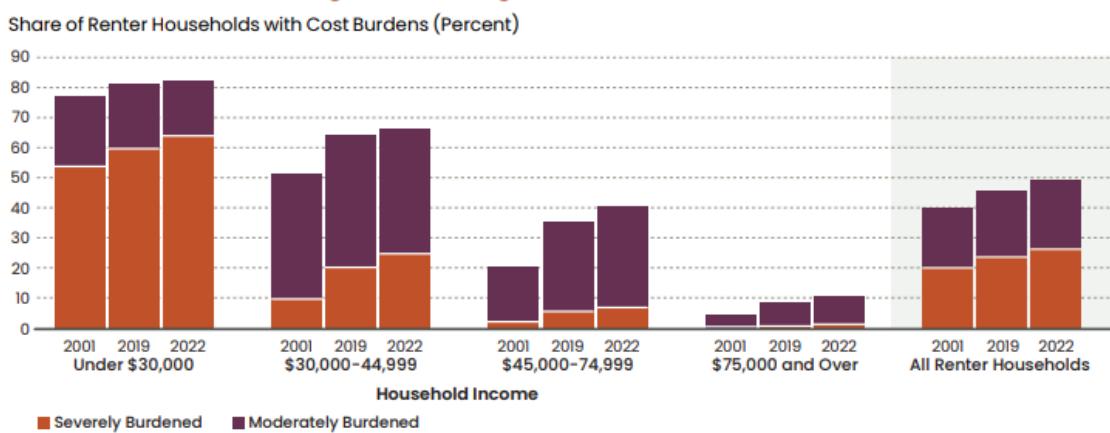


Figure 79 Source: [Joint Center for Housing Studies of Harvard University](#)

Additionally, Virtus has been pursuing BTR properties that target middle-income Americans to supplement our workforce housing strategy. An enormous window of opportunity has opened in the past decade for low-rent supply; as we can see below, properties offering rents under \$1,000/month have substantially decreased since 2012.

Coupled with what we officially consider to be middle-income workforce housing, BTR can offer cycle-resilient returns during times of economic distress (especially due to the relatively small existing pipeline of low-rent units), but the reality is there's such limited product that is both affordable and well-located, given the realities of today's development costs.

To further illustrate what we mean by middle-income workforce housing today, we target institutional quality properties typically 200 units and larger, whose rents are affordable primarily to grey collar tenants, such as first responders, educators, healthcare professionals, public sector workers, etc.

### The Rental Stock Is Shifting Toward Higher-Rent Units



**Figure 80** Source: *Joint Center for Housing Studies of Harvard University*

How do we define affordability? Simply put, we require a minimum 3 to 1 income-to-rent ratio to qualify a renter for each unit in the property. If you look at broad definitions of affordability, much of the industry and several large investors in the space define middle-income workforce housing as rents affordable to people earning between 80% and 120% of the area median income of the targeted metro, as measured by the Department of Housing and Urban Development ("HUD") household income. We tend to segment our strategies tighter than that, targeting renters in certain categories between 60% and 80% AMI, and 80% to 120% AMI. This is informed by the dynamics of the local market, both in terms of rent-to-income ratios and some of the discrepancies in how HUD measures median income. To illustrate by extremes, for the Miami-Miami Beach-Kendall, FL HUD Metro FMR Area, HUD displays Median Family Income as \$87,200 per year, which means if you're targeting rents affordable to a renter earning 80% of AMI, or \$69,760 per year, they could only qualify for an apartment up to \$1,938/mo (\$69,760 divided by 12 months divided by 3 to achieve a minimum 1:3 rent-to-income ratio). For those of you who have sought apartments in the Miami MSA in recent years, you know that something less than ~ 2,000/mo is almost non-existent, certainly any options that would allow a first responder or healthcare worker to live in dignified housing in the community they serve. Contrast that to another MSA of roughly the same size population, 6.4 million people, the Washington-Arlington-Alexandria, DC-VA-MD HUD Metro FMR Area, which indicates a Median Family Income of \$163,900 per year. Using the same calculation, a renter earning 80% of AMI, would be earning \$131,120 per year, and could thus afford an apartment up to \$3,642 per month, almost double that of Miami! I don't think anyone believes incomes and cost-of-living in D.C. are nearly double that of Miami.

