



# Why Private Real Estate?

**THE UNCONVENTIONAL TRUTH:  
PRIVATE REAL ESTATE EXPLAINED AND JUSTIFIED**

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MARCH 2022



# Executive Summary

- Commercial real estate (CRE) represents a significant portion of the global universe of investable assets and should be viewed as a critical building block in portfolio construction for both individual and institutional investors. As such, private real estate should be considered as the third leg of the stool in a traditional stock and bond portfolio.
- CRE is comprised of equity and debt investments through public and private markets.
- An allocation to private real estate can provide attractive risk-adjusted returns, excellent portfolio diversification, and a hedge against inflation; while maintaining or enhancing levels of current income for investors.
- When building a private real estate allocation, it is critically important that investors have a firm understanding of what they own and disciplined focus on selecting an investment matching their primary goals.

## Introduction

**When investing in real estate, a critical element to consider is to *know what you own and own what you need*. Further, private real estate investing is not as simple as just buying private real estate assets, and is much more nuanced than traditional investments like equities and fixed income.** CRE investments come with a lack of liquidity and transparency that differs from the public markets. CRE assets and strategies aren't homogenous, which increases the complexity. Through the two key axioms mentioned below, we believe that private real estate, as an asset class, can work harder and play a more crucial role in portfolio construction than it has in the past in order to help investors achieve more successful outcomes.

- 1 Know what you own.** Investors and their advisors have a responsibility to know exactly what they own in their portfolios when it comes to stocks, bonds, and in particular, real estate. This analysis should be conducted at the asset and portfolio level to better understand what exposure, whether explicit or implicit, investors are receiving when allocating to a particular strategy, in addition to the full schedule of management fees and other fund level expenses. It also plays an important role in developing the following concept.
- 2 Own what you need.** To best match strategy to an investor's return objectives and risk tolerance, a solid understanding of the product offering and underlying strategy is tantamount to a successful and satisfying experience when investing in private real estate. For example, prior to retirement, an investor would likely have a preference for real estate strategies with a stronger growth profile that features capital appreciation as the main determinant of total returns, whereas an investor currently in retirement might prefer more income-oriented real estate strategies as a source of enhanced yield in their portfolio. For an investor who's in retirement, they may prefer a combination of income and growth via a private real estate index fund.

# I. What is Commercial Real Estate?

By definition, real estate is tangible property that consists of land and anything permanently attached to it, including buildings and other physical improvements. Real estate assets are categorized as either residential (single-family homes) or commercial (business). This paper will focus on CRE investments only.

In general, large users of CRE have a tendency to rent property as a tenant and use their capital to grow core business operations rather than purchase the property as an owner. Reasons for renting vs. owning include upfront cost, maintenance requirements, and heightened flexibility. Tenants therefore compensate the CRE owners through lease (rent) payments for use of the property. Depending on the property type, lease agreements can range from one day (e.g. hotels) to over a decade (e.g. office, Amazon distribution centers). Consequently, CRE is typically comprised of income-producing properties such as office buildings, retail centers, industrial warehouses, apartment complexes, as well as hotels and resorts. Further, as CRE has evolved, there has been a proliferation of non-traditional property types, or niche sectors, that can include self-storage, senior and student housing, single-family rentals, medical offices, data centers, and life sciences labs.

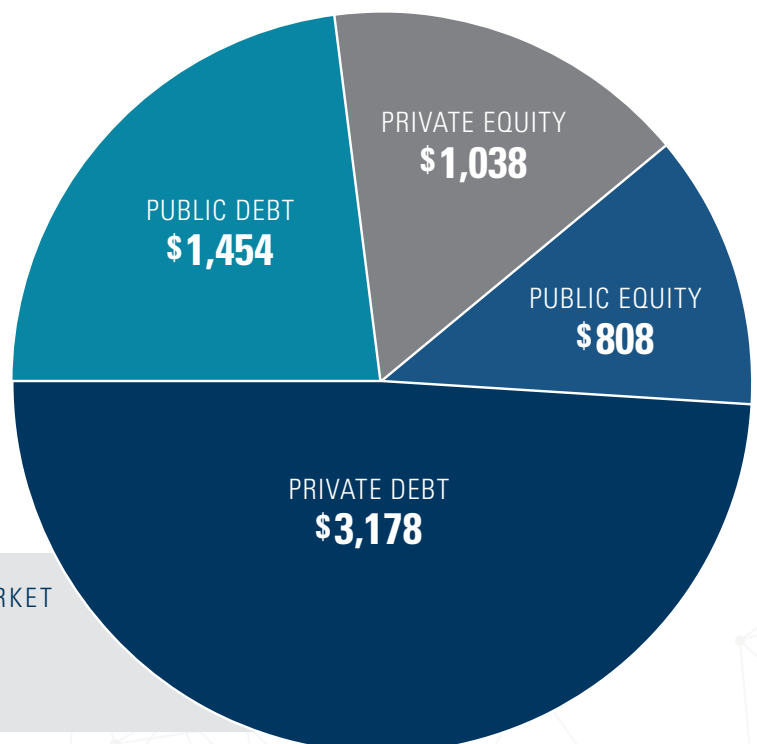
Fundamentally, CRE offers an attractive set of cash flow dynamics, namely a compelling combination of debt- and equity-like characteristics. It is debt-like in the high relative income that CRE produces for investors based on its leases and equity-like in that CRE has historically offered a strong capital appreciation profile. This leads to the following formula for CRE:

**DURABLE INCOME + STRONG CAPITAL APPRECIATION = CRE**

## THE INSTITUTIONAL U.S. REAL ESTATE MARKET

The U.S. represents the largest institutional quality real estate market globally. Further, the size of the U.S. real estate market is larger than the sum of the next three largest institutional markets – Japan, China, and the U.K.

The aggregate size of the U.S. real estate market of an institutional nature is approximately **\$6.5 trillion**.



**EXHIBIT 1: SIZE OF THE U.S. REAL ESTATE MARKET (SECOND QUARTER 2021)**

Sources: PREA, MSCI, NCREIF, NAREIT, Federal Reserve Flow of Funds

## THE FOUR QUADRANTS OF REAL ESTATE INVESTING

Investors in CRE can choose between equity and debt through either public or private markets (see **Exhibit 2**), highlighting the importance of *knowing what you own*. Equity investments (common and preferred equity) represent an ownership interest in an asset and debt investments (senior and mezzanine debt) are a loan against an asset. Public and private markets refer to whether the asset is traded on a public security exchange (e.g. New York Stock Exchange) or not. The four quadrants of CRE are cut across these two very distinct sets of criteria that include public vs. private and debt vs. equity real estate investments.

