

### Key takeaways

- There has been a fundamental change in the NFI-ODCE's exposure to underlying property types.
- Core real estate is experiencing an unusual drawdown period, primarily due to valuation declines in the higher interest rate environment.
- There has been a material buildup in redemption queues of the NFI-ODCE funds.

### CONTRIBUTORS

DEREK PROCTOR  
COLIN HILL  
LAUREN GIORDANO

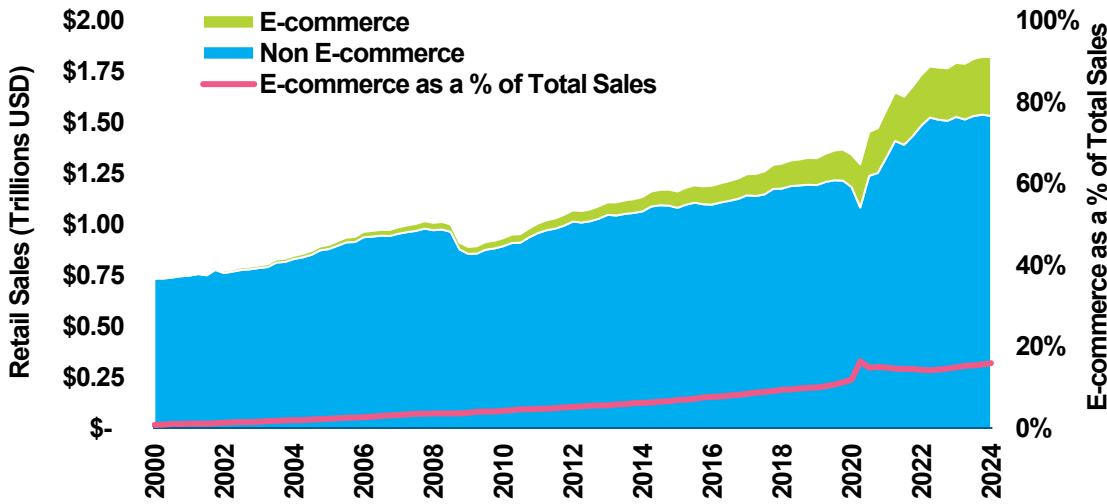
### Introduction

Recently, three key trends have gained prominence within core real estate, shaping the market and influencing investors' portfolios. This research note aims to briefly describe these trends and their impact within the core real estate asset class. Throughout this paper, we use the NCREIF NFI-ODCE as a proxy for the core real estate market given that the funds it is composed of are used by many institutional investors to provide exposure to core real estate.<sup>1</sup>

<sup>1</sup> The NCREIF NFI-ODCE is a capitalization-weighted, gross of fee, time-weighted return index consisting of roughly 25 open-ended core equity funds. Open-ended funds are generally defined as infinite-life vehicles consisting of multiple investors who have the ability to enter or exit the fund on a periodic basis.

### A fundamental change in property types

Starting in 2015, the property type composition of the NFI-ODCE began to experience a fundamental shift. The early stages of the rise of e-commerce accelerated investment in the construction of new industrial distribution centers to keep up with demand from large online retailers and logistics companies (see Figure 1). At the same time, large non-US investors were slowing down their pace of investment in large office buildings in US gateway markets. ODCE fund managers observed diminished capital flows into office properties, making it more difficult to justify the relatively higher cost of operating and maintaining office buildings. Over the next three to four years, the rapid expansion of e-commerce began to pull capital flows from the retail property sector as new online retailers took share from "brick and mortar" retailers, and tenant demand for space in older malls and shopping centers waned.

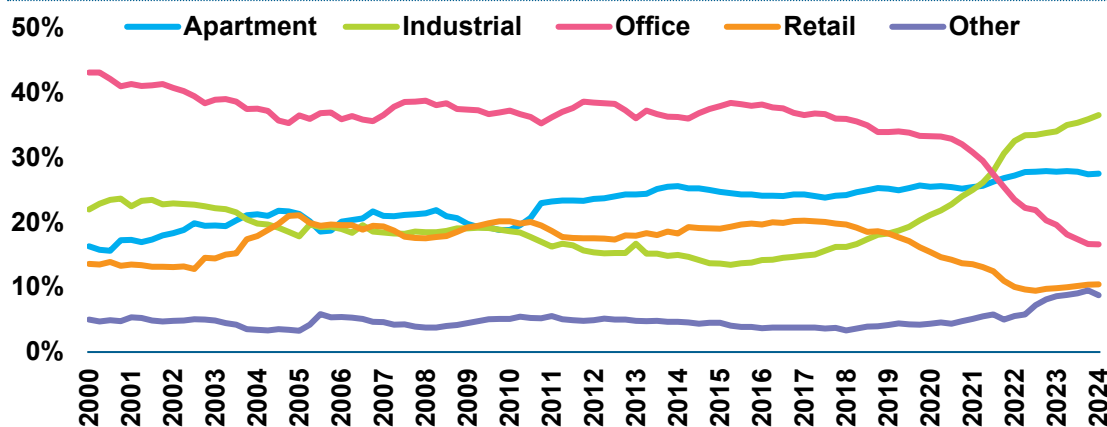


**FIGURE 1**  
**Quarterly US Retail Sales**  
**(Seasonally Adjusted)**

Source: US Census Bureau, Quarterly Retail E-Commerce Sales Report: Q1 2024, published May 17, 2024. Adjusted for seasonal variation, but not for price changes.

