MINNESOTA STATE BOARD
OF INVESTMENT
MEETING
SEPTEMBER 3, 1986
&
INVESTMENT ADVISORY
COUNCIL MEETING
SEPTEMBER 2, 1986

AGENDA

STATE BOARD OF INVESTMENT
MEETING

Wednesday, September 3, 1986
8:30 A.M. (PLEASE NOTE TIME CHANGE)

Room 118
State Capitol
Saint Paul

	TAB
1. Approval of Minutes of June 12, 1986	
2. Executive Director's Report:	
A. Quarterly Investment Review	A
1. Basic Retirement Funds	
2. Post Retirement Fund and Other Investment Funds	
B. Portfolio Statistics	B
3. Report from Investment Advisory Council Committees:	
A. Administrative and Asset Allocation Committees	C
1. Board Budget	
2. Supplemental Investment Funds	
3. Board Conference	
B. Equity Manager Committee	D
1. Manager performance	
2. Wilshire Associates	
C. Alternative Investment Committee	E
1. Report of alternative investment program	
2. Trust Company of the West and Heitman real estate funds	
4. Report from South Africa Task Force	F

Next meeting of the State Board of Investment is scheduled for Wednesday, December 3, 1986.

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Room 105, MEA Building
55 Sherburne Avenue
Saint Paul 55155
296-3328

MINUTES
STATE BOARD OF INVESTMENT
JUNE 12, 1986

The State Board of Investment met on Thursday, June 12, 1986 at 8:00 A.M. in Room 118 of the State Capitol. Governor Rudy Perpich, chair, Secretary of State Joan Anderson Growe, State Treasurer Robert W. Mattson, State Auditor Arne H. Carlson, and Attorney General Hubert H. Humphrey III were present.

The minutes of the March 5, 1986 Board meeting were unanimously approved.

EXECUTIVE DIRECTOR'S REPORT

Howard Bicker, Executive Director, first reviewed the asset allocation and investment performance of the Basic Retirement Funds. The market value of the Funds' assets increased 10.7% in the first quarter. The prime contributor to asset growth was the strong performance of the common stock market. The Basic Retirement Funds totaled $4.6 billion at the end of the first quarter of 1986. Mr. Bicker reported that the asset mix in the Basic Retirement Funds showed very little change during the first quarter of 1986, and stated the Funds' total portfolio produced a 10.6% total rate of return for the first quarter of 1986, and a 30.5% return for the year ending March 31, 1986. Mr. Bicker stated that the total portfolio outperformed the median of the tax-exempt managers for both periods. Mr. Bicker reported that the Basic Retirement Funds' active equity manager pool produced a 15.2% total rate of return for the first quarter and a 36.8% return for the latest year. He stated the aggregate of the managers outperformed the market for the quarter and tracked it very closely for the year. Mr. Bicker reported that the total rate of return of the Basic Retirement Funds' active bond manager pool for the first quarter was 6.2%, and 26.7% for the year. He stated that the active bond managers aggregate performance trailed the market for both periods due to the shorter duration of the portfolios and the utilization of mortgages in those portfolios.

In reviewing the Post Retirement Fund, Mr. Bicker reported that the market value of its assets increased 11.9% during the first quarter, due mostly to the strong capital markets. He stated the Fund had a net contribution of $1.4 million for that period, and at the end of the first quarter of 1986 the Post Retirement Fund totaled $3.47 billion. The asset mix for the Post Retirement Fund was essentially unchanged for the quarter. Mr. Bicker stated that the Fund's equity portfolio produced a 10.5% return during the first quarter and 29.3% for the latest year, which slightly trailed the market.

In response to a question from Mr. Carlson concerning the Post Retirement Fund, Mr. Bicker stated that the fund uses a value orientation as its investment management style. He stated that this style has been out of favor recently. By contrast during the most recent period, small cap and technology stocks have performed very well. Last year when the value orientation style was in favor, it outperformed the market. Mr. Carlson then asked a question concerning the use of an index fund for the entire stock component of the Post Retirement Fund. In response, Mr. Bicker stated that with the existing benefit formulas for the Post Retirement Fund, indexing is not appropriate because benefit increases are only given to retirees based upon realized gains. He stated that the index fund does not have turnover, so it does not generate realized equity gains. Given this constraint, it would not be advantageous to retirees to use an index fund for the Post Retirement Fund. Mr. Bicker stated that the staff is also exploring the utilization of a technique called portfolio insurance whereby futures are used to hedge the downside risk in an equity portfolio.

Mr. Bicker closed by stating that for the first time in history, the total value of all funds managed by the State Board of Investment exceeded $10 billion.

INVESTMENT ADVISORY COUNCIL REPORT

Jan Yeomans presented the Investment Advisory Council report:

ADMINISTRATIVE AND ASSET ALLOCATION COMMITTEE

Ms. Yeomans stated that the Administrative and Asset Allocation Committees met jointly to consider three items. First, the joint committee reviewed the Board's consultant search. Second, the committee reviewed the asset allocation target in the Basic Funds and reaffirmed that the targets should remain in place despite the fact the Alternative Investment Committee is having difficulty in finding appropriate vehicles for resource funds. Finally, Ms. Yeomans reported that the committee spent a great deal of time reviewing the staff position paper on the Post Retirement Fund and recognized the fact that benefit increases would not be coincident with inflation. Mr. Bicker then stated that the staff paper describes how the increases are derived along with the formulas and policy issues involved. He said the committee recommended that the position paper be transmitted to the various retirement funds and other interested parties for their information. The Committees believe that it is not appropriate for the Investment Advisory Council and State Board of Investment to recommend specific benefit increase policies since these policies are under the administrative control of the retirement systems and the legislature. Mr. Carlson stated that he would prefer a formal working relationship be formed with the pension funds to see what can be done.

EQUITY MANAGER COMMITTEE

Ms. Yeomans reported that the Committee reviewed the performance-based fee contracts sent to the Board's external equity managers, and stated that some of those contracts have been signed and returned. The Committee reviewed the performance of the Board's equity managers and determined that they are concerned about five managers in the group. Ms. Yeomans stated that three managers have not met their benchmarks. She said that one manager has experienced very rapid account growth, and the Committee feels it needs to be more closely monitored. Ms. Yeomans also reported that at Wilshire Associates the index fund manager has left the firm and the Committee recommends staff closely watch the long-term implications of his departure. In response to a question from Ms. Growe, Ms. Yeomans stated that the contracts for three equity managers are being renewed at this time. Mr. Bicker stated that if the Board approves the retention of the new consultant, the firm will review the entire portfolio to determine any style bias among the current managers. If necessary, a new manager could be retained to correct any style bias. In response to a question from Mr. Carlson, Mr. Bicker stated that if a manager search were necessary, each Board member would appoint an individual to serve on a search committee along with members from the Investment Advisory Council. Mr. Carlson moved approval of the equity manager contracts. The motion passed unanimously.

FIXED INCOME MANAGER COMMITTEE

Ms. Yeomans stated that the fixed income managers as a group underperformed the Merrill Lynch Bond Index over a recent period of time because they are relatively conservative and chose to keep relatively short duration in their portfolios. When a sharp drop in interest rates occurs, it is difficult for this style of management to perform well. Ms. Yeomans stated that the concern of the Committee is whether that style is appropriate, and the Committee recommends that staff work with the Board's consultant to develop specific alternatives for the Board's consideration. In response to a question from Mr. Carlson, Mr. Bicker stated that the same 30-day clause in effect for the equity manager contracts is applicable to the bond manager contracts. Mr. Carlson moved approval of the renewal of the bond manager contracts for one year. The motion passed unanimously.

ALTERNATIVE INVESTMENT COMMITTEE

Ms. Yeomans stated that the Committee is pursuing its policy to place 15% of the Basic Retirement Funds in alternative investments including real estate, venture capital and resource investments. She stated that the venture capital investments are on target with 10 commitments for a total commitment of $143.5 million. Ms. Yeomans stated that there has been a commitment of $325 million to ten funds in the real estate area, which is 7% of the Basic Retirement Funds. She stated that the Committee recommends a $20 million investment in State Street Fund IV which would be a follow-on fund to State Street Fund III. Mr. Carlson moved approval. The motion passed unanimously. Ms. Yeomans stated that the Committee is having difficulty identifying appropriate vehicles in the resource area at this time, and is considering ways to complete the remaining resource allocation.

CONSULTANT SEARCH COMMITTEE

Ms. Yeomans stated that a committee was convened after the March 5 meeting at which the Board requested that the consultant contract be rebid. She stated that the Committee consisted of one member appointed by each member of the Board and two members of the Investment Advisory Council. She stated that the committee sent a Request for Proposal to 15 consultants; ten responses were received and three finalists were selected who were then invited to make personal presentations. She stated Richards & Tierney of Chicago emerged as clearly superior in its ability to serve the needs of the State Board of Investment. She stated that the proposed fee for this service is $120,000 per year, and could be renewed on an annual basis. In response to a question from Mr. Carlson, Mr. Bicker stated that Richards & Tierney is a firm that will supply the vast majority of the Board's needs. Mr. Bicker stated that the Board may periodically require specialized consulting services for individual projects. In response to a question from Mr. Carlson, Mr. Bicker stated that State Street Bank is utilized as the vendor for our performance measurement, and individual managers will be reviewed by Richards & Tierney as part of their consulting contract. Mr. Carlson moved approval of Richards & Tierney as the consultant for the State Board of Investment. The motion passed unanimously.

The meeting adjourned at 8:40 A.M.

Respectfully submitted,

Howard Bicker

Howard J. Bicker
Executive Director

AGENDA

INVESTMENT ADVISORY COUNCIL MEETING

Tuesday, September 2, 1986
2:00 P.M.

MEA Building-Conference Room "A"
41 Sherburne Avenue
Saint Paul

	TAB
1. Approval of Minutes of June 3, 1986	
2. Executive Director's Report:	
A. Quarterly Investment Review	A
1. Basic Retirement Funds	
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2. Wilshire Associates	
C. Alternative Investment Committee	E
1. Report of alternative investment program	
2. Trust Company of the West and Heitman real estate funds	
4. Report from South Africa Task Force	F

Next meeting of the Investment Advisory Council is scheduled for Tuesday, December 2, 1986.

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Room 105, MEA Building
55 Sherburne Avenue
Saint Paul 55155
296-3328

MINUTES
INVESTMENT ADVISORY COUNCIL
JUNE 3, 1986

The Investment Advisory Council met on Tuesday, June 3, 1986 at 2:00 P.M. in the MEA Building, St. Paul.

MEMBERS PRESENT: Henry Adams, Verona Burton, James Eckmann, Ken Gudorf, Dick Hume, James Hacking, Jay Kiedrowski, Malcolm McDonald, Mike Rosen, Joe Rukavina, Ray Vecellio, Debbie Veverka, Jan Yeomans.

MEMBERS ABSENT: Paul Groschen, Judy Mares, Gary Norstrem, Harvey Schmidt

SBI STAFF: Howard Bicker, Jeff Bailey, Beth Lehman, Daralyn Peifer, John Griebenow, Harriet Balian, Charlene Olson.

OTHERS ATTENDING: Elton Erdahl, Richard Helgeson, Jim Heidelberg, Mike Ousdigian, Mary Remole, Jay Stoffel, Peter Sausen, Bob Whitaker.

The minutes of the March 4, 1986 meeting were approved.

EXECUTIVE DIRECTOR'S REPORT

Howard Bicker, Executive Director, first reviewed the asset allocation and investment performance of the Basic Retirement Funds. The market value of the Funds' assets increased 10.7% in the first quarter. The prime contributor to asset growth was the strong performance of the common stock market. Total contributions for the quarter were $5.4 million. Mr. Bicker reported that the asset mix in the Basic Retirement Funds showed very little change during the first quarter of 1986, but noted that the cash equivalents segment of the portfolio increased by 1% due to a rise in the cash held by the Basic Funds' equity managers. He reported the Funds' total portfolio produced a 10.6% total rate of return for the first quarter 1986, and a 30.5% return for the year ending March 31, 1986. Mr. Bicker noted that when alternative equity assets are excluded, the total rate of return for the first quarter was 11.4% and 32.8% for the year. He stated that total portfolio performance fell slightly below that of the Basic Funds' assigned asset class composite for the first quarter and latest year. However, it outperformed the median tax-exempt fund during both periods. Mr. Bicker reported that the Basic Retirement Funds' active equity manager pool produced a 15.2% total rate of return for the first quarter and a 36.8% return for the latest year. He stated that the managers' aggregate performance exceeded that of the Wilshire 5000 for the quarter, although their performance trailed slightly that of the Wilshire 5000 for the most recent year. Mr. Bicker reported that the total rate of return for the first quarter of the Basic Retirement Funds' active bond manager pool was 6.2%, and 26.7% for the year. He stated that the active bond managers' aggregate performance trailed the market due to their heavy weighting in the mortgage sector of the bond market.

In reviewing the Post Retirement Fund, Mr. Bicker reported that the market value of its assets increased 11.9% during the first quarter, due mostly to the strong capital markets. The asset mix of the Post Retirement Investment Fund remained essentially unchanged during the quarter. Mr. Bicker stated that the Fund's equity portfolio return produced a 10.5% return during the first quarter and 29.3% for the latest year, which was slightly under the market. In response to a question from Mr. Vecellio, Mr. Bicker stated that retirement benefit increases are based on fiscal year rates and are paid on a calendar year basis. In closing, Mr. Bicker stated that the total market value for all portfolios managed by the SBI exceeded $10 billion for the first time in history.

ALTERNATIVE INVESTMENT COMMITTEE REPORT

Mr. Gudorf presented the report of the Alternative Investment Committee. Mr. Gudorf reported that the Committee is recommending a $20 million investment in State Street Fund IV, a proposed $150 million successor fund to State Street Fund III. This recommendation is subject to final negotiation and Attorney General approval. Mr. Gudorf stated that there is currently a lack of investment opportunities in the venture capital and resource areas. He stated that the Committee is considering ways of completing the State Board of Investment's remaining resource allocation. Mr. Gudorf moved approval of the Committee's report. The motion passed unanimously.

ADMINISTRATIVE AND ASSET ALLOCATION COMMITTEES REPORT

Mr. McDonald asked Mr. Bailey for a brief report on the staff position paper relating to the Post Retirement Fund and its benefit increase mechanism. Mr. Bailey stated that the Basic Retirement Funds invest the contributions of active employees. When they retire, a sum sufficient to pay their pension is transferred to the Post Retirement Fund. He stated the Fund must earn a 5% return to finance the promised initial benefit. If the Fund earns more than 5%, the additional earnings are used to finance permanent benefit increases. Mr. Bailey reviewed the increases granted through the existing formula and pointed out that the benefit increases have a "lead-lag" relationship to the general inflation rate. Mr. Bicker summarized by saying that over the long term, the current formula will cause high benefit increases in periods of low inflation, and low benefit increases in periods of high inflation. Mr. McDonald stated it is the role of the Legislature and the retirement systems to formulate pension benefit policy. However, it is the recommendation of the committees that the staff paper be sent to the retirement systems and other interested parties to make them aware of the relevant issues. Mr. Adams moved approval to accept the Administrative and Asset Allocation Committees report. The motion passed unanimously.

EQUITY MANAGER COMMITTEE REPORT

Ms. Veverka reported that the Committee reviewed the performance-based fee contracts sent to the Board's external equity managers. She stated that the Board's equity managers have generally performed well in the most recent quarter and year. She stated that three managers are on a watch status: BMI Capital, Investment Advisers, and Peregrine Capital. Ms. Veverka reported that the head of the index fund management program at Wilshire Associates has left, and the Committee recommends staff closely evaluate the long-term implications of this departure and report back to the IAC and SBI next quarter. Mr. Eckmann moved approval of the Committee report. The motion passed unanimously.

FIXED INCOME COMMITTEE REPORT

Mr. Bicker stated that the investment performance of the fixed income managers has trailed the bond market's returns over the latest twelve months. He stated that the Committee recommends that the Board review the structure of the bond manager program. Areas for consideration include the use of passive versus active management and the development of more specialized management in mortgages and corporate bonds. Mr. Bicker stated that the Committee recommends that staff work with the Board's consultant over the next several quarters to develop specific alternatives for the Board's consideration. The Committee also recommends that the contracts of all current managers be renewed for one year. Mr. Gudorf moved approval of the Committee report. The motion passed unanimously.

CONSULTANT SEARCH COMMITTEE REPORT

Mr. Kiedrowski, Chairman of the Committee, stated that a request for proposal was sent to fifteen consulting firms, of which ten responded. He stated that three firms were selected for personal interviews: DeMarche Associates, Evaluation Associates, and Richards & Tierney. He stated that the Committee recommends Richard & Tierney be retained by the SBI as its consultant. The Committee feels the firm's expertise in investment management structures, performance management, and investment techniques will be extremely helpful in advising the Board on its future decisions. He stated that the proposed fee for this service is $120,000 per year, and could be renewed on an annual basis. He stated that the Board may periodically require specialized consulting services on an ad hoc or project basis. As a result, the Committee also recommended that the Board contract with firms as needed for these projects. Mr. Kiedrowski moved approval of the Committee's report. The motion passed unanimously.

The meeting adjourned at 3:10 P.M.

Respectfully submitted,

Howard Bicker

Howard J. Bicker
Executive Director

Tab A

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MINNESOTA STATE BOARD OF INVESTMENT

BASIC RETIREMENT FUNDS

QUARTERLY INVESTMENT REVIEW

JUNE 30, 1986

MINNESOTA STATE BOARD OF INVESTMENT

BASIC RETIREMENT FUNDS

SECOND QUARTER 1986

Summary

ASSETS

A 2.3% increase in market value during the second quarter of the year brought fiscal year 1986 asset growth for the Basic Retirement Funds to 23.7%. The asset growth was due entirely to investment returns, as teacher retirements under the "Rule of 85" raised net withdrawals for the second quarter to $55.8 million. Net withdrawals for the fiscal year totalled $85.7 million. Market values for the Funds' assets as of the end of the most recent two quarters and five calendar years are presented below.

Calendar Year		Market Value (millions)	Percent Change from Previous Period
1981		$2,148	+ 9.5
1982		2,806	+ 30.6
1983		3,129	+ 11.5
1984		3,265	+ 4.4
1985		4,030	+ 23.4
1986	1Q	4,463	+ 10.7
	2Q	4,564	+ 2.3

ASSET MIX

The Basic Retirement Funds' asset mix shifted slightly during the second quarter of the year. The common stock and alternative equity segments of the portfolio increased in relative size, while the bond and cash segments decreased. The shifts occurred as a result of the performance of the common stock market, the external managers' increased allocation to equities, and the continued funding of real estate and venture capital managers. Withdrawals for teacher retirements contributed to the decrease in cash. Asset segment weightings for the most recent two quarters and fiscal year are displayed below.

ASSET MIX

	6/30/85	3/31/86	6/30/86
Common Stocks	59.9%	61.2%	62.2%
Bonds	23.4	23.3	22.8
Cash Equivalents*	9.6	6.5	5.6
Alternative Equity Assets	7.1	9.0	9.4
	100.0%	100.0%	100.0%

*Includes cash uncommitted to long-term assets plus cash held by all external managers.

INVESTMENT RETURNS

The Basic Retirement Funds' total portfolio produced a 3.5% total rate of return for the second quarter of the year, bringing the investment results for fiscal year 1986 to 26.2%. Excluding alternative equity assets, the Basic Funds generated a 3.8% rate of return for the quarter and a 29.0% return for the most recent year.

The Basic Funds' portfolio performance failed to match that of the assigned stock/bond composite during the latest quarter and year. However, total performance for the quarter exceeded that of the median TUCS balanced portfolio by a substantial margin. In addition, total portfolio performance for fiscal year 1986 placed the Basic Retirement Funds at approximately the first quartile level of the TUCS balanced portfolio universe of over 1000 portfolios.

Total portfolio and asset segment returns for the most recent quarter and year are presented on the following page.

	Total Rate of Return	
	Second Quarter 1986	Year Ending 6/30/86
Common Stocks	5.1%	33.8%
Bonds	0.4	17.6
Cash	1.8	7.9
Alternative Equity Assets	1.9	4.5
Total Fund (including alt. assets)	3.5	26.2

EQUITY PERFORMANCE

A 4.5% total rate of return for the second quarter brought fiscal year returns for the Basic Retirement Funds' active equity manager pool to 32.4%. Although the manager pool underperformed the equity market during both the quarter and year, it matched the performance of the TUCS median equity manager during the most recent quarter and outperformed the median manager by a slim margin in the latest year. The performance results of the individual managers varied widely. Several of the Basic Funds' "growth" and "rotational" managers have produced exceptional returns during recent periods. However, the "value" investment approach has been out of favor throughout much of the recent year. Consequently, the pool's "value" managers have experienced mediocre results.

The index fund produced a 5.4% total rate of return for the second quarter and a 34.4% return for the year. As in previous quarters, the tracking error for the index fund remained within the established guidelines.

The active managers shifted their industry sector concentrations slightly. In aggregate, the managers' position in the Consumer Non-Durables sector was expanded, while holdings in the Technology and Materials and Services sectors were trimmed. As a group, the managers remained overweighted in the Financial and Transportation sectors and underweighted in the Capital Goods, Energy, and Utilities sectors.

Equity manager returns for the most recent quarter and year are displayed below.

Total Portfolio Returns

	Second Quarter 1986	Year Ending 6/30/86
Fred Alger	8.5%	47.2%
Alliance Capital	5.9	43.9
Beutel Goodman	-0.6	16.3
BMI Capital	7.0	36.7
Forstmann Leff	8.9	44.1
Hellman Jordan	0.3	29.5
IDS	7.5	41.9
Investment Advisers	4.6	29.3
Lieber & Company	11.0	42.1
Peregrine Capital	1.9	20.1
Waddell and Reed	2.0	28.5
Internal Manager	0.9	18.6
Total - External Active Managers	4.5	32.4
Wilshire Associates (Index Fund)	5.4	34.4
Wilshire 5000	5.8	35.3

BOND PERFORMANCE

The Basic Retirement Funds' bond managers produced an aggregate second quarter total rate of return of 0.4%. The pool's total rate of return for fiscal year 1986 was 17.9%. As a group, the bond managers failed to match the performance of the bond market and the TUCS median bond manager during the latest quarter and year. As with the equity managers, the performances of the bond managers were widely dispersed. Aggregate pool returns were hindered by several managers' heavy concentrations in the mortgage sector of the market. Suffering from high prepayments, the Mortgage sector significantly underperformed the Corporate and Treasury sectors during the most recent year.

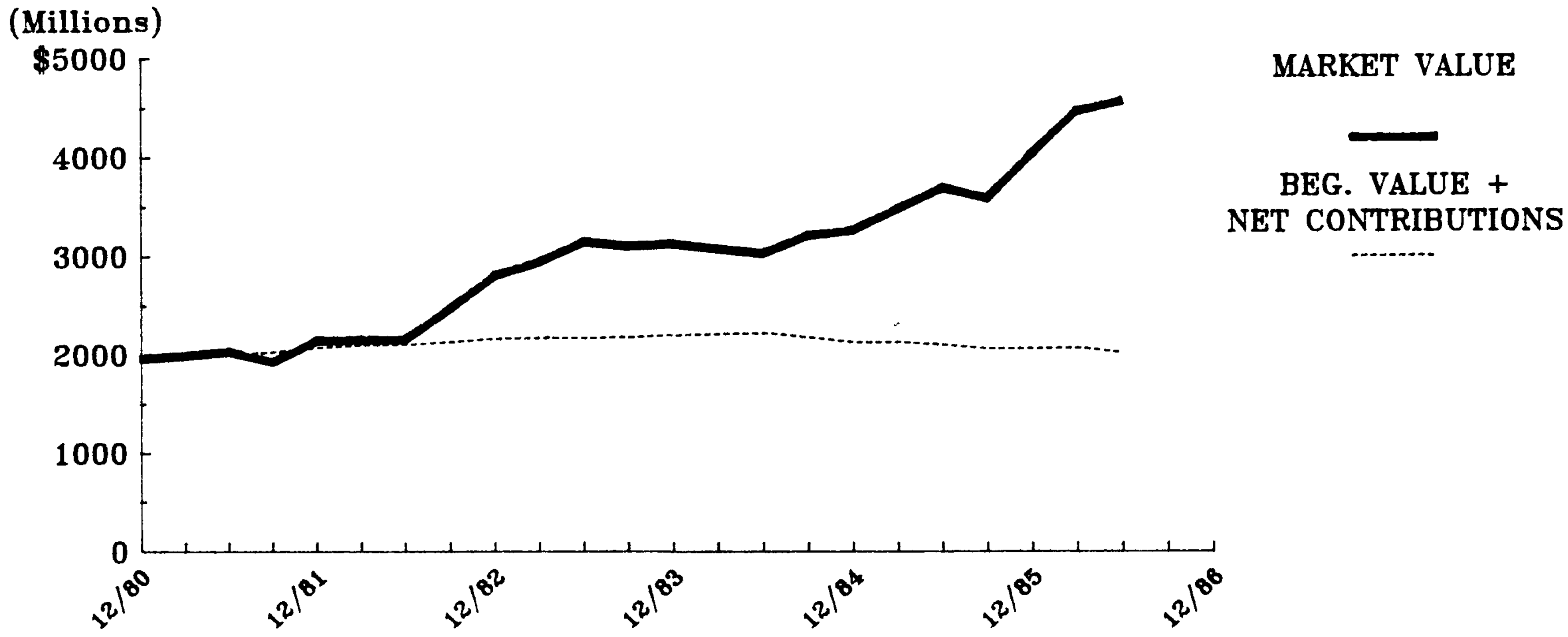
The Basic Retirement Funds' bond manager returns for the second quarter and year are presented below.

