

# Russell Research

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APRIL 2011

## Structuring a private real estate portfolio

Commercial real estate was first introduced to institutional investment portfolios in the 1970s to diversify risk and potentially enhance return.<sup>1</sup> In the 40 years since, real estate as an asset class has evolved to become an integrated component of the broader capital markets and a truly global investment opportunity set that is a mainstay in investment portfolios of all types and sizes. With a multitude of options available to investors, real estate investments today can be tailored to specific portfolio goals and constraints.

### Introduction

Real estate is a cyclical business that has undergone three major downturns over the past 30 years, each of which has led to important product and risk-management innovations. For example, the downturn that followed the S&L crisis in the late 1980s and early 1990s resulted in the birth of opportunistic real estate investing and the introduction of private equity real estate funds. The most recent downturn, resulting from the global financial crisis and associated global economic recession, has affected investors of different types, sizes, and geographies in a variety of ways. As in past down cycles, the lessons learned from this experience are helping to reshape the way Russell thinks about investment in the asset class and portfolio construction.

In the pages that follow, we will revisit the case for investment in private real estate (hereafter referred to simply as “real estate”),<sup>2</sup> discuss the various types of real estate investments and illustrate Russell’s real estate portfolio construction process.

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<sup>1</sup> During a 1970 speech to the Treasurer’s Club in New York, George Russell suggested that pension funds should consider investing in “foreign stocks” and real estate to help diversify their portfolios.

<sup>2</sup> This paper focuses primarily on investment in private real estate. The case for public real estate securities investing will be covered in a separate paper.

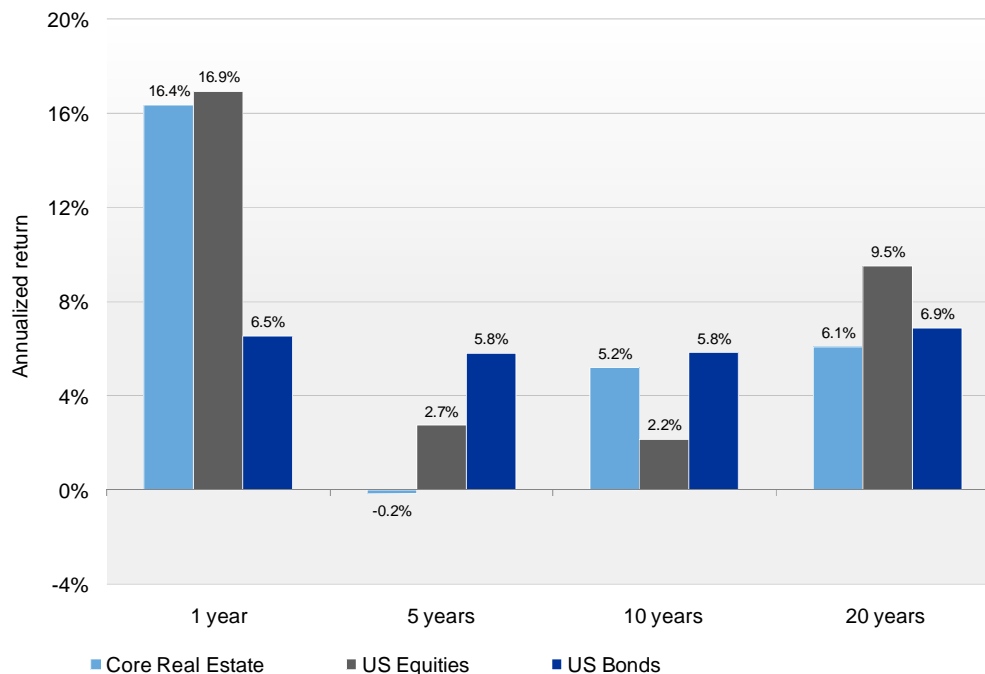
## Rationale for inclusion in a portfolio

There are several reasons to include real estate in a multi-asset portfolio, including potential return enhancement, risk diversification, long-term inflation protection, income generation and low volatility.

