



February 5, 2010

## Role of Real Estate

### Introduction

As investors approach their asset allocation review, the scrutiny of real estate portfolios has increased primarily due to the most recent severe market correction. Easy credit and the subsequent housing bubble combined to create risks for commercial real estate which were not typically prevalent. The question “What role should commercial real estate play in an overall asset allocation?” seems like a timely one for institutional investors to ask. On its surface, an investment in commercial real estate is less liquid than fixed income or equities, generally more management intensive and has historically represented a small portion (approximately 5% to 10%) of most institutional investors’ overall portfolios, so do the returns adequately reward the investor for the capital – financial and human – which it must deploy?

This memo will briefly outline some key roles real estate can play in a multi-asset portfolio. It is meant to open up the discussion in light of market conditions and in context of an overall asset allocation review.

It is not meant to make a conclusive recommendation at this time of which of the potential roles real estate is best suited to play, or empirically prove how real estate can fully perform such roles.

### Definition

Before discussing the various roles of real estate, PCA believes it is important to first define the investment universe of what constitutes “real estate” in the context of large institutional retirement system investors. First, in our discussions for future portfolio construction ideas, we have focused exclusively on commercial real estate and not on for sale residential home building or housing land development. While these segments are clearly “real estate” their unique risk characteristics align them with equity businesses more than income producing properties which form the basis for conventional institutional property investing. This definition leads to the four quadrants of real estate shown in Figure 1, with corresponding definitions below.

**Figure 1 – Real Estate Quadrants**

<b>Public Equity</b>	<b>Private Equity</b>
<b>Public Debt</b>	<b>Private Debt</b>

- Private commercial real estate equity represents direct investments in individual buildings and portfolios held as discrete assets or in commingled vehicles;
- Public commercial real estate equity represents investments in companies (and their corresponding portfolios) structured as Real Estate Investment Trusts (REITs) or Real Estate Operating Companies (REOCs) whose shares are traded on the public equity markets;
- Private commercial real estate debt represents lending instruments, or interests therein, held as either directly issued whole loans or commercial mortgages held in funds and/or privately sponsored commingled vehicles; and
- Public commercial real estate debt represents lending instruments structured as commercial mortgage-backed securities (CMBS) and any corresponding derivative instruments.

The purpose of this memo is to focus the discussion on the role of real estate in the two equity quadrants of private equity and public equity. Therefore, public and private real estate debt investment is excluded from this discussion memo.

With the definition of real estate established, we can describe what roles real estate can play in a multi-asset portfolio.

### **I. Diversifier**

The Employment Retirement Income Security Act of 1974 (ERISA) establishes minimum standards for private pension plans and fiduciaries. Therein, diversification is a duty of any institutional portfolio. Furthermore, empirical studies and one of the foundational tenets of portfolio theory is premised upon the benefits diversification can bring to an investment portfolio.

The correlations between real estate (as defined for the purposes of this paper), stocks, bonds, cash and private equity needs to be measured. Essentially the correlation coefficient is a measure of statistical relationship between two random variables. The correlation coefficient has a range of values from -1 to +1. At a value of -1, there is perfect negative correlation, meaning that the direction of change in one variable will always result in the opposite change in the other variable.

Below is a sample correlation matrix showing correlations between asset classes from a research paper produced by PCA.

**Figure 2 – Sample Correlation Matrix**

	Global Fixed Income	Real Estate	Global Equity	Private Equity
Global Fixed Income	1.00			
Real Estate	-0.20	1.00		
Global Equity	0.05	0.40	1.00	
Private Equity	0.00	0.40	0.85	1.00

Source: PCA


In this particular example, real estate has a correlation coefficient close of 0.40 to equities and -0.20 to fixed income. Therefore, real estate can play a significant role in diversifying a portfolio because when two asset classes have an imperfect relationship to one another, there is an opportunity to earn a higher return at a fixed level of risk or, conversely, to reduce risk for a given level of return. Therefore, constructing a real estate portfolio with this objective will require particular attention to monitoring and tracking the behavior risk and return is playing vis-à-vis the other asset classes in the portfolio.

