Homeownership and Commercial Real Estate

The differences between homeownership and commercial real estate investment are significant.

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HOMEOWNERSHIP HAS increased over the past decade. Today nearly 69 percent of U.S. households own homes, compared with 63 percent in 1996. Home equity is a substantial portion of the overall wealth of most homeowner households, and for many, their house is their single largest investment. Since most households already own a home, do they need to also invest in commercial real estate? Homeownership and commercial real estate have vastly different investment characteristics and fundamental attributes. Upturns and downturns in the residential home market are not necessarily harbingers of similar movements in the commercial real estate market. Hence, owning a home should not preclude investment in commercial real estate.

Homeownership generally refers to owning real estate property (a single-family home or a condominium unit) that is used as a primary (or sometimes secondary) residence. That is, it is first a consumption good and second, an investment asset. Commercial real estate, on the other hand, is purely an investment asset that is intended only to generate a return, in terms of both regular cash flows and value appreciation. Rental apartment buildings are regarded as commercial real estate, since the owner is not a resident and is renting out the units for rental cash flows in the short term and for growth in value over a longer time horizon. Generally speaking, commercial real estate includes the following property types: office, retail, rental apartments, industrial, hotel, self-storage and senior housing. An individual investor can potentially invest in commercial real estate via two ownership vehicles: indirect investment in properties via publicly traded real estate investment trusts (REITs), and direct investment through property transactions, property funds, or private REITs.

REAL ASSETS

Before we examine the disparities between homeownership and commercial real estate, let us consider some of the similarities. Both represent substantial portions of the total investment universe: U.S. residential homes are valued at $20 trillion, and investable U.S. commercial real estate at $6 trillion. Homes and commercial real estate are real assets and thus highly collateralizable. Both the home and commercial mortgage markets are large and well developed. Like other tangible investments, homeownership and commercial real estate can be effective hedges against inflation. Finally, residential real estate and privately traded commercial real estate have low return volatilities compared with stock and bond indexes.

Table I shows the average annual return, standard deviation, and return per unit of risk for some major U.S. and international benchmarks. The volatility of homeownership, measured by the standard deviation of the Freddie Mac home price index, is 3.3 percent; that of commercial real estate, measured by the standard deviation of the National Council of Real Estate Investment Fiduciaries' Property Index (NPI), is 6.4 percent. The NPI tracks the unleveraged performance of U.S. commercial properties held by institutional investors and their advisers. This index, which started in 1978, has the shortest history and thus determines the comparison period of 1978 to 2006.

Publicly traded real estate (proxied by the NAREIT Equity REIT Index), large capitalization stocks (measured by the S&P 500), small capitalization stocks (measured by the Russell 2000), and international stocks (measured by Morgan Stanley's Europe, Asia and Far East [EAFE] Index) all have much higher volatilities than private commercial real estate and privately owned homes. The NAREIT index, which is comprised of publicly traded REITs, has a volatility similar to stocks. Bonds (proxied by the Lehman Brothers Aggregate Bond Index) have a much lower volatility than stocks. Inflation and the price of gold are included as general economic indicators.

Despite some similarities, commercial real estate investment and homeownership are better characterized by their differences. Commercial real estate provides high current yields to investors, while homeownership has a substantial negative carry due to taxes and maintenance. Thus, the total return of commercial real estate is much higher than can be obtained from owner-occupied housing over the longer term. From a portfolio perspective, commercial real estate and homeownership have modest return correlations, the result of different demand and supply forces. While investing in commercial real estate is purely a financial exercise, buying a home is driven by both consumption and investment considerations. In addition, commercial real estate investment can be engineered to provide a full spectrum of risk-return tradeoffs ranging from low risk and single-digit returns to high risk and high returns nearing 20 percent.

Homeownership is both a consumption good and an investment asset. It serves the housing needs of the occupants but is also an investment asset, with the potential for capital gains appreciation, the ability to be leveraged, and tax benefits to the owner. Homeownership is thus driven by both investor sentiment and household consumption needs. In contrast, the only goal of investing in commercial real estate is to generate returns and create value.

As shown in Table I, home prices appreciated about 6.0 percent per year since 1978. Assuming a conservative after-tax annual cost of carry of 2.5 percent for maintenance, utilities, property tax and insurance, the investment return on homeownership is about 3.5 percent. If an owner-occupied home were held solely for investment purposes, it would demand a return similar to the NPI over the same period, as both are private real estate investments without any financial leverage. The average return of the NPI from 1978 to 2006 was 10.1 percent, as shown in Table I. The difference between the NPI return of 10.1 percent and 3.5 percent can therefore be attributed to the imputed income return on homeownership, which consists of the consumption, socio-economic and psychological benefits derived from occupying one's own home.

