

RISK VS. RETURN: A FRESH PERSPECTIVE

By Kenneth P. Riggs, Jr., CRE

ABOUT THE AUTHOR

Kenneth P. Riggs, Jr., CFA, MAI, CRE, is chief executive officer of Real Estate Research Corporation (RERC). RERC offers research, valuation, consulting, portfolio services, corporate advisory services, litigation support, and other real estate-related solutions. Investment criteria (capitalization rates, yield rates, and expense and rental growth expectations) are presented for nine property types on a national and regional level and for 40 major U.S. markets each quarter through the RERC Real Estate Report and the RERC DataCenter. (E-mail: riggs@rerc.com)

It is always a challenge to confidently price commercial real estate. The concern generally heats up when space fundamentals are at their cyclical lows and cash flow forecasts are in question. But even in the best of times, the goal for investors is to earn returns at least as good or better than the rest of the market on a risk-adjusted basis. Still, who can predict what the future will bring, and how does this impact our expectation for risk and return?

This article outlines an approach in developing an appropriate level of return given the amount of risk that is taken on. It also lays the foundation for bringing capital market behavior into focus, and discusses the author's view of the development of return expectations given an investor's outlook for risk.

For the purposes of this article, the author has identified and defined what various investment concepts mean. Exhibit 1 is a glossary of these concepts and terms.

WHAT'S RISK AND RETURN ALL ABOUT?

The real estate market has always had to adjust to financial, economic, and investor expectations. However, with everything the real estate market has gone through since 2001, it is even more challenging to deal

Making the Connection to the Terms

Term	Definition
Risk	The uncertainty that an unforeseen event(s) will occur to cause one not to achieve an expected return.
Return	A financial return in owning a property, which incorporates benefits such as diversification, stable returns, tangible assets, etc.
Market Price	The amount that a particular purchaser agrees to pay and a particular seller agrees to accept under the circumstances. The amount that clears the market.
Market Value	The monetary worth of a property to buyers and sellers at a given time and the present worth of future benefits that accrue to real property ownership. Market value has a range and can vary depending on the intended use (i.e., purchase, loan, transaction, etc).
Cost-Push Inflation	Rising prices caused by increasing costs of production that are passed onto consumers or users.
Demand-Pull Inflation	Rising prices caused by excessive demand for space or service beyond that caused by traditional cost-push inflation.
Required Return	The return an investor requires to be fairly compensated for assuming risks of the asset or portfolio being acquired. Expected return that a property is targeted to receive, plus appreciation (or depreciation). A forward-looking concept.
Realized Return	Actual income that a property received, plus appreciation (or depreciation). A backward looking concept.
Leveraged Return	Financial return available to invested equity after debt service, which is assumed to exist on the investment.
Unleveraged Return	Return available to invested equity, which assumes that there is no debt on the property. A free and clear return.
Cash-on-cash Return	The ratio of annual equity income to the equity investment. Cash-on-cash return can also be referred to as the equity capitalization rate, cash flow-rate, or equity dividend rate.
Total Return	Total return is the most basic and complete measure of periodic return. Total return includes both the change in the capital value of the asset during the period and any income paid out by the asset to the investor during the period.
Discount Rate	An interest rate used to convert future payments or receipts into present value. The discount rate may or may not be the same as the internal rate of return (IRR) or yield rate, depending on how it is extracted from the market or used in the analysis.
Overall Capitalization Rate	First year (stabilized) NOI (before capital items of tenant improvements and leasing commissions and debt service) divided by present value (or purchase price).
Yield Rate	A rate of return on capital, usually expressed as a compound annual percentage rate. A yield rate considers all expected property benefits, including the proceeds from sale at the termination of the investment.
Internal Rate of Return (IRR)	The annualized yield rate or rate of return on capital that is generated or capable of being generated within an investment or portfolio over a period of ownership. The IRR is the rate of discount that makes the net present value equal to zero.
Risk-Adjusted Return	Return that is adjusted to offset one or more risk factors. A term used to indicate that the return reflects the relative risk taken on for a specific investment.

