V

REVIEW OF INVESTMENT STRATEGIES AND RETURN

Information was collected on current asset policy and allocation on 90 PERS through component unit financial reports and annual reports of investment boards. Many of the reporting funds covered several separate plans and/or distinct employee groups within plans.

Our review concentrates on three main topics:

- A general summary of fund and portfolio characteristics of the PERS responding
- Comparisons of target asset allocation policies for 14 PERS
- Detailed reviews of investment policy for four selected PERS.

It is important to keep in mind the general nature of the compilation of statistics provided in the beginning of this section. Methods of reporting and categorizing asset holdings vary from PERS to PERS. In several cases, estimated percentages of assets in each market segment have been input. In addition, "other" asset buckets have been used to record asset types not easily classifiable. These estimates and simplifications have an obvious effect on the precision of the data displayed.

The four PERS selected were chosen as a subset of the 14 PERS with target asset allocation policies. The PERS chosen for detailed review are:

- Florida Retirement System
- The Teachers' Retirement System of Louisiana
- Minnesota State Retirement System
- The California Public Employees' Retirement System (CalPERS).

These PERS were selected to represent different regions, approaches, and fund sizes. CalPERS was selected, in addition, because it is one of the largest and best-known pension funds in the world.

A. Fund and Portfolio Characteristics: Fund Sizes

A total of 85 PERS reported the total market value of plan assets; a wide variety of fund sizes was reported. Included in the reporting group were ten of the world's most imposing asset pools, all with market value holdings in excess of $20 billion.

The bulk of PERS reported asset values as of June 30, 1993, the most popular fiscal year-end (Table 25).

TABLE 25
PERS FUND SIZES

Amount	No. of PERS
Less than $1 billion	15
$1 to $5 billion	31
$5 to $10 billion	14
$10 to $20 billion	15
More than $20 billion	10

B. Fund and Portfolio Characteristics: Equity Holdings

Table 26 confirms the general impression that PERS have greatly increased their commitment to equity investments in recent years. A total of 35 of the 87 PERS, or about 40% of the group, have committed at least half of their total portfolio to equity investments, including real estate holdings.

TABLE 26
PERS ALLOCATIONS TO EQUITIES (INCLUDING REAL ESTATE)

Allocation	No. of PERS
Less than 20%	12
20% to 30%	7
30% to 40%	8
40% to 50%	25
50% to 60%	23
More than 60%	12

The dedication to this market segment would probably be even more pronounced in the absence of statutory limitations on the level of equities in the portfolio. Some jurisdictions (Indiana is an example) forbid their state pension trust to hold equity investments. It is likely that some of the harsher restrictions may be eased in the future because of the evolution of thinking about investments among PERS and the need to pursue enhanced returns in light of budgetary constraints.

C. Fund and Portfolio Characteristics: Fixed-Income Holdings

Table 27 shows, unsurprisingly, that fixed-income investments are and will continue to be important segments of PERS's holdings. Of the 87 funds shown, 21 still are devoting more than 60% of the market value of their assets to fixed instruments. Either continuing conservatism or statutory restrictions on equity holdings would explain a disproportionate allocation to bonds. PERS with a large percentage of their plans' liabilities currently in pay status may also be compelled to pursue enhanced yield and to preserve capital in light of their heavy current payment obligations.

TABLE 27
PERS ALLOCATIONS TO FIXED INCOME (INCLUDING MORTGAGES)

Allocation	No. of PERS
Less than 30%	5
30% to 40%	23
40% to 50%	28
50% to 60%	10
60% to 80%	10
More than 80%	11

As mentioned before, it remains to be seen whether the trend away from fixed income will continue as PERS become more sophisticated, and perhaps aggressive, in their investment outlook.

D. Fund and Portfolio Characteristics: Conglomerated Asset Allocation

In Table 28, we show the breakdown by investment type of the nearly $800 billion in market value reported by 85 PERS. (Estimates have been made where reporting failed to give adequate information on asset types or breakdowns.)