Table I: Risk and return comparison, 1978-2006

	Avg. Return (% p.a.)	Std. Deviation (% p.a.)	Return per unit of risk
Real Estate Market			
Home Price Index	6.0	3.3	1.8
NCREIF Property Index	10.1	6.4	1.6
NAREIT Equity REIT Index	15.4	14.8	1.0
Stock and Bond Market Indexes			
S&P 500	13.2	15.3	0.9
Russell 2000	12.8	18.5	0.7
Lehman Bros. Aggregate Bond	8.6	7.5	1.1
Morgan Stanley EAFE Internat.	12.6	21.6	0.6
General Economic Indicators			
Inflation	4.1	3.0	
Gold price	4.7	28.0	

Sources: Ibbotson; NCREIF; NAREIT; FHLMC; FNMA; Moody's Economy.com; Prudential Real Estate Investors.
Note: The home price index is the Freddie Mac Conventional Mortgage Home Price Index. It is based on single-unit residential houses only and does not include condominiums.

Table II shows that the investment benefit derived from homeownership is only 35 percent of the total opportunity return from investing in property; that is, homeownership is one-third driven by financial considerations and two-thirds driven by consumption needs. Put differently, homeownership is one-third an investment asset and two-thirds a consumption good, whereas commercial real estate is 100 percent an investment asset.

Income return is an important attribute of any investment asset. For commercial real estate, income return, or yield, is a large part of total return. The stable, predictable income comes from contractual leases. This cash flow characteristic means that commercial real estate is an attractive alternative to fixed income instruments for some investors. Homeownership, however, has an estimated negative carry of 2.5 percent of home price, prior to mortgage interest payments.

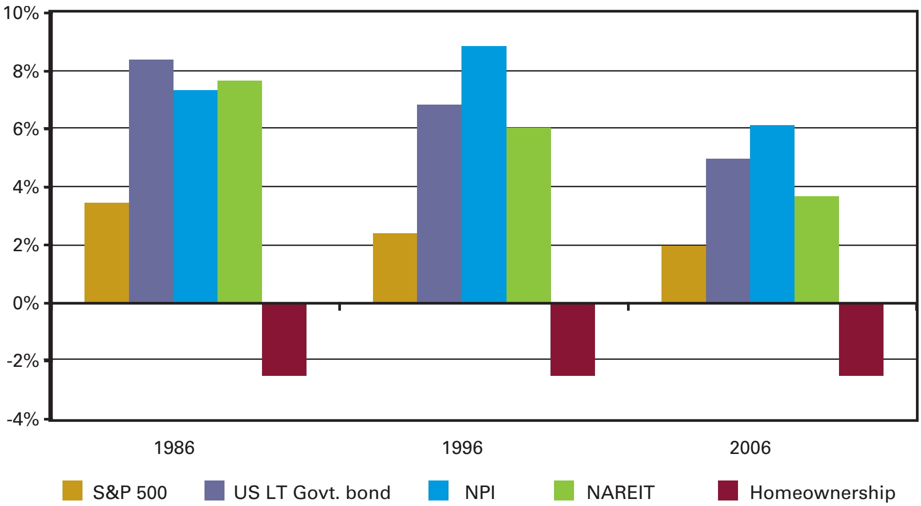
Figure 1 shows the current yields on different types of real estate assets, and stock and bond benchmarks. The chart

Table II: Investment and consumption share of homeownership

Appreciation return	6.0%
Negative carry	(2.5%)
Investment return	3.5%
Opportunity return	10.1%
Investment share	0.35
Consumption share	0.65

Source: Prudential Real Estate Investors. Note: Appreciation return is based on the home price index; opportunity return is the total return from the NPI. Both are shown in Table I.

Figure 1: Yield comparison of investment indexes



Sources: Ibbotson; Moody's Economy.com; NAREIT; NCREIF

shows that commercial real estate yields are high on a relative basis. Except for the high-interest-rate environment of the 1980s, private real estate yields exceed long-term government bond yields. REIT yields also compare more or less favorably with bond and stock yields. Homeownership, however, contrasts sharply with all other asset classes, as it has a negative carry, or current yield. Clearly, homeownership and commercial real estate are on opposite ends of the current yield spectrum. The difference in the current yield of commercial real estate and homeownership, of course, reflects the consumption value of owner-occupied homes.