Sources: *The Dictionary of Real Estate Appraisal, Fourth Edition, and RERC*

Exhibit 2
10-Year Treasury Bonds

Total Return % as of 6/30/2003

Annualized Returns

Market Indices	YTD	12-MONTH	3-YEAR	5-YEAR	10-YEAR	15-YEAR
S&P 500 Index	11.75%	0.25%	-11.19%	-1.61%	10.04%	11.41%
Dow Jones Composite Index	9.84%	-3.70%	-2.79%	-0.18%	9.61%	11.00%
NASDAQ Composite Index	21.51%	10.91%	-25.76%	-3.05%	8.71%	9.88%
Wilshire 5000 Index	12.92%	1.29%	-10.57%	-1.30%	9.54%	10.94%
Lehman Government Bonds Index	3.63%	11.33%	10.16%	7.66%	7.16%	8.47%
T-Bills (3-Month)	5.70%	1.35%	3.05%	3.88%	4.44%	5.04%
Consumer Price Index	1.44%	2.00%	2.10%	2.40%	2.43%	2.99%

Source: Morningstar

with the inherent difficulties associated with investment. When one finally strips away all the debates and emotions, both sides of investor behavior remain—efficient market theory and behavioral finance theory. The basic tenet of efficient market theory is that the market is mechanically driven by data, somewhat robotic in its way of approaching risk and return. On the other hand, behavioral finance views the world from a human dimension where the decision-making process for risk and return is more emotional and driven by gut instinct and backed by historical data.

In developing an informed opinion regarding an acceptable rate of return for commercial real estate and in understanding how to assess the risk that goes along with the expected return, it is important to remember that reaching a final decision on return criteria is a circular process that is based on one's understanding of the relative risk. As will be discussed later, the development of the market's view of risk and return is done within a mixed-asset diversification context. For the purposes of this article, risk is considered to reflect the probability of not achieving the return that one initially expects.

The author would suggest that first analyzing total required returns with an understanding of overall capitalization rates in commercial real estate may paint a clearer and more direct picture. Investors are primarily focused on realizing a certain targeted total return (required return), rather than achieving a certain capitalization rate because cap-

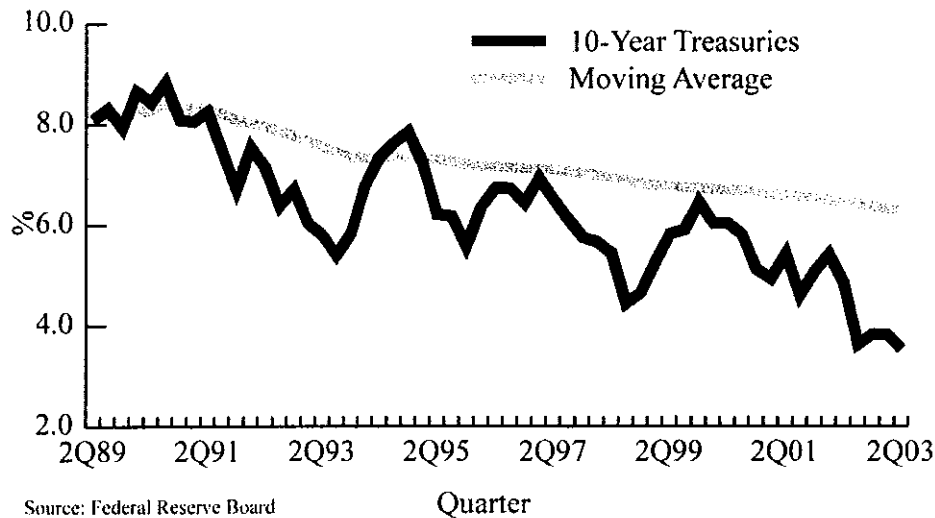
italization rates are a single point in time and can have extreme distortions (above market rents, high vacancy, roll-over risk, etc.) during market inflection points. Nothing is done in isolation, and once one has an informed view of the total return, the development of overall rates completes the picture. As we know, total returns, growth expectations, and overall capitalization rates are linked.