	Total Portfolio Returns	
	Second Quarter 1986	Year Ending 6/30/86
Investment Advisers	0.9%	16.2%
Lehman Management	1.1	17.1
Miller Anderson	0.2	18.5
Morgan Stanley	-1.3	17.9
Peregrine Capital	0.2	13.1
Western Asset	1.3	20.6
Total - External Managers	0.4	17.9
Salomon Brothers Broad Bond Index	1.1	19.9

FIGURE 1

BASIC RETIREMENT FUNDS

ASSET GROWTH



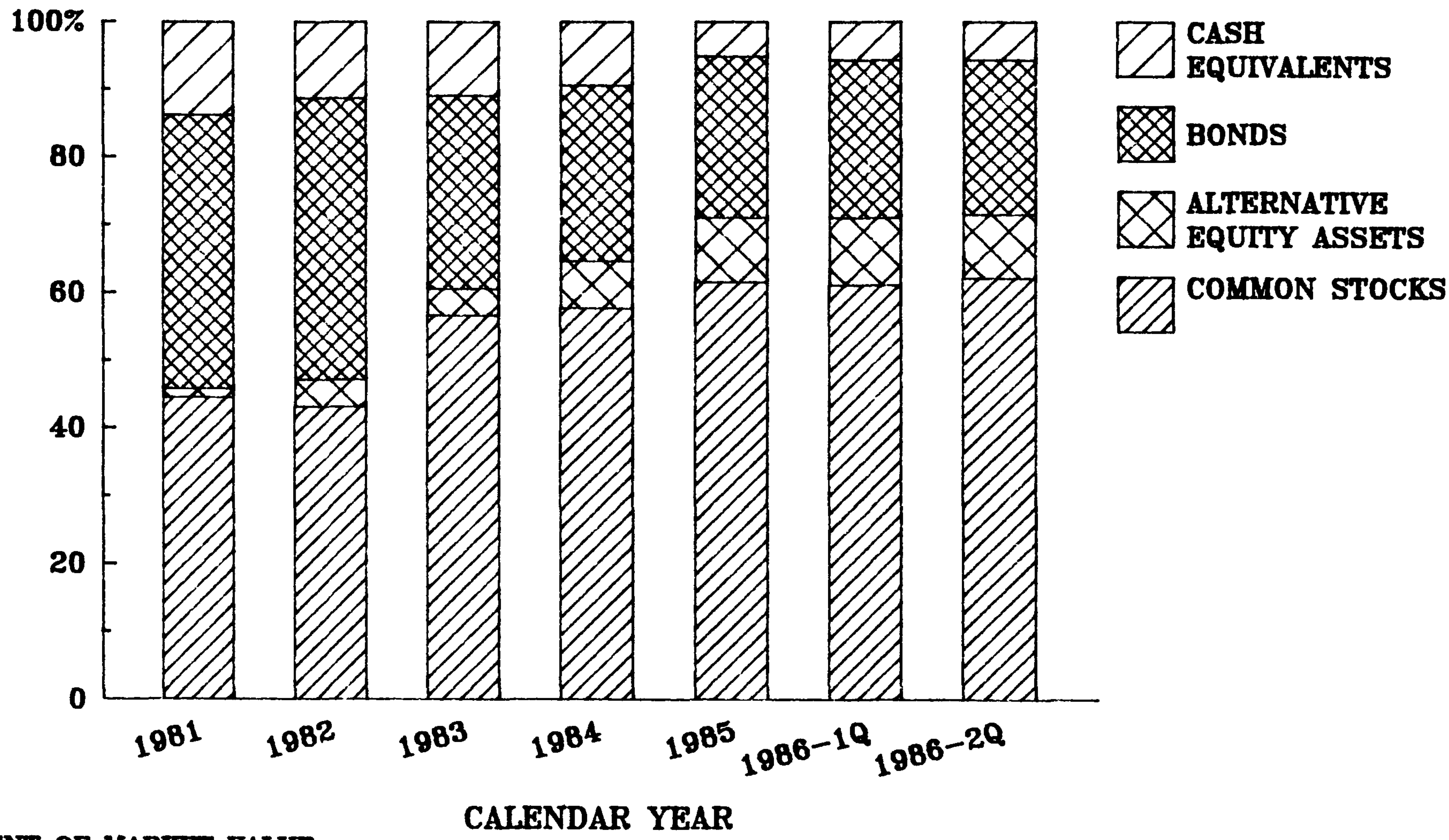
PERIOD ENDING

	12/80	12/81	12/82	12/83	12/84	12/85	6/86
BEGINNING VALUE	1,627.1	1,962.0	2,148.8	2,806.2	3,129.0	3,265.0	4,029.6
NET CONTRIBUTIONS	122.7	114.9	91.0	40.0	-77.6	-62.7	-50.4
INVESTMENT RETURN	212.2	71.9	566.4	282.8	213.6	827.3	584.5
ENDING VALUE	1,962.0	2,148.8	2,806.2	3,129.0	3,265.0	4,029.6	4,563.7

(MILLIONS OF DOLLARS)

FIGURE 2

BASIC RETIREMENT FUNDS
HISTORICAL ASSET MIX



PERCENT OF MARKET VALUE
END OF PERIOD ALLOCATIONS

TABLE 1

BASIC RETIREMENT FUNDS

ASSET MIX

PERCENT OF MARKET VALUE
(End of Period Allocations)

	Common Stocks		Bonds		Cash*		Real Estate		Resource Funds		Venture Capital	
	$Million	Percent	$Million	Percent	$Million	Percent	$Million	Percent	$Million	Percent	$Million	Percent
1981	959	44.6	865	40.3	297	13.8	20	0.9	8	0.4	-	-
1982	1,212	43.2	1,165	41.5	317	11.3	93	3.3	17	0.7	-	-
1983	1,773	56.7	892	28.5	342	10.9	101	3.2	21	0.7	-	-
1984	1,887	57.8	847	25.9	308	9.4	178	5.5	23	0.7	22	0.7
1985	2,481	61.6	961	23.8	204	5.1	288	7.1	47	1.2	49	1.2
1986 1Q	2,730	61.2	1,041	23.3	291	6.5	307	6.9	38	0.9	54	1.2
2Q	2,837	62.2	1,041	22.8	253	5.6	330	7.2	37	0.8	65	1.4

*Includes cash uncommitted to long-term assets plus cash held by all external managers.

TABLE 2

BASIC RETIREMENT FUNDS

ASSET MIX - ACTUAL vs. POLICY

PERCENT OF MARKET VALUE
(End of Period Allocations)

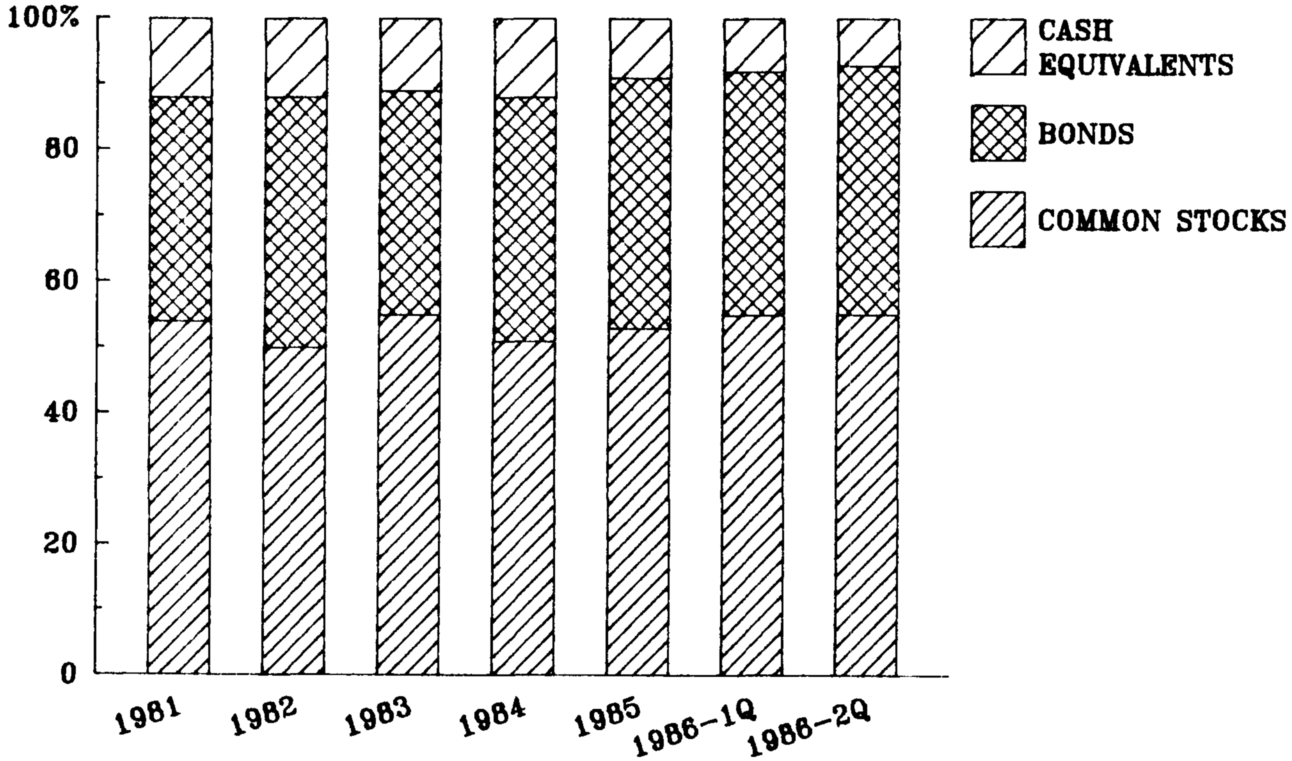
		Common Stocks*						Fixed Income***			Real Estate*			Resource Funds Venture Capital*		
		Passive Management			Active Management											
		Actual	Policy	Diff.	Actual	Policy	Diff.	Actual	Policy	Diff.	Actual	Policy	Diff.	Actual	Policy	Diff.
1983	1Q	0	40	-40	57.9	20	+37.9	38.3	25	+13.3	3.2	10	-6.8	0.6	5	-4.4
	2Q	0	40	-40	61.9	20	+41.9	34.5	25	+ 9.5	3.0	10	-7.0	0.6	5	-4.4
	3Q	0	40	-40	63.4	20	+43.4	32.8	25	+ 7.8	3.2	10	-6.8	0.6	5	-4.4
	4Q	43.5	40	+ 3.5	18.5	20	- 1.5	34.1	25	+ 9.1	3.2	10	-6.8	0.7	5	-4.3
1984	1Q	42.2	40	+ 2.2	17.8	20	- 2.2	35.7	25	+10.7	3.5	10	-6.5	0.8	5	-4.2
	2Q	41.7	40	+ 1.7	17.7	20	- 2.3	33.3	25	+ 8.3	5.5	10	-4.5	1.8	5	-3.2
	3Q	42.5	40	+ 2.5	17.9	20	- 2.1	32.6	25	+ 7.6	5.3	10	-4.7	1.7	5	-3.3
	4Q	42.1	40	+ 2.1	18.0	20	- 2.0	32.7	25	+ 7.7	5.5	10	-4.5	1.7	5	-3.3
1985	1Q	43.0	40	+ 3.0	18.3	20	- 1.7	31.4	25	+ 6.4	5.7	10	-4.3	1.6	5	-3.4
	2Q	43.2	40	+ 3.2	18.7	20	- 1.3	30.7	25	+ 5.7	5.6	10	-4.4	1.8	5	-3.2
	3Q	42.8	40	+ 2.8	18.8	20	- 1.2	29.5	25	+ 4.5	6.6	10	-3.4	2.3	5	-2.7
	4Q	44.6	40	+ 4.6	19.2	20	- 0.8	26.5	25	+ 1.5	7.2	10	-2.8	2.5	5	-2.5
1986	1Q	45.8	40	+ 5.8	20.0	20	0.0	25.1	25	+ 0.1	7.0	10	-3.0	2.1	5	-2.9
	2Q	43.7	40	+ 3.7	20.4	20	+ 0.4	26.3	25	+ 1.3	7.3	10	-2.7	2.3	5	-2.7

*Includes cash held by external managers in the particular asset class.
**Includes cash uncommitted to long-term assets.

FIGURE 3

TAX-EXEMPT BALANCED PORTFOLIO UNIVERSE

HISTORICAL ASSET MIX



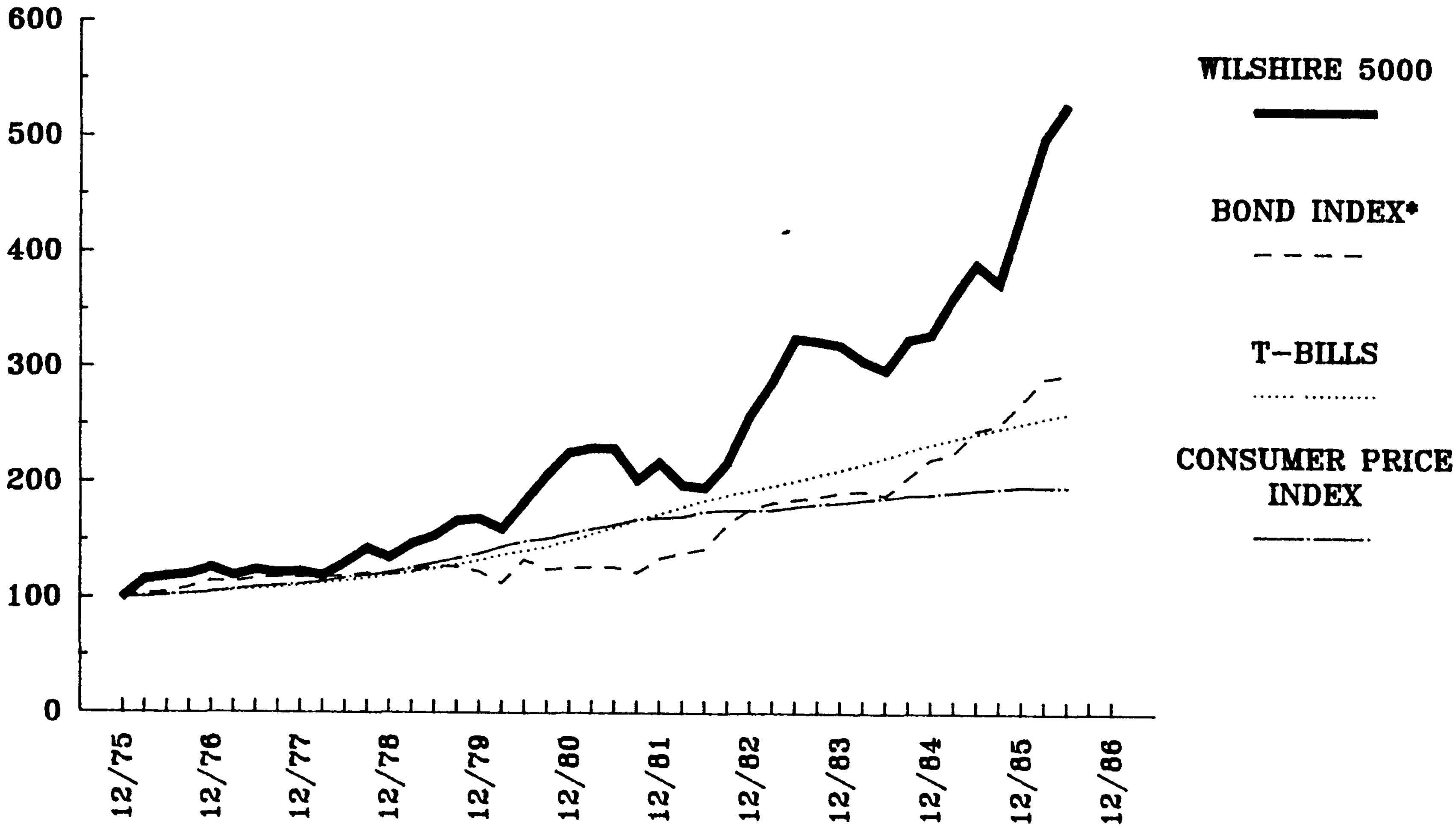
	1981	1982	1983	1984	1985	1986-1Q	1986-2Q
COMMON STOCKS	51%	48%	52%	48%	50%	53%	54%
BONDS	32	36	32	35	36	35	37
CASH EQUIVALENTS	12	12	10	11	9	8	7

PERCENT OF MARKET VALUE
END OF PERIOD ALLOCATIONS

Figure 3 and the accompanying table depict the median asset class weightings held in Wilshire Associate's TUCS universe of balanced portfolios during the most recent two quarters and five calendar years. The figure and table are intended to give a perspective of the historical asset allocation of balanced tax-exempt corporate and public funds. The portfolios in the balanced universe differ in composition. Many of the portfolios are comprised of only common stocks, bonds, and cash equivalents. Other portfolios in the balanced universe contain alternative assets such as real estate and venture capital in addition to stocks and bonds.

FIGURE 4

PERFORMANCE OF CAPITAL MARKETS
CUMULATIVE RETURNS



*M.L. MASTER INDEX THROUGH 12/79
SALOMON BROAD INDEX 1/80-6/86

FIGURE 5

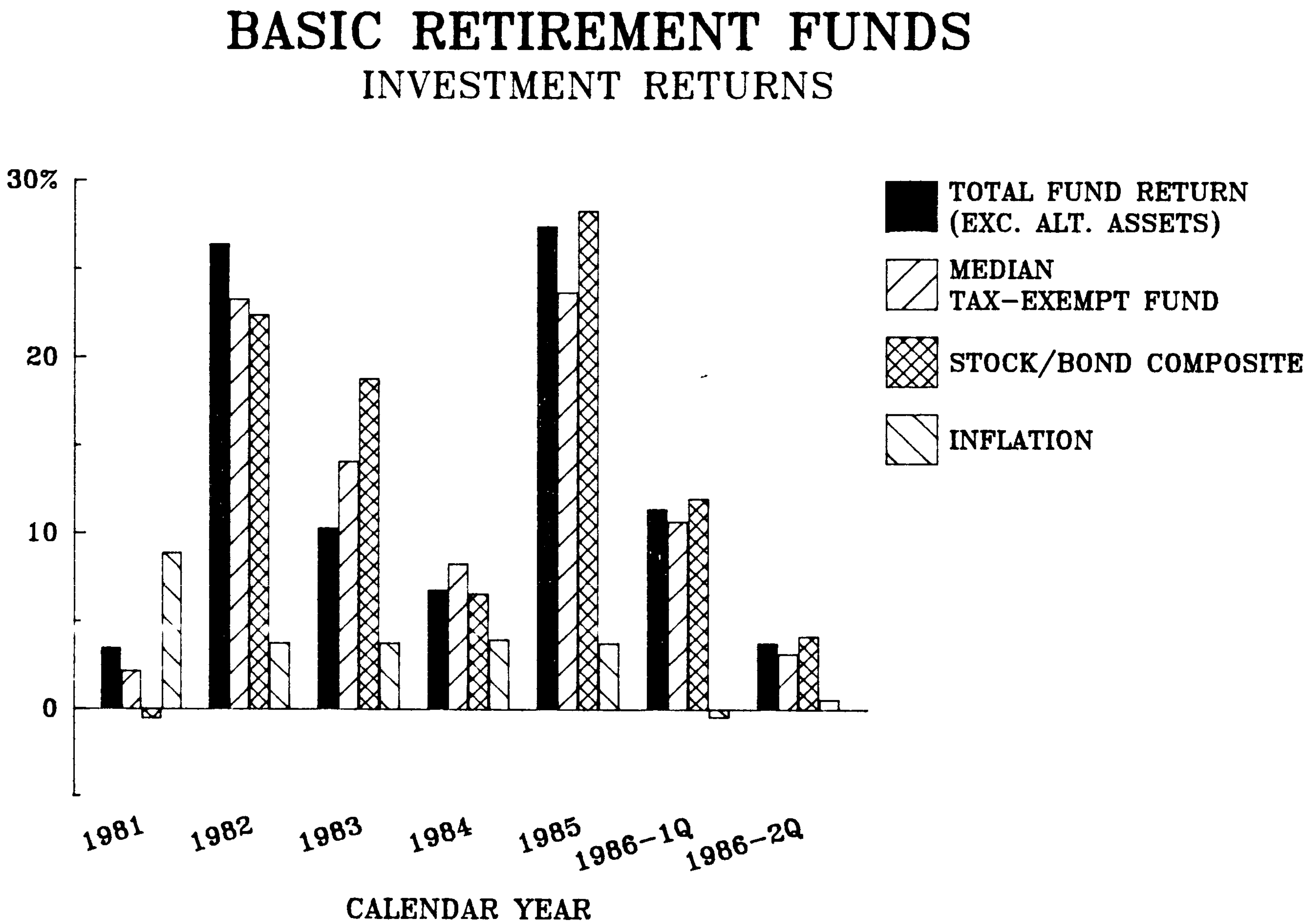

BASIC RETIREMENT FUNDS
INVESTMENT RETURNS
30%
20
10
0
TOTAL FUND RETURN (EXC. ALT. ASSETS)
MEDIAN TAX-EXEMPT FUND
STOCK/BOND COMPOSITE
INFLATION
1981
1982
1983
1984
1985
1986-1Q
1986-2Q
CALENDAR YEAR

TABLE 3

BASIC RETIREMENT FUNDS

INVESTMENT RETURNS RELATIVE TO PERFORMANCE STANDARDS

Calendar Year		Total Fund Return (exc. alt. assets)	Median Tax-exempt Fund	Stock/Bond* Composite	Inflation	91 Day T-Bills	Total Fund Return (inc. alt. assets)
1980		12.4%	18.6%	18.5%	12.4%	12.7%	12.4%
1981		3.5	2.2	1.8	8.9	15.6	3.5
1982		26.4	23.3	24.4	3.9	11.7	25.7
1983		10.3	14.1	18.2	3.8	9.3	10.1
1984		6.8	8.3	6.9	4.0	10.4	6.9
1985		27.4	23.7	28.3	3.8	7.9	25.6
1986	1Q	11.4	10.7	11.8	-0.4	1.8	10.6
	2Q	3.8	3.2	4.2	0.6	1.6	3.5
1 Year Through 6/30/86		29.0	25.1	29.2	1.7	7.3	26.2
3 Years Annualized Through 6/30/86		15.8	16.4	16.9	3.2	8.9	14.9
5 Years Annualized Through 6/30/86		17.5	17.6	18.8	3.9	10.0	16.8

*50/45/5 Wilshire 5000/Salomon Broad Bond Index/T-Bill Composite Through 12-31-82;
65/30/5 Wilshire 5000/Salomon Broad Bond Index/T-Bill Composite 1-01-83 through 6/30/86

TABLE 4

BASIC RETIREMENT FUNDS

INVESTMENT RETURNS - DETAIL

CALENDAR YEAR		COMMON STOCKS		BONDS		ALTERNATIVE EQUITY ASSETS
		Basics	Wilshire 5000	Basics	Salomon Bond Index	Basics
1980		26.2%	33.7%	-0.1%	3.3%	-
1981		0.0	-3.6	2.0	7.0	-
1982		21.6	18.7	38.1	29.8	11.9
1983		12.7	23.5	9.3	7.8	7.4
1984		2.7	3.1	14.6	15.1	11.8
1985		31.4	32.6	21.4	21.8	6.8
1986	1Q	14.4	14.4	6.1	8.6	- 1.1
	2Q	5.1	5.8	0.4	1.1	1.9
1 Year Through 6/30/86		33.8	35.3	17.6	19.9	4.5
3 Years Annualized Through 6/30/86		15.9	17.4	15.0	16.6	8.2
5 Years Annualized Through 6/30/86		16.6	18.1	18.5	18.3	N.A.

TABLE 5

BASIC RETIREMENT FUNDS

EQUITY MANAGER PERFORMANCE

TOTAL PORTFOLIO RETURNS

Managers	Second Quarter 1986	Year Ending 6/30/86	Two Years Ending 6/30/86 (Annualized)	Since Inception 3/1/83 (Annualized)
Fred Alger	8.5%	47.2%	36.5%	20.5%
Alliance Capital	5.9	43.9	39.0	20.7
Beutel Goodman	-0.6	16.3	26.0	18.4
BMI Capital	7.0	36.7	25.1	9.0
Forstmann Leff	8.9	44.1	36.7	21.5
Hellman Jordan	0.3	29.5	31.6	16.5
IDS	7.5	41.9	38.8	21.9
Investment Advisers	4.6	29.3	30.9	17.8
Lieber & Company	11.0	42.1	36.4	21.2
Peregrine Capital	1.9	20.1	N.A.	N.A.
Waddell & Reed	2.0	28.5	22.0	16.0
Internal Manager	0.9	18.6	N.A.	N.A.
Total - External Active Managers	4.5	32.4	30.5	16.3
Wilshire Associates (Index Fund)	5.4	34.4	33.0	N.A.
Performance Standards				
Wilshire 5000	5.8	35.3	33.2	21.2
TUCS Median Growth Mgr.	5.4	36.6	32.1	N.A.
TUCS Median Small Growth Mgr.	6.9	33.5	30.2	N.A.
TUCS Median Rotational Mgr.	4.8	32.7	31.6	N.A.
TUCS Median Value Mgr.	3.2	30.1	30.7	N.A.
Inflation	0.6	1.7	2.7	3.4

TABLE 6

BASIC RETIREMENT FUNDS

BOND MANAGER PERFORMANCE

TOTAL PORTFOLIO RETURNS

Managers	Second Quarter 1986	Year Ending 6/30/86	Since Inception 6/30/84 (Annualized)
Investment Advisers	0.9%	16.2%	25.3%
Lehman Management	1.1	17.1	22.2
Miller Anderson	0.2	18.5	20.7
Morgan Stanley	-1.3	17.9	22.0
Peregrine Capital	0.2	13.1	18.2
Western Asset	1.3	20.6	26.2
Total - External Bond Managers	0.4	17.9	22.4
Performance Standards			
Salomon Brothers Broad Bond Index	1.1	19.9	24.8
TUCS Median Bond Manager	1.3	18.4	21.7

MINNESOTA STATE BOARD OF INVESTMENT

POST RETIREMENT INVESTMENT FUND

QUARTERLY INVESTMENT REVIEW

JUNE 30, 1986

MINNESOTA STATE BOARD OF INVESTMENT

POST RETIREMENT INVESTMENT FUND

SECOND QUARTER 1986

Summary

ASSETS

Post Retirement Investment Fund assets increased 5.2% in market value during the second quarter. Early retirements under the "Rule of 85" continue to swell the size of the Fund. In particular, a large number of teacher retirements during June helped to push net contributions for the quarter to $172 million. Continued strong cash flows into the Fund are projected through the end of the 1987 fiscal year. End-of-period market values for the Post Retirement Investment Fund's assets for the latest two quarters and last five calendar years are shown below.

