BOSTON MA
CHICAGO IL
MIAMI FL
PORTLAND OR
SAN DIEGO CA
LONDON UK

NON-CORE REAL ESTATE

Christy Gahr
John Humphreys
Derek Proctor
Timur Yontar

MEKETA INVESTMENT GROUP
100 Lowder Brook Drive, Suite 1100
Westwood, MA 02090
meketagroup.com

November 2017

This paper examines the characteristics of non-core (value-added and opportunistic) real estate strategies and the impact of including them in an investor's portfolio. It concludes with a recommendation that investors should consider allocating part of their real estate allocation to non-core strategies.

INTRODUCTION

The characteristics of non-core properties are quite different from those of core properties. The latter consists of high quality assets that have high occupancy rates and provide steady cash flow. The investment profile of a core investment is similar to that of a bond, with reliable income streams and low volatility. These properties do not require significant enhancement, renovation, or development. In contrast, non-core strategies encompass greater risk, through increased use of leverage, greater reliance on renovation or development, a focus on secondary markets, and a number of other factors. In return for taking on greater risk, investors in non-core real estate strategies expect to be compensated via higher returns.

Exhibit 1

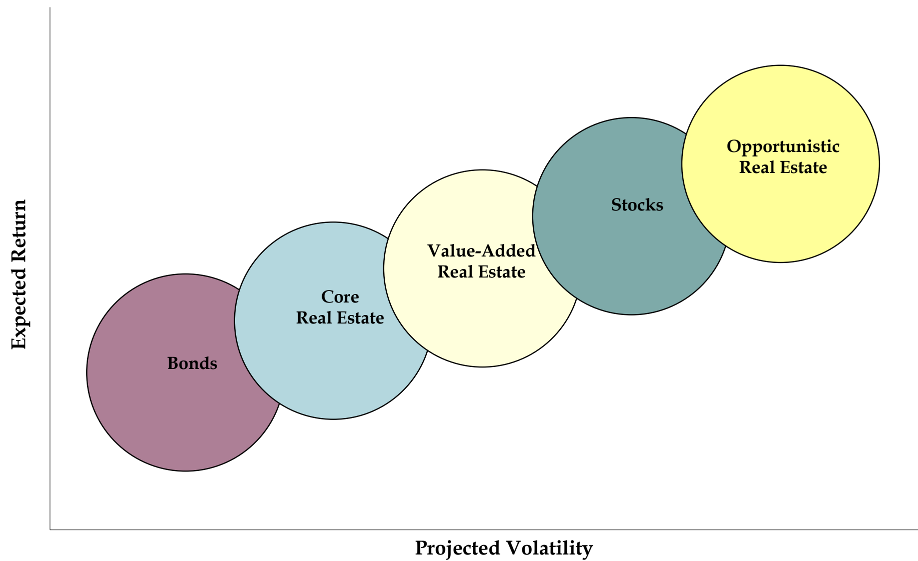
	Core	Value-Added	Opportunistic
Property Types Included	4 majors[1]	4 + Limited Specialty	4 + Moderate Specialty
Occupancy at Acquisition	≥ 85%	< 85%	< 85%
Target Markets	Primary	Primary/Secondary	Primary/Secondary/Tertiary
Asset Physical Needs	Minor	Renovation	Rehabilitation/Development
Holding Period (years)	7+	3-7	1-5
Income (as % of total return)	≥ 70%	30% - 70%	< 30%
Leverage	0% - 40%	40% - 70%	50% - 80%
Return Expectations	6% - 8%	10% - 12%	12% +

A comparison of core and non-core real estate characteristics is presented in Exhibit 1. These characteristics include portfolio composition, occupancy, target markets, physical needs, holding periods, income expectations, leverage, and expected return. Portfolio composition refers to the prospective types of properties; occupancy at acquisition refers to the proportion of square footage occupied at purchase; target markets refer to property location, such as primary (e.g., central business district) or secondary (e.g., suburban); physical needs refers to the degree of repair required, ranging from repositioning (i.e., refurbishment and operational improvements) to development (i.e., ground up property construction).

[1] As described later, these include Office, Retail, Multifamily, and Industrial properties. Specialty properties includes hotel, storage, student housing and other smaller segments of the investable universe.

Exhibit 2

Risk/Return Expectations



STRATEGIES

Non-core real estate strategies are usually put into one of two categories: value-added or opportunistic. Each offers unique characteristics, though there can be overlap between them.

Value-Added

Value-added real estate offers a risk-return profile that is greater than that of core real estate, but less than that of opportunistic, as indicated in Exhibit 2. Compared to core, this strategy focuses more on capital appreciation through physical property enhancement processes: repositioning, renovation, and redevelopment. Repositioning generally involves refurbishment and enhanced property management, which allow for a potential "re-grade" of property quality and for increased revenue. Renovation can include property enlargement, completion of major capital improvements to upgrade quality (e.g., a new roof or lobby), or structural repair and refinishing. Redevelopment can include a major overhaul and conversion of a property for a different use (e.g., a warehouse converted to multifamily apartments).