### RETURN ENHANCEMENT

Over its history and relative to other asset classes, real estate has provided a competitive return. Over the long term, “core” real estate<sup>3</sup> is expected to generate a lower return than public equities but higher than bonds. While the effects of the global financial crisis and the U.S. market downturn have skewed this relationship to a degree over more recent periods, the historical returns for U.S. core real estate, U.S. equities and U.S. bonds support this forecast (as demonstrated in Exhibit 1).

Exhibit 1: Historical returns for equities, bonds, and core real estate as of December 2010.



Sources: NCREIF Fund Index – Open-end Diversified Core Equity; Russell 3000® Index; Barclays Capital US Aggregate Bond Index. Returns calculated gross of fees.

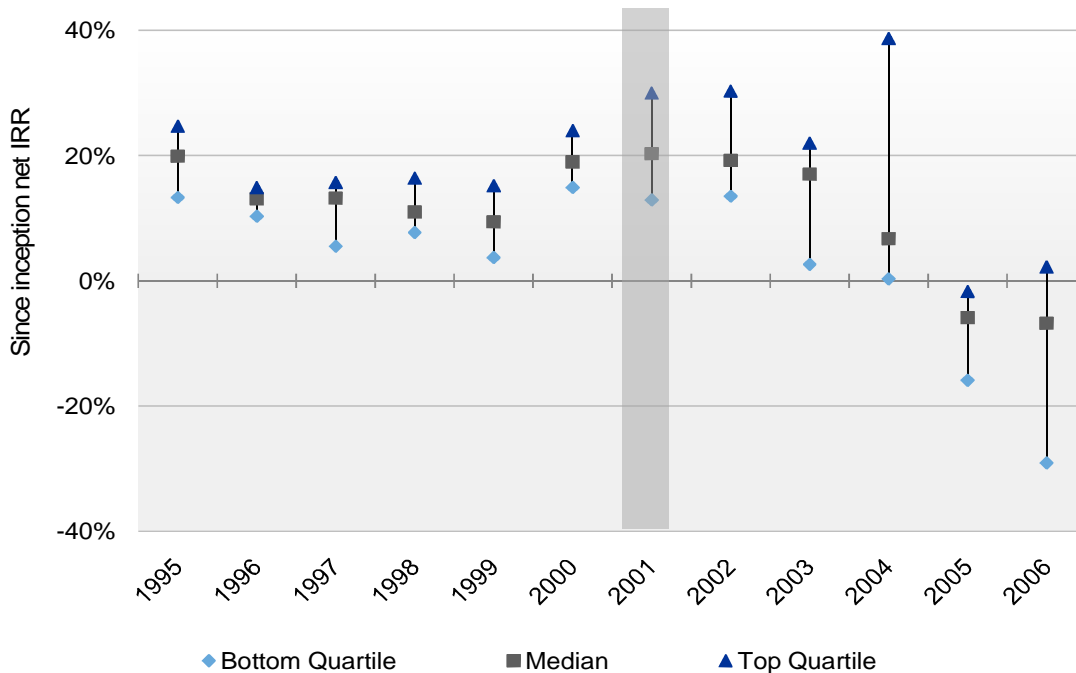
Indexes are unmanaged and cannot be invested in directly. Past performance is not indicative of future results.

Investing in “non-core” (i.e., value-added and opportunistic) real estate strategies is a way to further enhance the expected returns of a real estate portfolio. In general, non-core real estate is expected to deliver a 300 to 500-plus basis point return premium over core. According to Prequin, the average (median) fund produced an average since-inception net internal rate of return of 11.3% between 1995 and 2006, although significant volatility was observed over different vintage years (as evidenced in Exhibit 2). The historical record seems to indicate that non-core funds launched during or following recessions have performed better than those of other vintages. Conversely, as the returns of the 2005–2006

<sup>3</sup> Core and non-core real estate are described later in this paper in the “Major Asset Class Segments” section.

vintage years appear to confirm, non-core funds raised during periods of strong economic expansion and easy credit have performed poorly relative to other vintages.<sup>4</sup> It should be noted that manager skill also plays a critical (and increasingly important) role in generating strong returns from non-core investments, due to the large and growing investment opportunity set, diversity of strategies, increased use of leverage and other factors.

