

THE REAL ESTATE INVESTMENT TRUST:
PERFORMANCE OVER THE BUSINESS CYCLE

by

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ABSTRACT

The real estate investment trust (REIT) industry is a diverse and changing one. The existing mortgage-equity-hybrid classification scheme is inadequate in assessing the relationship between performance and investment structure. This paper suggested a new classification scheme which accounts for differences in investment ownership structure, product type and management, and applied this new scheme to 18 REITs.

The empirical portion of this paper analyzed the performance of 22 REITs over the 15-year period from 1973 to 1988 and used recessionary periods as a means to analyze performance over the business cycle. The results showed higher returns among equity oriented REITs as compared to mortgage REITs, but also indicated lesser total risk for the equity REITs, as measured by the coefficient of variation. The income portion of the total REIT return was greater than the appreciation component and exhibited substantially less variability.

Results also showed the REIT sample group outperformed the S & P 500 over the long 15-year period. For the shorter subperiods the sample outperformed the market for most periods, except the periods surrounding the 74-75 recession. The sample group exhibited the greatest risk-adjusted return during the upswing portion of the cycle, but varying returns during the downswing. Greater volatility was evident during downswing periods as shown by a beta greater than the market. Measures of diversification ranged from .35 to .94 with the highest measures during and preceding the recessionary period of 1982. The most recent periods had the lowest diversification measures.

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Chapter 1

THE REIT: A UNIQUE AND CHANGING ENTITY

The real estate investment trust (REIT) has been the primary form of securitized real estate over the past 20 years. REITs invest in various forms of real property: equities, mortgages, and real estate related securities. The REIT provides both the individual investor and the large institution a means for real estate investment, similar to a mutual fund.[11] A majority of REITs are publically held and traded on the American or New York Stock Exchanges, or over-the-counter (OTC), usually at prices ranging from \$5 to \$30. (Approximately 80% of the 161 REITs existing at year-end 1987 traded publicly.) The price and public trading allow individuals to invest in real estate without the large financial commitment and illiquidity of most other real estate investments.

REITs differ from the typical publically traded corporation, in that they pay no federal tax on income or gains passed through to shareholders. In order to maintain this beneficial tax status they must comply with stringent Internal Revenue Service requirements. The principal provisions require that a REIT: must have at least 100 shareholders; must have no more than 50% of its shares

owned by 5 or fewer individuals; must be managed by a board of trustees or directors; must distribute 95% of net annual taxable earnings; derive 75% of its annual gross income from real estate activities; and hold at least 75% of its total invested assets in real estate (including fee interests, leaseholds, options, loans secured by real property, and shares in other REITs). By requiring most assets to be held for four years, IRS restrictions prohibit the REIT from actively holding property for sale (such as developing single family homes for sale).

The IRS requirements continue to be a defining force upon the REIT. One of the most critical elements of the requirements is the definition of "income derived from real property." Rents from real property are included within the income definition, however, they may be disallowed from inclusion in the 75%-gross-income requirement if the REIT operates or manages the property itself instead of through an independent contractor. Thus, the REIT must be a passive investor rather than an active participant in the operation of its properties. This is typically accomplished through the use of an advisor who manages the REIT, or an independent management firm for day-to-day property management. Often times, the advisor, or the management, may be affiliated with the entity which formed

the REIT, such as a bank or mortgage company, who then collects fees for their services. The income restriction impacts REIT investments as well as management. For instance, the inability to directly manage and operate property makes it difficult for the REIT to develop property, other than as a joint venture partner managing the property in a limited capacity. The rules generally affect equity investments to a greater degree than mortgage investments where active management is not required for effective performance.

REITs are seemingly a hybrid between stock and real estate. But what type of investment are they really? How do they perform historically, and do all REITs perform alike? What type of return is provided, and what is its stability? How do REITs perform relative to other investments, are they more or less risky? How do the underlying real estate assets affect market returns? Does the market recognize and understand the composition of the real estate assets? How do REITs differ from other stocks? Why would one want to invest in REITs?

In an attempt to better predict performance, REITs are typically divided into several different categories based upon the type of assets in their portfolio.[15] As defined

by the National Association of Real Estate Investment Trusts (NAREIT), the mortgage REIT has at least 75% of its assets in mortgages secured by real estate. The equity REIT holds at least 75% of its assets in the ownership of real estate or other REITs, and the hybrid REIT is a combination of the two. Within these classifications, assets may vary by property type, location, and investment structure. Exhibit 1.1 illustrates the diversity which may occur among individual REITs.

California REIT is a hybrid, with both equity and mortgage investments. Half of its properties are in owned properties and the other half are in loans. Participating second mortgages, which make up 40% of the portfolio, however, have characteristics of ownership and are generally considered riskier than first mortgage investments due to the second position. As a result, the risk profile of California REIT is more similar to an equity REIT. New Plan Realty Trust is an equity REIT, with investments in equities in the form of properties and real estate securities. But, if the securities are interests in mortgage REITs or mortgage backed securities, it is more accurate to classify New Plan as a hybrid REIT. In this case, as of July 1986, approximately 75% of the securities assets were in the form of mortgage loan repos.[5]

EXHIBIT 1.1
A COMPARISON OF TWO REITs

REIT	Investment	% of real estate portfolio*

California REIT (as of 12-31-86):		
	real estate owned	50%
	participating seconds	40%
	subordinated land/purchase leasebacks	10%
Investment in 19 properties (retail, office, residential, industrial) in 3 states		
New Plan Realty Trust (as of 7-31-86):		
	real estate owned	44%
	real estate securities owned	56%
Investment in 31 properties (residential and retail only) in 10 states.		

Note:

* Real estate assets totaling 10% or greater of real estate portfolio.

Source: SEC 10K and Annual Report, Disclosure Inc.

However, an investor would not be able to deduce this without a careful analysis of the annual reports and SEC 10k reports for both REITs.

As illustrated, REITs may have differing forms of both mortgage and equity assets. The different types of investment, and varying degrees of diversification in property type and location all have very different risk implications. For example, a REIT that invests in a diversified portfolio of fixed-rate mortgages, should have substantially less risk than a REIT, that specializes in development joint ventures.

The asset mix within the REIT industry as a whole has changed at several points over the past 20 years. During the mid-1970s mortgage and other financial investments accounted for approximately 80% of industry assets as shown by Table 1.1. By the late 1970s this figure had decreased to the 40% range, and in the past 3 years it has increased again to over 50%. Consequently an investor who purchased a mortgage REIT in the 1970s, and held the shares continuously, may have become an investor in an equity REIT by the late 1970s.

Not only has the nature of REIT assets changed over

TABLE 1.1
REIT FINANCIAL ASSETS, YEAR-END OUTSTANDINGS: 1968, 1973,
1978, 1983, 1987
(Percent Distribution)

Category	1968	1973	1978	1983	1987
Total Assets	100%	100%	100%	100%	100%
Physical Assets*	27%	16%	54%	53%	41%
Multi-family	9%	5%	18%	17%	14%
Non-residential	18%	11%	36%	36%	28%
Financial Assets*	73%	84%	46%	47%	59%
Home mortgages	**	9%	9%	3%	N/A
Commercial mortgages	64%	37%	45%	20%	N/A
Multi-family mortgages	9%	33%	24%	12%	N/A
Miscellaneous Assets	0%	5%	-32%	12%	23%

Notes:

- * Total may differ from printed sum due to rounding.
- ** Sum too small to record separately.

Source:

Flow of Funds Accounts, Financial Assets and Liabilities
Year-end, 1962-1985, 1963-1986 and Fourth Quarter 1987.

time, but so has the REIT's role as a supplier in the real estate capital market. REITs were the primary supplier of mortgage capital during the 1971 - 1975 period, as shown by Table 1.2. This role decreased by 77% during the 1982-1986 period. Equity supplied decreased by 29% between the two periods. It is important to clarify that the entire REIT industry shrunk between the two periods, from \$21.9 billion of total assets in 1974 to \$10.2 billion in 1984.[3] The reasons for this contraction will be discussed in detail in Chapter 2.

The REIT is unique to the securities market: it is a real estate specific stock which must distribute nearly all of its earnings. It is also a unique player in the real estate industry because it is often a hybrid of investment types with potentially differing risks. Individual REITs may vary greatly in asset composition, and this composition may change over time. The diversity of investment structures and risk profiles should lead to variation in the returns among REITs and for the industry as a whole.

The following chapters will analyze the REIT in order to better understand and predict performance. Chapter 2 profiles the REIT industry from a historical perspective, and explains the major changes in the industry over the

TABLE 1.2
SOURCES OF CAPITAL FOR TWO REAL ESTATE BOOMS
(billions)

Type	1971-1975		1982-1986		%change (
MORTGAGES:					
REITs	\$123.4	24.8%	\$29.6	6.0%	(76.0)%
Banks	120.0	24.1	200.4	40.6	67.0
Savings & Loans	90.5	18.2	135.7	27.5	49.9
Life Ins. Co.s	80.9	16.2	79.2	16.1	(2.1)
Savings Banks	41.7	8.4	23.6	4.8	(43.4)
Government	36.2	7.3	21.3	4.3	(41.2)
Pension Funds	5.3	1.1	3.8	0.8	(28.3)
	-----	-----	-----	-----	-----
	498.0	100.0	493.6	100.0	(0.9)
% Total		79.6%		67.1%	
EQUITY:					
Life Ins. Co.s	\$89.3	70.2%	\$125.9	51.9%	41.0%
REITs	35.0	27.5	24.8	10.2	(29.1)
Pension Funds	2.0	1.6	26.3	10.9	1,215.0
Syndicators	1.0	0.8	54.5	22.5	5,350.0
Foreign Inv.	0.0	0.0	11.0	4.5	--
	-----	-----	-----	-----	-----
	127.3	100.0	242.5	100.0	90.5
% Total		20.4%		32.9%	
Totals	\$625.3	100.0%	\$736.1	100.0%	17.7%

Source: John McMahan, The Real Estate Capital Market: Historical Perspectives, Emerging Trends and Future Directions. Real Estate Issues 12 (2), Exhibit XVII.

past 20 years. Chapter 3 explores the existing classification scheme, and its inappropriateness in explaining performance, and presents a new classification scheme. Chapter 4 analyzes the actual performance of a group of 22 REITs over the 15-year period from 1973 to 1988, utilizing recessionary periods as a means to analyze performance over the business cycle.

Chapter 2

A PROFILE OF THE REIT INDUSTRY

A Checkered Past

REITs have existed since the 19th century as Massachusetts business trusts. Their numbers decreased following a 1935 federal court ruling that caused business trusts to be taxed as corporations. This trend was reversed by the Real Estate Investment Trust Act passed by Congress in 1960. This act exempted business trusts from corporate taxation provided they comply with REIT requirements.[15] The REITs of the early 1960s primarily invested directly in real estate assets versus investment in real estate mortgages. The industry grew quite slowly at first, with total industry assets of \$1 billion by late 1968, as illustrated by Table 2.1.