Table 28 shows a balance between equity and fixed-income investments, with a small but material allocation to more progressive categories like international and the "other" category, which includes venture capital and other nontraditional investments. Certainly, the table could be mistaken for the asset allocation of a private employer's pension fund.

TABLE 28
BREAKDOWN OF TOTAL PERS ASSETS HELD BY TYPE

Type of Asset	Percentage of Total
Domestic Equity	40.25%
International Equity	3.75
Real Estate	2.75
Domestic Fixed Income	39.0
International Fixed Income	2.0
Mortgages	4.5
Short-Term Investments	5.0
Other Investments	2.75

E. Review of Asset Allocation

Our review of the annual and component unit financial reports revealed the target asset allocations of 14

PERS. (It is expected that many others have instituted such policies, but either these targets were not included in the available materials or we were unable to locate them. No sampling was performed—the 14 PERS allocation targets constitute the targets readily available in the data provided.)

Table 29 displays an interesting variation of target policies, and most of the PERS displayed have recent allocations reasonably in line with targets. Note that in some cases target allocations have recently been adjusted, with actual allocations understandably lag the new guidelines somewhat. Changes in allocation policy need to be effected gradually to avoid losses due to inopportune timing of liquidations.

Note also that, in general, investment boards are creating targets within a web of statutory investing restrictions and percentage limitations on holdings of each asset class.

All actual allocations are as of June 30, 1993, except for the DC Retirement Board (September 30, 1993) and CalPERS (June 30, 1992). Market value is assumed to be used in allocating funds.

TABLE 29
EXAMPLES OF ASSET ALLOCATION TARGET POLICIES

Public Employee Retirement System	Asset Category	Policy			Actual Allocation
		Minimum	Target	Maximum	
District of Columbia Retirement Board	Equities:	58%	63%=	68%	65.8%
	Active		34%+		
	Passive		12%+		
	International		17%		
	Fixed Income:	26	31%=	36	25.3
	Domestic		26%+		
	International		5%		
	Nontraditional	0	3%	8	—
	Real Estate	0	3%	8	—
	Cash Equivalents		—		8.9
California Public Employees' Retirement System	Domestic Equity	23%	—	33%	33.0%
	International Equity	6	—	15	9.8
	Domestic Fixed	36	—	42	40.7
	International Fixed	3	—	5	4.9
	Real Estate	8	—	13	6.9
	Alternative Assets	0	—	2	0.1
	Cash Equivalents	1	—	4	4.6
Public Employees' Retirement System of Nevada	Fixed Income	—	50%	—	46.7%
	Equities	—	40	—	40.7
	Real Estate	—	10	—	6.8
	Cash	—	—	—	5.2
	Alternative Assets	—	—	—	0.6
North Dakota Public Employees' Retirement System	Domestic Equity	—	39%	—	40.0%
	International Equity	—	10	—	9.9
	Domestic Fixed	—	37	—	40.4
	International Fixed	—	4	—	4.2
	Real Estate	—	5	—	2.2
	Venture Capital	—	3	—	1.0
	Cash Equivalents	—	2	—	2.3

