MINNESOTA STATE BOARD OF INVESTMENT MEETING

June 5, 1985

&

INVESTMENT ADVISORY COUNCIL MEETING

June 4, 1985

AGENDA

STATE BOARD OF INVESTMENT
MEETING

Wednesday, June 5, 1985
8:30 A.M.

Room 112
STATE CAPITOL
Saint Paul

		TAB
1.	Approval of Minutes of March 21, 1985 meeting	
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.	Legislative Review	C
4.	Renewal of Evaluation Associates Contract	
5.	Report from Investment Advisory Council Committees:	
	A. Asset Allocation Committee	D
	1) Asset Mix Recommendation for Permanent School Fund	
	B. Equity Manager Committee	E
	1) Recommendation to balance manager styles 2) Review of equity managers	
	C. Fixed Income Manager Committee	F
	1) Review of the implementation of the dedicated bond portfolio	
	2) Review of Fixed Income Managers	
	D. Alternative Investment Committee	G
	1) Report on progress of the implementation of the alternative investment program and request for approval to participate in three venture capital partnerships and two real estate funds	

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 21, 1985

The State Board of Investment met at 10:25 A.M. on March 21, 1985 in Room 500S of the State Office Building. 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 13, 1984 meeting were unanimously approved.

EXECUTIVE DIRECTOR'S REPORT

Howard Bicker, Executive Director, reviewed the asset allocation and investment performance of the Basic Retirement Funds. He reported that the total rate of return for the fourth quarter of CY 1984 was 3.2%. The positive performance was due largely to the strength of the bond market. He stated that the asset allocation was basically unchanged, except for a slight increase in bonds due to the market. During the quarter, the fund had a $50 million negative cash flow, with a total $75 million negative cash flow for the year.

Mr. Bicker anticipates that the cash flow to the Post Retirement Fund will be approximately $200 million for the current calender year. He stated that the dedicated bond portfolio is now in place. Mr. Bicker reported that the retirees had received a 6.9% lifetime benefit increase effective January 1, 1985. He noted the new format for the Post Retirement Fund in the quarterly report.

Mr. Carlson noted that the total rate of return for the Post Retirement Fund for calender year 1984 exceeded 10%.

LEGISLATIVE AUDITOR'S REPORT

Mr. Bicker reviewed the findings and recommendations of the annual audit conducted by the Legislative Auditor. In response to a question from Mr. Carlson, Claudia Gudvangen, Audit Manager, stated that the State Board of Investment is audited yearly and department administrative expenditures every three years. This year both were included in the audit.

INVESTMENT ADVISORY COUNCIL REPORTS

Judith Mares, Chair of the Investment Advisory Council, presented the reports of the council committees:

ADMINISTRATIVE COMMITTEE

Ms. Mares reported on the progress of the Board's legislative proposal. She also outlined current committee discussions on the development of an incentive fee structure for compensating the external money managers. She stated that the joint committee composed of the Equity Manager Committee and Board will examine this issue. Ms. Mares also discussed the transfer of Minnesota Supplemental Retirement Fund assets to State Street Bank, and stated that the unit values had been computed in three business days as opposed to the former 2-3 weeks.

ASSET ALLOCATION COMMITTEE

Ms. Mares reviewed the discussion of the Committee regarding the asset allocation of the Permanent School Fund in light of the recent passage of the Constitutional Amendment. She said a proposal would be made at the June Board meeting. She also stated that the cash flows to the Post Retirement Fund would be used to buy bonds matching the fund's new liabilities until the annual rebalancing of the dedicated bond portfolio.

EQUITY MANAGER COMMITTEE

Ms. Mares reviewed the work of the Equity Manager Committee which is attempting to classify the styles of the SBI's current equity managers. She stated that a recommendation to rebalance the style bias of the equity managers would be made at the June Board meeting.

Mr. Carlson inquired about the ability of external managers to beat the market, and noted that an index fund may be the appropriate approach for large portfolios. Ms. Mares stated that over the long term, a case could be made for active management. She stated that the subject will be addressed by the committee.

FIXED INCOME COMMITTEE

Ms. Mares reported that the dedicated bond portfolio had been implemented without problems or publicity. She stated that the short time period since the external bond managers were retained did not enable an individual evaluation of their performance.

ALTERNATIVE INVESTMENT COMMITTEE

Ms. Mares stated that the Council recommends the Board invest in DSV Partners IV, a venture capital fund. Ms. Growe moved that the Board invest $10 million in DSV Partners IV. The motion passed unanimously.

Mr. Carlson requested that the Committee explore the possibility of a Minnesota real estate pool. Ms. Mares agreed.

The meeting adjourned at 10:40 A.M.

Respectfully submitted,

Howard Bicker

Howard J. Bicker
Executive Director

AGENDA

INVESTMENT ADVISORY COUNCIL
MEETING

Tuesday, June 4, 1985
2:00 P.M.

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

	TAB
1. Approval of Minutes of March 20, 1985 meeting	
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. Legislative Review	C
4. Renewal of Evaluation Associates Contract	
5. Report from Investment Advisory Council Committees:	
A. Asset Allocation Committee	D
1) Asset Mix Recommendation for Permanent School Fund	
B. Equity Manager Committee	E
1) Recommendation to balance manager styles 2) Review of equity managers	
C. Fixed Income Manager Committee	F
1) Review of the implementation of the dedicated bond portfolio	
2) Review of Fixed Income Managers	
D. Alternative Investment Committee	G
1) Report on progress of the implementation of the alternative investment program and request for approval to participate in three venture capital partnerships and two real estate funds	

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 20, 1985

The Investment Advisory Council met on March 20, 1985 at 2:40 p.m. in the MEA Conference Room.

Members present: Judith Mares, Malcolm McDonald, Henry Adams Jr., James Eckmann, Allen Eldridge, Paul Groschen, Richard Hume, Joseph Rukavina, Harvey Schmidt, Ray Vecellio, and Jan Yeomans.

Members Absent: Verona Burton, Gordon Donhowe, Ken Gudorf, Gary Norstrem, Mike Rosen and Deborah Veverka.

SBI Staff: Howard Bicker, Jeff Bailey, John Griebenow, Teresa Myers, and Daralyn Peifer.

Others Attending: Jim Ryan, Mike Ousdigian, and Robert Whitaker.

The minutes of the December 12, 1984 meeting were unanimously approved.

EXECUTIVE DIRECTOR'S REPORT

Howard Bicker, Executive Director, reviewed the asset allocation and investment performance of the Basic Retirement Funds. He reported that the total rate of return for the fourth quarter of CY 1984 was 3.2%. The positive performance was due largely to the strength of the bond market. He stated that the asset allocation was basically unchanged, except for a slight increase in bonds due to the market. During the quarter the fund had a $50 million negative cash flow, with a total $75 million negative cash flow for the year.

Mr. Bicker anticipates that the cash flow to the Post Retirement Investment Fund will be approximately $200 million for the current calender year. He stated that the dedicated bond portfolio is now in place. Mr. Bicker reported that the retirees had received a 6.9% lifetime benefit increase effective January 1, 1985. He noted the new format for the Post Retirement Fund in the quarterly report.

LEGISLATIVE AUDIT REPORT

Mr. Bicker reviewed the findings and recommendations of the recent annual audit conducted by the Office of the Legislative Auditor. In response to question from Mr. McDonald, Mr. Bicker stated that the legislative auditor conducted both a financial and compliance audit.

ADMINISTRATIVE COMMITTEE

Mssrs. McDonald and Bicker presented the concept of incentive fees, currently under discussion by the Administrative Committee. In response to a question from Mr. Adams, Mr. Ryan from Evaluation Associates stated that both the Rockefeller Foundation and the State of Pennsylvania have implemented incentive fees. In response to a question from Mr. Vecellio, Mr. Bicker stated that the Board doesn't want its managers to deviate from the particular investment styles for which they were hired. Ms. Mares stated that the committee concurred with the proposal philosophically, but there are several issues that need further discussion, including the time period for evaluation and the appropriate standard for comparison. She stated that the issue will be evaluated by the Equity Manager Committee. Mr. Bicker requested that Council members communicate their views to the committee members. Mr. Ryan stated that incentive fees are the wave of the future, and predicted that within five years all fees will be on an incentive basis.

Ms. Mares discussed the transfer of additional assets to State Street Bank, and noted that the unit values for the Minnesota Supplemental Retirement Funds were posted in record time. Mr. Bicker reviewed the progress of the Board's legislative proposals.

ASSET ALLOCATION COMMITTEE

Mr. Bicker reviewed the asset allocation of the Permanent School Fund and the proposed changes recommended by staff. He outlined the current discussion by the asset allocation committee, which focuses on the need for the growth of the fund principal through investment in equities versus the need for current income through bonds. Mr. Bicker stated that the discussion would continue with a recommendation at the June meeting.

EQUITY MANAGER COMMITTEE

Ms. Mares outlined the issues currently under review by the Joint Committee composed of the Council Equity Manager Committee and the Board. Mr. Ryan discussed three managers--Trustee & Investor, Herbert Smith, and BMI--who currently concern Evaluation Associates. In response to a question from Mr. Vecellio, Mr. Bicker clarified that the Lieber update referred to a limit on the amount of new cash flow the company could accept. It is not a recommendation that additional assets be allocated to the firm at this time.

Mr. Bicker stated that in addition to the firms discussed by Mr. Ryan, staff is concerned about Siebel and Loomis Sayles. In response to a question from Mr. Adams, Mr. Bicker stated he would prefer fewer managers. Ms. Mares stated that the portfolio will be evaluated to determine the current bias before the decision to fire any manager is made. Mr. Bicker will send the policy guidelines on the termination of managers to the new Council members. Ms. Mares said the decision on manager termination is not driven strictly by performance. Mr. Adams stated that a policy to allocate assets to the worst performers is at times appropriate, and noted that for his firm, last year's losers are this year's winners. In response to a question from Mr. Vecellio, Ms. Mares stated that the analysis of a manager can become clouded by the time period, and the goal is to come to the same judgement regardless of the time period used. Mr. Ryan stated a good test is if the same manager would be hired today, based on the quality of personnel and the market's role in determining past performance.

FIXED INCOME COMMITTEE

Mr. Schmidt stated that the dedicated bond portfolio is now in place. Mr. Ryan noted that the change was accomplished without any publicity. Mr. Schmidt stated that it is too early to review the performance of the bond managers.

ALTERNATIVE INVESTMENT COMMITTEE

Mr. McDonald outlined the details of a proposed venture capital partnership, DSV Partners IV. Mr. McDonald moved that the Council recommend the Board participate in the partnership. Ms. Mares commented that the staff had conducted extensive research with due diligence. Mr. McDonald's motion passed unanimously.

Mr. McDonald stated that he anticipated a request that the Council look into the possibility of a fund for Minnesota real estate investments. Mr. McDonald noted that the Board can own no more than 20% of pooled real estate funds, and all investments must offer competitive returns.

In response to a question from Mr. Hume, Mr. Bicker stated that the takedown for the Apache program had been slower than anticipated. Mr. Bicker also stated that the Council of Institutional Investors had held its first meeting on the Phillips Petroleum recapitalization plan. He noted that the Board's continuing participation would be evaluated in light of both the time commitment and press attention to the Council's activities.

The meeting adjourned at 3:50 p.m.

Respectfully submitted,

Howard Bicker

Howard J. Bicker
Executive Director

Tab A

TABLE OF CONTENTS

MINNESOTA STATE BOARD OF INVESTMENT

QUARTERLY INVESTMENT REVIEW

BASIC RETIREMENT FUNDS

March 31, 1985

MINNESOTA STATE BOARD OF INVESTMENT

BASIC RETIREMENT FUNDS

FIRST QUARTER 1985

Summary

ASSETS

The market value of the Basic Retirement Funds assets increased 6.6% during the first quarter of 1985. The growth in value was attributable primarily to the strong performance of the common stock segment of the Basic Funds' portfolio. The sizeable negative net contributions which hampered the growth of the Basic Funds' assets during the last half of 1984 were halted temporarily as first quarter net contributions totaled $2 million. The Basic Funds, however, are expected to experience substantial net withdrawals in second quarter 1985 as teacher retirements occur. End-of-period market values of the Basic Retirement Funds are presented below.

Calendar Year		Market Value (millions)	Percent Change from Previous Period
1980		$1,962	+ 20.6%
1981		2,148	+ 9.5
1982		2,806	+ 30.6
1983		3,129	+ 11.5
1984		3,265	+ 4.4
1985	1Q	3,479	+ 6.6

ASSET MIX

There were no significant changes in the Basic Funds' asset mix during first quarter 1985. The strong relative performance of the stock market resulted in a slight increase in the comparative weighting of the common stock component of the portfolio. The active equity managers' allocation to equities remained constant. The bond segment exhibited a minor decrease in allocation, reflecting principally the weak relative performance of the bond market but also a slight trimming of the active fixed income managers' allocation to bonds. The relative size of the cash equivalent and alternative equity investment segments of the portfolio remained virtually unchanged. The percentage of the Basic Funds (at market value) invested in the various asset classes over the last two quarters are shown below.

ASSET MIX

	12/31/84	3/31/85
Common Stocks	57.8%	59.1%
Bonds	25.9	24.3
Cash Equivalents*	9.4	9.6
Alternative Equity Assets	6.9	7.0
	100.0%	100.0%

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

INVESTMENT RETURNS

The Basic Retirement Funds' portfolio generated a 6.5% total rate of return in the first quarter. In a reversal of the previous quarter's results, a comparatively strong common stock market was the major contributor to total fund performance. First quarter bond segment returns, on the other hand, were relatively modest. A slightly greater exposure to common stocks allowed the Basic Funds to outperform a universe of balanced tax-exempt funds, although the Basic Funds did underperform their stock/bond composite target. Total portfolio and asset segment returns for the most recent quarter and year are displayed below.

	Total Rate of Return	
	First Quarter 1985	Year Ending 3/31/85
Common Stocks	9.5%	18.4%
Bonds	2.1	14.5
Cash	2.2	10.5
Alternative Equity Assets	1.6	9.2
Total Fund	6.5	16.4

EQUITY PERFORMANCE

The stock market, as represented by the Wilshire 5000, produced a 10.3% total return in the first quarter. Once again, the market proved to be an elusive performance target for equity managers as less than 25% of all equity managers in the TUCS universe produced returns which were superior to that of the market. Although several of the SBI's individual active equity managers generated returns which exceeded that of the stock market, as a group the Basic Retirement Funds' active equity managers underperformed the market. The performance of the index fund continued to remain in close synchronization with the performance of the Wilshire 5000.

The active managers' aggregate industry sector emphases changed little during the quarter. The active managers as a group continued to be significantly overweighted in the Financial, Technology, and Transportation sectors and underweighted in the Energy and Utilities sectors. In addition, aggregate exposure to equities remained constant and changes in portfolio risk characteristics were relatively minor.

The Basic Retirement Funds' equity manager returns for the latest quarter, year, and since-inception are presented in the table below.

Total Portfolio Returns

	First Quarter 1985	Year Ending 3/31/85	Since Inception 3/1/83 (Annualized)
Fred Alger	7.2%	11.9%	7.3%
Alliance Capital	12.2	23.9	8.0
Beutel Goodman	10.7	23.4	17.7
Forstmann Leff	10.9	18.0	10.4
Hellman Jordan	8.7	19.7	8.9
IDS	8.5	23.9	10.9
Investment Advisers	6.4	20.9	11.5
Loomis Sayles	5.7	8.6	- 0.7
Siebel Capital	7.5	20.0	8.4
Herbert R. Smith	7.5	6.9	- 2.7
Trustee & Investors	5.7	6.5	0.2
Total - External Active Managers	8.4	17.0	7.5
Wilshire Associates (Index Fund)	9.9	19.1	NA
Wilshire 5000	10.3	18.7	13.7

BOND PERFORMANCE

In contrast to its outstanding performance in the fourth quarter, the bond market's first quarter 1985 performance was relatively lackluster. The market experienced substantial fluctuations throughout the quarter as it responded to the volatile pattern of interest rate changes. The Merrill Lynch Master Bond Index produced a modest 2.0% return for the quarter, bringing its return for the last three quarters (i.e., since the inception of the active bond manager accounts) to 18.7%. The Basic Retirement Funds' active bond managers generated a combined return of 2.1% for the quarter and a 17.8% return for the last three quarters, outperforming the Merrill Lynch Index in the latest quarter but underperforming in the period since inception. First quarter and since-inception returns for the Basic Funds' external bond managers are presented below.

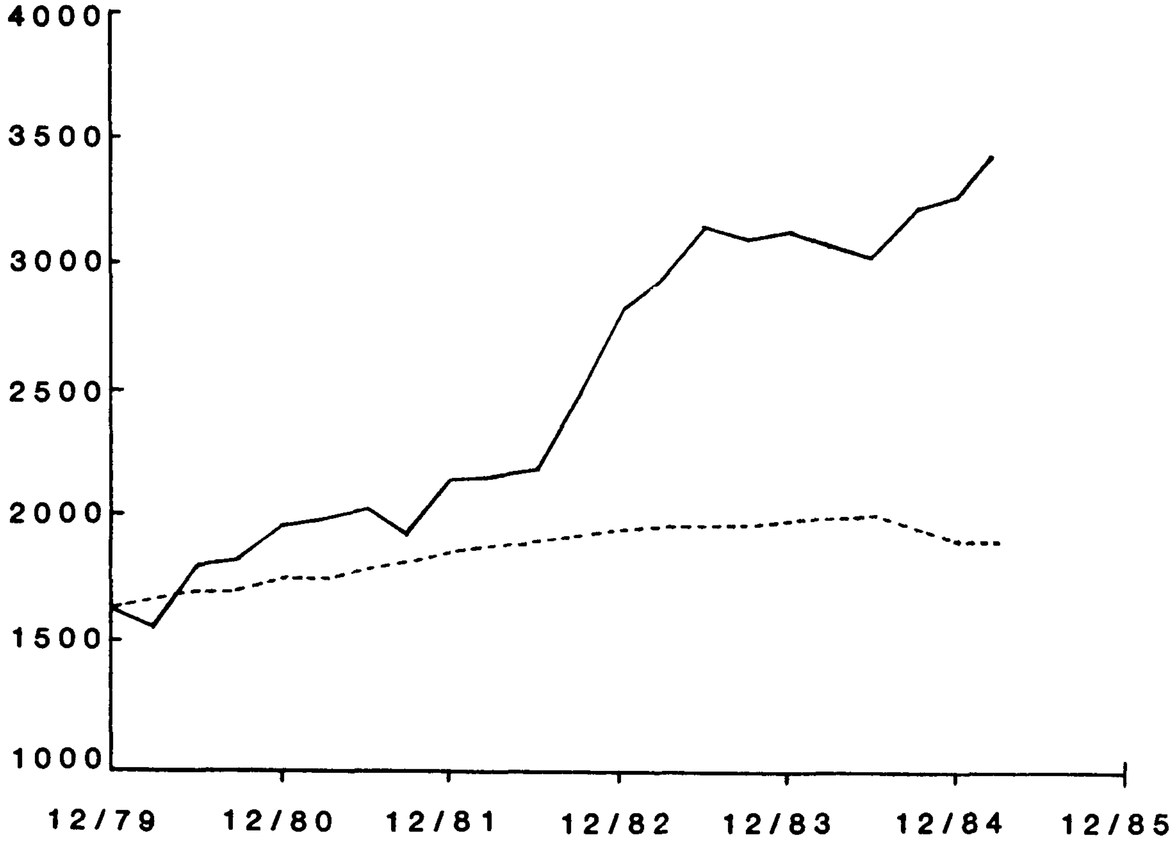
Total Portfolio Returns

	First Quarter 1985	Since Inception 6/30/84
Investment Advisers	1.8%	23.8%
Lehman Management	2.1	18.5
Miller Anderson	2.5	16.3
Morgan Stanley	1.5	15.6
Norwest Bank Minneapolis	2.2	15.4
Western Asset	2.3	21.1
Total - External Managers	2.1	17.8
Merrill Lynch Master Bond Index	2.0	18.7

FIGURE 1

BASIC RETIREMENT FUNDS

ASSET GROWTH



BEGINNING VALUE PLUS NET CONTRIBUTIONS ---
TOTAL PORTFOLIO MARKET VALUE ——

PERIOD ENDING

	12/80	12/81	12/82	12/83	12/84	3/85
BEGINNING VALUE	1627.1	1962.0	2148.8	2806.2	3129.0	3265.0
NET CONTRIBUTIONS	122.7	114.9	91.0	40.0	- 77.6	2.0
INVESTMENT RETURN	212.2	71.9	566.4	282.8	213.6	211.9
ENDING VALUE	1962.0	2148.8	2806.2	3129.0	3265.0	3478.9

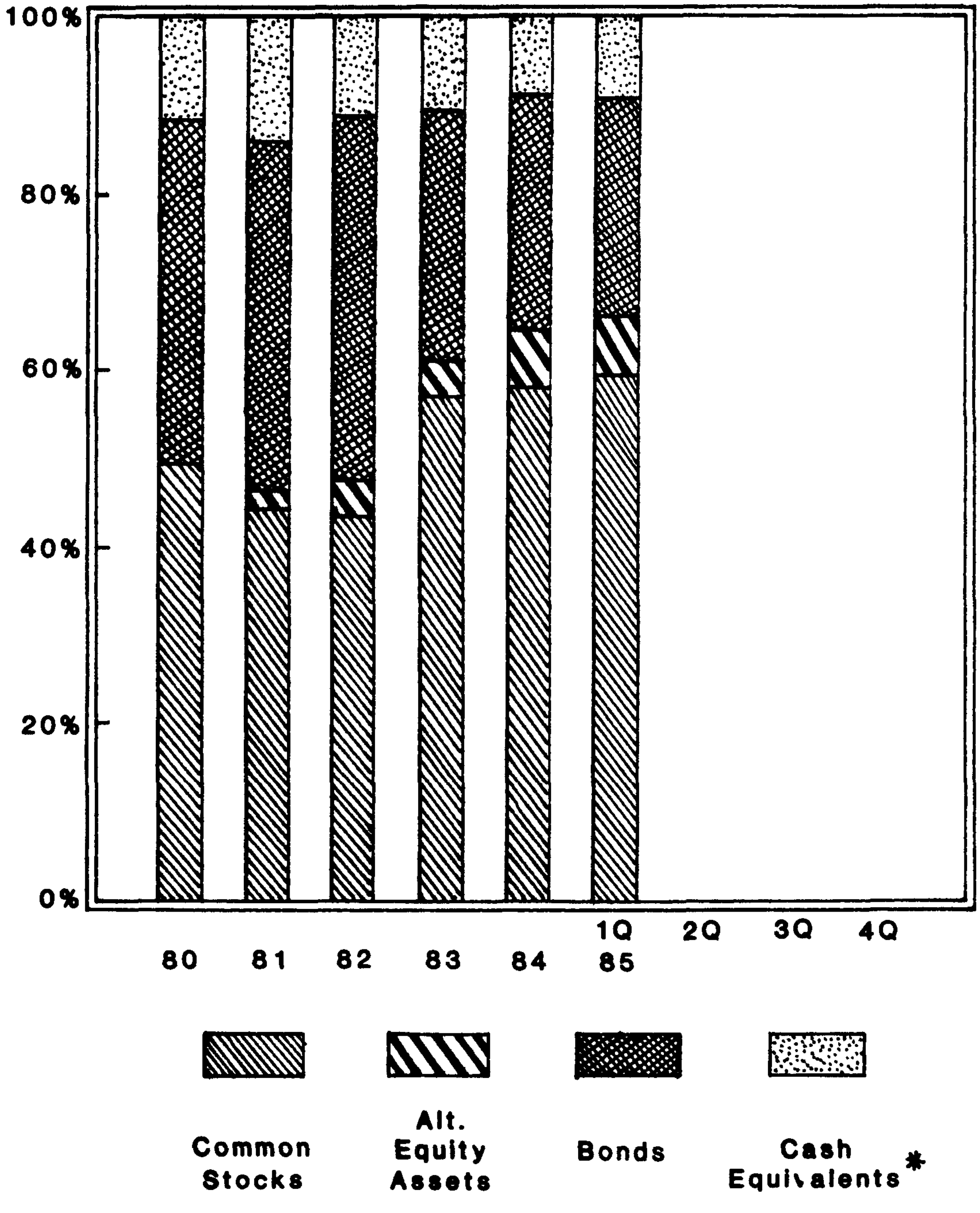
(MILLIONS OF DOLLARS)

FIGURE 2

BASIC RETIREMENT FUNDS

ASSET MIX

PERCENT OF MARKET VALUE
(End Of Period Allocations)



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

TABLE 1

BASIC RETIREMENT FUNDS

ASSET MIX

PERCENT OF MARKET VALUE
(End of Period Allocations)

	Common Stocks		Bonds		Cash*		Real Estate		Resource Funds		Venture Capital	
	$Million	Percent	$Million	Percent	$Million	Percent	$Million	Percent	$Million	Percent	$Million	Percent
1980	964	49.1	767	39.1	231	11.8	-	-	-	-	-	-
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 1Q	2,055	59.1	845	24.3	335	9.6	194	5.6	25	0.7	26	0.7

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

TABLE 2

BASIC RETIREMENT FUNDS

ASSET MIX - ACTUAL vs. POLICY

PERCENT OF MARKET VALUE
(End of Period Allocations)

		Common Stocks*						Fixed Income***			Real Estate*			Resource Funds Venture Capital*		
		Passive Management			Active Management											
		Actual	Policy	Diff.	Actual	Policy	Diff.	Actual	Policy	Diff.	Actual	Policy	Diff.	Actual	Policy	Diff.
1983	1Q	0	40	-40	57.9	20	+37.9	38.3	25	+13.3	3.2	10	-6.8	0.6	5	-4.4
	2Q	0	40	-40	61.9	20	+41.9	34.5	25	+ 9.5	3.0	10	-7.0	0.6	5	-4.4
	3Q	0	40	-40	63.4	20	+43.4	32.8	25	+ 7.8	3.2	10	-6.8	0.6	5	-4.4
	4Q	43.5	40	+ 3.5	18.5	20	- 1.5	34.1	25	+ 9.1	3.2	10	-6.8	0.7	5	-4.3
1984	1Q	42.2	40	+ 2.2	17.8	20	- 2.2	35.7	25	+10.7	3.5	10	-6.5	0.8	5	-4.2
	2Q	41.7	40	+ 1.7	17.7	20	- 2.3	33.3	25	+ 8.3	5.5	10	-4.5	1.8	5	-3.2
	3Q	42.5	40	+ 2.5	17.9	20	- 2.1	32.6	25	+ 7.6	5.3	10	-4.7	1.7	5	-3.3
	4Q	42.1	40	+ 2.1	18.0	20	- 2.0	32.7	25	+ 7.7	5.5	10	-4.5	1.7	5	-3.3
1985	1Q	43.0	40	+ 3.0	18.3	20	- 1.7	31.4	25	+ 6.4	5.7	10	-4.3	1.6	5	-3.4

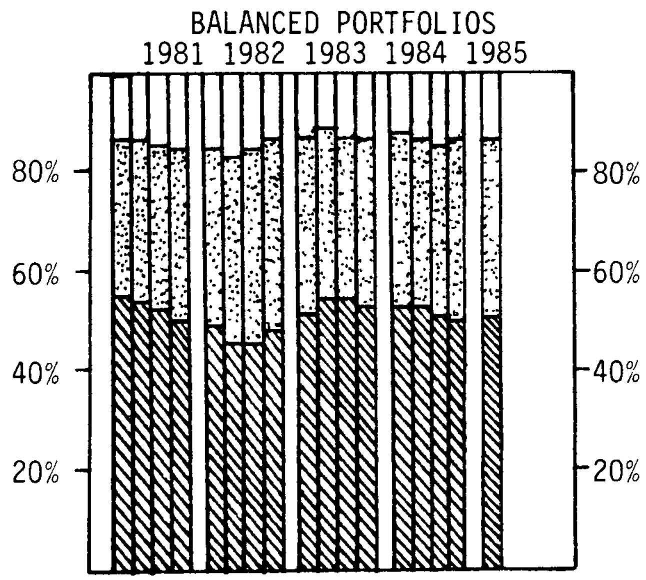
*Includes cash held by external managers.
**Includes cash uncommitted to long-term assets.

FIGURE 3

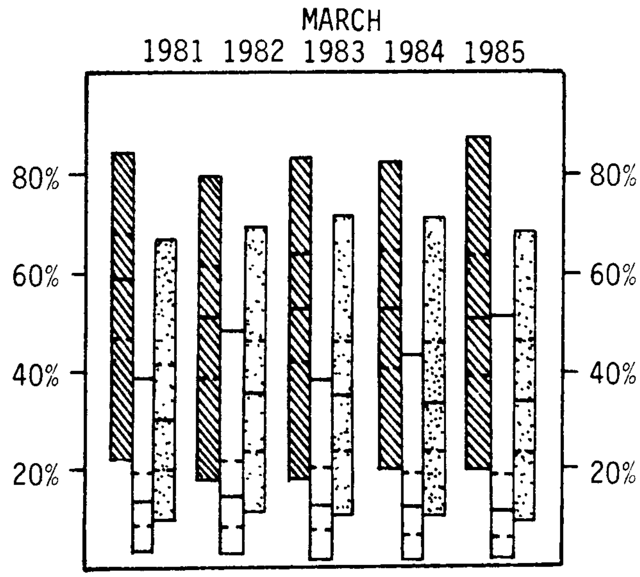
ASSET ALLOCATION PERSPECTIVE

TAX EXEMPT BALANCED PORTFOLIOS

QUARTER-TO-QUARTER
AVERAGE ASSET ALLOCATION



ASSET ALLOCATION
DISTRIBUTION



EQUITY | FIXED INCOME | CASH

PERCENT EQUITY	MARCH 1981	1982	1983	1984	1985
5TH PERCENTILE	83	79	82	81	86
25TH PERCENTILE	66	60	62	63	62
MEDIAN	57	49	51	51	49
75TH PERCENTILE	45	37	41	40	38
95TH PERCENTILE	21	17	18	19	19
PERCENT CASH EQUIV					
5TH PERCENTILE	37	47	37	42	50
25TH PERCENTILE	18	20	19	18	18
MEDIAN	12	13	11	11	10
75TH PERCENTILE	7	7	6	5	5
95TH PERCENTILE	2	2	1	1	1
PERCENT FIXED INCOME					
5TH PERCENTILE	65	68	70	69	67
25TH PERCENTILE	40	45	45	44	45
MEDIAN	29	34	34	32	33
75TH PERCENTILE	19	23	23	23	23
95TH PERCENTILE	8	9	9	9	8

Source: Trust Universe Comparison Service

FIGURE 4

PERFORMANCE OF CAPITAL MARKETS

CUMULATIVE RETURNS

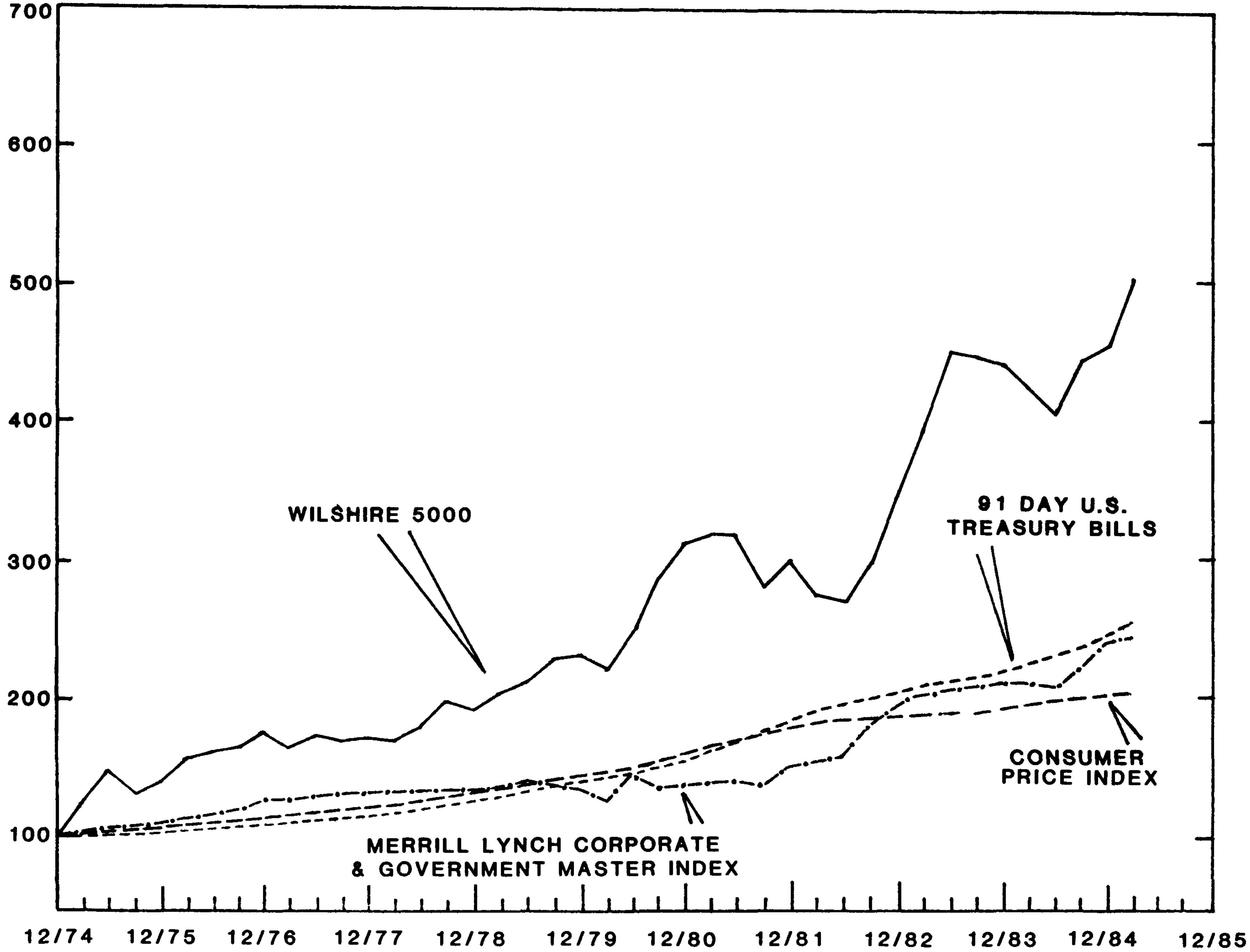


FIGURE 5

BASIC RETIREMENT FUNDS

INVESTMENT RETURNS RELATIVE TO PERFORMANCE STANDARDS

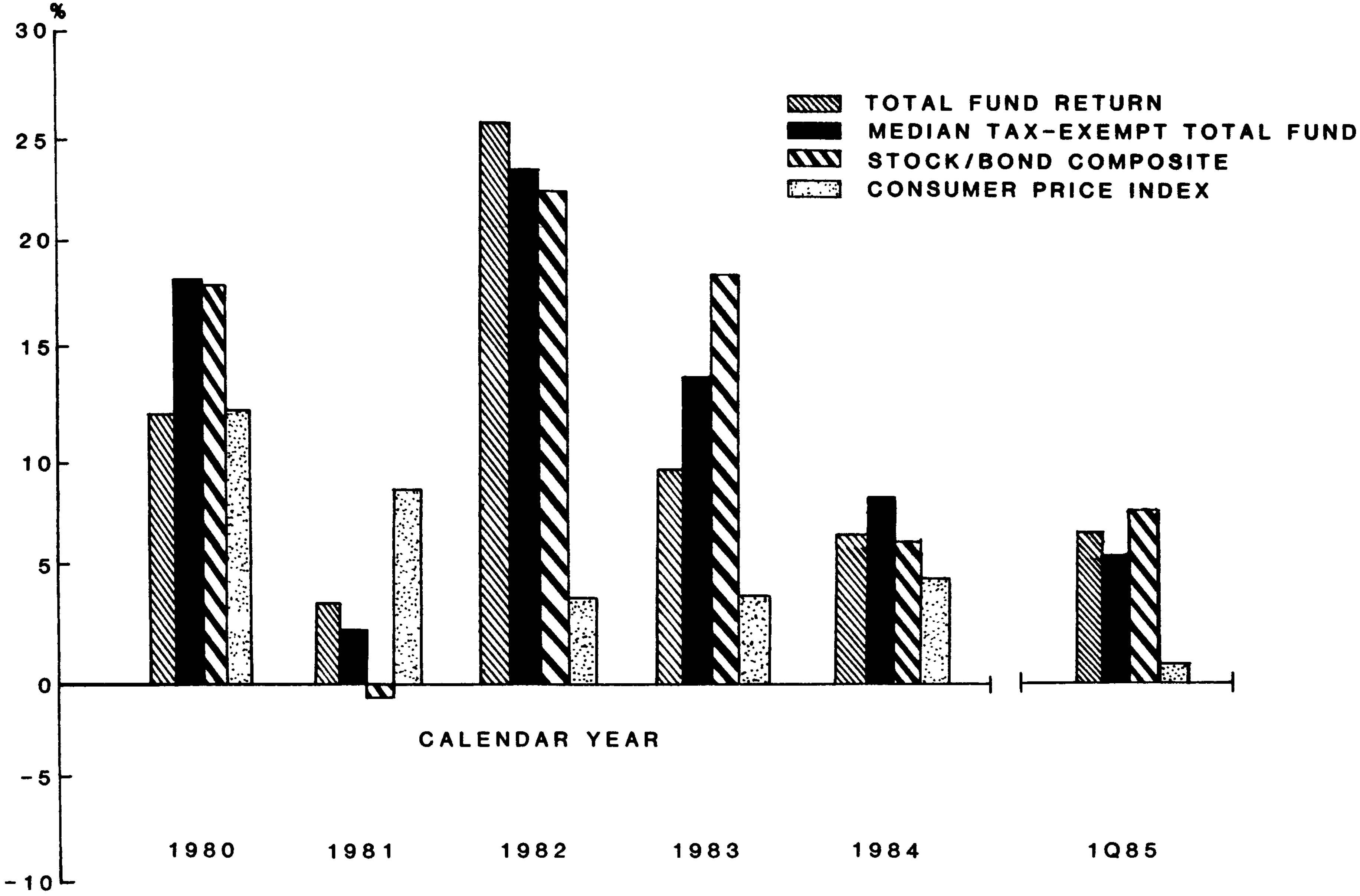


TABLE 3

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	Total Fund Return (inc. alt. assets)
1980	12.4	18.6	18.3	12.5	12.4
1981	3.5	2.2	-0.6	8.9	3.5
1982	26.4	23.3	22.4	3.8	25.7
1983	10.3	14.1	18.8	3.8	10.1
1984	6.8	8.3	6.6	4.0	6.9
1985 1Q	6.9	5.7	7.8	1.0	6.5
1 Year Through 3-31-85	17.0	16.3	18.1	3.6	16.4
3 Years Annualized Through 3-31-85	17.1	17.7	20.9	4.0	16.7
5 Years Annualized Through 3-31-85	14.7	15.5	16.1	5.9	14.5

*50/50 Wilshire 5000/Merrill Lynch Bond Index Composite Through 6-30-81
70/30 Wilshire 5000/Merrill Lynch Bond Index Composite 7-01-81 through 3-31-85

TABLE 4

BASIC RETIREMENT FUNDS

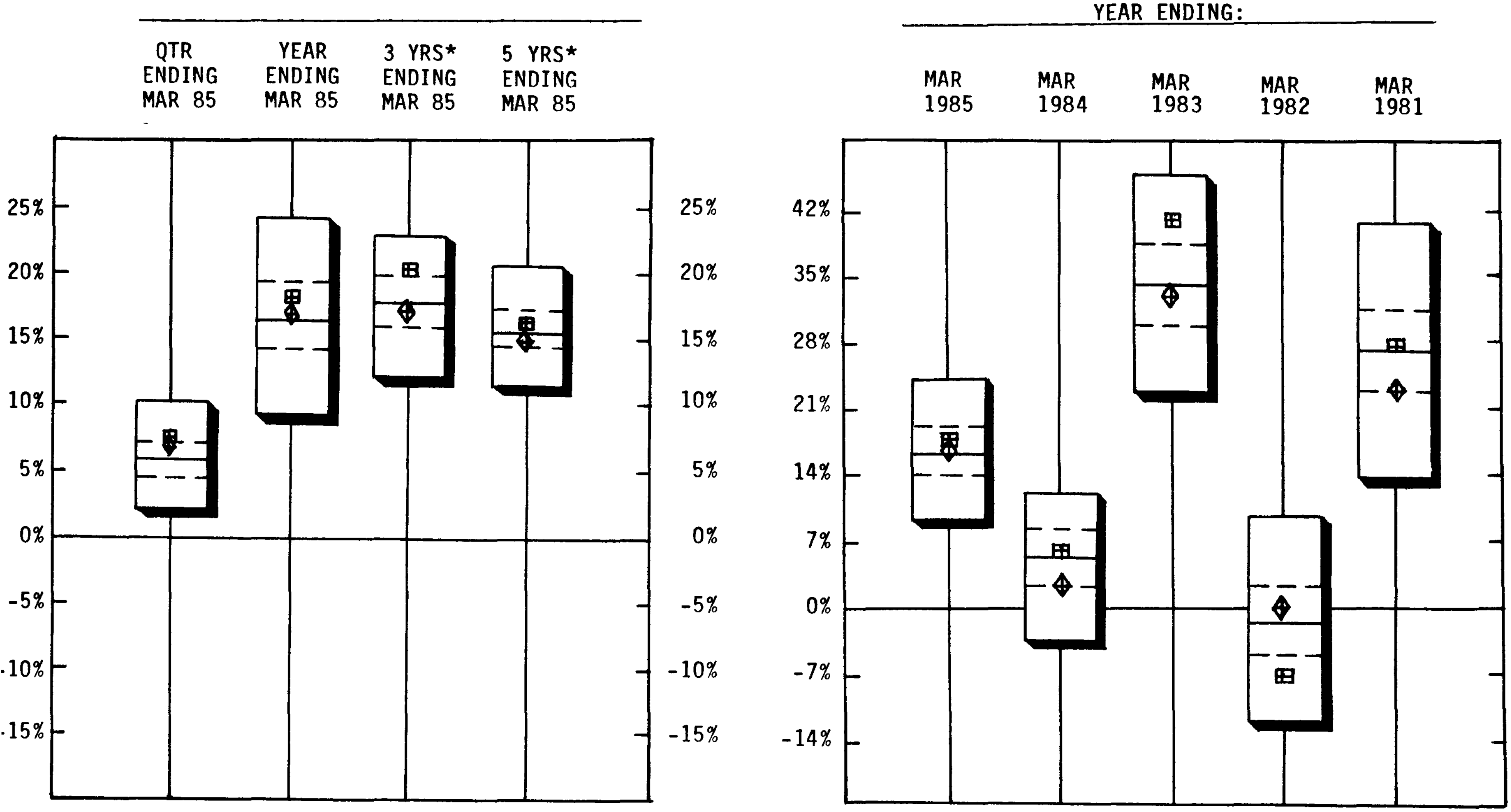
INVESTMENT RETURNS - DETAIL

Calendar Year	Total Fund Return (exc. alt. assets)	Common Stocks		Bonds		Alternative Equity Assets	Total Fund Return (inc. alt. assets)
		Basics	Wilshire 5000	Basics	ML Bond Index		
1980	12.4	26.2	33.7	-0.1	3.3	-	12.4
1981	3.5	0.0	-3.6	2.0	7.0	-	3.5
1982	26.4	21.6	18.7	38.1	29.8	11.9	25.7
1983	10.3	12.7	23.5	9.3	7.8	7.4	10.1
1984	6.8	2.7	3.1	14.6	15.1	11.8	6.9
1985 1Q	6.9	9.5	10.3	2.1	2.0	1.6	6.5
1 Year Through 3-31-85	17.0	18.4	18.7	14.5	16.5	9.2	16.4
3 Years Annualized Through 3-31-85	17.1	17.5	22.4	19.8	16.9	NA	16.7
5 Years Annualized Through 3-31-85	14.7	15.3	17.8	15.6	14.6	NA	14.5

FIGURE 6

DISTRIBUTION OF TOTAL PORTFOLIO RETURNS

TAX EXEMPT BALANCED PORTFOLIOS



⊞ Wilshire 5000/Merrill Lynch Bond Index
◈ Basic Retirement Funds

Source: Trust Universe Comparison Service; Merrill Lynch Capital Markets

TABLE 5

DISTRIBUTION OF TOTAL PORTFOLIO RETURNS

TAX EXEMPT BALANCED PORTFOLIOS

					YEAR ENDING:				
	QTR ENDING MAR 85	YEAR ENDING MAR 85	3 YRS* ENDING MAR 85	5 YRS* ENDING MAR 85	MAR 1985	MAR 1984	MAR 1983	MAR 1982	MAR 1981
5TH PERCENTILE	10.3%	24.2%	22.8%	20.5%	24.2%	12.2%	45.8%	9.7%	40.8%
25TH PERCENTILE	7.1	19.3	19.8	17.3	19.3	8.4	38.4	2.4	31.5
MEDIAN	5.7	16.3	17.7	15.5	16.3	5.4	34.1	- 1.5	27.3
75TH PERCENTILE	4.4	14.1	15.9	14.4	14.1	2.4	29.8	- 4.9	22.7
95TH PERCENTILE	2.2	9.2	12.1	11.4	9.2	-3.5	22.6	-12.0	13.6
WILSHIRE 5000	10.3	18.7	22.4	17.8	18.7	6.1	45.7	-14.1	44.2
MERRILL LYNCH BOND INDEX	2.0	16.5	16.9	14.6	16.5	5.3	30.1	9.8	12.7
** STOCK/BOND INDEX	7.8	18.1	20.9	16.1	18.1	6.0	41.0	- 7.1	28.4
BASIC RETIREMENT FUNDS	6.9	17.0	17.1	14.7	17.0	2.5	33.7	0.8	22.5

*Annualized

**50/50 Wilshire 5000/Merrill Lynch Bond Index Composite Through 6-30-81
70/50 Wilshire 5000/Merrill Lynch Bond Index Composite 7-01-81 Through 3-31-85

Source: Trust Universe Comparison Service; Merrill Lynch Capital Markets.

