

**MINNESOTA STATE BOARD
OF INVESTMENT
MEETING
JUNE 12, 1986
&
INVESTMENT ADVISORY
COUNCIL MEETING
JUNE 3, 1986**

AGENDA

STATE BOARD OF INVESTMENT
MEETING

Thursday, June 12, 1986
8:00 A.M.

Room 118
State Capitol
Saint Paul

- TAB
1. Approval of Minutes of March 4, 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. Asset allocation for alternative investments
 2. Post Retirement Investment Fund review
 - B. Equity Manager Committee D
 1. First quarter review of equity managers
 2. Renewal of equity manager contracts
 3. Wilshire Associates - index fund manager
 - C. Fixed Income Committee E
 1. First quarter review of fixed income managers
 2. Renewal of fixed income manager contracts
 - D. Alternative Investment Committee F
 1. Report on implementation of alternative investment program
 2. State Street Real Estate Fund IV
 4. Report from the Consultant Search Committee G

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

MEMBERS OF THE BOARD:
GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H. CARLSON
STATE TREASURER ROBERT W. MATTSON
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



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
MARCH 5, 1986

The State Board of Investment met on Wednesday, March 5, 1986 at 9:00 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 December 4, 1985 Board meeting were unanimously approved.

EXECUTIVE DIRECTOR'S REPORT

Howard Bicker, Executive Director, reviewed the asset allocation and investment performance of the Basic Retirement Funds. The market value of the Basic Retirement Funds' assets increased 12.6% in the fourth quarter, bringing the Basic Funds' total growth for the calendar year 1985 to 23.4%. The first quarter showed a positive cash flow of \$4 million in the quarter which reduced net withdrawals for the year to \$63 million. Mr. Bicker reported that the asset mix in the Basic Retirement Funds showed an increase of 3% in common stock and a continued movement toward our long term asset allocation for alternative investments. Mr. Bicker noted that the Basic Retirement Funds total portfolio produced a 12.5% total rate of return for the fourth quarter and a 25.6% total rate of return for the year. Excluding alternative investments, the Basic Funds' portfolio generated a 13.6% total rate of return for the quarter and a 27.4% return for the year. Mr. Bicker reported that the common stock performance was very strong during the fourth quarter, with the Wilshire 5000 producing a fourth quarter return of 16.8%, and a total return for the calendar year of 32.6%. Interest rates continued to decline, and the bond market experienced another strong quarter, showing a 7.9% return for the quarter and a 21.8% return for the year. The SBI's managers are in line with the market.

Mr. Bicker reported that the Post Retirement Fund continues to show strong growth. The Fund increased by 11.8% in market value during the fourth quarter, bringing asset growth for the full calendar year 1985 to 38.3%. With regard to the asset mix,

the cash component of the Post Retirement Fund increased slightly, while the common stock segment declined slightly during the fourth quarter. This change was primarily due to the gradual but persistent reduction in the common stock segment necessary to fund the dedicated bond portfolio in a declining interest rate environment. The Post Retirement Fund's equity portfolio produced a 17.0% total rate of return for the fourth quarter. For the calendar year 1985 the equity portfolio's return was 28.4%, underperforming the Wilshire 5000, but roughly matching the manager pool's return. No significant changes took place in the bond portfolio during the fourth quarter.

In response to a question by Mr. Carlson regarding the dedicated bond portfolio in the Post Retirement Fund, Mr. Bicker stated that it is not an actively managed portfolio in the sense it is not a total rate of return portfolio. It is designed to produce cash flows that meet all future obligations to individuals who have retired. It also produces a minimum 3% benefit increase. Mr. Carlson raised the question regarding the total rate of return for the dedicated bond portfolio. Mr. Bicker stated it has a duration very closely matching the market. The bond market return for the quarter was 7.9%, and the total rate of return for the Post Retirement Fund would be similar to that. Mr. Carlson stated that because the funds have a high exposure to bonds at a time when interest rates are dropping, this will effect both the Post and Basic Retirement Funds. Mr. Bicker stated that the Post Retirement Fund's portfolio was established as a risk averse portfolio. The portfolio's total rate of return, with the exception of the equity component, is not necessarily relevant. The dedicated bond component is there to ensure that the benefits that are promised will be paid. In response to a question from Mr. Carlson as to whether or not we see a further slide in interest rates, Mr. Bicker stated that the consensus is that interest rates will trend upward during 1986.

Mr. Bicker stated that a staff paper on the Post Retirement Fund will be available to the Board at the June or September meeting.

INVESTMENT ADVISORY COUNCIL REPORT

Judy Mares, Chair of the Investment Advisory Council, presented the Council report:

ADMINISTRATIVE AND ASSET ALLOCATION COMMITTEE

The committee reviewed the Legislative Auditor's report on the SBI's operations for the fiscal year ended June 30, 1985. The Board's financial statements received an unqualified opinion. There were two findings in the management letter. The first recommendation related to the need for additional monitoring of collateral backing securities on loan. Staff is developing a new system to efficiently monitor the market value of securities on loan and the collateral backing those loans. The second recommendation relates to the reimbursement of travel expenses for Board members and their staffs. The committee recommends

that the Board adopt the following policy: For fiscal years 1986 and 1987, each Board member and/or staff may utilize up to \$2,000 of the SBI's budget for travel. All travel shall be for SBI related activities. Ms. Grove moved approval.

In response to a series of questions from Mr. Humphrey and Mr. Carlson, Mr. Bicker stated that the \$2,000 maximum would be used by an individual Board member and/or staff member. If additional funds are needed, the Board could hold a special meeting. The motion passed on a vote of 4-1. Governor Perpich voted in opposition.

Ms. Mares stated that the committee recommends State Street Bank & Trust Company be retained to provide performance evaluation services to the Board. She explained that the Board's existing evaluator, Merrill Lynch, has discontinued its services in this area. Mr. Mattson moved that State Street be retained to provide performance measurement services.

In response to a question from Mr. Carlson, Ms. Mares stated that the formula to evaluate investment performance is standard throughout the industry. State Street's impartiality as a performance evaluator is not an issue. She also stated that State Street also provides the ability to look at a data base of other funds of similar size and characteristics. In response to a question from Mr. Carlson, Mr. Bicker stated that State Street will utilize the TUCS universe which includes data from most trust companies in the United States. In response to a question from Mr. Carlson, Mr. Bicker stated that the number of firms offering performance evaluation services is decreasing. The motion passed unanimously.

Ms. Mares stated that the committee recommended a formal Request For Proposal be issued for consultant services. She stated that the consultant would provide: 1) services currently provided by Evaluation Associates in manager selection and monitoring and 2) an evaluation of the guaranteed insurance contract option to be offered in the Minnesota Supplemental Investment Fund. Mr. Carlson moved approval for the consultant RFP. Mr. Humphrey stated it is important to evaluate periodically consultant services available in the marketplace. The motion passed unanimously.

EQUITY MANAGER COMMITTEE

Ms. Mares stated that the primary activity of the Equity Manager Committee was focused on the issue of fee structure. Ms. Mares stated that a decision by the Securities & Exchange Commission last November will allow the use of incentive fees. The committee addressed alternative fee proposals and recommends the adoption of a fulcrum fee proposal. The committee developed benchmarks for performance for each equity manager called normal portfolios. A manager's normal portfolios represents the universe of securities from which that manager selects. As a result, it is a measure of that manager's investment style. Staff has developed a fee structure whereby investment managers

would be paid a base fee for performance 200 basis points higher than their normal portfolio. Fees on the upside would be capped at 1%. If managers underperform their normal portfolio by more than 550 basis points, they would not be paid. Performance would be measured on a 3 year rolling average. Ms. Mares recommended adoption of this performance based fee, and strongly encouraged each investment manager to participate. She recommended that it not be a mandatory system. In response to a question from Ms. Grove, Mr. Bicker stated that only one manager disagrees and Staff is negotiating with that manager. Mr. Humphrey moved approval of the fulcrum fee structure. In response to a question from Mr. Carlson regarding written policy relating to what their strategy will be, Mr. Bicker stated that staff has developed a normal portfolio for each manager. In response to a question from Mr. Carlson, Mr. Bicker stated that our overall recommendation for measurement will be total returns versus the market. The motion passed unanimously.

ALTERNATIVE INVESTMENT COMMITTEE

Ms. Mares stated that the Alternative Investment Committee discussed three strategic areas including venture capital, real estate and resource funds. In the area of venture capital the committee addressed how to manage stocks which are distributed from venture programs. The committee recommends the Board approve the hiring of T. Rowe Price Associates to manage the stock distributions. Mr. Carlson moved approval. The motion passed unanimously.

Ms. Mares stated that since there has been a sharp decline in oil prices the Council recommends the tabling of resource investments at this time. The Council will be reviewing existing oil and gas programs in light of the structural changes in the market.

SOUTH AFRICA TASK FORCE

Mr. Kiedrowski, Chairman of the Advisory Committee on the South African issue, stated that when the Board passed its South Africa resolution on October 2, 1985, there were 20 companies who had not signed the Sullivan Principles. Since that time, 13 have signed the Sullivan Principles, one company withdrew from doing business in South Africa, two companies have comparable policies which allows them under the resolution to be exempted from Phase I, and one company was a buyout merger and no longer would come under the resolution. As a result, there are three remaining companies in the SBI portfolio that have not signed the Sullivan Principles.

In response to a question from Governor Perpich, Mr. Kiedrowski stated that Newmont Mining has signed the Sullivan Principles, so the three remaining non-signers are Diamond Shamrock, Hughes Tool, and United States Steel. The State Board of Investment has sponsored or cosponsored resolutions for these three companies. Mr. Kiedrowski stated that on a 7-1 vote, the Task Force advised the investment staff that when in the normal

course of business the three stocks are sold, they not be repurchased unless the failure to reinvest would be inconsistent with the Board's fiduciary obligations. He also stated that the staff has notified its external money managers of the Task Force's recommendation.

In response to a series of questions from Mr. Carlson, Mr. Kiedrowski stated that the Board has voted its proxies for some time and has been active in either sponsoring or cosponsoring resolutions. Mr. Kiedrowski also stated that the Task Force was instructed under the resolution to divest if legal and financial advice was received which allowed this procedure. In reviewing that information, the Task Force concluded it would be advisable at this time not to divest any of the stocks in these three companies, but rather to instruct the managers not to repurchase if they sell unless they felt it inhibited their ability to meet their fiduciary responsibility.

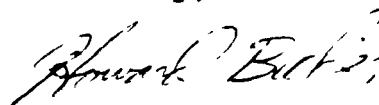
In response to Mr. Carlson's statement that it now appears no divestments will occur because of the requirement to meet fiduciary standards, Mr. Kiedrowski stated that the position is consistent with the resolution passed by the Board.

In reply to Mr. Carlson's questions, Mr. Kiedrowski stated that the resolution required financial and legal advice prior to any divestment. The Task Force chose to take an alternate route in light of the legal and financial advice it received.

Mr. Kiedrowski stated that the Task Force will continue to review the legal and financial advice under each implementation phase in light of developments around the country.

The meeting adjourned at 9:55 A.M.

Sincerely,



Howard J. Bicker
Executive Director

AGENDA

INVESTMENT ADVISORY COUNCIL
MEETING

Tuesday, June 3, 1986
2:00 P.M.

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

- | | |
|---|------------|
| 1. Approval of Minutes of March 4, 1986 | <u>TAB</u> |
| 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. Asset allocation for alternative investments | |
| 2. Post Retirement Investment Fund review | |
| B. Equity Manager Committee | D |
| 1. First quarter review of equity managers | |
| 2. Renewal of equity manager contracts | |
| 3. Wilshire Associates - index fund manager | |
| C. Fixed Income Committee | E |
| 1. First quarter review of fixed income managers | |
| 2. Renewal of fixed income manager contracts | |
| D. Alternative Investment Committee | F |
| 1. Report on implementation of alternative investment program | |
| 2. State Street Real Estate Fund IV | |
| 4. Report from the Consultant Search Committee | G |

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

MEMBERS OF THE BOARD:
GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H. CARLSON
STATE TREASURER ROBERT W. MATTSON
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



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
MARCH 4, 1986

The Investment Advisory Council met on Tuesday, March 4, 1986, at 2:00 P.M. in the MEA Building, St. Paul.

MEMBERS PRESENT: Judith Mares, Henry Adams, James Eckmann, Paul Groschen, Ken Gudorf, James Hacking, Jay Kiedrowski, Gary Norstrem, Verona Burton, Malcolm McDonald, Joe Rukavina, Harvey Schmidt, Ray Vecellio, Jan Yeomans.

MEMBERS ABSENT: Mike Rosen, Dick Hume, Deborah Veverka.

SBI STAFF: Howard Bicker, Teresa Myers, John Griebenow, Daralyn Peifer, Harriet Balian, Charlene Olson.

OTHERS ATTENDING: Elton Erdahl, Mike Ousdigian, Bob Whitaker.

The minutes of the December 3, 1985 meeting were approved.

EXECUTIVE DIRECTOR'S REPORT

Howard Bicker, Executive Director, reviewed the asset allocation and investment performance of the Basic Retirement Funds. The market value of the Basic Retirement Funds' assets increased 12.6% in the fourth quarter, bringing the Basic Funds' total growth for the calendar year 1985 to 23.4%. The first quarter showed a positive cash flow of \$4 million in the quarter which reduced net withdrawals for the year to \$63 million. Mr. Bicker reported that the asset mix in the Basic Retirement Funds showed an increase of 3% in common stock and a continued movement toward our long term asset allocation for alternative investments. Mr. Bicker noted that the Basic Retirement Funds total portfolio produced a 12.5% total rate of return for the fourth quarter and a 25.6% total rate of return for the year. Excluding alternative investments, the Basic Funds' portfolio generated a 13.6% total rate of return for the quarter and a 27.4% return for the year. Mr. Bicker reported that the common stock performance was very strong during the fourth quarter, with the Wilshire 5000 producing a fourth quarter return of 16.8%, and

a total return for the calendar year of 32.6%. Interest rates continued to decline, and the bond market experienced another strong quarter, showing a 7.9% return for the quarter and a 21.8% return for the year. The SBI's managers are in line with the market.

Mr. Bicker reported that the Post Retirement Fund continues to show strong growth. The Fund increased by 11.8% in market value during the fourth quarter, bringing asset growth for the full calendar year 1985 to 38.3%. With regard to the asset mix, the cash component of the Post Retirement Fund increased slightly, while the common stock segment declined slightly during the fourth quarter. This change was primarily due to the gradual but persistent reduction in the common stock segment necessary to fund the dedicated bond portfolio in a declining interest rate environment. The Post Retirement Fund's equity portfolio produced a 17.0% total rate of return for the fourth quarter. For the calendar year 1985 the equity portfolio's return was 28.4%, underperforming the Wilshire 5000, but roughly matching the manager pool's return. No significant changes took place in the bond portfolio during the fourth quarter.

ADMINISTRATIVE COMMITTEE

Ms. Mares stated that the Committee's first recommendation is to focus on the need for additional monitoring of collateral backing securities on loan. Staff is developing a new system to efficiently monitor the market value of securities on loan and the collateral backing those loans.

Ms. Mares also stated the Legislative Auditor has suggested that the SBI adopt a policy relating to Board members and their staff travel from the staff budget. The committee recommends the following policy be adopted by the SBI: For fiscal years 1986 and 1987, each Board member and/or staff, may utilize up to \$2,000 of the SBI's budget for travel. All travel shall be for SBI related activities. Mr. McDonald moved approval of this matter. The motion passed unanimously. Ms. Mares stated that the committee recommends State Street Bank and Trust Company be retained to provide performance evaluation services. The existing evaluator, Merrill Lynch, has discontinued its services to the Board. Mr. McDonald moved approval of the recommendation. The motion passed unanimously.

Ms. Mares stated that the committee is proceeding with a formal Request For Proposal for consultant services and GIC's. Mr. Bicker explained that the RFP committee will be composed of a representative of each Board member and representation from the Council. All responses will be reviewed and a decision made regarding which group will be presented to the Board. The committee will determine to whom the RFP's will be sent. The contract with Evaluation Associates, who has been the consultant for four years, expires July 1, 1986. The new recommendation will be made at the June meeting. Mr. Kiedrowski moved approval of the recommendation. The motion passed unanimously.

SOUTH AFRICAN TASK FORCE

Mr. Kiedrowski, Chairman of the Advisory Committee on the South African issue, stated that when the Board passed its South Africa resolution on October 2, 1985, there were 20 companies who had not signed the Sullivan Principles. Since then, 13 have signed the Sullivan Principles, one company withdrew from doing business in South Africa, two companies have comparable policies which allows them under the resolution to be exempted from Phase 1, and one company was a buyout merger and no longer would come under the resolution. Mr. Kiedrowski reported that Newmont Mining has signed the Sullivan Principles, therefore, the three remaining non-signers are Diamond Shamrock, Hughes Tool, and United States Steel. Mr. Kiedrowski stated that on a 7-1 vote, the Task Force advised the investment staff that when in the normal course of business the three stocks are sold, they not be repurchased unless the failure to reinvest would not be consistent with the Board's fiduciary obligations.

In response to a question by Ms. Mares regarding counsel, Mr. Kiedrowski said the question is, "Should there have been outside counsel?" Mr. Kiedrowski stated the Attorney General advised that the Board could be liable for a law suit if the decision to divest was made on the basis of the resolution. Mr. Kiedrowski stated the Task Force is continuing to proceed under the resolution, and also that there has to be legal and financial consultation. The State of New York still has not divested. Mr. Hacking stated the SBI does not need statutory authority to take action on South Africa. Mr. Kiedrowski stated the Task Force is continuing to implement the resolution and that there may be sponsorship of additional resolutions to companies.

ALTERNATIVE INVESTMENT COMMITTEE

Mr. Gudorf presented the report of the Alternative Investment Committee. He stated that several meetings were held with various venture capital companies, and it appears that currently it is more difficult to find attractive venture capital investments. He also stated that each of the ventures is at an early stage.

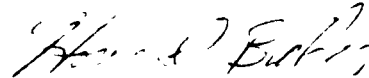
Mr. Gudorf stated that additional investments should be made in real estate, and the Committee would primarily be looking at existing managers. The Committee met with the two oil and gas investment managers, Amgo and Apache. The Committee reviewed an additional \$5 million investment in AMGO III. After some discussion, Mr. Gudorf withdrew this proposal, and Mr. McDonald seconded the motion to table action. Harry Adams concurred. In the area of venture capital the committee discussed the matter of how to manage stocks which are distributed from venture partnerships and recommended that T. Rowe Price be hired to manage these stock distributions. Mr. Adams moved approval of hiring T. Rowe Price. The motion passed unanimously. Ms. Mares stated that since there has been a sharp decline in oil prices, the matter of new resource investments be tabled, and the committee will continue to review existing oil and gas programs.

EQUITY MANAGER COMMITTEE

Ms. Yeomans presented the report of the Equity Manager Committee. In regard to the proposal for use of incentive fees, the committee discussed alternative fee proposals and recommends the adoption of a fulcrum fee proposal. The fee structure has been developed whereby investment managers would be paid a base fee for performance 200 basis points higher than their normal portfolio. Fees on the upside would be capped at 1%. If managers underperform their normal portfolio by more than 550 basis points, they will not be paid. Performance would be measured using a 3-year rolling average. Mr. McDonald moved approval of the fulcrum fee structure. The motion passed unanimously. It was suggested this structure will be implemented July 1, 1986.

The meeting adjourned at 3:10 P.M.