Table 29—*Continued*

Public Employee Retirement System	Asset Category	Policy Minimum	Policy Target	Policy Maximum	Actual Allocation
California State Teachers Retirement System	Domestic Large Cap	20%	25%	35%	29.8%
	Domestic Small Cap	5	8	15	11.2
	International Equity	5	18	20	5.2
	Domestic Fixed	25	30	50	43.5
	International Fixed	1	1	3	0.4
	Real Estate	5	10	15	3.2
	Venture Capital	2	7	10	0.8
	Cash Equivalents	1	1	5	5.9
Public Employees' Retirement System of Idaho	S&P 500	20%	29%	38%	43.4%
	Non-S&P 500	12	18	24	12.7
	International Equity	0	11	15	—
	Other Equity	0	0	5	—
	Domestic Fixed	16	23	40	26.8
	Idaho Mortgages	0	10	12	5.2
	Real Estate	0	1	10	4.8
	Cash Equivalents	1	8	10	7.1
Kentucky Retirement Systems	Equities	—	27.5%	—	30.8%
	Fixed Income	—	62.5	—	57.2
	Cash Equivalents	—	10.0	—	12.0
Minnesota State Retirement System	Domestic Equity	—	50%	—	49.4%
	International Equity	—	10	—	10.9
	Domestic Bonds	—	24	—	27.8
	Alternative Assets	—	15	—	9.7
	Cash Equivalents	—	1	—	2.2
Kansas Public Employees' Retirement System (targets effective 6/30/93, then 7/1/93)	Domestic Equity	—	45/29.2%	—	39.4%
	International Equity	—	15/15	—	6.1
	Domestic Fixed	—	23/23.6	—	32.8
	International Fixed	—	2/12.2	—	6.3
	Real Estate	—	6/10	—	6.7
	Alternative Assets	—	4/5	—	2.7
	Cash Equivalents	—	5/5	—	5.9
Iowa Public Employees' Retirement System	Domestic Equity	19%	26%	29%	26.8%
	International Equity	3	8	13	4.6
	Domestic "Tactical"	4	8	12	10.0
	Domestic Fixed	20	20	30	42.4
	Passive Fixed	0	15	20	—
	International Fixed	0	7	12	2.2
	Real Estate	6	10	14	5.4
	Venture Capital	0	1	3	1.3
	Special Investments	0	5	13	7.3
	Cash Equivalents	0	0	15	—
Teachers' Retirement System of Louisiana	Equities	35%	50%	55%	45.2%
	Fixed Income	30	40	40	45.2
	Alternative Assets	0	5	10	0.5
	Cash Equivalents	0	5	15	9.1

TABLE 29—*Continued*

Public Employee Retirement System	Asset Category	Policy Minimum	Policy Target	Policy Maximum	Actual Allocation
Florida Retirement System	Domestic Equity	54%	59%	64%	57.1%
	International Equity	2	3	6	(↑ incl. ↑)
	Fixed Income	25	29	40	34.1
	Real Estate	2	8	10	2.0
	Cash Equivalents	0	1	10	6.8
Washington State Department of Retirement Systems	Domestic Equity	30%	—	40%	40.2%
	Domestic Fixed	40	—	50	46.5
	International Assets	0	—	5	1.0
	Real Estate	0	—	6	3.8
	Alternative Assets	0	—	9	8.5
New Hampshire Retirement System	Equity (10% can be non-U.S.)	—	55%	—	48.5% U.S. 10 Int'l.
	Fixed (5% can be Non-U.S.)	—	30	—	27.7 U.S. 3.8 Int'l.
	Real Estate	—	10	—	8.0
	Alternative Assets	—	5	—	1.8
	Cash Equivalents	—	—	—	0.2

F. Review of Investment Policy

1. Florida Retirement System

Market value of assets: $34.50 billion (6/30/93)

Material taken from the 1992–1993 Investment Report (State Board of Administration of Florida)

a. Investment Objectives

The policy goal is to "maximize the probability of achieving the actuarial rate of return on the FRSTF [Florida Retirement System Trust Fund] portfolio, subject to risk considerations."

The long-term performance objective is to "meet or exceed the composite of returns of financial market indices for the respective asset classes, as enumerated in a static 'Target Allocation'."

The system's attitude toward risk is that stocks are the preferred asset holding, due to their perceived ability to track economic growth over time. The board believes that bonds "are actually more risky in the long run (uncertainty about providing a real return commensurate with liability needs) because of their inability to respond to changes in economic conditions."

As a result, the board has "some specific reasons to prefer stocks as the principal return generator in the portfolio." Believing a straight stock portfolio would produce the best results, the board nevertheless admits that "there is a limit to how much short term volatility even the staunchest long term investor can handle." Thus the role of investments other than stocks in the portfolio is "to diversify away some of the volatility."

b. Investment Guidelines

Asset Allocation. Category targets (effective June 22, 1993) are given in Table 30.

