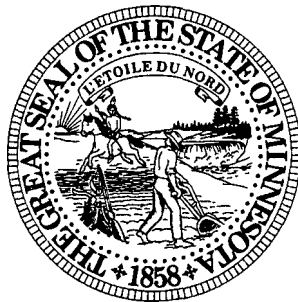


**MINNESOTA STATE BOARD
OF INVESTMENT
MEETING
March 1, 1989**

&

**INVESTMENT ADVISORY
COUNCIL MEETING
February 28, 1989**

MINNESOTA STATE BOARD OF INVESTMENT



Governor Rudy Perpich

State Auditor Arne H. Carlson

State Treasurer Michael A. McGrath

Secretary of State Joan Anderson Growe

Attorney General Hubert H. Humphrey III

AGENDA

STATE BOARD OF INVESTMENT MEETING

Wednesday, March 1, 1989

9:00 A.M.

**Room 118 - State Capitol
Saint Paul**

TAB

- 1. Approval of Minutes of December 7, 1988**
- 2. Executive Director's Report (H. Bicker)**
 - A. Quarterly Investment Review (October 1-December 31, 1988) A**
 - 1. Basic and Post Retirement Funds**
 - 2. Other Investment Funds**
 - B. Portfolio Statistics (December 31, 1988) B**
 - C. Administrative Report C**
 - 1. Budget and Travel Reports**
 - 2. Implementation of the Report from the Task Force on Fund Objectives**
- 3. Report from the SBI Administrative Committee (M. McGrath) D**
- 4. Report from the Board's Consultant (T. Richards)**
- 5. Reports from Investment Advisory Council Committees (J. Yeomans) E**
 - A. Equity and Fixed Income Manager Committees**
 - 1. Review of Active Manager Performance**
 - 2. Results of Dedicated Bond Portfolio Rebalancing**
 - 3. Renewal of BEA Contract**
 - 4. Commitment to Commodity Credit Corporation Export Loan Program**
 - 5. Review of Probation Status Policy**
 - 6. Recommendation to Retain Additional Active Stock Managers**
 - B. Alternative Investment Committee F**
 - 1. Report on Fund Manager Annual Reviews**
 - 2. Status Report on Real Estate Study**
- 6. Report from the Task Force on South Africa (C. Eller)**

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



EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Room 105, MEA Building
55 Sherburne Avenue
St Paul, MN 55155
Tel (612) 296-3328
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MINUTES

STATE BOARD OF INVESTMENT

December 7, 1988

The State Board of Investment (SBI) met on Wednesday, December 7, 1988 in Room 15 of the State Capitol at 10:00 A.M. Secretary of State Joan Anderson Growe, Acting Chair; State Treasurer Michael A. McGrath, and State Auditor Arne H. Carlson were present. Governor Rudy Perpich and Attorney General Hubert H. Humphrey III were absent.

The minutes of the September 19, 1988 meeting were unanimously approved.

ESCHEATED PROPERTY

Mr. McGrath stated that property escheated to the State had been sold for a total of \$70,996.41 and the proceeds had been deposited in the General Fund. He stated that one other item had yet to be sold. (Exhibit A)

EXECUTIVE DIRECTOR'S REPORT

Howard Bicker, Executive Director, stated that the market value of the Basic Retirement Funds increased by 2% during the third quarter of 1988. The large majority of this increase was due to net contributions of \$75 million during the quarter. He stated that the Funds' rate of return was 0.6% for the quarter; excluding alternative investment assets, it was up 0.3%. He reported the median balanced fund posted a 1.1% return. He stated that the Basic Funds' common stock segment trailed the performance of Wilshire 5000 for the latest quarter but matched the performance of the Wilshire 5000 for the latest year. Mr. Bicker reported that the bond segment of the Basic Funds tracked the Salomon Index for the quarter but fell slightly below the index for the year.

Mr. Bicker then summarized the performance of the Post Retirement Fund. He stated that the market value of the Post Fund increased by 1.6% during the quarter and that the increase was due entirely to market performance. He reported that the Fund experienced a negative cash flow of \$24 million during the period, and its asset mix had no significant changes. Mr. Bicker stated the new benefit increase has been calculated at 6.9%, which is payable to retirees effective January 1, 1989. He then stated that the stock segment slightly underperformed its benchmark for the quarter, but outperformed the benchmark by 3.5 percentage points for the latest year.

Mr. Bicker reported that as of September 30, 1988, all assets under management by the State Board of Investment totaled just slightly under \$13 billion.

Mr. Bicker then gave his Administrative Report. He referenced the quarterly budget and travel reports in the materials in the Board folder and the meeting schedules for the Board for calendar 1989. Mr. Bicker then stated that plans are being made for the Board's Investment Conference which is scheduled for January 24, 1989, and that staff are working with a committee of Board deputies to finalize the agenda. Mr. Bicker reported that a draft copy of the 1988 Annual Report has been sent to all members of the Board and the Advisory Council and that the final report will be printed and distributed in January, 1989.

ADMINISTRATIVE COMMITTEE REPORT

Mr. McGrath reported that the Administrative Committee met twice during the quarter. He stated that he had only information items to report. He stated that the Committee reviewed the capital equipment budget and concurred with the plan as presented by staff. He then stated that the Committee discussed the returns received on management fees paid to the Board's stock and bond managers. He stated that Mr. Tom Richards, Richards & Tierney, presented additional analysis on the returns received from the current group of active managers. Mr. McGrath reported that the Committee's future meeting plans include only one meeting a quarter in the month prior to the regular Board meeting. Mr. McGrath stated that the Committee discussed the relationship of the full Board, the IAC, the consultant and staff by reviewing the functional organization and decision-making process currently used by the SBI. He stated that the charts used for that discussion were included in the Board folder.

REVIEW OF FUND OBJECTIVES

Ms. Grove stated that the Investment Advisory Council had a very good discussion about fund objectives at its last meeting. She stated that John Bohan had agreed to head a task force to address this issue. She suggested that the Board could call a special meeting in late January or early February 1989 to receive the report from the task force. In response to a question from Ms. Grove, Ms. Yeomans stated that it is the intention of the IAC to present a framework for the Board, to present choices and probable implications of those choices, rather than present recommendations.

INVESTMENT ADVISORY COUNCIL COMMITTEE REPORTS

EQUITY MANAGER COMMITTEE

Ms. Yeomans stated that the Equity Committee met once during the quarter. She stated that the Committee had two information items to report and would request the Board's action on an additional item. She stated that the Committee reviewed an update of the active manager investment guidelines, which were updated to reflect the use of benchmark portfolios. She then stated that the Committee reviewed the use of the Wilshire 5000 as an equity asset class target. She stated the Committee reviewed a staff paper on this issue and concurred that the Wilshire 5000 is the most appropriate asset class target for the SBI. Mr. Carlson stated that the Wilshire 5000 appears to be a weaker standard than the S&P 500 and said he would like to see SBI returns compared to the S&P 500 and all possible indexes. He stated that he wanted the Board to review overall strategy, maintain specific objectives, and evaluate its ability to meet those objectives. Ms. Grove said she thought all of those issues could be reviewed by the Task Force that was formed by the IAC.

Ms. Yeomans stated that the item requiring Board action is a Committee recommendation to maintain probation status for Fred Alger. She stated that the IAC, after discussing whether to extend the Fred Alger probation or terminate the firm, concluded that the Committee needs to review the length of time a manager may be on probation. Mr. Bicker stated that the Equity Committee would have a recommendation at the next Board meeting concerning the length of time a manager should be on probation. Mr. Carlson moved that Fred Alger be terminated for poor performance and that the assets be placed in the index fund. Mr. McGrath seconded the motion. In response to a question from Mr. McGrath, Mr. Bicker stated an active manager is hired to be aggressive in order to outperform the market. As a result, he said, the performance of active managers will be more volatile than returns from the market as a whole. In response to a question from Ms. Grove, Mr. Bicker stated that Alliance Capital is a manager who has an investment style similar to that of Fred Alger and has performed very well. In response to another question from Ms. Grove, Ms.

Yeomans stated that she thought the Board ought to ask questions about the characteristics of the entire equity portfolio when making termination decisions rather than focus on a single manager. She stated that she thought it necessary to ask whether another manager with a similar investment style and could assume the Fred Alger portfolio, rather than discontinuing that style of management in total.

After some discussion about the current active managers, their styles and the amount of assets currently invested, Mr. Carlson amended his motion. This new motion would terminate Fred Alger and transfer the assets to Alliance Capital. Mr. McGrath seconded. The motion was approved unanimously.

FIXED INCOME MANAGER COMMITTEE

Ms. Yeomans stated that the Fixed Income Manager Committee had two information items to report and two action items for Board consideration. She stated that the first information item is the bidding of the three year guaranteed investment contract for the Supplemental Investment Fund. She stated that Mutual of America submitted the winning bid at a rate of 9.01 percent. She stated that the second information item concerned the newly established enhanced bond index fund in the Basic Funds. She stated that, as anticipated, the transaction costs to establish the index fund had a negative impact on the ability of the index funds to track the market initially. She added that the transaction costs were within expectations, but that the SBI would have to monitor returns so that those costs would be made up in the future.

Ms. Yeomans stated that the first action item involved several of the active managers. She stated that the IAC recommends that Morgan Stanley be removed from probation status. She stated that the firm has corrected the problems for which it was placed on probation. In response to a question from Mr. Carlson, Ms. Yeomans stated that the firm was placed on probation because it did not create a benchmark portfolio and because it violated the duration constraints that were part of its manager agreement. Mr. McGrath moved that Morgan Stanley be removed from probation. Ms. Growe seconded the motion. The motion was approved unanimously. Ms. Yeomans then stated that the IAC recommends that Lehman Management be removed from probation because of its improvement in relative performance. Mr. Carlson moved that Lehman Management be removed from probation. Mr. McGrath seconded the motion. The motion was approved unanimously. Ms. Yeomans then stated the IAC recommends that benchmarks be accepted for Investment Advisers, Morgan Stanley, and Miller Anderson. Mr. McGrath moved approval. Ms. Growe seconded the motion. The motion to accept the benchmarks was approved. (Mr. McGrath: Abstained).

Ms. Yeomans stated that the second item requiring Board action was the purchase of software services to assist in rebalancing the dedicated bond portfolio. She stated that the SBI has been purchasing the services from Bankers Trust for the past four years. She stated that the service has been quite satisfactory, but that staff and the IAC thought it was time to review the quality and cost of available services. She stated that the Committee reviewed seven responses to a request for proposal and concluded that Bankers Trust would provide the quality of service required at a very attractive fee. She added that the firm was also willing to guarantee the fee for three years. She then stated that the IAC recommends that the Board authorize the Executive Director, with assistance from the SBI's legal counsel, to negotiate and execute a three year contract with Bankers Trust to continue the software services for the dedicated bond portfolio. Mr. McGrath moved approval. Mr. Carlson seconded. The motion was adopted unanimously.

ALTERNATIVE INVESTMENT COMMITTEE

Ms. Yeomans reported that the Alternative Investment Committee met with five of the existing venture capital managers. She stated that each of the investments is relatively new so it is difficult to make a conclusive evaluation. She added that all funds seem to be proceeding according to expectations.

Ms. Yeomans stated that the Committee had one new investment to propose. She stated that the investment would be with a resource manager for an amount up to \$25 million in an overriding royalty interest with Standard Alaska Production Company, a subsidiary of British Petroleum. She stated that the investment was analyzed by staff, the Alternative Investment Committee, and by the Board's outside resource consultant, and everyone agreed that it was a very attractive opportunity. She then stated that the IAC recommends that the Board authorize the Executive Director, with assistance from legal counsel, to negotiate and execute a contract for up to \$25 million in the British Petroleum Prudhoe Bay Royalty Trust.

In response to a question from Mr. Carlson, Mr. Bicker stated that other partners in the fund include Prudential and Morgan Guaranty, and that Wisconsin was close to committing. In response to another question from Mr. Carlson, Mr. Bicker stated that the Board has committed approximately \$150 million to \$175 million to oil and gas funds, of which approximately \$120 million had been invested. Mr. Bicker stated that the Board's target allocation for resource funds is two and one-half percent, (approximately \$250 million) of the Basic Retirement Funds.

In response to another question from Mr. Carlson concerning the proposed investment, Mr. Bicker stated that the return would

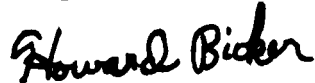
be about eight percent to ten percent if oil prices remained at current levels and could rise to 20 percent if oil prices moved up. Ms. Grove stated that she would like to have a one page summary of the asset allocation to alternative investments at the Board's next regular meeting. Mr. Carlson then moved adoption of the British Petroleum investment. Mr. McGrath seconded. The motion was approved unanimously.

EXECUTIVE DIRECTOR EVALUATION

Ms. Grove stated that she needed to collect the evaluations of the Executive Director that had been prepared by each Board member. She stated that she will give the evaluations to the Governor for compilation.

The meeting adjourned at 10:55 A.M.

Respectfully submitted,

A handwritten signature in cursive script that reads "Howard Bicker".

Howard Bicker
Executive Director

Attachment



STATE OF MINNESOTA
OFFICE OF THE STATE TREASURER
ST. PAUL 55155

MICHAEL A. McGRATH
 Treasurer

303 State Administration Building
 50 Sherburne Avenue
 St. Paul, Minnesota 55155
 (612) 296-7091

December 7, 1988

TO: Members, State Board of Investment

FROM: Michael A. McGrath
State Treasurer

SUBJECT: Escheated Property

The following is a status report on escheated property.

1) Securities Sold

2,042 shares of Northern States Power Common stock	\$66,025.86
214 shares of Philadelphia Electric Common stock	4,164.30
1,000 Bond of Northern Pacific Railway 3% due 1/1/2047	<u>806.25</u>
Total Proceeds	<u>Sub Total</u> <u>\$70,996.41</u>

2) Securities in re-registration (to be sold)

10 Shares of Cities Service	NA
500 Bond of Missouri Pacific Railway 4.25% due 1/1/2005	250.00
500 Bond of Missouri Pacific Railway 4.25% due 1/1/1990	450.00
1,200 United States Savings Bonds	<u>5,350.00</u>
Expected Proceeds	<u>Sub Total</u> <u>\$ 6,050.00</u>
Total Estimated Value	<u>\$77,046.41</u>

AGENDA

INVESTMENT ADVISORY COUNCIL MEETING

**Tuesday, February 28, 1989
2:00 P.M.**

**MEA Building - Conference Room "A"
Saint Paul**

- 1. Approval of Minutes of December 6, 1988**
- 2. Executive Director's Report (H. Bicker)**
 - A. Quarterly Investment Review (October 1-December 31, 1988) A**
 - 1. Basic and Post Retirement Funds**
 - 2. Other Investment Funds**
 - B. Portfolio Statistics (December 31, 1988) B**
 - C. Administrative Report C**
 - 1. Budget and Travel Reports**
 - 2. Implementation of the Report from the Task Force on Fund Objectives**
- 3. Report from the SBI Administrative Committee (T. Triplett) D**
- 4. Report from the Board's Consultant (T. Richards)**
- 5. Reports from Investment Advisory Council Committees E**
 - A. Equity and Fixed Income Manager Committees (J. Eckmann)**
 - 1. Review of Active Manager Performance**
 - 2. Results of Dedicated Bond Portfolio Rebalancing**
 - 3. Renewal of BEA Contract**
 - 4. Commitment to Commodity Credit Corporation Export Loan Program**
 - 5. Review of Probation Status Policy**
 - 6. Recommendation to Retain Additional Active Stock Managers**
 - B. Alternative Investment Committee (K. Gudorf) F**
 - 1. Report on Fund Manager Annual Reviews**
 - 2. Status Report on Real Estate Study**

MEMBERS OF THE BOARD.
GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H. CARLSON
STATE TREASURER MICHAEL A. McGRATH
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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St. Paul, MN 55155
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MINUTES

INVESTMENT ADVISORY COUNCIL

December 6, 1988

The Investment Advisory Council met on Tuesday, December 6, 1988 at 2:00 P.M. in the MEA Building, Saint Paul, MN.

MEMBERS PRESENT: Harry Adams, John Bohan, James Eckmann, Elton Erdahl, Paul Groschen, Jim Hacking, Vern Jackels, David Jeffery, Malcolm McDonald, Gary Norstrem, Joe Rukavina, Tom Triplett, Ray Vecellio, Debbie Veverka, and Jan Yeomans.

MEMBERS ABSENT: Ken Gudorf and Judy Mares.

SBI STAFF: Howard Bicker, Beth Lehman, Jim Heidelberg, Roger Henry, Harriet Balian and Charlene Olson.

OTHERS ATTENDING: Shane Allers, Gary Austin, Ed Burek, Christine Eller, Joan Anderson Growe, Ralph Jewell, Retired Educators Association of Minnesota, Jake Manahan, Tom Richards, Richards & Tierney, Mike Ousdigian, Peter Sausen and Bob Whitaker.

The minutes of the September 16, 1988 meeting were approved.
Moved by Harry Adams, seconded by Ray Vecellio.

EXECUTIVE DIRECTOR'S REPORT

Howard Bicker, Executive Director, stated that the market value of the Basic Retirement Funds increased by 2% during the third quarter of 1988. The large majority of this increase was due to net contributions of \$75 million during the quarter. He stated that the Funds' rate of return was 0.6% for the quarter compared to the median balanced fund return of 1.1%. He stated that the Basic Funds' common stock segment trailed the performance of the Wilshire 5000 stock index for the latest quarter but matched the performance of the stock index for the

latest year. Mr. Bicker reported that the bond segment of the Basic Funds tracked the Salomon Bond Index but fell slightly below the index for the year.

Mr. Bicker then summarized the performance of the Post Retirement Fund. He stated that the market value of the Post Fund increased by 1.6% during the quarter and that the increase was due entirely to market performance. He reported that the Fund experienced a negative cash flow of \$24 million during the period, and its asset mix had no significant changes. Mr. Bicker stated the new benefit increase has been calculated at 6.9%, which is payable to retirees effective January 1, 1989. He then stated that the stock segment slightly underperformed its benchmark for the quarter, but outperformed the benchmark by 3 1/2 percentage points for the latest year.

Mr. Bicker reported that as of September 30, 1988 all assets under management by the State Board of Investment totaled just slightly under \$13 billion.

Mr. Bicker then gave his Administrative Report. He referenced the quarterly budget and travel reports in the materials in the Board folder and the meeting schedules for the Board and IAC for calendar 1989. Mr. Bicker then stated that plans are being made for the Board's Investment Conference which is scheduled for January 24, 1989. He stated that George Roberts of Kohlberg Kravis & Roberts, will be the luncheon speaker. Mr. Bicker reported that a draft copy of the Annual Report has been sent to all members of the Board and the Advisory Council, and that the Report will be printed and distributed in January, 1989.

SBI ADMINISTRATIVE COMMITTEE REPORT

Tom Triplett stated that the Committee met twice during the quarter. He stated that the Committee reviewed the SBI capital equipment budget and said that the Board's consultant gave a report on the external managers' returns for the Basic Retirement Funds. Mr. Triplett then stated that the Administrative Committee will meet once each quarter in 1989. He further reported that the Committee discussed the relationships of the full Board, the IAC, the consultant and staff by reviewing the functional organization and decision-making process currently used by the SBI.

REVIEW OF FUND OBJECTIVES

John Bohan commented on the material which reviewed the objectives of the Basic and Post Retirement Funds. He stated that he believed fund objectives should reflect the purpose of the fund. He stated he found it instructive to state objectives for liquidity, expense, returns, and funding (the expected relationship of assets and liabilities). He stated he believed the purpose of the Post Fund as currently stated was descriptive rather than stating what the fund is trying to do. Mr. Bicker clarified that staff viewed fund objectives as broad statements

of purpose and viewed performance standards as measurable targets.

Joan Grove stated that the Board is not sure how to proceed in a systematic way to lay out fund objectives. She stated that the Board is looking for help from the IAC to perform the task. Mr. Eckmann stated his firm revisits fund objectives every three to five years. He stated he believed that a definition of a comparable universe to which the funds' returns may be compared is very important. Ms. Veverka stated her fund is in the process of reviewing its objectives and intends to look at both real and relative return measures. Mr. Groschen stated that he believes funding is not the State Board's concern and that it is the concern of the retirement funds. After further discussion, Ms. Yeomans suggested that a Task Force of the IAC be created to review fund objectives for the Basic Funds and the Post Fund. Mr. McDonald moved that a Task Force be created with the intent to report to the full IAC and to the Board. Mr. Bohan seconded. Ms. Yeomans stated that she would like Mr. Bohan to serve as Chair. Mr. Bohan, Mr. Adams, Mr. Eckmann, Mr. McDonald, Mr. Rukavina, Ms. Veverka, and Ms. Yeomans volunteered to serve on the Task Force. Ms. Grove suggested that the Task Force present their report to the Board at a special meeting in January or early February.

INVESTMENT ADVISORY COUNCIL REPORTS

EQUITY MANAGER COMMITTEE

Ms. Deborah Veverka gave the Equity Committee report. She stated that the Committee reviewed staff papers on active manager guidelines and on the Wilshire 5000 as an asset class target. She stated that the Committee concurred with the staff conclusion that the Wilshire 5000 is an appropriate target for the reasons as outlined in the paper. She then stated that the Committee recommended Fred Alger be continued on probation. Ms. Yeomans stated that the IAC should recommend that Fred Alger be continued on probation for one more quarter, but that the IAC should consider setting a decision point at which the firm would be terminated. Mr. Bohan moved the recommendation. Seconded by Gary Norstrom. After some discussion, Ms. Grove stated that she would like the IAC to discuss when to terminate a manager. She stated that it appeared to her as if a manager could be extended on probation a long time. Tom Triplett suggested that there be a joint meeting between the Equity and Fixed Income Committees to establish a probation/termination policy. There was general agreement that such a meeting would take place during the next quarter.

Ms. Veverka then stated that the Committee was recommending the hiring of the four external managers previously recommended to the Board. Mr. McDonald suggested that the recommendation was made once and was accepted. He stated that the hiring of the managers was tabled temporarily, and that if the IAC accepted the Committee report, the hiring issue would remain on the table for

later Board action. Malcolm McDonald made a motion to adopt the Committee report. Joe Rukavina seconded. The Committee report was accepted.

FIXED INCOME MANAGER COMMITTEE

Gary Norstrem reported that the Committee had two items of information to report. He stated that the recent guaranteed investment contract (GIC) for the Supplemental Investment Fund was bid successfully in late October. He stated that the Committee reviewed the performance of the index managers. He stated that due to transaction costs associated with the trading necessary to establish the index portfolios, initial returns were expected to trail the market index. He stated that these performance levels are consistent with expectations.

He stated that the Committee had several action items to report: 1) the Committee recommends that Morgan Stanley and Lehman Management be removed from probation; 2) after reviewing proposed manager benchmarks the Committee recommends approval of new benchmarks for IAI, Morgan Stanley and Miller Anderson; and 3) the Committee reviewed the request for proposal process for the dedicated bond portfolio software vendor. With respect to the third item he reported that the Committee reviewed seven RFP responses and concluded that the current vendor, Bankers Trust, was offering the best product at the lowest competitive price. Malcolm McDonald moved approval of the Committee report. Jim Eckman seconded. The report was accepted.

ALTERNATIVE INVESTMENT COMMITTEE

Malcolm McDonald gave the Alternative Investment Committee report. He stated that the single action item is a proposed investment in the British Petroleum deal in Prudhoe Bay, Alaska, for an amount up to \$25 million. He then stated that the Committee will report to the IAC about the real estate study by Laventhol and Horwath at a future meeting. Mr. McDonald moved approval of the Committee report. Jim Eckmann seconded. The Committee report was accepted.

The meeting adjourned at 3:45 P.M.

Respectfully submitted,



Howard Bicker
Executive Director

Tab A

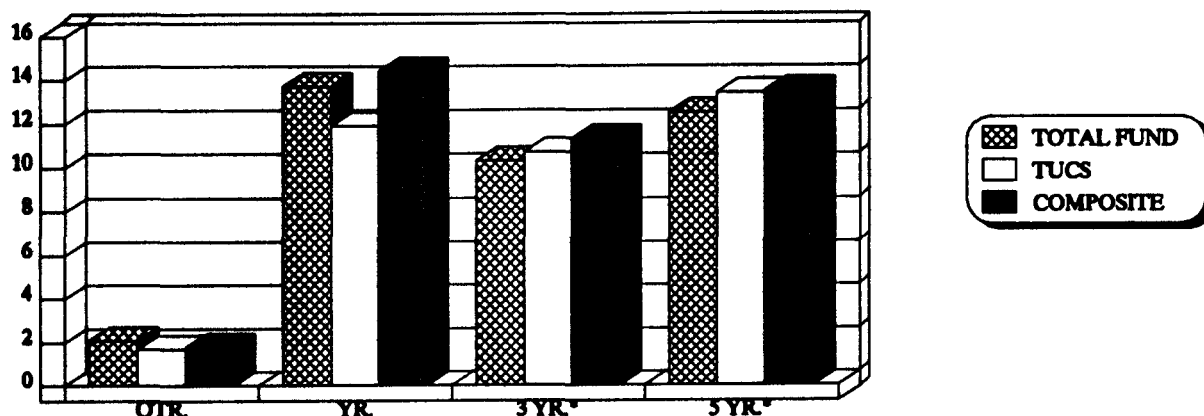
Basic Funds (Con't.)

Total Fund Performance

The Basic Funds' total portfolio substantially exceeded the return on the median fund for the quarter and the latest year.

Given its large commitment to common stocks, the Basic Funds can be expected to outperform other balanced pension portfolios during periods of positive stock performance and underperform during periods of negative stock performance.

PERCENT



Period Ending 12/31/88

*(Annualized)

	Qtr.	Yr.	3 Yr.	5 Yr.
Total Fund	2.1%	13.7%	10.3%	12.5%
Total Fund Without Alternative Assets	1.6	14.5	10.8	13.1
TUCS** Median Balanced Fund	1.7	11.9	10.7	13.4
Stock/Bond/Cash/Composite	1.8	14.4	11.3	13.5

** Trust Universe Comparison Service (TUCS) includes returns of over 800 public and private tax-exempt investors

Stock Segment Performance

The Basic Funds' common stock segment trailed the performance of its target for the latest quarter and year. Details on individual manager stock performance can be found on page 7 of the report.

	Qtr.	Yr.	(Annualized)	
Stock Segment	1.9%	16.7%	3 Yr.	5 Yr.
Wilshire 5000	2.3	17.9	11.3%	13.2%
			11.9	13.9

Bond Segment Performance

The bond segment of the Basic Funds exceeded the performance of its target for the latest quarter and year. Details on individual bond manager performance can be found on page 8 of the report.

	Qtr.	Yr.	(Annualized)	
Bond Segment	1.0%	8.2%	3 Yr.	5 Yr.
Salomon Broad Index	0.8	8.0	8.6%	12.2%
			8.5	12.5

The executive summary highlights the asset mix, performance standards and investment results for the Basic Retirement Funds and the Post Retirement Fund.

Additional detail on these funds as well as information on other funds managed by the Board can be found in the body of the Quarterly Investment Report.

EXECUTIVE SUMMARY

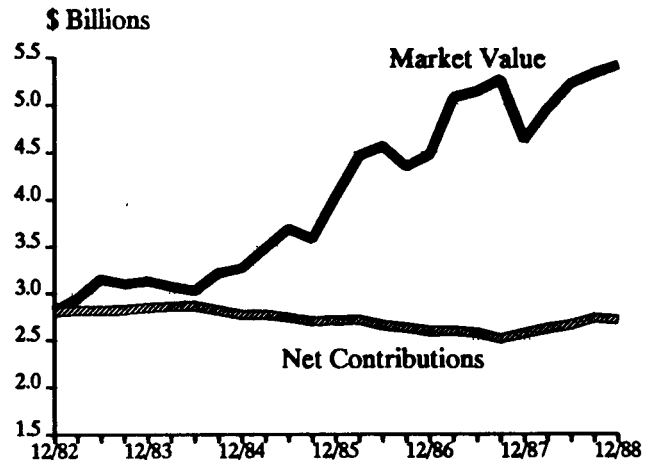
Basic Retirement Funds

Asset Growth

The market value of the Basic Funds increased 1.7% during fourth quarter of 1988. The increase was due to investment return. All four asset classes had positive returns with stocks providing the majority of the increase..

Asset Growth During Fourth Quarter 1988 (Millions)

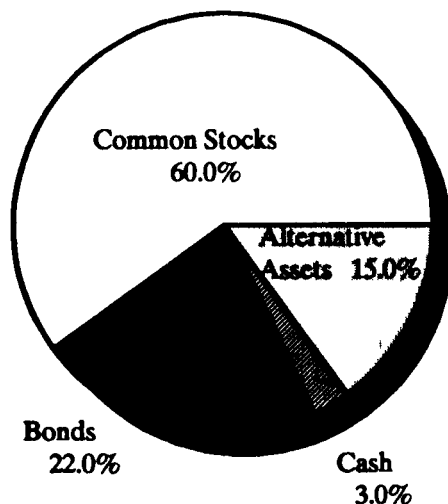
Beginning Value	\$5,328
Net Contributions	-22
Investment Return	114
Ending Value	\$5,420



Asset Mix

The asset mix of the Basic Funds is chosen to maximize long term rate of return. This requires a large commitment to common stocks. Other asset classes are used to limit short-run return volatility and to diversify portfolio holdings.

There were no significant change in the Basic Funds asset mix during the fourth quarter.



Policy Asset Mix

	Policy Asset Mix	Actual Mix 12/31/88	Actual Market Value (Millions)
Stocks	60.0%	59.5%	\$3,224
Bonds	22.0	22.4	1,215
Cash	3.0	4.5	244
Alternative Assets	15.0	13.6	737
	100.0%	100.0%	\$5,420

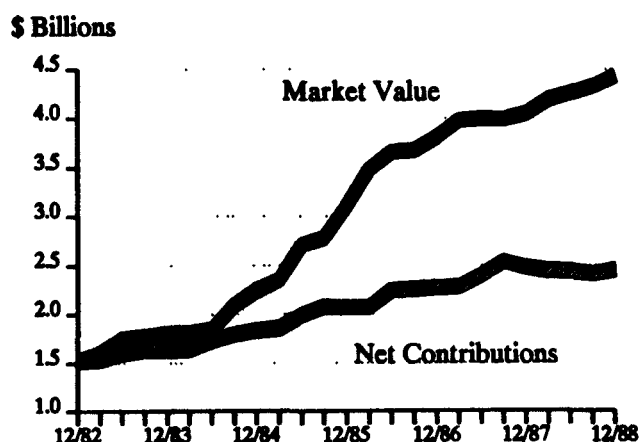
EXECUTIVE SUMMARY

Post Retirement Fund

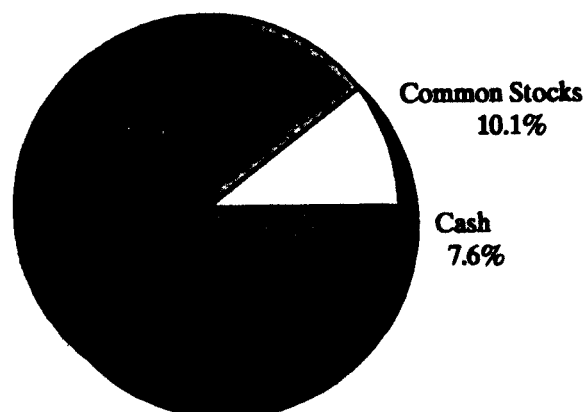
Asset Growth

The market value of the Post Fund increased by 2.5% during fourth quarter 1988.