Respectfully submitted,



Howard J. Bicker
Executive Director

Tab A

TABLE OF CONTENTS

<u>BASIC RETIREMENT FUNDS</u>	<u>PAGE</u>
Quarterly Investment Summary.....	2
Asset Growth.....	7
Asset Mix.....	8
Asset Mix - Actual vs. Policy.....	10
Balanced Portfolio Universe-Historical Asset Mix.....	11
Performance of Capital Markets.....	12
Investment Returns Relative to Performance Standards.....	13
Equity Manager Performance.....	16
External Equity Manager Risk Profiles.....	17
External Equity Manager Sector Weightings.....	18
Bond Manager Performance.....	19
External Bond Manager Risk and Sector Profiles.....	20
<u>POST RETIREMENT INVESTMENT FUND</u>	
Quarterly Investment Summary.....	21
Dedicated Bond Portfolio Statistics.....	25
Asset Growth.....	26
Asset Mix.....	27
Benefit Increases vs. Inflation.....	29
Equity Segment Returns.....	30
Equity Manager Data.....	32
<u>RETIREMENT FUNDS</u>	
Asset Mix:	
Supplemental Retirement Fund (Income Share Account).....	34
Supplemental Retirement Fund (Growth Share Account).....	36
Minnesota Variable Annuity Fund.....	38
Investment Returns Relative to Performance Standards.....	40
<u>PERMANENT SCHOOL FUND</u>	
Quarterly Investment Summary.....	41
Bond Portfolio Statistics.....	44
Asset Mix.....	45
<u>APPENDIX</u>	
Equity Manager Portfolio Statistics Glossary.....	A-2
External Equity Managers:	
Portfolio Statistics Historical Summary.....	A-5
Sector Weighting Historical Profile.....	A-9
Historical Performance Summary.....	A-13
Bond Manager Portfolio Statistics Glossary.....	A-14
External Fixed Income Managers:	
Portfolio Statistics Historical Summary.....	A-16
Sector Weighting Historical Profile.....	A-18
Historical Performance Summary.....	A-20

MINNESOTA STATE BOARD OF INVESTMENT

BASIC RETIREMENT FUNDS

QUARTERLY INVESTMENT REVIEW

MARCH 31, 1986

MINNESOTA STATE BOARD OF INVESTMENT

BASIC RETIREMENT FUNDS

FIRST QUARTER 1986

Summary

ASSETS

The market value of the Basic Retirement Funds' assets increased 10.7% in the first quarter of 1986. As in the previous quarter, the prime contributor to asset growth was the strong performance of the common stock market. First quarter net contributions totalled \$5.4 million. End of period market values for first quarter 1986 and the latest five calendar years are presented below.

<u>Calendar Year</u>	<u>Market Value (millions)</u>	<u>Percent Change from Previous Period</u>
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

ASSET MIX

The asset mix of the Basic Retirement Funds' changed little during first quarter 1986. The cash equivalents segment of the portfolio increased slightly due to a rise in the cash held by the Basic Funds' equity managers. Asset class weightings of the Basic Retirement Funds for the latest two quarters and the previous year are displayed below.

	ASSET MIX		
	<u>3/31/85</u>	<u>12/31/85</u>	<u>3/31/86</u>
Common Stocks	59.1%	61.6%	61.2%
Bonds	24.3	23.8	23.3
Cash Equivalents*	9.6	5.1	6.5
Alternative Equity Assets	<u>7.0</u>	<u>9.5</u>	<u>9.0</u>
	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 10.6% total rate of return for first quarter 1986 and a 30.5% return for the most recent year. Excluding alternative equity assets, the portfolio's total rate of return was 11.4% for the first quarter and 32.8% for the year.

Total portfolio performance fell slightly below that of the Basic Funds' assigned asset class composite for the first quarter and latest year. However, the total portfolio outperformed the median tax-exempt manager during both periods. Most significantly, total portfolio performance for the latest year exceeded that of the median manager by a considerable margin.

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

	Total Rate of Return	
	First Quarter 1986	Year Ending 3/31/86
Common Stocks	14.4%	37.2%
Bonds	6.1	26.2
Cash	1.9	8.2
Alternative Equity Assets	- 1.1	3.9
Total Fund (including alt. assets)	10.6	30.5

EQUITY PERFORMANCE

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. The managers benefited from their greater-than-market weighting of the Financial sector and their underweighting of the Energy sector. As a result, the managers' aggregate performance exceeded that of the Wilshire 5000 for the quarter, although their performance trailed slightly that of Wilshire's for the most recent year. The managers' aggregate performance exceeded the median equity manager's performance during both periods. The index fund continued to track the performance of its assigned target.

The active managers made few changes in their industry sector concentrations during the first quarter. As a group, the managers trimmed their positions in the Consumer Durables sector but remained overweighted in the Financial and Transportation sectors and underweighted in the Capital Goods, Energy, and Utilities sectors.

The Basic Retirement Funds' equity manager returns for the latest quarter and year are presented on the following page.

Total Portfolio Returns

	First Quarter 1986	Year Ending 3/31/86
Fred Alger	19.8%	48.0%
Alliance Capital	19.3	50.6
Beutel Goodman	14.3	25.7
BMI Capital	17.8	26.4
Forstmann Leff	18.8	43.1
Hellman Jordan	15.3	38.7
IDS	17.2	45.4
Investment Advisers	12.4	31.5
Lieber & Company	13.9	35.7
Peregrine Capital	6.5	28.6
Waddell and Reed	16.4	34.7
Internal Manager	10.3	N.A.
 Total - External Active Managers	 15.2	 36.8
 Wilshire Associates (Index Fund)	 14.0	 37.4
 Wilshire 5000	 14.4	 37.5

BOND PERFORMANCE

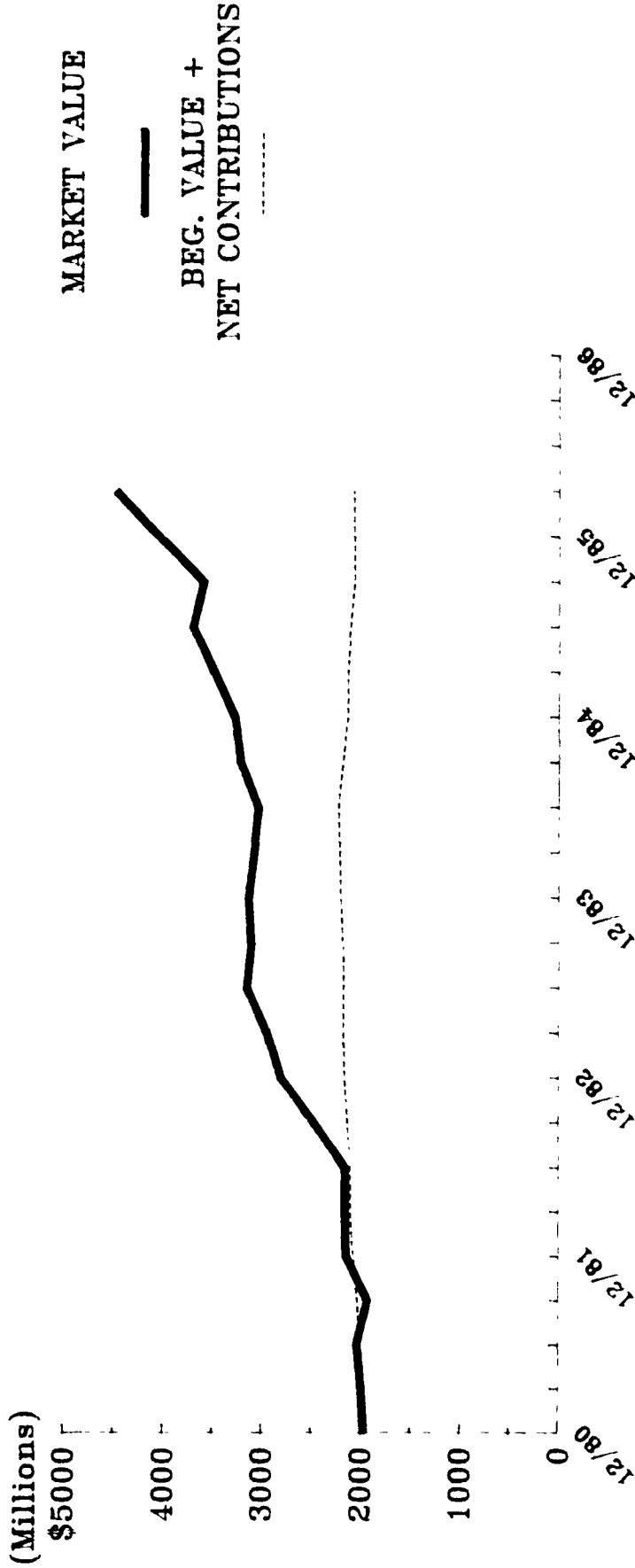
First quarter total rate of return for the Basic Retirement Funds' active bond manager pool was 6.2%. Aggregate bond performance for the most recent year was 26.7%. The bond manager pool failed to match the performances of the bond market and median bond manager during the latest quarter and year. The underperformance was attributable, for the most part, to the managers' heavy weighting of the mortgage sector of the bond market. Mortgage securities performed very poorly in the declining interest rate environment. Also contributing to aggregate underperformance was the managers' shorter-than-market portfolio duration.

The Basic Retirement Funds' bond manager returns for the most recent quarter and year are displayed below.

	Total Portfolio Returns	
	First Quarter <u>1986</u>	Year Ending <u>3/31/86</u>
Investment Advisers	5.9%	25.8%
Lehman Management	6.5	24.6
Miller Anderson	4.2	24.9
Morgan Stanley	8.3	30.4
Peregrine Capital	4.2	21.0
Western Asset	6.9	29.8
Total - External Managers	6.2	26.7
Merrill Lynch Master Bond Index	8.6	29.7

FIGURE 1

BASIC RETIREMENT FUNDS ASSET GROWTH

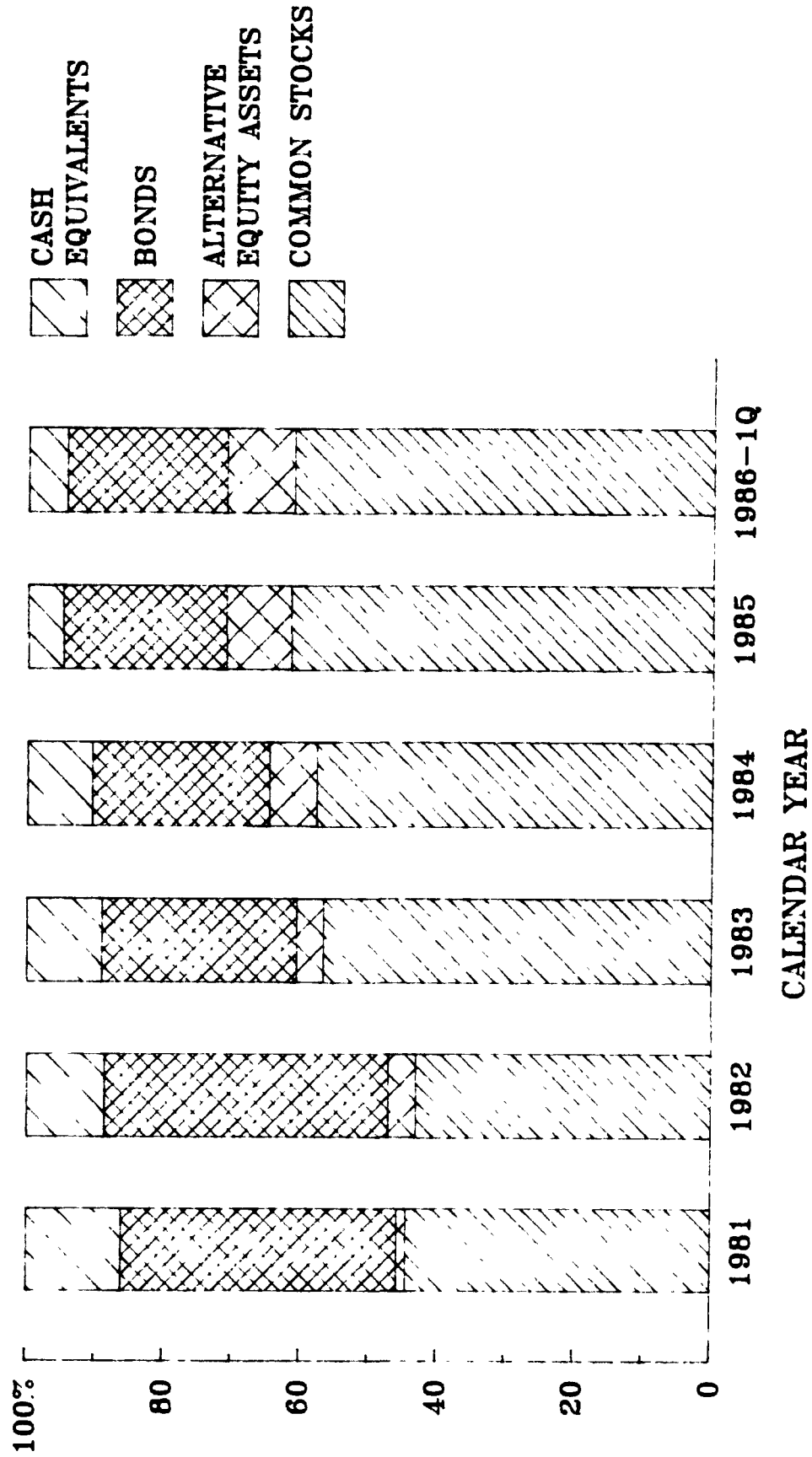


	12/80	12/81	12/82	12/83	12/84	12/85	3/86
BEGINNING VALUE	1,962.0	2,148.8	2,806.2	3,129.0	3,265.0	4,029.6	
NET CONTRIBUTIONS	122.7	114.9	91.0	40.0	-77.6	-62.7	5.4
INVESTMENT RETURN	212.2	71.9	566.4	282.8	213.6	827.3	427.8
ENDING VALUE	1,962.0	2,148.8	2,806.2	3,129.0	3,265.0	4,029.6	4,462.8

(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 \$Million	Common Stocks Percent	Bonds \$Million	Bonds Percent	Cash* \$Million	Cash* Percent	Real Estate \$Million	Real Estate Percent	Resource Funds \$Million	Resource Funds Percent	Venture Capital \$Million	Venture Capital 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

*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)**

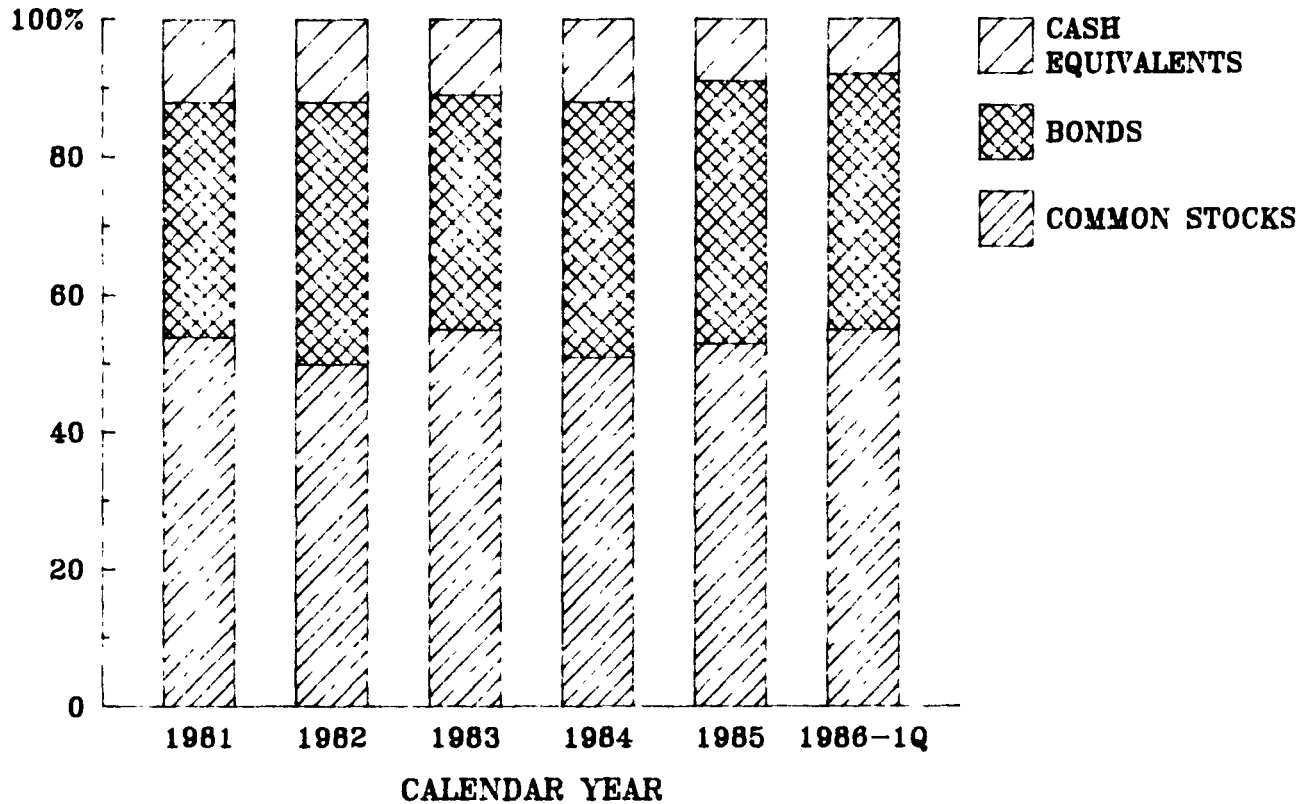
	Common Stocks*		* Fixed Income**		Real Estate*		Resource Funds Venture Capital*								
	Passive Management Actual Policy Diff.	Active Management Actual Policy Diff.	Actual Policy Diff.	Actual Policy Diff.	Actual Policy Diff.	Actual Policy Diff.	Actual Policy Diff.	Actual Policy Diff.							
1983 1Q	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

*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
COMMON STOCKS	51%	48%	52%	48%	50%	53%
BONDS	32	36	32	35	36	35
CASH EQUIVALENTS	12	12	10	11	9	8