The COVID-19 pandemic proved to be an accelerant for these trends. Due to the rise of remote work schedules, tenant and investor demand for office properties declined substantially. Consumer spending habits became even more dependent on online shopping for goods, foods, and services, creating further challenges for retail properties. With falling foot traffic, particularly in enclosed malls and urban street storefronts, retail spaces experienced declining revenue as well as less need for physical presence.

However, even as the health concerns brought by the pandemic receded, office and industrial demand continued on their divergent paths (see Figure 2). Potential lasting consequences of social distancing policies include the recognition that: 1) certain job functions that were traditionally performed in the office could be performed as well remotely, and 2) the United States was ill prepared for the disruption in the global flow of goods. Office workers, particularly in the US, preferred hybrid work schedules to improve their work/life balance, resulting in reduced tenant demand that may take years to fully materialize (e.g., in vacancy rates) as office leases expire. Industrial demand flourished as companies shifted to increase inventories, expand domestic manufacturing and assembly, and rebuild the nation’s distribution network.



**FIGURE 2**  
**NFI-ODCE Property Types**  
**Over Time**

Source: NCREIF, NFI-ODCE Value Weighted Net, as of March 31, 2024. “Other” includes the NFI-ODCE property types of Hotels, Land, and Other (includes numerous sub-types such as Senior Housing, Self-Storage, Healthcare, etc.)

As a result, the office sector has fallen from its long-standing position as largest property type in the index to third largest (~38% to ~17%), behind the industrial and apartment sectors. Conversely the industrial sector, which was the lowest weight of the major sectors for the decade leading up to 2019, went from ~15% 10 years ago to nearly 37% of the NFI-ODCE Index in Q1 2024. Somewhat less dramatically, the retail sector declined from ~19% to ~10% but seems to have stabilized as ODCE managers have dramatically reduced their mall holdings but have maintained ownership of neighborhood and community retail centers where supply and demand fundamentals are now favorable.

The apartment sector has not only remained the steadiest over the past two decades but also experienced modest growth in its share of the ODCE. While there have been minor fluctuations in supply and demand, the sector is driven by demographics and a consistent population growth rate. Apartment properties also tend to have lower relative capital requirements, and they have historically had access to favorable financing through US agency lending programs. The result is highly predictable income and strong liquidity, which has attracted increasing levels of institutional capital to the sector.

The office sector's replacement by the industrial and apartment sectors may have additional implications for investors' portfolios. For example, vacancy rates have been higher within the office sector compared to the industrial and apartment sectors. Higher vacancy rates are typically indicative of lower demand, and in turn lower rents and lower income returns for investors than what they are accustomed to for a given property type. Another key factor lies within the costs for the improvement and upkeep of these properties. Capital expenses are generally higher for office properties than for industrial and apartment properties. Similarly, tenant improvement costs tend to be higher for offices and lower for the two other sectors.

	Office	Industrial	Apartment	Retail
Capital Expenses	High	Low	Moderate/ Low	Moderate/ Low
Tenant Improvement Cost	High	Low	Low	Moderate/ High
Market Vacancy Rate	15% - 30%	5% - 10%	5% - 10%	5% - 15%
Expected 2024 Income Return <sup>2</sup>	6.1%	4.1%	4.4%	5.5%
Expected 2024 Appreciation Return <sup>3</sup>	-15.7%	-3.2%	-6.7%	-2.2%
Expected 2024 Total Return <sup>4</sup>	-9.9%	0.9%	-2.3%	3.2%
Expected Unlevered Annual Total Return (2024-2028) <sup>5</sup>	2.0%	6.0%	5.4%	6.5%

**FIGURE 3**  
**Characteristics of Different Property Types**

Source: Meketa Investment Group, 2024.

<sup>2</sup> Source: PREA Consensus Survey, May 2024. Values are the average of PREA's survey respondents' forecasts of the NCREIF Property Index sub-indices by property type.

<sup>3</sup> Ibid.