	Asset Growth During Fourth Quarter 1988 (Millions)
Beginning Value	\$4,326
Net Contributions	37
Investment Return	71
Ending Value	\$4,434

Asset Mix

The asset mix of the Post Retirement fund is chosen to create a sizable, steady stream of income sufficient to pay currently promised benefits. This income stream is created by a large commitment to bonds, primarily through a dedicated bond portfolio. Assets not committed to bonds are invested in cash equivalents or common stocks. There were no significant changes in the Post Retirement Fund asset mix during the fourth quarter.



Actual Asset Mix
12/31/88

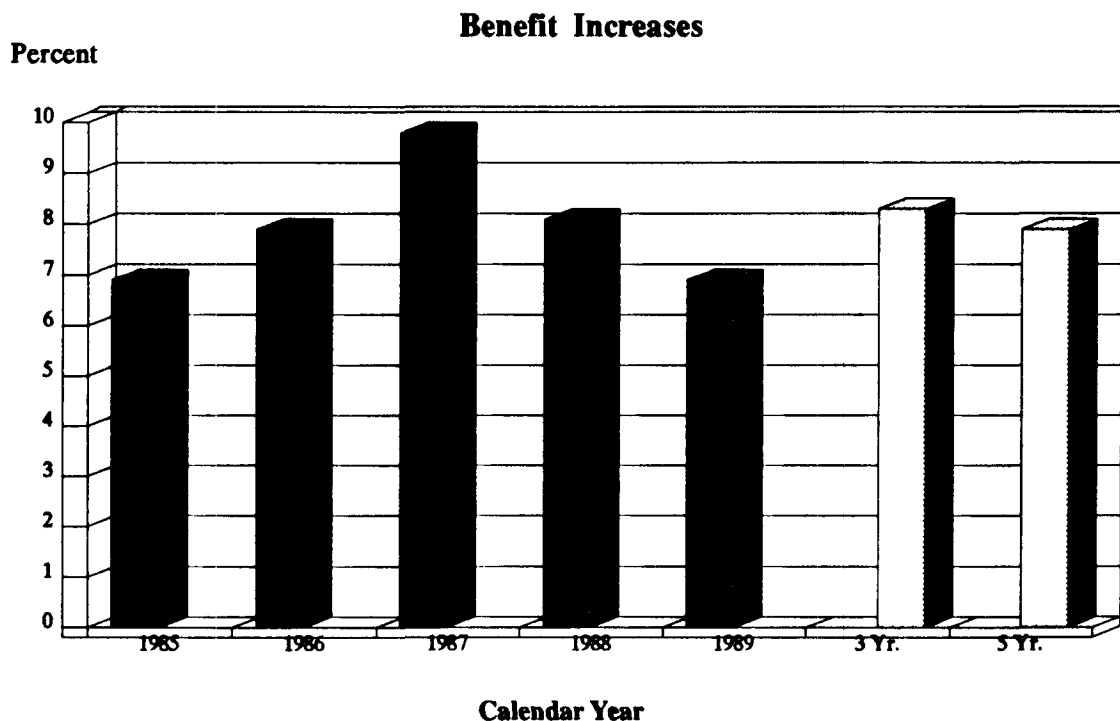
	Actual Market Value (Millions)	Asset Mix 12/31/88
Common Stocks	\$447	10.1%
Bonds	3,650	82.3
Cash	337	7.6
	\$4,434	100.0%

Post Fund (Con't.)

Total Fund Performance

Assets committed to the dedicated bond portfolio ensure that all existing promised benefits will be paid to current retirees. Excess investment earnings on Post Fund assets are used to finance permanent lifetime benefit increases for retirees.

Benefit increases are based upon earnings during a fiscal year and are effective at the start of the following calendar year. Benefit increases generated for the last five years are shown below.



	1985	1986	1987	1988	1989	(Annualized)	
Benefit Increases	6.9%	7.9%	9.8%	8.1%	6.9%	3 Yrs.	5 Yrs.
						8.3%	7.9%

Benefit increases are intended to compensate, to some degree, for the effect of inflation.

As measured by the Consumer Price Index (CPI), inflation increased by 3.5% on an annualized basis over the last five years (calendar 1984-1988).

Stock Segment Performance

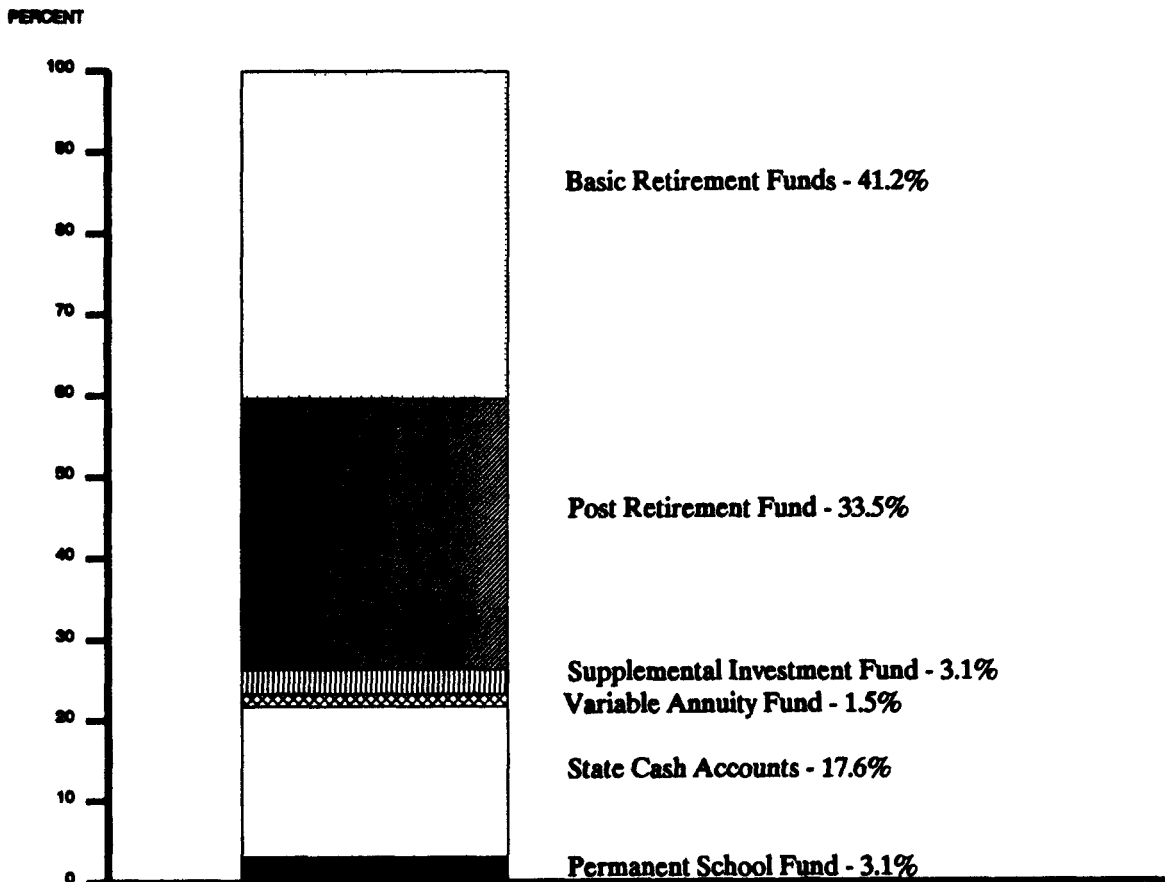
The stock segment of the Post Fund trailed its benchmark for the latest quarter but exceeded its benchmark for the latest year by a substantial margin.

	Period Ending 12/31/88			
	(Annualized)			
	Qtr.	Yr.	3 Yr.	5 Yr.
Stock Segment	1.3%	23.4%	7.1%	10.6%
Post Fund Benchmark	2.5	17.6	N.A.	N.A.

Bond Segment Performance

At the close of the quarter, the dedicated bond portfolio had a current yield of 8.62% and average duration of 7.36 years. The market value of the dedicated bond portfolio was \$3.6 billion at the end of the quarter.

The dedicated bond portfolio is designed such that cash inflows from portfolio income and principal payments match required cash outflows to retirees. Thus, total return is not a relevant performance measure for the portfolio. Nevertheless, the bond segment provided a 1.7% return for the quarter and a 9.2% return for the year. This is consistent with the design of the dedicated bond portfolio.

EXECUTIVE SUMMARY**Funds Under Management**

**12/31/88
Market Value
(Billions)**

Basic Retirement Funds	\$5.4
Post Retirement Fund	4.4
Supplemental Investment Fund	0.4
Variable Annuity Fund	0.2
State Cash Accounts	2.3
Permanent School Fund	0.4
Total	\$13.1

MINNESOTA STATE BOARD OF INVESTMENT QUARTERLY REPORT ON OBJECTIVES

Status
12/31/88

BASIC RETIREMENT FUNDS

\$ 5.3 billion

Total Return (Annualized)

- | | |
|------------------------------------------------------------------------------|------------------------------------------------|
| o Real (10 years)
3 to 5 percentage points over inflation | 12.6% (nominal)
6.7 percentage points over |
| o Relative (5 years) with Alternative Assets
Above composite index return | 12.5% (nominal)
1.0 percentage points below |
| o Relative (5 years) without Alternative Assets
Above median fund return | 13.0% (nominal)
0.4 percentage points below |

Liquidity

- | | |
|----------------|--------------------|
| o Minimal cash | 4.5% of total fund |
|----------------|--------------------|

POST RETIREMENT FUND

\$ 4.3 billion

Realized earnings

\$446 million in FY 1988

- | | |
|---------------------|-------------------------------------------|
| o Above 8% per year | 3.9 percentage points above
in FY 1988 |
|---------------------|-------------------------------------------|

Liquidity

- | | |
|----------------|--------------------|
| o Minimal cash | 7.6% of total fund |
|----------------|--------------------|

Status
June 30, 1988

FUNDING (Basic + Post Funds)*

Achieve full funding by 2009

- | | |
|-------------------------------|----------------|
| o Actuarial accrued liability | \$11.6 billion |
| o Actuarial value of assets | \$ 8.3 billion |
| o Percent funded | 72% |

* TRA, MSRS, PERA General plans only
Based on valuation by State's actuary

MINNESOTA STATE BOARD

OF INVESTMENT

QUARTERLY INVESTMENT REPORT

Fourth Quarter 1988

(October 1, 1988 - December 31, 1988)

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FINANCIAL MARKETS REVIEW

STOCK MARKET

Stock prices advanced during the fourth quarter primarily due to very heavy activity in the leveraged buyout and merger and acquisition areas. Overall, the Wilshire 5000 stock index provided a total return of 2.3% during the quarter and had a 17.9% return for the latest year.

There was a wide disparity in the price performance of different sectors during the quarter. Transportation was the best performing sector with a return of 5.8%. The worst performing sector was the finance sector which declined 2.9%.

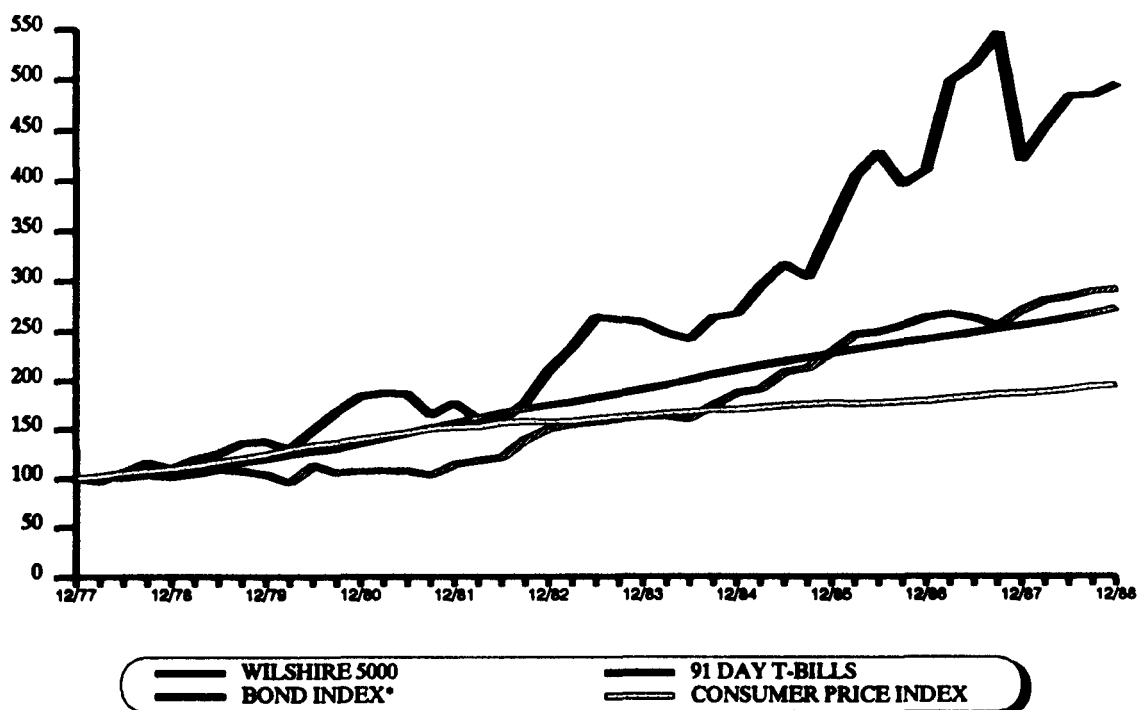
BOND MARKET

The bond market started on a very strong note as the economy showed signs of slowing down. However, the market gave up its initial gains later in the quarter as the economy showed renewed strength. Increases in the later part of the year in consumer spending, new jobs, and short term interest rates caused the market to be concerned about higher inflation and credit tightening by the Federal Reserve. The overall impact for the quarter was slightly lower bond prices but a small positive return due to interest payments.

Overall, the Salomon Brothers Broad Investment Grade (BIG) Index gained 0.8% for the quarter and had a 8.0% return for the latest year. Treasury/Agency securities were the best performing sector with a gain of 1.0% and mortgage issues provided the lowest return of 0.3%.

PERFORMANCE OF CAPITAL MARKETS

Cumulative Returns



* Merrill Lynch Master Index through 12/79; Salomon Broad Investment Grade Bond Index thereafter

FINANCIAL MARKETS REVIEW**REAL ESTATE**

Currently, the real estate market faces oversupply and slow demand. These factors are most apparent in second tier office properties, small shopping centers and properties located in the Southwest. The stronger sectors of the real estate market include warehouse and distribution facilities and larger retail centers. Current supply/demand forecasts extrapolate these trends through 1989.

VENTURE CAPITAL

Venture capitalists and entrepreneurs are currently watching, with considerable interest, the current debate over capital gains tax reform. They feel that a reduction of the tax rate for capital gains will encourage new business formations and increase venture capital activity overall. For 1989, the capital gains tax debate will be an important issue for the venture capital industry.

RESOURCE FUNDS

Over the last few months, crude oil prices have increased several dollars a barrel to the current \$18 per barrel level. Recent reports of a drop in U.S. crude oil inventories and the apparent willingness of non-OPEC countries to cut production have contributed to the strength in crude prices. For the remainder of 1989, many analysts feel that crude oil prices will remain in a \$16-\$18 per barrel trading range.

BASIC RETIREMENT FUNDS

Investment Objectives

The Basic Retirement Funds are composed of the retirement assets for currently working participants in the statewide retirement funds.

The SBI pursues several investment objectives in the management of the Basic Funds' assets. In order of importance, those objectives are:

- To secure the benefits promised public employees covered by the statewide retirement plan.
- To reduce employer/employee contributions and/or increase promised benefits.
- To avoid excessive volatility in portfolio returns over the short-run.

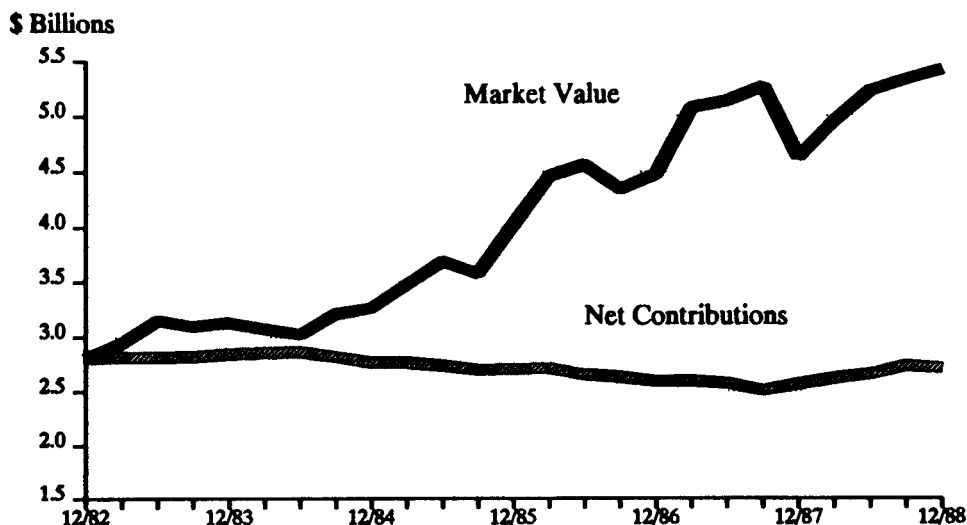
Based upon the Basic Funds' adequate funding levels and participant demographics, its investment time horizon is quite long. This extended time horizon permits the Board to take an aggressive, high expected return investment policy which incorporates a sizable equity component.

The Board is cognizant, however, that excessive short-run return volatility is undesirable. As a result, the investment policy of the Basic Funds also is designed to limit extreme portfolio return results through the inclusion of other asset classes that act as hedges against inflationary and deflationary environments.

Asset Growth

The market value of the Basic Retirement Funds' assets increased 1.7% during the fourth quarter of 1988. The increase was due to investment return. All four asset

classes had positive returns with stocks providing the majority of the increase.



	In Millions							
	12/84	12/85	12/86	12/87	3/88	6/88	9/88	12/88
Beginning Value	\$3,129	\$3,265	\$4,030	\$4,474	\$4,628	\$4,958	\$5,224	\$5,328
Net Contributions	-78	-62	-113	-26	53	40	75	-22
Investment Return	214	827	557	180	277	226	29	114
Ending Value	\$3,265	\$4,030	\$4,474	\$4,628	\$4,958	\$5,224	\$5,328	\$5,420

BASIC RETIREMENT FUNDS

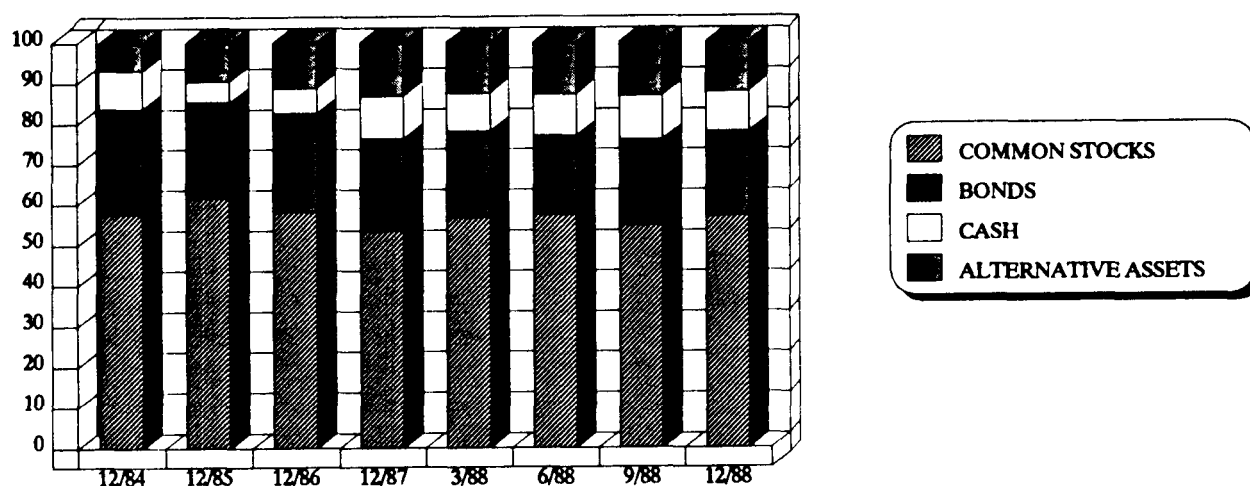
Asset Mix

Based on the Basic Funds' investment objectives and the expected long-run performance of the capital markets, the Board has adopted the following long term policy asset allocation for the Basic Funds:

There was no significant change in the Basic Funds asset mix for the fourth quarter.

Common Stocks	60.0%
Bonds	22.0
Cash Equivalents	3.0
Real Estate	10.0
Venture Capital	2.5
Resource Funds	2.5

PERCENT



	Last Five Years				Latest Qtrs.			
	12/84	12/85	12/86	12/87	3/88	6/88	9/88	12/88
Stocks	57.8%	61.6%	58.3%	53.6%	56.8%	57.5%	56.8%	57.1%
Bonds	25.9	23.8	24.3	22.6	21.2	19.5	20.7	20.9
Cash*	9.4	5.1	6.2	10.6	9.5	10.3	10.0	9.8
Real Estate	5.5	7.1	8.2	9.3	9.0	8.9	8.9	8.9
Venture Capital	0.7	1.2	1.6	2.5	2.3	2.6	2.2	2.1
Resource Funds	0.7	1.2	1.4	1.4	1.2	1.2	1.3	1.2
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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

BASIC RETIREMENT FUNDS

Total Fund Performance vs. Standards

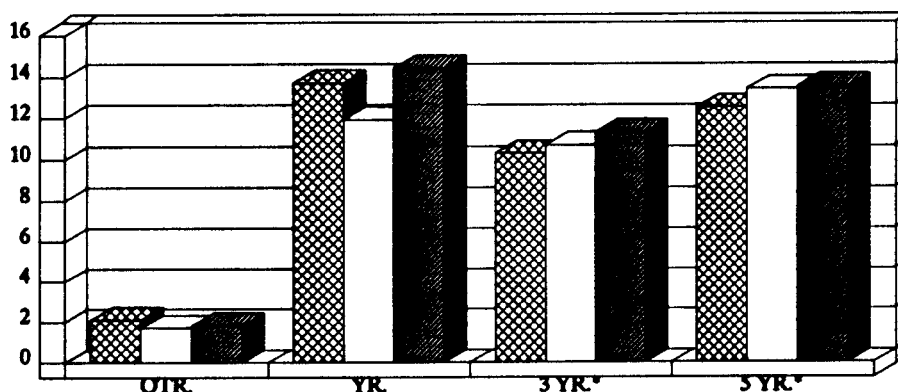
The Basic Funds' long-term rate of return performance is evaluated relative to two specific benchmarks:

- **Composite Index.** The returns provided by the total portfolio are expected to exceed those derived from a composite of market indices, weighted in the same proportion as the Basic Funds' policy asset allocation. Because comprehensive data is available for only the stock, bond and cash equivalents markets, the composite index is weighted 65% stocks, 30% bonds, 5% cash equivalents.
- **Median Tax-Exempt Fund.** The Basic Funds' portfolio is expected to outperform the median return produced by a representative sample of other public and private tax-exempt balanced funds. The sample universe used by the Board is the Wilshire Associates Trust Universe Comparison Service (TUCS). TUCS data reflects the investment returns of over 800 public and private pension investors.

The policy asset mix of the Basic Funds is based on the superior performance of common stocks over the history of the capital markets. The asset mix is designed to add value to the Basic Funds' over their long-term investment time horizon. In the short-run, the Basic Funds can be expected to outperform the median balanced portfolio during periods of positive relative stock performance and underperform during periods of negative stock performance.

The Basic Funds total portfolio exceeded most of its assigned performance standards for the latest quarter and year. Because of the Basic Funds sizable stock allocation and relatively good performance of the stock market, the Basic Funds' exceeded the median balanced fund by a substantial margin during the fourth quarter and year.

PERCENT



TOTAL FUND
 TUCS
 COMPOSITE

Period Ending 12/31/88

*(Annualized)

	Qtr.	Yr.	3 Yr.	5 Yr.
Total Fund	2.1%	13.7%	10.3%	12.5%
Total Fund Without Alternative Assets	1.6	14.5	10.8	13.1
TUCS Median Balanced Fund	1.7	11.9	10.7	13.4
Stock/Bond/Cash Composite	1.8	14.4	11.3	13.5

BASIC RETIREMENT FUNDS

Segment Performance vs. Standards

Stock Segment

The Basic Funds' common stock segment trailed its performance target for the latest quarter and year.

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Stock Segment	1.9%	16.7%	11.3%	13.2%
Wilshire 5000	2.3	17.9	11.9	13.9

Bond Segment

The bond segment of the Basic Funds exceeded the performance of its target for the latest quarter and latest year.

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Bond Segment	1.0%	8.2%	8.6%	12.2%
Salomon Bond Index	0.8	8.0	8.5	12.5

Cash Segment

The cash segment of the Basic Funds exceeded its target for the quarter and year.

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Cash Segment	2.1%	7.9%	7.0%	8.1%
91 Day T-Bills	1.9	6.6	6.3	7.2

Alternative Assets Segment

Comprehensive data on returns provided by the real estate, resource and venture capital markets are not available at this time. Therefore, performance standards for the alternative investment segment have not been established. Returns from the alternative asset segment are shown in the table.

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Alternative Assets	4.8%	12.2%	7.3%	8.1%

BASIC RETIREMENT FUNDS

Stock Manager Performance vs. Benchmarks

Common stock manager returns are evaluated against the performance of customized indices constructed to represent the managers' specific investment approaches. These custom indices are commonly referred to as "benchmark portfolios." The benchmark portfolios take into account the equity market forces that at times favorably or unfavorably impact certain investment styles. Thus, benchmark portfolios are the appropriate bogeys against which to judge the managers' performances.

As a group, the active and passive common stock managers trailed the performance of their aggregate benchmark for the latest quarter and year. The performance of the individual managers was extremely varied. Several exceeded the performance of their targets while others underperformed their benchmarks. A comprehensive analysis of the individual managers' performance is included in this quarter's Equity Manager Committee Report.

Manager performance relative to benchmarks is evaluated on a quarterly basis by the Equity Manager Committee of the Investment Advisory Council.

	Percent of Segment 12/31/88	Market Value 12/31/88 (Thousands)	Quarter Ending 12/31/88 Actual Bmrk	Year Ending 12/31/88 Actual Bmrk	(Annualized) Since 1/1/84 Actual Bmrk
Active Managers					
Alger	2.5%	\$81,449	-4.1% 1.3%	3.5 19.8%	8.8% 12.8%
Alliance	4.8	153,938	0.6 1.3	10.6 13.7	16.2 10.8
BMI	1.8	59,722	-2.2 1.2	26.5 20.2	8.6 10.6
Forstmann	4.2	134,487	2.6 1.6	10.4 14.6	13.8 11.4
IDS	3.3	105,826	1.6 2.3	5.3 16.2	13.6 14.0
IAI	2.4	77,247	1.8 3.0	3.9 15.9	12.4 14.2
Lieber & Co.	2.2	69,926	0.1 0.3	22.7 22.1	12.0 10.4
Waddell & Reed	3.5	111,909	1.2 0.9	10.4 16.4	10.5 10.4
Aggregate Active	24.7%	\$794,504	0.5%	11.9%	11.7%
Passive Manager					
Wilshire Associates	75.3%	\$2,429,496	2.3% 2.3%	18.5% 17.8%	13.8% 13.8%
Aggregate Passive	75.3%	\$2,429,496	2.3%	18.5%	13.8%
Total Stock Segment	100.0%	\$3,224,000	1.9% 2.1%	16.7% 17.8%	13.2% 13.6%
Wilshire 5000 Index			2.3%	17.9%	13.9%

Note: Total segment and aggregate active performance numbers include returns of any managers retained during the time periods shown but subsequently terminated by the Board.

BASIC RETIREMENT FUNDS

Bond Manager Performance vs. Benchmarks

Staff has worked with the Board's active bond managers to develop appropriate benchmark portfolios. Two of the five managers completed their benchmark portfolios approximately one year ago. Returns for these portfolios are reported below. For the remaining three active managers, the benchmark portfolio reported below in use is the Salomon Broad Investment Grade Bond Index, which represents the performance of essentially the entire investment-grade bond market, plus a small allocation to cash equivalents.

Manager performance relative to benchmarks is evaluated on a quarterly basis by the Fixed Income Manager Committee of the Investment Advisory Council.

As a group, the active and passive bond managers exceeded the performance of their aggregate benchmark for the quarter and the latest year. The performance of the individual managers for the quarter was somewhat varied. Four exceeded the performance of their targets and three slightly underperformed their benchmarks. A comprehensive analysis of the individual managers' performance is included in this quarter's Fixed Income Manager Committee Report.

	Percent of Segment 12/31/88	Market Value 12/31/88 (Thousands)	Quarter Ending 12/31/88 Actual Bmrk	Year Ending 12/31/88 Actual Bmrk	(Annualized) Since 7/1/84 Actual Bmrk
Active Managers					
IAI	3.9%	\$47,496	0.6% 0.9%	6.9% 7.9%	14.3% 13.9%
Lehman	8.9	107,874	0.8 0.9	8.1 7.4	13.2 13.2
Miller Anderson	13.2	160,297	1.6 0.8	8.8 7.9	14.6 13.9
Morgan Stanley	8.5	103,434	0.3 0.8	5.6 7.9	13.3 13.9
Western Asset	15.8	191,380	1.5 0.9	11.4 8.7	15.6 14.0
Aggregate Active	50.3%	\$610,481	1.0%	8.6%	14.2%
Passive Managers					
Fidelity Management	24.8%	\$300,970	1.0% 0.8%		
Lincoln Capital	24.9	301,822	1.2 0.8		
Aggregate Passive	49.7%	\$602,792	1.1%		
Total Bond Segment	100.0%	\$1,213,273	1.0% 0.8%	8.2% 8.0%	13.6% 13.3%
Salomon Broad Index			0.8%	8.0%	14.3%

Notes: Total segment and aggregate active performance numbers include returns of any managers retained during the time periods shown but subsequently terminated by the Board.