Value-added funds will likely include a moderate income return component, as opposed to opportunistic funds, which rely primarily on appreciation. Assets commonly include the four main property types (i.e., office, retail, multifamily, and industrial) along with occasional and modest investments in hotels and other specialty property types. Value-added strategies are more likely to invest in markets outside of the United States, which adds the risks of currency fluctuation and differing legal frameworks. Leverage is typically limited to 70% loan-to-value, a higher level than core strategies but lower than opportunistic strategies. Most value-added fund vehicles are close-ended, which commit investor capital for periods of ten years or longer. Conversely, some value-added strategies are offered via an open-ended vehicle, with no

defined term (i.e., they are "evergreen" funds). Open-ended funds entail additional considerations, including liquidity and valuation risks, which are discussed later on in this paper.

Opportunistic

Opportunistic strategies offer the highest level of return and risk potential within real estate, as is shown in Exhibit 2. Most of the expected return depends on future appreciation, resulting from physical property enhancements or ground up development. Ground up development introduces distinct and significant risks, specifically, the uncertainty of permitting, on-time and on-budget construction, and leasing. These risks influence the profitability of a development project and affect the developer's ability to purchase land, construct buildings, lease space to tenants, and to repay debt. However, some risk can be mitigated through various methods, such as pre-sales, purchasing land that is already entitled, and securing cost overrun guarantees from the developer.

Opportunistic asset types include the four main types along with hotels and other specialty property types. These specialty property types may include self-storage facilities, entertainment facilities, medical offices, senior housing, and student housing. Opportunistic fund leverage is typically moderate to high, with most fund-level limitations in the range of 50% to 80% loan-to-value. Fund vehicle types are almost exclusively closed-end since the investments are illiquid, difficult to price, and represent projects that can take years to execute.

Opportunistic strategies may also seek niche investments in senior or mezzanine debt. Because senior debt is the highest claim in the capital structure, it carries a fairly modest interest rate that generally would not attract an opportunistic investor. However, when the asset and hence the debt are amply distressed, the combination of income with the potential for capital appreciation may turn senior debt into an attractive investment.

Mezzanine debt takes a subordinate position in the capital structure, as payment to mezzanine investors is secondary to senior debt. Senior loans have longer maturity terms, such as five to ten years, while mezzanine loans typically have two- to five-year maturity terms and also require significantly higher interest rates. Thus, mezzanine loans are often more attractive to opportunistic investors under most market conditions, due to their higher risk/reward profile.

NON-CORE PERFORMANCE

Exhibit 3 shows performance for both core and non-core real estate funds based on information provided directly by real estate managers. The data confirms that risk and return profiles of non-core funds vary significantly from those of core funds. The data also indicates that the spread between top and bottom quartile funds (i.e., the inter-quartile spread) was tight for core funds but wide for value-add and opportunistic. This is to be expected, given the greater risk and more concentrated approach inherent in most value-add and opportunistic funds. The wide spread for value-add and opportunistic funds highlights the potential gains of investing with the best managers in the non-core real estate arena.

Exhibit 3

Real Estate Returns by Strategy[2]

(As of December 31, 2016)

	Core	Value-Added	Opportunistic
15-Year Annualized Return	6.9%	7.3%	10.5%
15-Year Annualized Standard Deviation	7.4%	12.0%	10.1%
5-Year Inter-Quartile Spread	1.2%	23.2%	22.0%

The fifteen-year period shown above included a secular bull market followed by a significant downturn for commercial real estate and the performance data may be biased due to survivorship and self-selection issues. We expect returns to be volatile in the future, but assume that investors will continue to be compensated for investing in riskier real estate assets and benefit over the long run. The following table (Exhibit 4) outlines several real estate portfolio options, along with our expected return and risk for each allocation.

Exhibit 4

Possible Real Estate Portfolios				
Core Real Estate	80%	65%	48%	32%
REITs	20	15	12	8
Value-Added	0	10	20	30
Opportunistic	0	10	20	30
Expected Return	*6.4*	*6.9*	*7.4*	*7.8*
Expected Standard Deviation	*14.7*	*15.6*	*17.0*	*18.4*

Source: MIG 2017 Annual Asset Study

Property Type Descriptions

Real estate varies significantly, not only among property types, *but within* property type sectors. An example of this is high-rise compared to low-rise office buildings, both of which entail considerably different characteristics. As such, it is important to monitor real estate

[2] Returns are net of fees and on a time weighted basis. The source for core fund data is NCREIF NFI-ODCE Equal Weighted Index. Value-added and opportunistic fund data is provided by Cambridge Associates Benchmarks.

portfolio exposures at a fairly granular level. Below are descriptions for the main asset types, each of which contains numerous subsets.

