Point of View

A Sector View of Public Market Ownership of Commercial Real Estate in the United States

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Introduction

For the second straight year, real estate investment trusts (REITs) outperformed the broader equity market in the United States by a wide margin in 2001 as investors sought refuge in stocks with relatively high, safe current yields and tangible assets. Equity REITs delivered total returns of nearly 14% in 2001, well ahead of the 7.4% total return for private real estate and the negative returns of most major market indices.[1] However, with the exception of the office sector, the strong performance by REITs did not translate into an increase in their ownership share of the commercial real estate universe. Instead, the ownership share held by REITs fell in five of the six property types we track in our annual survey, continuing a trend that began in 2000.

Only the office sector saw any increase in public market ownership, gaining a modest 0.2% share of the U.S. office market. Public companies' ownership of hotels, non-mall retail, mall and warehouse properties fell for the second straight year, while public ownership of apartments fell for the third straight year. To be sure, public real estate companies did increase their capital raising activities in 2001. According to NAREIT, public REITs raised about $18.7 billion of new capital in 2001, an increase of $8.4 billion, or over 80%, from the year 2000 total, but still well short of the record $45 billion raised by REITs in 1997. Capital flows into private real estate were also strong as real estate

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investments—public and private equity and debt investments—became one of the few safe havens from the falling stock market and volatile corporate bond market.

The seemingly counterintuitive trends in public market ownership over the past two years, during which public companies failed to gain market share despite strong performance and a resumption of capital raising activities, illustrate the strong cross currents in the real estate investment business recently. In particular, although property market conditions deteriorated for most property types and markets in 2001, conditions in the capital markets improved for many property sectors as capital flowed into the public and private equity and debt markets from other asset classes with weaker performance and a more uncertain outlook. As property market conditions weakened, demand for real estate investments concentrated on (or away from) a few selected property types and markets, making competition for the most attractive properties very intense. At the same time, the historically low interest rates allowed owners whose properties did not meet the market's finicky tastes to refinance and try to weather the market downturn as best as possible.

The net result was a reduction in acquisition activity for public real estate companies. The low interest rates made it particularly difficult for REITs to compete with private buyers, who could use leverage to gain a competitive advantage in terms of their overall cost of capital. Unlike private investors, REITs are effectively limited in the amount of leverage they can use by the public market's tolerance for debt levels. In recent years, the average debt to equity ratio for REITs has settled into the 40% to 45% range, versus anywhere from 65% to 80% for many private investors. Simultaneously, the ability to refinance at low interest rates rather than sell into an uncertain transaction market all but eliminated opportunities to buy assets at distressed prices. It appears that these market dynamics largely kept public real estate companies on the sell-side of the transactions market in 2001, where they took advantage of the strong capital inflows to selectively sell assets. Many of the REITs that did grow their asset base in 2001 did so through new development instead.

In fact, with the precursors for renewed REIT growth in place, acceleration should begin soon, based on the lags in the responses associated with the most recent downturn. Growth of the REIT industry property base essentially stopped by mid-1999, about a year and a half after new investment capital inflows began to slow, and about two years after REIT stock prices began to decline. The current episode of strong REIT price growth dates from the end of 1999. Investment capital inflow growth resumed in early 2001. Similar lags on the upside suggest that strengthening acquisition activity could appear during late 2002 or 2003. However, anecdotal evidence suggests that REIT management teams are not impressed by the investment opportunities in the current market environment and may delay increasing acquisition activity.

This report consists of four parts. First, we summarize the results of the analysis, placing them in the context of developments in the capital markets as they affected REITs and real estate operating companies (REOCs). Secondly, we discuss key features of the trend for each property market individually. Finally, two appendices address the more technical aspects of the study. Appendix A outlines our methodology, data sources and the definitions applied to the investment universe for each property type, citing the sources for the statistics from which we estimated them. Appendix B discusses the variance between our estimates for penetration this year and those for last year, outlining the principal sources of variation in the figures.

Summary Observations for 2001

Mixed performance in the face of a weakening economy during 2001 characterized the penetration trends. While public market penetration into the major property markets contracted unambiguously across all six of the property categories in 2000, the signal was less clear in 2001. Penetration in five of the six property types contracted for the second consecutive year, but the declines were significant for only three of the sectors: warehouses, hotels and retail malls. Public market ownership in the office sector increased slightly, while the penetration declines for apartment and non-mall

Exhibit 1
Public Market Penetration Changes: 2000 to 2001

	2000 (%)	2001 (%)	Change (% pts)
Offices	7.4	7.6	+0.2
Apartments	8.8	8.5	−0.3
Warehouses	10.7	9.7	−1.0
Non-Mall Retail	12.8	12.5	−0.3
Hotels	17.9	17.0	−0.9
Mall Retail	34.4	33.0	−1.4

retail were small. Exhibit 1 summarizes our penetration estimates for 2001 and changes from revised 2000 figures.

Clearly, the continued contraction arose in part from the acquisition of public companies by private firms. We counted a total of five takeovers—two purchases by private firms and three management buyouts—that removed properties from public-side ownership in at least one of the six categories during 2001.[2] The acquisitions included the Calwest acquisition of Cabot Industrial Trust (CTR), and the U.S. Retail Partners purchase of First Washington Realty Trust (FRW). The three management buyouts of public companies also removed properties from the public side during 2001—Vinings Investment Property Trust (VIPIS), Westfield America (WEA) and Sunburst Hospitality (SNB). At the same time, we found only one merger, CBL & Associates (CBL) acquisition of the Richard Jacobs Group retail portfolio that brought properties into public ownership.