Reversing this steady, slow trend, industry assets grew dramatically to nearly \$14 billion by 1972 and peaked at \$22 billion in 1974. The number of REITs increased from 113 in 1971 to over 220 in 1975.[9] The phenomenal growth was initially spurred by the entrance of the major financial institutions into the market in 1969, but was primarily due to a tight monetary policy which resulted in

TABLE 2.1
STATEMENTS OF REIT FINANCIAL ASSETS AND LIABILITIES, YEAR END OUTSTANDINGS 1968-1986
(\$ billions)

Category	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Physical Assets*	0.4	0.7	0.9	1.4	2.5	3.2	4.3	7.3	8.9	8.6	4.0	3.9	3.8	3.9	4.2	4.1	4.8	6.2	7.6
Multi-family	0.1	0.2	0.3	0.4	0.8	1.1	1.4	2.4	3.0	2.8	1.3	1.3	1.2	1.3	1.4	1.3	1.6	2.1	2.5
Non-residential	0.2	0.5	0.6	0.9	1.7	2.2	2.9	4.9	6.0	5.7	2.7	2.6	2.5	2.6	2.8	2.7	3.2	4.2	5.1
Total Financial Assets*	0.8	2.0	3.9	6.4	11.4	17.0	17.5	14.0	9.8	7.2	3.5	3.5	3.3	3.2	3.5	3.5	5.6	8.1	8.5
Home mortgages	**	0.2	0.6	0.8	1.2	1.9	1.7	1.4	1.1	0.9	0.7	0.5	0.4	0.3	0.3	0.2	0.2	0.3	0.3
Commercial mortgages	0.7	1.3	2.0	3.2	5.0	7.5	7.7	7.0	5.2	3.8	3.3	2.8	2.4	1.6	1.5	1.5	1.9	3.8	3.9
Multi-family mortgages	0.1	0.5	1.3	2.2	4.2	6.6	6.8	4.8	3.1	2.2	1.8	1.6	1.3	0.8	0.8	0.9	1.3	1.8	1.8
Miscellaneous assets	0.0	0.0	0.0	0.2	1.0	1.0	1.4	0.8	0.5	0.3	(2.4)	(1.4)	(0.9)	0.6	0.9	0.9	2.0	2.2	2.6
Total liabilities	0.8	1.5	2.2	4.1	8.8	14.4	16.6	17.8	16.0	13.0	4.9	4.6	4.1	4.0	4.1	3.8	4.8	6.1	6.8
Credit Market Instruments	0.8	1.5	2.2	4.1	8.8	14.4	15.8	15.7	13.8	11.3	4.6	4.4	3.9	3.7	3.7	3.5	4.3	5.6	***
Mortgages	0.2	0.4	0.5	0.7	1.2	1.5	1.6	2.0	2.4	2.4	2.0	2.0	1.9	1.9	2.0	2.1	2.5	2.7	2.7
Multi-family	0.1	0.1	0.2	0.2	0.4	0.5	0.5	0.7	0.8	0.8	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.9	0.9
Commercial	0.1	0.3	0.4	0.5	0.8	1.0	1.1	1.4	1.6	1.6	1.3	1.3	1.3	1.3	1.4	1.4	1.7	1.8	1.8
Corporate bonds	0.1	0.6	1.0	1.4	1.9	**	2.1	2.1	1.9	1.8	1.6	1.6	1.4	0.7	0.7	0.7	0.8	1.5	1.8
Bank loans n.e.c.	0.6	1.0	1.0	1.6	3.0	7.0	11.4	10.8	8.9	6.5	0.3	0.1	**	0.5	0.6	0.4	0.5	0.7	***
Open-market paper	0.0	0.0	0.0	0.8	3.2	4.0	0.7	0.8	0.6	0.5	0.6	0.8	0.5	0.6	0.4	0.4	0.6	0.7	1.1
Miscellaneous liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.1	2.3	1.8	0.3	0.1	0.2	0.4	0.4	0.3	0.5	0.5	0.2

Notes:

* Total may differ marginally from printed sum due to rounding.

** Sum too small to record separately.

*** In 1986 the format changed to add a category titled corporate equities, and these figures were not expressed in the same manner.

Source: Flow of Funds Accounts, Financial Assets and Liabilities Year-end, 1962-85, 1963-1986, and Fourth Quarter 1987.

high interest rates and limited funds for new real estate construction and development.[9]. Because REITs could raise funds directly in credit markets, they could more easily obtain funds than other mortgage lenders who relied on savings deposits. Presented with a potentially profitable opportunity, they moved into the mortgage market with amazing speed. In fact, REITs were the single largest contributor of mortgage capital during the 1971-1974 real estate boom, supplying nearly 25% of the \$498 billion total.[10]. Table 1.1 showed the increase in mortgage investments by REITs which peaked at over 80% of the total outstanding industry assets in 1973, before declining to the 50% range during late 1970s.

REITs raise capital for new investment through both equity and debt. Equity capital is raised through initial and secondary offerings of securities. Sources of debt include corporate bonds, commercial paper, bank borrowings and mortgage money on a project-specific basis. The 1970s lending boom was financed almost completely through commercial paper and short-term bank borrowings. From 1968 to 1973 these combined borrowings increased from \$.6 billion to \$11 billion, as shown in Table 2.1. Total liabilities grew from \$.8 billion to \$14.4 billion during this period. The heavy borrowing raised the industry

debt-to-equity ratio from 1:1 in 1968 to almost 4:1 in 1973.[15] At this point the REITs were essentially engaging in yield arbitrage, borrowing on the very short-term, and lending long.

Beginning in 1973, real estate development experienced a dramatic downturn brought on by a combination of forces: recession, overbuilt real estate markets, and rising interest rates.[15] Rising interest rates resulted in a negative spread between short-term borrowed funds and outstanding loans. Borrowers were unable to sell and/or rent product, they missed payments and eventually, defaulted on numerous loans. Through foreclosure, REITs were acquiring and holding property from which they had expected repayment of funds through take-out loans. With short-term debt costs rising and a lack of funds to pay off commercial paper and short-term bank notes, many REITs faced negative margins and finally bankruptcy.[8] Stock prices decreased severely for all types of REITs. The NAREIT share price index which stood at 103.5 in 1972 dropped 33% in one year, and another 49% the next year; by 1974 it was one-third of its former high. (See Table 2.2.)

The mortgage REITs, particularly those investing in construction and development, loans were the hardest hit by

TABLE 2.2
NAREIT SHARE PRICE INDEX 1972-1985 (1972=100)

Date	Type of REIT				
	All	% change	Equity	Mortgage	Hybrid
1972	103.51	--	102.46	99.94	107.19
1973	69.24	-33%	80.15	57.92	76.05
1974	34.93	-50%	56.64	26.66	32.11
1975	42.68	22%	61.37	33.19	43.18
1976	58.25	36%	83.47	45.94	58.52
1977	64.14	10%	95.14	49.56	63.45
1978	58.08	-9%	97.61	40.72	53.97
1979	69.32	19%	122.23	42.46	66.15
1980	76.99	11%	124.61	43.85	85.61
1981	76.25	-1%	122.25	41.42	88.01
1982	90.75	19%	136.31	54.37	103.72
1983	104.29	15%	164.62	57.36	124.45
1984	107.9	3%	179.45	54.77	134.56
1985	103.88	-4%	195.68	46.31	128.55
1986	113.47	9%	215.94	49.86	140.00
1987	95.79	-16%	205.86	37.79	106.96

Source: 1986 REIT Fact Book, National Association of Real Estate Investment Trusts.

the fallout. The mortgage REIT share-price index fell 73% over the two-year period whereas the equity REIT index fell only 45%. The mortgage REITs initially recovered more quickly than the equity REITs, gaining 72% over the 1974-76 period, however, they have never reached their pre-fallout index high of 99.94. Their post-fallout high was achieved in 1983 at an index price of only 57.36. Although the equity REITs only gained 47% over the 1974-76 period, the share price index continued to grow and reached nearly 216.00 in 1986 as compared to the pre-fallout high of 102.46.

Dividends fell also. Only 63 of over 125 qualified REITs were able to sustain dividend payments through the 1970s fallout.[15]

Having lost the confidence of investors, the REIT industry set about the task of restructuring during the 1976-1983 period. Over these years, total industry assets first decreased and then remained within the \$7 billion range from 1978 through 1983. (See Table 2.1.) Returns increased and remained strong from 1979 to 1985, except for 1981, 1985 and 1987 as shown in Table 2.3.

Table 2.3 also presents the returns for various types

TABLE 2.3
TOTAL RETURNS* FOR THE REIT INDUSTRY 1977 - 1985

Year	All	Type		
		Equity	Mortgage	Hybrid
1977	18.13%	22.04%	17.67%	15.28%
1978	-0.96%	11.24%	-8.65%	-6.87%
1979	30.05%	35.38%	16.74%	32.98%
1980	24.43%	17.16%	13.74%	39.33%
1981	8.80%	7.49%	6.51%	11.64%
1982	26.58%	17.04%	42.38%	27.60%
1983	25.32%	31.88%	15.24%	30.38%
1984	13.10%	16.25%	8.45%	15.28%
1985	5.33%	18.36%	-8.71%	5.95%
1986	18.78%	18.51%	18.02%	21.52%
1987	-10.68%	-3.51%	-15.81%	-17.01%

Note:

* Price appreciation, plus actual dividends paid during the year for companies which have been included in the NAREIT share price index for the entire year.

Source: 1986 REIT Fact Book, National Association of Real Estate Investment Trusts.

of REITs. Historically, the equity REIT has outperformed the mortgage REIT during most periods.

As share prices and returns stabilized, investor confidence returned. Investor interest, combined with the real estate industry's demand for both debt and equity capital made new offerings again feasible. In 1985, 29 new offerings came to the market for a total of \$2,792 million in new funds, an increase over the vigor of the 1970s. (See Table 2.4.) Combined with 30 secondary offerings, industry assets grew to nearly \$15 billion by 1985.[3]

Both new and secondary offerings decreased during 1986 and 1987 for several reasons. Firstly, the overbuilt condition of most real estate markets increased the risks of investment in those markets. Secondly, the participating mortgage REIT, the investment strategy of a number of REITs formed in 1985, promised to provide returns of 11-12%. But, as interest rates declined, potential borrowers found non-participating loans from other sources at comparable rates. This, and the competition among numerous participating REITs for investor money made the required return no longer achievable. The experience of Mortgage Investments Plus, a participating mortgage REIT formed by Weyerhaeuser Mortgage Company in 1985 is a good

TABLE 2.4
PUBLIC OFFERINGS OF SECURITIES BY REITs 1968 - 1986
(\$millions)

Year	Initial Offerings		Secondary Offerings	
	Number	Total \$	Number	Total \$
1968	4	\$67.6	10	\$54.8
1969	33	976.7	25	280.0
1970	41	1,358.4	31	329.0
1971	32	1,183.4	46	803.9
1972	29	563.2	38	660.1
1973	18	156.8	50	695.3
1974	5	1.5	12	22.2
1975	1	0.0	4	0.4
1976	0	0.0	8	19.7
1977	0	0.0	8	91.9
1978	3	8.4	9	83.1
1979	4	0.0	14	110.5
1980	4	30.0	16	234.0
1981	5	100.0	17	144.7
1982	3	315.0	9	138.6
1983	4	159.0	19	582.3
1984	9	378.0	25	2,351.1
1985	29	2,791.9	30	1,478.7
1986	12	612.0	14	604.3
1987	5	483.4	10	511.5

Sources: 1986 REIT Fact Book, National Association of Real Estate Investment Trusts.; Audit's Realty Stock Review, Vol.XIX, No. 1.

example of this. Unable to fund enough mortgage investments which would guarantee a going in yield of 10%, the REIT turned to joint ventures as a means to invest the initial capital.

Uncertainty regarding potential impacts of the Tax Reform Act of 1986 was a third factor inhibiting new offerings as potential sponsors adopted a wait-and-see attitude.[3] TRA '86 actually eased requirements on REITs in several ways. It expanded the services that the REIT can perform directly, rather than through an independent contractor; liberalized the definition of qualified income; and eased the safe-harbor rules allowing REITs a longer time frame to invest initial or new assets in qualified investments.[6] If TRA '86 had not relaxed requirements, it is likely that the REIT industry would have seen even less expansion in 1986 and 1987.

