At TIAA, we seek to provide you with timely insights and perspectives directly from the professionals whose everyday task is to manage your investments for the long term.

To our valued TIAA Real Estate Account investors,

Last January, we presented an optimistic case for the real estate industry in 2021 based on a variety of factors including resurgent consumer demand, low supply and accommodative government policy. Our expectations were exceeded as the Real Estate Account (REA) produced a net total return of 17.9%[1], its highest since 2011, when we were emerging from the Great Financial Crisis.

The key sectors driving this growth were rental housing, warehouse distribution facilities and self-storage. Comprising 47% of the Account's property portfolio, they accounted for approximately 85% of its total return.[2] Returns were also fueled by the decline in interest rates.

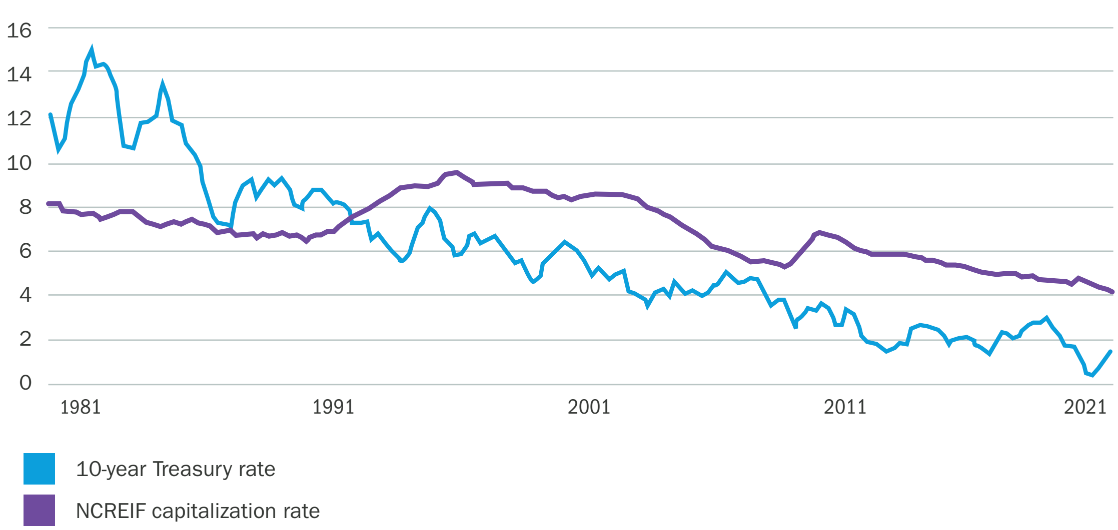
In this 2022 outlook, we focus on the implications of record-low property yields and the shift toward a more resilient core portfolio.

Randy Giraldo
Portfolio Manager
TIAA Real Estate Account

Interest rates and private real estate

The steady decline of interest rates since 1981 has perhaps been the most significant driver of appreciation across all of the major asset classes, and real estate is no exception. According to the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index, real estate income yields have declined from 8.6% in 1996 to all-time lows of 4.1%.

10-year Treasury rate vs. NCREIF capitalization rate (1980-2021)



Annual performance of asset classes during periods of rising rates (e.g., 10-year Treasury)

How sensitive are returns if interest rates rise in the future? In the table below, we identified quarters where sharp increases in the 10-year U.S. Treasury rate occurred, and compared the subsequent one-year total returns of bonds, real estate investment trusts (REITs) and private real estate.

Compared to investment-grade bonds and REITs, private real estate has outperformed following periods of significant interest rate increases.

Time period	10-year Treasury change	Bonds	Real estate investment trusts	Private real estate
Q2 1984	25.2%	**0.3%**	**9.4%**	**15.6%**
Q4 1987	25.7%	**1.4%**	- 3.6%	**8.0%**
Q4 1994	39.5%	- 3.2%	**3.2%**	**6.4%**
Q1 2000	29.7%	**0.4%**	**2.6%**	**11.2%**
Q3 2013	64.9%	- 2.0%	**6.2%**	**11.1%**
Q3 2017	43.4%	0.0%	**2.6%**	**7.0%**
Q3 2018	30.3%	- 1.0%	**4.7%**	**7.1%**

10-year Treasury values are one-year absolute change.
The total returns cited above for bonds, REITs and private real estate are represented by Bloomberg Barclays Aggregate Bond Index, NCREIF Property Index and NCREIF Total Return Index, respectively.[2]

In contrast to bonds, private real estate is valued based on prevailing market interest rates and the expectations of future income growth. It is often noted that real estate has provided an attractive hedge against inflation, but what is overlooked is that real estate is also an attractive hedge for short-term fluctuations in interest rates. For these reasons, we believe that the REA is an attractive complement to an investor’s fixed income strategy.

