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A Better Foundation for Benchmarking Core Open-End Real Estate Funds' Performance?

Like other asset classes, real estate investments have been adversely affected by the current recession. Most investors in real estate experienced record losses in the six months ending March 31, 2009. The losses reversed a multi-year trend of year-over-year gains in the range of 15 to 20 percent. This experience underscores the importance of having a meaningful benchmark for evaluating the performance of core open-end real estate funds.[1]

Since the late 1970s, pension funds and other investors in core open-end real estate funds have relied on the National Property Index (NPI) created by the National Council of Real Estate Investment Fiduciaries (NCREIF)[2] as a benchmark. This *Segal Advisory* provides background on the NCREIF NPI and describes NCREIF's newer index, the Open-End Diversified Core Equity (ODCE[3]). The NCREIF ODCE return information is capitalization-weighted,[4] but an equal-weighted (EQW)[5] version of the index is also available. This *Segal Advisory* explains why the NCREIF ODCE (EQW) may be more appropriate for benchmarking an investment in a core open-end real estate fund than the NCREIF NPI or the capitalization-weighted NCREIF ODCE.

The NCREIF NPI

The NCREIF NPI, which was launched in the fourth quarter of 1977, is a quarterly time series composite total rate-of-return measure of unleveraged (*i.e.*, debt-free) property level investment performance of a pool of individual commercial real estate properties. All properties in the NCREIF NPI have been acquired in the private market, at least in part, on behalf of tax-exempt institutional investors, most of which are pension funds, for investment purposes only. As such, all properties are held in a fiduciary environment. As of March 31, 2009, there were 6,071 properties in the NCREIF NPI with a gross asset value of just over $269 billion.

Three requirements must be met before a property can become part of the NCREIF NPI:

- The property must be classified as one of the following property types: office, retail, industrial, multi-family or hotel.
- The accounting of the property must be performed using market-value accounting.
- The property must be an operating property. An operating property is defined for a newly developed property as reaching 60 percent occupancy or having been available for occupancy for a year from its certificate of occupancy. If a property has been recently purchased with a "redevelopment" strategy, and the property is undergoing substantial expansion or re-tenanting, rehabilitation or remodeling, the property is defined as operating when occupancy reaches 60 percent. All existing properties (not recently developed or undergoing redevelopment as covered above) that are purchased regardless of current occupancy are defined as operating properties.

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1 Core open-end real estate 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, subject to utilizing low leverage and generally represented by equity ownership positions in stable U.S. operating properties.

2 The NCREIF (www.ncreif.com) is an association of institutional real estate professionals, including investment managers and plan sponsors, who are involved in pension fund real estate investments.

3 This abbreviation is pronounced, "odyssey."

4 The capitalization-weighted index is based on each fund's net invested capital, which is defined as beginning market value net assets (BMV), adjusted for weighted cash flows (WCF) during the period. To the extent WCF are not available, which may be the case for historical periods and older liquidated funds, BMV is used. More broadly, a capitalization-weighted index weights individual components according to their market capitalization, so that larger components carry a larger percentage weighting.

5 As the name suggests, the equal-weighted index gives the same weight, or importance, to each real estate fund in the index. This allows all of the funds, smaller as well as larger, to be considered on an even playing field.

The NCREIF ODCE

The NCREIF ODCE, which was launched in 2005, represents investment returns for leveraged funds, reported on both an historical and current basis. The NCREIF ODCE aggregates results of 26 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. Both the capitalization-weighted NCREIF ODCE and the NCREIF ODCE (EQW) are reported on a time-weighted,[6] gross and net-of-fees basis.

The NCREIF ODCE has a survivorship bias, meaning funds tend to stop operating due to poor results or low asset accumulation. This phenomenon tends to overestimate past results. Consequently, as of March 31, 2009, the NCREIF ODCE included the performance of 14 active open-end diversified core real estate funds, which held 1,823 properties with a gross asset value of almost $84 billion.