One has to look beyond these headline numbers to really target the more resilient middle-income renter, and really, it comes down to a submarket-by-submarket analysis, rather than using broad assumptions across an entire MSA. This is where our data science team has become really helpful in the last several years, using our proprietary data warehouse to recognize patterns and identify submarkets, and sometimes micromarkets, that should help our middle-income housing team optimize for affordability, immigration, sustained demand, and new supply risk, all of which inform future occupancy and rental rate growth trends.

Without getting too much into the sausage-making, simply put, we invest in high-quality assets typically built after 2000, whereby we can provide high-quality, affordable housing that allows essential workers to live in the communities they serve, without being rent-burdened. There are multiple ways to play this as we've done through the years, from acquisition to value-add, ground-up development, public-private-partnerships, stabilized core deals with a moat from new supply, distressed acquisitions, or preferred equity (very active in recent years).

**Middle-Income workforce housing is particularly compelling because not only is tenant demand more stable during downturns than higher-end multifamily, but rental rate growth potential is generally higher throughout the market cycle.**

This brings me to another question I've been asked many times through the years, around the growth in investor demand for these sectors, and has that reduced their potential for driving alpha from when they were still considered "niche?"

## **9. What Are Niche Sectors Today, What Are Not, And Does It Matter?**

This is often the question, or something like it, that I get from investors or I get asked to discuss on a panel at a conference. The presumption is that niche equals alpha compared to more "institutionalized" sectors. **There's some truth to that, but the motivation to move into the Virtus targeted sectors originally in 2006 was primarily around neutralizing uncontrollable risks, so we could have more predictable outcomes and thus improved risk/reward ratios throughout market cycles, especially during periods of contraction and downturn.** No doubt, we felt that in addition to targeting cycle-resilient sectors, we also wanted to target sectors that were less understood and less trafficked than Basic Food Groups. That way, we could develop an edge in understanding the nuances and idiosyncrasies of these differentiated sectors and exploit the opportunities within them.

Throughout the years, we've had a constant research process designed to uncover and consider emerging property segments and strategies that could meet the Firm's North Star of cycle resilience. After two decades of ongoing research, we've certainly uncovered new segments or sub-strategies, such as what's now referred to as life sciences, especially cGMP facilities, or specialty healthcare like behavioral health, substance abuse ("SUDS"), or inpatient rehab facilities ("IRF"), to name a few. We've also found derivations of existing property types, such as microunits or co-living within the residential sector. I often laugh when I hear of industrial outdoor storage ("IOS") as a new or emerging sector, because we've owned self-storage facilities for many years, and often we'd use adjacent unimproved property to store commercial vehicles and heavy equipment, but self-storage owners have been doing that for years. Admittedly, it has been rare in recent years to uncover a wholly new form of built space investment, but there are always new opportunities to explore, such as improved construction techniques (see our paper from 2021 on this subject: [link](#)), or new ways of creating new high-quality affordable housing, such as when we invested in the first residential public-private-partnership in the state of Texas in 2013, what's now widely utilized and referred to as the Public Finance Corporation or "PFC" structure where a developer can get a nearly permanent property tax abatement in return for leasing a certain percentage of units to tenants earning 80% of AMI or less.

**While we will always continue exploring new ways to deliver better outcomes within a cycle-resilient built space framework, it's hard to argue with Solomon's axiom, "There is nothing new under the sun."**

The next big question that comes up from investors is that since there are so many more players who have entered the Virtus targeted sectors, does that mean the alpha is gone because they're already more institutionalized?