TABLE 6

BASIC RETIREMENT FUNDS

EQUITY MANAGER PERFORMANCE

TOTAL PORTFOLIO RETURNS

MARCH 31, 1985

Managers	First Quarter 1985	Year Ending 3/31/85	Two Years Ending 3/31/85 (Annualized)	Since Inception 3/1/83 (Annualized)
Fred Alger	7.2%	11.9%	6.1%	7.3%
Alliance Capital	12.2	23.9	7.2	8.0
Beutel Goodman	10.7	23.4	17.9	17.7
Forstmann Leff	10.9	18.0	9.4	10.4
Hellman Jordan	8.7	19.7	9.8	8.9
IDS	8.5	23.9	10.6	10.9
Investment Advisers	6.4	20.9	11.1	11.5
Loomis Sayles	5.7	8.6	-0.9	-0.7
Siebel Capital	7.5	20.0	7.1	8.4
Herbert R. Smith	7.5	6.9	-3.0	-2.7
Trustee & Investors	5.7	6.5	0.1	0.2
Total - External Active Managers	8.4	17.0	7.1	7.5
Wilshire Associates (Index Fund)	9.9	19.1	NA	NA
Performance Standards				
Wilshire 5000	10.3	18.7	12.3	13.7
TUCS Aggressive Manager Median	9.2	14.5	6.2	NA
Inflation	1.0	3.6	4.2	4.1

TABLE 7

BASIC RETIREMENT FUNDS

EXTERNAL EQUITY MANAGER RISK PROFILES

QUARTER-END PORTFOLIO STATISTICS

MANAGER	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	Price Var.	PORTFOLIO RISK ORIENTATION Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
GROWTH MANAGERS												
Fred Alger	39	96	1.8%	16.4	1.27	0.85	++	++	-	-	++	+
Alliance	35	96	2.0	16.1	1.19	0.76	+	0	--	+	++	--
Loomis Sayles	18	98	2.3	18.6	1.33	0.76	++	++	--	+	++	-
Herbert R. Smith	49	97	2.7	11.2	1.26	0.84	+	+	-	0	0	0
Trustee & Investors	43	97	2.8	13.5	1.22	0.93	++	++	++	0	0	++
Mean Growth Manager	37	97	2.3	15.2	1.25	0.83	++	+	-	0	+	0
ROTATIONAL MANAGERS												
Forstmann Leff	27	69	3.1	11.8	1.19	0.89	++	+	0	-	0	0
Hellman Jordan	35	81	3.7	14.2	1.13	0.88	+	+	++	--	-	++
IDS	42	87	4.1	14.1	1.08	0.85	0	0	-	--	-	+
Investment Advisers	37	89	3.3	10.9	1.17	0.91	+	+	0	-	-	0
Siebel	52	76	2.5	12.8	1.19	0.87	+	0	-	++	0	0
Mean Rotational Manager	39	80	3.3	12.8	1.15	0.88	+	+	0	-	-	+
VALUE MANAGER												
Beutel Goodman	20	93	3.7	13.0	1.18	0.83	+	0	++	++	0	++
COMPOSITE DATA												
Composite External Manager	281	89	2.9	13.9	1.20	0.90	++	+	-	+	0	0
Index Fund Manager	1142	100	4.0	NA	1.06	0.95	-	0	-	0	-	0
Composite All Basic Managers	1188	96	3.7	NA	1.10	0.94	0	0	-	0	-	0

TABLE 8

BASIC RETIREMENT FUNDS

EXTERNAL EQUITY MANAGER SECTOR WEIGHTINGS

	SECTOR WEIGHTINGS								
MANAGER	CAPITAL GOODS	CONSUMER DURABLES	CONSUMER NONDURABLES	ENERGY	FINANCIAL	MAT. & SERVICES	TECHNOLOGY	TRANS-PORTATION	UTILITIES
GROWTH MANAGERS									
Fred Alger	5.2%	14.3%	28.8%	3.7%	7.8%	1.8%	24.8%	13.6%	---
Alliance	---	9.9	47.9	2.4	12.6	---	15.8	8.0	3.4%
Loomis Sayles	---	13.9	19.3	---	30.1	---	36.7	---	---
Herbert R. Smith	2.4	3.2	24.3	8.8	20.1	4.7	18.7	17.8	---
Trustee & Investors	2.3	1.5	17.0	3.9	6.8	26.2	31.2	11.1	---
Mean Growth Manager	2.0	8.6	27.5	3.8	15.5	6.5	25.4	10.1	0.7
ROTATIONAL MANAGERS									
Forstmann Leff	2.5	9.8	25.7	---	25.5	14.7	17.4	4.4	---
Hellman Jordan	1.3	----	21.9	5.9	25.3	13.6	16.1	6.7	9.2
IDS	----	5.1	27.5	9.8	11.0	7.3	14.0	7.7	17.6
Investment Advisers	2.4	6.0	6.1	2.8	16.3	19.9	32.9	12.6	---
Siebel	7.0	5.4	39.1	1.2	18.9	5.9	22.5	---	---
Mean Rotational Manager	2.8	5.3	24.1	3.9	19.4	12.3	20.6	6.3	5.4
VALUE MANAGER									
Beutel Goodman	2.1	---	19.2	---	28.4	33.1	13.6	3.6	---
COMPOSITE DATA									
Composite External Managers	2.4	6.2	25.0	3.5	18.3	12.0	22.0	7.8	2.8
Index Fund Manager	5.1	4.1	25.8	11.9	11.3	10.8	14.7	2.9	13.4
Composite All Basic Managers	4.4	4.7	25.6	9.6	13.2	11.1	16.7	4.2	10.5
Wilshire 5000	4.9	3.9	25.3	13.0	11.4	10.9	14.4	3.3	12.9

STAFF COMMENTS:

The stock market, as represented by the Wilshire 5000, produced a 10.3% return for the first quarter of 1985 bringing the total return for the most recent year to 18.7%. The new year began with a sharp market rally which was led by aggressive growth and cyclical issues. Many of the smaller capitalization, higher beta stocks, in particular, including those in the technology sector, enjoyed strong performance during the month of January. By mid-February, however, these sectors of the market began to experience major corrections, while the performance of many larger capitalization, lower beta, defensive and consumer-related issues, which had underperformed the market in the early rally, improved. For the full quarter, the Financial, Energy, and Consumer Nondurables sectors emerged as the strongest performers, while the Technology and Consumer Durables sectors experienced relatively weak returns.

The rotation of market leadership made beating the market a difficult feat for equity managers to achieve. Approximately 75% of all equity managers in the TUCS universe underperformed the market in the first quarter. On the other hand, roughly half of the equity managers outperformed the market in the latest year, due in large part to strong relative returns in fourth quarter 1984. Aggressive equity managers, as represented by a sample of the TUCS universe, benefited from the early quarter rally of higher beta, smaller cap stocks. The median TUCS aggressive manager generated a 9.2% return for the quarter and a 14.5% return for the year. On a relative basis, however, the performance of the median TUCS aggressive manager lagged that of the market in the first quarter as well as in the latest year.

The Basic Retirement Funds' active equity managers produced a combined first quarter total return of 8.4%. Thus, the Basic Funds' active managers as a group underperformed both the market and the median TUCS aggressive manager in the quarter. With overweighted positions in the Financial and/or Consumer Nondurables sectors, Alliance Capital, Beutel Goodman and Forstmann Little were the SBI's top performing managers for the quarter. Loomis Sayles and Trustee & Investors, were the poorest performing SBI managers due, in part, to their significant overweighting of the Technology sector. For the latest year, the majority of the Basic Funds' active equity managers outperformed both the market and the sample of aggressive managers. As a group, the Basic Funds' active managers with an combined return of 17.0%, underperformed the market, but outperformed the median TUCS aggressive manager by a significant margin.

Aggregate equity portfolio characteristics were altered slightly during the quarter. As a group, the active equity managers reduced the yield of the portfolio and increased the P/E. The managers remained significantly overweighted in the Financial, Technology, and Transportation sectors and underweighted in the Energy and Utilities sectors.

The Basic Retirement Funds' passive equity portfolio produced a 9.9% return for the quarter, diverging slightly from the Wilshire 5000's 10.3% return. The annual return for the index fund was 19.1% versus the Wilshire 5000's 18.7% return.

MINNESOTA STATE BOARD OF INVESTMENT

QUARTERLY INVESTMENT REVIEW

POST RETIREMENT INVESTMENT FUND

March 31, 1985

MINNESOTA STATE BOARD OF INVESTMENT

POST RETIREMENT INVESTMENT FUND

FIRST QUARTER 1985

Summary

ASSETS

The assets of the Post Retirement Investment Fund rose by 4.7% in market value during the first quarter. Although the Fund's portfolio is primarily invested in bonds, the strong performance of the common stock segment was the primary contributor to the increase in the Fund's market value. Net contributions to the Fund continued to be significantly positive as a result of early retirements under the "Rule of 85". As expected, first quarter net contributions, at $20 million, were down from fourth quarter 1984 levels. However, a massive influx of new contributions is expected before the end of the second quarter as teacher retirements take place. End-of-period market values of the Post Retirement Investment Fund's assets over the past five years are shown below.

Calendar Year		Market Value (millions)	Percent Change from Previous Period
1980		$1,161	+20.2
1981		1,101	- 5.2
1982		1,523	+38.3
1983		1,803	+18.4
1984		2,246	+24.6
1985	1Q	2,352	+ 4.7

ASSET MIX

The completion of the Post Retirement Investment Fund's dedicated bond portfolio resulted in the reduction in the Fund's cash position and a concomitant increase in its bond holdings. Despite the direction of new cash flow into bonds, the common stock component's strong performance allowed its relative weighting to remain constant from the previous quarter. The percentage of the Fund (at market) invested in stocks, bonds and cash equivalents over the last two quarters is presented below.

ASSET MIX

	12/31/84	3/31/85
Common Stocks	30.0%	30.4%
Bonds	62.9	66.0
Cash Equivalents	7.1	3.6
	100.0%	100.0%

BOND PORTFOLIO

The construction of the Post Retirement Investment Fund's dedicated bond portfolio was completed during the first quarter. During the months of January and February, the original bond portfolio and cash holdings were converted into the required bond issues. Trading in these bonds went smoothly and generated no noticable market impact.

The dedicated bond portfolio is designed to produce cash flows sufficient to ensure that benefits promised current retirees are available when needed. The dedicated portfolio also generates enough income to fund a floor annual benefit increase.

A staff analysis of the dedicated bond portfolio's construction and a discussion of related issues is presented in the Fixed Income Manager Committee section of this quarterly report.

EQUITY PERFORMANCE

The common stock component of the Post Retirement Investment Fund produced a 9.7% total rate of return during the first quarter. This result fell slightly short of the Wilshire 5000's 10.3% total return but compared favorably to the performance of other active equity managers.

The sector weightings of the equity portfolio did not shift significantly over the quarter. The portfolio remained heavily overweighted in Financial stocks and underweighted in Utilities and Consumer Nondurable stocks. During the quarter positions in Capital Goods and Utilities were reduced while holdings in Energy and Technology were increased.

The equity portfolio's returns over the most recent quarter, one year and since March 1, 1983 (to facilitate comparability with external manager performance) are displayed below.

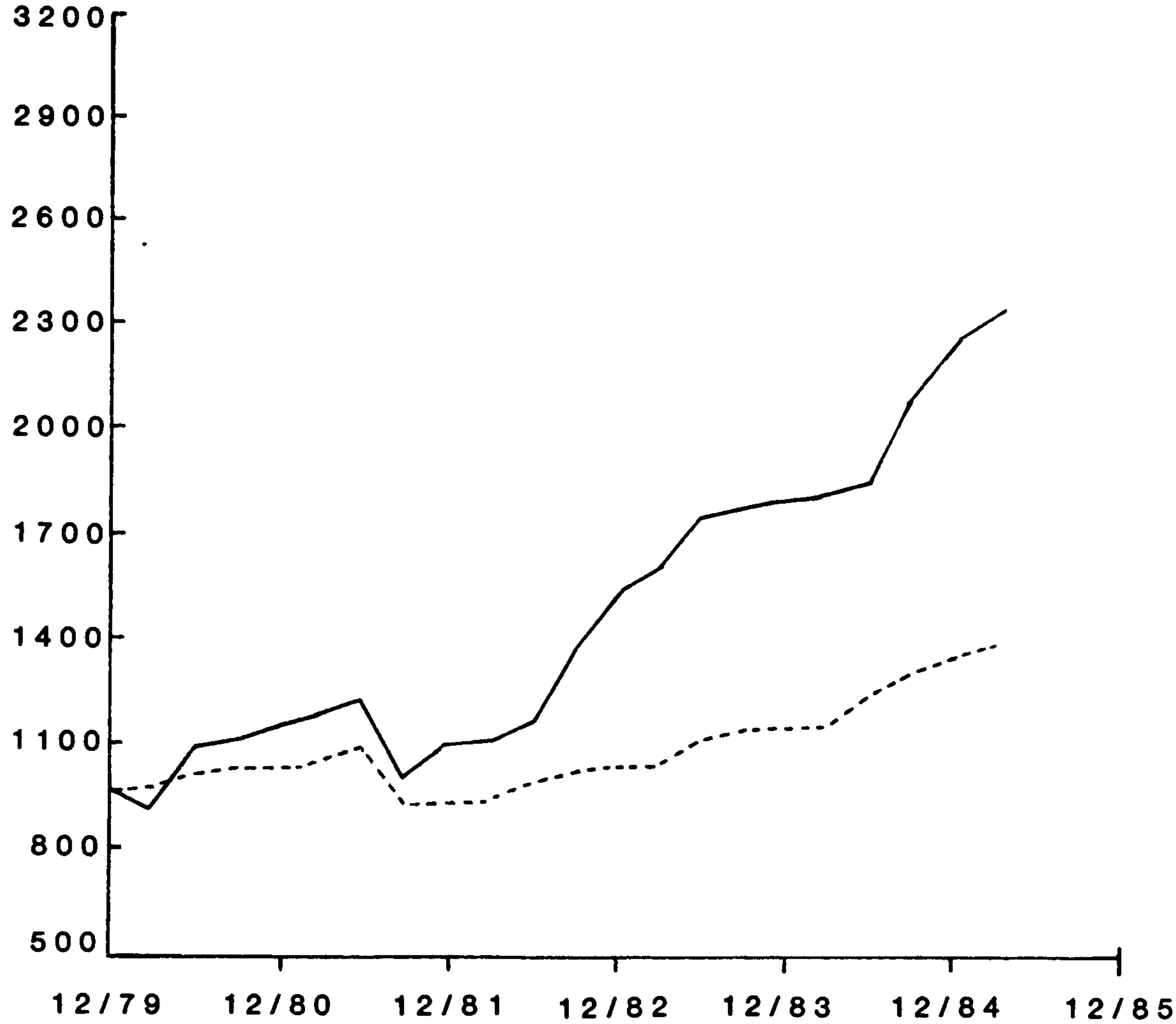
Total Portfolio Returns

	First Quarter 1985	Year Ending 3/31/85	Since 3/1/83 (Annualized)
Equity Portfolio	9.7%	21.1%	12.9%
Wilshire 5000	10.3	18.7	13.7

FIGURE 7

POST RETIREMENT INVESTMENT FUND

ASSET GROWTH



BEGINNING VALUE PLUS NET CONTRIBUTIONS ---
TOTAL PORTFOLIO MARKET VALUE ——

BEGINNING VALUE PLUS NET CONTRIBUTIONS ---
TOTAL PORTFOLIO MARKET VALUE

	YEAR ENDING 12/80	12/81	12/82	12/83	12/84	3/85
BEGINNING VALUE	965.6	1161.6	1100.9	1522.9	1802.9	2245.7
NET CONTRIBUTIONS	70.1	-97.8	102.6	109.1	201.0	20.3
INVESTMENT RETURN	125.9	37.1	319.4	170.8	241.8	86.4
ENDING VALUE	1161.6	1100.9	1522.9	1802.9	2245.7	2352.4

(MILLIONS OF DOLLARS)

FIGURE 8

POST RETIREMENT INVESTMENT FUND

ASSET MIX

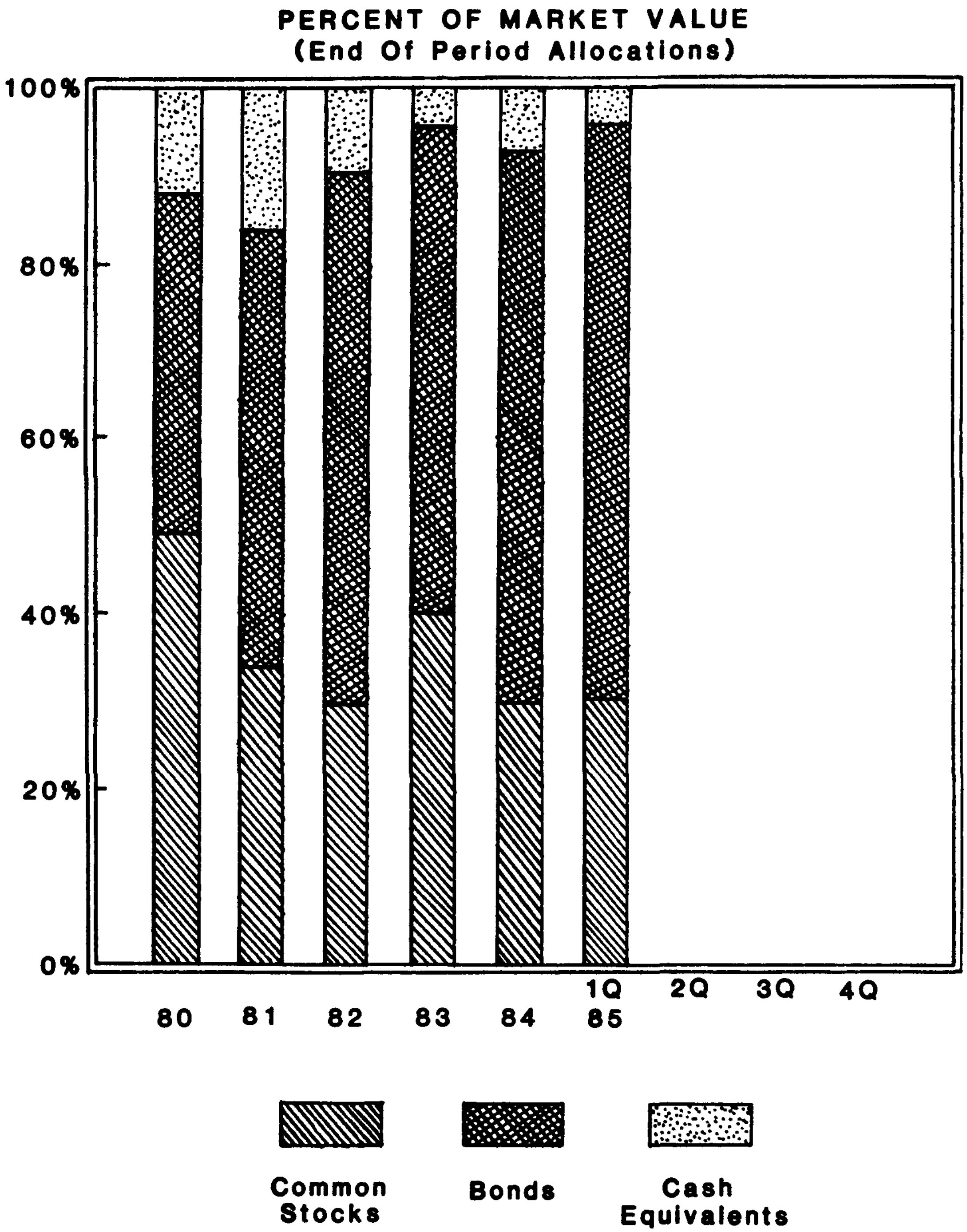


TABLE 9

POST RETIREMENT INVESTMENT FUND

ASSET MIX

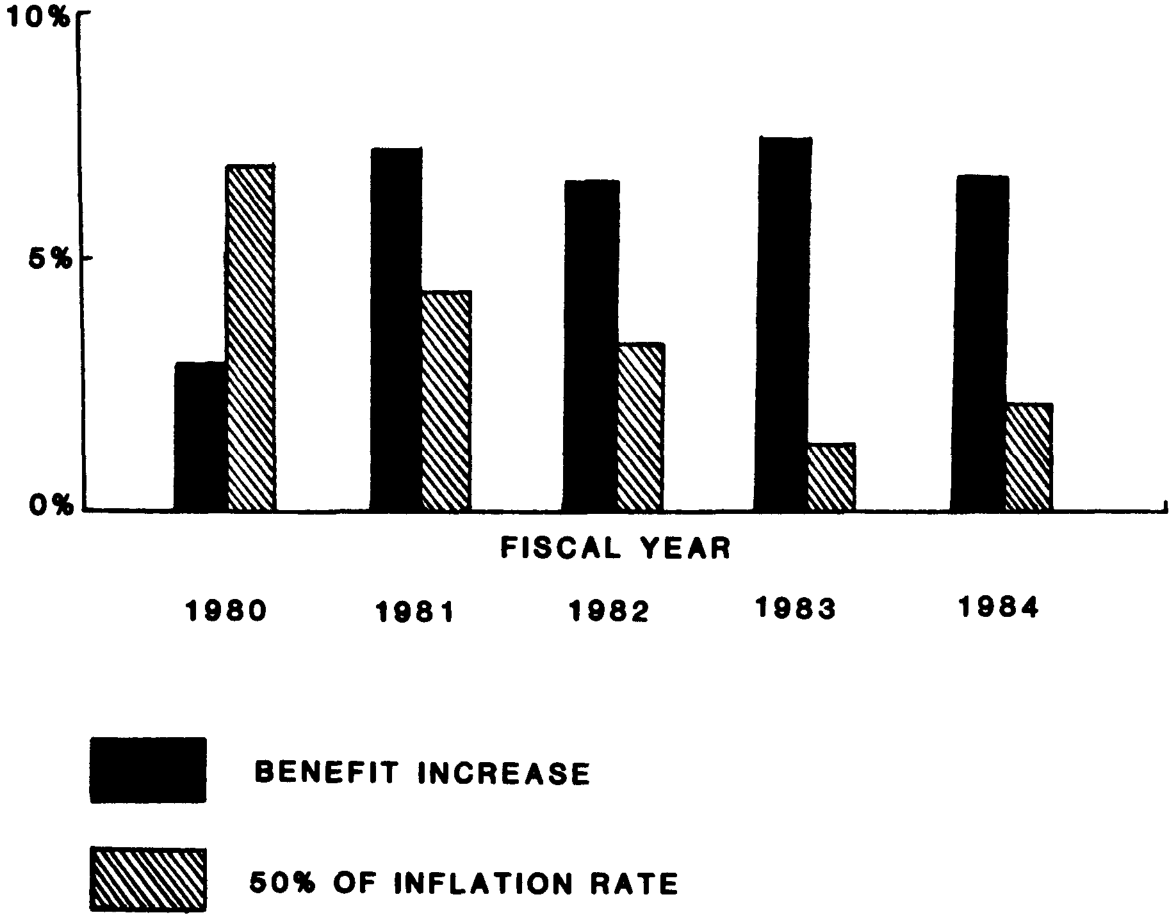
PERCENT OF MARKET VALUE
(End Of Period Allocations)

Calendar Year		Common Stocks $Million	Common Stocks Percent	Bonds $Million	Bonds Percent	Cash $Million	Cash Percent
1980		568.4	48.9	453.0	39.0	140.3	12.1
1981		376.0	34.2	545.5	49.5	179.4	16.3
1982		465.0	30.5	919.9	60.4	138.1	9.1
1983		730.3	40.5	1,002.1	55.6	69.8	3.9
1984		674.8	30.0	1,411.4	62.9	159.5	7.1
1985	1Q	715.5	30.4	1,551.8	66.0	85.1	3.6

FIGURE 9

POST RETIREMENT INVESTMENT FUND

BENEFIT INCREASES VERSUS INFLATION



	FISCAL YEAR					ANNUALIZED	
	1980	1981	1982	1983	1984	3 Yr.	5 Yr.
BENEFIT INCREASE	3.2%	7.4%	6.9%	7.5%	6.9%	7.1%	6.4%
50% OF INFLATION RATE	7.2	4.8	3.6	1.3	2.2	2.3	3.7

FIGURE 10

POST RETIREMENT INVESTMENT FUND

EQUITY SEGMENT RETURNS

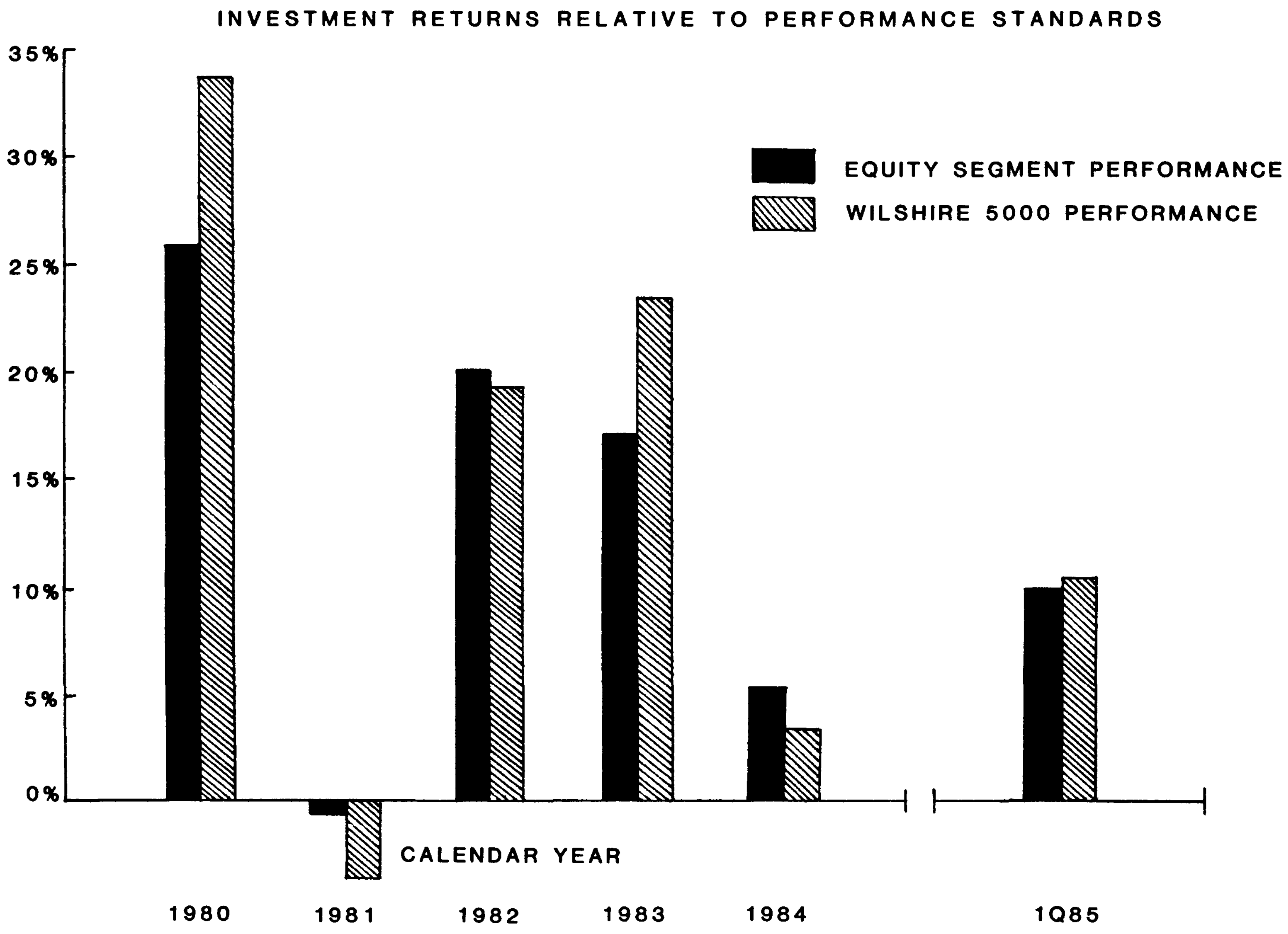


TABLE 10

POST RETIREMENT INVESTMENT FUND

EQUITY SEGMENT RETURNS

INVESTMENT RETURNS RELATIVE TO PERFORMANCE STANDARDS

	Total Returns	
	Post	Wilshire 5000
1980	25.9%	33.7%
1981	-0.3	-3.6
1982	20.0	18.7
1983	16.9	23.5
1984	5.2	3.1
1985 1Q	9.7	10.3
1 Year Through 3-31-85	21.1	18.7
3 Years Annualized Through 3-31-85	19.6	22.4
5 Years Annualized Through 3-31-85	16.2	17.8

TABLE 11

POST RETIREMENT INVESTMENT FUND

EQUITY MANAGER DATA

MARCH 31, 1985

SECTOR WEIGHTINGS

SECTORS	WEIGHTING INTERNAL MANAGER	WEIGHTING WILSHIRE 5000
Capital Goods	4.2%	4.9%
Consumer Durables	4.6	3.9
Consumer Nondurables	17.0	25.3
Energy	17.3	13.0
Financial	17.4	11.4
Materials & Services	11.1	10.9
Technology	18.3	14.4
Transportation	3.8	3.3
Utilities	6.3	12.9
	100.0%	100.0%

QUARTER-END PORTFOLIO STATISTICS

	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Internal Manager	117	100%	4.2%	12.4	1.12	0.96	+	-	+	+	-	0

MINNESOTA STATE BOARD OF INVESTMENT

QUARTERLY INVESTMENT REVIEW

SUPPLEMENTAL RETIREMENT FUND
(Income Share Account)

SUPPLEMENTAL RETIREMENT FUND
(Growth Share Account)

MINNESOTA VARIABLE ANNUITY FUND

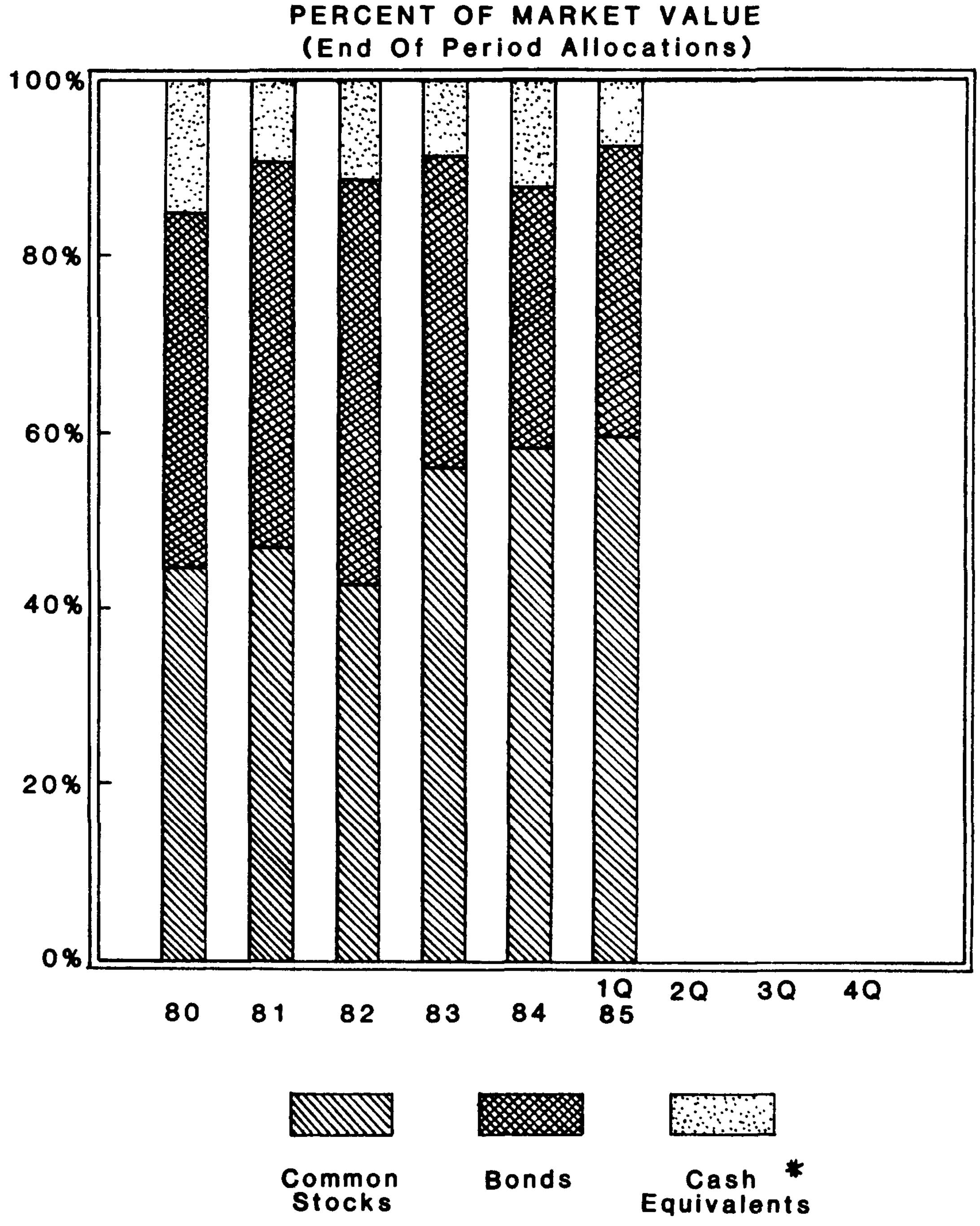
PERMANENT SCHOOL FUND

March 31, 1985

FIGURE 11

SUPPLEMENTAL RETIREMENT FUND
(Income Share Account)

ASSET MIX



* Includes cash held by the external manager

TABLE 12

SUPPLEMENTAL RETIREMENT FUND
(Income Share Account)

ASSET MIX

PERCENT OF MARKET VALUE
(End Of Period Allocations)

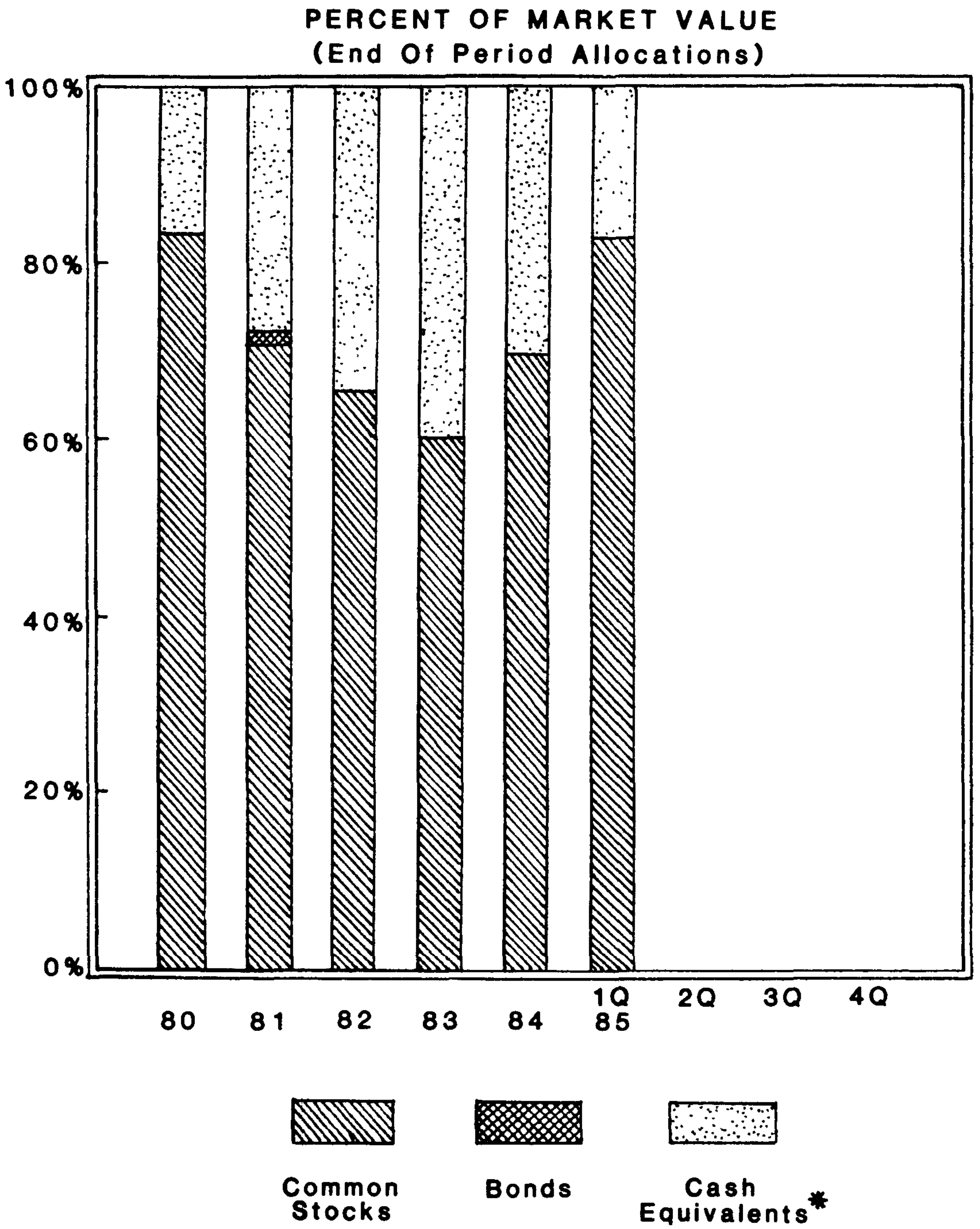
Calendar Year	Common Stocks $Million	Common Stocks Percent	Bonds $Million	Bonds Percent	Cash* $Million	Cash* Percent
1980	33.5	44.5	30.5	40.4	11.3	15.1
1981	35.9	47.1	33.4	43.8	7.0	9.1
1982	42.7	42.5	46.2	46.0	11.5	11.5
1983	63.5	56.2	39.6	35.0	9.9	8.8
1984	74.4	58.0	37.6	29.3	16.4	12.7
1985 1Q	81.9	60.0	44.1	32.3	10.5	7.7

*Includes cash held by the external manager

FIGURE 12

SUPPLEMENTAL RETIREMENT FUND
(Growth Share Account)

ASSET MIX



* Includes cash held by external manager

TABLE 13

SUPPLEMENTAL RETIREMENT FUND

(Growth Share Account)

ASSET MIX

PERCENT OF MARKET VALUE
(End Of Period Allocations)

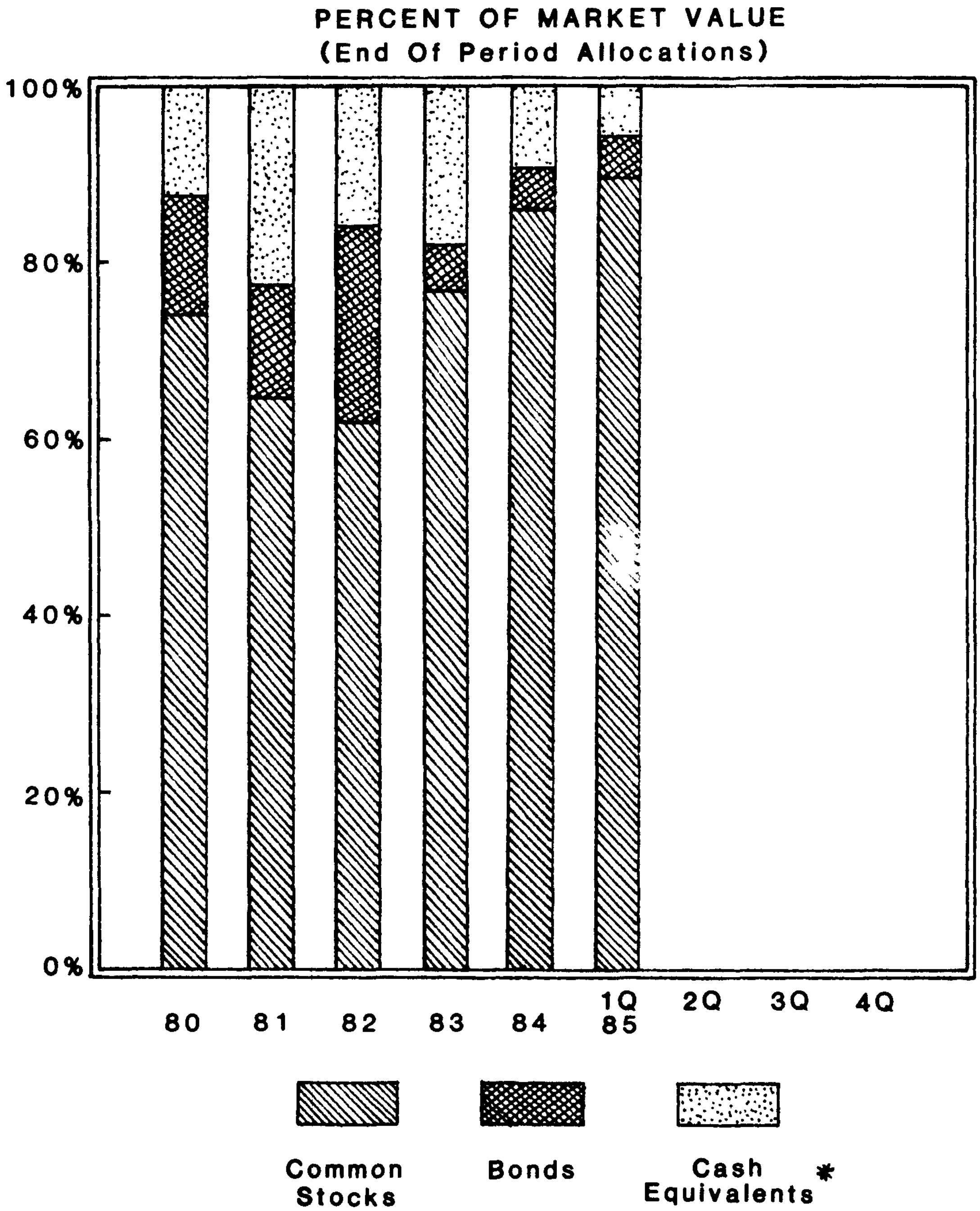
Calendar Year		Common Stocks $Million	Common Stocks Percent	Bonds $Million	Bonds Percent	Cash* $Million	Cash* Percent
1980		29.8	83.0	----	----	6.1	17.0
1981		28.8	71.3	0.5	1.2	11.1	27.5
1982		32.5	65.6	----	----	17.0	34.4
1983		33.7	60.3	----	----	22.2	39.7
1984		41.8	70.0	----	----	17.9	30.0
1985	1Q	52.2	82.0	----	----	11.5	18.0

*Includes cash held by the external manager

FIGURE 13

MINNESOTA VARIABLE ANNUITY FUND

ASSET MIX



* Includes cash held by external managers

TABLE 14

MINNESOTA VARIABLE ANNUITY FUND
ASSET MIX

PERCENT OF MARKET VALUE
(End Of Period Allocations)

Calendar Year	Common Stocks $Million	Common Stocks Percent	Bonds $Million	Bonds Percent	Cash* $Million	Cash* Percent
1980	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 1Q	102.1	90.6	5.2	4.6	5.5	4.8

*Includes cash held by external managers

FIGURE 14

PERMANENT SCHOOL FUND

ASSET MIX

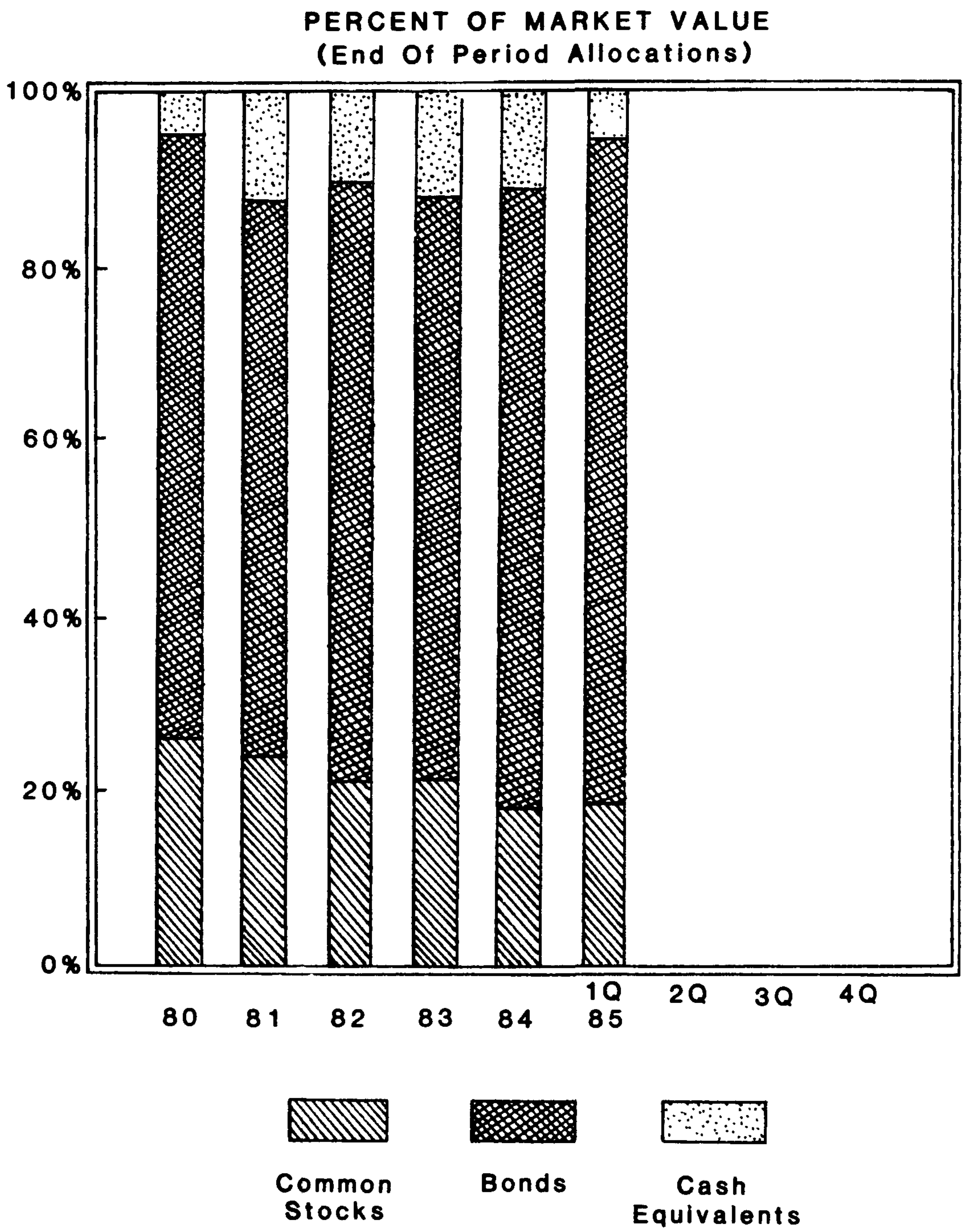


TABLE 15

PERMANENT SCHOOL FUND

ASSET MIX

PERCENT OF MARKET VALUE
(End Of Period Allocations)

Calendar Year		Common Stocks $Million	Common Stocks Percent	Bonds $Million	Bonds Percent	Cash $Million	Cash Percent
1980		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	1Q	57.6	18.5	235.6	75.9	17.5	5.6

TABLE 16

MINNESOTA STATE BOARD OF INVESTMENT

RETIREMENT AND TRUST FUNDS

INVESTMENT RETURNS RELATIVE TO PERFORMANCE STANDARDS

YEAR ENDING MARCH 31, 1985

	Total Fund Return	Stock/Bond Composite**	Common Stocks	Wilshire 5000	Bonds	ML Bond Index
SUPPLEMENTAL RETIREMENT FUNDS						
Income Share Account*	19.9%	17.8%	21.6%	18.7%	19.2%	16.5%
Growth Share Account*	14.3	18.7	14.3	18.7	---	16.5
VARIABLE ANNUITY FUND*	17.1	18.7	18.3	18.7	11.5	16.5
PERMANENT SCHOOL FUND	19.7	17.0	23.7	18.7	21.0	16.5

* Includes performance of both internal and external managers.