REITs Today: A Trend Toward Specialization

The REITs of the 1980s hold a greater variety of assets than in the early 1970s. Learning from their former mistakes, fewer REITs invest in C & D loans. Instead, the industry's mortgage investments show greater diversity and include mortgage-backed securities, mortgage pools, second

mortgages with some form of equity enhancement, as well as fixed-rate mortgages. Countrywide Mortgage Investments II formed in 1985, is an example of a new, specialized REIT, which invests only in mortgage pools of single-family residential properties.[15] Some of the mortgage-pool REITs are among the largest in the industry with respect to total assets. Countrywide Mortgage Investments, Inc., for example, had over \$1.1 billion in invested assets as of year-end 1986. Other recently formed REITs have also adopted strategies to hold specialized portfolios and concentrate on specific property types, locations or industry segments. Beverly Investment Properties, Inc., Health Care Property Investors and Meditrust, for example, all formed since 1984, invest in purchase/leasebacks of health care facilities.[15]

A second new trend is illustrated by the finite-life REITs (FREITs). The finite-life structure has become increasingly popular, with half of the existing 34 FREITs formed since 1984.[8] FREITs are designed to solve the problem of discounting, whereby shares in the REIT sell below actual asset value due to investor's difficulty in accurately valuing the stock. This issue is especially common in real estate related stocks where book value on owned property may be substantially less than actual asset

value. However, FREITs may create a new industry problem if properties that are designated to be sold, sell in a down market decreasing potential returns.

The 1980s have also been a time when REITs moved towards value creation, by following investment strategy that sought assets for renovation, retenanting and new development. Copley Properties, Inc. advised by Copley Real Estate Advisors, a spin-off of New England Life, is an example of a developmental REIT. Copley acts as the "money partner" in joint venture developments with established developers. Sometimes Copley will go further and fund a construction loan as well as contributing equity, but in most transactions it contributes only the equity portion.

[7]

The specified or partially specified trust has become more popular with all types of REITs, as an alternative to the blind trust. In theory, this structure allows the potential investor a better view of potential returns, thereby increasing the marketability of the initial offering. However, specified offerings require a lengthy process of legal and analytical work, leading to a more costly offering. Also, REITs are faced with increasing competition for quality product primarily from pension

funds and foreign investors, and as a result, sponsors have had an increasingly difficult time purchasing sufficient product at the outset to have a fully-specified REIT.

The REIT product has become more diverse because sponsors have become more creative, and utilized public REIT offerings to serve their specific needs. Lincoln Property Company, one of the largest developers of income-producing property in the United States has ongoing annual capital needs of between \$1.5 to \$2 billion. By directly accessing the capital markets, in 1985, Lincoln raised approximately \$30 million in equity through a fully-specified, infinite life, participating mortgage REIT.[11] This REIT provided loans for three of Lincoln's projects, at a lesser cost than other financing alternatives.

The REIT industry today is a melting pot of many different investment types. Some of these, such as the equity REIT which invests in a single property type, have existed since the 1960s. Others such as the Lincoln offering are a new market product. As of December 1987, there were 161 tax qualified REITs with total assets of \$34 billion.[6] An industry balance sheet with a breakdown of investment types is shown in Table 2.5. As of year-end

TABLE 2.5
REIT INDUSTRY BALANCE SHEET, YEAR END, 1987*
(\$billions)

Category	\$Amount
ASSETS:	
Mortgages	
Construction & Development	\$1.5
First on Completed Properties	4.4
Second & Wraparound	1.0
Mortgage Pools	14.5
Equity Investments	
Property Owned	9.1
Other	1.1
Total Real Estate Investments	\$31.6
Cash & Other Assets	2.5
Loss Reserves	(0.1)
Total Assets	\$34.0
LIABILITIES:	
Mortgages	3.0
GNMA-Backed Bonds	13.4
Commercial Paper	1.0
Bank Debt	1.2
Non-Convertible Debt	1.4
Convertible Debt	1.5
Other Liabilities	1.2
Total Liabilities	\$22.7
Shareholders' Equity	11.3
	\$34.0

Note:

* Does not reflect some funds raised during the fourth quarter of 1987.

Source: Alex Browns & Sons, Inc., Real Estate Stocks Monitor, Second Quarter 1988.

1987, the industry was approximatedly 67% leveraged as compared to nearly 85% leveraged in 1975. It is important to note that 59% of the \$22.7 billion in liabilities is in GNMA-backed bonds, whose underlying mortgage payments which are government guaranteed and FHA-insured, and a safer form of debt than the industry took on in the 1970s. Thus, the industry appears to have taken a more conservative posture than in the 1970s.

Chapter 3
CLASSIFICATION

Mortgage, Equity, Hybrid or Something Else?

Real estate assets vary greatly within classifications and among individual REITs, as was illustrated by California REIT and New Plan Realty Trust in Chapter 1. It is this diversity and variety that makes it difficult to understand performance, particularly for the investor who has little or no real estate knowledge.

In an attempt to understand performance, investors and NAREIT have historically classified REITs as either equity, mortgage or hybrid. A majority of literature on REIT performance has also utilized these classifications, in particular with reference to equity REITs. Most authors state that they are using the NAREIT definition, but some do not define the classifications. Kuhle and Walther redefined the categories to require only 67% of any one asset to qualify for mortgage or equity.[12] Smith and Shulman simply required a majority of the assets in any one category.[19] Their sample of 16 equity included REITs

which were on average 17.5% invested in mortgages, with six over 20%, and one, 49.1%.

In spite of its wide spread use, the existing equity-mortgage-hybrid classification may not reflect the composition of a REIT's portfolio and may be a poor indicator of the return and risk of an individual REIT. This classification system does not reflect the type of real estate product nor the form of legal investment ownership structure and the risks associated with each. As one moves through the development cycle from land acquisition, to building construction, to lease-up, to the operation of a fully occupied building the risks vary greatly with the differing stages of the development-investment cycle. Similarly, a fixed-rate first mortgage, a participating second and a wraparound mortgage, while all forms of debt, have very different risk implications associated with the credit priorities attached to the investment's legal structure. These distinctions are important to understanding the variability in expected returns.

The participating mortgage with an equity kicker illustrates the deficiency in the existing scheme. Although considered debt, the participation element may

exhibit characteristics of an equity investment, especially if the kicker represents a larger portion of the expected loan yield. Additionally, the mortgage could be either unsubordinated or subordinated with the unsubordinated version having a greater risk.

There have been efforts at a more detailed classification scheme. In 1970, Schulkin used a matrix scheme and classified REITs by both type and advisor.[17] Type classifications were construction and development (loans), long-term investment (equity or long-term mortgage) and miscellaneous. Miscellaneous was further broken down into mixed maturity (construction and development and long term), and homeowners installment. Advisors were classified as commercial bank, life insurance company, mortgage banker and other. This matrix approach was more comprehensive but still failed to thoroughly address either the product type or investment structure.

Audit's Realty Stock Review, an investor guide for real estate stocks and REITs, classifies REITs into five groups: property, leaseback, property and mortgage combination, mortgage, and participating mortgage.[1] The classification is based upon the REIT's announced investment strategy as well as the actual real estate

assets, though Audit's has no hard rules for classification and primarily uses judgement.[2] While this scheme addresses the participating mortgage and leaseback types of assets, it fails to address differing product types and investment structure. For example, property REITs could include investments in existing properties, new construction, or land. In turn, investment in new construction could be as different as a limited partnership interest, or 100% fee ownership. Although the existing schemes are not adequate in explaining investment structure and its corresponding risks, they are easily applied.

Factors Impacting REIT Performance

A new classification scheme should hopefully serve to better explain REIT performance, while more completely defining investment risk. Several factors, individually and in combination, can affect REIT performance. These include: investment ownership structure, product type, diversification, leverage, and management.

Investment ownership structure is the legal structure utilized in an investment and its financial interest -- a 100% fee ownership versus a limited partnership interest. The investment structure is first characterized as debt or

equity then defined in detail as follows:

	Unsubordinated	Subordinated
DEBT	fixed-rate variable rate equity-enhanced	second mortgage wrap equity enhanced- second
EQUITY	limited partner general partner real estate securities land purchase/leaseback leasehold 100% fee interest	land purchase/ leaseback

With respect to the above categories, risk is perceived to increase as an investment moves from debt to equity. The passive, fixed-rate unsubordinated loan is analogous to a bond; it generates regular and predictable payments with no management required by the holder. The equity-enhanced mortgage has convertible characteristics and is analogous to a convertible bond. Risk is greater than for a regular bond or mortgage because knowledgeable decision-making is required regarding the decision to convert. Moving along the risk spectrum, subordinated debt is accepted as riskier than unsubordinated because the second position carries a greater chance of loan default.

The land purchase/leaseback, while usually subordinated has the bond-like feature of a long-term fixed payment. It is riskier than debt as there is actual ownership, and management decision-making is required regarding the decision and the price at which to purchase or sell the land. Limited partnership interests and real estate securities limit the risk of 100% ownership. However, securities are potentially unique as they may consist of several of the above types of investments if they are shares in other REITs. At the far end of the risk spectrum is 100% fee ownership, and a general partnership interest in a joint venture or limited partnership. In both of these types of ownership, ongoing decision-making is required in order to effectively manage the asset, and the property is exposed to substantial market risk. (Market risk would be the greatest with short-term leases.)

Product type is first defined in the context of the real estate development process as follows:

PRODUCT TYPE

existing property
existing property - value enhancement
property development
land development
land speculation

Risk increases as one moves down the list, from

existing properties to land development and land speculation. Product type may be further defined by use.

USE

residential
office
industrial
retail

healthcare
hotel/motel
other

Special Purpose properties such as healthcare, and hotel/motel typically experience the greatest risk -- the improvements are constructed for a particular use and tenant and could not be readily released to a different type of tenant. Plus, they are better characterized as business operations than real estate investments. Among the other use types risk is generally dictated by market conditions and varies with location.

Diversification is accepted has having an effect on real estate performance. Diversification allows risk to be distributed, potentially leading to less variation in total portfolio returns. Within the real estate industry there are two potential forms of diversification - product and geographic. Within the REIT context there is also the potential for diversification within investment structure. The rewards from diversification must be weighed against the costs. These costs may include new personnel, new

offices in other geographic areas, or decreased productivity from existing personnel working in an unfamiliar area.

Poor or inexperienced management could have a negative impact on performance whereas knowledgeable management could enhance performance. REIT management generally takes one of three forms: affiliate or non-affiliate advisor or self-administered. The affiliate advisor is a related entity which generally advises the trustees on REIT strategy and oversees day-to-day management as needed. The non-affiliate plays a similar role as the affiliate advisor but is an unrelated entity. Self-administered REITs guide investment strategy (asset management) and may contract for some services, but must utilize an independent contractor to manage and operate properties in order to meet passivity rules. The independent contractor must be limited in its relationship to the REIT. Specifically it may not own directly or indirectly more than 35% of the shares of the REIT. But, the independent contractor could be owned by the sponsor or affiliate advisor, if it still met this rule. Prior to TRA '86 few REITs were self-administered for fear they may not be able to meet the passivity requirements, but with the requirements relaxed, a number of REITs have become self-administered in order

to exercise additional control over REIT management.

The final perceived influence on performance is leverage. Both higher potential returns and increased risk are generally associated with the use of leverage. The impact, of course, depends upon the cost and level of borrowing. Leverage may include project-specific financing as well as REIT financing. REITs may also exhibit off-balance sheet financing, which is often difficult to ascertain. Off balance-sheet financing most often occurs in the land purchase/leaseback asset when the leasehold interest is subordinate to the first-trust deed.

Alternatives for a New Classification Scheme

A new classification scheme would ideally take into account all of the potential factors affecting performance. However, for a new scheme to be useable it should be easily understood by the REIT investment community. Additionally the information needed to complete the scheme must be available. Ideally this information would be a detailed breakdown of assets by type. However, as there is no standardized reporting within the real estate industry, balance sheets are not uniform, and, often they are too aggregate in form. SEC 10K reports, while not always in a

comprehensive form generally supply sufficient data on investments to recast the assets of most REITs.

The first way one might reclassify REITs is to evaluate their investments as passive or active. By law REITs must invest "passively" in real estate. TRA '86 relaxed these guidelines so that REITs may be self-administered and still qualify for REIT status. Thus the new laws allow the REIT, if it desires, to play a much more active management role. The question arises as to whether the REIT personnel are qualified to take on this role, versus an experienced advisor. In any event, the risk profile, and the margin for error increases as the activity level increases. Like bonds, long-term mortgages and long-term net leases are truly passive as the management cannot affect on the performance of the asset over the loan or lease term. Moderately passive investments may include participating or convertible mortgages, and purchase leasebacks. In all these investments some decision-making is required, but it is usually a one-time decision such as exercising an option to convert, or pricing a purchase/leaseback. A third level would be active investment in which daily decisions are required regarding the investment asset. An example of an active investment would be a developmental REIT such as Copley Properties. Thus, under this scheme the REIT is

classified as either passive, moderately passive or active. Investments would be placed into categories as shown below.