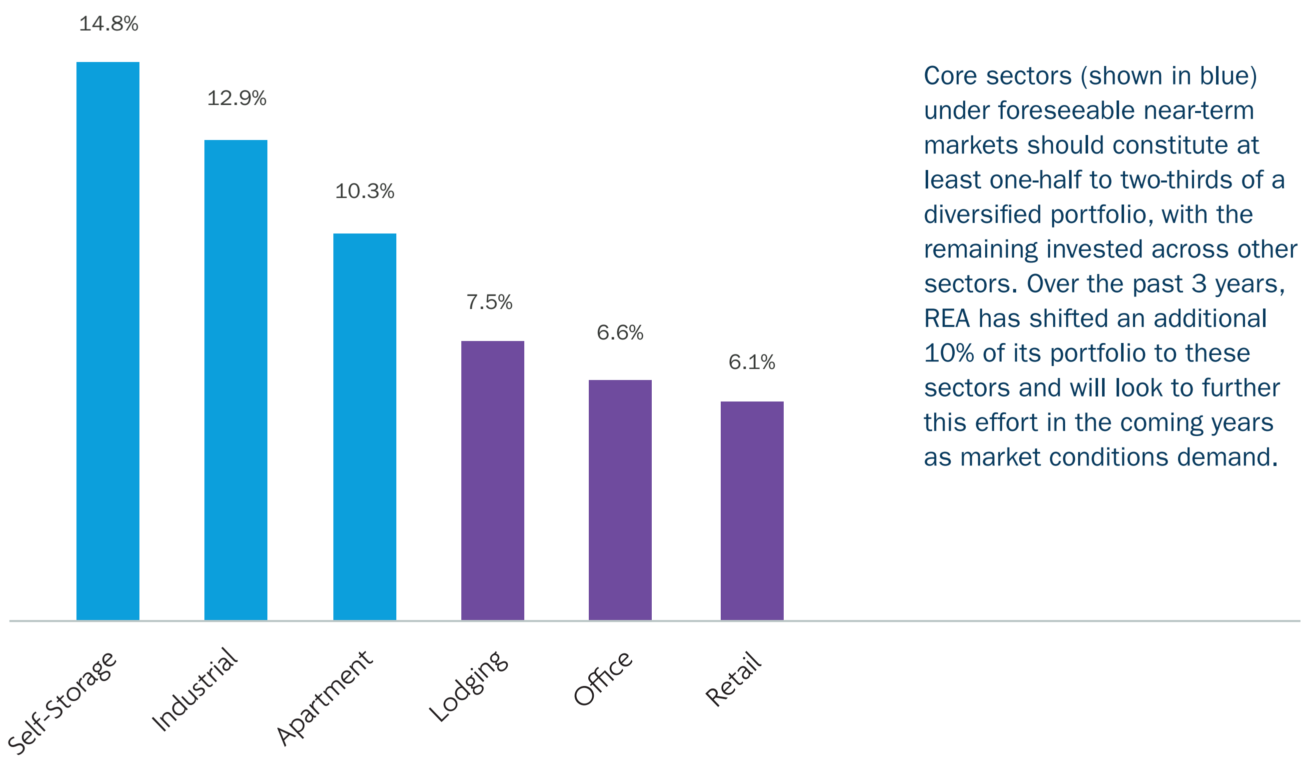
All real estate is not created equal however. Some property types do a better job of providing inflation protection while others provide more durable income. Some have benefited from technological disruption while others have been meaningfully challenged. To provide the benefits described above, a portfolio must be constructed in a manner that best tracks the overall economy as market dynamics demand.

Core real estate—a more resilient portfolio

For decades, core real estate portfolios primarily consisted of trophy assets that looked impressive on the cover of investor presentations—large, urban office towers and shopping centers—complemented with an allocation to apartments and warehouses. These sectors all traded hands at similar overall yields, and their historical total returns were not too dissimilar.

But what we have learned, particularly in the last two economic cycles, is that the most resilient and best performing real estate is often the least glamorous—including housing, warehouses and self-storage. Reviewing historical data, we found that these sectors below in blue have outperformed the industry overall. We believe this outperformance will continue. By contrast, technology has exposed excess capacity in the office, retail and hospitality sectors. REA has made significant progress in the past five years in shifting to a more resilient core profile and will continue to do so over the next 3-5 years as market dynamics demand.

Total returns – 2008-2021



Core sectors (shown in blue) under foreseeable near-term markets should constitute at least one-half to two-thirds of a diversified portfolio, with the remaining invested across other sectors. Over the past 3 years, REA has shifted an additional 10% of its portfolio to these sectors and will look to further this effort in the coming years as market conditions demand.