Delisting also affected the publicly traded securities for REITs and REOCs during 2001. Three firms lost their listings on a major exchange during 2001 (Host Funding, Lodgian and Prime Retail), and a fourth was delisted during the first half of 2002 (Pinnacle Holdings). Lodgian filed for bankruptcy protection late in the year. Although the delisting actions technically do not affect public market penetration, these events severely curtail equity raising potential for the affected firms, and usually result in a sharp drop in share liquidity as well.

Sales activity among REITs remained relatively strong, while acquisition activity, which slowed sharply in 1999 and 2000, remained relatively subdued. In four of the six property categories, acquisition activity slowed further in 2001 from an already slow pace in 2000. The pace of acquisitions accelerated slightly in the office category, which saw a 5% increase in purchases. Overall, the balance of single property transactions tilted in favor of net growth for offices and retail malls in 2001. Exhibit 2 summarizes acquisition and sales activity by sector for calendar year 2001.

Market Penetration by Property Type

For each property type, we provide figures for public market penetration consistent with our definitions for the "institutional quality investable universe" discussed in Appendix A. To be included, properties must be located in the U.S. In addition, properties in some categories must meet a size requirement (expressed in terms of number of units or square feet, depending on the property type) to satisfy our criteria. Finally, the properties must also satisfy a "controlling interest" condition for jointly owned properties (*i.e.*, the REIT or REOC ownership share of a jointly held property must equal or exceed 50%). As a result, some properties listed by REITs or REOCs in their own tabulations of properties held are excluded from our totals either because they do not meet our size and location criteria, or because the firms hold only a minority

Exhibit 2
Number of Properties Acquired and Sold by REITs by Category, 2001

	Offices	Non-Mall Retail	Apartments	Warehouses	Mall Retail	Hotels
Purchases	230	183	135	62	36	21
Sales	179	263	240	107	9	33
Net Change from Mergers	−5	−60	−10	−164	−37	−147

interest in the properties. These exclusions may cause our statements about specific firm portfolios to differ somewhat from statistics and statements released by the firms themselves.

Apartment

The takeovers and restructurings that caused the apartment share to decline during 2000 slowed in 2001, but did not stop. Selective purchases and sales accelerated, which we believe indicates that REITs were using this time to sharpen their focus on core products, regions and strategies by pruning their portfolios of properties that did not fit their investment criteria. While a few large, strategic deals took place, the individual transactions produced in aggregate as much activity as the few larger transactions.

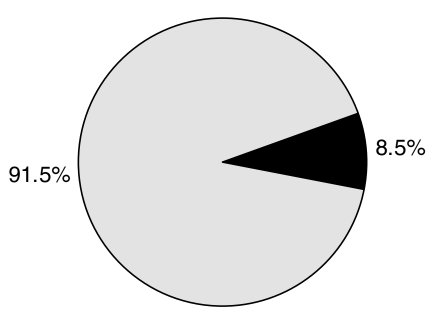
The most significant transaction that did have an impact on penetration was the bulk sale by New Plan Excel Realty Trust (NXL) of most of its garden apartment portfolio to a private investor group comprised of Houlihan-Parnes Realtors, LLC and C.L.K. Management Corp. in a transaction that took over fifty properties and 12,000 units out of public ownership in the third quarter of 2001 (see Exhibit 3). The other notable transaction, also in the third quarter, involved the privatization of the Vinings Investment Property Trust (VIPIS), which removed an additional ten apartment properties out of public ownership.

Strong demand for apartment properties in the transactions market as a whole prompted numerous REITs to make selective sales throughout the year. Equity Residential Properties (EQR), by far the largest holder of apartment properties among public companies, sold about fifty properties with just under 9,000 units during the year.[3] Overall, EQR reduced its portfolio by about thirty properties and 3,000 units. Although this figure represents only a small proportion of its portfolio, it helped tip the balance of transactions toward negative net penetration. Other net sellers included Summit Properties (SMT), Highwoods Properties (HIW), Associated Estates Realty (AEC) and Post Properties (PPS), though none of these reported a net reduction in holdings greater than ten apartment properties.

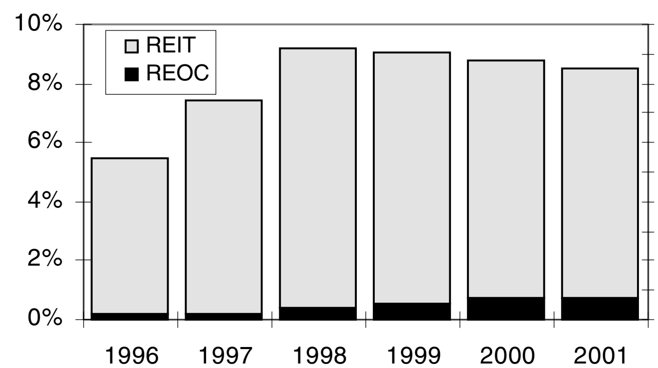
The most significant large transaction that did not affect public market penetration involved the merger of two public REITs, Charles E. Smith Residential Realty (SRW) and Archstone Realty Trust (ASN). This transaction, which was completed during the fourth quarter but was in process and well known throughout most of the year, involved about sixty properties.