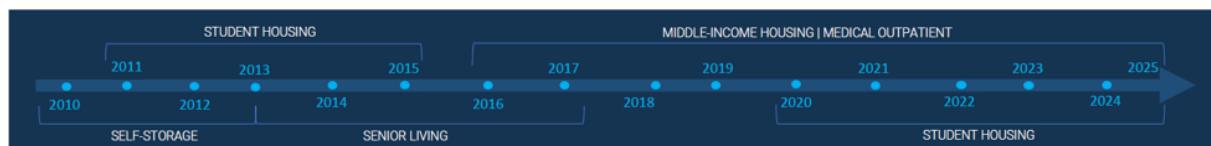
## **10. With All The New Entrants Into Niche Property Types, Is The Alpha Now Gone?**

Ever since we began investing in the Virtus sectors over 19 years ago, there has been a steady increase in the number of players entering those sectors. It has ranged from smaller players to some of the largest, most sophisticated investors in the world. In fact, Virtus has sold assets and especially portfolios, to some of these mega-players as their first entry into the asset class. There are pluses and minuses to all these new entrants. **The negatives are that new capital chasing deals eventually drives up valuations and entrance pricing, as well as increases new supply risk. Further, we've seen new entrants come in and agree to certain investment terms that are more developer or operator-friendly friendly putting more risk on the investor and reducing investor economics. That can often set market expectations with counterparties.**

The positives of new entrants are as follows:

1. Greater liquidity was one of the main risks of investing early days in these sectors. There was always concern that even if the property performance was resilient, how do you get out (who do you sell to), especially if there's a liquidity crunch? That has changed materially, and if the recent transaction volume of Basic Food Groups versus cycle-resilient sectors post Great Tightening is instructive, it appears cycle-resilient sectors are now MORE liquid than Basic Food Groups during periods of distress.
2. Related to increased liquidity, there has been a significant increase in debt availability from all different types of lenders. In the distant past, some of the biggest lenders to Basic Food Groups wouldn't even bother with some of the Virtus sectors. We often had to cajole community and regional banks to lend on our self-storage assets, often with recourse, and it took a while to get FNMA and FRMC to recognize student housing as a viable residential sector they should be lending on in a way that was commercially acceptable to borrowers. As of this writing, the majority of lenders provide debt to at least some of our targeted sectors, because the landscape has grown so much, and they'd likely be out of business if they were just doing new originations within office or retail.
3. As new entrants have come into our targeted sectors, almost inevitably, they underappreciate the idiosyncratic factors and operational nuances of these property types, which have created several distressed opportunities for us to acquire good real estate that needs a different business plan and execution model. This is one of the reasons we've seen so many new groups, including name-brand large investors, enter and exit at least one of

our targeted property types, and not with the desired outcome, despite the good fundamentals of the sector. Even today, as I travel around the globe visiting with LPs, asset managers, and other fund managers, these sectors are still largely misunderstood.



**Figure 81** Notable pivots by property type  
Source: Virtus

**Table 1** Sector Exposure by Year (%)

Year	Middle-Income Housing	Education	Student Housing	Medical Outpatient	Life Sciences	Self Storage	Senior Living	Active Adult
2012			66.2			25.9	8.0	
2013			38.5	7.3		11.9	42.2	
2014	11.8		19.7			9.1	59.4	
2015	3.0	3.1	8.2	3.5		1.8	80.3	
2016	12.8		18.1			2.0	67.1	
2017	71.5			25.2			3.3	
2018	17.4	12.2		25.3		5.3	39.8	
2019	79.8			20.2				
2020	27.3		29.5	35.1	4.8	3.3		
2021	47.8		17.5	22.4	12.4			
2022	55.8	8.0	10.2	6.6	19.4			
2023	36.6		30.1	23.6				9.6
2024	15.1	26.3	51.0	5.5		2.2		
2025	65.0	27.0				8.0		

While a plethora of new entrants can definitely impact valuations or supply risk in some of the Virtus targeted sectors temporarily, overall, we view new entrants as a net positive in the long term. This is exactly why Virtus has exclusively raised diversified funds for the last 14 years. When there's a temporary disruption in a sector or sub-strategy, we are not shy about pulling away temporarily and investing in another one of our targeted sectors with more compelling risk-adjusted returns, as shown in the figure above. We don't always get it right or time it perfectly, but the vector of our pivots through the years has been largely accurate.