Exhibit 2: Historical internal rates of return (IRR) by vintage year



Non-core sample period includes vintage years 1995 through 2006 from the Preqin database. Vintage years included only if capital has been completely called and 10 or more fund observations exist. Shaded region represents U.S. recession.

### RISK DIVERSIFICATION

From a macroeconomic perspective, the return drivers underpinning real estate returns differ from those of many other classes of financial assets, thus providing a diversification benefit to a multi-asset portfolio. Additionally, the diverse nature of the individual real estate markets and property types available to real estate investors generate distinctive performance characteristics. While its diversification benefits may be overstated due to appraisal smoothing<sup>5</sup>, core real estate as evidenced by the NCREIF Fund Index–Open-end Diversified Core Equity (NFI-ODCE) has demonstrated very low correlation to equity and bond indexes on a historical basis (as shown in Exhibit 3).<sup>6</sup>

<sup>4</sup> The sample period used in this analysis ends in 2006 because this vintage year represents the last fully-invested vintage in the Preqin database. The data from subsequent vintage years contains a significant number of funds that remain in their investment period with material amounts of capital left to deploy, thus biasing the return data.

<sup>5</sup> Because real estate assets trade infrequently, the market value of these assets has to be estimated using appraisals during the interim. These appraisals are typically done on a quarterly or annual basis, thus resulting in a return pattern that is less volatile (or “smoothed”) than for investments traded on exchanges.

<sup>6</sup> We have excluded non-core real estate returns from this analysis because returns are calculated using cash-on-cash IRRs, which do not provide an accurate comparison to time-weighted returns.

Exhibit 3: Correlations of core real estate to equity and bond indexes

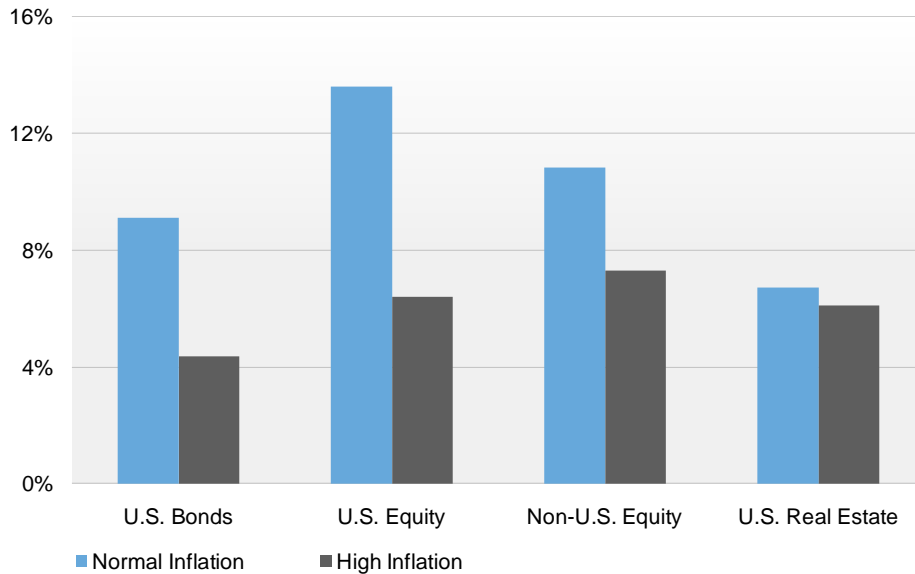
Index	NFI-ODCE, Net
Russell Global ex-U.S. Index <sup>7</sup>	0.12
Russell Global Index <sup>8</sup>	0.13
Barclays Capital US Aggregate Bond Index	-0.13
Russell 1000® Index	0.11

Sample period is 1979 through 2010. Correlations are calculated using annual returns. Indexes are unmanaged and cannot be invested in directly. Past performance is not indicative of future results.

RELATIONSHIP WITH INFLATION

Real estate has been identified as having a long-term relationship with inflation. Over the long term, real estate may provide some protection against inflation, because real estate revenue, which is derived from periodically resetting contractual rental payments, will adjust to changing external market conditions, such as rising price levels. Within the asset class, core may be a better defense against inflation than non-core, particularly in environments where long-duration debt is available to hedge liabilities and where index-linked leases allow for rent increases to be passed through to tenants. Exhibit 4 illustrates the performance of equities, debt and real estate during periods of normal and high inflation. While equity- and debt-related indexes suffer during periods of rising inflation, core real estate exhibits returns during periods of high inflation similar to those they return during periods of normal inflation.