TABLE 30
CATEGORY TARGETS FOR FLORIDA RETIREMENT SYSTEM

Asset Category	Minimum	Target	Maximum
Equities, Domestic	54%	59%	64%
Equities, Foreign	2	3	6
Fixed Income	25	29	40
Real Estate	2	8	10
Cash	0	1	10

Investment Restrictions. The report does not discuss specific board policy on investment quality and concentration guidelines. The following state statutory restrictions apply:

- Domestic common stocks cannot exceed 80% of the portfolio.
- Internally managed common stocks cannot exceed 50% of the portfolio.
- Normally, only 3% of the equity securities of any one corporation can be held with board approval (or if the stock is part of a broad equity index), the limit can be raised to 10%.
- Corporate fixed income holdings are limited to 80%.
- Holdings of the Federal Housing Administration or Veterans Administration mortgages in Florida (or foreign government general obligations with a 25-year default-free history) are limited to 25%.
- Foreign corporate or commercial securities are limited to 10%.
- South African investments are forbidden.

c. Overall Performance Evaluation

The return of each segment of the fund is compared with a published benchmark, namely:

- Equities are compared with the Standard & Poor's 500.
- International equities are compared with the Europe, Australia, Far East Index (EAFE).
- Fixed income is compared with the FLA Extended Duration Index (FEDX).
- Real Estate is compared with the Russell NCREIF Property Index.
- Cash and equivalents are compared with average 91-day Treasury bill rates.

d. Evaluation of Managers

Individual manager portfolios are "measured against customized benchmarks on a long-term basis." Managers of equities are considered to have met their benchmark if they come within 50 basis points of its return, and they exceed it if they beat it by more than 50 basis points. The same standard applies to fixed-income managers, except that the corridor for meeting the benchmark for mortgage portfolio managers is 100 basis points.

e. Managers' Fees

Investment managers were paid $27,772,082 for the fiscal year ending June 30, 1993, with more than two-thirds of this total ($18,895,001) going to equity managers. Brokers were paid $10,799,404 over the same period.

2. The Teachers' Retirement System of Louisiana

Market value of assets: $6.47 billion (6/30/93)

Material taken from the component unit financial report for the fiscal year ending 6/30/93

a. Investment Objectives

The investment objectives were as follows:

1. Protect the systems assets in real terms
2. Achieve investment returns sufficient to meet the actuarial assumption necessary to improve the future soundness of the system the goal is for returns to exceed the current return assumption
3. Maximize total return within prudent parameters.

The quantitative objective for real rate of return is 3.9% (in excess of the consumer price index).

b. Investment Guidelines

Asset allocation category targets are shown in Table 31.

TABLE 31
CATEGORY TARGETS FOR TEACHERS' RETIREMENT SYSTEM OF LOUISIANA

Asset Category	Minimum	Target	Maximum
Cash and Equivalents	0%	5%	15%
Fixed Income	30	40	60
Alternative Investments	0	5	10
Total Stock	35	50	55

Further breakdowns are given, but they do not correlate with the overall targets. There appear to be typographical errors in this section of the report.

Fixed-Income Guidelines. Quality restrictions are placed on fixed-income acquisitions. The following are acceptable:

- All U.S. government issues.
- Corporate issues rated BAA (Moody's) or BBB (Standard & Poor's). BAA/BBB rated bonds cannot exceed 20% of the market value of the bond portfolio.
- Municipal bonds rated A or higher. Holdings in this category cannot exceed 15% of the market value of the bond portfolio.
- Mortgages—either pooled, bond form, "pass-through" securities or closed-end funds recommended in writing by a manager/advisor.

- Private placements approved by the board (cannot exceed 10% of the bond portfolio).
- Canadian government debt rated A or higher, with written permission from the board (cannot exceed 15% of the bond portfolio).

Other restrictions apply. There are additional restrictions for global fixed-income managers, including the following:

- Only certain countries are acceptable (31 listed).
- Foreign-denominated investments are limited (¥, £, DM—50% of a manager's portfolio; all other foreign currencies—20%).
- Quality ratings must be consistent with the previously stated BAA/BBB standard.