- **Multifamily** - Usually differentiated by location (urban or suburban) and size of structure (high rise, low rise, or garden apartments). High rises are normally found near or in central business districts of cities as land costs are greater than in suburban areas.
- **Industrial** - Often used for manufacturing as well as for warehouse space. The category also includes special purpose buildings, such as those used by wholesale distributers and combinations of warehouse, showroom, and office facilities.
- **Retail** - Varies from large regional shopping centers to strip centers. It is also common to find retail space on the first floor of office buildings in major cities.
- **Office** - A commercial property type used to maintain or occupy professional or business offices. Properties vary from large multi-tenant buildings in major cities to single tenant buildings in suburbs.
- **Hotel** - Hospitality real estate driven by both leisure and business travel. Investments are generally categorized by the level of service and amenities at the property and depends highly on property management execution.
- **Other Specialty** - Self-storage facilities, medical offices, senior housing, student housing, casinos, land, and other niche real estate.

Property Type Considerations

Risk-reward characteristics vary by property type, with the effects of these characteristics magnified by the strategy type pursued. For example, non-core real estate entails increased levels of leverage and property enhancement, both of which magnify volatility. This is especially true for higher risk, opportunistic development projects, which can involve significant leverage amounts, construction lead times and lease-up lead times.

Exhibit 5

Property Type	Lease Duration	Historical Cyclicality	Construction Period (months)	Other Characteristics
Multifamily	Annual	Low	12 to 36	Government agencies are a reliable lender for residential properties; consistent demand; best historical risk-adjusted returns.
Retail	5 to 10 years	Moderate	12 to 48	Public REITs hold a large percentage of mall properties.
Industrial	5 to 10 years	Moderate	9 to 12+	Construction time is shortest of the main property types.
Office	5 to 10 years	High	18 to 48	Above average volatility; tenancy significantly impacted by economic downturns.
Hotel	Daily	High	12 to 24	Most volatile historical return series due to daily repricing of rental rates

Lease agreements vary significantly for each property type (as indicated in Exhibit 5). Multifamily leases typically terminate annually while office, industrial and retail lease terms usually terminate after five to ten years. Annual leases are advantageous during upward-cycles, allowing higher rental rates to be charged sooner. Long-term leases, by contrast, can be beneficial if they extend an above-market rate through a downward cycle.

In addition to the base rent, long-term leases may include built-in adjustments, such as step-ups after a certain period of time, inflation-related increases, and even percentages of a retail tenant's gross sales. These rent adjustments help long-term leases compensate for an inability to renew to market rents annually.

As indicated in Exhibit 5, construction periods can vary drastically from as short as nine months for certain industrial projects to as long as four years for complex office projects. For numerous reasons, investor risk increases as construction periods increase. Principally, these risks are the possibility of increasing costs (e.g., financing, materials, labor) and greater uncertainty about the possible economic environment when construction is completed (i.e., can the property be leased at a rate sufficient to cover its costs?).

The various property types entail different risk-reward characteristics, as indicated in Exhibit 6, which shows historical return and volatility of the four main property types. Within the NCREIF Property Index, retail assets have historically produced the highest risk-adjusted returns, while hotel properties have been the most volatile. Though the NCREIF Property Index represents core properties, the risk characteristics are likely indicative (on a different scale) of the property type characteristics present in non-core strategies.

Exhibit 6

Asset Type Performance

(20 Years ending December 31, 2016)

GEOGRAPHY

The geographic placement of real estate can have a significant impact on its performance. An example of this is the historical trend of properties in primary markets outperforming those in secondary and tertiary markets. Primary markets typically include major metropolitan districts, such as New York City, Boston, Washington D.C., San Francisco, and Los Angeles. These markets have substantial employment sectors that create tenant demand that typically matches or exceeds available supply of real estate space (i.e., land). This limited supply of land, when matched with high demand, has led to higher market rental rates and occupancy rates historically.

Tertiary markets are typically suburban markets, with fewer constraints on new supply and inconsistent demand for real estate space. In an economic down market, tertiary tenants tend to move toward primary markets (city centers) to take advantage of unusually attractive lease rates on prime property. This effect reduces the downside risk for primary markets.

There are many other factors that affect local real estate markets, including: market demand influences such as job growth, the quality of job creation (indicated by salaries and wages), resident ages, sizes of households, and other related demographic information. Perhaps the most relevant indicator of the robustness of a real estate market is a region's employment base.

Global

Real estate funds with a global mandate tend to be focused on the developed economies of the United States, Western Europe, and Asia. Emerging market investments have been concentrated in the larger, more populous countries within the so-called "BRIC" category: Brazil, Russia, India, and China. The United States and Western Europe, along with certain Asian markets, represent mature regions for core, value-added, and opportunistic strategies. The BRIC regions have generally less stable and less mature real estate markets that attract opportunistic strategies. Differing legal and political systems permeate these regions, so local expertise is paramount for any investment outside the U.S.

SUPPLY AND DEMAND

Developers must carefully consider job growth, salaries and wages, ages and size of households, and financing costs when determining the economic benefits of undertaking a project. The supply of space available in a market tends to stay fixed in the short-term and requires significant lead time to adjust to increases in demand. Thus, under-development or over-development can have a prolonged effect on market fundamentals (i.e., rent, occupancy, and absorption rates). Additionally, developers must consider market values in relation to replacement cost, which is the total cost to build or replace a property. If the property replacement cost is greater than the expected market value, it is not sensible for a developer to undertake the project.