**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 quarter 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

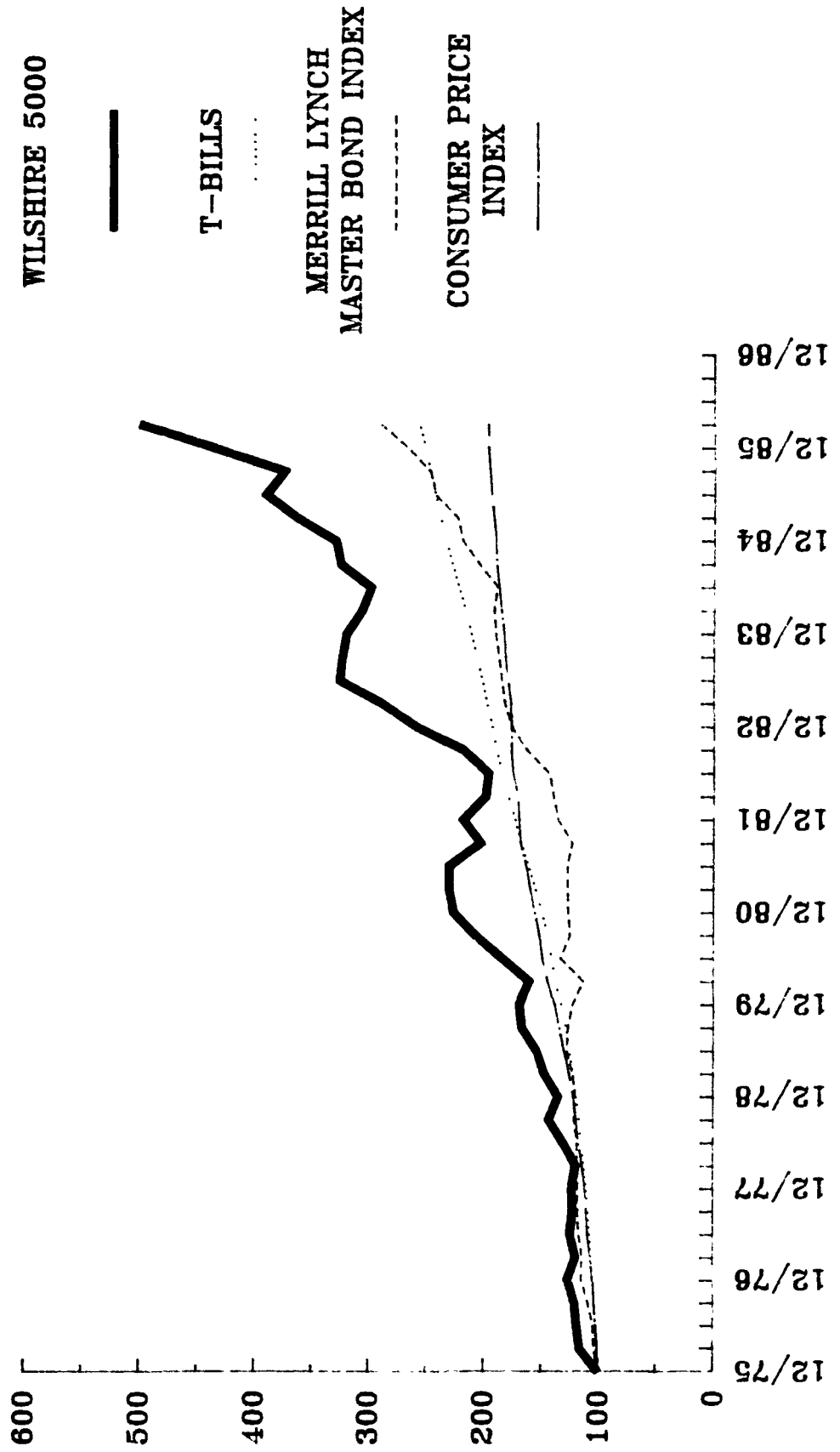


FIGURE 5

BASIC RETIREMENT FUNDS INVESTMENT RETURNS

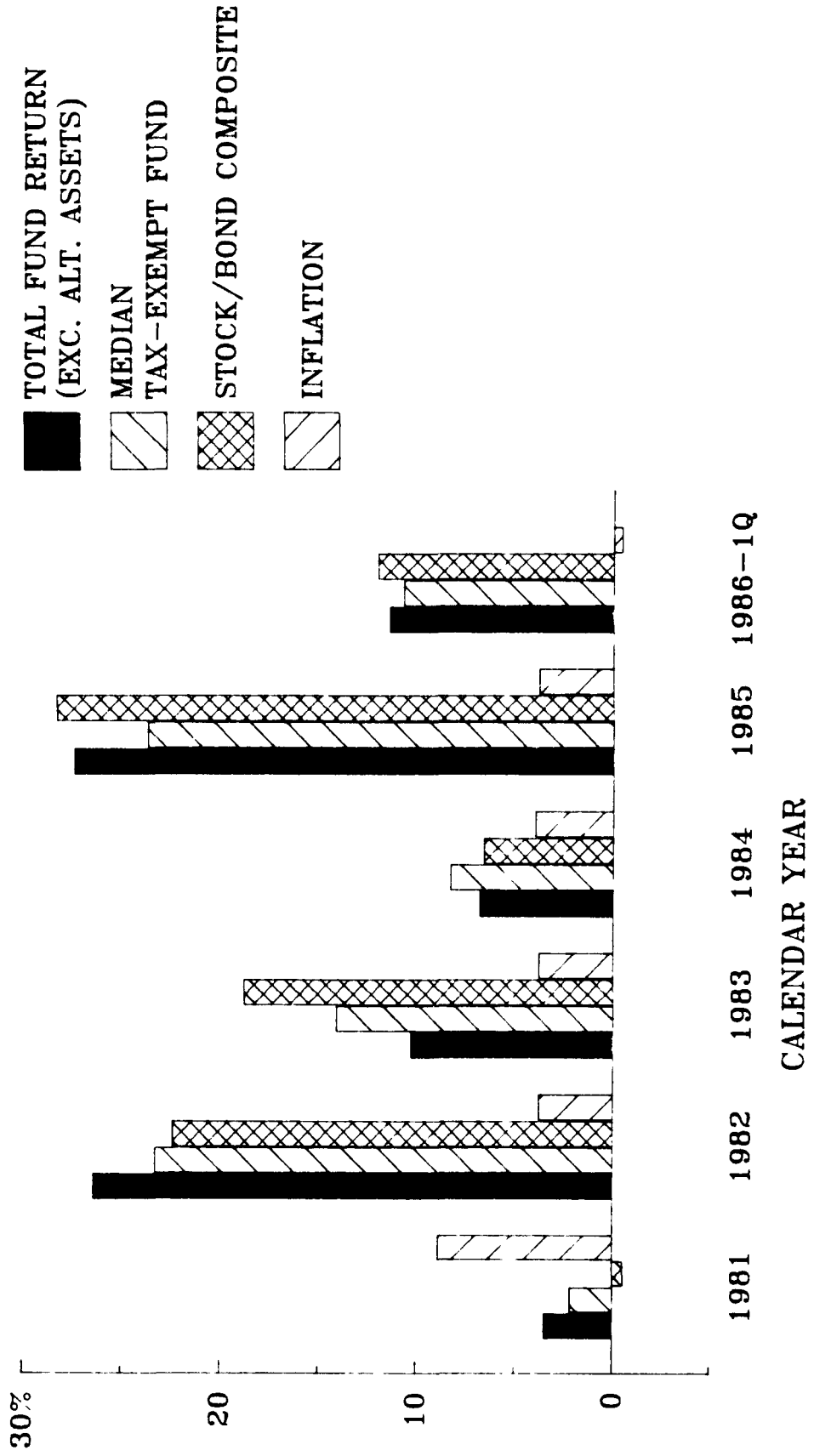


TABLE 3

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%	18.8%	12.5%	12.7%	12.4%
1981	3.5	2.2	2.0	8.9	15.6	3.5
1982	26.4	23.3	23.7	3.8	19.2	25.7
1983	10.3	14.1	17.9	3.8	9.3	10.1
1984	6.8	8.3	7.0	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	12.0	-0.5	1.8	10.6
1 Year Through 3/31/86	32.8	29.8	33.8	2.3	7.6	30.5
3 Years Annualized Through 3/31/86	16.8	16.7	18.6	3.6	9.1	16.1
5 Years Annualized Through 3/31/86	16.5	15.9	17.7	4.2	10.5	15.9

*50/45/5 Wilshire 5000/Merrill Lynch Bond Index/T-Bill Composite Through 12-31-82;
65/30/5 Wilshire 5000/Merrill Lynch Bond Index/T-Bill Composite 1-01-83 through 3/31/86

TABLE 4

BASIC RETIREMENT FUNDS

INVESTMENT RETURNS -- DETAIL

Calendar Year	Common Stocks		Bonds		Alternative Equity Assets
	Basics	Wilshire 5000	Basics	ML Bond Index	
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
1 Year Through 3/31/86	37.2	37.5	26.2	29.7	3.9
3 Years Annualized Through 3/31/86	17.7	20.1	15.7	16.7	8.1
5 Years Annualized Through 3/31/86	15.3	16.7	18.1	17.9	N.A.

TABLE 5

BASIC RETIREMENT FUNDS

EQUITY MANAGER PERFORMANCE
TOTAL PORTFOLIO RETURNS

Managers	First Quarter 1986	Year Ending 3/31/86	Two Years Ending 3/31/86 (Annualized)	Since Inception 3/1/83 (Annualized)
Fred Alger	19.8%	48.0%	28.7%	19.1%
Alliance Capital	19.3	50.6	36.6	20.3
Beutel Goodman	14.3	25.7	24.5	20.2
BMI Capital	17.8	26.4	22.1	7.4
Forstmann Leff	18.8	43.1	29.8	20.1
Hellman Jordan	15.3	38.7	28.8	17.8
IDS	17.2	45.4	34.2	21.1
Investment Advisers	12.4	31.5	26.1	17.6
Lieber & Company	13.9	35.7	28.6	19.0
Peregrine Capital	6.5	N.A.	N.A.	N.A.
Waddell & Reed	16.4	34.7	20.0	16.6
Internal Manager	10.3	N.A.	N.A.	N.A.
Total - External Active Managers	15.2	36.8	26.2	16.0
Wilshire Associates (Index Fund)	14.0	37.4	27.9	N.A.
Performance Standards				
Wilshire 5000	14.4	37.5	27.7	20.9
TUCS Median Growth Mgr.	16.0	39.3	27.4	N.A.
TUCS Median Small Growth Mgr.	14.3	35.1	26.0	N.A.
TUCS Median Rotational Mgr.	15.8	37.1	26.9	N.A.
TUCS Median Value Mgr.	13.5	35.3	27.9	N.A.
Inflation	-0.5	2.3	3.0	3.5

TABLE 6

BASIC RETIREMENT FUNDS EXTERNAL EQUITY MANAGER RISK PROFILES

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	39	98	1.29	0.91	-0.54	-0.40	0.31	0.23	0.12	0.94	0.48	-0.17	0.45	0.19
Alliance	37	94	1.24	0.85	-0.49	-0.46	0.48	0.88	0.36	0.53	0.11	-0.10	0.57	0.09
Mean SBI														
Growth Mgr.	38	96	1.27	0.88	-0.52	-0.43	0.40	0.56	0.24	0.74	0.30	-0.14	0.51	0.14
SMALL GROWTH MANAGERS														
BMI Capital	34	97	1.33	0.86	-0.59	-1.06	-0.13	0.37	0.03	0.98	0.43	1.48	0.96	0.08
Lieber & Co.	109	99	1.31	0.86	-0.38	0.00	-0.06	0.03	0.16	0.63	0.02	1.49	0.48	-0.27
Waddell & Reed	74	88	1.29	0.93	-0.16	-0.51	0.22	-0.07	-0.19	0.87	0.42	0.36	0.11	0.11
Mean SBI														
Growth Mgr.	72	95	1.31	0.88	-0.38	-0.52	0.01	0.11	0.00	0.83	0.29	1.11	0.52	-0.03
ROTATIONAL MANAGERS														
Forstmann Leff	76	89	1.37	0.88	-0.39	-0.77	0.16	0.10	-0.35	0.91	0.35	0.64	0.59	0.27
Hellman Jordan	35	97	1.26	0.88	-0.48	-0.71	0.26	0.06	0.19	0.79	0.34	-0.16	0.21	0.09
IDS	42	92	1.20	0.91	-0.22	-0.11	0.44	0.50	0.34	0.53	0.21	0.11	0.29	0.11
IAI	36	84	1.12	0.95	-0.29	-0.57	0.07	0.02	-0.03	0.48	0.10	-0.11	0.40	0.02
Mean SBI														
Rotational Mgr	47	91	1.24	0.91	-0.35	-0.54	0.23	0.17	0.04	0.68	0.25	0.12	0.37	0.12
VALUE MANAGERS														
Beutel Goodman	23	87	1.15	0.85	0.06	-0.94	-0.66	-0.64	-0.03	0.37	0.64	0.19	0.23	0.12
Peregrine Cap.	196	84	1.19	0.76	0.51	-0.31	-1.53	-0.73	-0.41	0.19	0.16	0.73	0.20	0.19
Internal Mgr.	64	92	0.99	0.93	0.71	0.54	-0.82	-0.62	0.03	-0.05	-0.03	-0.33	-0.12	0.52
Mean SBI														
Value Mgr.	94	88	1.11	0.85	0.43	-0.24	-1.00	-0.66	-0.14	0.20	0.26	0.20	0.10	0.28
Composite Ext. Manager														
Composite Ext. Manager	580	92	1.23	0.93	-0.19	-0.43	-0.17	0.02	-0.01	0.59	0.28	0.20	0.41	0.13
Index Fund Manager														
Index Fund Manager	1,269	93	1.07	0.96	0.15	-0.17	-0.17	-0.02	0.06	0.16	-0.02	0.06	0.09	-0.01
Composite All Basic Mgrs.														
Composite All Basic Mgrs.	1,455	93	1.12	0.95	0.06	-0.26	-0.22	-0.04	0.03	0.29	0.07	0.11	0.19	0.05

* See Equity Manager Portfolio Statistics Glossary for definitions.

TABLE 7

BASIC RETIREMENT FUNDS EXTERNAL EQUITY MANAGER SECTOR WEIGHTINGS

MANAGER	SECTOR WEIGHTINGS									
	CAPITAL GOODS	CONSUMER DURABLES	CONSUMER NONDURABLES	ENERGY	FINANCIAL	MAT. & SERVICES	TECHNOLOGY	TRANSPOR- TATION	UTILITIES	
GROWTH MANAGERS										
Fred Alger	1.7%	8.2%	46.5%	---	17.4%	5.9%	18.7%	1.6%	---	
Alliance	2.4	4.5	46.6	---	30.2	2.5	8.2	5.6	---	
Mean SBI Growth Mgr.	2.1	6.4	46.6	0.0	23.8	4.2	13.5	3.6	0.0	
Median TUCS Growth Mgr.	3.2	3.2	34.2	1.0	18.1	10.5	18.2	4.6	1.8	
SMALL GROWTH MANAGERS										
BMI Capital	6.8	7.7	38.4	4.6	20.9	3.6	18.0	---	---	
Lieber & Company	2.1	7.4	21.4	3.5	38.4	12.3	9.0	4.0	2.0	
Waddell & Reed	4.3	7.3	13.0	2.9	23.3	24.9	16.9	7.3	---	
Mean SBI Sm. Growth Mgr.	4.4	7.5	24.3	3.7	27.5	13.6	14.6	3.8	0.7	
Median TUCS Sm. Growth Mgr.	3.2	3.5	38.2	---	14.2	11.9	14.6	2.7	---	
ROTATIONAL MANAGERS										
Forstmann Leff	1.3	4.0	18.1	---	34.7	17.4	10.1	8.1	6.3	
Hellman Jordan	---	12.1	22.3	2.2	29.8	13.6	18.4	1.7	---	
IDS	---	1.7	32.6	1.1	17.7	15.6	8.9	12.1	10.2	
Investment Advisers	5.6	3.3	20.6	2.3	9.6	23.8	18.8	13.4	2.6	
Mean SBI Rotational Mgr.	1.7	5.3	23.3	1.4	23.0	17.6	14.1	8.8	4.8	
Median TUCS Rotational Mgr.	3.4	4.3	25.8	4.8	14.1	11.9	15.7	3.6	6.0	
VALUE MANAGERS										
Beutel Goodman	4.2	4.2	9.2	3.8	18.6	22.9	20.9	11.5	4.6	
Peregrine Capital	7.4	5.5	15.6	16.2	5.3	15.7	14.8	3.8	15.8	
Internal Mgr.	---	1.5	11.6	26.2	8.8	6.2	11.4	6.9	27.4	
Mean SBI Value Mgr.	3.9	3.7	12.1	15.4	10.9	14.9	15.7	7.4	15.9	
Median TUCS Value Mgr.	5.3	4.7	22.5	9.5	11.6	12.5	12.4	2.5	14.0	
Composite External Managers										
Index Fund Manager	2.8	5.5	25.6	5.1	20.7	13.4	14.6	6.4	5.8	
Composite All Basic Managers	5.0	4.5	27.0	7.7	13.8	11.9	13.7	3.2	13.2	
Wilshire 5000	4.4	4.7	25.8	7.5	15.7	12.3	14.7	4.0	10.9	
	4.8	4.7	27.0	8.0	14.1	11.8	13.4	3.3	12.9	

TABLE 8

BASIC RETIREMENT FUNDS
 BOND MANAGER PERFORMANCE

TOTAL PORTFOLIO RETURNS

Managers	First Quarter 1986	Year Ending 3/31/86	Since Inception 6/30/84 (Annualized)
Investment Advisers	5.9%	25.8%	28.8%
Lehman Management	6.5	24.6	24.9
Miller Anderson	4.2	24.9	23.8
Morgan Stanley	8.3	30.4	26.4
Peregrine Capital	4.2	21.0	21.1
Western Asset	6.9	29.8	29.5
Total - External Bond Managers	6.2	26.7	25.7
Performance Standards			
Merrill Lynch Master Bond Index	8.6	29.7	28.0
TUCS Median Bond Manager	7.2	27.1	N.A.

TABLE 9

BASIC RETIREMENT FUNDS EXTERNAL BOND MANAGERS

QUARTER-END PORTFOLIO STATISTICS

MANAGER	QUARTER PORTFOLIO T/O	PORTFOLIO STATISTICS SUMMARY							DURATION	TERM TO MAT.
		# OF BONDS	BOND ALLOCATION	COUPON	CURRENT YIELD	YIELD TO MAT.	AVERAGE QUALITY			
Investment Advisers	17	22	95	9.9	8.9	8.2	AAA	3.3	4.2	
Lehman Management	28	54	97	11.0	9.7	8.3	AAA	4.0	8.5	
Miller Anderson	73	37	92	10.5	9.7	8.8	AA	4.4	11.4	
Morgan Stanley	62	20	100	9.4	9.0	8.7	AAA	5.4	19.9	
Peregrine Capital	10	54	98	11.2	10.3	9.4	AA	4.1	11.0	
Western Asset	58	48	95	9.8	9.8	9.3	AA	5.5	18.9	

SECTOR WEIGHTING PROFILE

MANAGER	QUALITY WEIGHTINGS							SECTOR WEIGHTINGS							
	AAA	AA	A	BAA	OTHER	GOVT	ACCY	ZERO	IND	UTIL	FIN	TRAN	MTGS	MISC	CASH
Investment Advisers	84	8	8	0	0	52	0	12	25	0	6	0	0	0	5
Lehman Management	89	4	6	1	0	65	2	0	9	0	6	0	15	0	3
Miller Anderson	74	0	5	5	16	45	0	0	2	0	8	0	37	0	8
Morgan Stanley	100	0	0	0	0	41	0	0	0	0	0	0	59	0	0
Peregrine Capital	48	18	32	0	2	0	0	0	9	0	31	0	40	17	2
Western Asset	76	4	5	14	1	7	9	3	12	9	2	1	52	0	5

MINNESOTA STATE BOARD OF INVESTMENT

POST RETIREMENT INVESTMENT FUND

QUARTERLY INVESTMENT REVIEW

MARCH 31, 1986

MINNESOTA STATE BOARD OF INVESTMENT

POST RETIREMENT INVESTMENT FUND

FIRST QUARTER 1986

Summary

ASSETS

The assets of the Post Retirement Fund rose 11.9% in market value during the fourth quarter. The rapid growth was due almost entirely to strong capital markets' returns. Net contributions for the quarter totalled \$1.4 million. End-of-period market values for the Post Retirement Investment Fund's assets for the latest quarter and last five calendar years are shown below.

<u>Calendar Year</u>	<u>Market Value (millions)</u>	<u>Percent Change from Previous Period</u>
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

ASSET MIX

The asset mix of the Post Retirement Investment Fund remained essentially unchanged during the quarter. Cash equivalents remained slightly above target as the low level of interest rates have made additional commitments to bonds relatively unattractive.

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		
	<u>3/31/85</u>	<u>12/31/85</u>	<u>3/31/86</u>
Common Stocks	30.4%	20.5%	19.7%
Bonds	66.0	70.2	70.6
Cash Equivalents	<u>3.6</u>	<u>9.3</u>	<u>9.7</u>
	100.0%	100.0%	100.0%

EQUITY PERFORMANCE

The total return on the Post Retirement Investment Fund's equity portfolio was 10.5% during the first quarter. This return fell below that of both the Wilshire 5000 and the SBI external equity manager pool. The equity portfolio also underperformed the Wilshire 5000 and external equity manager pool over the most recent four quarters.