One key implication of this objective for real estate would be that the actual portfolio will likely need to be more measurable and comparable to that which is used for asset allocation modeling. Most asset allocation models either use the public real estate securities indices from Standard & Poor's or NAREIT or the unleveraged, pre-fee private data series in NCREIF. This would result in a more conservative, core-oriented portfolio with low levels of leverage and more stabilized property investments.

## **II. Inflation Hedge**

Real estate assets contain two components of return: income and appreciation. In medium to longer term inflationary periods, real estate investments have the capacity to, at least, partially hedge inflation, as demand for real estate is relatively inelastic. Furthermore, commercial real estate often has both long-term leases that contain built-in rent increases over time, and/or shorter-term leases that renew at the current market rate.

Current inflation impacts both the income return through its impact on the Net Operating Income (NOI) of the property and the appreciation return through the capitalization rate and NOI growth rate. Properties that are more intensive to maintain and do not have the ability to pass through expenses to tenants will generally have ambiguous results insofar as whether the income return can keep up with current inflation, as expenses may or may not increase at the same rate as revenues. This is more typically seen in apartment and hotel assets, and to a lesser degree in



office buildings. Property sectors where the expenses are passed through to the tenants and base rental rates are “bumped” by contract in conjunction with an index, will result in a positive NOI impact during inflationary times. This is more generally seen in the retail segment. More specifically, if the primary goal is to hedge inflation, then the real estate portfolio’s focus will be on triple-net leased real estate with CPI indexed rents, to ensure the assets are inflation protected. As such, real estate can potentially play a role by hedging inflation, but particular attention must be paid to the allocation within the real estate asset class by property sector as the impact will not be uniform.

### **III. Total Return Oriented**

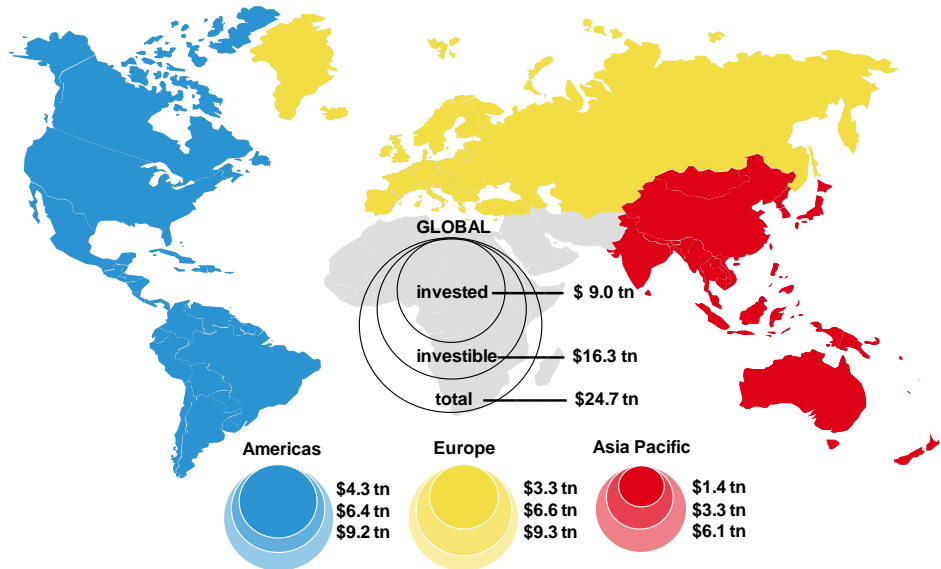
A third potential role for real estate would be as an absolute return enhancer to a multi-asset portfolio. It is important to note that unleveraged commercial real estate returns from public and private real estate, as measured by NAREIT and NCREIF, do not consistently outperform the absolute returns of stocks, but at certain points in time have proven to have higher performance. As such, real estate could provide “alpha” to an investment portfolio but would need a wide range of allocation parameters and would likely need to pursue a more aggressive mandate within real estate. This would include higher leverage, more speculative development or other re-positioning and re-letting strategies, less traditional property types and possibly more emphasis on secondary locations than the types typically thought of as investment grade, i.e. completed and substantially leased institutional commercial real estate. The role of leverage, in particular, would also need to be carefully examined, since both risk and returns are amplified by the effect of leverage. A key element of leverage would be that in certain points in the cycle it would need to be actively managed. Additionally, the income component may be generally lower and more focus would be placed on capital value appreciation. This would generally result and require a very active management style to implement and monitor the portfolio should this be the objective.