Exhibit 3

Apartment Public Market Penetration Year End 2001 (million units)



Total 12.39 million units



	1996	1997	1998	1999	2000	2001
REIT	5.3%	7.2%	8.8%	8.5%	8.1%	7.8%
REOC	0.2%	0.2%	0.4%	0.5%	0.7%	0.7%
Total	**5.5%**	**7.4%**	**9.2%**	**9.0%**	**8.8%**	**8.5%**

Net buyers among apartment REITs were few and far between. AIMCO (AIV) reported gross purchases of only five apartment properties during the year, and 73 sales. Home Properties of New York (HME) reported ten property purchases, but fourteen property sales during the year. Cornerstone Realty Trust (TCR) purchased nine properties. Overall, however, apartment trading on the part of REITs during 2001 was muted for the second consecutive year.

Warehouse

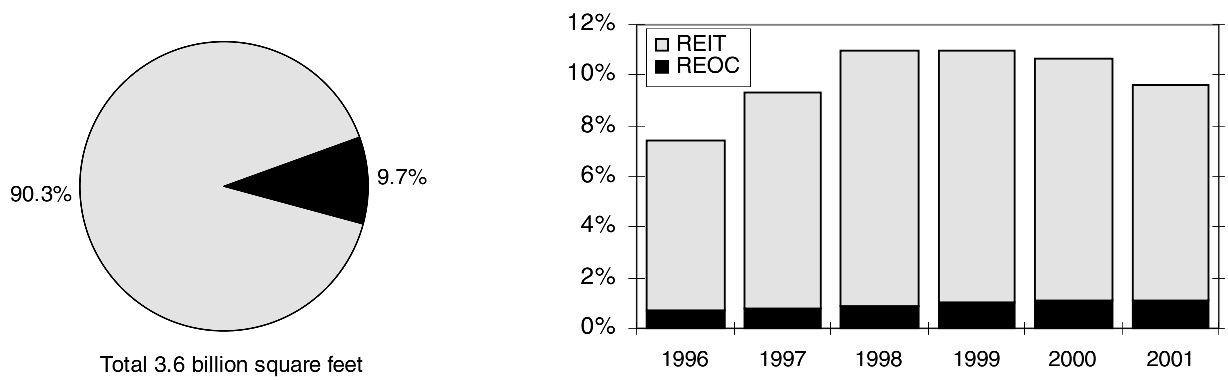
Unlike the apartment sector, transaction activity among the warehouse REITs was relatively strong, running from bulk sales to buyouts. Overall, one large buyout on the part of a private-side investor helped to push total penetration down for the second straight year. The Calwest buyout of Cabot Industrial Trust (CTR) late in 2001 removed 160 warehouse properties with 27 million square feet of space from the public domain. This single transaction caused penetration to decline by about 0.75% (see Exhibit 4). A smaller public-to-private transaction involved the transfer of the residual industrial portfolio of Pacific Gulf Properties (PAG) to a liquidating trust in late summer when FountainGlen Properties' purchased PAG's senior housing portfolio. Pacific Gulf previously had sold the bulk of its industrial portfolio to Calwest in November 2000.

The other notable bulk transfer of properties involved the buyout of Speiker Properties (SPK) by Equity Office Properties (EOP) in July 2001. EQR acquired a small number of industrial properties—twenty-three properties with about 4.6 million square feet—as part of this transaction, but quickly disposed of over one-third of the industrial portfolio (in size terms) by year-end 2001. Other public-to-public buyouts involving small numbers of warehouse properties included the purchase of American Industrial Trust (IND) by Developers Diversified Realty (DDR) and the Excel Legacy (XLG) purchase by Price Enterprises (PREN).

Additionally, one warehouse REIT was delisted in 2001. As noted earlier, delisting events technically do not affect public market penetration. However, from a practical standpoint, the loss of liquidity and market scrutiny associated with listing on a market exchange reduces the incentives that create market and societal benefits of public sector ownership—transparency and responsiveness to market signals, for example. In September 2001, Prime Retail (PRT) was delisted from the New York Stock Exchange.

Exhibit 4

Warehouse Public Market Penetration Year End 2001 (billion sq. ft.)



	1996	1997	1998	1999	2000	2001
REIT	6.7%	8.5%	10.1%	10.0%	9.6%	8.5%
REOC	0.7%	0.8%	0.9%	1.0%	1.1%	1.1%
Total	**7.4%**	**9.3%**	**10.9%**	**11.0%**	**10.7%**	**9.7%**

A number of REITs were modest net purchasers of warehouse properties in 2001. The largest were AMB Properties (1.4 million sq. ft. of qualifying properties) and Keystone Property Trust (2.2 million sq. ft.). Duke Realty (DRE), First Industrial Realty Trust (FR) and Liberty Property Trust (LRY) were the most notable of a few REITs that were active as both sellers and buyers. Over the course of the year, DRE purchased about 2.3 million square feet of warehouse space and sold about 2.8 million square feet, resulting in a small net contraction of the company's industrial portfolio. The FR portfolio contracted by 2.3 million square feet through seventeen purchases and thirty dispositions. LRY purchased thirteen properties and sold thirteen properties.

Office

Increased transaction activity and consolidation continued in the office sector during 2001. Acquisitions of privately held assets by public companies helped to produce a net gain in penetration, despite two privatizations that involved a small number of office properties (see Exhibit 5). In fact, the office sector was the only one of six that posted a net increase in penetration.

