

Current Trends in Pension Fund Real Estate Investment

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ABSTRACT

Traditionally, pension funds have been relatively homogeneous in their real estate investment practices. Today, however, pension funds as an investor group are quite diverse in their attitudes towards real estate. Our study shows that real estate strategies run the gamut from aggressively increasing total exposure to exiting the asset class altogether. Some look to real estate for its diversification and inflation hedging benefits, while others choose real estate strictly on a total risk/return basis. A growing number of funds are increasing their allocation to REIT stocks while many others own no public real estate securities. While there are no industry-wide constants that apply to all pension funds, this thesis explores the industry's current real estate investment options and identifies trends for the next five years.

We surveyed 26 defined benefit plan sponsors with \$18 billion in real estate equity investment. Our results suggest that pension real estate investment will have an average annual growth of 7.6% over the next five years, a slight increase above the 7.0% forecasted annual growth for total plan assets. We also determined that separate accounts will continue to be the favored vehicle, while commingled funds become less prevalent. Investment in REIT stocks should increase over the next five years, with REIT allocations forecasted to average 17% of pension real estate portfolios by 2002. Over one third of the respondents indicated that they are presently considering a property-for-stock swap as a method of REIT investment.

Our results also suggest that pension funds will continue to use investment advisors and managers to oversee 85% of their real estate capital going forward. The major criteria for selection of an advisor/manager will include product and market expertise, strong track record, performance-based fees, and flexibility in terminating the relationship.

The survey also revealed information about how REITs are purchased by pension funds. Nearly 70% of the respondents, which are primarily senior real estate investment officers, know that their fund's equity managers have some exposure to REIT stocks, but only 8% of them know the actual exposure and only 23% of them are consulted before REIT transactions. This finding suggests that, among other things, pension funds as institutions could have a significantly higher real estate exposure than the sponsors realize.

Thesis Supervisor: Blake Eagle
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CHAPTER ONE

Background on Pension Plans

The main function of all employee benefit plans or pension plans is to provide retirement income for plan members; however, the plans vary greatly in terms of their funding, payment requirements, and sponsorship. In the following chapter, we will define and discuss the two major plan types, defined benefit plans and defined contribution plans. We will then briefly describe the differences between the main plan sponsors: public employer plans, private employer plans, and multi-employer or union plans (also called Taft-Hartley plans). Finally, we will define the size of total US pension assets and present typical asset allocations, including the amount of real estate investment.

Defined Benefit Plans (DBP's)

A defined benefit plan provides a retired employee a predetermined level of income that is typically paid monthly from retirement until death. The income is based upon a formula that usually incorporates years of service and employee earnings. For example, retirement income may equal 50% of the average salary for the last five years of the employee's service or 1.5% of the final year income times the numbers of years of service. A DBP is typically offered by large corporations and public sector employers such as municipalities, states, and the federal government.

The level of benefit, which usually includes inflation protection, is defined by the benefit formula, which is independent of plan asset investment performance. The employer makes ongoing contributions to the pension investment fund, which is ultimately used to pay retirement benefits. Thus, the plan sponsor or employer guarantees or defines the benefit in advance and assumes the investment risk on the pension fund assets. The sponsor also assumes all the liability or payment risks such as mortality, employee turnover, and salary escalations. If an employer over-estimates the return on plan assets or under-estimates the liability funding

schedule, the employer will be forced to increase its contribution to the pension fund to meet plan obligations.

With the passage of the Employee Retirement Act of 1974 (ERISA), pension plan liabilities were effectively converted from “fringe benefits” to an enforceable legal claim by the beneficiaries against the sponsor.¹ Plan sponsors have a fiduciary duty to provide the promised retirement payments to the plan beneficiaries. ERISA also contains a “Prudent Man Rule” section that mandates risk minimization through investment diversification.

From a financial perspective, a DBP can be viewed as a liability funding institution.² As such, the investment of pension fund assets is managed in the balance sheet context (present value of plan assets, plan liabilities, and any surplus) with each pension plan having its own unique liability structure (promised benefits). Sponsors consider the following five factors when setting investment policies and asset allocations:³

1. The pension benefit policy (payout formula).
2. Plan sponsor sensitivity to asset value fluctuations (volatility) and capital markets expectations (expected return and risk for various asset classes).
3. Plan sponsor sensitivity to fluctuations in liability values (due to mortality, employee turnover, salary escalation, etc)
4. Is the plan a going concern or a termination plan (liquidity implications) ?
5. Risks related to the sponsor’s main business line and pension plan investments (Should General motors pension plan invest in automobile stocks ?).

It is estimated that at year-end 1996 there were \$3.6 trillion in defined benefit plan assets.

Although these plans grew at a 20% average annual rate between 1940 and 1980, experts expect

¹ Jerome B Cohen, Edward D. Zinbarg, Arthur Zeikel, Investment Analysis and Portfolio Management, Chapter 17: Investor policies, 1993, Irwin.

² John R. Thomas, “US and Japanese Pension Policy”, Association of Investment Managers and Researchers (AIMR) Seminar on Investment Policy, April 1994.

³ John L. Maginn, Donald L. Tuttle, Managing Investment Portfolios: A Dynamic Process, Chapter 4, 1990, Warren Gorham, & Lamont.

that future growth in these plans will be modest and more in line with that of the national economy.⁴ These plans are also expected to become a smaller percentage of total pension plans, given the extraordinary growth in defined contribution plans.

Defined Contribution Plans (DCP)

The major difference between a defined contribution plan and a defined benefit plan is that for the former, the employer has no financial obligation beyond making regular contributions into a qualified employee's pension investment account. The contributions are typically calculated as a percentage of annual income or as a percentage of company profits. There are a large variety of legal forms for defined contribution plans such as 401Ks, 403B's, Keogh Plans, and Employee Stock Option Plans to name a few of the major types.

The employer is responsible for selecting an investment manager and asset custodian (record keeper) and for providing the investment vehicles for the plan. Defined contribution plans typically offer a domestic equity mutual fund(s), corporate bond fund(s), money market fund, a guaranteed investment contract (GIC), and a balanced fund. Some large plans offer additional investment vehicles such as international stock and bond funds. The individual employee makes the investment allocation decision and bears all the investment risk.

Since 1985, the growth in defined contribution plans has exploded at an annual rate in excess of 20%. Total year-end 1996 defined contribution plan assets were approximately \$1.6 trillion.⁵ It is anticipated that the defined contribution plan assets will continue to grow at a 20% annual rate for the foreseeable future.⁶

There are two main reasons for this explosive growth.⁷ First, employers are tired of the

⁴ Keith P. Ambachtsheer, "Investment Policies for North American Pension Plans", Association of Investment Managers and Researchers (AIMR) Seminar on Investment Policy, April 1994.

⁵ Bernstein Research, 1996.

⁶ Ibid.

increasingly complicated regulations, the expensive reporting requirements, and the investment risks associated with DBPs. In fact, a significant number of US employers have terminated their defined benefit plans, purchased annuities for covered employees, and replaced the plans with defined contribution plans. Second, younger employees have become disenchanted with the fact that they receive no economic benefit from defined benefit plans until they are vested (typically 5 years of service) and the maximum economic benefit does not materialize unless one has 25+ years of service with the same employer. With defined contribution plans, the vesting periods are usually much shorter (from immediate vesting to three years typically) and the employer investment is made directly into the individual employee account. These funds remain the employee's assets even if he or she moves to another employer.

Major Plan Categories

Public Employer Plans

This category includes federal, state, and local government employers. These plans have historically been exclusively defined benefit plans but in recent years a few public employers are offering a defined contribution plan as well. Public employer plans have a political bent because the sponsors are governments that are run by elected officials. These elected officials are typically very risk averse and do not like the negative publicity of large losses in the retirement funds. Therefore, the investment policies for public plans are usually more conservative than those of private employer plans. Their portfolios typically have a higher fixed income allocation and lower allocations to US equities, international equities, real estate equities, and venture capital.

Private Employer Plans

This category includes both large and small corporate employers. Large corporations have historically offered defined benefit plans although many now offer defined contribution plans as

⁷ Robert L. Johnson and Peter R. Shepard, "Defined Contribution Plans: Can the Real Estate Industry Tap this Growing Pool of Capital ?", Masters Thesis, Massachusetts Institute of Technology, August 1996.

well. Their investment policy has typically been more aggressive than the public defined benefit plans with higher allocations to equities, real estate, and venture capital. Small companies offer only defined contribution plans, primarily because these plans allow the employer to transfer all investment risk to its employees. This is critical because a severely under-funded DBP could easily bankrupt a small company.