The sector emphasis in the Post Retirement Fund's equity portfolio changed significantly during the first quarter. The Fund's equity manager increased the portfolio weightings of the Capital Goods, Financial, and Technology sectors and cut back positions in the Energy, Transportation, and Utilities sectors.

Equity portfolio performance for the latest quarter and year are presented on the following page.

	<u>First Quarter 1986</u>	<u>Year Ending 3/31/86</u>
Equity Portfolio	10.5%	29.3%
Wilshire 5000	14.4	37.5

DEDICATED BOND PORTFOLIO

No significant changes took place in the dedicated bond portfolio during the fourth quarter. The portfolio remained invested in high quality issues. Treasury and Agency issues composed the vast majority of the portfolio. Relevant quarter-end portfolio statistics are shown on the following page.

TABLE 10

POST RETIREMENT INVESTMENT FUND

DEDICATED BOND PORTFOLIO STATISTICS

March 31, 1986

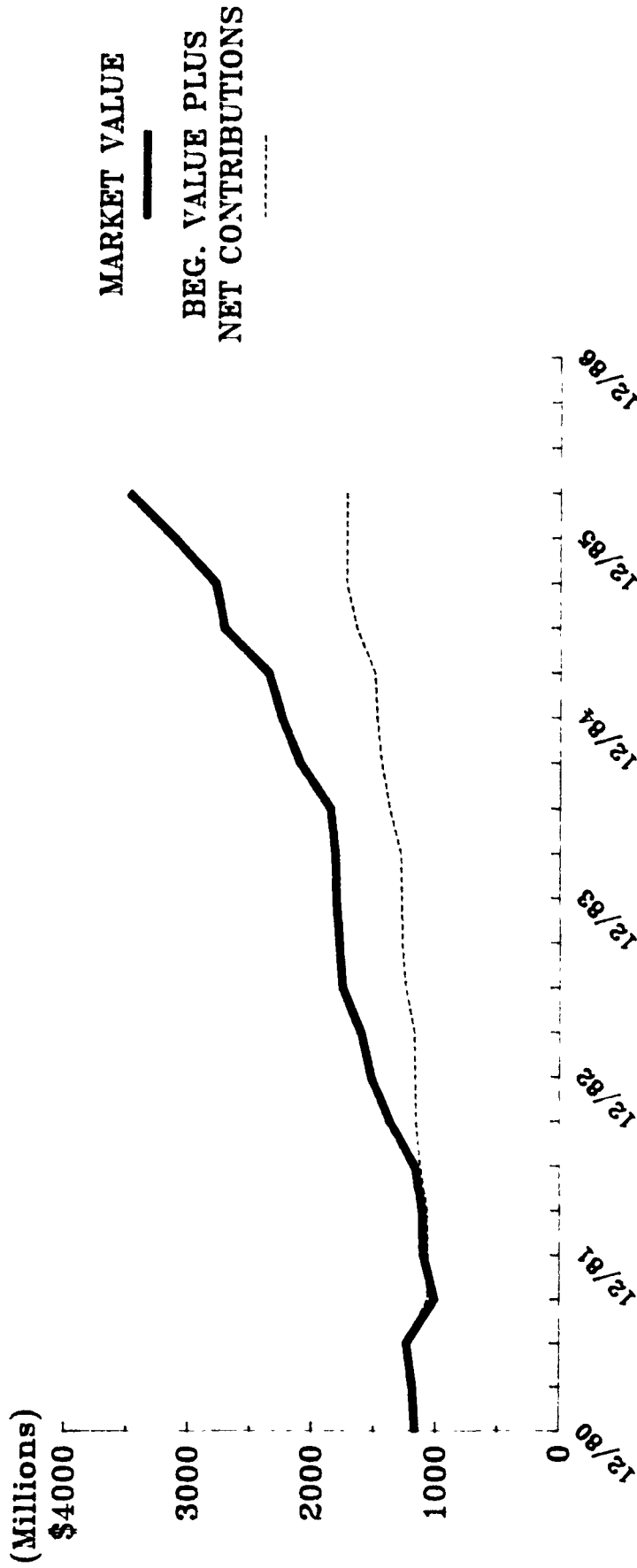
Value at Market	\$2,275,358,601
Value at Par	\$2,008,759,296
Average Coupon	10.55%
Current Yield	8.88%
Yield to Maturity	8.03%
Time to Maturity	13.94 Years
Average Duration	7.41 Years
Average Quality Rating	AAA
Number of Issues	212

SECTOR WEIGHTINGS

Treasury	65.5%
Federal Agency	9.0
Industrial	8.5
Utilities	6.6
Finance	5.0
Transportation	1.1
Mortgages	0.0
Miscellaneous	<u>4.3</u>
	100.0%

FIGURE 6

POST RETIREMENT INVESTMENT FUND ASSET GROWTH



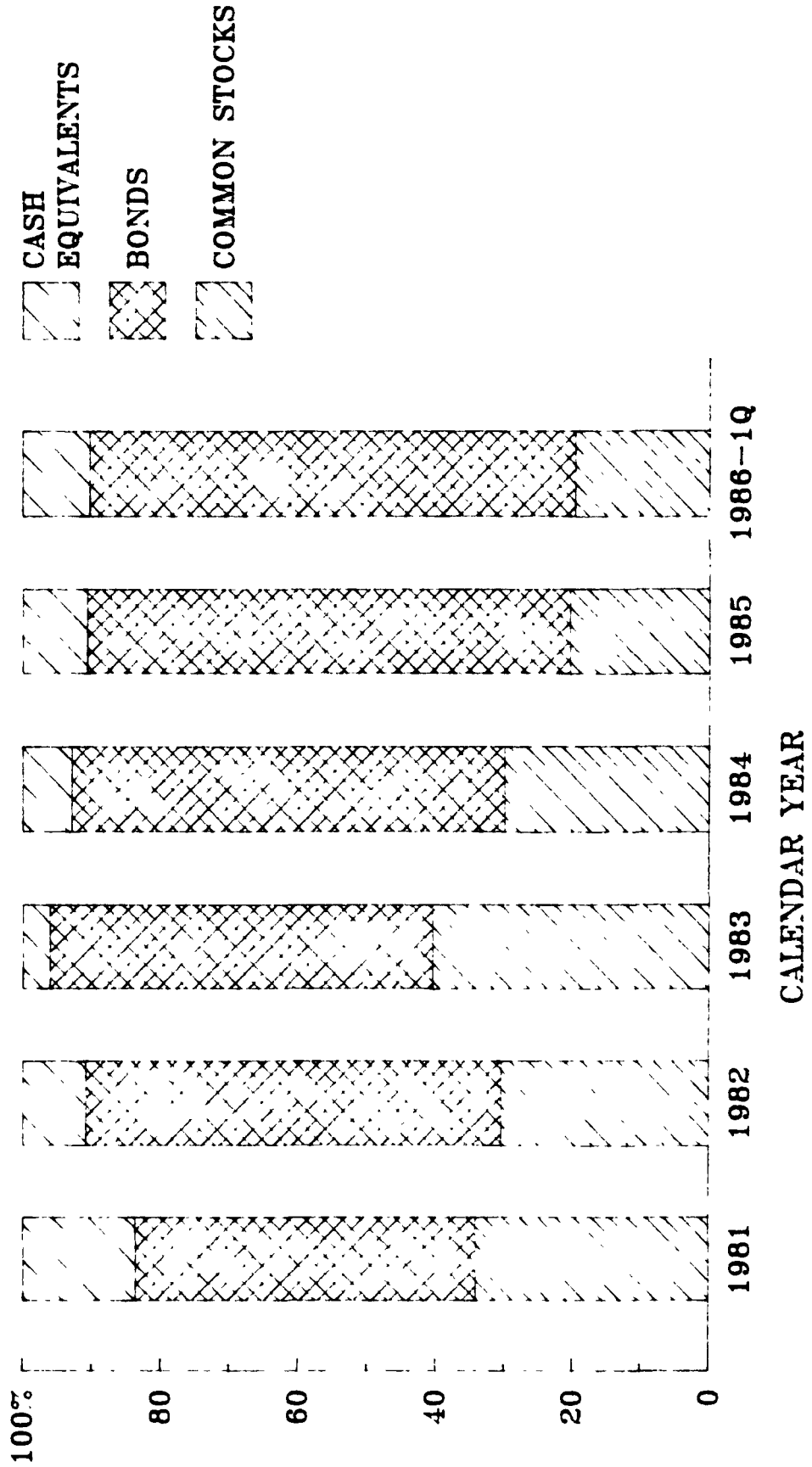
PERIOD ENDING

	12/80	12/81	12/82	12/83	12/84	12/85	3/86
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	1.4
INVESTMENT RETURN	125.9	37.1	319.4	170.8	241.8	622.7	367.6
ENDING VALUE	1,161.6	1,100.9	1,522.9	1,802.9	2,245.7	3,107.3	3,476.3

(MILLIONS OF DOLLARS)

FIGURE 7

POST RETIREMENT INVESTMENT FUND HISTORICAL ASSET MIX



PERCENT OF MARKET VALUE
END OF PERIOD ALLOCATIONS

TABLE 11

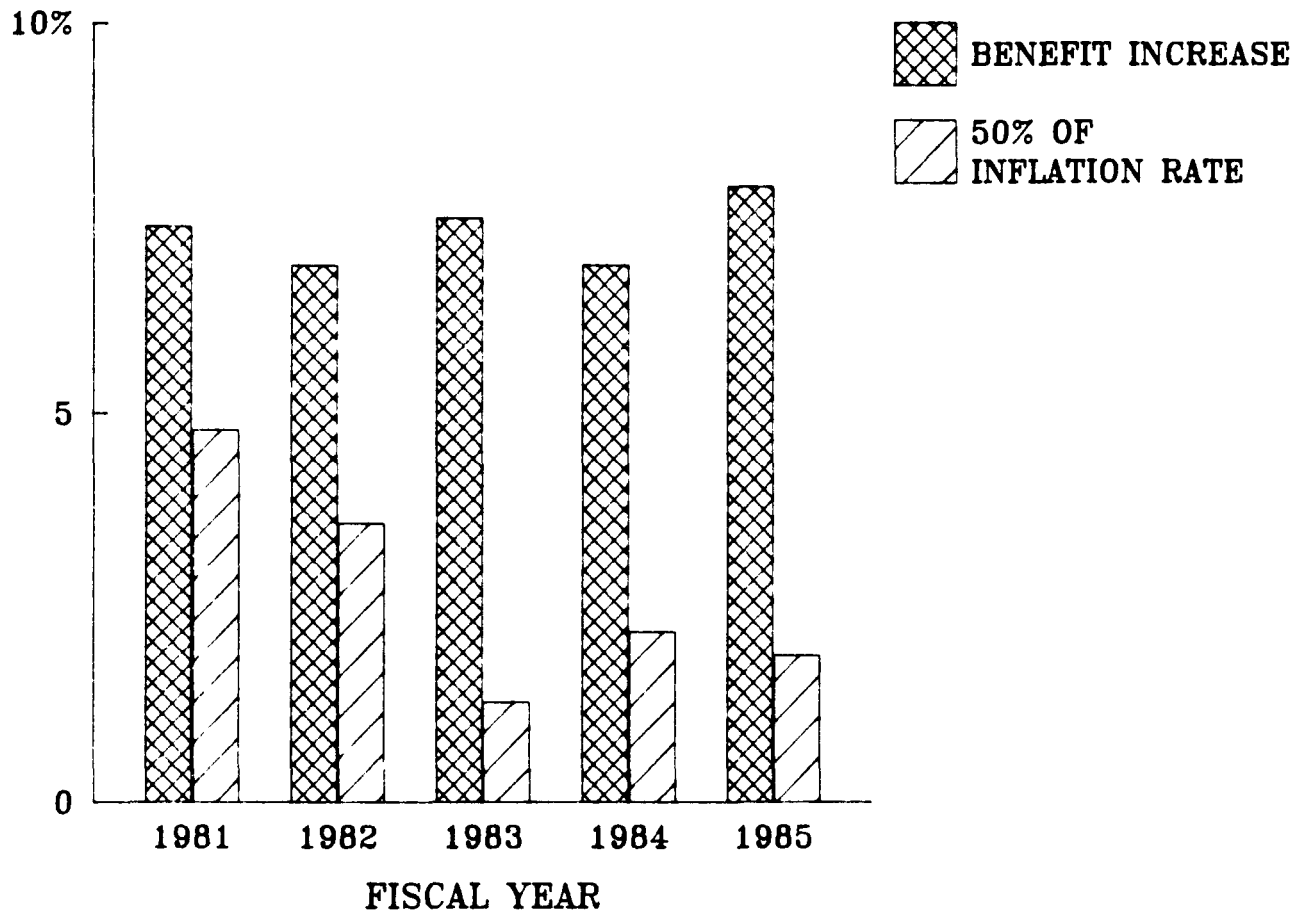
**POST RETIREMENT INVESTMENT FUND
ASSET MIX**

PERCENT OF MARKET VALUE
(End Of Period Allocations)

Calendar Year	Common Stocks		Bonds		Cash	
	\$Million	Percent	\$Million	Percent	\$Million	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

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

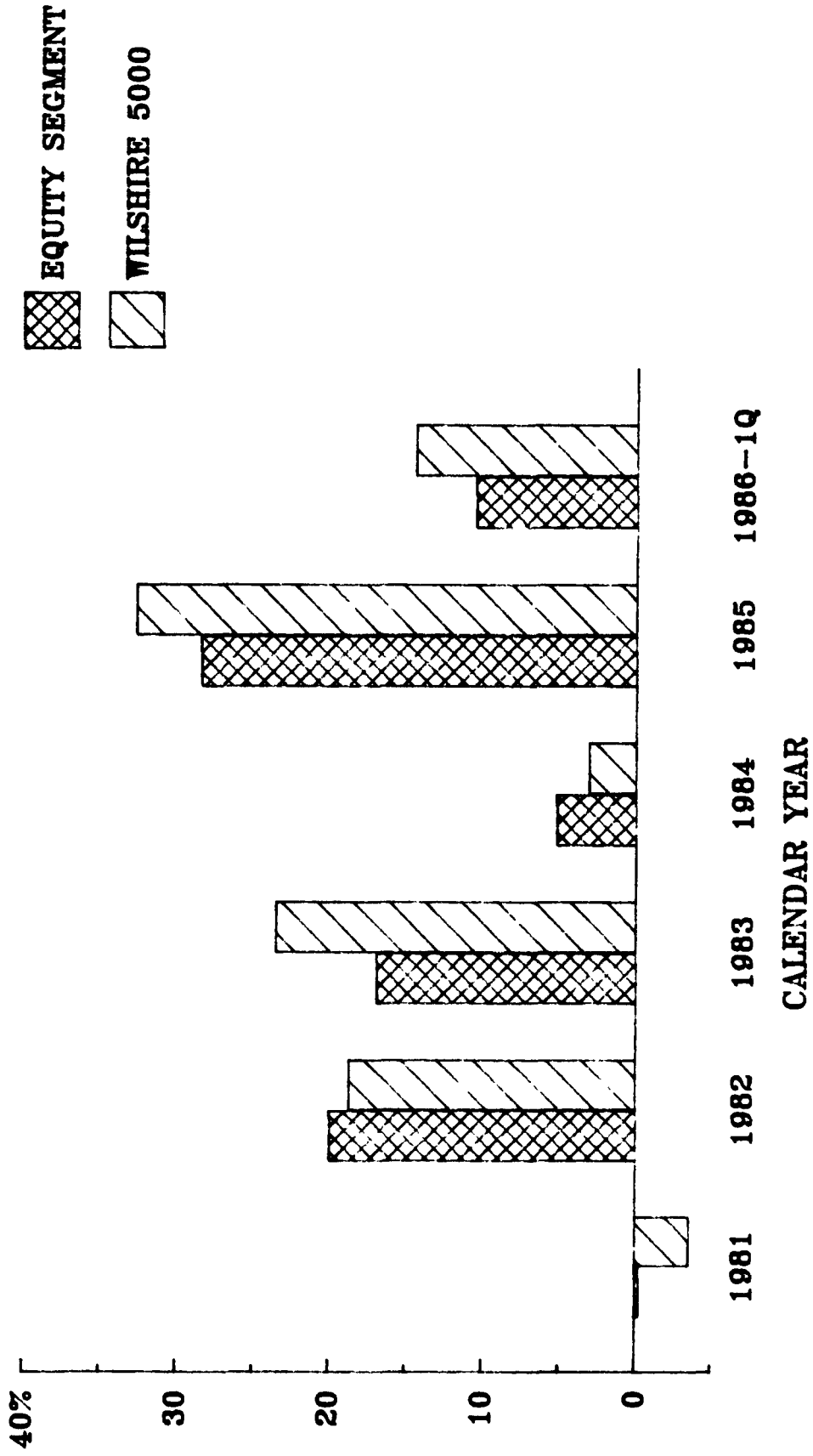


TABLE 12

POST RETIREMENT INVESTMENT FUND

EQUITY SEGMENT RETURNS

INVESTMENT RETURNS RELATIVE TO PERFORMANCE STANDARDS

	Total Returns	
	<u>Post Retirement Fund</u>	<u>Wilshire 5000</u>
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
1 Year Through 3/31/86	29.3	37.5
3 Years Annualized Through 3/31/86	17.5	20.1
5 Years Annualized Through 3/31/86	15.3	16.7

TABLE 13

POST RETIREMENT INVESTMENT FUND
EQUITY MANAGER DATA

MARCH 31, 1986

SECTORS	SECTOR WEIGHTINGS		WEIGHTING INTERNAL MANAGER	WEIGHTING WILSHIRE 5000	# OF STOCKS	EQUITY ALLOC.	MKT. VOLTY	DIVER.	YIELD	E/P	REL. RET.	P/B	5 YR EARN	MVAR	EVAR	SIZE	GROW	FINL
	WEIGHTING INTERNAL MANAGER	WEIGHTING WILSHIRE 5000																
Capital Goods	5.2%	4.8%																
Consumer Durables	3.8	4.7																
Consumer Nondurables	13.3	27.0																
Energy	17.1	8.0																
Financial	14.5	14.1																
Materials & Services	9.1	11.8																
Technology	25.6	13.4																
Transportation	2.2	3.3																
Utilities	9.1	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.	112	100%	1.09	0.91	0.22	-0.26	-0.85	-0.46	-0.09	0.23	0.04	0.13	0.25	0.27