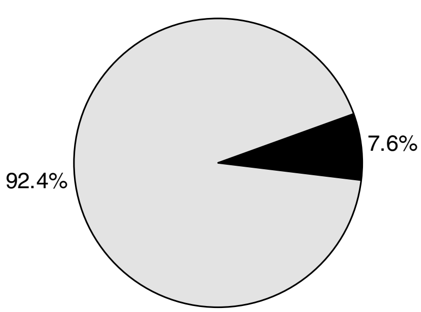
Equity Office Properties' (EOP) acquisition of Speiker Properties (SPK) dwarfed other transactions in the office sector during 2001. This transaction, which had no net effect on public market penetration, involved over 150 properties and over 25 million square feet of office space. Smaller public-to-public mergers involving office properties included the acquisition of American Industrial Properties (IND) by Developers Diversified Realty (DDR) and Price Enterprises' (PREN) purchase of Excel Legacy (XLG).

Two transactions involving public-to-private ownership changes involved only one office property each: the purchase of First Washington Realty Trust (FRW) by U.S. Retail Partners LLC, and the privatization of the Vinings Investment Properties Trust (VIPIS).

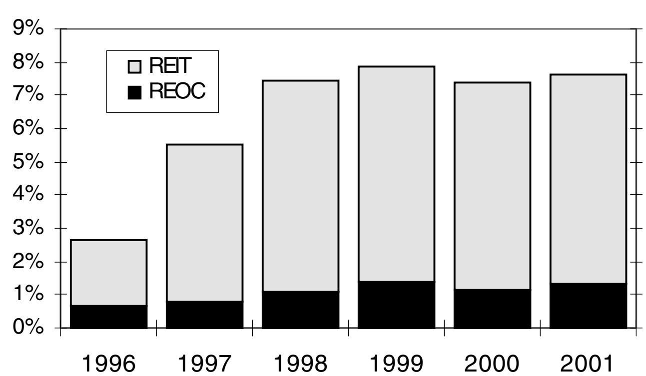
Notable bulk acquirers included Brandywine Realty Trust (BDN), which acquired twenty-eight properties, and PS Business Parks (PSB), which acquired eleven properties. Duke Realty Properties (DRE), Highwoods Properties (HIW) and Liberty Property Trust (LRY) were active developers during 2001. Together, these companies brought over fifty new projects into service. Large individual sales included thirteen office properties by Banyan Strategic Realty Trust (BSRTS), which adopted a liquidation plan in early 2001, fifteen properties by LRY and ten properties by Prentiss Property Trust (PP). Additionally, First Industrial Realty Trust (FR) sold fourteen R&D office properties during the year.

Exhibit 5

Office Public Market Penetration Year End 2001 (billion sq. ft.)



Total 8.07 billion square feet



REIT	2.0%	4.7%	6.4%	6.5%	6.3%	6.3%
REOC	0.6%	0.8%	1.1%	1.4%	1.1%	1.3%
Total	**2.6%**	**5.5%**	**7.5%**	**7.8%**	**7.4%**	**7.6%**

Despite the increase in penetration noted above, most firms reported sales last year while relatively few firms reported purchases. Of the sixty-four REITs that reported owning office properties at year-end 2001, only fifteen reported any acquisition activity, while thirty-six reported property sales.

Mall Retail[4]

Two large takeovers combined with modest net buying by other mall REITs characterized transaction activity in the mall sector during 2001. Overall, public market penetration contracted for the second consecutive year (see Exhibit 6). The net decrease of five malls under public firm control combined with a 3.3% increase in the mall universe, caused a substantial −1.4% decline in penetration during 2001.

The largest individual transaction affecting mall ownership was the privatization of Westfield America (WEA), which removed thirty-seven malls from public ownership in April 2001. The acquisition of privately held Richard Jacobs Group, with fifteen mall properties, by CBL & Associates (CBL) during the first quarter partially offset the Westfield privatization.

For the most part, however, mall REITs remained relatively inactive last year. The group of firms that hold retail mall properties for investment is smaller than corresponding groups for our other categories. At year-end 2001, thirty-seven REITs held mall properties. During the year eleven of these companies reported purchasing at least one mall property, while seven companies reported selling at least one mall property. The largest mall owner, the Simon Property Group (SPG), was largely inactive, acquiring only one new property late in 2001.

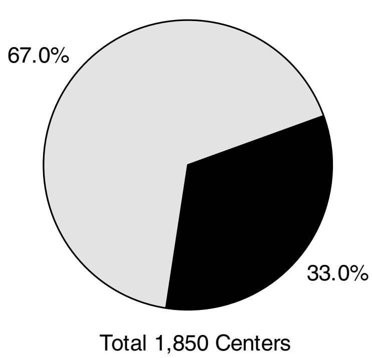
The aforementioned delisting of Prime Retail Inc. (PTR), an outlet center owner and operator, in late September 2001, also involved the retail mall sector. PTR, which remains publicly owned, owns seven mall retail properties among its forty-five retail holdings.

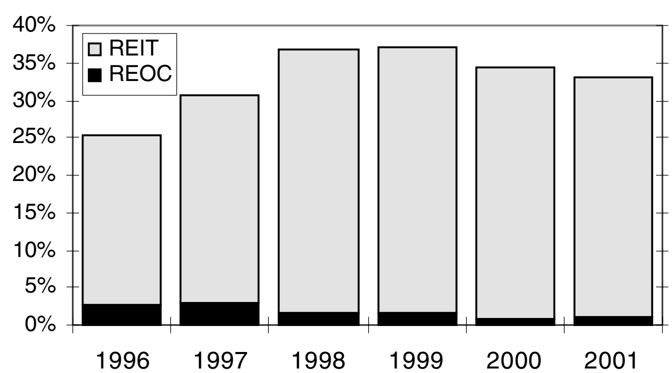
Non-Mall Retail

Transactions involving non-mall retail properties tilted slightly in favor of sales over purchases during 2001. This trend, combined with a key privatization, caused a modest decline in public market ownership during the year (see Exhibit 7). Consolidation in this sector also continued.

