

## Stock Market Rotations and REIT Valuation

*For much of the past decade,  
public real estate companies  
have behaved like small cap  
value stocks.*

**ALTHOUGH PUBLIC** debate over the true nature of real estate stocks has waned since the explosive growth phase of the real estate investment trust (REIT) market in the mid-1990s, the strong performance for real estate stocks in 2001 and the first half of 2002, even as property market fundamentals weakened, has refocused attention on the relationship between public and private real estate markets. Despite rising vacancy rates and falling rents across virtually all property types and markets in the United States, real estate stocks outperformed both the broader public equities market and private real estate in 2001 and early 2002. Many real estate companies, in

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fact, were trading at slight premiums to the net asset values (NAVs) of their underlying properties for some or all of this recent period. While not all REITs participated in the market rally, the recent period contrasts sharply with the 1998 to 1999 period, when public real estate companies posted negative returns and traded at steep discounts to NAV, while private real estate investments, as measured by the NCREIF Property Index (NPI), enjoyed healthy double-digit returns.

The periodic disconnects between the valuations of public real estate companies, both REITs and real estate companies (REOCs), and the conditions in the property markets have puzzled investors and analysts, fueling the debate over whether public real estate companies are real estate or stocks. Although many in the industry have conceded that REITs and REOCs are both, the relationship between the private property markets and public equities market is not well understood. Some analysts, for example, have interpreted the REIT market decline in 1998 and 1999 and the subsequent recovery as evidence that the forward-looking public markets lead the backward-looking private markets, anticipating dislocations in the space markets.

While property market fundamentals clearly affect the performance of REITs and REOCs, we believe that rotations in public market sentiment between growth-oriented stocks and value-oriented stocks

have exerted a powerful influence on the valuation of real estate stocks. At times, this influence has overwhelmed property market fundamentals, resulting in episodes during which property market conditions and REIT performance have differed dramatically, causing public companies to trade at discounts or premiums to their NAVs. This article examines the relationship between public market investor sentiment and valuations of public real estate companies. It finds that shares of public real estate companies have behaved like small cap value stocks for much of the past decade and, as such, have tended to trade at premiums to NAV when market sentiment favors value stocks and at discounts to NAV when market sentiment favors growth stocks.

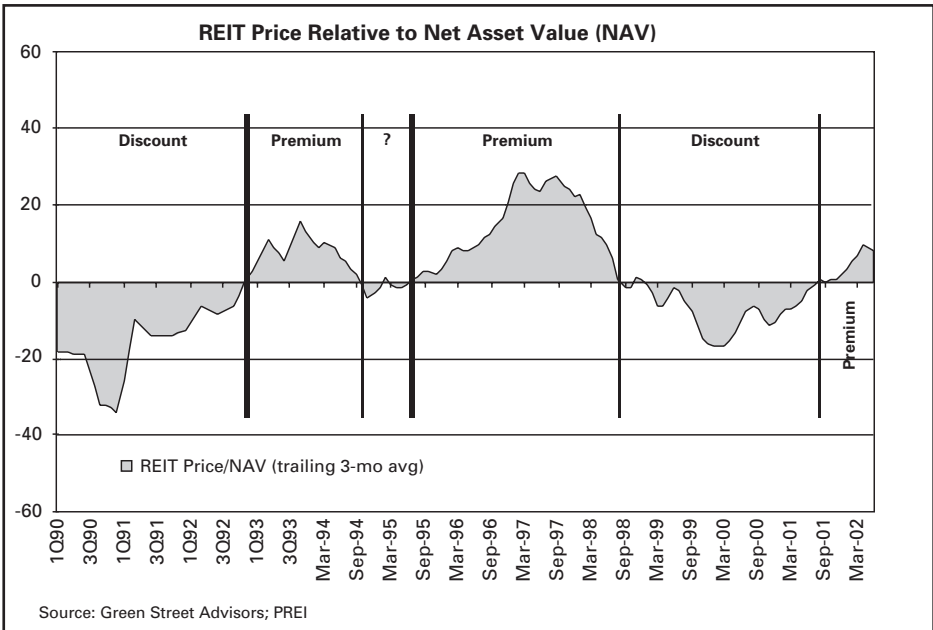
#### THE PRICE-TO-NAV PUZZLE

To understand the relationship between the public and private real estate markets, analysts and investors often examine the ratio between public companies' share prices and their NAV per share estimates. When price-to-NAV ratios are less than one, companies trade at discounts to NAV; when price-to-NAV ratios are greater than one, companies trade at premiums to NAV. Figure 1 shows that REITs generally have traded at prices differing from NAV, most often within a band around NAV