Supply and demand information will help a manager determine which markets are most likely to benefit from economic growth. The positive supply and demand characteristics of densely populated primary markets have given them a structural advantage in producing returns. Even during periods of downward pressure, tenants from tertiary markets tend to migrate to primary markets to benefit from advantageous rental rates and a high-profile business address.

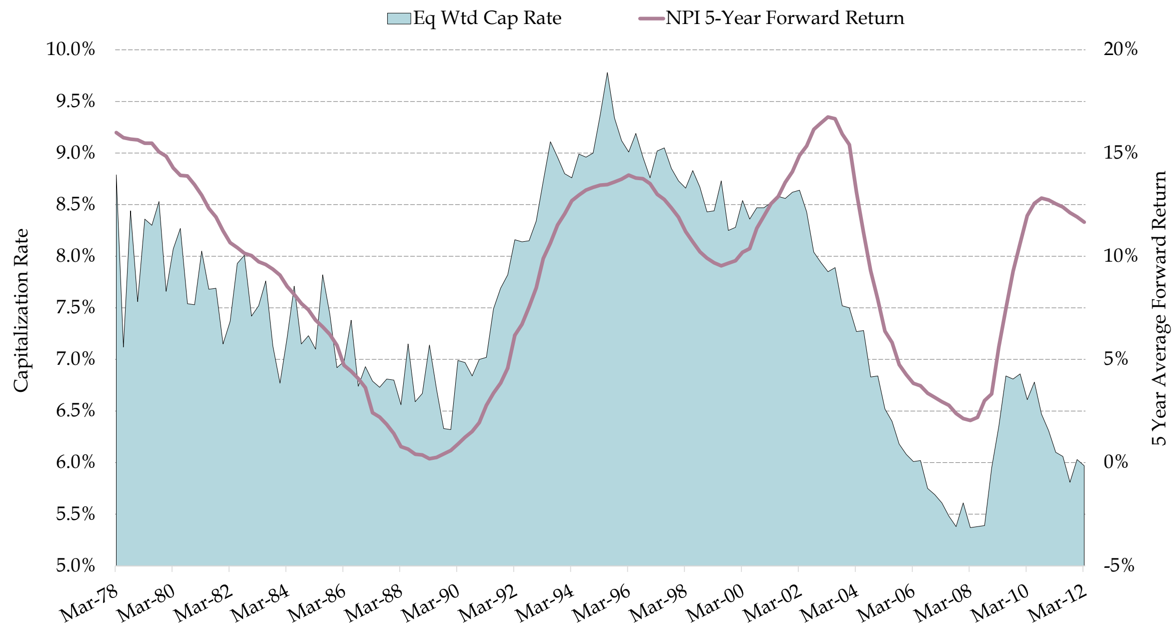
REAL ESTATE FUNDAMENTALS

The "fundamentals" of real estate have a significant effect on performance. Real Estate fundamentals include rental rate, occupancy rate, absorption rate, and capitalization rate. Rental rate refers to the amount tenants are willing to pay for space (price per square foot). This is effected by property size and quality, lease duration, and most importantly, market conditions. Occupancy rate refers to the amount of space, as a percentage of the property, that is currently occupied. Absorption rate refers to the rate at which real estate vacancies are either leased or sold to users in the market place, usually expressed as square footage per year.

Perhaps the most important (and most transparent) signal of the real estate market is the capitalization rate. The capitalization rate could be viewed as the inverse of a price-earnings ratio, as it is calculated by dividing the annual net operating income by the property purchase price. A higher capitalization rate indicates a higher expected (or required) return on investment. Capitalization rates are significantly affected by general market conditions (e.g., they tend to increase as prospects for property fundamentals deteriorate). These rates vary by property type and by market, indicating differences in risk/reward ratios. For example, the more volatile office and retail sectors generally trade at above-average capitalization rates, as do properties in tertiary markets.

Historically, real estate returns have been clearly linked to capitalization rates. As with any investment, the price paid for future cash flow has a meaningful effect on returns. Exhibit 7 portrays how higher (or downward trending) capitalization rates have preceded stronger returns, and vice versa.

Exhibit 7



FINANCING AND LEVERAGE

Debt allows a real estate manager to gain greater real estate investment exposure with the same amount of equity capital. The effect of this is an amplified positive or negative return on equity. Positive leverage occurs when the property level return is greater than the interest rate on the debt. Otherwise, negative leverage will occur, causing a magnified loss of equity. Thus, leverage has a "swing" effect on performance, which increases the importance of consistent property level income.

The amount of debt, as a percentage of property value, is termed loan-to-value (LTV). Higher LTVs, such as 80% or higher, increase the risk of foreclosure, as the equity cushion between debt and the property value is smaller. Loans at higher LTVs are generally at higher interest rates and are more difficult to obtain, depending on the market environment.