** Wilshire 5000/Merrill Lynch Master Bond indices:

Income Account - 50% stock/50% bond
Growth Account - 100% stock/ 0% bond
Variable Fund - 100% stock/ 0% bond
Permanent School - 20% stock/80% bond

TABLE 17

EQUITY MANAGER PERFORMANCE

TOTAL PORTFOLIO RETURNS

March 31, 1985

	First Quarter 1985	Year Ending 3/31/85	Two Years Ending 3/31/85 (Annualized)	Since Inception 3/1/83 (Annualized)
Income Share Account				
BMI Capital	9.3%	17.8%	-1.2%	- 0.7%
Internal Manager	9.1	21.4	12.0	12.3
Growth Share Account				
Waddell & Reed	5.2	6.8	9.1	8.8
Internal Manager	9.1	21.7	9.7	10.6
Variable Annuity Fund				
Norwest Bank	7.8	7.6	3.6	5.5
Lieber & Company	11.6	21.8	11.9	11.7
Internal Manager	9.2	20.4	9.3	10.4
Performance Standards				
Wilshire 5000	10.3	18.7	12.3	13.7
TUCS Aggressive Manager	9.2	14.5	6.2	NA
Inflation	1.0	3.6	4.2	4.1

APPENDIX

This appendix contains historical portfolio data pertaining to the SBI's external equity 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.

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.

# of Stocks - number of different issues held in the manager's stock portfolio.

Equity Allocation - percent of the manager's total portfolio invested in common and preferred stocks and convertible securities.

Yield - indicated annual dividend of the manager's stock portfolio divided by the market value of the manager's stock portfolio.

P/E - weighted average price per share of the managers' common stock portfolio divided by the weighted average trailing four quarter earnings per share of the manager's common stock portfolio.

Market Volatility - 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.

Diversification - 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.

Portfolio Risk Orientation - the riskiness of a portfolio can be expressed in terms of its market volatility and diversification. A complementary approach is to break down a portfolio's risk into sensitivity to various fundamental factors. These factors, six of which are used in this analysis, are related to various balance sheet, income statement and securities data on the stocks which make up a manager's portfolio. The sensitivity of a manager's portfolio to these factors is rated relative to the the stock market's sensitivity. Thus, the term ++ (--) indicates that a portfolio has a relatively very high (low) exposure to the factor. A + (-) indicates an above (below) average exposure. A 0 indicates no exposure.

Price Variability - risk related to the historical variability of the prices of stocks in the 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 - 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.

Earnings Success - risk related to the extent to which the earnings of companies owned by the portfolio have been recently low or negative. The poorer have been companies' earnings, the riskier is the portfolio. Items including return on equity, earnings growth, book/price ratio, dividend cuts, and tax rate make up this measure.

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 - 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.

Financial Leverage - 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.

TUCS Aggressive Manager Median - the median fund within a subsample of the TUCS universe restricted to aggressive equity managers. The TUCS universe is a universe of over 4000 portfolios custodied by over 30 major banks. For purposes of the SBI's analysis out of the universe have been selected a subsample which includes only those equity managers with risk characteristics (market volatility and diversification) similar to those of the SBI's managers. This provides a group of funds against which valid performance comparisons can be made. An assumed .50% management fee has been included to facilitate performance comparisons.

TABLE A-1

EXTERNAL EQUITY MANAGERS

PORTFOLIO STATISTICS HISTORICAL SUMMARY

MANAGER NAME	DATE	QTR. PORT. T/O	# OF STKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVRSFN	Price Var.	PORTFOLIO RISK ORIENTATION Earn. Var.	Earn. Succ.	Size	Growth	Fin. Lever.
AVG. EXT. MANAGERS	3/31/85	31	43	90	2.72	14.4	1.23	0.82	+	+	-	0	0	0
AVG. EXT. MANAGERS	12/31/84	24	42	86	3.02	13.1	1.25	0.81	+	+	0	0	+	0
AVG. EXT. MANAGERS	9/30/84	33	42	84	3.00	13.4	1.26	0.82	+	+	-	0	+	0
AVG. EXT. MANAGERS	6/30/84	27	41	81	3.21	13.5	1.29	0.81	+	+	+	+	+	0
AVG. EXT. MANAGERS	3/31/84	25	41	83	3.05	13.5	1.25	0.82	+	+	0	+	+	0
AVG. EXT. MANAGERS	12/31/83	36	34	84	2.79	16.2	1.23	0.80	+	+	0	+	0	0
AVG. EXT. MANAGERS	9/30/83	32	32	85	2.48	19.4	1.29	0.82	+	+	0	+	+	0
AVG. EXT. MANAGERS	6/30/83	27	32	85	2.44	16.7	1.29	0.81	+	0	-	0	+	+
AVG. EXT. MANAGERS	3/31/83	NA	26	67	2.78	15.0	1.26	0.83	+	+	-	0	+	0
FRED ALGER	3/31/85	34	39	96	1.77	16.4	1.27	0.85	++	++	-	-	++	+
FRED ALGER	12/31/84	16	36	95	2.63	12.8	1.19	0.86	+	+	-	--	+	0
FRED ALGER	9/30/84	20	33	94	2.57	13.8	1.22	0.86	+	++	--	0	0	-
FRED ALGER	6/30/84	16	32	93	2.92	13.1	1.22	0.86	+	+	0	0	-	0
FRED ALGER	3/31/84	19	33	91	2.82	14.8	1.19	0.86	+	+	+	0	0	0
FRED ALGER	12/31/83	23	32	95	2.64	15.9	1.18	0.88	+	++	-	0	0	0
FRED ALGER	9/30/83	27	32	91	2.63	17.5	1.24	0.88	+	++	0	0	0	0
FRED ALGER	6/30/83	8	35	94	2.10	18.7	1.33	0.88	++	++	--	+	+	++
FRED ALGER	3/31/83	NA	35	89	2.31	17.1	1.29	0.87	++	++	--	+	+	+
ALLIANCE CAPITAL	3/31/85	10	35	96	2.03	16.1	1.19	0.76	+	0	--	+	++	--
ALLIANCE CAPITAL	12/31/84	8	34	92	2.26	14.0	1.30	0.73	+	+	--	+	++	--
ALLIANCE CAPITAL	9/30/84	13	31	88	2.30	14.9	1.34	0.72	+	++	--	0	+	--
ALLIANCE CAPITAL	6/30/84	8	32	92	1.84	15.4	1.39	0.73	+	+	++	+	++	--
ALLIANCE CAPITAL	3/31/84	12	32	92	1.75	15.4	1.38	0.72	+	+	0	+	++	--
ALLIANCE CAPITAL	12/31/83	14	33	92	1.47	19.7	1.37	0.72	+	++	-	0	++	-
ALLIANCE CAPITAL	9/30/83	22	27	87	1.55	20.4	1.41	0.75	+	++	-	+	+	-
ALLIANCE CAPITAL	6/30/83	17	30	91	1.72	20.9	1.35	0.77	+	++	--	0	+	0
ALLIANCE CAPITAL	3/31/83	NA	30	84	1.68	20.3	1.40	0.81	++	++	--	+	++	-
BEUTEL GOODMAN	3/31/85	13	20	93	3.74	13.0	1.18	0.83	+	0	++	++	0	++
BEUTEL GOODMAN	12/31/84	8	19	94	4.26	12.3	1.19	0.81	+	0	++	++	0	++
BEUTEL GOODMAN	9/30/84	10	18	93	4.15	9.3	1.21	0.81	+	+	+	++	0	++
BEUTEL GOODMAN	6/30/84	11	18	92	4.14	14.9	1.18	0.79	0	+	0	++	0	++
BEUTEL GOODMAN	3/31/84	12	20	98	3.84	11.0	1.16	0.79	+	+	+	++	0	++
BEUTEL GOODMAN	12/31/83	15	16	95	3.77	10.3	1.08	0.74	+	+	++	++	0	++
BEUTEL GOODMAN	9/30/83	6	16	99	3.47	10.5	1.14	0.75	+	+	++	++	0	++
BEUTEL GOODMAN	6/30/83	7	12	79	3.29	10.2	1.07	0.75	+	0	-	++	0	++
BEUTEL GOODMAN	3/31/83	NA	6	34	2.98	9.3	1.09	0.71	+	0	++	+	+	++

MANAGER NAME	DATE	QTR. PORT. T/O	# OF STKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVRSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Succ.	Size	Growth	Fin. Lever.
BMI CAPITAL	3/31/85	2	25	99	1.87	18.4	1.26	0.55	++	++	--	++	++	--
BMI CAPITAL	12/31/84	13	21	87	2.19	17.6	1.33	0.74	++	++	--	++	++	--
BMI CAPITAL	9/30/84	29	20	82	2.65	15.2	1.33	0.75	++	++	--	++	+	--
BMI CAPITAL	6/30/84	6	24	99	2.73	18.5	1.33	0.79	++	++	-	++	+	--
BMI CAPITAL	3/31/84	18	24	95	2.67	17.1	1.32	0.80	++	++	0	++	+	--
BMI CAPITAL	12/31/83	14	21	98	2.23	20.4	1.29	0.81	+	++	-	++	+	0
BMI CAPITAL	9/30/83	19	19	99	2.14	19.2	1.34	0.81	+	++	-	++	+	0
BMI CAPITAL	6/30/83	0	20	96	2.26	16.6	1.31	0.80	+	0	--	++	+	0
BMI CAPITAL	3/31/83	NA	13	53	2.35	13.7	1.36	0.80	++	++	--	++	++	++
FORSTMANN-LEFF	3/31/85	53	27	69	3.06	11.8	1.19	0.89	++	+	0	-	0	0
FORSTMANN-LEFF	12/31/84	11	31	87	3.58	10.9	1.22	0.84	+	0	++	-	0	++
FORSTMANN-LEFF	9/30/84	40	31	83	3.53	10.8	1.26	0.86	++	0	+	-	0	+
FORSTMANN-LEFF	6/30/84	31	31	54	3.64	11.4	1.26	0.81	+	+	++	-	0	++
FORSTMANN-LEFF	3/31/84	34	38	71	3.52	12.4	1.17	0.82	0	+	+	-	0	++
FORSTMANN-LEFF	12/31/83	41	39	81	3.23	15.7	1.10	0.70	--	0	++	--	--	--
FORSTMANN-LEFF	9/30/83	46	28	83	2.59	20.7	1.14	0.72	--	0	++	--	0	--
FORSTMANN-LEFF	6/30/83	52	33	93	2.90	15.0	1.08	0.70	--	--	0	--	--	--
FORSTMANN-LEFF	3/31/83	NA	38	85	3.23	14.8	1.09	0.82	0	0	0	-	0	--
HELLMAN JORDAN	3/31/85	49	35	81	3.73	14.2	1.13	0.88	+	+	++	--	-	++
HELLMAN JORDAN	12/31/84	38	42	82	3.94	13.4	1.21	0.86	+	++	++	--	0	++
HELLMAN JORDAN	9/30/84	10	44	80	4.01	13.7	1.22	0.84	+	++	+	--	0	++
HELLMAN JORDAN	6/30/84	34	37	61	5.09	13.5	1.25	0.87	+	++	++	-	0	++
HELLMAN JORDAN	3/31/84	30	34	58	4.94	12.9	1.16	0.87	+	++	+	--	0	+
HELLMAN JORDAN	12/31/83	43	23	51	5.31	12.5	1.23	0.74	+	++	++	-	--	++
HELLMAN JORDAN	9/30/83	57	20	47	2.89	21.2	1.34	0.77	+	++	++	0	0	++
HELLMAN JORDAN	6/30/83	38	18	56	2.37	16.1	1.30	0.77	+	++	-	--	0	++
HELLMAN JORDAN	3/31/83	NA	14	53	3.18	15.9	1.30	0.72	+	++	--	--	+	+
IDS ADVISORY	3/31/85	36	42	87	4.05	14.1	1.08	0.85	0	0	-	--	-	+
IDS ADVISORY	12/31/84	21	44	89	4.69	11.7	1.05	0.83	--	0	0	--	0	0
IDS ADVISORY	9/30/84	40	44	92	4.60	12.5	1.08	0.89	0	0	0	--	0	0
IDS ADVISORY	6/30/84	42	43	87	4.80	13.4	1.04	0.85	--	-	--	0	0	++
IDS ADVISORY	3/31/84	41	39	82	4.31	11.2	1.09	0.80	0	+	--	-	--	0
IDS ADVISORY	12/31/83	45	36	89	3.13	18.8	1.17	0.86	+	++	-	+	+	0
IDS ADVISORY	9/30/83	79	34	86	2.40	25.0	1.24	0.86	+	++	0	+	+	-
IDS ADVISORY	6/30/83	42	49	94	2.19	19.9	1.30	0.81	+	+	--	-	+	-
IDS ADVISORY	3/31/83	NA	48	88	3.17	15.3	1.19	0.84	+	+	-	--	+	-
INVESTMENT ADVISERS	3/31/85	28	37	89	3.25	10.9	1.17	0.91	+	+	0	-	-	0
INVESTMENT ADVISERS	12/31/84	9	42	97	3.76	9.8	1.19	0.88	+	+	++	--	0	0
INVESTMENT ADVISERS	9/30/84	21	39	88	3.74	9.9	1.21	0.86	+	+	+	--	0	0
INVESTMENT ADVISERS	6/30/84	8	43	98	4.19	10.0	1.21	0.89	0	0	++	-	0	++
INVESTMENT ADVISERS	3/31/84	21	40	92	3.60	11.1	1.17	0.89	0	+	++	-	0	++
INVESTMENT ADVISERS	12/31/83	16	39	89	3.11	13.5	1.13	0.86	--	+	++	--	0	0
INVESTMENT ADVISERS	9/30/83	8	41	89	2.92	15.6	1.13	0.87	--	+	++	--	0	0
INVESTMENT ADVISERS	6/30/83	7	37	78	3.19	15.9	1.08	0.89	-	0	0	--	0	0
INVESTMENT ADVISERS	3/31/83	NA	34	47	3.35	13.4	1.06	0.85	0	0	-	--	-	0

MANAGER NAME	DATE	QTR. PORT. T/O	# OF STKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVRSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Succ.	Size	Growth	Fin. Lever.
LIEBER & COMPANY	3/31/85	17	107	99	2.49	12.6	1.24	0.81	++	0	--	++	0	--
LIEBER & COMPANY	12/31/84	14	103	85	2.53	12.3	1.34	0.79	++	+	-	++	++	--
LIEBER & COMPANY	9/30/84	17	108	87	2.55	11.9	1.31	0.80	++	+	0	++	+	--
LIEBER & COMPANY	6/30/84	10	117	95	2.66	12.0	1.33	0.81	++	0	0	++	++	--
LIEBER & COMPANY	3/31/84	0	115	93	2.63	12.0	1.37	0.85	+	0	--	++	+	-
LIEBER & COMPANY	12/31/83	9	60	100	2.77	12.9	1.24	0.83	+	0	-	++	+	-
LIEBER & COMPANY	9/30/83	9	56	97	2.83	11.3	1.30	0.83	+	0	-	++	+	-
LIEBER & COMPANY	6/30/83	2	49	92	2.70	14.0	1.26	0.84	+	0	--	++	+	-
LIEBER & COMPANY	3/31/83	NA	24	45	2.94	15.9	1.20	0.85	+	0	-	++	+	--
LOOMIS SAYLES	3/31/85	62	18	98	2.29	18.6	1.33	0.76	++	++	--	+	++	-
LOOMIS SAYLES	12/31/84	37	14	84	2.32	15.5	1.26	0.72	++	+	--	--	++	-
LOOMIS SAYLES	9/30/84	46	16	88	1.57	17.2	1.35	0.78	++	++	--	-	+	-
LOOMIS SAYLES	6/30/84	25	20	94	1.71	14.4	1.37	0.70	++	++	-	+	++	0
LOOMIS SAYLES	3/31/84	6	22	93	1.93	13.2	1.37	0.66	++	++	--	+	+	+
LOOMIS SAYLES	12/31/83	39	19	81	1.79	18.0	1.38	0.70	++	++	--	+	+	0
LOOMIS SAYLES	9/30/83	60	23	95	1.28	28.8	1.53	0.75	++	++	--	+	++	0
LOOMIS SAYLES	6/30/83	49	19	97	1.21	17.3	1.64	0.75	++	++	--	+	++	++
LOOMIS SAYLES	3/31/83	NA	20	98	1.62	18.2	1.44	0.85	++	++	--	0	++	-
NORWEST BANK MPLS	3/31/85	45	59	89	0.95	20.2	1.41	0.79	++	++	--	++	++	--
NORWEST BANK MPLS	12/31/84	39	61	87	1.24	20.1	1.37	0.81	++	++	--	++	++	--
NORWEST BANK MPLS	9/30/84	61	62	97	1.18	26.6	1.36	0.81	++	++	--	++	+	-
NORWEST BANK MPLS	6/30/84	26	56	89	1.96	17.4	1.39	0.83	++	++	++	++	++	-
NORWEST BANK MPLS	3/31/84	66	47	87	1.65	19.2	1.28	0.82	++	++	--	++	++	-
NORWEST BANK MPLS	12/31/83	92	41	83	1.88	19.0	1.23	0.87	+	0	-	+	+	--
NORWEST BANK MPLS	9/30/83	56	53	85	2.12	21.4	1.27	0.87	+	0	-	+	+	-
NORWEST BANK MPLS	6/30/83	95	42	80	2.53	16.3	1.23	0.88	+	--	-	+	+	--
NORWEST BANK MPLS	3/31/83	NA	35	83	2.94	14.1	1.20	0.90	+	--	-	+	+	--
SIEBEL CAPITAL	3/31/85	38	52	76	2.46	12.8	1.19	0.87	+	0	-	++	0	0
SIEBEL CAPITAL	12/31/84	25	54	80	2.69	12.1	1.24	0.84	+	0	--	+	+	-
SIEBEL CAPITAL	9/30/84	48	50	74	2.73	12.8	1.24	0.86	+	0	--	+	+	-
SIEBEL CAPITAL	6/30/84	47	36	63	3.22	12.3	1.27	0.88	+	--	++	++	+	0
SIEBEL CAPITAL	3/31/84	28	42	78	3.07	11.5	1.25	0.88	+	0	+	+	+	0
SIEBEL CAPITAL	12/31/83	25	37	90	3.14	12.4	1.16	0.89	0	--	0	0	-	++
SIEBEL CAPITAL	9/30/83	26	35	83	3.28	12.6	1.15	0.88	0	0	++	0	0	0
SIEBEL CAPITAL	6/30/83	27	36	91	3.24	13.5	1.17	0.86	+	0	0	0	0	++
SIEBEL CAPITAL	3/31/83	NA	26	80	3.38	13.5	1.15	0.85	+	0	-	--	0	+
HERBERT R. SMITH	3/31/85	27	49	97	2.65	11.2	1.26	0.84	+	+	-	0	0	0
HERBERT R. SMITH	12/31/84	48	45	77	2.83	10.3	1.30	0.72	++	++	--	++	+	0
HERBERT R. SMITH	9/30/84	39	52	89	2.78	12.0	1.25	0.79	++	++	--	+	+	0
HERBERT R. SMITH	6/30/84	38	67	86	3.29	12.5	1.20	0.92	+	+	-	+	+	--
HERBERT R. SMITH	3/31/84	29	68	84	3.12	13.9	1.22	0.91	+	+	0	+	+	0
HERBERT R. SMITH	12/31/83	46	60	80	2.14	18.9	1.33	0.85	++	++	-	++	+	++
HERBERT R. SMITH	9/30/83	40	46	65	2.68	19.4	1.44	0.87	+	++	-	++	+	++
HERBERT R. SMITH	6/30/83	13	48	65	2.36	18.2	1.46	0.83	++	++	--	++	++	++
HERBERT R. SMITH	3/31/83	NA	18	20	2.74	13.7	1.45	0.77	++	++	--	+	+	++

MANAGER NAME	DATE	QTR. PORT. T/O	# OF STKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVRSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Succ.	Size	Growth	Fin. Lever.
TRUSTEE & INVESTORS	3/31/85	9	43	97	2.82	13.5	1.22	0.93	++	++	++	0	0	++
TRUSTEE & INVESTORS	12/31/84	40	41	96	3.00	11.2	1.31	0.91	++	++	++	+	+	+
TRUSTEE & INVESTORS	9/30/84	24	37	94	3.52	8.3	1.28	0.91	++	0	++	--	+	0
TRUSTEE & INVESTORS	6/30/84	15	40	95	3.86	12.8	1.31	0.90	++	+	++	-	+	++
TRUSTEE & INVESTORS	3/31/84	25	41	98	3.30	14.4	1.27	0.89	++	+	++	0	+	++
TRUSTEE & INVESTORS	12/31/83	17	44	99	2.82	18.0	1.25	0.89	+	0	0	+	+	++
TRUSTEE & INVESTORS	9/30/83	9	40	98	3.04	19.8	1.26	0.92	+	0	++	+	+	++
TRUSTEE & INVESTORS	6/30/83	11	34	98	3.09	17.5	1.24	0.93	+	0	-	+	+	+
TRUSTEE & INVESTORS	3/31/83	NA	26	71	3.80	14.4	1.24	0.93	+	0	-	+	0	++
WADDELL & REED	3/31/85	41	52	78	3.58	12.1	1.26	0.82	++	++	0	+	-	++
WADDELL & REED	12/31/84	32	46	52	3.34	11.8	1.29	0.75	++	++	--	+	+	++
WADDELL & REED	9/30/84	76	48	35	3.11	12.1	1.27	0.76	+	++	--	+	+	-
WADDELL & REED	6/30/84	81	13	21	2.08	10.9	1.56	0.52	++	++	++	++	+	+
WADDELL & REED	3/31/84	35	21	31	2.63	12.6	1.31	0.74	+	++	+	+	0	++
WADDELL & REED	12/31/83	103	10	31	2.45	17.2	1.36	0.72	++	+	--	++	++	--
WADDELL & REED	9/30/83	9	17	73	1.41	27.4	1.41	0.73	++	0	--	++	+	--
WADDELL & REED	6/30/83	38	16	75	1.51	21.0	1.48	0.74	++	0	--	++	++	+
WADDELL & REED	3/31/83	NA	17	79	2.04	14.9	1.50	0.81	++	+	-	++	+	++

TABLE A-2

EXTERNAL EQUITY MANAGERS

SECTOR WEIGHTING HISTORICAL PROFILE

EQUITY SECTOR WEIGHTS

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT & SERV	TECH	TRAN	UTIL
AVG. EXT. MANAGERS	3/31/85	---	2.4	6.8	26.4	3.6	17.5	11.4	22.2	6.8	3.0
AVG. EXT. MANAGERS	12/31/84	---	2.4	8.0	26.4	2.3	15.5	11.2	23.9	6.6	4.0
AVG. EXT. MANAGERS	9/30/84	---	2.9	7.9	27.9	3.8	14.1	9.6	26.3	4.8	2.7
AVG. EXT. MANAGERS	6/30/84	---	4.0	7.6	28.6	4.2	12.5	10.9	23.4	5.4	3.4
AVG. EXT. MANAGERS	3/31/84	---	5.2	7.6	24.0	5.7	13.2	13.3	22.7	5.1	3.1
AVG. EXT. MANAGERS	12/31/83	---	6.0	6.4	23.5	3.0	12.2	15.1	24.0	6.3	3.5
AVG. EXT. MANAGERS	9/30/83	---	3.6	5.9	28.9	3.1	12.8	13.5	24.2	5.7	2.4
AVG. EXT. MANAGERS	6/30/83	---	3.7	6.1	30.2	3.6	15.1	11.7	21.2	5.8	2.5
AVG. EXT. MANAGERS	3/31/83	---	2.8	4.3	30.6	3.6	15.2	11.4	23.5	4.9	3.8
FRED ALGER	3/31/85	57,886,615	5.2	14.3	28.8	3.7	7.8	1.8	24.8	13.6	---
FRED ALGER	12/31/84	54,018,782	5.2	16.1	36.1	---	4.1	7.9	25.2	5.4	---
FRED ALGER	9/30/84	53,908,974	9.3	15.4	33.7	---	0.8	11.4	23.5	6.0	---
FRED ALGER	6/30/84	49,936,760	14.0	8.0	30.7	---	3.8	11.5	29.5	2.6	---
FRED ALGER	3/31/84	51,737,228	13.3	4.3	28.8	---	3.4	18.3	31.9	---	---
FRED ALGER	12/31/83	55,644,200	13.2	6.6	21.7	---	6.4	18.1	33.9	---	---
FRED ALGER	9/30/83	56,169,879	5.7	6.8	26.9	---	8.4	23.3	29.0	---	---
FRED ALGER	6/30/83	58,138,999	4.9	8.5	35.0	3.5	8.2	18.0	21.9	---	---
FRED ALGER	3/31/83	51,420,548	1.4	7.5	37.0	---	9.0	22.0	23.1	---	---
ALLIANCE CAPITAL	3/31/85	58,738,405	---	9.9	47.9	2.4	12.6	---	15.8	8.0	3.4
ALLIANCE CAPITAL	12/31/84	52,332,767	---	8.7	48.8	---	10.2	---	20.6	8.1	3.7
ALLIANCE CAPITAL	9/30/84	51,653,441	---	8.8	49.7	---	9.6	---	19.3	9.2	3.5
ALLIANCE CAPITAL	6/30/84	48,457,996	---	8.1	51.6	---	6.9	---	23.5	9.9	---
ALLIANCE CAPITAL	3/31/84	47,427,119	---	8.3	48.0	2.7	5.6	---	25.1	10.4	---
ALLIANCE CAPITAL	12/31/83	52,725,699	0.8	7.5	45.3	---	6.8	2.4	24.2	13.1	---
ALLIANCE CAPITAL	9/30/83	52,945,082	2.8	5.4	45.9	---	9.2	---	24.6	12.1	---
ALLIANCE CAPITAL	6/30/83	57,538,354	2.2	4.7	42.3	---	8.2	7.5	22.7	12.4	---
ALLIANCE CAPITAL	3/31/83	51,037,067	---	3.5	49.9	2.7	6.7	3.6	23.5	10.0	---
BEUTEL GOODMAN	3/31/85	70,177,266	2.1	---	19.2	---	28.4	33.1	13.6	3.6	---
BEUTEL GOODMAN	12/31/84	63,402,269	8.8	---	13.8	---	32.2	33.8	11.4	---	---
BEUTEL GOODMAN	9/30/84	60,461,938	6.5	---	14.0	---	37.1	35.6	6.8	---	---
BEUTEL GOODMAN	6/30/84	55,295,358	9.3	---	21.1	---	30.4	32.4	6.7	---	---
BEUTEL GOODMAN	3/31/84	56,896,258	8.9	---	18.6	---	27.2	39.3	6.0	---	---
BEUTEL GOODMAN	12/31/83	57,233,781	9.8	---	20.2	---	11.2	46.2	5.4	7.2	---
BEUTEL GOODMAN	9/30/83	55,416,939	8.8	---	22.0	---	13.1	43.5	4.7	8.0	---
BEUTEL GOODMAN	6/30/83	54,835,808	11.0	---	18.5	---	17.4	42.4	---	10.6	---
BEUTEL GOODMAN	3/31/83	50,442,256	---	---	15.7	---	15.4	52.1	---	16.8	---

EQUITY SECTOR WEIGHTS

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT & SERV	TECH	TRAN	UTIL
BMI CAPITAL	3/31/85	9,851,108	7.1	9.0	37.6	---	---	6.8	35.9	3.7	---
BMI CAPITAL	12/31/84	9,015,974	6.5	5.8	40.0	---	---	7.4	35.9	4.4	---
BMI CAPITAL	9/30/84	8,820,740	4.6	13.4	42.6	---	---	4.1	31.3	3.9	---
BMI CAPITAL	6/30/84	8,533,642	3.2	16.4	37.4	---	---	11.5	31.5	---	---
BMI CAPITAL	3/31/84	8,366,038	4.3	12.7	39.3	---	---	17.8	25.9	---	---
BMI CAPITAL	12/31/83	9,784,767	7.4	12.1	28.4	---	6.6	19.0	26.4	---	---
BMI CAPITAL	9/30/83	10,420,827	7.6	11.2	37.1	---	6.4	18.6	19.2	---	---
BMI CAPITAL	6/30/83	11,285,353	7.9	12.7	44.2	---	9.8	15.9	9.5	---	---
BMI CAPITAL	3/31/83	10,081,983	10.6	8.1	35.3	---	12.3	22.0	11.8	---	---
FORSTMANN-LEFF	3/31/85	61,436,421	2.5	9.8	25.7	---	25.5	14.7	17.4	4.4	---
FORSTMANN-LEFF	12/31/84	55,396,358	1.4	10.5	30.9	---	23.3	15.1	13.3	5.5	---
FORSTMANN-LEFF	9/30/84	53,550,733	4.5	4.6	32.5	---	21.5	14.5	18.9	3.6	---
FORSTMANN-LEFF	6/30/84	51,218,131	3.7	3.6	40.2	---	7.0	10.3	24.3	7.2	3.7
FORSTMANN-LEFF	3/31/84	52,083,507	7.6	3.0	37.0	---	6.0	14.5	23.1	6.0	2.8
FORSTMANN-LEFF	12/31/83	55,421,154	5.7	13.6	35.5	5.8	3.9	8.4	18.7	5.3	3.1
FORSTMANN-LEFF	9/30/83	55,775,736	---	14.6	52.3	3.3	4.5	5.3	15.1	4.8	---
FORSTMANN-LEFF	6/30/83	56,471,479	---	12.7	61.4	---	2.7	7.2	11.7	4.3	---
FORSTMANN-LEFF	3/31/83	51,390,160	2.1	4.7	50.7	5.9	4.7	10.3	17.4	4.2	---
HELLMAN JORDAN	3/31/85	59,732,797	1.3	---	21.9	5.9	25.3	13.6	16.1	6.7	9.2
HELLMAN JORDAN	12/31/84	54,923,168	1.3	6.1	19.5	1.1	19.8	17.1	20.3	9.2	5.7
HELLMAN JORDAN	9/30/84	52,497,049	1.5	10.7	11.3	0.8	14.0	15.3	29.3	12.0	5.0
HELLMAN JORDAN	6/30/84	47,929,367	1.8	12.4	13.8	1.2	16.4	21.2	12.6	11.1	9.6
HELLMAN JORDAN	3/31/84	49,895,127	---	12.4	19.5	6.4	15.7	15.7	4.3	8.8	17.2
HELLMAN JORDAN	12/31/83	50,182,761	---	14.8	30.0	6.0	16.5	10.4	2.1	3.0	17.2
HELLMAN JORDAN	9/30/83	50,713,576	---	15.0	47.4	---	19.5	3.5	3.3	4.7	6.5
HELLMAN JORDAN	6/30/83	52,402,164	---	3.8	23.3	---	35.9	---	24.8	---	12.2
HELLMAN JORDAN	3/31/83	49,541,253	---	---	15.1	---	33.4	4.6	27.2	---	19.7
INVESTMENT ADVISERS	3/31/85	62,742,678	3.4	6.0	6.1	2.8	16.3	19.9	32.9	12.6	---
INVESTMENT ADVISERS	12/31/84	58,967,426	3.3	6.4	13.6	5.9	20.5	19.2	19.9	10.8	0.6
INVESTMENT ADVISERS	9/30/84	55,807,710	3.7	7.2	21.5	6.9	21.0	13.1	20.2	5.6	0.8
INVESTMENT ADVISERS	6/30/84	50,388,386	5.5	5.9	26.3	6.2	18.8	9.1	20.6	3.7	3.9
INVESTMENT ADVISERS	3/31/84	51,864,720	5.8	5.4	30.2	8.9	21.5	7.7	15.6	3.9	1.0
INVESTMENT ADVISERS	12/31/83	54,533,402	6.3	6.3	25.0	5.8	21.9	9.7	15.7	6.1	3.2
INVESTMENT ADVISERS	9/30/83	53,819,067	5.8	6.2	30.6	6.0	13.4	9.1	18.3	7.1	3.5
INVESTMENT ADVISERS	6/30/83	54,812,985	6.5	6.6	24.7	11.7	9.7	9.8	16.9	10.3	3.9
INVESTMENT ADVISERS	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	3/31/85	62,021,800	---	5.2	27.5	9.8	11.0	7.3	14.0	7.7	17.6
IDS ADVISORY	12/31/84	57,153,006	1.8	4.6	29.5	3.7	7.6	3.7	16.9	7.2	25.0
IDS ADVISORY	9/30/84	55,468,185	3.4	6.6	25.4	7.6	7.9	5.6	19.6	4.6	19.4
IDS ADVISORY	6/30/84	50,278,968	---	5.3	27.6	8.1	6.8	7.6	19.2	4.8	20.6
IDS ADVISORY	3/31/84	50,085,955	4.8	10.1	12.4	9.6	8.7	14.3	15.2	9.5	15.4
IDS ADVISORY	12/31/83	54,006,960	4.9	7.6	18.0	---	8.8	19.0	26.1	6.0	9.6
IDS ADVISORY	9/30/83	54,334,602	---	4.1	24.3	3.4	6.0	19.7	33.8	5.4	3.4
IDS ADVISORY	6/30/83	57,561,715	4.2	12.0	30.5	4.5	4.2	6.7	33.7	4.3	---
IDS ADVISORY	3/31/83	50,689,028	5.4	9.2	30.7	5.4	9.8	6.4	26.3	---	6.6

EQUITY SECTOR WEIGHTS

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT & SERV	TECH	TRAN	UTIL
LIEBER & COMPANY	3/31/85	29,544,589	2.9	8.0	25.3	6.1	28.9	15.1	8.9	3.5	1.3
LIEBER & COMPANY	12/31/84	26,473,866	3.2	5.3	27.0	3.2	24.2	18.4	15.3	3.4	---
LIEBER & COMPANY	9/30/84	25,807,665	2.9	3.8	33.0	4.1	22.4	16.8	14.8	2.2	---
LIEBER & COMPANY	6/30/84	23,927,529	2.6	3.3	34.8	3.5	21.1	16.7	15.3	1.8	0.8
LIEBER & COMPANY	3/31/84	24,261,218	3.6	6.4	32.3	4.9	17.3	16.8	16.3	1.8	0.7
LIEBER & COMPANY	12/31/83	11,159,936	7.7	4.5	33.7	3.5	16.7	22.3	6.1	5.6	---
LIEBER & COMPANY	9/30/83	11,016,060	6.5	3.5	31.0	4.7	18.0	25.4	5.4	5.5	---
LIEBER & COMPANY	6/30/83	11,233,248	6.4	5.0	33.3	5.0	16.5	23.9	3.3	6.6	---
LIEBER & COMPANY	3/31/83	10,063,917	8.3	---	23.1	3.9	11.6	41.0	5.6	6.4	---
LOOMIS SAYLES	3/31/85	49,233,894	---	13.8	19.3	---	30.1	---	36.7	---	---
LOOMIS SAYLES	12/31/84	46,561,187	---	24.0	12.9	---	26.1	---	37.0	---	---
LOOMIS SAYLES	9/30/84	46,082,328	---	16.0	18.9	---	12.8	---	52.3	---	---
LOOMIS SAYLES	6/30/84	43,613,462	7.6	12.8	16.1	---	4.9	8.8	33.8	16.0	---
LOOMIS SAYLES	3/31/84	45,336,835	11.2	15.1	3.4	---	5.1	12.8	38.2	14.3	---
LOOMIS SAYLES	12/31/83	49,181,570	11.6	16.1	3.3	---	5.2	14.0	33.5	16.4	---
LOOMIS SAYLES	9/30/83	50,182,549	3.5	14.5	13.3	---	10.6	5.2	44.9	8.0	---
LOOMIS SAYLES	6/30/83	55,042,543	3.1	9.0	12.1	---	34.6	10.8	20.4	9.9	---
LOOMIS SAYLES	3/31/83	50,105,254	---	4.8	19.8	---	25.4	9.1	30.7	10.1	---
NORWEST BANK MPLS	3/31/85	27,145,424	---	2.3	44.2	6.3	9.2	6.2	28.0	1.9	1.9
NORWEST BANK MPLS	12/31/84	25,188,312	---	2.3	37.5	2.7	3.9	9.8	37.7	4.1	1.9
NORWEST BANK MPLS	9/30/84	25,685,954	---	3.7	38.0	0.6	2.3	11.9	39.7	1.3	2.4
NORWEST BANK MPLS	6/30/84	24,546,941	2.8	5.5	31.2	5.8	1.0	9.3	38.9	4.3	1.3
NORWEST BANK MPLS	3/31/84	10,385,041	3.6	4.4	23.1	8.5	1.1	7.2	45.5	5.4	1.1
NORWEST BANK MPLS	12/31/83	11,215,761	2.5	1.6	25.5	1.2	3.2	6.0	51.8	1.7	6.6
NORWEST BANK MPLS	9/30/83	11,816,270	1.2	---	31.6	3.3	2.0	8.4	46.1	1.4	5.8
NORWEST BANK MPLS	6/30/83	12,126,921	4.8	---	36.4	5.2	8.9	4.8	33.0	2.9	3.3
NORWEST BANK MPLS	3/31/83	10,417,512	7.0	1.8	47.1	4.2	13.5	---	20.1	6.3	---
SIEBEL CAPITAL	3/31/85	59,170,590	7.0	5.4	39.1	1.2	18.9	5.9	22.5	---	---
SIEBEL CAPITAL	12/31/84	55,043,551	3.2	6.3	35.4	---	16.1	4.1	26.3	8.5	---
SIEBEL CAPITAL	9/30/84	52,544,464	3.6	6.2	43.1	1.2	13.3	3.2	24.7	4.8	---
SIEBEL CAPITAL	6/30/84	49,523,376	4.1	4.8	38.8	---	25.9	7.4	17.6	1.4	---
SIEBEL CAPITAL	3/31/84	49,328,007	3.6	1.3	26.4	---	25.8	11.4	29.2	2.4	---
SIEBEL CAPITAL	12/31/83	53,482,144	3.6	1.7	27.9	---	24.0	11.7	24.6	2.6	3.8
SIEBEL CAPITAL	9/30/83	54,520,467	3.5	---	32.7	2.8	25.1	7.2	19.3	5.0	4.4
SIEBEL CAPITAL	6/30/83	56,381,931	2.6	---	36.4	1.7	22.6	6.2	20.1	5.4	5.0
SIEBEL CAPITAL	3/31/83	51,621,595	4.6	---	28.8	---	18.5	5.3	30.0	6.7	6.2
HERBERT R. SMITH	3/31/85	47,216,714	2.4	3.2	24.3	8.8	20.1	4.7	18.7	17.8	---
HERBERT R. SMITH	12/31/84	43,937,991	0.8	7.8	22.1	13.4	17.9	0.3	17.6	20.1	---
HERBERT R. SMITH	9/30/84	44,289,327	1.4	8.9	20.0	17.9	12.4	3.3	26.7	9.4	---
HERBERT R. SMITH	6/30/84	42,860,060	2.4	0.3	24.4	25.5	10.6	7.5	20.9	7.4	1.1
HERBERT R. SMITH	3/31/84	44,150,474	3.3	0.2	10.1	28.8	16.9	12.8	18.6	9.1	---
HERBERT R. SMITH	12/31/83	46,441,280	4.4	0.4	15.4	10.6	14.5	8.8	30.2	15.8	---
HERBERT R. SMITH	9/30/83	48,910,462	2.2	0.6	12.7	9.4	22.1	15.6	23.2	9.4	4.8
HERBERT R. SMITH	6/30/83	53,176,398	2.0	0.6	15.5	5.2	17.6	13.9	29.4	7.3	6.7
HERBERT R. SMITH	3/31/83	50,198,982	4.8	---	32.6	---	20.5	---	34.7	7.4	---

EQUITY SECTOR WEIGHTS

MANAGER NAME	DATE	TOTAL PORTFOLIO MARKET VALUE	CAP GDS	CONS DUR	CONS NDUR	ENER	FINL	MAT & SERV	TECH	TRAN	UTIL
TRUSTEE & INVESTORS	3/31/85	50,202,957	2.3	1.5	17.0	3.9	6.8	26.2	31.2	11.1	---
TRUSTEE & INVESTORS	12/31/84	47,486,287	---	1.7	9.9	3.9	7.1	28.0	34.9	11.2	3.3
TRUSTEE & INVESTORS	9/30/84	48,156,379	---	---	6.3	15.1	21.9	8.2	36.3	8.4	3.8
TRUSTEE & INVESTORS	6/30/84	44,119,650	2.5	---	9.9	11.9	17.6	9.4	38.8	---	10.0
TRUSTEE & INVESTORS	3/31/84	47,158,224	2.5	---	10.0	16.0	17.3	10.1	35.3	---	8.7
TRUSTEE & INVESTORS	12/31/83	50,974,369	2.4	---	12.9	9.3	16.7	9.5	41.4	---	7.7
TRUSTEE & INVESTORS	9/30/83	53,062,524	2.5	---	15.6	10.5	17.1	8.8	38.4	---	7.1
TURSTEE & INVESTORS	6/30/83	57,620,180	2.9	3.2	17.0	11.5	18.9	10.3	29.7	---	6.5
TRUSTEE & INVESTORS	3/31/83	50,154,412	3.6	---	12.2	14.4	24.1	10.2	24.1	---	11.4
WADDELL & REED	3/31/85	27,604,382	---	12.8	11.9	2.7	21.5	15.8	16.3	7.9	11.2
WADDELL & REED	12/31/84	26,234,116	---	14.0	18.7	---	18.8	2.7	25.5	1.0	19.3
WADDELL & REED	9/30/84	25,856,251	1.4	13.9	28.0	3.3	14.3	0.5	30.9	1.6	6.1
WADDELL & REED	6/30/84	25,495,564	---	29.0	25.7	---	15.7	---	17.8	11.8	---
WADDELL & REED	3/31/84	25,833,644	5.2	32.1	21.4	---	25.0	---	11.7	4.5	---
WADDELL & REED	12/31/83	11,409,742	12.8	32.4	---	---	33.9	---	20.9	---	---
WADDELL & REED	9/30/83	12,042,511	5.8	13.4	22.5	---	5.1	---	38.2	15.0	---
WADDELL & REED	6/30/83	12,464,478	5.7	13.2	29.2	3.3	5.0	---	31.1	12.5	---
WADDELL & REED	3/31/83	10,013,713	5.5	13.8	15.5	2.5	29.1	---	27.2	6.4	---
WILSHIRE 5000	3/31/85	---	4.9	3.9	25.3	13.0	11.4	10.9	14.4	3.3	12.9
WILSHIRE 5000	12/31/84	---	5.4	9.9	23.0	13.5	9.9	10.6	13.2	3.7	10.8
WILSHIRE 5000	9/30/84	---	5.2	4.3	24.9	13.2	10.3	11.5	15.5	2.9	12.2
WILSHIRE 5000	6/30/84	---	5.3	4.0	25.7	13.5	9.6	11.7	15.6	2.9	11.7
WILSHIRE 5000	3/31/84	---	5.4	3.9	23.6	16.1	9.8	12.1	15.3	2.9	11.1
WILSHIRE 5000	12/31/83	---	5.5	4.2	24.0	14.5	9.5	12.2	16.3	2.8	11.1
WILSHIRE 5000	9/30/83	---	5.2	4.0	24.3	14.8	9.4	11.8	16.3	2.9	11.3
WILSHIRE 5000	6/30/83	---	5.3	3.9	24.9	15.0	9.3	11.6	16.3	2.9	10.9
WILSHIRE 5000	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 1985	4Q 1984	3Q 1984	2Q 1984	1Q 1984	4Q 1983	3Q 1983	2Q 1983
FRED ALGER								
Equity	7.3%	0.2%	8.3%	-4.1%	-8.1%	-1.0%	-3.5%	13.9%
Total Fund	7.2	0.2	8.0	-3.5	-7.0	-0.9	-3.4	13.1
ALLIANCE CAPITAL								
Equity	13.1	1.3	7.1	2.2	-11.2	-0.6	-8.7	14.3
Total Fund	12.2	1.3	6.6	2.2	-10.1	-0.4	-8.0	12.7
BEUTEL GOODMAN								
Equity	12.1	5.1	10.1	-2.8	-0.7	3.5	3.4	13.9
Total Fund	10.7	4.9	9.3	-2.8	-0.6	3.3	1.1	8.7
BMI CAPITAL								
Equity	10.5	2.3	3.6	2.1	-14.4	-6.0	-7.8	14.4
Total Fund	9.3	2.2	3.4	2.0	-14.5	-6.1	-7.7	11.9
FORSTMANN-LEFF								
Equity	12.6	3.7	7.5	-2.8	-8.3	-1.0	-1.7	11.2
Total Fund	10.9	3.4	4.6	-1.7	-6.0	-0.6	-1.2	9.9
HELLMAN JORDAN								
Equity	10.0	4.3	8.6	-4.8	-3.1	-0.9	-9.5	10.0
Total Fund	8.7	4.6	9.5	-3.9	-0.6	-1.0	-3.2	5.8
IDS ADVISORY								
Equity	9.2	3.2	11.4	0.0	-8.4	-0.9	-6.6	14.3
Total Fund	8.5	3.0	10.3	0.4	-7.3	-0.6	-5.6	13.6
INVESTMENT ADVISERS								
Equity	6.6	5.8	11.3	-3.0	-5.8	1.5	-2.9	11.6
Total Fund	6.4	5.7	10.7	-2.8	-4.9	1.3	-1.8	8.0
LIEBER & COMPANY								
Equity	13.8	2.9	8.9	-1.3	-10.8	1.7	-2.3	16.6
Total Fund	11.6	2.6	7.9	-1.4	-7.3	1.3	-1.9	11.6
LOOMIS SAYLES								
Equity	6.9	1.5	6.0	-4.8	-8.8	-2.3	-9.3	10.2
Total Fund	5.7	1.0	5.7	-3.8	-7.8	-2.0	-8.8	9.8
NORWEST BANK MPLS								
Equity	9.5	-2.1	5.3	-6.3	-8.8	-6.0	-3.6	19.6
Total Fund	7.8	-1.9	4.7	-2.7	-7.4	-5.1	-2.6	16.4
SIEBEL CAPITAL								
Equity	9.8	5.2	7.4	0.4	-9.1	-2.4	-4.0	10.6
Total Fund	7.5	4.8	6.1	0.4	-7.8	-1.9	-3.3	9.2
HERBERT R. SMITH								
Equity	9.4	-0.9	3.4	-3.1	-6.4	-7.8	-11.0	13.4
Total Fund	7.5	-0.8	3.3	-2.9	-4.9	-5.1	-8.0	5.9
TRUSTEE & INVESTORS								
Equity	6.1	-1.4	9.3	-6.8	-7.8	-3.7	-7.9	16.4
Total Fund	5.7	-1.4	9.1	-6.4	-7.5	-3.9	-7.9	14.9
WADDELL & REED								
Equity	8.1	0.7	-1.6	-10.3	-17.2	-9.3	-4.7	29.9
Total Fund	5.2	1.5	1.4	-1.3	-2.2	-5.3	-3.0	24.0
SBI AGGREGATE								
Equity	9.5	2.4	8.0	-2.7	-7.5	-1.5	-5.3	13.2
Total Fund	8.4	2.4	7.2	-2.2	-5.9	-1.2	-4.5	10.5
MARKET INDICES								
Wilshire 5000	10.3	1.3	9.2	-2.8	-4.2	-1.0	-0.9	13.0
S&P 500	9.2	1.8	9.7	-2.5	-2.4	0.4	-0.1	11.1
91 Day T-Bills	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.	3/31/85	38	25	91	10.3	10.8	11.5	AAA	4.2	8.2
AVG. EXT. MGRS.	12/31/84	36	22	93	10.3	10.8	11.4	AAA	4.5	8.8
AVG. EXT. MGRS.	9/31/84	54	29	88	10.1	11.1	12.3	AAA	4.3	8.8
INVESTMENT ADV.	3/31/85	19	13	99	8.7	9.3	11.7	AAA	4.9	8.9
INVESTMENT ADV.	12/31/84	24	10	99	8.4	9.3	11.5	AAA	5.6	12.1
INVESTMENT ADV.	9/31/94	10	7	100	9.0	10.8	12.6	AAA	6.4	15.2
LEHMAN MGMT.	3/31/85	43	24	85	11.6	11.4	11.0	AAA	3.6	5.6
LEHMAN MGMT.	12/31/84	42	19	85	11.6	11.4	10.8	AAA	3.3	5.3
LEHMAN MGMT.	9/31/84	62	15	82	11.2	11.5	12.2	AAA	3.7	6.5
MILLER ANDERSON	3/31/85	36	41	92	9.0	10.0	11.1	AA	3.7	7.4
MILLER ANDERSON	12/31/84	48	43	99	9.1	10.1	11.3	AA	3.9	7.3
MILLER ANDERSON	9/31/84	83	59	71	9.8	11.1	11.9	AAA	3.3	6.7
MORGAN STANLEY	3/31/85	68	16	85	11.1	11.3	11.5	AAA	3.8	7.3
MORGAN STANLEY	12/31/84	29	12	100	11.5	11.5	11.5	AAA	5.3	9.4
MORGAN STANLEY	9/31/84	105	20	99	8.6	8.9	12.5	AAA	3.7	5.3
NORWEST BANK	3/31/85	13	28	100	11.1	11.3	11.5	AA	3.7	7.6
NORWEST BANK	12/31/84	37	25	96	10.5	10.9	11.3	AA	3.5	7.5
NORWEST BANK	9/31/84	17	21	93	10.6	11.7	12.5	AA	3.6	7.6
WESTERN ASSET	3/31/85	51	28	87	10.4	11.5	12.1	AA	5.3	12.2
WESTERN ASSET	12/31/84	38	24	80	10.6	11.4	11.8	AA	5.2	11.3
WESTERN ASSET	9/31/84	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	DATE	TOTAL PORTFOLIO MARKET VALUE	QUALITY WEIGHTINGS					SECTOR WEIGHTINGS									
			AAA	AA	A	BAA	OTHER	GOVT	AGCY	ZERO	IND	UTIL	FIN	TRAN	MTGS	MISC	CASH
AVG. EXT. MGRS.	3/31/85	---	78	10	6	2	4	27	5	4	5	6	12	0	31	1	9
AVG. EXT. MGRS.	12/31/84	---	77	12	7	2	2	33	8	4	2	8	12	0	24	1	7
AVG. EXT. MGRS.	9/31/84	---	79	12	7	2	0	30	10	7	3	8	9	1	19	1	12
INVESTMENT ADV.	3/31/85	30,942,776	85	15	0	0	0	53	0	18	11	13	4	0	0	0	1
INVESTMENT ADV.	12/31/84	30,397,636	74	26	0	0	0	52	0	18	0	25	4	0	0	0	1
INVESTMENT ADV.	9/31/84	27,932,974	72	28	0	0	0	59	0	10	0	31	0	0	0	0	0
LEHMAN MGMT.	3/31/85	177,383,853	95	3	2	0	0	65	13	0	2	0	2	0	3	0	15
LEHMAN MGMT.	12/31/84	173,831,628	98	0	2	0	0	64	13	0	3	0	0	0	5	0	15
LEHMAN MGMT.	9/31/84	162,737,117	96	1	2	0	0	60	13	5	4	0	0	0	0	0	18
MILLER ANDERSON	3/31/85	173,961,916	54	13	11	2	20	2	0	4	7	0	27	0	52	0	8
MILLER ANDERSON	12/31/84	169,696,156	55	17	14	5	9	0	0	7	5	0	36	0	51	0	1
MILLER ANDERSON	9/31/84	159,574,376	81	12	5	2	0	0	0	0	2	0	17	0	52	0	29
MORGAN STANLEY	3/31/85	173,106,782	100	0	0	0	0	38	9	0	0	0	0	0	38	0	15
MORGAN STANLEY	12/31/84	170,547,941	100	0	0	0	0	74	18	0	0	0	0	0	8	0	0
MORGAN STANLEY	9/31/84	159,109,110	100	0	0	0	0	45	27	27	0	0	0	0	0	0	1
NORWEST BANK	3/31/85	86,259,088	55	23	19	3	0	3	0	0	0	5	38	0	47	7	0
NORWEST BANK	12/31/84	84,387,890	65	13	18	4	0	6	7	0	0	5	30	0	48	0	4
NORWEST BANK	9/31/84	79,887,650	58	14	24	4	0	12	7	0	10	0	31	0	33	0	7
WESTERN ASSET	3/31/85	181,426,695	76	9	4	7	4	4	11	0	8	16	0	1	47	0	13
WESTERN ASSET	12/31/84	177,328,832	69	15	7	5	4	3	11	0	6	19	2	2	33	4	20
WESTERN ASSET	9/31/84	165,957,816	68	15	9	5	3	4	16	0	3	18	4	5	26	4	20