The largest single transaction involving non-mall retail properties was the purchase of the First Washington Realty Trust (FRW) by U.S. Retail Partners, a private entity. This transaction alone

Exhibit 6
Mall Retail Public Market Penetration Year End 2001 (centers)

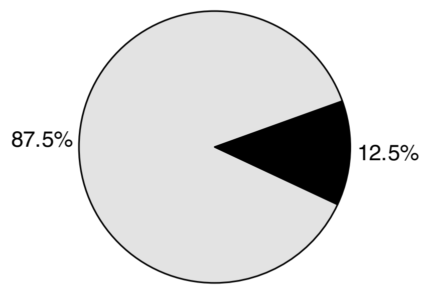




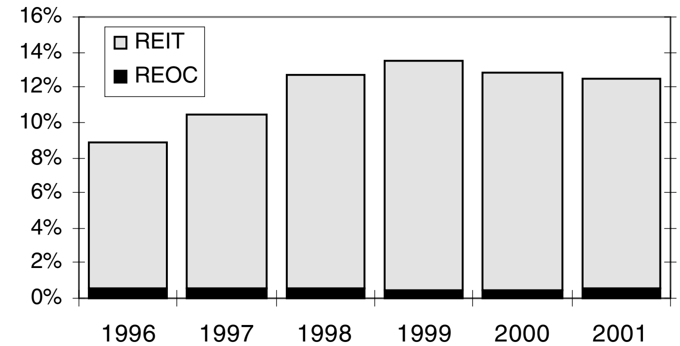
	1996	1997	1998	1999	2000	2001
REIT	22.8%	27.9%	35.3%	35.4%	33.5%	32.0%
REOC	2.7%	2.9%	1.5%	1.5%	0.9%	1.0%
Total	**25.5%**	**30.8%**	**36.8%**	**37.0%**	**34.4%**	**33.0%**

Exhibit 7

Non-Mall Retail Public Market Penetration Year End 2001 (centers)



Total 36,901 Centers



	1996	1997	1998	1999	2000	2001
REIT	8.3%	9.8%	12.1%	13.0%	12.3%	11.9%
REOC	0.6%	0.6%	0.6%	0.5%	0.5%	0.6%
Total	**8.8%**	**10.4%**	**12.7%**	**13.5%**	**12.8%**	**12.5%**

took sixty properties, about 0.15%, out of public-side ownership. At the same time, three significant public-to-public merger transactions took place, two of which were completed in September 2001—the acquisition of Excel Legacy (XLG) by Price Enterprises (PREN), which involved twenty-two properties, and the acquisition of United Investors Realty Trust (UIRT) by Equity One (EQY), which involved twenty-four properties. The third merger, Commercial Net Lease Realty's (NNN) purchase of Captec Net Lease Realty (CCCR), took place in the fourth quarter and involved 135 properties, of which twenty-seven were non-mall retail properties.

Acquisition activity slowed from 2000, while sales activity remained at roughly the same pace. At year-end 2001, a total of eighty-six REITs held at least one non-mall retail property. Only twenty-seven companies acquired any properties last year, while forty-three companies sold at least one. Property acquisitions totaled 183 in 2001, a 16% reduction from the 219 acquisitions in calendar year 2000. The slowdown in acquisition activity was spread across individual REITs. Some of the largest companies kept their acquisition activity very low for a second year. Realty Income Corp (O), which holds the largest number of non-mall retail properties among REITs, made no acquisitions in 2001 and only three in 2000, versus over 100 properties per year in 1998 and 1999. Kimco Realty (KIM), which has the second largest portfolio of non-mall properties, acquired only eleven properties in 2001, compared with thirty-one properties in 2000 and forty-two properties in 1999.

Large block acquisitions in 2001 included Chelsea Property Group's (CPG) purchase of over thirty retail properties from the Konover Property Trust (KPT), Equity One's (EQY) acquisition of twenty-eight properties held by the subsidiary of an affiliate and Weingarten Realty's (WRI) purchase of nineteen properties.

At the same time, individual property sales increased very slightly, from 252 properties in 2000 to 263 properties in 2001. Large block sales included the above-mentioned transaction involving CPG and KPT, a twenty-one-property sale by Burnham Pacific Properties (BPP) as part of its liquidation strategy, and a seventeen-property sale by Duke Realty (DRE). Overall, BPP, which sold thirty-three properties, was the most active seller of properties in the other retail category.

Hotel

Unlike the other property categories, most hotel investment firms have chosen not to use the REIT structure. We identified only twenty-seven REITs that held hotels in their portfolios and met our criteria, and over fifty non-REIT corporations that invest in hotel properties and owned at least one property at year-end 2001.

During 2001, the hotel industry experienced a drastic decline in demand. The stress on operations reverberated through the industry, and affected the status of the property investors as well. One consequence of this stress was the delisting of at least four hotel firms: Buckhead America (BUCK) in February; Host Funding (HFD, now HFDI) and Full House Resorts (FHRI) in April; and Lodgian (LOD, now LODN) in November.[5] Two small firms exited the sector by disposing of any and all hotels in their portfolios: Colorado Casinos (CCRIQ) and Full House Resorts (FHRI).

Additionally, one REOC, Sunburst Hospitality (SNB), went private early in the year, eliminating eighty hotels with over 11,000 rooms from public-side ownership. This single transaction reduced the hotel penetration estimate by 0.27% in 2001, slightly more than half of the total decline (see Exhibit 8).