* 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)**

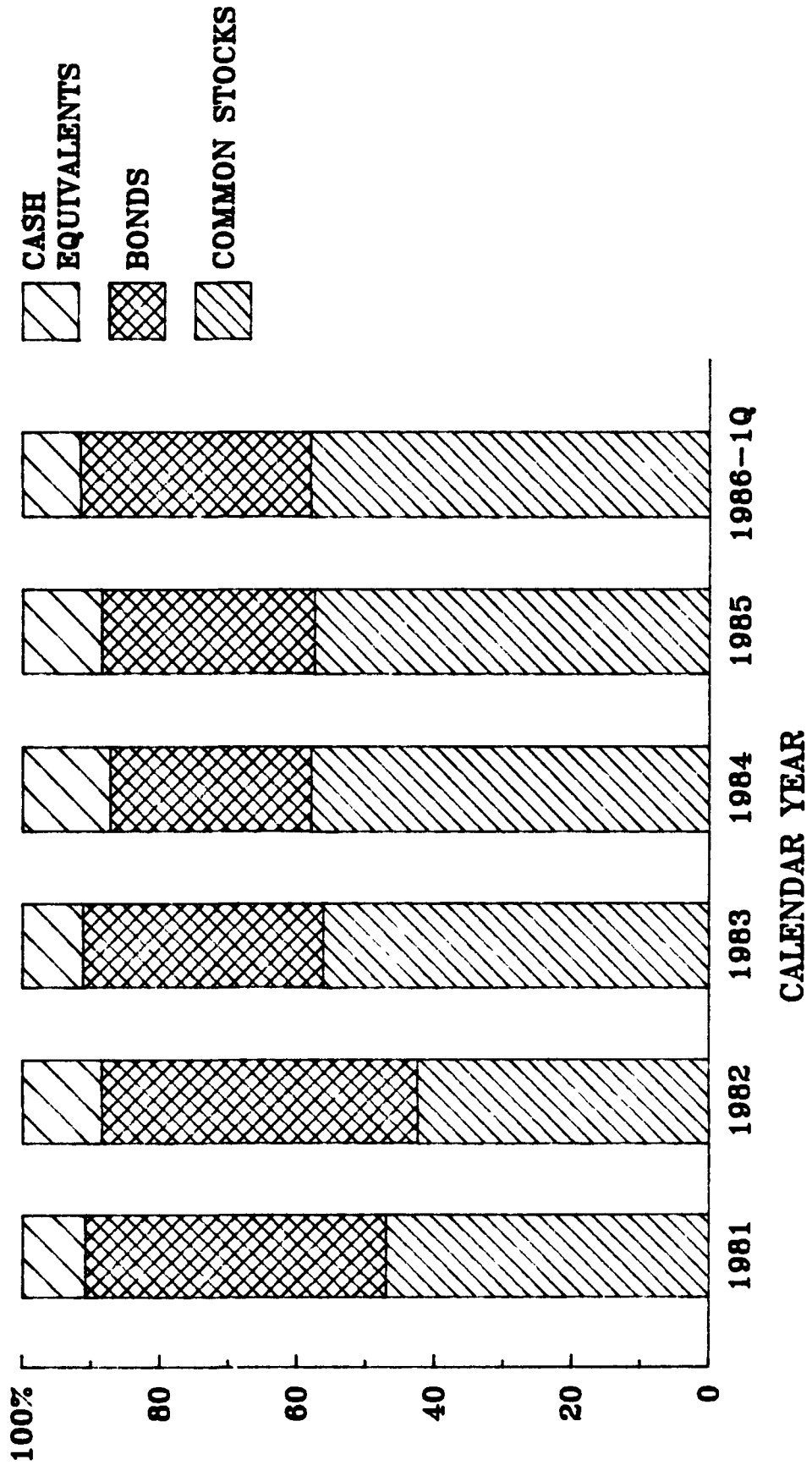
MINNESOTA VARIABLE ANNUITY FUND

QUARTERLY INVESTMENT REVIEW

MARCH 31, 1986

FIGURE 10

SUPPLEMENTAL INVESTMENT FUND (INCOME SHARE ACCOUNT) HISTORICAL ASSET MIX



PERCENT OF MARKET VALUE
END OF PERIOD ALLOCATIONS

TABLE 14

SUPPLEMENTAL INVESTMENT FUND
(Income Share Account)
ASSET MIX

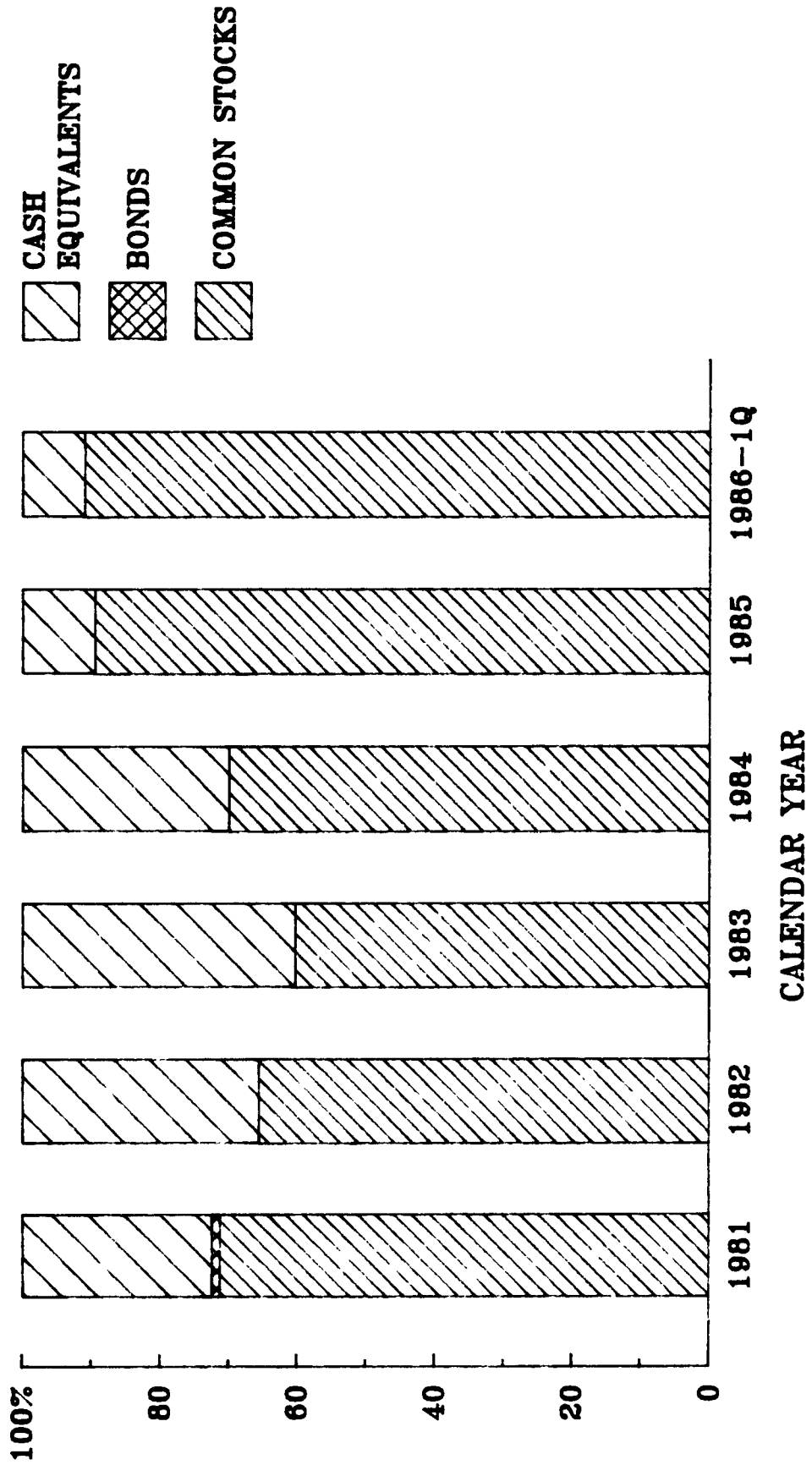
PERCENT OF MARKET VALUE
(End Of Period Allocations)

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

*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 15

SUPPLEMENTAL INVESTMENT FUND
(Growth Share Account)

ASSET MIX

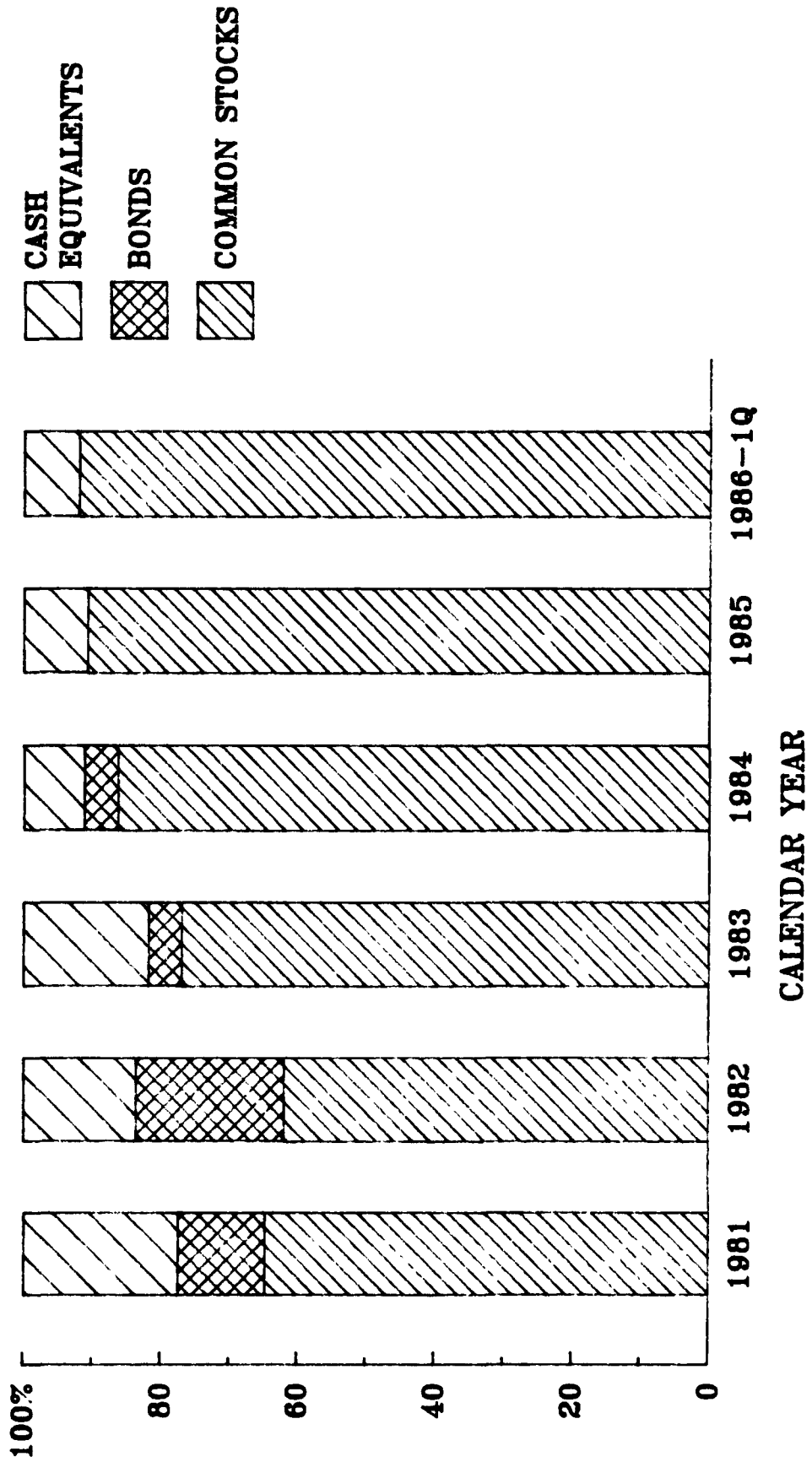
PERCENT OF MARKET VALUE
(End Of Period Allocations)

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

*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 16

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

*Includes cash held by external managers

TABLE 17

MINNESOTA STATE BOARD OF INVESTMENT
RETIREMENT FUNDS

INVESTMENT RETURNS RELATIVE TO PERFORMANCE STANDARDS

YEAR ENDING MARCH 31, 1986

	Total Fund Return	Stock/Bond Composite**	Common Stocks	Wilshire 5000	Bonds	ML Bond Index
SUPPLEMENTAL INVESTMENT FUND						
Income Share Account*	24.2%	33.8%	26.7%	37.5%	23.5%	29.7%
Growth Share Account*	29.2	36.0	30.6	37.5	---	29.7
VARIABLE ANNUITY FUND*	30.2	36.0	31.1	37.5	---	29.7

* Includes performance of both internal and external managers.

** Wilshire 5000/Merrill Lynch Master 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

MARCH 31, 1986

MINNESOTA STATE BOARD OF INVESTMENT

PERMANENT SCHOOL FUND

FIRST QUARTER 1986

Summary

ASSETS

The Permanent School Fund's assets rose 2.6% in market value in the fourth quarter. The asset growth was due entirely to market value appreciation, as net withdrawals of income from the Fund totalled \$ 10 million for the first quarter. End-of-period market values for the latest quarter and last five calendar years are presented below.

<u>Calendar Year</u>	<u>Market Value (Millions)</u>	<u>Percent Change From Previous Period</u>
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

ASSET MIX

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

In recent quarters, the Fund's common stock portfolio was completely liquidated. The proceeds from this liquidation have been held in cash equivalents. Given the sharp drop in long-term interest rates, staff has held off reinvesting the proceeds 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		
	<u>3/31/85</u>	<u>12/31/85</u>	<u>3/31/86</u>
Common Stocks	18.5%	0.0%	0.0%
Bonds	75.9	68.2	67.7
Cash Equivalents	<u>5.6</u>	<u>31.8</u>	<u>32.3</u>
	100.0%	100.0%	100.0%

BOND PORTFOLIO

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

TABLE 18

PERMANENT SCHOOL FUND BOND PORTFOLIO STATISTICS

March 31, 1986

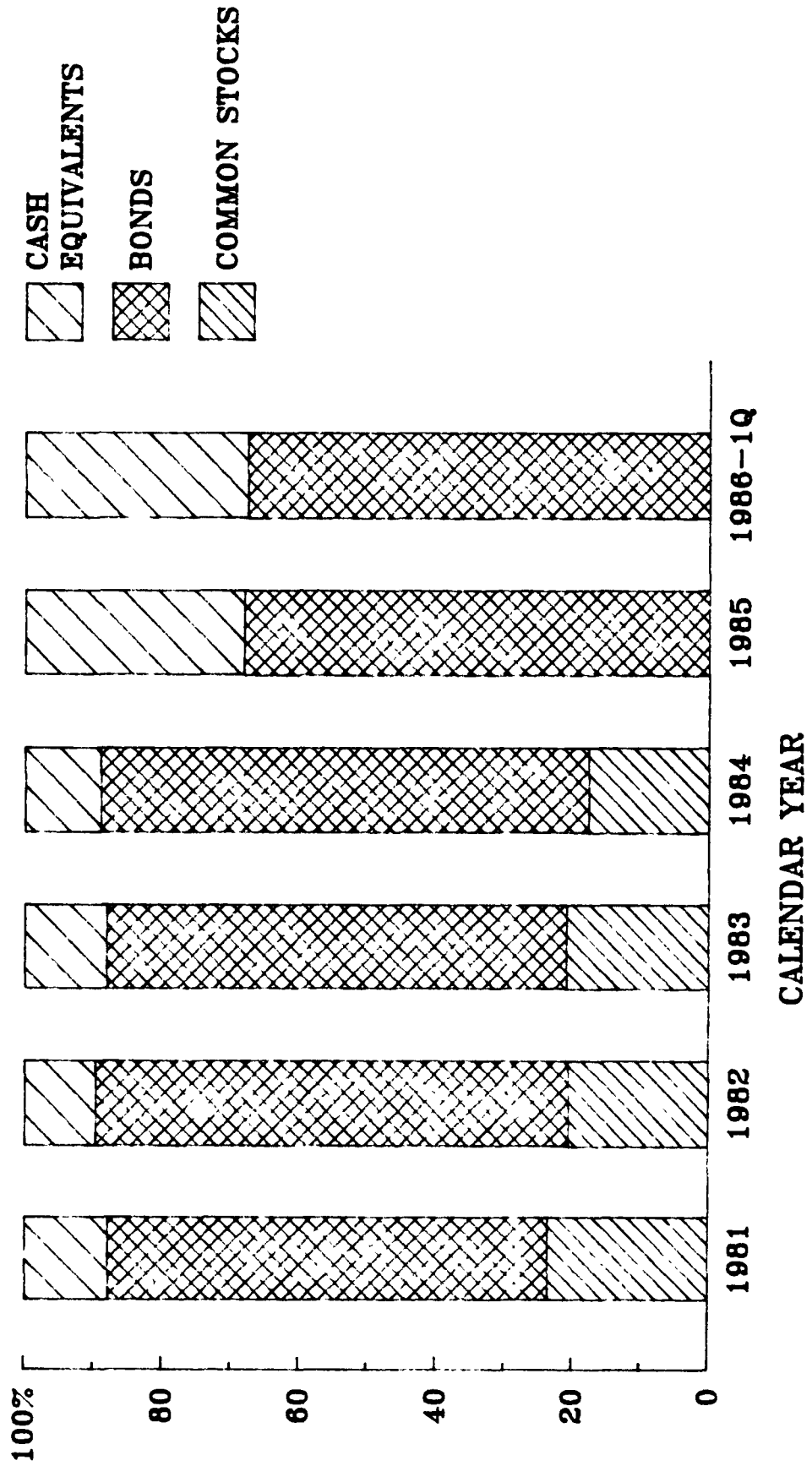
Value at Market	\$239,597,325
Value at Par	\$228,326,496
Average Coupon	10.15%
Current Yield	9.50%
Yield to Maturity	8.78%
Time to Maturity	12.06 Years
Average Duration	5.65 Years
Average Quality Rating	AAA
Number of Issues	115

SECTOR WEIGHTINGS

Treasury	14.6%
Federal Agency	23.8
Industrial	5.8
Utilities	9.0
Finance	4.3
Transportation	5.8
Mortgages	35.1
Miscellaneous	<u>1.6</u>
	100.0%

FIGURE 13

PERMANENT SCHOOL FUND HISTORICAL ASSET MIX



PERCENT OF MARKET VALUE
END OF PERIOD ALLOCATIONS

TABLE 19

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

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
(R ²) | - 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 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	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
FRED ALGER	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
	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
ALLIANCE CAPITAL	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
	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	0.54	-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	0.03	0.48	-0.72	-0.53	-0.04	

MANAGER NAME	QTR. PORT. T/O	EQUITY ALLOC.	R2	EQUITY BETA	MVAR	EVAR	REL RET	P/B	5 YR EARN	SIZE	GROW	E/P	YIELD	FINL	
BEUTEL GOOLMAN	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	
	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	
	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	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	
	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	
	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	
	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	
	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	
	12	98	0.79	1.16	0.16	-0.19	0.27	-0.41	-0.85	1.34	0.01	0.01	-0.42	0.37	
	15	95	0.74	1.08	0.21	-0.08	0.22	-0.42	-0.61	1.18	0.03	0.03	-0.72	0.24	
	6	99	0.75	1.14	0.35	0.03	-0.17	-0.50	-0.75	1.16	0.04	0.04	-0.91	0.25	
	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	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
		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
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	
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	
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	
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	
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		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	
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	
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	
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	
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	
FORSTMANN-LEFF		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
		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
	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	
	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	
	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	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	
	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	
	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	
	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	
	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	
	46	83	0.72	1.14	0.10	-0.12	-0.09	-0.09	0.09	0.03	0.19	-0.45	-0.21	-0.12	
	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	35	97	0.88	1.26	0.79	0.34	0.26	0.06	0.19	-0.16	0.21	-0.71	-0.48	0.09
		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
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	

MANAGER NAME	QTR. PORT. T/O	EQUITY ALLOC.	R2	EQUITY BETA	MVAR	EVAR	REL RET	P/B	5 YR EARN	SIZE	GROW	E/P	YIELD	FINL	
IDS ADVISORY	3/31/86	16	92	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	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	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	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	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	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	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	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	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	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	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	1.30	-0.92	-0.08	-0.26	0.17	-0.01	0.16	0.48	-0.51	-0.37	-0.11	
	INVESTMENT ADVISERS	3/31/86	13	84	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	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	1.15	0.45	0.10	-0.40	-0.12	0.07	-0.02	0.28	0.02	-0.25	0.03	
6/30/85		10	90	1.17	0.60	0.18	-0.33	-0.26	0.14	-0.17	0.12	0.18	-0.19	-0.08	
3/31/85		28	89	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	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	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	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	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	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	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	1.08	0.28	-0.16	-0.12	0.01	-0.13	-0.10	0.17	-0.38	-0.09	-0.01	
LIEBER & COMPANY		3/31/86	14	99	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	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	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	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	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	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	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	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	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	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	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	1.26	0.90	-0.11	0.43	-0.11	-0.00	1.94	0.18	0.04	-0.27	-0.20	
	PEREGRINE CAPITAL	3/31/86	47	84	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	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	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	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	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	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	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	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	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	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	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	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	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-2