Stock Guidelines. The following restrictions apply:

- All stocks must be listed (including the National Association of Securities Automatic Quotation System or NASDAQ) and registered with the Securities and Exchange Commission (SEC).
- Not more than 20% of the total stock portfolio can be invested in any one industry category.
- Small to mid-size capitalization managers cannot buy the securities of any company with a market capitalization of $1.5 billion or more.

Other restrictions apply. There are additional guidelines for international equity managers, including the following:

- Managers are generally restricted to EAFE countries in the list for fixed income. However, with board approval, up to 10% of the portfolio can be invested in the other approved countries.
- As a defensive mechanism, managers may invest up to 10% of the portfolio in U.S. stocks.
- Investment in one industry sector is limited to 25% of the portfolio without board approval to exceed this level.
- Cash levels may not exceed 25% of the portfolio without board approval.
- Short currency positions cannot be taken.

Cash and Equivalents Guidelines. The following instruments are approved:

- Treasury bills with maturity one year or less
- Repurchase agreements collateralized by Treasury or agency securities, at least 100%
- Commercial paper rated P-1 (Moody's) or A-1 (Standard and Poor's) with senior bond ratings of A/A or better—maximum maturity is 90 days (no more than 10% of short-term holdings)
- Certificates of deposits must be from Louisiana banks or similar institutions—$1 million per bank maximum, with a maximum maturity of 366 days (restricted to 5%)
- Money market funds satisfying the same restrictions already listed
- Commercial debt with a maturity of one year or less rated A or better (restricted to 10%).

Other restrictions apply.

Alternative Investment Guidelines. The board can consider investments in real estate, private placements, options, or derivatives. Objectives and rules will be adopted when a decision to invest in an alternative opportunity is made.

Guidelines on securities lending, speculative investments, and other topics are also covered.

c. Overall Performance Evaluation

The overall objective is a real rate of return of 3.9%. In light of short-term fluctuations, the board will also look at other measures to assess fund performance:

- The fund is expected to perform in the top one-third of a universe of total funds having similar investment policies.
- The fund's performance will be compared with that of other public plans.

d. Evaluation of Managers

Managers must report monthly on asset performance. The board will review managers' results quarterly, focusing on:

- Adherence to policy guidelines
- Comparison of results against appropriate indices, such as:
  - The Standard and Poor's 500 Index and the Banker's Trust Independent Consultant's Corporate Universe Indices for domestic equities
  - The EAFE Index for international equities
  - The Lehman indices for domestic fixed income
  - Lehman and Salomon indices for global fixed income
- Comparison with managers using similar investment policies and styles
- Opportunities available in capital markets
- Changes in the manager's firm.

Managers are expected to perform in the top half of their manager universe and the top quartile of their manager style universe (per the Bankers Trust Independent Consultant Cooperative Universe).

e. Managers' Fees

Investment advisors were paid $7,707,064 for the fiscal year ending June 30, 1993. A total of $5,199,596 in brokerage fees (including certain miscellaneous investment expenses) was paid over the same period.

3. Minnesota State Retirement System

The section discusses the management of the basic retirement funds, which pertain only to active employees' assets. Retiree assets are separately managed, and until recently, were very conservatively invested.

Market value of assets: $9.72 billion (6/30/93)—the retiree fund held $8.25 billion

Material taken from the 1993 Annual Report (Minnesota State Board of Investment)

a. Investment Objectives

The objective is simply "to ensure that sufficient funds are available to finance promised retirement benefits." The board feels that a large commitment to equities is the best way to maximize long-term returns, with other assets used to diversify against short-term volatility.

More specific targets are:

- Total real returns over a ten-year period are expected to be in the 3–5% range.
- Over a five-year period, the fund is expected to outperform a composite of market indices weighted to reflect asset allocation policy.
- Over a five-year period, the fund is expected to outperform the median of public and private funds with a balanced mix of stocks and bonds.

b. Investment Guidelines

All fund assets are managed externally by private money management firms.