Overall, twenty REOCs and eight REITs reduced their hotel holding during 2001, while eighteen REOCs and three REITs increased the number of hotel properties they control. Extended Stay America (ESA) was among the small number of REITs to increase the number of properties owned in the public domain. ESA increased its hotel portfolio through the development of thirty-nine new properties. Notable active disposition activity included the sale of nine properties by Buckhead America (BUCK), roughly half of its hotel assets, as the company implemented an exit strategy of its hotel ownership and management businesses.

Appendix A

Data Sources and Estimates for Institutional Quality Holdings and Investable Universe Size by Property Type

Investable Universe Size by Property Type

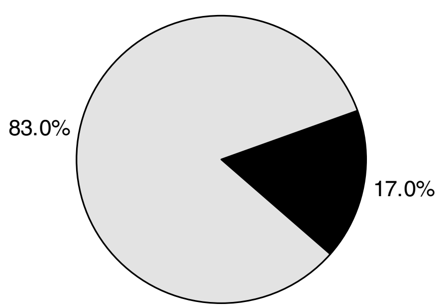
In this update, we applied precisely the same definitions for the institutional quality investable universe as we did in preparing the prior penetration estimates. For the most part, the estimates exclude the smallest buildings, government buildings and owner-occupied structures from property type totals. Below, we summarize the definitions and the methodology for estimating the investable universe for each of the six property categories.

Real Estate Investment Trusts

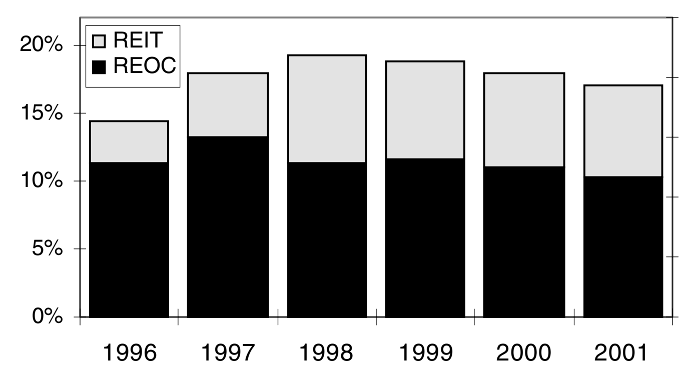
The exclusive source of information in this study on REIT property holdings and transactions is a statistical database of properties maintained by SNL Securities. This useful database currently

Exhibit 8

Hotel Public Market Penetration Year End 2001 (million rooms)



Total 4.12 million rooms



	1996	1997	1998	1999	2000	2001
REIT	3.1%	4.7%	8.0%	7.2%	7.0%	6.7%
REOC	11.2%	13.1%	11.2%	11.6%	11.0%	10.3%
Total	**14.3%**	**17.9%**	**19.2%**	**18.8%**	**17.9%**	**17.0%**

contains detailed information on over 34,000 individual properties held (or planned to be held) by equity REITs and selected REOCs. The information used in this study includes: company of ownership, size (in square feet, units, or rooms, depending on the property type), location, acquisition date, year built, ownership percentage and sale date (if applicable). In addition, we extract data on real estate company initial public offering dates and REIT status from another database of REIT and REOC corporate information, also maintained by SNL Securities.

Real Estate Operating Companies

We include properties held by public firms categorized in May of each year by Bloomberg as belonging to the Real Estate and Lodging industrial categories, plus the Casino Hotel and the Resort Theme Park subcategories of the Entertainment industry. Non-hotel gaming companies and companies whose entire real estate holdings were located offshore are excluded. The REOCs must be publicly held entities that trade on one of the major stock exchanges in the U.S. or Canada. In early 2000, SNL Securities initiated coverage on a number of REOCs for its property database. We include these firms, and going forward will also include all REOC firms reported in the SNL Securities database regardless of their Bloomberg classifications. At year-end 2001, the SNL database contained twenty-nine REOCs with at least one property included in the investable universe as we define it.

Using these criteria, we include ninety-eight current and acquired REOCs in our ownership tabulations for the 1996–2001 period. As with REITs, the properties themselves are included only if they satisfy the criteria applicable to the specific property type. Data on property holdings by these firms is culled primarily from 10-K reports, occasionally supplemented with material obtained from direct communication with the firms.

Apartment Market

We define the apartment investable universe to include all units in properties with twenty units or more. This criterion excluded nineteen properties held by REITs, a total of 210 units (averaging eleven units per property), at year-end 2000 from our computations.

We base estimates for these figures on the Property Owners and Managers Survey conducted by the U.S. Census Bureau in late 1995 and early 1996. This survey determined estimates for the number of rental units in properties by size of the property applicable to the results of the 1993 American Housing Survey, which corresponds roughly to a year-end 1992 figure. We then step the estimates forward in time based on a simple model of additions and removal, according to the schedule in Exhibit A-1.

The U.S. Department of Commerce provides figures for completions of properties with twenty or more units. The removal rate and completions share assumptions are ours.

Office Market

The investable universe includes all private sector office space that is tenant-occupied or vacant and offered for lease, defined in square footage terms. No minimum size applies for this property type. In fact, REIT ownership of office properties appears to include many smaller investments. At year-end 2001, for example, over 360 office properties held by REITs, about 10% of the total, were smaller than 30,000 square feet.