PASSIVE -----	MODERATELY PASSIVE -----	ACTIVE -----
straight- mortgage long-term- net lease	participating mortgages convertible mortgages purchase leasebacks limited partner real estate securities	fee interests general partner

A majority of REITs hold more than one type of investment, consequently a single REIT may fall into more than one category. Thus, there could be hybrids of the various categories such as a passive-moderately active REIT and an overall hybrid that combined the three categories. As with the mortgage-equity-hybrid classification, percentage cut-offs must be utilized. For example, if 75% is selected -- a passive REIT must have at least 75% of its net asset value invested in passive investments.

While the passive-active scheme is more comprehensive than the mortgage-equity-hybrid scheme in accounting for investment structure, it does not take into account product type, use, diversification or leverage. Management is taken into account, as a more sophisticated management team is required as the investment becomes more active.

The second classification method uses a matrix format which includes both investment structure and product type. Risk increases as one moves along each axis. Some investment structure types are grouped together for simplicity where the perceived risk is considered similar. Each box within the matrix is numbered and REITs are classified according to percentage of real estate assets within each category. This matrix is shown as Exhibit 3.1 on the following page.

The matrix classification scheme accounts for investment structure and product type. Management is included implicitly, as a more sophisticated management team is required as a REIT moves up the risk spectrum. Use type, leverage and diversification are not included within the matrix, however, a sample could be split, say by use to further define the performance. There should also be some type of qualification for categorization. The 75% figure is selected again.

The risk spectrum matrix is judged to be the best alternative classification because it allows for a more comprehensive approach than the passive-active alternative. Eighteen REITs are classified by the risk spectrum matrix

EXHIBIT 3.1
RISK SPECTRUM MATRIX

INVESTMENT STRUCTURE

RISK SPECTRUM	INVESTMENT STRUCTURE					
	DEBT			EQUITY		
	unsubordinated	subordinated	subordinated	unsubordinated	unsubordinated	
REAL ESTATE PRODUCT TYPE	straight debt	w/equity enhancement	second or wrap	land purchase/ leaseback	limit. partner	general partner wholly owned
existing property	1	2	3	4	5	6
existing property-value enhancement	7	8	9	10	11	12
property development	13	14	15	16	17	18
land development-speculation	19	20	21	22	23	24

in Table 3.1. These REITs have been in existence at least since 1973, and some will be used for further performance analysis in Chapter 4. The REITs are classified as of either year-end 1986 or 1987. As most REITs did not have 75% of assets in any one category, the percentage breakdown by category is shown for those investments which amounted to more than 10% of total real estate investments. A separate category was created for real estate securities, number 25. This was done as the real estate securities group may not necessarily perform as an equity, when the underlying assets consist of mortgage-type REITs.

As shown by Table 3.1, 11 of the 25 different categories are represented by the sample REIT assets. Most prevalent is the wholly owned equity in which 11 of the 18 REITs are invested. Eight out of the 18 own second or wrap investments. Only five of the REITs have more than 75% of their assets in any single category. In order to compare this classification to the mortgage-equity-hybrid the sample was also classified according to the standard system. There are 8 hybrid, 6 equity and 4 mortgage REITs. As illustrated, the standard system is too simplistic to represent the true diversity in assets.

Fourteen of the 18 REITs classified in Table 3.1 are

TABLE 3.1
A CLASSIFICATION OF 18 REITS UNDER THE RISK SPECTRUM MATRIX**

REIT	Standard	PERCENTAGE OF REAL ESTATE ASSETS WITHIN EACH CLASS**									
		Real Estate Product Types									
Class	1	2	3	4	6	12	13	19	21	24	25
	Existing Property					Value Project Enhance		Land Development & Speculation		Real Estate Securities	
Banhamerica Realty Investors (86)	hybrid	231	552	132	602						
BRI Realty Trust (86)	mortgage	451	552	132	602						
California REIT (86)	hybrid		402	102	502						
Genwill Investors, Inc. (86)	mortgage		282					252	212	132	
Eastgroup Properties (87)	equity		102	352	202					202	
Federal Realty Invest. Trust (86)	equity			272		1602					
First Union RE Equity & Mort. (87)	hybrid				722						
Hotel Investors (87)	hybrid	242			642						
IRT Property Co. (87)	equity				842						
Loans & Mettleton Mort. Inv. (87)	mortgage						592	252			
Mortgage Growth Investors (86)	hybrid		222		722						
New Plan Realty Trust (86)	equity				442						562
Pennsylvania REIT (87)	equity				912						
Property Capital Trust (86)	hybrid	282	332	392							
Realty Refund Trust (87)	mortgage			842							
Washington REIT (87)	equity					1602					
Wells Fargo Mort. & Eq. Trust (86)	hybrid	172			252			402			
Western Investment RE Trust (86)	hybrid	122	112		692						
No. of REITs with assets in class		5	2	8	4	11	2	3	2	1	1
Maximum percentage in class		45%	23%	84%	39%	91%	100%	59%	25%	13%	20%

Notes:

- * Classification is of year-end on date in (). Only classes with assets are shown.
- ** Percent of real estate assets. Only percentages of at least 10% are shown.
- *** 1, 13, & 19 = straight debt; 2 = debt w/equity enhancement; 3 & 71 = subordinated second or wrap; 4 = subordinated land purchase/leaseback; 6 & 24 = general partner or wholly owned.
- **** New Plan completed a \$50 million debt offering in late 1985, and unable to find suitable purchases, as of 1986, still had a portion invested on a short-term basis in mortgage loan repos.

Source: SEC 10K and Annual Report, Disclosure Inc.

subjectively ranked according to risk and presented in Table 3.2. The ranking is based upon the percentage of assets in each category, and will be used in Chapter 4 to assess the relationship between ranking and performance.

All of the REITs were classified according to their asset composition within the past 2 years. But since they have been in existence for at least 15 years, portfolios may have changed over time. Exhibits 3.2 and 3.3 classify 4 REITs as of 1973, 1980, and 1987. All four REITs have maintained a fairly consistent investment strategy over the past 15 years. Lomas & Nettleton no longer invests in healthcare related properties, but has the same type of investment structure over the entire period. Property Capital Trust has recently lessened its investment in land purchase/leasebacks, and is again investing in mortgages in straight debt, but has always been a hybrid with three investment structures and diversified property types. IRT Property Company increased its investment in wraparound mortgages in the late 1970s, but has always been predominately equity oriented. First Union has maintained basically the same investment structure over the entire period, but has shifted its predominant property type from office to shopping center. All have maintained a fairly consistent investment strategy over the past 15 years.

TABLE 3.2
SUBJECTIVE RISK RANKING - RISKIEST TO LEAST RISKIEST

Number	Name & Date of Classification
1	Eastgroup Properties (87)
2	Federal Realty Invest. Trust (86)
3	Washington REIT (87)
4	Cenvill Investors, Inc. (86)
5	New Plan Realty Trust (86)
6	Pennsylvania REIT (87)
7	IRT Property Co. (87)
8	First Union RE Equity & Mort. (87)
9	Hotel Investors (87)
10	Property Capital Trust (86)
11	Bankamerica Realty Investors (86)
12	Wells Fargo Mort. & Eq. Trust (86)
13	Realty Refund Trust (87)
14	Lomas & Nettleton Mort. Inv. (87)

EXHIBIT 3.2
CHANGE OVER TIME IN ASSET MIX AND TOTAL ASSETS

Date	Classification new - %	old	Total Assets (\$,000s)	Property Types*
LOMAS & NETTLETON MORTGAGE INVESTORS				
6-30-87:	13 - 59%	mortgage	\$944,103	1
	19 - 25%			2
				4
6-30-80:	13 - 69%	mortgage	\$327,808	1
	19 - 18%			2
				4
				6
6-30-73:	13 - 64%	mortgage	\$350,149	1
	19 - 23%			2
				4
				6
PROPERTY CAPITAL TRUST				
7-31-86:	4 - 39%	hybrid	\$183,972	1
	3 - 33%			2
	1 - 28%			4
				5
7-31-80:	4 - 71%	hybrid	\$53,133	1
	3 - 23%			2
				4
				5
7-31-83:	4 - 64%	hybrid	\$73,357	1
	1,3 - 33%			2
				4
				5

Note:

* 1 = office, 2 = retail, 3 = industrial, 4 = residential
5 = hotel, 6 = health, 7 = other

Source: SEC 10K and Annual Report, Disclosure Inc.

EXHIBIT 3.3
CHANGE OVER TIME IN ASSET MIX AND TOTAL ASSETS (continued)

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Date	Classification new - %	old	Total Assets (\$,000s)	Property Types*
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IRT PROPERTY COMPANY**

12-31-87:	6 - 84%	equity	\$190,786	75% -2 3 4
12-31-80:	6 - 56%	hybrid	\$61,931	2 3 4
	3 - 24%			
11-30-73:	6 - 76%	equity	\$61,264	N/A
	1 - 18%			

FIRST UNION REAL ESTATE MORTGAGE & EQUITY

12-31-87:	6 - 73%	hybrid	\$441,222	70% -2 1 5
	3 - 27%			
12-31-80:	6 - 97%	equity	\$289,181	1 2
	3 - 24%			
7-31-73:	6 - 86%	equity	\$146,101	70% - 1 2 5 4
	3 - 9%			

Notes:

* 1 = office, 2 = retail, 3 = industrial, 4 = residential, 5 = hotel, 6 = health, 7 = other

** IRT Property Company was formed in 1979 from the merger of Investors Realty Trust and Summit Properties.

Source: SEC 10K and Annual Report, Disclosure Inc.

Although investment strategy has remained fairly consistent it is important to note that for two out of the four REITs the standard classification type would have changed from equity to hybrid at one point.(Exhibit 3.3) However, the new classification accurately represents the true portfolio composition at any point in time.

Chapter 4

THE PERFORMANCE OF REITS OVER THE BUSINESS CYCLE

This chapter analyzes the returns of 22 REITs over a 15-year period beginning in the the third quarter of 1973 through the first quarter of 1988. The analysis looks at individual and portfolio REIT returns relative to each other and to a market basket of stocks, namely Standard & Poors Composite Index (S & P 500). One would expect to see substantial variation in REIT returns among the sample due to the diversity in asset mix. On another level, REIT performance is compared to the market over the business cycle.

Data Base

This study covers 22 REITs listed on the New York or American Stock Exchanges or over-the-counter. Initially REITs were selected upon the qualifications that: they had survived 1, or 2, recessions (74-75, 81-82), and are still qualified for REIT status today. Forty-nine REITs were identified that met these criteria. Of the 49, 46 had survived 2 and only 3 had survived 1 recession. The few

one-recession survivors is explainable by the fact that few REITs were formed from 1976 to 1983, a period during which industry assets did not grow at all. At this point price and dividend histories were collected from Tradeline[20], an online financial information source. Returns were unavailable or incomplete for 27 out of the original sample set of 49 REITs. There are several different explanations for this. A number of REITs (8) could not be found, most likely because they do not trade publically. Another group (5) had an incomplete price or dividend history. The gaps usually occurred during the 1970s REIT disaster period, and most likely because they did not have enough volume to trade on NASDAQ during this period. Six had no trading volume for a period during the 1970s, also probably a product of the 1970s disaster. Eight REITs, although documented in other sources as existing entities since the early 1970s, only had very recent price and dividend histories. It is likely that many of these such as Weingarten Realty, Inc., formed in 1948, had only recently gone public and thus had no prior trading history. After all those REITs without a continuous volume, price and dividend history over the 15-year period were eliminated, the sample set shrunk to the 22 REITs. This sample of 22 represents approximately 14% of the 161 REITs in existence today.