Asset Allocation. Category targets are shown in Table 32.

TABLE 32
CATEGORY TARGETS FOR THE MINNESOTA STATE RETIREMENT SYSTEM

Asset Category	Target
Domestic Stocks	50%
International Stocks	10
Domestic Bonds	24
Alternative Investments	15
Unallocated Cash	1

Fixed-Income Guidelines. The bond portfolio is divided into two segments, active management and semipassive management.

The active portion may receive no more than 50% of the bond segment to manage. Managers are selected to blend investment styles. There is an overall duration band of three to seven years within which managers must keep their portfolios. This is to maintain the antideflationary goal of the bond portfolio (via a minimum duration) and to control variability in bond segment returns (via a maximum duration). Bond quality is also restricted (BAA or better).

The "semipassive" segment attempts to achieve incremental returns on the Salomon Broad Investment Grade (BIG) Index by making minor adjustments to the index.

Domestic Stock Guidelines. The domestic equity portfolio is split, similar to the fixed-income segment, into active and passive management, with a maximum of 50% of the stock segment going into active hands. Active managers are expected to "add value" by providing incremental returns over time versus a customized benchmark reflecting each manager's approach.

The passive portion of the domestic stock portfolio is used to compensate for biases in active manager investing (referred to in the report as "misfit"). The domestic stock segment has experienced, historically, in its active segment:

- Overexposure to small capitalization stocks
- Overexposure to growth stocks
- Underexposure to higher yield stocks.

The passive portion, invested in an index fund, is modestly adjusted or "tilted" to bring the overall domestic stock portfolio back into balance.

International Stock Guidelines. Again, an active and passive division is in place, except that at least 50% of the portfolio is to be managed actively. As of June 30, 1993, only 20% was being actively managed due to the infancy of the commitment to international stocks (from October 1, 1992). The active category is divided into active/passive, meaning active country selection but passive within that country, and fully active.

The board has grouped foreign countries into three categories: Group I, Group II, and Group III. Group I includes countries with excellent human rights records, with Group III including those with poor records. Group II is in between. Managers may invest in all three groups, but must notify the board in writing if investing in Group II, and must show up in person to justify their decision if investing in Group III.

Alternative Investment Guidelines. Investments in real estate, venture capital, and resources (oil, gas, and so on) are closely monitored. Direct investments are not allowed; the fund must have at least four other partners in an investment, with the fund taking no greater than a 20% position in any investment. Investments of this type are intended to be broadly diversified across many classifications.

c. Overall Performance Evaluation

As mentioned above, the fund's explicit return goals are:

- Total real returns over a ten-year period in the 3–5% range
- Over a five-year period, to outperform a composite of market indices weighted to reflect asset allocation policy
- Over a five-year period, to outperform the median of public and private funds with a balanced mix of stocks and bonds

Domestic stock returns are shown against the Wilshire 5000 Index (along with an adjusted version reflecting the board's restrictions on liquor and tobacco stocks). Domestic bonds are compared with the Salomon BIG Index. International stock returns are measured against the Morgan Stanley Capital International Index of EAFE.

In addition, the fund (excluding alternative assets) is compared with the Master Trust portion of the Wilshire Associates Trust Universe Comparison Service (TUCS).

d. Evaluation of Managers

Domestic stock managers are held both to risk objectives and to return objectives. Active and passive managers are expected to invest in accordance with their stated approach. Active managers must hold highly nondiversified portfolios, with passive managers naturally being required to mirror the diversity of their target indices.

Benchmark portfolios customized to reflect an individual domestic stock manager's approach are constructed for evaluation of return results. There is no such provision yet for the recently inaugurated international stock program.

Risk objectives for bond managers are ensured by the duration and quality requirements imposed. Returns for all managers are compared against the Salomon BIG Index.