For a fund to be included in the NCREIF ODCE it must market itself as an open-end commingled fund pursuing a diversified core investment strategy, primarily investing in private equity real estate with the following guidelines:

- ***Investment*** At least 80 percent of the market value of real estate net assets must be invested in private equity real estate properties. No more than 20 percent of such assets may be invested in, but not limited to, property debt, public company, equity/debt or private company (operating business) equity/debt.
- ***Domain*** At least 95 percent of the market value of real estate net assets must be invested in U.S. markets.
- ***Property Types*** At least 80 percent of market value of real estate net assets must be invested in office, industrial, multi-family and retail property types.
- ***Life Cycle*** At least 80 percent of market value of real estate net assets must be invested in operating properties. No more than 20 percent of such assets may be invested in, but not limited to, (pre)development/redevelopment or initial leasing/lease-up cycles.
- ***Diversification*** No more than 70 percent (adjusted up or down for market forces) of market value of real estate net assets may be invested in one property type or one region as defined by the NCREIF NPI.
- ***Leverage*** No more than 40 percent leverage, which is defined as the ratio of total debt, grossed-up for ownership share of off-balance sheet debt, to the fund's total assets, also which are grossed-up for such off-balance sheet debt.

The Indices Compared

Scope of Coverage

According to *Emerging Trends in Real Estate® 2009*,[7] the investment-grade private real estate universe was valued at $4.8 trillion in 2008. Analyzing data from ING, Segal Advisors found that five sectors — office, multi-family, industrial, retail and hotels — accounted for almost 85 percent, or $4.0 trillion.[8]

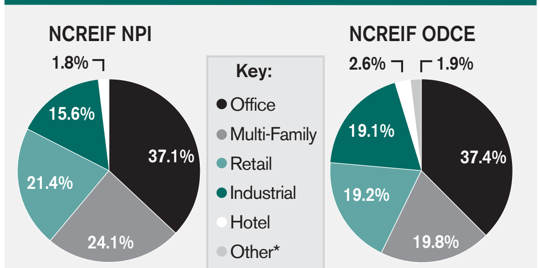
The NCREIF NPI represents approximately 7 percent of investment-grade properties in the five "core" sectors. In contrast, the NCREIF ODCE represents approximately 2 percent of the properties in those sectors. Although the NCREIF ODCE includes fewer core properties — all of which are also in the NCREIF NPI — it includes other properties that are *not* in the NCREIF NPI: self-storage, land investments, development properties, and newly completed construction properties with occupancy rates lower than 60 percent.

Moreover, although the scope of the NCREIF NPI's core coverage is greater than the NCREIF ODCE, the NCREIF ODCE tends to hold larger assets in primary markets[9] for extended periods of time. This is consistent with the vast majority of open-ended diversified core funds' stated strategy of owning assets in primary versus secondary markets and their perpetual fund structure (holding periods for close-end funds by nature are shorter due to liquidation mandated by a defined operating life).

Sector Diversification

The office exposure of both indices is identical, but the NCREIF NPI holds more multi-family and retail investments, and the NCREIF ODCE holds more industrial, hotels and other investments. See Graph 1.

Graph 1: Sector Diversification of the NCREIF NPI and NCREIF ODCE as of 3/31/09



* Other includes land, self-storage and senior housing.
Source: National Council of Real Estate Investment Fiduciaries.

[6] Time-weighting eliminates the effect of varying cash inflows by assuming a single investment at the beginning of a period and measuring the growth or loss of market value to the end of that period. Because this method eliminates the distorting effects created by inflows of new money, it is used to compare the returns of investment managers.

[7] This publication, a joint venture of the Urban Land Institute (ULI) and PricewaterhouseCoopers LLP, is available on the following page of the ULI Web site: http://www.uli.org/sitecore/content/ULI2Home/ResearchAndPublications/EmergingTrends/Americas.aspx

[8] The other sectors included senior housing ($232 billion), medical offices ($210 billion), student housing ($160 billion) and self-storage ($120 billion).