Historically, commercial real estate has yielded a much higher total return than homeownership, largely due to the lack of current return from a home. Table III shows that the NPI has averaged a total return of 12.7 percent in the past ten years compared with 7.7 percent for homeownership. REITs have had an even higher return, averaging 14.5 percent over the same time. REITs returned more than private real estate partly because REITs use debt, and the NPI measures property-level return free of any leverage. Both the NPI and NAREIT indexes outperform homeownership by a large margin, considering even longer periods of fifteen or twenty years, or since 1978 (the start of the NPI).

Figure 2 shows the rolling four-quarter total and appreciation returns for commercial real estate and for the home price index. The NPI and home prices have comparable average appreciation returns,

Table III: Total return comparisons

	NAREIT Equity	NPI	Homeownership
1996	35.3%	10.3%	3.3%
1997	20.3%	13.9%	4.9%
1998	-17.5%	16.2%	5.1%
1999	-4.6%	11.4%	5.4%
2000	26.4%	12.3%	7.6%
2001	13.9%	7.3%	7.5%
2002	3.8%	6.7%	7.2%
2003	37.1%	9.0%	8.0%
2004	31.6%	14.5%	12.0%
2005	12.2%	20.1%	13.2%
2006	35.1%	16.6%	6.3%
10-Year Avg.	14.5%	12.7%	7.7%
15-Year Avg.	15.4%	9.8%	6.1%
20-Year Avg.	13.1%	8.4%	5.7%
1978-2006 Avg.	15.3%	10.1%	6.0%

Sources: Moody's Economy.com; NCREIF; NAREIT; Prudential Real Estate Investors

whereas the total return of commercial real estate is much higher than homeownership due to the positive cash flow component. Moreover, homeownership and commercial real estate returns are not strongly correlated. For example, commercial property returns peaked in 1984 and then drifted downward until 1992, but no corresponding pattern occurred in residential homes. Another example is the strong peak in commercial real estate return in 1998 without any corresponding return behavior in residential homes.

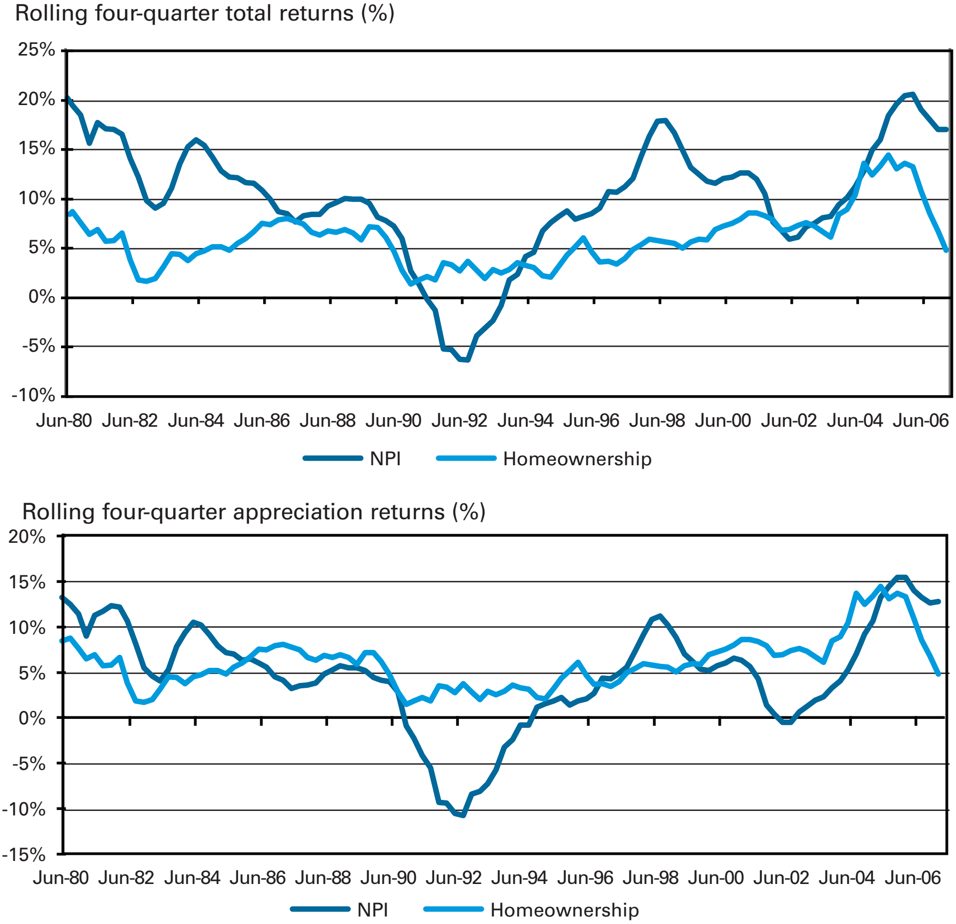
To quantify the relationship, we calculate correlations between commercial real estate and the home price index from 1978 to 1Q07 using quarterly data to see whether both have a place in the same portfolio. The correlation between the NPI and homeownership is 0.38 based on total returns and 0.33 based on appreciation returns alone—a modest correlation from a portfolio perspective. The correlation between REITs and homeownership is even lower, at 0.10 calculated from total returns and 0.11 from appreciation returns alone. In terms of portfolio diversification, the modest correlations suggest that homeownership and commercial real estate investment are not substitutes for each other and, in fact, can be attractive complements.