**To conclude, without question, alpha still exists in these sectors for the most capable investment managers and operators, and the potential risk-adjusted returns of these sectors can be superior to a Basic Food Group or other more cyclical real estate investment strategy.**

## 11. How Are We Looking Ahead?

While we have achieved enormous success in our primary property types and have built an investor base that looks to us for expertise in managing idiosyncratic risks in these categories,

we would not be able to run the Firm with confidence if we were not devoting significant resources toward ensuring that we are always at the forefront of responsible investment. We operate under the axiom that an organization must evolve, or it will die. Finding new property types, or even subsectors of our existing business line, is just as central to our firm's DNA as the specific lines of business in which we currently operate. We are constantly in the process of finding entirely new asset types to study, define our views, and then potentially build internal resources to pursue.

We have additionally put resources into opportunities that we ultimately concluded were promising but not right for our investment needs. For instance, we underwent a deep exploration into the Single-Family Rental ("SFR") space immediately before our 2018 white paper. We found that although the sector has deep runway in consolidating and institutionalizing, we do not believe the valuations and yields currently available (even in attractive markets) offer a favorable spread compared to less risky and more historically proven forms of rental housing. We have also considered what appears to be traditional property types, but with a more sustainable tenant base, such as government-tenanted office space. We declined investing out of concern for appropriation clauses in most leases, often poor quality of real estate, and modest rental rate growth. Although it is crucial to note that we do not consider these efforts to be "wasted work," because they may form the backbone of a future effort if we conclude that circumstances formerly preventing our involvement have changed.

There are several areas we are presently researching. Two examples would be infrastructure and shallow bay industrial. Within infrastructure, our focus is especially on social infrastructure, including healthcare, education, and community facilities that meet public needs and can often be developed or operated through public-private partnerships. These are areas where long-term demand is clear, returns can be stable, and our experience in purpose-built assets translates directly. On shallow bay industrial, we continue to see opportunity in smaller, multi-tenant service and last-mile buildings close to population centers. These properties tend to stay full across cycles, serve essential local businesses, and benefit from limited land and zoning supply. With the rise of onshoring mentioned earlier in the paper and reiterated in figure 83, the demand for smaller industrial spaces is only going to increase, and we are studying this intently.