ranging from a 20 percent discount to a 20 percent premium. Since 1990, there have been three distinct periods during which REITs traded at premiums to NAV and two distinct times when they traded at discounts to NAV.

issue of why REITs as a group tend to trade at values different from NAV. Two theories have tried to explain the pricing differences in the public and private property markets. The closed-end fund theory views REITs primarily as passive portfolios

**Figure I** REITs Usually Trade at Values Different from NAV



Many academic and industry studies have attempted to determine what factors have driven the disparities between the valuations in the two markets. Our own prior research, which looked at the determinants of REIT valuations relative to other REITs, suggests that earnings growth, size (market capitalization), and leverage have been important drivers of pricing dispersions between REITs.

Most studies do not address the macro

that allow small investors to invest in a diversified portfolio of real estate assets without the complications of operating responsibilities. Closed-end funds tend to trade at a discount relative to their NAVs. Thus, the theory predicts that REITs should be priced at a discount relative to NAVs, at least most of the time, which clearly contradicts observed facts. Imbedded tax costs, uncertainty with valuing underlying investments, and serious

agency problems coupled with limited ability to add value in relatively efficient public markets are the major factors contributing to the discount pricing of exchange-traded closed-end funds.

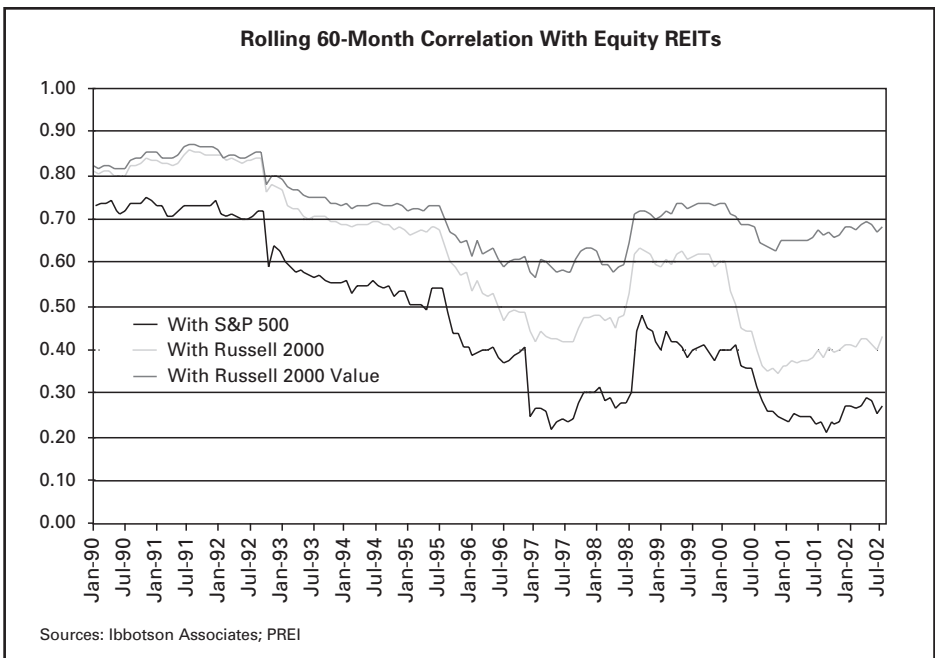
The operating-company theory suggests just the opposite—that REITs should trade at premiums to NAV. It views REITs as operating companies that actively pursue investment opportunities to add value to the company. According to this theory, successful REITs should be able to attain strong and sustainable growth rates. In competitive capital markets, the good companies will have a lower cost of capital and will force out the inferior companies whose management teams are not capable

of finding and executing effective investment and operating strategies. Ultimately, such a framework predicts a market characterized by relatively few, large, and efficient companies dominating the industry, allowing the successful companies to trade at premiums to their underlying NAVs.