A descriptive profile of the 22 REITs used in the study is shown in Table 4.1. All but one of the REITs were founded prior to 1974, and 14 were founded prior to 1970. This suggests that REITs that were well established by 1970 had better odds of surviving the 1970s disaster. REITs are either self-advised or managed through an affiliate advisor. Nine are self-advised, however approximately half of these represent recent changes since TRA'86 reduced requirements. Total assets of the individual REITs range from \$35 to over \$460 million. This suggests that asset size is not one of the criteria involved in long-term survival. Liabilities (debt) varies from \$1 to over \$330 million, with the percentage of debt ranging from approximately 2% to 75%. The REIT sample is geographically diversified with 15 out of 17 holding invested in assets in more than 3 states. There are 4 REITs which invest primarily in a single property type. Three of these invested in shopping centers, and one, Hotel Investors, specializes in hotels. There are no single property REITs in the sample set, in fact, a majority invested in at least 30 different properties.

Throughout the analysis it is important to keep in mind that the sample represents the long-term survivors,

TABLE 4.1
CHARACTERISTICS OF REIT SAMPLE SET

Name#	Date Founded Exchange	Mgmt**	Total Assets*** (\$,000)	Total Liab.**** (\$,000)	Portfolio Holdings		
					# of States	# of Types	# of Prop.
Bankamerica Realty Investors (86)	1970 NYSE	3	\$213,610	\$74,208	5	4	30+
Cenvill Investors, Inc. (86)	1960 NYSE	1	184,477	92,775	1	2	10+
Clevertust Realty Investors (86)	1970 OTC	N/A	53,286	28,245	N/A	N/A	N/A
Consolidated Cap. Realty Inv. (86)	1973 OTC	1	92,478	59,639	6	N/A	35+
Eastgroup Properties (87)	1969 ASE	1	49,981	1,074	16	5	30+
Eastover Corp. (85)	1978 OTC	1	22,143	3,317	N/A	N/A	N/A
Federal Realty Investment Trust (86)	1962 NYSE	3	305,648	216,871	9	1	30+
First Carolina Investors (85)	1971 OTC	N/A	35,845	13,336	N/A	N/A	N/A
First Union RE Equity & Mort. (87)	1961 NYSE	3	441,222	331,778	14	3	30+
Hotel Investors (87)	1969 ASE	3	104,079	53,907	17	1	30+
HRE Properties (85)*****	1969 NYSE	3	181,401	39,262	13	3	30
IRT Property Co. (87)	1969 NYSE	3	190,786	104,153	11	1	80+
Lomas & Nettleton Mort. Inv. (87)	1969 NYSE	1	280,193	172,826	35	4	900+
New Plan Realty Trust (86)	1972 NYSE	3	190,740	99,855	10	2	30+
Pennsylvania REIT (87)	1960 ASE	3	73,484	14,174	12	3	40+
Pittsburgh West Virginia Rail Road	1973 ASE	N/A	N/A	N/A	N/A	N/A	N/A
Property Capital Trust (86)	1969 ASE	1	183,972	77,127	15	4	55+
Property Trust of America (86)	1963 OTC	N/A	59,989	14,941	5	N/A	39
Realty Refund Trust (87)	1971 NYSE	1	69,773	50,192	5	4	10
USP REIT	1970 OTC	N/A	N/A	N/A	N/A	N/A	N/A
Washington REIT (87)	1960 ASE	3	79,305	14,725	3		24
Wells Fargo Mort. & Eq. Trust (86)	1970 NYSE	1	464,815	224,699	18	4	100+

Notes:

- * Date shown refers to year end source date
- ** Management: 1 = affiliate advisor, 2 = non-affiliate advisor, 3 = self-advised
- *** Total Assets is the total of all assets shown on the balance sheet.
- **** Total Liabilities is the total of all debt-related liabilities.
- ***** Previous name was Hubbard RE Investments -- name changed as of 2-1-86

Source: SEC 10K and Annual Report, Disclosure Inc.; Moody's Bank and Finance Manual

those REITs that survived at least two major recessions. It is likely that they are the outstanding performers of the industry, however, as a proportion of the numbers existing today they represent a small select group, 13.7% of the 161 qualified REITs.

Methodology

The performance of these 22 REITs is first analyzed over the entire 15-year time period, both individually and as a group, as compared to the S & P 500. Variability in return is explored through traditional return measures as well as measures of dispersion and risk. The two measures of return are the geometric mean and the arithmetic mean of quarterly returns and include both price and dividend yields. The geometric average measures the average growth rate of the investment if the shares were purchased and sold each quarter over the time period with the proceeds and dividends continually reinvested. The arithmetic mean shows the average quarterly return if the REIT shares were sold every quarter and only the initial investment was reinvested. Variability in return has less impact on the arithmetic mean, but does impact the geometric mean. For instance a zero return in the last quarter would have little impact on the arithmetic mean, but would reduce the

geometric mean to zero. Dispersion and risk are measured through both the standard deviation and coefficient of variation. The coefficient of variation adjusts for differences in the mean return, standardizing the measure.

The above return and variability measures are also broken down into appreciation and income components for the entire REIT portfolio and compared to the S & P 500. The whole income component is typically more stable than share-price appreciation, because REITs must pay out 95% of taxable income. As long as the underlying assets perform, we can expect a high degree of stability.

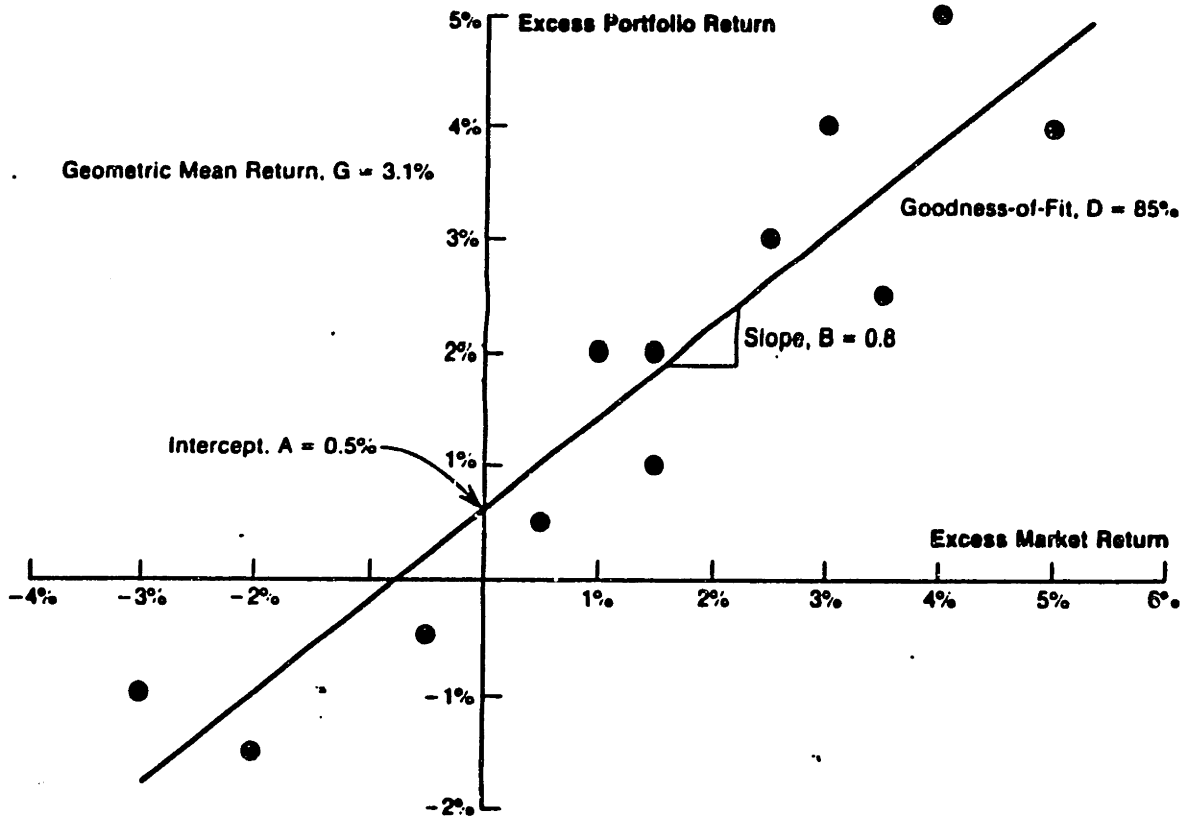
In order to further measure performance of the sample, the return for the consolidated (equally weighted) portfolio is compared with the market return, as indexed by the S & P 500 return. The methodology is similar to that followed by Smith and Shulman[19] in their analysis of equity REITs compared to closed-end investment companies over the 11 year period from December 1963 to December 1974. In that study, the authors regressed the excess return of the individual REITs, and the consolidated portfolio against the excess market return over the entire holding period, deriving three different measures of performance: A, an excess return; B, a measure of

systematic risk; and D, a diversification indicator. The first measure of performance is the market comparison, A, which is the Y-intercept of the straight line, and reveals the excess return achieved by the REITs when the excess market return is zero. (See Exhibit 4.1.) If A is positive then the stock has outperformed the market on a risk-adjusted basis. The reverse holds if A is negative.

The slope of the line, B, is the second measure of performance. B measures the REIT stock's sensitivity to market movements. This is also an estimate of systematic risk, or beta, the portion of risk attributable to market events caused by general economic, social or political conditions. (Unsystematic risk is the other component of risk that relates to the business risk that is specific to the individual stock. By holding portfolios of 20 or more common stocks, unsystematic risk can almost be diversified away. Systematic risk, however, cannot be reduced by further diversification.) If the REIT stock has a beta of 1, it moves with the market; if the beta is 2; then any movements are 2 times the market.

The final measure is one of diversification, D, which is a test of goodness-of-fit of the relationship. It measures the fraction of the total variation in the return

EXHIBIT 4.1
ILLUSTRATION OF METHODOLOGY FOR PERFORMANCE EVALUATION



Source: Smith and Shulman, 1976. [19]

that can be explained by market return. D indicates how well diversified the portfolio is over the sample period. The greater the diversification the less unsystematic risk the stock contains, and the less other stocks would improve the return on a portfolio basis. For example, if D were equal to 40% then 60% of the risk could be eliminated by holding the stock in a diversified portfolio of common stocks.

After analysis over the entire time period, REIT returns are analyzed over business cycles. The National Bureau of Economic Research[16] identifies three business cycles over the period beginning in the fourth quarter of 1973 to the present. The recessions, identified by quarters, are from 1:74 - 1:75, 1:80 - 3:80 and 3:81 - 4:82, with peak-to-peak and trough-to-trough cycles also identified. After analyzing the individual REIT returns over these periods, the author concluded that the mini-recession of 1980 made no impact and, for simplicity, eliminated it from special consideration. Thus returns are analyzed over two complete cycles and across its component upswings and downswings. The geometric return is calculated for the consolidated REIT portfolio total, appreciation and income returns, and compared with the S & P 500. Regression is also used to compare the REIT

performance with the market over the different periods using the three additional performance measures identified above.

Analysis

As one would expect, the individual REIT returns exhibited substantial variation. (See Table 4.2.) Quarterly returns for the individual REITs over the time period ranged from a minimum of - 56.25% for CleveTrust Realty Investors in 4:74 to a maximum of - 92.31% for Cenvill Investors in 1:76. At its lowest point in 2:74, the consolidated REIT portfolio earned a negative return of -24.41% and at its highest point in 1:75 - 37.66%. The minimum return is very close to the S & P minimum of 24.74% of the next quarter (3:74). However, the REIT maximum is nearly 15 basis points greater than the S & P return of 22.69% in the same quarter. A majority of the REITs were at their lowest performance level late in 1974, but upon recovery reached their highest performance shortly thereafter in the first quarter of 1975, 76, or 77. The timing and amount of the individual maximum, and minimum returns do show the enormous impact the 1970s REIT disaster had on the entire industry.