Calendar Year		Market Value (millions)	Percent Change from Previous Period
1981		$1,101	- 5.2
1982		1,523	+38.3
1983		1,803	+18.4
1984		2,246	+24.6
1985		3,107	+38.3
1986	1Q	3,476	+11.9
	2Q	3,658	+ 5.2

ASSET MIX

Cash equivalents rose as a percentage of the Post Retirement Investment Fund during the second quarter. That increase was due primarily to the last minute surge of teacher retirements at the end of the quarter. The bulk of the new contributions were received late in June and had yet to be invested in long-term securities by quarter-end.

The percentage of the Fund (at market value) invested in common stocks, bonds, and cash equivalents over the last two quarters and previous year is presented below.

ASSET MIX

	6/30/85	3/31/86	6/30/86
Common Stocks	27.1%	19.7%	18.6%
Bonds	65.7	70.6	67.2
Cash Equivalents	7.2	9.7	14.2
	100.0%	100.0%	100.0%

EQUITY PERFORMANCE

The Post Retirement Investment Fund's equity portfolio generated a -1.2% return during the second quarter. This return fell below that of both the Wilshire 5000 and SBI external equity manager pool. For the most recent four quarters the equity portfolio also trailed the return of the Wilshire 5000 and external equity manager pool. The "value" investment approach pursued by the Fund's internal manager has been very much out of favor for the last several quarters. This fact is evidenced by the equally lackluster recent performance of the Board's external managers who follow a similar "value" style.

The sector weightings of the Post Retirement Investment Fund's equity portfolio were not altered significantly during the quarter. The equity portfolio remains overweighted in the Capital Goods, Energy, and Technology sectors and underweighted in the Consumer Nondurables, Materials and Services, and Utilities sectors. Equity portfolio performance for the latest quarter and year are presented on the following page.

	Second Quarter 1986	Year Ending 6/30/86
Equity Portfolio	-1.2%	19.5%
Wilshire 5000	5.8	35.3

DEDICATED BOND PORTFOLIO

No significant changes took place in the dedicated bond portfolio during the second quarter. However, staff did complete the analysis necessary to rebalance the dedicated bond portfolio at the beginning of the 1987 fiscal year. Next quarter's report will discuss the details of the rebalancing. At the end of the second quarter, the dedicated bond portfolio remained invested largely in high quality issues. Agency issues continued to dominate the portfolio.

TABLE 7

POST RETIREMENT INVESTMENT FUND

DEDICATED BOND PORTFOLIO STATISTICS

JUNE 30, 1986

Value at Market	$2,285,551,380
Value at Par	$1,999,690,496
Average Coupon	10.54%
Current Yield	9.00%
Yield to Maturity	8.14%
Time to Maturity	13.68 Years
Average Duration	7.27 Years
Average Quality Rating	AAA
Number of Issues	208

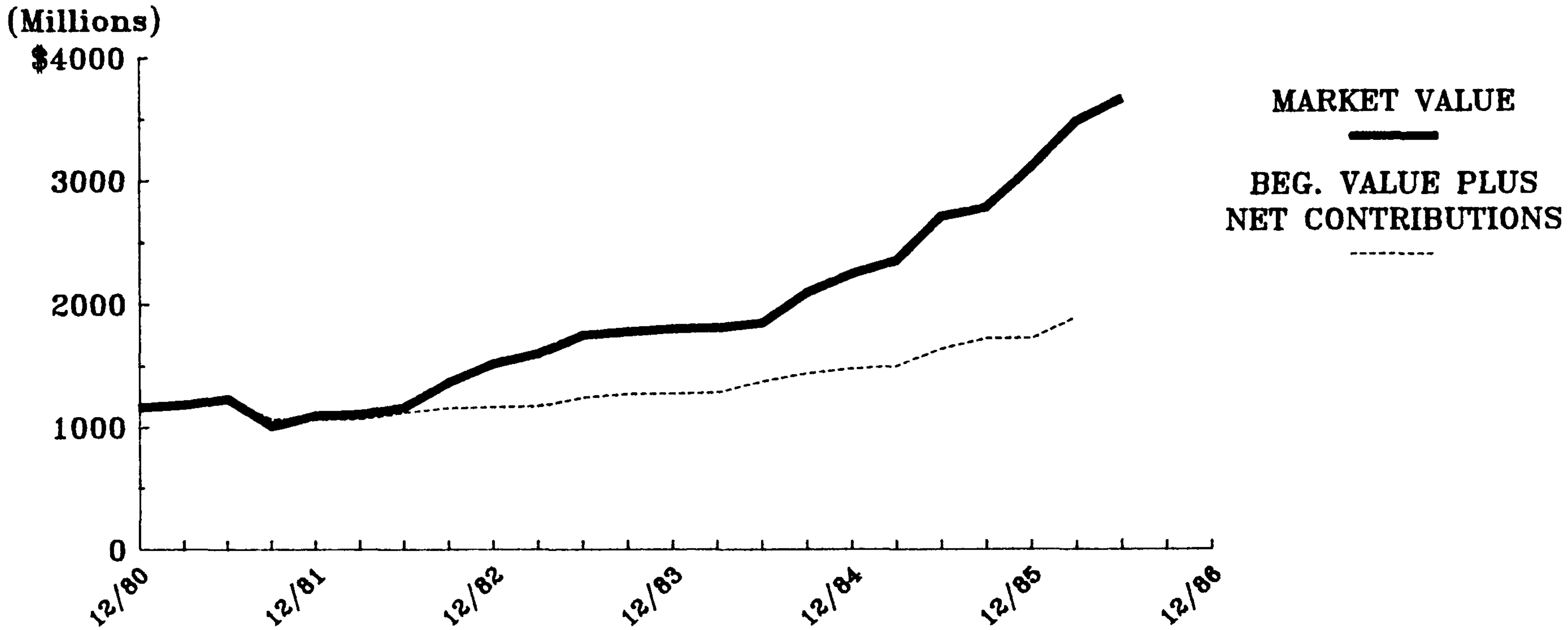
SECTOR WEIGHTINGS

Treasury	65.7%
Federal Agency	9.1
Industrial	8.1
Utilities	6.7
Finance	5.0
Transportation	1.0
Mortgages	0.0
Miscellaneous	4.4
	100.0%

FIGURE 6

POST RETIREMENT INVESTMENT FUND

ASSET GROWTH



PERIOD ENDING

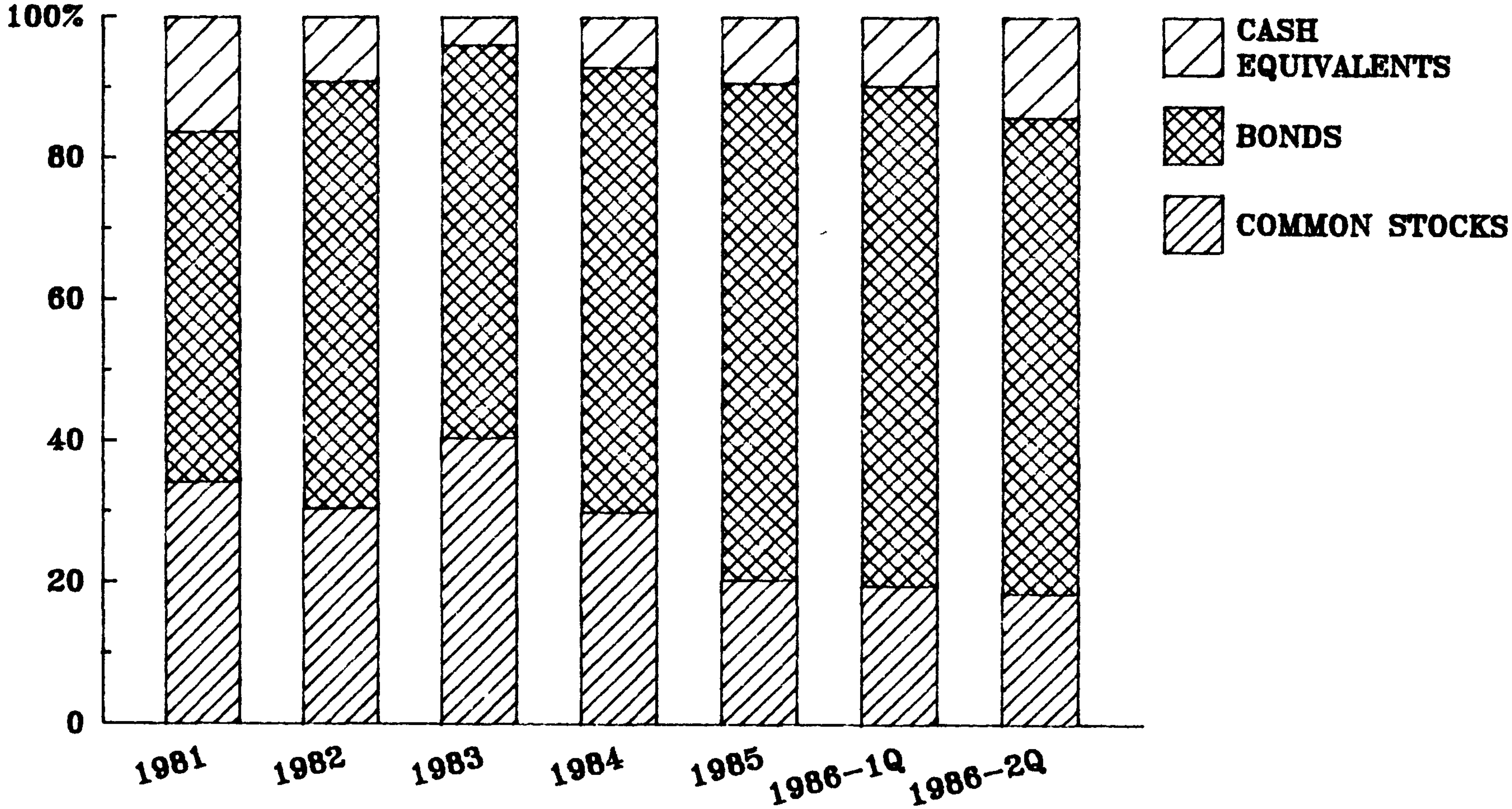
	12/80	12/81	12/82	12/83	12/84	12/85	6/86
BEGINNING VALUE	956.6	1,161.6	1,100.9	1,522.9	1,802.9	2,245.7	3,107.3
NET CONTRIBUTIONS	70.1	-97.8	102.6	109.1	201.0	238.9	173.7
INVESTMENT RETURN	125.9	37.1	319.4	170.8	241.8	622.7	376.7
ENDING VALUE	1,161.6	1,100.9	1,522.9	1,802.9	2,245.7	3,107.3	3,657.7

(MILLIONS OF DOLLARS)

FIGURE 7

POST RETIREMENT INVESTMENT FUND

HISTORICAL ASSET MIX



PERCENT OF MARKET VALUE
END OF PERIOD ALLOCATIONS

TABLE 8

POST RETIREMENT INVESTMENT FUND

ASSET MIX

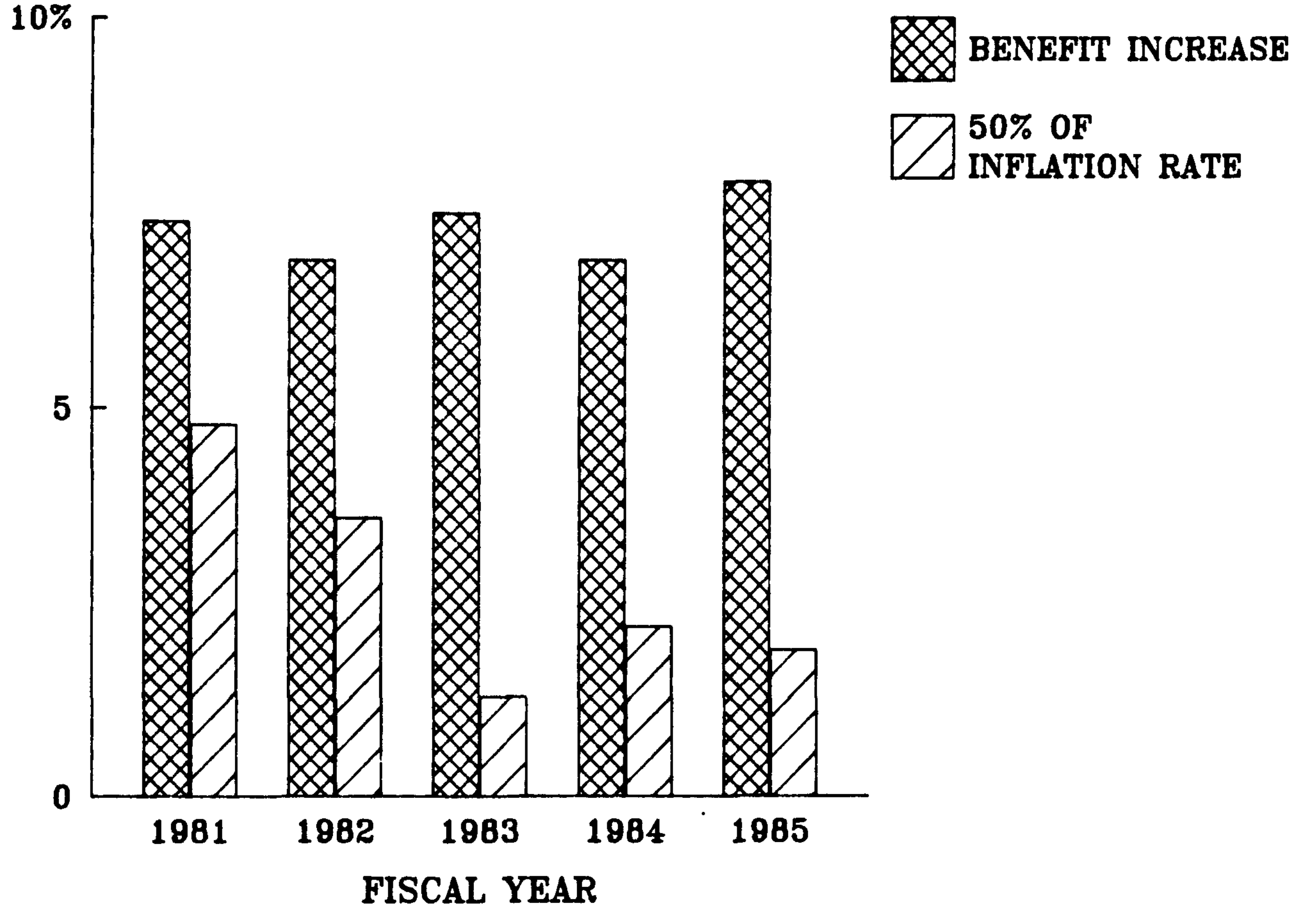
PERCENT OF MARKET VALUE

(End Of Period Allocations)

Calendar Year		Common Stocks $Million	Common Stocks Percent	Bonds $Million	Bonds Percent	Cash $Million	Cash Percent
1980		568.4	48.9	453.0	39.0	140.3	12.1
1981		376.0	34.2	545.5	49.5	179.4	16.3
1982		465.0	30.5	919.9	60.4	138.1	9.1
1983		730.3	40.5	1,002.1	55.6	69.8	3.9
1984		674.8	30.0	1,411.4	62.9	159.5	7.1
1985		636.5	20.5	2,182.5	70.2	288.3	9.3
1986	1Q	686.3	19.7	2,454.3	70.6	335.6	9.7
	2Q	681.0	18.6	2,457.1	67.2	519.6	14.2

FIGURE 8

POST RETIREMENT INVESTMENT FUND
BENEFIT INCREASES VERSUS INFLATION



FISCAL YEAR

	1981	1982	1983	1984	1985	3 YR.*	5 YR.*
BENEFIT INCREASE	7.4%	6.9%	7.5%	6.9%	7.9%	7.1%	6.4%
50% OF INFLATION RATE	4.8	3.6	1.3	2.2	1.9	2.3	3.7

* ANNUALIZED

FIGURE 9

POST RETIREMENT INVESTMENT FUND

EQUITY SEGMENT RETURNS

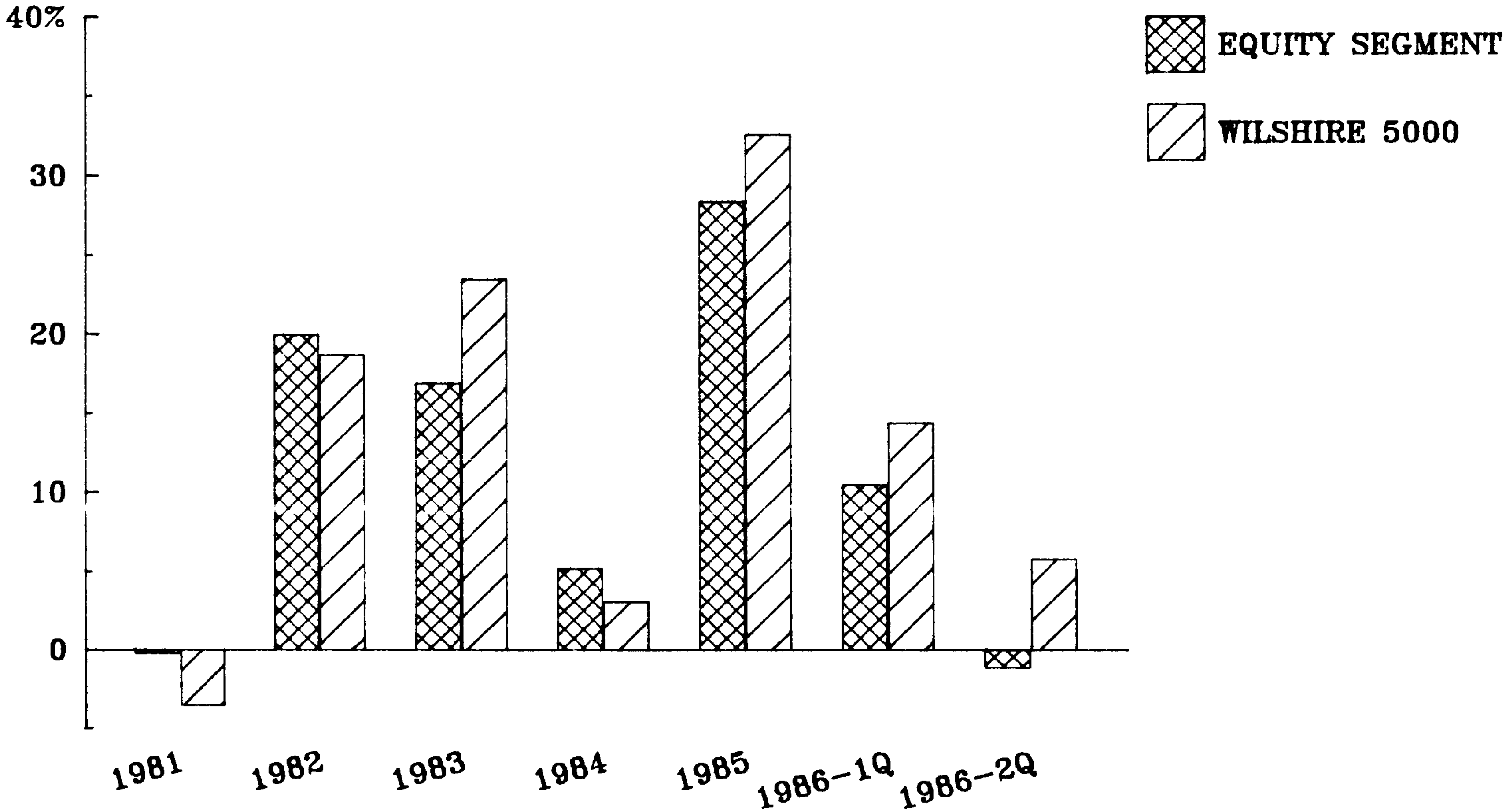


TABLE 9

POST RETIREMENT INVESTMENT FUND

EQUITY SEGMENT RETURNS

INVESTMENT RETURNS RELATIVE TO PERFORMANCE STANDARDS

		Total Returns	
		Post Retirement Fund	Wilshire 5000
1980		25.9%	33.7%
1981		-0.3	-3.6
1982		20.0	18.7
1983		16.9	23.5
1984		5.2	3.1
1985		28.4	32.6
1986	1Q	10.5	14.4
	2Q	-1.2	5.8
1 Year Through 6/30/86		19.5	35.3
3 Years Annualized Through 6/30/86		13.2	17.4
5 Years Annualized Through 6/30/86		15.2	18.1

TABLE 10

POST RETIREMENT INVESTMENT FUND

EQUITY MANAGER DATA

June 30, 1986

SECTOR WEIGHTINGS

SECTORS	WEIGHTING INTERNAL MANAGER	WEIGHTING WILSHIRE 5000
Capital Goods	6.1%	4.5%
Consumer Durables	3.9	4.0
Consumer Nondurables	14.0	28.8
Energy	18.1	7.8
Financial	14.7	14.0
Materials & Services	6.4	12.4
Technology	25.9	12.6
Transportation	2.0	3.0
Utilities	8.9	12.9
	100.0%	100.0%

QUARTER-END PORTFOLIO STATISTICS *

MANAGER	# OF STOCKS	EQUITY ALLOC.	MKT. VOLTY	DIVER.	YIELD	E/P	REL. RET.	P/B	5 YR EARN	MVAR	EVAR	SIZE	GROW	FINL
Internal Mgr.	115	100%	1.12	0.90	0.30	0.12	-0.83	-0.54	-0.21	0.13	0.04	0.05	0.19	0.21

* See Equity Manager Portfolio Statistics Glossary for definitions.

MINNESOTA STATE BOARD OF INVESTMENT

SUPPLEMENTAL INVESTMENT FUND
(Income Share Account)

SUPPLEMENTAL INVESTMENT FUND
(Growth Share Account)

MINNESOTA VARIABLE ANNUITY FUND

QUARTERLY INVESTMENT REVIEW

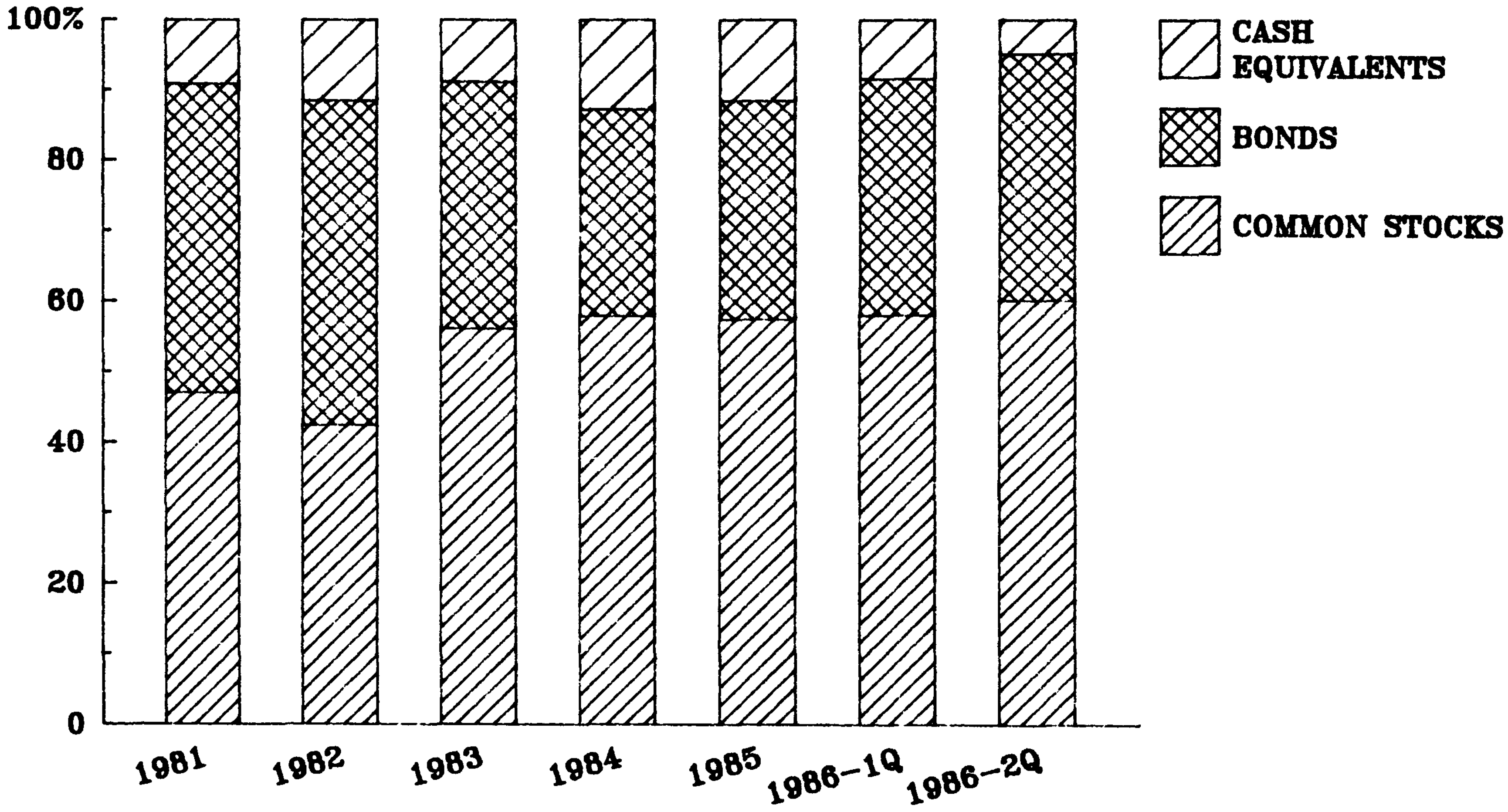
JUNE 30, 1986

FIGURE 10

SUPPLEMENTAL INVESTMENT FUND

(INCOME SHARE ACCOUNT)

HISTORICAL ASSET MIX



PERCENT OF MARKET VALUE
END OF PERIOD ALLOCATIONS

TABLE 11

SUPPLEMENTAL INVESTMENT FUND
(Income Share Account)