EXTERNAL EQUITY MANAGERS
SECTOR WEIGHTING HISTORICAL PROFILE

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	EQUITY SECTOR WEIGHTS										UTIL
			CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT & SERV	TECH	TRAN	UTIL		
AVG. EXT. MANAGERS	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	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	---	---		
ALLIANCE CAPITAL	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	---		

EQUITY SECTOR WEIGHTS

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT & SERV	TECH	TRAN	UTIL	
BEUTEL GOODMAN	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	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	---	---	
FORSTWANN-LEFF		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	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	

EQUITY SECTOR WEIGHTS

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT SERV	TECH	TRAN	UTIL
INVESTMENT ADVISERS	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
IDS ADVISORY	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	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	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	---	---	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	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	3/31/86	---	4.8	4.7	27.0	8.0	14.1	11.8	13.4	3.3
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-3

EXTERNAL EQUITY MANAGERS

HISTORICAL PERFORMANCE SUMMARY

	1Q 1986	4Q 1985	3Q 1985	2Q 1985	1Q 1985	4Q 1984	3Q 1984	2Q 1984	1Q 1984	4Q 1983	3Q 1983	2Q 1983
FRED ALGER												
Equity	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	1.8	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-4

**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.	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
INVESTMENT ADV.	9/30/84	54	29	88	10.1	11.1	12.3	AAA	4.3	8.8
	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
LEHMAN MGMT.	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
	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
MILLER ANDERSON	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
	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
MORGAN STANLEY	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
	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
MORGAN STANLEY	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

MANAGER NAME	DATE	QUARTER PORTFOLIO T/O	# OF BONDS	BOND ALLOCATION	COUPON	CURRENT YIELD	YIELD TO MAT.	AVERAGE QUALITY	DURATION	TERM TO MAT.	
NORWEST BANK	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	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-5

**EXTERNAL FIXED INCOME MANAGERS
SECTOR WEIGHTING HISTORICAL PROFILE**

MANAGER NAME	TOTAL PORTFOLIO MARKET VALUE	DATE	QUALITY WEIGHTINGS					SECTOR WEIGHTINGS									
			AAA	AA	A	BAA	OTHER	GOVT	AGCY	ZERO	IND	UTIL	FIN	TRAN	MTGS	MISC	CASH
AVG. EXT. MGRS.	---	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
INVESTMENT ADV.	---	9/30/84	79	12	7	2	0	30	10	7	3	8	9	1	19	1	12
	38,938,391	3/31/86	84	8	8	0	0	52	0	12	25	0	6	0	0	0	5
	36,766,845	12/31/85	96	4	0	0	0	68	0	12	8	0	7	0	0	0	5
	34,573,707	9/30/85	96	4	0	0	0	70	0	13	9	0	7	0	0	0	1
	33,794,148	6/30/85	96	4	0	0	0	62	0	23	10	0	4	0	0	0	1
	30,942,776	3/31/85	85	15	0	0	0	53	0	18	11	13	4	0	0	0	1
LEHMAN MGMT.	30,397,636	12/31/84	74	26	0	0	0	52	0	18	0	25	4	0	0	0	1
	27,932,974	9/30/84	72	28	0	0	0	59	0	10	0	31	0	0	0	0	0
	220,998,995	3/31/86	89	4	6	1	0	65	2	0	9	0	6	0	15	0	3
	207,462,430	12/31/85	89	5	6	0	0	51	10	0	7	2	7	0	12	0	11
	194,774,253	9/30/85	87	6	7	0	0	54	12	0	9	2	7	0	11	0	5
	190,808,742	6/30/85	91	5	4	0	0	64	8	0	5	2	4	0	9	0	8
MILLER ANDERSON	177,383,853	3/31/85	95	3	2	0	0	65	13	0	2	2	0	3	0	15	
	173,831,628	12/31/84	98	0	2	0	0	64	13	0	3	0	0	0	5	0	15
	162,737,117	9/30/84	96	1	2	0	0	60	13	5	4	0	0	0	0	0	18
	217,291,031	3/31/86	74	0	5	5	16	45	0	0	2	0	8	0	37	0	8
	208,552,908	12/31/85	71	0	6	4	19	45	0	0	2	0	8	0	44	0	1
	191,849,284	9/30/85	68	1	9	4	18	24	0	0	5	0	9	0	60	0	2
MORGAN STANLEY	183,857,869	6/30/85	69	3	8	4	16	19	0	2	5	0	12	0	57	0	5
	173,961,916	3/31/85	54	13	11	2	20	2	4	7	0	27	0	52	0	8	
	169,696,156	12/31/84	55	17	14	5	9	0	7	5	0	36	0	51	0	1	
	159,574,376	9/30/84	81	12	5	2	0	0	0	0	2	0	17	0	52	0	29
	225,686,690	3/31/86	100	0	0	0	0	41	0	0	0	0	0	0	59	0	0
	208,381,895	12/31/85	100	0	0	0	0	42	0	0	0	0	0	0	58	0	0
MORGAN STANLEY	193,513,567	9/30/85	100	0	0	0	0	41	0	0	0	0	0	59	0	0	
	188,907,479	6/30/85	100	0	0	0	0	49	0	0	0	0	0	51	0	0	
	173,106,782	3/31/85	100	0	0	0	0	38	9	0	0	0	0	38	0	15	
	170,547,941	12/31/84	100	0	0	0	0	74	18	27	0	0	0	8	0	0	
	159,109,110	9/30/84	100	0	0	0	0	45	27	27	0	0	0	0	0	0	1

MANAGER NAME	TOTAL PORTFOLIO MARKET	DATE	VALUE	QUALITY WEIGHTINGS					SECTOR WEIGHTINGS									
				AAA	AA	A	BAA	OTHER	GOVT	AGCY	ZERO	IND	UTIL	FIN	TRAN	MTGS	MISC	CASH
NORWEST BANK	104,370,666	3/31/86	48	18	32	0	2	2	0	0	0	9	0	31	0	40	17	2
	100,139,659	12/31/85	55	13	29	0	3	3	0	0	0	5	0	29	0	48	16	2
	95,186,493	9/30/85	61	12	25	0	2	2	0	0	0	4	2	31	0	52	7	4
	92,417,709	6/30/85	56	15	20	7	2	2	0	0	0	4	5	33	0	49	7	2
	86,259,088	3/31/85	55	23	19	3	0	0	3	0	0	0	5	38	0	47	7	0
	84,387,890	12/31/84	65	13	18	4	0	0	6	7	0	0	5	30	0	48	0	4
79,887,650	9/30/84	58	14	24	4	0	0	12	7	0	10	0	31	0	33	0	7	
WESTERN ASSET	235,514,306	3/31/86	76	4	5	14	1	1	7	9	3	12	9	2	1	52	0	5
	220,363,561	12/31/85	73	5	8	7	7	5	8	8	1	15	9	2	1	48	0	11
	201,666,058	9/30/85	74	6	5	4	11	11	3	0	0	14	10	0	1	49	0	12
	197,929,627	6/30/85	73	9	4	8	6	10	0	0	0	8	15	0	1	51	0	15
	181,426,695	3/31/85	76	9	4	7	4	4	4	11	0	8	16	0	1	47	0	13
	177,328,832	12/31/84	69	15	7	5	4	4	3	11	0	6	19	2	2	33	4	20
165,957,816	9/30/84	68	15	9	5	3	3	4	16	0	3	18	4	5	26	4	20	

TABLE A-6

EXTERNAL FIXED INCOME MANAGERS
HISTORICAL PERFORMANCE SUMMARY

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

Tab B

PORTFOLIO STATISTICS

	PAGE
I. Composition of State Investment Portfolios 3/31/86	1
II. Cash Flow Available for Investment 1/1/86-3/31/86	3
III. Monthly Transactions and Asset Summary - Retirement Funds	4

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
COMPOSITION OF STATE INVESTMENT PORTFOLIO'S BY TYPE OF INVESTMENT
MARKET VALUE MARCH 31, 1986

	CASH AND SHORT TERM SECURITIES	BONDS		STOCKS		ALTERNATIVE ASSETS	TOTAL
		INTERNAL	EXTERNAL	INTERNAL	EXTERNAL		
BASIC RETIREMENT FUNDS:							
TEACHERS RETIREMENT FUND	\$ 12,839 .70%	\$ -0- 0.00%	\$443,872 24.15%	\$ -0- 0.00%	\$1,213,283 66.02%	\$167,855 9.13%	\$1,837,849 100%
PUBLIC EMPLOYEES RETIRE. FUND	777 .06%	-0- 0.00%	307,606 24.41%	-0- 0.00%	836,990 66.43%	114,690 9.10%	1,260,063 100%
STATE EMPLOYEES RETIRE. FUND	16,676 1.78%	-0- 0.00%	223,961 23.89%	-0- 0.00%	612,175 65.30%	84,621 9.03%	937,433 100%
PUBLIC EMP. POLICE & FIRE FUND	10,064 2.83%	-0- 0.00%	87,120 24.52%	-0- 0.00%	226,934 63.86%	31,237 8.79%	355,355 100%
HIGHWAY PATROL RETIRE. FUND	2,535 3.76%	-0- 0.00%	15,854 23.48%	-0- 0.00%	43,167 63.93%	5,962 8.83%	67,518 100%
JUDGES RETIREMENT FUND	28 .61%	-0- 0.00%	1,108 24.25%	-0- 0.00%	3,017 66.02%	417 9.12%	4,570 100%
POST RETIREMENT FUND	340,064 9.78%	2,449,564 70.47%	-0- 0.00%	686,329 19.75%	-0- 0.00%	-0- 0.00%	3,475,957 100%
MINNESOTA SUPPLEMENTAL FUNDS:							
INCOME SHARE ACCOUNT	8,943 5.02%	59,787 33.54%	-0- 0.00%	97,342 54.60%	12,193 6.84%	-0- 0.00%	178,265 100%
GROWTH SHARE ACCOUNT	2,353 2.86%	-0-	-0- 0.00%	43,055 52.31%	36,893 44.83%	-0- 0.00%	82,301 100%
FIXED RETURN ACCOUNT	64,847 85.95%	10,604 14.05%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	75,451 100%
BOND ACCOUNT	688 7.63%	8,327 92.37%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	9,015 100%
MINNESOTA VARIABLE ANNUITY	2,254 1.55%	-0-	-0- 0.00%	66,692 45.98%	76,108 52.47%	-0- 0.00%	145,054 100%
TOTAL RETIREMENT FUNDS	\$ 462,068 5.48%	\$2,528,282 30.00%	\$1,079,521 12.81%	\$893,418 10.60%	\$3,060,760 36.31%	\$404,782 4.80%	\$8,428,831 100%

PERMANENT SCHOOL FUND	115,965 32.26%	243,522 67.74%	-0- 0.00%	-0- 0.00%	-0- 0.00%	359,487 100%
TREASURERS CASH	115,944 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	115,944 100%
TRANSPORTATION FUNDS	470,559 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	470,559 100%
STATE BUILDING FUNDS	120,409 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	120,409 100%
HOUSING FINANCE AGENCY	173,580 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	173,580 100%
MINNESOTA DEBT SERVICE FUND	213,167 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	213,167 100%
MISCELLANEOUS ACCOUNTS	230,379 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	230,379 100%
TACONITE AREA ENVIR. PROTECTION	13,480 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	13,480 100%
N.E. MINNESOTA PROTECTION	40,788 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	40,788 100%
GRAND TOTAL	\$1,956,339 19.24%	\$2,771,804 27.26%	\$1,079,521 10.62%	\$893,418 8.79%	\$3,060,760 30.11%	\$404,782 3.98%
						\$10,166,624 100%

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

For period of
January 1, 1986 - March 31, 1986

Teachers Retirement Fund	-0-
Public Employees Retirement Fund	\$ (2,500,000)
State Employees Retirement Fund	10,000,000
Public Employees Police & Fire	3,000,000
Highway Patrol Retirement Fund	(2,000,000)
Judges Retirement Fund	-0-
Post Retirement Fund	1,578,373
Supplemental Retirement Fund - Income	2,781,074
Supplemental Retirement Fund - Growth	(207,276)
Supplemental Retirement Fund - Fixed	(329,408)
Supplemental Retirement Fund - Bond	201,461
Minnesota Variable Annuity Fund	\$ <u>(171,685)</u>
 Total Retirement Funds Net Cash Flow	 \$ 12,352,539
 Permanent School Fund	 (9,607,120)
 Total Net Cash Flow	 \$ <u>2,745,419</u>

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
TRANSACTION AND ASSET SUMMARY
RETIREMENT FUNDS

	Net Transactions			Asset Summary (at market)					Total (000,000) (at market)
	Bonds (000,000)	Stocks (000,000)	Total	Cash Flow	Short-term % of Fund	Bonds % of Fund	Equity % of Fund		
March 1984	5	19	24	11	5.7	39.0	55.3	51.9	
April	(2)	24	22	36	6.1	36.9	57.0	51.45	
May	4	43	47	40	6.2	37.5	56.3	49.93	
June	5	(38)	(33)	119	8.7	36.5	54.8	51.87	
July	151	29	180	34	5.8	40.5	53.7	52.47	
August	(6)	(16)	(22)	24	6.2	38.4	55.4	55.98	
September	16	(6)	10	14	6.3	39.0	54.7	56.52	
October	19	32	51	31	5.8	39.7	54.5	57.48	
November	(7)	(19)	(26)	18	6.5	40.1	53.4	57.60	
December	91	(71)	20	12	6.3	41.2	52.5	58.64	
January 1985	(5)	131	126	20	4.3	42.0	53.7	61.88	
February	30	(5)	25	27	4.3	41.2	54.5	61.77	
March	(1)	5	4	26	4.6	41.7	53.7	62.13	
April	(79)	17	(62)	23	5.9	40.7	53.4	62.60	
May	(13)	(41)	(54)	32	6.9	40.4	52.7	66.02	
June	284	118	402	408	6.8	41.2	52.0	68.01	
July	84	68	153	40	5.2	41.8	53.0	68.12	
August	79	4	83	30	4.3	43.3	52.4	68.67	
September	32	(10)	22	31	4.6	44.6	50.8	67.51	
October	50	52	102	26	3.3	44.8	51.9	69.86	
November	(29)	(22)	(51)	41	4.4	43.1	52.5	72.99	
December	(3)	(76)	(79)	16	5.5	43.1	51.4	75.83	
January 1986	(7)	13	6	13	5.5	42.9	51.6	76.18	
February	36	(8)	28	34	5.3	42.9	51.8	80.49	
March	1	(3)	(2)	27	5.4	42.9	51.7	84.29	

Tab C

MEMBERS OF THE BOARD:
GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H. CARLSON
STATE TREASURER ROBERT W. MATTSON
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

May 13, 1986

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

FROM: Administrative and Asset Allocation Committees

SUBJECT: Committee Reports

The Administration and Asset Allocation Committees met jointly. The Committees first reviewed the status of the Board's consultant search. Staff described the interviews conducted with the three consultant finalists.

The Committees also reviewed the alternative asset allocation target in the Basic Funds. Staff and the Alternative Asset Committee have found it difficult of late to identify quality limited partnerships in the resource area. Nevertheless, the Administrative and Asset Allocation Committees recommend that the Board's existing target allocation to resource funds be maintained.

Finally, the Committees spent considerable time discussing the staff position paper relating to the Post Retirement Fund and its benefit increase mechanism. The Committees believe that it is not appropriate for the IAC and SBI to recommend specific benefit increase policies. These policies are under the administrative control of the retirement systems and the legislature. 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. A copy of the staff position paper follows this report.

POST RETIREMENT INVESTMENT FUND
BENEFIT INCREASE ISSUES

Staff Position Paper
May, 1986

EXECUTIVE SUMMARY

The assets of retired public employees, covered by the seven statewide retirement plans, are invested in the Post Retirement Investment Fund (PRIF). The retirees' contributed assets, plus the PRIF's investment earnings, finance lifetime annuities for eligible retirees. If the PRIF's investments should earn more than the 5% actuarially required return, the excess earnings are used to finance permanent benefit increases.

Minnesota's statewide pension plans completely segregate the retirement assets of active and retired employees. This structure has the advantage of permitting a separate focus on the needs and objectives of these two employee groups. It has facilitated the maintenance of the PRIF's fully-funded financial condition. Under the PRIF's conservative structure, promised benefits to retirees are highly secure.

The PRIF's benefit increase formula has granted retirees sizable benefit increases in recent years, particularly when compared to the inflation rate. A number of factors have been responsible for these large increases including high interest rates, rising stock prices, low inflation, and rapid growth in PRIF membership.

It is unlikely that the large benefit increases relative to inflation can be sustained indefinitely. In fact, many of the factors that have led to these large increases could reverse themselves in the future, leading to benefit increases that fall well behind the inflation rate. This situation occurred in the late 1970's. The lagged relationship between benefit increases

and inflation may be an inherent feature of the PRIF's benefit increase formula.

A number of major issues concerning the PRIF confront policymakers. These issues include benefit adequacy, the State's role in protecting benefits against inflation, realistic PRIF benefit increase expectations, the lagged relationship between benefit increases and inflation under the current formula, and, in general, the desirability of the existing benefit increase mechanism.

FUND DESCRIPTION

The Post Retirement Investment Fund (PRIF) contains the pension assets of retired public employees covered by the seven statewide retirement plans. Fully vested public employees are entitled to life-time annuities, with monthly benefits based on the employees' "high-five" average salaries and years of service. Upon the employees' retirements, dollar amounts sufficient to fund their promised benefits (i.e., the present value of their annuities) are transferred from the Basic Retirement Funds to the PRIF.

These transferred sums remain invested in the PRIF while they are gradually paid out to the retirees. For purposes of funding the retirees' annuities, it is assumed that the PRIF's invested assets will earn at least 5% per year. Thus, the amounts transferred from the Basic Retirement Funds are less than the actual amounts expected to be paid in the future to retirees. If the PRIF's investment returns satisfy the 5% actuarial assumption, then the PRIF will maintain a value sufficient to finance promised benefits.

PRIF investment earnings counted toward meeting the 5% target return include interest and dividend income and realized capital gains (or losses). Unrealized capital gains (or losses) are not defined as part of the PRIF's earnings for benefit financing purposes. The effect of this provision is to make the financing of retiree benefits (and particularly benefit increases) largely insensitive to short-run fluctuations in the capital markets.

If the PRIF should generate more than a 5% return on its invested assets, the excess earnings are used to finance

permanent benefit increases to eligible retirees. Essentially, the excess earnings are used to purchase additional monthly annuities for eligible retirees, on top of the benefits already promised those individuals. The calculation of benefit increases will be explained in greater detail in a later section.

SEGREGATION OF ACTIVE AND RETIRED EMPLOYEE ASSETS

The structure of Minnesota's statewide pension plans is relatively unique. Most private and public pension plans commingle the retirement assets of all their participants, whether those people are currently employed or retired. Minnesota, on the other hand, completely separates active and retired employee assets. Active employee assets are invested in the Basic Retirement Funds, while retired employee assets are invested in the PRIF.

This segregated investment management structure is advantageous because it permits a separate focus on the needs and objectives of these two employee groups. The investment goals of retired employees differ considerably from those of active employees. Thus, their retirement assets should be managed under different policies.