Multiple Employer or Union Plans (Taft Hartley)

This category includes unions for carpenters, plumbers, masons, and electricians, etc. These plans often contain an interesting investment dynamic in that most of the plan participants earn their living in the construction and real estate industries. Consequently, the union representatives lobby strongly for pension fund investment in local real estate developments, provided that their union members are hired to work on the job.

There is often continual tension on the Board of Directors between the plan sponsors, who typically want to minimize risk and to diversify the portfolio, and the union representatives, who want to boost job growth by maximizing the real estate allocation. During economic down cycles, it was not uncommon for a Taft-Hartley plan to have upwards of 25% of plan assets allocated to real estate in an attempt to provide jobs for plan members. Union representatives contend that, although this is not optimal asset allocation, without jobs there are no employees and no need for a pension plan.

Total US Pension Assets, Typical Asset Allocations, and Real Estate Investment Estimates

Pension funds are the largest capital source in the U.S., representing 47% of the estimated \$11 trillion in investable capital. See Exhibit 1 for an estimated break down of total US pension assets by sponsor type.

EXHIBIT 1

Plan Category	\$\$\$ in Billions
Federal Government Defined Benefit Plans	\$ 420
Corporate Defined Benefit Plans	\$1,200
State/Local Government Defined Benefit Plans	\$1,735
Taft-Hartley Defined Benefit Plans	\$ 300
Total Defined Benefit Plans	\$3,655
Corporate Defined Contribution Plans (1)	\$1,610
Total Defined Contribution Plans	\$1,610
TOTAL PENSION PLAN ASSETS	\$5,265
Source: 1996 Federal Reserve Flow of Funds, Bernstein Research 1996, and Greenwich Associates 1996	

(1) Public Pension funds are also beginning to offer defined contribution plans but the dollars are presently minimal and thus have been ignored.

Most estimates suggest that defined benefit plans are the largest institutional owner of real estate with approximately \$125 billion in assets (\$118 billion in private investment and \$7 billion in REITs). This is approximately 36% of the \$350 billion combined real estate equity market (\$250 billion in private investment and \$100 billion in REITs)⁸. See Exhibit 2 for average asset allocations for defined benefit and defined contribution plans as of year-end 1995.

⁸ Combination of Equitable "Emerging Trends in Real Estate 1997", Paine Webber, and Greenwich Associates.

EXHIBIT 2

Investment Type	Public Defined Benefit Plans	Corporate Defined Benefit Plans	Corporate Defined Contribution Plans
US Stocks	43.3%	47.8%	56.1%
International	10.9%	14.5%	2.0%
US Bonds	35.9%	25.5%	10.2%
Short Term Cash	3.1%	3.1%	4.7%
Equity Real Estate	3.3%	4.0%	0.1%
GIC's	0.1%	0.4%	22.9%
Real Estate Mortgages	1.2%	0.2%	0.0%
Other	2.3%	4.1%	3.9%
Source: Greenwich Associates, 1995			

As shown above, defined contribution plans are an insignificant source of capital in today's real estate market. Most DCP's do not offer a vehicle for real estate investment. Many plans are considering the inclusion of a REIT mutual fund as an investment option. If this occurs, defined contribution plans could funnel a significant amount of capital into the public REIT market over the next decade. Because DCP's are such a small player in real estate, the remainder of this paper will focus on current trends in defined benefit plan investment in commercial real estate.

CHAPTER TWO

HISTORY OF PENSION FUND INVESTMENT AND THE ROLE OF REAL ESTATE

Prior to the 1940's, there were very few pension plans in the United States; however, in the post world war two era, the numbers grew significantly. By 1950, 20% of all private employees were covered by a defined benefit plan, and by 1970, the number grew to 50%. As the number of plans grew, so did the number of investment classes found on the plans' balance sheets. In this chapter, we will discuss the evolution of pension fund investment, particularly focusing on the role of real estate.

1950's: Government Bonds and AAA Corporate Bonds

The 1950's may best be characterized as a decade of extreme investment conservatism. Almost all pension funds held only fixed income portfolios consisting of government bonds and AAA corporate bonds. With inflation averaging a meager 1.8% during the 1950's, these fixed income investments provided adequate real rates of return, thus plan sponsors had no compelling reasons to explore other investment alternatives. In fact, plan sponsors generally considered investment in real estate and common stocks too risky during this period.⁹

1960's: Introduction to US Common Stocks

By the 1960's, plan sponsors had begun accepting modern portfolio theory, which called for greater portfolio diversification. The common thinking at this time was that stocks would always provide a higher return or "risk premium" than bonds provided that the holding period was very long term and the investor was willing to weather the higher volatility. Many investment managers looked to the stock market as a way of greatly increasing expected long-term returns with a perceived marginal increase in overall portfolio risk. For the first time, plan sponsors

⁹ Keith P. Ambachtsheer "Investment Policies for north American Pension Plans," Association of Investment Managers and Researchers (AIMR) Seminar on Investment Policy, April 1994.

seemed more willing to take on risk in the hopes of reducing required sponsor contributions going forward.

From 1960 to 1964, average annual inflation was 1.2%, and stocks provided a 9.3% real rate of return as compared to a 3.8% real rate of return for bonds. This impressive five year performance by common stocks, in conjunction with the academic literature projecting continued strong stock returns, resulted in almost every US pension fund allocating the majority of their capital to common stocks for the second half of the decade.¹⁰ For example, JP Morgan, a major pension fund investment manager at that time, recommended an 80% allocation to US common stocks for all of its pension fund clients during the late 1960's.¹¹

From 1965 to 1969, average annual inflation more than tripled to 3.8% and the real return for stocks fell to 1.1%; however, these returns were much better than the negative 6.4% real return for bonds during that period. This disparity in returns encouraged pension funds to maintain their huge allocation to common stocks heading into the 1970's.¹²

1970's: Introduction to Real Estate

Between 1970 and 1974, inflation remained high and the real return for stocks and bonds plummeted in 1973 and 1974 as shown in Exhibit 3:

EXHIBIT 3

Year	CPI (Inflation)	Stock Real Return	Bond Real Return
1970	5.5%	<1.4%>	12.2%
1971	3.4%	10.6%	7.4%
1972	3.4%	15.0%	3.7%
1973	8.8%	<21.6%>	<7.1%>
1974	12.2%	<34.5%>	<13.6%>
Source: Frank Russell Company			

¹⁰ Eagles, Blake "Revisiting the Case for Pension Fund Investment in Real Estate," Frank Russell Company, 1990.

¹¹ John R. Thomas "US and Japanese Pension Policy," AIMR Seminar, April 1994.

¹² Frank Russell Company.

During 1973 and 1974, stocks lost a staggering 56% of their value and bonds declined by 22%. It was very clear that these results were in large part due to the high inflation rates. The high inflation rate environment had a twofold effect on pension funds. First, plan sponsors would have to increase their contribution levels going forward to cover the investment return shortfalls for the 1965-1974 period. Second, high inflation had driven up wages much higher than what had been actuarially estimated, thus significantly increasing the value of pension fund liabilities. This resulted in a number of under-funded pension funds where the present value of their liabilities exceeded the present value of their assets.

The threat of bankrupt pension plans prompted congress to pass the Employee Retirement Income Security Act of 1974 (ERISA). The goal was to impose fiduciary guidelines to legally ensure that plan sponsors responsibly managed pension fund assets. This meant that plan sponsors would be both legally and financially responsible for any mismanagement of a retirement plan. ERISA also established minimum vesting, funding, and reporting standards for employee retirement plans.

From an investment management perspective, ERISA made all fiduciaries subject to the “Prudent Man Rule,” which effectively required that they use investment allocation policy to minimize the risk of large losses via diversification by asset class. This put the focus on risk and return in a “total portfolio” context. ERISA did not specifically define adequate diversification, but rather mandated that plan fiduciaries exercise caution and employ good judgment in the investment process. Plan fiduciaries interpreted ERISA to mean that it would be prudent to evaluate investment alternatives beyond US stocks and bonds such as international stocks and bonds, venture capital, and real estate.

By 1975, the pension fund community had not made any significant real estate investments; however, plan sponsors were beginning to consider commercial real estate investment because the asset class:¹³

- Introduced potential inflation protection when compared to stocks and bonds.
- Reduced total portfolio risk due to estimated low correlation of return with stocks and bonds(modern portfolio theory).
- Represented the largest store of wealth in the world and as such should be included in a total market portfolio.
- Qualified as a prudent investment for the ERISA diversification requirement.