ASSET MIX

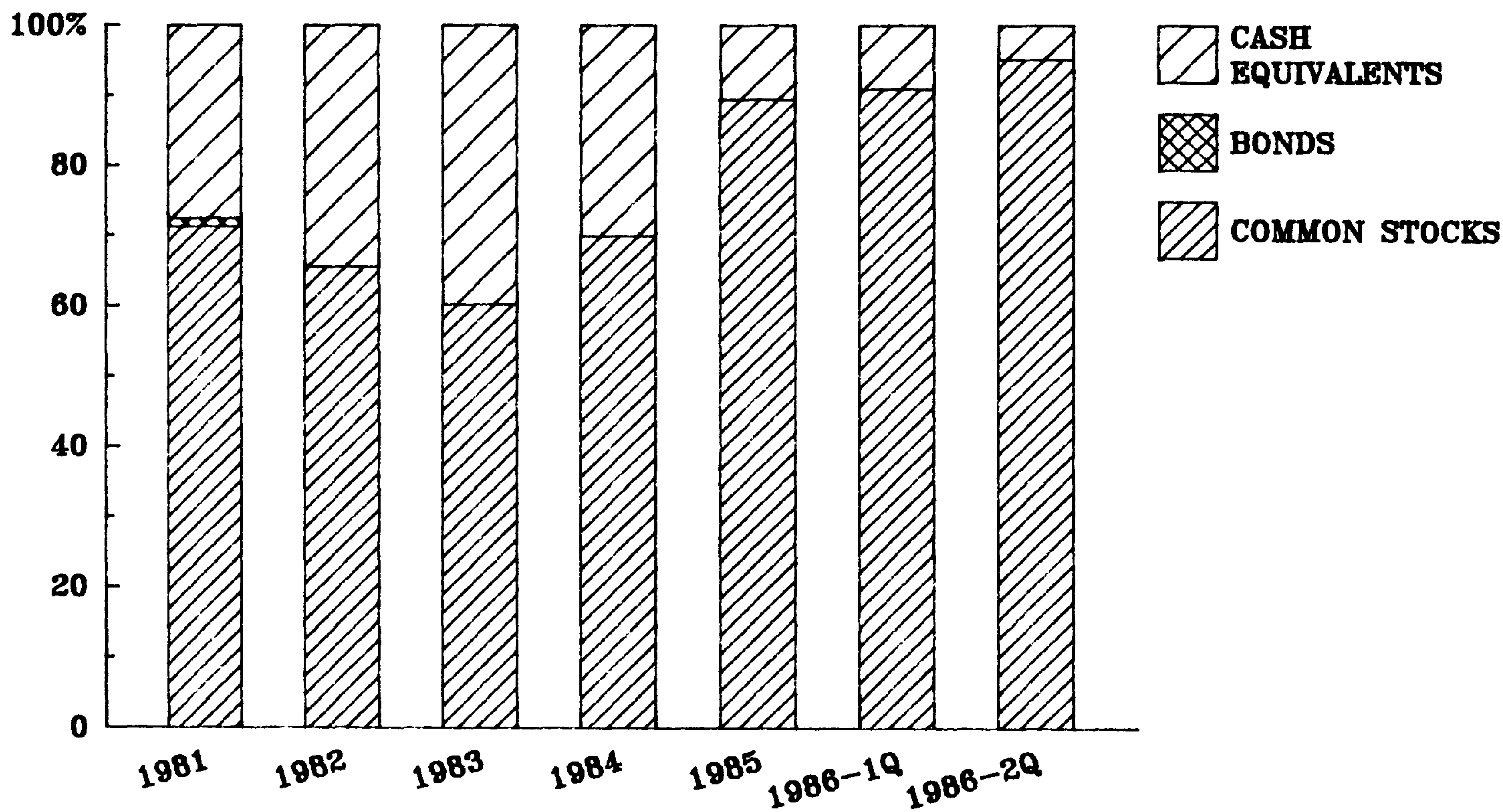
PERCENT OF MARKET VALUE
(End Of Period Allocations)

Calendar Year		Common Stocks		Bonds		Cash*	
		$Million	Percent	$Million	Percent	$Million	Percent
1980		33.5	44.5	30.5	40.4	11.3	15.1
1981		35.9	47.1	33.4	43.8	7.0	9.1
1982		42.7	42.5	46.2	46.0	11.5	11.5
1983		63.5	56.2	39.6	35.0	9.9	8.8
1984		74.4	58.0	37.6	29.3	16.4	12.7
1985		92.8	57.5	50.0	31.0	18.5	11.5
1986	1Q	103.5	58.1	59.8	33.5	15.0	8.4
	2Q	108.0	60.2	62.7	35.0	8.6	4.8

*Includes cash held by the external managers

FIGURE 11

SUPPLEMENTAL INVESTMENT FUND
(GROWTH SHARE ACCOUNT)
HISTORICAL ASSET MIX



PERCENT OF MARKET VALUE
END OF PERIOD ALLOCATIONS

TABLE 12

SUPPLEMENTAL INVESTMENT FUND
(Growth Share Account)
ASSET MIX

PERCENT OF MARKET VALUE
(End Of Period Allocations)

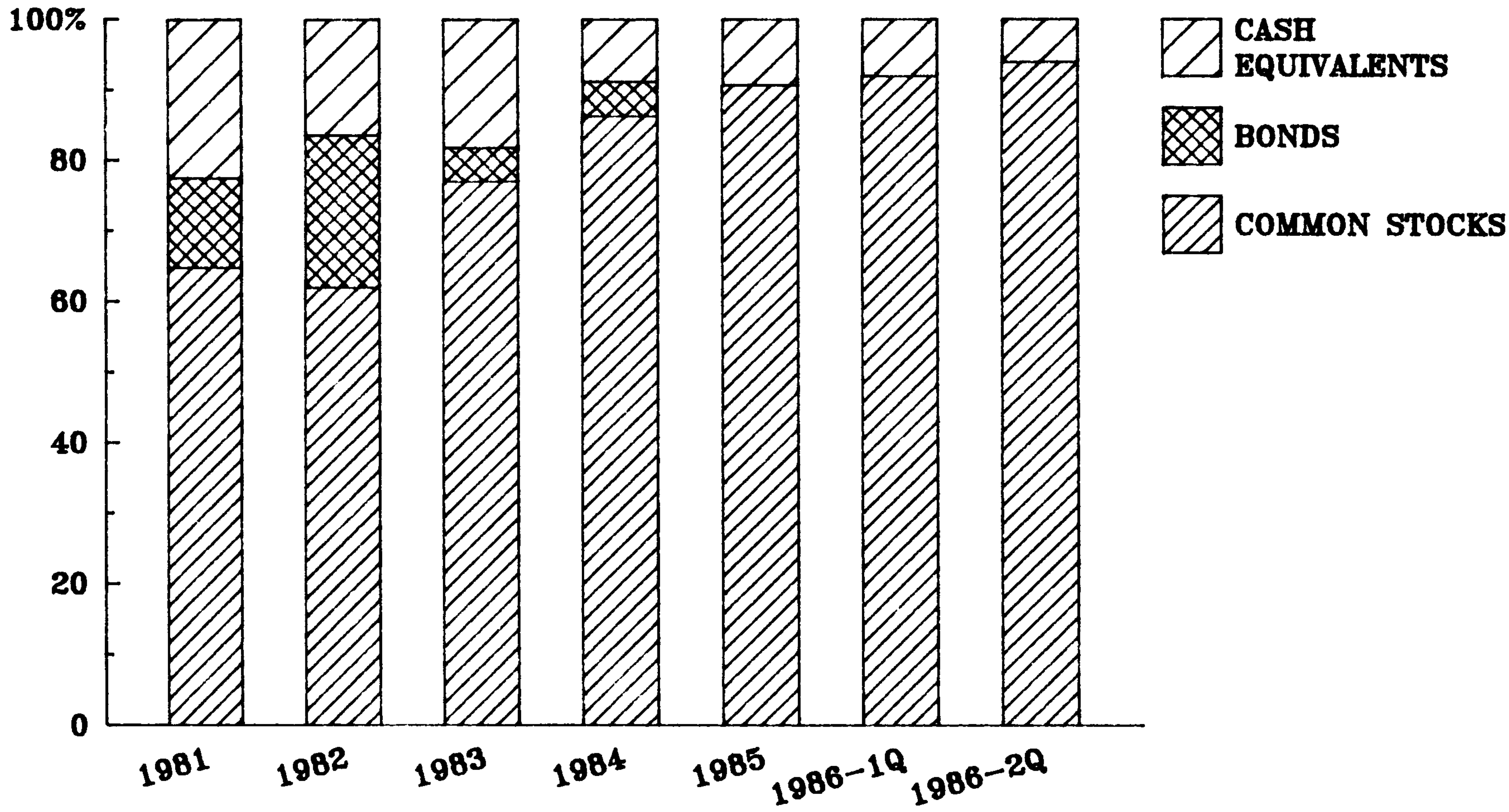
Calendar Year		Common Stocks		Bonds		Cash*	
		$Million	Percent	$Million	Percent	$Million	Percent
1980		29.8	83.0	----	----	6.1	17.0
1981		28.8	71.3	0.5	1.2	11.1	27.5
1982		32.5	65.6	----	----	17.0	34.4
1983		33.7	60.3	----	----	22.2	39.7
1984		41.8	70.0	----	----	17.9	30.0
1985		65.8	89.5	----	----	7.7	10.5
1986	1Q	74.9	91.0	----	----	7.4	9.0
	2Q	75.0	95.2	----	----	3.8	4.8

*Includes cash held by the external managers

FIGURE 12

MINNESOTA VARIABLE ANNUITY FUND

HISTORICAL ASSET MIX



PERCENT OF MARKET VALUE
END OF PERIOD ALLOCATIONS

TABLE 13

MINNESOTA VARIABLE ANNUITY FUND
ASSET MIX

PERCENT OF MARKET VALUE
(End Of Period Allocations)

Calendar Year		Common Stocks		Bonds		Cash*	
		$Million	Percent	$Million	Percent	$Million	Percent
1980		55.2	74.1	9.8	13.2	9.4	12.7
1981		49.6	64.8	9.7	12.7	17.2	22.5
1982		56.7	62.0	19.8	21.6	15.0	16.4
1983		78.9	77.0	5.0	4.8	18.7	18.2
1984		89.4	86.3	5.1	4.9	9.1	8.8
1985		116.8	90.7	---	---	12.0	9.3
1986	1Q	133.5	92.0	---	---	11.6	8.0
	2Q	138.9	94.0	---	---	8.9	6.0

*Includes cash held by external managers

TABLE 14

MINNESOTA STATE BOARD OF INVESTMENT
RETIREMENT FUNDS

INVESTMENT RETURNS RELATIVE TO PERFORMANCE STANDARDS

YEAR ENDING JUNE 30, 1986

	Total Fund Return	Stock/Bond Composite**	Common Stocks	Wilshire 5000	Bonds	Salomon Bond Index
SUPPLEMENTAL INVESTMENT FUND						
Income Share Account*	17.8%	29.2%	19.9%	35.3%	16.2%	19.9%
Growth Share Account*	23.4	33.8	24.0	35.3	---	19.9
VARIABLE ANNUITY FUND*	24.5	33.8	24.9	35.3	---	19.9

* Includes performance of both internal and external managers.

** Wilshire 5000/Salomon Broad Bond/91 day T-bill indices:

Income Account - 65% stock/30% bond/5% cash
Growth Account - 95% stock/ 5% cash
Variable Fund - 95% stock/ 5% cash

MINNESOTA STATE BOARD OF INVESTMENT

PERMANENT SCHOOL FUND

QUARTERLY INVESTMENT REVIEW

JUNE 30, 1986

MINNESOTA STATE BOARD OF INVESTMENT

PERMANENT SCHOOL FUND

FIRST QUARTER 1986

Summary

ASSETS

The assets of the Permanent School Fund increased 1.7% in market value during the second quarter. New contributions of $1.1 million accounted for a small portion of the increase, with the rest coming from market appreciation. End-of-period market values for the latest quarter and last five calendar years are presented below.

Calendar Year		Market Value (Millions)	Percent Change From Previous Period
1980		$245	+ 1.7
1981		236	- 3.7
1982		286	+ 21.2
1983		290	+ 1.4
1984		308	+ 6.2
1985		350	+ 13.6
1986	1Q	359	+ 2.6
	2Q	365	+ 1.7

ASSET MIX

The assets of the Permanent School fund are invested entirely in fixed income securities. As discussed in previous quarterly Investment Reviews, the accounting restrictions under which the Fund must operate dictate that current income maximization be its primary investment goal. Common stocks are not a viable component of the Fund's long-run asset mix.

Cash equivalents have been held at high levels in recent quarters following the liquidation of the Fund's common stock portfolio. Given the sharp drop in interest rates, the proceeds from that liquidation have not yet been invested in long-term bonds.

The percentage of the Fund (at market value) invested in common stocks, bonds, and cash equivalents over the last two quarters and previous year is presented below.

ASSET MIX

	6/30/85	3/31/85	6/30/86
Common Stocks	17.3%	0.0%	0.0%
Bonds	71.4	67.7	65.4
Cash Equivalents	11.3	32.3	34.6
	100.0%	100.0%	100.0%

BOND PORTFOLIO

The Permanent School Fund's bond portfolio, at the end of the second quarter, remained invested in high quality, intermediate-to-long term maturity issues. Mortgages, both federally and privately insured, made up the largest segment of the portfolio. Relevant quarter-end portfolio statistics are shown on the following page.

TABLE 15

PERMANENT SCHOOL FUND

BOND PORTFOLIO STATISTICS

June 30, 1986

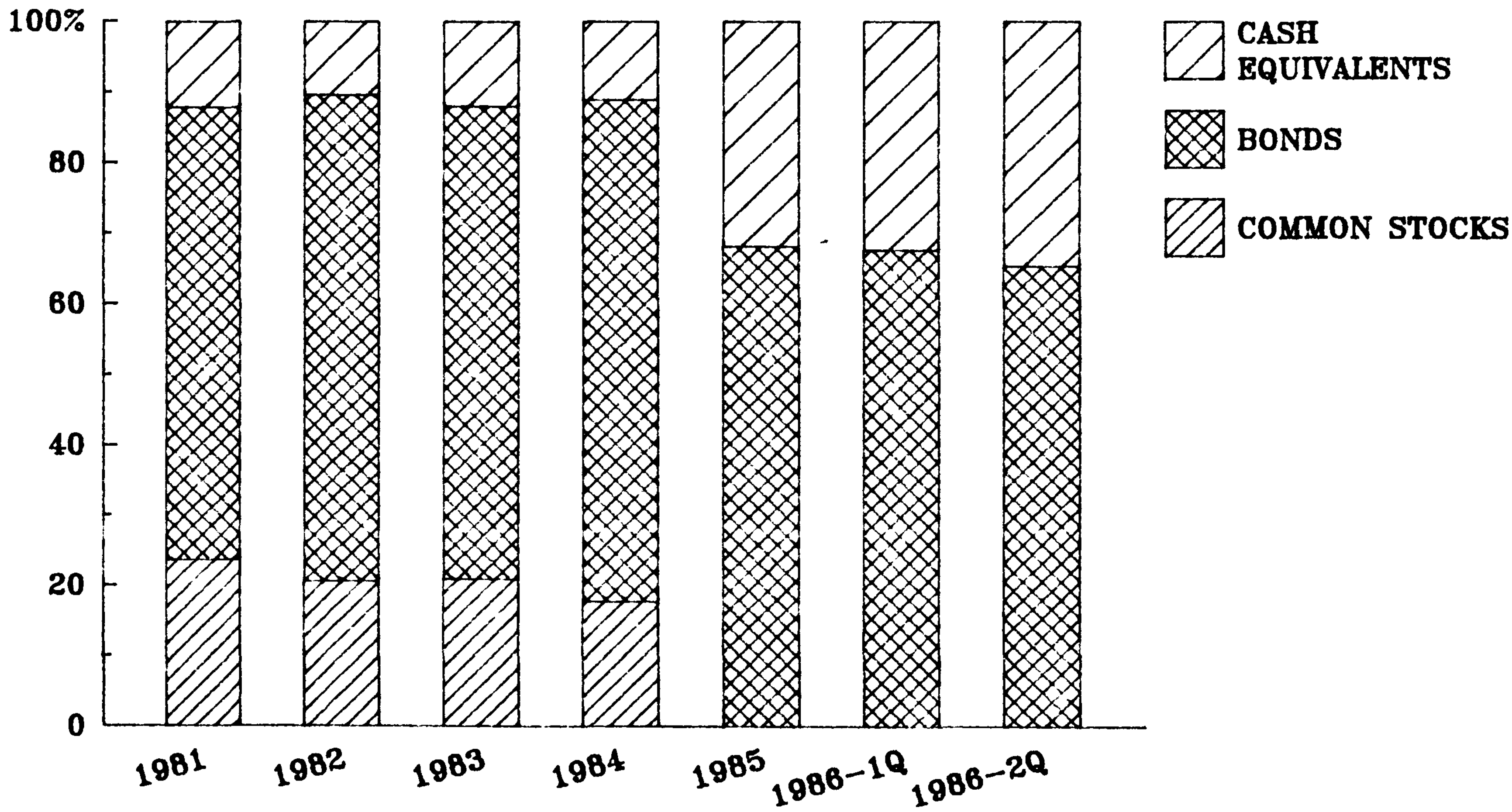
Value at Market	$238,664,172
Value at Par	$227,078,304
Average Coupon	9.97%
Current Yield	9.49%
Yield to Maturity	8.97%
Time to Maturity	11.39 Years
Average Duration	4.58 Years
Average Quality Rating	AAA
Number of Issues	113

SECTOR WEIGHTINGS

Treasury	18.8%
Federal Agency	24.1
Industrial	5.3
Utilities	9.0
Finance	4.3
Transportation	5.2
Mortgages	31.6
Miscellaneous	1.7
	100.0%

FIGURE 13

PERMANENT SCHOOL FUND
HISTORICAL ASSET MIX



PERCENT OF MARKET VALUE
END OF PERIOD ALLOCATIONS

TABLE 16

PERMANENT SCHOOL FUND

ASSET MIX

PERCENT OF MARKET VALUE
(End Of Period Allocations)

Calendar Year		Common Stocks		Bonds		Cash	
		$Million	Percent	$Million	Percent	$Million	Percent
1980		63.9	26.1	169.3	69.2	11.6	4.7
1981		56.0	23.7	151.9	64.2	28.5	12.1
1982		59.1	20.7	197.6	69.0	29.5	10.3
1983		60.8	21.0	195.0	67.1	34.4	11.9
1984		54.9	17.8	219.4	71.2	33.8	11.0
1985		0.0	0.0	238.7	68.2	111.5	31.8
1986	1Q	0.0	0.0	243.5	67.7	116.0	32.3
	2Q	0.0	0.0	238.4	65.4	126.3	34.6

APPENDIX

This appendix contains historical portfolio data pertaining to the SBI's external equity and fixed income managers from the inception of the SBI's accounts with these managers. Any revisions of portfolio data reported in previous quarterly reviews are contained in this appendix.

EQUITY MANAGER PORTFOLIO STATISTICS GLOSSARY

In the following pages, summary descriptions of the individual equity managers' investment philosophy, risk characteristics, and performance data are displayed. Some of the statistics presented are technical in nature. This glossary is designed to aid in understanding the terms that are introduced.

The first five portfolio characteristics listed in the glossary are presented in the Quarterly Investment Review and Appendix on an absolute basis. The remaining portfolio statistics are reported relative to the stock market. The purpose of presenting these statistics in a relative fashion is to "normalize" them, or remove the impact of market-wide changes on the characteristics of a manager's portfolio. In calculating the relative values, the stock market is represented by the 1000 largest capitalization companies in the Wilshire 5000. The managers' portfolio characteristics are reported in standard deviation units relative to the average or mean of these 1000 companies. Thus, a positive (negative) value for a portfolio characteristic indicates a value higher (lower) than the market average.

# of Stocks	- number of different issues held in the manager's stock portfolio.
Qtr. Port. Turnover	- the manager's total equity asset sales during the quarter divided by the average value of the manager's equity assets over the quarter.
Equity Allocation	- percent of the manager's total portfolio invested in common and preferred stocks and convertible securities.
Diversification (R2)	- extent to which a manager's equity holdings statistically resemble the stock market. Low (high) diversification portfolios will experience returns which are not well (are well) correlated with those of the market. By definition, the market has a diversification measure of 1.0. The less a portfolio is diversified, the lower will be its diversification measure (referred to as R-squared). The SBI's managers are required, over the long-term, to hold portfolios with diversification levels less than .85.

Market Volatility (Equity Beta) - degree to which the returns on the manager's stock portfolio are sensitive to movements in the stock market's return. By definition the market has a market volatility measure (referred to as beta) of 1.0. Portfolios with values greater (less) than 1.0 have above (below) average sensitivity to market moves. The SBI's managers are required, over the long-term to hold portfolios with market volatility levels above 1.10. This measure does not include the impact of cash holdings on total portfolio volatility.

Price Variability (MVAR) - risk related to the historical variability of the prices of stocks in the manager's portfolio. The more variable are the portfolio's securities' prices, the more risky is the portfolio. Items such as current stock price, twelve month price range, trading volume, and beta make up this measure.

Earnings Variability (EVAR) - risk related to the variability of the earnings of those companies owned in the manager's portfolio. The more variable are the companies' earnings, the more risky is the portfolio. Items such as variance of accounting earnings, variance of cash flow, occurrence of extraordinary accounting items, and the correlation of companies' earnings with U.S. corporate earnings make up this measure.

12-Month Relative Return (REL RET) - the return on the stocks currently in the manager's portfolio over the last twelve months less the return on the S&P 500.

Price-to-Book Ratio (P/B) - the market value of the manager's portfolio divided by the latest available annual book value.

5 Year Earnings Growth (5 YR. EARN.) - the annualized growth of the average earnings per share of the manager's portfolio over the latest five fiscal years.

Size and Immaturity (SIZE)	- Risk related to the size and maturity of the companies held in the portfolio. The smaller and younger the companies, the more risky is the portfolio. Items such as total assets, market capitalization, gross plant/book value ratio, and company age make up this measure.
Growth (GROW)	- risk related to the growth orientation of companies owned by the manager. The more growth-oriented are the companies, the riskier is the portfolio. Items such as dividend yield, E/P ratio, and growth in total assets make up this measure.
Earnings-to-Price Ratio (E/P)	- the weighted average trailing four quarter earnings per share of the manager's common stock portfolio divided by the weighted average price per share of the manager's common stock portfolio.
Dividend Yield (YIELD)	- indicated annual dividend of the manager's stock portfolio divided by the portfolio market value.
Financial Leverage (FINL)	- risk related to the extent to which companies held in the portfolio have used debt to finance their operations. The more leveraged are the companies, the riskier is the portfolio. Items such as debt/asset ratio, current asset/current liability ratio, and uncovered fixed charges make up this ratio.
Industry Sector Overweightings	- those sectors of the economy in which the manager has invested a significantly larger percentage of the portfolio than is represented by the stock market.
Industry Sector Underweightings	- those sectors of the economy in which the manager has invested a significantly smaller percentage of the portfolio than is represented by the stock market.