The dynamics of the three (NAREIT, NPI and homeownership) are very different, resulting in a significant variation in the amplitude of their cycles. Homeowners do not have to sell, and the value of their property is less important in the short term. (If they must move, they can always rent if they do not like the sales price.) Investors view their investments less emotionally, have a shorter time horizon and are more apt to sell through different cycles. Figure 2 illustrates this point.

DIFFERENT DRIVERS

The lack of strong correlation between commercial real estate and homeownership returns reflects their different fundamental drivers. Today, some investors are concerned with the weakening of the resi-

Figure 2: Lack of strong return correlation



Sources: NAREIT; NCREIF; Moody's Economy.com; Ibbotson. Note: NPI appreciation returns are calculated as (change in market value + partial sales)/beginning market value.

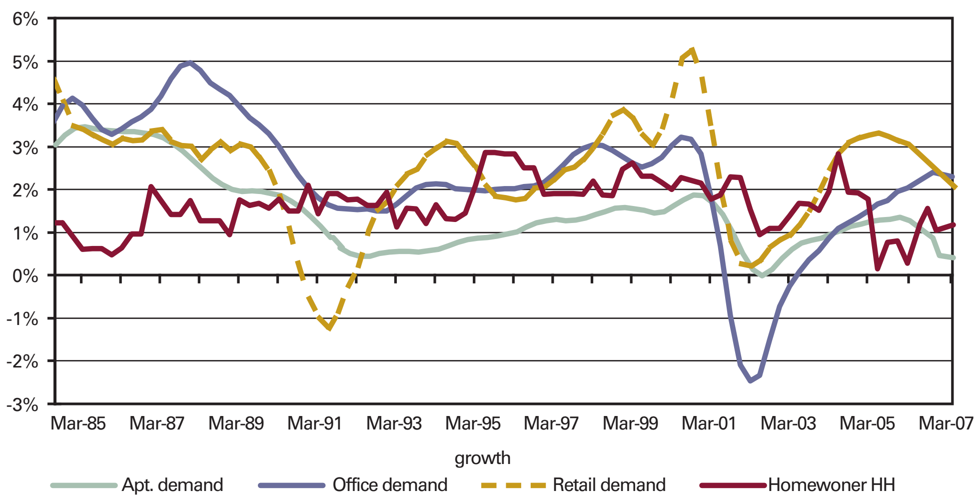
dential real estate market and its implications for commercial real estate investing. The cooling of the residential market may not be a harbinger of a weakening commercial real estate market, since the two have different demand and supply cycles. In fact, currently, commercial real estate is experiencing favorable fundamentals such as low construction, healthy demand, improving occupancy and rising rents.

Affordability, household formation, the shifting distribution of household age cohorts and general employment all drive demand for homeownership. But commercial real estate demand is strongly linked to business employment and consumer spending, among other things. The supply of commercial space has always been much more volatile than that of owner-occupied homes. Since office, retail and apartments are the largest sectors in the NPI, we focus on these sectors to highlight the demand and supply cycles of commercial real estate and owner-occupied housing.