	DEBT	EQUITY	<b>EXHIBIT 2: THE FOUR QUADRANTS OF REAL ESTATE</b> Source: Real Estate Finance & Investments (17th Edtn.)
PUBLIC	<ul style="list-style-type: none"> <li>Commercial Mortgage Backed Securities (CMBS)</li> </ul>	<ul style="list-style-type: none"> <li>REIT Stocks</li> <li>Publicly Traded Real Estate Property Companies</li> <li>Real Estate Mutual Funds</li> </ul>	
PRIVATE	<ul style="list-style-type: none"> <li>Senior Loans</li> <li>Mezzanine Debt</li> <li>Whole Loans Mortgage</li> </ul>	<ul style="list-style-type: none"> <li>Open and Closed End Funds</li> <li>Separate Account/Direct Investments</li> <li>Non-Traded REIT</li> </ul>	

## PRIVATE EQUITY REAL ESTATE

Private equity real estate (PERE) refers to an investor taking an equity interest position in a CRE property or portfolio of properties. For institutional investors, commingled funds are an established manner of investing in CRE. A commingled fund is a pool of capital raised and managed by an external investment management firm, like USAA Real Estate, and which is known as the general partner (GP). The GP will acquire, manage, and dispose of CRE assets for the fund's investors, which are known as limited partners (LPs). While the fund owns the properties, the investors provide much of the capital used to acquire the assets and thus, benefit from the performance of the fund. These investments funds are not publicly-traded, hence they are considered "private equity". Institutions can use other private vehicles that may include a separate account (a fund of one investor), joint venture, direct investment (owning the investment directly on the LP's balance sheet), or private real estate investment trust (REIT). All these vehicles have in common their use of private capital to acquire equity interest in CRE assets.



## PUBLIC EQUITY REAL ESTATE

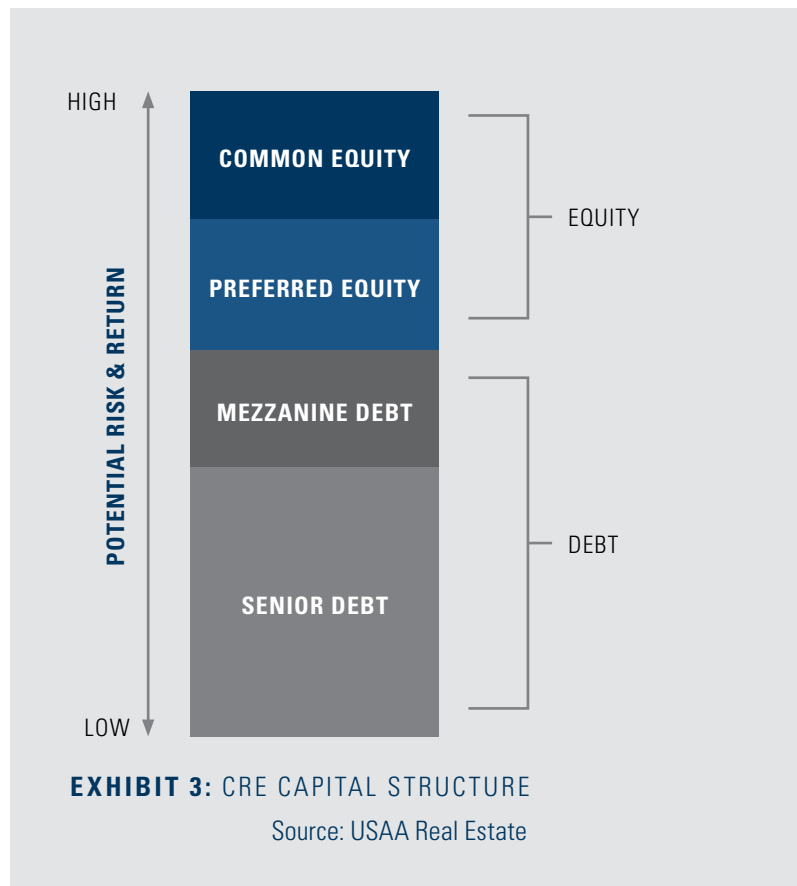
Public equity real estate gives investors an interest in a CRE property, but the equity financing comes via the publicly-traded capital markets. These listed companies come in two forms: REITs (Real Estate Investment Trusts) and REOCs (Real Estate Operating Companies). REITs are traded on a stock exchange and are perpetual vehicles that are, by law, required to distribute at least 90% of their taxable income annually as dividends and generate at least 75% of gross income from rents from real property. REITs offer a high degree of liquidity since they are traded on an exchange.

## PRIVATE REAL ESTATE DEBT

Private real estate debt typically uses a commingled fund structure to invest in debt instruments tied to, or backed by, CRE property. Private debt vehicles extend debt financing to borrowers for acquiring and improving CRE. Funds will construct a pool of loans that are senior in the capital structure to equity investments and may range from senior secured debt, mezzanine debt, or even preferred equity positions (see **Exhibit 3**). Debt investments receive fees and interest payments during the life of the loan that behave much like a bond. Funds are managed by the GP on behalf of LPs, although separate accounts may allow investors to customize their debt exposure.

## PUBLIC REAL ESTATE DEBT

Public real estate debt provides debt financing on CRE property. The vehicle offering in the public markets follows a commercial mortgage-backed security (CMBS) structure. CMBS is a pool of mortgages that are backed by commercial properties. CMBS features multiple tranches that give investors the option to choose from varying levels of risk and payment priority. Lower priority tranches compensate investors with higher potential returns than a senior tranche. Residential mortgage-backed securities (RMBS) are also common and like CMBS, but are comprised of a pool of mortgages backed by single-family residential homes. Another form of public real estate debt is a mortgage REIT. Mortgage REITs trade on a stock exchange and pass most of the taxable income along to their shareholders as dividends through originating or purchasing loans on their balance sheets.



## TRADITIONAL PROPERTY TYPES

### INDUSTRIAL, MULTIFAMILY, OFFICE, AND RETAIL

CRE assets vary by primary purpose or operational intent. This again ties back to how important it is to *know what you own* and *own what you need* when investing in CRE because sector selection is a key driver of investment performance and source of diversification. For example, the office sector is primarily focused on providing a workplace or working environment for administrative and managerial workers. The workforce tends to occupy floors of an office building, outfitted with desks, computers, a reception area, conference rooms, bathrooms, etc. The following sections serve to highlight the nuances of each property type.



**Industrial/Logistics** – Assets are large buildings that support e-commerce, logistics, and manufacturing activities. Industrial has been a growing property type due to the explosion of e-commerce. Key demand drivers include online sales, manufacturing and production levels, consumer discretionary spending, trade flows, and supply chain reconfiguration. Industrial tends to have a longer lease duration that can be up to 10 years for certain logistics tenants.



**Multifamily** – This property type features apartment buildings. Demand drivers include income level, household formation, job growth and unemployment, population migration, immigration, birthrates, and lifestyle trends. Multifamily leases tend to be shorter and average one to two years.



**Office** – Office buildings represent space used to conduct commercial and professional operations. This property type has longer lease durations, with companies typically signing a lease for 10 or more years. Drivers for the sector include job growth, unemployment rate, Gross Domestic Product (GDP) growth, office design densification, and work-from-home trends.



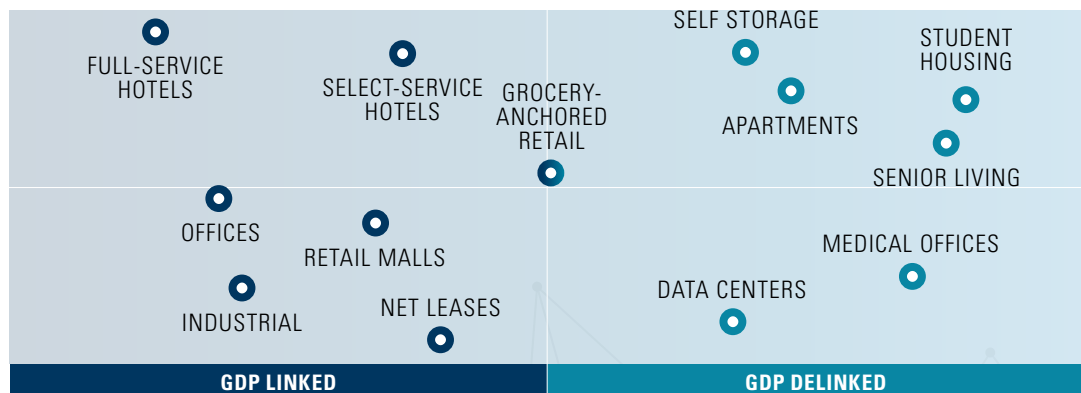
**Retail** – These properties include commercial structures where consumers can buy or experience a good or service. Demand is driven by consumer spending, wage growth, demographic shifts, population growth, savings rates, and credit availability. Retail leases average three to five years.