Tab B

PORTFOLIO STATISTICS

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
COMPOSITION OF STATE INVESTMENT PORTFOLIO'S BY TYPE OF INVESTMENT
MARKET VALUE MARCH 31,1985

	CASH AND SHORT TERM SECURITIES	BONDS		STOCKS		ALTERNAIVE ASSETS	TOTAL
		INTERNAL	EXTERNAL	INTERNAL	EXTERNAL		
BASIC RETIREMENT FUNDS:							
TEACHERS RETIREMENT FUND	$ 66,634	$ -0-	$381,936	$ -0-	$ 875,510	$103,458	$1,427,538
	4.67%	0.00%	26.75%	0.00%	61.33%	7.25%	100%
PUBLIC EMPLOYEES RETIRE. FUND	36,255	-0-	276,880	-0-	634,647	75,034	1,022,816
	3.54%	0.00%	27.07%	0.00%	62.05%	7.34%	100%
STATE EMPLOYEES RETIRE. FUND	43,044	-0-	188,973	-0-	433,182	51,189	716,388
	6.01%	0.00%	26.38%	0.00%	60.47%	7.14%	100%
PUBLIC EMP. POLICE & FIRE FUND	14,588	-0-	68,161	-0-	157,246	18,426	258,421
	5.64%	0.00%	26.38%	0.00%	60.85%	7.13%	100%
HIGHWAY PATROL RETIRE. FUND	2,085	-0-	13,465	-0-	31,063	3,642	50,255
	4.15%	0.00%	26.79%	0.00%	61.81%	7.25%	100%
JUDGES RETIREMENT FUND	146	-0-	942	-0-	2,173	255	3,516
	4.15%	0.00%	26.79%	0.00%	61.81%	7.25%	100%
POST RETIREMENT FUND	95,190	1,491,896	-0-	712,404	-0-	-0-	2,299,490
	4.14%	64.88%	0.00%	30.98%	0.00%	0.00%	100%
MINNESOTA SUPPLEMENTAL FUNDS:							
INCOME SHARE ACCOUNT	10,400	42,597	-0-	71,834	9,851	-0-	134,682
	7.72%	31.63%	0.00%	53.34%	7.31%	0.00%	100%
GROWTH SHARE ACCOUNT	5,488	-0-	-0-	30,467	27,604	-0-	63,559
	8.63%	0.00%	0.00%	47.94%	43.43%	0.00%	100%
FIXED RETURN ACCOUNT	16,255	46,766	-0-	-0-	-0-	-0-	63,021
	25.79%	74.21%	0.00%	0.00%	0.00%	0.00%	100%
BOND ACCOUNT	1,609	3,116	-0-	-0-	-0-	-0-	4,725
	34.05%	65.95%	0.00%	0.00%	0.00%	0.00%	100%
MINNESOTA VARIABLE ANNUITY	7,812	-0-	-0-	48,221	56,690	-0-	112,723
	6.93%	0.00%	0.00%	42.78%	50.29%	0.00%	100%
TOTAL RETIREMENT FUNDS	$ 299,506	$1,584,375	$930,357	$862,926	$2,227,966	$252,004	$6,157,134
	4.86%	25.73%	15.11%	14.02%	36.19%	4.09%	100%

PERMANENT SCHOOL FUND	22,668 7.41%	226,623 74.11%	-0- 0.00%	56,509 18.48%	-0- 0.00%	-0- 0.00%	305,800 100%
TREASURERS CASH	874,083 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	874,083 100%
TRANSPORTATION FUNDS	415,185 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	415,185 100%
STATE BUILDING FUNDS	122,957 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	122,957 100%
HOUSING FINANCE AGENCY	144,068 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	144,068 100%
MINNESOTA DEBT SERVICE FUND	213,670 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	213,670 100%
MISCELLANEOUS ACCOUNTS	177,529 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	177,529 100%
TACONITE AREA ENVIR. PROTECTION	12,927 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	12,927 100%
N.E. MINNESOTA PROTECTION	28,315 100%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	-0- 0.00%	28,315 100%
GRAND TOTAL	$2,310,908 27.34%	$1,810,998 21.43%	$930,357 11.01%	$919,435 10.88%	$2,227,966 26.36%	$252,004 2.98%	$8,451,668 100%

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

For period of
January 1, 1985 - March 31, 1985

Teachers Retirement Fund	$ -0-
Public Employees Retirement Fund	(12,000,000)
State Employees Retirement Fund	10,000,000
Public Employees Police and Fire	4,000,000
Highway Patrolmans Retirement Fund	-0-
Judges Retirement Fund	-0-
Post Retirement Fund	20,305,438
Supplemental Retirement Fund - Income	141,543
Supplemental Retirement Fund - Growth	(57,727)
Supplemental Retirement Fund - Fixed	1,255,142
Supplemental Retirement Fund - Bond	175,008
Minnesota Variable Annuity Fund	(88,499)
Total Retirement Funds Net Cash Flow	$ 23,730,905
Permanent School Fund	(10,598,536)
Total Net Cash Flow	$ 13,132,369

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

TRANSACTION AND ASSET SUMMARY
RETIREMENT FUNDS

	Net Transactions				Asset Summary (at market)			
	Bonds (000,000)	Stocks (000,000)	Total	Cash Flow	Short-term % of Fund	Bonds % of Fund	Equity % of Fund	Total (000,000) (at market)
March 1983	(270)	1098	828	47	8.7	37.2	54.1	4841
April	(6)	(7)	(13)	40	9.3	36.3	54.4	5086
May	52	59	111	34	7.9	36.8	55.3	4996
June	(15)	31	16	83	9.0	34.9	56.1	5177
July	47	154	201	47	6.1	35.2	58.7	5053
August	19	7	26	39	6.3	35.4	58.3	5072
September	22	(103)	(81)	29	8.3	35.9	55.8	5202
October	2	93	95	51	7.5	35.8	56.7	5158
November	18	(20)	(2)	40	6.3	37.4	56.3	5275
December	(1)	22	21	47	5.7	37.9	56.4	5262
January 1984	3	(31)	(28)	45	6.8	38.7	54.5	5267
February	(1)	27	26	31	7.0	38.6	54.4	5170
March	5	19	24	11	5.7	39.0	55.3	5119
April	(2)	24	22	36	6.1	36.9	57.0	5145
May	4	43	47	40	6.2	37.5	56.3	4993
June	5	(38)	(33)	119	8.7	36.5	54.8	5187
July	151	29	180	34	5.8	40.5	53.7	5247
August	(6)	(16)	(22)	24	6.2	38.4	55.4	5598
September	16	(6)	10	14	6.3	39.0	54.7	5652
October	19	32	51	31	5.8	39.7	54.5	5748
November	(7)	(19)	(26)	18	6.5	40.1	53.4	5760
December	91	(71)	20	12	6.3	41.2	52.5	5864
January 1985	(5)	131	126	20	4.3	42.0	53.7	6188
February	30	(5)	25	27	4.3	41.2	54.5	6177
March	(1)	5	4	26	4.6	41.7	53.7	6213

Tab C

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

May 28, 1985

TO: Members, State Board of Investment
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

Howard Bicker

FROM: Howard Bicker, Executive Director

SUBJECT: 1985 Legislative Session

The following bills affecting the State Board of Investment were passed by the 1985 Legislature:

1) SF 319; SBI Housekeeping
Chapter 324

Chapter 324 expands the State Board of Investment's authorized investment in government, corporate, and short-term obligations; provides for more frequent valuations for the Fixed Return Account; and increases the number of accounts authorized to participate in the Combined Investment Fund. The bill was sponsored by the State Board of Investment and supported by the Investment Advisory Council and retirement funds.

2) HF 729; Local Pension Funds Administration Bill

HF 729 authorizes the Moorhead Police and Fire Fund to merge with PERA Police and Fire, subject to approval by the Moorhead City Council. The bill authorizes the State Board of Investment to review all the assets in the Moorhead fund and require liquidation of any securities deemed inappropriate for transfer to Basic and Post Retirement Funds.

Tab D

EXECUTIVE DIRECTOR
HOWARD J. BICKER

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

May 20, 1985

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

FROM: Asset Mix Committee

SUBJECT: Committee Report

The Committee's primary topic of interest this quarter was a review of the investment needs and objectives of the Permanent School Fund. The Committee, after discussions with staff, recommends that the Fund's portfolio be completely invested in intermediate to long-term investment grade bonds.

This recommendation is predicated on the Permanent School Fund's goal of generating income to offset state school aid payments, as well as the restrictive accounting provisions under which the Fund must operate. The Committee believes that including equity securities in the Fund's portfolio, given its current accounting provisions, would lower the amount of current income available as well as make that income stream unacceptably volatile.

The Committee views this recommended all-fixed income strategy as unfortunately, but necessarily, short-run in perspective. The Committee recommends that the Board endorse Constitutional changes that would remove the Permanent School Fund's restrictive accounting provisions. Such changes would permit the inclusion of equity securities in the portfolio without significantly sacrificing current income. Yet at the same time, equity investments would permit the Fund to increase in value and provide a growing stream of inflation-adjusted income.

THE PERMANENT SCHOOL FUND
NEEDS AND OBJECTIVES

Staff Postion Paper
May, 1985

EXECUTIVE SUMMARY

The Permanent School Fund is a trust fund created by the State Constitution. The Fund was created to serve as a long-term source of revenue for public schools. Income generated by the Fund currently is used to offset state school aid payments.

A recent Constitutional amendment liberalized the Permanent School Fund's investment authority. The amendment permits higher return assets to be held in the Fund's investment portfolio. However, certain restrictive constitutionally established accounting provisions still exist that hinder the investment management of the Fund.

The Permanent School Fund in many ways is similar in purpose to a typical endowment fund. Any endowment fund must trade-off immediate maximum income investment objectives versus long-run income growth investment objectives. The specific circumstances of the endowment fund will dictate the appropriate trade-off.

The Permanent School Fund's restrictive accounting provisions differentiate it from a typical endowment fund. The Permanent School Fund must reduce annual spendable income by an amount equal to amortized realized net capital losses. Further, it may not utilize any of its current or past capital gains to support spendable income. Thus, if the Fund is to avoid excessively large fluctuations in current spendable income, it should not pursue investment strategies that might generate sizable realized losses in any year. In other words, the Fund should maintain a short-run, conservative risk posture focused on maximizing current spendable income. This goal is best accomplished by holding a portfolio composed entirely of intermediate to long-term investment grade bonds.

This investment approach certainly will produce high levels of current spendable income. However, it will sharply limit long-run growth in spendable income. It is recommended that the Board support Constitutional changes that would remove the Fund's restrictive accounting provisions. Such a change will permit the Fund's portfolio to be invested in a more aggressive, long-run oriented manner that will facilitate long-run growth in spendable income.

BACKGROUND

The Permanent School Fund was created in 1858 under Article XI, Section 8 of the Minnesota State Constitution. The Fund was designed to serve as a long-term source of revenue for public schools. Technically, the Fund is composed of two parts. The first consists of lands granted to the State by the federal government that have been consolidated into the Fund. These lands generate income in the form of land sales, mining royalties, timber sales and lakeshore and other leases. The income from these sources is used to purchase financial securities which make up the second part of the Permanent School Fund. It is this second part of the Fund, the principal as represented by the Fund's financial investments, that is the focus of this paper.

The Fund had a market value of $308 million ($332 million at cost) as of December 31, 1984. For the calendar year 1984, the Fund transferred $26 million to the general fund, which was used to offset state aid payments to Minnesota's public schools. During that same period the Fund received $700,000 in revenues from the its land holdings.

RECENT CONSTITUTIONAL AMENDMENT

Prior to the recent passage of a Constitutional amendment, the investment authority for the Permanent School Fund, as specified by the Constitution, was extremely restrictive. Investments in stocks were limited to 20% (at cost) of the Fund.

Further, all stocks purchased were required to have made five consecutive annual dividend payments. A maximum of 40% of the Fund could be invested in corporate bonds, but only the bonds of corporations who earnings exceeded interest requirements on outstanding bonds by three times for five consecutive years. The remainder of the Fund was required to be invested in the securities of the U.S. Treasury, U.S. agencies, states, or Minnesota municipalities.

A 1984 constitutional amendment eliminated these restrictive investment statutes. The Permanent School Fund is now permitted to be invested under the same statutes that govern the investment of all other funds under SBI management. Therefore, an opportunity now exists for restructuring the investment portfolio of the Fund. However, as is discussed below, the Fund still suffers from certain restrictive accounting requirements mandated by the Constitution. These requirements effectively limit the appropriate investment objectives that can be applied to the Fund.

INVESTMENT OBJECTIVES OF ENDOWMENT FUNDS

In many respects, the basic goal of the Permanent School Fund is similar to that of a typical endowment fund. That is, the Fund, with its pool of investible assets, is expected to generate a stream of income that finances certain projects, specifically in this case to provide an offset to state school aid payments. Given this similarity of purpose between the Permanent School

Fund and endowment funds, it is useful to analyze briefly the range of investment objectives facing typical endowment funds.

Any endowment fund encounters certain short-run versus long-run investment trade-offs. In the short-run, there is a demand for maximum current spendable income. This short-run objective can usually best be met by holding investments in lower risk, fixed income securities. Conversely, in the long-run, there is a demand for a growing stream of real (i.e., inflation adjusted) spendable income. This long-run objective can usually best be met by holding investments in higher risk equity securities. Unfortunately, the two investment objectives tend to be mutually incompatible. Maximum current spendable income achieved through fixed income investments will sharply limit long-run growth in a fund's principal and, hence, the real spendable income that the fund can generate. On the other hand, a growing stream of real spendable income achieved through equity investments usually results in a lower, and certainly a more volatile, stream of current spendable income.

An endowment fund sponsor's tolerance for risk largely is determined by how it trades off short-run versus long-run objectives. In turn, the emphasis on short-run versus long-run objectives is primarily a function of the importance of the endowment fund's spendable income stream to the sponsor's total revenue. Where the spendable income stream is a relatively small percentage of total revenues, the risk tolerance of the sponsor will tend to be higher than in a situation where the fund's spendable income stream is a large percentage of the sponsor's total revenues. In the former case, the sponsor can afford to take a longer-term perspective. It can attempt to increase the fund's value through riskier investments so that at some point in the future the fund's spendable income can play a more substantial role in the sponsor's total revenue picture. In the latter case, the sponsor must be more cautious. A protracted period of poor investment results could have a serious impact on the various projects that the endowment fund is supposed to finance.

INVESTMENT OBJECTIVES OF THE PERMANENT SCHOOL FUND

Ideally, the Permanent School Fund should be managed as would an endowment fund. However, the Fund has certain constitutional accounting restrictions that differentiate it from a typical endowment fund. As prescribed by the State Constitution, the principal of the Fund must remain undiminished in perpetuity. The offset to school aids can be financed only out of the Fund's dividend and interest income. None of the Fund's principal may be reduced to finance the offset. Realized losses on fixed income securities are amortized over the remaining life of the securities sold. Realized losses on equity securities are amortized over a five year period. Any combined amortized realized losses on fixed income and equity securities are first subtracted from any realized gains on fixed income and equity securities. If the amortized realized losses are greater than realized gains, then the difference must be recovered from the Fund's interest and dividend income. On the other hand, any excess realized capital gains are added to the Fund's principal. These excess realized capital gains cannot be spent to offset school aids.

A typical endowment fund does not have to reduce spendable income if realized capital losses are taken. Moreover, a typical endowment fund can utilize all of its current or past capital gains to support spendable income. The Permanent School Fund does not have this latitude. Therefore, as a result of its restrictive accounting requirements, if the Fund is to avoid excessively large fluctuations in current spendable income, it should not pursue investment strategies that might generate significant realized losses in any given year, unless an offsetting increase in interest and dividend income is also produced. Implicitly, the Fund is forced to focus on short-run income maximization as its investment objective. This approach will cause long-run growth in the Fund's principal and real spendable income to be sacrificed in exchange for a higher and more stable level of current spendable income. As is discussed below, this approach would not be the ideal strategy if the Fund could be managed like the typical endowment fund. However, it would appear to be the only feasible strategy given present accounting constraints.

PROPOSED ASSET MIX

Based on the Permanent School Fund's investment needs described above, staff recommends that its portfolio should be placed in investment grade, intermediate to long-term fixed income securities. Currently, the vast majority of the Fund's bond portfolio is invested in government issues. This is a remaining vistage of the recently removed restrictive investment authority. While at this time quality yield spreads are at very low levels, over the long term, spendable income to the Fund can be enhanced by increasing the holdings of lower quality bonds.

Staff also recommends that the Fund hold a minimal cash equivalents position. The Fund has no need for liquidity, beyond that necessary to facilitate investment management. (Given that the principal of the Fund must remain inviolate, no sales of securities for the purpose of generating cash flow are ever possible). The lower yields paid by cash equivalents make it an inferior investment to longer maturity fixed income assets.

Finally, staff recommends against owning common stocks in the Fund. As was discussed, holding common stocks would permit an increase the size of the Fund's principal and spendable income over the long-run. However, for several reasons, the inclusion of a significant equity component in the portfolio will adversely and unacceptably impact current spendable income. First, common stock dividend yields are considerably lower than bond yields. Second, equity prices are highly volatile and at times will generate capital losses that will reduce spendable income.

Third, because the Fund's principal cannot be spent, and net capital gains become part of the Fund's principal, the effects of the volatility of equity prices on the Fund's spendable income cannot be smoothed out by spending past realized capital gains.

It seems more reasonable to rely on the revenues from the Fund's land holdings to generate growth in principal. The Fund's investment holdings should be used as a means of converting those revenues into a long-run steady stream of state school aids financing.

RECOMMENDED CONSTITUTIONAL CHANGES

Staff believes that the long-run investment management of the Permanent School Fund could be enhanced considerably if the restrictive Constitutional accounting requirements applied to the Fund were relaxed. As noted, the Fund generates revenues equivalent to less than one percent of the State's general fund appropriations. Based on the earlier discussion of endowment fund investment objectives, it would seem desirable to attempt to increase the Fund's principal over the long-run by making sizable investments in equity securities. While this strategy might reduce current spendable income temporarily, given the limited relative importance of its spendable income to the State's revenues, the Fund can afford to be more future-oriented and focus on long-run growth in principal and real spendable income.

Despite the fact that this paper recommends that the Fund now be invested in fixed income assets, staff recognizes that the present structure of the Fund, and the derivative need for an emphasis on current spendable income, is actually detrimental to the State's interests in the long-run. By effectively forcing the concentration of the majority of the Fund's assets into fixed income securities, the real value of the Fund's principal is gradually eroded by inflation. That is, the Fund has no means to grow in value, beyond the minor revenues from its land holdings. Thus, the spendable income that the Fund can produce as support for school aids will gradually decline in relative importance. But staff believes that current accounting provisions offer no practical alternative to this focus on short-run investment objectives.

The most effective means of resolving this dilemma would be to alter the Permanent School Fund's constitutionally established accounting provisions. They should be changed to eliminate the required offset of net capital losses against spendable income and to permit the inclusion of net capital gains in spendable income. If these changes were made, the Fund would have the same investment flexibility as a typical endowment fund. As a result, a longer-term investment outlook could be adopted, with a correspondingly positive impact on long-run spendable income available to the State.

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 10, 1985

TO: Members, Asset Mix Committee
FROM: Jeff Bailey
SUBJECT: Effects of altering asset mix on the income generated the Permanent School Fund

Assume:

-- Bond portfolio yields 10% in interest income annually.

-- Common stocks produce a 15% annual total return.

-- Of the 15% total return, 5 percentage points is in the form of dividend income. The other 10 percentage points of return is in the form of capital gains.

-- The fund annually is rebalanced to its target weighting.

-- No new contributions take place.

Under these assumptions, and with a starting fund value of $300 million, after ten years the Permanent School Fund would generate the following outcomes:

PERCENT EQUITY	EQUITY VALUE	BOND VALUE	TOTAL VALUE	EQUITY INCOME	BOND INCOME	TOTAL INCOME
0	0	300	300	0	300	300
10	33	298	331	17	282	299
20	73	292	365	36	262	298
30	120	282	403	56	240	297
40	177	266	444	79	216	295
50	244	244	488	103	188	292
60	322	214	537	130	158	288
70	413	177	590	159	124	283
80	518	129	647	191	86	278
90	639	71	710	225	45	271
100	778	0	778	262	0	262

Conclusion: Given existing Constitutional constraints, the goal of the Permanent School Fund must be to maximize current (i.e., interest and dividend) income. Clearly, the longer (shorter) is the Fund's investment time horizon, the more productive are asset mixes with high common stock (bond) allocations. However, what is unclear is precisely what time horizon is desirable from the State's viewpoint.

The assumptions underlying the analysis conducted above are favorably tilted toward common stocks. That is, projected common stock total returns are high relative to projected bond yields. Further, no variability in common stock total returns is assumed. Nevertheless, over a ten-year period, higher bond allocations are directly related to the production of higher levels of current income. It would take approximately thirteen years, under the above assumptions, for the 100% common stock asset mix to produce more income than the 100% bond asset mix. A 20%/80% common stock/bond asset mix has an eleven year break-even horizon.

It is true that over the very long run utilizing common stocks in the Fund's investment portfolio likely will generate more income than a 100% bond asset mix. However, the break-even horizon would appear to be too long to justify the inclusion of common stocks in the portfolio, even under the optimistic assumptions employed in the above analysis. Staff continues to recommend that all of the Fund's assets be invested in fixed income securities.

Tab E

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

May 22, 1985

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

FROM: Equity Manager Committee

SUBJECT: Committee Report

The Committee has spent a considerable amount of time reviewing the Board's existing active equity management structure. The Committee has focused on five primary issues:

1. The investment styles of the Board's current active equity managers

2. The appropriate balance of active equity investment approaches

3. The performance of the Board's active equity managers

4. Appropriate changes in the Board's mix of active equity managers

5. An efficient procedure for implementing the Committee's recommendations

The Committee finds that the Board's current mix of active equity managers has a bias towards growth-oriented investment styles. This bias largely was an unintended result of the original selection process, which focused on identifying aggressive, historically very successful managers.

The growth bias of the Board's current active equity manager mix is not necessarily undesirable. Most of the Board's equity assets are held in a passively managed index fund. As a result, the Board can afford to take more risk in its actively managed equity segment. However, this strategy will periodically encounter situations, like that of the last eighteen months, when growth managers perform very poorly. There also will be periods when growth managers perform extremely well.

Nevertheless, the Committee recommends that the Board reduce its active equity manager growth bias. The Board should still require that its active equity managers implement a non-diversified, aggressive investment approach. However, the Board should develop a more balanced blend of investment styles. This change will require reducing the amount of assets managed by the Board's growth managers and increasing the assets invested by managers who utilize a value-oriented investment style. The Committee believes that a major step in this direction can be implemented by terminating several growth managers whose organizational effectiveness and performance are in question.

The Committee has reviewed the performance and organizations of the Board's active equity managers. The Committee again emphasizes that two years is simply an insufficient period of time over which to fully evaluate a manager's relative performance. However, based on interviews with the Board's active equity managers, the Committee believes that several managers do not appear to be operating with the effectiveness and confidence that was demonstrated when they were initially retained. The Committee recommends the termination of the Board's investment management agreement with Loomis Sayles, Siebel Capital, Herbert R. Smith, and Trustee & Investors. These firms together manage approximately $200 million of the SBI's equity assets.

The Committee recommends that these managers be immediately notified of their dismissal and instructed to do no more trading in their portfolios. The contents of their portfolios should then be offered to the Board's remaining managers, up to the allocations recommended in the attached table. Those stocks not selected by the remaining managers should be liquidated in an orderly fashion by internal staff and/or by an external advisor. The proceeds should be distributed in cash to the remaining managers. Some stocks may also be offered to the index fund.

In order to increase the percentage of the equity portfolio allocated to value investment management, the Board should initiate a search for additional value-oriented managers to be hired later in the year. In the interim the assets that are to be assigned to the new value managers should be invested by SBI staff in a similar value style. The Committee also recommends that Norwest Bank, one of the Board's current managers, be requested to shift its investment approach from growth to value. The firm offers both investment approaches. The Committee believes that the firm can implement the value approach with little disruption in current operations. With respect to the remaining managers, the Committee recommends that their contracts be extended for one year.

The Committee endorses the concept of incentive fees. All managers retained by the Board should agree to manage the SBI's assets under a properly constructed incentive fee system. If, and when, the Securities and Exchange Commission permits the use of the incentive fees, the Committee recommends that the Board institute such fees immediately.

IAC EQUITY MANAGER COMMITTEE
PROPOSED ACTIVE EQUITY MANAGER ALLOCATION

GROWTH MANAGERS	$ MILLIONS	ROTATIONAL MANAGERS	$ MILLIONS	VALUE MANAGERS	$ MILLIONS
Fred Alger	75	Forstman-Leff	60	Beutel Goodman	75
Alliance Capital	75	Hellman Jordan	60	Lieber & Co.	50
BMI Capital	50	IDS Advisory	60	Norwest Bank (Peregrine Capital)	75
Waddell & Reed	75	Investment Advisers	60	Adviser to be named	75*

*Until the new value manager is hired, it is recommended that SBI staff manage these assets.

EXTERNAL EQUTIY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Fred Alger Management (New York)

PORTFOLIO MANAGER(S): Portfolio decisions are made by the firm's analysts.

ACCOUNT HISTORY: Start-up 3/1/83 $50.0 million

INVESTMENT PHILOSOPHY: Fred Alger utilizes a microeconomic investment approach, emphasizing individual stock selection rather than industry selection and/or market timing. The firm focuses primarily on two types of companies: Those currently undergoing a positive life cycle change, and those creative companies whose products have high unit volume growth rates. Fred Alger expects these two types of companies to be characterized by substantially above-consensus earnings gains and thus, strong stock price performance. The firm's decision-making structure is relatively unique in that portfolio selections are made by the firm's highly motivated group of analysts. Except on rare occasions, the firm maintains a fully invested posture.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Fred Alger Mgmt	34%	39	96%	1.8%	16.4	1.27	.85	++	++	-	-	++	+
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Consumer Durables, Technology, Transportation

INDUSTRY SECTOR UNDERWEIGHTINGS: Energy, Financial, Utilities, Material & Services

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Fred Alger Mgmt	7.2%	11.9%	6.1%	7.3%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Alliance Capital Management (Minneapolis)

PORTFOLIO MANAGER(S): Alfred Harrison
John Koltes

ACCOUNT HISTORY: Start-up: 3/1/83 $50.0 million

INVESTMENT PHILOSOPHY: The Alliance Capital office system employs a macroeconomic investment approach. Investment strategy is developed on two levels. Macroeconomic considerations are analyzed on a centralized basis at the New York headquarters. Committees, composed of members from the regional and New York offices, develop economic forecasts, set asset allocation and industry weightings, and formulate an eligible list of attractive securities. Specific stock selection is conducted at the regional office level. The Minneapolis office tends to focus on companies with favorable ratios of P/E to forecasted earnings growth.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Alliance Capital (Mpls)	10%	35	96%	2.0%	16.1	1.19	.76	+	0	--	+	++	--
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Consumer Nondurables, Transportation, Consumer Durables

INDUSTRY SECTOR UNDERWEIGHTINGS: Capital Goods, Energy, Materials & Services, Utilities

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Alliance Capital (Mpls)	12.2%	23.9%	7.2%	8.0%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: BMI Capital (New York)

PORTFOLIO MANAGER(S): James Awad
Frank Houghton

ACCOUNT HISTORY: Start-up: 3/1/83 $10.0 million

INVESTMENT PHILOSOPHY: BMI employs a microeconomic investment approach, emphasizing individual stock selection rather than industry selection and/or market timing. The firm focuses on two types of companies: First, misperceived companies that are in the process of undergoing dynamic change that will cause them to produce materially higher earnings over the near-term, but whose prospects are as yet unrecognized by the market; Second, small-to-medium sized companies that exhibit the potential for rapid future earnings growth. This second type of company dominates the BMI portfolios. The firm tends to take sizable positions in a relatively few stocks. BMI generally maintains a fully invested posture, with any cash positions a result of a lack of attractive investment opportunities.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION					
								Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
BMI Capital	2%	25	99%	1.9%	18.4	1.26	.55	++	++	--	++	++	--
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Consumer Nondurables, Technology, Capital Goods, Consumer Durables

INDUSTRY SECTOR UNDERWEIGHTINGS: Energy, Financial, Materials & Services, Utilities

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
BMI Capital	9.3%	17.8%	-1.2%	-0.7%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Beutel Goodman Capital Management (Houston)

PORTFOLIO MANAGER(S): Robert McFarland
Richard Andrews

ACCOUNT HISTORY: Start-up: 3/1/83 $50.0 million

INVESTMENT PHILOSOPHY: Beutel Goodman utilizes a modified, microeconomic investment style. The firm concentrates on stock selection but is sensitive to the impact of macroeconomic factors on the attractiveness of specific industries and companies. Stocks purchased by Beutel Goodman tend to be either companies whose stock prices are too low in comparison to their tangible book value (as estimated by Beutel Goodman analysts) or companies whose stocks possess low relative P/E's given their investment characteristics and forecasted earnings growth. The firm generally remains fully invested, with cash positions usually resulting from an immediate lack of attractive investment opportunities.

QUARTER-END PORTFOLIO STATISTICS

								PORTFOLIO RISK ORIENTATION					
	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Beutel Goodman	13%	20	93%	3.7%	13.0	1.18	.83	+	0	++	++	0	++
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Financial, Materials & Services

INDUSTRY SECTOR UNDERWEIGHTINGS: Consumer Durables, Energy, Utilities, Capital Goods

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Beutel Goodman	10.7%	23.4%	17.9%	17.7%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Forstmann Leff (New York)

PORTFOLIO MANAGER(S): Joel Leff

ACCOUNT HISTORY: Start-up: 3/1/83 $50.0 million

INVESTMENT PHILOSOPHY: Forstmann Leff uses a macroeconomic investment approach, focusing on industry selection and market timing. The firm attempts to identify social and economic factors impacting the marketplace on a cyclical and secular basis. From this analysis the firm focuses on those sectors that will be positively and negatively affected by these forces. Stock selection is of secondary importance to the firm. Holdings tend to be concentrated in larger capitalization institutional favorites. Forstmann Leff is an active market timer willing to make sizable asset mix shifts at any point in the market cycle.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION: Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Forstmann Leff	53%	27	69%	3.1%	11.8	1.19	.89	++	+	0	-	0	0
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Financial, Materials & Services, Transportation, Consumer Durables

INDUSTRY SECTOR UNDERWEIGHTINGS: Energy, Utilities, Capital Goods

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Forstmann Leff	10.9%	18.0%	9.4%	10.4%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Hellman Jordan Management (Boston)

PORTFOLIO MANAGER(S): Gerald Jordan
Edward Heubner
Martin Hale

ACCOUNT HISTORY: Start-up: 3/1/83 $50.0 million

INVESTMENT PHILOSOPHY: Hellman Jordan employs a modified, macroeconomic investment approach, focusing on companies that it believes will be positively impacted by the firm's forecasted economic scenarios. The firm attempts to identify long-term trends in the economy and develop investment concepts related to these trends. Stock selection is considered to be of secondary importance to successful asset mix and sector rotation decisions. While this approach often leads the firm to focus on high growth, high P/E companies, when the firm is negative on the market it will move to high yield, lower growth, lower P/E defensive stocks. In either case, the firm tends to hold larger capitalization issues. Hellman Jordan is an active market timer, willing to make sharp, significant asset mix moves at any point over the market cycle.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Hellman Jordan	49%	35	81%	3.7%	14.2	1.13	.88	+	+	++	--	-	++
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Financial, Transportation

INDUSTRY SECTOR UNDERWEIGHTINGS: Capital Goods, Energy, Utilities, Consumer Durables

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Hellman Jordan	8.7%	19.7%	9.8%	8.9%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: IDS Advisory (Minneapolis)

PORTFOLIO MANAGER(S): Mitzi Malevich

ACCOUNT HISTORY: Start-up: 3/1/83 $50.0 million

INVESTMENT PHILOSOPHY: IDS employs a macroeconomic investment approach, focusing on industry selection and limited market timing. The firm's investment decisions are driven by its economic outlook. The firm attempts to identify industries that will be positively and negatively impacted by forecasted broad economic trends. The firm actively rotates among these affected industries. IDS's decisions are also influenced by its interpretation of broad market conditions such as liquidity, sentiment, and valuation. The firm tends to make moderate asset allocation moves gradually over a market cycle.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
IDS Advisory	36%	42	87%	4.1%	14.1	1.08	.85	0	0	-	--	-	+
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Transportation, Utilities, Consumer Durables

INDUSTRY SECTOR UNDERWEIGHTINGS: Capital Goods, Materials & Services

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
IDS Advisory	8.5%	23.9%	10.6%	10.9%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Investment Advisers

PORTFOLIO MANAGER(S): Kenneth Thorsen

ACCOUNT HISTORY: Start-up: 3/1/83 $50.0 million

INVESTMENT PHILOSOPHY: Investment Advisers utilizes a macroeconomic investment style, with a relatively equal emphasis placed on asset allocation, industry weighting, and stock selection. Through a committee structure, the firm attempts to identify the economy's position within the real economic and credit cycles. Based upon this analysis, Investment Advisers rotates its portfolios among industries and investment characteristics. Stock selection focuses on the recommendations of fundamental valuation and earnings momentum models. Holdings tend to be concentrated in large capitalization institutional favorites. The firm actively conducts market timing to take advantage of cyclical moves in the market.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Investment Advisers	28%	37	89%	3.3%	10.9	1.17	.91	+	+	0	-	-	0
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Financial, Technology, Transportation, Materials & Services, Consumer Durables

INDUSTRY SECTOR UNDERWEIGHTINGS: Capital Goods, Energy, Utilities, Consumer Nondurables

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Investment Advisers	6.4%	20.9%	11.1%	11.5%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Lieber & Co. (Harrison, NY)

PORTFOLIO MANAGER(S): Nola Falcone
Stephen Lieber

ACCOUNT HISTORY:			
	Start-up:	3/1/83	$10.0 million
	Contribution:	1/1/84	$15.0 million

INVESTMENT PHILOSOPHY: Lieber & Co. seeks to identify investment concepts that are either currently profitable or likely to become so in the near future, yet whose prospects are not reflected in the stock prices of the companies associated with the concepts. The investment concepts upon which the firm focuses are related to both macroeconomic trends and specific product developments within particular industries or companies. Stocks purchased by Lieber tend to be those of well-managed, high growth and high ROE, small-to-medium sized companies. The stocks may be undervalued due to the failure of investors to fully recognize either the value of new products or a successful turnaround situation. Particularly attractive to Lieber are small-to-medium sized takeover candidates. The firm generally is fully invested, with any cash positions the result of a lack of attractive investment concepts.

QUARTER-END PORTFOLIO STATISTICS

								PORTFOLIO RISK ORIENTATION					
	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Lieber & Co.	17%	107	99%	2.5%	12.6	1.24	.81	++	0	--	++	0	--
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Financial, Materials & Services, Consumer Durables

INDUSTRY SECTOR UNDERWEIGHTINGS: Capital Goods, Energy, Utilities, Technology

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEAR ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Lieber & Co.	11.6%	21.8%	11.9%	11.7%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Loomis Sayles & Co. (Boston)

PORTFOLIO MANAGER(S): Kenneth Heebner

ACCOUNT HISTORY: Start-up: 3/1/83 $50.0 million

INVESTMENT PHILOSOPHY: The Loomis aggressive equity management philosophy employs a modified microeconomic approach. Based upon the firm's economic forecast, the aggressive equity group identifies those industries and companies that are expected to experience significant cyclical or secular earnings gains in excess of market expectations. The Loomis portfolio tends to focus on stocks with relatively high P/E's and low yields and companies with highly variable, but successful patterns of historical earnings growth. The firm generally maintains a fully invested position, only rarely raising cash to significant levels.

QUARTER-END PORTFOLIO STATISTICS

								PORTFOLIO RISK ORIENTATION					
	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Loomis Sayles	62%	18	98%	2.3%	18.6	1.33	.76	++	++	--	+	++	-
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Consumer Durables, Technology, Financial

INDUSTRY SECTOR UNDERWEIGHTINGS: Capital Goods, Energy, Materials & Services, Transportation, Utilities

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Loomis Sayles	5.7%	8.6%	-0.9%	-0.7%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Norwest Bank (Minneapolis)

PORTFOLIO MANAGER(S): Robert Mersky
Paul Von Kuster

ACCOUNT HISTORY: Start-up: 3/1/83 $10.0 million
Contribution: 5/1/84 $15.0 million

INVESTMENT PHILOSOPHY: Norwest utilizes a modified, microeconmic investment style. The firm uses two investment management approaches. The first is to seek small, immature companies which exhibit the potential for strong earnings growth and high profitability. The second is to select larger capitalization stocks representing special situations such as turnaround companies, takeover candidates, or economic cycle plays. On average, the emerging growth approach represents about 60% of the portfolio, although this percentage may change depending upon the firm's market outlook. Norwest rarely attempts to time movements in the market. The decision to hold cash is usually a result of a lack of attractive growth opportunities.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Norwest Bank	45%	59	89%	1.0%	20.2	1.41	.79	++	++	--	++	++	--
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Consumer Nondurables, Technology

INDUSTRY SECTOR UNDERWEIGHTINGS: Capital Goods, Energy, Utilities, Consumer Durables, Materials & Services, Transportation

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Norwest Bank	7.8%	7.6%	3.6%	5.5%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Siebel Capital Management (San Francisco)

PORTFOLIO MANAGER(S): Kenneth Siebel
Ronald Sloan
Walter Harrison

ACCOUNT HISTORY: Start-up: 3/1/83 $50.0 million

INVESTMENT PHILOSOPHY: Siebel employs a modified, microeconomic investment style, concentrating on stock selection, but also considering the effect of macroeconomic factors on the prospects for specific industries and companies. The firm tends to purchase stocks of two principle types of companies: First, seasoned growth companies devising new products or creating new markets for old products which will significantly raise earnings growth. Second, low P/E companies undergoing a potentially profitable redeployment of assets. Siebel is a moderate market timer, willing to alter asset mix at any point in the market cycle.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Siebel Capital	38%	52	76%	2.5%	12.8	1.19	.87	+	0	-	++	0	0
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Consumer Nondurables, Financial, Technology, Capital Goods, Consumer Durables

INDUSTRY SECTOR UNDERWEIGHTINGS: Energy, Materials & Services, Utilities, Transportation

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Siebel Capital	7.5%	20.0%	7.1%	8.4%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Herbert R. Smith (Witchita Falls, TX)

PORTFOLIO MANAGER(S): Herbert Smith
David Bagbee

ACCOUNT HISTORY: Start-up: 3/1/83 $50.0 million

INVESTMENT PHILOSOPHY: Herbert R. Smith utilizes a modified, macroeconomic investment approach. The firm uses its economic and political outlook and its technical analysis of the marketplace to establish the asset mix for its portfolios. The firm is an aggressive market timer, willing to make sizable asset allocation moves at any point in the market cycle. Although asset allocation receives the firm's primary attention, the firm also emphasizes stock selection. Its stock selection is predicated upon both fundamental and technical analysis of individual securities. Herbert Smith searches for stocks with attractive relative P/E's and positive technical patterns.