WHAT ARE THE RETURN CUES FROM THE FINANCIAL MARKETS?

Most experts agree that real estate is an extremely cyclical industry that lags the national economy but equally is impacted by secular trends. Each generation seems to learn on its own that diversification is key to a proper investment strategy, and our risk and return expectations are influenced by what happens in the broad financial markets. As demonstrated in Exhibit 2, the equity market for stocks is finally making the connection with investors and giving back some of the return that it plucked from their hands over the past three years. Investors do not expect this pace of return to continue for an extended period, but it is at a necessary level in order to get the market back on track. It will take more time for the stock market to recover, but what is more relevant are returns over a 10- to 15-year period or longer.

As applied to the future, a historical review of this data suggests a stock market return in the 10-12% range, which is higher than some major Wall Street firms are predicting. The stock market is one asset class used as a comparative benchmark to real

Exhibit 3
Annualized Returns



estate, but expectations that unleveraged institutional commercial real estate will be above this range are unreasonable. Remember, stocks are a leveraged return that has whipsawed investors' emotions back and forth for the past 10 years—this is the risk that investors do not like. (Studies show that investors dislike losses more than they like gains from a proportion view. For example, on average an investor is more upset with a 10% loss than he or she is happy with a 10% gain. This is referred to as an asymmetrical payoff.)

For institutional commercial real estate, this conclusion provides the upper limit for unleveraged total returns. For the lower end for return expectations, we look at 10-year treasury bonds. Exhibit 3 illustrates the 10-year T-bond returns since 1989. These safe-haven investments hit their peak in third quarter 1990 with an interest rate of 8.82%. Conversely, T-bonds hit their trough in second quarter 2003 at an interest rate of 3.54%. Talk about a dynamic shift during the last 14 years!

The question in analyzing T-bond returns have many investors asking how much of this low return is cyclical versus secular. First, the primary reason that 10-year T-bond rates have decreased over the past 10 to 15 years is because the U.S. rate of inflation has fallen so low that economists have been speculating about deflation, and the Federal Reserve has lowered the discount rate to 1.0%. Like all life experiences that ebb and flow, these rates will not last forever. The answer to developing a

future view is that there have been both cyclical and secular changes in the foundation of interest rates.

The author believes that 10-year T-Bonds will increase as the economy gets on track. It is expected that 10-year T-Bonds will move to approximately 4.5-5.0% by the beginning of 2004, increase to the mid 5.0% range by the end of 2004, and reach a level of around 6.0% for 2005, but there is no information suggesting that 10-year T-bonds will reach their 13-year high of 8%. The author suggests that 10-Year T-bonds serve as one of the building blocks in developing investment return expectations.

As illustrated in Exhibit 4, pricing, or the return requirements of commercial real estate, is based on a hybrid approach lying somewhere between that of stocks and bonds. Given the economic, financial, and commercial real estate outlook today, a total unleveraged return for institutional real estate in the 8-12% range is reasonable. The final return depends on the specific asset's lease duration, tenant credit, and the financial structure that yields specific earning characteristics. The longer the lease duration and the higher the tenant credit, the more real estate behaves like a bond. Conversely, the shorter the lease duration and the lower the tenant credit, the more real estate returns will mirror a stock. Using this approach, an investor can change the return requirement given new information.



Source: *Expectations and Market Realities in Real Estate: 2004*

USING SURVEY RETURNS

Among its core research activities, the author's firm conducts independent investment surveys that are designed to gain an understanding and interpretation of property underwriting criteria of key players in the industry. This survey research has served as the foundation of the real estate industry's use of required return expectations (pre-tax total returns, going in and terminal capitalization rates, rental growth, and expense growth) used to price and value real estate. This information continues to be gathered for institutional-grade real estate on a national and metropolitan level.