ROLE IN A PORTFOLIO

The primary reasons for investing in non-core real estate are to increase diversification and to enhance returns. Non-core investments not only carry a higher expected return, but greater potential for superior managers to create outsized returns.

Non-core real estate strategies often incorporate specialty property types and different geographies, which allows for enhanced diversification. Further, historically they have exhibited low-to-moderate *observed* correlations with the public equity and debt markets and, at the same time, low *observed* volatility.[3] Still, these strategies should be considered at least as risky as public equities. However, we expect that an allocation to non-core real estate, if funded from equities, should *decrease* the expected risk of the overall portfolio, as shown in Exhibit 9.

Exhibit 9

Diversified Portfolio Comparison		
Core Real Estate	5%	5%
Non-Core Real Estate	0	5
Equities	60	55
Bonds	35	35
Expected Return	*6.8*	*6.9*
Expected Standard Deviation	*11.8*	*11.5*

Source: MIG 2017 Annual Asset Study

OTHER CONSIDERATIONS

When constructing a portfolio of real estate investments, a plan sponsor should seek to diversify the portfolio broadly, both in core and non-core assets. This includes diversification by strategy, geography, property type, employment base, manager, vehicle, individual investment, and vintage year.

An investor in non-core real estate should also consider vehicle types, the J-curve effect, valuation methods, market cycles, labor concerns, use of third-party property management, financing, and supply and demand factors. These considerations are discussed below.

Vehicle Type, J-curve effect, and Valuation

Non-core funds are available in two vehicle types: closed-end and open-end. A closed-end fund vehicle does not offer capital withdrawal during its fund term, which may extend beyond ten years. An open-end fund vehicle, by contrast, allows for contributions and withdrawals throughout its life, with some limitations. Value-added funds may use either a closed-end or open-end fund vehicle. Nearly all opportunistic funds are closed-end due to the relative illiquidity of the assets.

Closed-end fund vehicles typically have a term of ten years. In the first three to five years, a phenomenon known as the "J-curve" effect occurs, whereby returns will likely be negative or low. This is because fees are charged and capital is spent on property enhancement or

[3] This observed volatility and correlations are artificially lowered by the historical accounting and pricing methods used by private real estate firms (i.e., they are marked to market on a quarterly or annual basis and they use transaction-based appraisals).

development, but the property does not necessarily increase in value immediately. An example of this is a development project that is substantially complete, but the property is worth much more as a finished product. A meaningful realization of appreciation is only captured at a later stage when the project is fully complete and leased. Thus, during the J-curve period, the total return may appear negative even though a significant amount of capital has been productively contributed.

Open-end funds must provide liquidity based on *estimated* market values and, at times, impose a queue that limits or delays redemptions by investors. These are two important considerations. Open-end funds are typically valued on a quarterly basis using a combination of internal valuations and third party appraisals. Appraised values tend to lag the market and, as such, investors are at risk of buying or selling shares in the fund at a stale valuation.

Commitments and Queues

Like private equity partnerships, most non-core real estate funds, being closed-end, require an advance commitment of capital. The commitment is drawn down, or “called,” by the general partner over a period of two to five years. During this period, other partnerships owned by an investor may be in their distribution phase, effectively reducing the investor’s allocation to real estate. Therefore, to maintain a fixed level of actual investment in real estate, it is necessary to commit more than the target allocation (i.e., over-commit). There is insufficient history to establish a reliable rule on how much to over-commit, but we estimate it will be necessary to commit approximately 1.5x the desired allocation for non-core real estate strategies.

A consideration of open-end funds are queues, which require investors to wait to make contribution or receive distributions. This occurs primarily when many investors simultaneously request capital redemptions, which is more common during downward real estate cycles. Most domestic open-end fund vehicles can impose limitations that allow for an orderly withdrawal. Still, as redemption requests increase, real estate managers can be pressured to provide liquidity by selling properties at distressed prices, reducing the fund’s performance. Conversely, commitment queues that typically occur during upward cycles and can motivate overly zealous managers to purchase less-than-ideal properties in order to put capital to work and eliminate their queue.

The Universe of Funds

The construction of a real estate portfolio will be partly determined by the available set of investment opportunities. Because there is no universal database to which all non-core funds report, it is impossible to know the precise size of the universe of funds. An estimate of the size and scale of the universe or real estate funds is shown in Exhibit 10.

Exhibit 10

Real Estate Fund Universe[4]

(As of December 31, 2016)

	Core	Value-Added	Opportunistic
Funds	24	206	222
Gross Assets	$218 bn	$117 bn	$245 bn

The average core open-end fund is much larger than the average value-added or opportunistic closed-end fund. Fund databases also indicates that, since 2000, as many as twenty-six and as few as eight opportunistic funds have raised capital in a given calendar year. Over the same period, the number of value-added funds raising capital in a given year has been between seven and thirty-two. However, it can be reasonably assumed that not all funds have reported to this database, and that there are a number of smaller closed-end funds that are not included.