Figure 3 shows the annual growth rate in the number of households owning homes and demand for the three largest sectors of commercial real estate. It is obvious from the chart that growth in homeowner households is mostly unrelated to demand growth for commercial space.

Financial and demographic factors play vital roles in homeownership demand. Housing demand is mainly driven by household formation and affordability, which in turn is driven by the home-price to household-income ratio and mortgage

Figure 3: Growth of homeowner households and demand for commercial real estate



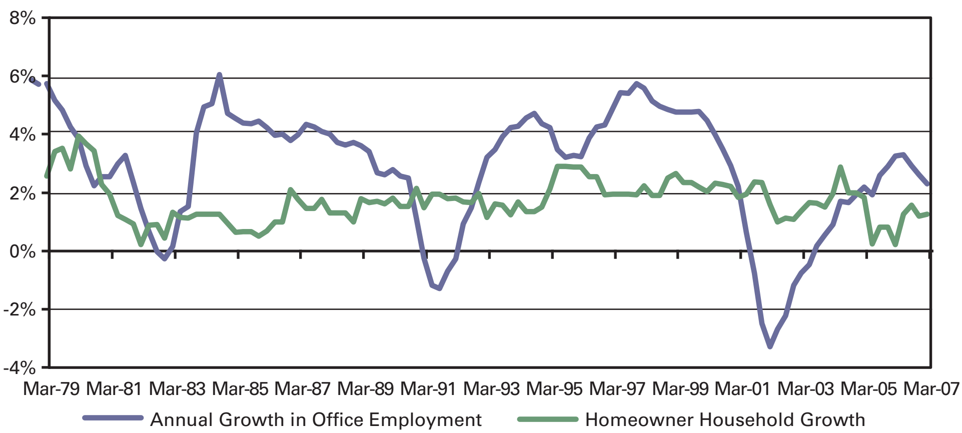
Sources: Moody's Economy.com; PPR; Prudential Real Estate Investors rates. In the past decade, growing housing affordability, bolstered by low mortgage rates, led to an unprecedented boom in home purchase and refinancing.

In contrast, office employment growth is the main demand driver of office space. Employment growth is, in turn, highly positively correlated with the business cycle. When the economy is expanding and adding jobs, office demand typically rises. Figures 3 and 4 show that the precipitous drop in net absorption of office space at the start of the millennium was mainly a result of a downturn in office space demand caused by the weakening of broad economic forces. As the economy recovered, office job growth resumed, leading to office space demand growth. In general, the corporate sector of the economy drives demand for office and industrial properties.

On the other hand, in the retail sector, which is the next largest property type in the NPI, space demand is driven by the consumer sector, which does not always mirror the corporate sector. Consumer spending on retail items is influenced not only by employment growth, but also by population growth, household earnings growth and the elasticity of consumption. Figures 3 and 5 show the close relationship between net absorption of retail space and growth in retail sales.

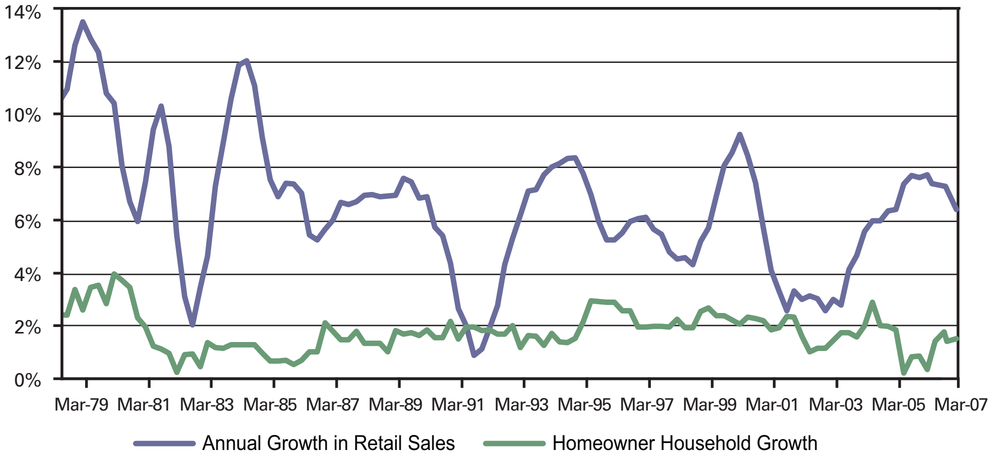
Demand for rental apartments, however, by its nature, is closely affected by the single-family home sector but in a largely negative way. Rental apartments compete directly with owner-occupied housing, as shown in Figure 6 (versus Figure 3). Demand for rental housing depends on household formation, which depends on population growth and business cycles.