Real estate investments are compared with inflation, and the Wilshire Associates Real Estate Index. Performance objectives for venture capital and resource investments have not yet been developed.

e. Managers' Fees

Fees for investment management for all funds under the Minnesota State Board of Investment's control were about $12,600,000 for the fiscal year ending June 30, 1993. (The basic retirement funds comprise about half of all assets.) Total brokerage fees for all funds held for the same fiscal year were about $6,900,000.

4. The California Public Employees' Retirement System

Market value of assets: $76.1 billion (6/30/93)
Material taken from the 1993 Annual Report

a. Investment Objectives

The fund's specific goals are:

- *Inflation*—achieve a total return 4% in excess of the CPI
- Actuarial—achieve total returns above the assumed interest rate of 8.75%
- Performance
  - Internal equity index portfolio—equal the Wilshire 2500 Index (adjusted for restrictions on South African investments)
  - Externally managed assets—compared against customized objectives
  - Fixed income—exceed the Salomon Large Pension Fund Fixed-Income Index by 1%
  - Real estate—earn a 5% real rate of return.

CalPERS is known for its aggressive involvement in the operations of its major holdings. The board believes that "these efforts have been successful not only at generating higher returns at our target companies but also at other prominent U.S. corporations with substandard performance."

b. Investment Guidelines

Information presented in the annual report is more descriptive and less indicative of restrictions.

Asset Allocation (from the 1991 Annual Investment Report). Category targets are shown in Table 33.

TABLE 33
CATEGORY TARGETS FOR CALIFORNIA PERS

Asset Category	Minimum	Maximum
Domestic Equities	23%	33%
Domestic Fixed Income	36	42
International Equities	6	15
International Fixed Income	3	5
Real Estate	8	13
Alternative Assets	0	2
Cash Equivalents	1	4

Domestic Fixed-Income Guidelines. The domestic bond portfolio is actively managed. A substantial portion of the portfolio is invested in real estate mortgages, either directly or through government insured issues.

Domestic Stock Guidelines. Of the domestic equity portfolio, 80% is allocated to an internally managed index fund, which is intended to mirror the Wilshire 2500, removing South Africa-related companies.

Interestingly, it is reported that the staff has "recently implemented a system using an artificially intelligent computer that will capture higher returns from more accurately forecasting market trends and profitable trading opportunities."

The remaining 20% is dedicated to 17 external managers whose goal is to outperform the South Africa Free Standard and Poor's 500.

Global Investment Guidelines. Eight international equity and three international fixed-income managers are used to invest in global markets. The board also uses "two currency overlay managers to overlay a portion of our currency risk exposure in the foreign equity markets." Global managers generally may not hold U.S. securities, although two firms have exemptions currently.

As of June 30, 1993, 33 countries in Europe, the Pacific Basin, Latin and North America were approved.

Alternative Investment Guidelines. The fund allocates about 5% of its assets to venture capital, corporate restructuring, "special situations," alternative emerging investments, and private equity placements. These holdings "are typically long-term positions that are expected to provide significant returns over periods of five years or longer. They increase the diversification of the total portfolio, contributing to the enhancement of return and the reduction of risk."

The fund has a significant commitment to real estate. It appears, however, to be wary of the prospects, noting that "predictions made just a few years ago have turned out to be meaningless and are out of synch with the realities of the current, depressed real estate market." CalPERS has therefore "been selectively pursuing acquisitions in areas deemed to have some strength while aggressively examining and disposing of products in the portfolio whose values will not rebound as markets return to equilibrium." They intend to avoid "acquiring trophy' products with unrealistic appreciation objectives and an unattainable exit strategy."

c. Overall Performance Evaluation

The fund's explicit performance goals previously stated above define the measurement basis.

d. Evaluation of Managers

As mentioned previously, customized benchmarks are developed to evaluate the performance of external asset managers.

e. Managers' Fees

Figures for the fiscal year ending June 30, 1993 were not reported. The 1991 Investment Report listed:

- $21,523,313 in commissions
- $28,741,745 in real estate fees
- $25,191,873 in external manager fees
- $4,019,371 in fees for servicing mortgages.