By 1979, US pension funds, primarily large public and corporate plans, had invested \$4.5 billion in commercial real estate, which represented less than 1% of the \$688 billion in total US pension fund assets. The investments were almost exclusively open-end commingled funds run by insurance companies and commercial banks. These primarily unleveraged funds purchased fully leased income producing properties with diversification by property type and geographical region.¹⁴

In this continued high inflation environment (inflation was 9.0% in 1978 and 13.3% in 1979), plan sponsors believed that real estate would continue to provide an effective inflation hedge thus ensuring positive real returns. In addition, the US commercial property market was exhibiting very solid supply/demand fundamentals (i.e. supply was not outstripping demand) and high mortgage interest rates were inhibiting new development.

As indicated by table 4 shown below, real estate performed well in the 1970's compared to other assets classes. Consequently, by the end of the decade, most pension plans had demonstrated an intent to begin or increase investment in commercial real estate. This flow of capital into real estate would continue well into the next decade.

¹³ Eagle, Blake "Revisiting the Case for Pension Fund Investment in Real Estate" Frank Russell Company, 1990.

¹⁴ Ibid.

EXHIBIT 4

Time Period	Average CPI (Inflation)	Stock Real Return	Bond Real Return	Real Estate Real Return
1975-1979 (five years)	8.1%	6.1%	<2.2%>	5.5%
1970-1979 (ten years)	7.6%	<2.4%>	<1.4%>	3.6%

Source: Frank Russell Company

1980's: Increased Real Estate Allocations and Overbuilding

After a solid performance by real estate investments for the prior five years, plan sponsors became increasingly knowledgeable about and comfortable with the asset class and began to consider higher risk real estate investment vehicles. The larger pension funds adopted a core/satellite approach utilizing as the "core" investment open-ended commingled funds (run by insurance companies and banks) and direct investments. Independent, advisor sponsored, closed end funds were used as the higher risk "satellite" or tactical investment vehicle. These smaller, entrepreneurial advisory firms offered many higher risk investment options for the pension fund community including participating debt/development funds, equity JV funds, highly leveraged funds, property sector funds, and geographic sector funds.¹⁵

By year-end 1984, US pension funds had \$41 billion invested in US real estate equities. This represented 3.15% of the \$1.3 trillion in defined benefit plan assets. The five year investment performance for stocks, bonds, and real estate is illustrate in Exhibit 5:

¹⁵ Davidson, Harold "The Pension Funds' Increasing Real Estate Commitment," Real Estate Review, 1982.

EXHIBIT 5

Year	CPI (Inflation)	Stock Real Return	Bond Real Return	Real Estate Real Return
1980	12.4%	17.8%	<15.4%>	5.0%
1981	8.9%	<12.7%>	<9.3%>	7.3%
1982	3.9%	17.1%	37.2%	5.4%
1983	3.8%	17.9%	2.4%	9.1%
1984	4.0%	2.1%	12.4%	8.8%
Five Year Average	6.5%	7.7%	4.4%	7.1%
Source: Frank Russell Company				

By year end 1984 there were clear signs of too much capital fueling speculative development and systemic overpayment for properties based upon anticipated appreciation. Despite the signs, most large public and private defined benefit plans had decided to allocate 10% of their portfolios to commercial real estate equities, and the majority of the medium and small sized plans followed their lead. Once these allocations were set, pension plans had to compete against each other and other investors for attractive real estate investments. Certainly, the investment advisory firms, which were compensated based on assets under management, were very willing to invest this capital as soon as possible, even if it meant buying in softening markets.

For the next five years, pension capital continued to flow into real estate, even though most markets continued to show further signs of weakness due to overbuilding. Unfortunately, pension fund capital was joined by massive capital inflows from syndication, savings and loans, commercial banks, life insurance companies, and foreign financial institutions, the combination of which inflated prices and encouraged additional building.¹⁶

¹⁶ Martin, Vince "Commentary on Current Marco Market Factors" TCW Realty Advisors, 1990.

By year-end 1989, pension funds had invested \$113 billion in real estate equities. For the last five years of the decade, real estate's average annual real rate of return was half of what it had been in the first five years, as illustrated in Exhibit 6. This disappointing performance by the real estate sector was a direct result of the overbuilding, which in turn was caused by too much mis-priced capital funneling into development. It should also be noted that the real estate returns were based upon the Russell-NCREIF index, which is based upon appraised property values. Appraisals are generally backward-looking and include a lagging effect or bias. Since the returns are not based upon market transactions, the "true" performance may actually have been even worse.

EXHIBIT 6

Year	CPI (Inflation)	Stock Real Return	Bond Real Return	Real Estate Real Return
1985	3.8%	26.8%	25.3%	6.0%
1986	1.1%	16.9%	18.5%	5.3%
1987	4.4%	0.7%	<4.5%>	0.9%
1988	4.4%	11.6%	6.0%	2.6%
1989	4.6%	25.6%	11.1%	1.4%
Five Year Average	3.7%	15.9%	10.8%	3.2%

Source: Frank Russell Company

1990-1996: Real Estate Capital Shortfall and the REIT Boom

The excess supply that softened real estate markets in the 1980's continued to create havoc in the 1990's. In 1990, the average national vacancy for all commercial space was 18% and net absorption was 1%.¹⁷ To exacerbate the weak absorption problems, the US economy was in a recession, which further decreased the demand for space. In addition, traditional real estate investors such as insurance companies, foreign institutional investors, and pension funds were

¹⁷ White, John Robert "Real Estate in the 1990's" Working Paper, 1990.

trying to reduce their real estate exposure and, in so doing, flooded the market with properties for sale. In aggregate, these factors severely depressed prices and created dismal real estate returns for the first few years of the decade.

High vacancy rates and depressed prices presented opportunities for ample back end appreciation when markets eventually improved. Despite these positive factors, private real estate capital had virtually disappeared. This capital crunch created tremendous opportunities for non-traditional real estate players including many Wall Street firms, who quickly stepped in to fill the capital void in 1991-1995 by creating vulture funds and revitalizing the public REIT market. The capitalization of the REIT market (excluding health care) grew from \$10 billion in 1991 to approximately \$100 billion by year-end 1996. Despite the exciting opportunities, most pension plans remained net sellers of real estate, with very few participating in the growth of REITs and vulture funds.

Many experts argue that it was the poor performance and the misalignment of interests of commingled funds that soured pension funds on real estate at that time. Commingled funds were the predominant investment vehicle of the 1980's and the first half of the 1990's; however, the funds provided pension plans no way out during the down cycle. Also, because of the fact that advisors were compensated based upon total assets under management, they had no incentive to pass up acquiring marginal properties or to sell properties in a declining market. These combined factors lead to poor decisions and exacerbated an already frustrating situation.

Although the outlook for real estate investment has improved during the mid 90's, many pension plans are still hesitant to return to their prior real estate allocations. However, other pension plans have recognized the opportunities and are looking to increase their allocations to real estate equities. This next wave of pension real estate investment is likely to be different than prior waves. After the carnage of the late 1980's and early 1990's, most pension plans appear to be committed to analyzing real estate investments based more on its total risk/return compared to alternative investments and less on its diversification and inflation hedging characteristics. This idea will be further discussed in the following chapter.

CHAPTER THREE

The Role of Real Estate in a Pension Fund Portfolio

As discussed in Chapter 2, significant pension fund investment in real estate did not occur until the 1970's when inflation was very high and modern portfolio theory was becoming increasingly accepted. Given these two phenomena, core real estate's role in the pension portfolio was clear: to protect against inflation and to further diversify the portfolio. Today, however, the role is not so clear. There are more types of real estate investments to choose from offering vastly different diversification and inflation protection and risk/return characteristics. In the following chapter, we will discuss the benefits of diversification and inflation protection and examine their importance in today's real estate investment. In addition, we will examine the varying real estate investment characteristics or styles and the need for each pension plan to identify clear objectives or strategies before selecting an appropriate real estate.

DIVERSIFICATION

Modern portfolio theory (MPT) suggests that an investor should maximize risk-adjusted portfolio returns by including investments, or investment classes, whose expected returns are not highly correlated.¹⁸ Low correlation implies that external factors or economic shocks such as interest rate movements or a large increases in oil prices affect assets within a diversified portfolio differently. The lower the correlation between assets, the greater the unsystematic risk¹⁹ reduction to the portfolio. In the 1970's, plan sponsors, like other institutional investors, began to embrace MPT and sought investments that served to diversify their portfolios. With this in mind, many turned to real estate.

¹⁸ Ziering, Barry and McIntosh, Will, "Revisiting the Case for Including Core Real Estate in a Mixed-Asset Portfolio" *Real Estate Finance* Winter 1997.