TABLE A-1

EXTERNAL EQUITY MANAGERS

PORTFOLIO STATISTICS RELATIVE TO BENCHMARK PORTFOLIOS

QUARTER-END PORTFOLIO STATISTICS *

MANAGER		# OF STOCKS	EQUITY ALLOC.	MKT. VOLTY	DIVER.	YIELD	E/P	REL. RET.	P/B	5 YR EARN	MVAR	EVAR	SIZE	GROW	FINL
GROWTH MANAGERS															
Fred Alger	(A)	39	94	1.31	0.92	-0.56	-0.04	0.74	0.40	0.09	0.88	0.35	0.02	0.39	-0.0
	(B)	720	95	1.20	N.A.	-0.38	0.00	-0.05	0.42	0.49	0.47	0.03	0.29	0.49	-0.12
Alliance	(A)	37	98	1.21	0.89	-0.50	-0.02	0.30	0.75	0.48	0.88	0.35	-0.19	0.68	-0.26
	(B)	367	95	1.27	N.A.	-0.48	-0.07	-0.18	0.22	0.46	0.64	0.06	0.61	0.64	-0.06
SMALL GROWTH MANAGERS															
BMI Capital	(A)	31	95	1.37	0.90	-0.84	-0.08	0.23	0.23	-0.14	1.10	0.31	1.60	0.95	-0.17
	(B)	806	95	1.33	N.A.	-0.59	-0.07	-0.09	0.43	0.38	0.85	0.18	1.34	0.86	-0.20
Lieber & Co.	(A)	110	99	1.32	0.90	-0.36	0.14	0.12	0.05	0.15	0.59	0.12	1.50	0.55	-0.33
	(B)	1,286	95	1.31	N.A.	-0.46	-0.01	-0.21	0.07	0.19	0.65	0.14	1.77	0.81	-0.32
Waddell & Reed	(A)	67	79	1.28	0.93	-0.35	-0.02	0.28	0.02	-0.04	0.74	0.08	0.30	0.23	-0.02
	(B)	N.A.	80	1.35	N.A.	0.06	0.20	-0.36	-0.21	0.19	0.24	-0.06	1.15	0.29	0.01
ROTATIONAL MANAGERS															
Forstmann Leff	(A)	57	85	1.49	0.88	-0.72	-0.04	0.29	0.37	0.35	1.26	0.51	0.87	0.93	-0.25
	(B)	1,455	70	1.22	N.A.	-0.16	0.15	-0.21	0.08	0.15	0.46	0.06	0.66	0.46	-0.01
Hellman Jordan	(A)	34	99	1.34	0.89	-0.57	-0.02	0.12	0.16	-0.29	0.80	0.15	-0.07	0.95	0.00
	(B)	N.A.	100	1.09	N.A.	0.16	0.09	N.A.	-0.05	0.03	0.13	-0.02	0.04	0.07	-0.03
IDS	(A)	41	91	1.19	0.93	-0.23	0.06	0.54	0.46	0.25	0.54	0.17	0.09	0.22	-0.08
	(B)	N.A.	100	1.09	N.A.	0.16	0.09	N.A.	-0.05	0.03	0.13	-0.02	0.04	0.07	-0.03
IAI	(A)	35	82	1.17	0.94	-0.44	-0.16	0.40	0.28	0.06	0.55	-0.04	-0.03	0.28	-0.10
	(B)	N.A.	100	1.09	N.A.	0.16	0.09	N.A.	-0.05	0.03	0.13	-0.02	0.04	0.07	-0.03
VALUE MANAGERS															
Beutel Goodman	(A)	22	90	1.20	0.89	0.16	-0.41	-0.79	-0.67	-0.28	0.22	0.54	0.23	0.07	0.28
	(B)	412	95	1.18	N.A.	0.04	0.04	-0.56	-0.38	-0.15	0.17	0.13	0.99	0.04	0.10
Peregrine Cap.	(A)	202	90	1.18	0.79	0.56	-0.06	-1.28	-0.75	-0.52	0.09	0.27	0.62	0.17	0.22
	(B)	1,206	90	1.13	N.A.	0.17	0.05	-0.69	-0.49	-0.17	0.09	0.13	0.76	0.17	0.05
Composite External Managers		554	91	1.25	0.96	-0.26	-0.02	-0.01	0.05	0.01	0.58	0.19	0.24	0.43	-0.01
Index Fund Manager		1,344	99	1.09	0.97	0.16	0.09	-0.26	-0.05	0.03	0.13	-0.02	0.04	0.07	-0.03
Composite All Basic Managers		1,495	96	1.14	0.97	0.03	0.06	-0.08	-0.02	0.02	0.26	0.04	0.10	0.18	-0.03

(A) - Actual Portfolio
(B) - Benchmark Portfolio

TABLE A-2

EXTERNAL EQUITY MANAGERS

SECTOR WEIGHTINGS RELATIVE TO BENCHMARK PORTFOLIOS

SECTOR WEIGHTINGS

MANAGER		CAPITAL GOODS	CONSUMER DURABLES	CONSUMER NONDURABLES	ENERGY	FINANCIAL	MAT. & SERVICES	TECHNOLOGY	TRANS-PORTATION	UTILITIES
GROWTH MANAGERS										
Fred Alger	(A)	1.9%	7.5%	52.9%	---%	11.6%	6.2%	15.8%	4.0%	---%
	(B)	2.9	2.0	42.2	0.6	9.2	16.7	21.8	3.7	0.9
Alliance	(A)	2.3	3.6	49.1	---	28.1	---	9.8	7.1	---
	(B)	4.2	2.4	33.0	0.9	17.0	14.5	23.7	4.2	---
SMALL GROWTH MANAGERS										
BMI Capital	(A)	8.5	6.4	43.4	---	19.8	2.9	19.1	---	---
	(B)	5.3	4.6	37.7	1.6	6.9	17.8	21.4	4.2	0.5
Lieber & Company	(A)	1.7	7.3	22.4	3.1	41.8	10.3	7.5	3.7	2.1
	(B)	6.4	5.5	26.2	1.9	20.3	15.5	19.0	3.0	2.1
Waddell & Reed	(A)	4.4	7.8	26.0	0.4	20.7	21.7	12.4	6.6	---
	(B)	5.1	3.6	30.0	4.6	14.9	11.2	9.3	2.9	18.4
ROTATIONAL MANAGERS										
Forstmann Leff	(A)	2.6	6.6	25.2	---	22.4	13.2	23.7	5.2	1.1
	(B)	3.8	3.6	30.0	4.3	17.4	14.4	13.5	4.1	8.9
Hellman Jordan	(A)	---	9.3	24.8	---	32.7	10.7	20.1	2.4	---
	(B)	4.5	4.0	28.8	7.8	14.0	12.4	12.6	3.0	12.9
IDS	(A)	---	---	42.4	3.1	16.4	15.8	6.5	5.0	10.8
	(B)	4.5	4.0	28.8	7.8	14.0	12.4	12.6	3.0	12.9
Investment Advisers	(A)	8.2	---	33.0	1.0	9.6	26.5	13.2	8.6	---
	(B)	4.5	4.0	28.8	7.8	14.0	12.4	12.6	3.0	12.9
VALUE MANAGERS										
Beutel Goodman	(A)	3.4	5.3	9.3	4.0	20.3	23.3	19.0	11.0	4.4
	(B)	8.8	4.9	25.5	8.3	13.1	22.1	11.4	5.8	---
Peregrine Capital	(A)	8.0	6.7	9.6	15.2	8.1	15.7	13.6	5.0	18.1
	(B)	8.1	3.4	17.8	9.8	13.5	15.1	13.4	4.8	14.2
Composite External Managers		3.2	5.0	30.5	4.7	19.2	12.0	14.4	5.6	5.3
Index Fund Manager		4.7	4.2	28.8	7.8	13.5	11.7	12.9	3.0	13.4
Composite All Basic Managers		4.2	4.5	29.3	6.9	15.2	11.8	13.3	3.8	11.0
Wilshire 5000		4.5	4.0	28.8	7.8	14.0	12.4	12.6	3.0	12.9

(A) - Actual Portfolio
(B) - Benchmark Portfolio

TABLE A-3

EXTERNAL EQUITY MANAGERS

PERFORMANCE RELATIVE TO BENCHMARK PORTFOLIOS

Managers	Second Quarter 1986		Year Ending 6/30/86		Two Years Ending 6/30/86 (Annualized)	
	Actual Portfolio	Normal Portfolio	Actual Portfolio	Normal Portfolio	Actual Portfolio	Normal Portfolio
Fred Alger	8.5%	5.9%	47.2%	35.5%	36.5%	31.6%
Alliance Capital	5.9	4.4	43.9	32.1	39.0	28.3
Beutel Goodman	-0.6	3.1	16.3	31.8	26.0	31.8
BMI Capital	7.0	6.6	36.7	35.7	25.1	30.2
Forstmann Leff	8.9	4.1	44.1	26.0	36.7	24.9
Hellman Jordan	0.3	5.8	29.5	35.3	31.6	33.0
IDS	7.5	5.8	41.9	35.3	38.9	33.0
Investment Advisers	4.6	5.8	29.3	35.3	30.9	33.0
Lieber & Company	11.0	8.0	42.1	37.8	36.4	31.1
Peregrine Capital	1.9	3.0	20.1	27.3	N.A.	N.A.
Waddell & Reed	2.0	5.0	28.5	28.3	22.0	23.7
Internal Manager	0.9	3.7	18.6	32.7	N.A.	N.A.
Total - External Active Managers	4.5	N.A.	32.4	N.A.	30.5	N.A.
Wilshire Associates (Index Fund)	5.4	N.A.	34.4	N.A.	33.0	N.A.
Performance Standards						
Wilshire 5000	5.8	N.A.	35.3	N.A.	33.2	N.A.
TUCS Median Growth Mgr.	5.4	N.A.	36.6	N.A.	32.1	N.A.
TUCS Median Small Growth Mgr.	6.9	N.A.	33.5	N.A.	30.2	N.A.
TUCS Median Rotational Mgr.	4.8	N.A.	32.7	N.A.	31.6	N.A.
TUCS Median Value Mgr.	3.2	N.A.	30.1	N.A.	30.7	N.A.
Inflation	0.6	N.A.	1.7	N.A.	2.7	N.A.

TABLE A-4

EXTERNAL EQUITY MANAGERS

PORTFOLIO STATISTICS HISTORICAL SUMMARY

MANAGER NAME	DATE	QTR. PORT. T/O	EQUITY ALLOC.	R2	EQUITY BETA	MVAR	EVAR	REL RET	P/B	5 YR EARN	SIZE	GROW	E/P	YIELD	FINL
AVG. EXT. MANAGERS	6/30/86	25	91	0.90	1.28	0.70	0.26	0.09	0.12	0.01	0.45	0.49	-0.06	-0.36	-0.07
	3/31/86	29	92	0.88	1.25	0.66	0.30	-0.04	0.07	0.02	0.41	0.41	-0.53	-0.27	0.08
	12/31/85	29	90	0.89	1.23	0.55	0.29	0.03	0.04	-0.02	0.43	0.33	-0.34	-0.23	0.14
	9/30/85	27	82	0.83	1.23	0.53	0.27	-0.29	0.04	0.07	0.41	0.31	-0.15	-0.25	0.07
	6/30/85	24	90	0.83	1.23	0.55	0.14	-0.23	0.07	0.20	0.46	0.27	-0.07	-0.18	-0.02
	3/31/85	33	90	0.82	1.23	0.53	0.02	-0.26	0.06	0.21	0.54	0.13	-0.01	-0.17	0.03
	12/31/84	24	86	0.81	1.25	0.56	0.08	-0.13	0.17	0.03	0.73	0.23	-0.03	-0.32	0.05
	9/30/84	33	84	0.82	1.26	0.56	0.09	-0.10	0.17	0.05	0.72	0.22	-0.08	-0.28	0.04
	6/30/84	27	81	0.81	1.29	0.36	0.04	-0.25	0.13	0.01	0.79	0.19	-0.02	-0.29	0.14
	3/31/84	25	83	0.82	1.25	0.38	0.03	-0.10	0.13	0.01	0.60	0.20	-0.15	-0.26	0.08
	12/31/83	36	84	0.80	1.23	0.44	0.07	-0.03	0.07	-0.19	0.80	0.26	-0.31	-0.27	0.06
	9/30/83	32	85	0.82	1.29	0.64	0.07	0.32	0.21	-0.12	0.89	0.34	-0.40	-0.36	-0.02
	6/30/83	27	85	0.81	1.29	0.68	0.00	0.30	0.11	-0.10	0.75	0.35	-0.44	-0.34	0.00
FRED ALGER	6/30/86	21	94	0.92	1.31	0.88	0.35	0.74	0.40	0.09	0.02	0.39	-0.04	-0.56	-0.01
	3/31/86	40	98	0.91	1.29	0.94	0.48	0.31	0.23	0.12	-0.17	0.45	-0.40	-0.54	0.19
	12/31/85	28	95	0.90	1.25	0.69	0.45	0.11	0.13	0.25	0.14	0.19	0.02	-0.45	0.25
	9/30/85	28	95	0.83	1.23	0.64	0.33	-0.07	0.16	0.31	0.32	0.33	-0.17	-0.42	0.08
	6/30/85	41	92	0.79	1.23	0.77	0.39	-0.07	0.32	0.48	0.26	0.53	-0.05	-0.55	0.05
	3/31/85	36	96	0.85	1.27	0.84	0.24	0.03	0.39	0.69	0.05	0.38	-0.23	-0.64	0.08
	12/31/84	16	95	0.86	1.19	0.48	0.05	0.03	0.35	0.10	0.26	0.10	0.03	-0.47	-0.09
	9/30/84	20	94	0.86	1.22	0.44	0.14	0.10	0.34	0.00	0.42	-0.01	-0.04	-0.44	-0.08
	6/30/84	16	93	0.86	1.22	0.11	-0.01	0.06	0.06	-0.21	0.45	-0.13	-0.21	-0.31	0.07
	3/31/84	19	91	0.86	1.19	0.14	0.04	-0.13	0.08	-0.34	0.46	-0.12	-0.40	-0.32	-0.00
	12/31/83	23	95	0.88	1.18	0.38	0.08	0.26	-0.04	-0.37	0.31	-0.05	-0.50	-0.32	0.05
	9/30/83	27	91	0.88	1.24	0.75	0.22	0.44	0.20	-0.23	0.43	0.03	-0.46	-0.32	0.15
	6/30/83	8	94	0.88	1.33	1.29	0.30	0.51	0.23	-0.37	0.74	0.35	-0.76	-0.46	0.22

MANAGER NAME	DATE	QTR. PORT. T/O	EQUITY ALLOC.	R2	EQUITY BETA	MVAR	EVAR	REL RET	P/B	5 YR EARN	SIZE	GROW	E/P	YIELD	FINL
ALLIANCE CAPITAL	6/30/86	11	98	0.89	1.21	0.88	0.35	0.30	0.75	0.48	-0.19	0.68	-0.02	-0.50	-0.26
	3/31/86	17	94	0.85	1.24	0.53	0.11	0.48	0.88	0.36	-0.10	0.57	-0.46	-0.49	0.09
	12/31/85	7	96	0.83	1.23	0.52	0.13	0.23	1.06	0.43	-0.14	0.56	-0.44	-0.54	0.00
	9/30/85	15	89	0.73	1.24	0.53	0.15	0.09	0.99	0.54	-0.02	0.64	-0.50	-0.61	-0.08
	6/30/85	7	95	0.76	1.21	0.52	0.03	0.04	0.96	0.66	0.08	0.68	-0.30	-0.56	-0.06
	3/31/85	10	96	0.76	1.19	0.48	-0.12	0.10	0.74	0.73	0.15	0.63	-0.27	-0.55	-0.20
	12/31/84	8	92	0.73	1.30	0.56	0.09	0.03	0.82	0.51	0.26	0.85	-0.29	-0.73	-0.15
	9/30/84	13	88	0.72	1.34	0.53	0.15	-0.02	0.72	0.52	0.33	0.83	-0.28	-0.65	-0.09
	6/30/84	8	92	0.73	1.39	0.46	0.13	-0.27	0.78	0.45	0.48	0.78	-0.40	-0.73	-0.04
	3/31/84	12	92	0.72	1.38	0.68	0.13	0.13	0.71	0.46	0.50	0.65	-0.47	-0.72	-0.04
	12/31/83	14	92	0.72	1.37	0.65	0.31	0.18	0.78	0.14	0.45	0.72	-0.50	-0.72	0.06
	9/30/83	22	87	0.75	1.41	1.02	0.21	0.45	0.44	0.29	0.43	0.60	-0.33	-0.67	0.00
	6/30/83	17	91	0.77	1.35	0.93	0.14	0.38	0.03	0.03	0.34	0.48	-0.72	-0.53	-0.04
BEUTEL GOODMAN	6/30/86	10	90	0.89	1.20	0.22	0.54	-0.79	-0.67	-0.28	0.23	0.07	-0.41	0.10	0.28
	3/31/86	22	87	0.85	1.15	0.37	0.64	-0.66	-0.64	-0.33	0.19	0.23	-0.94	0.06	0.12
	12/31/85	18	89	0.83	1.22	0.30	0.58	-0.58	-0.61	-0.74	0.63	0.13	-0.88	0.25	0.35
	9/30/85	5	99	0.81	1.26	0.47	0.47	-0.40	-0.32	-0.52	0.90	0.12	-0.73	0.09	0.26
	6/30/85	6	94	0.83	1.24	0.55	0.22	-0.27	-0.26	-0.64	0.96	0.27	-0.55	-0.02	0.37
	3/31/85	14	93	0.83	1.18	0.38	-0.25	-0.38	-0.25	-0.71	1.19	0.14	-0.43	0.06	0.24
	12/31/84	8	94	0.81	1.19	0.27	-0.15	-0.41	-0.42	-0.87	1.14	0.04	0.21	0.06	0.63
	9/30/84	10	93	0.81	1.21	0.31	-0.17	-0.10	-0.41	-0.81	1.28	0.10	0.23	0.08	0.59
	6/30/84	11	92	0.79	1.18	0.05	-0.29	0.19	-0.44	-0.89	1.32	0.07	0.02	-0.05	0.58
	3/31/84	12	98	0.79	1.16	0.16	-0.19	0.27	-0.41	-0.85	1.34	0.01	-0.42	-0.04	0.37
	12/31/83	15	95	0.74	1.08	0.21	-0.08	0.22	-0.42	-0.61	1.18	0.03	-0.72	0.05	0.24
	9/30/83	6	99	0.75	1.14	0.35	0.03	-0.17	-0.50	-0.75	1.16	0.04	-0.91	0.05	0.25
	6/30/83	7	79	0.75	1.07	0.49	-0.00	-0.41	-0.43	-0.39	0.92	0.11	-0.15	-0.02	0.34
BMI CAPITAL	6/30/86	20	95	0.90	1.37	1.10	0.31	0.23	0.23	-0.14	1.60	0.95	-0.08	-0.84	-0.17
	3/31/86	17	97	0.86	1.33	0.98	0.43	-0.13	0.37	0.03	1.48	0.96	-1.06	-0.59	0.08
	12/31/85	5	95	0.85	1.27	0.74	0.35	-0.30	0.22	0.13	1.14	0.59	-0.80	-0.40	-0.01
	9/30/85	28	28	0.72	1.40	0.89	0.32	-0.78	0.48	0.67	1.47	0.74	-0.42	-0.71	-0.25
	6/30/85	10	98	0.75	1.22	0.80	0.17	-0.52	0.80	1.06	1.42	0.63	-0.14	-0.56	-0.38
	3/31/85	2	99	0.55	1.26	0.84	0.10	-0.66	1.13	1.04	1.49	0.23	-0.20	-0.61	-0.33
	12/31/84	13	87	0.74	1.33	0.78	0.34	-0.20	1.05	0.56	1.41	0.11	-0.24	-0.57	-0.18
	9/30/84	29	82	0.75	1.33	0.78	0.17	-0.44	0.83	0.63	1.17	-0.05	0.01	-0.44	-0.23
	6/30/84	6	99	0.79	1.33	0.63	0.17	-0.37	0.67	0.32	1.51	0.22	-0.24	-0.48	-0.16
	3/31/84	18	95	0.80	1.32	0.77	0.20	-0.53	0.72	0.31	1.86	0.36	-0.40	-0.47	-0.14
	12/31/83	14	98	0.81	1.29	1.02	0.26	0.26	0.58	0.08	1.60	0.48	-0.52	-0.49	0.01
	9/30/83	19	99	0.81	1.34	1.04	0.20	0.54	0.64	0.09	1.66	0.50	-0.34	-0.48	0.01
	6/30/83	0	96	0.80	1.31	1.14	0.02	0.55	0.28	0.10	1.61	0.43	-0.25	-0.41	-0.07

MANAGER NAME	DATE	QTR. PORT. T/O	EQUITY ALLOC.	R2	EQUITY BETA	MVAR	EVAR	REL RET	P/B	5 YR EARN	SIZE	GROW	E/P	YIELD	FINL
FORSTMANN-LEFF	6/30/86	71	85	0.88	1.49	1.26	0.51	0.29	0.37	0.35	0.87	0.93	-0.04	-0.72	-0.25
	3/31/86	83	89	0.88	1.37	0.91	0.35	0.16	0.10	-0.35	0.64	0.59	-0.77	-0.39	0.27
	12/31/85	78	88	0.91	1.35	0.94	0.36	0.48	0.06	-0.38	0.03	0.45	-0.44	-0.46	0.35
	9/30/85	108	70	0.88	1.27	0.64	0.24	0.13	0.10	-0.42	0.00	0.25	-0.48	-0.43	0.25
	6/30/85	27	77	0.89	1.22	0.83	0.17	0.16	0.15	0.08	-0.20	0.35	-0.07	-0.33	0.09
	3/31/85	55	69	0.89	1.19	0.67	0.07	-0.15	-0.04	0.13	-0.03	0.16	0.14	-0.18	0.02
	12/31/84	12	87	0.84	1.22	0.39	-0.06	-0.14	-0.07	-0.44	0.39	-0.06	-0.01	-0.10	0.08
	9/30/84	40	83	0.86	1.26	0.49	0.03	-0.20	-0.25	-0.43	0.25	-0.17	-0.23	-0.09	0.14
	6/30/84	31	54	0.81	1.26	0.14	0.01	-0.27	-0.21	-0.22	0.16	0.07	-0.08	-0.16	0.15
	3/31/84	34	71	0.82	1.17	0.13	-0.04	-0.11	-0.14	-0.21	0.17	0.05	-0.18	-0.10	0.15
	12/31/83	41	81	0.70	1.10	0.02	-0.11	-0.25	-0.03	-0.25	-0.12	-0.03	-0.15	-0.07	0.05
	9/30/83	46	83	0.72	1.14	0.10	-0.12	-0.09	0.09	-0.34	0.03	0.19	-0.45	-0.21	-0.12
	6/30/83	52	93	0.70	1.08	0.34	-0.22	-0.01	0.07	-0.04	0.03	0.11	-0.17	-0.22	-0.17
HELLMAN JORDAN	6/30/86	15	99	0.89	1.34	0.80	0.15	0.12	0.16	-0.29	-0.07	0.95	-0.02	-0.57	0.00
	3/31/86	35	97	0.88	1.26	0.79	0.34	0.26	0.06	0.19	-0.16	0.83	-0.71	-0.48	0.09
	12/31/85	36	95	0.93	1.14	0.32	0.23	-0.13	-0.17	0.04	-0.13	0.39	-0.22	-0.22	0.25
	9/30/85	36	96	0.89	1.07	0.26	0.09	-0.49	-0.29	-0.06	-0.54	0.03	0.02	0.00	0.27
	6/30/85	38	89	0.89	1.10	0.29	-0.04	-0.27	-0.21	-0.12	-0.47	-0.07	0.18	0.15	0.07
	3/31/85	52	81	0.88	1.13	0.28	-0.12	-0.20	-0.28	-0.07	-0.24	0.00	-0.07	0.06	0.30
	12/31/84	36	82	0.86	1.21	0.59	0.25	-0.36	-0.35	-0.36	0.15	0.12	0.14	-0.09	0.30
	9/30/84	10	80	0.84	1.22	0.64	0.38	-0.17	-0.26	-0.45	0.22	0.16	-0.08	0.05	0.33
	6/30/84	34	61	0.87	1.25	0.28	0.21	-0.34	-0.29	-0.33	0.10	0.10	-0.10	0.16	0.52
	3/31/84	30	58	0.87	1.16	0.25	0.15	0.03	-0.41	-0.22	0.01	0.19	-0.05	0.25	0.30
	12/31/83	43	51	0.74	1.23	0.16	0.09	-0.19	-0.23	-0.26	0.25	0.18	0.07	0.45	0.26
	9/30/83	57	47	0.77	1.34	-0.12	0.23	0.23	-0.11	-0.36	0.35	0.24	-0.23	0.05	0.15
	6/30/83	38	56	0.77	1.30	0.79	0.20	0.63	0.16	-0.36	-0.27	0.42	-0.94	-0.44	0.24
IDS ADVISORY	6/30/86	28	91	0.93	1.19	0.54	0.17	0.54	0.46	0.25	0.09	0.22	0.06	-0.23	-0.08
	3/31/86	16	92	0.91	1.20	0.53	0.21	0.44	0.50	0.34	0.11	0.29	-0.11	-0.22	0.11
	12/31/85	19	93	0.88	1.18	0.55	0.30	0.19	0.55	0.35	0.24	0.28	-0.12	-0.21	0.16
	9/30/85	21	98	0.86	1.15	0.37	0.28	-0.02	0.30	0.34	0.07	0.22	-0.17	-0.15	0.06
	6/30/85	13	98	0.87	1.11	0.37	0.21	0.17	0.16	0.41	-0.02	0.16	0.00	0.04	0.03
	3/31/85	39	87	0.85	1.08	0.24	-0.06	0.10	0.07	0.43	-0.09	-0.06	0.18	0.18	0.10
	12/31/84	21	89	0.83	1.05	0.04	-0.10	0.16	0.12	0.23	-0.07	-0.07	0.11	0.25	0.07
	9/30/84	40	92	0.89	1.08	0.17	-0.12	0.17	0.28	0.31	0.08	-0.04	0.19	0.23	0.03
	6/30/84	42	87	0.85	1.04	-0.08	-0.15	0.28	0.54	0.31	0.28	-0.11	0.18	0.21	0.17
	3/31/84	41	82	0.80	1.09	0.11	-0.01	0.23	0.15	0.19	0.17	-0.13	0.28	0.14	0.04
	12/31/83	45	89	0.86	1.17	0.24	0.23	0.27	0.15	-0.15	0.43	0.22	-0.34	-0.13	0.14
	9/30/83	79	86	0.86	1.24	0.64	0.20	0.29	0.26	-0.06	0.60	0.43	-0.46	-0.40	-0.10
	6/30/83	42	94	0.81	1.30	-0.92	-0.08	-0.26	0.17	-0.01	0.16	0.48	-0.51	-0.37	-0.11