TABLE 4.2

STATISTICAL PROFILE OF REIT RETURNS 2:73 - 1:88

Name	Quarterly Returns				Standard		Coefficient of Variation
	Maximum	Quarter	Minimum	Quarter	Average	Deviation	
Bankamerica Realty Investors	71.82%	4:76	(47.16%)	4:74	4.78%	19.89%	4.16
Cenvill Investors, Inc.	92.31	1:76	(44.44)	3:74	7.51	24.05	3.25
Clevetrust Realty Investors	85.71	1:75	(56.25)	4:74	3.16	23.33	7.39
Consolidated Cap. Realty Inv.	37.18	2:80	(36.36)	4:86	1.87	14.48	7.74
Eastgroup Properties	47.60	1:75	(35.39)	2:76	2.40	16.82	7.01
Eastover Corp.	50.00	1:76	(35.02)	4:73	3.90	15.89	4.08
Federal Realty Investment Trust	45.19	1:75	(19.83)	3:81	5.69	10.51	1.85
First Carolina Investors	61.90	1:76	(44.44)	4:74	3.52	19.81	5.63
First Union RE Equity & Mort.	44.23	1:75	(27.09)	4:87	5.49	12.90	2.35
Hotel Investors	75.15	1:75	(33.23)	4:73	4.52	14.71	3.25
HRE Properties	36.62	1:75	(28.00)	3:75	3.33	10.63	3.19
IRT Property Co.	53.06	1:77	(43.42)	4:74	4.70	15.36	3.27
Lomas & Wettleton Mortgage Inv.	47.18	2:80	(35.55)	2:74	3.68	15.34	4.17
New Plan Realty Trust	43.28	4:82	(20.89)	3:74	6.69	11.60	1.73
Pennsylvania REIT	36.36	1:75	(19.28)	2:74	5.89	10.32	1.75
Pittsburgh West Virginia Rail Road	43.03	4:81	(17.23)	2:84	2.83	10.75	3.81
Property Capital Trust	68.91	1:75	(41.02)	2:74	5.47	16.46	3.01
Property Trust of America	86.32	1:77	(37.50)	3:74	3.69	20.28	5.49
Realty Refund Trust	44.80	1:75	(26.80)	4:74	3.63	14.29	3.93
USP REIT	39.76	2:81	(20.10)	1:82	3.78	11.97	3.17
Washington REIT	29.24	1:81	(19.27)	2:74	5.96	10.04	1.68
Wells Fargo Mortgage & Equity Trus	83.20	1:75	(48.18)	3:74	3.87	20.17	5.20
Consolidated Sample Group	37.66%	1:75	(24.41%)	2:74	4.37%	10.89%	2.49
Standard & Poors Composite Index	22.69%	1:75	(24.74%)	3:74	3.12%	9.23%	2.96

The average quarterly returns also exhibited variation over the period, ranging from 1.87% to 7.51%, with a consolidated portfolio average of 4.37%. This figure was substantially greater than the S & P 500 return of 3.12%. This is especially significant as the standard deviation for the REIT consolidated portfolio was slightly greater than the S & P, but the coefficient of variation was actually less than the S & P. This suggests that this REIT portfolio may have actually been a less risky investment over the period, while delivering a greater average return.

Quarterly geometric returns for the consolidated REIT portfolio, illustrated in Table 4.3, ranged from .31% for Clevetrust Realty Investors to 6.07% for New Plan Realty Trust. Table 4.3 also shows the percent of the real estate portfolio invested in equity type assets. These figures are as of year-end 1985, 86, or 87. Chapter 3 illustrated that investment strategy appears to have changed little over time, therefore recent portfolio figures are used. It is significant to note that out of the top 10 ranking REITs, all but Cenvill have investments in equity type assets, and 7 out of the 10 had a 70% or greater equity investment. For these 7 REITs, the coefficient of

TABLE 4.3

QUARTERLY GEOMETRIC RETURN, EQUITY INVESTMENT AND RETURN RANKING 3:73 - 1:88

Name	Geometric Return	Return Ranking	Risk Ranking (from Table 3.2)	% Equity Investment*
Bankamerica Realty Investors	2.81%	11	11	83.00%
Cenvill Investors, Inc.	4.87	5	4	0.0
Clevetrust Realty Investors	0.31	22		N/A
Consolidated Cap. Realty Inv.	0.81	21		N/A
Eastgroup Properties	2.64	14	1	75.0
Eastover Corp.	1.02	20		N/A
Federal Realty Investment Trust	5.18	4	2	100.0
First Carolina Investors	1.50	19		N/A
First Union RE Equity & Mort.	4.71	6	8	73.0
Hotel Investors	3.54	8	9	71.0
HRE Properties	2.78	12		N/A
IRT Property co.	3.51	9	7	84.0
Lomas & Nettleton Mortgage Inv.	2.51	15	14	0.0
New Plan Realty Trust	6.07	1	5	44.0
Pennsylvania REIT	5.38	3	6	91.0
Pittsburgh West Virginia Rail Road	2.30	16		N/A
Property Capital Trust	4.21	7	10	39.0
Property Trust of America	1.82	18		N/A
Realty Refund Trust	2.67	13	13	0.0
USP REIT	3.12	10		84.0
Washington REIT	5.48	2	3	100.0
Wells Fargo Mortgage & Equity Trust	1.92	17	12	25.0
Consolidated Sample Group	3.80			
Standard and Poor's Composite Index	2.69			

Notes:

* Percent of real estate portfolio, rounded to the nearest whole number.

variation ranged from 1.68 to 3.27, some of the lowest figures in the portfolio. One would expect the equity oriented REITs to have greater returns due to the increased risk in equity type investments, however, one would also expect higher coefficient of variations. Thus equity oriented REITs appear to offer a greater return with comparable or even less total risk as measured by the coefficient of variation. REITs with substantial assets in mortgage investments -- Lomas & Nettleton, Realty Refund and Wells Fargo Mortgage & Equity were ranked near the bottom, 15th, 13th and 17th respectively. These REITs had coefficients of variation ranging from 4.17 to 5.49, indicating greater total risk for a lesser return. The exception was Cenvill with the 5th highest return, however, its mortgage investments in speculative land development are judged to be risky. The geometric return of 3.8% for the portfolio again out performs the S & P index which had a return of 2.69% over the period.

The return rankings are closely correlated with the risk rankings from Table 3.2, as shown in Table 4.3. This relationship suggests that investors are compensated for greater risk. (It should also be noted that only 14 out the sample set were ranked in Chapter 3.)

As REITs must distribute 95% of taxable earnings one expects that the income component would be a greater component of total return for the REITs than the S & P 500. This was the case. Exhibits 4.2 and 4.3 graph total, income and appreciation returns for both the consolidated REIT portfolio and the S & P 500. Exhibit 4.4 compares income returns for the S & P 500 and the REIT sample. As also expected REIT income returns were substantially greater than the S & P 500. Table 4.4 breaks down the total return into appreciation and income components for the individual REITs. The REIT income component contributed a greater portion of the total return than did appreciation. However, the variability of that return is substantially less as illustrated by a coefficient of variation of .25 for income and 5.19 for appreciation. Both of these are slightly higher than for the S & P.

Individual REITs had average quarterly appreciation returns ranging from -1.24% to 5.68%. Some of the coefficient of variations are very large -- as high as 25.22 with a low of 2.46. In contrast, all but 4 of the REITs in the consolidated portfolio had coefficients of variation for income that were less than 1. They ranged from .13 to 1.52. The average income returns ranged from .63% to 3.11% with an average of 2.24%. This average was