These surveys are used directly or in conjunction with the firm's models to develop investment criteria for various classes of properties on a national level. Regional and metropolitan criteria are also offered for average/second-tier level properties. This survey information is released each quarter for nine property types through the *RERC Real Estate Report*. An excerpt of that information for third quarter 2003 is shown in Exhibit 5.

Recognizing that many factors affect the investment potential of real estate, RERC recently expanded its use of independent survey returns. This more inclusive information also can be used as benchmark, and provides useful data in today's maturing market where averages do not allow for well informed, risk-adjusted decision-making.

For the national market, the property classes were divided into first-, second-, and third-tier property levels by using a standard deviation around the mean survey response. The second-tier required

total return for apartments of 9.9% is reflective solely by the national survey results, and the first- and third-tier required total returns are an estimate based on RERC's standard deviation calculation around the average survey result. In this case, the apartment first- and third-tier required total returns are 9.2% and 10.5%, respectively. This approach was developed for the national returns in order to maintain the integrity of the survey responses and historical relevancy of the time series. This information is known as the *RERC National Forecast*.

For the regional and metropolitan markets, RERC's required return expectations take into account the independent survey information, and also such elements as demand expectations, economic realities, employment data, space market (information sourced by Torto Wheaton Research), vacancy rates, absorption, completions, and rent. These additional factors are modeled into the RERC regional and metro-level forecast because survey responses alone are not sufficient for an adequate sample and the historical survey information does not exist.

These required returns serve as a barometer of the targeted returns that real estate investors are requiring, and are one of several benchmarks, or tools, that investors can use to arrive at expected returns. Other useful benchmarks include an analysis of alternative investment returns, actual targeted returns in specific deals, and historical indexed returns. (A discussion of the author's view of pricing risk for real estate was printed in *Real Estate Issues*, Aug. 1996.)

Exhibit 5
RERC's Required Return Expectations by Property Type

Real Estate Investment Criteria by Property Type										
	INDUSTRIAL		RETAIL			OFFICE		APARTMENT	HOTEL	AVERAGE
	Warehouse	R&D	Regional Mall	Power Center	Neighborhood/Community	CBD	Suburban	Apartment	Hotel	All Property Types Average
Pre-tax Yield (IRR) (%)										
Range	9.3 - 10.9	10.2 - 11.6	9.3 - 10.9	9.7 - 11.3	9.4 - 11.0	9.5 - 10.9	10.1 - 11.5	9.1 - 10.5	12.0 - 13.4	9.6 - 11.6
Average	10.1	10.9	10.1	10.5	10.2	10.2	10.8	9.8	12.7	10.6
Going-in Cap Rate (%)										
Range	7.8 - 9.0	8.6 - 9.8	7.4 - 8.6	7.9 - 9.3	7.7 - 8.9	8.1 - 8.9	8.5 - 9.5	7.2 - 8.0	9.9 - 11.5	7.8 - 9.6
Average	8.4	9.2	8.0	8.6	8.3	8.5	9.0	7.6	10.7	8.7
Terminal Cap Rate (%)										
Range	8.4 - 9.4	9.0 - 10.0	8.0 - 9.2	8.6 - 9.8	8.4 - 9.4	8.4 - 9.4	9.0 - 10.0	7.8 - 8.6	10.5 - 11.9	8.3 - 10.1
Average	8.9	9.5	8.6	9.2	8.9	8.9	9.5	8.2	11.2	9.2

¹ This survey was conducted in July, August, and September 2003 and reflects required returns for Third Quarter 2003 investments.

² The low range of each property type is the required return for 1st-tier investment properties, which is defined as new or newer quality construction in prime to good locations.

³ The high end of the range of each property type is the required return for 3rd-tier investment properties, which is defined as older properties with functional inadequacies or marginal locations.

⁴ The average stated for each property type is RERC's required return for 2nd-tier investment properties, which is defined as aging, formerly 1st-tier properties, in good to average locations.