**Niche Sectors** – The CRE industry has seen a rise in non-traditional property types over the last decade. These can include student housing, self-storage, medical office, laboratory buildings, data centers, cold storage, and senior housing to name a few. Many of these niche sectors offer strong secular trends, as well as providing enhanced diversification to a real estate portfolio. The lease durations for some notable niche sectors for stabilized properties are shown in **Exhibit 4**.

**EXHIBIT 4: STABILIZED PROPERTY SECTOR DURATION & CYCLICALITY**

Source: Mercer



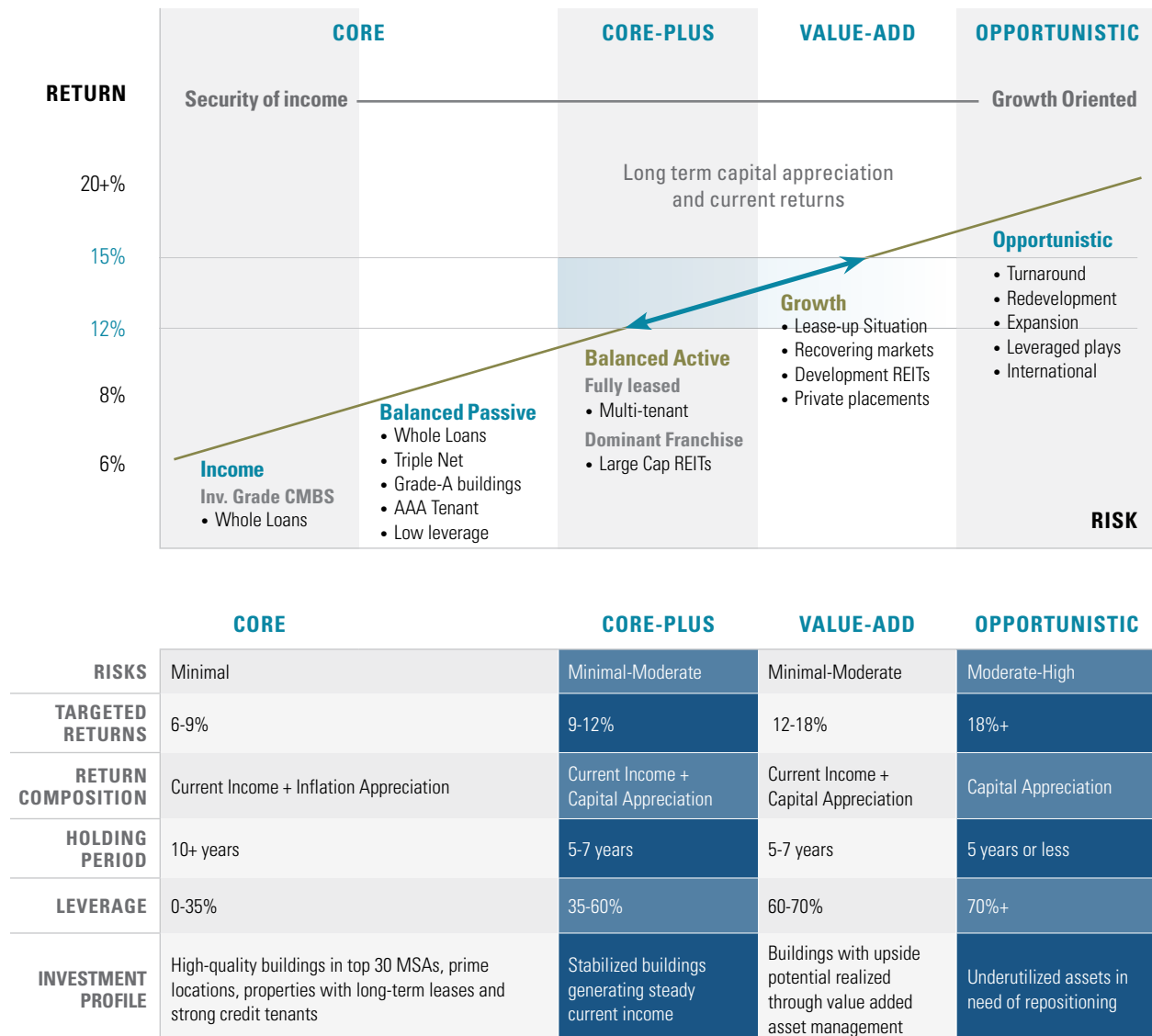
## REAL ESTATE INVESTMENT STRATEGIES ACROSS THE RISK/RETURN SPECTRUM

Even within a certain property type, real estate equity investment can be classified across the risk spectrum by type of strategy: Core, Core-Plus, Value-Add, and Opportunistic. To a degree, this also coincides with the life cycle of CRE property investment. Each strategy has distinct characteristics across return composition, leverage, holding period, and liquidity. Total return by strategy is comprised of income and capital appreciation components. The lowest risk strategy (core) focuses on income as the primary driver of total return, whereas the highest risk strategy (opportunistic) relies on capital appreciation to achieve its targeted total returns.

Investors can use a variety of vehicles and strategies to construct a real estate portfolio based on their individual investment objectives and risk tolerance. Generally, real estate assets tend to be considered a long-term strategic allocation within a comprehensive portfolio. However, it can also be used tactically, such as a development or redevelopment strategy.

**EXHIBIT 5: A MULTI-STRATEGY APPROACH TO CRE**

Source: USAA Real Estate



## CORE REAL ESTATE

Core real estate offers attractive risk-adjusted returns for investors with long-term time horizons. High-quality, fully-stabilized, long-leased, and low-leverage assets are less sensitive than higher risk strategies to periods of market volatility. Further, given high occupancy and small portion of lease rollovers each year, income is more stable and liquidity is superior, given a focus on top tier locations.

## CORE-PLUS REAL ESTATE

Core-Plus real estate is characterized by high-quality assets with minor upgrade requirements. As well, leverage can be utilized to enhance returns. Property owners will attempt to increase the cash flows through minor improvements, increasing tenant quality and rollover schedule, or management efficiencies. Properties produce steady cash flows, but some may be used for deferred and future maintenance to upgrade buildings and parking structures.

## VALUE-ADD REAL ESTATE

Value-Add real estate consists of the repositioning or redevelopment to maximize the use, and therefore, value of the asset. These assets need some corrective action – deferred maintenance, below-market occupancy, below-market lease rates, or substandard facilities that are in need of repair or overhaul – to reach their full value. Remedial action may include property renovations, management restructuring, marketing, etc.

## OPPORTUNISTIC INVESTMENTS

Opportunistic mandates are the riskiest category, and while they have the least predictable cash flows, they also offer the potential for the highest returns. The focus is on distressed properties and loans, ground-up development, and entity-level investing. Typically, opportunistic strategies will pursue assets with limited in-place rental income and therefore, a lower going-in yield. As such, a large component of total returns will come from capital appreciation at the time of exiting the investment.