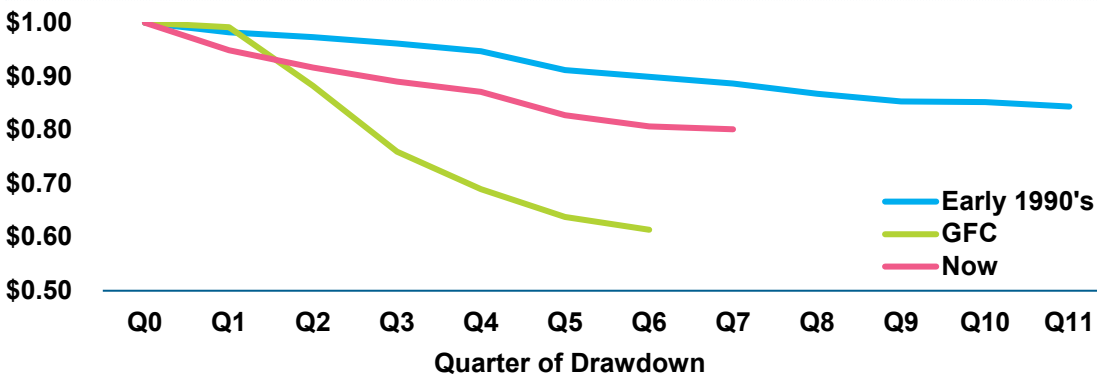
<sup>4</sup> Ibid. Numbers may not add due to rounding.

<sup>5</sup> Ibid. An unlevered total return that is below the income return implies expected price declines for the sector, while a higher total return implies price gains.

## The current drawdown period

Core real estate has experienced negative returns over the last 21 months. While this period's negative returns have been nowhere near as severe as those experienced during the Global Financial Crisis ("GFC"), they have been worse than those experienced during the early 1990's.

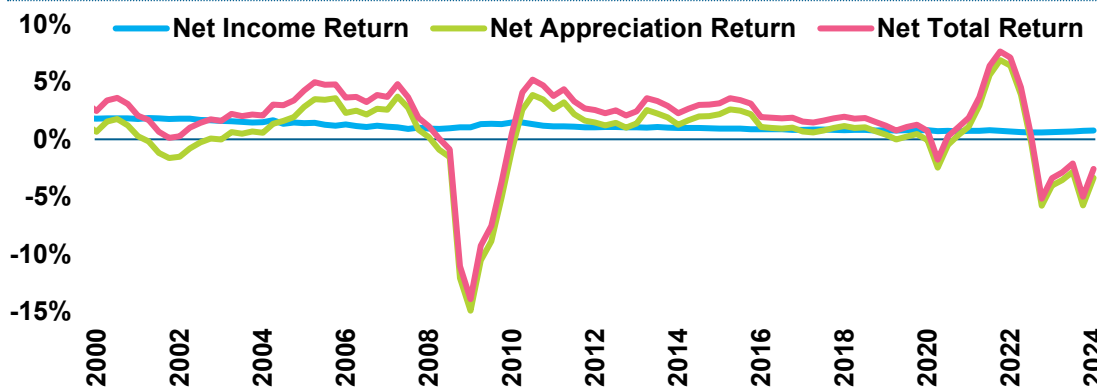
As of June 30, 2024, core real estate's period of negative returns had lasted one quarter longer than that of the GFC. While the pain of the GFC was concentrated in an 18-month period for core real estate investors, the early 1990's drawdown lasted nearly three full years (see Figure 4). It remains to be seen which of those periods the current drawdown will more likely resemble.



**FIGURE 4**  
Growth of a Dollar During Periods of Negative Returns

Source: NCREIF, NFI-ODCE Value Weighted Net Total Return, quarterly returns, as of June 30, 2024. Q0 represent \$1 USD. The 2Q24 return represents a preliminary estimate published by NCREIF on July 12, 2024.

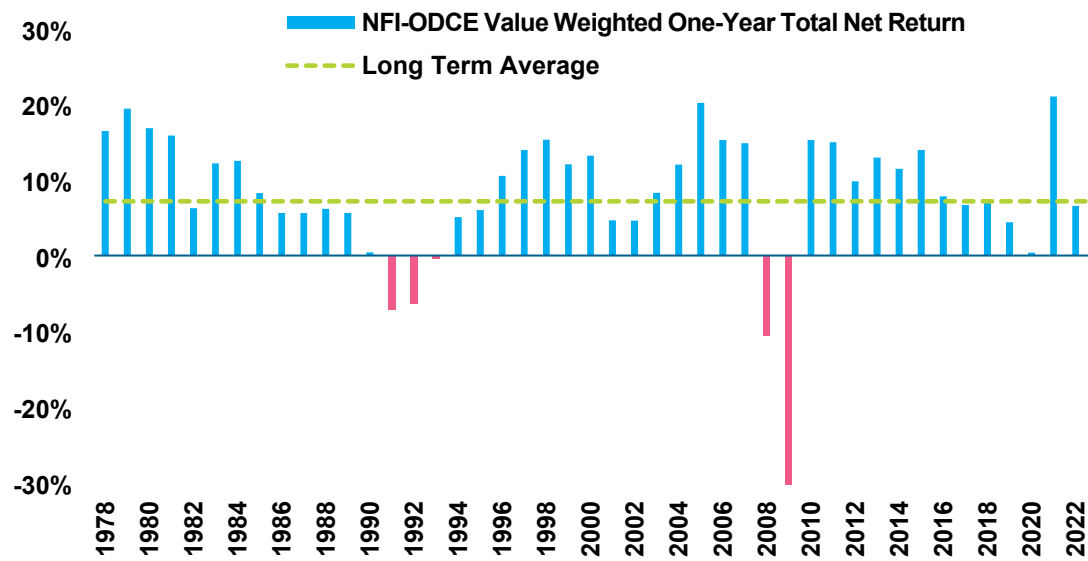
The income portion of the NFI-ODCE's return over the past 18 months has remained fairly close to its 10-year average. The appreciation return component has been responsible for the bulk of the recent drawdown, consistent with its history of driving the ODCE's drawdowns (and upturns) over the past 20 years (shown in Figure 5). In commercial real estate, appreciation (or depreciation, depending on the period) is largely driven by the interest rate cycle. Higher borrowing costs tend to dampen commercial property prices directly by making investments in the sector more expensive, but also indirectly by slowing economic activity and reducing the demand for such properties. While the direct impact on pricing has been felt broadly across all property types, the indirect impact varies greatly by property type. In this recent period, office has taken most of the impact while other property types (e.g., industrial) have fared better.