Source: RERC Real Estate Report, Fall 2003

Our firm's total required returns have experienced a slight roller coaster effect over the past 10 to 15 years. However, during the last 12 years, average total required returns for the core properties have ranged between a high of 12.5% in the first quarter 1992 and a low of 10.6% in third quarter 2003. Interestingly, our view is that top quality assets have total required returns much lower than the surveyed results would indicate. Applying the average to these top tier assets becomes problematic in that the range around the average becomes much larger and more difficult to interpret. With the proper analysis, investors can use these required returns as one useful benchmark in determining an appropriate required or expected return given any level of risk. Based upon the analysis of the survey data, an investor can develop expectations for unleveraged total return, given various risk elements of a particular investment.

Investors need to pay extremely close attention to the risk they take on relative to the anticipated return. For example, a 10% return for an apartment investment may be superior to an 11 to 12% return for a suburban office, given the significantly different risk levels of the two assets. In a maturing market, the key to getting the returns one expects is in making the connection between risk and return.

ADDITIONAL USE OF SURVEY DATA

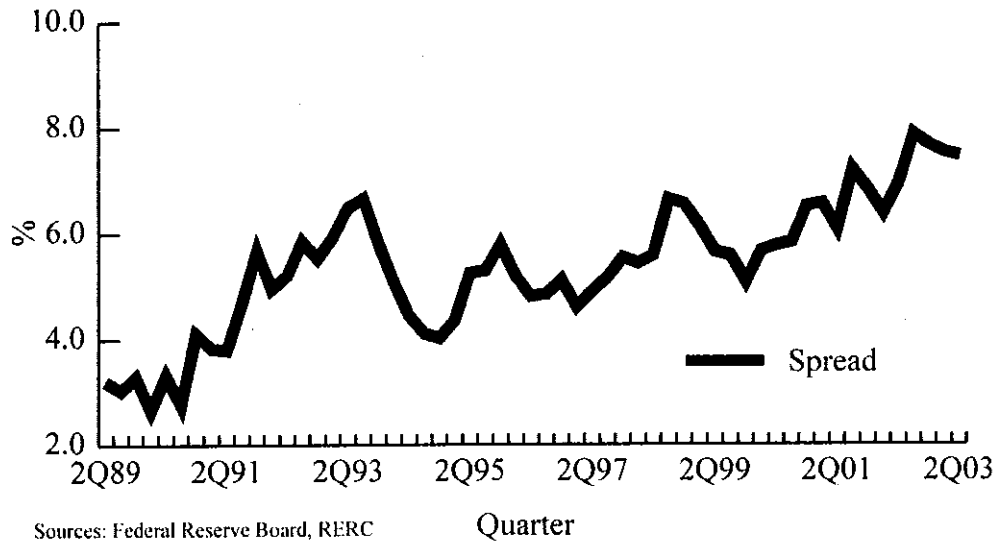
Another way to use the return data provided each quarter in the *RERC Real Estate Report* is to analyze the historical spread of total required returns versus 10-year T-bonds, which in the past, generally

has ranged between 450 and 600 basis points. At 10.6% (this is an average for all property types with an average earning structure), RERC's total required return expectations are at the lowest point they have been since we started this survey process over 20 years ago. However, at approximately 650 basis points, the spread between required returns and 10-year T-bonds remains near an all-time high.

Generally speaking, as 10-year treasuries increase or decrease, the "expected" real estate yield lags with, or slowly follows, the same pattern. Since real estate competes with other risky assets for capital, increases in risk-free rates should motivate real estate investors to require higher returns. Exhibit 6 illustrates the yield relationship of the firm's total required returns and 10-year T-bonds with the spread showing a continual increase from 1990 to today. This above average spread will tend to keep discount rates stable in anticipation of interest rates increasing. This allows the spread to normalize and keeps prices relatively steady in the short-term.