## OTHER CONSIDERATIONS

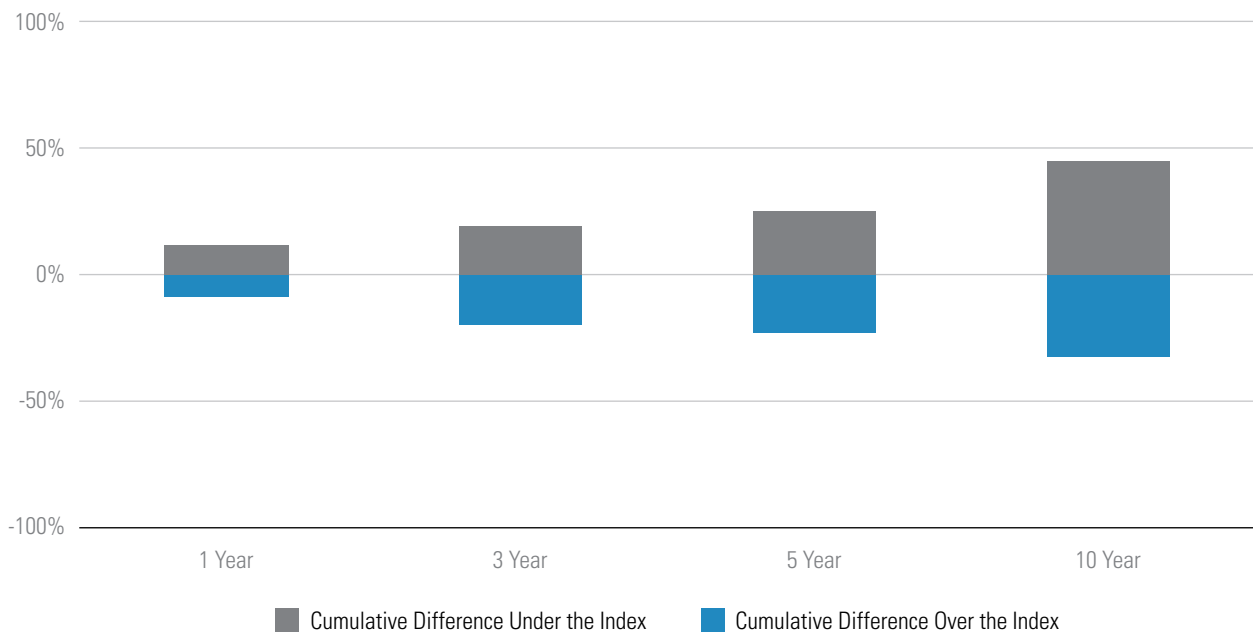
Fundamentally, investing in CRE features the following risks: leverage, interest rate, liquidity, macro-economic, tenant/lease, location, development/entitlement, etc. Important sources of diversification in CRE can include investment manager, liquidity, geography, property type, vintage year, and risk/return. To achieve the optimal level of diversification benefits, it is crucial that investors incorporate most of the sources.

### INVESTMENT MANAGER

The investment manager will use its employees and resources for acquisitions, asset and portfolio management, financing, and research. The manager's strength in each of these areas should be evaluated in relation to its proposed strategy. As well, some managers may have unique expertise in a particular geography, property type, or risk profile. Diversification by investment manager helps to mitigate execution risk while also gaining a differentiated perspective. Investment manager due diligence and selection focuses on a firm's people, philosophy, processes, and performance. **Exhibit 6** shows the dispersion of ODCE Gross returns by quartile, indicative of underlying investment managers' over or underperformance versus peers over trailing periods on a cumulative basis.

**EXHIBIT 6: NFI-ODCE CUMULATIVE RETURN DISPERSION BY TRAILING PERIOD**

Source: NCREIF





## LIQUIDITY

Although real estate is an illiquid asset, certain structures allow for liquidity to be offered on a periodic basis. Public fund structures (CMBS, property REITs, mortgage REITs, REOCs) can provide daily liquidity, whereas private fund structures cannot. Open-end funds typically allow for quarterly redemptions or distribution of dividends. Closed-end funds are the most illiquid, although a secondary market exists to trade interests, it is thinly traded and may require discounts to net asset value. Further, transfer of a fund interest requires the approval of the GP. Closed-end funds do provide cash flow during the fund's life through distribution of income or from asset sales. These distributions are irregular and unpredictable.

## GEOGRAPHIC

Geographic diversification eliminates concentration risk to a particular market, region, or country. Global real estate funds will diversify by country to allocate risk across several economies to mitigate the cyclicity of the portfolio. In the U.S., geographies are defined by region or across metropolitan statistical areas (MSAs) and categorized as primary, secondary, and tertiary markets. Gateway cities (e.g. New York, Boston, and Los Angeles) refers to the primary markets with the highest population density, most diverse economies, highest barriers to entry, the largest and most liquid real estate markets, and serve as major entry points into the country. Secondary markets (e.g. Dallas, Atlanta, and Seattle) naturally come next and generally lag the primary markets on one of the previously mentioned criteria, with tertiary markets following thereafter. Risk generally increases as investors move beyond the gateway cities and primary markets, as approximated by cap rates on a relative basis.

## PROPERTY SECTOR

Property sectors represent a critical diversifier within a real estate portfolio. The four traditional property types are industrial, multifamily, office, and retail. More recently, there has been a focus on non-traditional or niche property types that can offer a balanced portfolio that is more stable across economic cycles and secular themes.

## VINTAGE YEAR

Vintage year refers to the year in which the initial capital call for a fund occurs and can occur at various points of the economic cycle. Timing of vintage year will have a strong effect on the fund's long-term performance. A real estate portfolio that invests across different vintage years helps mitigate overall risk, as well as portfolio cyclicity.

## RISK AND RETURN

Investors can choose to use the asset class strategically, creating a more diversified portfolio across the aforementioned factors, or tactically through choosing a single fund to access a specific investment opportunity. Further, they can select a combination of strategies (Core, Value-Add, and Opportunistic) and/or mandate tilts (income-oriented versus appreciation-focused) to further diversify a more comprehensive real estate allocation to increase the likelihood of successful achieving outcomes.



## II. Why? The Benefits of Private Equity Real Estate

Private real estate, when included in a traditional stock-bond portfolio, can provide some of the strongest benefits in a comprehensive portfolio context versus nearly all other investable groups. Any investor with a diversified portfolio mandate should consider CRE as their third largest portfolio exposure. In addition to representing a significant asset class for investment, the fundamental benefits will be explained and supported in this section, which can include: the potential for enhanced and durable income yields, a strong risk-adjusted return profile, aiding the overall portfolio through diversification, and acting as an effective inflation hedge.

### SIGNIFICANT COMPONENT OF THE INVESTABLE UNIVERSE

CRE represents a large part of the investable universe of potential investments. As of 2021, the total value of the institutional U.S. CRE market across all four quadrants is \$6.5 trillion. From a comprehensive investment perspective, real estate represents a significant portion of global investable assets and as such, should be considered as a critical building block for portfolio construction for both institutional and private investors. Further, the combination of liquid and illiquid asset classes in a portfolio has shown to be a successful option over time. The Yale Endowment Model, an application of modern portfolio theory that stresses large allocations to illiquid investments that was pioneered by David Swensen, has consistently outperformed a public-only approach due to its significant allocation to private and alternative investments like CRE.