The semi-passive managers were retained effective July 1, 1988. Returns from prior periods are not available.

POST RETIREMENT FUND

Investment Objectives

The Post Retirement Investment Fund contains the pension assets of retired public employees covered by statewide retirement plans.

Upon the employees' retirement, sums of money sufficient to finance fixed monthly annuities are transferred from accumulation pools in the Basic Funds to the Post Fund. In order to support promised benefits, the Post Fund must "earn" at least 5% on its invested assets each year. If the Post Fund exceeds this earnings rate, excess earnings are used to finance permanent benefit increases for eligible retirees.

The SBI pursues two investment goals for the Post Fund:

- To produce annual earnings sufficient to maintain promised benefits at current levels

- To generate additional earnings which allow benefits to be increased at a rate which compensates, to some degree, for inflation

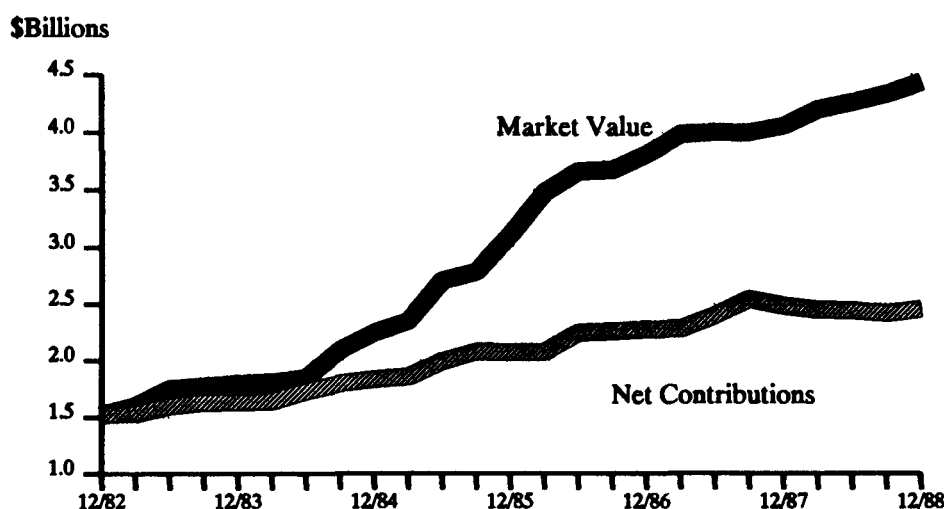
To achieve these two objectives, the SBI recognizes that the Post Fund requires a completely different investment approach than that applied to the Basic Retirement Funds.

The Post Fund is not oriented toward long-term total rate of return maximization. Rather, the SBI attempts to generate a high, consistent stream of earnings for the Post Fund that will maintain current benefits, as well as produce benefit increases over time.

Asset Growth

The market value of the Post Fund increased by 2.5% during the fourth quarter of 1988. Moderate asset growth

was achieved through investment returns and net contributions of \$37 million for the quarter.



	In Millions							
	12/84	12/85	12/86	12/87	3/88	6/88	9/88	12/88
Beginning Value	\$1,803	\$2,246	\$3,107	\$3,808	\$4,047	\$4,193	\$4,258	\$4,326
Net Contributions	201	239	199	207	-32	-8	-24	37
Investment Return	242	622	502	32	178	73	92	71
Ending Value	\$2,246	\$3,107	\$3,808	\$4,047	\$4,193	\$4,258	\$4,326	\$4,434

POST RETIREMENT FUND

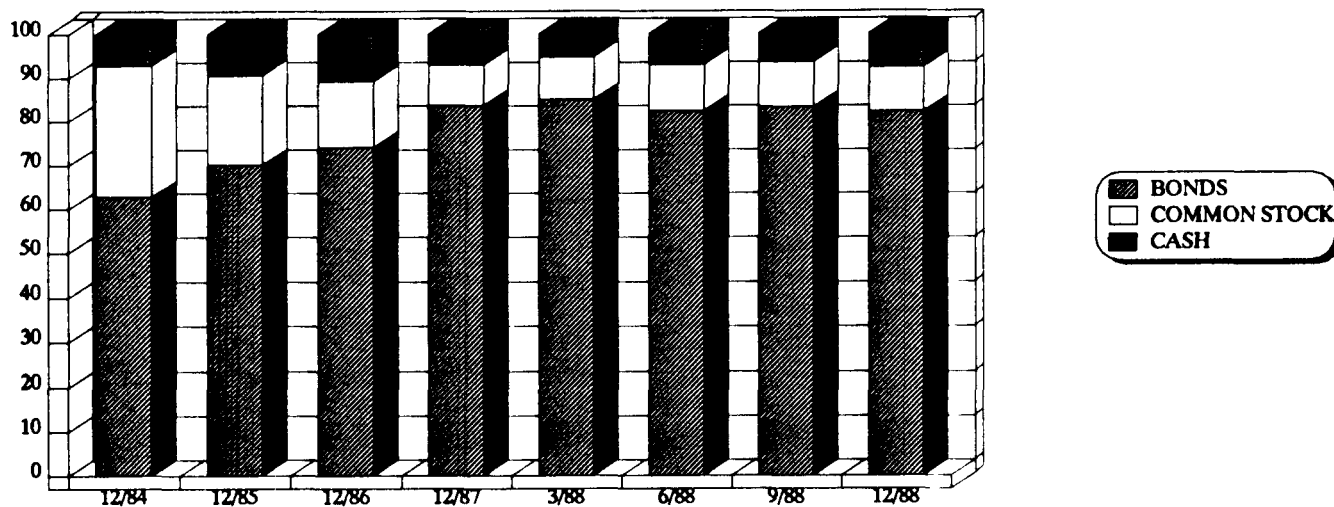
Asset Mix

The Board has designed the asset mix of the Post Fund to generate the sizable stable earnings stream necessary to finance monthly payments to retirees.

The SBI invests the majority of the Post Fund's assets in a dedicated bond portfolio. A dedicated bond portfolio is a collection of various maturity, high-quality bonds which generate cash flows from income and principal payments that match a specific stream of liabilities.

Assets not committed to the dedicated bond portfolio generally are invested in common stocks and cash equivalents. There were no significant changes in the Post Retirement Fund asset mix during the third quarter.

PERCENT



	Last Five Years				Latest Qtrs.			
	12/84	12/85	12/86	12/87	3/88	6/88	9/88	12/88
Bonds	62.9%	70.2%	74.2%	83.7%	85.1%	82.5	83.4%	82.3%
Stocks	30.0	20.5	15.1	9.3	9.6	10.5	10.2	10.1
Cash	7.1	9.3	10.7	7.0	5.3	7.0	6.4	7.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

POST RETIREMENT FUND

Total Fund Performance

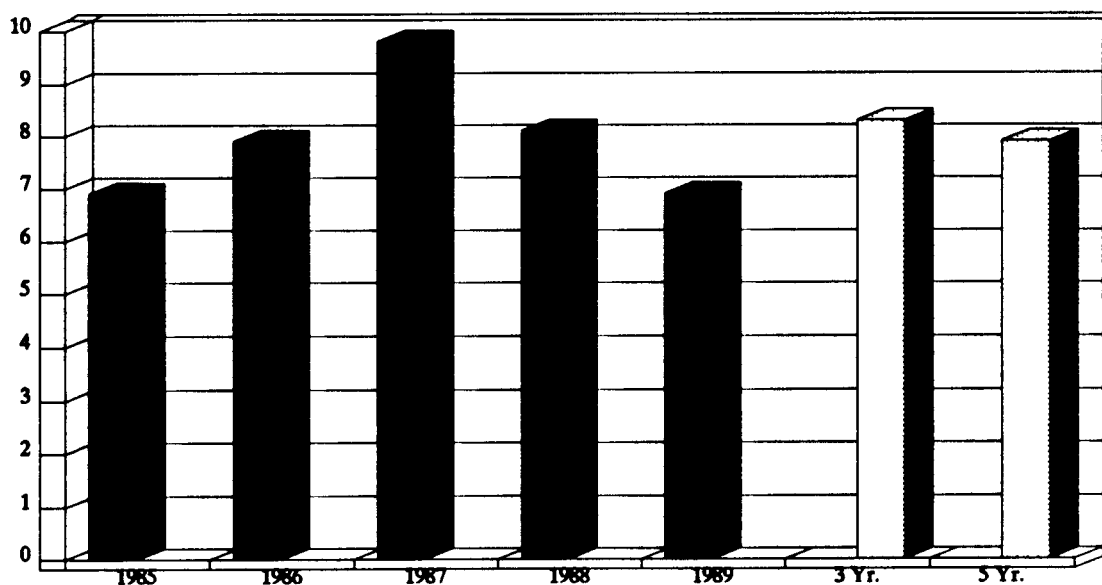
The ability of the Post Fund to maintain current benefit levels and provide future benefit increases depends upon its earnings. State statutes define earnings for the Post Fund as interest and dividend income as well as realized equity and fixed income capital gains (or losses). Unrealized capital gains (or losses) have no direct impact on the benefits paid out to retirees. Unrealized capital gains (or losses) are excluded from defined earnings in order to make benefit payments largely insensitive to near-term fluctuations in the capital markets.

Assets committed to the dedicated bond portfolio ensure that all existing promised benefits will be paid to current retirees. Excess investment earnings on the Post Fund assets are used to finance permanent lifetime benefit increases for retirees.

Benefit increases are based upon earnings during a fiscal year and are effective at the start of the following calendar year. Benefit increases generated over the last five years are shown below.

Percent

Benefit Increases



Calendar Year

(Annualized)

	1985	1986	1987	1988	1989	3 Yrs.	5 Yrs.
Benefit Increases	6.9%	7.9%	9.8%	8.1%	6.9%	8.3%	7.9%

Benefit increases are intended to compensate, to some degree, for the effect of inflation.

As measured by the Consumer Price Index (CPI), inflation increased by 3.5% on an annualized basis over the last five years (calendar 1984-1988).

POST RETIREMENT FUND

Segment Performance

Stock Segment Performance

The stock segment of the Post Fund trailed its benchmark for the quarter but exceeded its benchmark for the latest year by a substantial margin.

	Period Ending 12/31/88 (Annualized)			
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Stock Segment	1.3%	23.4%	7.1%	10.6%
Post Fund Benchmark	2.5	17.6	N.A.	N.A.

Bond Segment Performance

The composition of the Post Retirement Investment Fund's dedicated bond portfolio remained essentially unchanged during the third quarter.

The Post Fund's bond portfolio provided a 1.7% total rate of return for the quarter and a 9.2% return for the year. This performance is consistent with the bond portfolio's design. The Post Fund's dedicated bond portfolio is structured so that portfolio income and maturities match the Fund's liability stream. As a result, the duration of the dedicated bond portfolio exceeds that of the bond market. Consequently, on a total return basis, the portfolio can be expected to underperform the bond market in down periods and outperform the market in up periods.

**Dedicated Bond Portfolio Statistics
12/31/88**

Value at Market	\$ 3,570,370,178
Value at Cost	3,478,621,310
Average Coupon	6.51%
Current Yield	8.62
Yield to Maturity	9.42
Current Yield at Cost	8.84
Time to Maturity	17.42 Years
Average Duration	7.36 Years
Average Quality Rating	AAA
Number of Issues	373

SUPPLEMENTAL INVESTMENT FUND

The Minnesota Supplemental Investment Fund is a multi-purpose investment program that offers a range of investment options to state and local public employees. The different participating groups use the Fund for a variety of purposes:

- It functions as the investment manager for all assets of the Unclassified Employees Retirement Plan.
- It acts as the investment manager for all assets of the supplemental retirement programs for state university and community college teachers and for Hennepin County Employees.
- It is one investment vehicle offered to public employees as part of the state's Deferred Compensation Plan.
- It serves as an external money manager for a portion of some local police and firefighter retirement plans.

A wide diversity of investment goals exists among the Fund's participants. In order to meet those needs, the Fund has been structured much like a "family of mutual funds." Participants may allocate their investments among one or more accounts that are appropriate for their needs, within the statutory requirements and rules established by the participating organizations. Participation in the Fund is accomplished through the purchase or sale of shares in each account.

The investment returns shown in this report are calculated using a time-weighted rate of return formula. These returns may differ slightly from calculations based on share values, due to the movement of cash flows in and out of the accounts.

On December 31, 1988 the market value of the entire fund was \$404 million.

Investment Options

Income Share Account - an actively managed, balanced portfolio utilizing both common stocks and bonds.

Growth Share Account - an actively managed, all common stock portfolio.

Common Stock Index Account - a passively managed, all common stock portfolio designed to track the performance of the entire stock market.

Bond Market Account - an actively managed, all bond portfolio.

Money Market Account - a portfolio utilizing short term, liquid debt securities.

Guaranteed Return Account - an option utilizing guaranteed investment contracts (GIC's), which offer a fixed rate of return for a specified period of time.

SUPPLEMENTAL INVESTMENT FUND

Income Share Account

Investment Objectives

The primary investment objective of the Income Share Account is similar to that of the Basic Retirement Funds. The Account seeks to maximize long-term real rates of return, while limiting short-run portfolio return volatility.

Asset Mix

The Income Share Account is invested in a balanced portfolio of common stocks and fixed income securities. Common stocks provide the potential for significant capital appreciation, while bonds act as a deflation hedge and provide portfolio diversification.

	Target	Actual
Stocks	60.0%	59.7
Bonds	35.0	30.8
Cash*	5.0	9.5
	100.0%	100.0%

Investment Management

The Account combines internal and external management. Internal investment staff manage the entire fixed income segment. The entire stock segment is managed by Wilshire Associates as part of a passively managed index fund designed to track the Wilshire 5000.

Market Value

On December 31, 1988 the market value of the Income Share Account was \$212 million.

* Includes cash held by the external managers

PERCENT



TOTAL ACCT.
 MEDIAN FUND
 COMPOSITE

Period Ending 12/31/88

	Annualized			
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	1.9%	14.2%	8.6%	11.5%
Median Fund*	1.7	11.9	10.7	13.4
Composite**	1.8	13.9	11.1	13.5
Equity Segment	2.3	19.0	8.2	10.6
Wilshire 5000	2.3	17.9	11.9	13.9
Bond Segment	1.1	7.9	8.9	13.0
Salomon Bond Index	0.8	8.0	8.5	12.5

* TUCS Median Balanced Portfolio

** 60/35/5 Wilshire 5000/Salomon Broad Bond Index/T-Bills Composite

SUPPLEMENTAL INVESTMENT FUND

Growth Share Account

Investment Objectives

The Growth Share Account's investment objective is to generate above-average returns from capital appreciation on common stocks.

Asset Mix

The Growth Share Account is invested almost entirely in common stocks. Generally, the small cash equivalents component represents the normal cash reserves held by the Account as a result of net contributions not yet allocated to stocks.

	Target	Actual
Stocks	95.0%	70.4%
Cash*	5.0	29.6
	100.0%	100.0%

*Includes cash held by the external managers

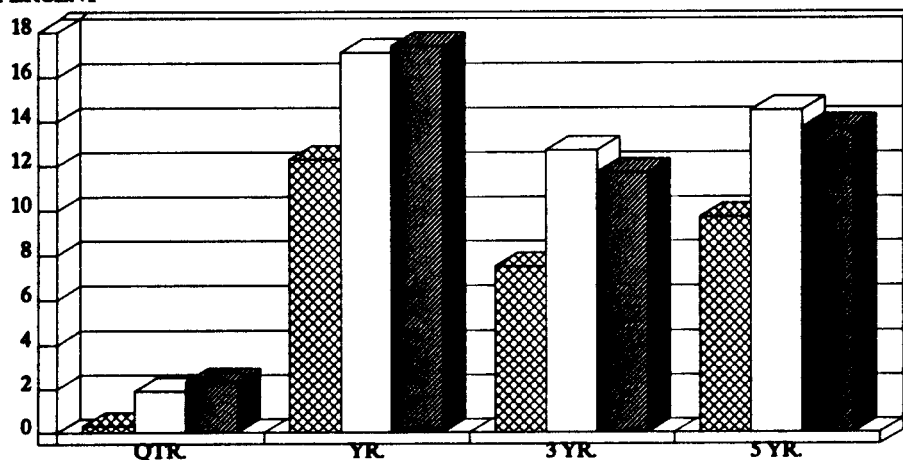
Investment Management

The entire Account is managed by the same group of active external stock managers utilized by the Basic Retirement Funds. (See page 7 for performance results for these managers.)

Market Value

On December 31, 1988 the market value of the Growth Share Account was \$72 million.

PERCENT



TOTAL ACCT.
 MEDIAN FUND
 COMPOSITE

Period Ending 12/31/88

Annualized

	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	0.3%	12.3%	7.5%	9.7%
Median Fund*	1.9	17.1	12.7	14.5
Composite**	2.3	17.4	11.7	13.7
Equity Segment	0.3	12.3	7.7	8.7
Wilshire 5000	2.3	17.9	11.9	13.9

* TUCS Median Managed Equity Portfolio

** 95/5 Wilshire 5000/T-Bills Composite

SUPPLEMENTAL INVESTMENT FUND

Common Stock Index Account

Investment Objectives and Asset Mix

The investment objective of the Common Stock Index Account is to generate returns that match those of the common stock market. The Account is designed to track the performance of the Wilshire 5000, a broad-based equity market indicator.

The Account is invested 100% in common stocks.

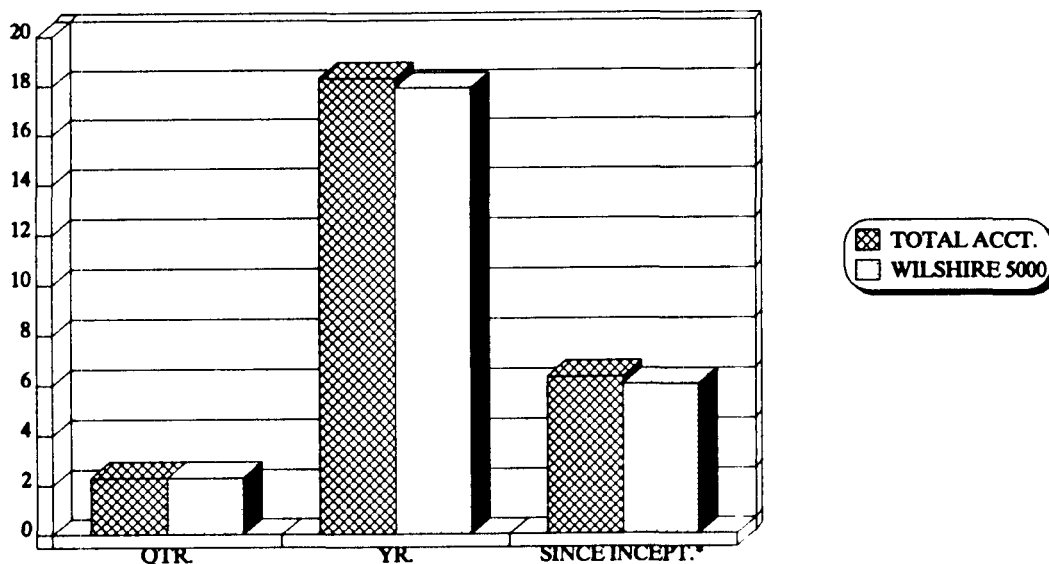
Investment Management

The entire Account is managed by Wilshire Associates as part of a passively managed index fund.

Market Value

On December 31, 1988 the market value of the Common Stock Index Account was \$4 million.

PERCENT



Period Ending 12/31/88

Annualized
Since Inception*

	Qtr.	Yr.	7/1/86
Total Account	2.3%	18.3%	6.3%
Wilshire 5000	2.3	17.9	6.0

* The Common Stock Index Account was added to the Supplemental Fund in July 1986.

SUPPLEMENTAL INVESTMENT FUND

Bond Market Account

Investment Objectives

The investment objective of the Bond Market Account is to earn a high rate of return by investing in fixed income securities.

Asset Mix

The Bond Market Account invests primarily in high-quality, government and corporate bonds that have intermediate to long-term maturities, usually 3 to 20 years.

Investment Management

The entire Account is managed by the same group of active external bond managers utilized by the Basic Retirement Funds. (See page 8 for performance results for these managers.)

Market Value

On December 31, 1988 the market value of the Bond Market Account was \$2 million.

PERCENT



TOTAL ACCOUNT
 SALOMON BROAD

Period Ending 12/31/88

Annualized
Since Inception*

	Qtr.	Yr.	7/1/86
Total Account	1.1%	8.6%	7.8%
Salomon Broad	0.8	8.0	6.6

* The Bond Market Account was added to the Supplemental Fund in July 1986.

SUPPLEMENTAL INVESTMENT FUND

Money Market Account

Investment Objectives

The investment objective of the Money Market Account is to purchase short-term, liquid fixed income investments that pay interest at rates competitive with those available in the money markets.

Asset Mix

The Money Market Account is invested entirely in high quality short-term investments such as U.S. Treasury Bills, bank certificates of deposit, repurchase agreements, and high grade commercial paper. The average maturity of these investments is 30 to 60 days.

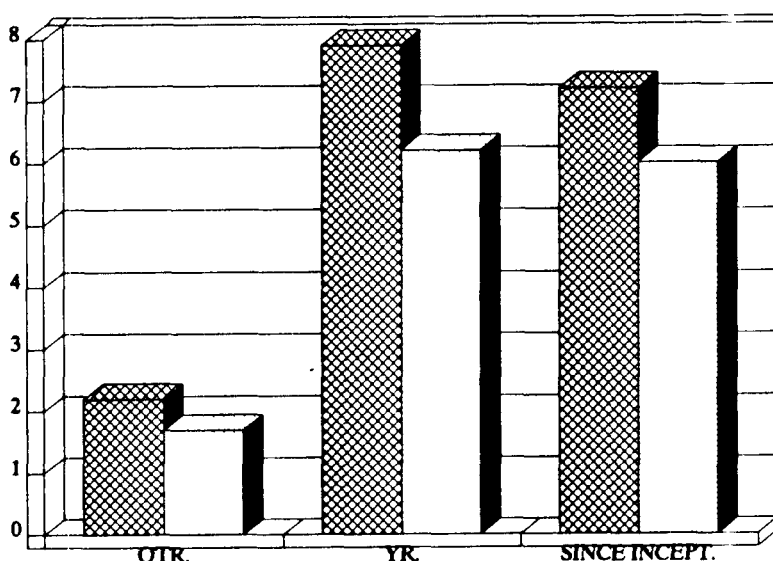
Investment Management

The Money Market Account is managed solely by State Street Bank and Trust Company. State Street manages a major portion of the Board's cash reserves.

Market Value

On December 31, 1988 the market value of the Money Market Account was \$68 million.

PERCENT



Period Ending 12/31/88

Annualized
Since Inception*

	Qtr.	Yr.	7/1/86
Total Account	2.2%	7.9%	7.2%
91 Day T-Bills	1.9	6.6	6.2

* The Money Market Account was added to the Supplemental Fund in July 1986.

SUPPLEMENTAL INVESTMENT FUND**Guaranteed Return Account****Investment Objectives**

The investment objectives of the Guaranteed Return Account are to protect investors from any loss of their original investment and to provide a fixed rate of return over a three year period.

Asset Mix

The Guaranteed Return Account is invested in guaranteed investment contracts (GIC's) offered by major U.S. insurance companies.

Investment Management

Annually, the Board accepts bids from insurance companies that meet the financial quality criteria defined by State statute. Generally, the insurance company offering the highest three year GIC interest rate is awarded the contract. That interest rate is then offered to participants who make contributions to the Guaranteed Return Account over the following twelve months.

Market Value

On December 31, 1988 the market value of the Guaranteed Return Account was \$46 million.

Contract Period	Annual Effective Interest Rate	Manager
Nov. 1, 1986 - Oct. 31, 1989	7.72%	Principal Mutual Life
Nov. 1, 1987 - Oct. 31, 1990	8.45%	Principal Mutual Life
Nov. 1, 1988 - Oct. 31, 1991	9.01%	Mutual of America

VARIABLE ANNUITY FUND

Investment Objective

The Variable Annuity Fund is an investment option formerly offered to members of the Teachers' Retirement Association. The fund was designed as an alternative to the regular teachers' retirement plan. The opportunity to enroll in the Fund is no longer offered to new Association members, although members enrolled prior to the cutoff date may retain their participation in the Fund and continue to make contributions.

The investment objective of the Variable Annuity Fund is comparable to that of the Supplemental Investment Fund's Growth Share Account. The goal of the Variable Annuity fund is to generate above-average capital appreciation.

Asset Mix

The Variable Annuity Fund is invested almost entirely in common stocks.

	Target	Actual
Stocks	95.0%	75.2%
Cash*	5.0	24.8
Total	100.0%	100.0%

*Includes cash held by the external managers

Investment Management

The entire Fund is managed by the same group of active external stock managers utilized by the Basic Retirement Funds. (See page 7 for performance results for these managers.)

Asset Growth

The market value of the Variable Annuity Fund increased by 0.3% during the fourth quarter of 1988. The increase was attributable to increasing stock prices during the period.

Asset Growth During Fourth Quarter 1988 (Millions)	
Beginning Value	\$156.0
Net Contributions	-0.4
Investment Return	0.9
Ending Value	\$156.5

Performance

The Variable Annuity Fund underperformed the median fund for the quarter and the latest year.

	Period Ending 12/31/88			
			Annualized	
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Fund	0.6%	12.7%	7.9%	10.1%
Median Fund*	1.9	17.1	12.7	14.5
Composite**	2.3	17.4	11.7	13.7
Equity Segment	0.5	12.6	8.0	10.0
Wilshire 5000	2.3	17.9	11.9	13.9

* TUCS Median Managed Equity Portfolio

** 95/5 Wilshire 5000/T-Bills Composite

PERMANENT SCHOOL FUND

Investment Objectives

The SBI invests the Permanent School Fund to produce a high, consistent level of income that will assist in offsetting state expenditures on school aids.

The Permanent School fund's investment objectives are influenced by the restrictive legal provisions under which its investments must be managed. These provisions require that the Permanent School Fund's principal remain inviolate. Further, any net realized equity and fixed income capital gains must be added to principal. Moreover, if the Permanent School Fund realizes net capital losses, these losses must be offset against interest and dividend income before such income can be distributed. Finally, all interest and dividend income must be distributed in the year in which it is earned.

These legal provisions limit the investment time horizon over which the Permanent School Fund is managed. Long-run growth in its assets is difficult to achieve without seriously reducing current spendable income and exposing the spendable income stream to unacceptable volatility. The SBI, therefore, invests the Permanent School Fund's assets to produce the maximum amount of current income, within the constraint of maintaining adequate portfolio quality.

Asset Mix

The asset mix of the Permanent School Fund was essentially unchanged during the fourth quarter. The Permanent School fund continues to hold only fixed income securities. Under current legal limitations, common stocks are not appropriate vehicles for the Fund.

	Target	Actual
Bonds	95.0%	92.5%
Cash	5.0	7.5
Total	100.0%	100.0%

Investment Management

The entire fund is managed by an internal investment staff.

Asset Growth

The market value of the Permanent School Fund's assets decreased 2.7% during third quarter. Withdrawals from the fund exceeded contributions by 14.8 million.

Asset Growth During Fourth Quarter 1988 (Millions)

Beginning Value	\$365.4
Net Contributions	-14.8
Investment Return	4.9
Ending Value	\$355.5

Bond Segment Performance

The composition of the Permanent School Fund's bond portfolio was essentially unchanged during the quarter. The bond portfolio is structured with a laddered distribution of maturities to minimize the Fund's exposure to re-investment rate risk. At the quarter's-end, the portfolio had a current yield of 9.48%, an average life of 7.0 years, and a AAA quality rating. The portfolio remains concentrated in Treasury and Agency issues and has a significant mortgage component as well.

Bond Portfolio Statistics 12/31/88

Value at Market	\$322,431,467
Value at Cost	327,851,415
Average Coupon	9.07%
Current Yield	9.48
Yield to Maturity	9.56
Current Yield at Cost	9.33
Time to Maturity	17.51 Years
Average Duration	7.00 Years
Average Quality Rating	AAA
Number of Issues	123

STATE CASH ACCOUNTS

Description

State Cash Accounts represent the cash balances in more than 200 separate accounts that flow through the Minnesota State Treasury. These accounts range in size from \$5,000 to over \$400 million.

Most accounts are invested by SBI staff through two short-term pooled funds:

- **Trust Fund Pool** contains the cash balances of retirement-related accounts managed internally and cash balances in the Permanent School Fund.
- **Treasurer's Cash Pool** contains the cash balances of special or dedicated accounts necessary for the operation of certain State agencies and the balance of the Invested Treasurer's Cash.

In addition, each State of Minnesota bond sale requires two additional pools; one for bond proceeds and one for the debt reserve transfer.

Because of special legal restrictions, a small number of cash accounts cannot be commingled. These accounts are invested separately.

Investment Objectives

- **Safety of Principal.** To preserve capital.
- **Competitive Rate of Return.** To provide a high level of current income.
- **Liquidity.** To meet cash needs without the forced sale of securities at a loss.

Asset Mix

The SBI maximizes current income while preserving capital by investing all cash accounts in high quality, liquid short term investments. These include U.S. Treasury and Agency issues, repurchase agreements, bankers acceptances, commercial paper, and certificates of deposit.

Investment Management

All state cash accounts are managed by the SBI investment staff. As noted above, most of the assets of the cash accounts are invested through two large commingled investment pools.

Performance

Both the Trust Fund Pool and the Treasurer's Cash Pool outperformed their target for the quarter and the latest year.