The observed high spreads over treasuries are an attempt by investors to avoid the cyclical movements in the financial markets that the real estate markets cannot adapt to quickly, and potentially have a significant negative impact on values and prices if rates move upward unexpectedly. However, the continued high spread is suggesting that the financial market changes are more secular in nature and it is time for real estate to lower its expectation on returns. This is where many

Exhibit 6
RERC Required Returns vs. 10-Year Treasuries



observers feel that there is a disconnect between real estate return requirements compared to alternative investments. However, we view it as a cyclical phenomenon that is turning into more of a secular trend.

The author's forecast, for illustrative purposes only, is for a normalized spread of 400 to 500 basis points over equal-term treasuries for total required returns. For example, if investors anticipate 10-year treasuries to be 5%, then required total returns will be 9-10% (400 to 500 basis points higher). This reflects our view for institutional core properties that have various lease durations and tenant credit quality but solid cash flow earning structures in place. Further, this reflects an unleveraged return expectation.

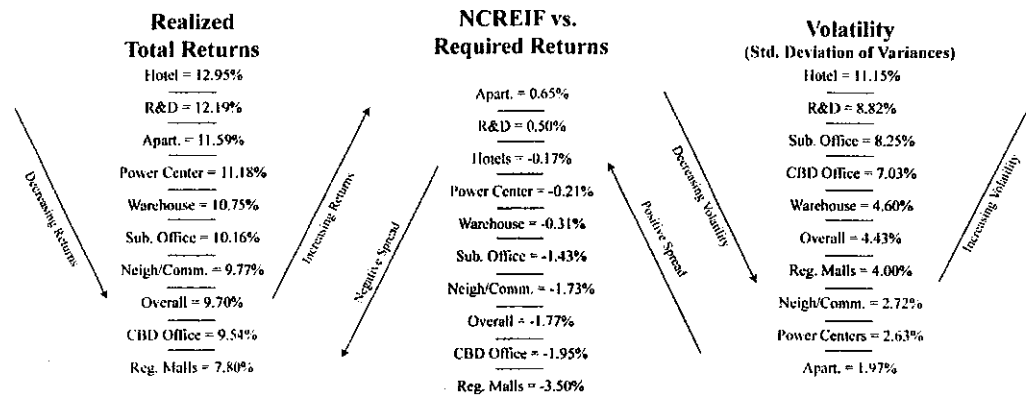
ANALYZING RISK USING REPORTED RETURNS VS. REQUIRED RETURNS

Over the years, NCREIF returns have become known as the industry standard in analyzing realized (reported) returns. With access to the NCREIF historical database, our firm uses these returns as a basis in developing an opinion of required total returns, which is to take historical data to predict the future. This comparison of RERC's required total returns to that of NCREIF's reported total

returns presents a challenge in that RERC's required return expectations are a forward-looking view, and NCREIF's returns are more of a rearview approach. This historical comparison allows an investor to assess if their required returns (targeted returns) have been met by market realities (realized, or reported, returns).

To keep this analysis on an apples-to-apples basis, we are able to look back at what investors projected during third quarter 1993 for a total required return. We then can compare that information to NCREIF 1993 data going forward 10 years. As an example of this backtracking, we looked at neighborhood and community centers and found that third quarter 1993, investors had a required return of 12.3%. NCREIF reports for a 10-year period going forward that total reported returns were 9.8%. This means that investors surveyed expectations were 2.5% more than what the market delivered (difference between expectations and market realities). Although there are a variety of possible reasons why this occurred, the value of the data analysis rests with comparing, on a relative basis, how well each property type performed. However, this methodology cannot be applied to the more relevant of our required returns because one would have to wait for 10 years until the reported

Exhibit 7
RERC Pyramids



Sources: RERC, NCREIF

returns happen. This is nice for research, but does very little for today's investment decisions.

Keeping in mind the relevance and importance of our firm's current survey data, we took the average of the surveyed returns over that 10-year period (second quarter 1993 through second quarter 2003). The average over that term was 11.5%, which if contrasted to NCREIF's reported return of 9.6%, shows that actual returns were 1.9% below investor expectations. Although this analysis is not completely parallel, it does allow for the recent data to be captured and reflected in the analysis. The author's view is that the importance of this analysis lies in the ability to make a relative comparison among the property types—office, retail, apartments, and industrial. The greater the relative difference of required versus realized (NCREIF reported returns) returns, the higher the level of relative risk or a risk-adjusted return.