In Exhibit A-2, Property and Portfolio Research (PPR) provides the estimates for the total stock of office properties for each of the year-end periods, and baseline estimates for the private-sector proportion. CB Richard Ellis-Torto Wheaton Research supplies the baseline estimate for the tenant-occupied proportion of total stock.[6]

Some of the office space in the universe is multi-use, containing retail space at ground level or elsewhere, which we estimate to comprise less than 5% of the investable universe.

Warehouse Market

The investable universe includes private, non-manufacturing, tenant-occupied or leaseable warehouse space in properties with 25,000 square feet

Exhibit A-1
Schedule of Additions and Removal

Year	Units, Start of Year	Less: Removals at 0.3%	Completions Share with 20+ Units	Units, End of Year
1992	—	—	—	11,667
1993	11,667	35	53	11,685
1994	11,685	35	63	11,713
1995	11,713	35	97	11,775
1996	11,775	35	113	11,852
1997	11,852	36	107	11,924
1998	11,924	36	140	12,028
1999	12,028	36	152	12,144
2000	12,144	36	161	12,268
2001	12,268	37	157	12,389

Notes: The sources are the U.S. Census Bureau and Prudential Real Estate Investors.

of space or more. At year-end 2001, only 132 properties comprising about 2.4 million square feet of warehouse space controlled by public REITs, representing 6% of properties and 0.8% of space, existed in properties smaller than this lower limit (see Exhibit A-3). This is far below the estimated proportion of the total universe comprising properties of this size.

Property and Portfolio Research (PPR) provides the baseline estimates for total stock in the industrial category for all industrial structures, to which we apply adjustments supplied by F.W. Dodge and Torto Wheaton Research.

The investable universe stock of warehouse space has increased recently by about 2% annually.

Hotel Market

The universe consists of the total number of rooms in lodging facilities with twenty or more rooms. Smith Travel Research, a nationally recognized firm that tracks hotel data, provides us with the current estimate for the lodging sector universe (see Exhibit A-4).

Smith Travel reported that there were over 38,000 lodging facilities in the nation, offering about 4.1 million rooms in total at year-end 2000. Growth of the hotel universe registered a moderate pace of 3.1% in 2001, roughly equal to the growth pace in 2000.

Retail Market

We partitioned the retail universe into two segments based on the gross leaseable areas of individual properties. The "Mall Retail" segment consists of all operating properties reporting a gross leaseable area of more than 400,000 square feet. This division is consistent with the one used by the International Council of Shopping Centers. The "Non-Mall Retail" segment consists of all other retail properties. Measurement of the public market penetration in the retail sector is based on the number of properties.

A database of retail centers maintained by the National Research Bureau (NRB) provides the property counts used to define the investable universe. This database contained 39,136 properties in its most recent release (May 2002), an increase of 2.6% from the 2001 database. Virtually all of the properties reported a gross leaseable area, allowing us to partition the database into separate estimates for the retail mall universe and the non-mall retail universe. In addition, we use fields indicating the property status (used to exclude those properties that are "planned," under construction, or otherwise not operating), and the completion year to provide counts for each year-

Exhibit A-2
Investable Universe—Office

Year-end	Total Stock (billion sq. ft.)	Private Sector Proportion (%)	Tenant-Leased/ Offered (%)	Investable Universe (billion sq. ft.)
1995	10.19	82	89	7.43
1996	10.23	82	89	7.46
1997	10.28	82	89	7.51
1998	10.37	82	89	7.57
1999	10.53	82	89	7.68
2000	10.83	82	89	7.91
2001	11.05	82	89	8.07

Note: The sources are Property and Portfolio Research and Torto Wheaton Research.

Exhibit A-3
Investable Universe—Warehouse

Year	Total Space (million sq. ft.)	Private Share (%)	Warehouse Share (%)	Tenant Occup. (%)	Share > 25,000 sq. ft. (%)	Investable Universe (million sq. ft.)
1995	7,526	84.1	85.9	66.1	87.4	3,141
1996	7,667	84.1	85.9	66.1	87.4	3,200
1997	7,828	84.1	85.9	66.1	87.4	3,267
1998	8,009	84.1	85.9	66.1	87.4	3,342
1999	8,218	84.1	85.9	66.1	87.4	3,430
2000	8,461	84.1	85.9	66.1	87.4	3,531
2001	8,712	84.1	85.9	66.1	87.4	3,636

Note: The sources are Property and Portfolio Research and Torto Wheaton Research.

Exhibit A-4
Investable Universe—Hotel

Year-end	Millions of rooms
1995	3.37
1996	3.46
1997	3.58
1998	3.73
1999	3.88
2000	4.00
2001	4.12

Note: The source is Smith Travel Research.

end. See Exhibit A-5 for the investable universe based on the data in the 2002 NRB database.

Both the mall and non-mall figures are slightly higher for 2000 in this study for the year compared with our prior study, and slightly lower for the prior years. Nevertheless, the current estimates are consistent with the 2002 NRB database.

Appendix B

Reconciliation of Current Estimates with Prior Estimates

With the release of each report, we encounter numerous statistical changes that create variances from figures we have previously reported. The variances are caused by differences between the current and prior data values and key dates that apply to specific properties, data for properties not previously reported and revisions to statistics we use to estimate the investable universe. At the same time, we sometimes refine the methodology in other respects, improving the consistency and

Exhibit A-5
Investable Universe—Retail

Year	Mall Properties	Non-Mall Properties	Total Properties
1995	1,535	34,669	36,204
1996	1,583	35,139	36,722
1997	1,641	35,583	37,224
1998	1,688	35,981	37,669
1999	1,744	36,346	38,090
2000	1,791	36,637	38,428
2001	1,850	36,901	38,751

Note: The source is the National Research Bureau.

precision of the estimates and in some cases modifying the database filtering logic used to prepare the estimates.