**FIGURE 5**  
NFI-ODCE Quarterly Returns by Return Driver

Source: NCREIF, NFI-ODCE Value Weighted Net Total Return, quarterly returns, as of March 31, 2024.

Like most other financial markets, the core real estate market tends to move in cycles. Its historical drawdowns have been infrequent – at least a decade apart – with core real estate investors experiencing negative annual returns in only six of the last 46 years (see Figure 6).

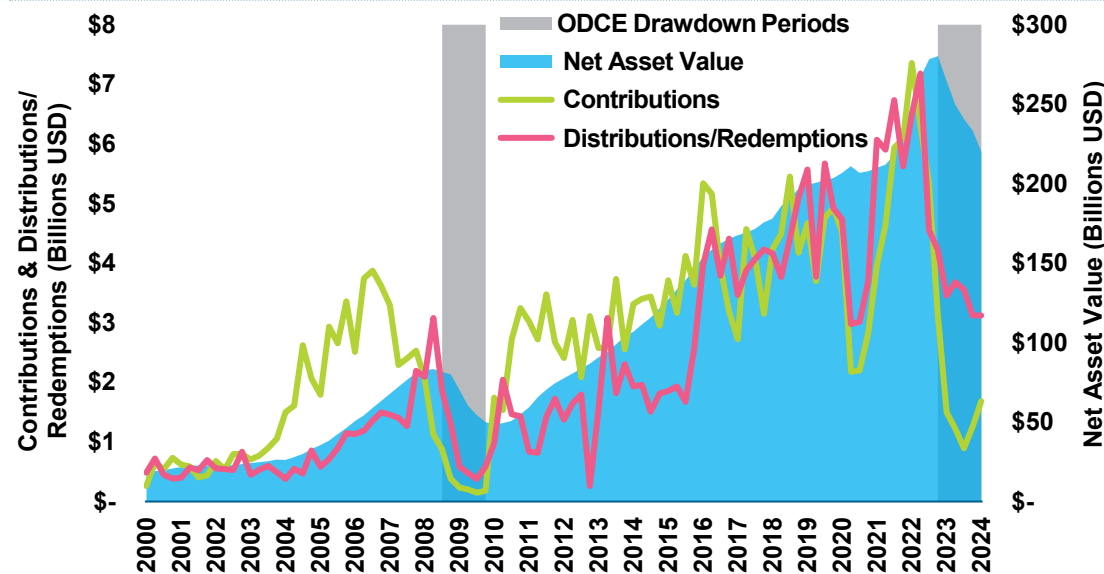


**FIGURE 6**  
**Historical Annual Returns**

Source: NCREIF, NFI-ODCE Value Weighted Net Total Return, annual returns, as of December 31, 2023. Long term average is the average of annual returns from January 1, 1978 to December 31, 2023.

### Buildup in the redemption queue

One of the unique features of open-ended funds is that they are designed to provide investors with the ability to enter or exit the fund on a periodic basis (often quarterly), allowing for a degree of liquidity in a traditionally illiquid asset class. Figure 7 depicts the historical contributions (in green) and distributions/redemptions (in pink) of the NFI-ODCE. Of note are the sharp drops in contributions during the GFC and the current cycle which coincide with the ODCE’s historical drawdown periods (in grey).