¹⁹ Unsystematic risk is defined as risk unique to a single investment and one that is diversifiable.

Historically, private real estate returns have exhibited a low, or even negative, correlation with stocks and bonds. Exhibit 7 reports negative correlations between private real estate and other asset classes during the period between 1976 and 1995.

EXHIBIT 7

Historical Returns, Standard Deviations, and Correlation Coefficients 1976 - 1995

Mixed Asset Correlation Matrix									
Investment	Mean Qtr. Return	Std. Dev.	Annual Real Return	S&P 500 Index	Small Cap. Stock	L-T Gov't Bonds	NCREIF Index	NAREIT Index	Foreign Stocks
S&P 500 Index	3.72%	7.16%	8.89%	1.000					
Small-Cap Stocks(a)	5.19%	11.37%	13.63%	0.766	1.000				
L-T Govt. Bonds (a)	2.72%	6.56%	4.96%	0.411	0.196	1.000			
NCREIF/PRISA (c)	2.05%	1.84%	2.98%	-0.079	-0.026	-0.190	1.000		
NAREIT Index	3.95%	7.12%	9.91%	0.651	0.761	0.332	0.082	1.000	
Foreign Stocks (b)	3.97%	8.81%	9.42%	0.559	0.414	0.357	0.023	0.503	1.000

(a) Ibbotson & Associates
 (b) Morgan Stanley EAFE
 (c) The Prudential PRISA portfolio is used for 1976-1978

According to modern portfolio theory, complete diversification is achieved by first constructing a market portfolio that consists of value-weighted investments in all possible asset types or classes. One could think of this as an index fund for the entire investable universe. An investor would then borrow or lend at the risk-free rate (i.e. buy or sell T-Bills) to adjust the portfolio for risk tolerance.

Using this framework, several studies have been conducted to determine an appropriate allocation to commercial real estate. A 1976 study by the Frank Russell Company and Solomon Brothers suggested a 27% allocation. A more recent 1996 study by Michael Miles had similar

results with a 25% allocation. It is interesting to note that as of year-end 1996, the average pension fund allocation to real estate was less than 4%. This suggests that pension funds may not totally agree with the academic view of optimal diversification by asset class and that they consider other factors when determining investment allocations.

Portfolio theory also suggests that diversification is needed within the asset class. The reason it is so important to diversify within a private real estate portfolio is because the individual assets have a great deal of unsystematic or property-specific risk that is minimized only by investing in a large number of properties spread across property type and geographic area. Unfortunately, there are no index funds available for private real estate investment. Thus, a pension fund must either build its own large, diversified portfolio, which requires a large amount of capital and manpower, or invest a smaller amount of capital in a large, diversified, pooled fund run by a third party.

Inflation Hedge

The other common argument for investing in real estate is that it provides an excellent hedge against unanticipated inflation. Pension plans are particularly concerned with inflation risk because it affects both sides of their balance sheets. On the asset side, unanticipated inflation reduces the real rates of return of its investments. On the liability side, the fund is hurt again by cost of living adjustments paid to the plan beneficiaries, creating additional strain on an already impaired asset portfolio.

As illustrated in Exhibit 8, private real estate is the only major asset class that is strongly and positively correlated with inflation. This means that when inflation increases, the losses incurred by other assets are partially offset by gains in the real estate portfolio. However, the degree to which private real estate acts as a hedge varies with conditions in the space markets.²⁰ When markets are in balance, e.g., the supply of space matches the demand for space, owners are able

²⁰ Wurtzbaach, Charles H., "Commercial Real Estate as a Portfolio Inflation Hedge," *JMB Perspectives*, Volume 2.

to pass on rental and expense increases to tenants. Therefore, the property's return increases. However, when there is excess supply in the space markets, owners have far less negotiating power, and are less likely to be able to increase rents to keep up with inflation. This phenomenon is illustrated in Exhibit 8. Notice that the correlation between private real estate and inflation was the lowest during the late 1980's, a period of largely overbuilt space markets. Notice also that in nearly all time periods, real estate had a higher correlation than any other asset class.

EXHIBIT 8

Correlation with Inflation					
Investment	1976-1995	1976-1980	1981-1985	1986-1990	1991-1995
NCREIF/PRISA	0.493	0.581	0.018	0.129	0.137
S&P 500 Index	-.151	-.002	-.462	-.136	-.093
Small-Cap Stocks	-.029	-.268	-.251	-.092	-.243
L-T Govt. Bonds	-.346	-.118	-.469	-.605	-.047
L-T Corp. Bonds	-.349	-.142	-.548	-.538	-.047
NAREIT Index	-.079	-.248	-.538	-.346	-.359
Foreign Stocks	-.251	-.083	-.478	.649	.071
Source: FrankRussell Company					

Where Do REITs Fit In ?

Up to this point, the discussion of real estate's role in a pension fund portfolio has been restricted to the benefits of private real estate investment as a diversifier and as an inflation hedge. REIT stocks are an alternative real estate investment that differ from direct or private investment in that they represent an investment in an ongoing business, not just a piece of property. There is presently much debate in both academia and professional circles about the relative value of REIT

investment with respect to diversification benefits, inflation hedging, and its risk/return profile.

Exhibit 7 indicates that for the period 1976-1995, direct real investment (Russell-NCREIF index) had a correlation of -0.79 with stocks and -0.019 with bonds whereas REITs (NAREIT index) had a 0.65 correlation with stocks and 0.76 correlation with bonds. This analysis also indicated a low .082 correlation between the NCREIF and NAREIT indices. Several academicians have disputed the implications of these findings based upon shortcomings of the NCREIF index, namely that the index is appraisal-based and is therefore subject to a lagging effect. In 1995, Geltner et al.²¹ studied this relationship using a five-year interval instead of the quarterly interval used in the index, claiming that the five-year interval more realistically matches real estate's average holding period. In addition, Geltner de-smoothed the NCREIF index return and deleveraged the NAREIT return for a more appropriate comparison. The results indicated a 0.338 correlation between the NCREIF and NAREIT indexes, which was much higher than the .082 correlation originally calculated in Exhibit 7. These findings suggests that investors may achieve diversification benefits by holding both private and public real estate in a portfolio.

Geltner also conducted a mean-variance efficient frontier analysis for various expected real returns over a five-year interval. For an expected real return of 25%, Geltner determined that an 8% REIT allocation and a 43% direct real estate allocation would be optimal. For an expected real return of 45%, the optimal allocations shifted to 11% for REITs and 8% for direct holdings. A similar study conducted in 1995 by Hartzel et al.²² also concluded that institutional investors could obtain diversification benefits from including both public and private real estate in a diversified portfolio.

²¹ Geltner, Rodriguez, and O'Connor "The Similar Genetics of Public and Private Real Estate in the Optimal Long-Horizon Portfolio Mix," *Real Estate Finance*, Fall 1995.

²² David J. Hartzel, Charles H. Wutzebach, and David E. Watkins "Combining Publicly Traded Real Estate Securities with Privately Held Portfolios," *Real Estate Finance*, Fall 1995.

The data indicate that REITs are far less effective than private real estate as an inflation hedge. As discussed earlier, for the period between 1976 and 1995, the Frank Russell company determined that direct real estate investment is the only asset class that exhibited positive correlation with inflation. The study reported a private real estate inflation correlation of 0.137 as compared to -.359 for REITs. These general findings were confirmed by Hartzell's 1996 study.

Direct investment in real estate and REIT investment must also be considered within a risk/return framework. For the period 1976-1995, the NCREIF index provided an average annual real return of 3% whereas the NAREIT index provided a 10% real return. Thus, on a total return basis, REITS have performed much better; however, REITs also have greater financial risk as evidenced by an average leverage amount of 40% of total capital compared to the unleveraged NCREIF return.

Whether or not REIT investment is appropriate for a specific pension fund will depend upon their view of diversification benefits, inflation hedging qualities, and return objectives for the fund. Clearly REITs appear to have a higher risk/return profile and this suggests that they may be more appropriate for pension funds with aggressive return objectives and higher risk tolerances.

Investment Styles

Pension real estate investing has come a long way since the time when pension funds and their advisors sought to assemble a portfolio of "deals", each of which seemed appealing in isolation, but taken together may provide unexpected risk/return characteristics.²³ The plan sponsor may now choose from both securities and direct investments and can more easily rebalance portfolios of public securities. This versatility requires that plan sponsors develop clear objectives and not fall into the trap of treating all real estate the same. In Jacques Gordon's article, he stresses the importance of determining strategies that "explicitly seek returns for pre-defined levels of risk."