**“CRE SERVES AS THE **THIRD-LEG OF THE STOOL** IN A PORTFOLIO, BEHIND STOCK AND BOND ALLOCATIONS.”**

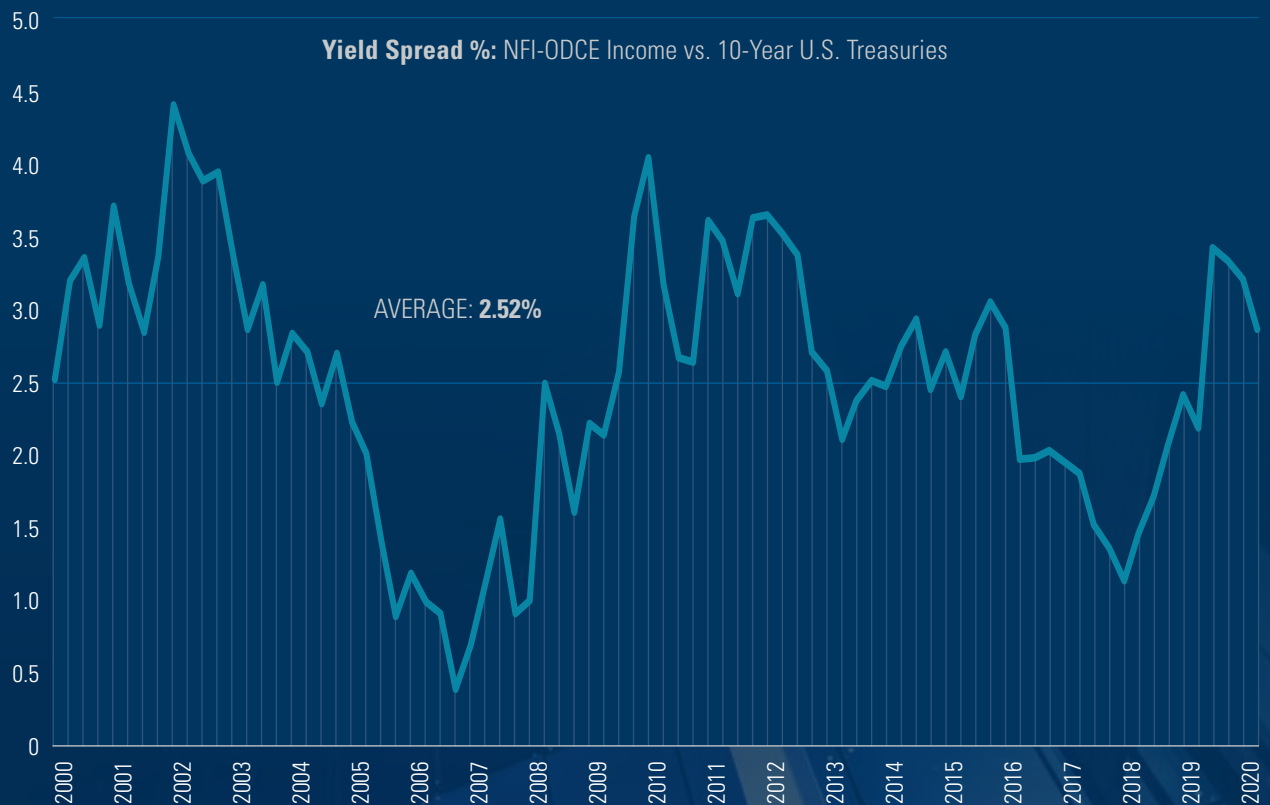
— **GREG STARK**, EXECUTIVE MANAGING DIRECTOR, USAA REAL ESTATE —

## ENHANCED, DURABLE INCOME

As previously described, a major component of total returns comes from property yield, or the income generation from private real estate. Relative to other major asset classes, CRE provides enhanced income potential versus corporate bonds or large-cap equities. As shown in **Exhibit 7**, core private real estate has historically generated a stronger relative income profile that is significantly in excess of U.S. Treasuries. Since 2000, the spread for the NFI-ODCE Income vs. 10-Year U.S. Treasury yields has averaged 252 bps per annum. Here we have used the NFI-ODCE returns, given its focus on core real estate strategies with higher than average property and portfolio level cash-on-cash yields.

### EXHIBIT 7: ENHANCED INCOME POTENTIAL

Sources: NCREIF, Bloomberg L.P.