This year, we made no material changes to the estimation methodology or to key assumptions used in the preparation of estimates.

Exhibit B-1 summarizes our estimates for the sources and magnitudes of the variances between our year-end 2000 estimates reported in 2001 and our revised year-end 2000 estimates.

There are three major categories of adjustments associated with revised figures: (1) those caused by changes in our methodology, which are not material this year; (2) those arising from data revisions and property additions to and deletions from the SNL property database; and (3) those affected by changes in the estimate for the property type universe.

REIT Data Revisions in the Securities Databases

Each year, numerous revisions in and additions to the SNL Securities database take place. Material data revisions include changes in the size of properties, their joint venture status and key action dates (date purchased and date sold, in particular). We also occasionally make changes to the database of REOC holdings we created to complete our real estate investment company list.

This year the revisions to the warehouse and to the hotel categories were relatively large. A more modest adjustment appears in the apartment estimates.

One large industrial REIT added significantly to the level of property detail it reported, in many cases providing information on individual buildings in multi-building centers. The additional detail raised the tabulation of warehouse space owned at year-end 2000 by over 27 million square feet. This adjustment accounts for about three-fourths of the variance between our penetration estimate for warehouses at year-end 2000 reported in 2001 and our estimate in 2002. Much of the remaining variance arose from a re-categorization of thirty-eight properties held by another REIT. Previously, the properties had been categorized as "General Industrial" or as "Flex/Service Center." This year, these properties have been categorized as warehouses, and are therefore included in the penetration estimate for this category.

The adjustment to the hotel penetration figure arose from partially offsetting corrections to erroneous year 2000 rooms-owned counts for a casino-hotel REOC (which should have been included in the totals but were not) and a large hotel management firm (which should not have been included but were). These errors caused our estimate for REOC penetration of the hotel universe to understate the actual figure by about 0.3% last year.

Virtually all of the apartment variance arose from improved reporting for a single large apartment REIT. We should note that "reporting" in this context refers to the availability of information about properties that appears in the SNL property database. The adjustments included the reporting in

Exhibit B-1
Public Market Penetration Reconciliation—Year-end 2000

	Apartment (%)	Warehouse (%)	Office (%)	Mall Retail (%)	Non-Mall Retail (%)	Hotel (%)
Year-end 2000, Prior Report	8.0	9.5	7.5	34.1	13.2	17.3
Plus: Net from DB Changes	0.5	1.2	−0.1	0.2	−0.2	0.3
Plus: Universe Est. Changes	0.3	0.0	0.0	0.1	−0.2	0.3
Equals: Current Year-end 2000	8.8	10.7	7.4	34.4	12.8	17.9

2002 of over twenty properties purchased by the REIT prior to year-end 2000 that did not appear in the SNL database in 2001, and the reporting of the number of units for two portfolios, which the firm reports on an aggregate basis. In total, the adjustments raised the reported holdings for this REIT by nearly 49,000 units at year-end 2000, raising the REIT apartment penetration by 0.4%.

Size of Universe Adjustments

In 2002, the largest adjustment to the estimated size of the universe involved the apartment sector. This resulted from an improvement in reporting multifamily completions on the part of the U.S. Census. In particular, the Census began reporting completions of units in structures with twenty or more units, which corresponds to the lower limit of our definition for the apartment universe. In the past, the Census reported completions of units in structures with five or more units, which required an adjustment on part to reflect the twenty-unit minimum threshold used in this study. With the improved reporting, we no longer have to make this an adjustment. In re-computing estimates for the size of the universe from the benchmark year (1992), we found that the size of the apartment universe grew more slowly than we had previously estimated. By 2000, the new estimate for the universe stood about 3.3% below the estimate we used in 1999. This had the net effect of increasing our penetration estimate for 2000 by about 0.3%.

Two of our data sources—the National Research Bureau (NRB) database of retail properties, and Smith Travel Research, which provides information on the lodging sector—routinely revise their figures. Each year, we revise penetration estimates for prior years to reflect variances from one year to the next in their estimates for total stock.

In 2002, the estimates for the mall universe declined slightly for all historical years from those we tabulated in 2001. The year 2000 estimate declined by seven properties, a change of about 0.4%. The count for other retail centers for the year 2000 increased by 588 properties.

Historical estimates for the hotel universe also decreased slightly, producing an upward revision in our penetration estimates for the hotel sector of about 0.3 percentage points.

Endnotes

1. The sources are the National Association of Real Estate Investment Trusts (NAREIT) Equity REIT Index and the National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index.
2. Other important buyouts did not involve properties in any of the six categories. For example, a REIT buyout that took place in 2001 but involved no properties we track was the sale of Franchise Finance Company of America (FFA) to GE Capital.
3. At year-end 2001, AIMCO (AIV) and EQR held a comparable number of apartment units. EQR, however, listed a far larger number of properties, 991 properties owned or controlled at year-end 2001 compared with 557 properties. AIV held a minority equity interest in and managed an additional 569 properties.
4. For purposes of this report, all retail centers with a gross leaseable area exceeding 400,000 sq. ft. are included in the mall retail category. All other retail centers are included in the Non-Mall Retail category. See Appendix A.
5. Lodgian filed for Chapter 11 bankruptcy in December, 2001.
6. A 1997 BOMA survey of the national office market found that approximately 11% is owner-occupied. This estimate coincides with the estimate provided to us by Torto Wheaton Research.