MANAGER NAME	DATE	QTR. PORT. T/O	EQUITY ALLOC.	R2	EQUITY BETA	MVAR	EVAR	REL RET	P/B	5 YR EARN	SIZE	GROW	E/P	YIELD	FINL
INVESTMENT ADVISERS	6/30/86	22	82	0.94	1.17	0.55	-0.04	0.40	0.28	0.06	-0.03	0.28	-0.16	-0.44	-0.10
	3/31/86	13	84	0.95	1.12	0.48	0.10	0.07	0.02	-0.03	-0.11	0.40	-0.57	-0.29	0.02
	12/31/85	32	83	0.93	1.14	0.39	0.18	-0.22	0.04	-0.01	-0.12	0.29	-0.27	-0.24	0.02
	9/30/85	4	95	0.92	1.15	0.45	0.18	-0.40	-0.12	0.07	-0.02	0.28	0.02	-0.25	0.03
	6/30/85	10	90	0.90	1.17	0.60	0.10	-0.33	-0.26	0.14	-0.17	0.12	0.18	-0.19	-0.08
	3/31/85	28	89	0.91	1.17	0.51	0.05	-0.33	-0.26	0.16	0.08	-0.02	0.43	-0.11	-0.06
	12/31/84	9	97	0.88	1.19	0.39	-0.12	-0.20	-0.34	-0.15	0.09	-0.08	0.43	-0.01	0.04
	9/30/84	21	88	0.86	1.21	0.40	-0.13	-0.21	-0.23	-0.00	0.12	0.02	0.45	-0.02	0.06
	6/30/84	8	98	0.89	1.21	0.11	-0.23	-0.28	-0.22	0.09	0.08	0.02	0.48	0.00	0.21
	3/31/84	21	92	0.89	1.17	0.05	-0.22	-0.36	-0.17	0.14	0.14	0.07	0.25	-0.14	0.22
	12/31/83	16	89	0.86	1.13	0.06	-0.15	-0.30	-0.16	-0.05	0.01	0.15	-0.09	-0.17	0.17
	9/30/83	8	89	0.87	1.13	0.16	-0.15	-0.20	-0.03	-0.03	0.03	0.19	0.01	-0.20	0.09
	6/30/83	7	78	0.89	1.08	0.28	-0.16	-0.12	0.01	-0.13	-0.10	0.17	-0.38	-0.09	-0.01
LIEBER & COMPANY	6/30/86	7	99	0.90	1.32	0.59	0.12	0.12	0.05	0.15	1.50	0.55	0.14	-0.36	-0.33
	3/31/86	14	99	0.86	1.31	0.63	0.02	-0.06	0.03	0.16	1.49	0.48	0.00	-0.38	-0.27
	12/31/85	12	97	0.85	1.30	0.53	0.07	-0.01	0.04	0.27	1.56	0.48	0.02	-0.39	-0.21
	9/30/85	6	98	0.80	1.30	0.54	0.12	-0.04	0.03	0.35	1.64	0.50	-0.10	-0.40	-0.31
	6/30/85	14	96	0.80	1.27	0.55	0.04	-0.17	0.03	0.40	1.83	0.36	-0.05	-0.35	-0.43
	3/31/85	19	99	0.81	1.24	0.65	0.03	0.04	0.09	0.35	1.79	0.17	-0.02	-0.35	-0.21
	12/31/84	14	85	0.79	1.34	0.78	0.12	-0.25	0.03	0.39	1.94	0.48	-0.05	-0.47	-0.17
	9/30/84	17	87	0.80	1.31	0.74	0.07	-0.28	0.05	0.49	1.99	0.51	0.01	-0.48	-0.18
	6/30/84	10	95	0.81	1.33	0.76	0.05	-0.37	0.13	0.52	1.99	0.42	-0.02	-0.48	-0.10
	3/31/84	0	93	0.85	1.37	0.65	0.00	-0.16	0.18	0.57	1.99	0.45	0.03	-0.46	-0.12
	12/31/83	9	00	0.83	1.24	0.63	-0.01	0.30	-0.06	0.28	1.93	0.29	0.12	-0.38	-0.07
	9/30/83	9	97	0.83	1.30	0.85	-0.03	0.47	-0.09	0.17	1.92	0.22	0.18	-0.29	-0.10
	6/30/83	2	92	0.84	1.26	0.90	-0.11	0.43	-0.11	-0.00	1.94	0.18	0.04	-0.27	-0.20
PEREGRINE CAPITAL	6/30/86	37	90	0.79	1.18	0.09	0.27	-1.28	-0.75	-0.52	0.62	0.17	-0.06	0.56	0.22
	3/31/86	47	84	0.76	1.19	0.19	0.16	-1.53	-0.73	-0.41	0.73	0.20	-0.31	0.51	0.19
	12/31/85	53	82	0.81	1.21	0.26	0.18	-1.31	-0.77	-0.55	0.88	0.10	-0.54	0.33	0.27
	9/30/85	9	80	0.82	1.22	0.53	0.37	-1.26	-0.63	-0.36	0.36	0.15	-0.33	0.22	0.24
	6/30/85	58	75	0.78	1.48	0.25	0.00	-1.46	-0.60	-0.45	1.06	0.07	-0.34	0.27	-0.13
	3/31/85	49	89	0.79	1.41	0.32	0.07	-1.28	-0.53	-0.48	1.01	-0.07	-0.09	0.27	0.02
	12/31/84	37	87	0.81	1.37	1.11	0.39	-0.05	0.72	0.27	1.88	0.76	-0.79	-0.96	-0.11
	9/30/84	61	97	0.81	1.36	1.10	0.43	0.10	0.89	0.22	1.70	0.83	-0.82	-0.95	-0.17
	6/30/84	26	89	0.83	1.39	0.77	0.37	-0.59	0.49	0.23	1.45	0.71	-0.55	-0.77	-0.09
	3/31/84	66	87	0.82	1.28	0.76	0.26	-0.30	0.82	0.31	1.29	0.77	-0.59	-0.67	-0.07
	12/31/83	92	83	0.87	1.23	0.66	0.16	0.12	0.41	0.12	1.32	0.74	-0.59	-0.69	-0.09
	9/30/83	56	85	0.87	1.27	0.96	0.09	0.85	0.85	0.09	1.22	0.77	-0.83	-0.75	-0.22
	6/30/83	95	80	0.88	1.23	0.70	-0.11	0.45	0.33	0.06	1.05	0.46	-0.42	-0.40	-0.13

MANAGER NAME	DATE	QTR. PORT. T/O	EQUITY ALLOC.	R2	EQUITY BETA	MVAR	EVAR	REL RET	P/B	5 YR EARN	SIZE	GROW	E/P	YIELD	FINL
WADDELL & REED	6/30/86	35	79	0.93	1.28	0.74	0.08	0.28	0.02	-0.04	0.30	0.23	-0.02	-0.35	-0.02
	3/31/86	20	88	0.93	1.29	0.87	0.42	0.22	-0.07	-0.19	0.36	0.11	-0.51	-0.16	0.11
	12/31/85	36	75	0.91	1.27	0.76	0.36	0.10	-0.12	0.02	0.48	0.22	-0.02	-0.20	0.15
	9/30/85	41	50	0.85	1.24	0.53	0.37	-0.02	-0.24	-0.13	0.36	0.15	0.17	-0.09	0.24
	6/30/85	34	74	0.79	1.19	0.55	0.21	0.14	-0.31	0.17	0.26	-0.17	0.41	0.11	0.27
	3/31/85	51	78	0.82	1.26	0.62	0.23	-0.12	-0.39	0.09	0.49	-0.09	0.43	0.01	0.34
	12/31/84	39	52	0.75	1.29	0.78	0.10	0.00	-0.05	0.05	0.54	0.27	0.13	-0.30	0.12
	9/30/84	76	35	0.76	1.27	0.53	0.07	-0.01	-0.04	0.08	0.35	0.22	0.21	-0.20	0.02
	6/30/84	81	21	0.52	1.56	0.71	0.22	-0.74	-0.05	-0.16	0.89	-0.03	0.72	-0.60	0.24
	3/31/84	35	31	0.74	1.31	0.43	0.03	-0.13	-0.12	-0.22	0.61	-0.08	0.28	-0.35	0.23
	12/31/83	103	31	0.72	1.36	0.86	0.03	-0.49	-0.23	-1.07	1.42	0.09	-0.24	-0.46	-0.14
	9/30/83	9	73	0.73	1.41	1.31	-0.06	0.75	0.58	-0.24	1.98	0.56	-0.56	-0.69	-0.35
	6/30/83	38	75	0.74	1.48	1.51	0.00	1.11	0.49	-0.03	1.86	0.71	-0.53	-0.54	-0.05

TABLE A-5

EXTERNAL EQUITY MANAGERS

SECTOR WEIGHTING HISTORICAL PROFILE

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	EQUITY SECTOR WEIGHTS: CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT & SERV	TECH	TRAN	UTIL
AVG. EXT. MANAGERS	6/30/86	---	3.7	5.5	30.7	2.4	21.0	13.3	14.6	5.3	3.3
	3/31/86	---	2.8	5.5	25.6	5.1	20.7	13.4	14.6	6.4	5.8
	12/31/85	---	3.0	6.2	24.1	7.4	19.1	13.0	14.5	7.4	5.3
	9/30/85	---	2.8	6.6	27.5	4.2	18.4	12.7	16.8	7.6	3.4
	6/30/85	---	2.2	6.6	29.3	3.1	20.0	10.9	17.3	7.6	3.0
	3/31/85	---	2.4	6.8	26.4	3.6	17.5	11.4	22.2	6.8	3.0
	12/31/84	---	2.4	8.0	26.4	2.3	15.5	11.2	23.9	6.6	4.0
	9/30/84	---	2.9	7.9	27.9	3.8	14.1	9.6	26.3	4.8	2.7
	6/30/84	---	4.0	7.6	28.6	4.2	12.5	10.9	23.4	5.4	3.4
	3/31/84	---	5.2	7.6	24.0	5.7	13.2	13.3	22.7	5.1	3.1
	12/31/83	---	6.0	6.4	23.5	3.0	12.2	15.1	24.0	6.3	3.5
	9/30/83	---	3.6	5.9	28.9	3.1	12.8	13.5	24.2	5.7	2.4
	6/30/83	---	3.7	6.1	30.2	3.6	15.1	11.7	21.2	5.8	2.5
	3/31/83	---	2.8	4.3	30.6	3.6	15.2	11.4	23.5	4.9	3.8
FRED ALGER	6/30/86	112,733,180	1.9	7.5	52.9	---	11.6	6.2	15.8	4.0	---
	3/31/86	103,958,164	1.7	8.2	46.5	---	17.4	5.9	18.7	1.6	---
	12/31/85	86,744,768	1.7	11.7	38.7	---	18.2	3.1	17.0	6.6	2.9
	9/30/85	73,092,544	---	10.3	44.4	2.4	14.1	3.1	14.5	8.4	2.8
	6/30/85	63,144,042	---	17.6	36.0	1.4	9.3	3.5	15.7	16.6	---
	3/31/85	57,886,615	5.2	14.3	28.8	3.7	7.8	1.8	24.8	13.6	---
	12/31/84	54,018,782	5.2	16.1	36.1	---	4.1	7.9	25.2	5.4	---
	9/30/84	53,908,974	9.3	15.4	33.7	---	0.8	11.4	23.5	6.0	---
	6/30/84	49,936,760	14.0	8.0	30.7	---	3.8	11.5	29.5	2.6	---
	3/31/84	51,737,228	13.3	4.3	28.8	---	3.4	18.3	31.9	---	---
	12/31/83	55,644,200	13.2	6.6	21.7	---	6.4	18.1	33.9	---	---
	9/30/83	56,169,879	5.7	6.8	26.9	---	8.4	23.3	29.0	---	---
	6/30/83	58,138,999	4.9	8.5	35.0	3.5	8.2	18.0	21.9	---	---
	3/31/83	51,420,548	1.4	7.5	37.0	---	9.0	22.0	23.1	---	---

EQUITY SECTOR WEIGHTS

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT & SERV	TECH	TRAN	UTIL
ALLIANCE CAPITAL	6/30/86	110,202,737	2.3	3.6	49.1	---	28.1	---	9.8	7.1	---
	3/31/86	104,093,860	2.4	4.5	46.6	---	30.2	2.5	8.2	5.6	---
	12/31/85	87,252,311	---	4.6	45.6	---	29.2	---	14.3	6.3	---
	9/30/85	74,094,296	---	7.5	52.0	---	21.8	---	11.1	7.6	---
	6/30/85	65,072,829	---	8.7	49.9	2.2	14.3	---	12.7	8.9	3.3
	3/31/85	58,738,405	---	9.9	47.9	2.4	12.6	---	15.8	8.0	3.4
	12/31/84	52,332,767	---	8.7	48.8	---	10.2	---	20.6	8.1	3.7
	9/30/84	51,653,441	---	8.8	49.7	---	9.6	---	19.3	9.2	3.5
	6/30/84	48,457,996	---	8.1	51.6	---	6.9	---	23.5	9.9	---
	3/31/84	47,427,119	---	8.3	48.0	2.7	5.6	---	25.1	10.4	---
	12/31/83	52,725,699	0.8	7.5	45.3	---	6.8	2.4	24.2	13.1	---
	9/30/83	52,945,082	2.8	5.4	45.9	---	9.2	---	24.6	12.1	---
	6/30/83	57,538,354	2.2	4.7	42.3	---	8.2	7.5	22.7	12.4	---
	3/31/83	51,037,067	---	3.5	49.9	2.7	6.7	3.6	23.5	10.0	---
BEUTEL GOODMAN	6/30/86	90,128,302	3.4	5.3	9.3	4.0	20.3	23.3	19.0	11.0	4.4
	3/31/86	90,652,277	4.2	4.2	9.2	3.8	18.6	22.9	20.9	11.5	4.6
	12/31/85	79,304,850	3.9	3.8	9.0	2.8	28.2	22.1	18.2	12.0	---
	9/30/85	70,821,795	2.7	3.7	15.7	---	26.0	24.0	16.6	11.3	---
	6/30/85	75,450,430	2.8	---	12.8	---	30.4	23.1	19.1	11.7	---
	3/31/85	70,177,266	2.1	---	19.2	---	28.4	33.1	13.6	3.6	---
	12/31/84	63,402,269	8.8	---	13.8	---	32.2	33.8	11.4	---	---
	9/30/84	60,461,938	6.5	---	14.0	---	37.1	35.6	6.8	---	---
	6/30/84	55,295,358	9.3	---	21.1	---	30.4	32.4	6.7	---	---
	3/31/84	56,896,258	8.9	---	18.6	---	27.2	39.3	6.0	---	---
	12/31/83	57,233,781	9.8	---	20.2	---	11.2	46.2	5.4	7.2	---
	9/30/83	55,416,939	8.8	---	22.0	---	13.1	43.5	4.7	8.0	---
	6/30/83	54,835,808	11.0	---	18.5	---	17.4	42.4	---	10.6	---
	3/31/83	50,442,256	---	---	15.7	---	15.4	52.1	---	16.8	---
BMI CAPITAL	6/30/86	68,576,473	8.5	6.4	43.4	---	19.8	2.9	19.1	---	---
	3/31/86	64,120,062	6.8	7.7	38.4	4.6	20.9	3.6	18.0	---	---
	12/31/85	54,452,525	9.9	4.0	32.2	14.6	19.3	4.3	12.3	3.4	---
	9/30/85	49,026,413	10.4	3.4	37.8	---	6.0	4.0	28.9	9.6	---
	6/30/85	9,759,880	5.4	9.7	34.9	---	5.7	4.0	30.3	9.9	---
	3/31/85	9,851,108	7.1	9.0	37.6	---	---	6.8	35.9	3.7	---
	12/31/84	9,015,974	6.5	5.8	40.0	---	---	7.4	35.9	4.4	---
	9/30/84	8,820,740	4.6	13.4	42.6	---	---	4.1	31.3	3.9	---
	6/30/84	8,533,642	3.2	16.4	37.4	---	---	11.5	31.5	---	---
	3/31/84	8,366,038	4.3	12.7	39.3	---	---	17.8	25.9	---	---
	12/31/83	9,784,767	7.4	12.1	28.4	---	6.6	19.0	26.4	---	---
	9/30/83	10,420,827	7.6	11.2	37.1	---	6.4	18.6	19.2	---	---
	6/30/83	11,285,353	7.9	12.7	44.2	---	9.8	15.9	9.5	---	---
	3/31/83	10,081,983	10.6	8.1	35.3	---	12.3	22.0	11.8	---	---

EQUITY SECTOR WEIGHTS

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT & SERV	TECH	TRAN	UTIL
FORSTMANN-LEFF	6/30/86	95,703,997	2.6	6.6	25.2	---	22.4	13.2	23.7	5.2	1.1
	3/31/86	87,886,861	1.3	4.0	18.1	---	34.7	17.4	10.1	8.1	6.3
	12/31/85	73,996,082	1.4	7.9	25.7	2.1	25.2	22.1	8.9	6.7	---
	9/30/85	63,626,068	---	9.7	41.6	6.6	20.9	6.4	12.1	2.8	---
	6/30/85	66,383,632	1.1	7.4	40.1	---	25.1	10.3	11.0	5.1	---
	3/31/85	61,436,421	2.5	9.8	25.7	---	25.5	14.7	17.4	4.4	---
	12/31/84	55,396,358	1.4	10.5	30.9	---	23.3	15.1	13.3	5.5	---
	9/30/84	53,550,733	4.5	4.6	32.5	---	21.5	14.5	18.9	3.6	---
	6/30/84	51,218,131	3.7	3.6	40.2	---	7.0	10.3	24.3	7.2	3.7
	3/31/84	52,083,507	7.6	3.0	37.0	---	6.0	14.5	23.1	6.0	2.8
	12/31/83	55,421,154	5.7	13.6	35.5	5.8	3.9	8.4	18.7	5.3	3.1
	9/30/83	55,775,736	---	14.6	52.3	3.3	4.5	5.3	15.1	4.8	---
	6/30/83	56,471,479	---	12.7	61.4	---	2.7	7.2	11.7	4.3	---
	3/31/83	51,390,160	2.1	4.7	50.7	5.9	4.7	10.3	17.4	4.2	---
HELLMAN JORDAN	6/30/86	83,097,338	---	9.3	24.8	---	32.7	10.7	20.1	2.4	---
	3/31/86	82,829,526	---	12.1	22.3	2.2	29.8	13.6	18.4	1.7	---
	12/31/85	71,819,754	---	8.8	20.1	9.4	23.5	18.7	15.2	2.9	1.4
	9/30/85	60,551,842	---	5.6	17.1	6.9	26.9	17.2	13.8	4.7	7.7
	6/30/85	64,181,384	3.9	3.5	23.0	7.0	26.0	15.5	7.5	3.5	10.0
	3/31/85	59,732,797	1.3	---	21.9	5.9	25.3	13.6	16.1	6.7	9.2
	12/31/84	54,923,168	1.3	6.1	19.5	1.1	19.8	17.1	20.3	9.2	5.7
	9/30/84	52,497,049	1.5	10.7	11.3	0.8	14.0	15.3	29.3	12.0	5.0
	6/30/84	47,929,367	1.8	12.4	13.8	1.2	16.4	21.2	12.6	11.1	9.6
	3/31/84	49,895,127	---	12.4	19.5	6.4	15.7	15.7	4.3	8.8	17.2
	12/31/83	50,182,761	---	14.8	30.0	6.0	16.5	10.4	2.1	3.0	17.2
	9/30/83	50,713,576	---	15.0	47.4	---	19.5	3.5	3.3	4.7	6.5
	6/30/83	52,402,164	---	3.8	23.3	---	35.9	---	24.8	---	12.2
	3/31/83	49,541,253	---	---	15.1	---	33.4	4.6	27.2	---	19.7
INVESTMENT ADVISERS	6/30/86	86,330,923	8.2	---	33.0	1.0	9.6	26.5	13.2	8.6	---
	3/31/86	82,520,514	5.6	3.3	20.6	2.3	9.6	23.8	18.8	13.4	2.6
	12/31/85	73,389,199	4.0	6.6	15.7	3.0	12.6	18.5	24.4	12.2	2.9
	9/30/85	61,953,366	3.2	6.5	8.3	2.9	15.9	20.2	28.3	12.8	1.8
	6/30/85	66,785,302	3.4	8.8	6.5	3.2	18.8	17.1	29.0	13.2	---
	3/31/85	62,742,678	3.4	6.0	6.1	2.8	16.3	19.9	32.9	12.6	---
	12/31/84	58,967,426	3.3	6.4	13.6	5.9	20.5	19.2	19.9	10.8	0.6
	9/30/84	55,807,710	3.7	7.2	21.5	6.9	21.0	13.1	20.2	5.6	0.8
	6/30/84	50,388,386	5.5	5.9	26.3	6.2	18.8	9.1	20.6	3.7	3.9
	3/31/84	51,864,720	5.8	5.4	30.2	8.9	21.5	7.7	15.6	3.9	1.0
	12/31/83	54,533,402	6.3	6.3	25.0	5.8	21.9	9.7	15.7	6.1	3.2
	9/30/83	53,819,067	5.8	6.2	30.6	6.0	13.4	9.1	18.3	7.1	3.5
	6/30/83	54,812,985	6.5	6.6	24.7	11.7	9.7	9.8	16.9	10.3	3.9
	3/31/83	50,748,987	6.5	9.1	26.0	10.2	7.3	15.0	17.7	5.0	3.2

EQUITY SECTOR WEIGHTS

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT & SERV	TECH	TRAN	UTIL
IDS ADVISORY	6/30/86	96,881,914	---	---	42.4	3.1	16.4	15.8	6.5	5.0	10.8
	3/31/86	90,164,763	---	1.7	32.6	1.1	17.7	15.6	8.9	12.1	10.2
	12/31/85	76,939,408	---	1.9	31.7	2.6	14.9	10.4	13.9	13.2	11.4
	9/30/85	64,292,295	3.0	2.2	27.1	5.1	13.6	12.7	13.9	12.7	9.7
	6/30/85	68,295,847	3.0	4.8	27.7	8.4	13.4	7.2	11.7	8.5	15.1
	3/31/85	62,021,800	---	5.2	27.5	9.8	11.0	7.3	14.0	7.7	17.6
	12/31/84	57,153,006	1.8	4.6	29.5	3.7	7.6	3.7	16.9	7.2	25.0
	9/30/84	55,468,185	3.4	6.6	25.4	7.6	7.9	5.6	19.6	4.6	19.4
	6/30/84	50,278,968	---	5.3	27.6	8.1	6.8	7.6	19.2	4.8	20.6
	3/31/84	50,085,955	4.8	10.1	12.4	9.6	8.7	14.3	15.2	9.5	15.4
	12/31/83	54,006,960	4.9	7.6	18.0	---	8.8	19.0	26.1	6.0	9.6
	9/30/83	54,334,602	---	4.1	24.3	3.4	6.0	19.7	33.8	5.4	3.4
	6/30/83	57,561,715	4.2	12.0	30.5	4.5	4.2	6.7	33.7	4.3	---
	3/31/83	50,689,028	5.4	9.2	30.7	5.4	9.8	6.4	26.3	---	6.6
LIEBER & COMPANY	6/30/86	44,505,476	1.7	7.3	22.4	3.1	41.8	10.3	7.5	3.7	2.1
	3/31/86	40,102,680	2.1	7.4	21.4	3.5	38.4	12.3	9.0	4.0	2.0
	12/31/85	35,197,559	1.8	8.7	20.1	3.5	34.3	11.9	12.2	5.4	2.0
	9/30/85	30,715,520	1.6	7.0	21.9	4.5	32.6	14.3	11.8	5.1	1.2
	6/30/85	31,313,770	2.1	7.8	21.4	4.6	30.3	16.0	11.0	5.5	1.2
	3/31/85	29,544,589	2.9	8.0	25.3	6.1	28.9	15.1	8.9	3.5	1.3
	12/31/84	26,473,866	3.2	5.3	27.0	3.2	24.2	18.4	15.3	3.4	---
	9/30/84	25,807,665	2.9	3.8	33.0	4.1	22.4	16.8	14.8	2.2	---
	6/30/84	23,927,529	2.6	3.3	34.8	3.5	21.1	16.7	15.3	1.8	0.8
	3/31/84	24,261,218	3.6	6.4	32.3	4.9	17.3	16.8	16.3	1.8	0.7
	12/31/83	11,159,936	7.7	4.5	33.7	3.5	16.7	22.3	6.1	5.6	---
	9/30/83	11,016,060	6.5	3.5	31.0	4.7	18.0	25.4	5.4	5.5	---
	6/30/83	11,233,248	6.4	5.0	33.3	5.0	16.5	23.9	3.3	6.6	---
	3/31/83	10,063,917	8.3	---	23.1	3.9	11.6	41.0	5.6	6.4	---
PEREGRINE CAPITAL	6/30/86	89,051,403	8.0	6.7	9.6	15.2	8.1	15.7	13.6	5.0	18.1
	3/31/86	87,406,272	7.4	5.5	15.6	16.2	5.3	15.7	14.8	3.8	15.8
	12/31/85	82,085,372	9.1	6.3	15.1	17.8	5.3	19.1	11.2	3.3	12.7
	9/30/85	72,758,648	8.3	8.5	18.3	12.6	4.5	15.7	18.0	3.0	11.2
	6/30/85	29,610,673	0.2	---	51.4	4.2	12.4	2.9	24.0	2.7	2.3
	3/31/85	27,145,424	---	2.3	44.2	6.3	9.2	6.2	28.0	1.9	1.9
	12/31/84	25,188,312	---	2.3	37.5	2.7	3.9	9.8	37.7	4.1	1.9
	9/30/84	25,685,954	---	3.7	38.0	0.6	2.3	11.9	39.7	1.3	2.4
	6/30/84	24,546,941	2.8	5.5	31.2	5.8	1.0	9.3	38.9	4.3	1.3
	3/31/84	10,385,041	3.6	4.4	23.1	8.5	1.1	7.2	45.5	5.4	1.1
	12/31/83	11,215,761	2.5	1.6	25.5	1.2	3.2	6.0	51.8	1.7	6.6
	9/30/83	11,816,270	1.2	---	31.6	3.3	2.0	8.4	46.1	1.4	5.8
	6/30/83	12,126,921	4.8	---	36.4	5.2	8.9	4.8	33.0	2.9	3.3
	3/31/83	10,417,512	7.0	1.8	47.1	4.2	13.5	---	20.1	6.3	---

EQUITY SECTOR WEIGHTS

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT & SERV	TECH	TRAN	UTIL
WADDELL & REED	6/30/86	97,376,898	4.4	7.8	26.0	0.4	20.7	21.7	12.4	6.6	---
	3/31/86	95,498,169	4.3	7.3	13.0	2.9	23.3	24.9	16.9	7.3	---
	12/31/85	82,027,227	4.6	7.7	17.0	5.4	15.2	25.9	15.0	9.1	---
	9/30/85	74,328,144	2.0	7.7	18.8	5.1	19.7	22.5	15.6	5.2	3.3
	6/30/85	29,531,769	---	11.8	14.5	2.5	21.1	18.4	13.3	6.1	12.4
	3/31/85	27,604,382	---	12.8	11.9	2.7	21.5	15.8	16.3	7.9	11.2
	12/31/84	26,234,116	---	14.0	18.7	---	18.8	2.7	25.5	1.0	19.3
	9/30/84	25,856,251	1.4	13.9	28.0	3.3	14.3	0.5	30.9	1.6	6.1
	6/30/84	25,495,564	---	29.0	25.7	---	15.7	---	17.8	11.8	---
	3/31/84	25,833,644	5.2	32.1	21.4	---	25.0	---	11.7	4.5	---
	12/31/83	11,409,742	12.8	32.4	---	---	33.9	---	20.9	---	---
	9/30/83	12,042,511	5.8	13.4	22.5	---	5.1	---	38.2	15.0	---
	6/30/83	12,464,478	5.7	13.2	29.2	3.3	5.0	---	31.1	12.5	---
	3/31/83	10,013,713	5.5	13.8	15.5	2.5	29.1	---	27.2	6.4	---
WILSHIRE 5000	6/30/86	---	4.5	4.0	28.8	7.8	14.0	12.4	12.6	3.0	12.9
	3/31/86	---	4.8	4.7	27.0	8.0	14.1	11.8	13.4	3.3	12.9
	12/31/85	---	4.8	4.2	25.7	10.5	12.9	11.4	14.2	3.3	13.0
	9/30/85	---	4.7	4.1	26.2	10.6	12.3	11.4	14.0	3.4	13.3
	6/30/85	---	4.8	4.0	26.3	11.2	12.2	10.8	13.6	3.6	13.5
	3/31/85	---	4.9	3.9	25.3	13.0	11.4	10.9	14.4	3.3	12.9
	12/31/84	---	5.4	9.9	23.0	13.5	9.9	10.6	13.2	3.7	10.8
	9/30/84	---	5.2	4.3	24.9	13.2	10.3	11.5	15.5	2.9	12.2
	6/30/84	---	5.3	4.0	25.7	13.5	9.6	11.7	15.6	2.9	11.7
	3/31/84	---	5.4	3.9	23.6	16.1	9.8	12.1	15.3	2.9	11.1
	12/31/83	---	5.5	4.2	24.0	14.5	9.5	12.2	16.3	2.8	11.1
	9/30/83	---	5.2	4.0	24.3	14.8	9.4	11.8	16.3	2.9	11.3
	6/30/83	---	5.3	3.9	24.9	15.0	9.3	11.6	16.3	2.9	10.9
	3/31/83	---	5.1	3.5	25.2	14.6	9.8	12.3	14.9	2.9	11.8