### REITS AND SMALL CAP VALUE STOCKS

While the operating-company theory is probably a more accurate description of most REITs and REOCs today, the historical patterns in REIT price-to-NAV ratios suggest that neither theory explains the

**Figure 2** Strong Relationship Between REITs and Small Cap Value Stocks



pricing differences between public real estate companies and private market valuations of their assets. Instead, a cyclical pattern of REIT pricing frequently moves independently of property market cycles and seems to be more closely related to investor sentiment in the public equities market.

Figure 2 shows the correlations between REITs and the S&P 500, Russell 2000, and Russell 2000 Value indices. REITs clearly have more in common with smaller cap stocks, represented by the Russell 2000 indices, than they do with large cap stocks, represented by the S&P

500. The correlation between REITs and the Russell 2000 has been consistently higher than the correlation between REITs and the S&P 500, which has declined over time from more than 0.70 in the early 1990s to around 0.30 today.

This relationship is not surprising, since most REITs and REOCs have equity market capitalizations that are typical of small to medium cap stocks in the U.S. stock market. Figure 3 demonstrates the small cap nature of REITs relative to companies in the S&P 500. As of September 30, 2002, the companies in the S&P 500 had an aggregate market

**Figure 3** Most REITs are Small Cap Companies

<b>Size Characteristics of S&amp;P 500 Companies vs. REITs</b>		
	<b>S&amp;P 500</b>	<b>REITs</b>
Number of Companies	500	177
Total Market Value	7,437,578	163,194
Average Market Value	14,875	922
Weighted Average Market Value <sup>1</sup>	71,095	2,935
1st Quartile	12,549	1,150
Median	6,309	415
3rd Quartile	2,857	149
Maximum	245,254	10,820
Minimum	238	1
Number of Companies Less Than \$1 Billion	23	125
Overall Capitalization Status <sup>2</sup>	0.93	0.27

Market value data in millions, as of Sept 30, 2002

<sup>1</sup> Weighted by the market value share.

<sup>2</sup> Individual companies have a capitalization status ranging from 0 to 1. Companies with a market cap of \$8 billion or more are assigned a status indicator of 1. Companies with a market cap of \$1 billion or less are assigned a status indicator of 0. Companies with a market cap between \$1 billion and \$8 billion have a status indicator between 0 and 1, linearly interpolated according to their market value. The overall capitalization status is a weighted average of the individual market cap status indicator, the weight being market value share of the company.

Sources: Datastream; NAREIT; PREI

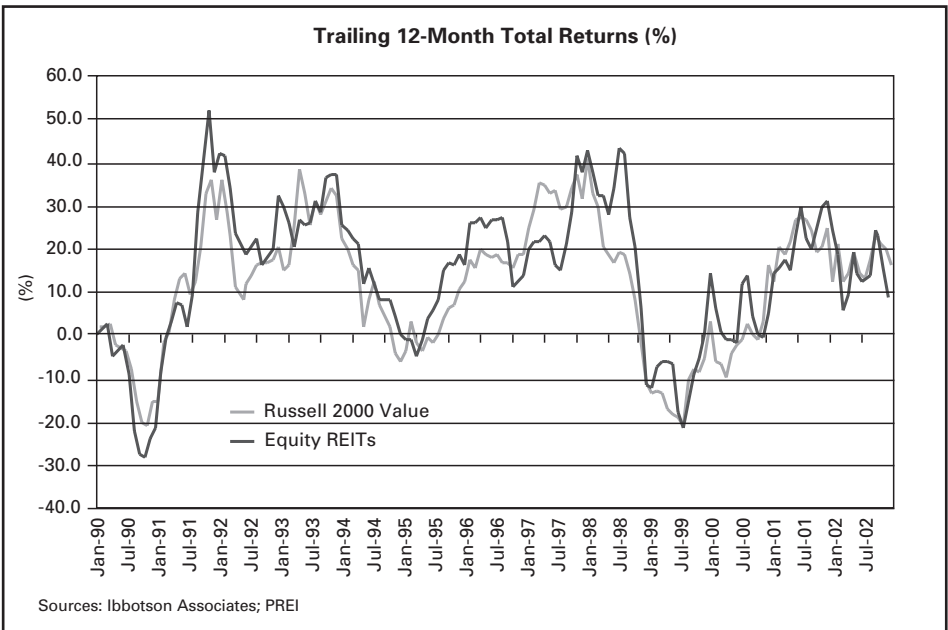
value of nearly \$7.5 trillion and an average value of just under \$14.9 billion. By comparison, the 177 REITs in the NAREIT Index had an aggregate market value of just \$163 billion, and an average size of just \$922 million.