²³ Gordon, Jacques N., "Investment Styles for Property Investors," *PREA Quarterly*, Spring 1997.

He also discussed the following “styles” that characterize real estate investments:

Income - A real estate investment whose performance is dominated by the income component of return, not the appreciation of the real estate. For example, a single-tenant building leased long-term to a high credit quality tenant. This style closely resembles fixed-income investing.

Balanced (Income and Growth) - This style includes properties with periodic exposure to the leasing market, having components of both income and capital appreciation. For example, a shopping center that is close to fully leased, but that contains leases that rollover periodically, marking the property to market. This type of property often characterizes the portfolios of many publicly traded REITs.

Value (High Yield) - This style includes properties with leases well above current market levels or underperforming REITs. Careful underwriting is needed to understand how much risk accompanies the opportunity to earn higher yields.

Growth - This style includes investments in recovering markets with low occupancy rates but increasing absorption and rent levels. The higher capital appreciation possibilities require that the investor be willing to take leasing risk. This strategy usually causes the investor to forego current income for capital appreciation, which is expected to provide more than half of the total return.

Opportunistic - This style includes investments in highly inefficient markets often with owners under financial duress. International investment and investment in speculative development are also considered opportunistic investments. Like growth, most of the total return is expected to come from the back end and the timing of the income stream is difficult to predict.

These styles, or categories, provide an excellent framework which investors may use to analyze potential investments. As Gordon explains, the goal should be for plan sponsors to know in advance what to expect from a real estate investment and how it will affect the portfolio.

Why Are Some Pension Funds Exiting Real Estate?

While some pension plans are increasing their real estate allocations, many others are getting out of real estate altogether. According to Barry Ziering and Will McIntosh (1997) many pension plans have replaced a risk minimizing approach with one emphasizing higher risk for higher returns. The authors state that this shift could mean several things: 1) pension plans are less risk averse than they once were (at least with real estate), 2) pension plans no longer believe that core real estate has the potential to provide portfolio-level diversification and inflation hedging benefits, and/or 3) investors believe the issues of liquidity, pricing, transaction cost, and the “staff-intensive” nature of private real estate outweigh the portfolio benefits it can provide.

Three pension plans have recently publicly announced that they will be liquidating their real estate portfolios and exiting the asset class altogether. The largest of these is the \$12.6 billion State of Connecticut Trust Funds that will be liquidating its \$1.1 billion real estate portfolio. State Treasurer Christopher Burnham stated that the move was caused by poor performance (average annualized return for seven years ended 6/30/95 of -19%). Sun Co. Inc., a \$1.2 billion master retirement trust, is eliminating its 10% real estate allocation, partially because of poor performance. According to Richard L. Veith, director of trust investments, any future investment in real estate will be opportunistic. EG&G, a \$340 million pension fund, is also exiting real estate, due to its poor liquidity and performance.

While we don't know the specifics behind these decisions, each one was at least partially based on weak performance. Were their expectations rational? Many investors who believed they had diversified portfolios were burned in the early 1990s and now believe that real estate failed as an asset class. However, in many cases, a careful analysis would indicate that many of these portfolios actually contained significant levels of uncompensated risk imbedded in them, such as concentration risk and severe illiquidity (Stoesser 1996). Perhaps plan sponsors need to do a better job at creating objectives for their real estate investments and pay more attention to their unique risk/return characteristics. This task is likely to become more difficult as the variety of real estate vehicles expands.

CHAPTER FOUR

Public and Private Investment Vehicles

In the prior chapter, we discussed the importance of establishing clear investment objectives for a real estate investment. Once these objectives are identified, the plan sponsors must then decide on an appropriate investment vehicle, from which there are many to choose. Today, private investment vehicles include acquisitions by in-house staff, commingled funds, separate accounts, investment in private operating companies or private REITs, joint ventures, and opportunistic funds. Public investment vehicles include REITs and REOCs (C-corporations). This chapter will briefly define these investment vehicles and discuss the pros and cons of each with respect to investment control, liquidity, investment management costs, risk and return, franchise value, and alignment of incentives.

PRIVATE INVESTMENT VEHICLES

Acquisitions by In-House Staff

Definition: Acquisition of a portfolio of property completed by staff members of the pension fund real estate group with no advisory help. These investments are usually class A property with low vacancy rates. They are typically core investments financed with 100% equity.

Investment Control: Pension fund has total control of the investment.

Liquidity: Typical liquidity for a direct holding. Asset sales are via brokers with a two to six month selling period.

Internal Investment Management Costs: A sizable real estate staff is needed for market research, acquisitions and dispositions, and asset management.

External Investment Management Costs: No additional fees other than brokerage fees for dispositions and typical third party management fees for portfolio properties.

Risk and Return Profile: Target returns for unlevered acquisitions are in the 9% to 12% range with the income component representing the majority of the return. Risk is perceived to be moderate because of the below average leasing risk and financial risk.

Franchise Value: None. There is no operating business involved.

Alignment of Incentives: Not an issue because there are no third party advisors. However, in-house staff are interested in job preservation so they may be reluctant to suggest a large sell-off of property even when such a decision may be prudent.

Commingled Funds

Definition: Typically a ten-year locked-in investment into an unleveraged, closed end fund or partnership with a specific investment strategy (usually diversification by property type and geography). This vehicle was very popular in the 1980's with small and mid-sized pension funds that did not have enough capital or manpower allocated to real estate to build their own well-diversified portfolios.

Control of Investment Decision: By definition, a pension fund has no control in a commingled fund and cannot influence investment decisions or request redemptions prior to the maturity. A sale of the partnership interest is difficult but possible.

Liquidity: Commingled fund interests were highly illiquid in the late 1980's and early 1990s because there were no potential buyers. In addition, the investors could not redeem their portion of fund value until maturity, which was usually ten years from inception. Even today the sale of a partnership interest would take several months.

Internal Investment Management Costs: With commingled fund investment, the pension fund does not need a large internal staff to monitor the investments going forward because the money is effectively tied up for a ten year period.

External Investment Management Costs: Commingled fund managers receive an annual fee for assets under management based upon appraised value in addition to acquisition and disposition fees. These fees could easily add up to 2% annually.

Risk and Return: Most commingled funds contain only equity, with little or no leverage utilized. The return objective is typically income-oriented with a target net return of 7% to 10%. The risk profile is assumed to be below average because the portfolios consisted of fully leased class A properties diversified by property type and geography. In addition, most investors, especially in the 1970's and 1980's, sought out these investments for an inflation hedge and for a low correlation to stocks and bonds.

Franchise Value: Commingled funds have minimal franchise value. They are a current return driven, finite life investment vehicle. How a specific fund performs relative to its peers will be the determinant as to whether or not an advisor gets additional funds from investors. Today, few investors have any intention of rolling over their investments when the fund matures because of inferior returns in the late 1980;s and early 1990s.

Alignment of Incentives: Commingled funds have been criticized for having poor alignment of incentives. This criticism stems from the following: the capital is locked up for a long period of time regardless of performance, the manager receives a management fee based on assets under management instead of performance, and these managers often have no co-invested capital at risk.

Separate Accounts

Definition: These accounts are designed for institutional investors willing to commit large sums of money to an investment advisor or manager. The advisor or manager typically assembles and manages a portfolio of properties tailored to the investor's specific investment criteria.

Control of Investment Decision: The investment decisions are made by either the pension plan sponsor or the investment manager, depending upon how the account was set-up. Typically an investment advisor has no investment discretion whereas an investment manager has full

investment discretion. The authority to make dispositions decisions typically resides with the plan sponsor.

Liquidity: Separate account investments are typically direct hold investments. Once a sell decision has been made by the pension fund, a broker is hired and the sale typically takes two to six months.

Internal Investment Management Costs: A small to medium sized in-house staff is required to manage separate account investments because the pension fund needs to track ongoing performance and ultimately decide the timing for dispositions.

External Investment Management Costs: Separate account compensation was originally similar to commingled funds with a fee for assets under management, acquisition fees, and disposition fees. In the past few years, pension funds have required that these compensation arrangements be altered to include performance-based components.

Risk and Return: Separate account investments are usually unlevered portfolios of fully leased class A properties. The return objectives are high current income with modest capital appreciation and total returns in the 7% to 10% range. The risk profile depends upon the individual investment strategy, but is typically relatively low-risk.

Franchise Value: There is no franchise value related to a separate account. It is a relatively static portfolio of properties with acquisitions performed by the investment advisor/manager and third party property management.