EXHIBIT 4.2

Consolidated REIT Portfolio 3:73-1:88

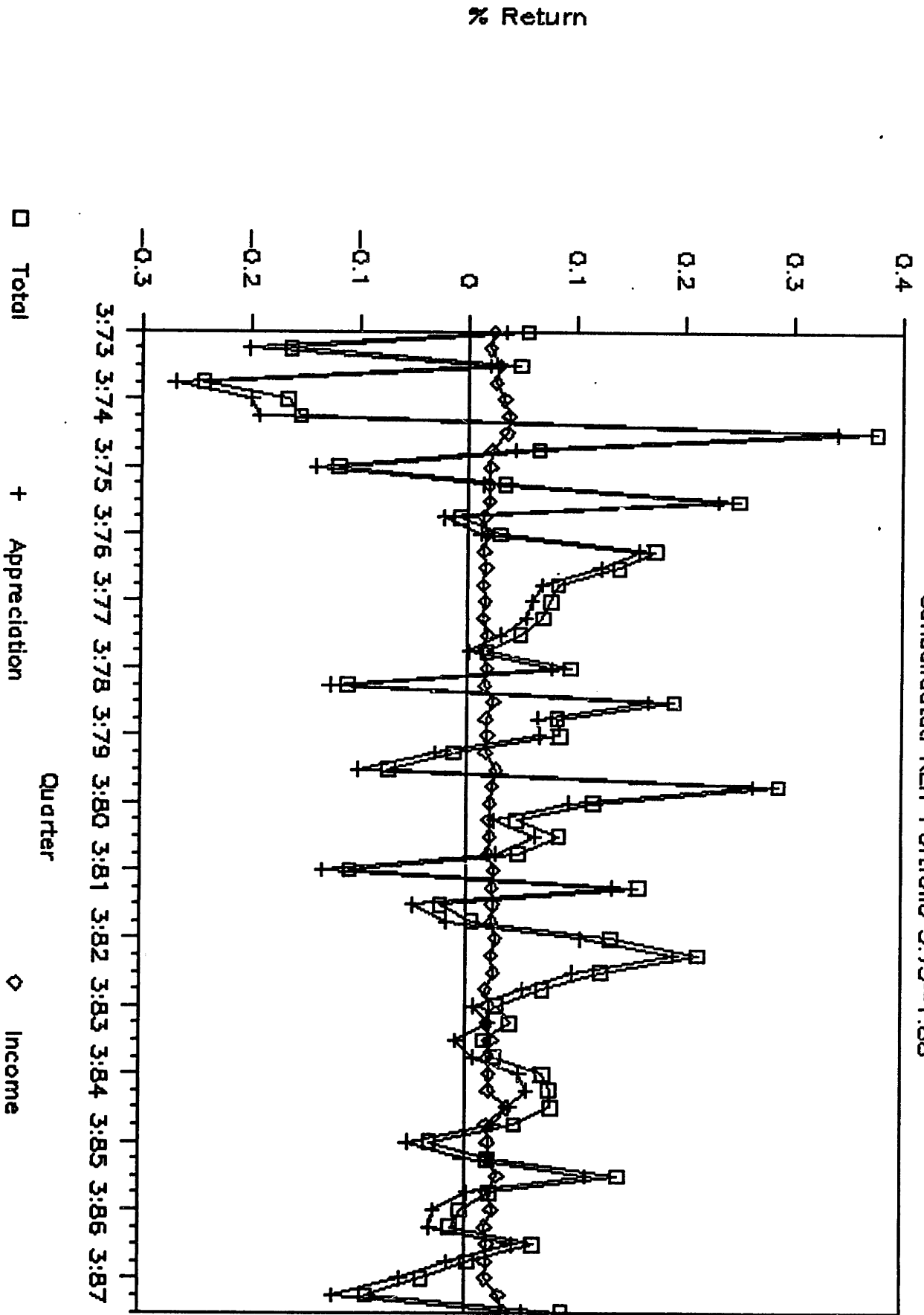


EXHIBIT 4.3

S & P 500 3:73-1:88

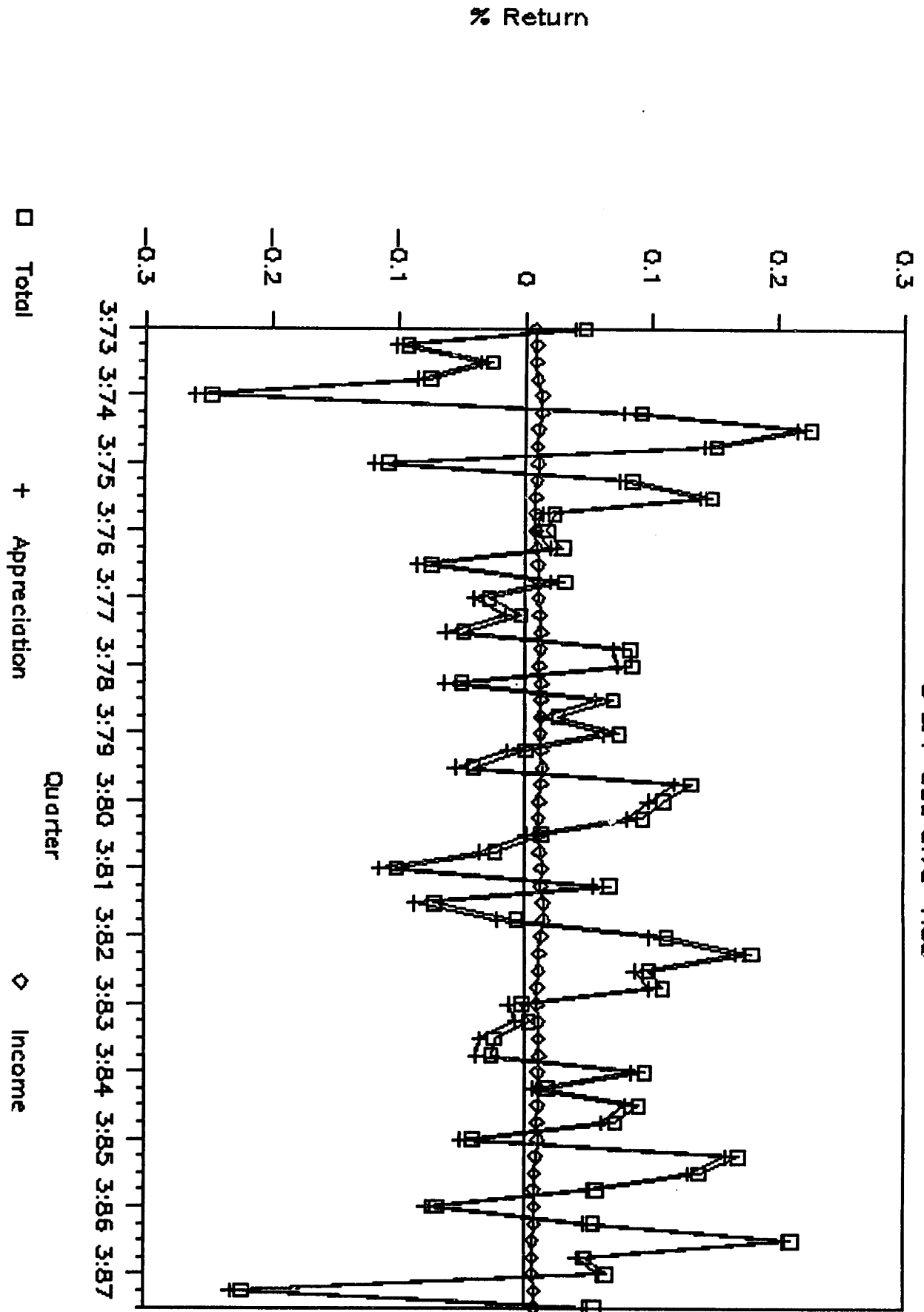


EXHIBIT 4.4

Income Returns 3:73-1:88

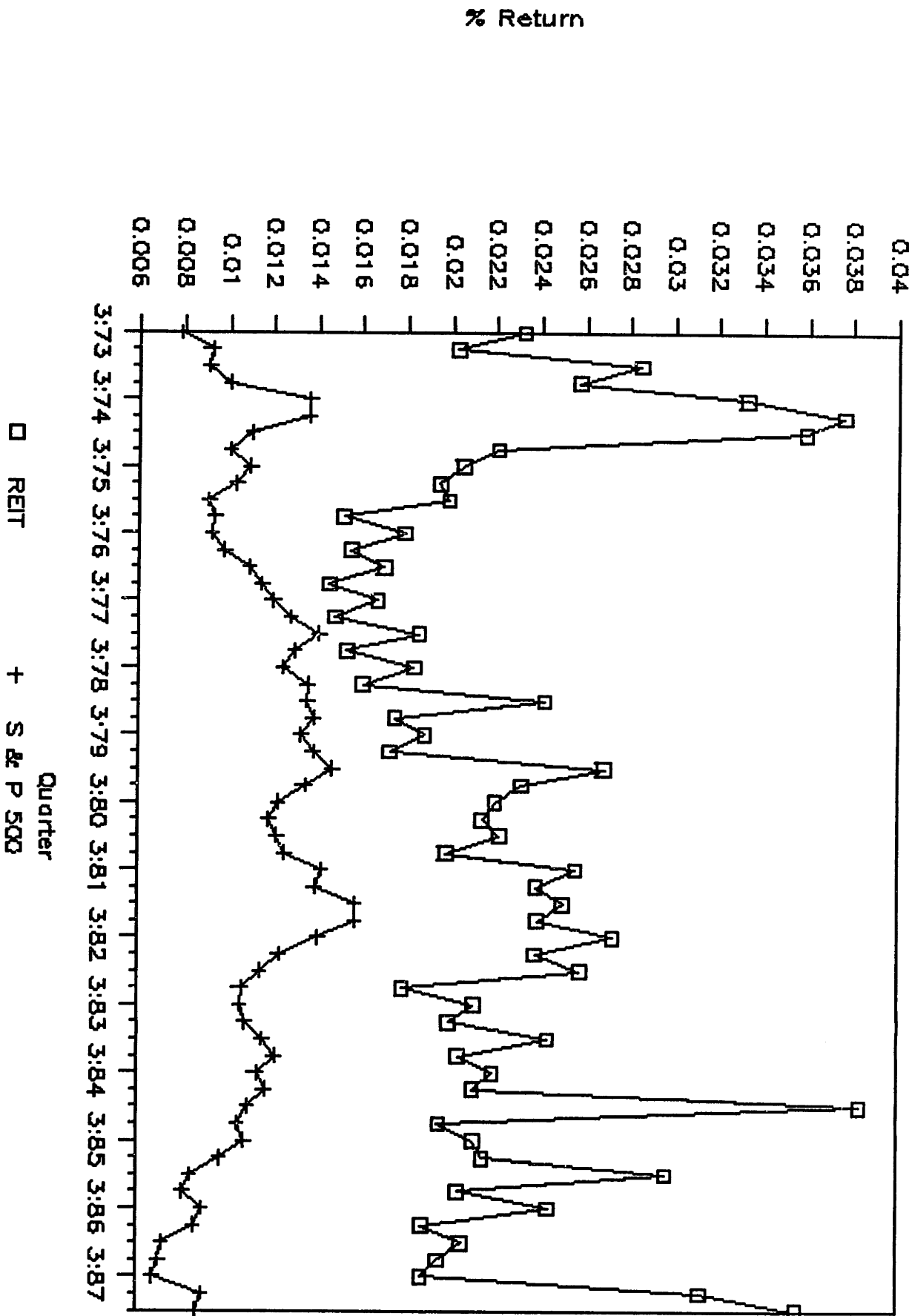


TABLE 4.4
 PROFILE OF APPRECIATION AND INCOME RETURNS 2:73 - 1:88

Name	Quarterly Returns					
	Appreciation			Income		
	Average	Standard Deviation	Coefficient of Variation	Average	Standard Deviation	Coefficient of Variation
Bankamerica Realty Investors	2.81%	29.64%	7.00	1.98%	0.68%	0.34
Cenvill Investors, Inc.	5.68	24.38	4.29	1.83	1.14	0.62
Clevetrust Realty Investors	1.76	23.44	13.55	1.41	1.08	0.77
Consolidated Cap. Realty Inv.	-1.24	14.78	(11.89)	3.11	4.38	1.41
Eastgroup Properties	1.06	17.26	16.22	1.33	2.03	1.52
Eastover Corp.	1.54	16.03	10.43	2.36	2.25	0.95
Federal Realty Investment Trust	3.55	10.38	2.92	2.14	0.51	0.24
First Carolina Investors	2.89	20.11	6.96	0.63	0.92	1.46
First Union RE Equity & Mort.	3.23	12.84	3.98	2.26	2.66	0.91
Hotel Investors	1.48	14.5	9.80	3.04	1.46	0.48
HRE Properties	0.84	10.48	12.44	2.49	0.49	0.20
IRT Property co.	2.69	15.56	5.80	2.01	1.45	0.72
Lonas & Wettleton Mortgage Inv.	0.71	15.17	21.47	2.98	1.09	0.37
New Plan Realty Trust	4.37	11.5	2.63	2.32	0.73	0.31
Pennsylvania REIT	3.67	10.27	2.79	2.21	2.29	1.03
Pittsburgh West Virginia Rail Road	0.42	10.68	25.22	2.41	0.32	0.13
Property Capital Trust	2.95	16.28	5.49	2.52	0.82	0.33
Property Trust of America	1.4	20.14	14.34	2.29	1.57	0.69
Realty Refund Trust	0.65	14.09	21.72	2.98	0.62	0.21
USP REIT	0.69	12.41	18.11	3.09	2.6	0.84
Washington REIT	4.05	9.98	2.46	1.91	0.39	0.21
Wells Fargo Mortgage & Equity Trust	1.51	20.02	13.27	2.37	0.74	0.31
Consolidated Sample Group	2.11%	10.97%	5.19	2.24%	0.56%	0.25
Standard & Poors Composite Index	1.99%	9.27%	4.65	1.13%	0.22%	0.19

greater than the S & P average of 1.13%. The preceding suggests that the REIT may be an excellent choice for the investor who desires a high and consistent income return.

The results of the regression output showing the additional performance measures are presented in Table 4.5. The market comparison, A, indicates that all but three out of the 22 REITs in the consolidated portfolio outperformed the market on a risk-adjusted basis. The equity oriented REITs appear to have also outperformed others on a risk-adjusted basis. The consolidated REIT portfolio outperformed the market by 1.47% over the period.

As an equally weighted portfolio, the REITs exhibited a beta of .80. Thus the sensitivity of the REIT portfolio is less than the market, indicating a less risky investment. A majority of the individual REITs, 15 out of the 22, have betas that are less than the market.

The final measure of performance is D, the diversification measure. Both the individual REITs and the portfolio exhibited low levels of diversification with a measure of .46 for the portfolio. Individual REITs had diversification measures ranging from .06 to .44. These figures indicate substantial unsystematic risk among both

TABLE 4.5
PERFORMANCE MEASURES OF REIT SAMPLE SET: 3:73 -1:88

Name	% Equity Investment*	Market Comparison, A	Systematic Risk, B	Diversifi- cation, D
Bankamerica Realty Investors	83.00%	1.15%	1.17	0.30
Cenvill Investors, Inc.	0.0	4.00	1.34	0.26
Clevetrust Realty Investors	N/A	(0.23)	1.25	0.25
Consolidated Cap. Realty Inv.	N/A	(1.02)	0.56	0.10
Eastgroup Properties	75.0	0.91	0.88	0.27
Eastover Corp.	N/A	(0.26)	0.57	0.10
Federal Realty Investment Trust	100.0	2.82	0.76	0.45
First Carolina Investors	N/A	0.44	0.96	0.20
First Union RE Equity & Mort.	73.0	2.45	0.92	0.44
Hotel Investors	71.0	1.58	0.83	0.28
HRE Properties	N/A	0.67	0.58	0.25
IRT Property co.	84.0	1.94	0.66	0.16
Lonas & Nettleton Mortgage Inv.	0.0	0.75	0.83	0.25
New Plan Realty Trust	44.0	3.93	0.66	0.28
Pennsylvania REIT	91.0	3.14	0.66	0.34
Pittsburgh West Virginia Rail Road	N/A	0.34	0.41	0.12
Property Capital Trust	39.0	2.20	1.13	0.41
Property Trust of America	N/A	1.10	0.51	0.06
Realty Refund Trust	0.0	0.93	0.61	0.15
USP REIT	84.0	0.85	0.35	0.06
Washington REIT	100.0	3.39	0.49	0.21
Wells Fargo Mortgage & Equity Trust	25.0	0.70	1.04	0.23
Consolidated Sample Group		1.47%	0.80	0.46
Standard and Poor's Composite Index		0.00%	1.00	1.00

Note:

* Percent of real estate portfolio, rounded to the nearest whole number.

the individual REITs and the portfolio.