QUARTER-END PORTFOLIO STATISTICS

								PORTFOLIO RISK ORIENTATION					
	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Herbert R. Smith	27%	49	97%	2.7%	11.2	1.26	.84	+	+	-	0	0	0
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Technology, Transportation, Financial

INDUSTRY SECTOR UNDERWEIGHTINGS: Capital Goods, Materials & Services, Utilities, Energy

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Herbert R. Smith	7.5%	6.9%	-3.0%	-2.7%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Trustee & Investors (Boston)

PORTFOLIO MANAGER(S): Mason Klinck
Richard Welch
Peter Schaedel

ACCOUNT HISTORY: Start-up: 3/1/83 $50.0 million

INVESTMENT PHILOSOPHY: Trustee & Investors employs a highly disciplined, microeconomic investment approach, emphasizing stock selection rather than industry selection and/or market timing. The firm analyzes potential purchase and sale candidates through the use of computerized data bases which screen such fundamental valuation parameters as price, earnings, and balance sheet and income statement data. Trustee & Investors searches for companies with unrecognized assets or earnings, or companies undergoing cyclical or operational turnarounds. The firm maintains a fully invested position at all times.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Trustee & Investors	9%	43	97%	2.8%	13.5	1.22	.93	++	++	++	0	0	++
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Technology, Transportation, Materials & Services

INDUSTRY SECTOR UNDERWEIGHTINGS: Capital Goods, Consumer Durables, Consumer Nondurables, Utilities, Energy, Financial

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Trustee & Investors	5.7%	6.5%	0.1%	0.2%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

EXTERNAL EQUITY MANAGER INFORMATION
March 31, 1985

FIRM NAME: Waddell & Reed Asset Management (Kansas City)

PORTFOLIO MANAGER(S): Henry Herrmann

ACCOUNT HISTORY:			
	Start-up:	3/1/83	$10.0 million
	Contribution:	1/1/84	$15.0 million

INVESTMENT PHILOSOPHY: Waddell & Reed, in its aggressively managed funds, employs a microeconomic investment approach. While asset mix decisions are made for all Waddell & Reed funds at a committee level, the aggressive funds focus on stock selection almost entirely. Holdings are concentrated in small capitalization stocks with an orientation toward cyclical companies and immature growth companies, particularly technology companies. The Waddell & Reed organization is an active market timer willing to make significant asset mix shifts at any point in the market cycle.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF STOCKS	EQUITY ALLOC.	YIELD	P/E	MKT VOLTY	DIVERSFN	PORTFOLIO RISK ORIENTATION Price Var.	Earn. Var.	Earn. Success	Size	Growth	Fin. Lever.
Waddell & Reed	41%	52	78%	3.6%	12.1	1.26	.82	++	++	0	+	-	++
SBI MGRS (Avg.)	31	43	90	2.7	14.4	1.23	.82	+	+	-	0	0	0
TUCS MEDIAN	NA	NA	89	NA	NA	1.26	.80	++	+	-	++	++	0

INDUSTRY SECTOR OVERWEIGHTINGS: Consumer Durables, Financial, Materials & Services, Transportation

INDUSTRY SECTOR UNDERWEIGHTINGS: Capital Goods, Energy, Consumer Nondurables

PERFORMANCE

	FIRST QUARTER 1985	YEAR ENDING 3/31/85	TWO YEARS ENDING 3/31/85 (ANNUALIZED)	SINCE INCEPTION 3/1/83 (ANNUALIZED)
Waddell & Reed	5.2%	6.8%	9.1%	8.8%
SBI MGR AGGREGATE	8.4	16.3	6.9	7.3
TUCS MEDIAN	9.2	14.5	6.2	NA
WILSHIRE 5000	10.3	18.7	12.3	13.7
CPI (Inflation)	1.0	3.6	4.2	4.1

STATE OF MINNESOTA

STATE BOARD OF INVESTMENT

EQUITY INVESTMENT MANAGER STATUS REPORT: 12/31/84 - 3/31/85

($ millions)

	EQUITY ASSETS UNDER MANAGEMENT				FIRST QUARTER 1985							
	3/31/83		3/31/85		Gained		Lost					
vestment nager	# of Accts	Asset Size	# of Accts	Asset Size	# of Accts	Asset Size	# of Accts	Asset Size	Professional Staff Turnover	Organizational Changes	Investment Style Changes	Comments
ed Alger	59	$1,645	77	$2,239	1	$ 10.0	1	$ 89.6	Baruch Halpern, VP and Analyst/ Manager, left firm. Gregory Richards, analyst, joined firm.	-	-	-
lliance Capital nagement inneapolis)	43	$1,095	46	1,534	-	-	-	-	-	-	-	-
utel, Goodman pital Management	5	$ 104	18	664	2	229.0	-	-	-	-	-	-
I Capital Corp.	5	$ 160	19	335	2	35.0	-	-	Gerard Hallaren joined research staff. Steve Dixon, formerly Assoc. Dir. Research became Dir. Research. Brendan Heneghan transferred from research to institutional sales.	-	-	-
A Asset nagement	126	$4,800	92	3,948	-	-	10	342.8	Lost port.mgr./analyst (Walton), research analysts (Gasner & Trumper), one trader (McMahon). Added research analyst Mike Moriarty.	-	-	Joel Leff assigned as portfolio manager is definite plus
llman Jordan nagement	22	$ 440	32	824	3	65.0	-	-	-	-	-	-
S Advisory Group	81	$3,361	78	3,194	1	3.2	4	173.5	Doug Jacobs joined IDS Advisory Group as VP Marketing.	-	-	-
IDS Equity Advisors			48	2,332	-	-	3	164.4		-	-	-
vestment Advisers, c.	79	$1,001	89	1,501	-	-	-	-	-	-	-	-
eber & Co.	29	$ 389	39	681	2	6.0	-	-	-	-	-	-
vergreen Total Return			22	143								
vergreen Fund			16	530								
vergreen Limited			1	8								

STATE OF MINNESOTA

STATE BOARD OF INVESTMENT

EQUITY INVESTMENT MANAGER STATUS REPORT: 12/31/84 - 3/31/85

($ millions)

	EQUITY ASSETS UNDER MANAGEMENT				FIRST QUARTER 1985							
	3/31/83		3/31/85		Gained		Lost					
estment ger	# of Accts	Asset Size	# of Accts	Asset Size	# of Accts	Asset Size	# of Accts	Asset Size	Professional Staff Turnover	Organizational Changes	Investment Style Changes	Comments
is-Sayles & Co. ital Growth gement)	12	$ 540	13	$ 672	-	$ -	1	$ 20.0	Charles Thomas, Director of Marketing resigned, and was replaced by Dougal Thomas.	-	-	-
est Bank	3	49	3	99	-	-	-	-	-	-	-	-
el Capital gement	32	412	38	686	1	31.2	1	9.2	-	-	-	-
ert R. Smith, Inc.	24	152	31	217	1	1.4	-	-	-	-	-	-
tee & Investors Inc.	15	310	25	830	-	-	1	2.0	-	-	-	-
ell & Reed t Management	6	471	9	646	-	-	-	-	Sara Jones, analyst left firm and was replaced by Carolyn Gibbs.	-	-	-

Tab F

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

May 20, 1985

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

FROM: Fixed Income Manager Committee

SUBJECT: Committee Report

The Committee reviewed a staff report which analyzed the construction of the Post Retirement Investment Fund's dedicated bond portfolio. The Committee endorses the observations and conclusions of that report.

The Committee also reviewed staff reports pertaining to recent interviews held with the Board's external fixed income managers. The outcomes of those interviews appear satisfactory. The Committee believes that the managers are operating effectively and that performance to date had been acceptable and that all contracts be renewed for one year.

CONSTRUCTION OF THE DEDICATED BOND PORTFOLIO

Staff Position Paper

May, 1985

RATIONALE FOR A DEDICATED BOND PORTFOLIO

The Post Retirement Investment Fund contains the assets of retired Minnesota public employees covered by seven statewide retirement plans. Participants in the Fund are promised lifetime annuities, the size of which are based upon the employees' "high five" average salaries and years of service. Upon the employees' retirement, sums of money sufficient to finance fixed monthly annuities for the retirees are transferred to the Post Retirement Investment Fund.

In order to support these promised benefits, the Fund must "earn" at least 5% on its invested assets. Earnings are defined as interest and dividend income plus realized capital gains. If the Fund earns more than 5%, the excess earnings are used to finance permanent benefit increases for eligible employees.

The Post Retirement Investment Fund has two objectives:

1) To produce earnings sufficient to finance benefits currently promised retirees.

2) To produce additional earnings that permit benefits to be increased at a rate which compensates, to some degree, for inflation.

In the third quarter of 1984, staff developed a series of position papers that discussed the investment needs, objectives and investment management structure of the Post Retirement Investment Fund. To meet the first objective cited above, staff recommended that a portion of the Fund's assets be placed in a dedicated bond portfolio. This portfolio would be composed of high quality bonds blended so as to produce cash flows, from interest and principal payments, that would match the stream of benefits promised current retirees. It was also recommended that the dedicated portfolio be utilized to achieve, in part, the second objective as well. That is, the dedicated portfolio would be made large enough to produce not only cash flows sufficient to fund promised benefits, but also to generate a three percent benefit increase annually. This benefit increase would serve as a stable, minimum increase, which could be added to based upon the performance of the remainder of the Fund's investment portfolio.

Staff proposals were reviewed by the Investment Advisory Council's Asset Allocation Committee and the full Investment Advisory Council (IAC). The IAC recommended that the Board approve the staff proposals, which the Board did at its December, 1984 meeting.

ADVISER SELECTION PROCESS

Also at its December, 1984 meeting, the Board requested that the IAC's Fixed Income Manager Committee work with staff to select an adviser who would assist in implementing the dedicated bond portfolio. The role of the adviser would be to provide the computer software and technical expertise necessary both to design the dedicated bond portfolio as well as to carry out the specified securities trading.

The adviser would not be retained to act in the role of a money manager. Staff would continue to manage the Fund's assets. Rather, the adviser would utilize liability data submitted by the retirement funds and asset data submitted by staff, to construct a list of bonds to be purchased and sold that would meet the estimated cash needs of the Fund's current beneficiaries over the next thirty years. This list would be monitored and, if necessary, altered by the adviser as staff carried out the implementation of the dedicated bond portfolio.

In consultation with Evaluation Associates, the Committee and staff chose to interview three firms for the adviser's job: Bankers Trust, J.P. Morgan, and Ward & Wissner. Interviews were held with each firm at the Investment Board's offices.

A representative list of the issues discussed with each firm included:

- The universe of bonds from which the firm would select securities for the dedicated portfolio
- Bond pricing procedures
- Bond dedication software
- Procedures for selecting alternative bonds if originally suggested issues are not available
- Constraints placed on sectors, qualities, and individual issues
- Call protection
- Details of the firm's proposed trading strategy
- Hedging during portfolio construction
- Use of bond swaps in the dedicated portfolio
- Bond dedication experience
- Fees

SELECTION OF BANKERS TRUST

From among the three candidates considered, Bankers Trust was selected by the Fixed Income Manager Committee to provide assistance in the dedicated bond portfolio's construction. While all three candidates offered excellent credentials, the Committee and staff believed that Bankers Trust offered the best combination of experience, personnel, software, trading strategies, and cost. The Committee recommended that Bankers Trust be hired and in early-January the firm signed a one-year contract with the Investment Board.

Soon after Bankers Trust was hired, representatives of the firm came to Minnesota for a meeting with staff and the Fixed Income Manager Committee. Prior to the meeting, the firm was supplied with a copy of the Post Retirement Investment Fund's existing bond holdings and estimated liabilities. Based on this information and its previous meeting with staff and the Fixed Income Manager Committee, the firm constructed a suggested dedicated bond portfolio. Bankers Trust proposed that the portfolio be composed largely of Treasury and Agency bonds, due to the prevailing historically low yield spreads between corporates and government issues. The firm recommended retaining all corporate bonds that were then held in the portfolio. Where necessary, existing Treasury and Agency bonds would be sold to buy other Treasury and Agency bonds which, when combined with the existing corporate bonds, would produce the cash flows required to meet promised benefit payments.

This proposal was advantageous in a number of ways. First, transacting only in Treasury and Agency issues significantly reduced the difficulty and cost of constructing the dedicated portfolio. Government issues trade much more easily than do most corporates. Yet due to the low level of yield spreads, very little in terms of portfolio income was given up. Second, in the future if, and when, yield spreads widen, the government holdings can be swapped for corporate bonds at a pace dictated only by the availability of attractive trades. Third, the ability to simultaneously sell and buy Treasury and Agency bonds allowed the Investment Board to avoid significant interest rate risk exposure. The Board was never required to significantly alter the duration of its portfolio because it did not have to move into and out of cash as sells and buys took place.

DEDICATED PORTFOLIO CONSTRUCTION

The process of constructing a dedicated bond portfolio for the Post Retirement Investment Fund was greatly facilitated by the Fund's pre-dedication asset mix structure. As a result of investment decisions made as far back as 1980, the Fund's bond portfolio represented an ad hoc dedicated portfolio. That is, based on the Fund's perceived investment needs, and the prevailing high level of interest rates, a large portion of the Fund had been invested in long-term, high quality bonds. While no formal study had been conducted regarding the Fund's specific cash flow needs, the size and make-up of the Fund's existing bond portfolio closely approximated that of the desired dedicated portfolio. Thus, construction of the dedicated portfolio was more a matter of refining the existing bond portfolio than creating an entirely new portfolio.

Since the middle of 1984, the Post Retirement Investment Fund had been experiencing large cash inflows. These inflows were caused by early retirements under the "Rule of 85." Staff had been investing these cash inflows in a manner designed to fill gaps in the Fund's bond maturity structure. Thus, it is hard to pinpoint a date at which time trading for the dedicated bond portfolio actually commenced. However, December 31, 1984 would seem to be a reasonable, although somewhat arbitrary, starting date for purposes of this report.

The original bond portfolio contained 271 securities with a total year-end 1984 market value of $1.30 billion. The breakdown of the original portfolio by financial characteristics is presented in Table 1.

The desired dedicated bond portfolio contained 187 securities and had a February month-end market value of $1.46 billion. Its financial characteristics are shown in Table 2. As can be seen, the two portfolios were quite similar. The dedicated portfolio had a slightly higher yield-to-maturity and duration than did the original portfolio. On a quality basis, the two were essentially the same. In terms of sector weighting, the dedicated portfolio had a higher percentage of government holdings and contained no mortgages.

Construction of the dedicated bond portfolio entailed transactions in a large number and dollar amount of securities. The bonds that the original portfolio held generally were not precisely those that the dedicated portfolio would require. However, as noted, the original portfolio was quite similar in composition to the desired dedicated portfolio. As a result, most of the required transactions involved swapping very similar bonds. These trades had the advantage of being done with very liquid, similar securities which greatly reduced transactions costs and the risk of adverse interest rate moves.

The primary deficiency of the original portfolio's composition compared to that of the desired dedicated portfolio lay in bonds with maturities in the ten to twenty-five year range. The original portfolio had a shortage of these bonds and an excess of short to intermediate term issues. Most of the new cash added to the portfolio was concentrated in correcting this imbalance.

In all approximately $1.8 billion (at market) in total trading took place over the first two months of 1985. By the end of February, trading for the dedicated portfolio was complete. The list of issues traded and the par amounts transacted in are shown in Table 3. The actual trading went quite smoothly. It is not possible to quantify the total costs of the trades. However, the liquidity of the government bond market permitted the dedicated bond portfolio's transactions to be absorbed with no apparent significant market impact.

INVESTMENT OF NEW CASH FLOW

One dedicated bond portfolio topic that remains not fully resolved relates to the investment of new cash flows. The dedicated portfolio will be rebalanced at the end of each calendar year based on fiscal year-end actuarial data supplied by the retirement funds. In the interim, annuities for retirees will continue to be purchased. This new cash inflow must be invested. In order to minimize interest rate exposure until the annual rebalancing is conducted, staff has recommended that the portion of the new cash flow necessary to fund promised benefits be invested in fixed income securities with durations, in aggregate, approximately equal to those of the newly created liabilities. In order to implement this process, it will be necessary for the State's actuary to supply estimates of the new liabilities.

ON-GOING MONITORING

The dedicated bond portfolio represents a passive investment strategy. Moreover, the portfolio is designed to generate a specific stream of income. Total returns on the bond investments are irrelevant to the objectives of the portfolio. Thus, appropriate monitoring procedures are substantially different than those applied, for example, to the total return portfolios invested by the Board's active external bond managers.

As discussed, the objective of the dedicated portfolio is to generate a stream of income sufficient to match the benefit payments promised current retirees. In terms of meeting this objective there are two major sources of potential underperformance. One is that the actuarial benefit forecasts supplied by the retirement funds might be inaccurate. The SBI has no control over these estimates. However, staff will periodically compare actual benefits versus estimates to evaluate the effectiveness of the estimation procedure. Second, the dedicated portfolio might be improperly constructed and insufficient income produced. Given the certainty of income flows from high quality bonds, this type of error is highly unlikely. Moreover, income from reinvested cash flows represents less than 2% of total estimated liabilities. The reinvestment rate used in the dedicated portfolio's construction is a conservative 5%. Again, staff will periodically report on the actual amount of income and timing of income generated by the dedicated portfolio relative to expected amounts and timing.

STATE OF MINNESOTA

EXTERNAL FIXED INCOME MANAGER UPDATE INTERVIEW

1. Name of manager interviewed — Investment Advisers

2. Date interview conducted — May 14, 1985

3. Representing Minnesota State Board of Investment

   Howard Bicker
   Jeff Bailey
   David McCulloch

4. Representing manager

   Larry Hill - Portfolio Manager

STAFF COMMENTS AND RECOMMENDATIONS

Staff can identify no serious problems at this early stage of the fixed income investment management relationship between Investment Advisers and the SBI. Staff recommends that normal manager monitoring continue.

I. ORGANIZATION

No changes in the Investment Advisers organization have occurred since the inception of the SBI's fixed income account.

II. ASSETS UNDER MANAGEMENT

	June 30, 1984		March 31, 1985	
	Number	Market Value (Millions)	Number	Market Value (Millions)
Tax Exempt Accounts	48	$275	49	$332

Fixed income-only accounts make up about one-third of the total fixed income portfolios managed by Investment Advisers. The other two-thirds are fixed income portions of balanced accounts. Out of the fifteen fixed income-only accounts, only ten represent large institutional clients handled directly by Larry Hill. Thus, fixed income account load does not appear to be a problem at Investment Advisers. Over the longer-term the firm's goal is to have roughly fifteen large institutional fixed income clients per portfolio manager.

III. STAFF

No fixed income personnel changes have taken place at Investment Advisers since the inception of the SBI's account.

IV. INVESTMENT APPROACH

Investment Advisers is a traditional top down bond manager. The firm's approach is oriented toward correct identification of the economy's position in the credit cycle. This analysis leads the firm to its interest rate forecast and maturity decisions, from which the firm derives most of its value-added. Investment Advisers is an active asset allocator, willing to make rapid, significant moves between cash and long maturity investments over the course of an interest rate cycle. Quality, sector and issue selection are secondary decisions. Quality and sector choices are made through yield spread analyses consistent with the interest rate forecasts. Individual security selection receives very limited emphasis, focusing largely on specific bond characteristics such as call provisions.

During the second half of 1984 Investment Advisers was largely bullish on the outlook for interest rates. As a result, it kept portfolio duration relatively long by retaining many of the long maturity securities with which the SBI annually funded the firm. However, as interest rates declined in the second half of 1984, the firm became more neutral on the market and by early 1985 had lowered the portfolio duration substantially.

Investment Advisers portfolio is differentiated from the portfolios of most of the SBI's other fixed income managers by its relatively conventional collection of securities. The firm's sanguine interest rate outlook permitted it to hold on to several of the corporate issues that it inherited from the SBI. That outlook also predisposed the firm against holding such securities as floating rate notes and bank CD's. In addition, the firm has generally viewed pass-through securities as being overpriced and therefore held no mortgages in the portfolio.

V. PERFORMANCE

A. Relative to the Merrill Lynch Bond Index (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	1.8%	10.8%	23.8%
ML Bond Index	2.0	9.2	18.7

Due to a very strong second half of 1984, Investment Advisers has significantly outperformed the ML Bond Index over the last three quarters. The firm has maintained a duration above that of the index. In rates witnessed over this period, the firm's maturity strategy has been very successful.

B. Relative to Similar Risk Fixed Income Managers (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	1.8%	10.8%	23.8%
TUCS Median	2.0	9.2	17.8

Again, due to its strong 1984 second half, Investment Advisers has far outperformed the median of a sample of similar risk fixed income managers over the last three quarters.

C. Performance Attribution

	Last Quarter	Last 2 Quarters	Last 8 Months
Total Portfolio (Buy-Hold Monthly)	1.6%	10.8%	16.3%
Market	2.0	7.9	11.1
Management	-0.3	2.9	4.9
Maturity	0.1	2.7	4.7
Sector/Quality	0.4	0.5	0.7
Issue Selection	-0.7	-0.3	-0.5

Over the last eight months (dropping July 1984, the initial month). Investment Adviser's positive performance relative to the universe of Treasury issues (i.e., the "market") has been primarily the result of holding a longer duration portfolio than that of the Treasury universe (roughly 2.7 years). Sector/quality decisions have added slight relative value while issue selection has slightly detracted value.

STATE OF MINNESOTA

EXTERNAL FIXED INCOME MANAGER UPDATE INTERVIEW

1. Name of manager interviewed Lehman Management

2. Date interview conducted May 9, 1985

3. Representing Minnesota State Board of Investment

   Jeff Bailey
   David McCulloch
   James Ryan - Evaluation Associates

4. Representing manager

   Paul Hutter - Portfolio Manager
   Joseph Scanlon - Marketing Representative
   William Simmons - Marketing Respresentative

STAFF COMMENTS AND RECOMMENDATIONS

Staff can identify no problems at this early stage of the investment management relationship between Lehman and the SBI. Staff recommends that normal manager monitoring continue.

I. ORGANIZATION

In 1984 Lehman Brothers was acquired by Shearson/American Express. While the acquisition has had significant impacts on various other parts of the Lehman Brothers organization, Lehman Management Company (LBMCO), which conducts investment management for the SBI and other institutional clients, appears to be essentially unaffected.

To date no personnel or organizational shifts have occurred at LBMCO as a result of the acquisition. LBMCO retains 35% of its profits to provide incentives to key personnel. At the time of the acquisitions, bonuses, with three-year vesting periods, were paid to key personnel to ensure their continued presence in the firm.

As with all acquisitions of investment management firms, however, the potential for organizational disruption exists. Staff will continue to monitor the situation at Lehman Brothers.

II. ASSETS UNDER MANAGEMENT

	June 30, 1984		March 31, 1985	
	Number	Market Value (Millions)	Number	Market Value (Millions)
Tax Exempt Accounts	36	$3,000	38	$3,400

When Lehman was initially interviewed, the firm put growth targets of approximately 11-12 accounts per manager, and 60 accounts and $4 billion dollars in total under management. Since the SBI account's inception, client growth at Lehman has been moderate. With four senior portfolio managers, the firm is below its limits on account load per manager. It appears to have considerable room for growth. Over the longer-term Lehman hopes to continue to grow by adding portfolio managers developed within the firm.

III. STAFF

Steve Kohlhagen, one of the firm's senior fixed income portfolio managers, left Lehman in late 1984. He left to head up the foreign currency trading desk at Bankers Trust. Kohlhagen's departure does not appear to be caused by any problems within Lehman. Further, it does not appear to have affected the firm's investment management process to any significant extent. Kohlhagen was replaced by Lawrence Fell, who moved over from the firm's corporate and municipal bond section.

Over the last several quarters, Lehman has also added several assistant portfolio managers, who eventually may become senior portfolio managers.

IV. INVESTMENT APPROACH

Lehman's primary emphasis is on forecasting cyclical interest rate trends and positioning its portfolios in terms of maturity, quality and sectors in response to its interest rate forecasts. However, the firm avoids significant, rapidly changing interest rate bets. Rather, it prefers to shift portfolio interest rate sensitivity gradually over a market cycle, avoiding extreme positions in either long or short maturities. Individual bond selection is based on a quantitative valuation approach and the firm's internally-conducted credit analysis. High quality (A or better) undervalued issues are selected consistent with the desired maturity, quality and sector composition of the portfolios.

Over the last three quarters, Lehman has held to the belief that the economy is in the later stages of a credit cycle. It has therefore kept portfolio duration at the lower end of its normal operating ranges, expecting interest rates to eventually rise. The SBI's 3-7 duration guidelines have contrained the firm slightly, as most of its portfolios have maintained durations below 3 years, compared to the approximately 3.5 years maintained in the SBI's portfolio. Lehman has viewed corporate yield spreads as excessively narrow. As a result, the firm has held primarily government issues. The firm has preferred to hold a blend of short to intermediate term issues, using a moderately high cash position to keep portfolio duration short.

V. PERFORMANCE

A. Relative to the Merrill Lynch Bond Index (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	2.1%	9.0%	18.5%
ML Bond Index	2.0	9.2	18.7

Lehman's performance has closely tracked that of the Merrill Lynch Bond Index consistently over the last three quarters. This result occurred despite the fact that interest rates were generally flat or declining over this period, yet the duration of Lehman's portfolio was consistently below that of the index.

B. Relative to Similar Risk Fixed Income Managers (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	2.1%	9.1%	18.5%
TUCS Median	2.0	9.2	17.8

Over the last three quarters, Lehman has slightly outperformed the median of other fixed income managers with similar risk attributes.

C. Performance Attribution

	Last Quarter	Last 2 Quarters	Last 8 Months
Total Portfolio (Buy-Hold Monthly)	2.0%	9.1%	12.9%
Market	1.9	7.9	11.1
Management	0.1	1.2	1.8
Maturity	-0.2	0.9	1.6
Sector/Quality	0.0	0.1	0.1
Issue Selection	0.3	0.2	0.1

Over the last eight months (dropping July 1984, the initial month) Lehman's positive performance versus the universe of Treasury issues (i.e., the "market") has been primarily the result of holding a longer duration portfolio than that of the Treasury universe (roughly 2.7 years). Sector/quality and individual issue selection added essentially nothing to relative performance.

STATE OF MINNESOTA

EXTERNAL FIXED INCOME MANAGER UPDATE INTERVIEW

1. Name of manager interviewed — Miller Anderson & Sherrerd

2. Date interview conducted — May 10, 1985

3. Representing Minnesota State Board of Investment

   Jeff Bailey
   David McCulloch

4. Representing manager

   Richard Worley - Portfolio Manager
   Thomas Bennett - Portfolio Manager
   Ellen Harvey - Portfolio Manager

STAFF COMMENTS AND RECOMMENDATIONS

Staff can identify no problems at this early stage of the investment management relationship between Miller Anderson and the SBI. Staff recommends that normal manager monitoring continue.

I. ORGANIZATION

No significant organizational changes have taken place at Miller Anderson since the inception of the SBI's account.

Miller Anderson is considering the creation of several pooled accounts that would be offered to their institutional fixed income clients. The pools would be composed of hard to purchase, hard to account for securities (such as mortgage pass-throughs). Clients could buy shares in these pools, thus achieving significant administrative economies of scale with respect to the ownership of the underlying securities. The firm plans to make a formal proposal to its clients at a future date.

II. ASSETS UNDER MANAGEMENT

	June 30, 1984		March 31, 1985	
	Number	Market Value (Millions)	Number	Market Value (Millions)
Tax Exempt Accounts	37	$2,184	46	$3,179

Miller Anderson has grown significantly since being retained by the SBI. The firm's long-run growth targets, presented at the initial interview, were for 20 fixed income-only accounts and $2.5 billion under management. The firm now has 22 fixed income-only accounts. Miller Anderson is no longer actively seeking new fixed income business and has raised its minimum account size to $50 million. The firm expects no near-term significant growth in accounts or assets under management.

III. STAFF

Ellen Harvey, formerly of Morgan Futures Corp., joined Miller Anderson as a fixed income portfolio manager in early 1985. She has extensive financial futures experience. Currently, she is handling short to intermediate term investments for the firm.

IV. INVESTMENT APPROACH

Miller Anderson focuses its investments in misunderstood or under-researched classes of securities. Over the years this approach has led the firm to emphasize mortgage-backed securities in its portfolios. The firm rarely purchases corporate bonds. Based on its economic and interest rate outlook, the firm establishes a desired maturity level for its portfolios. This decision is instituted primarily through the selection of specific types of mortgage securities that have prepayment expectations consistent with the portfolio's desired maturity. The firm will also move in and out of cash, at times aggressively over an interest rate cycle, but never taking extremely high cash positions. Total portfolio maturity is always kept within an intermediate three-to-seven year duration band. Unlike many other firms that also invest in mortgage securities, Miller Anderson intensively researches and, even in some cases manages, the mortgage pools in which it invests.

In the early months of Miller Anderson's management of the SBI's account, the firm took a basically defensive stance, expecting the economy to continue to grow and interest rate pressures to increase. Later in 1984, the firm adopted a more positive interest rate forecast and increased portfolio duration by drawing down cash. Throughout the last three quarters, Miller Anderson had kept approximately 50% of the portfolio invested in mortgage-related securities. More recently the firm has concentrated in privately-securitized mortgage securities which provide attractive yield differentials over government agency pass-throughs. Despite its changing interest rate forecast the firm has generally held discount pass-throughs believing that the market consistently undervalues them relative to current coupon and premium issues. The firm has also held significant positions in floating rate notes and bank certificates of deposit, believing that these securities offer attractive yields relative to cash.

V. PERFORMANCE

A. Relative to the Merrill Lynch Bond Index (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	2.6%	9.1%	16.3%
ML Bond Index	2.0	9.2	18.7

Over the last three quarters, Miller's performance trails that of the Merrill Lynch Master Bond Index. The underperformance was due to a poor relative returns in the second half of 1984 when the firm's portfolio was kept very short while interest rates declined.

B. Relative to Similar Risk Fixed Income Managers (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	2.6%	9.1%	17.8%
TUCS Median	2.0	9.2	17.8

Miller outperformed the median manager from a sample of similar risk managers in the first quarter 1985. However, due to poor relative performance in the second half of 1984, the firm trails the similar risk sample median over the last three quarters.

C. Performance Attribution

	Last Quarter	Last 2 Quarters	Last 8 Months
Total Portfolio (Buy-Hold Monthly)	2.8%	8.9%	12.1%
Market	2.0	7.9	11.1
Management	.8	1.0	1.0
Maturity	-0.3	0.6	1.3
Sector/Quality	0.0	0.3	0.3
Issue Selection	1.2	0.1	-0.7

Over the last eight months (dropping July 1984, the initial month), Miller's positive performance relative to the universe of Treasury issues (i.e., the "market") has been primarily the result of holding a longer duration portfolio than that of the treasury universe (roughly 2.7 years). Sector/quality decisions have been slightly positive contributors to performance while issue selection has detracted value. A note of caution: A large part of Miller's portfolio could not be incorporated into the management return analysis due to the unique characteristics of many of their holdings. This situation may invalidate the performance attribution analysis.

STATE OF MINNESOTA

EXTERNAL FIXED INCOME MANAGER UPDATE INTERVIEW

1. Name of manager interviewed — Morgan Stanley Asset Management

2. Date interview conducted — May 9, 1985

3. Representing Minnesota State Board of Investment

   Jeff Bailey
   David McCulloch
   James Ryan - Evaluation Associates

4. Representing manager

   Geoffrey Gettman - Portfolio Manager
   Bruce Ives - Portfolio Manager

STAFF COMMENTS AND RECOMMENDATIONS

Staff can identify no serious problems at this early stage of the investment management relationship between Morgan and the SBI. Staff is slightly concerned about the absence of long-run growth plans at the firm. Staff recommends that normal manager monitoring continue.

I. ORGANIZATION

No significant organizational changes have occurred at Morgan Stanley since the inception of the SBI's account.

Peter Nadosy, senior fixed income investment manager at Morgan, has been made a managing director of the firm.

II. ASSETS UNDER MANAGEMENT

	June 30, 1984		March 31, 1985	
	Number	Market Value (Millions)	Number	Market Value (Millions)
Tax Exempt Accounts	29	$1,040	38	$1,935

In the initial interview, the firm provided no long term targets for manager account loads and asset growth. Since that time the firm's client base has expanded by roughly one-third. Morgan now seems to be more cognizant of the need for growth limits. However, beyond raising the minimum account size to $50 million, it has taken no steps to formalize such limits. Staff finds this deficiency somewhat disturbing and will continue to request that they be established.

III. STAFF

Mary Allen, a portfolio manager who had handled tax-exempt securities and corporate cash management for the firm, recently left for personal reasons. She has been replaced by Bruce Ives, formerly a fixed income portfolio manager at Union Carbide. Ives has considerable experience in bond immunization. Staff does not expect this personnel turnover to hinder management of the SBI's account.

IV. INVESTMENT APPROACH

Morgan Stanley takes a very conservative approach to fixed income management, emphasizing the preservation of capital through the generation of consistent real returns. The firm maintains the vast majority of its portfolio in short to intermediate maturity, high quality (A or better) securities. Large positions in maturities longer than ten years are held only as temporary trading opportunities. These positions are increased or reduced gradually as the firm's expectations regarding the cyclical level of interest rates change. Issue selection is of secondary importance to maturity decisions. Further, the firm avoids short-run trades between qualities and sectors. Rather, given its maturity decisions, the firm prefers to make sizable investments in specific areas of the market where it believes persistent misvaluations are present.

Over the last three quarters, Morgan's interest rate outlook has shifted several times and along with these shifts the duration of the portfolio has been adjusted substantially. Unfortunately, most of the adjustments have followed rather than led market moves. In mid-1984, as the interest rates declined, the firm held a very short portfolio. It did not extend maturities until the fourth quarter, missing much of the market rally. In February, as interest rates rose, the extended maturity position hindered performance. But as the firm sharply cut back maturities in March, rates again declined.

Morgan has viewed yield spreads as too low over the last three quarters to justify any corporate issues in the portfolio. Instead, the firm has held exclusively government issues. More recently, the firm has significantly increased its holdings of mortgage pass-through securities. Morgan believes that the pass-throughs offer the same high quality as Treasury and Agency issues, but now provide considerably more attractive yields as well.

V. PERFORMANCE

A. Relative to the Merrill Lynch Bond Index (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	1.6%	8.9%	15.6%
ML Bond Index	2.0	9.2	18.7

Morgan underperformed the ML Bond Index over the last three quarters. Most of the underperformance was concentrated early in the third quarter 1984. Morgan has guessed wrong several times regarding the near-term direction of interest rates.

B. Relative to Similar Risk Fixed Income Managers (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	1.6%	8.9%	15.6%
TUCS Median	2.0	9.2	17.8

Morgan has underperformed the median of similar risk fixed income managers over the last three quarters. Again, most of this underperformance was concentrated in the third quarter 1984.

C. Performance Attribution

	Last Quarter	Last 2 Quarters	Last 8 Months
Total Portfolio (Buy-Hold Monthly)	1.6%	9.1%	12.7%
Market	1.9	7.9	11.1
Management	-0.3	1.2	1.6
Maturity	-0.3	1.0	1.5
Sector/Quality	-0.1	-0.2	0.1
Issue Selection	0.1	0.4	0.0

Over the last eight months (dropping July 1984, the initial month) Morgan's positive performance relative to the universe of Treasury issues (i.e., the "market") is attributable almost entirely to holding a portfolio, in an environment of flat or falling interest rates, which had a longer duration than the market. Essentially no value added was generated by sector/quality and individual issue selection decisions.

STATE OF MINNESOTA

EXTERNAL FIXED INCOME MANAGER UPDATE INTERVIEW

1. Name of manager interviewed — Norwest Bank Minneapolis (Peregrine Capital)

2. Date interview conducted — May 14, 1985

3. Representing Minnesota State Board of Investment

   Howard Bicker
   Jeff Bailey
   David McCulloch

4. Representing manager

   William Giese - Portfolio Manager
   Patricia Burns - Portfolio Manager

STAFF COMMENTS AND RECOMMENDATIONS

Staff can identify no serious problems at this early stage of the fixed income investment management relationship between Norwest and the SBI. Staff recommends that normal manager monitoring continue.

I. ORGANIZATION

No changes in the Norwest (Peregrine) organization have occurred since the inception of the SBI's fixed income account.

II. ASSETS UNDER MANAGEMENT

	June 30, 1984		March 31, 1985	
	Number	Market Value (Millions)	Number	Market Value (Millions)
Tax Exempt Accounts	5	$170	6	$271

Norwest's long-run growth target is approximately 10 accounts per portfolio manager. The firm has considerable room for growth at this point.

III. STAFF

No changes in Norwest (Peregrine) staff have occurred since the inception of the SBI's account.

IV. INVESTMENT APPROACH

Norwest stresses consistency of fixed income portfolio relative returns. To accomplish this goal, the firm maintains a portfolio of high quality, liquid securities and a balance of maturity levels avoiding extreme exposures on either the long or short end. Further, Norwest will make only gradual moves between maturities over an interest rate cycle. The firm's maturity, quality and sector decisions are driven by both its economic forecasts and a quantitative analysis of the sensitivity of various classes of fixed income securities to different interest rate scenarios. The firm also concentrates on exploring misperceived fixed income securities, which has led the firm to make extensive use of mortgage-backed securities and floating rate notes.

Norwest's interest rate outlook has remained largely bearish over the last three quarters. The firm has viewed the economy as being near the end of a credit cycle and that interest rate pressures are likely to increase. At the time of the inception of the SBI's account, Norwest believed that the flat yield curve favored holding short average maturity, discount pass-through securities and puttable bonds. Both types of issues offered protection against interest rate increases but gave up little in yield. Later in the year, the interest rates declined and the yield curve steepened. The firm altered its forecasts slightly, as it began to expect the bond market to trade in a narrow range for a period, with interest rates rising later in 1985. In this environment Norwest expected intermediate-term issues to continue to perform well. As a result, it moved into floating rate notes and intermediate, high coupon corporate issues. This had the effect of picking up yield relative to cash.

V. PERFORMANCE

A. Relative to the Merrill Lynch Bond Index (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	2.3%	8.0%	15.4%
ML Bond Index	2.0	9.2	18.7

Norwest has underperformed the ML Bond Index over the last three quarters due to poor second half of 1984 relative returns. In that period the short duration maintained in its portfolio hindered relative performance significantly.

B. Relative to Similar Risk Fixed Income Managers (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	2.3%	8.0%	15.4%
TUCS Median	2.0%	9.2%	17.8

Norwest likewise underperformed a sample of similar risk fixed income managers over the last three quarters due to its poor relative second half 1984 performance.

C. Performance Attribution

	Last Quarter	Last 2 Quarters	Last 8 Months
Total Portfolio (Buy-Hold Monthly)	2.3%	8.9%	13.0%
Market	2.0	7.9	11.1
Management	0.4	1.0	1.8
Maturity	-0.2	1.0	1.8
Sector/Quality	-0.2	0.1	0.0
Issue Selection	0.8	0.1	0.0

Over the last eight months (dropping July 1984, the initial month), Norwest's positive performance relative to the universe of Treasury issues (i.e., the "market") was due almost entirely to the maintenance of a portfolio duration longer than that of the Treasury universe (roughly 2.7 years).

STATE OF MINNESOTA

EXTERNAL FIXED INCOME MANAGER UPDATE INTERVIEW

1. Name of manager interviewed — Western Asset Management

2. Date interview conducted — May 16, 1985

3. Representing Minnesota State Board of Investment

   Howard Bicker
   Jeff Bailey
   Roger Henry
   David McCulloch

4. Representing manager

   Kent Engel - Portfolio Manager
   Edward Robbie - Portfolio Manager

STAFF COMMENTS AND RECOMMENDATIONS

Staff can identify no serious problems at this early stage of the fixed income management relationship between Western Asset and the SBI. Some personnel changes have occurred, but in general the firm seems to have strengthened itself. Staff recommends that normal manager monitoring continue.

I. ORGANIZATION

No significant organizational changes have taken place at Western since the inception of the SBI's account.

II. ASSETS UNDER MANAGEMENT

	June 30, 1984		March 31, 1985	
	Number	Market Value (Millions)	Number	Market Value (Millions)
Tax Exempt Accounts	30	$1,599	31	$1,830

At the initial interview, Western had specified no long-run growth targets. The firm now believes that fifty client relationships is a reasonable goal. With its current portfolio manager staff the firm appears to have considerable room for growth.

III. STAFF

Win Neuger, the SBI's original portfolio manager at Western, left the firm toward the end of the third quarter 1984 to pursue an attractive offer from Bankers Trust. Neuger's departure does not appear to have been disruptive to the firm's investment management process. Over the last several quarters the firm has added several individuals. These moves appear designed to replace Neuger as well as increase the firm's portfolio management and analytical capacity.

IV. INVESTMENT APPROACH

Western recognizes the importance of interest rates changes on fixed income portfolio returns. However, the firm believes that successful interest rate forecasting, particularly short-run forecasting, is extremely difficult to accomplish consistently. Thus, the firm attempts to keep portfolio maturity in a narrow band near that of the market, making only relatively small, gradual shifts over an interest rate cycle. It prefers to add value primarily through appropriate sector decisions. Based on its economic analysis, Western will significantly overweight particular sectors, shifting these weights as economic expectations warrant. Issue selection, like its maturity decisions, are of secondary importance to the firm.

Throughout most of the last three quarters, Western had been generally optimistic about the near-term outlook for interest rates although it did view the economy as entering the later stages of the credit cycle. As a result it tended to keep portfolio duration in the upper end of its normal operating range.

Over the last three quarters the firm has maintained a large and increasing portion of its portfolio in mortgage pass-through securities. Western's belief that the credit cycle is in a mature stage led it to look for quality. The firm viewed pass-throughs as providing similar quality and liquidity as Treasury issues, but higher yields. Western has held three types of pass-throughs: GNMA current coupon issues, FHLMC and FNMA discount issues, and FHA project loans. The firm has a specific rationale for owning each type of security.

Western has also had a significant representation in corporate issues. In general the firm has viewed corporates as overpriced and likely to underperform as yield spreads rise. However, the firm has sought to identify specific issues which have been shunned by the market and are offering considerably higher yields than other corporates with the same or higher quality ratings.

Finally, Western has held a sizable cash position. It has served as an offset to the longer maturities held in the portfolio, permitting total portfolio duration to meet the firm's objectives.

V. PERFORMANCE

A. Relative to the Merrill Lynch Bond Index (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	2.3%	9.3%	21.1%
ML Bond Index	2.0	9.2	18.7

Western has outperformed the ML Bond Index over the last three quarters, largely as a result of its decision to holding a portfolio with a duration longer than that of the index.

B. Relative to Similar Risk Fixed Income Managers (Net of Fees)

	Last Quarter	Last 2 Quarters	Last 3 Quarters
Total Portfolio	2.3%	9.3%	21.1%
TUCS Median	2.0	9.2	17.8

Western likewise has outperformed the median of a sample of similar risk fixed income managers over the last three quarters.

C. Performance Attribution

	Last Quarter	Last 2 Quarters	Last 8 Months
Total Portfolio (Buy-Hold Monthly)	2.2%	9.2%	15.0%
Market	2.0	7.9	11.1
Management	0.2	1.3	3.6
Maturity	-0.2	1.3	3.3
Sector/Quality	-0.1	0.0	-0.4
Issue Selection	0.5	0.0	0.6

Over the last eight months (dropping July 1984, the initial month), Western's positive performance relative to the Treasury universe (i.e., the "market") has been primarily due to the maintenance of a portfolio duration above that of the Treasury universe (roughly 2.7). Some relative value has been added through issue selection, although value was subtracted by the firm's sector/quality decisions.