Alignment of Incentives: If the fee structure is based upon assets under management, then there is a poor alignment of incentive, similar to the old commingled funds. If the compensation is a modest asset management fee with a back-end performance based fee, then there is a better alignment of interest with the pension fund client.

Ongoing Investment in Private Operating Companies or Private REITs

Definition: Permanent equity investment in a non-public real estate operating company or REIT. It is an investment in a ongoing business, not the purchase of a property or group of properties. This is a passive investment vehicle with no day to day responsibility; however, a pension fund may have a seat(s) on the company's board of directors, depending on their percentage ownership. If the fund owns more than 50% of the company, then it actually controls the board of directors.

Control of Investment Decision: This depends upon the level of investment. If the pension fund owned a majority of the voting stock, then clearly control would rest with the pension fund. In most cases, the pension fund is a minority owner with some limited ability to influence operating decisions. Overall, the investment is primarily considered passive.

Liquidity: Again, if the pension fund is the majority owner, then it could direct a liquidation of the company or specific assets. As with most direct holdings, this would take two to six months. If the pension fund is a minority owner, then the investment is much less liquid. Detailed legal documentation (usually heavily negotiated) typically outline the pension fund's rights and remedies if they want their interest liquidated. The time period for this type of sale is usually much greater than six months, with the majority owner having a right of first refusal. An IPO or a sale of the business to an existing public REIT are two viable exit strategies for this investment vehicle.

Internal Investment Management Costs: This depends on the degree to which the pension fund wants to be involved with the company's operations. Typically, a pension fund would need to dedicate part of its real estate staff to monitor the investment. Any decisions to liquidate the holding would obviously require more of a time commitment.

External Investment Management Costs: If the company is self-administered, there are no advisory fees; however, it is important to link the company's management compensation to long term performance, not large annual salaries and bonuses.

Risk and Return: This investment vehicle usually has a high risk profile because of the exposure to development risk and the increased financial risk from company leverage of over 50%. Expected returns on this equity range from 15% to 25% depending upon the company's investment and development activities.

Franchise Value: A superior private company can enjoy considerable franchise value in the form of lower debt costs, local market area expertise, low operating costs, and new business from strong tenant and brokerage relationships.

Alignment of Incentives: If the day-to-day managers have their own capital at risk and their incentive compensation is tied to performance measures, then there will be a good alignment of interest between the managers and the pension fund. If the managers have no co-invested capital and extremely high base salaries, then the appropriate incentives may not be in place.

Development Joint Ventures (JV)

Definition: This is typically an investment in a stand alone development deal or an acquisition of a large property with low occupancy and needed renovations. These investments are usually made only by pension funds with a large real estate allocation. It is not uncommon for the joint venture partner to be a private operating company or even a public REIT.

Control of Investment Decision: This is a difficult issue. The pension fund usually provides the majority of the equity capital but the operating partner controls the day-to-day operations. Control of the investment is a heavily negotiated item. Although the JV agreement may state that the pension fund has most of the control, in reality, the operating partner runs the deal and makes progress reports to the pension fund.

Liquidity: As with the investment in a private operating company, problems can arise when one party wants to liquidate and one party does not. Even though most JV agreements include detailed provisions on the procedure for a forced sale, litigation is not uncommon. If both parties agree on a sale and a sales price, then the sale period is two to six months. If there is a disagreement, the process can take years.

Internal Investment Management Costs: Oversight of a development deal, especially a large one, requires a large time commitment. Clearly, a pension fund needs an in-house dedicated staff to oversee these complex investments.

External Investment Management Costs: It is not uncommon to hire an external construction manager to provide third party monitoring of the progress prior to funding.

Risk and Return: This investment is a high-risk vehicle with a target return of 20% +. The pension fund undertakes construction risk, lease-up risk, and financial risk due to the high leverage (70%+).

Franchise Value: The reputation of the JV partner may result in a lower debt cost; however, beyond that, there is minimal franchise value.

Alignment of Incentives: This depends upon the legal structure. There are many ways to help align the interests, such as co-investment of capital, preferential returns to the pension fund, and performance or back-end based fees.

Opportunistic Funds

Definition: This is usually a closed end fund for investment in development, redevelopment, or international real estate investment. The funds are typically sponsored by Wall Street firms; large advisory firms, such as Apollo or AEW; or large real estate firms with capital markets divisions such as Trammell Crow, Koll, or Hines. These funds are similar to the commingled funds of the 1980s in that they have a fixed investment horizon; however, unlike most commingled funds, the fee structures have a performance-based component.

Control of Investment Decision: None. This is a passive investment with the investment fund sponsor making all acquisition and liquidation decisions.

Liquidity: Minimal. Again, the investment is locked in for a fixed time period (three to ten years). Sale of a partnership stake is possible, but difficult.

Internal Investment Management Costs: Minimal in-house monitoring is needed because the investment is passive (the fund sends out monthly update reports).

External Investment Management Costs: These funds usually have large fees including development fees, acquisition fees, asset management fees, etc. in addition to back end fees if certain performance hurdles are achieved.

Risk and Return: These are risky investments with target returns in excess of 20%. Allocations to this vehicle is similar to an investment in a venture capital fund with the investments sharing a similar entrepreneurial nature.

Franchise Value: Moderate. The investment fund sponsor's real estate operating reputation may be perceived as franchise value.

Alignment of Incentives: Incentives are aligned as long as the bulk of the sponsor compensation is tied to performance, or better yet, the sponsor co-invests capital.

PUBLIC INVESTMENT VEHICLES

Public REITs and REOCs

Definition: Investment in publicly traded shares of a REIT or REOC (C-Corp). Investment could result from secondary market stock purchases, private equity placements, stock for property swaps, or advisor/operating company roll-ups.

Control of Investment Decision²⁴ Usually none, unless a pension fund owns enough shares to merit a seat(s) on the board of directors, in which case there may be some ability to influence investment policy. For example, Ameritech pension trust recently completed a \$162 million property for stock swap with Meridian Industrial Trust, which gave Ameritech a 30% ownership in the company.

²⁴ This section refers to the real investment decision related to the development, acquisition, or disposition of real property, not the purchase or sale of the marketable security.

Liquidity: Marketable securities are very liquid relative to direct investments. The selling costs are considerably less and the sale of a position could occur anywhere between immediately and a few days, depending upon the size of the position relative to the stock's average daily trading volume. While most agree with the liquidity benefits, critics would suggest that in a down market it would be difficult for a pension fund to quickly liquidate a large position in a REIT stock.

Internal Investment Management Costs: In-house managers are usually equity managers that oversee other industry investments besides real estate. Selling costs are the brokerage commissions, which again are considerably less than the commercial brokerage commissions paid for the sale of a direct property investment.

External Investment Management Costs: Outside advisors fees are comparable to other stock management fees in the 25-50 basis point range, which are considerably less than direct investment advisory fees. In addition, there are the usual brokerage commissions when REIT stocks are sold.

Risk and Return: REITs are generally considered moderate to high-risk investments, depending on the individual company. The investment is exposed to development risk, lease-up risk, and financial risk with average leverage around 40% of total capital.²⁵ Target returns for REIT investments vary between 10% and 15% with at least half of the return coming from the income component.

Franchise Value: There can be significant franchise value as evidenced by the fact that most REITs are presently trading at a premium to net asset value.²⁶ Lower cost of capital and the ability to lever off of strong relationships with tenants are examples of this franchise value. These benefits are similar to those found for a superior private real estate company.

Alignment of Incentives: Incentives are aligned through management ownership and stock

²⁵ Paine Webber.

²⁶ Green Street Advisors.

options. REIT managers usually own a significant percentage of the company in the form of UPREIT operating partnership units, not publicly traded shares. While management ownership is generally considered a good thing, the ownership of UPREIT partnership units may cause conflicts with owners of marketable shares in the REIT when taxable transactions are being considered²⁷. These conflicts are usually only a problem in the rare instances where management owns a majority of the company.

SUMMARY

The following table summarizes the attributes of the various investment vehicles. Which vehicles are appropriate for a given pension fund depends upon their preferences concerning these attributes. For funds that value total investment control, direct acquisitions and separate accounts may make sense. REITs are the clear winner if liquidity and the ability to quickly rebalance or sell a portfolio are important. REITs are also the most favorable with respect to total investment management cost (internal and external combined). Opportunistic Funds and Development joint ventures have the highest risk profile, followed by REITs and private operating companies, then unlevered direct holdings (separate accounts, commingles funds, and in-house acquisitions). Franchise value primarily applies to private operating company and public REIT investment. Finally, proper alignment of interest between principals and agents depend upon the specifics of the arrangement.