SSB Assets Boast Lowest Vacancy Through Market Cycles

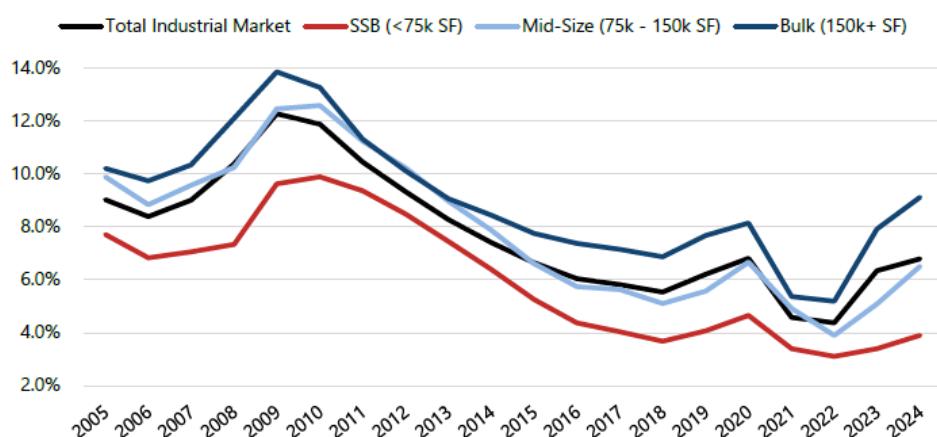
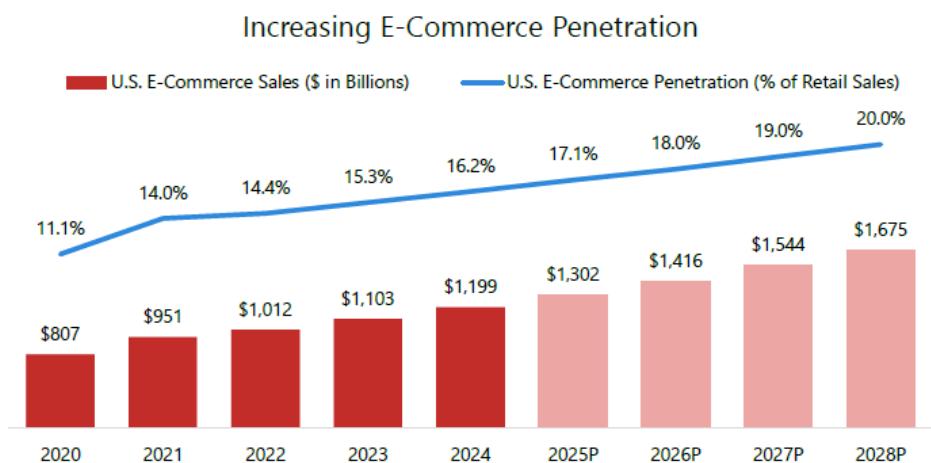


Figure 82 Source: Rectangle Group using CoStar data

It is a constant iterative process for us to consider entirely new categories or subsectors of our existing property types, and this process is constantly under review to ensure efficiency and accuracy in our diligence. In the healthcare space, we have evolved our targeted strategies and have targeted or made investments in post-acute care centers, ambulatory surgery centers, biopharma facilities, and rehabilitation or behavioral health centers. For alternative multifamily, we are still exploring a myriad of localized programs to yield affordable housing from both a public-private and market-rate perspective. We are also incessantly pursuing opportunities in the “smart building” industry, which involves buildings made from innovative construction techniques such as off-site fabrication or modular construction. There are also myriad design trends that we have studied in the past, like micro-apartments or co-living, and concluded whether and where these may be viable. We hold the common belief that these trends will have “arrived” when they are embodied into standard industry practice, but we see an abundance of upside in the interim when they are simply “good ideas” before the inevitable time they become indistinguishable from conventional housing.



**Figure 83** Source: [Rectangle Group using eMarketer data](#)

**In every case, we are mindful that we cannot simply pursue “new” trends, but must find sectors that truly benefit from long-term, unabated growth and resilience.** We will be the first to admit that this can be quite difficult to meet regarding our four guiding investment criteria referenced at the outset of this paper. The majority of innovative trends impacting real estate in recent years, especially in traditional property types, have not been forces creating demand for new property types. This is apparent in retail trends as of late, where e-commerce takes a greater market share and pushes more staid brands like Sears and JCPenney into obsolescence. It is also manifested in trends such as coworking, which makes more efficient use of office layouts, or even Airbnb, which has unlocked a truly disruptive amount of space in the hospitality sector. While these trends are typically lucrative to their direct agents, they do not necessarily create tailwinds for the entire sector. Accordingly, Virtus will continually steer clear of fads and unsupported trends that conceal spatial headwinds beneath the momentum of their buzzwords.

Our guardrails are straightforward. We look for demand that lasts, supported by aging populations, childcare needs, migration into strong metros, and the ongoing shift of care and commerce closer to households. We avoid places that can be overbuilt quickly and favor locations where power, permits, or land, rather than optimism, limit new supply. We insist on prices we can defend and more than one way to win, and we focus only where our operating depth gives us an advantage. This approach has helped us manage risk across cycles, and it remains our plan as we carefully consider expansion into areas such as infrastructure and shallow bay industrial, while continuing to grow in healthcare, education, storage, and middle-income housing.