TABLE A-6

EXTERNAL EQUITY MANAGERS

HISTORICAL PERFORMANCE SUMMARY

	2Q 86	1Q 86	4Q 85	3Q 85	2Q 85	1Q 85	4Q 84	3Q 84	2Q 84	1Q 84	4Q 83	3Q 83	2Q 83
FRED ALGER													
Equity	9.0%	21.2%	20.0%	-4.7%	10.1%	7.3%	0.2%	8.3%	-4.1%	-8.1%	-1.0%	-3.5%	13.9%
Total Fund	8.5	19.8	18.7	-4.6	9.1	7.2	0.2	8.0	-3.5	-7.0	-0.9	-3.4	13.1
ALLIANCE CAPITAL													
Equity	6.1	20.0	19.2	-3.6	11.5	13.1	1.3	7.1	2.2	-11.2	-0.6	-8.7	14.3
Total Fund	5.9	19.3	17.8	-3.3	10.8	12.2	1.3	6.6	2.2	-10.1	-0.4	-8.0	12.7
BEUTEL GOODMAN													
Equity	-0.9	15.7	12.5	-9.0	8.1	12.1	5.1	10.1	-2.8	-0.7	3.5	3.4	13.9
Total Fund	-0.6	14.3	12.0	-8.6	7.5	10.7	4.9	9.3	-2.8	-0.6	3.3	1.1	8.7
BMI CAPITAL													
Equity	7.2	18.6	19.4	-9.9	-0.7	10.5	2.3	3.6	2.1	-14.4	-6.0	-7.8	14.4
Total Fund	7.0	17.8	11.1	-2.4	-0.9	9.3	2.2	3.4	2.0	-14.5	-6.1	-7.7	11.9
FORSTMANN-LEFF													
Equity	10.1	20.8	21.5	-5.4	9.4	12.6	3.7	7.5	-2.8	-8.3	-1.0	-1.7	11.2
Total Fund	8.9	18.8	16.3	-4.2	8.1	10.9	3.4	4.6	-1.7	-6.0	-0.6	-1.2	9.9
HELLMAN JORDAN													
Equity	0.4	16.1	19.4	-5.9	9.5	10.0	4.3	8.6	-4.8	-3.1	-0.9	-9.5	10.0
Total Fund	0.3	15.3	18.6	-5.6	7.5	8.7	4.6	9.5	-3.9	-0.6	-1.0	-3.2	5.8
IDS ADVISORY													
Equity	8.1	18.2	20.5	-5.9	10.7	9.2	3.2	11.4	0.0	-8.4	-0.9	-6.6	14.3
Total Fund	7.5	17.2	19.7	-5.9	10.1	8.5	3.0	10.3	0.4	-7.3	-0.6	-5.6	13.6
INVESTMENT ADVISERS													
Equity	5.3	14.7	20.5	-7.8	7.1	6.6	5.8	11.3	-3.0	-5.8	1.5	-2.9	11.6
Total Fund	4.6	12.4	18.5	-7.2	6.4	6.4	5.7	10.7	-2.8	-4.9	1.3	-1.8	8.0
LIEBER & COMPANY													
Equity	11.8	13.8	15.2	-1.7	6.3	13.8	2.9	8.9	-1.3	-10.2	1.7	-2.4	16.6
Total Fund	11.0	13.9	14.6	-1.9	6.0	11.6	2.6	7.9	-1.4	-7.3	1.3	-1.9	11.6
PEREGRINE CAPITAL													
Equity	2.1	7.7	15.5	0.4	10.7	9.5	-2.1	5.3	-3.2	-8.8	-6.0	-3.6	19.6
Total Fund	1.9	6.5	12.8	-1.9	9.1	7.8	-1.9	4.7	-2.7	-7.4	-5.1	-2.6	16.4
WADDELL & REED													
Equity	2.4	19.7	18.4	-5.4	8.7	8.1	0.7	-1.6	-10.3	-14.0	-9.3	-4.7	30.2
Total Fund	2.0	16.4	10.4	-2.0	7.0	5.2	1.5	1.4	-1.3	-2.2	-5.3	-3.0	24.0
SBI AGGREGATE													
Equity	5.0	16.6	17.7	-5.7	8.8	9.5	2.4	8.0	-2.7	-7.5	-1.5	-5.6	12.1
Total Fund	4.5	15.2	15.2	-4.5	8.0	8.4	2.4	7.2	-2.2	-5.9	-1.2	-4.5	10.5
MARKET INDICES													
Wilshire 5000	5.8	14.4	16.8	-4.3	7.5	10.3	1.3	9.2	-2.8	-4.2	-1.0	-0.9	13.0
S&P 500	6.0	14.1	17.3	-4.1	7.4	9.2	1.8	9.7	-2.5	-2.4	0.4	-0.1	11.1
91 Day T-Bills	1.6	1.8	1.8	1.9	1.9	2.1	2.3	2.7	2.6	2.4	2.3	2.4	2.2

BOND MANAGER PORTFOLIO STATISTICS GLOSSARY

Like the preceding equity manager portfolio statistics glossary, this bond manager portfolio statistics glossary is designed to define terminology used in evaluating a bond manager's investment philosophy, risk characteristics and performance data.

Qtr. Port. Turnover	-	the manager's total bond sales during the quarter divided by the average value of the manager's bond portfolio over the quarter.
# of Issues	-	the number of different bond issues held in the manager's portfolio.
Bond Allocation	-	the percent of the manager's total portfolio invested in bonds.
Coupon	-	the annual interest payment received on the manager's total portfolio stated as a percent of the portfolio's face value.
Current Yield	-	the annual interest payment produced by the manager's total portfolio stated as a percent of the portfolio's market value.
Yield to Maturity	-	the compounded annualized return that the manager's total portfolio would produce if it were held to maturity and all cash flows were reinvested at an interest rate equal to the yield to maturity.
Duration	-	a measure of the average life of the total portfolio. Duration is a weighted average maturity whereby the time in the future that each cash flow is received is weighted by the proportion that the present value of the cash flow contributes to the total present value (or price) of the total portfolio.
Term to Maturity	-	also a measure of the average life of the total portfolio. Term to maturity is the number of years remaining until the average bond in the portfolio makes its final cash payment.

Quality Weightings	-	refer to the average rating given the total portfolio's securities by Moody's Corp. A security's rating indicates the financial strength of its issuer and other factors related to the likelihood of full and timely payment of interest and principal.
Sector Weightings	-	refer to the sectors of the bond market in which the manager has position his/her bond portfolio.
TUCS Median	-	the median manager within a subsample of the TUCS universe that is restricted to fixed income managers investing in portfolios with quality and duration characteristics similar to those that are required of the SBI's bond managers.

TABLE A-7

EXTERNAL FIXED INCOME MANAGERS

PORTFOLIO STATISTICS HISTORICAL SUMMARY

MANAGER NAME	DATE	QUARTER PORTFOLIO T/O	# OF BONDS	BOND ALLOCATION	COUPON	CURRENT YIELD	YIELD TO MAT.	AVERAGE QUALITY	DURATION	TERM TO MAT.
AVG. EXT. MGRS.	6/30/86	47	40	96	9.8	9.3	9.0	AAA	4.6	10.0
	3/31/86	41	39	96	10.3	9.6	8.8	AAA	4.5	12.3
	12/31/85	41	33	95	10.5	10.0	9.6	AAA	4.4	8.7
	9/30/85	22	34	96	10.7	10.6	10.6	AAA	4.3	8.7
	6/30/85	48	29	95	10.4	10.2	10.4	AAA	4.5	8.5
	3/31/85	37	25	91	10.3	10.8	11.5	AAA	4.2	8.2
	12/31/84	38	22	93	10.3	10.8	11.4	AAA	4.5	8.8
	9/30/84	54	29	88	10.1	11.1	12.3	AAA	4.3	8.8
INVESTMENT ADV.	6/30/86	9	21	96	9.6	8.8	8.3	AAA	3.3	4.1
	3/31/86	17	22	95	9.9	8.9	8.2	AAA	3.3	4.2
	12/31/85	10	16	95	9.4	8.8	8.7	AAA	3.4	4.3
	9/30/85	30	18	99	9.7	9.3	9.9	AAA	3.8	5.1
	6/30/85	50	17	99	8.4	8.1	10.1	AAA	4.7	6.2
	3/31/85	19	13	99	8.7	9.3	11.7	AAA	4.9	8.9
	12/31/84	25	10	99	8.4	9.3	11.5	AAA	5.6	12.1
	9/30/94	10	7	100	9.0	10.8	12.6	AAA	6.4	15.2
LEHMAN MGMT.	6/30/86	16	48	97	10.8	9.8	8.3	AAA	4.0	8.1
	3/31/86	28	54	97	11.0	9.7	8.3	AAA	4.0	8.5
	12/31/85	40	32	89	11.1	10.2	9.2	AAA	3.7	6.5
	9/30/85	24	35	95	11.4	10.9	10.2	AAA	3.9	6.6
	6/30/85	49	27	92	11.4	10.8	9.9	AAA	3.8	6.3
	3/31/85	43	24	85	11.6	11.4	11.0	AAA	3.6	5.6
	12/31/84	44	19	85	11.6	11.4	10.8	AAA	3.3	5.3
	9/30/84	62	15	82	11.2	11.5	12.2	AAA	3.7	6.5
MILLER ANDERSON	6/30/86	57	60	97	9.4	9.3	9.5	AA	5.2	11.6
	3/31/86	73	37	92	10.5	9.7	8.8	AA	4.4	11.4
	12/31/85	71	42	99	10.4	9.9	9.6	AA	5.3	9.6
	9/30/85	23	52	98	9.6	10.2	10.6	AA	5.0	9.7
	6/30/85	75	48	95	9.3	10.0	10.4	AA	4.6	9.3
	3/31/85	35	41	92	9.0	10.0	11.1	AA	3.7	7.4
	12/31/84	50	43	99	9.1	10.1	11.3	AA	3.9	7.3
	9/30/84	83	59	71	9.8	11.1	11.9	AAA	3.3	6.7

MANAGER NAME	DATE	QUARTER PORTFOLIO T/O	# OF BONDS	BOND ALLOCATION	COUPON	CURRENT YIELD	YIELD TO MAT.	AVERAGE QUALITY	DURATION	TERM TO MAT.
MORGAN STANLEY	6/30/86	89	13	100	8.6	8.9	9.1	AAA	5.4	10.8
	3/31/86	62	20	100	9.4	9.0	8.7	AAA	5.4	19.9
	12/31/85	58	17	100	10.4	10.1	9.9	AAA	5.0	10.6
	9/30/85	18	20	100	11.2	11.1	11.0	AAA	4.4	9.8
	6/30/85	38	17	100	11.4	10.8	10.5	AAA	5.0	9.7
	3/31/85	62	16	85	11.1	11.3	11.5	AAA	3.8	7.3
	12/31/84	30	12	100	11.5	11.5	11.5	AAA	5.3	9.4
	9/30/84	105	20	99	8.6	8.9	12.5	AAA	3.7	5.3
PEREGRINE	6/30/86	12	51	97	10.8	10.2	9.8	AA	4.3	9.7
	3/31/86	10	54	98	11.2	10.3	9.4	AA	4.1	11.0
	12/31/85	18	51	98	11.5	10.8	10.4	AA	3.7	9.3
	9/30/85	20	43	96	11.6	11.2	11.0	AA	3.3	7.8
	6/30/85	15	35	98	11.2	10.8	10.5	AA	3.4	7.6
	3/31/85	13	28	100	11.1	11.3	11.5	AA	3.7	7.6
	12/31/84	39	25	96	10.5	10.9	11.3	AA	3.5	7.5
	9/30/84	17	21	93	10.6	11.7	12.5	AA	3.6	7.6
WESTERN ASSET	6/30/86	97	48	90	9.3	9.0	9.0	AA	5.6	15.7
	3/31/86	58	48	95	9.8	9.8	9.3	AA	5.5	18.9
	12/31/85	47	40	87	10.3	10.1	10.0	AA	5.2	11.9
	9/30/85	19	34	89	10.7	11.0	11.1	AA	5.6	13.0
	6/30/85	58	29	84	10.5	10.7	10.8	AA	5.4	12.1
	3/31/85	52	28	87	10.4	11.5	12.1	AA	5.3	12.2
	12/31/84	39	24	80	10.6	11.4	11.8	AA	5.2	11.3
	9/30/84	49	19	80	11.3	12.3	12.8	AA	4.8	11.3

TABLE A-8

EXTERNAL FIXED INCOME MANAGERS

SECTOR WEIGHTING HISTORICAL PROFILE

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	QUALITY WEIGHTINGS AAA	AA	A	BAA	OTHER	SECTOR WEIGHTINGS GOVT	AGCY	ZERO	IND	UTIL	FIN	TRAN	MTGS	MISC	CASH
AVG. EXT. MGRS.	6/30/86	---	78	6	10	3	3	28	6	3	9	2	10	1	37	3	4
	3/31/86	---	79	6	9	3	3	35	2	2	9	2	9	0	34	3	4
	12/31/85	---	80	5	8	2	5	35	3	2	6	2	9	0	35	3	5
	9/30/85	---	81	5	8	1	5	33	3	2	7	2	9	0	39	1	4
	6/30/85	---	81	6	6	3	4	34	1	4	5	4	9	0	36	1	5
	3/31/85	---	78	10	6	2	4	27	5	4	5	6	12	0	31	1	9
	12/31/84	---	77	12	7	2	2	33	8	4	2	8	12	0	24	1	7
	9/30/84	---	79	12	7	2	0	30	10	7	3	8	9	1	19	1	12
INVESTMENT ADV.	6/30/86	39,301,944	81	8	11	0	0	34	18	12	23	0	10	0	0	0	4
	3/31/86	38,938,391	84	8	8	0	0	52	0	12	25	0	6	0	0	0	5
	12/31/85	36,766,845	96	4	0	0	0	68	0	12	8	0	7	0	0	0	5
	9/30/85	34,573,707	96	4	0	0	0	70	0	13	9	0	7	0	0	0	1
	6/30/85	33,794,148	96	4	0	0	0	62	0	23	10	0	4	0	0	0	1
	3/31/85	30,942,776	85	15	0	0	0	53	0	18	11	13	4	0	0	0	1
	12/31/84	30,397,636	74	26	0	0	0	52	0	18	0	25	4	0	0	0	1
	9/30/84	27,932,974	72	28	0	0	0	59	0	10	0	31	0	0	0	0	0
LEHMAN MGMT.	6/30/86	223,483,722	89	4	6	1	0	60	0	0	11	2	7	0	18	0	3
	3/31/86	220,998,995	89	4	6	1	0	65	2	0	9	0	6	0	15	0	3
	12/31/85	207,462,430	89	5	6	0	0	51	10	0	7	2	7	0	12	0	11
	9/30/85	194,774,253	87	6	7	0	0	54	12	0	9	2	7	0	11	0	5
	6/30/85	190,808,742	91	5	4	0	0	64	8	0	5	2	4	0	9	0	8
	3/31/85	177,383,853	95	3	2	0	0	65	13	0	2	0	2	0	3	0	15
	12/31/84	173,831,628	98	0	2	0	0	64	13	0	3	0	0	0	5	0	15
	9/30/84	162,737,117	96	1	2	0	0	60	13	5	4	0	0	0	0	0	18
MILLER ANDERSON	6/30/86	217,656,629	71	5	4	5	15	25	0	0	2	0	8	0	60	2	3
	3/31/86	217,291,031	74	0	5	5	16	45	0	0	2	0	8	0	37	0	8
	12/31/85	208,552,908	71	0	6	4	19	45	0	0	2	0	8	0	44	0	1
	9/30/85	191,849,284	68	1	9	4	18	24	0	0	5	0	9	0	60	0	2
	6/30/85	183,857,869	69	3	8	4	16	19	0	2	5	0	12	0	57	0	5
	3/31/85	173,961,916	54	13	11	2	20	2	0	4	7	0	27	0	52	0	8
	12/31/84	169,696,156	55	17	14	5	9	0	0	7	5	0	36	0	51	0	1
	9/30/84	159,574,376	81	12	5	2	0	0	0	0	2	0	17	0	52	0	29

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	QUALITY WEIGHTINGS AAA	AA	A	BAA	OTHER	SECTOR WEIGHTINGS GOVT	AGCY	ZERO	IND	UTIL	FIN	TRAN	MTGS	MISC	CASH
MORGAN STANLEY	6/30/86	222,763,940	100	0	0	0	0	33	9	0	0	0	0	0	58	0	0
	3/31/86	225,686,690	100	0	0	0	0	41	0	0	0	0	0	0	59	0	0
	12/31/85	208,381,895	100	0	0	0	0	42	0	0	0	0	0	0	58	0	0
	9/30/85	193,513,567	100	0	0	0	0	41	0	0	0	0	0	0	59	0	0
	6/30/85	188,907,479	100	0	0	0	0	49	0	0	0	0	0	0	51	0	0
	3/31/85	173,106,782	100	0	0	0	0	38	9	0	0	0	0	0	38	0	15
	12/31/84	170,547,941	100	0	0	0	0	74	18	0	0	0	0	0	8	0	0
	9/30/84	159,109,110	100	0	0	0	0	45	27	27	0	0	0	0	0	0	1
PEREGRINE	6/30/86	104,606,143	48	19	31	0	2	0	0	0	9	0	30	0	41	17	3
	3/31/86	104,370,666	48	18	32	0	2	0	0	0	9	0	31	0	40	17	2
	12/31/85	100,139,659	55	13	29	0	3	0	0	0	5	0	29	0	48	16	2
	9/30/85	95,186,493	61	12	25	0	2	0	0	0	4	2	31	0	52	7	4
	6/30/85	92,417,709	56	15	20	7	2	0	0	0	4	5	33	0	49	7	2
	3/31/85	86,259,088	55	23	19	3	0	3	0	0	0	5	38	0	47	7	0
	12/31/84	84,387,890	65	13	18	4	0	6	7	0	0	5	30	0	48	0	4
	9/30/84	79,887,650	58	14	24	4	0	12	7	0	10	0	31	0	33	0	7
WESTERN ASSET	6/30/86	238,657,259	80	2	8	9	1	13	9	3	7	7	2	4	45	0	10
	3/31/86	235,514,306	76	4	5	14	1	7	9	3	12	9	2	1	52	0	5
	12/31/85	220,363,561	73	5	8	7	7	5	8	1	15	9	2	1	48	0	11
	9/30/85	201,666,058	74	6	5	4	11	11	3	0	14	10	0	1	49	0	12
	6/30/85	197,929,627	73	9	4	8	6	10	0	0	8	15	0	1	51	0	15
	3/31/85	181,426,695	76	9	4	7	4	4	11	0	8	16	0	1	47	0	13
	12/31/84	177,328,832	69	15	7	5	4	3	11	0	6	19	2	2	33	4	20
	9/30/84	165,957,816	68	15	9	5	3	4	16	0	3	18	4	5	26	4	20

TABLE A-9

EXTERNAL FIXED INCOME MANAGERS

HISTORICAL PERFORMANCE SUMMARY

	2Q 1986	1Q 1986	4Q 1985	3Q 1985	2Q 1985	1Q 1985	4Q 1984	3Q 1984
INVESTMENT ADVISERS								
Fixed Income	0.9%	6.2%	6.5%	2.5%	9.4%	1.9%	8.8%	11.8%
Total Fund	0.9	5.9	6.3	2.3	9.2	1.8	8.8	11.8
LEHMAN MANAGEMENT								
Fixed Income	1.2	6.7	6.9	2.1	8.7	2.0	7.7	9.6
Total Fund	1.1	6.5	6.5	2.1	7.6	2.1	6.8	8.7
MILLER ANDERSON								
Fixed Income	0.2	4.4	8.8	4.4	6.0	2.5	7.5	7.7
Total Fund	0.2	4.2	8.7	4.4	5.7	2.5	6.3	6.7
MORGAN STANLEY								
Fixed Income	-2.1	8.2	7.7	2.5	9.3	1.5	7.3	6.1
Total Fund	-1.3	8.3	7.7	2.4	9.1	1.5	7.2	6.3
PEREGRINE CAPITAL								
Fixed Income	0.2	4.3	5.4	3.1	7.3	2.3	6.0	7.7
Total Fund	0.2	4.2	5.2	3.0	7.1	2.2	5.6	6.9
WESTERN ASSET								
Fixed Income	0.9	7.4	10.7	1.9	10.7	2.4	8.0	11.8
Total Fund	1.3	6.9	9.3	1.9	9.1	2.3	6.8	10.8
SBI FIXED INCOME AGGREGATE								
Fixed Income	1.7	6.4	8.1	2.8	8.5	2.1	7.5	8.8
Total Fund	0.4	6.2	7.7	2.7	7.8	2.1	6.8	8.1
MARKET INDEX								
Salomon Broad Bond Index	1.1	7.9	7.8	2.0	8.9	2.2	7.5	8.6

Tab B

PORTFOLIO STATISTICS

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
COMPOSITION OF STATE INVESTMENT PORTFOLIO'S BY TYPE OF INVESTMENT
MARKET VALUE JUNE 30, 1986

	CASH AND SHORT TERM SECURITIES	BONDS		STOCKS		ALTERNATIVE ASSETS	TOTAL
		INTERNAL	EXTERNAL	INTERNAL	EXTERNAL		
BASIC RETIREMENT FUNDS:							
TEACHERS RETIREMENT FUND	$ 15,355	$ -0-	$444,646	$ -0-	$1,206,317	$180,621	$1,846,939
	0.83%	0.00%	24.08%	0.00%	65.31%	9.78%	100%
PUBLIC EMPLOYEES RETIRE. FUND	42,753	-0-	304,840	-0-	826,876	123,745	1,298,214
	3.29%	0.00%	23.48%	0.00%	63.70%	9.53%	100%
STATE EMPLOYEES RETIRE. FUND	33,973	-0-	226,811	-0-	615,627	92.090	968,501
	3.51%	0.00%	23.42%	0.00%	63.56%	9.51%	100%
PUBLIC EMP. POLICE & FIRE FUND	17,980	-0-	88,748	-0-	231,077	34,528	372,333
	4.83%	0.00%	23.84%	0.00%	62.06%	9.27%	100%
HIGHWAY PATROL RETIRE. FUND	4,546	-0-	16,354	-0-	44,384	6,628	71,912
	6.32%	0.00%	22.74%	0.00%	61.72%	9.22%	100%
JUDGES RETIREMENT FUND	1,281	-0-	1,107	-0-	3,000	449	5,837
	21.95%	0.00%	18.96%	0.00%	51.40%	7.69%	100%
POST RETIREMENT FUND	519,596	2,403,094	-0-	678,775	-0-	-0-	3,601,465
	14.43%	66.72%	0.00%	18.85%	0.00%	0.00%	100%
MINNESOTA SUPPLEMENTAL FUNDS:							
INCOME SHARE ACCOUNT	7,578	61,340	-0-	96,332	12,746	-0-	177,996
	4.26%	34.46%	0.00%	54.12%	7.16%	0.00%	100%
GROWTH SHARE ACCOUNT	534	-0-	-0-	39,646	38,567	-0-	78,747
	0.68%		0.00%	50.35%	48.97%	0.00%	100%
FIXED RETURN ACCOUNT	76,896	-0-	-0-	-0-	-0-	-0-	76,896
	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100%
BOND ACCOUNT	213	10,771	-0-	-0-	-0-	-0-	10,984
	1.94%	98.06%	0.00%	0.00%	0.00%	0.00%	100%
MINNESOTA VARIABLE ANNUITY	2,183	-0-	-0-	66,000	79,561	-0-	147,744
	1.48%		0.00%	44.67%	53.85%	0.00%	100%
TOTAL RETIREMENT FUNDS	$ 722,888	$2,475,205	$1,082,506	$880,753	$3,058,155	$438,061	$8,657,568
	8.35%	28.59%	12.51%	10.17%	35.32%	5.06%	100%

PERMANENT SCHOOL FUND	126,318 35.04%	234,176 64.96%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	360,494 100%
TREASURERS CASH	850,617 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	850,617 100%
TRANSPORTATION FUNDS	475,061 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	475,061 100%
STATE BUILDING FUNDS	96,678 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	96,678 100%
HOUSING FINANCE AGENCY	137,751 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	137,751 100%
MINNESOTA DEBT SERVICE FUND	200,988 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	200,988 100%
MISCELLANEOUS ACCOUNTS	111,806 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	111,806 100%
TACONITE AREA ENVIR. PROTECTION	12,736 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	12,736 100%
N.E. MINNESOTA PROTECTION	40,836 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	40,836 100%
GRAND TOTAL	$2,775,679 25.36%	$2,709,381 24.76%	$1,082,506 9.89%	$880,753 8.05%	$3,058,155 27.94%	$438,061 4.00%	$10,944,535 100%

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
NET CASH FLOW AVAILABLE FOR INVESTMENT

For period of
April 1, 1986 - June 31, 1986

Teachers Retirement Fund	$ (55,500,000)
Public Employees Retirement Fund	(6,000,000)
State Employees Retirement Fund	(1,916,000)
Public Employees Police & Fire	4,500,000
Highway Patrol Retirement Fund	1,991,000
Judges Retirement Fund	1,097,000
Post Retirement Fund	172,240,323
Supplemental Retirement Fund - Income	538,288
Supplemental Retirement Fund - Growth	(4,844,743)
Supplemental Retirement Fund - Fixed	364,144
Supplemental Retirement Fund - Bond	2,066,190
Minnesota Variable Annuity Fund	$ (101,827)
Total Retirement Funds Net Cash Flow	$ 114,434,375
Permanent School Fund	1,191,537
Total Net Cash Flow	$ 115,625,912

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

TRANSACTION AND ASSET SUMMARY
RETIREMENT FUNDS

	Net Transactions				Asset Summary (at market)			
	Bonds (000,000)	Stocks (000,000)	Total	Cash Flow	Short-term % of Fund	Bonds % of Fund	Equity % of Fund	Total (000,000) (at market)
June 1984	5	(38)	(33)	119	8.7	36.5	54.8	5187
July	151	29	180	34	5.8	40.5	53.7	5247
August	(6)	(16)	(22)	24	6.2	38.4	55.4	5598
September	16	(6)	10	14	6.3	39.0	54.7	5652
October	19	32	51	31	5.8	39.7	54.5	5748
November	(7)	(19)	(26)	18	6.5	40.1	53.4	5760
December	91	(71)	20	12	6.3	41.2	52.5	5864
January 1985	(5)	131	126	20	4.3	42.0	53.7	6188
February	30	(5)	25	27	4.3	41.2	54.5	6177
March	(1)	5	4	26	4.6	41.7	53.7	6213
April	(79)	17	(62)	23	5.9	40.7	53.4	6260
May	(13)	(41)	(54)	32	6.9	40.4	52.7	6602
June	284	118	402	408	6.8	41.2	52.0	6801
July	84	68	153	40	5.2	41.8	53.0	6812
August	79	4	83	30	4.3	43.3	52.4	6867
September	32	(10)	22	31	4.6	44.6	50.8	6751
October	50	52	102	26	3.3	44.8	51.9	6986
November	(29)	(22)	(51)	41	4.4	43.1	52.5	7299
December	(3)	(76)	(79)	16	5.5	43.1	51.4	7583
January 1986	(7)	13	6	13	5.5	42.9	51.6	7618
February	36	(8)	28	34	5.3	42.9	51.8	8049
March	1	(3)	(2)	27	5.4	42.9	51.7	8429
April	(3)	(131)	(134)	20	7.3	42.9	49.8	8384
May	(2)	8	6	44	7.7	40.8	51.5	8450
June	226	326	552	625	8.3	41.4	50.3	8715

Tab C

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
Room 105, MEA Building
55 Sherburne Avenue
Saint Paul 55155
296-3328

August 21, 1986

TO: Members, State Board of Investment
Members, Investment Advisory Council

FROM: Administrative and Asset Allocation Committees

SUBJECT: Committee Reports

The Administrative and Asset Allocation Committees met jointly to discuss several matters that will be before the Board and the IAC during the next quarter.