Assuming that companies with more than an \$8 billion equity capitalization are squarely large cap stocks and those with less than \$1 billion are squarely small cap stocks, the overall capitalization status of the S&P 500 is 0.93. (A status of “one” is 100 percent large cap.) Although the S&P 500 is a large cap index, it does not represent the largest 500 companies traded in the U.S. stock markets. However, as the overall capitalization status suggests, the medium to small cap stocks that are

included in the S&P 500 have limited influence in the overall index. At the same time, not all REITs are small cap stocks either. The largest REIT has more than \$10 billion in equity capitalization. But the overall capitalization status of the NAREIT members is 0.27, which could loosely be interpreted as 27 percent large cap and 73 percent small cap companies.

Within the small cap universe, REITs are more highly correlated with small cap value stocks than they are with the broader Russell 2000 index, which includes small cap growth stocks as well. Again, this is not terribly surprising, given the high dividend yields that most REITs offer investors. While the correlation between REITs and the Russell 2000 index has

**Figure 4** REIT Returns Track Small Cap Value Stock Returns



shown a downward trend similar to that observed with the S&P 500, the correlation between REITs and small cap value stocks has fluctuated within a relatively narrow band and remains quite high.

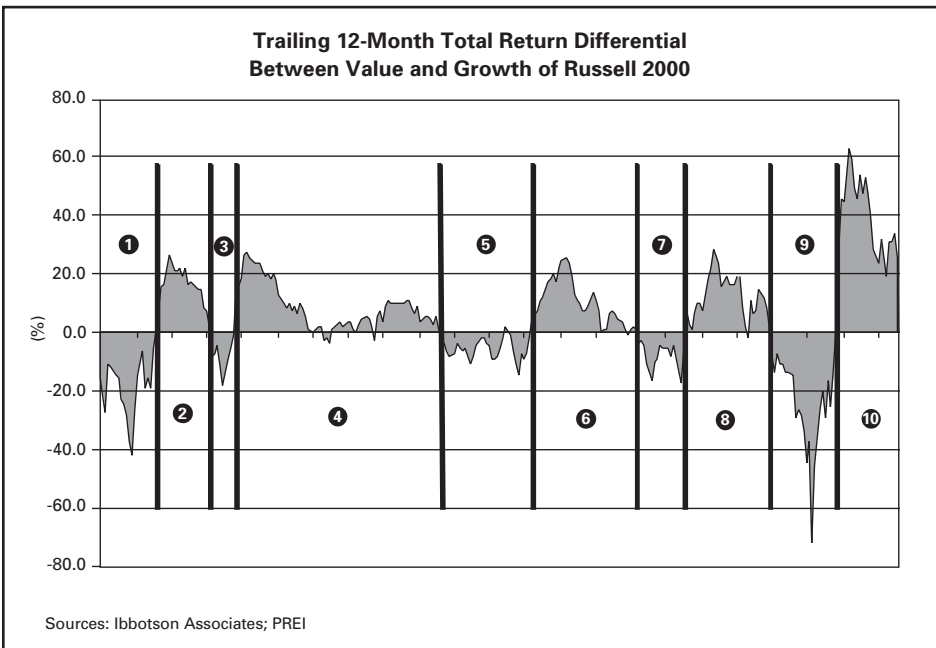
A direct comparison between the total returns for REITs and the Russell 2000 Value index further illustrates the strength of this relationship. Figure 4 shows that REITs and the Russell 2000 Value index have moved in very close tandem since the early 1990s. The peaks and valleys of the two indices are virtually identical. Because REITs have behaved like small cap value stocks, we expect they likely will continue to do so in the future, barring some fundamental change (e.g., significant consoli-

dation in the REIT market that results in fewer but much larger companies).