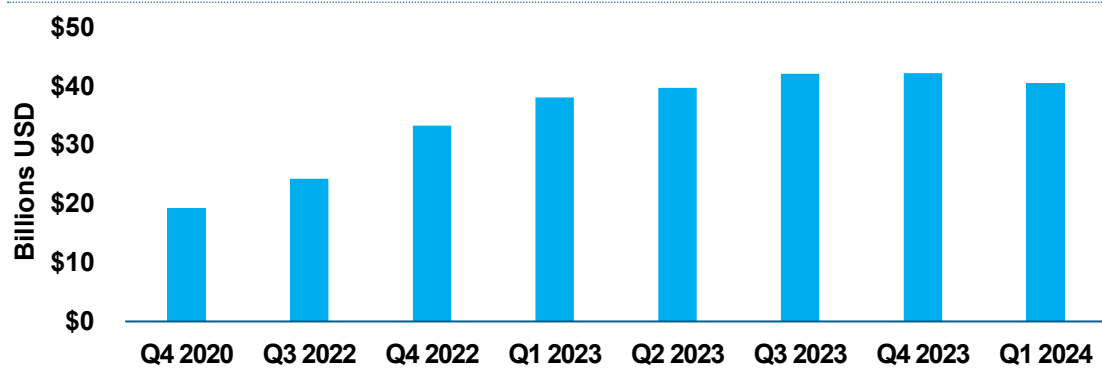
**FIGURE 7**  
**NFI-ODCE Net Asset Value, Contributions, and Distributions/Redemptions**

Source: NCREIF, NFI-ODCE Value Weighted beginning asset value, contributions, and distributions/redemptions are as of March 31, 2024. Grey shaded regions represent the ODCE’s historical quarterly drawdown periods.

In practice, just because an investor requests a contribution or redemption, does not mean that it happens immediately. When contributions and redemptions are requested, managers may or may not honor them immediately. This delay in honoring the request typically happens more often with redemptions. In this case, the redemption request enters what is known as a “redemption queue.” Once in the queue, managers may pay out the redemptions on a pro-rata, first-come-first-serve, or other basis. However, nearly every fund in the NFI-ODCE pays out redemptions pro-rata based on total investor net asset value in the fund at the time of redemption.

During market downturns, the number of redemption requests tend to accumulate in a queue, causing a backlog of requests. This backlog is what the core real estate market has recently been experiencing. Strikingly, the NFI-ODCE had roughly 19.3% of net asset value in the redemption queue as of Q1 2024. This is more than double the 9.2% that occurred during the COVID-19 Pandemic in Q4 2020. It is also higher than the queue during the GFC which reached a peak of 15%.<sup>6</sup> NFI-ODCE funds during that time saw redemption requests outpace new contributions for two years following the GFC.

<sup>6</sup> Data obtained from quarterly surveys that Meketa sends to the funds in the NFI-ODCE, as of March 31, 2024. Note that some funds may not be included in or respond to these surveys.



**FIGURE 8**  
**NFI-ODCE Redemption Queue**

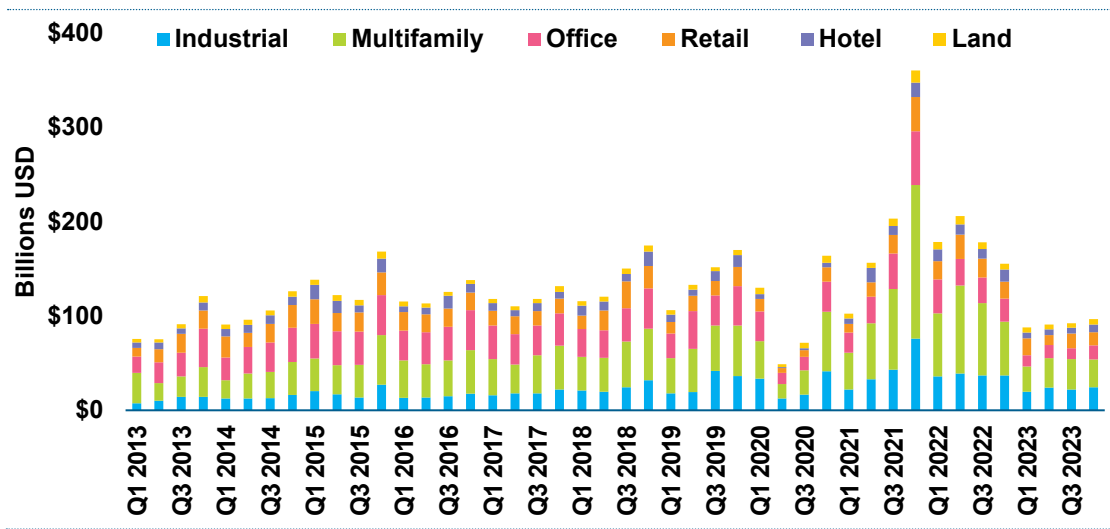
Source: Ibid.

Elevated redemption queues can be an issue for an open-end fund as they have the potential to constrain the way the manager pursues acquisitions, since proceeds from any dispositions may be used to pay out the redeeming investors rather than fund new acquisitions. The larger the redemption queue is as a percentage of the fund’s net asset value, the longer it is expected to take for that manager to pivot from playing “defense” back to being able to play “offense.” However, in prior cycles, as the market began to stabilize and valuations seemed to near a bottom, many investors in open-end real estate funds were quick to rescind their redemption requests. This is partly because some investors may put more dollars in the redemption queues during periods of distress than they intend to redeem to maximize their own liquidity. Hence some funds may experience a quick drop in redemption queues.