Labor

Labor policies are more relevant for non-core real estate strategies, as labor relations can be very important for projects that involve construction and renovation. Some managers have defined a firm-wide "Responsible Contractor Policy,"[5] which states their basic philosophy when dealing with labor- and union-related issues. It is advantageous to obtain case studies and references that highlight the manager's activities relating to the policy. Having such practices in-place can help a labor-conscious investor determine if the manager adheres to a union-friendly policy.

Third-Party Servicers

Property maintenance and other services such as leasing can be performed by either an in-house group or a third party. The choice of these providers can have a significant impact on property performance. While some value-added strategies utilize in-house property managers, most opportunistic strategies use third-party property managers. This occurs since opportunistic strategies mostly focus on property improvement followed by a sale, instead of holding property on a long-term basis.

---

[4] The source for core funds is the NCREIF NDI-ODCE index; for value-added and opportunistic funds, it is the Cambridge Associates Benchmarks.

[5] A Responsible Contractors Policy (RCP) is designed to guide the selection of independent contractors and subcontractors who provide construction, repairs, maintenance, and infrastructure operating services. Among the guiding factors outlined in a policy are compliance with applicable statutes and payment of "fair" compensation and benefits to employees.

There are certain considerations that surround in-house property management and third-party property management. For instance, in-house property management includes an internal management fee that is charged back to the fund. Investors should expect this fee to be charged at fair market rate and should monitor any conflict that this secondary source of income for the manager could create. For example, in-house management could influence the manager to inappropriately retain or acquire properties that generate property management revenues. On the other hand, in-house management brings a valuable ability to directly oversee and control properties in the portfolio.

The use of third-party property management has different drawbacks, such as reducing direct management oversight. However, third party managers are often regionally specialized and local to the property, which may bring a better understanding of the market. Using third-party property managers also reduces the need to adjust the amount of personnel as properties are bought and sold. Additionally, using third party property management allows for use of best in class vendors, meaning that the best managers for each particular region or micro-market can be selected.

Joint Venture Partnerships

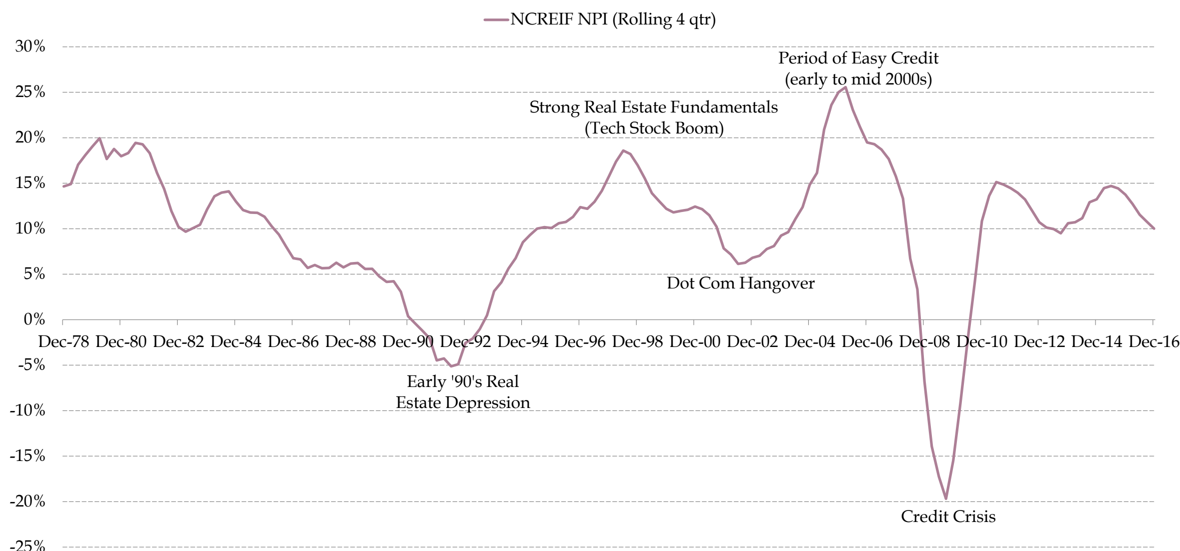
Real estate managers often create joint venture partnerships in which two or more parties acquire or develop a real estate property. Usually, joint ventures involve a real estate manager who needs a developer as a partner. These partnerships often require that the joint venture partner contributes a substantial amount of capital. The capital contribution is typically rewarded by a performance fee, which is calculated as the percentage of all profit (carried interest) after a return hurdle (preferred return) has been met. For example, a joint-venture partner could receive a 20% carried interest after a 9% preferred return is achieved by the fund on the property. While some value-added strategies use joint venture partnerships, nearly all opportunistic strategies use them. It should be noted that using joint venture partners can incur increased costs that are not explicitly charged as management fees and are not readily visible to the investor.

Market Cycles

The cyclical nature of the real estate industry can have a significant impact on non-core real estate performance. Purchasing non-core real estate during market downturns can be particularly profitable, as non-core strategies have amplified cycles. This can allow a manager to purchase property at discounted prices, and then complete physical renovations followed by selling at a higher price when market valuations have reverted.