Nevertheless, we will be unyielding in constantly scanning the horizon for new opportunities that fit into our existing family of investment domains. The coming years will undoubtedly find us identifying new niches within existing business units while simultaneously seeking out entirely new opportunities.

## 12. Conclusion

Real estate, at its core, is a people business because most people spend most of their lives in the built-world environment. The number of households, their ages, incomes, and mobility - and the ways they learn, seek care, work, and consume - are what ultimately determine whether space is needed, where it is needed, and how it should be configured. This paper's central point is that those inputs are changing in durable ways, and that investors who treat demographics and macro conditions as first-order signals are better positioned to allocate capital through cycles.

Virtus has always focused on this premise since the first iteration of this research in 2005 and 2006. The themes identified early in our history have not only persisted, but they have matured into investable demand for the property types that define Virtus today. Aging cohorts translated into a sustained need for healthcare services and the facilities that support them. Large generations moving through life-stage transitions drove demand for education infrastructure, rental housing, and storage as mobility and household formation evolved. In hindsight, the most important aspect of those early calls was not any single prediction, but the decision to anchor the platform in life-cycle demand rather than discretionary real estate narratives.

That anchor helped the portfolio behave with greater predictability than the traditional sectors the firm initially targeted. Across periods of volatility - whether driven by operating shocks or capital-market repricing - needs-based real estate has generally maintained occupancy and cash-flow continuity better than sectors dependent on discretionary spending or business growth. The performance and resiliency profiles highlighted in this paper are consistent with a simple idea: when the use case is essential, and supply is constrained by real-world friction, cash flows are less vulnerable to sudden demand air pockets.

At the same time, resilience has never meant complacency. Demographic demand expresses itself differently as the world changes. Technology alters delivery models in healthcare and education. Migration reshapes regional labor markets and household growth. Affordability pressure changes what 'attainable' looks like, and it influences rent growth. Even within our favored sectors, local supply cycles, operating-cost shocks, and changes in regulation can shift

the risk-reward calculus quickly. Virtus therefore, treats strategy as adaptive: we adjust pacing, markets, property subtypes, and even our position in the capital stack as conditions evolve.

Adaptation is also where differentiation increasingly lives. As more institutional capital recognizes the same demographic tailwinds, headline sector selection becomes less of an advantage. Winning requires translating broad trends into granular decisions - selecting submarkets where demand is growing faster than deliverable supply, working closely with property-level team members who can execute in labor- and service-intensive businesses, and maintaining a basis and structure that can withstand unforeseen disruptions. Our process is designed to keep the demographic compass in view while allowing the portfolio to rotate toward the most attractive expressions of those themes at any point in time.

Looking forward, the demand for built space will continue to be shaped by the intersection of demographics and macro forces, not by either in isolation. Aging, shifting household formation, and migration will remain powerful undercurrents, while interest rates, technology (including AI-enabled services), and policy will influence the timing, pricing, and design of that demand. Virtus will keep investing in the research, data, and relationships required to stay current on those shifts - and to identify new niches that fit our framework without chasing fads.

**In short, Virtus intends to keep doing what has worked for the last two decades: start with the macro context that translates secular trends into durable demand, invest in data and domain expertise to pattern recognize for appropriate pivots, look in the mirror and learn from mistakes, and above all, execute with excellence by focusing on the people occupying and operating within our built-world environment.**

#### About The Authors:

- Terrell Gates is founder and CEO of Virtus Real Estate Capital. He has been writing this paper series on demographically driven real estate since 2006.
- Dr. Nitish Kumar is a Research Specialist at Virtus who assisted with this 4<sup>th</sup> iteration of the paper.