#### INVESTOR SENTIMENT AND MARKET ROTATIONS

For most investors, the past two years have been a painful reminder of the market's tendency to cycle through bull and bear markets. The duration and remarkable high of the most recent bull market and the swiftness and breadth of the decline since the bubble burst demonstrate quite clearly the potential force and severity—good and bad—of market rotations. Figure 5 shows one view of the changes in investor percep-

**Figure 5** Distinct Periods of Value vs. Growth

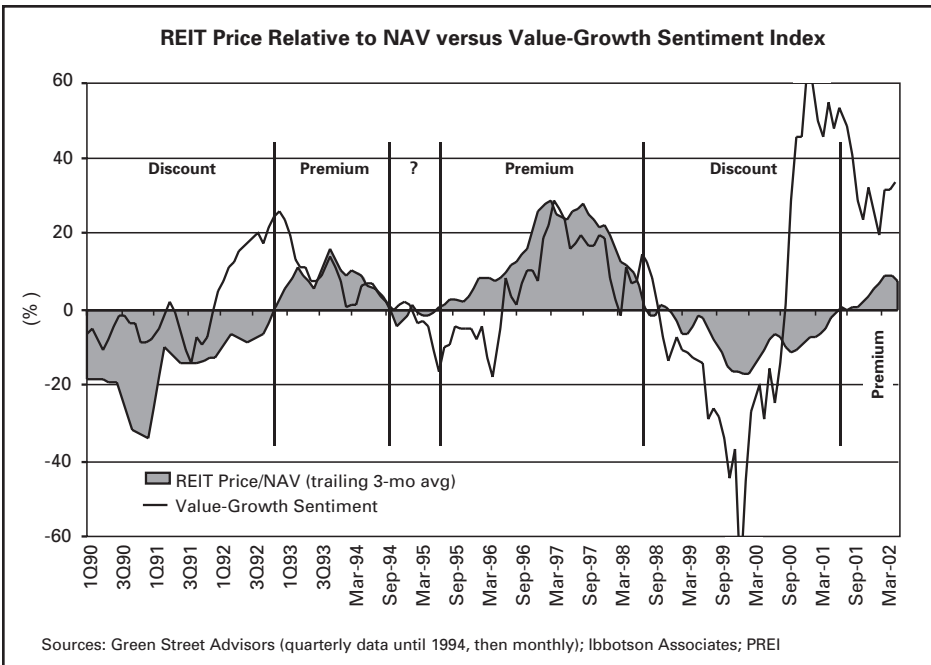


tions of the public equities market. The figure demonstrates the difference between the trailing 12-month total returns for the Russell 2000 Value and Growth indices. Shaded areas below the x-axis, identified by the odd numbers, indicate periods during which growth stocks outperformed value stocks. Shaded areas above the x-axis, identified by the even numbers, indicate periods during which value stocks outperformed growth stocks.

The cyclical pattern confirms our basic intuition that the market goes through cycles during which the prospects for growth are perceived as being better or worse for different sectors of the market or

for the market as a whole. What is remarkable about the pattern in Figure 5, however, is the magnitude of the two most recent periods. During the most recent growth phase, from late-1998 through September 2000, small cap value stocks underperformed small cap growth stocks by an average of 25 percent on a trailing 12-month basis. At the peak of this growth phase, value stocks underperformed growth stocks by more than 70 percent. Since then, however, value stocks have outperformed growth by an average of 38 percent on a trailing 12-month basis, and at the peak of the current cycle, outperformed growth stocks by 63 percent.