Green Street CPRI data as of 9/30/21

The year ahead

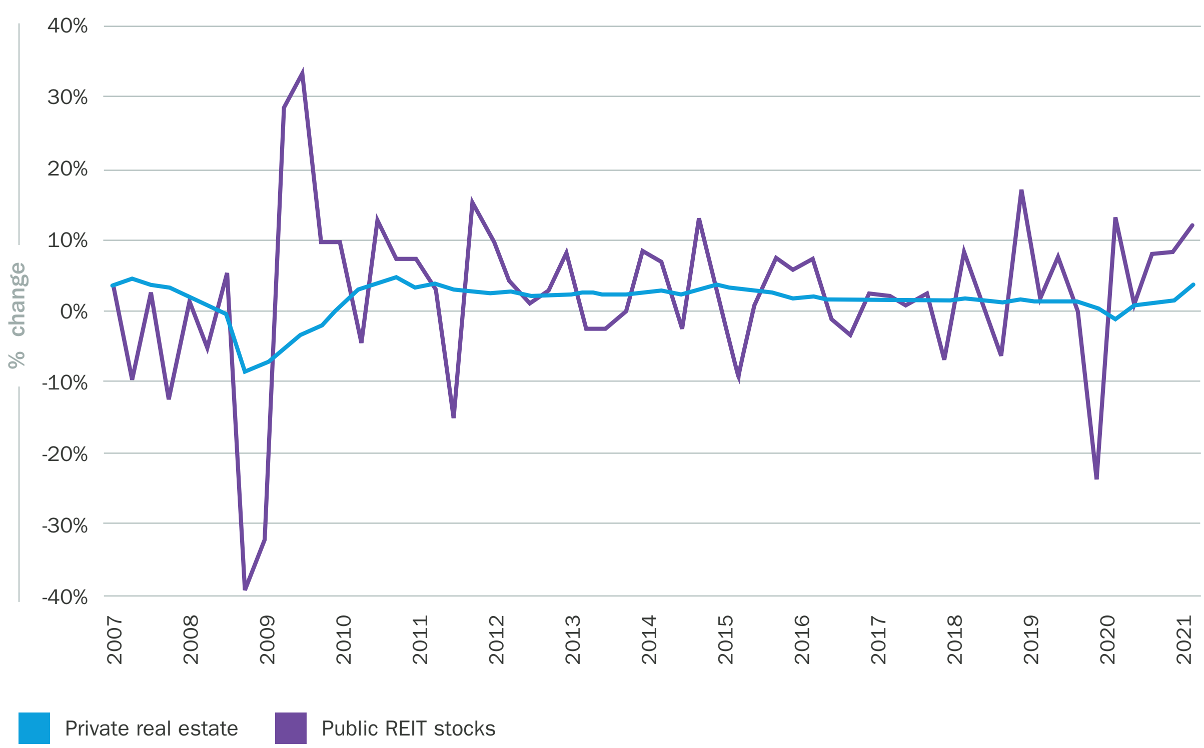
We expect 2022 to be another solid year for private real estate, particularly in comparison to the other major asset classes. Below are the primary conditions that make us optimistic, some of which continue from last year.

Slower supply growth due to supply chain bottlenecks. Freezing the economy in 2020 broke many linkages in its framework that are still being mended. Delays in new construction due to supply chain bottlenecks have created an artificially low inventory of space for certain sectors, especially housing. In addition, increased savings and consumer spending should continue to fuel demand for goods, which positively benefits warehouses.

Dry powder (meaningful capital expected to be deployed). Institutional investors have significant amounts of investable capital and are generally under-allocated to real estate.[3] As of September 2021, there was more than $350 billion of capital raised by 1,200+ funds targeting private real estate globally.[4] The balance sheets of major pension systems have thankfully improved over the past 18 months, significantly repairing what had long been a looming economic concern. As domestic and foreign investors seek to increase their allocation to real estate and deploy capital, there could be further compression in yields and price appreciation.

Momentum. One of the key benefits of private real estate is its low volatility when compared to liquid real estate alternatives such as public REIT stocks. Changes in performance of private real estate do not occur overnight but rather take place over longer periods of time. The chart below demonstrates the directional consistency of private real estate when compared to REITs.

Since Q1 2007, private real estate experienced only seven negative quarters, concentrated around the Great Financial Crisis, vs. 17 quarters for Public REIT Stocks.



Public REIT stocks and private real estate are represented by NAREIT All Equity Index and NCREIF Total Return Index, respectively.

In conclusion

Strong results from appreciation and better-than-expected rent growth should continue to positively drive performance this year, albeit unlikely at the levels experienced in 2021.

Clearly there are headwinds for commercial real estate, including:

- The longer-term adverse impacts of the work-from-home movement in the office sector.
- Continued challenges for the retail sector due to the shift to on-line shopping.

Fortunately, the Real Estate Account is well-positioned to withstand these headwinds in large part due to its progressive diversification to the more resilient core sectors, and its inherent stability during periods of rising interest rates and volatility.

On behalf of TIAA and the Real Estate Account portfolio team, we hope that you have a healthy, productive and profitable year ahead.

Sincerely,

Randy Giraldo
Portfolio Manager
TIAA Real Estate Account

Visit **TIAA.org/rea2022** for more information, including the 2022 REA Outlook video

[1] 1-year net annual return as of December 31, 2021.

[2] Period is the 1-year return, as of September 30, 2021.

[3] JLL, Real estate investors prepare for distress, but opportunities lag, June 16, 2021, https//www.us/jll.com/en/trends-and-insights/investor.real-estate-investors-prepare-for-distress-but-opportunities-lag.

[4] Prequin, Real estate market shows signs of recovery, October 11, 2021, https://www.preqin.com/Portals/0/Documents/Q3%20RE%20press%20release.pdf?ver=2021-10-15-103837-987.

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