	Period Ending 12/31/88		
	Market Value (Millions)	Qtr.	Yr.
Treasurer's Cash Pool	\$1,995	2.0%	8.1%
Trust Fund Cash Pool	299	2.1	7.9
91-Day T-Bills		1.9	6.6

Tab B

PORTFOLIO STATISTICS

	PAGE
I. Composition of State Investment Portfolios 12/31/88	1
II. Cash Flow Available for Investment 10/1/88-12/31/88	3
III. Monthly Transactions and Asset Summary - Retirement Funds	4

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
COMPOSITION OF STATE INVESTMENT PORTFOLIOS BY TYPE OF INVESTMENT
MARKET VALUE DECEMBER 31, 1988
(in 000's)

	CASH AND SHORT TERM SECURITIES	BONDS		STOCKS		ALTERNATIVE ASSETS	TOTAL
		INTERNAL	EXTERNAL	INTERNAL	EXTERNAL		
BASIC RETIREMENT FUNDS:							
TEACHERS RETIREMENT FUND	\$ 111,539 4.64%	\$ -0-	\$ 537,804 22.36%	\$ -0-	\$1,429,063 59.43%	\$326,373 13.57%	\$ 2,404,779 100%
PUBLIC EMPLOYEES RETIRE. FUND	47,758 3.62%	-0-	297,941 22.60%	-0-	791,723 60.06%	180,809 13.72%	1,318,231 100%
STATE EMPLOYEES RETIRE. FUND	50,733 4.64%	-0-	244,724 22.36%	-0-	650,308 59.43%	148,513 13.57%	1,094,278 100%
PUBLIC EMP. POLICE & FIRE FUND	25,973 5.68%	-0-	101,157 22.12%	-0-	268,807 58.78%	61,388 13.42%	457,325 100%
HIGHWAY PATROL RETIRE. FUND	3,726 4.64%	-0-	17,974 22.36%	-0-	47,762 59.43%	10,908 13.57%	80,370 100%
JUDGES RETIREMENT FUND	161 4.63%	-0-	777 22.37%	-0-	2,064 59.41%	472 13.59%	3,474 100%
PUBLIC EMP. P.F. CONSOLIDATED	2,095 22.15%	1,914 20.24%	1,269 13.42%	38 0.40%	3,372 35.65%	770 8.14%	9,458 100%
CORRECTIONAL EMPLOYEES RETIREMENT	2,411 4.64%	-0-	11,628 22.36%	-0-	30,900 59.43%	7,057 13.57%	51,996 100%
POST RETIREMENT FUND	336,560 7.59%	3,650,082 82.33%	-0-	447,043 10.08%	-0-	-0-	4,433,685 100%
MINNESOTA SUPPLEMENTAL FUNDS:							
INCOME SHARE ACCOUNT	12,903 6.08%	65,413 30.82%	-0-	-0-	133,954 63.10%	-0-	212,270 100%
GROWTH SHARE ACCOUNT	7,645 10.63%	-0-	-0-	-0-	64,298 89.37%	-0-	71,943 100%
MONEY MARKET ACCOUNT	67,668 100%	-0-	-0-	-0-	-0-	-0-	67,668 100%
COMMON STOCK INDEX ACCOUNT	-0-	-0-	-0-	-0-	3,665 100%	-0-	3,665 100%
BOND MARKET ACCOUNT	-0-	-0-	2,169 100%	-0-	-0-	-0-	2,169 100%
GUARANTEED RETURN ACCOUNT	-0-	-0-	46,308 100%	-0-	-0-	-0-	46,308 100%

	CASH AND SHORT TERM SECURITIES	BONDS		STOCKS		ALTERNATIVE ASSETS	TOTAL
		INTERNAL	EXTERNAL	INTERNAL	EXTERNAL		
MINNESOTA VARIABLE ANNUITY	7,074 4.52%	-0-	-0-	-0-	149,466 95.48%	-0-	156,540 100%
TOTAL RETIREMENT FUNDS	\$ 676,246 6.49%	\$3,717,409 35.70%	\$1,261,751 12.12%	\$447,081 4.29%	\$ 3,575,382 34.33%	\$736,290 7.07%	\$10,414,159 100%
PERMANENT SCHOOL FUND	26,783 7.53%	328,701 92.47%	-0-	-0-	-0-	-0-	355,484 100%
TREASURERS CASH	1,995,415 100%	-0-	-0-	-0-	-0-	-0-	1,995,415 100%
HOUSING FINANCE AGENCY	175,193 100%	-0-	-0-	-0-	-0-	-0-	175,193 100%
MINNESOTA DEBT SERVICE FUND	18,232 100%	-0-	-0-	-0-	-0-	-0-	18,232 100%
MISCELLANEOUS ACCOUNTS	200,156 100%	-0-	-0-	-0-	-0-	-0-	200,156 100%
MINNESOTA STATE BUILDING FUNDS	24,226 100%	-0-	-0-	-0-	-0-	-0-	24,226 100%
GRAND TOTAL	\$3,116,251 23.64%	\$4,046,110 30.69%	\$1,261,751 9.57%	\$447,081 3.39%	\$3,575,382 27.12%	\$736,290 5.59%	\$13,182,865 100%

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

For period of
October 1, 1988 - December 31, 1988

Teachers Retirement Fund	\$ 33,000,000.00
Public Employees Retirement Fund	(64,000,000.00)
State Employees Retirement Fund	-0-
Public Employees Police & Fire	5,000,000.00
Highway Patrol Retirement Fund	-0-
Judges Retirement Fund	-0-
Public Emp. P & F Consolidated	3,782,886.00
Correctional Employees Retirement Fund	-0-
Post Retirement Fund	37,191,403.00
Supplemental Retirement Fund - Income	(4,617,702.00)
Supplemental Retirement Fund - Growth	(3,212,263.00)
Supplemental Retirement Fund - Money Market	(12,828,254.00)
Supplemental Retirement Fund - Index	26,034.00
Supplemental Retirement Fund - Bond Mkt.	919,862.00)
Supplemental Retirement Fund - Guaranteed	22,942,608.00
Minnesota Variable Annuity Fund	<u>\$ (395,337.00)</u>
 Total Retirement Funds Net Cash Flow	 \$ 17,809,237.00
 Permanent School Fund	 <u>(14,825,413.00)</u>
 Total Net Cash Flow	 <u>\$ 2,983,824.00</u>

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)
September 1986	14	(67)	(53)	(48)	4.9	47.0	48.1	8490
October	4	(117)	(113)	10	6.2	46.5	47.3	8724
November	(17)	(3)	(20)	40	6.8	46.0	47.2	8864
December	(51)	44	(7)	12	7.0	46.0	47.0	8772
January 1987	34	21	42	15	6.2	44.4	49.4	9283
February	120	(9)	111	50	5.4	44.4	50.2	9576
March	76	(15)	61	18	4.9	44.5	50.6	9614
April	100	(7)	93	4	4.1	45.0	50.9	9383
May	3	(136)	(133)	33	5.9	44.6	49.5	9403
June	(42)	(22)	(64)	141	7.8	42.6	49.6	9706
July	283	(119)	164	52	6.4	44.9	48.7	10028
August	181	(14)	167	40	5.2	44.7	50.1	10020
September	50	10	60	59	5.3	44.5	50.2	9850
October	(12)	(37)	(49)	20	6.5	50.1	43.4	9077
November	9	(10)	(1)	69	7.4	51.1	41.5	8890
December	(3)	34	31	0	6.8	50.1	43.1	9180
January 1988	(5)	118	113	57	5.9	50.0	44.1	9572
February	102	1	103	47	5.2	49.8	45.0	9841
March	25	(10)	15	6	5.2	49.8	45.0	9686
April	(9)	16	7	11	5.2	49.1	45.7	9667
May	(2)	(2)	(4)	41	5.7	48.3	46.0	9633
June	(3)	18	15	75	6.1	47.5	46.4	10045
July	91	(5)	86	56	5.8	48.1	46.1	10003
August	(3)	14	11	55	6.3	48.2	45.5	9920
September	(7)	(3)	(10)	19	6.4	48.0	45.6	10208
October	(7)	0	(7)	(27)	6.2	48.2	45.6	10329
November	129	1	130	88	5.8	48.6	45.6	10217
December	(1)	2	1	83	6.5	47.8	45.7	10414

Tab C

MEMBERS OF THE BOARD.
GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H. CARLSON
STATE TREASURER MICHAEL A. McGRATH
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Room 105, MEA Building
55 Sherburne Avenue
St. Paul, MN 55155
Tel (612) 296-3328
FAX (612) 296-9572

February 16, 1989

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

FROM: Howard Bicker

SUBJECT: Executive Director's Administrative Report

1. Budget Reports

A budget-to-actual report for the SBI's Fiscal Year 1989 Administrative Budget is included as Attachment A. It includes expenditures through January 31, 1989.

2. Travel Report

A summary of SBI travel expenditures for November 16, 1988-February 15, 1989 is included as Attachment B.

3. Implementation of Report from the Task Force on Fund Objectives.

At its special meeting on February 8, 1989, the Board adopted recommendations from the January, 1989 Report from the Task Force on Fund Objectives. I have developed an implementation plan for those recommendations that may be addressed within the Board's current statutory authority (see Attachment C).

ATTACHMENT A

STATE BOARD OF INVESTMENT
FISCAL YEAR 1989 ADMINISTRATIVE BUDGET REPORT
GENERAL FUND APPROPRIATION
FISCAL YEAR TO-DATE THROUGH JANUARY 31, 1989

ITEM	FISCAL YEAR 1989 BUDGET	FISCAL YEAR 1989 EXPENDITURES
PERSONAL SERVICES		
CLASSIFIED EMPLOYEES	\$ 222,572	\$ 126,214
UNCLASSIFIED EMPLOYEES	1,050,000	571,657
PART-TIME EMPLOYEES	0	0
SEVERENCE PAY	10,600	0
MISCELLANEOUS PAYROLL	6,000	-444
SUBTOTAL	\$ 1,289,172	\$ 697,427
EXPENSES & CONTRACTUAL SERVICES		
RENTS & LEASES	97,000	53,631
REPAIRS/ALTERATIONS/MAINTENANC	9,000	4,163
PRINTING & BINDING	18,000	6,558
PROFESSIONAL/TECHNICAL SERVICE	5,000	7,240
DATA PROCESSING & SYSTEM SERVI	162,000	81,300
PURCHASED SERVICES	20,000	14,432
SUBTOTAL	\$ 311,000	\$ 167,324
MISCELLANEOUS OPERATING EXPENSES		
COMMUNICATIONS	20,000	12,092
TRAVEL, IN-STATE	3,000	317
TRAVEL, OUT-STATE	40,000	20,832
FEES & OTHER FIXED CHARGES	7,000	3,000
SUBTOTAL	\$ 70,000	\$ 36,241
SUPPLIES/MATERIALS/PARTS	15,000	12,836
CAPITAL EQUIPMENT	22,000	21,790
TOTAL GENERAL FUND	\$ 1,707,172	\$ 935,618

ATTACHMENT B

STATE BOARD OF INVESTMENT

**Travel Summary by Date
November 16, 1988 - February 15, 1989**

<u>Purpose</u>	<u>Name(s)</u>	<u>Destination and Date</u>	<u>Total Cost</u>
Miscellaneous			
Institute for Fiduciary Education & The Ford Foundation Advisory Task Force on Social Investing	H. Bicker	New York NY 12/4-5	\$ 59.00
Manager Monitoring			
Resource Fund Manager			
Apache Annual Meeting	J. Lukens	Denver CO 12/7-8	\$ 713.03
Manager Monitoring			
Venture Capital Manager			
Kohlberg Kravis Roberts & Company Meeting	J. Griebenow	New York NY 1/24-25	\$ 562.25
Manager Monitoring			
Passive Stock Manager			
Wilshire Associates	D. Gorence	Los Angeles CA 1/12-13	\$ 653.11
Consultant Meeting			
Richards & Tierney	M. Menssen	Chicago IL 1/31/89	\$ 131.50

ATTACHMENT C

MEMBERS OF THE BOARD:

GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H. CARLSON
STATE TREASURER MICHAEL A. McGRATH
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



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STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Room 105, MEA Building
55 Sherburne Avenue
St Paul, MN 55155
Tel (612) 296-3328
FAX: (612) 296-9572

February 14, 1989

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

FROM: Howard Bicker

SUBJECT: Implementation of Report from the Task Force
on Fund Objectives

At its special meeting on February 8, 1989, the Board reviewed the January 1989 Report from the Task Force on Fund Objectives and took the following actions:

- o The Board adopted the recommendations that can be implemented within current statutory authority, with the understanding that the designation of asset class targets and the use of flexible asset allocation targets would receive further discussion.
- o The Board directed SBI staff to discuss the recommendations that would require statutory changes with the retirement systems and other affected parties and report back to the Board.

Based on these actions, I propose the following implementation timetable:

1. Review Asset Class Targets March-June 1989

Staff has prepared a discussion on asset class targets for stocks and bonds for the March 1989 meeting. A discussion on asset class targets for real estate, venture capital, resource funds and international stock will be presented to the Board and IAC in June 1989.

March 1989

Review targets for stocks and bonds

March-June 1989

Establish targets for alternative assets

2. Revise Composite IndexMarch-Sept. 1989

Currently, the Basic Fund's composite index is weighted:

65%	Common Stock	Wilshire 5000
30	Bonds	Salomon BIG
5	Cash	91-Day T-Bills
<u>100%</u>		

The Task Force recommended that alternative asset classes be added to the composite to reflect the recommended target asset allocation of the entire portfolio:

60.0%	domestic stocks
10.0	international stock
10.0	real estate
2.5	resource funds
2.5	venture capital
15.0	domestic bonds
0.0	cash
<u>100.0%</u>	

Selection of specific indices for the revised composite will depend on the results of #1, above. Since the composite index requires a five year historical comparison, some judgment will be required concerning the weights given to a specific index during each quarter. For example, it would be inappropriate to include weighting for international stocks in the composite before any assets are actually committed to that asset class. Similar questions arise regarding the historical inclusion of indices for real estate, venture capital and resource funds since these assets were added to the portfolio gradually over several years.

Staff will review this timing issue and present recommendations concerning historical, current and future composite index weightings:

March-June 1989	Recommend historical composite weightings
June-Sept. 1989	Incorporate in reporting

3. Review Flexible Asset AllocationMarch-Dec. 1989

Flexible asset allocation methodologies cover a variety of options that include both low and high risk strategies.

Currently, the SBI utilizes a conservative, low-risk strategy that requires rebalancing the overall asset mix toward long term targets when the actual allocation to any asset class moves more than 10 percentage points away from its long term target. Staff has discretion to rebalance if the asset class

is less than 10 percentage points above or below its target. In practice, this rebalancing policy imposes a "buy low, sell high" discipline.

Other strategies, like tactical asset allocation, are variations on the concept of market timing. Marketing timing is a change in asset mix caused by perceived shifts in asset class relative values. Marketing timing decisions do not affect a plan's long run policy asset mix. Market timing is a short-run strategy that attempts to add value to returns produced by the long term asset allocation targets. Exposure can be changed by buying and selling securities or through the use of financial futures.

If the Board wishes to consider an active market timing strategy, it should thoroughly review alternative methodologies and determine if they are feasible for the SBI:

March-Sept. 1989	Identify alternative strategies and assess feasibility for the SBI
Sept.-Dec. 1989	Determine management structure, if used by the SBI

4. Develop Implementation Plan for International Equities

March-Dec. 1989

The Board adopted the recommendation to add a 10% allocation to international equities in the Basic Funds. There are several issues that must be addressed before any securities are added to the portfolio:

March-June 1989	Establish program structure: <ul style="list-style-type: none">o Select asset class targeto Determine active/passive mixo Determine hedging strategy, if anyo Determine manager configurationo Determine funding source and timetable
June-December 1989	Determine custody arrangements Select managers

While not specified above, I believe on-going information and education for the Board members and their deputies to be an

ATTACHMENT C (con't)

important component of the implementation plan. Staff plans to develop "mini-seminars" covering all the implementation issues during the coming months.

5. Develop Implementation Plan
for International Short-Term

March-June 1989

While the Task Force did not address this issue, I believe it is appropriate for the Board to explore the use of international securities for its short term cash assets. A modest allocation to money-market type securities issued by foreign banks or corporations could increase yield on cash holdings in the retirement funds as well as state cash accounts:

March-June 1989

Determine recommended allocation

Determine implementation procedures

Determine custody arrangements

6. Review Allocations to Cash

March 1989

The Task Force recommended that the Board maintain minimal cash holdings in the Basics and Post Retirement Funds:

	<u>Recommendation</u>	<u>Previous Target</u>
Basic Funds	0%	3%
Post Fund	one month's payments	\$50 million

I agree that the Basic Funds should minimize their unallocated cash. While I believe the current target of 3% cash can be reduced, I do not feel it is feasible to target a 0% cash level. Transfers to the Post Retirement Fund have averaged \$34 million over the last 18 months. These transfers have ranged from a low of \$4 million to a high of \$155 million. Payments from the Post Fund are approximately \$35 million per month.

I feel a minimum 1% allocation to cash (approximately \$55 million in the Basics and \$40 million in the Post) for each fund is necessary to meet current liquidity needs. As suggested by the figures cited above, this should satisfy the needs of the Post Fund and should meet most liquidity needs in the Basic Funds.

Therefore, I recommend the Board modify the asset allocation recommended by the Task Force to include a 1% allocation to cash in the Basic Funds and the Post Funds.

March 1989

Act on revised cash allocation

7. Revise Report FormatsMarch-Sept. 1989

The Board adopted the "score card" report format recommended by the Task Force. Staff has prepared the summary report using data currently available for the quarter ending December, 1988. This is included in the Board folder for the March 1, 1988 meeting. Adjustments will need to be made in certain entries as implementation of the Task Force Report progresses. In addition, sections of the quarterly investment report will need to be revised to reflect new mission statements and objectives.

March 1989

Initial score card presented

March-June 1989

Incorporate other changes in body of the quarterly investment report

June-Sept. 1989

Review entire reporting format with ad hoc review committee

Tab D

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



EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Room 105, MEA Building
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St. Paul, MN 55155
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February 16, 1989

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

FROM: State Treasurer Michael A. McGrath, Chair
SBI Administrative Committee

SUBJECT: SBI Administrative Committee Report

The SBI Administrative Committee met on February 15, 1989 and discussed the following items:

INFORMATION ITEMS:

1. FY 1988 Audit Results

The State Board of Investment (SBI) is audited annually by the Office of the Legislative Auditor for financial and statutory compliance. Howard Bicker, Executive Director, reported that the fiscal year 1988 audit report contains no findings or recommendations. A copy of the auditors management letter is attached for your review (Attachment A).

2. Legislative Update

The Committee reviewed a status report on legislation of interest to the SBI. These reports are sent to Board Member Deputies on a weekly basis throughout the Legislative Session. A copy of the most recent status report is attached (Attachment B).

3. Status Report on FY 1989 Staff Work Plan

The Committee discussed the status of the FY 1989 Staff Work Plan. A summary is attached for your review (Attachment C).

Most of the planned initiatives are proceeding according to their projected time frames. However, the Board's decision to review the goals and objectives of the Basic and Post Retirement Funds has caused certain projects to be postponed.

The Committee discussed the need for the Board to come to some conclusion on the issues of asset class targets and active/passive mix in order to move forward on the recommendation to add four new stock managers to the active manager group. This issue has been pending since September 1988. It was the consensus of the Committee that these items should be reviewed by the IAC before the March 1989 meeting of the Board, if possible, and that the Board should be prepared to discuss these items at that time.

4. Review of Deferred Compensation Plan Vendors

All public employees in Minnesota are eligible to participate in a state-sponsored Deferred Compensation Plan. The plan is administered by the Minnesota State Retirement System (MSRS). By statute, the SBI is responsible for approving all contracts with the vendors that provide investment options to employees and may take bids for these services at its discretion.

The SBI awarded contracts to two vendors, Great West and Minnesota Mutual/Northwestern National Life, in 1979. While these contracts were considered to be long-term commitments, the Committee feels it is prudent to review the current services being provided. The Committee asked Paul Groschen, MSRS Executive Director, and Mr. Bicker to form a task force for this purpose and report their findings to the Administrative Committee in May or August 1989. The task force will include representation from MSRS and SBI staff as well as Board member designees.

ACTION ITEM:

1. Proposed Consultant RFP

Richards & Tierney, Inc. will complete its third year as the Board's consultant on June 30, 1989. It has been the Board's past practice to issue a request for proposal (RFP) for its consultant on a three-year cycle.

Recommendation:

The Committee recommends that the Board establish a Consultant Review Committee to draft the RFP, review responses, interview finalist candidates and make a recommendation to the Administrative Committee. The Consultant Review Committee should include a designee of each Board member and two members of the IAC. The Administrative Committee's recommendation should be presented to the Board at its June 1989 meeting.

**STATE BOARD OF INVESTMENT
FINANCIAL AND COMPLIANCE AUDIT
FOR THE YEAR ENDED JUNE 30, 1988**

JANUARY 1989

**Financial Audit Division
Office of the Legislative Auditor
State of Minnesota**



STATE OF MINNESOTA

OFFICE OF THE LEGISLATIVE AUDITOR

VETERANS SERVICE BUILDING, ST. PAUL, MN 55155 • 612/296-4708

JAMES R. NOBLES, LEGISLATIVE AUDITOR

Senator Randolph W. Peterson, Vice-Chairman
Legislative Audit Commission

Members of the Legislative Audit Commission

and

Mr. Howard J. Bicker, Executive Director
State Board of Investment

Audit Scope

We have completed a financial and compliance audit of the State Board of Investment (SBI) for the year ended June 30, 1988. Our audit was made in accordance with generally accepted auditing standards, and the standards for financial and compliance audits contained in the U.S. General Accounting Office Government Auditing Standards, and accordingly, included such audit procedures as we considered necessary in the circumstances. Field work was completed on December 1, 1988.

The objectives of the audit were to:

- express an opinion on the financial statements of the State Board of Investment for the year ended June 30, 1988;
- study and evaluate major SBI internal control systems, including a review of investment transactions and administrative disbursements; and
- verify that financial transactions were made in accordance with applicable laws, regulations, and policies, including Minn. Stat. Chapter 11A and other finance-related laws and regulations.

Management Responsibilities

The management of SBI is responsible for establishing and maintaining a system of internal accounting control designed to provide reasonable, but not absolute, assurance that assets are safeguarded against loss from unauthorized use or disposition, and that transactions are executed in accordance with management's authorization and recorded properly. In fulfilling this responsibility, estimates and judgments by management are required to assess the expected benefits and related costs of control procedures.

Because of inherent limitations in any system of internal accounting control, errors or irregularities may occur and not be detected. These limitations were considered when evaluating the effectiveness of SBI's system of accounting control. Also, projection of any evaluation of the

ATTACHMENT A (con't)

Senator Randolph W. Peterson, Vice-Chairman
Members of the Legislative Audit Commission
Mr. Howard J. Bicker, Executive Director
State Board of Investment
Page 2

system to future periods is subject to the risk that procedures may become inadequate because of changes in conditions, or that the degree of compliance with the procedures may deteriorate.

The management of SBI is also responsible for the agency's compliance with laws and regulations. In connection with our audit, we selected and tested transactions and records from the programs administered by SBI. The purpose of our testing of transactions was to obtain reasonable assurance that SBI had, in all material respects, administered their programs in compliance with applicable laws and regulations.

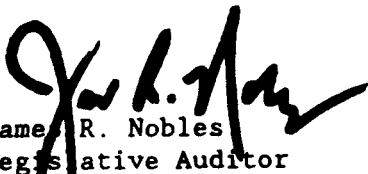
Conclusions


We have issued an unqualified opinion on the SBI financial statements for the year ended June 30, 1988. Our audit opinion, dated December 1, 1988, is included in the 1988 SBI Annual Report.

In our opinion, the SBI system of internal accounting control in effect on June 30, 1988, taken as a whole, was sufficient to provide management with reasonable, but not absolute assurance that assets are safeguarded against loss from unauthorized use or disposition, and that transactions are executed in accordance with management's authorization and recorded properly.

In our opinion, for the year ended June 30, 1988, SBI administered its programs in compliance, in all material respects, with applicable finance-related laws and regulations.

We would like to thank the State Board of Investment staff for the cooperation extended to us during this audit.


James R. Nobles
Legislative Auditor


John Asmussen, CPA
Deputy Legislative Auditor

January 23, 1989

ATTACHMENT B

BILLS OF INTEREST TO THE MINNESOTA STATE BOARD OF INVESTMENT

1989 LEGISLATIVE SESSION
Includes Action Through 2/10/89

<u>DESCRIPTION OF BILL</u>	<u>HF/SF #</u>	<u>AUTHOR</u>	<u>CURRENT STATUS</u>
Licensing mortgage bankers would establish an education and research fund to be invested by the SBI	SF - 50	Spear	Referred to Commerce Committee
Linked deposit bill would authorize SBI to purchase certificates of deposit from eligible financial institutions throughout the state	SF - 87	Dahl	Ag Committee Hearing Scheduled 2/13 Rm. 112 Capitol
Pre-73 Retiree Bill	HF - 118	Simoneau	Referred to Gov't. Operations
	SF - 153	Waldorf	Referred to Gov't. Operations
Rule of 85 option at discretion of employing unit	HF - 145	Sarna	Referred to Labor Management
	HF - 437	Frank	Referred to Gov't. Operations
Pension Benefit Bil Age 62 normal retirement formula increase	SF - 307	D. Moe	Referred to Gov't. Operations
Prohibiting Officers and Employees of Retirement Plans and Funds from Serving for Compensation as Directors or Officers of outside Corporations or Assoc.	SF - 333	Pogemiller	Referred to Gov't. Operations
Providing for Donations to the Permanent School Fund	HF - 498 SF - 478	McEachern Pehler	Referred to Education Referred to Education

ATTACHMENT C

STATE BOARD OF INVESTMENT Staff Work Plan Summary New Initiatives FY 89

I. <u>Implement Investment Strategies</u>	June 1988 Projected Time Frame	February 1989 Current Status
A. Asset Allocation		
1. Develop and implement international investment program.		1. Postponed pending goals and objectives review of the Basic Funds. Current time frame is:
o Establish target allocation o Develop program structure o Conduct manager search	Jul. 1988 - Dec. 1988 Jul. 1988 - Mar. 1989 Jan. 1989 - Jun. 1989	Mar. 1989 Mar. 1989 - Jun. 1989 Jun. 1989 - Dec. 1989
2. Review asset allocation in alternative investment area.	Jul. 1988 - Dec. 1988	2. Postponed. Needs re-evaluation due to above.
B. Equities		
1. Recommend completeness fund alternatives.	Jul. 1988 - Jun. 1989	1. On schedule.
2. Review equity asset class target.	Oct. 1988 - Mar. 1989	2. Completed.
3. Review index fund manager.	Jan. 1989 - Jun. 1989	3. On schedule.
4. Implement new/replacement manager search process.	On-going	4. On-going. Recommendation to hire four managers pending since Sept. 1988.
C. Fixed Income		
1. Implement customized bond index fund.	Jul. 1988 - Mar. 1989	1. Enhanced Bond Index Fund in place. Decision to further customize postponed.
2. Review software vendors for dedicated bond portfolio rebalancing.	Oct. 1988 - Dec. 1988	2. Completed.
3. Complete development of bond manager benchmark portfolios.	Oct. 1988 - Mar. 1989	3. Completed.
4. Review short-term portfolio liquidity needs.	Oct. 1988 - Mar. 1989	4. Postponed until FY 1990.
5. Implement arbitrage earnings program for state's general obligation bond proceeds.	-----	5. New project assigned to Short-Term portfolio staff. Program nearly complete.
D. Alternative Investments		
1. Conduct real estate portfolio review with special project consultant.	Jul. 1988 - Dec. 1988	1. Consultant report being evaluated by Alternative Investment Committee. Recommendation will be brought to the Board in June, 1989.
2. Investigate new investment vehicles for inclusion in portfolios.	Jan. 1989 - Jun. 1989	2. Postponed. Needs re-evaluation due to I-A, above.

ATTACHMENT C (con't)

STATE BOARD OF INVESTMENT Staff Work Plan Summary New Initiatives FY 89

II. <u>Implement Administrative Initiatives</u>	June 1988 Projected Time Frame	February 1989 Current Status
A. FY 90-91 Budget		
1. Develop budget proposal.	Jul. 1988 - Dec. 1988	1. On schedule.
B. Master Custodian		
1. Review services and associated costs.	Jul. 1988 - Sept. 1988	1. Completed.
C. Northern Ireland Legislation		
1. Develop implementation plan.	Jul. 1988 - Dec. 1988	1. On schedule.
D. South Africa Resolution		
1. Implement Phase IV.	Jan. 1989 - Jun. 1989	1. On schedule.
E. SBI Investment Conference		
1. Plan conference agenda and make all necessary arrangements.	Jul. 1988 - Sept. 1988	1. Rescheduled to Jan. 24, 1989.
2. Conduct conference.	Sept. 1988	
F. Deferred Compensation Plan		
1. Review SBI involvement in administration of plan.	Oct. 1988 - Mar. 1989	1. Issue to be brought to Administrative Committee Feb., 1989.
G. Consultant RFP		
1. Develop RFP.	Jan. 1989 - Mar. 1989	1. On schedule.
2. Conduct search.	Apr. 1989 - Jun. 1989	2. On schedule.
H. Information Sessions for Supplemental Fund Participants		
1. Plan and conduct information sessions around the state.	On-going	1. On schedule.
I. Social Investing		
1. Review by Proxy Committee.	-----	1. New project delegated to Proxy Committee.

Tab E

MEMBERS OF THE BOARD.
GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H. CARLSON
STATE TREASURER MICHAEL A. McGRATH
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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February 16, 1989

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

FROM: Equity Manager Committee
 Fixed Income Manager Committee

SUBJECT: Joint Committee Report

The Equity and Fixed Income Managers met jointly on February 15, 1989 to review the following items:

- o Review of Active Manager Performance
- o Results of Dedicated Bond Portfolio Rebalancing
- o Renewal of BEA Contract
- o Commitment to U.S. Government Loan Guaranteed Agricultural Export Program
- o Review of Manager Probation Policy
- o Recommendation to Retain Additional Active Stock Managers

INFORMATION ITEMS:

1. Review of Active Managers

The Joint Committee reviewed the performance reports for the active equity and fixed income managers. No action is required by the Board since all managers meet the qualitative and quantitative guidelines currently established. The Value of Active Management (VAM) Reports for each manager are attached for your review at the end of this tab section.

2. Results of Dedicated Bond Portfolio Balancing

The dedicated bond portfolio in the Post Retirement Fund was rebalanced in January after receipt of new liability stream data from the State's actuary.

Under current asset allocation policy, assets are to be committed to the dedicated bond portfolio sufficient to provide approximately 8% realized income (5% necessary to fund current benefits, 3% additional to fund a floor benefit increase).

In order to match the new projected liability stream, roughly \$200 million in common stocks would need to be liquidated in order to fully fund the dedicated bond portfolio. Rather than liquidate stocks at this time, other assets were used to cover 100% of the first ten years' liabilities and over 80% of the remaining years' projected liability stream. The remaining portion of liabilities will be filled in as cash flow permits.