The management of the active employees' assets follows a policy that is long-run in outlook and is willing to assume above-average risk. The vast majority of the active employees' assets are invested in common stocks and other equity securities. On the other hand, the management of the retired employees' assets follows an investment policy with a much shorter time horizon and with a very limited willingness to take on risk.

Most of the PRIF is invested in high quality fixed income securities designed to ensure adequate funding of promised benefits.

The segregation of employee retirement assets also permits pension policymakers to clearly identify the important underlying assumptions and financial condition of both the active and retired employees' pools of retirement assets. Such aspects as demographics, capital markets and inflation expectations, wage growth, funding status, and benefit levels are better examined separately from the perspective of the active and retired employees' pension funds.

PRIF ALWAYS FULLY FUNDED

One particular aspect of the PRIF's financial condition is made very clear by the segregation of employee retirement assets. That is, presuming only that the PRIF's investments earn the assumed 5% rate of return (a very conservative assumption), the Fund is by definition always fully funded.

As discussed earlier, when a public employee retires an amount sufficient to sustain his/her promised benefits is transferred to the PRIF. Because these benefits are based on predetermined factors (i.e., years of service and "high-five" salary), there is virtually no uncertainty as to the liabilities of the Fund. This situation is in contrast to the uncertainty surrounding expected active employee benefits. Wage rates and years of service are factors that can exhibit wide swings and can render actuarial assumptions meaningless in a matter of years.

Because the PRIF's liabilities are so certain and because of the low investment earnings assumption applied, one can confidently say that the PRIF is fully funded. This characteristic of the Fund separates it from the vast majority of other public pension funds, which in many cases exhibit very low funding ratios. Under the PRIF's current structure, promised benefits to retirees are at virtually no risk. No additional charges on employers are ever likely to be needed to support promised benefits.

CALCULATION OF BENEFIT INCREASES

As discussed above, when the PRIF earns more than its actuarially required 5% return in any given fiscal year, excess earnings are used to finance permanent benefit increases for eligible retirees. Avoiding insignificant details, the calculation of benefit increases is fairly simple. From the PRIF's fiscal year earnings are subtracted an amount sufficient to satisfy the actuarially required 5% return. These residual earnings are then adjusted for several minor charges. After these adjustments, the PRIF's residual earnings are stated as a percentage of the present value of the current eligible retiree liabilities. This percentage represents the benefit increase that the Fund must grant eligible retirees.

Retiree benefit increases are strictly a function of the PRIF's investment performance. Economic factors, particularly inflation, influence the level of benefit increases only as they affect the returns available to the PRIF. Retirees are totally dependent on the PRIF for benefit increases. In effect, once a

public employee retirees, the State sets aside a sum sufficient to finance promised benefits and then disclaims all further responsibility for the future purchasing power of those benefits.

HISTORY OF PRIF BENEFIT INCREASES

The current mechanism for calculating retiree benefit increases was adopted by the Legislature in 1980. Since that time, benefit increases granted retirees have been substantial, particularly relative to the inflation rate. Table 1 lists the PRIF benefit increases on a year-by-year basis.

TABLE 1

Post Retirement Investment Fund
Annual Benefit Increases

	Calendar Year					
	1980	1981	1982	1983	1984	1985
Benefit Increase	3.2	7.4	6.9	7.5	6.9	7.9
Inflation Rate	12.4	8.9	3.9	3.8	4.0	4.0

Benefit increases over the last six years have averaged 6.6% on a compounded annual basis. This figure compares favorably to the 6.1% annual rate of change in the Consumer Price Index over that same period.

A number of factors have contributed to the large inflation-adjusted benefit increases over the last six years. Most importantly has been the high level of interest rates. Interest rates surged in the late 1970's and early 1980's. These higher interest rates boosted the yields on the PRIF's bond portfolio and, hence, produced higher investment earnings.

The second factor was the SBI's decision to increase the proportion of the PRIF's portfolio invested in fixed income securities. This strategy was predicated on the historically high level of interest rates referred to above. The combination of higher interest rates and a larger bond portfolio had a dramatic impact on the PRIF's earnings. In 1980, interest income represented 4.9% of the fund's liabilities. By 1985, that figure was 7.4%. This increased interest income was passed directly on to retirees in the form of benefit increases.

The third factor was the unusually strong performance of the stock market. The market produced returns averaging 17.1% a year over the last six years. A large portion of the stock price advance was translated into realized capital gains as part of the PRIF's normal common stock portfolio management process. Because realized equity capital gains are counted as part of investment earnings, they too served to increase benefits.

The fourth factor was the dramatic decline in the rate of inflation during the last six years. In 1980, inflation was running at a 12.4% annual rate. In calendar year 1985, consumer prices grew only 4.0%. Thus, while PRIF investment income was growing, the rate of inflation was declining. The result has been in recent years benefit increases more than double the rate of inflation.

Finally, the last factor contributing to the recent large benefit increases has been the rapid growth in the PRIF's membership. The number of new retirees each year has grown from 2491 in 1980 to 3677 in 1985, a 50% increase. In particular, during the last two years a considerable part of this growth has

been due to early retirements under the "Rule of 85." Growth in new retirees enhances benefit increases due to the PRIF's eligibility requirements. Only those individuals who have been retired for at least 18 months are eligible to receive a benefit increase at the beginning of each calendar year. The excess earnings on the assets of ineligible retirees are credited to eligible retirees. In a sense, eligible retirees benefit from the "float" on the excess earnings of ineligible retirees. When the number of new retirees is increasing, this procedure benefits current retirees by artificially raising benefit increases.

UNDERSTANDING RECENT BENEFIT INCREASES

It is most unlikely that the confluence of favorable macroeconomic, asset mix, and demographic factors will occur again in the foreseeable future. Interest rates have fallen sharply over the last year. At current levels (8% long-term rates) over 90% of new contributions must be placed in the dedicated bond portfolio just to support current benefits and fund a modest 3% benefit increase. Further, while continued strong stock market gains are possible, historical evidence would argue against expecting similar returns in the future. With respect to inflation, economic analysts' projections are divided over its future course. Most forecasts discount the possibility of continued declines. Many economists contend that strong economic growth and high rates of money growth will result in much higher inflation before the end of the decade. Finally, the rapid influx of new retirees into the PRIF will soon level off, particularly given that the "Rule of 85" has not been extended.

In fact, it is quite conceivable that events could develop in such a way that benefit increases fall significantly behind the inflation rate. This situation occurred in the late 1970's when the PRIF earned no benefit increases from 1976 to 1979. This was a period when the inflation rate averaged 8.4% per year. Many persons erroneously believe that the primary cause of the zero earned benefit increases from 1976-79 was the formula used to calculate those increases. This formula was revised in 1980 and has been associated with the large benefit increases offered since then. The incorrectness of this view is shown in Table 2 which lists the benefit increases that would have been produced from 1976-79 under the current formula, if it had been in effect during that period.

TABLE 2

Post Retirement Investment Fund
Hypothetical Benefit Increases
Assuming Current Formula Then In Effect

	Calendar Year			
	1976	1977	1978	1979
Benefit Increase	1.2	1.6	0.9	1.9
Inflation Rate	4.8	6.8	9.0	12.7

Clearly, these hypothetical benefit increases are not substantially different than the zero growth in benefits that actually occurred.

Certain aspects of the old formula did inhibit benefit increases. The impact was not significant, however. The more important reasons for the inadequate inflation-adjusted benefit increases were the mediocre performance of the capital markets, the PRIF's asset mix, and the upsurge in inflation.

In the late 1970's interest rates and the inflation rate rose rapidly. But the PRIF's bond portfolio could not roll over immediately into higher yielding bonds without incurring substantial losses. As a result, the Fund's interest income remained near the levels earned in a lower interest rate environment. Further, the stock market over this period produced mediocre results. Combined with an investment philosophy that limited portfolio turnover, the result was that no significant realized equity capital gains were available to fund earnings. In addition, half of the PRIF's assets were invested in stocks. The Fund's earnings suffered not only because of the dearth of realized equity capital gains, but because dividend income produced by stocks is considerably less than interest income produced by an equivalent dollar investment in bonds. All of these factors together produced benefit increases quite inadequate to compensate for the high inflation of the late 1970's.

LAGGED RELATIONSHIP BETWEEN BENEFIT INCREASES AND INFLATION

In fact, the experience of the late 1970's versus the 1980's highlights a serious flaw in the PRIF's benefit increase mechanism. That problem is the tendency of PRIF benefit increases to lag the inflation rate. As inflation rose in the late 1970's, benefit increases would not have immediately responded under the current formula. They did begin to catch up in the early 1980's. By that time inflation had peaked. As inflation declined PRIF benefit increases remained high. Most likely those benefit increase will decline, perhaps quite

quickly, over the next several years. It is not inconceivable, however, that by then inflation rates will again be rising. The adequacy of the PRIF's benefit increases relative to inflation will once again be called into question.

The reasons for the lag between PRIF benefit increases and inflation is tied to the relationship between capital markets investment returns and inflation. Bond prices perform poorly during periods of rising inflation. Interest rates reflect an inflation premium. As inflation rates rise, so do interest rates (not necessarily in lockstep, but the correlation is still high). Rising interest rates drive down bond prices. Stock prices often respond negatively in such an environment as well, particularly if the inflation rise is rapid and unexpected. Higher interest rates on bonds provide "competition" to stocks in the eyes of investors, causing a decline in stock prices. Further, corporate earnings may not adjust quickly to inflation, making stocks less attractive. The opposite effects occur in a declining inflation rate environment.

PRIF benefit increases are tied to the Fund's investment earnings. If common stock prices decline because of a rise in inflation, PRIF earnings will suffer from an absence of realized capital gains. Further, as interest rates rise the bond portfolio cannot be quickly moved into higher yielding bonds without incurring immediate realized capital losses, which would further impair benefit increases. Hence, even though interest rates rise, the Fund's earnings will not be bolstered immediately by an increase in interest income.

Eventually, new cash flows into the Fund, invested in higher yielding bonds, will augment the PRIF's interest earnings and benefit increases will start to rise. But the pattern is for these benefit increases to lag the rise in inflation.

As inflation rates decline and interest rates fall, the PRIF's stock portfolio likely will rise in value, generating realized capital gains. The bond portfolio will still be invested in higher yielding bonds. The result is a high level of earnings which will permit continued large benefit increases. Eventually the investment of new cash flows in lower yielding bonds will drive down interest rates. But again the pattern of benefit increases to lag the move in inflation persists.

PROMINENT ISSUES CONFRONTING POLICYMAKERS

A number of major issues concerning the PRIF should be addressed by policymakers. The first issue is the subject of benefit adequacy. If current benefits promised retirees are sufficient from the State's view to support an adequate standard of living, the focus can be placed on maintaining the inflation-adjusted value of these benefits. On the other hand, if benefits are not considered to be adequate, then policymakers may desire to increase the level of benefits. Such an increase would require additional contributions to the PRIF if the Fund is to maintain its fully funded status.

The second issue is whether the State should guarantee the inflation-adjusted value of pension benefits paid to public employee retirees. As discussed, no guarantee of any kind currently exists. Retiree benefit increases are solely dependent

on the earnings of the PRIF. Under certain economic conditions (which have occurred in the past), those earnings may fail to provide benefit increases that match inflation. Does the State have a responsibility to retirees to provide inflation protection, even in periods when PRIF earnings are inadequate to do so? If the answer is yes, how complete should this protection be? Conversely, in those periods when the PRIF produces benefit increases that outpace inflation, should benefit increases be capped?

The third issue, which is a derivative of the second, concerns realistic expectations for PRIF benefit increases. It can be shown that under a broad range of economic conditions, it is unreasonable to expect the PRIF to produce earnings that allow benefit increases to match inflation. Few U.S. pension plans, private or public, attempt to give benefit increases that even partially, let alone fully, compensate for inflation on a consistent basis. Policymakers may elect to establish a benefit increase target that is only a fraction of the inflation rate.

The fourth issue is the pattern of lagged benefit increases relative to inflation that the PRIF has produced over the last decade. Whether it is acceptable to grant benefit increases that fail to match inflation in periods when inflation is rising, while granting benefit increases that exceed inflation when inflation is falling, is debatable. Over a several year period, benefit increases may average out to be an acceptable fraction of the inflation rate. However, the arbitrariness of the lagged pattern can produce inequities among retirees, depending on their dates of retirement.

The final issue quite simply is whether it is desirable to provide benefit increases in the current manner. This broad subject encompasses the three previously discussed issues. Currently, the PRIF's actuarially assumed return of 5% is below the rate of return that the Fund can reasonably be expected to produce. The implied policy goal of this conservative assumption is to create surplus earnings that will be credited to retirees in the form of benefit increases. However, it is unclear whether this mechanism is the most efficient means of providing inflation protection to retiree benefits, presuming that some level of inflation protection is a State objective.

As has been discussed in this paper, the current mechanism for granting benefit increases has both positive and negative consequences. On the positive side is the fact that the PRIF has little likelihood of failing to fund its promised benefits. The conservative level of the assumed return on the PRIF's assets ensures this result. Further, the PRIF can be expected to produce excess earnings that permit benefits to be increased. On the negative side, the PRIF may be unable to grant benefit increases that adequately compensate for inflation under some economic environments. Further, the PRIF's benefit increases have consistently lagged movements in the inflation rate over the past decade. Policymakers should consider whether, if inflation protection is a desirable goal, other direct benefit increase mechanisms might be more efficient means of accomplishing this objective.

Tab D

MEMBERS OF THE BOARD.
GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H CARLSON
STATE TREASURER ROBERT W MATTSON
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

May 23, 1986

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

FROM: Equity Manager Committee

SUBJECT: Committee Report

The Committee reviewed the performance-based fee contract sent to the Board's external equity managers. To date several managers have returned signed contracts. With the exception of one manager, all of the Board's external equity managers are expected to agree to the use of performance-based fees.

The Committee also reviewed the recent performance of the Board's equity managers. In general, the Board's equity managers have performed well in the most recent quarter and twelve months. For the most part, the managers have outperformed their assigned benchmarks. The Committee believes that the performance of BMI Capital, Investment Advisers, and Peregrine Capital has been weak enough to warrant special attention. The Committee is also concerned with the rapid account growth at Beutel Goodman and believes that this situation needs continued monitoring.

The Committee also discussed the situation at Wilshire Associates, the Board's index fund manager. The person heading up the index fund management program has chosen to leave Wilshire. The Committee believes that this departure is not likely to hinder the near-term performance of the index fund. However, the Committee recommends that staff closely evaluate the longer-term implications of this departure and report back to the IAC and Board at their next meetings.

STATE OF MINNESOTA

(EAI)

STATE BOARD OF INVESTMENT

EQUITY INVESTMENT MANAGER STATUS REPORT: 12/31/85 - 3/31/86

(\$ millions)

Investment Manager	ASSETS UNDER MANAGEMENT			FIRST QUARTER 1986			Investment Style Changes	Comments
	3/31/86	3/31/85	3/31/85	Professional Staff Turnover	Organizational Changes	Investment Style Changes		
	# of Accts	# of Accts	# of Accts	Lost # of Accts	Gained # of Accts	Asset Size	Professional Staff Turnover	Organizational Changes
Red Alger	59	69	\$2,821	2	2	\$152.1	-	-
Illiance Capital Management (Minneapolis)	48	48	\$2,903	-	-	-	-	-
Wentzel, Goodman Capital Management	5	31	\$1,200	1	1	\$ 20.0	-	-
II Capital Corp.	5	12	\$ 256	2	2	\$ 36.6	Christopher Mortenson, an analyst, left the firm.	-
A Asset Management	126	66	\$4,196	6	6	\$164.9	John Downing (Head Trader), Dominic Rossi (Assistant Controller), and Barbara Winkler (Associate Financial Analyst) left the firm. Joan McKey (Research Analyst) joined the firm.	-
William Jordan Management	22	32	\$1,257	1	1	\$ 38.0	-	-
B Advisory Group IUS Equity Advisors	81	68	\$3,717	3	3	\$ 33.2	1	\$ 12.4
		50	\$2,984	-	1	\$ 11.2	1	\$ 11.2
Investment Advisers, E.	79	91	\$2,042	-	-	-	-	-
Deber & Co.	29	48	\$1,705	4	4	\$ 39.1	-	-
Bergreen Total Return		27	\$ 590					
Bergreen Fund		20	\$1,096					
Bergreen Limited		1	\$ 19					

STATE OF MINNESOTA

STATE BOARD OF INVESTMENT

EQUITY INVESTMENT MANAGER STATUS REPORT: 12/31/85 - 3/31/86

(\$ millions)

INVESTMENT MANAGER	ASSETS UNDER MANAGEMENT			FIRST QUARTER 1986			Investment Style Changes	Comments
	3/31/85	3/31/86	3/31/86	3/31/85	3/31/86	3/31/86		
	# of Accts	# of Accts	# of Accts	Lost # of Accts	Professional Staff Turnover	Organizational Changes		
Investment Bank	3	\$ 49	6	\$ 267.0	-	-	-	-
Shell & Reed Investment Management	6	\$ 471	8	\$ 881.0	-	-	-	-

Ann Frenzen, Senior V.P. Marketing, joined the firm.

Steve Widlak, research analyst, left the firm.

Tab E

MEMBERS OF THE BOARD:
GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H. CARLSON
STATE TREASURER ROBERT W. MATTSON
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

May 29, 1986

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

FROM: Fixed Income Manager Committee

SUBJECT: Committee Report

The Committee reviewed the recent investment performance of the Board's fixed income managers. While investment performance has trailed the bond market's returns over the latest twelve months, the Committee can identify no specific items of serious concern among the Board's managers.

The Committee, however, does recommend that the Board review the structure of the bond manager program. As the Committee discussed with staff, areas for consideration include passive versus active management, the appropriate investment styles for inclusion in the aggregate bond portfolio, and the desirable number of managers. 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.

BOND MANAGER UPDATE INTERVIEWS
SUMMARY NOTES

I. STAFF COMMENTS AND RECOMMENDATIONS

Staff can identify no problems among the Board's fixed income managers serious enough to warrant Board action. Since the managers' hirings in July, 1984, the bond market has performed strongly. In aggregate, the managers have trailed the bond market's returns. This result is due primarily to the conservative investment approach followed by the managers, in general. Their investment styles attempt to achieve superior performance in flat or rising interest rate environments. But in periods of falling interest rates, as have been witnessed over the last two years, the managers are likely to underperform the market.

From a longer term perspective, with the bond manager program two years old, staff recommends that the management structure be reviewed, in conjunction with the Board's new consultant. Issues that should be considered include: passive versus active management, the specific investment approaches assigned to each manager, and the appropriate number of active managers.

II. RECENT MEETING DATES

<u>MANAGER</u>	<u>DATE OF MEETING</u>
Investment Advisers	May 14
Lehman Management	May 27
Miller Anderson, Sherrerd	May 28
Morgan Stanley	May 27
Peregrine Capital	May 14
Western Asset	May 16

III. ORGANIZATION

No significant organizational changes have occurred at any of the Board's fixed income manager firms since the last semi-annual meetings. However, one potentially important change may take place at Western Asset Management. The firm has requested that its parent, First Interstate Bancorporation, put the firm up for sale. The reasons for this request are similar to those behind the spinoff of other investment management subsidiaries from banks. Western Asset believes that by disassociating itself with First Interstate that it will increase its flexibility to attract and retain high quality investment management talent. In addition, the firm believes that its marketing efforts currently are hampered by its ties to the bank.