It is interesting to compare the above performance measures to those documented by Smith and Shulman.[19] These authors analyzed a sample of 9 equity REITs for an 11-year period from December 1963 to December 1974. Their sample results showed an annual geometric return of -0.40% versus a market return of 3.20% . This return was lower than our finding, a quarterly return of 3.80% . Their conclusion was that REITs under-performed the market on a risk adjusted basis, as evidenced by a market comparison of -2.1% . Their sample had a beta of $.81$ over the period, however, essentially equal to ours of $.80$. Their measure of diversification was less than our sample, $.29$ as compared to $.46$. This indicates that the REIT industry may exhibit a fairly consistent beta over time. It also suggests that a REIT portfolio should be considered less risky than the stock market.

Analysis over the Business Cycle

As the REIT is comprised of real estate related assets and real estate is viewed as a hedge against inflation, one would expect REITs to outperform the market during economic upswings. Tables 4.6 and 4.7 show total, appreciation, and

TABLE 4.6
 QUARTERLY RETURNS FOR CONSOLIDATED REIT SAMPLE GROUP OVER BUSINESS
 CYCLES 3:73 - 1:88

Time Period	Total	Apprec.	Income	Excess
Full Period				
3:73-1:88	3.80%	1.51%	2.42%	1.73%
Business Cycle				
Peak-Trough				
4:73-1:75	-7.11%	-10.46%	2.45%	-9.03%
2:81-4:82	4.88%	2.74%	2.31%	2.44%
Recession				
1:74-1:75	-5.13%	-8.38%	2.53%	-7.07%
2:81-4:82	4.88%	2.74%	2.31%	2.44%
Downswing (P-T)				
4:73-1:75	-7.11%	-10.46%	2.45%	-9.03%
2:81-4:82	4.88%	2.74%	2.31%	2.44%
Upswing (T-P)				
1:75-2:81	7.49%	5.53%	2.29%	5.42%
4:82-1:88	4.14%	1.80%	2.46%	2.27%
Cycle				
Peak-Peak				
4:73-2:81	3.66%	1.44%	2.32%	1.61%
2:81-1:88	3.93%	1.57%	2.47%	1.79%
Trough-Trough				
1:75-4:82	7.05%	5.09%	2.26%	4.93%

TABLE 4.7
QUARTERLY RETURNS FOR S & P 500 OVER BUSINESS CYCLES 3:73 - 1:88

Time Period	Total	Apprec.	Income	Excess
Full Period				
3:73-1:88	2.69%	1.55%	1.19%	0.63%
Business Cycle				
Peak-Trough				
4:73-1:75	-3.16%	-4.29%	0.99%	-5.07%
2:81-4:82	2.23%	0.99%	1.27%	-0.21%
Recession				
1:74-1:75	-1.88%	-3.06%	1.07%	-3.81%
2:81-4:82	2.23%	0.99%	1.27%	-0.21%
Downswing (P-T)				
4:73-1:75	-3.16%	-4.29%	0.99%	-5.07%
2:81-4:82	2.23%	0.99%	1.27%	-0.21%
Upswing (T-P)				
1:75-2:81	3.73%	2.53%	1.30%	1.69%
4:82-1:88	4.53%	3.54%	1.10%	2.66%
Cycle				
Peak-Peak				
4:73-2:81	1.81%	0.62%	1.21%	-0.23%
2:81-1:88	3.42%	2.33%	1.17%	1.27%
Trough-Trough				
1:75-4:82	3.52%	2.27%	1.34%	1.32%

income return for the consolidated REIT portfolio and the S & P index over the different cycles. REIT portfolio total returns varied from a low of -7.11% during the 4:73 - 1:75 peak-to-trough cycle to a high of 7.49% in the upswing from 1:75 - 2:81. It is interesting that the income portion of the REIT return remained relatively constant, between 2.26% and 2.53%, over all periods. The appreciation return exhibited substantial variation ranging from -10.46% during the forementioned peak-to-trough to a high of 5.53% in the upswing that followed.

The REIT outperformed the S & P index on a total return basis during most periods. Exceptions include the 1:74 - 1:75 recession and the peak-to-trough, and downswing periods preceding that recession. Another exception was the most recent period including the upswing and trough-to-trough periods beginning in 4:82, where the REIT achieved a 4.14% return as compared to 4.53% for the S & P index. This result is tentative, however, because the current cycle is not complete, and the 1:88 is somewhat arbitrary as a cutoff point.

The data in Table 4.6 is inconclusive as to the REIT portfolio performance over the business cycle because REIT performance was inconsistent. However, it is probable that

much of the downturn in REIT returns during the earlier recession was as much due to mismanagement by the REIT industry as to the economic downturn. Even though only a small group of REITs played interest-rate arbitrage during this period, most likely the negative impacts spilled over to the whole industry, and investors did not completely differentiate between the good and the bad. Contrasting REIT performance relative to the S & P during the 81 - 82 recession, suggests that REIT management is now more sophisticated and reluctant to take those risks again, and the REIT portfolio should outperform the S & P 500 over future cycles.

The additional measures of performance are shown in Table 4.8. As one would expect, the consolidated REIT portfolio outperformed the market on a risk-adjusted basis over all periods except those leading up to and including the 1:74 - 1:75 recession. It is surprising, however, that the beta was slightly greater than one for all periods including the upswing and peak-to-peak except for the most recent cycles where it was nearer to .50. The higher beta was also evident in the downswing, peak-to-trough and recession cycles of 3:81 - 4:82. There can be interpretations for these betas. The higher beta, even

TABLE 4.8
PERFORMANCE MEASURES OVER BUSINESS CYCLES: 3:73 - 1:88

TIME PERIOD	Quarterly Compound Return, G	Market Comparison, A	Systematic Risk, B	Diversifi- cation, D
Full Period				
3:73-1:88	3.80%	1.47%	0.80	0.46
Business Cycle				
Peak-Trough				
4:73-1:75	-7.11%	(2.90)	1.04	0.55
2:81-4:82	4.88%	3.82%	1.06	0.92
Recession				
1:74-1:75	-5.13%	(2.21)	1.01	0.53
2:81-4:82	4.88%	3.82%	1.06	0.92
Downswing(P-T)				
4:73-1:75	-7.11%	(2.90)	1.04	0.55
2:81-4:82	4.88%	3.82%	1.06	0.92
Upswing(T-P)				
1:75-2:81	7.49%	3.96	1.03	0.52
4:82-1:88	4.14%	1.00	0.47	0.47
Cycle				
Peak-Peak				
4:73-2:81	3.66%	2.29	1.02	0.49
2:81-1:88	3.93%	1.08	0.56	0.53
Trough-Trough				
1:75-4:82	7.05%	3.78	1.05	0.60

during the upswing following the 1974 recession, suggests that the volatility surrounding the early 1970s remained with the REIT industry for some time. Secondly, it suggests that REITs are more volatile with respect to the market and thus have a greater risk during the downswing portion of the cycle. This is supported by Smith & Shulman's study[19] which found the largest beta within their sample (.91) occurred during the downswing from 1:69 to 1:75. Further, the fact that during the second recession REITs were still more volatile than the S & P lends greater credibility to the second interpretation.

The measure of diversification varied from .35 to .92 over the different periods with the low measured over the entire period. The highest measure was found during the cycles preceding and including the 1982 recession, indicating little unsystematic risk during these periods.

Chapter 5

CONCLUSION

What is a REIT? A REIT may be comprised of any variety of real estate and real estate related assets. The mortgage-equity- hybrid classification does not fully illustrate the diversity. Instead, one must look deeper and assess the risk associated with both the investment structure and the product type. Based upon NAREIT data, equity oriented REITs have historically generated higher returns than other types. This study also found higher returns among equity oriented REITs, but, contrary to earlier work the results also indicated lesser total risk as measured by the coefficient of variation. The mortgage REITs have been perceived as less risky and this studys' results showed lower returns as expected, but greater coefficients of variation which suggests greater total risk. This indicates that investors are being compensated for the greater risks associated with property ownership by higher returns. The risk indicators do not conform to expectations, however. One explanation may be that the study sample was a small group of long-term survivors, and it may not be representative of the industry at large today. This issue could be further explored, analyzing performance with respect to the new classification scheme,

with a larger sample set over a shorter time period.

Investors must realize the diversity within the industry and not think of REITs as a homogenous investment. A REIT which specializes in healthcare related real estate investments is subject to very different risks than a REIT investing in collateralized mortgage obligations, the latter of which is backed by insured bonds. Each REIT, or at least each type of REIT, should be analyzed separately as an investment.

How do REITs perform relative to other investments? In this study the sample set outperformed the S & P 500 over the long 15-year period. For the shorter subperiods, the REITs outperformed the market during most parts of the business cycle except during the bleak period of the mid-1970s especially the 74 - 75 recession. The sample set exhibited the greatest risk-adjusted return (A), during the upswing periods. Real estate is considered to be an inflation hedge, and these findings would suggest that the REIT may also perform in that capacity, reflecting the performance of the underlying assets. Other studies support this conclusion. Smith [13] in his study of 14 equity REITs over the period 1:64 - 2:78 found the highest value during the upswing portion of the 1960s cycle from

1:64-4:68. Smith and Shulman [19] studied 16 equity REITs over the December 1970 to December 1974 period, and also found the highest risk-adjusted return in a rising market.

The performance of the REIT during the downswing is less conclusive. The empirical results of this study showed that the REITs outperformed the S & P 500 during the most recent downswing from 3:81 to 4:82, but underperformed the market during the downswing of the early 1970s. Other studies found similar results for the earlier downswing, but none have documented the most recent downswing. This study indicated that REITs are more volatile during the downswing, as shown by a beta greater than the market during all downswings. This was also supported by Smith [18] who documented the highest beta during a declining market.

Based upon all measures, the worst REIT performance was during the fallout period of the early 1970s. It can be hypothesized that this was a result of conditions specific to the REIT industry that have since been resolved. Kuhle, et.al [13] studied 102 REITs (the total sample number in any year varied) from January 1973 to December 1985 and found results that suggested a more stable REIT environment in recent periods. This conclusion

was supported by the betas found in this study which were significantly less than 1 for the most recent time periods, but slightly greater than 1 for the periods during the REIT fallout. Although this study did not analyze the standard deviation and the coefficient of variation over the different cycles, a decrease in the dispersion of returns over time may offer further support for a more-stable-industry explanation.

The REIT sample portfolio exhibited measures of diversification that varied from .35 to .94 with the highest measures during and preceding the recessionary period of 1982. The most recent time periods had the lowest diversification measures, indicating that unsystematic risk could be further eliminated by holding REITs in a diversified portfolio.

When considering the conclusions suggested by this study, it should be kept in mind that the REIT portfolio represented a small and more significantly, a select portion of the industry. The sample was select because it represented the survivors of at least two and, in some cases, three recessions. Plus these are REITs that have been continuously and actively traded during a period when many REITs folded. Nevertheless, these findings would

indicate that REITs should make a strong addition to a diversified stock portfolio during inflationary, and possibly even during recessionary periods. The REIT provides investment potential for the investor desiring stable and relatively large income returns. When considering a REIT investment, one must consider the type of REIT, and remember that it is a diverse industry. Further studies should illuminate the differences in performance among different types beyond the traditional mortgage-equity-hybrid scheme by using new means of classification that have a greater focus on underlying asset risk. It would be especially insightful to look at recent performance among a larger sample and document the existence of a more stable industry. In any event, the REIT has changed dramatically over the past 20 years and will most likely continue its evolution as its defining forces - the tax laws and the capital markets - continue to change.

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