It should be stressed that this action does not jeopardize the Post Fund's ability to pay currently promised benefits or meet the 5% realized earnings requirement.

ACTION ITEMS:

1. Renewal of BEA Contract

BEA Associates, New York, has been retained to manage a cash enhancement program in the Post Retirement Fund since April 1, 1987. The purpose of the program is to improve the rate of return earned on cash equivalents through the use of low risk stock index futures.

Since inception, BEA has outperformed its benchmark by 1.44%; 0.82% on an annualized basis. More information on BEA is included in Attachment A.

The Joint Committee concurred with a staff recommendation that BEA's contract be renewed for one year and that its portfolio be reduced from \$115 million to \$20 million. The proposed reduction will not impair BEA's ability to manage the cash enhancement program. In addition, this reduction will allow additional assets to be committed to the dedicated bond portfolio as discussed above.

Recommendation:

The Joint Committee recommends that the SBI authorize the Executive Director, with assistance from SBI legal counsel, to negotiate and execute a contract amendment with BEA Associates and to negotiate and execute all associated

custody agreements. The agreement should reflect the reduction in assets committed to the cash enhancement program and should include modifications to the incentive fee structure that reflect the lower funding level.

2. Commitment to U.S. Government Guaranteed Agricultural Export Loan Program

First National Bank of Chicago has presented a proposal for the State Board of Investment (SBI) to purchase agricultural export loan participations. The proceeds would be used to finance commodity shipments that qualify under the guaranty program of the U.S. Commodity Credit Corporation. The program is designed to reduce export costs and thereby make U.S. export products more competitive on the world markets.

SBI funds would be used to purchase floating rate notes. Proceeds from the purchase would be used to support a loan only if Minnesota holds a significant market share of the export commodity.

The states of Wisconsin and North Dakota have committed to the program under similar terms. A number of other states are reviewing participation as well.

Proposed Commitment: \$30 Million

Proposed Terms:

- o up to 3-year floating rate notes
- o interest rate will be 50 basis points over 6 month U.S. Treasury Bills
- o interest will be paid semi-annually
- o principal will be paid annually

Guaranty:

- o principal is 100% guaranteed by the U.S. government
- o the first four and one-half percentage points of interest is guaranteed by the U.S. government

The Joint Committee concurs with a staff recommendation that the SBI commit \$30 million to the program from assets in the Treasurer's Cash Pool. The terms of the notes are compatible with the structure of the short-term state cash accounts and the proposed interest rate is competitive with other short-term investments. If fully utilized, the commitment would comprise approximately 2% of the average daily balance in the Treasurer's Cash Pool.

Recommendation:

The Joint Committee recommends that the SBI authorize the Executive Director, with assistance from legal counsel, to negotiate and execute a commitment of up to \$30 million to the First National Bank of Chicago Agricultural Export Loan Program sponsored by the U.S. Commodity Credit Corporation.

3. Review of Manager Probation Status

In March 1988, the Board adopted a Manager Continuation Policy that established qualitative and quantitative guidelines for evaluating the SBI's active stock and bond managers. A summary of the guidelines is included in Attachment B.

At its meeting in December 1988, the Board asked the IAC to review these guidelines and asked for some guidance concerning the length of time a manager should remain on probation.

The Committee spent considerable time discussing whether a specific time period could be attached to expectations concerning manager performance versus the market. There was an agreement that an active manager should be expected to outperform an appropriate benchmark over time, but the Committee does not recommend a specific time frame for evaluation purposes.

Recommendation:

The Joint Committee reviewed the current policy and affirmed its basic structure. To address the Board's concerns, the Joint Committee recommends that the Board adopt two changes to its current policy:

1) Qualitative Factors

Add the following as an event that requires probation:

- o A significant gain or loss in number of accounts or clients under management over the previous year.

2) Quantitative Factors

Add the following concerning probation status:

A manager who continues on probation status for two successive quarters will be formally reviewed by staff and the appropriate committee of the IAC during the following quarter. The manager will be required to appear at the offices of the SBI and respond to a list of specific questions/concerns about its investment process

and actual performance. Board members and their deputies will be notified of the review sessions. The IAC will recommend continuation or termination of the firm based on the results of the evaluation.

4. Recommendation to Retain Additional Active Stock Managers

In September 1988, the IAC recommended that the Board retain four active equity managers and provide each with a \$100 million portfolio. The IAC renewed this recommendation in December 1988. The four firms are:

- o Rosenberg Institutional Equity Management
- o Franklin Portfolio Associates Trust
- o Sasco Capital, Inc.
- o Concord Capital Management

The Joint Committee discussed the role of active management at great length and voted unanimously to reaffirm the IAC's previous recommendations on this matter.

The Joint Committee makes this recommendation for the following reasons:

- o The Joint Committee believes the Board should reaffirm its stated commitment to active management in the Basic Retirement Funds. Specifically, the Committee endorses the current policy to target up to 50% of the stock and bond segments to active management. Approximately 50% of the bond segment is committed to active management. Presently, active management represents only 25% of the stock portfolio. The addition of the four managers at the recommended amounts would bring this level to 37%.
- o The current group of stock managers has a bias toward a "growth" style that has been magnified by recent manager terminations. Since active managers have not been hired to fill the resulting gap in the portfolio, the current situation represents an implicit "bet" on the growth style. The Committee is not comfortable with this implied bet and strongly recommends the Board take explicit action to correct it. The four recommended managers will help fill in the gap by adding the "value" style, an investment approach that has no representation in the portfolio at the present time.
- o The Joint Committee believes specific managers should be selected based on their demonstrated ability to add value to a benchmark that represents their investment style. The Value of Active Management (VAM) analysis is well suited to this task. The VAM analysis for each of the recommended managers indicates these firms have a high likelihood of providing superior performance in their stated area of expertise (see Attachments C,D,E,F).

Recommendation:

The Joint Committee recommends that the SBI authorize the Executive Director, with assistance from SBI's legal counsel, to negotiate and execute contracts with Rosenberg, Franklin, Sasco, and Concord and provide each manager with an initial portfolio of \$100 million.

ATTACHMENT A

MEMBERS OF THE BOARD
GOVERNOR RUDY PERPICH
STATE AUDITOR ARNE H. CARLSON
STATE TREASURER MICHAEL A. McGRATH
SECRETARY OF STATE JOAN ANDERSON GROWE
ATTORNEY GENERAL HUBERT H. HUMPHREY III



EXECUTIVE DIRECTOR
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STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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February 14, 1989

TO: Members, IAC Fixed Income Manager Committee
FROM: Mark Edwards
SUBJECT: Review of BEA Contract

I. INVESTMENT APPROACH

On April 1, 1987, BEA Associates was retained to manage a \$100 million cash enhancement program utilizing low risk stock index futures investment strategies. The purpose of cash enhancement is to both improve the rate of return earned on cash equivalents in the Post Retirement Fund and to provide the State Board with a practical introduction to the derivatives market. Assets committed to the cash enhancement fund are expected to generate returns 100-200 basis points above the alternative investment vehicle for cash management, represented by the State Street Short Term Investment Fund (STIF).

The cash enhancement strategies utilized by BEA all involve hedged positions, the simultaneous purchase and sale of two different stock index futures and listed options contracts. The purchase/sale combinations are developed to capture a perceived mispricing between the different contracts without incurring any market risk. Although there is no risk to principal, there is the risk that mispricings do not realign as expected and that returns fall short of the STIF alternative.

Mispricing opportunities occur during periods of high relative market volatility. During periods of market stability, opportunities are both less frequent and offer lower returns. In addition, opportunities tend to only last for short periods of time. Once the mispricings have been corrected by the market, BEA withdraws from the financial futures market. When not committed to the enhancement strategies, assets are managed as short term money market type securities.

ATTACHMENT A (con't)

II. PERFORMANCE

	QUARTER ENDING				YEAR ENDING	CUMMULATIVE SINCE INCEPTION
	<u>3/31/88</u>	<u>6/30/88</u>	<u>9/30/88</u>	<u>12/31/88</u>	<u>12/31/88</u>	<u>4/1/87</u>
Port.Value (\$ MM)	\$108.15	\$109.74	\$112.12	\$114.54		
Total Port. Return	2.17%	1.48%	2.17%	2.16%	8.22%	14.54%
BNMK (STIF) Return	1.73	1.72	1.90	2.05	7.61	13.10
<u>Contribution to Return:</u>						
Active Strategy						
Hedged Puts	.42%	--%	.09%	(.08)%	.44%	1.07%
Mkt. Spread	(.02)	(.28)	--	.02	(.28)	(.20)
Cash Mgmt.	<u>1.77</u>	<u>1.76</u>	<u>2.08</u>	<u>2.22</u>	<u>8.06</u>	<u>13.67</u>
	2.17%	1.48%	2.17%	2.16%	8.22%	14.54%

III. ANALYSIS

For the 12 months ending December 31, 1988 the return on the BEA cash enhancement fund returned 61 basis points over its benchmark. Of this amount, 45 basis points was added through cash management and 16 basis points was added through active strategies. Since inception, the cash enhancement program has added 144 basis points to the STIF return, or 82 basis points on an annualized basis. Active strategies have accounted for 87 basis points of the value added since inception, or 50 basis points on an annualized basis.

During the past year, active management was hurt by two events:

- o a second quarter increase in the relative spread between Value Line and S&P options, which resulted in a loss on an Inter-Market spread.
- o a lower level of post election market volatility than anticipated, which negated earlier hedge gains.

In addition, generally low levels of market volatility throughout the year reduced the number of attractive opportunities, resulting in a larger than expected level of assets committed to cash management.

IV. RECOMMENDATIONS

Staff recommends that BEA's contract be renewed for one year and that its portfolio be reduced from \$115 million to \$20 million. Further, staff recommends that the current fee structure be modified to reflect the new funding level and that the current custody agreement be renegotiated.

While BEA has added value to its benchmark, it has applied active strategies to only a small portion of its total assets. The proposed reduction will not impair BEA's ability to manage the cash enhancement program.

ATTACHMENT B

MANAGER CONTINUATION POLICY SUMMARY

Probation/termination decisions are based on a quarterly review of qualitative and quantitative factors.

Qualitative

A manager will be placed on probation if any of the following events occur:

- o A change in the firm's ownership or in the members of its management team.
- o A change in the manager's investment style.
- o An inability to create and maintain an appropriate benchmark portfolio.

If a manager cannot address these issues satisfactorily within two quarters, the manager will be terminated.

Other issues regarding the manager's organization and investment process may cause concern and warrant continued monitoring. However, they will not require probation/termination, as a general rule.

Quantitative

Using statistical methods, a confidence interval is constructed for each manager based on the manager's actual cumulative return relative to the manager's benchmark. Returns falling outside the confidence interval represent superior or inferior performance significant enough that the odds of it being due to chance are low. The confidence interval narrows over time. As more performance data is received, the ability to make judgments about a manager's investment skill increases, according to statistical theory.

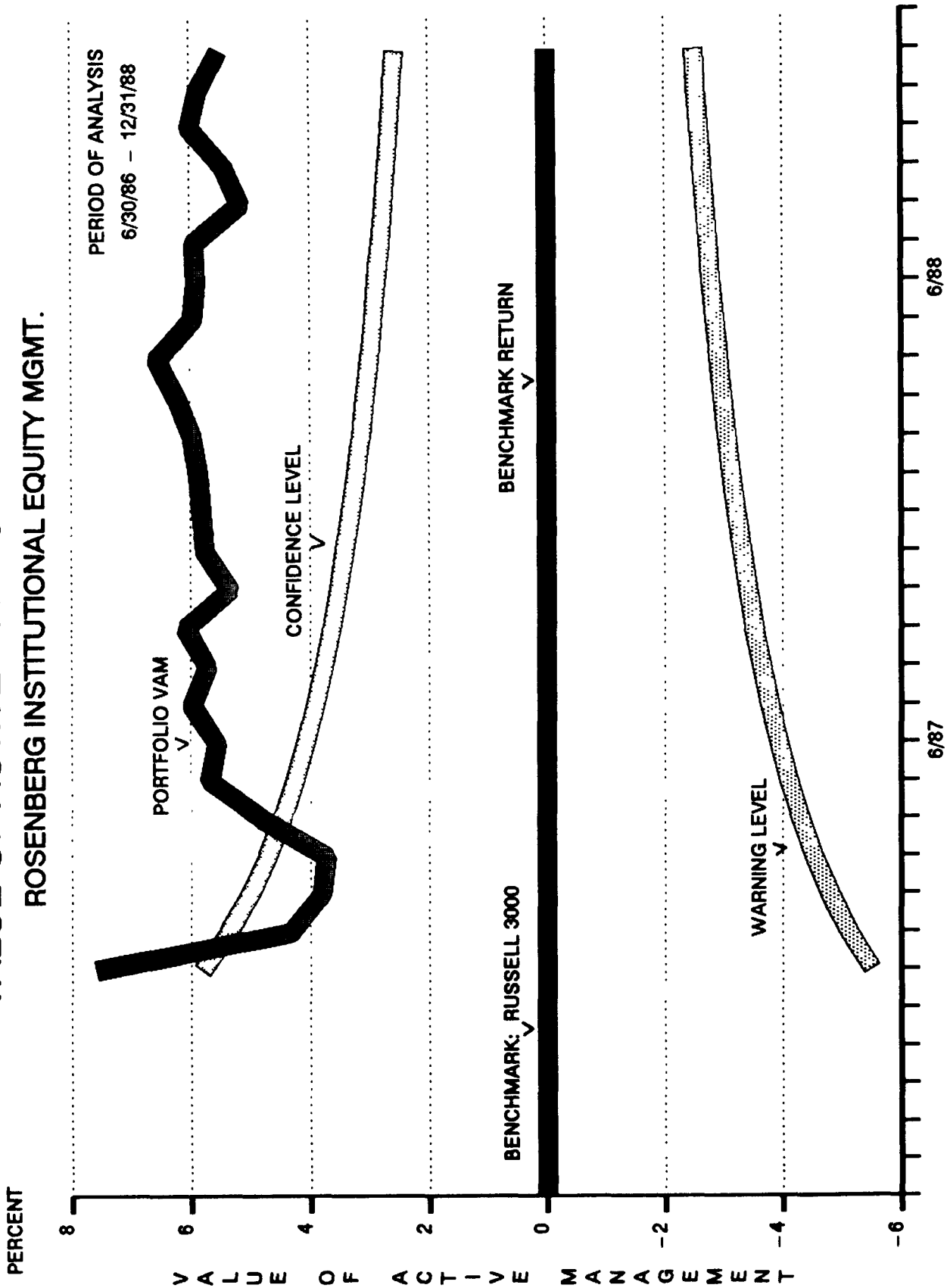
Probation Level: A cumulative return that falls below this level is low enough to cause concern, but the possibility that it is due to chance is still high. (1:5)

Termination Level: A cumulative return that falls below this level is significant enough that it is unlikely the manager possesses investment skill. (1:10)

There is no specified time limit to probation status for quantitative reasons.

VALUE OF ACTIVE MANAGEMENT REPORT

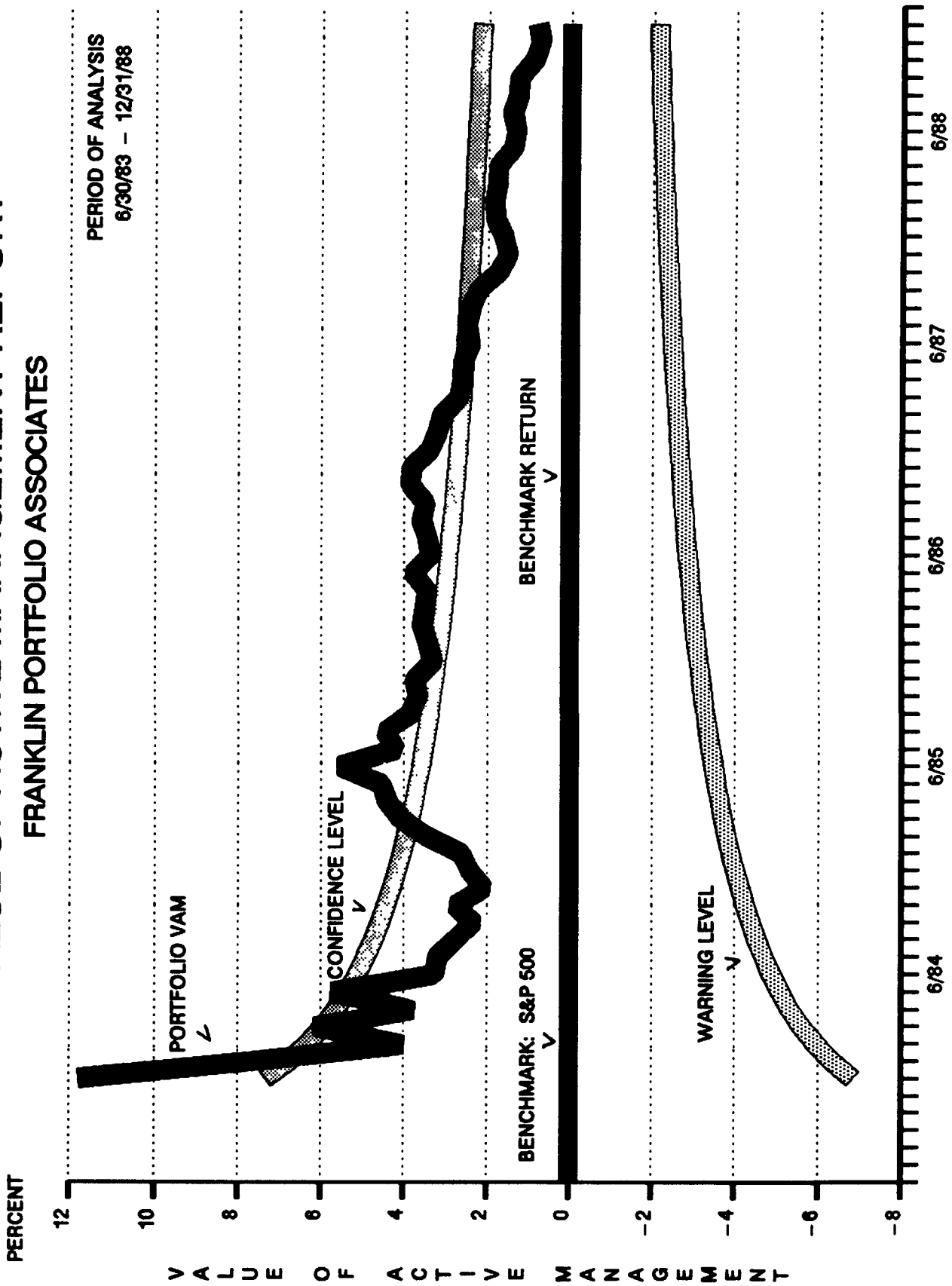
ROSENBERG INSTITUTIONAL EQUITY MGMT.



VALUE OF ACTIVE MANAGEMENT REPORT

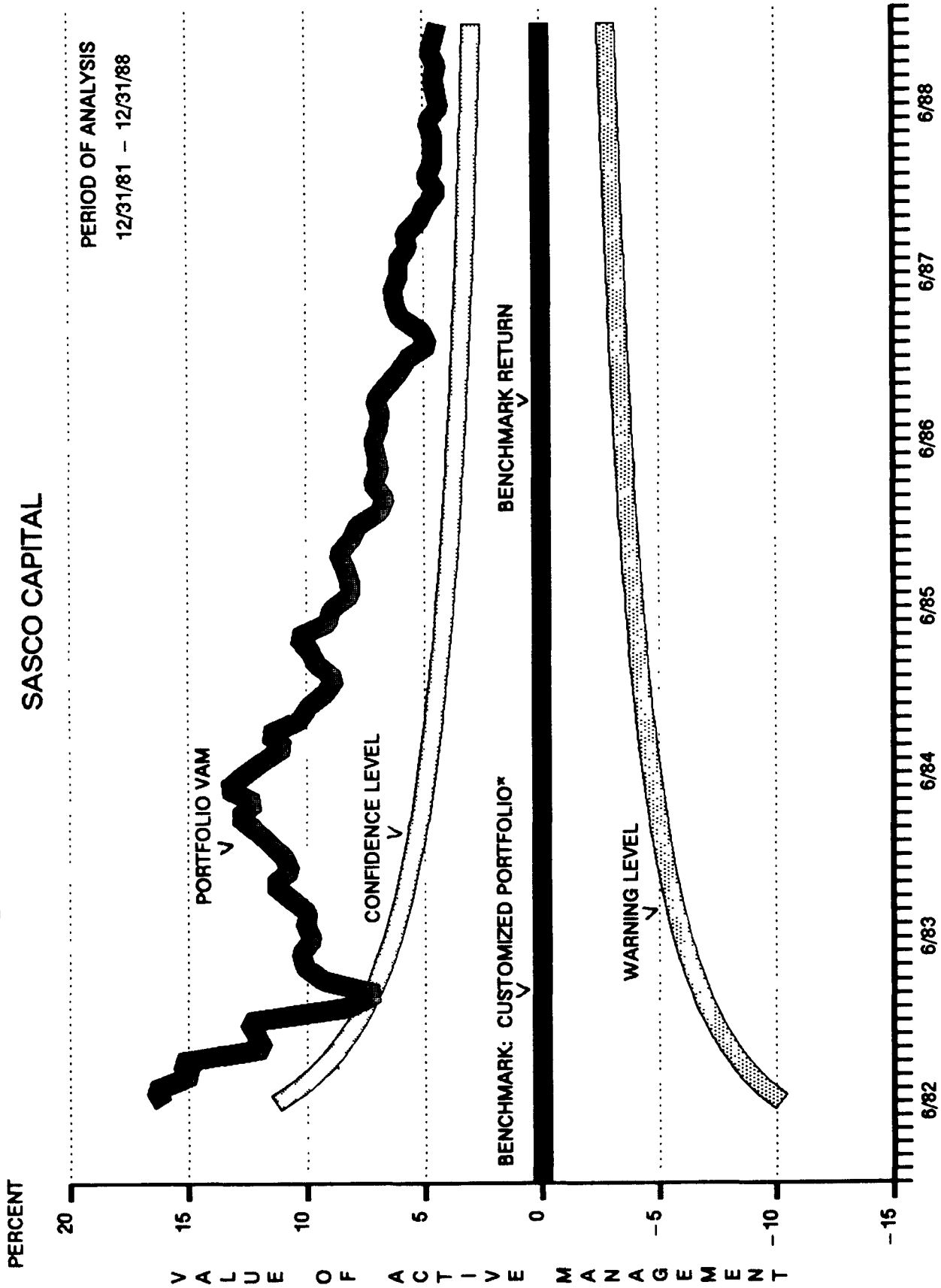
FRANKLIN PORTFOLIO ASSOCIATES

PERIOD OF ANALYSIS
6/30/83 - 12/31/88



VALUE OF ACTIVE MANAGEMENT REPORT

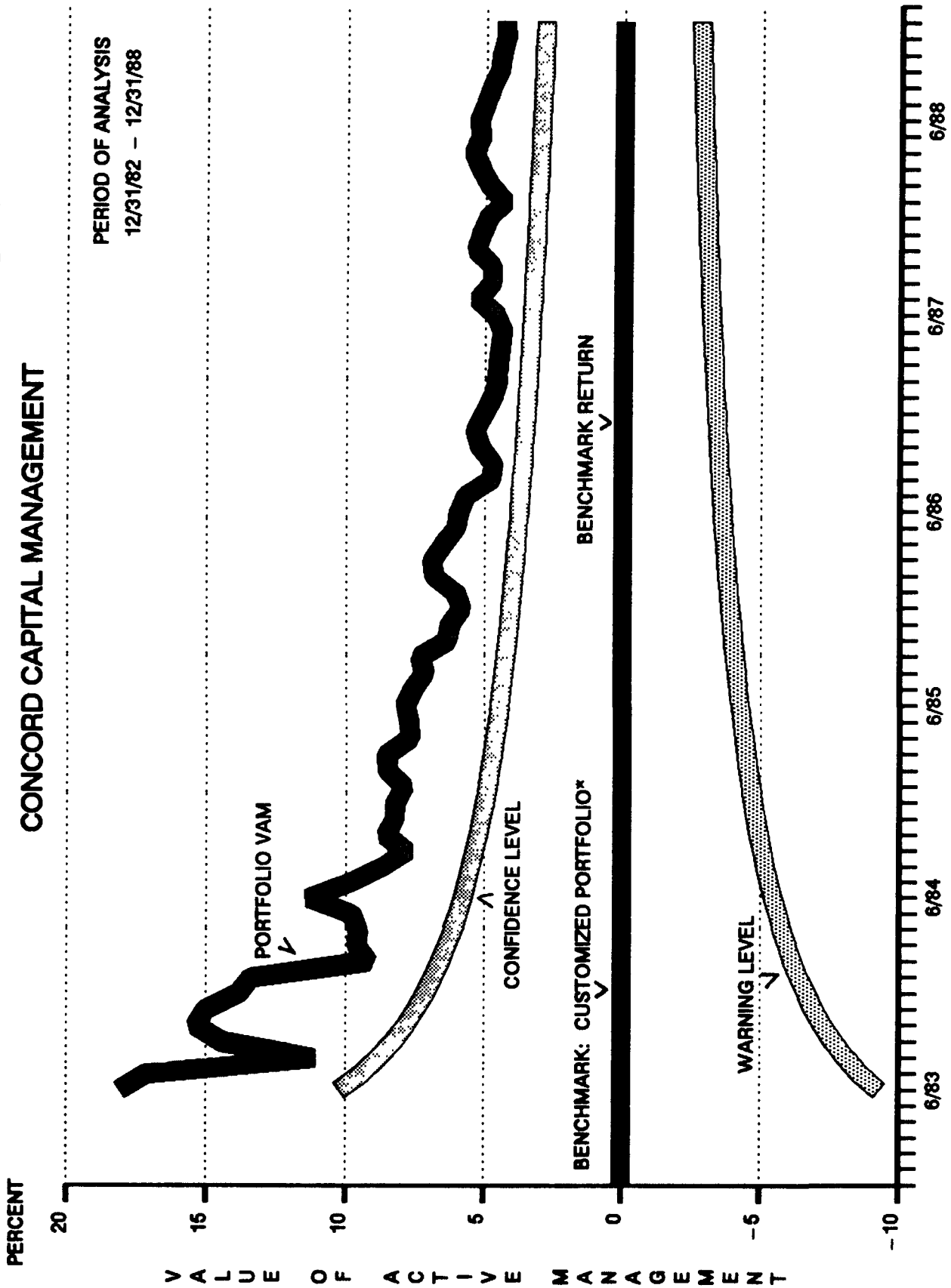
SASCO CAPITAL



* RETURNS PRIOR TO 10/83
ARE WILSHIRE 5000

VALUE OF ACTIVE MANAGEMENT REPORT CONCORD CAPITAL MANAGEMENT

PERIOD OF ANALYSIS
12/31/82 - 12/31/88



*RETURNS PRIOR TO 1/85 ARE A COMPOSITE
(50% S&P 500 - 50% VALUE LINE)

ACTIVE EQUITY MANAGERS

Value of Active Management Reports

Fourth Quarter 1988

Common stock manager returns are evaluated against the performance of customized indices constructed to represent the managers' specific investment approaches. These custom indices are commonly referred to as "benchmark portfolios." The benchmark portfolios take into account the equity market forces that at times favorably or unfavorably impact certain investment styles. Thus, benchmark portfolios are the appropriate bogeys against which to judge the managers' performance.

Manager performance relative to benchmarks is evaluated on a quarterly basis by the Equity Manager Committee of the Investment Advisory Council.

Staff Recommendations

Staff recommends the following actions concerning manager status:

- No action required.

Managers	Market Value 12/31/88 (Thousands)	Quarter Ending 12/31/88		Calendar Year To Date		Year Ending 12/31/88		(Annualized) Since 1/1/84	
		Actual	Bmrk	Actual	Bmrk	Actual	Bmrk	Actual	Bmrk
Alger	\$103,363	-4.1%	1.3%	3.5%	19.8%	3.5%	19.8%	8.8%	12.8%
Alliance	195,356	0.6	1.3	10.6	13.7	10.6	13.7	16.2	10.8
BMI	75,791	-2.2	1.2	26.5	20.2	26.5	20.2	8.6	10.6
Forstmann	170,672	2.6	1.6	10.4	14.6	10.4	14.6	13.8	11.4
IDS	134,298	1.6	2.3	5.3	16.2	5.3	16.2	13.6	14.0
LAI	98,031	1.8	3.0	3.9	15.9	3.9	15.9	12.4	14.2
Lieber & Co.	88,740	0.1	0.3	22.7	22.1	22.7	22.1	12.0	10.4
Waddell & Reed	142,018	1.2	0.9	10.4	16.4	10.4	16.4	10.5	10.4
Wilshire 5000		2.3%		17.9%		17.9%		13.9%	

PORTFOLIO MANAGER: David Alger

ASSETS UNDER MANAGEMENT: \$103,362,592

INVESTMENT PHILOSOPHY

Fred Alger searches for companies expected to experience above-consensus earnings gains. These earnings gains may be either cyclical or secular. The firm focuses on two types of companies: first, companies whose product is expected to achieve high consistent unit volume growth rates; and, second, companies undergoing a positive life cycle change not yet fully recognized by the market. The proportion of the total portfolio invested in these two types of companies varies over time. On average, however, the high unit growth companies tend to dominate the total portfolio. Fred Alger is not an active market timer, usually maintaining a fully invested position.

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Growth plan not in place.
- Significant account loss experienced during past year.
- Loss of key research professional

The first item remains outstanding. The recent account losses and the loss of a key investment professional cause concern and warrant continued monitoring.

The firm's exceptional strengths continue to be:

- Highly successful and experienced professionals.
- Organizational continuity and strong leadership.
- Extensive securities research process.