One of the primary reasons for the delay in satisfying redemption requests is low levels of transaction activity in the real estate market. Real estate is inherently

illiquid. When redemptions cannot be matched with incoming contributions, managers may be inclined to sell properties as a way to raise the cash. However, in a transitory period of property valuations, the bid/ask spread between buyers and sellers tends to expand, which often makes it difficult for the two counterparties to agree on a price. A seller may not be willing to sell at a lower price than what the manager believes it is worth. The recent buildup in the core real estate redemption queue, coupled with how long this queue has existed, can be partly attributed to this reason – managers not wanting to sell properties at the low valuations that currently prevail in the real estate market, particularly for office properties.<sup>7</sup>

<sup>7</sup> US Office values have fallen approximately 35%. Fitch, "US Office CRE Values Yet to Trough; Recovery Will Be Protracted," March 4, 2024.



**FIGURE 9**  
**Transaction Volume**

Source: PREA Compendium of Statistics.

## Conclusion

Core real estate remains a strong anchor to most institutional real estate programs. Changes in the underlying compositions of core real estate portfolios have been material over the last decade. We expect the underlying property type allocations to continue to evolve, as certain property types experience stronger demand and generate higher returns and thus attract more institutional capital than others.

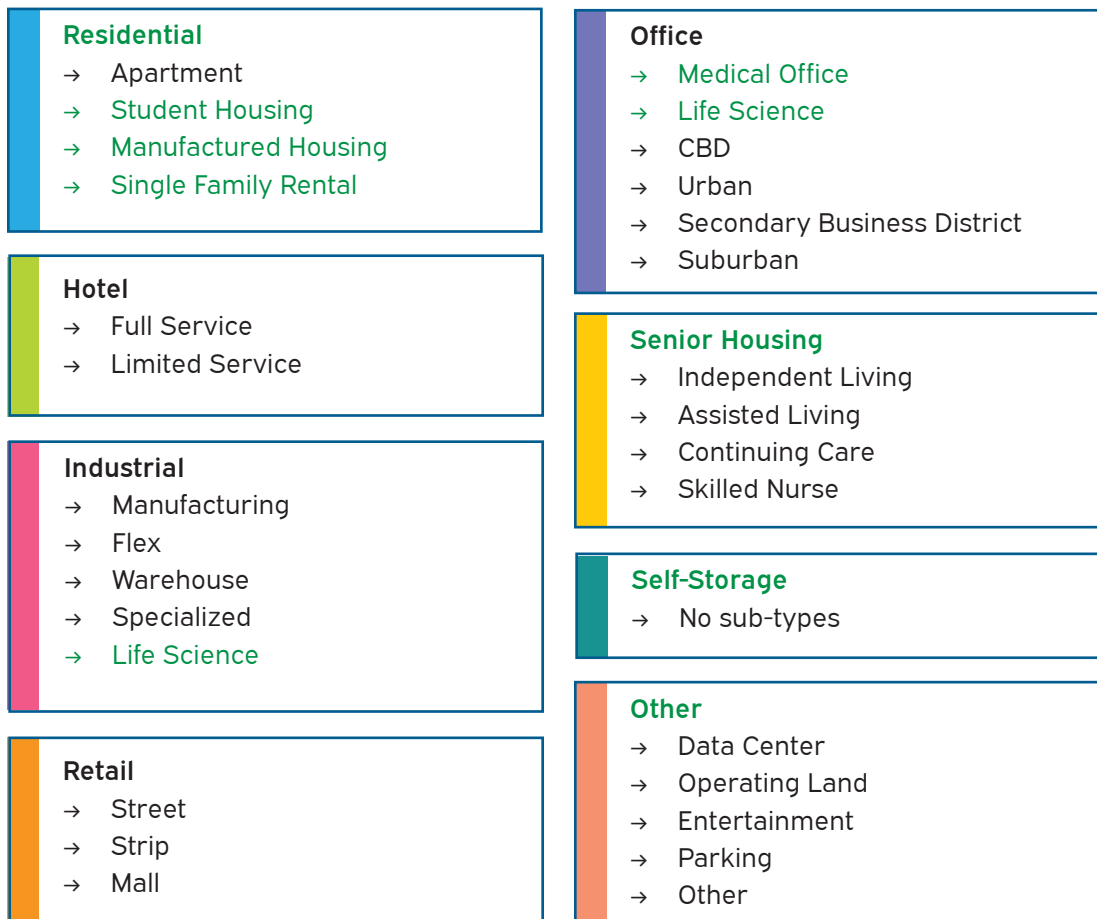
The recent period of negative returns and the increase in redemption queues among core real estate funds in the NFI-ODCE universe reflects cyclical repricing across the real estate universe. These factors are expected to moderate in the future as there becomes more clarity around long-term interest rates in addition to the continued growth in the economy and underlying tenant demand.