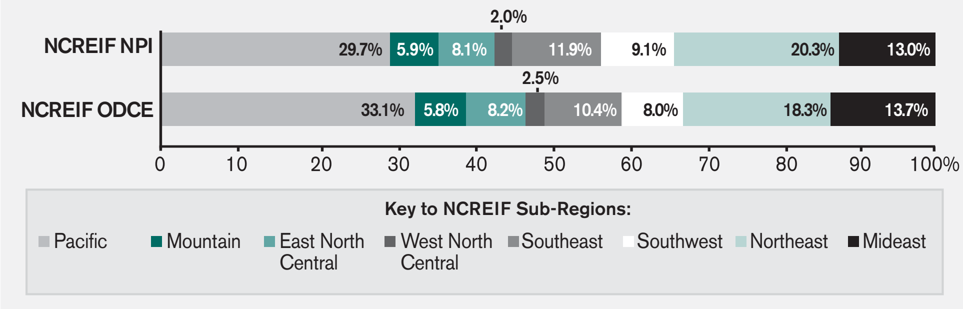
[9] "Primary markets" are those geographic areas in which demand for commercial real estate has been historically high.

The key difference between the NCREIF NPI and NCREIF ODCE is that the NCREIF ODCE includes other property types, such as self-storage, senior housing and land (most likely held for future development).

Geographic Diversification

As shown in Graph 2, the NCREIF NPI properties and NCREIF ODCE managers hold higher concentrations in the West Region (includes Pacific and Mountain) and East Region (includes Northeast and Mideast). The NCREIF ODCE's higher exposure to the West is the combined effect of the run-up in property values in the West and the emergence of Oregon and Washington state as higher growth markets. The NCREIF ODCE's lighter exposure to the East can be explained by the concentration of newer funds and their inability to compete for larger assets with higher values, due to the strength of long-term performance. The NCREIF ODCE's lower exposure in the South, which includes the Southeast and the Southwest, highlights many managers' disinterest in acquiring assets in Alabama, Arkansas, Florida, Louisiana, Mississippi and Oklahoma.

Graph 2: Geographic Diversification of the NCREIF NPI and NCREIF ODCE as of 3/31/09



Source: National Council of Real Estate Investment Fiduciaries.

Return Calculations

The total return calculation is consistent for both indices as it incorporates both income and appreciation, and is capitalization (value)-weighted. The differences between the underlying information utilized to calculate performance results for each index are outlined below:

- NCREIF NPI returns are based on property level cash flows at 100 percent ownership without leverage. Property level information is reported to NCREIF with leverage; however, performance information is calculated on an unleveraged basis. In aggregate, the NCREIF NPI measures the performance of properties held by funds and individual investors with varying investment strategies.
- NCREIF ODCE returns are based on fund level cash flows at actual ownership percentage (includes joint ventures and wholly-owned structures) with leverage. The aggregated return incorporates cash held at the fund level and only includes performance information for funds following a core investment strategy. In addition to the cash drag,[10] leveraged returns are slightly offset by the cost of maintaining debt, through the payment of interest expense.

Appraisal Frequency

NCREIF requires that properties included in the NCREIF NPI be valued at least quarterly, either internally or externally, using standard commercial real estate appraisal methodology. Each property must be independently appraised a minimum of once every three years.

The underlying funds that make up the NCREIF ODCE follow a more rigorous appraisal schedule. An internal or external appraisal is conducted quarterly, and full external appraisals are conducted at least once every year.[11]

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Historically, the disparity in appraisal frequency has resulted in the NCREIF ODCE realizing downward and upward valuation movements before the NCREIF NPI. In the past, the NCREIF NPI has exhibited a more volatile return stream, a phenomenon which was reversed post 1995, with the NCREIF ODCE becoming a more volatile return stream. The argument that the appraisal lag of the NCREIF NPI has contributed to valuation smoothing is a valid argument specifically when discussing the past 14 years of performance.