QUANTITATIVE EVALUATION**Performance Relative to Benchmark**

	Calendar			Since 1/1/84	
	Latest Quarter	Year To Date	Latest Year	Year Annualized	
Fred Alger Actual	-4.1%	3.5%	3.5%	8.8%	
Fred Alger Benchmark	1.3%	19.8	19.8	12.8	

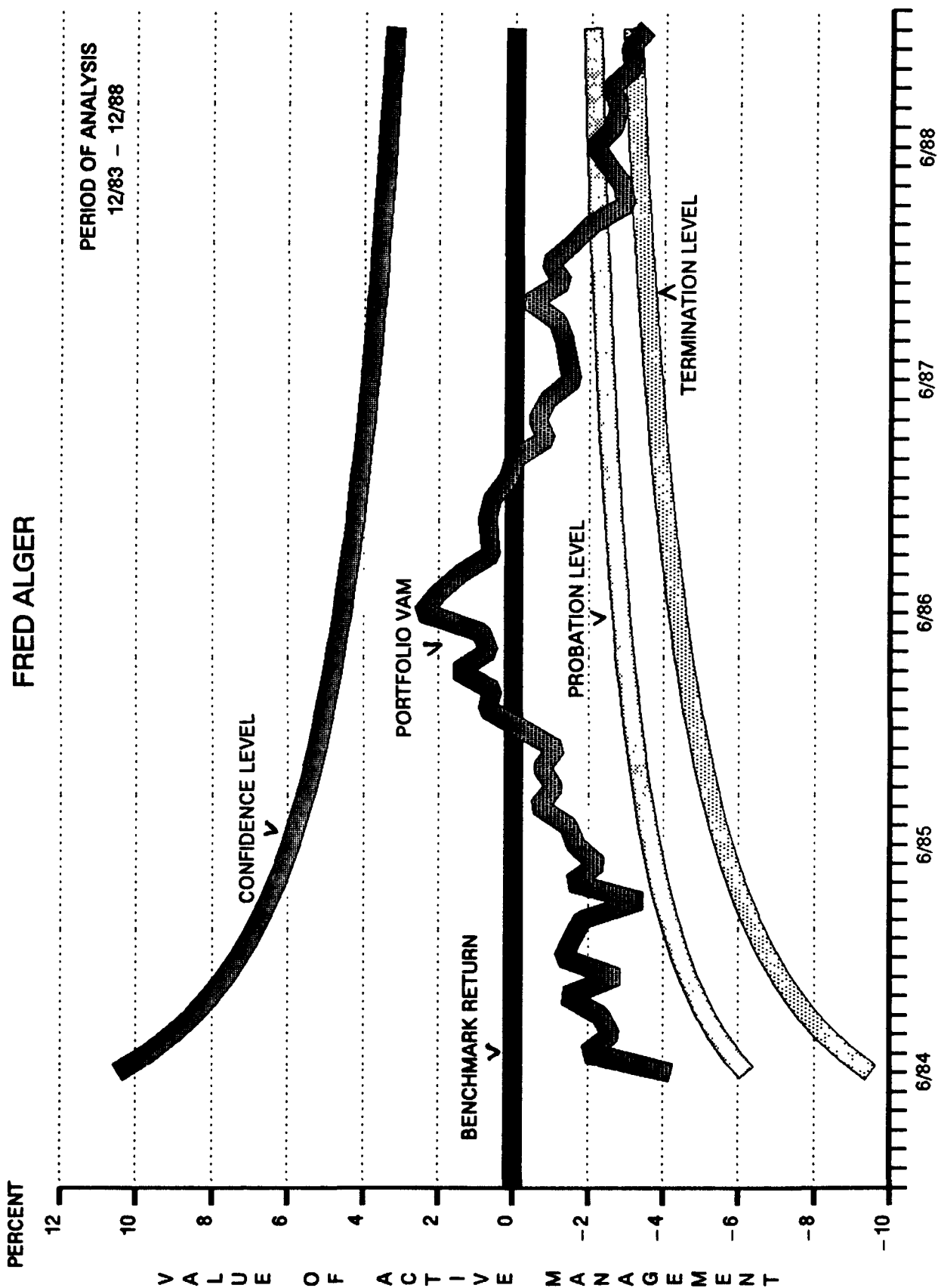
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required. The manager was terminated effective December 31, 1988.

VALUE OF ACTIVE MANAGEMENT REPORT

FRED ALGER



ALLIANCE CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Jack Koltes

ASSETS UNDER MANAGEMENT: \$195,355,773

INVESTMENT PHILOSOPHY

Alliance searches for companies likely to experience high rates of earnings growth, on either a cyclical or secular basis. Alliance has invested in a wide range of growth opportunities from small, emerging growth to large, cyclically sensitive companies. There is no clear distinction on the part of the firm as to an emphasis on one particular type of growth company over another. However, the firm's decision-making process appears to be much more oriented toward macroeconomic considerations than is the case with most other growth managers. Accordingly, cyclical earnings prospects, rather than secular, appear to play a larger role in terms of stock selection. Alliance is not an active market timer, rarely raising cash above minimal levels.

QUALITATIVE EVALUATION

(Reported By Exception)

The firm's exceptional strengths continue to be:

- Highly successful and experienced professionals.
- Organizational continuity and strong leadership.
- Well-acquainted with needs of large clients.
- Investment style consistently and successfully applied over a variety of market environments.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Calendar			
	Latest Quarter	Year To Date	Latest Year	Since 1/1/84 Annualized
Alliance Capital Actual	0.6%	10.6%	10.6%	16.2%
Alliance Capital Benchmark	1.3	13.7	13.7	10.8

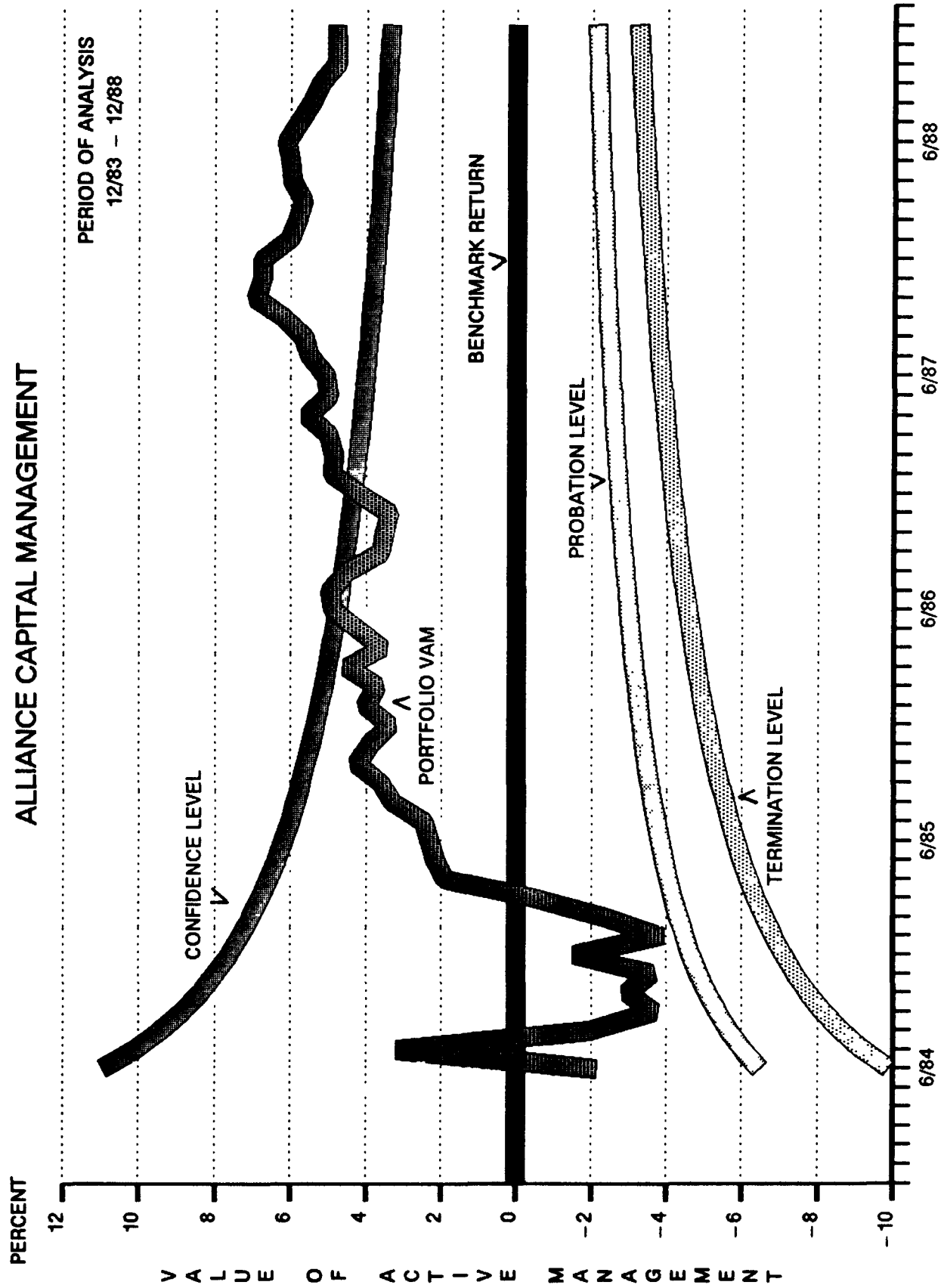
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT

ALLIANCE CAPITAL MANAGEMENT



Performance Report

Fourth Quarter 1988

BMI CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Frank Houghton, James Awad

ASSETS UNDER MANAGEMENT: \$75,790,839

INVESTMENT PHILOSOPHY

BMI's investment approach focuses on companies expected to exhibit strong sustained earnings gains. BMI attempts to identify two types of "growth" companies: first, misperceived companies that are in the process of undergoing dynamic changes that will cause them to produce materially higher earnings over the near-term; and, second, small-to-medium sized companies that exhibit the potential for rapid future earnings growth. The weighting of the two types of growth companies within the firm's portfolio will vary over time depending upon economic and financial conditions. Generally, however, the misperceived companies will make up the majority of the portfolio. On the other hand, the smaller high growth companies tend to dominate the portfolio's risk characteristics. The firm concentrates almost exclusively on stock selection, only rarely raising cash to significant levels.

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Lack of clearly identifiable leadership.

This issue, while not serious, warrants continued monitoring.

The firm's exceptional strengths continue to be:

- Extensive securities research process.

QUANTITATIVE EVALUATION

		Performance Relative to Benchmark		
		Calendar		Since 1/1/84
	Latest Quarter	Year To Date	Latest Year	Annualized
BMI Capital Actual	-2.2%	26.5%	26.5%	8.6%
BMI Capital Benchmark	1.2	20.2	20.2	10.6

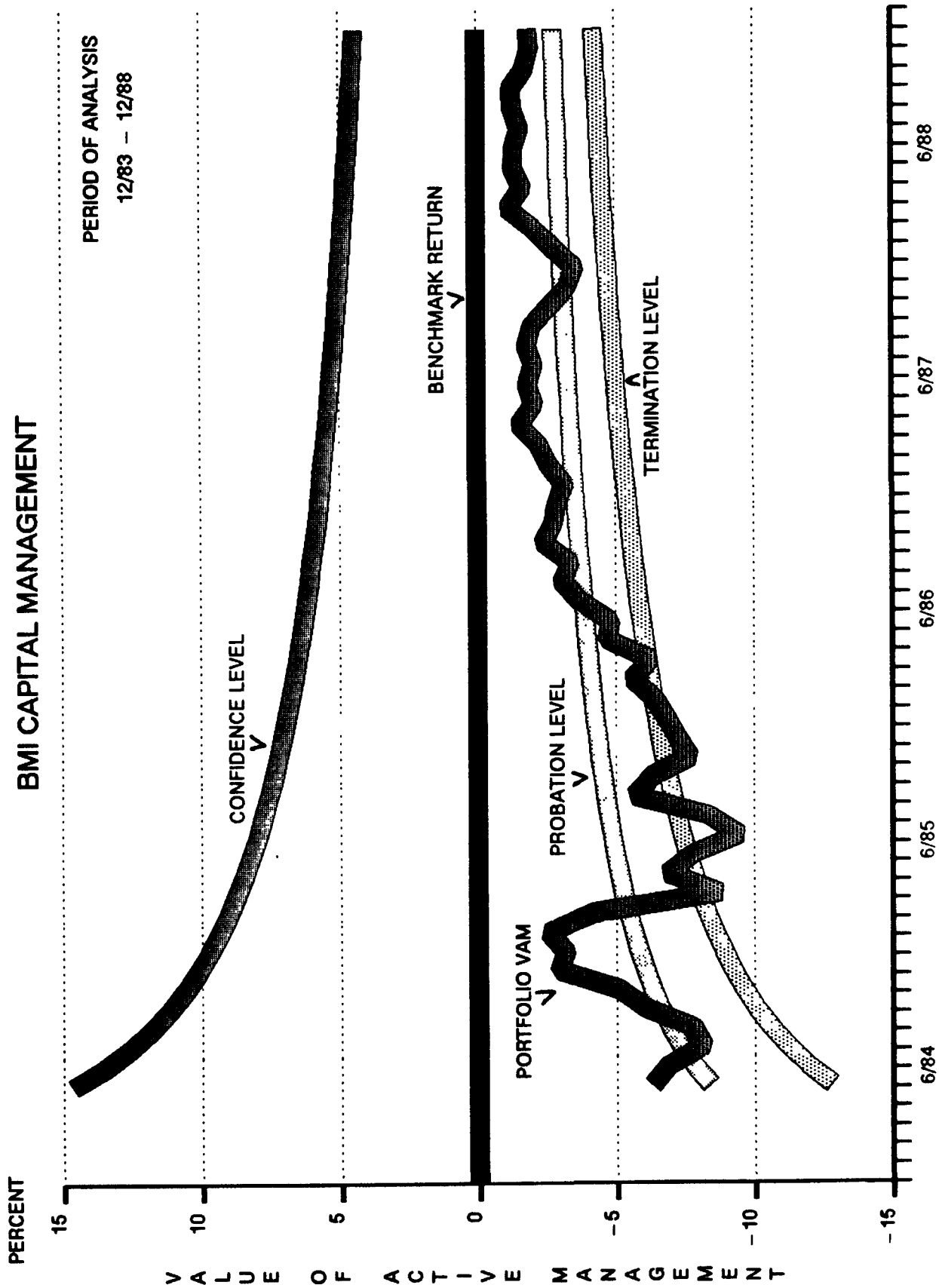
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT

BMI CAPITAL MANAGEMENT



Performance Report

Fourth Quarter 1988

FORSTMANN LEFF ASSOCIATES

PORTFOLIO MANAGER: Joel Leff

ASSETS UNDER MANAGEMENT: \$170,671,830

INVESTMENT PHILOSOPHY

Forstmann Leff is a classic example of a "rotational" manager. The firm focuses almost exclusively on asset mix and sector weighting decisions. Based upon its macroeconomic outlook, the firm will move aggressively into and out of asset classes and equity sectors over the course of a market cycle. The firm tends to purchase liquid, large capitalization stocks. Forstmann Leff will make sizable market timing moves at any point during a market cycle.

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Relatively high turnover among firm's professionals.

This issue, while not serious, remains outstanding.

The firm's exceptional strengths continue to be:

- Highly successful and experienced professionals.
- Investment style consistently and successfully applied over a variety of market environments.
- Well-acquainted with needs of large clients.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark			
	Calendar			Since 1/1/84
	Latest Quarter	Year To Date	Latest Year	
Forstmann-Leff Actual	2.6%	10.4%	10.4%	13.8%
Forstmann-Leff Benchmark	1.6%	14.6	14.6	11.4

(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

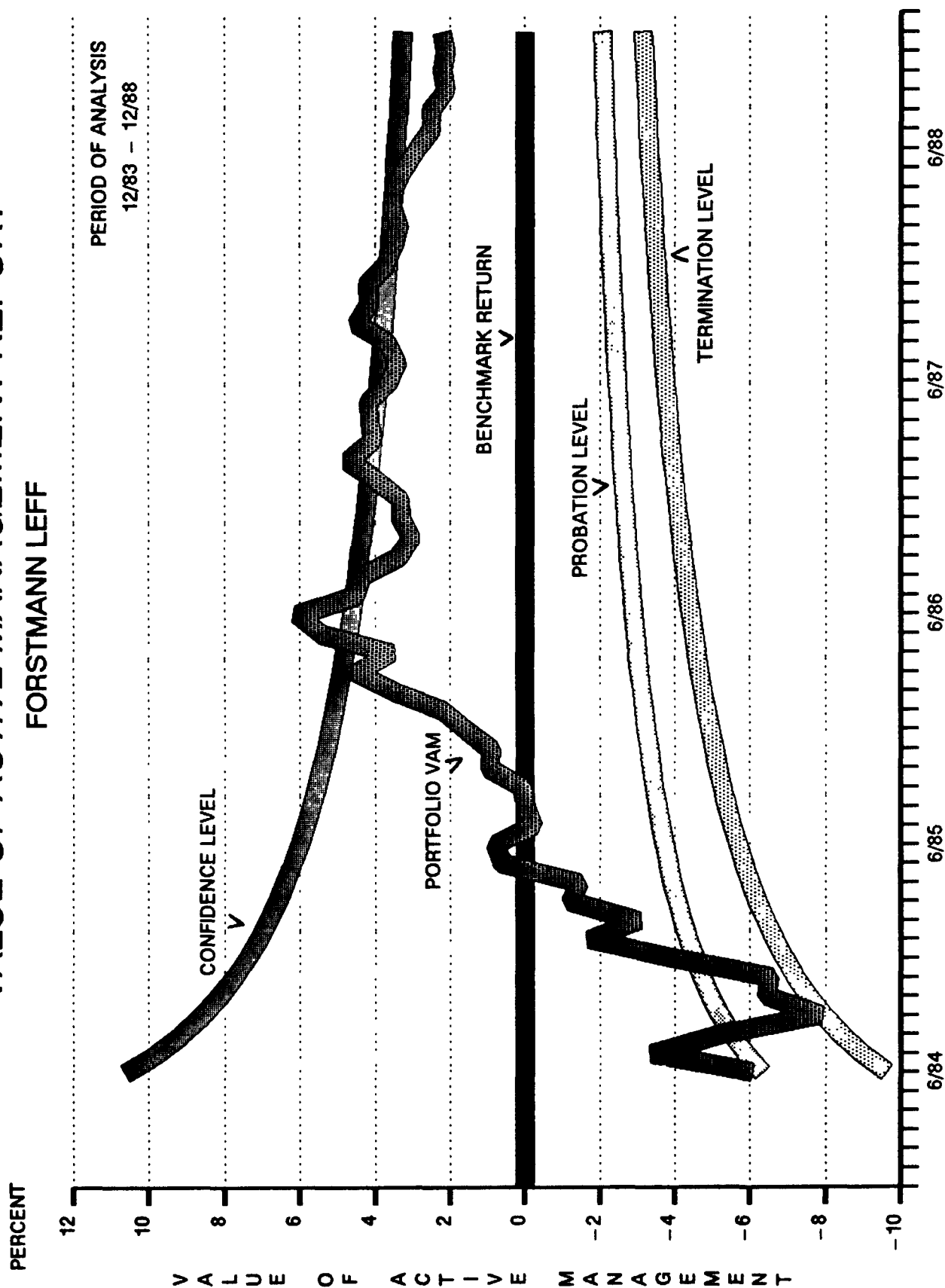
No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

FORSTMANN LEFF

PERIOD OF ANALYSIS

12/83 - 12/88



Performance Report

Fourth Quarter 1988

IDS ADVISORY

PORTFOLIO MANAGER: Mitzi Malevich

ASSETS UNDER MANAGEMENT: \$134,298,316

INVESTMENT PHILOSOPHY

IDS employs a "rotational" style of management, shifting among industry sectors based upon its outlook for the economy and the financial markets. The firm emphasizes primarily sector weighting decisions. Moderate market timing is also used. Over a market cycle IDS will invest in a wide range of industries. It tends to buy liquid, large capitalization stocks. While IDS will make occasional significant asset mix shifts over a market cycle, the firm is a less aggressive market timer than most rotational managers.

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Growth plan not in place.
- Account load for portfolio managers is large.

These items remain outstanding and, while not serious, should continue to be monitored.

The firm's exceptional strengths continue to be:

- Investment style consistently and successfully applied over a variety of market environments.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Calendar			Since 1/1/84	
	Latest Quarter	Year To Date	Latest Year	Year	Annualized
IDS Advisory Actual	1.6%	5.3%	5.3%		13.6%
IDS Advisory Benchmark	2.3%	16.2	16.2		14.0

(See Value of Active Management graph below)

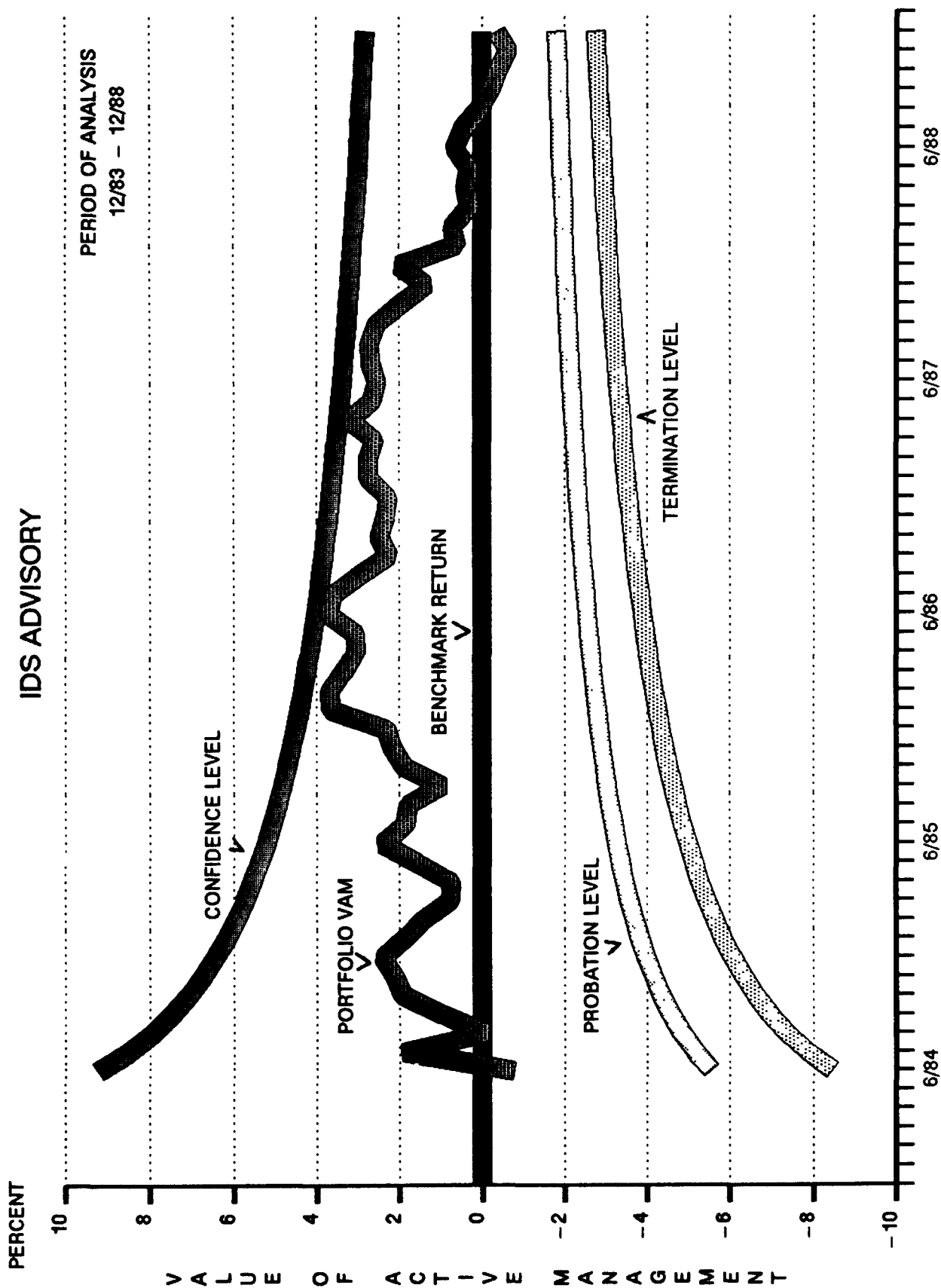
STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

IDS ADVISORY

PERIOD OF ANALYSIS
12/83 - 12/88



PORTFOLIO MANAGER: Charles Webster

ASSETS UNDER MANAGEMENT: \$98,030,844

INVESTMENT PHILOSOPHY

Investment Advisers is a "rotational" manager. Its macroeconomic forecasts drive its investment decision-making. The firm emphasizes market timing and sector weighting decisions. Investment Advisers will invest in a wide range of industries over a market cycle. It tends to hold liquid, medium to large capitalization stocks. The firm is an active market timer, willing to make gradual but significant asset mix shifts over a market cycle.

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Growth plan not in place.
- Lack of familiarity with needs of large institutional clients.

The first item, while not serious, warrants additional monitoring. While the firm continues to address the second issue, staff believes additional monitoring is warranted.

The firm's exceptional strengths continue to be:

- Investment style consistently applied over a variety of market environments.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Calendar			Since 1/1/84	
	Latest Quarter	Year To Date	Year	Latest Year	Annualized
IAI Actual	1.8%	3.9%	3.9%	3.9%	12.4%
IAI Benchmark	3.0	15.9	15.9	15.9	14.2

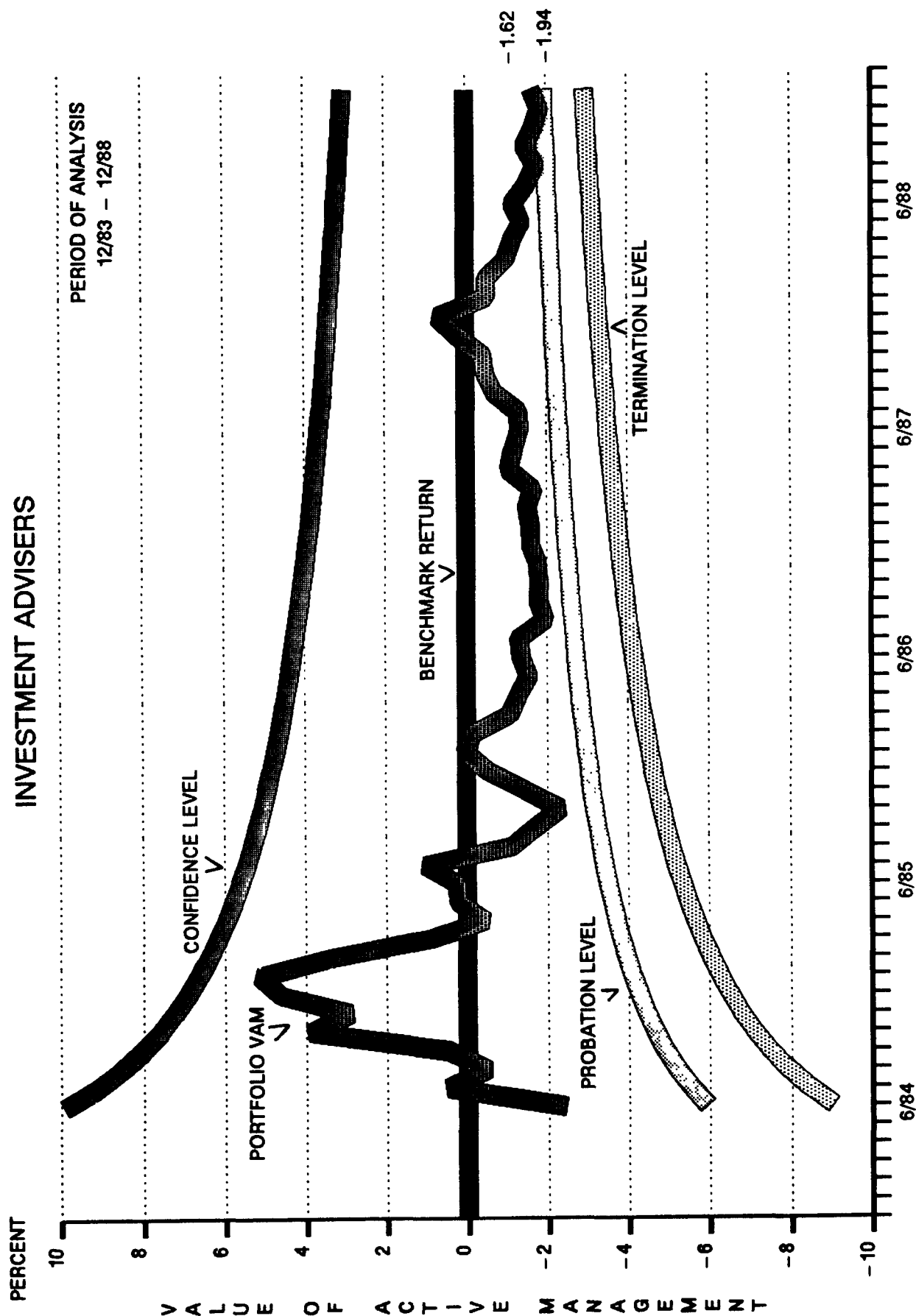
STAFF RECOMMENDATIONS

No action required.

(See Value of Active Management graph below)

VALUE OF ACTIVE MANAGEMENT REPORT

INVESTMENT ADVISERS



LIEBER & COMPANY

PORTFOLIO MANAGER: Stephen Lieber, Nola Falcone

ASSETS UNDER MANAGEMENT: \$88,740,263

INVESTMENT PHILOSOPHY

Lieber and 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 return on equity, small-to-medium sized companies. The stocks may be undervalued due to the failure of investors to recognize fully either the value of new products or a successful turnaround situation. Particularly attractive to Lieber are small-to-medium size takeover candidates. The firm generally is fully invested, with any cash positions the result of a lack of attractive investment concepts.

QUALITATIVE EVALUATION

The previous evaluation noted several items of concern:

- Firm is unfamiliar with needs of large clients.
- No analysis of performance relative to benchmark.

These concerns remain largely unresolved. The firm is currently undertaking the task of developing its own customized benchmark portfolio. Staff is confident that the firm will provide that a satisfactory resolution of these issues in the near future.