**Figure 6** REIT NAV Premiums/Discounts Approximate Value/Growth Phases



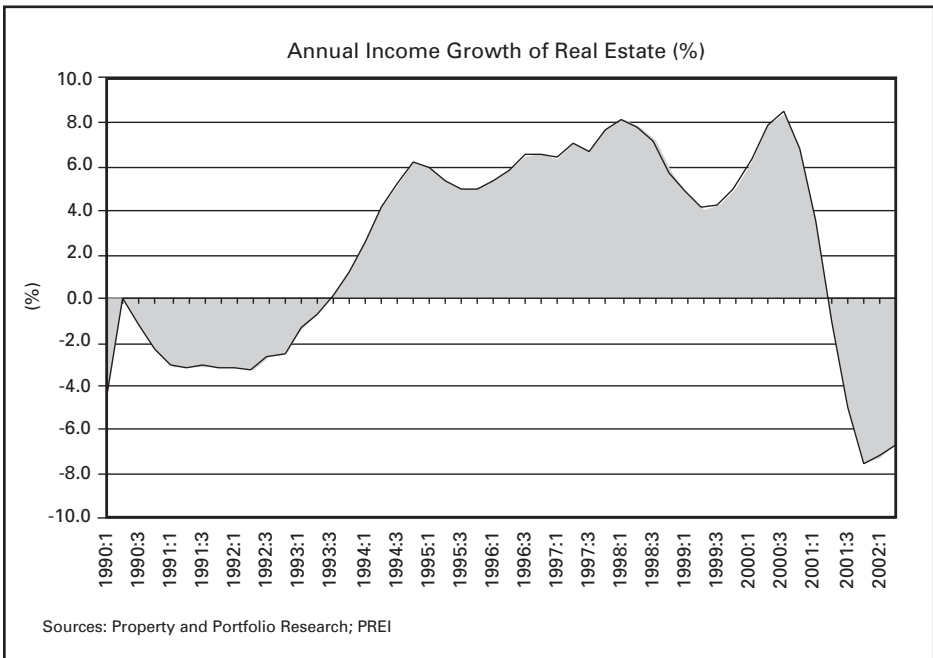


**PREMIUM/DISCOUNT AND  
VALUE/GROWTH CYCLES**

Because most public real estate companies behave like small cap value stocks, it seems logical that the cyclical rotation between the growth and value orientation of the stock market should influence the valuation of REIT stocks. Green Street Advisors has tracked REIT pricing premiums and discounts over NAV since 1990, with quarterly frequency prior to 1994 and monthly frequency since then. Figure 6 shows an overlay of the 3-month average premium/discount in REIT prices relative to NAV shown in Fig. 1 and the value-growth return differentials from Figure 5.

While the fit is obviously not perfect, considerable overlap occurs between the periods during which growth stocks were in favor and REITs, on average, traded at discounts to NAV, and periods during which value stocks were in favor and REITs traded at premiums to NAV. In 1998 and 1999, REITs sold off sharply and traded at discounts to NAV despite the robust conditions in the property markets. This REIT bear market coincides with the abrupt shift in stock market sentiment as investors rotated out of value stocks and into growth stocks, mostly tech stocks. More recently, REITs have outperformed both the broader

**Figure 7** Property Market Cycles Also Influence Real Estate Stocks



equity markets and private real estate despite deteriorating property market fundamentals. This was largely because of their relative attractiveness as high yielding value stocks in an otherwise dismal stock market.

The imperfect fit of Figure 6 also reveals the real estate character of REITs. Although the forces in the public equity markets appear to exert the strongest influence on REIT pricing and performance, as stocks of real estate operating companies, REIT stock performance also is influenced by property market fundamentals. Figure 7 shows the annual income growth for a hypothetical but representative real estate portfolio comprised of 35 percent office, 30 percent retail, 25 percent apartment, 5 percent warehouse, and 5 percent hotel properties (to correspond to the approximate distribution within the equity REIT market). In this case, income is the product of rent and occupancy in the respective sectors, and is aggregated by the fixed weights assigned to each sector.