EXTERNAL FIXED INCOME MANAGER INFORMATION
March 31, 1985

FIRM NAME: Investment Advisers, Inc. (Minneapolis)

PORTFOLIO MANAGER(S): Lawrence Hill

ACCOUNT HISTORY: START-UP: 7/2/84 $25.0 million

INVESTMENT PHILOSOPHY: Investment Advisers is a traditional top down bond manager. The firm's approach is oriented toward correct identification of the economy's position in the credit cycle. This analysis leads the firm to its interest rate forecast and maturity decisions, from which the firm derives most of its value-added. Investment Advisers is an active asset allocator, willing to make rapid, significant moves between cash and long maturity investments over the course of an interest rate cycle. Quality, sector and issue selection are secondary decisions. Quality and sector choices are made through yield spread analysis consistent with the firm's interest rate forecast. Individual security selection receives very limited emphasis, focusing largely on specific bond characteristics such as call provisions.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF ISSUES	BOND ALLOC.	COUPON	CURRENT YIELD	YIELD TO MAT.	AVERAGE QUALITY	DURATION	TERM TO MAT.
INVESTMENT ADVISERS	38%	13	99%	8.7%	9.3%	11.7%	AAA	4.9 YRS.	8.9 YRS.
SBI MANAGERS (AVG.)	38	25	91	10.3	10.8	11.5	AAA	4.2	8.8
TUCS MEDIAN	NA	NA	91	11.2	NA	NA	AAA	4.6	8.7

	QUALITY WEIGHTINGS					SECTOR WEIGHTINGS									
	AAA	AA	A	BAA	OTHER	GOV'T	AGCY	ZERO	IND	UTIL	FINC	TRAN	MTGS	MISC	CASH
INVESTMENT ADVISERS	85%	15%	0%	0%	0%	52%	0%	18%	0%	25%	4%	0%	0%	19%	1%
SBI MANAGERS (AVG.)	78	10	6	2	4	27	5	4	5	6	12	0	31	1	9
ML BOND INDEX	78	9	9	4	0	63	12	NA	6	11	4	0	0	3	0

PERFORMANCE

	LATEST QUARTER	LAST TWO QUARTERS	SINCE INCEPTION (6/30/84)
INVESTMENT ADVISERS	1.8%	10.8%	23.8%
SBI MGR. AGGEGATE	2.1	9.0	17.8
TUCS MEDIAN	2.0	9.2	17.8
ML BOND INDEX	2.0	9.2	18.7
CPI (INFLATION)	1.0	1.3	2.5

EXTERNAL FIXED INCOME MANAGER INFORMATION
March 31, 1985

FIRM NAME: Lehman Management Company (New York)

PORTFOLIO MANAGER(S): Paul Hutter

ACCOUNT HISTORY: START-UP: 7/2/84 $150.0 million

INVESTMENT PHILOSOPHY: Lehman's primary emphasis is on forecasting cyclical interest rate trends and positioning its portfolios in terms of maturity, quality and sectors, in response to its interest rate forecast. However, the firm avoids significant, rapidly changing interest rate bets. Instead, it prefers to shift portfolio interest rate sensitivity gradually over a market cycle, avoiding extreme positions in either long or short maturities. Individual bond selection is based on a quantitative valuation approach and the firm's internally-conducted credit analysis. High quality (A or better) undervalued issues are selected consistent with the desired maturity, quality and sector composition of the portfolios.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF ISSUES	BOND ALLOC.	COUPON	CURRENT YIELD	YIELD TO MAT.	AVERAGE QUALITY	DURATION	TERM TO MAT.
LEHMAN MGMT.	38%	24	85%	11.6%	11.4%	11.0%	AAA	3.6 YRS.	5.6 YRS.
SBI MANAGERS (AVG.)	38	25	91	10.3	10.8	11.5	AAA	4.2	8.8
TUCS MEDIAN	NA	NA	91	11.2	NA	NA	AAA	4.6	8.7

	QUALITY WEIGHTINGS					SECTOR WEIGHTINGS									
	AAA	AA	A	BAA	OTHER	GOV'T	AGCY	ZERO	IND	UTIL	FINC	TRAN	MTGS	MISC	CASH
LEHMAN MGMT.	95%	3%	2%	0%	0%	65%	13%	0%	2%	0%	2%	0%	3%	0%	15%
SBI MANAGERS (AVG.)	78	10	6	2	4	27	5	4	5	6	12	0	31	1	9
ML BOND INDEX	78	9	9	4	0	63	12	NA	6	11	4	0	0	3	0

PERFORMANCE

	LATEST QUARTER	LAST TWO QUARTERS	SINCE INCEPTION (6/30/84)
LEHMAN MGMT.	2.1%	9.0%	18.5%
SBI MGR. AGGEGATE	2.1	9.0	17.8
TUCS MEDIAN	2.0	9.2	17.8
ML BOND INDEX	2.0	9.2	18.7
CPI (INFLATION)	1.0	1.3	2.5

EXTERNAL FIXED INCOME MANAGER INFORMATION
March 31, 1985

FIRM NAME: Miller, Anderson & Sherrerd (Philadelphia)

PORTFOLIO MANAGER(S): Richard Worley
Thomas Bennett

ACCOUNT HISTORY: START-UP: 7/21/84 $150.0 million

INVESTMENT PHILOSOPHY: Miller Anderson focuses its investments in misunderstood or underresearched classes of securities. Over the years this approach has led the firm to emphasize mortgage-backed securities in its portfolios. The firm rarely purchases corporate bonds. Based on its economic and interest rate outlook, the firm establishes a desired maturity level for its portfolios. This decision is instituted primarily through the selection of specific types of mortgage securities that have prepayment expectations consistent with the portfolio's desired maturity. The firm will also move in and out of cash, but generally only gradually over an interest rate cycle and never taking extremely high cash positions. Total portfolio maturity is always kept within an intermediate three-to-seven year duration band. Unlike many other firms that also invest in mortgage securities, Miller Anderson intensively researches and, even in some cases manages, the mortgage pools in which it invests.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF ISSUES	BOND ALLOC.	COUPON	CURRENT YIELD	YIELD TO MAT.	AVERAGE QUALITY	DURATION	TERM TO MAT.
MILLER ANDERSON	38%	41	92%	9.0%	10.0%	11.1%	AA	3.7 YRS.	7.4 YRS.
SBI MANAGERS (AVG.)	38	25	91	10.3	10.8	11.5	AAA	4.2	8.8
TUCS MEDIAN	NA	NA	91	11.2	NA	NA	AAA	4.6	8.7

	QUALITY WEIGHTINGS					SECTOR WEIGHTINGS									
	AAA	AA	A	BAA	OTHER	GOV'T	AGCY	ZERO	IND	UTIL	FINC	TRAN	MTGS	MISC	CASH
MILLER ANDERSON	54%	13%	11%	2%	20%	2%	5%	4%	7%	0%	27%	0%	52%	0%	8%
SBI MANAGERS (AVG.)	78	10	6	2	4	27	5	4	5	6	12	0	31	1	9
ML BOND INDEX	78	9	9	4	0	63	12	NA	6	11	4	0	0	3	0

PERFORMANCE

	LATEST QUARTER	LAST TWO QUARTERS	SINCE INCEPTION (6/30/84)
MILLER ANDERSON	2.6%	9.1%	16.3%
SBI MGR. AGGEGATE	2.1	9.0	17.8
TUCS MEDIAN	2.0	9.2	17.8
ML BOND INDEX	2.0	9.2	18.7
CPI (INFLATION)	1.0	1.3	2.5

EXTERNAL FIXED INCOME MANAGER INFORMATION
March 31, 1985

FIRM NAME: Morgan Stanley Asset Management (New York)

PORTFOLIO MANAGER(S): Peter Nadosy
Geoffrey Gettman

ACCOUNT HISTORY: START-UP: 7/2/84 $150.0 million

INVESTMENT PHILOSOPHY: Morgan Stanley takes a very conservative approach to fixed income investing, emphasizing the preservation of capital through the generation of consistent real returns. This philosophy has led the firm to maintain a vast majority of its portfolio in short to intermediate maturity, high quality (A or better) securities. Large positions in maturities longer than ten years are held only as temporary trading opportunities. These positions are increased or reduced gradually as the firm's expectations of the cyclical level of interest rates changes. Issue selection is of secondary importance to maturity decisions. Further, the firm avoids short-run trades between qualities and sectors. Rather, given its maturity decisions, the firm prefers to make sizable investments in specific areas of the market where it believes persistent misvaluations are present.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF ISSUES	BOND ALLOC.	COUPON	CURRENT YIELD	YIELD TO MAT.	AVERAGE QUALITY	DURATION	TERM TO MAT.
MORGAN STANLEY	68	16	85%	11.1%	11.3%	11.5%	AAA	3.8 YRS.	7.3 YRS.
SBI MANAGERS (AVG.)	38	25	91	10.3	10.8	11.5	AAA	4.2	8.8
TUCS MEDIAN	NA	NA	89	11.3	NA	NA	AAA	4.6	8.7

	QUALITY WEIGHTINGS					SECTOR WEIGHTINGS									
	AAA	AA	A	BAA	OTHER	GOV'T	AGCY	ZERO	IND	UTIL	FINC	TRAN	MTGS	MISC	CASH
MORGAN STANLEY	10%	0%	0%	0%	0%	38%	9%	0%	0%	0%	0%	0%	38%	0%	15%
SBI MANAGERS (AVG.)	78	10	6	2	4	27	5	4	5	6	12	0	31	1	9
ML BOND INDEX	78	9	9	4	0	63	12	NA	6	11	4	0	0	3	0

PERFORMANCE

	LATEST QUARTER	LAST TWO QUARTERS	SINCE INCEPTION (6/30/84)
MORGAN STANLEY	1.6%	8.9%	15.6%
SBI MGR. AGGEGATE	2.1	9.0	17.8
TUCS MEDIAN	2.0	9.2	17.8
ML BOND INDEX	2.0	9.2	18.7
CPI (INFLATION)	1.0	1.3	2.5

EXTERNAL FIXED INCOME MANAGER INFORMATION
March 31, 1985

FIRM NAME: Norwest Bank Minneapolis

PORTFOLIO MANAGER(S): William Geise

ACCOUNT HISTORY: START-UP: 7/2/84 $75.0 million

INVESTMENT PHILOSOPHY: Norwest's stresses consistency of fixed income portfolio relative returns. To accomplish this goal, the firm maintains a portfolio of high quality, liquid securities and a balance of maturity levels avoiding extreme exposures on either the long or short end. Further, Norwest will make only gradual moves between maturities over an interest rate cycle. The firm's maturity, quality and sector decisions are driven by both its economic forecasts and a quantitative analysis of the sensitivity of various classes of fixed income securities to different interest rate scenarios. The firm also concentrates on exploring misperceived fixed income securities, which has led the firm to make extensive use of mortgage-backed securities and floating rate notes.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF ISSUES	BOND ALLOC.	COUPON	CURRENT YIELD	YIELD TO MAT.	AVERAGE QUALITY	DURATION	TERM TO MAT.
NORWEST BANK	13%	28	100%	11.1%	11.3%	11.5%	AA	3.7 YRS.	7.6 YRS.
SBI MANAGERS (AVG.)	38	25	91	10.3	10.3	11.5	AAA	4.2	8.8
TUCS MEDIAN	NA	NA	91	11.2	NA	NA	AAA	4.6	8.7

	QUALITY WEIGHTINGS					SECTOR WEIGHTINGS									
	AAA	AA	A	BAA	OTHER	GOV'T	AGCY	ZERO	IND	UTIL	FINC	TRAN	MTGS	MISC	CASH
NORWEST BANK	55%	23%	19%	3%	0%	3%	0%	0%	0%	5%	38%	0%	47%	7%	0%
SBI MANAGERS (AVG.)	78	10	6	2	4	27	5	4	5	6	12	0	31	1	9
ML BOND INDEX	78	9	9	4	0	63	12	NA	6	11	4	0	0	3	0

PERFORMANCE

	LATEST QUARTER	LAST TWO QUARTERS	SINCE INCEPTION (6/30/84)
NORWEST BANK	2.3%	8.0%	15.4%
SBI MGR. AGGEGATE	2.1	9.0	17.8
TUCS MEDIAN	2.0	9.2	17.8
ML BOND INDEX	2.0	9.2	18.7
CPI (INFLATION)	1.0	1.3	2.5

EXTERNAL FIXED INCOME MANAGER INFORMATION
March 31, 1985

FIRM NAME: Western Asset Management (Los Angeles)

PORTFOLIO MANAGER(S): Kent Engel

ACCOUNT HISTORY: START-UP: 7/2/84 $150.0 million

INVESTMENT PHILOSOPHY: Western recognizes the importance of interest rates changes on fixed income portfolio returns. However, the firm believes that successful interest rate forecasting, particularly short-run forecasting, is extremely difficult to accomplish consistently. Thus, the firm attempts to keep portfolio maturity in a narrow band near that of the market, making only relatively small, gradual shifts over an interest rate cycle. It prefers to add value primarily through appropriate sector decisions. Based on its economic analysis, Western will significantly overweight particular sectors, shifting these weights as economic expectations warrant. Issue selection, like its maturity decisions, are of secondary importance to the firm.

QUARTER-END PORTFOLIO STATISTICS

	QTR. PORT. T/O	# OF ISSUES	BOND ALLOC.	COUPON	CURRENT YIELD	YIELD TO MAT.	AVERAGE QUALITY	DURATION	TERM TO MAT.
WESTERN	38%	28	87%	10.4%	11.5%	12.1%	AA	5.3 YRS.	12.2 YRS.
SBI MANAGERS (AVG.)	38	25	91	10.3	10.8	11.5	AAA	4.2	8.8
TUCS MEDIAN	NA	NA	91	11.2	NA	NA	AAA	4.6	8.7

	QUALITY WEIGHTINGS					SECTOR WEIGHTINGS									
	AAA	AA	A	BAA	OTHER	GOV'T	AGCY	ZERO	IND	UTIL	FINC	TRAN	MTGS	MISC	CASH
WESTERN	76%	9%	4%	7%	4%	4%	11%	0%	8%	16%	0%	1%	47%	0%	13%
SBI MANAGERS (AVG.)	78	10	6	2	4	27	5	4	5	5	12	0	31	1	9
ML BOND INDEX	78	9	9	4	0	63	12	NA	6	11	4	0	0	3	0

PERFORMANCE

	LATEST QUARTER	LAST TWO QUARTERS	SINCE INCEPTION (6/30/84)
WESTERN	2.4%	9.4%	21.1%
SBI MGR. AGGEGATE	2.1	9.0	17.8
TUCS MEDIAN	2.0	9.2	17.8
ML BOND INDEX	2.0	9.2	18.7
CPI (INFLATION)	1.0	1.3	2.5

STATE OF MINNESOTA

STATE BOARD OF INVESTMENT

FIXED INCOME INVESTMENT MANAGER STATUS REPORT: 12/31/84 - 3/31/85

($ millions)

	EQUITY ASSETS UNDER MANAGEMENT				FIRST QUARTER 1985							
	6/30/84		3/31/85		Gained		Lost					
vestment nager	# of Accts	Asset Size	# of Accts	Asset Size	# of Accts	Asset Size	# of Accts	Asset Size	Professional Staff Turnover	Organizational Changes	Investment Style Changes	Comments
vestment Advisers, c.	48	$ 275	49	$ 332	-	$ -	-	$ -	-	-	-	-
hman Management Co. c.	36	3,000	38	3,400	2	75	1	150	Steven Kohlhagen, VP and staff economist has left firm.	-	-	-
ller, Anderson Sherrerd	37	2,184	46	3,179	6	613	-	-	Robert Hagin joined firm as Director Computer Based Equity Research. Also, Elario Monteiro joined firm as Analyst.	-	-	-
rgan Stanley set Mgmt. Inc.	29	1,040	38	1,935	3	94	-	-	Bruce Ives joined firm as bond portfolio manager.	-	-	-
rwest Bank	5	170	6	271	-	-	-	-	-	-	-	-
stern Asset Mgt. .	30	1,599	31	1,830	1	100	-	-	Edward Moody VP and Portfolio Manager, and Steve Gradow Assistant VP joined firm.	-	-	-

Tab G

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 17, 1985

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

FROM: Alternative Investment Committee

SUBJECT: Alternative Investment Strategy Recommendations

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 $450 million of the $3 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 participations in balanced limited partnerships whose objectives specify diversification by industry type, stage of corporate development, and location. Given the current favorable environment for venture capital investing, the Alternative Investment Committee is recommending the SBI's venture capital investment program be substantially completed by June 1985.

The Alternative Investment Committee recommends that the Board approve Matrix Partners II for an investment of $10 million, Inman & Bowman for an investment of $7.5 million and Allied Ventures for an investment of $5 million. All three proposed venture capital managers have extensive venture capital experience and proven capabilities in successfully investing, managing and liquidating venture capital investments. Matrix Partners, with offices in Boston and San Francisco, will have a moderate early stage, high technology orientation with a secondary opportunistic focus on special situations (small leveraged buyouts or turnarounds), low or non-technology investments and later stage companies. Inman & Bowman, whose general partners have recently left the venture arm of Hambrecht & Quist to form their own firm, will be based in San Francisco and will invest Fund capital primarily in early stage, high technology venture capital investments. Allied Ventures, based in Washington D.C., emphasizes the Southeast, later stage investments and low technology companies. A detailed review of each manager is attached.

In conjunction with Venture Economics and the Alternative Investment Committee, staff has conducted an extensive review of each manager, including reference checks and day-long interviews at their places of business. In addition, staff and the Alternative Investment Committee have met with and interviewed each manager at SBI offices.

In the next quarter, the Alternative Investment Committee will examine additional ways to expand the Board's venture capital investment portfolio. One idea, currently under consideration, is the formation of a commingled limited partnership to invest in Minnesota-based venture capital companies. This Fund would be formed and managed by prominent Minnesota venture capitalists acting as general partners and Fund managers. Limited partners in the Fund would include the SBI (up to 20% of the Fund's capitalization) and at least four other institutional investors. The Fund would coinvest, only in Minnesota companies, with other venture capital limited partnerships. Suitability of potential general partners will be judged relative to the Board's venture capital criteria.

REAL ESTATE

The real estate investment strategy involves three steps to be implemented over a three to five year period. The first step called for investment of 30-40% of the real estate portfolio in diversified open-end commingled funds. The second step called 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. The first two steps are substantially completed.

The Alternative Investment Committee recommends implementation of the third step of the Board's real estate investment strategy: investments in less diversified more focused (specialty) commingled funds. Specifically, the Committee recommends that the Board approve Trust Company of the West (TCW) Realty Fund III for an investment of $40 million and State Street Real Estate Fund III for an investment of $20 million. Both specialty real estate managers offer extensive experience managing real estate commingled funds, strong property management capabilities and a specialty designed to enhance real estate investment returns. TCW and State Street specialize in the use of investment vehicles such as convertible mortgages, participating mortgages and leverage to maximize real estate investment returns. Detailed reviews of each manager are attached.

In conjunction with Evaluation Associates and the Alternative Investment Committee, staff has conducted extensive reviews of each manager, including reference checks and day-long interviews with the managers at their places of business. In addition, staff and the Alternative Investment Committee have met with and interviewed each manager at SBI offices.

In the next quarter, the Alternative Investment Committee will consider commingled investment funds that will invest in Minnesota real estate. The Committee will solicit proposals from professional real estate managers as to their ability to form and manage a Minnesota commingled real estate fund. Participants in the Fund will include the SBI (up to 20% of the Fund's capitalization) and at least four other institutional investors. Proposals will be judged relative to the Board's real estate criteria.

RESOURCE

The strategy for resource investments requires that investments be made over a three to five year period in oil and gas partnerships that focus investment in conservative, lower risk type investments, that is, proved producing properties and royalties which are diversified geographically and/or geologically. In addition, investments should be structured to "trade-off" or minimize tax benefits in order to enhance the SBI's overall rate of return. The Alternative Investment Committee and staff are currently reviewing ways to expand the Board's resource investment portfolios.

ALTERNATIVE EQUITY INVESTMENTS

FUND	COMMITMENT	FUNDED
REAL ESTATE:		
Equitable	$ 40.0 Million	$ 40.0 Million
Aetna	40.0	40.0
Prudential	40.0	40.0
RREEF	75.0	25.0
Heitman	20.0	18.0
TCW *	40.0	20.0
State Street *	20.0	5.0
Total:	$275.0 Million	$188.0 Million
Target:	($300 Million or 10% of Basic Retirement Funds)	
VENTURE CAPITAL:		
Norwest	$10.0 Million	$7.0 Million
KKR	25.0	13.6
Summit	10.0	2.5
First Century	10.0	2.5
DSV IV	10.0	4.0
Matrix *	10.0	2.5
Inman/Bowman *	7.5	2.0
Allied *	5.0	0.5
Total:	$87.5 Million	$34.6 Million
Target:	($75 Million or 2.5% of Basic Retirement Funds)	
RESOURCE:		
Amgo I	$15.0 Million	$15.0 Million
Amgo II	7.0	7.0
Apache	30.0	0.3
Total:	$52.0 Million	$22.3 Million
Target:	($75 Million or 2.5% of Basic Retirement Funds)	

* Indicates managers currently being recommended to the SBI for commitment and funding.

MATRIX PARTNERS II, L.P.

I. BACKGROUND DATA

NAME OF FIRM:	Matrix Management Company
NAME OF FUND:	Matrix Partners II, L.P.
TYPE OF FUND:	Venture Capital Limited Partnership
SIZE OF FUND:	$50 Million
DATE OF INTERVIEW:	April 3, 1985
FIRM ATTENDEES:	Paul Ferri, Rick Fluegel, Glen McLaughlin, Mike Humphreys
ADDRESS:	One Post Office Square Boston, Massachusetts 02109
TELEPHONE:	(617) 482-7735
CONTACT:	Michael Humphreys

II. ORGANIZATIONAL STRUCTURE

The Fund will be managed by Matrix II Management Company, which is organized as a partnership. The general partners of the Matrix Management Company will be Paul Ferri, Frederick Fluegel, Warren Hellman, Michael Humphreys, and Glen McLaughlin. Messrs. Ferri, Fluegel and Humphreys will be the managing general partners and will jointly make all the investment and personnel decisions of the Fund. The managing general partners will devote the majority of their time to the management of Matrix Partners I, which was organized in 1982 with $44 million in contributed capital, and the proposed Fund, Matrix Partners II, which will have approximately $50 million in contributed capital.

III. PERFORMANCE HISTORY

General Partners

Messrs. Ferri, Fluegel, Hellman, Humphreys and McLaughlin have managed Matrix Partners, L.P. (MP I) together since the fund's inception in 1982. Prior to the formation of MP I, Ferri, Hellman, and Humphreys jointly managed Hellman, Ferri Investments Associates (HFIA), a $15.2 million venture capital partnership from 1977 to the fund's liquidation in 1982.

In addition to their experience at Matrix, Ferri and Fluegel worked together as general partners at WestVen Management from 1972 to 1977, managing Western Investment Associates, a $21 million venture capital partnership. Fluegel remained at West Ven as a senior general partner of Western Investment Associates II before joining Ferri at Matrix in 1982. McLaughlin also joined Matrix at MP I's inception in 1982. Previously, he served as Sr. V.P. of Finance at Four-Phase Systems, a high-tech venture-backed company in which WestVen was an investor.

Ferri, Fluegel, Humphreys and McLaughlin will devote substantially all of their time to the management of MP I and MP II. Hellman, however, will devote only a small portion of his time to Matrix. In addition to his Matrix activities, Hellman manages Hellman and Friedman, a partnership which makes leveraged buyout and non-technology investments for its own account. Additional information regarding the general partners' backgrounds and experience is presented in Table 1 on page 10.

Portfolio Performance

MP I was formed in January, 1982 with $44 million of committed capital. Since MP I's inception, the partnership has made 28 investments. To date, none of the investments have been liquidated. As of December 31, 1984, 11 of the investments generated unrealized gains, 7 were valued at cost and the remaining 10 investments were valued below cost.

The value of the MP I portfolio investments as of December 1984 was estimated by the general partners to be $35 million. In addition, MP I has $14 million in cash reserved for new and follow-on investments. Overall, the internal rate of return to limited partners as of December 31, 1984, based on the partners' capital contributions and unrealized capital gains was 6.2%. The return calculation reflects the $14 million which was drawn down in December but which has not as yet been invested. The return on invested capital based on actual investments in portfolio companies, was 7.8%.

Hellman Ferri Investment Associates (HFIA) was organized in December, 1977 with $15 million in contributed capital. The Fund invested in 25 portfolio companies over its term. As of December 31, 1984, HFIA had distributed $98.5 million of cash and securities and had assets of $4.9 million remaining in the partnership. The internal rate of return to limited partners was 59.0%; the return on invested capital was 69.5%. Valuation policies utilized by the general partners in estimating portfolio values are presented on page 6. The MP I and the HFIA portfolios are presented in Exhibit II, pages 11-15.

IV. STAFF

Staff Composition

The staff consists of the five general partners and one associate, Timothy Barrows. Two of the three managing general partners, Ferri and Humphreys, manage Matrix's Boston, Mass. office. The third managing partner, Fluegel, is accompanied by McLaughlin in the operation of the firm's San Jose, California office. Hellman's office is located in San Francisco.

Staff Turnover

Only one investment professional has left the staff since Hellman, Ferri's inception in 1977. The staff member was asked to resign as general partner due to differences in opinion.

Allocation of Responsibilities Among Staff Members

Ferri, Fluegel and Humphreys will be the managing general partners of the Fund and will jointly make the investment decisions. Although one of the general partners will bear the primary responsibility for a specific portfolio company investment from deal origination through liquidation, at least two of the general partners will be involved in making the selection, monitoring, and management decisions.

Compensation and Incentive Systems

Each of the general partners will receive a salary plus a share in the general partners' profit allocation. Ferri and Fluegel, as senior partners, will receive a slightly greater share in the incentive allocative than the remaining three partners. The associate will receive a salary and will be eligible to receive a performance bonus.

Affiliation with Research Organizations and Consultants

The general partners will not be formally affiliated with any research organizations or consultants. Most often, the general partners will call upon the entrepreneurs they have funded previously to assist in the evaluation of investment opportunities.

Co-investment Network

The general partners have developed and expanded their network of potential co-investors throughout their years of active venture capital investing both by organizing syndicated investments and by participating in other venture firms' investments. The maintenance of offices on both the East and West Coasts has facilitated the establishment of co-investment relationships with top-tier venture firms in both areas. In the past, the general partners have co-invested most frequently with Weis, Peck & Greer; Hambrecht & Quist; Interwest; and Venrock.

V. INVESTMENT STRATEGY

Corporate Stage of Development

The investment strategy of Matrix Partners II will be virtually identical to that of MP I. MP II will focus on early stage investments, although it will also invest in later stage financings of both technology and non-technology companies where valuations seem particularly attractive.

MP II may also purchase, to a limited degree, equity securities of developmental-stage companies in the public markets, during periods when the value of shares of these public companies is depressed relative to private equity opportunities. However, the general partners anticipate that no more than a small percentage of the portfolio will be invested in public companies at any time during the term of the partnership.

Location

Historically, over 80% of the Matrix portfolio companies have been located near one of the firm's offices. Of the current MP I companies, 64% are located in California and 18% are located in the East Coast area. Although the general partners will consider investments in any area of the U.S., the focus of the MP II investment activities will be in California and Massachussetts. In addition, the general partners anticipate that they will see attractive investment opportunities through MP I's partnership interest in Intermountain Technology Ventures, a Boulder Colorado venture capital firm and thus, the MP II portfolio may include several Colorado companies as well.

Industries

MP I has focused primarily on high-technology companies, with investments in a wide variety of companies in the information processing, office automation, communications and health care industries. However, unlike many high-tech oriented venture funds, MP I has invested in a number of distinctly non-technology companies as well. The general partners anticipate that they will continue the high-tech emphasis for MP II and, as in MP I, they will also seek out attractive non-technology opportunities to diversify the portfolio.

Deal Origination

The general partners initiated and led approximately 50% of their previous MPI and HFIA investments, as measured by dollars invested. The partners expect to continue this strategy for MP II.

VI. INVESTMENT MANAGEMENT

Generation of Investments

Each of the general partners has developed a network of deal sources. Many of Matrix's investment opportunities are generated through the general partners' continuing relartionships with entrepreneurs of portfolio companies they have funded in the past. In addition, opportunities are generated through the managing general partners' relationships with other venture capitalists. Opportunities are also produced through Hellman's relationships with members of the investment banking community, which he developed in his 15 years at Lehman Brothers as head of Lehman's Investment Banking Division. Interesting deals are also generated through McLaughlin's contacts in both the high-tech entrepreneurial community and the venture capital community developed during his tenure at Four-Phase Systems.

Investment Selection

The general partners utilize the following criteria in screening potential portfolio companies:

1. Strong management
2. Technologically advanced product concepts
3. High barrier-to-entry products
4. Reasonable capital requirements
5. Well-defined markets

Negotiation and Structuring of Investments

In order to obtain preference during liquidation, Matrix most often purchases convertible preferred stock, but in certain circumstances the firm may utilize straight common stock. Demand notes with warrants may be used on occasion. Standard representations and warranties, covenants, and registration rights are included in Matrix's portfolio company purchase agreements.

Allocation of Investments among Funds Under Management

MP I's final takedown of committed capital was completed in December, 1984. As of December 31, 1984, MP I had $14.4 million in cash and cash equivalents available for new investments and follow-on reserves. If new investments are made, MP I will invest in parallel with MP II on a pro rata basis until MP I is fully invested. MP II may invest in the follow-on investments of selected MP I portfolio companies.

Syndication of Investments

Matrix investments will be syndicated to include other experienced venture capital investors whose investment philosophy and goals are similar to those of Matrix.

Monitoring and Management of Investments

The general partners of the Fund expect to be actively involved with portfolio companies, typically through representation on the Boards of these companies. The general partners obtained Board representation for approximately 80% of the privately-held companies in the MP I portfolio. They anticipate that they will serve on a similar number of MP II Boards.

During the course of a typical investment, the Matrix general partners will provide support and assistance to portfolio company entrepreneurs in a variety of ways. Generally, they will be actively involved in both the establishment of company strategy and the structuring of financing rounds. Further, they will frequently participate in the recruitment and selection of upper management and the analysis of potential acquisitions and joint ventures. Only when significant problems arise will the general partners become actively involved in the day-to-day operations of a portfolio company.

Termination of Investments

Most often, Matrix will liquidate investments either through the sale of portfolio company securities in the public market or through the sale of portfolio companies to other firms. On occasion, Matrix may utilize redemption provisions as an exit mechanism.

Distribution of Returns

All distributions will be in the form of cash or freely tradeable securities. The general partners do not anticipate re-investing the proceeds of liquidated portfolio securities.

VII. FUND ADMINISTRATION

Portfolio Valuations

The valuation of the Fund's portfolio will be made by the general partners and reviewed by the independent auditors. The valuations will not be subject to review by a Valuation Committee or Arbitration Board and will be conclusive on all partners.

In determining the fair value of investments, the general partners consider the nature and term of restrictions on, and the relative volatility of the market price of, such investments.

1. Listed securities which are not restricted as to salability or transferability will be valued at the last reported sales price on the valuation date. If any listed security was not traded on such date, then the mean of the closing high bid and low asked prices as of the close of business on such date will be used.

2. Unlisted securities which are readily marketable will be valued at the mean of the closing bid and asked prices as of the valuation date.

3. Securities, whether listed or unlisted, for which market quotations are available, but which are restricted as to salability or transferability, will be as provided in 1.) and 2.) above, less a discount as determined in good faith by the general partners (30% at December 31, 1984 and 1983).

4. Securities for which market value quotations are not readily available will be valued at fair value as determined in good faith by the general partners.

Client Communications

Matrix will provide to the limited partners annual audited financial statements and comprehensive annual reports describing the status of the portfolio. In addition, general partners will submit supplemental investment summaries to partners on a quarterly basis.

VIII. PARTNERSHIP AGREEMENT

Management Fee

Through 1987, the general partner will be paid a management fee of 2.5% of total committed capital; thereafter, the fee will be 3.0% of committed capital. Any consulting or management advisory fees paid to the general partners by private portfolio companies for services performed on behalf the Fund will reduce the management fee paid by limited partners.

Upon termination of the Fund, a liquidating trust may be established for the purpose of holding any restricted or non-marketable securities. In this event, liquidating trustee will be selected by the general partners. The trustee will receive an annual fee of 2.0% of the average value of the assets in the trust for the first two years and 1.0% annually thereafter.

Profit Sharing

During the life of Matrix II, 80% of the Fund's net ordinary income and net capital gains will be allocated to the partners, both limited and general, in proportion to their capital contributions. The remaining 20% of net income and capital gains will be allocated to the general partners as an incentive profit allocation. All of the income from short-term investments will be allocated to the partners in proportion to their capital contributions.

If distributions paid to the general partners during the term of the Fund exceed the total incentive allocation determined under the partnership agreement, the excess will be repaid by the general partners to the Fund at the time of termination.

Additional Expenses Allocated to Partnership

The Fund will pay the legal, accounting, and reporting fees for partnership activities. In addition, the Fund will pay up to $350,000 in organizational fees.

General Partners Capital Contribution

The general partners will contribute $1.5 million of capital to the Fund. The contribution will be in the form of cash.

Term of Fund

Matrix Partners I will have a ten year term. In the event that the Fund holds restricted or non-marketable securities at the end of the term, a liquidating trust will be established.

Drawdown of Fund Capital

Twenty five percent of the Fund's capital will be contributed upon the closing of the Fund. The remainder of the committed capital will be taken down in future installments at the discretion of the general partners before January 1, 1991. The general partners anticipate that the contributed capital will be drawn down in 4 installments over a 5 year period. Limited partners will be notified 30 days before drawdowns occur.

IX. CLIENT BASE

MATRIX PARTNERS, L.P.

Limited Partners	Capital Contribution
Aetna Casualty & Surety Co.	$2.0 Million
Allegheny International	1.0
American Manufacturers Mutual Insurance Company	1.0
American Motorist Insurance Co.	1.0
BankAmerica Capital Inv., Inc.	5.0
CIGNA Venture Capital	2.0
Cornell University	2.0
The Ford Foundation	4.0
General Electric Pension Trust	3.0
General Motors-Salaried Trust	1.0
General Motors-Hourly Trust	1.0
H.I. Grousbeck	1.0
IBM Retirement Plan Trust	4.0
LKBL Associates-81	0.4
Lehman Brothers Kuhn Loeb, Inc.	0.6
Lumbermens Mutual Casualty Co.	1.0
Meridian International Number Two	2.0
Metropolitan Life Insurance Co.	1.0
Mutual Benefit Life Insurance Co.	1.0
Prudential Assurance Company Ltd.	2.5
San Francisco Partners, L.P.	4.2
International Bank for Reconstruction and Development	3.0
	$43.7 Million

EXHIBIT I

GENERAL PARTNERS' EXPERIENCE

Mr Fern (46) is a general partner of Matrix Management, the general partner of MPI and is a general partner of Hellman, Fern Investment Associates ("HFIA") (See "Relationships with Affiliates" and "Investment Results of Prior Partnerships" below) Prior to joining HFIA in 1978, he was a partner of WestVen Management (1972-1977), the general partner of Western Investment Associates ("WIA"), a $21 million venture capital partnership Earlier, he was a partner of Becker Technological Associates, a $9 5 million venture capital fund

Mr Fern received his B E E from Cornell University in 1960, an M S E E from Polytechnic Institute in Brooklyn in 1964 and an M B A from Columbia University in 1968 Mr Fern was elected to Sigma Xi and Beta Gamma Sigma He is currently a director of BancTec, Inc , Paradyne Corporation, and Stratus Computer, Inc , as well as several private companies including Applix, Inc , Bytex Corporation and Cadmus Computer Systems, Inc

Mr Fluegel (45) is a general partner of Matrix Management He is also, and has been since 1978, a general partner of WestVen, which is the general partner of Western Investment Associates II, a $21 5 million venture capital partnership (See "Relationships with Affiliates" and "Investment Results of Prior Partnerships" below) Earlier (1971 to 1977), he was a partner of WestVen Management, the general partner of WIA

Mr Fluegel received a B S from the U S Naval Academy in 1961 and an M S from the University of California, Irvine in 1968 He is currently a director of several private companies including Applied MicroCircuits Corporation, ComDesign, Inc , ELXSi International, Inc , FileNet Corporation and LP Com, Inc

Mr Hellman (50) is a general partner of Matrix Management, HFIA and Hellman & Friedman, a partnership formed in 1983 to invest in leveraged buyouts and non-technology companies (See "Relationships with Affiliates" and "Investment Results of Prior Partnerships" below) Previously (1962 to 1977), he was a general partner of Lehman Brothers where he served as head of Lehman Brothers' Investment Banking Division, president and director of Lehman Brothers, Inc and chairman of Lehman Corporation, a closed-end investment company

Mr Hellman graduated from the University of California at Berkeley in 1955 and The Harvard Graduate School of Business Administration in 1959 He is currently a director of Castle & Cooke, Inc , Crown Zellerbach Corporation, Itel Corporation, Midway Airlines, Inc and Orion Pictures Corporation, as well as several private companies including Acton Computer, Inc , Il Fornaio (America) Corporation and Shaughnessy Holdings, Inc

Mr Humphreys (33) is a general partner of Matrix Management He is also, and has been since 1980, a general partner of HFIA (See "Relationships with Affiliates" and "Investment Results of Prior Partnerships" below) He is currently a director of the following privately held companies Axiom Technology Corporation, New England Critical Care, Inc and Parkview Centers, Inc

Prior to joining HFIA, he received an M B A from The Harvard Graduate School of Business Administration in 1979 and practiced as a C P A with Ernst & Whinney (1974-1977) Mr Humphreys received a B S from the University of Oregon in 1974

Mr McLaughlin (50) is a general partner of Matrix Management (See "Relationships with Affiliates" and "Investment Results of Prior Partnerships" below) Prior to joining MPI in 1982, he was senior vice president of finance at Four-Phase Systems, Inc (1971 to 1982) He was also president of Four-Phase Finance, Inc Previously, he was director of finance and administration for the European operations of Memorex Corporation in London, England

Mr McLaughlin graduated from the University of Oklahoma in 1956 and The Harvard Graduate School of Business Administration in 1964 Mr McLaughlin was elected to Beta Gamma Sigma He is currently a director of Phoenix American, Inc and several private companies including Circadian, Inc and Information Appliance, Inc He is also a member of the Private Sector Investment Advisory Panel for the City of San Jose

Mr Barrows (27) is an associate of Matrix Management Previously, Mr Barrows received an M B A from the Stanford Graduate School of Business in 1984 Earlier, he was employed as an associate with Merrill Lynch Capital Markets in corporate finance (1979 to 1982) Mr Barrows received a B A from Williams College in 1979

EXHIBIT IIA: PORTFOLIO PERFORMANCE

MATRIX PARTNERS, L. P.
INVESTMENT SUMMARY FOR
THE MINNESOTA STATE BOARD OF INVESTMENT

Company Name, Location/Industry	Date of Investment	Total Invested	Total Realized Valuation	Unrealized Valuation 12/31/84	Stage of Investment	Lead Investor	BOD	Initiating General Partner	Other Institutional Investors
Acton Computer, Goleta, CA Magnetic Disc Components	3/84	999,998	--	1,568,624	Third Stage	Yes	FWH	FWH	Brentwood; Berkeley International
AMCC, San Diego, CA ECL Gate Arrays	3/83	1,361,766	--	2,775,556	Turn-Around	No	FKF	FKF	Adler; Oak; Robertson Colman
Applix, Inc., Westboro, MA Office Automation Software	4/83	1,498,126	--	4,811,251	Start-up	Yes	PJF	WMH	Chatham Ventures; New Enterprise Associates
Axiom Technology, Newton, MA Semiconductor Test Equip.	4/83	1,292,017	--	1,586,014	Start-up	Yes	WMH	PJF	Morgan Holland; Paine Webber; Charles River
Azimuth Corp. (Prolink) Boulder, CO Office Computer Systems	7/83	1,000,002	--	194,805	Second Stage	Yes	PJF	PJF	WPGL; WIA II; Olivetti; Interwest; Hellman, Ferri
BancTec, Dallas, TX Electronic Check Processing	8/82	606,875	--	418,750	Public Stock	n/a	PJF	PJF	n/a
Bridge, Mountain View, CA Computer Networking Equipment	1/83	530,000	--	1,530,000	Second Stage	No	No	FKF	Interwest; IVP; WP&G
Businessland, San Jose, CA Computer Retailer	2/83	1,000,008	--	933,341	Second Stage	No	No	GM	Bessemer; Mayfield; IVP; Early Stages
Cadmus Computer, Lowell, MA Computer Workstations	7/83	2,967,000	--	2,478,200	Start-up	Yes	PJF	PJF	Citicorp Ltd; Charles River
Cadnetix Corp., Boulder, CO CAD Workstations	4/83	750,004	--	1,435,717	Second Stage	No	No	PJF	Technology Venture; Kleiner Perkins
CadTec Corp., San Jose, CA VLSI CAD Systems	3/82	666,666	--	61,955	Start-up	No	No	FKF	Sevin Rosen; NEA; Capital Management
Cipher Data Prod., San Jose, CA Data Storage Equipment	9/82	265,600	864,998	--	Public Stock	n/a	No	FKF	n/a
Circadian, San Jose, CA Heart Monitoring Equipment	11/82	700,002	--	1,283,337	Third Stage	No	GM	GM	Bessemer; Capital Resources Corp.
ComDesign, Inc., Goleta, CA Data Communications Equipment	8/83	750,000	--	750,000	Third Stage	No	FKF	FKF	Interwest Partners
CTX International, Sunnyvale, CA Product Control Software	6/82	1,000,000	55,129	--	Start-up	Yes	GM	FKF	Hambrecht & Quist; US Ventures
Entrepo, Inc., Sunnyvale, CA Wafer Tape Storage Devices	6/83	788,450	--	1	Start-up	No	GM	GM	Kleiner Perkins; Astec Int'l; Oxford
Ferretec, Inc., San Jose, CA Microwave Components & Systems	8/82	1,000,000	--	1,000,000	Start-up	Yes	PJF	PJF	None

Company Name, Location/Industry	Date of Investment	Total Invested	Total Realized Valuation	Unrealized Valuation 12/31/84	Stage of Investment	Lead Investor	BOD	Initiating General Partner	Other Institutional Investors
FileNet Corporation, Costa Mesa, CA Automated Optical File Systems	9/82	1,840,000	--	3,729,999	Start-up	Yes	FKF	FKF	WP&G, Olivetti; Brentwood
Il Fornaio (America),Torrance, CA Specialty Retailer	6/83	1,083,449	--	490,722	Start-up	Yes	FWH	FWH	Warburg Pincus Capital; Interwest
Information Appliance, Palo Alto, CA Innovative Home Computer	3/83	500,000	--	700,000	Start-up	Yes	GM	GM	Sutter Hill; VenRock; Warburg Pincus
Integrated Office Sys., Cupertino, CA Computer Sys. for Sales Management	4/82	860,000	100	--	Start-up	No	FKF	FKF	Bessemer; Arscott Norton; IVP
LP Com, Cupertino, CA Telephone Test Equipment	7/83	1,386,000	--	2,355,090	Start-up	Yes	FKF	FKF	Interwest
LAM Research, Fremont, CA Semiconductor Processing Equip.	9/82	400,000	1,600,000	--	Third Stage	No	No	GM	Arscott Norton; Hambrecht & Quist; Merrill Pickard
LNR Communications, Hauppauge, NY Microwave Equipment	2/82	416,667	--	416,667	Secondary Stock	n/a	No	PJF	n/a
Micropolis Corp., Chatsworth, CA Magnetic Disk Storage Devices	8/82	1,006,752	--	811,856	Third Stage	No	No	FKF	IVA; WIA II; Oak; CitiCorp
Project Genesis, San Jose, CA Seed Stage Joint Venture	11/83	105,030	2,000	--	Seed	Yes	FKF	FKF	WP&G; Merrill Pickard
Parkview Centers, Eden Prairie, MN Alcoholism Treatment Centers	1/83	750,000	--	1,038,463	Third Stage	No	WMH	WMH	Norwest Venture Partners; North Star; Montgomery Ventures
Shaughnessy Hold., Santa Barbara, CA Regional Motel Operator	4/83	3,016,001	--	3,016,001	Leverage Buyout	No	FWH	FWH	Warburg Pincus Capital; First Chicago
Summagraphics Corp., Fairfield, CT Data Digitizers and Tablets	7/82	1,102,670	--	710,499	Third Stage	No	No	WMH	Bessemer; Oak; Interwest; ARD
Tencor Instru., Mountain View, CA Semiconductor Inspection Equip.	4/84	869,220	--	869,220	Secondary Stock	No	No	FKF	n/a
WP Films, Los Angeles, CA Film Production & Distribution	6/82	500,000	--	500,000	Turn-Around	No	FWH	FWH	Warburg Pincus; Rust Capital; First Cap. Corp; HBO
Xidex Corp., Sunnyvale, CA Film and Magnetic Media	10/84	314,325	--	312,500	Public Stock	No	No	FKF	n/a
Intermountain Tech., Boulder, CA Regional Venture Partnership	4/84	75,000		75,000	n/a	Yes	PJF	PJF	WP&G
		31,401,628	2,522,227	35,853,569					

EXHIBIT IIB: PORTFOLIO PERFORMANCE

HELLMAN, FERRI INVESTMENT ASSOCIATES
INVESTMENT SUMMARY FOR
THE MINNESOTA STATE BOARD OF INVESTMENT

Company Name, Location/Industry	Date of Investment	Total Invested	Total Realized Valuation	Unrealized Valuation 12/31/84	Stage of Investment	Lead Investor	BOD	Initiating General Partner	Other Investors
Accutest Corp., Chelmsford, MA Semiconductor Test Equipment	3/80	500,010	500,010	--	Second Stage	No	No	JJG	Palmer; Chs. River; Paine Web. Mem. Dr. Trust; Univ.Rochester
Advent, Cambridge, MA Audio & Video Equipment	11/77	330,000	188,979	--	Public Stock	No	No	JJG	n/a
Apollo Computer, Chelmsford, MA Computer Workstations	9/80	800,000	56,829,611	--	Start-up	Yes	JJG	PJF	Sutter Hill; VenRock
Apple Computer, Cupertino, CA Personal Computers	8/79	787,500	15,727,621	--	Third Stage	No	No	JJG	Xerox; Fayez Sarofim; Brentwood; Hixon
Autotrol Technology, Denver, CO CAD Systems	2/79	75,000	73,437	--	Public Stock	No	No	JJG	n/a
BancTec, Dallas, TX Electronic Check Processing	9/78	614,222	5,013,635	--	Third Stage	Yes	PJF	PJF	None
Bolt, Beranek & Newman, Cambridge, MA Telecommunications Equipment	9/77	135,588	212,601	--	Public Stock	No	No	JJG	n/a
Broadcast Enterprises, Philadelphia, PA Radio & Television Stations	5/79	757,690	803,266	182,692	Second Stage	No	PJF	FWH	TA Associates; First Capital Corp.
Continental Cablevision, Boston, MA Cable TV Operator	3/80	299,880	-	749,700	Secondary Stock	No	No	FWH	n/a
Datamedia Corporation, Pennsauken, NJ Computer Terminals	8/78	100,003	2,996	--	Start-up	No	No	JJG	INCO; Charles River; Palmer
Information Displays, Armonk, NY CAD Systems	6/79	500,000	1,132,593	--	Second Stage	Yes	PJF	PJF	WIA II; Xerox; Bank of America; SCG Investors
Instron Corp., Canton, MA Structural Test Equipment	6/78	144,250	180,997	--	Public Stock	No	No	PJF	n/a
Instrumentation Labs, Lexington, MA Medical Analytical Instruments	3/78	572,110	690,045	--	Public Stock	No	No	PJF	n/a
LNR Communications, Hauppauge, NY Microwave Equipment	11/78	650,000	--	1,300,000	Secondary Stock	No	No	PJF	New Court Securities
Midway Airlines, Chicago, IL Regional Airline	7/79	946,027	1,571,121	232,183	Start-up	Yes	FWH	FWH	Paine Webber; Brentwood; N.W. Growth Fund; Bessemer
Norpac Exploration, Englewood, CO Seismic Exploration Services	4/80	1,000,000	882,281	--	Third Stage	No	PJF	PJF	Welsh Carson Anderson & Stone; First Chic. Corp; New Court Sec
Persci, Inc., Venice, CA Computer Disc Equipment	5/79	582,318	201,451	--	Second Stage	Yes	PJF	PJF	Hambrecht & Quist

Company Name, Location/Industry	Date of Investment	Total Invested	Total Realized Valuation	Unrealized Valuation 12/31/84	Stage of Investment	Lead Investor	BOD	Initiating General Partner	Other Investors
Prolink (Azimuth Corp.), Boulder, CO Office Computer Systems	1/81	775,000	--	151,065	Start-up	Yes	PJF	PJF	Interwest; WIA II; Citibank; Jamieson & Co.
RamTek, Santa Clara, CA Computer Graphic Equipment	12/78	82,500	90,875	--	Public Stock	No	No	JJG	n/a
Sentinel Computer, Cincinnati, OH Small Business Computers	10/79	1,240,616	--	1	Start-up	Yes	JJG	JJG	Palmer; Hixon; Charles River
Stratus Computer, Marlboro, MA Fault Tolerant Computers	5/80	485,535	21,657,973	--	Start-up	Yes	PJF	PJF	IVA; G.E. Venture Capital
Telenet Corp., Stamford, CT Packet Switch Networks	9/77	780,318	1,699,394	--	Secondary Stock	No	No	JJG	Palmer
Terak Corporation, Scottsdale, AZ Computer Graphic Systems	12/78	1,720,000	--	294,448	Second Stage	Yes	JJG/PJF	JJG	WIA II
Univ. Instruments, Binghamton, NY Data Communications Equipment	4/78	221,225	357,000	--	Public Stock	No	No	PJF	n/a
Wolohan Lumber, Saginaw, MI Building Products Retailer	8/84	140,128	89,990	--	Public Stock	No	No	FWH	n/a
		14,239,920	107,905,876	2,910,088					

INMAN & BOWMAN

I. BACKGROUND DATA

NAME OF FIRM:	G&K Partners
NAME OF PARTNERSHIP:	Inman & Bowman
TYPE OF FUND:	Venture Capital Limited Partnership
DATE OF INTERVIEW:	March 26, 1985
FIRM ATTENDEES:	Kirk Bowman, Grant Inman
ADDRESS:	235 Montgomery Street San Francisco, CA 94104
TELEPHONE:	(415) 576-3570
CONTACT:	Kirk Bowman

II. ORGANIZATIONAL STRUCTURE

Kirk Bowman and Grant Inman, the general partners of the Fund, have recently left the venture arm of Hambrecht & Quist (H&Q) to form their own firm, G&K Partners. Inman & Bowman will be the first venture capital partnership organized and managed by the firm. The general partners will not retain management responsibilities for H&Q portfolio companies and thus, will devote substantially all of their time to the management of the Inman & Bowman Fund.

III. PERFORMANCE HISTORY

General Partners

Messrs. Bowman and Inman have had more than 15 years of direct venture capital experience apiece. They have participated together as co-investors for over 14 years and have worked together as venture capital partners for almost six years. From 1981 through April 1985, Bowman and Inman served as Senior Investment Partners at Hambrecht & Quist (H&Q), collectively investing $49.4 million in 50 portfolio companies.

Prior to joining H&Q, Bowman and Inman worked together as general partners of WestVen, a venture capital organization affiliated with BankAmerica Corporation. As a general partner at WestVen from 1974 to 1980, Inman participated in the management of both Western Investment Associates I and II (WIA I-II), each a $21 million venture partnership. Bowman managed BankAmerica's direct venture capital activities from 1972 to 1979, when he joined Inman as general partner at WestVen. Resumes of the general partners are presented in Exhibit I, page 9.

Portfolio Performance

In measuring the historical performance of Kirk Bowman and Grant Inman relative to other venture capital firms, staff analyzed the portfolio of 58 investments which Bowman and Inman made as partners over the 1979 through 1984 period. The aggregate Inman-Bowman portfolio includes both the WestVen (WIA II) investments for which Inman and Bowman bore direct responsibility and the investments which they made as senior Investment Partners at H&Q. The total cost of the portfolio was $54.6 million. During the 1979-1984 period, a total of $40.8 million was distributed to the WestVen and H&Q funds as 9 of the investments were fully liquidated and 2 underwent partial liquidation. The unrealized value of the remaining 49 portfolio company investments as of December 31, 1984 was estimated by the general partners to be $51.3 million. Twenty-two of the unrealized investments were valued above cost, 14 continued to be valued at cost, and 13 were valued below cost.