Conversely, purchasing non-core real estate near a market peak can have a correspondingly bad outcome. Exhibit 11 portrays boom and bust periods for commercial real estate.

Exhibit 11



There are additional downside risks involved with market cycles, including leasing risk, financing risk, and market timing risk. Leasing risk entails the difficulty of finding tenants after renovations or development have been completed. Aggressive terms (e.g., discounted rents, concessions, etc.) may be necessary to lease the property, causing a reduction of income, which, in turn, reduces property value. Financial risk can occur from tighter underwriting standards, which restrict availability of loans to purchase or re-finance real estate. Lastly, if a downward market occurs during the life of a non-core fund, the managers may find it necessary to hold onto properties longer than originally planned.

Costs

Total costs and fees associated with non-core real estate investing are higher than for core real estate. There are two essential types of fees associated with non-core real estate funds. The first is a management fee, which typically ranges from 1.25% to 2.0% per year. The second is a performance fee, typically called "carried interest," which is paid as percentage of fund profits if a certain hurdle, or "preferred" rate of return is achieved.

Once the general partner has produced a minimal baseline return for the limited partners (called the "hurdle rate"), all future profits are usually divided between the general partner and the limited partner (called "carried interest"). For example, a partnership may specify a hurdle rate of 9% and a carried interest of 20%.

This means that as soon as the limited partners have received a return of 9% on their initial investment, all profits are distributed 20% to the general partner, and 80% to the limited partners.

An allocation to non-core real estate will require added commitments by the investor in time and resources. Administratively, the capital calls and distributions associated with non-core real estate funds are unpredictable. Fund administrators need procedures to accommodate these cash flows reliably and efficiently. Additionally, these assets will require additional monitoring by the investor.

SUMMARY AND RECOMMENDATION

There are significant advantages to investing in non-core real estate, principally, enhanced returns and diversification. Still, there are disadvantages of non-core real estate, including higher risk, as well as the diminished transparency and liquidity that accompany private market investments. On balance, however, an allocation to non-core real estate should benefit most long-term portfolios. Non-core strategies comprise a large portion of the investable real estate universe and offer additional sources of return that stem from control of the assets. Managers can develop properties, improve properties, and at times of distress, acquire them at depressed prices.

For investors who already have core real estate investments, non-core real estate can enhance total return with only a modest increase in risk. Meketa Investment Group recommends that investors consider allocating between 30% and 60% of their real estate portfolio to non-core strategies. The target allocation will depend primarily upon the investor's risk tolerance and objectives for their overall portfolio. We recommend building a diversified (by asset type, life-cycle, geography, etc.) sub-portfolio of non-core funds over a period of three to six years. Finally, investors should be aware that market cyclicality will play a large role in the returns these vehicles produce.

APPENDIX A

GLOSSARY OF REAL ESTATE TERMS

Absorption: The amount of inventory or units of a specific commercial property type that become occupied during a specified time period (usually a year) in a given market, typically reported as the absorption rate.

Appraisal: An estimate of a property's fair market value that is typically based on replacement cost, discounted cash flow analysis, and/or comparable sales price.

Asset management: The various disciplines involved with managing real property assets from the time of investment through the time of disposition, including acquisition, management, leasing, operational/financial reporting, appraisals, audits, market review and asset disposition plans.

Base rent: A set amount used as a minimum rent with provisions for increasing the rent over the term of the lease.

Broker: A person who acts as an intermediary between two or more parties in connection with a transaction.

Capitalization Rate: A percentage that relates the value of an income-producing property to its future income, expressed as net operating income divided by purchase price. This is also referred to as *cap rate*.

Capital Structure: The structure for financing a commercial real estate property or portfolio. Commercial real estate capital structures typically include equity and senior debt, which represent capital from an investor and the first position mortgage. Mezzanine debt, construction loans, and participating debt may also be included, which are additional forms of filling in needed capital for a capital structure.

Central Business District (CBD): The downtown area of a city, usually the location of a concentration of high-rise office buildings and commercial activity.

Closed-end fund: A commingled fund that has a targeted range of investor capital and a finite life.

Concessions: Cash or cash equivalents expended by the landlord in the form of rental abatement, additional tenant finish allowance, moving expenses or other monies expended to influence or persuade a tenant to sign a lease.

Construction loan: Interim financing provided to support the developmental phase of a property.

Development: Ground up property construction. It can generally be broken down into specific ***projects***, in categories: ***economic development, site selection,*** and ***commercial, industrial*** or residential ***real estate*** projects, all of which are either directly or indirectly related to ***startups***, ***expansions*** or ***relocations***. ***Real estate developmen***t in sophisticated ***locations*** is guided by controls and restrictions. They are usually identified by names as residential developments and business, office, commercial, or industrial parks or buildings. A ***planned community*** is a type of real estate development.

Improvements: In the context of leasing, the term typically refers to the improvements made to or inside a building but may include any permanent structure or other development, such as a street, sidewalk, utilities, etc.