### **IV. Exposure to the Investment Universe**

Real estate is a part of the investible universe of options for all institutional investors. As such, any portfolio that has no inclusion of real estate is making an explicit bet that other asset classes will perform better on a risk-adjusted basis than real estate, and that minimally sufficient diversification benefits may be garnered by investing in real estate. Historically, some investors have generally wanted a justification for why real estate should be included in any portfolio, when in reality, as part of the large and available options to institutional investors, it is best to always have real estate included and to justify why it should not be a part of a total investment portfolio.

The chart on the following page depicts an approximation of the size of the global real estate market, which is estimated at about \$25 trillion. To put it in context, the estimated size of the global equity markets ranges from \$35 trillion to \$40 trillion.

**Figure 3 – Estimated Size of Commercial Real Estate Market**



Source: RREEF Research, ULI, DTZ

## **Conclusion**

Even with a static composition of the non-real estate assets such as equities, fixed income and cash in a diversified portfolio, the four potential roles of real estate outlined above can result in very different real estate portfolios. With respect to objectives of inflation and diversification, a more conservative portfolio of completed and substantially leased, low to moderately leveraged, professionally managed investment grade properties (office, industrial warehouse/distribution, retail, multifamily and hotel) would generally achieve the objectives; whereas the objectives of return enhancement and overall exposure lead to a more open-ended approach to real estate investment structuring and selection. It should be noted that an investor can take more than one approach, but must take into account the impact this would have on expected return and risk parameters.

In all instances, PCA believes that capital preservation needs to be a foremost part of the role of real estate equation. Some consultants may actually break this component out as its own objective; however, PCA believes it is best that this be incorporated as an element in each of the roles listed above, but to varying degrees.

The following table provides a summary of the implications that each of the aforementioned objectives has on a key component for institutional investors. The implications to an investor are quite diverse depending upon what objective real estate is designed to provide within the overall composite portfolio. As a diversifier, the real estate portfolio will be more conservative or safe, by having lower leverage and domestically-focused in the five major property types. Additionally, income would generally be the main driver of return. The inflation hedge objective would be likely met with a portfolio that has similar characteristics to that shown by

diversification; however, capital value appreciation will need to have some priority in order to ensure that the investments preserve their capital value. The objectives of return enhancement and overall exposure will generally result in higher risk and potentially higher return portfolios. Furthermore, these objectives will have greater dispersion across the investible universe as well as more reliance on investment manager discretion.

**Figure 4 – Implications for Institutional Investors for Role of Real Estate**

	<b>Diversifier</b>	<b>Inflation Hedge</b>	<b>Return Enhancer</b>	<b>Exposure</b>
<b>Income</b>	High Priority	High Priority	Low Priority	Medium Priority
<b>Appreciation</b>	Low Priority	Medium Priority	High Priority	Medium Priority
<b>Leverage</b>	Limited Use	Limited Use	Opportunistic Use	Moderate Use
<b>Capital Planning</b>	Easier	Moderate	Difficult	Moderate
<b>Risk Profile</b>	Low	Moderate	High	Moderate
<b>Geography</b>	More Domestic – Primary Markets	More Domestic – Primary Markets	Diverse	Diverse
<b>Property Types</b>	5 Major Types	5 Major Types	Diverse	Diverse
<b>Allocation</b>	Consistent Exposure	Consistent Exposure	High-No Exposure	Consistent Exposure

As investors continue to scrutinize their real estate portfolio, it is imperative that a top-down approach in designing its future real estate program is undertaken. Understanding the complexion of the other components of the overall portfolio is paramount in determining an appropriate role for real estate. Ignoring the other 90% and treating the real estate component as its own silo can lead to increased risk. Further, there should be alignment between the overall objective of real estate, the strategic plan, and the corresponding investments pursued therein. In doing so, PCA believes investors can better position themselves.