The firm's exceptional strengths continue to be:

- Organizational continuity and strong leadership.
- Attractive, unique investment approach.
- Investment style consistently and successfully applied over a variety of market environments.
- Extensive securities research process.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark			
	Calendar		Since 1/1/84	
	Latest Quarter	Year To Date	Latest Year	Annualized
Lieber & Co. Actual	0.1%	22.7%	22.7%	12.0%
Lieber & Co. Benchmark	0.3	22.1	22.1	10.4

(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

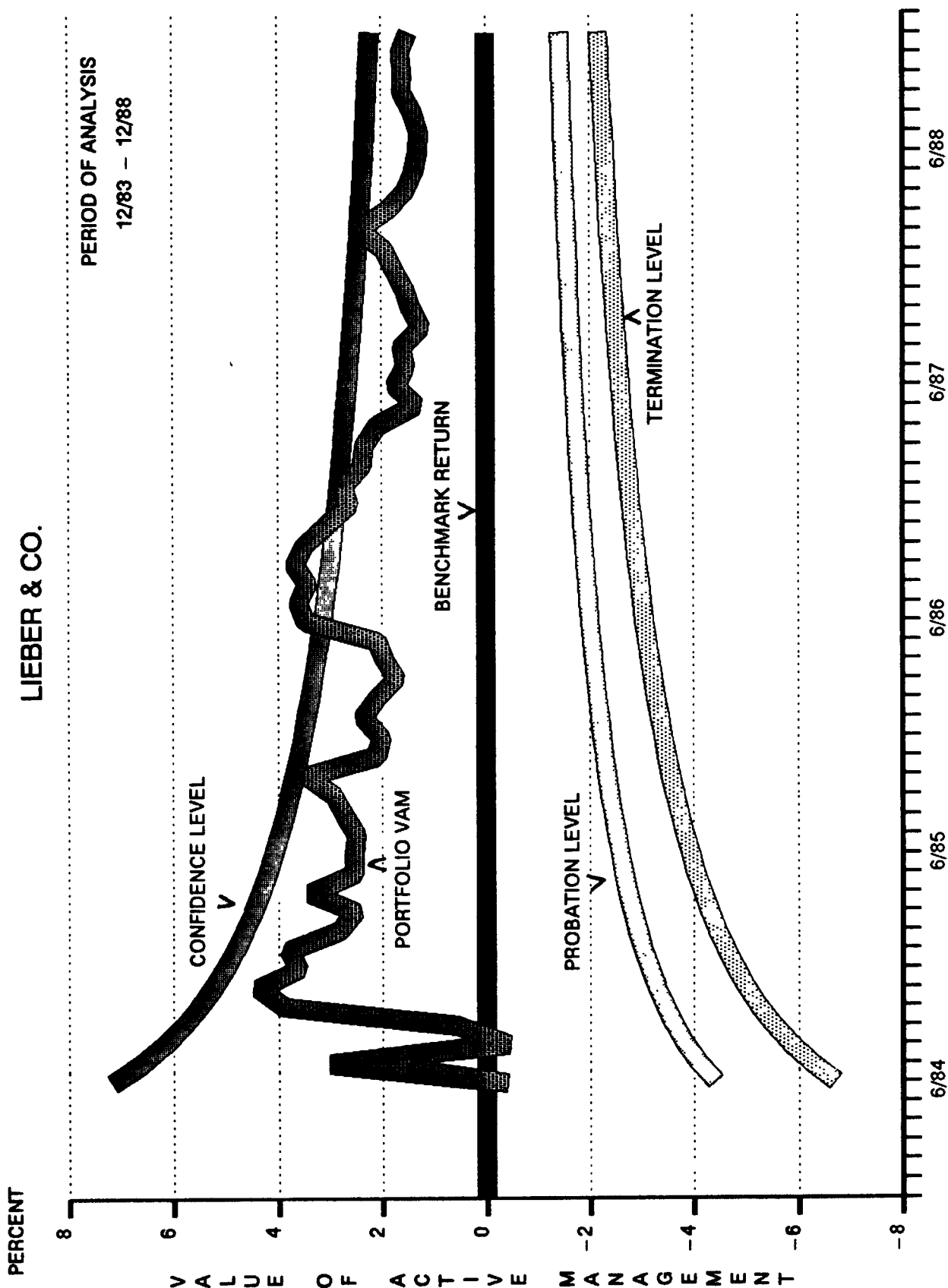
No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

LIEBER & CO.

PERIOD OF ANALYSIS

12/83 - 12/88



Performance Report

Fourth Quarter 1988

WADDELL & REED

PORTFOLIO MANAGER: Henry Herrman

ASSETS UNDER MANAGEMENT: \$142,018,114

INVESTMENT PHILOSOPHY

Waddell & Reed focuses its attention primarily on smaller capitalization growth stocks, although the firm has been very eclectic in its choice of stocks in recent years. However, the firm has demonstrated a willingness to make significant bets against this investment approach for extended periods of time. The firm is an active market timer and will raise cash to extreme levels at various points in the market cycle.

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Insufficient effort to understand performance relative to an appropriate benchmark.

This issue warrants further monitoring and discussion with the firm.

The firm's exceptional strengths continue to be:

- Highly successful and experienced professionals.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Calendar			Since 1/1/84	
	Latest Quarter	Year To Date	Latest Year	Annualized	
Waddell & Reed	1.2%	10.4%	10.4%	10.5%	
Waddell & Reed Benchmark	0.9	16.4	16.4	10.4	

STAFF RECOMMENDATIONS

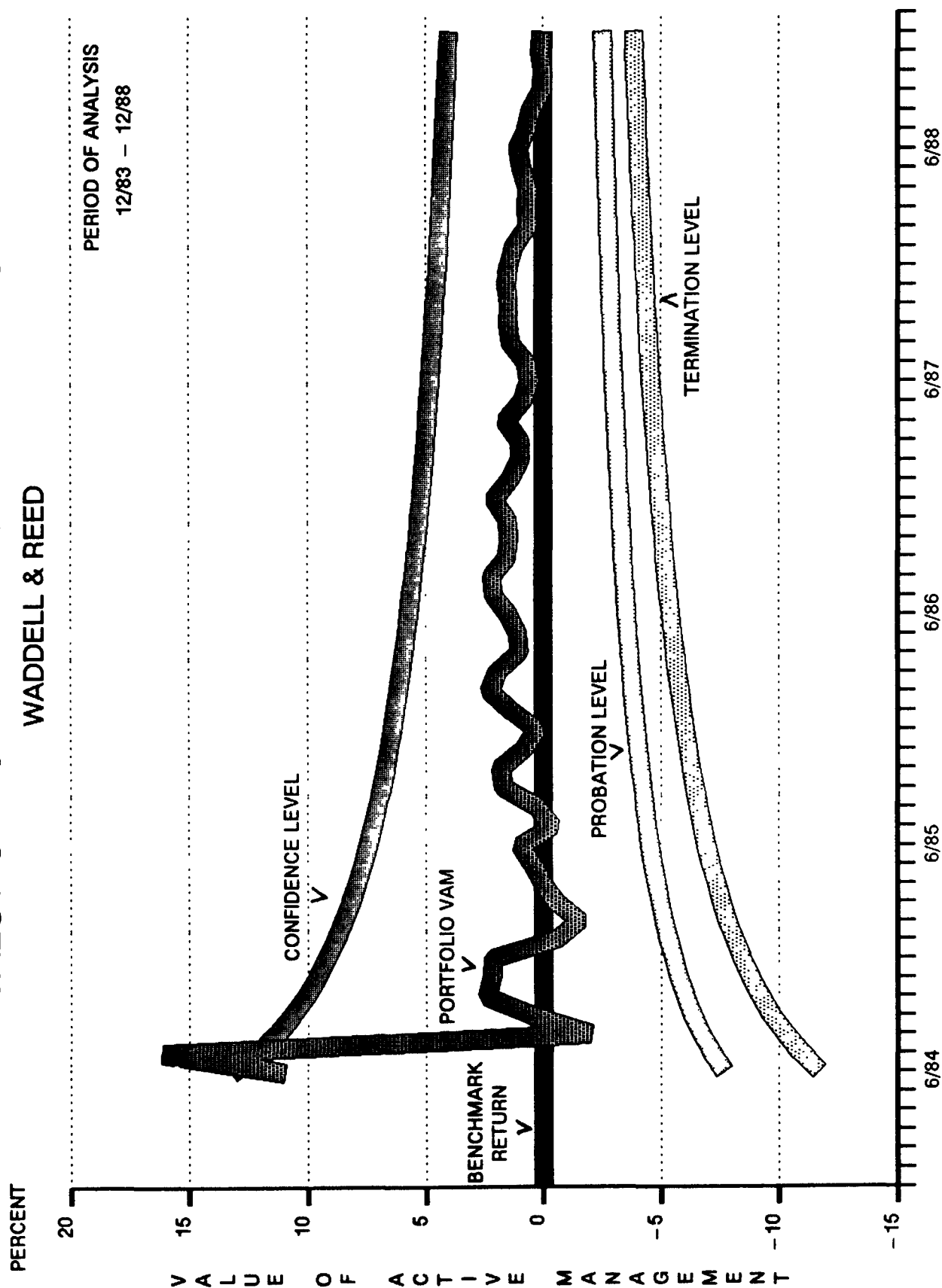
No action required.

(See Value of Active Management graph below)

VALUE OF ACTIVE MANAGEMENT

WADDELL & REED

PERIOD OF ANALYSIS
12/83 - 12/88



ACTIVE BOND MANAGERS

Value of Active Management Reports

Fourth Quarter 1988

Staff worked with the Board's bond managers to develop appropriate benchmark portfolios. During the fourth quarter, the Board approved benchmarks for IAI, Morgan Stanley, and Miller Anderson. IAI, Lehman, Morgan Stanley, and Western Asset have customized benchmarks, while Miller Anderson will continue to use the Salomon Broad Investment Grade index as its standard. Staff will report performance relative to the new benchmarks starting with the next reporting period.

Staff Recommendations

Staff recommends the following actions concerning manager status:

- No action required.

Manager performance relative to benchmarks is evaluated on a quarterly basis by the Fixed Income Manager Committee of the Investment Advisory Council.

Managers	Market Value 12/31/88 (Thousands)	Quarter Ending 12/31/88		Calendar Year To Date		Year Ending 12/31/88		(Annualized) Since 7/1/84	
		Actual	Bmrk	Actual	Bmrk	Actual	Bmrk	Actual	Bmrk
IAI	\$ 47,664	0.6%	0.8%	6.9%	7.9%	6.9%	7.9%	14.3%	13.9%
Lehman	108,258	0.8	0.9	8.1	7.4	8.1	7.4	13.2	13.2
Miller Anderson	160,867	1.6	0.8	8.8	7.9	8.8	7.9	14.6	13.9
Morgan Stanley	103,802	0.3	0.8	5.6	7.9	5.6	7.9	13.3	13.9
Western Asset	192,060	1.5	0.9	11.4	8.7	11.4	8.7	15.6	14.0
Salomon Broad Investment Grade Index		0.8%		8.0%		8.0%		14.3%	

Performance Report

Fourth Quarter 1988

INVESTMENT ADVISERS

PORTFOLIO MANAGER: Larry Hill

ASSETS UNDER MANAGEMENT: \$47,664,324

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 analyses consistent with the interest rate forecasts. Individual security selection receives very limited emphasis, focusing largely on specific bond characteristics such as call provisions.

QUALITATIVE EVALUATION

(Reported By Exception)

The current evaluation notes the following concern:

- New benchmark adopted.

The SBI approved a customized benchmark for IAI at its December 1988 meeting. The new benchmark will be incorporated in the first quarter 1989 return analysis. This issue deserves close monitoring over the next several quarters to judge the continuing appropriateness of the new benchmark and Investment Adviser's return relative to that benchmark.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark			
	Calendar		Since 6/30/84	
	Latest Quarter	Year To Date	Latest Year	Annualized
IAI Actual	0.6%	6.9%	6.9%	14.3%
IAI Benchmark	0.9	7.9	7.9	13.9

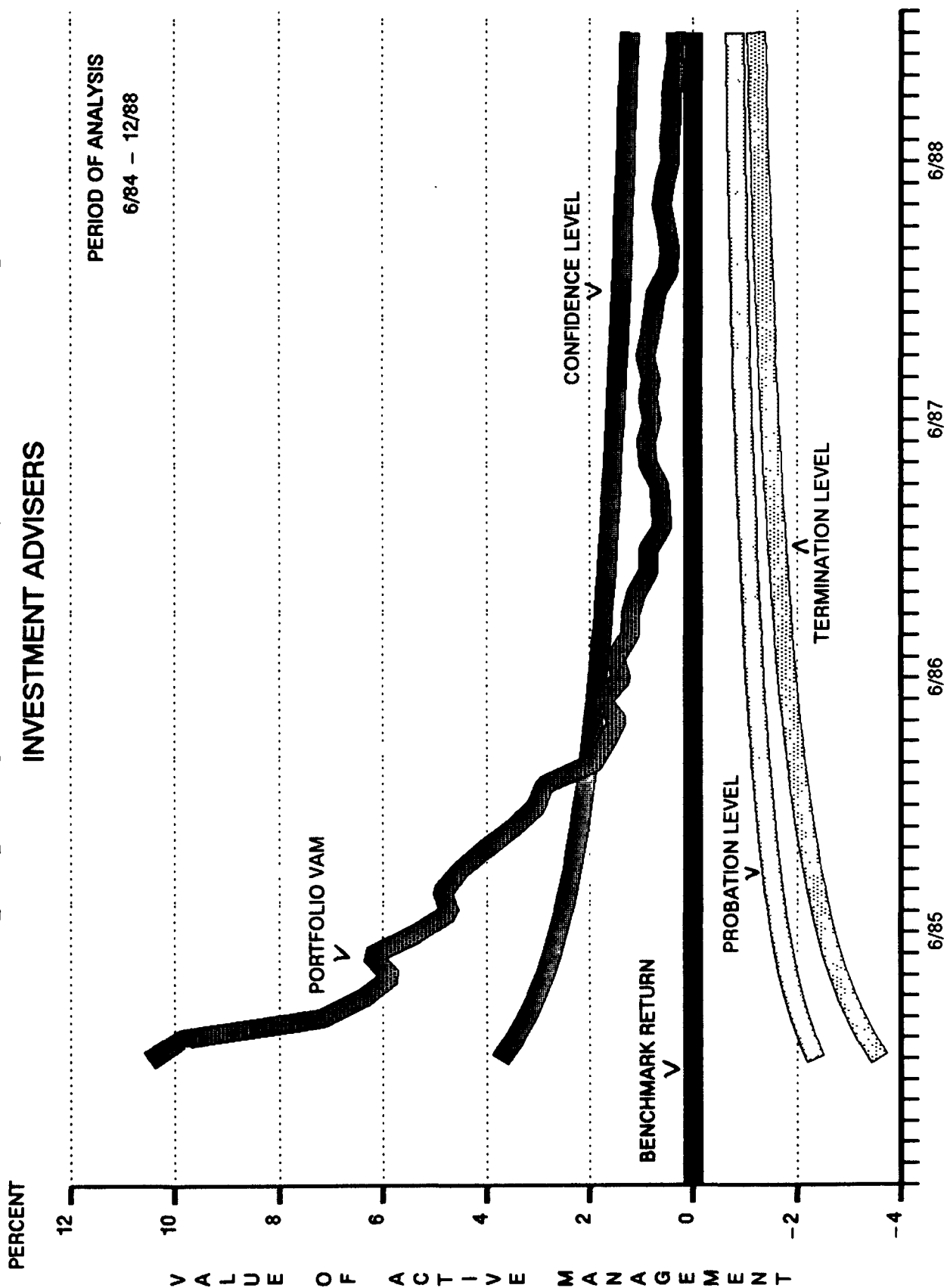
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

INVESTMENT ADVISERS



Performance Report

Fourth Quarter 1988

LEHMAN MANAGEMENT

PORTFOLIO MANAGER: Paul Hutter

ASSETS UNDER MANAGEMENT: \$108,257,693

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.

QUALITATIVE EVALUATION
(Reported By Exception)

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark			
	Calendar		Since 6/30/84	
	Latest Quarter	Year To Date	Latest Year	Annualized
Lehman Actual	0.8%	8.1%	8.1%	13.2%
Lehman Benchmark	0.9	7.4	7.4	13.2

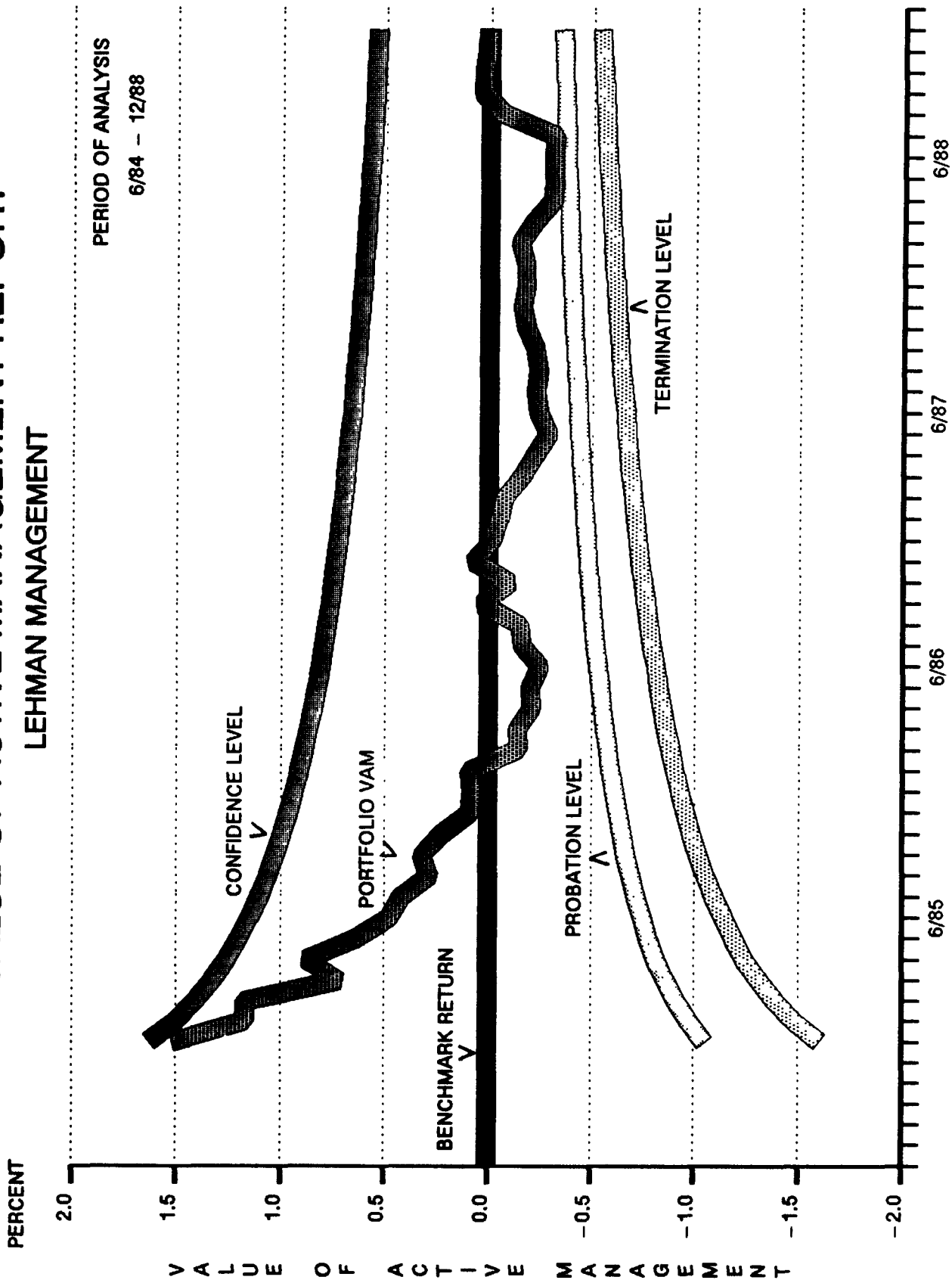
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT

LEHMAN MANAGEMENT



Performance Report

Fourth Quarter 1988

MILLER ANDERSON

PORTFOLIO MANAGER: Tom Bennet

ASSETS UNDER MANAGEMENT: \$160,866,883

INVESTMENT PHILOSOPHY

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 and specialized corporate securities in its portfolios. 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 securities and cash levels that are consistent with the portfolio's desired maturity. However, such moves are made gradually over an interest rate cycle and extremely high cash positions are never taken. Total portfolio maturity is always kept within an intermediate three-to-seven year duration band. Unlike 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.

QUALITATIVE EVALUATION

(Reported By Exception)

The current evaluation notes the following concern:

- Assets under management have grown substantially in the last year.

This item, while not serious, merits attention. Staff will monitor Miller Anderson to ensure that the firm maintains its managerial and strategic flexibility.

- Benchmark ratified.

At its December 1988 meeting, the SBI approved the use of the Salomon Broad Investment Grade (BIG) index as the benchmark for Miller Anderson.

QUANTITATIVE EVALUATION

Miller Actual Miller Benchmark	Performance Relative to Benchmark			
	Calendar			Since 6/30/84
	Latest Quarter	Year To Date	Latest Year	Annualized
	1.6%	8.8%	8.8%	14.6%
	0.8	7.9	7.9	13.9

(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

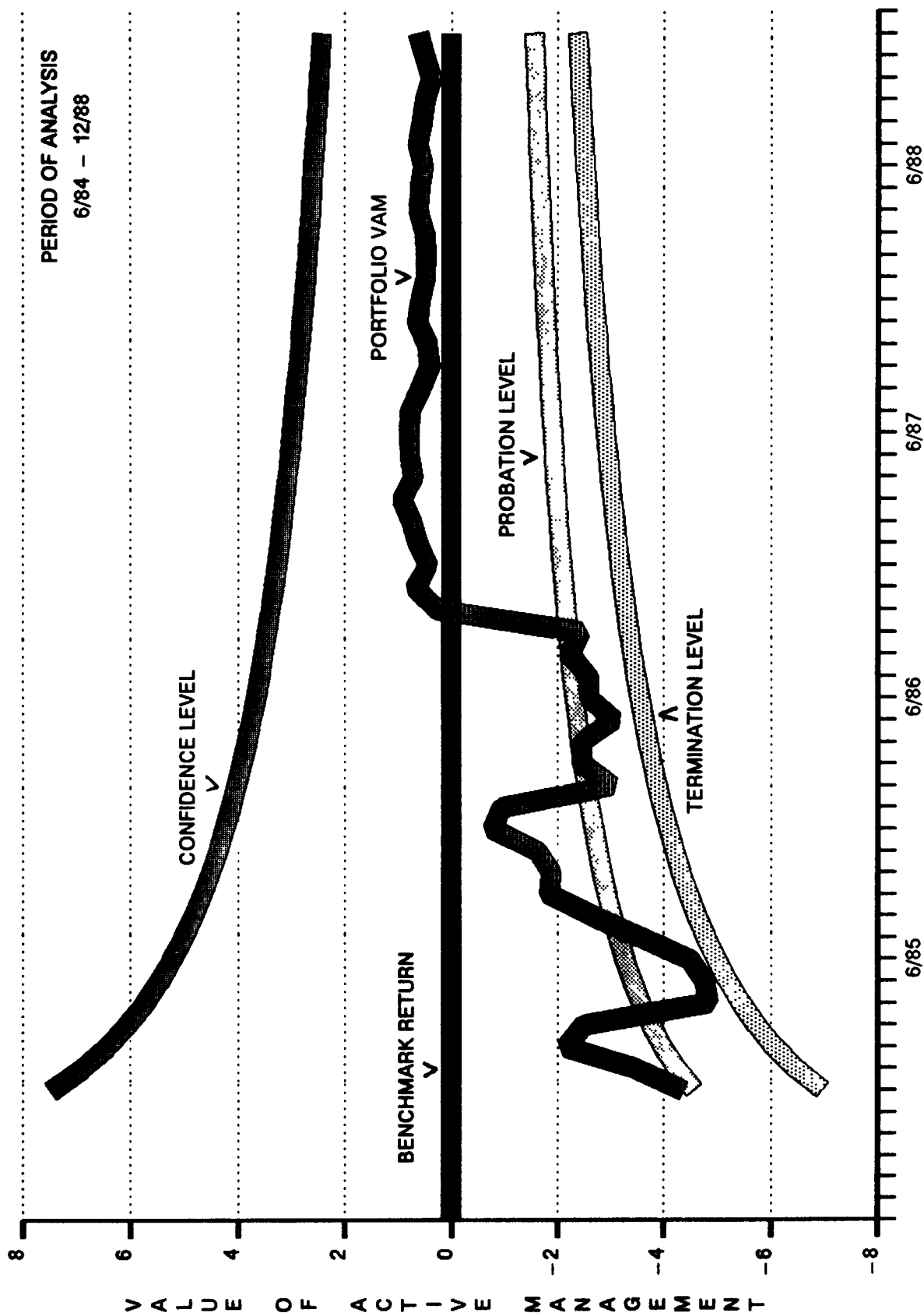
VALUE OF ACTIVE MANAGEMENT REPORT

MILLER ANDERSON & SHERRERD

PERIOD OF ANALYSIS

6/84 - 12/88

PERCENT



MORGAN STANLEY

PORTFOLIO MANAGER: Geoffrey Gettman

ASSETS UNDER MANAGEMENT: \$103,801,680

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. 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.

QUALITATIVE EVALUATION

(Reported By Exception)

The current evaluation notes the following concern:

- New benchmark adopted.

The SBI approved a customized benchmark for Morgan at its December 1988 meeting. The new benchmark numbers will be incorporated in the first quarter 1989 return analysis. This issue deserves close monitoring over the next several quarters to judge the continuing appropriateness of the new benchmark and Morgan Stanley's returns relative to that benchmark.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark			
	Calendar		Since 6/30/84	
	Latest Quarter	Year To Date	Latest Year	Annualized
Morgan Actual	0.3%	5.6%	5.6%	13.3%
Morgan Benchmark	0.8	7.9	7.9	13.9

(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

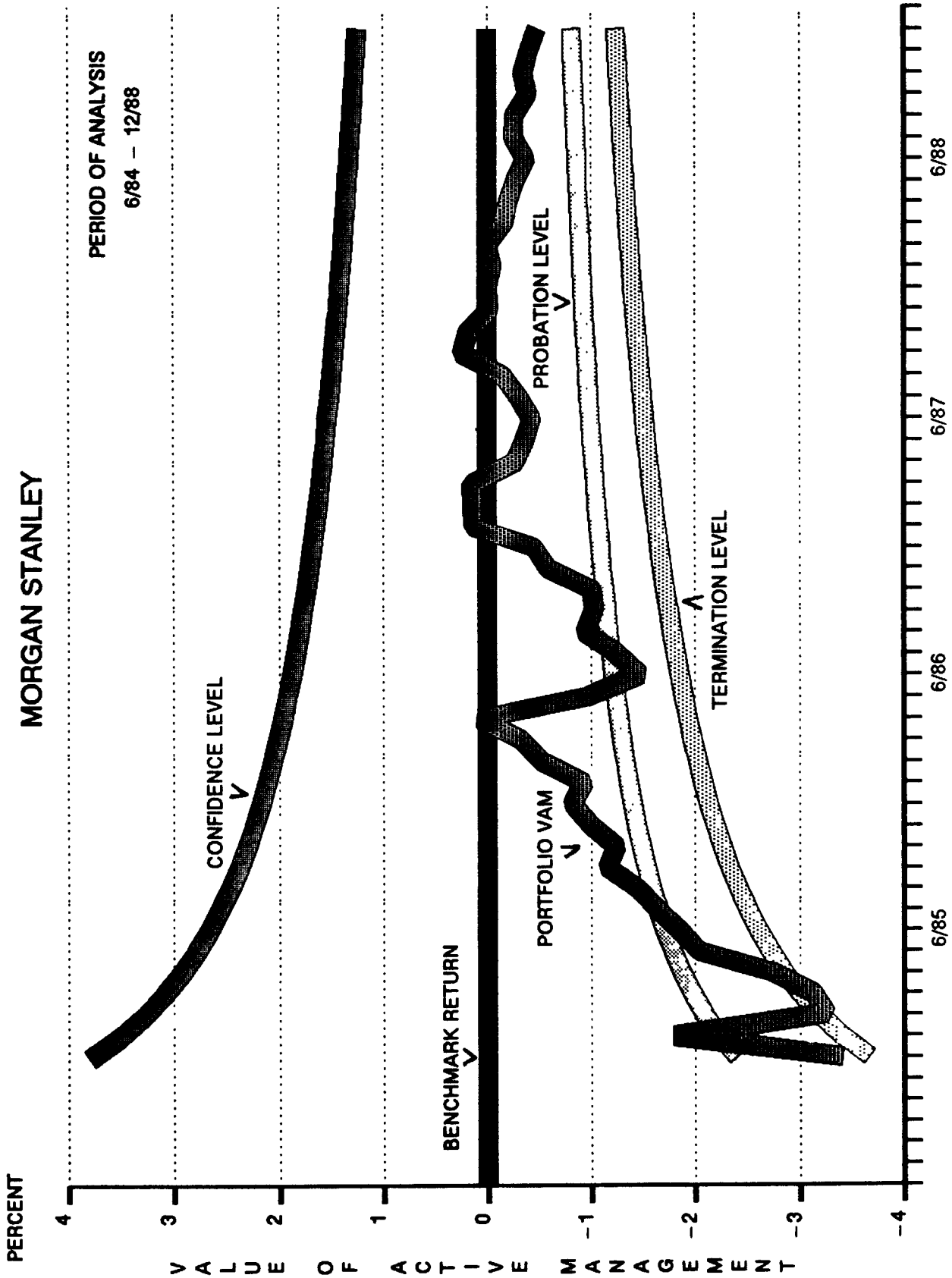
No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

MORGAN STANLEY

PERIOD OF ANALYSIS

6/84 - 12/88



Performance Report

Fourth Quarter 1988

WESTERN ASSET MANAGEMENT

PORTFOLIO MANAGER: Edgar Robie, Jr.

ASSETS UNDER MANAGEMENT: \$192,059,855

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 maturity decisions, are of secondary importance to the firm.