IV. ASSETS UNDER MANAGEMENT

	JUNE 30, 1984		SEPTEMBER 1985		MARCH 1986	
	<u>NUMBER</u>	<u>MARKET VALUE (MILL.)</u>	<u>NUMBER</u>	<u>MARKET VALUE (MILL.)</u>	<u>NUMBER</u>	<u>MARKET VALUE (MILL.)</u>
Investment Advisers	48	\$ 275	50	\$ 387	62	\$ 713
Lehman Management	36	3,000	45	4,200	43	4,700
Miller Anderson	37	2,184	52	3,810	52	4,749
Morgan Stanley	29	1,040	51	2,782	55	3,700
Peregrine Capital	5	170	5	261	5	278
Western Asset	30	1,599	30	2,341	28	2,400

Account growth at the Board's fixed income managers has slowed in recent quarters. Assets under management increased primarily due to strong investment results.

Investment Advisers' fixed income accounts have risen sharply in number. However, this growth represents increases in the fixed income portions of balanced accounts. These accounts are not managed by the Board's portfolio manager.

In its last report to the Board, staff expressed concern over account growth at Morgan Stanley. Since that time, the firm has set a \$100 million account size minimum and account growth has slowed considerably.

V. STAFF

No significant staff changes have occurred at any of the Board's managers since the last set of update interviews.

VI. INVESTMENT APPROACH

Staff has recently concluded normal portfolio construction for its active equity managers. Staff, therefore, is prepared to begin work on normal portfolio design for the Board's fixed income managers. To facilitate this process, staff spent considerable time reviewing the investment style of each manager.

Western Asset has done a large amount of its own research on normal portfolios. The firm has constructed what SBI staff believes to be a valid normal portfolio. Lehman Management is also very interested in this subject and hopes to design a normal portfolio by year-end. The other managers have less of an understanding of normal portfolios, and will likely require SBI staff to build these benchmarks.

STATE OF MINNESOTA

STATE BOARD OF INVESTMENT

FIXED INCOME INVESTMENT MANAGER STATUS REPORT: 12/31/85 - 3/31/86

(\$ millions)

Investment Manager	FIXED INCOME ASSETS UNDER MANAGEMENT				FIRST QUARTER 1986				Investment Style Changes	Comments
	6/30/84	3/31/85	Lost	Professional Staff Turnover	Organizational Changes	Organizational Changes	Investment Style Changes			
	# of Accts	# of Accts	# of Accts	Asset Size	Asset Size	Asset Size	Asset Size	Asset Size	Asset Size	Asset Size
Investment Advisers, C.	48	\$ 275	62	\$ 713	7	\$104.9	-	-	-	-
Investment Management Co. C.	36	\$3,000	43	\$4,700	4	\$105.0	1	\$184	-	-
Miller, Anderson Shearson	37	\$2,184	52	\$4,749	-	-	-	-	-	-
Ogden Stanley Investment Mgt. Inc.	29	\$1,040	55	\$3,700	2	\$140.0	-	-	-	-
Investment Bank Int. Inc.	5	\$ 170	5	\$ 278	-	-	-	-	-	-
Western Asset Mgt.	30	\$1,599	28	\$2,400	1	\$ 23.0	4	\$ 13	-	-

Daniel J. Forrestal, III, equity portfolio manager, joined the firm. Thomas L. Bennett was named a general partner, bringing the total to seven.

Tab F

MEMBERS OF THE BOARD:
GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H. CARLSON
STATE TREASURER ROBERT W. MATTSON
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

May 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.

During the last quarter, the Alternative Investment Committee met with and conducted an annual review session with Kohlberg, Kravis and Roberts (KKR), one of the SBI's venture capital managers. Currently, KKR is actively working with existing portfolio companies to streamline operations, increase cash and cash flow and pay down acquisition debt. New investment activity, however, is expected to be slow due to high valuations

currently being placed on acquisitions in the public and private marketplace. To date, approximately 40% of the SBI's aggregate commitment to KKR's 1984 and 1986 commingled funds has been invested.

REAL ESTATE

The real estate investment strategy involves three steps. The first step 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 four of the SBI's real estate managers: TCW Realty Advisors, RREEF, Heitman Advisory Corporation and State Street. In general, the managers are cautious and are emphasizing retail and industrial properties in their acquisition searches. Favorable opportunities now present in the debt market are being considered by some of the managers to refinance or place new mortgage debt on certain portfolio properties. By the end of 1986, all of the managers should have the SBI's investment commitment close to fully invested.

Also during the quarter, the Alternative Investment Committee considered an additional real estate investment with State Street. The Committee is recommending the Board approve a \$20 million investment in State Street Fund IV, a proposed \$150 million successor fund to State Street Fund III. The SBI currently has a \$20 million investment in State Street Fund III. Both Fund IV and Fund III will follow essentially similar guidelines and strategies. This recommendation is 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.

FUTURE CONSIDERATIONS

Going forward, the Alternative Investment Committee agenda will include:

- 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	10/81	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	15.0	10/85	238.0	Closed end diversified
TCW	40.0	40.0	7/85	216.0	Closed end specialized investment vehicle
State Street	20.0	20.0	7/85	103.0	Closed end specialized investment vehicle
Washington Square	10.0	0.0	---	100.0	Closed end specialized Minnesota only
First Asset	10.0	0.0	---	100.0	Closed end specialized Minnesota only
Total:	\$325.0	\$261.0			
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	0.0	12/85	2000.0	Lo-tech mature	NY/CA offices
Summit	10.0	5.0	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	0.0	---	30.0	Hi-tech early stage	MN office
Total:	\$143.5	\$ 54.1				
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 ANNUAL REVIEW SUMMARY

FIRM NAME: Kohlberg, Kravis, Roberts and Co. (KKR)
 FUND NAME: 1984 Investment Partnership (KKR III)
 CONTACT: George Roberts
 ACCOUNT INCEPTION: March 21, 1984
 SBI COMMITMENT: \$25.0 Million
 SBI CURRENT INVESTMENT: \$25.0 Million

INVESTMENT DESCRIPTION: KKR III is a \$1 billion leveraged buyout limited partnership formed in March 1984 III. The term of the Fund is twelve years with optional extensions. Investment focus of KKR will be on stable and mature, cash generating, low technology companies with diversified operations.

KKR III INVESTMENTS	CALENDAR	CASH RETURNS TO SBI	CUMULATIVE SINCE
CURRENT TOTAL	1984	CALENDAR	INCEPTION
\$ (COST)		1985	
7	\$21,372.0	\$8,812.0	\$30,184.0

SUMMARY DESCRIPTION OF CURRENT PORTFOLIO
 (% OF TOTAL FUND COST)

STAGE OF DEVELOPMENT	%	INDUSTRY GROUPS	#
Early Stage Financing	0	Wholesaling and Specialty Retail	19
Expansion Financing	0	Light Manufacturing and Service	19
Bridge Financing	0	Lodging	12
Leveraged Buyouts	100	Real Estate	3
		Natural Resources	25
		Cable TV and Television	22

STAFF COMMENTS: KKR 1984 Investment Partnership reached full investment in the first quarter of 1986. The fund now has investments in seven companies involved in cable TV and broadcasting, oil and gas, specialty retail and wholesale, motel management, real estate and printing, business forms and heating and cooling manufacturing. With full investment of fund capital, KKR is actively working with portfolio company managements to increase cash and cash flows and pay down debt. Strategies to accomplish this will include elimination of unnecessary operating and capital expenses, public offerings and/or divestment of certain corporate divisions and refinancings with lower rate debt.

ALTERNATIVE INVESTMENT ANNUAL REVIEW SUMMARY

FIRM NAME: Kohlberg, Kravis, Roberts and Co. (KKR)
 FUND NAME: 1986 Investment Partnership (KKR IV)
 CONTACT: George Roberts
 ACCOUNT INCEPTION: December 20, 1985
 SBI COMMITMENT: \$50 Million
 SBI CURRENT INVESTMENT: \$6.3 Million

INVESTMENT DESCRIPTION: KKR IV is a \$2 billion leveraged buyout limited partnership formed in December 1985. The term of the Fund is twelve years with optional extensions. Investment focus of KKR IV will be on stable and mature, cash generating, low technology companies with diversified operations.

KKR IV INVESTMENTS	CALENDAR	CASH RETURNS TO SBI	CUMULATIVE SINCE
CURRENT TOTAL	1985		INCEPTION
\$	\$0		\$0
1	\$250.0 Million		

SUMMARY DESCRIPTION OF CURRENT PORTFOLIO
 (% OF TOTAL FUND COST)

STAGE OF DEVELOPMENT	%	INDUSTRY GROUPS	%
Early Stage Financing	0	Food and Consumer Products	100
Expansion Financing	0	Manufacturing	0
Bridge Financing	0	Technology	0
Leveraged Buyouts	100	Other	0

STAFF COMMENTS: KKR 1986 Investment Partnership completed its first acquisition (Beatrice) in April of 1986. That acquisition represented approximately 13% of total fund capital. Going forward, the initial investment pace of the 1986 fund is expected to be slow as KKR believes that most deals they are currently seeing are priced too high.

ALTERNATIVE INVESTMENT ANNUAL REVIEW SUMMARY

FIRM NAME: Trust Company of the West/Westmark
 FUND NAME: TCW Realty Fund III
 CONTACT: Bruce Ludwig
 ACCOUNT INCEPTION: 7/31/85
 SBI COMMITMENT: \$40.0 Million
 SBI CURRENT INVESTMENT: \$40.0 Million

INVESTMENT DESCRIPTION: TCW Realty Fund III is a \$215 million real estate fund formed in July 1985. Term of the Fund is ten years with optional extensions. The Fund will diversify by location and property type with a focus on specialty investment vehicles such as convertible and participating mortgages. Management of the Fund will be a joint venture between Trust Company of the West and Westmark Real Estate Investment Services. On-site property management is primarily contracted to local property management firms.

TCW FUND III INVESTMENTS	CASH RETURNS TO SBI	CUMULATIVE SINCE
CURRENT TOTAL	CALENDAR	INCEPTION
\$ (COST)	1985	
6	\$0	\$534,100.0

SUMMARY DESCRIPTION OF CURRENT PORTFOLIO
 (% OF TOTAL FUND COST)

LOCATION	%	INDUSTRY GROUPS	%
East	0.0%	Office	0.0%
Midwest	0.0	Retail	61.0
South	39.0	Industrial	39.0
West	61.0	Hotel/Motel	0.0
		Apartments	0.0
		Other	0.0

STAFF COMMENTS: At March 31, 1986, TCW Realty Fund III had investments in six properties (four industrial buildings in Dallas, Texas and two shopping centers in California). These properties represent approximately 25% of the fund's total capitalization. Three additional properties, representing another 30% of fund capital, are under contract and feasibility study. Full investment of Fund III is expected in the fourth quarter of 1986 at which time a successor Fund IV will offer subscriptions. Strategic focus areas for Fund III investments will be primarily in retail and industrial properties. Specialty investment vehicles such as convertible and participating mortgages will likely comprise approximately 50% of the fund. To increase exposure to East coast markets, TCW Realty Advisors has recently opened their first branch office in Boston.

ALTERNATIVE INVESTMENT ANNUAL REVIEW SUMMARY

FIRM NAME: Rosenberg Real Estate Equity Funds (RREEF)
 FUND NAME: RREEF USA III
 CONTACT: Paul Sack
 ACCOUNT INCEPTION: 4/25/84
 SBI COMMITMENT: \$75 Million
 SBI CURRENT INVESTMENT: \$47.0 Million

INVESTMENT DESCRIPTION: RREEF USA III is a \$773 million commingled real estate Group Trust. Term of the Fund is twelve years with optional extensions. The Fund is investing primarily in unleveraged, wholly-owned, equity real estate diversified by location and property type. On-site property management will be conducted by RREEF employees.

RREEF USA III INVESTMENTS	CASH RETURNS TO SBI	CUMULATIVE SINCE
CURRENT TOTAL	CALENDAR	INCEPTION
\$	1985	
10	\$132,357.0	\$1,525,891.0

SUMMARY DESCRIPTION OF CURRENT PORTFOLIO
 (% OF TOTAL FUND COST)

LOCATION	%	INDUSTRY GROUPS	%
East	3.0%	Office	35.0%
Midwest	14.0	Retail	53.0
South	43.0	Industrial	12.0
West	40.0	Hotel/Motel	0.0
		Apartments	0.0
		Other	0.0

STAFF COMMENTS: RREEF USA Fund III has now purchased, as of March 31, 1986, ten properties (four shopping centers, three office buildings and three industrial properties) for an investment of \$482.5 million or 62% of total fund capital. Additional properties to be acquired for the fund will include completed leased and unleveraged shopping centers, industrial properties and, to a lesser extent, office buildings. The softness in the office market has slowed somewhat the acquisition period for the fund. However, RREEF expects full investment of fund capital by early 1987. At that time, RREEF will offer subscriptions to RREEF USA Fund IV.

ALTERNATIVE INVESTMENT ANNUAL REVIEW SUMMARY

FIRM NAME:
 FUND NAME:
 CONTACT:
 ACCOUNT INCEPTION:
 SBI COMMITMENT:
 SBI CURRENT INVESTMENT:

Heitman Advisory Corporation
 HAC Group Trust I
 David Glickman
 6/14/84
 \$20.0 Million
 \$20.0 Million

INVESTMENT DESCRIPTION:

HAC Group Trust is a \$113.0 million real estate Group Trust formed in May 1984. Term of the Fund is fifteen years with optional extensions. The Fund is investing primarily in equity real estate diversified by location and property type. Centre Properties, Ltd., an affiliate of Heitman, manages all 100% owned properties.

HAC GROUP TRUST II INVESTMENTS
 CURRENT TOTAL
 \$ (COST)

8 \$103.0 Million

CALENDAR
 1984

\$335,807.0

CASH RETURNS TO SBI
 CALENDAR
 1985

\$1,394,662.0

CUMULATIVE SINCE
 INCEPTION

\$1,730,470.0

SUMMARY DESCRIPTION OF CURRENT PORTFOLIO
 (% OF TOTAL FUND COST)

LOCATION	%	INDUSTRY GROUPS	%
East	15.0%	Office	32.0%
Midwest	48.0	Retail	22.0
South	33.0	Industrial	29.0
West	4.0	Mixed Use	17.0
		Other	0.0

STAFF COMMENTS:

On March 31, 1986, Heitman Group Trust Fund I had investments in eight properties (two office, two industrial, three retail and one mixed-use) representing approximately 91% of total fund capital. One more acquisition should bring the fund to full investment sometime in the second or third quarter of 1986. Going forward, a principal investment strategy for the fund will be to take advantage of lower interest rates by placing medium and long term fixed rate first mortgages on some of the properties to enhance and leverage long term investment returns.

ALTERNATIVE INVESTMENT ANNUAL REVIEW SUMMARY

FIRM NAME: Heitman Advisory Corporation
 FUND NAME: HAC Group Trust II
 CONTACT: David Glickman
 ACCOUNT INCEPTION: 10/31/85
 SBI COMMITMENT: \$30.0 Million
 SBI CURRENT INVESTMENT: \$15.0 Million

INVESTMENT DESCRIPTION: HAC Group Trust is a \$238.5 million real estate Group Trust formed in October 1985. Term of the Fund is fifteen years with optional extensions. The Fund is investing primarily in equity real estate diversified by location and property type. Centre Properties, Ltd., an affiliate of Heitman, manages all 100% owned properties.

HAC GROUP TRUST II INVESTMENTS	CASH RETURNS TO SBI	CUMULATIVE SINCE
CURRENT TOTAL	CALENDAR	INCEPTION
\$	1985	
4	\$0	\$121,845.0

SUMMARY DESCRIPTION OF CURRENT PORTFOLIO
 (% OF TOTAL FUND COST)

LOCATION	%	INDUSTRY GROUPS	%
East	64.0%	Office	64.0%
Midwest	16.0	Retail	0.0
South	20.0	Industrial	16.0
West	0.0	Mixed Use	20.0
		Other	0.0

STAFF COMMENTS: As of March 31, 1986, Heitman Group Trust Fund II had investments in four properties (two office, one industrial and one mixed-use) representing approximately 29% of total fund capital. Additional properties to be acquired in Fund II will include completed and leased shopping centers, business and industrial parks, office and mixed-use properties. The financing strategy for Fund I will be applied, where appropriate, for Fund II. It is anticipated that Fund II will be substantially committed and invested by the fourth quarter of 1986. At such time, Heitman Fund III, which is presently being marketed, is expected to begin operations.

ALTERNATIVE INVESTMENT ANNUAL REVIEW SUMMARY

FIRM NAME:
 FUND NAME:
 CONTACT:
 ACCOUNT INCEPTION:
 SBI COMMITMENT:
 SBI CURRENT INVESTMENT:

State Street Bank and Trust Company
 State Street Real Estate Fund III
 Bob Kilroy
 8/15/85
 \$20.0 Million
 \$20.0 Million

INVESTMENT DESCRIPTION:

State Street Real Estate Fund III is a \$103 million real estate fund formed in August 1985. Term of the Fund is 15 years with optional extensions. The Fund will diversify by location and property type with a focus on specialty investment vehicles such as convertible and participating mortgages. State Street Bank has retained Aldrich, Eastman and Waltch as the Fund advisor. On-site property management is primarily contracted to outside firms or is conducted by joint venture partners.

STATE STREET INVESTMENTS
 CURRENT TOTAL
 \$

7 \$103 Million

CALENDAR
 1985

\$0

CASH RETURNS TO SBI

\$0

CUMULATIVE SINCE
 INCEPTION

SUMMARY DESCRIPTION OF CURRENT PORTFOLIO
 (% OF TOTAL FUND COST)

LOCATION	%	INDUSTRY GROUPS	%
East	7.0%	Office	21.0%
Midwest	0.0	Retail	49.0
South	44.0	Industrial	30.0
West	49.0	Hotel/Motel	0.0
		Apartments	0.0
		Other	0.0

STAFF COMMENTS:

In response to current market conditions and attractive investment opportunities in the retail and industrial sectors, the fund has invested in eight neighborhood shopping centers, eight warehouse/distribution facilities, two office properties, and one mixed-use property. These properties represent 75% of the fund's invested capital at March 31, 1986. These nineteen investments are all equity-oriented participating mortgages, joint ventures or fee-owned. One additional investment commitment has been made to a warehouse/distribution center located in the Dallas/Fort Worth area. The closing of this investment will make the fund fully invested. State Street Fund IV, a proposed \$150 million successor fund to Fund III, is currently offering subscriptions.

Tab G

MEMBERS OF THE BOARD:
GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H. CARLSON
STATE TREASURER ROBERT W. MATTSON
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

May 29, 1986

TO: Members, State Board of Investment
FROM: Consultant Search Committee
SUBJECT: Committee Recommendation

At its March 5, 1986 meeting the Board requested that its consulting contract be rebid. A Committee was formed to conduct consultant search composed of one person appointed by each Board member along with two IAC members with experience in this area.

A request for proposal was prepared and sent to fifteen consulting firms, ten of which responded. After reviewing the responses, the Committee selected three firms for personal interviews: DeMarche Associates, Evaluation Associates, and Richards and Tierney.

It is the Committee's recommendation that Richards and Tierney be retained by the SBI as its consultant. The firm has demonstrated a superior understanding of investment management structures, performance measurement and investment techniques. The Committee feels the firm's expertise and perspective in these areas will be extremely helpful in advising the Board on its future decisions.

The proposed fee for this service is \$120,000 per year. The contract would be effective for one year, but could be renewed on an annual basis.

In addition to this contract, the Committee also recognized that the Board may periodically require other specialized consulting services on an ad hoc or project, basis. In order to obtain the most appropriate consultants for these projects, the Committee recommends that the Board contract with firms for special projects as needed. The extent to which these special services may be required can not be determined at this time. As with all requests for consulting services, the Board would review and approve all special project contracts.