Exhibit 4: Analysis of major indexes during periods of normal and high inflation



Sources: NFI-ODCE; Russell 3000® Index; MSCI EAFE Index (1978-1996Q3) and Russell Global ex-U.S. Index thereafter; Barclay’s Capital U.S. Aggregate Bond Index. Returns are average (not annualized) quarterly returns. Sample period 1978Q1 through 2010Q3. U.S. inflation is defined as the percentage change in the U.S. All-Urban Consumer Price Index. High inflation is defined as >0.7% in a quarter.

Indexes are unmanaged and cannot be invested in directly. Past performance is not indicative of future results.

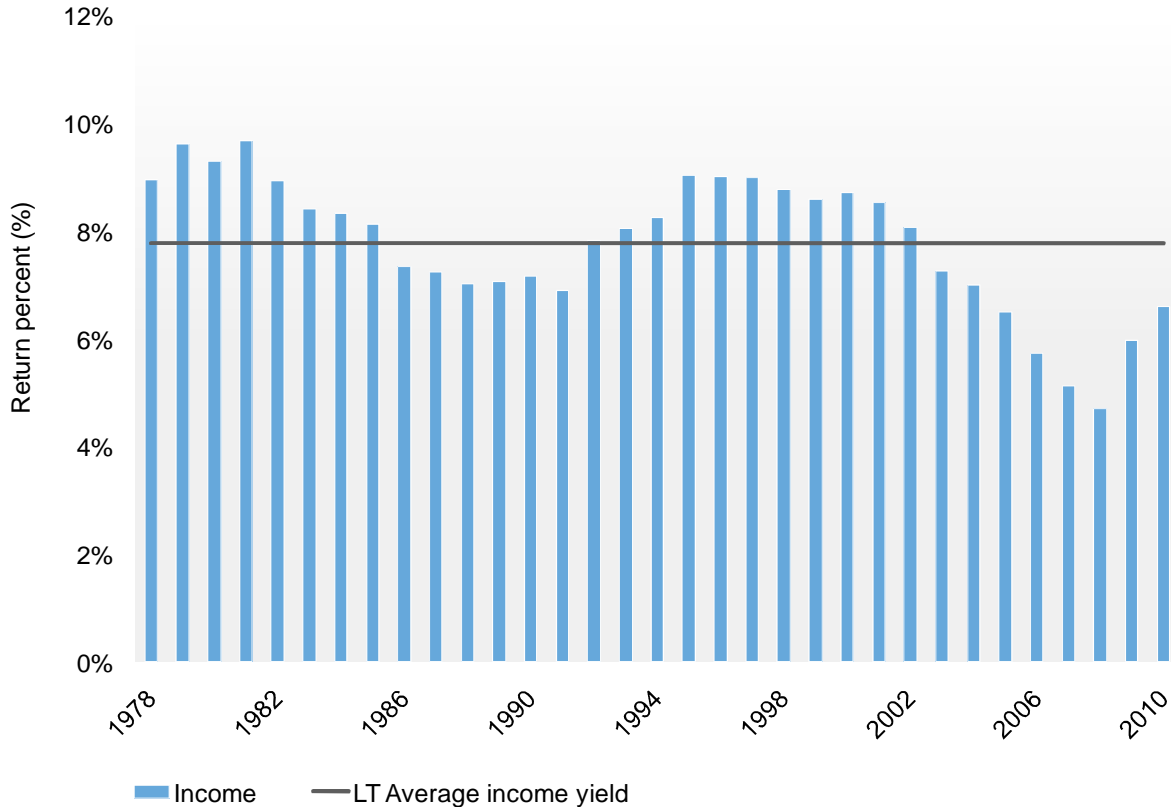
<sup>7</sup> MSCI EAFE Index prior to Q3 1996.

<sup>8</sup> MSCI World Index prior to Q3 1996.