Figure 4: Employment is the main driver of office demand



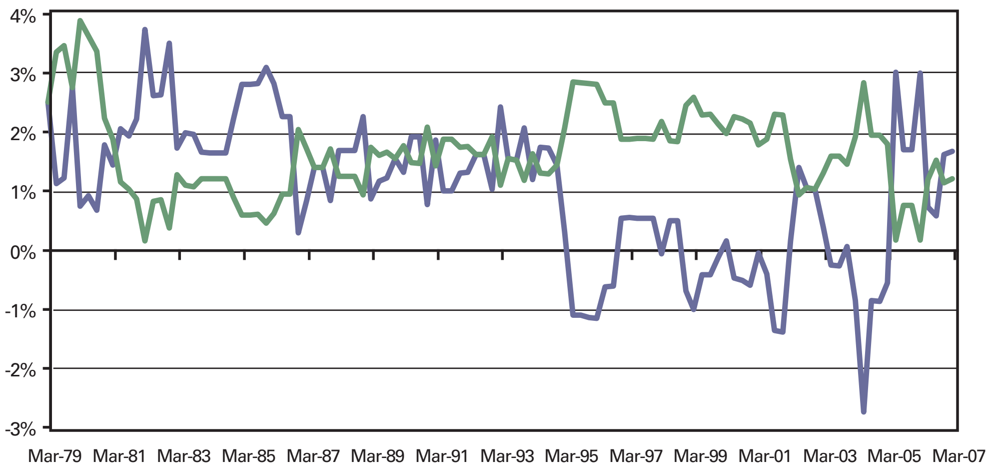
Sources: Moody's Economy.com

Figure 5: Retail sales drive retail demand



Source: Moody's Economy.com. Note: The annual growth rate was calculated using a three-month moving average to smooth seasonal fluctuations.

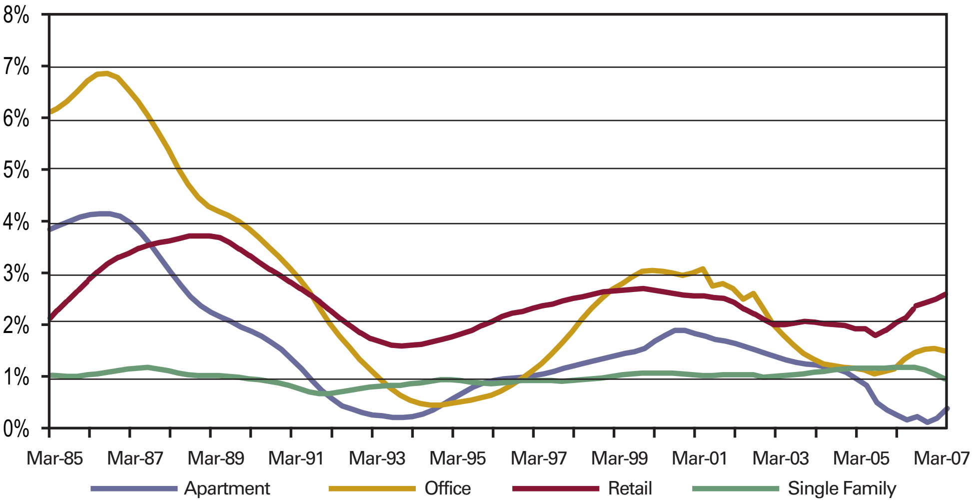
Figure 6: Renter household growth is the mirror image of homeowner household growth



Source: Moody's Economy.com

When the economy is strong, many young people find jobs and leave home, which results in more household formation. Also, in strong economies, immigration tends to rise. Rental demand also depends on the age distribution of households, as young people have a higher propensity to rent but are less likely to own. However, change in