For example, this comparison shows that required returns for hotel were 13.10% and reported or realized returns were 12.95% for a -0.15% difference for a 10-year holding period. As such, we would suggest that hotel properties offered a relatively good investment because they provided investors with a

return that nearly matched their expectations. This implies that investor expectations matched the risk of the investment at hand. This could be contrasted, for example, to CBD office, which had a required return of 11.6% and a reported or realized return of 9.5% for a -2.1% difference for a 10-year period. In this case, our firm would state that CBD office disappointed investors and delivered below market expectations on a relative basis or risk-adjusted basis.

Despite the difference between forward-looking expectations and rearview realities, our required returns also can be compared to NCREIF's reported total returns for each property type. Exhibit 7, referred to as the RERC Pyramids, illustrates the spread (shows either negative or positive variance) between these two sets of returns, and allows an investor to observe when the variance was the greatest and to identify inflection points in the market. For example, it is important to be able to answer the question that if hotels have historically met investor expectations, where are the returns today? This can be answered by looking at 12-month trailing returns versus what investor expectations are going forward. Today, hotels would reflect a negative spread of approximately 610

basis points (13.6% required minus 7.5% 12-month trailing return). This tells investors that repricing of the asset has to occur, and what the relative level of repricing must be in order for investor expectations to be met in the future.

As mentioned earlier, behavioral finance suggests that investors dislike losses more than they like gains, or returns are not normally distributed around the mean and may have an asymmetrical distribution. If investors do not earn their required returns, less money will flow into commercial real estate. Conversely, if investors do earn their required returns, more money will flow into commercial real estate. However, even the inflows and outflows may be asymmetrical, where more money flows out in a negative market than what flows in during a positive market.

This type of analysis allows investors to see if the market's total return expectations have been met on a historical basis, and to compare and contrast the performance of the core properties on a risk-adjusted basis. The historical view examines whether investors are earning what they require on average. This comparison of NCREIF's reported returns to RERC's required returns allows us to make the connection between market realities and hopeful promises.

Further, to appropriately consider the relationship between required versus reported returns, an investor must analyze the volatility of the returns to understand the risk among the property types (Exhibit 7).

CONCLUSIONS

- Return, risk, and other related terms must be defined especially for real estate. Investors have to make the profound connection between risk and return!
- In developing a solid view of risk and return for commercial real estate, an investor must be able to understand cyclical and secular issues for the economy, the financial markets, and the space capital markets.

- We suggest using a forecast for 10-year T-Bonds as a basis to develop an informed opinion of an appropriate unleveraged total real estate return. It provides a lower end return basis for commercial real estate on an unleveraged basis. Further, developing an appropriate risk-spread adjustment to forecasted 10-year T-bonds aids in addressing risk ratings for equity real estate.
- Be careful with applying average required returns in today's market, or for that fact, anytime in the near future. Returns vary widely, depending on the property types and earning characteristics of each property. Investors need to start rating the earning characteristics of real estate like bonds between "A" and "B" assets.
- Survey return requirements, including our own required return research surveys, should be used only as one tool in the arsenal for developing an appropriate forecast for total returns and overall capitalization rates.
- NCREIF is the industry standard performance measurement and we see the long-term realized total returns can be a useful guide in determining an appropriate required return for the market.
- There is a big difference between an overall capitalization rate and a cash flow rate, especially when you are looking across assets. When looking at the relationship between required return rates and pricing, investors must consider cash flow projections and incorporate the risk of these cash flow projections into pricing.
- The comparison of required versus reported returns provides an investor with an understanding of the risk of each particular property type. Further, this analysis can be used to determine the likelihood of capital flows into or out of that sector.
- Further analysis of the volatility of returns is a must to understand risk.