From an earnings perspective, two periods of weakness and one period of general strength have occurred in the property markets since 1990. During the growth period of the property market (3Q93–1Q01) income growth averaged around 5.5 percent per year, versus an average annual decline of 3 percent per year in the real estate market recession

from 1990 through mid-1993. Income growth spiked at more than 8 percent in 1998 and again in late 2000, at the height of the tech-driven market. Then came the 2001 recession, which caused yearly income to decline as much as 7.6 percent.

Property market fundamentals help explain some of the imperfections in the relationship between market sentiment and REIT pricing relative to NAV shown in Figure 6. In 1992, for example, while property market conditions were extremely weak, REITs continued to trade at a discount to NAV even as stock market sentiment shifted toward value stocks. Then, in late 1995 and early 1996, as the real estate recovery accelerated, REITs traded at a premium to NAV even though market sentiment favored growth stocks. In fact, for a relatively brief period, REITs were being bought and sold as growth stocks. The strong recovery in the property markets, the potential to roll over existing leases to much higher rents, and the healthy capital flows from investors who bought underpriced property in the private markets allowed REITs to deliver returns comparable to growth stocks for about two years.

The effects of the property and capital markets are not always offsetting, of course. When market sentiment shifted back toward value in late 1996 and 1997,

REITs carried forward the momentum they had achieved during their high growth phase and continued to trade at premiums to NAV that exceeded 20 percent. In 1998, however, when market sentiment shifted back toward growth, REITs were no longer perceived as growth stocks, and REITs endured two years of negative returns as growth investors rotated into other sectors.

Clearly, value-growth rotations in the stock market have been more frequent than changes in property market cycles. These rotations in the broader stock market strongly influence investor sentiment toward REITs, as measured by the pricing premium/discount relative to NAV. While property market conditions also affect REIT pricing and can magnify or moderate the effects of value-growth market rotations, most of the equity capital in the REIT market does not flow through dedicated REIT mutual funds and closed-end funds. With roughly \$15 billion of capital in real estate mutual funds and another \$2.5 billion in closed-end real estate funds (raised in 2001 and 2002), dedicated real estate funds account for only a small share (less than 11 percent) of the \$163 billion total REIT equity market capitalization. Although some of the capital outside of dedicated REIT funds may be invested in REITs and REOCs as part of a real estate strategy, which in theory should make capital flows into and out of the sector less

volatile, a significant portion consists of marginal capital that views real estate stocks primarily as a sector of the equities market. It is not surprising, therefore, that real estate stocks are strongly influenced by stock market rotations of the large marginal capital base.

## S U M M A R Y

The general findings of this study confirm what many people in the industry already accept about real estate stocks—that they are both real estate and stocks. The strong relationship between REIT performance and market sentiment toward small cap value and small cap growth stocks provides valuable insights into the often puzzling disconnect between the public real estate market and the private property markets. While public real estate companies afford investors access to the investment characteristics of private real estate, especially high and relatively stable yields, they represent a very small sector of the public equities market. Because of the small size of the sector, capital flows in the public equities market can and often do easily overwhelm the private market property characteristics of real estate stocks when these characteristics are either in or out of favor. As shown in this report, REITs have traded at premi-

ums to NAV when value investing is in favor, and at discounts to NAV when growth investing is in favor. Since sentiments in the stock market change much faster and less predictably than property market cycles, the stock market gyration dominantly delineates the cycles of REITs trading at premiums or discounts to NAVs.

Investors, therefore, must be aware not only of property market fundamentals when investing in real estate stocks, but also of changes in market sentiment that might influence the valuation of REITs and REOCs. While this added dimension can be a source of risk for investors who choose to gain exposure to the asset class through the public equities market, the emergence of meaningful public real estate capital markets has overwhelmingly been a source of opportunity for real estate investors. With an understanding of the public market's influence on real estate stocks, sophisticated real estate investors can take advantage of the industry's dual capital markets (public and private) to exploit arbitrage opportunities that arise when the public or private markets price real estate assets differently.