## INCOME GENERATION

Approximately 70%-80% of the total return from core real estate is derived from current income generated by contractual rent payments associated with tenant leases. For non-core real estate, total return is more reliant on capital appreciation, so current income represents a smaller component of the overall return. Exhibit 5 demonstrates the stable income return generated by core real estate in the U.S. since 1978. This stable income return helps to reduce the variability of total returns and to maintain current cash flows.

Exhibit 5: Illustration of core real estate income



NFI-ODCE constituents, 1978-2010.

Indexes are unmanaged and cannot be invested in directly. Past performance is not indicative of future results.

## LOW VOLATILITY

Real estate demonstrates lower volatility than many other asset classes for two main reasons. First, from an investment perspective, the leasing and financing structures found in real estate investments are long-term in nature, adjusting only gradually to changing market conditions and thus producing a relatively smooth return pattern. Additionally, real estate returns are largely dependent on periodic asset valuations and therefore do not exhibit the same level of volatility as returns from investments listed on exchanges. Appraisals are necessary because pricing is fully known only at the time of a property sale, which may occur only once every several years. Moreover, no two properties are identical, so extrapolating an appraisal for a non-transacted property requires estimation from imperfect substitutes.

In the case of core, Exhibit 6 demonstrates that the income generated has remarkably low volatility (Exhibit 5 also shows the steadiness of core real estate income). Additionally, the

total net return of the NFI-ODCE has a standard deviation of 5.69%, which is favorable relative to other asset classes.<sup>9</sup>

Exhibit 6: Average standard deviation for core private real estate

	Net income standard deviation	Net appreciation standard deviation	Total net return standard deviation	Standard deviation annualized
NFI-ODCE	0.60	5.48	5.69	
Russell 1000® Index				15.73
BC U.S. Aggregate Bond Index				5.85

Sample period 1978Q1 through 2010Q4. Standard deviations are calculated from quarterly returns. Indexes are unmanaged and cannot be invested in directly. Past performance is not indicative of future results.

## Distinct from other asset classes

### PRIMARY MARKET FACTOR EXPOSURES

Real estate is closely aligned with overall macroeconomic performance. This alignment is more lagging or coincident to the macroeconomic cycle than is equity alignment, which tends to behave as a leading indicator. The asset class also reflects the particulars of the real estate cycle, which is primarily influenced on the demand side by job growth, retail sales and international trade. Supply-side factors can include broad trends in overall credit market conditions and construction industry fundamentals, but more importantly are driven by localized factors specific to individual markets, including local development and planning policies. Finally, real estate investing is unique in that it offers investors the opportunity to own and control distinct assets that can be physically improved, made more operationally efficient or repurposed in some way to potentially enhance returns.

### MARKET ENVIRONMENTS WHEREIN REAL ESTATE IS HELPFUL

Russell advocates a strategic and diversified approach to real estate for investors seeking durable investment returns in different market environments. In general, real estate is a pro-cyclical business that performs best during expansionary phases of the business cycle. Real estate also tends to move in long and, to some extent, predictable cycles.

Due to its cyclicity, real estate will tend to produce the highest returns when investment is made in an economic recovery or early growth stage and harvested during an expansionary phase. However, within the asset class, certain styles of investing will benefit from different economic conditions. For example, opportunistic investing, which seeks to capitalize on market dislocations and anomalies in real estate and capital markets conditions, tends to perform best during or immediately following periods of market turbulence and recession. In contrast, many types of value-added strategies, which depend on leasing momentum and rent growth to generate returns, are more attractive during expansionary phases of the business cycle. Finally, core real estate, which can be viewed as the “beta” of the asset class, will often perform as well as the overall real estate market in general. Due to their focus on fully leased properties in prime markets and conservative capital structures, core real estate investments tend to preserve value better than non-core investments in down markets.

<sup>9</sup> By contrast, listed risky asset classes such as equities, commodities futures and REITs generally exhibit standard deviations in the 13%–18% range over similar sample periods. Time-series volatility is the volatility of a particular fund’s series of returns over a sample period.