Figure 7: Supply cycles, completions relative to stock



Sources: PPR; Moody's Economy.com

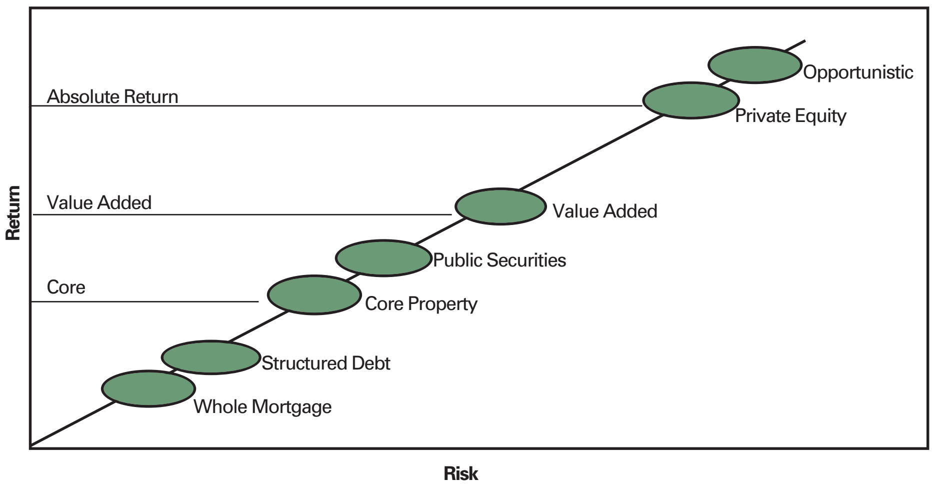
homeownership has the strongest impact on demand for rental housing, as each new homeowner means one less renter. Thus, demand for rental housing is mostly negatively related to demand for homeownership. The negatively related demand drivers for rental and ownership housing are not likely to lead to a strong positive return correlation between them.

The supply cycles of the homeownership market and commercial real estate have a marked dissimilarity. First, commercial real estate supply cycles are far more volatile than single-family homes (most owner-occupied homes in the United States are single-family). Supply cycles in the commercial real estate arena are also much more pronounced. Second, the peaks and troughs of commercial real estate and residential homes are not aligned. As shown in Figure 7, the past five years have seen a boom in single-family home completions relative to stock, whereas offices and apartments have had serious declines in completions relative to stock. While supply growth for retail space was healthy over the past five years, no boom in retail construction occurred.

INVESTMENT STRATEGIES

Commercial real estate investment portfolios use many investment strategies to target risk-return trade-offs. For example, most real estate investment managers offer funds with core, value-added and absolute return strategies, with target returns rang-

Figure 8: Multiple investment strategies in commercial real estate



Source: Prudential Real Estate Investors

ing from 7 percent to 20 percent in today's environment. Such value-enhancing and market-timing strategies are not the real goal of most homeowners. Some people buy homes, renovate them and sell them for a profit in certain stages of the business cycle, but that is not a strategy pursued by most homeowners.

Figure 8 shows the full spectrum of investment strategies in commercial real estate. In the debt area, investors may own whole mortgages, different tranches of commercial mortgage-backed securities (CMBS) and collateralized debt obligations (CDO). A core strategy refers to investing in stabilized, income-producing commercial properties with no or low financial leverage. In today's environment, expected returns are in the range of 7 percent to 8 percent. Value-added investment may be in the form of financial engineering, such as mezzanine debt, development forwards to capture the large value creation associated with development and redevelopment, and substantial operational improvements from large increases in income due to improving occupancy and rising rents. Expected returns for value-added investments range from 9 percent to 15 percent. Typical absolute return strategies are private equity investing in emerging companies and opportunistic acquisition of highly distressed assets with high leverage, with expected returns of 15 percent or more.

Investing internationally is another way to increase risk-adjusted returns and leads to far more diversification in a portfolio, exposing investors to growth and cyclical opportunities that are not available in the home market. However, it carries the additional risk of adverse currency movements and complex regulatory and taxation issues.

Such market timing and development or predevelopment strategies are not usually pursued with residential real estate. Regardless of market conditions, it is costly, in both monetary and nonmonetary terms, to sell one's house and move to an apartment temporarily to profit from price movements. Homeownership is thus somewhat restrictive as an investment asset.

CONCLUSION

Homeownership and commercial real estate have significant similarities. Both are tangible assets, are large parts of the investment universe and offer a hedge against inflation. However, in terms of current return, total return, demand drivers and supply cycles, they are different. Different fundamental drivers imply that upturns and downturns in the owner-occupied housing market and commercial real estate are not necessarily contemporaneous. Also, commercial real estate is a pure investment asset, whereas owner-occupied homes are both an investment asset and, far more important, a consumption good. The modest correlation between commercial real estate and homeownership, plus their different attributes, suggests that they are not substitutes for each other and, in fact, can be attractive complements in a diversified portfolio.