A review of the quarterly returns of the NCREIF NPI and NCREIF ODCE since their inception reveals an interesting pattern. In the 31

[10] Cash drag refers to cash that a real estate fund will carry to either meet redemptions, seize perceived investment opportunities, or cover fund or asset level expenses. Cash drag affects performance due to its relatively low to zero yield as compared to real estate. Cash drag tends to hurt results in time periods with higher positive performance, and help results when results are negative.

[11] This information is based on a Segal Advisors survey of the funds in the ODCE universe.

Performance Data

# of Years	Annualized Performance Ending 3/31/09 NCREIF NPI	NCREIF ODCE	NCREIF ODCE (EQW)	Excess Performance* vs. NCREIF NPI NCREIF ODCE	NCREIF ODCE (EQW)
1	-14.68%	-23.37%	-22.67%	-8.69%	-7.99%
3	4.15%	0.31%	0.56%	-3.84%	-3.59%
5	9.43%	7.05%	6.93%	-2.38%	-2.50%
7	9.14%	7.42%	7.26%	-1.72%	-1.88%
10	9.36%	8.20%	7.96%	-1.16%	-1.40%
15	9.94%	9.32%	9.07%	-0.62%	-0.87%
20	7.39%	6.70%	6.51%	-0.69%	-0.88%
25	7.88%	7.01%	6.72%	-0.87%	-1.16%
31.25**	9.37%	8.68%	8.25%	-0.69%	-1.12%

* This is since the inception of the NPI. Although the ODCE is newer, it reports historical return data.

** Comparative returns are expressed as "excess performance" even when the differences, as in this table's data, are all negative.

Source: National Council of Real Estate Investment Fiduciaries.

fourth-quarter periods since the inception of the NCREIF NPI, the NCREIF NPI has outpaced the NCREIF ODCE 77 percent of the time. Eleven of the differences were significant (*i.e.*, greater than 1 percent). According to representatives from NCREIF, these significant differences may be attributable to the fact that managers in the NCREIF NPI are more rigorous about adjusting valuations around end-of-year periods. NCREIF NPI adjustments have tended to result in higher valuations in both up and down periods, while NCREIF ODCE adjustments have tended to be lower in both up and down periods.[12]

The NCREIF ODCE Nuances

The capitalization-weighted NCREIF ODCE index has been driven by four of the six largest funds over the past 10 years.[13] The NCREIF ODCE (EQW), in contrast, emphasizes the results of the entire fund universe.

Return History

As shown in the above table, since the inception of the NCREIF NPI, the difference between the NCREIF ODCE and NCREIF NPI has been -69 basis points (bps),[14] while the difference between NCREIF ODCE (EQW) and NCREIF NPI has been -112 bps. This information highlights the fact that the NCREIF ODCE (EQW) has been slightly more volatile and has captured more of the downward momentum of real estate returns historically than both the NCREIF NPI or the capitalization-weighted NCREIF ODCE.

"NCREIF NPI adjustments have tended to result in higher valuations in both up and down periods, while NCREIF ODCE adjustments have tended to be lower in both up and down periods."

Conclusion

In the past, institutional investors only had the option of comparing core real estate managers to the NCREIF NPI. With the emergence of the NCREIF ODCE and, in particular, the NCREIF ODCE (EQW), it is now possible to compare core real estate managers to an index that more directly represents the investment strategies, sector and geographical diversification, leverage utilization and cash drag of core open-end real estate funds.

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For more information about the NCREIF indices for benchmarking real estate investments, contact your Segal Advisors investment consultant or Justin Mallis at 212.251.5241 or jmallis@segaladvisors.com.

12 The fourth quarters of 1991 and 1992 are the anomalies. In those quarters, NCREIF NPI managers wrote down asset values more aggressively than did the NCREIF ODCE managers.

13 These funds and their gross asset value as of March 31, 2009 follow: JPMorgan Strategic Property ($16.7 billion), Prudential's PRISA ($12.4 billion), UBS Trumbull Property ($9.7 billion), Morgan Stanley Prime Property ($7.9 billion), Multi-Employer Property Trust ($6.0 billion) and RREEF America II ($5.2 billion).

14 As a reminder, 10 bps equals 0.1 percent.

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