## Appendix: Changes coming to the ODCE

Primarily in response to the changing property type composition of the index, the NCREIF Board of Directors met in March 2024 and approved several changes to the NFI-ODCE. The changes primarily impact the index's inclusion criteria and property type classifications. These changes, particularly to the property classification system, may render historical comparisons of the index's property types, like that in the first section of this paper, challenging or potentially even misleading.

### Property type

Figure 10 below details the breakdown of the new NFI-ODCE property type classifications with changes displayed in green text. Notably, the apartment category was re-classified as residential and now includes student housing, manufactured housing, and single-family rentals (whereas it used to be strictly apartments). The office category was expanded to include medical offices and life sciences, and the industrial sector was expanded to include life sciences as well. Additionally, the self-storage and senior housing sub-categories were re-categorized as major property types.



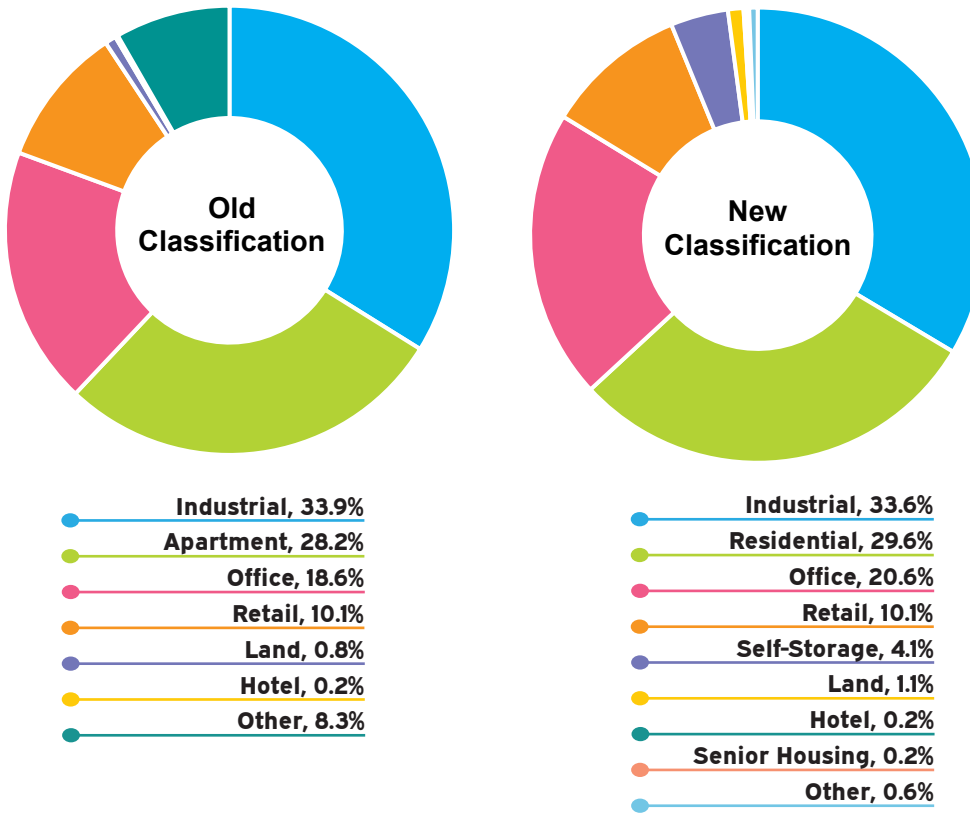
**FIGURE 10**  
**New NCREIF NFI-ODCE**  
**Property Types and**  
**Sub-Types**

Source: NCREI, NFI-ODCE  
Performance Attribution Report  
Review, Q1 2024.



The two new main property types and six sub-property types were primarily taken from the “other” category. This has resulted in a substantial decrease in the “other” category’s market value from roughly 8.3% of the NFI-ODCE to 0.6%.<sup>8</sup>

<sup>8</sup> Source: NCREI, NFI-ODCE Performance Attribution Report Review, Q1 2024.



**FIGURE 11**  
**NCREIF NFI-ODCE Market Value by Property Type**

Source: NCREI, NFI-ODCE Performance Attribution Report Review, Q1 2024.