## Major asset class segments

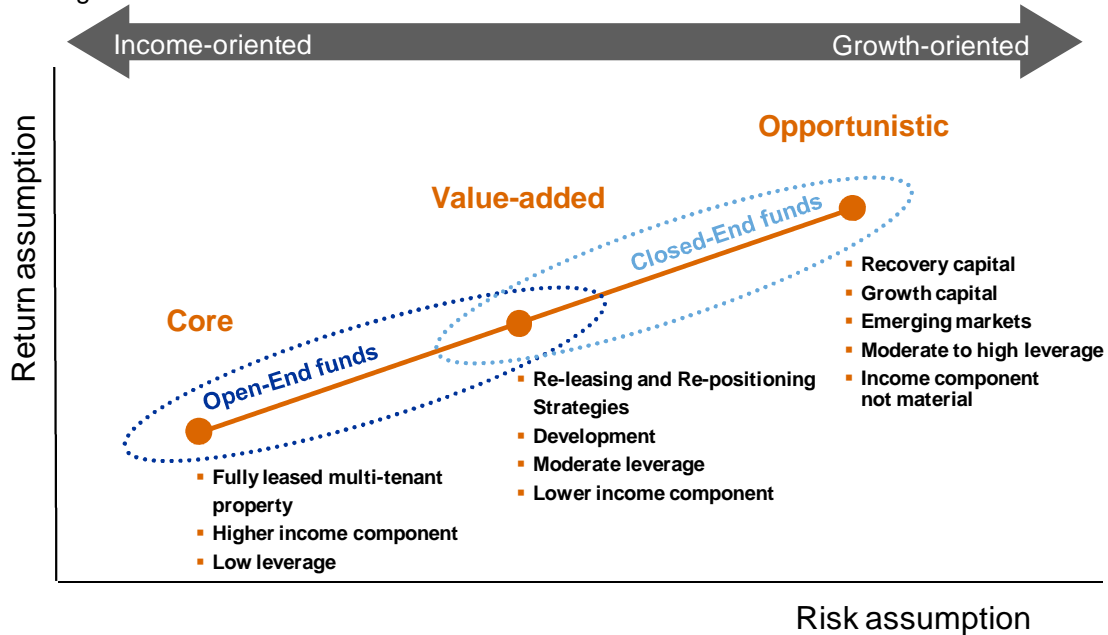
Real estate investment is segmented by both property type and investment style. The major (or traditional) property types include office buildings, apartments, retail centers and industrial properties, each with several distinct subtypes. Additionally, several other nontraditional property types are included in some real estate portfolios, including hotels, senior-housing facilities, medical office buildings, self-storage facilities and student apartments.

Real estate may also be segmented by investment style. “Core” properties are the safest type of investment and are generally expected to provide relatively modest rates of return. A core portfolio should emphasize traditional property types, operating assets (at least 80% leased), and the limited use of financial leverage (less than 40% of total capital). Exposure to core real estate is typically obtained through portfolios of directly owned assets (i.e., separate accounts) or through commingled funds (typically open-ended). A core-oriented portfolio should produce returns between those of stocks and bonds.

“Non-core” investments generally focus less on current income and more on capital appreciation. Historically, non-core investments have been classified further as “value-added” and “opportunistic,” although there is considerable overlap within these categories. Non-core investments may include nontraditional property types and/or properties that involve development, redevelopment or leasing risk. Non-core strategies may include asset, portfolio and operating company investments that entail significant financial leverage (in excess of 50%) and that require specialized acquisition or management expertise to enhance their value. Implementation of a non-core real estate portfolio is typically made through investments in closed-end private equity-style structures.

The chart in Exhibit 7 provides a graphical representation of the relationship between core and non-core investments.

Exhibit 7: Illustration of core and non-core (value-added and opportunistic) real estate strategies



This hypothetical example is for illustration only and is not intended to reflect the return expectations of any actual investment.