²⁷ For example, the sale of an UPREIT to a non-UPREIT would generate a taxable gain for the UPREIT operating partnership unit holders but a sale to another UPREIT would be a tax-deferred transaction. IF the first transaction was a better deal for the stockholders but a worse deal for the partnership unit holders, then there could be a conflict.

Investment Vehicle Matrix							
	Investment Control	Liquidity	Internal Investment Cost	External Investment Cost	Risk Profile	Franchise Value	Alignment of Interests
In-House Acquisitions	Very High	Moderate	High	Low	Moderate	Low	Moderate
Commingled Fund	Low	Low	Low	High	Moderate	Low	Low
Separate Account	High	Moderate	Moderate	Moderate	Moderate	Low	Moderate
Operating Company	Low	Low	Low	Moderate	High	High	Moderate
Development JV	Moderate	Moderate	High	Moderate	Very High	Low	Moderate
Opportunity Fund	Low	Low	Low	High	Very High	Moderate	Moderate
REIT/REOC	Low	Very High	Low	Low	High	High	Moderate

CHAPTER FIVE

Survey Results

There has been a lot of speculation in both academia and the pension fund advisory community about how pension funds will alter their real estate investment activities in light of their recent negative experiences with the asset class and the revitalization of the public market. The literature on the subject suggests that no one really agrees and that there are clear biases, especially among the private real estate advisory firms. In hopes of avoiding these biases, we went directly to the source, the plan sponsors. The following data is based upon survey results of 26 pension plans ranging in size between \$1.5 billion to over \$58 billion with aggregate real estate equity holdings in excess of \$18 billion or just under 15% of total pension fund equity real estate holdings. We have used these results to identify current trends in pension fund real estate investment.

Total Plan Assets and Real Estate Allocations

Aggregate plan assets and total equity real estate investment for 1992, 1997, and a 2002 projection were reported as follows:

	1992	1997	2002
Total Plan Assets	\$125.4 billion	\$248.0 billion	\$344.6 billion
Real Estate Investment	\$11.3 billion	\$18.2 billion	\$26.2 billion
Real Estate as a % of Plan Assets	9.0%	7.6%	7.9%

For the five-year period 1992-1997, aggregate plan assets grew by a very strong 98%, while real estate investments grew by 61%. The growth in total plan assets was fueled by significant

increases in sponsor funding due to improved employment conditions and by asset appreciation due primarily to fantastic equity returns. The five-year forecast for 1997-2002, suggests a more modest growth in total plan assets of 39%, with a 44% growth in real estate exposure.

The 7.6% average real estate allocation reported by our survey is significantly higher than the 2.8% reported by Greenwich Associates²⁸. This disparity is caused in part by the fact that our participants are all members of the Pension Real Estate Association and as such, are all presently real estate investors whereas a large number of pension funds do not invest in real estate at all. However it is interesting to note that 15% or 4 out of the 26 respondents have indicated that they will gradually exit real estate investment altogether over the next five years.

The current real estate allocation is down considerably from 1992, reflecting significant growth in total plan assets and a period of poor real estate performance. The 2002 projections are more favorable for real estate, with a slightly higher real estate allocation. Many respondents commented on the difficulty of creating and maintaining a target real estate allocation. One respondent said of private real estate, "It's difficult for us to pin down an allocation for a highly illiquid asset class when we are working within a portfolio that changes every day."

Real estate as a percentage of total plan assets is a function of three factors: changes in target allocations, the performance of the existing real estate investments, and the performance of the other assets in the plan portfolio. These dynamics exhibit the difficulty in strategic portfolio management due to asset value fluctuations. A fund can target an 8% allocation to real estate, but unanticipated increases in real estate performance coupled with unanticipated decreases in other asset classes could result in a real estate exposure that is significantly higher than the target allocation. The reverse is also possible.

²⁸ Greenwich Associates (1996).

Choice of Investment Vehicles

Although the above data indicates that real estate allocations are not expected to change significantly, our analysis suggests that the way in which real estate capital is invested is likely to change.

The following table illustrates some of the trends as indicated by the survey results:

Investment Vehicle	1992	1997	2002
Commingled Fund	34%	30%	21%
Separate Account	41%	46%	44%
Private Operating Co.	5%	5%	4%
Development JV	20%	6%	3%
Opportunistic Fund	0%	7%	11%
REIT Stocks	0%	6%	17%

There is a clear trend towards reducing investment in commingled funds. As discussed in chapter four, this vehicle has been maligned for poor investment performance, lack of investment control, lack of liquidity, and misalignment of incentives between the investment managers and the investors. As commingled funds drop in popularity, separate accounts should become an increasingly dominant vehicle for direct investment over the next five years. Although these accounts require a larger capital commitment, they are generally considered a better direct investment alternative because of increased investment control and improved alignment of incentives.

Together, commingled funds and separate accounts will make up the majority of private real estate investment, with a decreasing share of the pie going to permanent co-investment in private real estate operating companies and development joint ventures. Lack of control and liquidity, particularly the lack of a clear “exit “ strategy, could be possible reasons for the decline in these

two vehicles; however, these issues do not appear to be major deterrents against opportunistic fund investment, as it is expected to grow over the next five years.

The most significant trend reported by this survey is the trend towards increased REIT investment. Assuming total pension real estate investment grows 44% (\$125 billion to \$180 billion) by 2002, as suggested by the survey and that the average REIT allocation grows from 6% to 17%, total pension investment in REITs will increase nearly 4.5x from \$7.5 billion to \$30.6 billion. For a REIT market that is currently only \$100 billion, this \$23 billion increase over the next five years is substantial. As mentioned in Chapter 4, the appeal of these vehicles is obvious: much better liquidity, better alignment of interests, low investment management costs, and good alignment of incentives.

Target Returns, Investment Categories, and Investment Vehicles

The respondents were asked to project average annual total nominal returns for the following investment categories: Core/Core +, Growth, and Opportunistic. The results were as follows:

Investment Category	Projected Annual Total Nominal Return
Core/Core +	9%-12%
Growth	14%-17%
Opportunistic	18%-25%

The respondents were also asked which investment vehicles were appropriate for a given investment category. The respondents were given the option to choose more than one vehicle for each category. The percentage of respondents that believed that the vehicles were appropriate were as follows:

Investment Vehicle	Core/Core +	Growth	Opportunistic
Commingled Fund	86%	28%	43%
Separate Account	93%	47%	28%
Private Operating Co.	19%	14%	19%
Development JV	43%	33%	28%
Opportunistic Fund	28%	28%	81%
REIT stocks	38%	71%	23%

The results indicate that commingled funds and separate accounts are viewed as the predominant Core/Core + investment, REITs as the Growth vehicle, and Opportunistic Funds as the high risk/return vehicle. Separate accounts appear to be the most versatile vehicle, with a significant number of respondents checking the vehicle for all investment categories.

Strategic vs. Tactical Investment Policy

As we discussed in Chapter 3, real estate is being analyzed more and more on a risk/return basis, just like any other investment. This may suggest that investors are less concerned with the diversification and inflation hedge benefits that real estate has to offer and are not necessarily committed to holding a predetermined level of real estate. Our survey results support this idea with 60% of the respondents indicating that owning real estate is primarily a tactical decision as opposed to a strategic decision.²⁹ We also found that these respondents had a higher allocation to REITs and opportunistic funds than did those who chose strategic.

²⁹ Strategic is defined as a longer term hold investment with pre-set diversification levels and passive management. Tactical is defined as a shorter term hold investment with more investment flexibility and active management.

The remaining 40% believed that holding real estate is a strategic decision. For these investors, target allocations are pre-determined and efforts are made to hold a diversified real estate portfolio. Diversification benefits and the inflation hedging property of real estate appear to be the major reasons for investment. It also appears that many of these investors greatly favor the separate account vehicle.

Investment Management

The respondents were asked to break out by percentage how their investment capital is and will be managed. The results were as follows:

Investment Management³⁰	1997	2002 Estimate
In-House	13%	15%
Investment Advisor	23%	23%
Investment Manager	65%	62%

Surprisingly, the results show that most respondents are willing to surrender control of their real estate portfolios to investment managers. This lack of control is tempered somewhat through recent management contracts that provide specific guidelines that are arranged in advance and that describe a clear picture of the investor’s objectives and the manager’s authority. Also, discussions with several plan sponsors, advisors, and managers indicated that, in practice, the difference between an investment advisor and investment manager is often minimal. Combined, investment advisors and managers will control the vast majority of pension plan real estate assets, with in-house personnel controlling only a small amount.