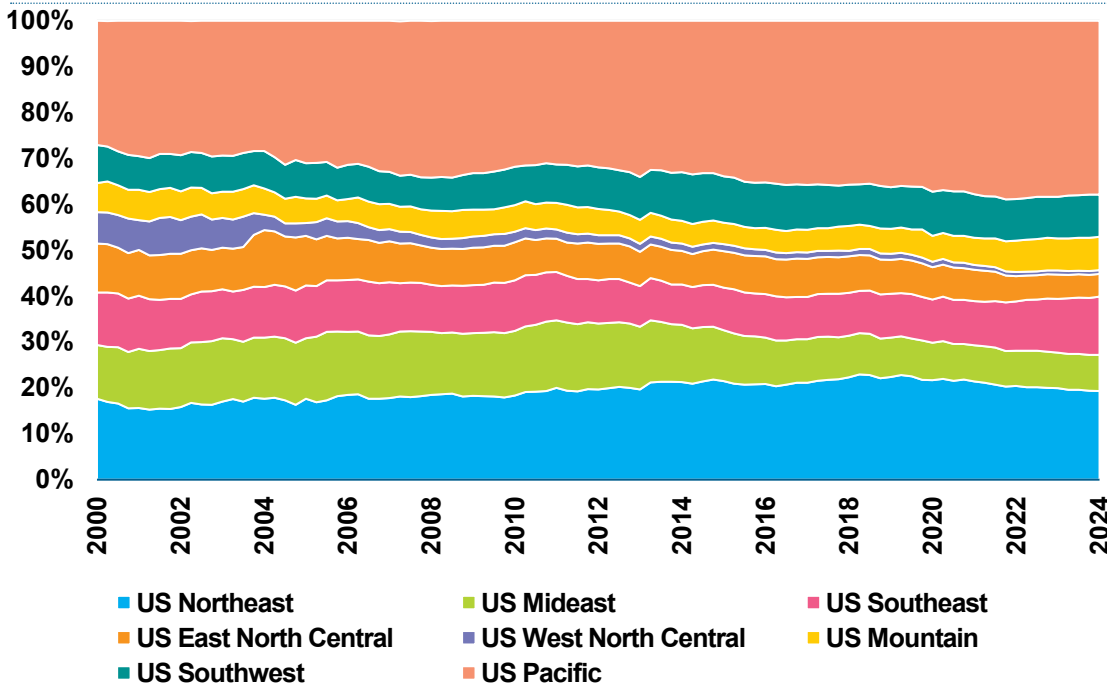
Old Criteria	New Policy
<p><b>Old Property Type Test</b></p> <p>At least 75% of the fund’s aggregate gross market value of real estate at effective ownership share are invested in office, industrial, apartment, and retail property types. For the purposes of this test, the fund is allowed to include the value of a loan investment if the underlying collateral is one of the four property types mentioned.</p>	<p><b>Revised Property Type Test</b></p> <p>At least 75% of the fund’s aggregate gross market value of real estate at effective ownership share are invested in office, industrial, residential, and retail property types. For the purposes of this test, the fund is allowed to include the value of a loan investment if the underlying collateral is one of the four property types mentioned.</p> <p><b>New Policy Test to Limit the Six New Property Sub-Types</b></p> <p>A maximum of 25% of the fund’s aggregate gross market value of real estate at effective ownership share can be invested in the six new property sub-types (single family rental, manufactured housing, student housing, industrial life science, office life science, and medical office).</p>

**FIGURE 12**  
**NCREIF NFI-ODCE Inclusion Criteria Policy**

Source: NCREIF, NFI-ODCE Inclusion Criteria Changes, April 30, 2024.

## Geographic distribution

While the NFI-ODCE's composition of property types has evolved dramatically over time, its geographical distribution by region has remained fairly consistent since 2000 (see Figure 13 below). The biggest change has been a gradual increase in the allocation to properties in the Pacific region, which have risen from 27% in 2000 to 38% of the NFI-ODCE in Q1 2024. This increase has come primarily at the expense of properties in the north central and midwest regions of the United States.



**FIGURE 13**  
NFI-ODCE Regions Over Time

Source: NCREIF, as of March 31, 2024.

## Disclaimers

This document is for general information and educational purposes only, and must not be considered investment advice or a recommendation that the reader is to engage in, or refrain from taking, a particular investment-related course of action. Any such advice or recommendation must be tailored to your situation and objectives. You should consult all available information, investment, legal, tax and accounting professionals, before making or executing any investment strategy. You must exercise your own independent judgment when making any investment decision.

All information contained in this document is provided "as is," without any representations or warranties of any kind. We disclaim all express and implied warranties including those with respect to accuracy, completeness, timeliness, or fitness for a particular purpose. We assume no responsibility for any losses, whether direct, indirect, special or consequential, which arise out of the use of this presentation.

All investments involve risk. There can be no guarantee that the strategies, tactics, and methods discussed in this document will be successful.

Data contained in this document may be obtained from a variety of sources and may be subject to change. We disclaim any and all liability for such data, including without limitation, any express or implied representations or warranties for information or errors contained in, or omissions from, the information. We shall not be liable for any loss or liability suffered by you resulting from the provision to you of such data or your use or reliance in any way thereon.

Nothing in this document should be interpreted to state or imply that past results are an indication of future performance. Investing involves substantial risk. It is highly unlikely that the past will repeat itself. Selecting an advisor, fund, or strategy based solely on past returns is a poor investment strategy. Past performance does not guarantee future results.