## Benchmark

Benchmarking investment performance is a challenging exercise for real estate portfolios. The availability and appropriateness of performance benchmarks varies substantially by geography and investment type. In most geographies, no true industry-standard index exists for the asset class. Additionally, the various published real estate benchmarks vary substantially along a number of dimensions (i.e., property-level versus fund-level, appraisal-based versus transaction-based, risk type, fund structure), which makes performance comparisons difficult. Given the number of ways in which real estate portfolios can be constructed, we advise investors to select real estate benchmarks that are appropriate for the specific structure of their real estate allocation. Investors may also wish to consider a long-term absolute-performance return target, rather than rely on specific benchmarks for comparison purposes.

The options for real estate benchmarks have increased over time as new tools and information have become available. Exhibit 8 provides a comparison of the leading real estate benchmarks.

Exhibit 8: Major private real estate benchmarks

Name:	NCREIF Property Index	NCREIF Fund Index – Open-end Diversified Core Equity	NCREIF / Townsend Fund Indexes	IPD Global Property Index	MIT Center for Real Estate Transaction-Based Index	Moody's / Real Commercial Property Price Index (CPPI)
Base date:	Q1 1978	Q1 1978	Q4 1989	Dec. 2000	Q1 1984	Dec. 2000
Reporting frequency:	Quarterly	Quarterly	Quarterly	Annual	Quarterly	Monthly
Geography:	U.S.	U.S.	Global	Global	U.S.	U.S.
Based on:	Property-level valuations and operating income data	Returns of open-end core funds	Returns of value-added, opportunistic and core funds	Property-level valuations and operating income data	Transaction prices and operating income data	Transaction prices (from same-property repeat sales)
Data Source:	NCREIF data-contributing members provide data on their assets	Contributing funds submit data	Contributing funds submit data to The Townsend Group	Contributing funds provide data to national indexes, which are aggregated to create the global index	NCREIF database	Real Capital Analytics, Inc. database
Property or fund level:	Property	Fund	Fund	Property	Property	Property
Gross asset value / net asset value:	GAV	Both GAV & NAV	Both GAV & NAV	GAV	GAV	GAV
Universe size:	6,175 properties / \$247.1 billion GAV (12/31/2010)	16 funds / \$59.2 billion NAV (12/31/2010)	295 funds / \$148.5 billion NAV (9/30/2010)	52,159 properties / \$1,073.7 billion GAV (12/31/2009)	6,175 properties / \$247.1 billion GAV (12/31/2010)	146,359 transactions / \$2,379.6 billion GAV (2/1/2011)

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## Liquidity issues

Real estate is an illiquid asset class. Core open-end real estate funds generally offer “best efforts” quarterly liquidity. “Best efforts” simply means that liquidity is quarterly, unless the fund cannot meet a redemption request. Failure to meet a request may result from particular cash flow issues for a fund or general liquidity issues in the market. If the market is experiencing a liquidity squeeze, core real estate is unlikely to make redemptions. (To some extent, liquidity becomes an issue just when it is needed most.)

Non-core real estate funds are generally offered as closed-end funds with no liquidity provisions. Investors are expected to remain invested for the life of the fund, which lasts 8 to 10 years in most cases. A secondary market for non-core real estate fund interests has existed for several years, although activity has been modest and buyers typically seek deep discounts. In the aftermath of the global financial crisis, there has been more interest in this area, and the market appears positioned for growth over the next several years.

## Cash flows

As noted in Exhibit 5, cash flows are a hallmark of core real estate. By contrast, non-core real estate is more reliant on capital appreciation as part of its return.

## Active management potential and common strategies

There are no passive investment alternatives for real estate portfolios, so investors must take an active approach. Active management in real estate occurs at two specific levels. First, a manager can actively manage a portfolio through market, sector and or property selection decisions. Alternatively, a manager can make physical changes to an individual property, increase its operational efficiency or alter its capital structure in efforts to increase returns.

Core real estate, the “beta” of the asset class, features limited opportunities for active management. Core portfolios typically feature relatively rigid investment guidelines designed to constrain exposures within a narrow style box. These guidelines reduce a manager’s ability to generate excess returns via physical property improvements. Instead, core managers will typically seek to outperform a benchmark by selecting properties in the best-performing markets and property types, and through efficient operational management (i.e., lease negotiations, expense controls, etc.). In the U.S., most core real estate managers typically target returns that meet or exceed the peer group index (NFI-ODCE).