Two items were reviewed concerning the 1987 Legislative Session. First, the Committee was briefed on the 1987-89 biennial budget request. At present, the request reflects a "same level" budget. Second, the Committee discussed potential legislative proposals that would require statutory changes. Both the budget request and any legislative proposals will be presented to the Board for approval at its next meeting.

The Committee discussed activity related to the Supplemental Investment Fund (SIF). Due to the legislation sponsored by the Board during the 1986 session, new investment options are available to participants in the SIF. A revised prospectus has been developed by SBI staff to reflect these changes and the brochure has now been distributed to all participants in the Fund. The SIF's guaranteed investment contract (GIC) option will be available beginning November 1986. GIC bids will be solicited from eligible insurance companies through a competitive bid process in October.

The Committee noted that there has been little direct response from the three retirement systems concerning the SBI paper on the Post Retirement Fund and its benefit increase mechanism. Mr. Bicker has addressed two of the retirement system boards on this issue during the last quarter.

Finally, the Committee was briefed on the up-coming investment conference sponsored by the SBI. The Board's fifth Annual Investment Conference has been scheduled for Monday, November 17, 1986.

Tab D

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Room 105, MEA Building
55 Sherburne Avenue
Saint Paul 55155
296-3328

August 27, 1986

TO: Members, State Board of Investment
Members, Investment Advisory Council

FROM: Equity Manager Committee

SUBJECT: Committee Report

The Committee reviewed the recent performance of the Board's equity managers. There has been considerable variation in manager results over the most recent quarter and year when compared to the market. Managers who follow a "Growth" investment style generally have done very well, while managers who use a "Value" investment style have done poorly. Just the opposite occurred in the period mid-1983 through 1984. When compared to benchmarks designed to reflect the managers style, for the most part the managers have performed well. However, the performance of Investment Advisers, Peregrine Capital and Waddell & Reed has been weak enough to warrant special attention.

The Committee also reviewed the situation at Wilshire Associates, the Board's index fund manager. The person heading the index fund management program left Wilshire. At its previous meeting the Committee requested staff evaluate the Wilshire situation and report back. Staff's report concluded that Wilshire remains firmly committed to index fund management. The index fund program at Wilshire will now be headed by Tom Stephens, who has considerable experience with non-discretionary index fund management. Staff is confident Stephens can keep the Board's index fund operating efficiently. The Committee supports staff's conclusions and recommends no action be taken at this time regarding the index fund.

EQUITY MANAGER UPDATE INTERVIEWS
SUMMARY NOTES

I. STAFF COMMENTS AND RECOMMENDATIONS

Staff discussed several issues with the Board's equity managers at the recent set of meetings. Most important were the managers' current investment strategies, the returns and risks produced by the managers relative to their specific benchmark (normal) portfolios, and the continuing implementation of the Board's South Africa resolution.

No serious organizational problems have occurred at any of the Board's managers since the last set of meetings. Staff believes that the stated investment approaches of the managers have been consistently implemented. Performance has varied widely among the managers. Managers pursuing a "Growth" style of investing have done well in recent quarters, while "Value" managers have lagged the market considerably. While several managers have underperformed their assigned benchmarks recently, staff recommends no changes in the Board's group of active managers be considered at this time.

II. RECENT MEETING DATES

MANAGER	DATE OF MEETING
Fred Alger Management	August 25
Alliance Capital	August 20
BMI Capital	August 26
Beutel Goodman	August 15
Forstmann-Leff	August 26
Hellman Jordan	August 25
IDS Advisory	August 22
Investment Advisers	August 22
Lieber & Company	August 25
Peregrine Capital	July 30
Waddell & Reed	July 14

III. ORGANIZATIONAL CHANGES

No significant organizational changes took place at any of the Board's external equity managers.

IV. ASSETS UNDER MANAGEMENT

	MARCH 1983		DECEMBER 1985		JUNE 1985	
	NUMBER	MARKET VALUE (MILL.)	NUMBER	MARKET VALUE (MILL.)	NUMBER	MARKET VALUE (MILL.)
Fred Alger	59	$1,645	71	$2,514	67	$3,066
Alliance	43	1,095	47	2,086	61	3,368
BMI Capital	5	160	14	260	12	240
Beutel Goodman	5	104	30	1,050	32	1,280
Forstmann-Leff	126	4,800	72	3,711	67	4,538
Hellman Jordan	22	440	33	1,158	34	1,351
IDS Advisory	87	3,361	73	3,369	69	3,932
Investment Advisors	79	1,001	91	1,793	92	2,132
Lieber & Company	14	341	19	853	19	1,257
Peregrine Capital	3	49	6	290	6	284
Waddell & Reed	6	471	10	748	8	931

Assets and accounts grew sharply at Alliance's Minneapolis office in the second quarter. As reported previously, this growth was pre-planned and part of the consolidation of Alliance's regional offices. The Board's portfolio manager at Alliance was not assigned significant additional accounts or assets. The Minneapolis office believes that it has the capacity to handle the new accounts with its current personnel.

With the exception of Alliance, no sizable changes in assets under management or number of accounts have taken place among the Board's other managers. In past quarterly reports, staff has noted the strong growth in accounts at Beutel Goodman. The firm is near its self-prescribed growth target of 40 accounts. The poor market for "Value" managers has served to limit the firm's growth recently.

V. STAFF CHANGES

Two significant personnel changes have occurred since the last set of equity manager meetings. Hellman Jordan lost one portfolio manager, Guy Scott, who had joined the firm in late 1985. He will be leaving at the firm's request. An inability to blend into the firm's investment management approach was cited as the reason for the departure. This premature departure raises some questions as to the stability of the firm's money management process. The situation bears future monitoring. Beutel Goodman added an additional portfolio manager. Phil Ferguson represents the firm's fourth portfolio manager. His addition is part of the expansion of the firm's money management capacity. Beutel Goodman expects Ferguson to be the last addition to its staff, as it is nearing attainment of its long-run growth targets.

VI. INVESTMENT APPROACH

Staff has developed a normal portfolio for each of the Board's active equity managers. A normal portfolio reflects the types of securities from which a particular manager generally makes his stock selections. A manager's normal portfolio represents the manager's specific investment style. As a result, a normal portfolio is an appropriate benchmark for evaluating the investment risks and returns produced by each of the Board's active equity managers.

Staff presented each manager with an analysis of his current investment position relative to his normal portfolio. Staff also discussed the manager's past performance relative to the normal portfolio. Details of this analysis can be found in the appendix to the Quarterly Investment Review.

VII. SOUTH AFRICA

Staff reviewed with each manager the Board's resolution regarding investment in companies doing business in South Africa. Staff discussed the implementation of the most recent phase of the resolution. An updated list of companies covered by Phase I and II was distributed to each manager.

Tab E

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Room 105, MEA Building
55 Sherburne Avenue
Saint Paul 55155
296-3328

August 5, 1986

TO: Members, State Board of Investment
Members, Investment Advisory Council

FROM: Alternative Investment Committee

SUBJECT: Alternative Investment Strategy

As a strategy to increase overall portfolio diversification and provide a hedge against inflation, the Investment Advisory Council's Asset Allocation Committee has recommended that 15% or $675 million of the $4.5 billion Basic Retirement Fund be allocated to alternative investments. Alternative investments include real estate, venture capital and resource investments where Minnesota State Board of Investment (SBI) participation is limited to commingled funds or other pooled vehicles.

STRATEGY FOR INVESTMENTS

VENTURE CAPITAL

The venture capital investment strategy is to establish and maintain a broadly diversified venture capital portfolio comprised of investments that provide diversification by industry type, stage of corporate development and location.

To date, the SBI has committed to ten commingled venture capital funds for a total commitment of $143.5 million. These commitments substantially complete the SBI's current venture capital asset allocation.

REAL ESTATE

The real estate investment strategy involves three steps. The first calls for investment of 30-40% of the real estate portfolio in diversified open-end commingled funds. The second step calls for investment of 30-40% of the real estate portfolio in diversified closed-end commingled funds. The third step calls for investment of 20-30% of the real estate portfolio in less diversified, more focused (specialty) commingled funds.

Currently, the SBI has committed $325.0 million to ten commingled real estate funds. These commitments, and projected investments (subject to Board approval) in follow-on funds with existing managers, will substantially complete the SBI's real estate investment strategy and allocation.

During the latest quarter, the Alternative Investment Committee met with and conducted annual review sessions with three of the SBI's real estate managers: Aetna, Equitable and Prudential. In general, the managers are emphasizing upgrading and improvements to the existing portfolio as opposed to acquiring new properties. Property dispositions have focused on smaller properties which have reached their full potential or are underperforming. Some of the managers are considering refinancing or placing new debt on certain portfolio properties in order to take advantage of lower interest rates. In summary, all three managers have provided the SBI with real returns and a diversified real estate portfolio.

Also during the quarter, the Alternative Investment Committee considered additional real estate investments with Heitman and Trust Company of the West (TCW). The Committee is recommending the Board approve a $20 million investment in Heitman Group Trust III and a $30 million investment in TCW Realty Fund IV. The SBI currently has a $20 million investment in Heitman Group Trust I, a $30 million investment in Heitman Group Trust II and a $40 million investment in TCW Realty Fund IV. The new funds offered by TCW and Heitman will follow essentially similar guidelines and strategies as previous funds. These recommendations are subject to final negotiation and Attorney General approval.

RESOURCE FUNDS

The strategy for resource investment requires that investments be made in oil and gas partnerships that focus investment in conservative, lower risk type investments (i.e., proved producing properties and royalties diversified geographically and/or geologically).

Currently, the SBI has committed $67.5 million to four commingled oil and gas funds. The Alternative Investment Committee is considering ways of completing the SBI's remaining resource allocation.

The Alternative Investment Committee and staff are currently considering an additional oil and gas investment with Apache. This investment would finance certain oil and gas acquisitions made by Apache Petroleum Company. It is expected that during the fourth quarter of 1986 Apache will finalize the investor group for this investment.

FUTURE CONSIDERATIONS

Going forward, the Alternative Investment Committee agenda will include the following ongoing activities:

- Conduct annual review sessions with existing alternative investment managers.

- Review the SBI's alternative investment strategy and asset allocation guidelines.

- Evaluate other commingled funds for possible investment.

- Examine ways of improving performance monitoring of existing alternative investment managers.

Recommendations regarding these issues will be made to the Board when appropriate.

ALTERNATIVE EQUITY INVESTMENTS

FUND	COMMITMENT (millions)	FUNDED (millions)	INCEPTION DATE	FUND SIZE (millions)	TYPE/ STRATEGY
REAL ESTATE:					
Equitable	$ 40.0	$ 40.0	10/81	$3124.0	Open end diversified
Aetna	40.0	40.0	4/82	1664.0	Open end diversified
Prudential	40.0	40.0	9/81	5316.0	Open end diversified
RREEF	75.0	47.0	4/84	773.0	Closed end diversified
Heitman I	20.0	20.0	6/84	113.0	Closed end diversified
Heitman II	30.0	30.0	10/85	238.0	Closed end diversified
TCW I	40.0	40.0	7/85	216.0	Closed end specialized investment vehicle
State Street I	20.0	20.0	7/85	103.0	Closed end specialized investment vehicle
State Street II	20.0	0.0	7/86	100.0	Closed end specialized investment vehicle
Total:	$325.0	$276.0			
Target:	($450 Million or 10% of Basic Retirement Funds)				
VENTURE CAPITAL:					
Norwest	$ 10.0	$ 7.0	1/84	$ 60.0	Hi-tech early stage MN/OR/AZ offices
KKR I	25.0	25.0	3/84	1000.0	Lo-tech mature NY/CA offices
KKR II	50.0	7.0	12/85	2000.0	Lo-tech mature NY/CA offices
Summit	10.0	7.5	12/84	93.0	Hi-tech later stage MA office
First Century	10.0	2.5	12/84	100.0	Hi-tech early stage NY/CA offices
DSV IV	10.0	7.0	4/85	60.0	Hi-tech early stage NJ/CA offices
Matrix	10.0	4.0	7/85	70.0	Hi-tech early stage MA/CA offices
Inman/Bowman	7.5	2.0	6/85	44.0	Hi-tech early stage CA office
Allied	5.0	1.6	7/85	40.0	Lo-tech later stage DC office
Superior Venture	6.0	1.5	6/86	35.0	Hi-tech early stage MN office
Total:	$143.5	$ 65.1			
Target:	($112.5 Million or 2.5% of Basic Retirement Funds)				
RESOURCE:					
Amgo I	$ 15.0	$ 15.0	7/81	$ 144.0	Debt with royalty or equity
Amgo II	7.0	7.0	2/83	36.0	Debt with royalty or equity
Apache I	22.5	0.5	5/84	150.0	Debt with royalty or equity
Apache II	23.0	22.4	10/85	180.0	Debt with royalty or equity
Total:	$ 67.5	$ 42.5			
Target:	($112.5 Million or 2.5% of Basic Retirement Funds)				

ALTERNATIVE INVESTMENT MANAGER INFORMATION
ANNUAL REVIEW SUMMARY

FIRM NAME:	Prudential Investment Management Corp.
FUND NAME:	PRISA I
CONTACT:	Don Davis
ACCOUNT INCEPTION:	9/81
SBI INVESTMENT (COST):	$40 Million
SBI INVESTMENT (MARKET VALUE):	$56.6 Million

INVESTMENT DESCRIPTION: PRISA I is an open-end commingled real estate fund formed in July 1970. PRISA invests primarily in existing properties diversified by location and property type. On-site property management is primarily contracted to outside firms or is conducted by joint venture partners. The Fund has no termination date, although investors have the option quarterly to withdraw a portion or all of their investment.

PRISA CURRENT PORTFOLIO COMPOSITION

PROPERTY MARKET VALUE	# OF PROPERTIES
$4.8 Billion	318

LOCATION	
East	24%
Midwest	13
South	20
West	43

PROPERTY TYPE	
Office	55%
Retail	16
Industrial	15
Hotel	8
Residential	4
Other	2

PRISA UNIT VALUE RETURNS

	LAST FOUR QUARTERS	THREE YEARS ANNUALIZED	FIVE YEARS ANNUALIZED
TOTAL	6.8%	10.6%	10.1%
INCOME	7.0	7.7	7.7
APPRECIATION	-0.2	2.9	2.4

ALTERNATIVE INVESTMENT MANAGER INFORMATION
ANNUAL REVIEW SUMMARY

FIRM NAME:	Aetna Life and Casualty Company
FUND NAME:	Real Estate Separate Account (RESA)
CONTACT:	Tom Anathan
ACCOUNT INCEPTION:	4/82
SBI INVESTMENT (COST):	$40 Million
SBI INVESTMENT (MARKET VALUE):	$52.5 Million

INVESTMENT DESCRIPTION: RESA is an open-end commingled real estate fund formed in January, 1978. The Fund invests primarily in existing equity real estate diversified by location and property type. On-site property management is primarily contracted to outside firms or conducted by a joint venture partner. The Fund has no termination date, although investors have the option to withdraw all or a portion of their investment.

RESA CURRENT PORTFOLIO COMPOSITION

PROPERTY MARKET VALUE	# OF PROPERTIES
$1.3 Billion	127

LOCATION	
East	18%
Midwest	23
South	4
West	55

PROPERTY TYPE	
Office	44%
Retail	18
Industrial	25
Hotel	6
Residential	7

RESA UNIT VALUE RETURNS

	LAST FOUR QUARTERS	THREE YEARS ANNUALIZED	FIVE YEARS ANNUALIZED
TOTAL	9.5%	11.3%	11.4%
INCOME	8.2	8.8	9.0
APPRECIATION	1.3	2.5	2.4

ALTERNATIVE INVESTMENT MANAGER INFORMATION
ANNUAL REVIEW SUMMARY

FIRM NAME:	Equitable Real Estate Group, Inc.
FUND NAME:	Separate Account #8
CONTACT:	Harry Pierandri
ACCOUNT INCEPTION:	10/81
SBI INVESTMENT (COST):	$40 Million
SBI INVESTMENT (MARKET VALUE):	$59.3 Million

INVESTMENT DESCRIPTION: Equitable Separate Account #8 is an open-end commingled real estate fund formed in August 1973. The Fund invests primarily in existing equity real estate diversified by location and property type. On-site property management is primarily contracted to outside firms or conducted by joint venture partners. The Fund has no termination date although investors have the option of withdrawing all or a portion of their investment.

SEPARATE ACCOUNT #8 CURRENT PORTFOLIO COMPOSITION

PROPERTY MARKET VALUE	# OF PROPERTIES
$2.9 Billion	241

LOCATION	
East	29%
Midwest	17
South	30
West	24

PROPERTY TYPE	
Office	42%
Retail	36
Industrial	14
Hotel	8
Residential	0
Other	0

SEPARATE ACCOUNT #8 UNIT VALUE RETURNS

	LAST FOUR QUARTERS	THREE YEARS ANNUALIZED	FIVE YEARS ANNUALIZED
TOTAL	9.8%	13.7%	12.7%
INCOME	7.4	7.3	7.8
APPRECIATION	2.4	6.4	4.9

Tab F

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
Room 105, MEA Building
55 Sherburne Avenue
Saint Paul 55155
296-3328

August 4, 1986

TO: Members of the State Board of Investment

FROM: South Africa Task Force

SUBJECT: Implementation of the SBI Resolution on Companies that Do Business in South Africa.

The South Africa Task Force met on July 8, 1986 to review implementation of the SBI's resolution. The members of the Task Force are:

Jay Kiedrowski, Chair Commissioner of Finance	Governor's Representative
Elton Erdahl Teachers Retirement Association	Retirement Fund Representative
Richard Helgeson Deputy State Auditor	State Auditor's Representative
Michael Lucas Senior Vice President Norwest Bank	Private Sector Representative
Robert Mattson State Treasurer	
Jack Tunheim Assistant Attorney General	Attorney General's Representative
Rick Scott AFSCME	Public Employee Representative
Elaine Voss Deputy Secretary of State	Secretary of State's Representative

The Task Force is submitting the following report on implementation of the Board's resolution:

I. Review of Phase I

During Phase I, the Task Force focused its activity on the non-Sullivan signatories in the actively managed common stock portfolios.

In October 1985, letters regarding the Board's resolution were sent to 107 companies that did business in South Africa at that time. Twenty of those companies were non-Sullivan signatories. The remaining eighty-seven companies are subject to Phases II through IV of the Board's resolution. To date, 98 responses have been received.

Since the initial communications with the twenty non-Sullivan signatories, thirteen companies signed the Sullivan Principles. In addition, one of the companies demonstrated that it follows corporate policies which are comparable to the Sullivan Principles. This company is included in the implementation of Phase II of the resolution. Two companies sold their operations in South Africa. Finally, one company is in the midst of buyout negotiations which should take the company private.

The Board planned to sponsor or cosponsor nine shareholder resolutions calling for various companies to sign the Sullivan Principles. Six of these resolutions were withdrawn when the companies became Sullivan signatories prior to their annual meeting. The three resolutions cosponsored by the Board and an unofficial count of their affirmative vote are show below:

Diamond Shamrock	18%
Hughes Tool	21%
U.S. Steel	16%

While these totals may appear low, it should be noted that they are among the highest percentages received by any company for any shareholder resolution. Historically, shareholder resolutions have received about 5% of the vote.

At the end of Phase I (January 1986) , three companies in the actively managed common stock portfolios had not signed the Sullivan Principles (or instituted a comparable policy). After reviewing the reports of its financial and legal advisors, the Board decided not to immediately liquidate stocks in these companies, but chose to proceed with divestiture through transactions occurring during the normal course of business. If investment managers decide to sell any of these stocks through the normal course of business, the Board has instructed them not to repurchase the security unless the managers anticipate that action would violate their fiduciary obligations. If managers repurchase any stock in these companies, they have been instructed to notify the Board of that action. The managers have abided by the Board's request, and in those instances where the stock has been sold, there has been no repurchase.

As of December 31, 1985, three external managers held positions in these stocks totalling $4,419,444. Norwest held small positions in each of the three stocks, while Hellman Jordan and IDS held positions in U.S. Steel. Norwest's holdings of these stocks remains unchanged. However, Hellman Jordan and IDS have completely liquidated their U.S. Steel positions. The sales proceeds represent $2,141,069 or approximately 50% of the aggregate December 31, 1985, holdings and 80% of the December 31, U.S. Steel holdings. No repurchases have been made. Details of the positions are presented below:

	12/31/85 SHARES	12/31/85 MARKET VALUE	SALES-SHARES	SALES-12/31/85 MARKET VALUE
Diamond Shamrock	80,000	$1,110,000	0	0
Hughes Tool	50,000	662,500	0	0
U.S. Steel	99,416	2,646,944	80,416	2,141,069
Total	229,416	$4,419,444	80,416	$2,141,069

In addition to these holdings, as of December 31, 1985, approximately $7 million of U.S. Steel was held in internal portfolios. Sales of these positions will be made consistent with the internal manager's fiduciary duty.

II. Implementation of Phase II

The Task Force took the following actions with respect to Phase II:

A. Non-Sullivan signatories in the Active Portfolios

In addition to the three companies previously identified, the latest review showed that four other companies in the SBI's actively managed common stock portfolios had not signed the Sullivan Principles (or instituted comparable policies). As of April 30, 1986, the market value of these holdings was approximately $4.7 million.

The Task Force directed the SBI staff to sponsor shareholder resolutions for these four companies for the 1987 proxy season. In addition, the Task Force directed SBI staff to instruct each of the active managers to implement the Board's "non-repurchase" policy for these companies. This brings the number of companies affected by the policy to a total of seven (three as a result of Phase I, four as a result of Phase II). The letter to external managers was dated August 4, 1986, the end date for Phase II. Both of these actions are consistent with the implementation activities of Phase I.

It should be noted that by signing the Sullivan Principles, companies agree to independent monitoring of their South Africa operations. As a result, all Sullivan signatories meet the monitoring requirements of Phase II of the resolution.

B. Non-Sullivan Signatories in the Passive Portfolio/Index Fund

The Task Force recommended that the Board consider expanding implementation of the resolution to include holdings in the passive as well as the active portfolios. The Task Force is requesting the Board's consultant to analyze the potential financial impact of the non-repurchase policy on the index fund. After reviewing the result of that analysis, the Task Force will decide how the non-repurchase policy could be applied to the index fund. The consultant's analysis will be completed in November 1986.

According to The Investor Responsibility Research Center (IRRC), there are 70 publically held companies that are non-Sullivan signatories currently doing business in South Africa. As of April 30, 1986 the index fund held stocks in 18 of these companies with a market value of $24.9 million. SBI staff will contact these companies and compile information on their South Africa operations for review by the Task Force. SBI will sponsor shareholder resolutions for these companies during the 1987 proxy season.

C. Companies in the Actively Managed Portfolios that Directly Support Apartheid

The Task Force recommends that the Board consider expanding implementation of the resolution to include companies in the actively managed portfolios that can be categorized as directly supporting apartheid. While the Task Force decided to exclude this group in Phase I, the resolution provides that the Board can consider divesting securities of companies that "operate in a manner which directly supports apartheid."

In order to proceed with this recommendation several actions are necessary:

1) The Task Force must define what constitutes direct support to apartheid.

2) SBI staff must review the active portfolios to determine which holdings meet the definition and obtain information about the companies' activities in South Africa.

3) SBI staff will prepare shareholder resolutions for the companies affected for the 1987 proxy season.

4) The Task Force will seek financial and legal advice regarding possible divestiture of any companies meeting the definition it establishes.

To begin this process, the Task Force directed SBI staff to request IRRC's assistance in developing a definition of what constitutes direct support of apartheid. SBI staff will also contact other organizations with experience in implementing this type of divestment program.