QUALITATIVE EVALUATION

(Reported By Exception)

The firm's exceptional strengths continue to be:

- Highly successful and experienced professionals.
- Extensive research and understanding in the application of normal portfolios to bond management.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark			
	Calendar		Since 6/30/84	
	Latest Quarter	Year To Date	Latest Year	Annualized
Western Actual	1.5%	11.4%	11.4%	15.6%
Western Benchmark	0.9	8.7	8.7	14.0

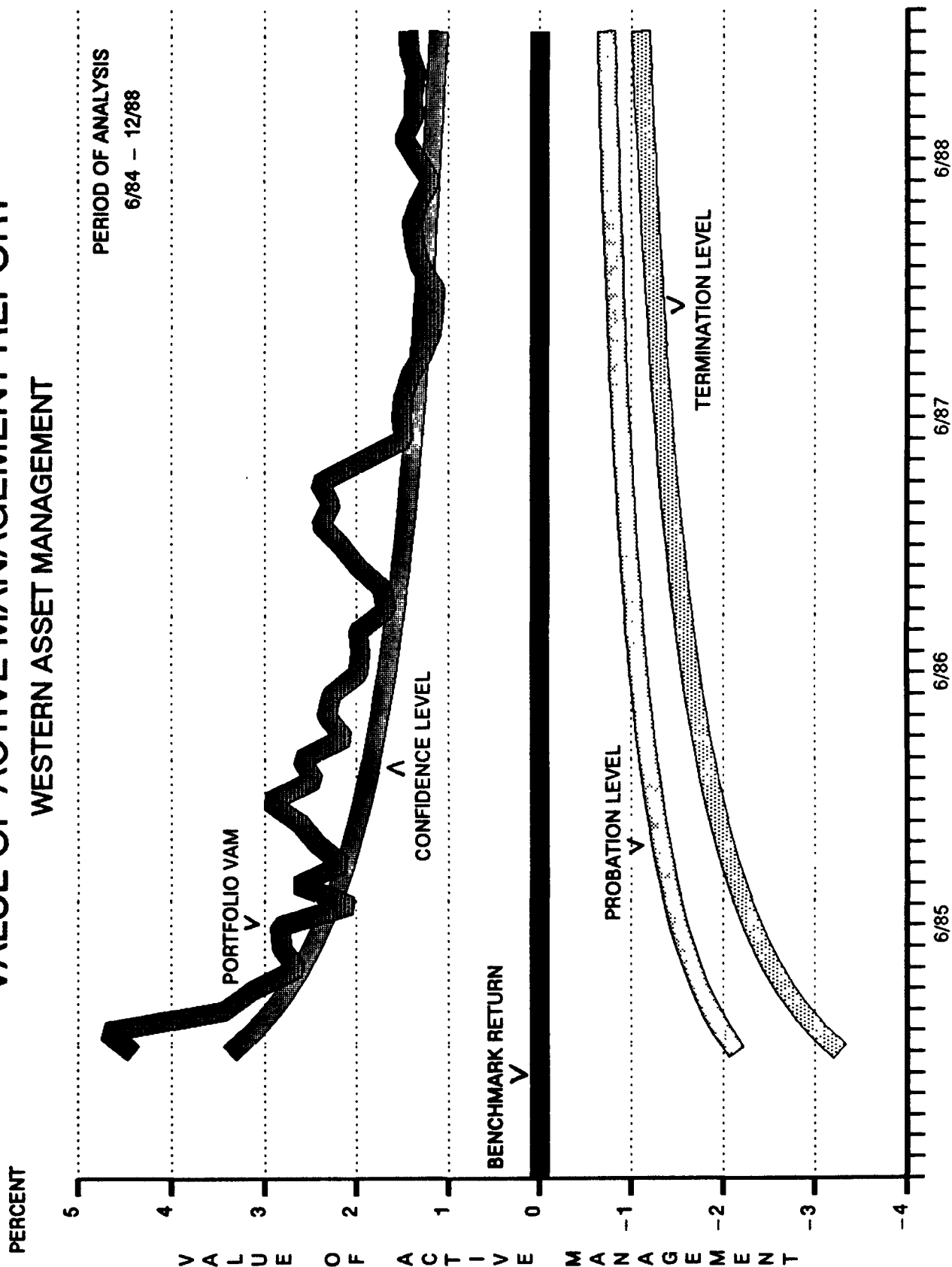
STAFF RECOMMENDATIONS

No action required.

(See Value of Active Management graph below)

VALUE OF ACTIVE MANAGEMENT REPORT

WESTERN ASSET MANAGEMENT



Tab F

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



EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Room 105, MEA Building
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St. Paul, MN 55155
Tel (612) 296-3328
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February 16, 1989

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

FROM: Alternative Investment Committee

SUBJECT: Committee Report

The Alternative Investment Committee met during the quarter to review the following items. No required action by the Board at this time.

INFORMATION ITEMS:

1) Strategy Review

To increase overall portfolio diversification, 15% of the Basic Retirement Funds is 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. A chart summarizing the Board's current commitments is attached (see Attachment A).

The venture capital investment strategy is to establish and maintain a broadly diversified venture capital portfolio comprised of investments that provide diversification by industry type, stage of corporate development and location. To date, the SBI has committed to fourteen commingled venture capital funds for a total commitment of \$308 million.

The real estate investment strategy involves three steps. The first step calls for investment of 30-40% of the real estate portfolio in diversified open-end commingled funds. The second step calls for investment of 30-40% of the real estate portfolio in diversified closed-end commingled funds.

The third step calls for investment of 20-30% of the real estate portfolio in less diversified, more focused (specialty) commingled funds. Currently, the SBI has committed \$385 million to twelve commingled real estate funds.

The strategy for resource investment requires that investments be made in resource investment vehicles that are specifically designed for institutional investors to provide an inflation hedge and additional diversification. Individual resource investments will include proved producing oil and gas properties, royalties and other investments that are diversified geographically and by type. Currently, the SBI has committed \$105 million to seven commingled oil and gas funds.

2) Annual Review Sessions

During January 1989, the Alternative Investment Committee and staff conducted annual review sessions with three of the SBI's venture capital managers and one of the SBI's resource managers.

Venture Capital Managers

- o Summit
- o First Century
- o Norwest

Resource Manager

- o First Reserve

Summaries of the review sessions are included as attachments to this committee report (see Attachment B,C,D,E).

In aggregate, these managers represent approximately 6% of the SBI's total alternative investment holdings and approximately 0.75% of the Basic Retirement Funds as of 12/31/88.

In general, the annual review sessions focused on implementation of investment strategies, organizational effectiveness, and, performance to date. Overall, the Alternative Investment Committee and staff have been satisfied with the investment progress made by Summit, Norwest and First Reserve. The investment activities of these managers are proceeding as originally expected. The Committee and staff would consider new investments with these managers, if appropriate.

The Committee and staff have been less satisfied with the investment progress of First Century. In general, First Century is investing at a pace slower than originally expected.

To remedy their lack of investment progress, First Century is re-evaluating investment strategy and adding additional staff. The Committee and staff will continue to monitor the actions of First Century to improve operations but, at this time, a new investment with First Century would not be considered.

3) Real Estate Project Review

Also during the quarter, the Alternative Investment Committee and staff met with the SBI's special project real estate consultant, Laventhol and Horwath. The purpose of the meeting was to review the progress made towards completion of the project review of the SBI' real estate portfolio. Currently, the timetable for completion of the review is as follows:

February 1989	review and comment on a rough draft of the project report
March 1989	committee review of final report and conclusions
June 1989	presentation of final report and conclusions to SBI

4) Future Considerations

Going forward, the Alternative Investment Committee agenda will include:

- o Reviewing investment objectives, strategy, asset allocation and performance measurement.
- o Working with the existing real estate and oil and gas special project consultants.
- o Considering potential venture capital consultants.
- o Considering additional investments with new and existing managers.
- o Conducting annual review sessions with existing alternative investment managers.

ATTACHMENT A

ALTERNATIVE EQUITY INVESTMENTS FOURTH QUARTER 1988

	INCEPT DATE	FUND SIZE (MILLIONS)	SBI COMMITMENT	SBI-FUNDED	SBI-TO BE FUNDED	FUND DESCRIPTION
<u>REAL ESTATE:</u>						
AETNA	Apr-82	\$1,573	\$40,000,000	\$40,000,000	\$0	OPEN END - DIVERSIFIED
EQUITABLE	Oct-81	\$3,613	\$40,000,000	\$40,000,000	\$0	OPEN END - DIVERSIFIED
HEITMAN I	Jun-84	\$113	\$20,000,000	\$20,000,000	\$0	CLOSED END - DIVERSIFIED
HEITMAN II	Oct-85	\$238	\$30,000,000	\$30,000,000	\$0	CLOSED END - DIVERSIFIED
HEITMAN III	Nov-86	\$200	\$20,000,000	\$18,119,115	\$1,880,885	CLOSED END - DIVERSIFIED
PRUDENTIAL	Sep-81	\$3,560	\$40,000,000	\$40,000,000	\$0	OPEN END - DIVERSIFIED
RREEF	Apr-84	\$773	\$75,000,000	\$75,000,000	\$0	CLOSED END - DIVERSIFIED
STATE STREET III	Jul-85	\$103	\$20,000,000	\$20,000,000	\$0	CLOSED END - SPECIALIZED
STATE STREET IV	Jul-86	\$86	\$15,000,000	\$15,000,000	\$0	CLOSED END - SPECIALIZED
STATE STREET V	Nov-87	\$82	\$15,000,000	\$15,000,000	\$0	CLOSED END - SPECIALIZED
TCW III	Jul-85	\$216	\$40,000,000	\$40,000,000	\$0	CLOSED END - SPECIALIZED
TCW IV	Sep-86	\$250	\$30,000,000	\$30,000,000	\$0	CLOSED END - SPECIALIZED
TOTAL R.E. PORTFOLIO			\$385,000,000	\$383,119,115	\$1,880,885	
<u>VENTURE CAPITAL:</u>						
ALLIED	Jul-85	\$40	\$5,000,000	\$3,333,334	\$1,666,666	LATER STAGE
DSV	Apr-85	\$60	\$10,000,000	\$10,000,000	\$0	EARLY STAGE
FIRST CENTURY	Dec-84	\$100	\$10,000,000	\$4,000,000	\$6,000,000	EARLY STAGE
FIRST CHICAGO	Mar-88	\$50	\$5,000,000	\$557,915	\$4,442,085	SECONDARY INTERESTS
GOLDER THOMA	Oct-87	\$225	\$14,000,000	\$2,100,000	\$11,900,000	LATER STAGE
INMAN/BOWMAN	Jun-85	\$44	\$7,500,000	\$3,750,000	\$3,750,000	EARLY STAGE
KKR I	Mar-84	\$1,000	\$25,000,000	\$25,000,000	\$0	LBO
KKR II	Dec-85	\$2,000	\$18,365,172	\$18,365,172	\$0	LBO
KKR III	Oct-87	\$5,600	\$146,634,660	\$52,379,579	\$94,255,081	LBO
MATRIX	Jul-85	\$70	\$10,000,000	\$10,000,000	\$0	EARLY STAGE
NORWEST	Jan-84	\$60	\$10,000,000	\$10,000,000	\$0	EARLY STAGE
SUMMIT I	Dec-84	\$93	\$10,000,000	\$10,000,000	\$0	LATER STAGE
SUMMIT II	May-88	\$230	\$30,000,000	\$3,000,000	\$27,000,000	LATER STAGE
SUPERIOR	Jun-86	\$35	\$6,645,000	\$3,322,500	\$3,322,500	EARLY STAGE - MN.
T. ROWE PRICE	Mar-86	-	-	-	-	IPO MANAGER
TOTAL V.C. PORTFOLIO			\$308,144,832	\$155,808,500	\$152,336,332	
<u>RESOURCES:</u>						
AMGO I	Jul-81	\$144	\$15,000,000	\$15,000,000	\$0	DEBT WITH EQUITY
AMGO II	Feb-83	\$36	\$7,000,000	\$7,000,000	\$0	DEBT WITH EQUITY
AMGO IV	May-88	\$75	\$12,300,000	\$3,590,700	\$8,709,300	DEBT WITH EQUITY
APACHE I	May-84	\$100	\$3,000,000	\$1,564,025	\$1,435,975	DEBT WITH EQUITY
APACHE II	Oct-85	\$180	\$23,000,000	\$23,000,000	\$0	DEBT WITH EQUITY
APACHE III	Dec-86	\$190	\$30,000,000	\$30,000,000	\$0	NET PROFITS INTEREST
MORGAN O&G	Jul-88	\$135	\$15,000,000	\$1,100,900	\$13,899,100	DEBT WITH EQUITY
TOTAL RES. PORTFOLIO			\$105,300,000	\$81,255,625	\$24,044,375	
TOTAL ALT. INV. PORT			\$798,444,832	\$620,183,240	\$178,261,592	

ATTACHMENT B

ANNUAL REVIEW SUMMARY
SUMMIT PARTNERS
January 18, 1989

MANAGER REPRESENTATIVES: Roe Stamps, Steve Woodsum

SBI ASSETS UNDER MANAGEMENT: \$13,000,000

BACKGROUND AND DESCRIPTION: Summit Ventures I and II were formed by the managing general partners of Stamps, Woodsum & Company, and Shearson/American Express. Stamps and Woodsum focus on profitable, expansion stage firms that have not received any venture backing. Most investments are in high-tech firms. Investments are diversified by location and industry type. Summit has offices in Boston, Atlanta, and Southern California. Summit I and II have ten year terms.

QUALITATIVE EVALUATION:

In 1988, Summit Partners made ten new investments and nine follow-on investments. On May 12, 1988, Summit closed Summit Ventures II. SBI committed \$30 million to this fund. Currently, its investment pattern mirrors that of Summit Ventures.

To accommodate their growth, Summit partners expanded their staff and hired six associates.

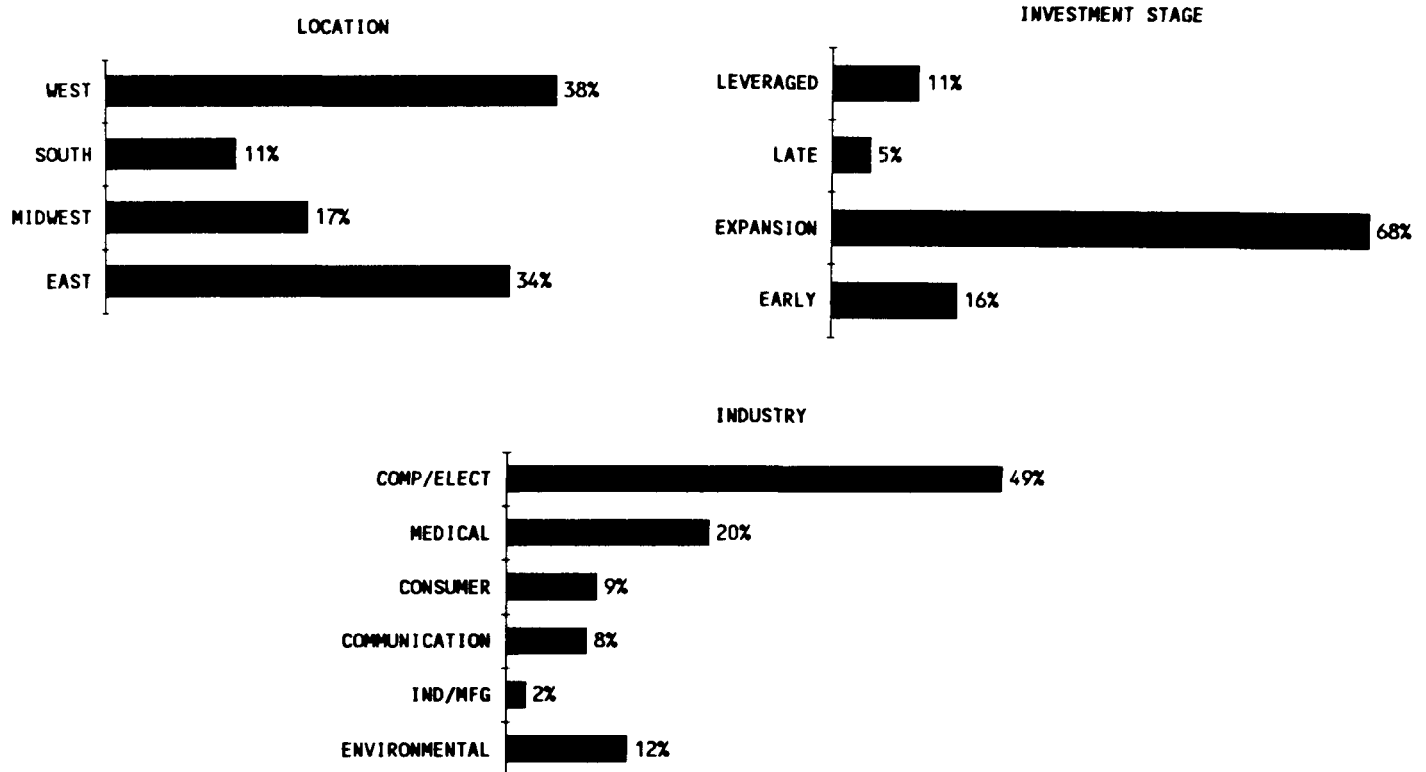
In the future, Summit Partners plans to continue their current investment strategy. They will look for deals where they are lead and first professional investor, owners of senior securities, and directors on the board. They will invest primarily in later stage companies that have businesses in computer related technology, communications, or environmental services.

ATTACHMENT B (con't)

QUANTITATIVE EVALUATION

COMMITMENT:	\$40,000,000
FUNDED COMMITMENT:	\$13,000,000
MARKET VALUE OF FUNDED COMMITMENT:	\$12,511,450
CASH DISTRIBUTIONS:	\$ 1,995,900
INCEPTION DATE(S):	Summit I Summit II Dec. 1984 May 1988
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	5.4%

DIVERSIFICATION PROFILE (% OF COST)



STAFF COMMENTS AND RECOMMENDATIONS:

The Alternative Investment Committee and staff have been satisfied with Summit's operation and performance to date. Additional investments with Summit will be considered, when appropriate.

ATTACHMENT C

ANNUAL REVIEW SUMMARY
FIRST CENTURY PARTNERSHIP
January 26, 1989

MANAGER REPRESENTATIVES: Jack Dulaney, Michael Meyers

SBI ASSETS UNDER MANAGEMENT: \$4,000,000

BACKGROUND AND DESCRIPTION: First Century III was formed in December, 1984 and has a term of ten years. Smith Barney Venture Corp., a subsidiary of Smith Barney Harris Upham and Company is the general partner and manager of the partnership. Smith Barney Venture has offices in New York and San Francisco. This is the third fund formed by the firm since 1972. The partnership invests primarily in early stage, high technology companies that are diversified by location and industry group.

QUALITATIVE EVALUATION:

First Century accelerated their investment pace in 1988, adding eleven companies to their portfolio. After a slow start, they expect to keep up this investment pace and be fully invested by mid 1990.

First Century has changed their strategy, concentrating less on early stage high-tech deals. In 1988, only two of their eleven investments were in high-tech companies. They now are investing more in less technology-driven areas such as retailing and health care.

This strategy shift occurred because First Century feels there are fewer high-tech start-ups to choose from and many fall outside their risk/return preferences.

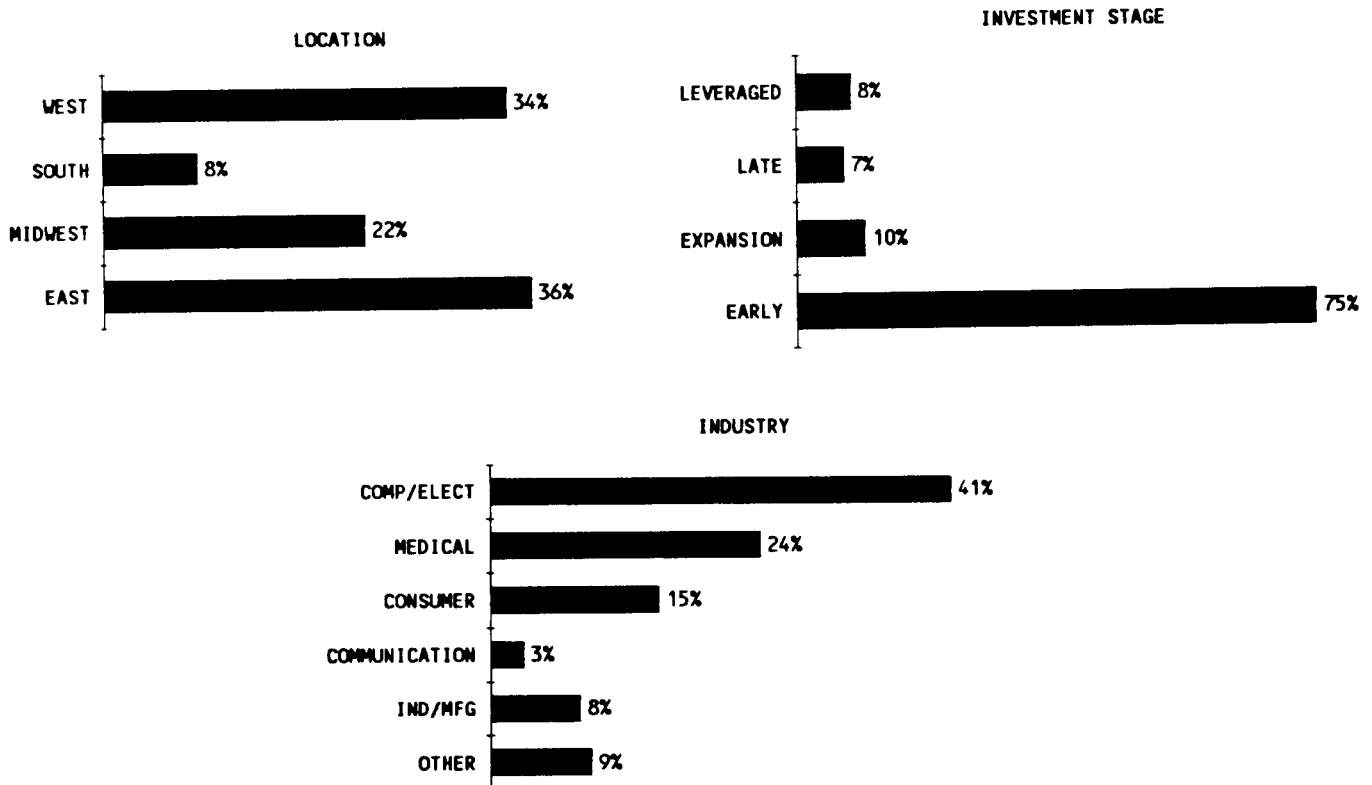
First Century hired Gary Masner as a partner. He has marketing experience at IBM and venture capital experience with Roberts, Coleman and Stevens, a high-tech investment banking firm in San Francisco.

ATTACHMENT C (con't)

QUANTITATIVE EVALUATION

COMMITMENT:	\$10,000,000
FUNDED COMMITMENT:	\$4,000,000
MARKET VALUE OF FUNDED COMMITMENT:	\$4,208,811
CASH DISTRIBUTIONS:	\$43,075
INCEPTION DATE(S):	Dec. 1984
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	2.2%

DIVERSIFICATION PROFILE (% OF COST)



STAFF COMMENTS AND RECOMMENDATIONS:

Of the four capital managers reviewed this quarter, the Alternative Investment Committee and staff rank First Century lowest in terms of operations and performance to date. Therefore, at this time, the Alternative Investment Committee and staff do not recommend additional investments with First Century.

ATTACHMENT D

ANNUAL REVIEW SUMMARY
NORWEST VENTURE PARTNERS
January 19, 1989

MANAGER REPRESENTATIVES: Daniel J. Haggerty

SBI ASSETS UNDER MANAGEMENT: \$10,000,000

BACKGROUND AND DESCRIPTION: Norwest Venture Capital Management, a wholly owned subsidiary of Norwest Corp., is the general partner and manager of the partnership. Norwest Venture Partners' focuses on high technology companies in the early stages of corporate development. However, the portfolio also includes investments in expansion stage firms and is diversified by the location and industry type. Norwest Venture Management has offices in Minneapolis, Phoenix, and Portland, Oregon. Northwest Venture Partners I was formed in January 1984 and has a term of ten years.

QUALITATIVE EVALUATION:

Norwest is nearing full investment and will use the remaining funds for follow-on investments.

Although Norwest expects ultimate rates of return in the mid-teens, they are currently disappointed in the fund's performance. Returns have been hampered primarily by the poor performance of computer-related investments.

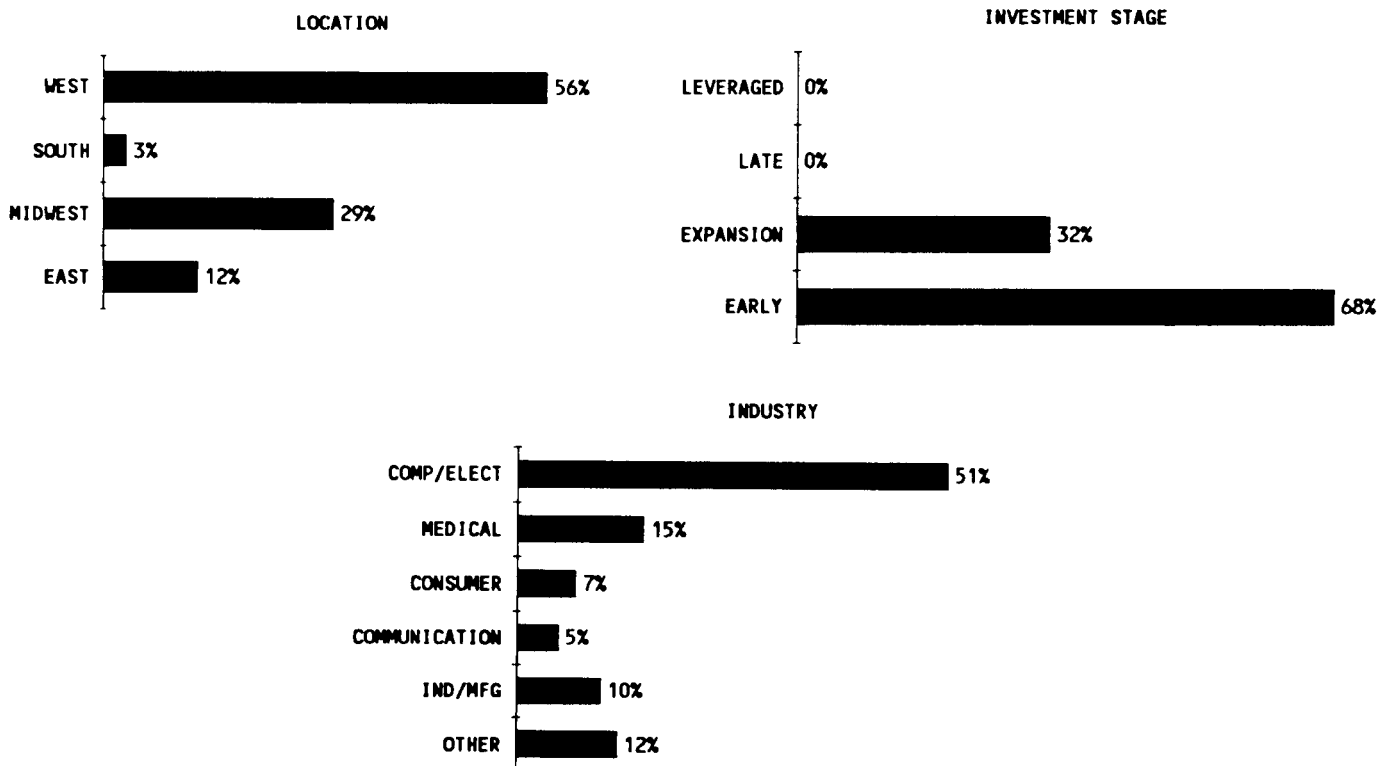
Norwest does not intend to raise a second venture capital investment fund after the current fund is fully invested. In the future, Norwest Corp. will be their sole investor.

ATTACHMENT D (con't)

QUANTITATIVE EVALUATION

COMMITMENT:	\$10,000,000
FUNDED COMMITMENT:	\$10,000,000
MARKET VALUE OF FUNDED COMMITMENT:	\$8,435,530
CASH DISTRIBUTIONS:	\$2,466,686
INCEPTION DATE(S):	Jan. 1984
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	2.7%

DIVERSIFICATION PROFILE (% OF COST)



STAFF COMMENTS AND RECOMMENDATIONS:

The Alternative Investment Committee and staff have been satisfied with Norwest's operation and performance to date.

ATTACHMENT E

ANNUAL REVIEW SUMMARY
AMGO I, II, & IV
January 17, 1989

MANAGER REPRESENTATIVES: John Hill

SBI ASSETS UNDER MANAGEMENT: \$25,590,700

BACKGROUND AND DESCRIPTION: The general partner and manager of AmGO I, II, and IV is First Reserve Corp. The general partner's strategy is to create a diversified portfolio of oil and gas investments. The portfolio is diversified by location, geological structure, investment type, and operating company. AmGO I, II, and IV were formed in July, 1981, December, 1982 and May, 1988 respectively and have terms of twenty, nineteen and ten years.

QUALITATIVE EVALUATION:

During 1988, First Reserve made ten new investments and sold interests in five others. Five new investments were also approved for 1989. In AmGO I and II, First Reserve changed their investment strategy:

- They reduced investments in oil and gas reserves.
- They increased non-reserve investments. For example, they have increased investments in oil and gas companies.

In 1989, First Reserve plans to:

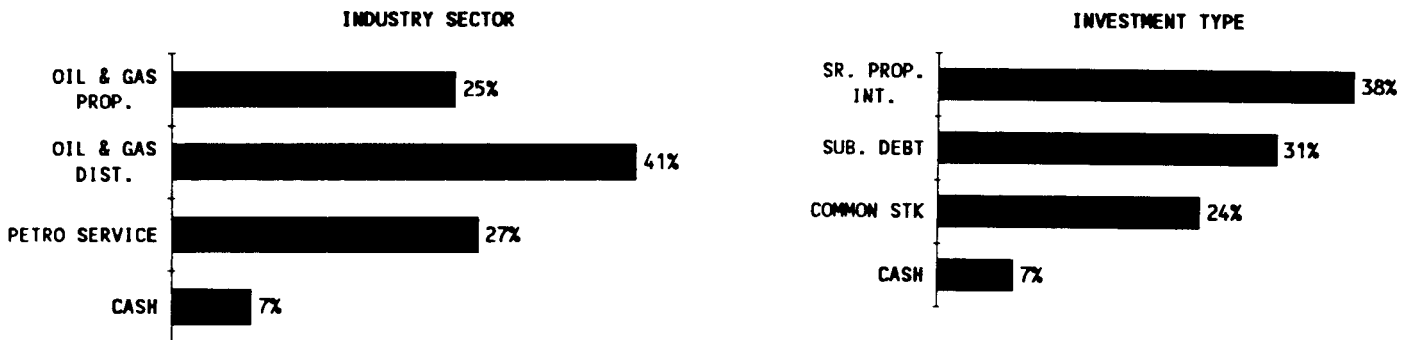
- Continue emphasis on non-reserve investments.
- Continue a high level of investment activity in AmGO I and II even though both are near full investment. This includes sales, refinancings, incremental investments in existing companies, and new investments.
- Have AmGO IV fully invested by year-end.

ATTACHMENT E (con't)

QUANTITATIVE EVALUATION

COMMITMENT:	\$37,000,000
FUNDED COMMITMENT:	\$25,590,700
MARKET VALUE OF FUNDED COMMITMENT:	\$13,227,211
CASH DISTRIBUTIONS:	\$ 4,381,370
INCEPTION DATE(S):	AmGO I AmGO II AmGO IV Sept. 1981 Feb. 1983 May 1988
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	-8.1%

DIVERSIFICATION PROFILE (% OF COST)



STAFF COMMENTS AND RECOMMENDATIONS:

The Alternative Investment Committee and staff have been satisfied with AmGO's operation and performance to date. Additional investments with AmGO will be considered, when appropriate.