By contrast, non-core real estate can be viewed as the “alpha” of the asset class, and it features significant opportunities for active management. As opposed to core portfolios, non-core strategies rely on adding value at the property level or through financial engineering in efforts to generate excess investment returns.

The non-core fund universe has grown substantially over the past two decades and now represents a global opportunity set with a broad and diverse investment universe. Due to this increase in breadth, the opportunities to generate returns in excess of those available in a core portfolio are much greater. Typically, investment guidelines imposed on a non-core portfolio are far more relaxed than guidelines for core portfolios, and thus managers have more latitude in operating the investment program. Non-core return expectations will vary depending on strategy and geography, but most feature long-term internal rate-of-return targets in the 10% to 15% range. On a relative basis, we generally expect anywhere from 300 to 500-plus basis points of excess return from non-core strategies over core real estate.

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## Model weights within the asset class

The model weights for real estate portfolios will vary for institutional investors, depending on return objectives, risk tolerance and other unique characteristics and constraints.

Additionally, implementation options vary significantly for investors of different types, sizes and domiciles. This variety of investor needs and options creates a number of challenges for portfolio construction.

In general, Russell advocates that investors develop a mix of assets that accurately reflects their specific objectives and constraints. Most portfolios will have substantial allocations to both core and non-core investments, while also allowing for meaningful allocation to public real estate securities.

As a starting point, a discussion of the purpose of real estate in the overall portfolio will provide some context for how to structure the top-down allocations. Russell has developed a model portfolio framework that combines both core and non-core components. Investors who view real estate as a return-enhancement component of the overall portfolio will typically have a higher weighting to non-core segments, while those who include real estate in the overall plan for its diversification and/or risk- and volatility-dampening attributes will have a higher weighting to core investments. Russell's framework for model weights in the real estate portfolio is included in Exhibit 9.

Exhibit 9: Model real estate portfolio ranges



Example provided for illustrative purposes only.

The model portfolio framework is provided as a reference point for a typical institutional real estate investor. The exact portfolio mix should be tailored to meet the investor's unique objectives for the asset class. Specific factors to consider include the following:

- **Investor size, type and domicile:** Real estate markets demonstrate pronounced local variations in terms of investor practices, product offerings and industry structures. As a result, the differences in available implementation options make it difficult for some investors to construct diversified portfolios, particularly in less-developed markets. Top-down allocation targets must be adjusted to account for these issues.
- **Return objectives:** Return-seeking investors will typically have a higher target allocation to non-core segments of the real estate markets. These investors may also seek greater exposure to growth-oriented geographic markets, including emerging economies, to generate higher returns.
- **Liquidity constraints:** Real estate should be considered an illiquid investment regardless of what fund structures suggest. Investors with higher liquidity requirements will typically target a greater percentage of the portfolio in publicly traded real estate securities. Liquidity-conscious investors may also wish to have a higher allocation to open-end real estate investment products, though they should also understand that in

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many cases, these funds can become – and remain – illiquid for extended periods of time.

- **Volatility sensitivity:** Public real estate securities demonstrate higher volatility than private real estate investments. While some of the reduced volatility of real estate investments is the result of the appraisal smoothing, the presence of private real estate investments in the overall portfolio will work to dampen overall volatility. Investors with a higher degree of sensitivity to portfolio volatility may consider a greater allocation to core real estate investments.
- **Portfolio diversification:** Publicly traded real estate securities portfolios tend to demonstrate higher correlation with public equity markets, particularly over shorter time horizons. As a result, investors seeking higher diversification benefits from real estate may consider higher allocations to private real estate investments.

### Conclusion

Real estate is an important addition to a multi-asset portfolio. Despite the recent downturn during the global financial crisis that began in late 2008, the asset class continues to offer the potential for competitive return, diversification benefit, strong income return, low volatility, and inflation-hedging. As it has evolved from a niche investment pursued by few to a mainstay investment in institutional portfolios, real estate has grown and matured both in terms of global footprint and product availability. Today, the vast array of real estate implementation options allows investors the ability to customize portfolios to fit their needs, but also places significant importance on portfolio construction and the identification of skilled managers.

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First used: April 2011

USI-9575-04-13