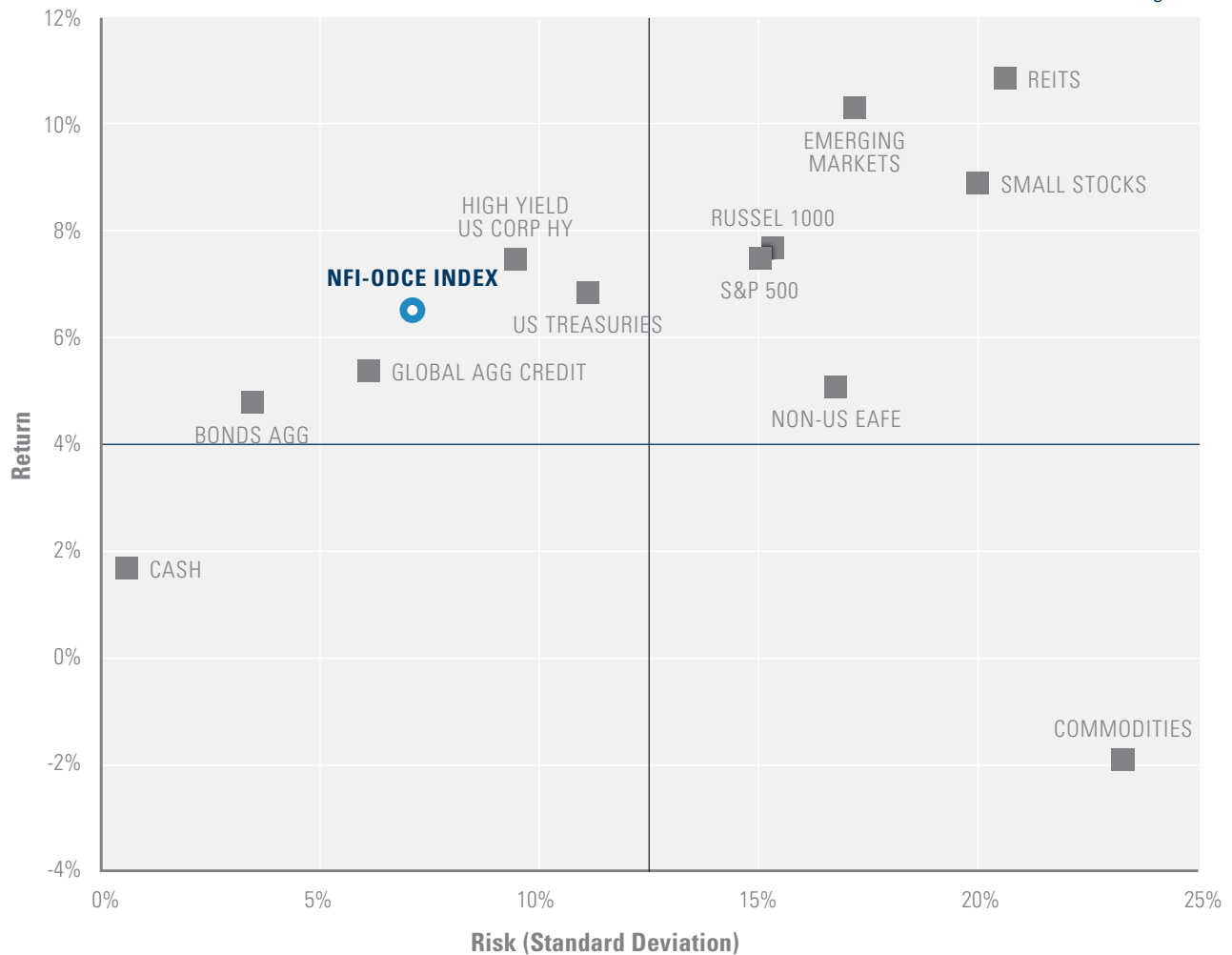


## STRONG HISTORICAL RISK-ADJUSTED RETURNS

As shown in the following three exhibits, private real estate has historically generated a strong risk-adjusted return profile for investors on a long-term basis. The high-quality nature of CRE holdings that produce strong levels of current cash flow due to long-term, in-place lease agreements with creditworthy tenants has generated compelling total returns with a low volatility for investors. These types of properties feature stable valuations and high levels of liquidity. Further, the combination of current income from contractually obligated rent payments plus appreciation in the residual value of the assets has been a main driver behind the asset class's successful track record of performance.

**EXHIBIT 8: RETURN AND RISK BY ASSET CLASS (TRAILING 20 YEARS ENDED 12/31/2020)**

Source: Bloomberg L.P.



Leveraged property returns, as measured by the NFI-ODCE Index, were used in **Exhibit 9** for private real estate, to be more comparable with the capital structure of REITs and U.S. Stocks. The mean return for leveraged private real estate falls between those of stocks and bonds, consistent with risk. The NFI-ODCE Fund Index has historically provided a superior risk-to-reward ratio than U.S. Stocks and REITs, as measured by the Sharpe ratio. To note, historic returns don't always deliver returns commensurate with risk over any particular time period, and such is the nature of risk.

**EXHIBIT 9: MAJOR ASSET CLASS PERFORMANCE BY CALENDAR YEAR (1992 – 2020)**

Source: Bloomberg L.P.

1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>BEST</b>																												
18.4	32.9	8.1	37.8	35	33.4	28.6	40.9	49.7	13.9	32.1	47.3	31.6	25.6	35.1	32.7	24	58.2	27.9	29.9	19.7	38.8	28	<b>15</b>	21	25.6	<b>8.4</b>	31.5	21
15.8	19.7	<b>6.1</b>	37.6	34	32.9	27	27.3	26.4	8.4	16.8	39.2	20.7	<b>21.4</b>	26.9	<b>16</b>	5.2	32.5	26.9	<b>16</b>	17.9	33.1	25.1	3.3	17	21.8	1.9	31.4	20
14.6	18.9	5.3	30.7	23	22.4	20.3	21.3	20.3	<b>5.6</b>	10.3	37.1	18.3	14	18.4	11.6	3.0	28.4	<b>16.4</b>	10.7	16.4	32.4	13.7	2.8	12	21.7	1.3	28.7	18.4
8.9	17.2	4.2	28.5	22	20.3	<b>16.4</b>	21	<b>14.3</b>	5.3	9.6	29.9	17.3	12.2	<b>16.3</b>	9.9	-2.5	28	16.1	8.3	16.4	23.3	13.2	1.4	12	14.6	0.0	25.5	17.7
8.8	17.1	3.2	20.3	16	<b>15.1</b>	13.5	20.9	11.7	5.1	<b>5.5</b>	<b>29</b>	<b>13.1</b>	6.5	15.8	7	<b>-10</b>	27.2	15.1	7.8	16	<b>13.9</b>	<b>12.5</b>	1	11	8.7	-1.8	22.7	8.3
8.0	12.3	1.3	19.2	<b>11.7</b>	15.1	8.7	<b>13.2</b>	11.6	5	3.8	28.7	11.4	6.3	15.5	5.8	-26	26.5	15.1	5	15.8	7.4	9.1	0.6	<b>8.8</b>	8.5	-2.1	17.6	7.5
7.6	10.2	0.4	18.5	11	12.8	6.5	4.8	6.3	4.2	2	20.7	11.1	5	11.8	5.5	-34	13.5	9.4	2.1	<b>10.9</b>	2.9	6	0.2	<b>8.6</b>	<b>7.6</b>	-4	14.8	7.1
7.4	10.1	-1	17.5	6.4	9.7	5.5	2.4	-3	2.5	1.4	<b>9.3</b>	10.9	4.6	4.8	5.4	-37	12.9	9.0	1.5	6.8	0.12	4.9	-0.4	2.6	7.5	-4.4	14.3	5.2
4.4	9.8	-1.8	15.3	5.5	9.2	1.9	-0.8	-5.9	-12	-16	5.3	7.7	3.5	4.8	3.4	-38	6	8.2	0.2	4.2	-1.2	2.5	-1.2	1.5	5.8	-4.8	8.7	<b>1.2</b>
4.1	3.4	-2.9	11.6	4.4	5.5	-2.5	-2.1	-7.8	-12	-20	4.1	4.5	3.1	4.3	1.9	-38	0.4	6.5	-1.2	3.6	-2	0.1	-4.4	1.3	5.5	-11	7.5	0.9
-12	<b>0.5</b>	-5.2	<b>7.1</b>	3.6	2.1	-18	-4.6	-9.1	-21	-22	2.5	4.3	2.7	1.9	-1.6	-43	-13	2.4	-4.2	0.2	-2.6	-4.5	-4.5	0.5	3.5	-13	<b>5.3</b>	-5.1
<b>-5.5</b>	-12	-7.6	6.5	-0.9	-14	-36	-8.7	-14	-32	-22	1.2	1.3	2.4	-15	-16	-46	<b>-30</b>	0.2	-12	0.1	-13	-33	-33	0.2	0.9	-14	2.4	-24
<b>WORST</b>																												

Color	Asset Class	Total Return (%)	Std Dev (%)	Return / Risk	Sharpe Ratio
	Bonds - Agg	4.9	3.6	1.4	0.80
	Munis	4.7	4.4	1.1	0.62
	<b>NFI-ODCE</b>	<b>7.8</b>	<b>11.0</b>	<b>0.8</b>	<b>0.53</b>
	REIT	10.0	18.5	0.5	0.43
	US Treasuries	7.0	11.7	0.6	0.42
	Small Stocks	8.7	19.2	0.5	0.35
	High Yield	6.9	15.5	0.5	0.32
	Russell 1000	7.5	17.8	0.4	0.31
	S&P 500	7.2	17.6	0.4	0.30
	EAFE	4.9	20.7	0.2	0.14
	Cash	2.0	2.0	1.0	0.00
	Commodities	0.0	26.2	0.0	-0.08

Another important and connected aspect of private real estate returns is the low absolute and relative volatility of the asset class. **Exhibit 10** indicates the NFI-ODCE Index, which is levered, has generated annual volatility of 11.6% over the last 20 years. Sharpe Ratio is used here as a measure of risk-adjusted returns and is defined as the outperformance over the risk-free rate per unit of the portfolio's volatility. Over the trailing 20-year period, private real estate generated the strongest risk-adjusted returns as measured by a Sharpe Ratio of 0.68; whereas bonds, stocks, and REITs (Real Estate Investment Trusts) feature Sharpe Ratios of 0.53, 0.46, and 0.47, respectively.