Internal Rate of Return (IRR): The percentage rate earned on each dollar that remains in an investment each year. The IRR of an investment is the discount rate at which the sum of the present value of future cash flows equals the initial capital investment.

Joint Venture: The joining of two or more individuals or entities in a specific business enterprise such as the development of a project or the acquisition of an investment.

Lease: An agreement whereby the owner of real property gives the right of possession to another for a specified period of time and for a specified consideration.

Lease Rate: The period rental payment to a lessor for the use of assets. It may also be considered as the implicit interest rate in minimum lease payments.

Leverage: The use of credit to finance a portion of the costs of purchasing or developing a real estate investment. Positive leverage occurs when the interest rate is lower than the capitalization rate or projected internal rate of return. Negative leverage occurs when the current return on equity is diminished by the employment of debt.

Lifecycle: The various developmental stages of a property: pre-development, development, leasing, operating and redevelopment (or rehab).

Mezzanine Debt: Somewhere between equity and debt. Mezzanine capital is that piece of the capital structure that has senior debt (or a first mortgage) above it (up to about 50 or 60 percent of value) and equity below it (about 15 to 30 percent). Usually it's has a LTV ratio of 70 to 85 percent. There is both equity and debt mezzanine financing, and it can be done at the asset level, entity or company level, or it could be unrated tranches of CMBS. Returns are generally in the mid to high-teens. Cycle considerations are very key (if values drop, the mezzanine position can be wiped out), as is real estate due diligence.

Net Operating Income (NOI): The potential rental income plus other income, less vacancy, credit losses, and operating expenses.

Open-end fund: A commingled fund that does not have a finite life, it continually accepts new investor capital and makes new property investments.

Opportunistic: A phrase generally used by advisers and managers to describe investments in underperforming, undermanaged or new (construction) assets that hold the expectation of near-term increases in cash flow and value. Opportunistic investments typically involve a high degree of risk and hence seek higher returns.

Property Management: The day-to-day management, often on-site, of the operations of a property including rent collection, tenant services, care of the physical plant, security and adherence to regulatory requirements. Some property management arrangements also include lease renewal negotiations and even the leasing and marketing of the property to outside prospects. See: Management Agreement.

Real Estate Investment Trust (REIT): An investment vehicle in which investors purchase certificates of ownership in the trust, which in turn invests the money in real property and then distributes any profits to the investors. The trust is not subject to corporate income tax as long as it complies with the tax requirements for a REIT. Shareholders must include their share of the REIT's income in their personal tax returns. (Barron's Dictionary of Real Estate Terms and Encyclopedia of Real Estate Terms 2nd Edition, Damien Abbott)

Rehabilitation: Extensive renovation intended to cure obsolescence of a building or project.

Renovation: The state of being restored to its former good condition; "the inn was a renovation of a Colonial house."

Self-selection Bias: Refers to the fact that fund managers have the choice to report their returns to an index. Most managers will report only if they feel their performance numbers are above average.

Submarket: A segment or portion of a larger geographic market defined and identified on the basis of one or more attributes that distinguish it from other submarkets or locations.

Survivorship Bias: Refers to the fact that only managers that stop reporting performance data are removed from an index. The most common reason for not reporting is poor performance.

Vacancy: The number of units or space (of a specific commercial type) that are vacant and available for occupancy at a particular point in time within a given market (usually expressed as a vacancy rate).

Vacancy Rate: The percentage of the total supply of units or space of a specific commercial type that is vacant and available for occupancy at a particular point in time within a given market.

Value-added: A phrase generally used by advisers and managers to describe investments in underperforming and/or undermanaged assets, but that excludes ground-up development.

DISCLAIMERS

This document is for general information and educational purposes only, and must not be considered investment advice or a recommendation that the reader is to engage in, or refrain from taking, a particular investment-related course of action. Any such advice or recommendation must be tailored to your situation and objectives. You should consult all available information, investment, legal, tax and accounting professionals, before making or executing any investment strategy. You must exercise your own independent judgment when making any investment decision.

All information contained in this document is provided "as is," without any representations or warranties of any kind. We disclaim all express and implied warranties including those with respect to accuracy, completeness, timeliness, or fitness for a particular purpose. We assume no responsibility for any losses, whether direct, indirect, special or consequential, which arise out of the use of this presentation.

All investments involve risk. There can be no guarantee that the strategies, tactics, and methods discussed in this document will be successful.

Data contained in this document may be obtained from a variety of sources and may be subject to change. We disclaim any and all liability for such data, including without limitation, any express or implied representations or warranties for information or errors contained in, or omissions from, the information. We shall not be liable for any loss or liability suffered by you resulting from the provision to you of such data or your use or reliance in any way thereon.

Nothing in this document should be interpreted to state or imply that past results are an indication of future performance. Investing involves substantial risk. It is highly unlikely that the past will repeat itself. Selecting an advisor, fund, or strategy based solely on past returns is a poor investment strategy. Past performance does not guarantee future results.