The internal rate of return on invested capital for the 59 portfolio company investments was 34.7%. Since the Inman, Bowman portfolio is an aggregate of investments which the general partners made at WestVen and H&Q, the rate of return was based on actual cashflows to and from the portfolio companies rather than cashflows to and from the limited partners of the separate funds. Consequently, the return was gross of both management fees and expenses and the general partners' profit allocation. The valuation principles which the general partners followed in estimating the unrealized portfolio company values are listed on page 6. The aggregate Inman, Bowman portfolio is presented in Exhibit II, page 10-15.

IV. STAFF

Staff Composition

Initially, Bowman and Inman will be assisted by a secretary/office manager. Fund administration will be handled by Inman. The general partners expect to add a senior general partner to the staff approximately one year after the Fund's closing.

Staff Turnover

Inman & Bowman is newly created (April, 1985). There has been no turnover as yet.

Allocation of Responsibilities among Staff Members

Bowman and Inman will originate and be individually responsible for specific investments and will follow assigned portfolio companies from deal inception through investment liquidation. Toward this end, each of the general partners has developed his own network of deal sources and industry areas of expertise. However, although each of the general partners will bear the primary responsibility for the investments he generates, both Bowman and Inman will be involved in the analysis, selection, and to a lesser extent, the management of each portfolio company investment.

Compensation and Incentive Systems

Bowman and Inman will receive salaries and equal shares in the general partners' 20% profit allocation. In the event that a senior partner is added to the firm, the profit allocation will be shared equally among the three partners.

Affiliation with Research Organizations and Consultants

The general partners will not utilize any research organizations or consultants on a formal basis. Instead, they have selected several of the entrepreneurs they have funded over the past 15 years to assist in the evaluation of potential portfolio companies. These key entrepreneurs will be given an opportunity to become limited partners in a small ($1 million) co-investment fund which will invest in parallel on a pro-rata basis with the Inman & Bowman fund.

Co-Investment Network

Bowman and Inman have organized and participated in syndicated venture capital investments for 15 years, operating as general partners of several well-known venture firms. Each has developed a nation-wide network of venture co-investors. Frequent co-investors have included Greylock; Mayfield; Merrill, Pickard, Anderson & Eyre; Welsh, Carson, Anderson & Stowe; Technology Venture Investors; and Arthur Rock & Co..

Deal Origination

The general partners expect to lead the majority of the Inman & Bowman investments and have limited the size of the Fund and number of portfolio investments in order to fulfill this objective.

V. INVESTMENT STRATEGY

Corporate Stage of Development

The Inman & Bowman fund will have a strong start-up and early stage orientation. However, the Fund will also make investments in later stage or expansion companies. In particular, the general partners intend to search for later-stage companies experiencing problems where new management, a redirected business strategy and fresh capital could be the catalysts for revitalizing the company.

Consistent with their early stage emphasis, the general partners intend to concentrate their energies on a relatively small number of investments, making no more than 4 to 6 investments per year and not exceeding 25 to 30 investments over the term of the partnership.

Location

Bowman and Inman intend to invest on a national basis but will focus on investments located along the West Coast. Grant Inman has assisted in the development of and serves as advisor to two small regional seed-stage firms: Rainier Venture Partners in Washington State and Enterprise Partners in Southern California. The firms, which are expected to generate attractive investment opportunities for the Fund, are situated in areas of growing venture capital activity. To facilitate coverage of the active Silicon Valley area, Bowman and Inman will establish an office in Arrinda, California and another in the San Francisco Bay area.

Industries

Inman & Bowman will have a distinct high technology focus. The general partners intend to emphasize investments in semiconductor, telecommunications, medical, and computer companies. This focus will be essentially identical to that of the WestVen and H&Q funds.

VI. INVESTMENT MANAGEMENT

Generation of Investments

The general partners' network of deal sources includes, among others, venture capitalists, investment bankers, lawyers, and bankers. The general partners anticipate that the H&Q venture staff, many of whom were hired and trained by Bowman and Inman, will be a continuing source of investment leads. In addition, the general partners expect that the entrepreneurs they have funded in the past will be a fruitful source of attractive investment opportunities.

Investment Selection

The primary investment criteria employed by the general partners are:

1. Experienced management team, well-versed in its target market

2. Well-defined, proprietary product line

3. Products with high profit margins

4. Potentially large and growing national markets

5. Business strategy that is realistic in both its expectations and capital requirements

Negotiation and Structuring of Investments

The general partners typically will purchase preferred stock, although common stock may be utilized on occasion. Portfolio company purchase agreements will be structured to include the standard representations and warranties, positive and negative covenants, Board participation rights, registration rights, anti-dilution provisions and information requirements. In some instances, the agreements will include redemption or put provisions to facilitate the liquidation of the investments.

Allocation of Investments among Funds Under Management

Initially, Inman & Bowman will be the only fund under management by the general partners. According to the terms of the partnership agreement, the general partners may raise another fund when the Inman & Bowman fund is substantially fully-invested. The general partners anticipate that any overlapping investments will be made pro rata based upon the funds' contributed capital.

Syndication of Investments

In almost all instances, investments will be syndicated to include experienced venture capitalists. The primary criteria which the general partners utilize in selecting co-investors is that the investment philosophy and objectives be similar to those of the general partners. In some cases, the general partners may solicit venture capitalists whose special skills and expertise will be valuable to portfolio company management.

Monitoring and Management of Investments

For the majority of Inman & Bowman investments, the general partners will obtain representation on the Board of Directors. In addition, direct assistance to portfolio company entrepreneurs will generally include some or all of the following: defining the business plan, determining the financial requirements, strengthening management, structuring the investment, syndicating the investment group, and providing post-investment support. The general partners will limit the total number of portfolio companies to 25 to 30 in order to be able to provide active assistance to the entrepreneurs.

Termination of Investments

The principal methods by which the general partners will liquidate investment positions will be through the sale of portfolio company securities in the public market or through the acquisition of a portfolio company by another firm.

Distribution of Returns

The general partners anticipate that the majority of the distributions will be in the form of freely tradeable securities rather than cash. They do not expect to re-invest the proceeds of investments which have been liquidated.

VII. FUND ADMINISTRATION

Portfolio Valuations

The general partners will appoint an Advisory Committee of between three and five members. The Advisory Committee will provide counsel to the general partners; periodically review the Partnership's portfolio; and, review the general partners' valuation of assets of the Partnership.

The following rules will be applied by Inman & Bowman in establishing values for securities of portfolio companies:

1. Listed securities and NASDAQ National Marketing Systems securities which are readily marketable will be valued at closing trade prices.

2. Unlisted securities which are readily marketable will be valued at closing trade or bid prices.

3. Securities for which market quotations are available, but which are restricted as to salability or transferability, will be valued as provided above, less a discount based on the nature and term of the restrictions. If such restrictions apply for a period of up to one year, the discount will be 30% or 15% if the restrictions lapse within one month. For periods extending beyond one year, the discount will be 50%.

4. Non-marketable securities will be valued at cost, unless circumstances indicate a different valuation is warranted. Values will be increased only if a substantial arm's length investment has subsequently occurred at a higher price. Markdowns will be made based on subsequent financings or operating difficulties.

Client Communications

The limited partners will receive quarterly valuations of the portfolio and summaries of new investments made during the quarter. In addition, the limited partners will receive the annual audited financial statements of the partnership and an annual overview of the portfolio companies' progress.

VIII. PARTNERSHIP AGREEMENT

Management Fee

From the inception date through December 31, 1985, the annual management fee will be 2.5% of committed capital. For the year ending December 31, 1986, the management fee will be increased to 2.75% of committed capital. For subsequent years, the management fee will be equal to 3.0% of committed capital, subject to annual adjustments beginning in fiscal 1987 for increases in the Consumer Price Index for the San Francisco-Oakland Metropolitan Area. The minimum annual management fee will be $600,000.

The management fee will be reduced by any consulting fees received by the general partners from any entity in which the Partnership has an interest. In addition, equity compensation received by the general partners from any such entity will be considered income of the Fund.

Profit Sharing

Eighty percent of the capital gains and net ordinary income will be allocated to the limited and general partners in proportion to their capital contributions. The remaining 20% of the net ordinary income and capital gains will be allocated to the general partners as an incentive profit allocation. Income from short-term investments will be allocated to the partners in proportion to their contributed capital.

Additional Expenses Allocated to the Limited Partners

The Partnership will bear the expenses incidental to its organization and all legal, audit, banking, consulting and financial fees and expenses and any extraordinary expenses of the Partnership. Organization expenses are expected to be no greater than $150,000.

General Partners' Capital Contribution

The general partners will have a capitalization of at least $500,000. From this amount, the general partners will contribute an amount equal to 1% of the total committed capital of the Fund. The capital contribution will be in the form of cash. The balance of the capitalization will be invested in parallel with the Fund.

Term of Fund

Inman & Bowman will have a ten year term. The term may be extended up to 3 years.

Drawdown of Fund Capital

Twenty five percent of the Funds' capital will be contributed upon closing and the remainder will be drawn down in increments of 25%. The increments are to be called upon 60 days' written notification by the general partners. There will be no more than one such capital call per calendar year.

IX. CLIENT BASE

INMAN & BOWMAN

Limited Partners	Capital Commitments
Horsley Keogh (Fund of Funds)	15% of Fund
First Interstate Bank	15%
Kaiser Family Foundation	10%
U.S.West	10%
Fred Meyer	$1.25 Million
First Chicago (Fund of Funds)	$3.50 Million
Wisconsin Alumni Research Foundation	$1.00 Million

EXHIBIT I

GENERAL PARTNERS' EXPERIENCE

D. Kirkwood Bowman

Mr. Bowman (age 44) joined Hambrecht & Quist in January 1981 and is a Senior Investment Partner with that firm's venture capital group. From May 1979 to December 1980, he was a general partner of WestVen, the management partnership for Western Investment Associates II, a $21.5 million venture capital partnership. From 1972 to 1979, Mr. Bowman was affiliated with Small Business Enterprises Company and its successor, BankAmerica Capital Corporation, which managed the direct venture capital investment activities of BankAmerica Corporation and Bank of America. He managed the firm's Los Angeles office from 1974 until its merger with the San Francisco office in 1977. From 1968 to 1971, Mr. Bowman worked with The First National Bank of Chicago's small business investment company, First Capital Corporation of Chicago. He is currently a director of five private companies, Avanti Communications Corporation, Davox Corporation, Dest Corporation, Impact Systems, Inc. and Ridge Computers. He has been a director of a number of other companies throughout his career, including two companies that are currently publicly traded, Cipher Data Products, Inc. and Priam Corporation. He is currently a director of the Western Association of Venture Capitalists. Mr. Bowman has a B.A. degree in International Relations from the University of the Pacific and an M.B.A. degree in Finance from the University of California at Berkeley.

Grant M. Inman

Mr. Inman (age 43) joined Hambrecht & Quist in January 1981 and is a Senior Investment Partner with that firm's venture capital group. From 1974 to 1980, Mr. Inman was a general partner of both WestVen Management and WestVen, the management partnerships for Western Investment Associates I and II, each a $21.5 million venture capital fund. From 1969 to 1974, Mr. Inman was with A. G. Becker & Co. (later Warburg, Paribas, Becker) where he progressed from corporate finance associate to partner of Becktech, the management partnership of Becker Technological Associates. He is currently a director of three public companies, InteCom, Inc., Lam Research Corporation, and Paychex, Inc., and of five private companies, Healthcare International, Inc., HL Capital Management Corporation, Seattle Silicon Technology, Inc., Speech Recognition Systems, Inc., and Xenotech Laboratories, Inc. Mr. Inman serves as an advisor to two venture capital partnerships affiliated with Hambrecht & Quist, Rainier Venture Partners based in the Pacific Northwest and Enterprise Partners based in Southern California. Mr. Inman has a B.A. degree in Economics from the University of Oregon and an M.B.A. degree in Finance from the University of California at Berkeley.

EXHIBIT II

PORTFOLIO PERFORMANCE
INMAN & BOWMAN

Company Name	Location	Industry	Investment Amount	Date	Realized Value		Unrealized Value 12/31/84	Investment Stage	Lead Investor	Board of Directors	G.P. Who Initiated Inv.	Major Co-Investors
WestVen Investments												
Cipher Data Products	San Diego, CA	Tape drives for minicomputers and microcomputers	$ 500 51 750 $1,301	9/79 1/80 5/80	$1,144 1,530 4,789 $7,463	12/82 2/83 6/83	—	First venture round	Yes	Yes, until mid-1981	Bowman	IVA, Greylock, Interwest, Palmer
Data I/O Corp.	Redmond, WA	Instruments to program and test semiconducter devices	$537 88 112 $737	9/79 7/80 8/80	$8,256	6/83	$60 $60	Second round	Co-lead	Attended board meetings	Inman	Sutter Hill, Greylock, Fidelity
Dest Corp.	Milpitas, CA	Optical character recognition page readers	$300	12/80			$480	Re-start	No	No	Bowman	Mayfield, Hill Partners, Merrill Pickard Anderson & Eyre
ELXSI International	San Jose, CA	Multi-processor computer systems	$500	12/80			$1,895	First round	Co-lead	*Yes	Bowman	Arthur Rock, Hambrecht & Quist
Integrated Software Systems Corp.	San Diego, CA	Computer graphics software	$650 200 $850	11/80 4/81	$5,365	12/83	—	First venture round	Yes	No	Bowman	Greylock, Norwest
HL Capital Management	San Bruno, CA	Specialty insurance services	$600	11/79			$600	Start-up	Yes	Yes	Inman	Citicorp, Walden
Megatest Corp.	San Jose, CA	Automatic test equipment for semiconductor industry	$467	11/80			$642	First venture round	No	No	Bowman	TVI, Mayfield, Oak
Prolink Corp.	Boulder, CO	Integrated office systems for data, text and voice management	$450	4/80			$90	Start-up	Yes	*Yes	Bowman	Interwest, Citicorp
Hambrecht & Quist Investments												
Acrian, Inc.	San Jose, CA	Power transistors	$344	7/84			$344	Late	No	No	Inman	Sutter Hill, Merrill Pickard Anderson & Eyre

*Another WestVen partner on Board of Directors

Company Name	Location	Industry	Investment Amount	Date	Realized Value		Unrealized Value 12/31/84	Investment Stage	Lead Investor	Board of Directors	G.P. Who Initiated Inv.	Major Co-Investors
Amcodyne, Inc.	Longmont, CO	Fixed/removable and fixed 8" disk drives	$1,687 922 $2,609	8/83 8/84			$ 605 922 $1,527	Second round	No	No	Bowman	Hill Partners, Interwest, Mayfield, Kleiner Perkins Caufield & Byers
Amtel Systems Corp./ Quixote Corp.	Sunnyvale, CA	Local networking systems for data communications	$349 107 $456	10/81 3/84	$2	9/84	$1	Second round	No	No	Inman	Capital Management, Mayfield
Avanti Communications	Newport, RI	High-speed communications and networking systems	$1,078 642 $1,720	8/83 9/84			$1,078 642 $1,720	Second round	Yes	Yes	Bowman	Prime Capital, General Electric Ventures
Centocor Inc.	Malvern, PA	Monoclonal antibodies for cancer and hepatitis diagnosis	$238 318 6 378 $940	4/81 5/81 10/81 12/81	$ 360 928 541 $1,829	9/83 11/83 8/84	—	Second round	No	No	Inman	Venrock
CTX International	Sunnyvale, CA	Monitoring, analysis and control systems for semiconductor device manufacturers	$420 80 54 133 133 80 $900	6/82 6/83 7/83 4/84 7/84 9/84	$125	10/84	—	First round	No	Attended board meetings	Bowman	Matrix, U.S. Venture Partners
Dama Telecommunications Corp.	Parsippany, NJ	Digital communications network services	$772 200 $972	6/83 8/84			$ 802 200 $1,002	First venture round	No	No	Bowman	CIGNA, Riordan, Cable Howse
Davox Corp.	Billerica, MA	Integrated voice/ data terminals	$ 498 336 328 827 700 500 $3,189	6/82 6/82 1/83 12/83 5/84 7/84			$ 537 283 277 827 700 500 $3,124	Start-up	Yes	Yes	Bowman	Bessemer, Oak, Citicorp
Dest Corp.	Milpitas, CA	Optical character recognition page readers	$350 407 67 21 $845	12/80 3/82 3/83 6/84			$ 560 814 67 14 $1,455	Re-start	Co-lead	Yes	Bowman	Mayfield, Hill Partners, Sprout, Merrill Pickard Anderson & Eyre

Company Name	Location	Industry	Investment Amount	Date	Realized Value		Unrealized Value 12/31/84	Investment Stage	Lead Investor	Board of Directors	G.P. Who Initiated Inv.	Major Co-Investors
Durango Systems, Inc./ Molecular Computer	San Jose, CA	Small businesss computer systems	$ 536 123 687 200 $1,546	4/82 3/83 7/83 6/84			$100	Re-start	Co-lead	Yes until late-1984	Bowman	Sutter Hill, Citicorp, Prime Capital, Arscott Norton
ELXSI International	San Jose, CA	Multi-processsor computer systems	$ 875 280 $1,155	6/81 11/83			$1,400 280 $1,680	Second round	No	No	Bowman	Arthur Rock, WestVen, Merrill Pickard Anderson & Eyre
Envision Technology	San Jose, CA	Color graphics computer peri-pherals	$1,000 29 $1,029	10/83 5/84			0 0 0	Second round	No	No	Bowman	Sutter Hill, Greylock
FileNet Corp.	Costa Mesa, CA	Optical disk-based document storage and retrieval systems	$474	9/83			$474	Second round	No	No	Bowman	Matrix, Olivetti, Brentwood
Graphic Software Systems, Inc.	Wilsonville, OR	Graphic software tools for microcomputers	$205	9/84			$205	First round	Yes	No	Inman	Rainer Venture Partners, Merrill Pickard Anderson & Eyre
Healthcare International, Inc.	Austin, TX	Psychiatric and general hospital management services	$1,275 776 $2,051	6/83 1/84			$1,822 776 $2,598	Second round	Yes	Yes	Inman	Ampersand, First Chicago Investment
HL Capital Management	San Bruno, CA	Specialty insurance services	$284 369 $653	1/83 2/83			$444 369 $813	Second round	No	Yes	Inman	WestVen, Citicorp, Bank of America
Home Health Care of America, Inc.	Newport Beach, CA	Home health care services	$280 244 $524	3/81 6/81	$2,106 1,736 518 2,651 $7,011	4/83 5/83 6/83 7/83	—	Second round	No	No	Inman	Humana, Kleiner Perkins Caufield & Byers
Impact Systems, Inc.	San Jose, CA	Computerized process control systems for the paper industry	$ 615 433 $1,048	7/82 9/83			$1,025 433 $1,458	Second round	Co-lead	Yes	Bowman	Kleiner Perkins Caufield & Byers, TVI, Merrill Pickard Anderson & Eyre
Information Resources	Chicago, IL	Computerized market research data and services for the packaged goods industry	$615	7/82	$4,056 1,825 $5,881	7/84 8/84	—	First venture round	Yes	*Yes	Bowman	Greylock

*Another H&Q principal on board

Company Name	Location	Industry	Investment Amount	Date	Realized Value		Unrealized Value 12/31/84	Investment Stage	Lead Investor	Board of Directors	G.P. Who Initiated Inv.	Major Co-Investors
InteCom, Inc.	Allen, TX	Voice/data telecommunications switches and tandem switches	$1,119	11/81			$3,934	First venture round	Yes	Yes	Inman	Exxon, Citicorp, Wang, Ampersand
Integrated Office Systems, Inc.	Cupertino, CA	Communications and data management systems	$429 328 $757	4/82 5/83			0 0 0	Start-up	No	No	Inman	Matrix, Arscott Norton
Integrated Software Systems Corp.	San Diego, CA	Computer graphics software	$455		$ 27 1,403 $1,430	2/84 9/84	—	Second round	No	No	Bowman	Greylock, WestVen, Norwest
Intelledex Inc.	Corvallis, OR	Robotic systems for the light industrial manufacturing market	$ 420 492 364 $1,276	12/81 11/82 7/83			$2,100 738 364 $3,202	Start-up	Yes	Yes, until 1983	Inman	J.H. Whitney, Morgenthaler Partners, Sevin Rosen
Lam Research Corp.	Fremont, CA	Production processing equipment for the semiconductor industry	$ 350 523 250 $1,123	7/81 9/82 8/83			$ 864 1,510 144 $2,518	Start-up	Yes	Yes	Inman	Mayfield, Arscott Norton Merrill Pickard, Anderson & Eyre Matrix
LifeScan, Inc	Mountain View, CA	Electronic home glucose monitors	$418 297 110 $825	6/30 5/83 10/84			$ 781 296 110 $1,187	Second round	No	Attended board meetings	Bowman	Sutter Hill, Doan Resources, First Interstate
Lin Data Corp.	Santa Clara, CA	Magnetic recording media for computer disk subsystems	$388	3/84			$388	First round	No	No	Inman	Mohr Ventures, Mayfield
MAST Immunosystems	Mountain View, CA	In-vitro immunodiagnostic delivery systems	$ 515 600 $1,115	3/83 5/84			$ 515 600 $1,115	Second round	Yes	Yes, until early 1985	Inman	Horsley Keogh, G.T. Capital, Arscott Norton
McCormack & Dodge	Natuck, MA	Packaged software products for mainframe computers	$1,187	10/81	$1,956 573 160 $2,689	5/83 4/84 9/84	—	Second round	No	Attended board meetings	Bowman	Greylock, Fidelity, Interwest
Megatest Corp.	San Jose, CA	Automatic test equipment for the semiconductor industry	$800	4/84			$800	Late	No	No	Bowman	TVI, Mayfield, Oak, WestVen
Micropolis Corp.	Chatsworth, CA	Winchester and floppy disk drives	$525 205 $730	6/81 8/82	$666 12 57 $735	1/84 2/84 10/84	$367	Late	No	No	Inman	IVA, WestVen, Citibank

Company Name	Location	Industry	Investment Amount	Date	Realized Value	Unrealized Value 12/31/84	Investment Stage	Lead Investor	Board of Directors	G.P. Who Initiated Inv.	Major Co-Investors
Monitor Labs, Inc.	San Diego, CA	Instrumentation to monitor and measure ambient air qualiy	$350	5/81		$159	Late	Yes	Yes, until early 1984	Bowman	—
Novatech Corp.	Broomfield, CO	Data recording instrumentation for the airframe market	$286 447 $733	3/82 3/84		$ 8 175 $183	Re-start	No	Attended board meetings	Bowman	Union Ventures, First Interstate
Oakleaf Corp.	Chatsworth, CA	Microcomputer systems for the automobile dealer marketplace	$760	1/82		$760	First venture round	Yes	Yes, until late 1984	Bowman	—
Paychex, Inc.	Rochester, NY	Automated payroll services	$687	3/82		$938	Late	Yes	Yes	Inman	Horsley Keogh
Photon Kinetics, Inc.	Beaverton, OR	Optical fiber instruments for laboratory and field tests	$559	12/84		$559	Second round	Co-lead	No	Inman	Greylock, Sutter Hill, Rainier Venture Partners
Point 4 Data Corp.	Irvine, CA	Minicomputer systems and related hardware/software products	$420 170 197 $787	7/81 4/82 5/83		$420 170 197 $787	Second round	No	No	Bowman	Oak, J.H. Whitney
Prolink Corp.	Boulder, CO	Integrated office systems for data, text, and voice management	$ 490 658 $1,148	7/81 7/83		$122 165 $287	Second round	No	No	Inman	WestVen, Matrix, Interwest
Quantum Medical Systems, Inc.	Issaquah, WA	Medical diagnostic ultrasound systems	$ 94 560 $654	8/83 5/84		$134 560 $694	Start-up	Yes	No	Inman	Golder Thoma, Rainier Venture Partners
Ridge Computers	Santa Clara, CA	Personal integrated graphics workstations	$ 503 205 331 706 $1,745	12/81 3/83 4/84 11/84		$2,494 205 331 706 $3,736	First venture round	Co-lead	Yes	Bowman	Arthur Rock, F. Eberstadt, Mohr Ventures
Scott Systems, Inc.	Marlborough, MA	Intelligent terminal workstations	$ 615 399 $1,014	8/82 7/83		$362 141 $503	Second round	No	No	Inman	Charles River Partnership, First Chicago Investment
Seattle Silicon Technology, Inc.	Bellevue, WA	Silicon compilation tools for rapid design of electronic memories	$1,017	9/84		$1,017	Start-up	Yes	Yes	Inman	Rainier Venture Partners, Norwest, Hill Partners, Paragon

Company Name	Location	Industry	Investment Amount	Date	Realized Value	Unrealized Value 12/31/84	Investment Stage	Lead Investor	Board of Directors	G.P. Who Initiated Inv.	Major Co-Investors
Sideband Technology	Scottsville, NY	Land mobile radios	$ 704 358 115 58 36 $1,271	9/81 3/82 2/83 7/83 11/83	0 0	—	Second round	Yes	Yes, until 1984	Inman	Horsley Keogh, Kleiner Perkins Caufield & Byers
Speech Recognition Systems, Inc.	Rochester, NY	Speech recognition systems	$222 81 129 $432	11/83 8/84 12/84		$222 81 129 $432	Start-up	Yes	Yes	Inman	Horsley Keogh
Synapse Computer Corp.	Milpitas, CA	Transaction processing computer systems	$ 525 336 41 1,319 $2,221	5/81 6/82 4/83 7/84		$ 336 177 14 $1,319 $1,846	First round	No	Attended board meetings	Bowman	TVI, Bessemer, Interwest
Telco Systems, Inc.	Menlo Park, CA	Telecommunications and fiber optics products	$450	8/83		$1,278	Second round	No	No	Inman	Arscott Norton
Telequest, Inc.	Burbank, CA	Decorator specialty residential telephones	$600	6/83		$1,140	Start-up	Yes	Yes, until 1984	Inman	Arscott Norton
Terra Tek, Inc.	Salt Lake City, UT	Geophysical testing and measurement services for the government and the oil and gas industry	$536	4/82		$706	Second round	Co-lead	*Yes	Inman	Venrock
Tricad, Inc.	Milpitas, CA	CAD/CAM systems for architectural, construction and engineering marketplaces	$ 315 180 1,000 $1,495	2/82 5/83 1/84		$ 64 27 104 $195	First round	No	Attended board meetings	Bowman	Fidelity, Merrill Pickard Anderson & Eyre, NEA
U.S. Windpower, Inc.	San Francisco, CA	Manufacturer of wind machines designed to produce electricity	$525 180 176 $881	6/81 6/82 12/83		$ 895 180 240 $1,315	Second round	No	No	Bowman	First Chicago Investment, F.H. Prince, Concord Partners
Xenotech Laboratories	Irvine, CA	Biochemistry implants for the orthopedic and cardiovascular markets	$420 320 226 $966	7/82 8/83 8/84		$420 320 226 $966	Start-up	Yes	Yes	Inman	Venrock, Alex Brown

*Another H&Q principal on Board

ALLIED VENTURE PARTNERSHIP I

I. BACKGROUND DATA

NAME OF FIRM:	Allied Capital Corporation
NAME OF FUND:	Allied Venture Partners (AVP)
TYPE OF FUND:	Venture Capital Limited Partnership
SIZE OF FUND	$30 million
DATE OF INTERVIEW:	February 5, 1985
FIRM ATTENDEES:	George Williams, David Gladstone, Brooks Browne, Jon Ledecky
ADDRESS:	1625 I Street, Suite 603 Washington, D.C. 20006
TELEPHONE:	202-331-1112
CONTACT:	David Gladstone

II. ORGANIZATION STRUCTURE

The general partner and Fund manager for Allied Venture Partnership I (AVP) will be Allied Management Partners which will have as its general partner Allied Advisory, Inc., a wholly-owned subsidiary of Allied Capital Corporation and as limited partners the senior officers of Allied Capital. Allied Capital was formed in 1958 and went public through a $1 million common stock offering in 1960. Between 1959 and 1984, Allied Capital grew to be one of the largest publicly-owned venture capital corporations and one of the nation's largest venture capital firms with assets currently in excess of $50 million. AVP, the proposed Fund, will be Allied Capital's first venture capital limited partnership under management. Most of AVP's investments will be shared on a 50-50 basis with Allied Capital.

III. PERFORMANCE HISTORY

The principal officers of Allied Capital, the Fund manager are, George Williams, Chairman, and David Gladstone, President. Williams and Gladstone have been with Allied Capital since 1959 and 1974, respectively. For additional information specific to senior officers of the Fund manager, biographies are given in Exhibit I.

Portfolio Performance

For the past twenty-five years since inception, Allied Capital has invested in hundreds of companies either through straight debt or equity-hybrid instruments. Overall, for the past five years, it has achieved a 44 percent average annual return on investment. For the past ten years it has achieved a 35 percent average annual return on investment and for the past 25 years has achieved a 30 percent average annual return on investment.

For Allied Capital's current venture capital portfolio (exclusive of straight loans) the average internal rate of return over the last 10 years per investment was 45%. The weighted average internal rate of return was 62%. Allied Capital's current venture capital portfolio is included in Exhibit II.

IV. STAFF

Staff Composition

In total, Allied Capital employs 10 professionals and a support staff. Out of Allied Capital's staff, George Williams, Chairman; David Gladstone, President; Brooks Browne, Senior Vice President; Jonathan J. Ledecky, Assistant vice President; David P. Parker, Deputy General Counsel; and Harry T. Brill, Treasurer will be most involved in the management of AVP. There are four other professionals at Allied as well as nine support staff, who will lend further assistance in managing AVP's investment activities. Resumes are included in Exhibit I.

Staff Turnover

Only one professional staff member has left Allied Capital's employ within the last two years. This staff member left for personal reasons.

During the last three years, Allied Capital has hired 3 additional professional staff members.

Allocation of Responsibilities Among Staff

Gladstone, Williams, Browne and Ledecky will be the principal staff members responsible for screening, investigating and monitoring individual portfolio company investments. Other Allied Capital employees will provide legal, administrative and analytical assistance.

Compensation and Incentive Systems

Officers of Allied Capital receive a salary, a performance bonus, pension, retirement and insurance benefits and stock options. In addition, officers on the investment side will receive a share in the general partners' profit allocation.

Affiliation with Research Organizations and/or Consultants

Allied Capital sometimes utilizes, as needed, experienced outsiders, such as accountants, tax specialists, fixed asset appraisal firms, insurance experts, and legal counsel. However, no formal relationships have been established.

Co-Investment Network

Allied has developed an extensive network of co-investors including, among others, Bankers Trust, Heritage Capital, Southeast Ventures, MorAmerica, Charles River, Kitty Hawk Capital and Acacia Mutual.

V. INVESTMENT STRATEGY

Corporate Stage of Development

Allied specializes and intends to concentrate investment in later stage investments in private companies. AVP's financings will not be "bridge" financings but rather mezzanine financings subordinated to banks but senior to equity funds used to start the company.

Location

While AVP's focus will be first on the southeast, and second on the east coast, AVP will make investments anywhere in the U.S. When investing outside the East Coast, Allied seeks a local venture capital partner.

Industries

AVP will focus primarily on low or non-technology companies. Companies in which Allied Capital has investments include, among others, medical and health, broadcasting and communications, and manufacturing companies. AVP will invest in the same types of companies and industries in which Allied Capital has invested in the past.

Deal Origination

Allied has a history of and expects to continue for AVP initiating and leading portfolio company investment financings.

VI. INVESTMENT MANAGEMENT

Generation of Investments

Investment opportunities will come to AVP from a network of sources including other venture capitalists, investment bankers, business brokers, commercial banks, lawyers, entrepreneurs, accountants and others with whom Allied has frequent contact. Allied estimates that they will see at least ten new deals every business day, of which one or two will merit investigation.

Investment Selection

AVP will seek opportunities in businesses with demonstrated records of earnings, or at least the near term possibility of positive cash flow. Management must be capable and committed personally and financially to the success of the company. Such companies will have proprietary products or a strong market share and serve growing markets. Conservative growth projections must indicate the ability for AVP to earn at least 30% per year return on investment.

Negotiation and Structuring of Investments

AVP will invest over 80% of its funds in convertible subordinated debentures and less than 20% of its funds in common stock or convertible preferred stock. AVP does not intend to have voting control of any portfolio companies but does intend to exercise a strong degree of control through its investment agreements. Representations, warranties, convenants, and registration rights, among other things, will be included in AVP's investment agreements.

Allocation of Investments Among Funds Under Management

Most investments will be shared equally between AVP and Allied Capital. However, since Allied Capital has a need for current income, investments which have no current income will likely be allocated exclusively to AVP. It is estimated that over 80% of AVP's investments will generate current income and will be shared equally with Allied Capital.

Syndication of Investments

Allied will seek experienced coinvestors for the majority of investments.

Monitoring of Investments

Allied Capital intends to work closely with the management of each company in which AVP invests. Major components of monitoring will include attending board meetings, reviewing financial statements and projections and frequent contact with personnel from portfolio companies.

Termination of Investments

AVP will prepare an exit strategy before an investment is made. The most likely methods of exiting an investment include the following:

1. Acquisition by another company in exchange for cash, notes or marketable securities.

2. An offering, either public or private, of the portfolio company's common stock owned by AVP.

3. Sale of AVP's position to the portfolio company either at a negotiated price or through the exercise of a put based on a predetermined formula. Allied expects it to take from four to eight years to realize on an investment.

Distribution of Returns

Upon liquidation of a portfolio company investment, AVP will distribute cash or freely tradeable securities. AVP will not reinvest proceeds of portfolio company sales.

VII. FUND ADMINISTRATION

Portfolio Valuations

AVP will have an Advisory Committee, composed of five to ten persons, who will review and approve semi-annual valuations. Neither the principals and Directors of Allied, nor affiliates will serve as members of this Committee. Policies followed for valuation purposes include:

1. Marketable securities will be valued at the closing sale or bid price minus a discount to reflect either limited trading or large holdings.

2. Restricted securities will at a 20% or greater discount from market depending on the nature and term of the restriction.

3. Non-marketable securities will be valued at cost, unless circumstances indicate a different valuation is warranted. Values will be increased only if a substantial arm's length investment has subsequently occurred at a higher price. Mark downs will be made based on subsequent financings or operating difficulties.

Client Communications

As a publicly-owned company, Allied Capital is accustomed to regular report requirements. The Allied Venture investment portfolio will be valued semi-annually by Allied's Board of Directors. Prompt quarterly reports will be issued on the operations along with other information necessary to follow Allied Venture's progress.

VIII. PARTNERSHIP AGREEMENT

Management Fee

Allied Venture will pay its pro-rata share of the general expenses incurred by Allied Advisory to operate both Allied Capital and Allied Venture. Specific expenses will be paid by each entity separately. Allied Venture's percentage share will be determined by dividing Allied Venture's assets by the sum of Allied Venture's and Allied Capital's assets. The fee will in no event exceed, cumulatively, 2 1/2 percent of Allied Venture's average assets.

Profit Sharing

Net investment income will be allocated in accordance with capital accounts. Net capital gains will be allocated to the Limited Partners until the Limited Partners have had returned to them an amount equal to their investment. Next, net capital gains will be allocated to the General Partner until there has been allocated an amount equal to 25 percent of the amount previously allocated to the Limited Partners. Thereafter, 20 percent of the net gains will be allocated to General Partner and 80 percent will be allocated to Limited Partners. Net capital losses will be allocated one percent to the General Partner and 99 percent to the Limited Partners.

Additional Expenses Allocated to Limited Partners

In addition to the management fee, AVP will be responsible for its own specific legal fees, costs directly related to the purchase and sale of its own securities, organizational expenses, etc.

General Partner's Capital Contribution

The Fund manager, Allied Capital, will invest in AVP both as a general partner ($300,000 or 1% of total Fund capital) and as a limited partner ($980,000). Capital contributions will be in the form of cash.

Term of Fund

Ten years, with up to three one-year extensions.

Drawdown of Fund Capital

The Limited Partners' subscriptions will be payable 10 percent at the closing and 30 percent during each of the first, second and third years.

IX. CAPITAL COMMITMENTS AS OF APRIL 17, 1985

Pacific Mutual Life Insurance	$5,000,000
Alcap S.A.	2,500,000
Kiplinger Washington Editors	2,000,000
Washington National Insurance	1,500,000
CUNA Mutual Life	1,000,000
Acacia Mutual Life	1,000,000
John Hanson Savings and Loan	1,000,000
Allied Directors Partnership	980,000

EXHIBIT I

George C. Williams Before joining Allied, Mr Williams was an FBI agent and later worked in the House of Representatives as a Congressional Committee senior staff member He joined Allied in 1959 and became President in 1964 and Chairman in 1984 He has experience in all aspects of Allied's venture capital investments He is past president of the industry's trade association and is widely known in the industry He has a B.A. from the University of Virginia.

David Gladstone Before joining Allied Mr Gladstone was with I T T and later with Price Waterhouse as a consultant, and with the U.S Government as a computer systems analyst He has been with Allied since 1974 and has been President since 1984 He is experienced in all aspects of Allied's venture capital activities and has served on the trade association's Board of Governors He has a B.A. from the University of Virginia, an M.A. from American University and an M B.A. from Harvard Business School He is the author of *Venture Capital Handbook* (Prentice Hall), now in its second printing

Brooks H. Browne Mr Browne came to Allied in 1984 from Overseas Private Investment Corporation where he headed their small business lending program He brings strong lending abilities to Allied s operations He has a B.A. from Williams College and an M B.A. from Harvard Business School

Jonathan J. Ledecky Mr Ledecky joined Allied in August, 1983 Before that, he worked in the corporate finance department of Kidder, Peabody & Co and the mergers and acquisition department of Morgan Stanley & Co He has a B.A. from Harvard College and an M B.A. from Harvard Business School

David P. Parker A lawyer by training, Mr Parker has handled investment closings and has been involved in work-out situations at Allied. A trial lawyer before joining Allied in 1978, he has experience in all the legal aspects of Allied's venture capital activities He has a B.A. from the University of the South and a J D from the University of Virginia.

G. Cabell Williams, III Mr Williams came to Allied from the computer industry where he worked for Computer Sciences Corp and later for Wang Laboratories He heads Allied's branch office in Florida. He has a B.A. from Rollins College

Clyde D. Garrett, II Mr Garrett was with Maryland National Bank before joining Allied. He has a B.S from Ithaca College and an M B.A. from George Washington University

Harry T. Brill Public accounting was Mr Brill's background before joining Allied in 1975 He is responsible for Allied s financial, administrative, and regulatory matters He has a B S from Benjamin Franklin University

Other Employees There are two other professionals at Allied as well as nine support staff for a total of nineteen employees Allied Advisory anticipates hiring one additional professional and one additional support staff

EXHIBIT II

	March 31, 1984			
Company's Name (State) (Type of Business)	**Investment (Shares, Exercise Price, or Original Amount)**	**Present or Potential Equity**	**Cost**	**Value as Determined by Board of Directors**
AmQuest Corp. (TX) *(1)*	Conv debenture ($175,000)	1.3%	$175,105	$ 95,000
(Gas exploration)	Preferred stock (14,000 shares)	11 7%	140,000	—0—
Atlantic Research Corp. (VA) *(1) (4)*				
(Propulsion & telecommunications)	Stock (76,545 shares)	1.8%	38,004	1,932 761
Beers & Associates (MD) *(3)*	Loan ($160,000)	—	2,330	2,330
(Legal computer software)	Warrants ($100)	9.0%	10	10
	Stock (32,889 shares)	29 6%	809	809
CAMAC Corp. (VA) (4)				
(Solution dyed fiber)	Common stock (161,000 shares)	4 3%	83,013	682,640
Central Florida Utilities, Inc. (FL)	Loan ($350,000)	—	341,185	341,185
(Utility Co)	Warrants ($79,550)	41 4%	13,505	399 000
Computer Terminal Systems, Inc. (NY) *(1) (4)*	Conv debenture (166,540 shares)	11 5%	300,000	582 894
(Mfg Terminals)	Conv debenture (56,980 shares)	3 9%	200,000	200,000
Consumer Health Services, Inc. *(4)*	Loan ($125,000)	—	—0—	—0—
(Med./Dent Consumer Info Service)	Conv debenture ($125,000)	16 5%	—0—	—0—
DMI Furniture, Inc. (KY) *(1) (4)*	Preferred Stock (5,000 shares)		500,000	500 000
(Furniture Mfg)	Warrants ($83,332)	1.0%	208	66,145
Dixie Yeast Corp. (NC) *(4)*	Loan ($100,000)	—	100,000	100 000
(Mfg yeast)	Conv debenture ($134,000)	5 8%	134,000	284 425
	Preferred stock (600 shares)	20 0%	60,000	60 000
	Stock (116,941 shares)	2 8%	200	134 482
	Warrants ($23,593)	1 0%	20	51,193
Educational Direction, Inc. (NY)				
(Educational films)	Stock (200 shares)	4%	35,000	20 000
Financial News Network, Inc. (CA) *(1) (4)*	Conv debenture at $1 00	2 7%	200,000	875,000
(National network)	Warrants (38,636 shares at $2 20)	5%	—0—	67 130
	Stock (28,333 shares)	4%	92,083	123,957
	Warrants (18,797 shares at $5 32)	.3%	—0—	—0—
Florida Crafts, Inc. (FL)	Loan ($350,000)	—	343,974	343 974
(Crafts stores)	Warrant ($58,300)	17 5%	8,066	8,066
International Signal & Control Group PLC (PA) *(1) (4)*				
(Mfg components)	Stock (800,000 shares)	0 7%	59,556	2,901 024
Interstate Communications, Inc. (MD)	Loan ($380,000)	—	374,661	374 661
(Radio station)	Warrant ($100)	35 0%	8,493	230 000
Ionia Corporation (DC)				
(Real estate)	Stock (45,000 shares)	7%	—0—	15 525
Robert F. Koch (MD) *(2)*				
(Real estate)	Asset acquired in liquidation	100 0%	133,021	133,021
Leslie Fay Company (NY) *(4)*	Loans ($400,000)	—	419,642	419,642
(Dress manufacturer)	Stock (2,073 shares)	1.8%	10,365	2,000 000
Marline Oil Corporation (NY) *(1) (4)*	Preferred Stock (41,625 shares)	.3%	362,000	280 424
(Oil Exploration)	Common Stock (9,867 shares)	1%	115,698	78,936

(1) Public Traded Company, (2) Interest Income Not Being Accrued, (3) May Be Considered Affiliate, (4) Highlighted In Annual Report

EXHIBIT II (continued)

Company's Name (State) (Type of Business)	Investment (Shares, Exercise Price, or Original Amount)	Present or Potential Equity	Cost	Value as Determined by Board of Directors
	March 31, 1984			
Meadowbrook Utility Systems, Inc. (FL)	Loans ($375,000)	—	$251,732	$ 251,732
(Water systems)	Warrants ($71,667)	45.0%	11,716	100,000
Miller Shoe Industries, Inc. (OH) *(1)*				
(Orthopedic Shoes)	Stock (6,000 shares)	1%	—0—	3,375
Nav-Tec Industries, Inc. (NY)	Loan ($243,334)	—	254,932	—0—
(Reactor mfg.)	Conv. debenture ($6,666)	10.0%	—0—	—0—
Pandick, Inc. (NY) *(1) (4)*				
(Financial printer)	Stock (204,811 shares)	2.5%	153	3,814,605
Howard Sanders Comm. Corp. (DC) *(4)*	Loan ($200,000)	—	198,757	198,757
(Radio Station)	Warrant ($80)	18.0%	1,571	207,000
Smith Laboratories (IL) *(1) (4)*				
(Pharmaceutical mfg.)	Stock (104,625 shares)	8%	163,837	1,033,172
Southern Broadcasting (FL)	Loan ($500,000)	—	488,861	488,861
(Television station)	Warrants ($50,000)	6.25%	12,435	12,435
Southern Systems, Inc. (FL) *(4)*	Convertible debenture ($300,000)	5.0%	300,000	300,000
(Mfg. computer printer)	Loan ($200,000)	—	200,000	200,000
Spa Management Services (VA) *(4)*	Loan ($300,000)	—	300,000	300,000
(Women's health spas)	Option	35.0%	—0—	—0—
E. J. Stewart, Inc. (PA)	Loan ($200,000)	—	195,409	195,409
(Video productions)	Warrant ($901)	10.0%	5,977	5,977
Storall Place (VA)	Loan ($125,000)	—	79,132	79,132
(Real estate dev.)	Warrants ($100)	10.0%	—0—	—0—
Summit Oilfield Services (TX) *(1) (4)*	Loan ($329,139)	—	78,125	78,125
(Oil servicing)	Stock (64,676 shares)	2.0%	210,443	53,619
TGIF Texas (TX) *(4)*	Loan ($124,000)	—	141,000	141,000
(Restaurants)	Stock (84,444 shares)	5.6%	24,000	253,332
Unison Industries (IL) *(4)*	Loan ($300,000)	—	135,237	135,237
(Magnetos)	Stock (6,375 shares)	8.9%	5,366	150,000
Subtotal			**$7,309,631**	**$21,306,002**

(1) Public Traded Company (2) Interest Income Not Being Accrued (3) May Be Considered Affiliate (4) Highlighted In Annual Report

TRUST COMPANY OF THE WEST (TCW) REALTY FUND III

I. BACKGROUND DATA

NAME OF FUND MANAGER:	Westmark Real Estate Investment Services
NAME OF FUND:	TCW Realty Fund III
TYPE OF FUND:	Closed-end Real Estate Group Trust
DATE OF ON-SITE INTERVIEW:	4/15/85
REPRESENTING MANAGER:	Vince Martin, Bruce Ludwig
CONTACT:	Bruce Ludwig
ADDRESS:	400 Hope Street Los Angeles, California 90071
TELEPHONE:	(213) 683-4200

II. ORGANIZATIONAL STRUCTURE

TCW Realty Advisors is a joint venture between Trust Company of the West (25%) and Westmark Real Estate Investment Services (75%). Trust Company of the West (TCW) is the Fund Trustee, and has retained Westmark as the investment manager for the real estate closed-end funds and separate accounts. TCW is an independent trust company founded in 1971 and owned entirely by its 25 senior officers and directors. Westmark was founded in 1982 and is wholly-owned by five general partners: Vince Martin, Sol Rabin, Bruce Ludwig, Roger Schultz, and Stan Zarrow. TCW has provided Westmark $4 million initial working capital and marketing support, and will receive 85% of the revenues until the investment is recovered. At that time, Westmark receives 75% and TCW 25% of the revenues.

III. BACKGROUND AND PERFORMANCE

Westmark manages two closed-end realty Funds. Fund I closed in March of 1983 with $172.5 million in contributed capital and completed acquisitions in May 1984. Fund II closed in June, 1984 with $150 million in contributed capital and is currently completing its acquisitions. Westmark manages approximately $150 million in discretionary separate accounts for US West and Rockwell International, and presents properties to Dow Chemical and General Motors for their non-discretionary separate accounts.