In the spirit of full transparency, the Real Capital Analytics Commercial Property Price (CPPI) Index uses a transaction-based methodology and since 2001, has generated a volatility of just 4.6% versus 16.9% volatility in U.S. equities and 21.0% in U.S. REITs during that same period. Even if you increase the volatility estimate, the story still holds true.

**EXHIBIT 10: TRAILING RETURNS FOR MAJOR ASSET CLASSES**  
**HISTORICAL RETURNS BY ASSET CLASS (AS OF 12/31/21)**

Source: Bloomberg L.P.

Annualized Total Returns	U.S. Corporate Bonds	U.S. Equities	U.S. REITs	NFI-ODCE Index
1 Year	-1.5%	28.7%	41.3%	22.2%
3 Year	4.8%	26.0%	19.9%	9.2%
5 Year	3.6%	18.4%	12.4%	8.7%
10 Year	2.9%	16.5%	12.2%	10.5%
20 Year	4.3%	9.5%	11.2%	8.3%
Volatility**	3.8%	15.8%	19.0%	11.6%
Sharpe Ratio**	0.53	0.46	0.47	0.68

\*NCREIF data on one-quarter lag

\*\*Based on 20-Year time period

Private CRE also has historically preserved capital in periods of financial distress, as measured by maximum drawdown or peak to trough total return performance. For example during the Global Financial Crisis, U.S. REITs had a maximum drawdown of 65.4% and U.S. equities declined 45.8%, yet the NFI-ODCE Index declined just 37.8% from its peak before bottoming out, using quarterly values. Based on long-term data, the order of this historical relationship amongst the various asset classes should continue in the future, albeit to varying degrees.

## DIVERSIFICATION

Since the inception of the NFI-ODCE Index (**Exhibit 11** and **12**), private real estate has been uncorrelated with most major asset classes such as stocks, bonds, and even REITs. Including low (or lower) correlated assets can decrease overall portfolio volatility and improve performance potential. Further, a bond allocation can be diversified away from assets that are sensitive to U.S. interest rate risk. Since CRE isn't monolithic, this brings back the earlier explanation of stabilized property sector duration and economic sensitivity and how portfolios can be constructed with a tilt towards growth or income depending on what you own. Based on the back-tested portfolio results (included in the Appendix), adding a 20% allocation to core private real estate lifts expected return by approximately 20-30 bps per year, while reducing volatility over the long-term. Private real estate exposure can add attractive and differentiated sources of return, while serving to reduce overall portfolio risk.

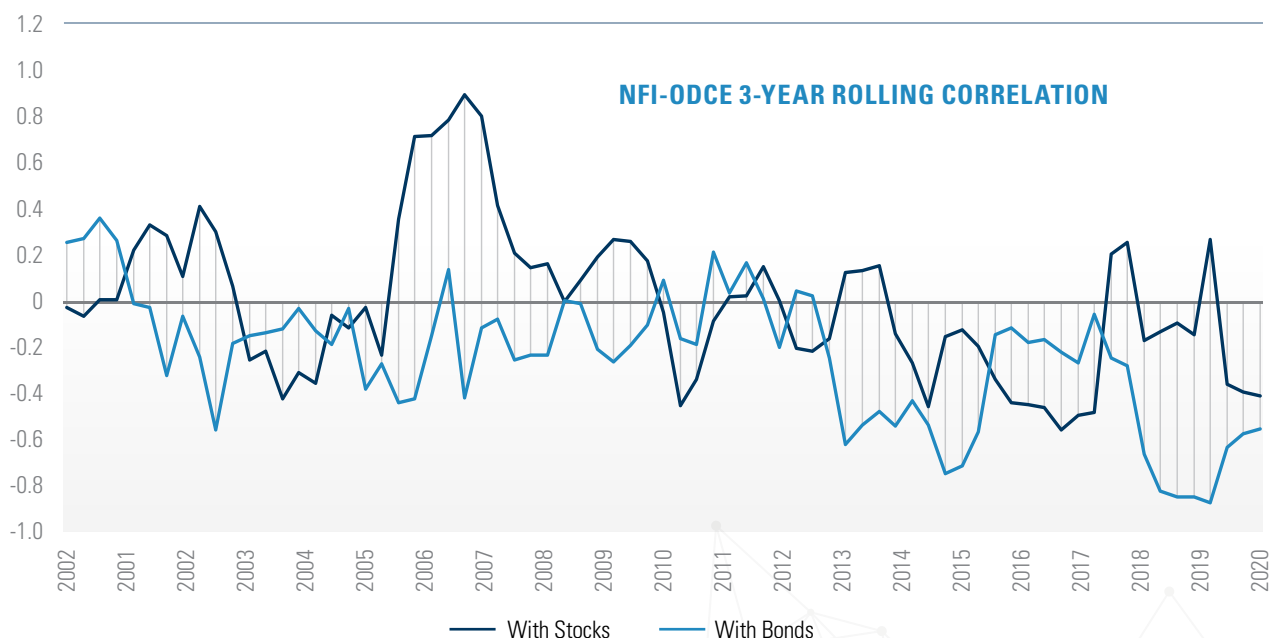
**EXHIBIT 11: CORRELATION MATRIX (DECEMBER 1978 TO DECEMBER 2020)**

Sources: NCREIF, Bloomberg L.P.

	PRIVATE REAL ESTATE	REITs	U.S. STOCKS	BONDS
PRIVATE REAL ESTATE	1.00	0.20	0.16	-0.22
REITs	0.20	1.00	0.77	-0.01
U.S. STOCKS	0.16	0.77	1.00	-0.22
BONDS	-0.22	0.01	-0.22	1.00

**EXHIBIT 12: ROLLING CORRELATION TO TRADITIONAL ASSET CLASSES**

Sources: NCREIF, Bloomberg L.P.



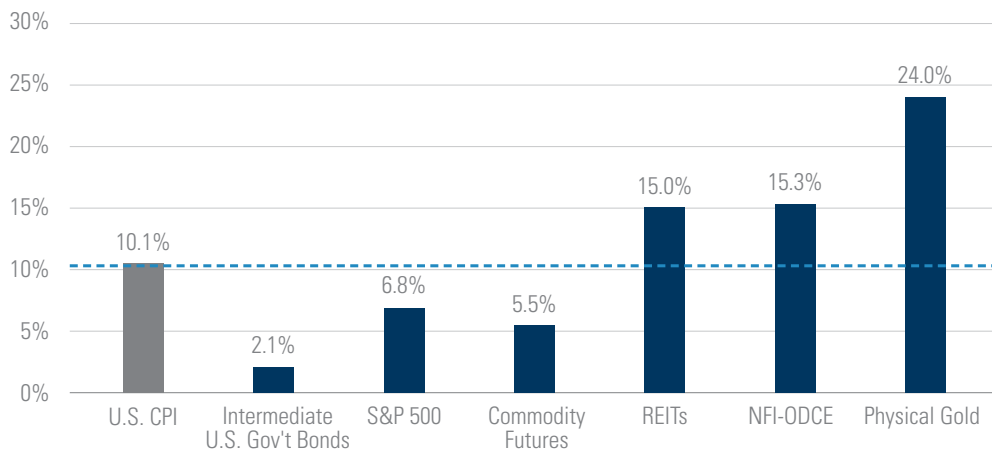


## INFLATION HEDGE

Private real estate is considered a more effective short-term inflation hedge versus traditional financial assets because the value and income of real estate will generally increase alongside inflation. **Exhibit 13** shows that private real estate generated return in excess of inflation during the Great Inflation of the late 1970s into the early 1980s; however, stocks and bonds failed to keep pace and thus, causing an erosion of value in real economic terms. Further, private real estate (**Exhibit 14**) displayed the strongest correlation to U.S. inflation versus all other major asset classes.