³⁰ Investment Advisor is defined as having no investment discretion, whereas an Investment Manager has full investment discretion.

Factors When Choosing an Investment Advisor or Manager

The respondents were asked to rate several reasons for choosing one investment advisor/manager over another. The responses were on a scale of 1 to 5 with 5 being very important and 1 being less important. We determined the average responses to be as follows:

Reason	Average Score
Specific Product Expertise	4.61
Strong Performance Track Record	4.33
Local Market Expertise	4.17
Performance-Based Fees	4.11
Flexibility in Terminating Relationship	4.00
Co-Investment of Capital	3.44
Control of Acquisition/Disposition Decision	2.72
Property Management Expertise	2.35
Expertise in Public and Private Investment	2.31

It is interesting to note that the top three criteria are return and performance driven, whereas the next three deal with discretion, control, and incentives. Perhaps these results suggest that plan sponsors are comfortable with their current arrangements with their advisors/managers, maybe because of refined agreements and guidelines. The results also seem to support the general push to consider real estate as a return generator above all else.

Factors For Choosing Direct Investment over REITs

The respondents were asked to rate several reasons for choosing direct investment over REIT stocks. The responses were on a scale of 1 to 5 with 5 being very important and 1 being less important. The results are as follows:

Factors	Average Score
Diversification and Inflation Hedging Benefits	3.75
Control/Input over Ongoing Investment Mgmt.	3.44
Long Term Growth/Total Return	3.44
Flexibility to Invest Large Sums of Capital	2.40

The respondents rated the benefits of diversification and inflation hedging as the strongest argument for direct investment over the purchase of REIT stocks. This supports prior results that listed direct investment as the primary core investment, as core investment is often viewed as the portion of the portfolio that provides the greatest diversification and inflation hedge.

Factors When Choosing to Invest in REITs over Direct Investment

The respondents were asked to rate several reasons for choosing REIT stocks over direct investment. The responses were on a scale of 1 to 5 with 5 being very important and 1 being less important. The average responses are as follows:

Factors	Average Score
Increased Liquidity	3.77
Good Alignment of Incentives	3.69
Efficient Means of Diversification	3.62
Value of Competent REIT Management	3.46
Low Investment Management Cost	3.00
Daily Market Valuation of Investment	2.92
Investment Control (Seats on Board)	1.90

As expected, liquidity was the most important factor for choosing REITs over Direct Investment. It should also be noted that many valued highly the fact that REITs are an efficient means of

diversification. The average score for this factor increased to 4.12 when we looked at just the smallest half of the respondents. This may suggest that for smaller funds with less capital with which to diversify, the ability to make smaller liquid investments is important.

Methods for Achieving REIT Target Allocations

We asked the plan sponsors to delineate what methods they were going to employ to achieve target REIT allocations. The response were as follows:

Investment Method	Percentage of respondents that considered using this method:
Direct Market Purchases	82%
Property for Stock Swap	35%
Advisory Firm Roll-Up	5%

Most pension plans are considering direct market purchases of REITs, which should come as no surprise, as this is the easiest way to “get their feet wet” in the REIT market. It was interesting to note that 35% of the respondents are considering a stock-for-property swap transaction. If this proves to be a significant trend, it could create additional supply of properties for the public markets and provide a much-needed opportunity for the REIT market to grow its holdings of real estate. There are 9 respondents considering swap transactions, which would total \$450 million. Thus, the average deal size would be \$50 million. It is also interesting to note that the results seem to indicate that most plan sponsors will not be receptive to proposals for advisory firm roll-ups.

Another option for REIT acquisitions that was raised during phone interviews was the possibility of private equity placement transactions. As pension plans become more comfortable with certain REITs, direct equity placement will become more common, primarily because the transaction costs are lower for both the issuer and the purchaser.

Pension Fund Stock Mangers Investment in REITs?

The respondents were asked if their in-house stock managers held REIT stocks in their equity portfolios and, if so, how much? The results were as follows:

Are REITs held in equity portfolios?	Percentage Response
Yes	69%
No	23%
Unsure	8%

For those that answered yes, they were asked if they knew the exposure amount:

Do you know how much?	Percentage Response
Yes	8%
No	92%

We then asked whether or not the real estate managers were consulted on REIT purchase decisions:

Are you consulted?	Percentage Response
Yes	23%
No	77%

When we combine the results of the three questions, we may conclude that most real estate managers know that their plans' equity managers invest in REITs, but do not know how much, and are not consulted before transactions. These results suggest that there is limited communication between equity mangers and real estate managers. It is impossible to achieve optimal portfolio management if managers from different asset classes are unknowingly buying

the same investments. There is also an issue of whether or not the equity managers know enough about analyzing real estate to purchase a real estate security or if real estate managers know enough about capital markets to buy a security. Ultimately, when REIT portfolios grow, perhaps the skills of these two managers will have to be combined. These results also suggest that our estimate of total REIT exposure may be understated.

CHAPTER SIX

CONCLUSIONS AND FORECASTS

Defined benefit plans are the largest source of capital in the world today, with approximately \$3.6 trillion in total capital. They are essentially liability-funding institutions with a clear and simple investment objective: to generate sufficient returns to cover present and future employee retirement obligations. Although pension funds are often viewed as being bureaucratic and slow moving, they should not be viewed as investor “black boxes” that funnel huge sums of capital into various investments in an undisciplined fashion. Each investment that they consider must make sense in a total portfolio context, which is unique for each pension plan.

Defined benefit plans have been, and will continue to be, the largest investor class in real estate equity for the foreseeable future. Most estimates suggest that their aggregate real estate investment totals approximately \$125 billion (\$118 billion private and \$7 billion public). This level of real estate investment amounts to 47% of the \$250 billion direct or private equity market and about 7% of the \$100 billion REIT or public equity market. It is clear from these figures that the real estate markets are significantly impacted by changes in pension funds’ investment strategies.

Historically, DPBs have invested in real estate strategically and primarily considered the diversification and inflation hedging qualities when choosing allocation levels. Today, most funds view real estate as a more tactical investment, where the total return must be attractive relative to alternative investment options. With this change in view, pension funds are much more likely to reduce or eliminate their real estate holdings during periods of weak fundamentals. Also, the speed with which pension funds can rebalance their real estate portfolios will increase as their holdings of public securities increase.

Pension plan sponsors are presently debating the relative benefits of private and public investments. Some sponsors view REITs as real estate, while others view them as stocks. Traditional academic comparisons of the NAREIT and NCREIF indices suggest a low

correlation between the two; however, there is a growing amount of research that suggests this comparison is invalid and that the correlation is much higher. Suffice it to say that academics are also debating this issue. Our survey respondents viewed the diversification benefit and investment control as the major benefits from direct investment while they cited liquidity and good alignment of incentives as the most important benefits of REIT stocks. Many academics believe that an optimal pension fund portfolio should include both public and private real estate, although allocations vary depending on portfolio objectives. It appears that many plan sponsors agree, as evidenced by the fact that REITs are being introduced in many portfolios for the first time.

Our survey indicates that pension funds will continue to utilize investment advisors and managers to oversee 85% of their real estate capital over the next five years. The respondents cited product and market expertise, management track record, performance based-fees, and flexibility in termination of the advisory relationship as the key criteria for selection of an investment advisor or manager.

Separate accounts will continue to be the most prevalent investment vehicle. Commingled funds will still comprise a significant portion of the real estate portfolio; however, capital will continue to flow out of this vehicle on a net basis as many funds mature and are liquidated over the next several years. Investment in REIT stocks should experience very strong growth through 2002, with an average fund allocating 17% of its total real estate exposure to REITs. Over 35% of the respondents are considering a property-for-stock swap with an existing REIT as a method of REIT investment. If these transactions gains popularity with a large portion of the pension fund community, it could cause a large increase in the market capitalization of the REIT market.

Investment in private operating companies and one-off joint ventures will not be significant investment vehicles going forward. Lack of control, liquidity, and a clear “exit” strategy were cited as reasons for the low level of interest in these vehicles.

The survey also revealed that many pension funds have internal problems categorizing REIT investment. Most of our respondents know that their plans’ equity managers invest in REITs, but

do not know how much, and are not consulted before transactions. These findings suggest that actual REIT exposure may be higher than expected. Over 30%, or almost \$30 billion of all REIT stocks, are owned in the name of investment advisors that hold the securities for undisclosed clients³¹. It is reasonable to assume that a large majority of these clients are pension funds. These facts suggest that pension funds may have REIT holding well in excess of the \$7 billion consensus estimate.

³¹ Paine Webber.

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