Prior to establishing Westmark, four of the senior partners, Vince Martin, Sol Rabin, Roger Schultz and Bruce Ludwig, were previously employed by Coldwell Banker Capital Management Services and had key responsibilities for the management of the $800 million invested in seven closed-end commingled real estate Funds and separate accounts managed for institutional investors.

The fifth partner, Stan Zarrow, is an attorney who did extensive legal work for Coldwell Banker.

TCW Realty Fund I, formed in March 1983, had a total rate of return of 12.6% in 1984, composed of 9.9% income and 2.7% appreciation.

Coldwell Banker Fund I, founded by Vince Martin and the other Westmark principals in 1972, liquidated in January 1984. The preliminary annualized total rate of return figure of that Fund was 15.3%. The final figure has not been determined because income is still being accrued from paper taken on sale.

IV. STAFF

Staff Composition

TCW employs 29 professionals who are responsible for the assets of commingled Funds and separate accounts. They include 8 acquisitions, 5 asset management, 5 research, 6 financial, 1 legal, 1 marketing and 3 administration personnel.

During the last year, 4 professionals have joined the firm: one acquisitions specialist, one asset manager, and two researchers.

Staff Turnover

Since it was founded in 1982, no professionals have left the firm.

Compensation and Incentives

Currently all employees receive straight salaries. A financial incentive system has been designed and implemented for the acquisitions and asset management staffs based on an individual percentage share and pooled participation in the management and incentive fees earned by Westmark. The amounts of the bonuses are determined by a committee composed of the five general partners and the President of TCW. Similar incentive systems are currently being designed for the research and clerical staffs. In addition, professional employees will be offered the opportunity to purchase shares in the firm.

V. INVESTMENT STRATEGY

Forms of Investment

Properties are purchased either on a 100% cash basis or through the utilization of a debt structure designed by Westmark called the "Equity Equivalent Loan". The Equity Equivalent Loan is designed to allow the tax-exempt investor to sell tax benefits to the taxable investor. In this transaction, Westmark makes a loan to the property owner which bears an interest rate close to the property capitalization rate. Westmark also participates in all increases in net income during the term of the loan. The percentage of participation is the same as the loan to market value ratio of the property at the time the loan is made. This percentage will always be more than 51% and less than 90%. At the same time, Westmark buys an option to purchase the building (or a partial interest) at the termination of the loan for a price equal to the face amount of the loan. This option can be exercised at any time. Westmark also receives title insurance to protect its option against any claims by the borrower. The insurance covers the anticipated appreciation of the property (two times the purchase price). The amount of the insurance can be increased at any time during the life of the property. The loan documents give Westmark operating control of the property. In effect, Westmark receives the same income and appreciation as if it owned the building.

This structure has been utilized by Coldwell Banker for the last seven years and comprised 67% and 65% of TCW Realty Fund I and Fund II investments, respectively. It is anticipated that at least 50% of Fund III will be invested in Equity Equivalent Loans.

Property Type

It is expected that Fund III will concentrate investments in industrial research and development facilities and retail properties. The Fund may also purchase suburban and mid-size office buildings in areas where there is less than a 3 year supply of space.

Location

Properties will be geographically diversified throughout the United States. The geographic distribution of Funds I and II combined is East (7%), South (19%), Midwest (7%), and West (67%).

Size

Properties are expected to range in size from $10 to $50 million.

Development

The Fund will not do development, but may assume leasing risk for a maximum of 25% of the Fund. In this transaction, the Fund would commit to finance construction costs up to a set amount subject to completion of the structure and other prerequisites. The Fund would participate in the lease-up of the property.

Leverage

Leverage may be used primarily in the form of taking over an existing mortgage. New debt may be used if advantageous, but is restricted to no more than a one to one debt equity ratio. Fund I is composed of approximately $12 million in debt and Fund II has $2 million in debt.

VI. INVESTMENT PROCESS

Generation of Investments

In order to target cities for investment, Westmark's five person research staff collects and analyzes economic and employment data such as local vacancy rates, on-going construction and job creation for 75 metropolitan areas. Based on this analysis, Westmark establishes a priority list of cities, sub-markets and property type acquisitions.

Eight full time acquisition professionals, including partner Roger Schultz, seek properties in the targeted areas by contacting brokers, owners, and developers. The staff members conduct a preliminary financial screening and on-site inspection of the property, and a letter of intent and draft contract are prepared in conjunction with the legal staff. After the letter is executed, an acquisitions staff member conducts a feasibility study, including an evaluation by outside engineers, and internal staff market studies, lease analyses, yield analyses, and legal review. All leases are read by the acquisition, asset management, and legal personnel. Additional on-site inspections are conducted, and the asset management and acquisitions staffs jointly prepare a "buy budget" which is the first year operating plan. The detailed proposal is submitted to the Investment Committee, composed of the five Westmark Partners and President of TCW, Ernest Ellison. The committee oversees the property acquisition process through formal weekly meetings and informal on-going discussions. The unanimous approval of the committee is required for a property acquisition.

Allocation of Investments

If a property meets the investment criteria of more than one account, the Fund will automatically get first choice for the property.

Monitoring and Property Management

On-site property management is contracted to local property management firms. The on-site manager is responsible for day-to-day operations, implementation of the operating budget, annual rent surveys and preparation of monthly income and expense reports.

Westmark's five person Asset Management staff is responsible for overseeing the on-site managers, reviewing monthly income and expense reports, conducting all lease negotiations and approving capital expenditures over a set limit predetermined for each property. The Investment Committee is responsible for final approval of all leases. The asset manager develops an annual operating plan for each property, which includes plans for marketing and leasing, capital expenditures and operating expenses, and a delineation of the level of discretion alloted to each on-site manager. Any variation from the budget must be approved by the asset manager. The manager inspects each property at least quarterly. The asset manager also is involved in the acquisitions process: examining leases, utilities, taxes and insurance and projecting expenses.

Sale of Fund Properties

No property has been sold from either Funds I or II. Westmark monitors all properties quarterly based on their current position and the firm's current investment criteria. If a property does not meet the current investment criteria for two successive quarters, it is a candidate for sale. A property will be sold if the investment committee unanimously determines 1) it has achieved its appreciation potential 2) an offer exceeds TCW's expectations for the property or 3) a defensive sale is warranted to cut losses. The manager estimates that approximately 15-20% of the properties will be sold during the life of the Fund. The Fund manager is currently contemplating the sale of a property in Fund I following re-negotiation of 2 leases to realize a 30% profit. Westmark would accept seller financing in a sale which would be discounted and converted immediately into cash.

VII. INVESTMENT AGREEMENT

Management Fees

Annual Management Fee - The initial year's fee is 1.2% of the total commitments. Thereafter it is 1/10 of 1% per month based on the lower of the cost or fair market value of invested assets. There is no fee charged for cash management services.

Incentive Fee: 10% of the cash distribution after the investor has received a cumulative annual 10% return on contributed capital and return of original investment.

Fees are not subject to change by the investment manager. Fees could be changed by a two-thirds vote of Fund participants.

Term of Fund and Extension Provisions

The Fund is scheduled to terminate on December 31, 1995, unless extended for two year increments by a vote of a majority of the unit holders or sooner terminated by the vote of unitholders owning not less than two-thirds of the outstanding units of the Fund.

Takedown of Commitments

Participants will pay for units either in full or in three installments: the first consisting of 50% due on the first business day of the month following execution of the agreement; the second 25% due on November 1, 1985; and the balance due on February 3, 1986. The trustee has the right to call for the second and third installments on thirty days notice after July 1, 1985.

Withdrawal/Transfer Policy

Beginning May 1, 1988, a participant may redeem 90% of the shares at market value from cash not committed to real estate investments. The effective date of the redemption will be the quarterly valuation date following the date on which the written notice is received by the Trustees. At termination of the Fund, the remaining 10% will be paid if the market value is at least equal to the market value on the date of the redemption request.

VIII. FUND ADMINISTRATION

Appraisals

Each property will be appraised at least once a year by an independent appraiser. The Trustee will review the appraisal on the quarterly evaluation date and adjust the value if there has been a change in circumstances.

Client Communications

Participants receive quarterly and annual reports. Quarterly reports contain an unaudited financial report including a balance sheet and statement of operations. The annual report contains audited sheets, statement of operations and statement of changes in the financial position.

IX. CLIENT BASE

TCW Realty Fund III currently has investor commitments of approximatley $150 million. The five largest investors include:

Illinois Municipal Employees	$20.0 Million
North American Phillips	12.5
Pacific Gas and Electric	10.0
Western Metal Industries	10.0
J.C. Penney	10.0

X. PRINCIPAL BIOGRAPHIES

The Managing Partner and Chief Investment Officer of Westmark is Vincent F Martin, Jr Mr Martin, age 43, was employed by Coldwell Banker & Company from 1970 to 1982, most recently as Executive Vice President and General Manager of Coldwell Banker Capital Management Services ("CMS"), a Coldwell Banker division whose sole operating function was to serve as a real estate investment manager for employee benefit plans through a series of closed-end commingled funds and separate accounts Mr Martin also served as Chairman of the Coldwell Banker Commercial Group Investment Committee and was a member of the Administrative Committee He was also Vice President and Director of CB Funding Corporation and CB Employees Investment Corporation Mr Martin has been a leader in developing employee benefit plan real estate investment policies and practices He was responsible for increasing the asset base of CMS from $19 million in 1973 to over $600 million by the end of 1981 He received a B S degree in Accounting (Cum Laude) from Boston College in 1963 and an M B A degree (with Distinction) from the Harvard Graduate School of Business Administration in 1968 He has also worked in the fields of public accounting and financial consulting and served as an officer in the United States Army

Dr Sol L Rabin, age 48, is the Director of Investment Research of Westmark He was formerly employed by Coldwell Banker & Company from 1971 to 1982 as Senior Vice President and General Manager of Coldwell Banker Research and Consultation Services, which he organized in 1971 This division specialized in providing real estate economic forecasts, market research, planning and investment strategy services for major developers, financial institutions, industrial corporations and CMS He has established a national reputation as a pioneer in the development of real estate demand models and the application of economic forecasting techniques to the real estate markets He was formerly a member of the UCLA Graduate School of Management faculty and Associate Director of its Business Forecasting Program Dr Rabin received a B A degree in Economics from Reed College in 1957 a Masters degree in City Planning from Harvard University in 1960 and a Ph D in Regional Economics from the University of Pennsylvania in 1969

Bruce L Ludwig age 43, is the Director of Marketing and Client Relations of Westmark He was formerly employed by Coldwell Banker & Company from 1964 to 1982 His most recent position was First Vice President National Accounts on the parent company staff As such, he was responsible for developing, maintaining and coordinating all Coldwell Banker relationships with major retail chains and shopping center developers nationally He was previously the Director of Commercial Properties for the southwest and eastern regions of Coldwell Banker Commercial Real Estate Services He has also had extensive experience as a leasing and investment sales specialist on a national basis He is widely recognized as an expert in the areas of shopping center planning development, leasing and joint venture arrangements He received a B S degree in Finance from California State University/Northridge in 1964

Roger C Schultz, age 50, is the Director of Acquisitions of Westmark He was employed by Coldwell Banker and Company from 1968 to 1982, most recently as First Vice President, National Accounts on the parent company staff In this capacity Mr Schultz was responsible for establishing, maintaining and coordinating the relationships of all Coldwell Banker divisions with major designated corporations, financial institutions and industrial and office building developers on a national and international basis Due to the depth of his product and marketing expertise he had the additional responsibility of originating, structuring and marketing large complex multi-use properties throughout the country He also has substantial experience in the leasing and investment sales of office and industrial properties He has previously held managerial and line positions in the aerospace engineering field He received a B S degree in Mechanical Engineering from Michigan State University in 1956

Stanton H Zarrow, age 49, is the Director of Operations of Westmark He was associated with the law firm of O'Melveny & Myers for eighteen years and a partner for thirteen years Mr Zarrow specialized in Federal tax matters generally, with particular emphasis on the tax aspects of real estate transactions and the prohibited transaction provisions of ERISA Prior to joining O'Melveny & Myers, he was an attorney with the Tax Division, Department of Justice, Washington, DC A frequent lecturer and author on Federal tax matters, Mr Zarrow is a practice consultant to Volumes I through V of Augustine and Zarrow, California Real Estate Law and Practice He received his baccalaureate degree from the University of Massachusetts in 1957 and his Law degree from Harvard Law School in 1960

STATE STREET REAL ESTATE FUND III

I. BACKGROUND DATA

NAME OF FUND MANAGER:	State Street Bank & Trust/Aldrich, Eastman, & Waltch
NAME OF FUND:	State Street Real Estate Fund III
TYPE OF FUND:	Closed-end Real Estate Group Trust
DATE OF ON-SITE INTERVIEW:	1/15/85
REPRESENTING MANAGER:	Peter Aldrich, Mark Waltch, Tom Eastman, Dick Burns, Joe Azrack John Patillo, Ned Wilmot
CONTACT:	Lucy O'Laughlin, Aldrich, Eastman & Waltch
ADDRESS:	One Post Office Square, Boston, MA
TELEPHONE:	(617) 542-9300

II. ORGANIZATIONAL STRUCTURE

State Street Bank & Trust Company, the Fund Trustee and manager, is a wholly-owned subsidiary of the State Street Boston Corporation. The Fund is managed by the Real Estate Section of the State Street Trust Department's Asset Management Division. State Street has complete discretion over the administration of the Fund and the investments of its assets. The State Street Funds are the only real estate investments managed by the Asset Management Division. In addition, the division manages approximately $11 billion in equity, fixed income and cash investments for tax-exempt clients.

State Street Bank has retained Aldrich, Eastman & Waltch (AEW) as the Fund advisor. AEW advises State Street on all real estate investment and portfolio management decisions for the Fund. Founded in 1981, AEW is wholly-owned by twenty of its employees, including its twelve principals. The three founding principals, Peter Aldrich, Tom Eastman, and Mark Waltch, formerly worked together at the Boston Company Real Estate Counsel, Inc.

III. BACKGROUND AND PERFORMANCE

AEW provides real estate investment advisory services for the two existing commingled real estate Funds managed by State Street Bank. State Street Real Estate Fund I closed in 1982 with $50 million contributed by 5 clients. Fund II closed in 1984 with $60 million in contributed capital from 9 clients. AEW also provides investment management services for $1.4 billion in gross real estate assets invested for nine separate account clients AT&T, Atlantic Richfield, BATUS, Digital Equipment, General Motors, Harvard Endowment, Owens-Illinois, Sears Roebuck and the Union of Operating Engineers Pension Fund. All clients of AEW, including State Street Bank, have veto power over the addition of new separate account clients by AEW.

State Street Real Estate Fund I, incepted in 1982, had a total rate of return of 21.0% in 1984. This return was composed of 14.7% income and 6.3% appreciation.

IV. STAFF

Staff Composition

AEW employs 59 investment professionals, who are assigned to the following functional areas acquisitions (20), asset management & portfolio strategy (14), legal/closing (4), financial/accounting (9), administration (4), marketing (1), systems (7).

Staff Turnover

In 1984, three acquisitions, eight portfolio management, three finance/accounting, one legal and two systems professionals joined the firm. In addition, AEW has recently named a new President, Bill Helm, formerly the Treasurer of Digital Corporation, to oversee the adminstrative function and enable Mr. Aldrich, Mr. Eastman and Mr. Waltch to devote more time to the investment process.

Compensation and Incentives

Employees receive a salary plus bonus based on individual performance and the overall profitability of the firm. Currently, eighteen employees are shareholders, and others will have the opportunity to purchase shares as a financial incentive.

V. INVESTMENT STRATEGY

Forms of Investment

The form of the investment structure varies with the circumstances of each property. It is anticipated that most of the Fund's investments will be in the form of equity-oriented debt instruments, such as participating or convertible mortgages with options, warrants, or conversion features. Generally, investments are structured to be tax-efficient, and to provide an attractive current yield in the form of a coupon, with substantial upside return potential from cash flow and future appreciation participation. AEW also invests on a straight equity basis. In some cases, an investment in the portfolio may be restructured by re-selling the property to a group of tax-shelter oriented investors while retaining substantially all of the non-tax economic benefits through the ownership of the land and the terms of the participating or convertible mortgage.

Property Type

The Fund may invest in warehouses, office buildings, R&D facilities, retail properties, hotels/motels, residential properties, and land. No more than 60% of the Fund will be invested in either industrial, retail, or office buildings, and no more than 15% will be invested in either hotel, residential, or development properties. Hotels, residential, and development properties combined will constitute no more than 30% of the Fund. These guidelines can be altered by State Street upon recommendation of AEW. AEW anticipates that Fund III will emphasize office and retail properties.

Location

The Fund will be diversified nationwide. No more than 50% of the assets will be invested in any one metropolitan area.

Size

Fund properties are expected to range between $20-$30 million.

Development

The Fund may make forward commitments conditional upon the completion of construction and pre-set occupancy levels. The Fund may assume leasing risk.

Leverage

The Fund will use leverage if the terms are favorable.

VI. INVESTMENT PROCESS

Generation of Investments

Investments are generated by a twenty-person acquisitions group through contacts with property owners, brokers, and developers. Following an initial screen of the people involved, location, and quality of the property, a letter of intent is issued by AEW for a prospective acquisition with the approval of the State Street Real Estate Department. A team, headed by one of the three acquisitions principals and composed of members of the acquisitions, legal, and asset management staffs, conducts analyses of the leases, management and service contracts, loan agreements, insurance coverages, titles, and operating and financial history of the property. At least two principals participate in the on-site inspection, including one who will retain overall responsibility for the property throughout its holding. During the due diligence process, independent engineers and appraisers are contracted to inspect the property.

The AEW Investment Committee, composed of the twelve principals, reviews the due diligence on an on-going basis during the acquisition phase. All investments must be unanimously approved by the committee. All acquisitions recommended by AEW for the State Street Fund must be approved by Lyle Davis, the Chief Investment Officer of the State Street Asset Management Division and Bob Kilroy, Vice President of the Real Estate Department.

Allocation of Investments

The nine separate accounts currently invested by AEW have different investment objectives and size requirements than the State Street Funds. Each account is assigned a "client advocate" who acts as a portfolio manager and participates in the decision to allocate properties among accounts. If a property were to meet the guidelines of more than one account, the investment would be allocated on a rotating basis.

Monitoring and Property Management

On-site property management is conducted by local property management firms or is the responsibility of the borrower/property owner in the debt-related deals. In all cases, including the debt transactions, AEW retains control over the property budgets, formulation of leasing strategy, approval of major leases, preparation and approval of annual operating plans and budgets, and capital expenditure decisions. An eleven person asset management staff, headed by an AEW principal, oversees property managers, establishes annual business plans for each property, and conducts on-site inspection on a periodic basis. The Asset Management team is in the process of developing a financial incentive system for on-site property managers contracted on a fee basis.

Sale of Fund Properties

AEW continually reviews the strategy of each portfolio to evaluate the desirability of holding versus selling, or the potential for refinancing in the light of capital market conditions. For example, of the twenty-five properties acquired for one separate account client since 1979, five have been sold and three restructured (the client transferred from the Boston Company to AEW when it was formed in 1981). While no properties have been sold from the State Street Funds, one has been restructured to sell the tax benefits. Sales and restructuring decisions are generated primarily by the principals and the Asset Management Group.

VII. Investment Agreement

Management Fees

Acquisition Fee:	Varies depending on the transaction, but will not be less than 1% and not more than 2% of the purchase price.
Disposition Fee:	Also varies according to the transaction, but will not be less than 1% or more than 2% of the sales price.
Asset Management Fee:	.75% of the net asset value of the Fund, annually.
Custodial Fee:	.07% of the net asset value of the Fund, annually.
Short Term Management Fee:	.15% of net asset value of cash equivalents until 85% of the Fund has been invested in real estate.

All fees are deducted from Fund income or capital.

Terms of Fund and Extension Provisions

The Fund is scheduled to terminate December 31, 1999. The term of the Fund may be extended in 5 year increments with the approval of the Trustee and participants holding at least two-thirds of the units. The Fund can be terminated prior to 1999 if Trustee receives written requests for termination from participants holding at least two-thirds of the units. In that event, the Trustee retains the discretion to distribute assets in-kind to the participants who either requested termination or consent to an in-kind distribution.

Takedown of Commitments

Commitments will be drawn in four installments over three month intervals. The Fund manager has the option of deferring the first scheduled takedown to the first actual investment or the second takedown, whichever is earlier.

Withdrawal Policy

A participant may withdraw from the Fund if an acceptable qualified trust is available to purchase the units. In addition, the Trustee may offer to redeem units using available cash on a pro-rata basis.

VIII. FUND ADMINISTRATION

Appraisals

The properties will be appraised by an independent appraiser whenever a substantial gain or loss is reported by AEW. The Fund is valued quarterly by State Street, based on the valuations provided by AEW. Each asset will be evaluated by an independent appraiser at least once every three years.

Client Communications

Clients will receive unaudited financial statements on a quarterly basis and annual audited financial reports. Clients also receive a separate profile on each fund acquisition.

IX. CLIENT BASE

State Street Real Estate Fund III currently has investor commitments of approximately $75 million. The five largest investors in the Fund include:

State of Connecticut	$30 Million
Honeywell	20
International Paper	10
State Street Retirement Fund	5
Mars, Inc.	5

X. PRINCIPAL BIOGRAPHIES

Peter C. Aldrich (age 41), prior to founding Aldrich, Eastman and Waltch (AEW) in 1981, was founder and President (1975-1981) of the Boston Company's real estate investment subsidiary. There he pioneered direct investment strategies for trusteed funds into alternative real estate investment vehicles, such as convertible and deep discount mortgages and alternative bond-like instruments such as real return mortgages.

Prior to his tenure at Boston Company, Mr. Aldrich was a real estate developer, a mortgage broker and banker, a property syndicator, and an advisor to public funds, banks and corporations on real estate investment matters. Additionally, he was the founder and first Chairman of the Pension Real Estate Association (PREA). He is a graduate of Harvard (B.A. and M.B.A.). He has been a frequent lecturer and essayist as well as a faculty member of Harvard University Graduate School of Business and Yale University Graduate School of Organizational Management. Mr. Aldrich is a Director of Monarch Capital Corporation and an Overseer of Simon's Rock.

Thomas G. Eastman (age 37) who serves as Chief Investment Officer of AEW, specializes in the creation and management of real estate portfolios for pension funds. He has had substantial experience not only in the acquisition and management of properties, but also in their development, rehabilitation, financing and sale. He has built and ,managed investment organizations to carry out these tasks. His portfolios have constantly ranked among the country's most successful.

Mr. Eastman formerly served as Senior Vice President of The Boston Company Real Estate Counsel, Inc. (1979-1981) where he managed its programs for tax-exempt institutional clients. Prior to that, he was the Director of Acquisitions for the closed-end real estate funds sponsored by Coldwell Banker, Los Angeles (1972-1979).

He is a graduate of Stanford (B.A.) and Harvard (M.B.A.).

Mark J. Waltch (age 55). Before joining AEW in 1981, Dr. Waltch was Senior Vice President of the Boston Company's real estate investment subsidiary (1980-1981), Dr. Waltch was responsible for closed-end collective investment funds for institutional investors. He was also President of Waltch Associates, Inc, an international urban design, economic analysis, planning and development firm; Vice President of Beacon companies, heading their development activities; and Principal and Director of the architectural and planning fir of Arrowstreet, Inc. At the MIT-Harvard Joint Center for Urban Studies, he aided in the implementation of alternative mortgage instruments.

Dr. Waltch has taught finance, development and design at MIT. He is a graduate in mining engineering of the Colorado School of Mines and in urban studies and urban design of MIT, where he received his Ph.D.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

FIRM NAME:	Equitable Real Estate Group, Inc.
FUND NAME:	Separate Account #8
CONTACT:	Harry Pierandri
ACCOUNT INCEPTION:	10/81
SBI COMMITMENT:	$40 Million
SBI CURRENT INVESTMENT:	$40 Million

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

SEPARATE ACCOUNT #8 CURRENT PORTFOLIO COMPOSITION

PROPERTY MARKET VALUE	# OF PROPERTIES	LOCATION	%	PROPERTY TYPE	%
$2.4 Billion	233	East	27%	Office	40%
		Midwest	19	Retail	36
		South	31	Industrial	12
		West	23	Hotel	10
				Residential	0
				Other	2

INVESTMENT ACTIVITY-LAST QUARTER

ACQUISITIONS $	ACQUISITIONS #	DISPOSITIONS $	DISPOSITIONS #
$2.8 M	2	$2.3 M	2

UNIT VALUE RETURNS

	LAST QUARTER	LAST FOUR QUARTERS	FIVE YEAR AVERAGE
Separate Account #8	1.8%	12.4%	13.9%
EAI Composite Median	2.2	11.9	13.5
CPI (Inflation)	1.0	3.6	5.9

STAFF COMMENTS: For the year ending March 31, 1985, Equitable's 12.4% total rate of return was composed of 7.5% income and 4.9% appreciation. The 12.4% return outperformed the inflation rate and the EAI Real Estate Composite Fund Median. Similar to the last three quarters, the volume of acquisitions remained low, with the purchase of one $2.8 million industrial property in Atlanta. Also during the quarter the Fund entered a joint venture to develop a $27.5 million office building in suburban Atlanta. No funding has taken place on this project. During the quarter, two industrial properties were sold with an average sales proceeds of $1.3 million, reflecting Equitable's strategy to sell underperforming holdings. The cash component increased to 10.9% from 6.4% at the end of the previous quarter, as the result of increased capital contributions to the Fund.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

FIRM NAME:	Aetna Life and Casualty Company
FUND NAME:	Real Estate Separate Account (RESA)
CONTACT:	Tom Anathan
ACCOUNT INCEPTION:	10/81
SBI COMMITMENT:	$40 Million
SBI CURRENT INVESTMENT:	$40 Million

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

RESA CURRENT PORTFOLIO COMPOSITION

PROPERTY MARKET VALUE	# OF PROPERTIES	LOCATION	%	PROPERTY TYPE	%
$1.3 Billion	128	East	18%	Office	41%
		Midwest	10	Retail	21
		South	20	Industrial	30
		West	52	Hotel	7
				Residential	1

INVESTMENT ACTIVITY-LAST QUARTER

ACQUISITIONS $	#	DISPOSITIONS $	#
$132.0 M	3	$21.7 M	2

UNIT VALUE RETURNS

	LAST QUARTER	LAST FOUR QUARTERS	FIVE YEAR AVERAGE
RESA	2.2%	11.9%	13.8%
EAI Composite Median	2.2	11.9	13.5
CPI (Inflation)	1.0	3.6	5.9

STAFF COMMENTS: For the year ending March 31, 1985, Aetna's 11.9% total rate of return was composed of 8.9% income and 3.0% appreciation. This return outperformed the inflation rate and equaled the EAI Real Estate Composite Fund Median. During the quarter, the Fund acquired a $78.3 million package of office R&D properties in Northern California, the $45.6 million Ritz-Carlton Hotel in Boston, and an $8.1 million industrial package in California purchased on a forward commitment basis. The Fund sold two properties: one small neighborhood shopping center that was underperforming in the portfolio, and an industrial property for a substantial gain after a 3 year hold. The cash position decreased from 14.9% at the end of last year to 8.8%.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

FIRM NAME:	Prudential Investment Management Corporation
FUND NAME:	PRISA I
CONTACT:	Don Davis
ACCOUNT INCEPTION:	9/81
SBI COMMITMENT:	$40 Million
SBI CURRENT INVESTMENT:	$40 Million

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

PRISA CURRENT PORTFOLIO COMPOSITION

PROPERTY MARKET VALUE	# OF PROPERTIES	LOCATION	%	PROPERTY TYPE	%
$4.9 Billion	455	East	24%	Office	52%
		Midwest	14	Retail	18
		South	21	Industrial	16
		West	41	Hotel	8
				Residential	4
				Other	2

INVESTMENT ACTIVITY-LAST QUARTER

ACQUISITIONS $	ACQUISITIONS #	DISPOSITIONS $	DISPOSITIONS #
$0.6 M	1	$1.3 M	2

UNIT VALUE RETURNS

	LAST QUARTER	LAST FOUR QUARTERS	FIVE YEAR AVERAGE
PRISA	2.8%	12.5%	13.0%
EAI Composite Median	2.2	11.9	13.5
CPI (Inflation)	1.0	3.6	5.9

STAFF COMMENTS: For the year ending March 31, 1985, PRISA's 12.5% total rate of return was composed of 7.9% income and 4.6% appreciation. This return outperformed the inflation rate and the EAI Real Estate Composite Fund Median. During the quarter, PRISA bought out a partner's interest in a joint venture industrial property in Dallas for $600,000 and sold two small properties at a loss. The dispositions reflect PRISA's strategy to sell small and/or underperforming holdings. PRISA's cash component declined from 8.9% at the end of the previous quarter to 4.9%.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

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:	$25.0 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 (AT COST)				CASH RETURNS TO SBI		
CURRENT TOTAL #	CURRENT TOTAL $	LATEST QUARTER #	LATEST QUARTER $	LATEST QUARTER	LAST FOUR QUARTERS	CUMULATIVE SINCE INCEPTION
5	$238.5 Million	2	$128.3 Million	$132,357	$132,357	$132,357

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

LOCATION	%	STAGE OF DEVELOPMENT	%	INDUSTRY GROUPS	%
East	0.0%	Fully Developed	100.0%	Office	41.4%
Midwest	0.0	Partially Developed	0.0	Retail	49.0
South	53.0			Industrial	9.6
West	47.0			Hotel/Motel	0.0
				Apartments	0.0
				Other	0.0

STAFF COMMENTS: As of March 31, 1985, RREEF USA III had investments in five properties which together represent 31% of total Fund capital. Two of these five properties, a ten building suburban office complex in Atlanta, Georgia and a regional shopping center in Tulsa, Oklahoma, were acquired in the first quarter of 1985. Additional properties under study for possible acquisition include a Los Angeles shopping center and a Seattle office building. The total Fund acquisition program is expected to be completed within 3 years.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

FIRM NAME:	Heitman Advisory Corporation
FUND NAME:	HAC Group Trust I
CONTACT:	David Glickman
ACCOUNT INCEPTION:	6/14/84
SBI COMMITMENT:	$20.0 Million
SBI CURRENT INVESTMENT:	$18.0 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 I INVESTMENTS (AT COST)				CASH RETURNS TO SBI		
CURRENT TOTAL		LATEST QUARTER				
#	$	#	$	LATEST QUARTER	LAST FOUR QUARTERS	CUMULATIVE SINCE INCEPTION
6	$83.5 Million	4	$37.0 Million	$267,664	$335,807	$335,807

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

LOCATION	%	STAGE OF DEVELOPMENT	%	INDUSTRY GROUPS	%
East	8.0%	Fully Developed	100.0%	Office	35.0%
Midwest	47.0	Partially Developed	0.0	Retail	37.0
South	28.0			Industrial	28.0
West	5.0			Hotel/Motel	0.0
				Apartments	0.0
				Other	0.0

STAFF COMMENTS: During the quarter ended March 31, 1985, Heitman closed on four properties for the Fund. The four properties include the Tri-County Corporate Center in Cincinnati, Ohio, Water Tower Place in Chicago, Illinois, Oakwood Mall in Enid, Oklahoma, and the Villa Marina Shopping Center in Marina Del Rey, California. These four new acquisitions, together with the two properties acquired by the Fund in the fourth quarter of 1984, represent approximately 74% of total Fund capital. Heitman is currently examining further investments which could bring the Fund to a fully invested position by June of 1985. Heitman Group Trust II, a proposed $200 million successor Fund to Group Trust I, will be offering subscriptions during the first half of 1985.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

FIRM NAME:	Norwest Venture Capital Management, Inc.
FUND NAME:	Norwest Venture Partners I (NVPI)
CONTACT:	Dan Haggerty
ACCOUNT INCEPTION:	1/12/84
SBI COMMITMENT:	$10 Million
SBI CURRENT INVESTMENT:	$7 Million

INVESTMENT DESCRIPTION: NVPI is a $60 million venture capital limited partnership formed in January 1984. Term of the Fund is 10 years with optional extensions. Investment focus of NVPI will be on high technology private companies in the early stages of development. The Fund will not invest in leveraged buyouts.

NVPI I INVESTMENTS				CASH RETURNS TO SBI		
CURRENT TOTAL #	CURRENT TOTAL $	LATEST QUARTER #	LATEST QUARTER $	LATEST QUARTER	LAST FOUR QUARTERS	CUMULATIVE SINCE INCEPTION
23	$13.9 Million	1	$0.6 Million	$0.06 Million	$0.06 Million	$0.06 Million

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

LOCATION	%	STAGE OF DEVELOPMENT	%	INDUSTRY GROUPS	%
East	9.0%	Early Stage Financing	88.0%	Computer Related	70.0%
Midwest	31.0	Expansion Financing	12.0	Machinery/Equipment	0.0
South	6.0	Bridge Financing	0.0	Industrial/Manufacturing	1.0
West	54.0	Leveraged Buyouts	0.0	Consumer Products/Services	0.0
				Communications	9.0
				Energy Related	5.0
				Medical Related	13.0
				Other	2.0

STAFF COMMENTS: During the first quarter of 1985, Norwest Venture Partners I invested $2.3 million in six companies. Five of the investments were follow-ons to earlier investments. The sixth was a new investment in a small computer-related firm located in the Pacific Northwest. The general partners in Norwest's Portland office initiated the investment for the firm and will continue to monitor its progress. Norwest investigated a number of attractive opportunities and expects to close on several new investments in second quarter 1985. In a strategy move to increase overall productivity, Norwest closed its Denver, Co. office in January. Norwest believes that the Colorado investments can be effectively monitored from the Portland and Minneapolis offices and is currently exploring other means of generating investments in the expanding southwestern area of the country.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

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 Million
SBI CURRENT INVESTMENT:	$13.6 Million

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

KKR III INVESTMENTS (AT COST)				CASH RETURNS TO SBI		
CURRENT #	TOTAL $	LATEST QUARTER #	LATEST QUARTER $	LATEST QUARTER	LAST FOUR QUARTERS	CUMULATIVE SINCE INCEPTION
5	$544.0 Million	2	$151.2 Million	$5,247	$35,470	$35,470

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

LOCATION	%	STAGE OF DEVELOPMENT	%	INDUSTRY GROUPS	%
East	16.0%	Leveraged Buyouts	100.0%	Conglomerates	100.0%
Midwest	34.0	Other	0.0	Other	0.0
South	22.0				
West	28.0				

STAFF COMMENTS: During the latest quarter ended March 31, 1985, KKR acquired an additional subsidiary of City Investing (Motel 6 discount motels) and a family owned company (M&T, Inc.) with interests in California real estate, construction, equity securities and agricultural properties, production and processing. At March 31, 1985, approximately 54% of total Fund capital was invested in five separate leveraged buyout companies.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
December 31, 1984

FIRM NAME:	Summit Partners, L.P.
FUND NAME:	Summit Ventures, L.P.
CONTACT:	Roe Stamps, Steve Woodsum
ACCOUNT INCEPTION:	12/20/84
SBI COMMITMENT:	$10 Million
SBI CURRENT INVESTMENT:	$2.5 Million

INVESTMENT DESCRIPTION: Summit Ventures is a $93 million venture capital limited partnership. The term of the partnership is ten years plus optional extensions. The partnership was formed in December 1984 by Stamps, Woodsum & Co. of Boston, Mass., the managing general partners of the fund, and Shearson/American Express. Stamps and Woodsum focus on actively generating investment opportunities, targeting portfolio companies that are already profitable yet have not received any venture backing. The fund's investment emphasis will be on high-tech, expansion stage companies. However, the Summit portfolio may include early stage firms and, in addition, will be diversified by industry type and location.

SUMMIT INVESTMENTS				CASH RETURNS TO SBI		
CURRENT #	TOTAL $	LATEST QUARTER #	LATEST QUARTER $	LATEST QUARTER	LAST FOUR QUARTERS	CUMULATIVE SINCE INCEPTION
5	$3.9 Million	2	$1.8 Million	$0	$0	$0

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

LOCATION	%	STAGE OF DEVELOPMENT	%	INDUSTRY GROUPS	%
East	22.0%	Early Stage Financing	0.0%	Computer Related	69.0%
Midwest	0.0	Expansion Financing	100.0	Machinery/Equipment	0.0
South	0.0	Bridge Financing	0.0	Industrial/Manufacturing	0.0
West	78.0	Leveraged Buyouts	0.0	Consumer Products/Services	0.0
				Communications	31.0
				Energy Related	0.0
				Medical Related	0.0
				Other	0.0

STAFF COMMENTS: The general partners of Summit Ventures continued to actively generate and review business opportunities during first quarter 1985. Two investments totalling $1.8 million were made. Both of the portfolio companies are California-based, profitable, expansion-stage firms. One of the companies is in the computer industry; the other is a telecommunications firm. In addition, Summit has several opportunities under serious consideration for 2nd quarter 1985.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

FIRM NAME: Smith Barney Venture Corp. (SBVC)
FUND NAME: First Century III (FCIII)
CONTACT: Mike Myers
ACCOUNT INCEPTION: 12/14/84
SBI COMMITMENT: $10 Million
SBI CURRENT INVESTMENT: $2.5 Million

INVESTMENT DESCRIPTION: FCIII is a New York based $100 million venture capital limited partnership formed in December 1984. Term of the Fund is 10 years with optional extensions. Investment focus of FCIII will be on high technology private companies in the early stages of development. FCIII is the third venture fund formed by SBVC since 1972.

FCIII INVESTMENTS				CASH RETURNS TO SBI		
CURRENT TOTAL #	CURRENT TOTAL $	LATEST QUARTER #	LATEST QUARTER $	LATEST QUARTER	LAST FOUR QUARTERS	CUMULATIVE SINCE INCEPTION
6	$3.6 Million	2	$2.6 Million	$0	$0	$0

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

LOCATION	%	STAGE OF DEVELOPMENT	%	INDUSTRY GROUPS	%
East	16.0%	Early Stage Financing	100.0%	Computer Related	45.0%
Midwest	0.0	Expansion Financing	0.0	Machinery/Equipment	0.0
South	34.0	Bridge Financing	0.0	Industrial/Manufacturing	0.0
West	50.0	Leveraged Buyouts	0.0	Consumer Products/Services	0.0
				Communications	0.0
				Energy Related	0.0
				Medical Related	55.0
				Other	0.0

STAFF COMMENTS: During the first quarter ended March 31, 1985, Smith Barney invested $1.6 million in two new portfolio companies and one existing one. The two new investments include a company involved in the medical rehabilitation business and a company that will manufacture gallium arsenide integrated circuits. The investment in the existing portfolio company was a follow-on investment for a company that is developing a specialized line of software products. As of March 31, 1985, Smith Barney had invested $3.6 million or 3.6% of Partnership capital into 6 venture capital portfolio company investments.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

FIRM NAME:	DSV Management, Ltd.
FUND NAME:	DSV Partners IV (DSV IV)
CONTACT:	Morton Collins
ACCOUNT INCEPTION:	4/10/1985
SBI COMMITMENT:	$10 Million
SBI CURRENT INVESTMENT:	$4 Million

INVESTMENT DESCRIPTION: DSV Partners IV, a $60 million venture capital limited partnership, was formed in April, 1985. The term of the Fund will be 12 years with an optional 3 year extension. DSV IV's investment focus will be on start-up and early stage, high-technology portfolio companies. The geographic emphasis of the Fund will be on East and West Coast firms. DSV IV is the fourth venture capital fund formed by DSV Management since the firm's inception in 1968.

DSV IV INVESTMENTS				CASH RETURNS TO SBI		
CURRENT TOTAL		LATEST QUARTER				
#	$	#	$	LATEST QUARTER	LAST FOUR QUARTERS	CUMULATIVE SINCE INCEPTION
0	$0	0	$0	$0	$0	$0

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

LOCATION	%	STAGE OF DEVELOPMENT	%	INDUSTRY GROUPS	%
East	0.0%	Early Stage Financing	0.0%	Computer Related	0.0%
Midwest	0.0	Expansion Financing	0.0	Machinery/Equipment	0.0
South	0.0	Bridge Financing	0.0	Industrial/Manufacturing	0.0
West	0.0	Leveraged Buyouts	0.0	Consumer Products/Services	0.0
				Communications	0.0
				Energy Related	0.0
				Medical Related	0.0
				Other	0.0

STAFF COMMENTS: During the first quarter of 1985, the DSV general partners devoted their time primarily to fundraising activities and the management of the DSV III portfolio companies. DSV IV's first closing took place in January, 1985, with Princeton University and AT&T as lead limited partners. The Fund's second closing occurred in April, 1985. No DSV IV investments were made during 1Q 85.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

FIRM NAME:	First Reserve Corporation
FUND NAME:	Amgo I
CONTACT:	Jon Hill
ACCOUNT INCEPTION:	July 1981
SBI COMMITMENT:	$15 Million
SBI CURRENT INVESTMENT:	$15 Million

INVESTMENT DESCRIPTION: Amgo I is a $144 million oil and gas Limited Partnership formed in July 1981. Term of the Fund is 20 years. Investment strategy of Amgo I is to provide a diversified portfolio of investments in terms of geographic locations, geological structures, investment types and operating companies.

AMGO I INVESTMENTS (AT COST)				CASH RETURNS TO SBI		
CURRENT TOTAL		LATEST QUARTER				
#	$	#	$	LATEST QUARTER	LAST FOUR QUARTERS	CUMULATIVE SINCE INCEPTION
23	$125.6 Million	0	$0.0 Million	$123,500	$565,800	$2,174,500

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

LOCATION	%	SECURITY INTEREST	%	INDUSTRY GROUPS	%
Texas	24.0%	Proved Developed Reserves	51.0%	Acreage	7.0%
Oklahoma	20.7	Probable Reserves	0.0	Drilling	11.1
Louisiana	18.5	Possible Reserves	4.0	Equity	5.5
Rocky Mtns.	12.8	General Recourse	45.0	Production	23.5
Mississippi	7.7			Royalty	26.4
California	7.6			Surface Facilities	0.0
Gulf Coast	5.7			Conv. Note and Preferred	26.0
New Mexico	1.5			Other	0.5
Other	1.5				

STAFF COMMENTS: First Reserve has not recommended any new investments to the Amgo I Board in the latest quarter. There are several transactions on hold in the pipeline awaiting a more certain pricing outlook. As of March 31, 1985, Amgo I had committed to 23 oil and gas investments for a $125.6 million total investment out of its original capitalization of $144 million. In the last quarter, First Reserve has been working with existing Amgo I portfolio companies to expand and enhance their overall operations. Specifically, First Reserve has been involved in raising outside capital for exploration and reserve purchases, merging a portfolio company into another company and negotiating a separation of a portfolio company into two entities.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

FIRM NAME:	First Reserve Corporation
FUND NAME:	Amgo II
CONTACT:	Jon Hill
ACCOUNT INCEPTION:	February 1983
SBI COMMITMENT:	$7 Million
SBI CURRENT INVESTMENT:	$7 Million

INVESTMENT DESCRIPTION: Amgo II is a $36 million oil and gas limited partnership formed in December 1982. Term of the Fund is 19 years. Investment strategy of Amgo II is to provide a diversified portfolio of investments in terms of geographic locations, geological structures, investment types and operating companies.

AMGO II FUND INVESTMENTS (AT COST)				CASH RETURNS TO SBI		
CURRENT TOTAL #	CURRENT TOTAL $	LATEST QUARTER #	LATEST QUARTER $	LATEST QUARTER	LAST FOUR QUARTERS	CUMULATIVE SINCE INCEPTION
9	$20.3 Million	0	$0.0 Million	$124,500	$325,700	$414,600

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

LOCATION	%
Texas	27.5%
Oklahoma	13.4
Louisiana	18.2
Rocky Mtns.	14.4
Gulf Coast	20.0
New Mexico	4.2
Other	2.3

SECURITY INTEREST	%
Proved Developed Reserves	35.0%
Probable Reserves	0.0
Possible Reserves	0.0
General Recourse	65.0

INDUSTRY GROUPS	%
Acreage	0.0%
Drilling	0.0
Equity	9.5
Production	13.0
Royalty	19.5
Surface Facilities	0.0
Conv. Note and Preferred	58.0
Other	0.0

STAFF COMMENTS: First Reserve has not recommended any new investments to the Amgo II Board in the latest quarter. There are several transactions on hold in the pipeline awaiting a more certain pricing outlook. As of March 31, 1985, Amgo II had committed to 9 oil and gas investments for a $20.3 million total investment out of its original capitalization of $36 million. In the last quarter, First Reserve has been working with existing Amgo II portfolio companies to expand and enhance their overall operations. Specifically, First Reserve has been involved in raising outside capital for exploration and reserve purchases and merging a portfolio company into another company. Upon full commitment of remaining Amgo II funds, First Reserve is planning on forming Amgo III.

ALTERNATIVE INVESTMENT MANAGER INFORMATION
March 31, 1985

FIRM NAME:	Apache Corporation
FUND NAME:	10% Equipment Financing Notes
CONTACT:	Charlie Hann
ACCOUNT INCEPTION:	May 1984
SBI COMMITMENT:	$30 Million
SBI CURRENT INVESTMENT:	$262,878

INVESTMENT DESCRIPTION: The Apache Corp. 10% Equipment Financing Notes are a $200 million private placement to finance Apache's portion of production facility expenditures under the terms of a series of offshore joint ventures in the Gulf of Mexico organized by Shell Oil Company. In addition to fixed interest payments of 10% per annum, noteholders will receive additional interest of 2% of Apache's share of gross revenues from the joint ventures. Principal and interest on the notes are estimated to be repaid by 1992. The 2% additional interest will be paid to noteholders throughout the life of producing properties.

10% EQUIPMENT FINANCING NOTE INVESTMENTS (AT COST)				CASH RETURNS TO SBI		
CURRENT TOTAL		LATEST QUARTER				
#	$	#	$	LATEST QUARTER	LAST FOUR QUARTERS	CUMULATIVE SINCE INCEPTION
1	$1.7 Million	0	$0.0 Million	$20,800	$51,430	$51,430

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

LOCATION	%	SECURITY INTEREST	%	INDUSTRY GROUPS	%
Texas	100.0%	Proved Developed Reserves	100.0%	Acreage	0.0%
Louisiana	0.0	Probable Reserves	0.0	Drilling	0.0
Other	0.0	Other	0.0	Production	100.0

STAFF COMMENTS: So far, nine prospects are indicated to be productive in the Apache/Shell joint venture. Development is in progress at one of these (High Island Block A-6) where a platform is on location and is producing. Apache's share of equipment expenditures have totaled $1.7 million for this development project. An additional prospect (South Timbalier 295) is being developed currently and will be in production sometime later this year. Because the size of the development expenditures has been relatively small for this prospect, no additional drawdowns of Fund capital were called for in the first quarter of 1985. Although exploratory drilling in the Apache/Shell joint venture has continued on schedule, development and equipment expenditures so far have been much less than projected. The reason for this is that Shell is reluctant to bring on new production in the current weak market for gas.