**EXHIBIT 13: ASSET CLASS PERFORMANCE DURING AN INFLATIONARY ENVIRONMENT**  
(MARCH 1978-SEPTEMBER 1981)

Sources: Bloomberg L.P., USAA Real Estate



**EXHIBIT 14: ASSET CLASS CHARACTERISTICS VS. U.S. INFLATION**  
(MARCH 1978-SEPTEMBER 1981)

Sources: Bloomberg L.P., USAA Real Estate

	Correlation	Return	Risk	Sharpe Ratio
Intermediate U.S. Gov't Bonds	-0.03	2.1%	11.5%	-0.75
S&P 500	-0.20	6.8%	14.4%	-0.27
Commodity Futures	-0.20	5.5%	17.7%	-0.29
REITs	-0.19	15.0%	15.8%	0.27
<b>NFI-ODCE</b>	<b>0.29</b>	<b>15.3%</b>	<b>1.9%</b>	<b>2.48</b>
Physical Gold	0.25	24.0%	39.0%	0.34
NFI-ODCE (2x Risk)				1.24
NFI-ODCE (3x Risk)				0.83
NFI-ODCE (Bonds/Stock Blended Risk)				0.36

# Concluding Thoughts

CRE should serve as the “third-leg of the stool” when it comes to allocating portfolio assets, behind that of stocks and bonds. CRE has consistently proved itself as a valuable component of any investment portfolio. Over the long-term, core real estate in the U.S. has generated higher returns than fixed income and lower volatility than equities while providing diversification benefits to both asset classes. A real estate allocation can help investors achieve a variety of positive outcomes: enhanced income potential increasing returns with lower volatility, diversification, and inflation protection.

## REFERENCES

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3. Pioneering Portfolio Management by David F. Swensen (2018).
4. 2018 Asset Allocation Return and Risk Assumptions. Wilshire Associates.
5. Real Estate as an Asset Class, May 2019. Mercer LLC.
6. Private Real Estate, March 2019. UBS Switzerland AG.

## APPENDIX

### Disclosures

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## THE MODEL (BACK-TESTED) PORTFOLIO

### EXHIBIT 15: BENCHMARK PORTFOLIO STATISTICS

Source: Bloomberg L.P.

	1Y	3Y	5Y	20Y
Return*	14.71%	11.02%	11.10%	8.00%
Standard Deviation*	20.77%	13.55%	10.38%	9.90%
Downside Risk**	10.89%	7.27%	5.76%	5.39%
Sharpe*	0.70	0.71	0.96	0.70
Sortino**	1.34	1.33	1.74	1.29
Raw Beta*	0.60	0.60	0.60	0.59
Adjusted Beta*	0.73	0.73	0.73	0.72
Alpha (Intercept)*	0.62%	0.48%	0.42%	0.45%
R <sup>2</sup> (Correlation <sup>2</sup> )*	99.9%	99.3%	98.5%	98.5%
R (Correlation)*	1.00	1.00	0.99	0.99
Skew	-1.40	-0.78	-0.89	-0.66
Kurtosis	2.51	0.60	2.57	0.91
Risk Free Return	0.09%	1.36%	1.08%	1.06%

\*Calculations are annualized, where appropriate and SPX is used as benchmark when appropriate. Return = total return when dividends reinvested in the security.

### EXHIBIT 16: BALANCED PORTFOLIO STATISTICS

Source: Bloomberg L.P.

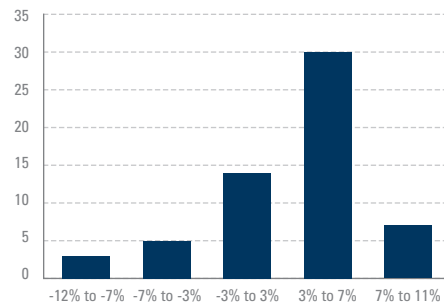
	1Y	3Y	5Y	20Y
Return*	13.22%	10.54%	10.62%	8.28%
Standard Deviation*	16.48%	10.73%	8.25%	8.24%
Downside Risk**	8.36%	5.56%	4.39%	4.62%
Sharpe*	0.80	0.86	1.16	0.88
Sortino**	1.57	1.65	2.17	1.56
Raw Beta*	0.79	0.79	0.79	0.82
Adjusted Beta*	0.86	0.86	0.86	0.88
Alpha (Intercept)*	0.31%	0.41%	0.42%	0.40%
R <sup>2</sup> (Correlation <sup>2</sup> )*	100.0%	99.9%	99.8%	96.9%
R (Correlation)*	1.00	1.00	1.00	0.98
Skew	-1.43	-0.86	-0.99	-1.07
Kurtosis	2.53	0.68	2.62	1.59
Risk Free Return	0.09%	1.36%	1.08%	1.06%

\*Calculations are annualized, where appropriate and .GS6040 is used as benchmark when appropriate. Return = total return when dividends reinvested in the security.

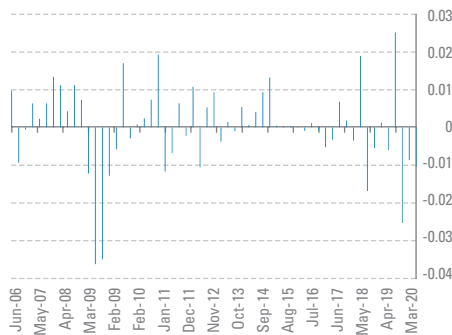
### EXHIBIT 17: BALANCED PORTFOLIO STATISTICS

Source: Bloomberg L.P.

#### Return Distribution



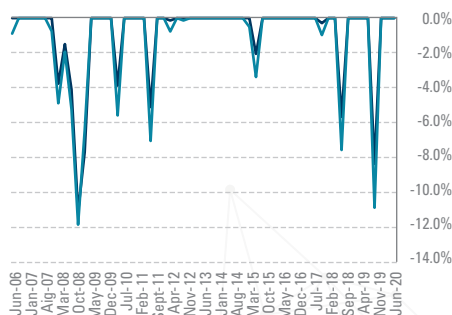
#### Outperformance vs. Benchmark



#### Standard Deviation



#### Drawdown Analysis



## BENCHMARKS/ PROXIES

- Equities: S&P 500 Index
- Fixed Income: Barclay's Capital US Aggregate Bond Index
- Real Estate: NCREIF Fund Index – Open End Diversified Core Equity
- Inception Date: 12/31/1999
- Data as of 12/31/2020

## BENCHMARK PORTFOLIO – ANNOTATED AS “.GS6040” BELOW

60% Stocks and 40% Bonds

## BALANCED MODEL PORTFOLIO

50% Stocks, 30% Bonds, and 20% Core Private (Levered) Real Estate

## An Improved Portfolio by Many Measures

### RISK & RETURN

- Annual Returns: +28 bps
- Portfolio Risk: -17%

### RISK-ADJUSTED RETURNS

- Sharpe Ratio: +25%
- Sortino Ratio: +21%



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