MINNESOTA STATE BOARD OF INVESTMENT MEETING
June 9, 1988

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INVESTMENT ADVISORY COUNCIL MEETING
June 7, 1988

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

Thursday, June 9, 1988
9:00 A.M.
Room 118 - State Capitol
Saint Paul

	TAB
1. Approval of Minutes of March 2, 1988	
2. Report on Escheated Property (M. McGrath)	
3. Appointment of IAC Members	
4. Executive Director's Report (H. Bicker)	A
A. Quarterly Investment Review (January 1-March 31, 1988) 1. Basic Retirement Funds 2. Post Retirement Fund and Other Investment Funds	
B. Portfolio Statistics (March 31, 1988)	B
C. Administrative Report 1. Budget and Travel Reports 2. Board Member Travel Policy 3. Consultant Contract Renewal 4. Master Custodian Review 5. 1988 Legislative Review 6. Fiscal Year 1989 Management Plan	C
5. Report from the Board's Consultant	
6. Reports from Investment Advisory Council Committees (J. Yeomans)	
A. Equity Manager Committee 1. Value of Active Management Reports 2. Equity Manager Contract Renewals 3. Equity Manager Selection Process Review 4. Completeness Fund Progress	D
B. Fixed Income Manager Committee 1. Value of Active Management Reports 2. Fixed Income Manager Contract Renewals 3. Report from the Bond Index Fund Manager Selection Committee 4. Reallocation of Assets to the Bond Index Fund	E
C. Alternative Investment Committee 1. Real Estate Manager Annual Reviews 2. Recommendations for New Commitments 3. Recommendations for a Real Estate Special Project Consultant 4. Recommendations for a Resource Fund Consultant	F

EXECUTIVE DIRECTOR
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MINUTES
STATE BOARD OF INVESTMENT
March 2, 1988

The State Board of Investment (SBI) met on Wednesday, March 2, 1988 in Room 118 of the State Capitol at 9:30 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, Chair, and Attorney General Hubert H. Humphrey, III, were absent.

The minutes of the November 25, 1987 meeting were unanimously approved.

ESCHEATED PROPERTY

State Treasurer McGrath reported on the current status of the process used to dispose of escheated property. Mr. McGrath moved approval of a resolution which lists property that has been identified as property escheated to the State of Minnesota (see Exhibit A). After discussion concerning the Board's statutory responsibilities, Mr. Carlson moved approval of the resolution provided that the State Board of Investment establish the approximate value of the property prior to its disposal. The motion was unanimously approved.

REAPPOINTMENT OF IAC MEMBERS

Ms. Growe stated that four Board appointments to the Investment Advisory Council (IAC) have expired. The four current members have applied for reappointment: Harry Adams, James Eckmann, Kenneth Gudorf, and Deborah Veverka. Mr. Carlson moved approval of the reappointments to terms effective until January, 1992. The motion passed unanimously. Ms. Growe requested that the appreciation of the Board be expressed to the appointees in the form of a letter.

EXECUTIVE DIRECTOR'S REPORT

Howard Bicker, Executive Director, stated that assets of the Basic Retirement Funds decreased by 12.1% during the fourth quarter of 1987. He said the decrease was due largely to the stock market decline in October, 1987. Also, Mr. Bicker noted that for the first time in more than four years the Basic Funds received a positive cash flow. Assuming no new early retirement incentives are passed by the Legislature, he stated the Basic Funds should continue to benefit from positive net contributions in the future. Mr. Bicker reported that the Basic Retirement Funds returned -13.2% for the fourth quarter and 3.8% for the year. He stated the equity segment returned -22.3% for the quarter, outperforming the Wilshire 5000, which returned -23.1%. For the year, the stock segment gained 2.6%, exceeding the Wilshire 5000 return of 2.3%. He stated that the bond segment gained 5.2% for the quarter, slightly underperforming the Salomon index return of 5.8%. For the year, the bond managers slightly outperformed the index with a gain of 2.8% versus a market return of 2.6%.

Mr. Bicker then summarized the performance of the Post Retirement Fund. He reported the assets of the Post Retirement Fund increased by 1.4% for the quarter. He stated the modest asset growth occurred despite net withdrawals from the Fund of over $62 million. Mr. Bicker reported the asset mix of the Post Retirement Fund at the end of 1987 was 83.7% fixed income, 9.3% common stocks, and 7.0% cash.

Concluding his investment report, Mr. Bicker stated that as of December 31, 1987 all assets under management by the State Board of Investment were $11.5 billion.

Mr. Bicker then presented information concerning three issues: performance of the Basic Retirement Funds and Post Retirement Fund from fiscal year 1983 to present; a proposal for a Manager Continuation Policy to evaluate the Board's stock and bond managers; and a proposed Completeness Fund within the common stock segment of the Basic Retirement Funds.

RESPONSE TO AUDITOR CARLSON'S LETTER

Mr. Tom Triplett, Commissioner of Finance and Chair of the IAC Administrative Committee, discussed Auditor Carlson's letter of November 19, 1987 to Governor Rudy Perpich, concerning the role of the State Board of Investment relative to the staff, the Investment Advisory Council and the Board consultant. He reviewed a response developed by the Administrative Committee and Howard Bicker (see Exhibit B).

Mr. Triplett referred to the second paragraph of the response which suggested that the Administrative Committee of the IAC meet on a monthly basis and encouraged attendance by Board members or their designees. He said these meetings would provide a more frequent opportunity for interchange between the Board, the IAC, and staff and the consultant. He said these meetings of the Administrative Committee would not supercede the role of other IAC committees but would act as an educational forum for informal discussion on a variety of issues.

Mr. Carlson stated that he appreciated the response but he would recommend a more formal committee structure. Mr. Carlson moved the committee be composed of each of the constitutional officers, or their designee, and the members of the Administrative Committee of the IAC. Mr. Carlson further moved that the Treasurer chair the committee. Mr. Carlson stated that responsibilities for setting the agenda and chairing the meetings should rest with one of the members of the Board.

Mr. McGrath seconded the motion in order to allow discussion. He said Mr. Carlson's motion would address some of his own concerns about communication but he had difficulty in acting on the motion since two members of the Board were absent. Mr. McGrath moved that the Carlson motion be tabled with the understanding that the Board meet within thirty days at the call of the Chair.

Ms. Growe seconded the motion in order to allow discussion. Mr. Carlson spoke against the McGrath motion because it would further delay action. Ms. Growe said she intended to oppose both the McGrath and Carlson motions. She said she felt Mr. Triplett's suggestion would address the concerns of Board members and she did not see a need to create a new committee. She further stated that she did not want to supplant the advisory role of the IAC.

Ms. Growe restated the McGrath motion to table the Carlson motion and called for a vote. The motion passed (Aye - Carlson, McGrath; Nay - Growe). Mr. Carlson moved to reconsider the McGrath motion. On reconsideration, the McGrath motion failed (Aye - McGrath; Nay - Carlson, Growe).

Ms. Growe then restated the Carlson motion to form a formal committee. Mr. Carlson spoke in support of his motion. He said his letter was prompted by concern that the Board was delegating its fiduciary responsibility to staff and the IAC. He said his motion included a provision that a fiduciary, i.e. a Board member, control the committee process. Ms. Growe disagreed with Mr. Carlson and state the Carlson motion would create a monthly meeting of the Board and change its chair. She suggested the forum outlined by Mr. Triplett be tried for three to four months to see if it meets the needs of the Board members. Mr. McGrath said he intended to vote for the Carlson motion in order to begin the communication and education process. Ms. Growe called for a vote on the Carlson motion. The motion passed (Aye - Carlson, McGrath; Nay - Growe).

INVESTMENT ADVISORY COUNCIL REPORT

Jan Yeomans, IAC Chair, presented the Investment Advisory Council Report.

ADMINISTRATIVE COMMITTEE

Ms. Yeomans stated that there were several information items discussed by the Administrative Committee. The first item was the 1987 Annual Report which was distributed in late February, 1988. The second item was an update on the Board's 1988 legislative package, which passed both the House and Senate Governmental Operations Committees and is awaiting floor action in both bodies. In response to a question from Mr. Carlson, Mr. Bicker stated the Board's legislative package contained a request for authority to invest in international securities.

Mr. Carlson asked if the Board had prepared a fiscal note concerning a bill that may affect the Board's investments in companies that do business in Northern Ireland. After discussing the administrative impacts of the bill, Mr. Carlson agreed with Ms. Growe's request that Board members review analysis of the fiscal impact before any information is transmitted to the legislature.

Ms. Yeomans stated the Administrative Committee renewed its recommendation that the Board adopt a staff position paper concerning overall performance evaluation in the Basic Retirement Funds. Mr. McGrath moved approval. The motion was unanimously approved.

Ms. Yeomans briefly described the Manager Continuation Policy, a staff position paper, which proposes a consistent framework by which to evaluate the Board's stock and bond managers. While the qualitative criteria referenced in the paper are essentially the same as those currently used, she stated the graphic display of the quantitative criteria is a new feature of the evaluation system. In reply to a question from Ms. Growe, Ms. Yeomans stated a manager must satisfy both the quantitative and qualitative criteria to be considered for continuation. Ms. Yeomans stated the system monitors the manager's performance relative to a customized benchmark. If the manager is not adding value relative to that benchmark, the manager should not continue to serve. Mr. Carlson stated he did not agree with a policy that supports retention of a group of managers that underperforms market indices and he questioned the reasonableness of the benchmarks chosen for individual managers. He said he felt the policy would allow mediocre performance to continue. He urged the Board and the IAC to review individual benchmarks and fund performance relative to several different market indices before adopting this policy.

Ms. Growe stated she understood the policy would assist the Board and staff to evaluate the performance of managers currently retained by the SBI and was not designed to answer the larger questions Mr. Carlson was raising. In response to a question from Ms. Growe, Ms. Yeomans stated there are a variety of evaluation methods used by companies represented on the IAC. To the extent features of those systems were appropriate, she said they were debated and incorporated in the proposed policy. Dave Tierney, Richards & Tierney, Inc., said the quantitative evaluation in the proposed policy is the most powerful and objective test currently available with which to judge manager performance.

Mr. McGrath moved approval of the Manager Continuation Policy. Mr. Carlson stated he felt adopting the policy would protect poor performance rather than encourage excellence. Ms. Growe said it was important to establish a comprehensive policy and begin to work with it. She said she felt comfortable with the proposal as an appropriate way to begin the analysis. Mr. Carlson asked the vote on one McGrath motion be fully recorded. The motion passed (Aye - Growe, McGrath; Nay - Carlson).

Ms. Yeomans said the last item for Board action from the Administrative Committee concerned repurchase agreements made by the State Board of Investment. Ms. Yeomans stated the committee recommended the Board adopt a resolution which would permit the Executive Director to establish third party relationships with several banks (see Exhibit C). This action would allow the Board to further secure the collateral pledged to the repurchase agreements. Mr. Carlson moved approval of the resolution. The motion was unanimously passed.

EQUITY MANAGER COMMITTEE

Ms. Yeomans stated the Equity Manager Committee used the Manager Continuation Policy to formulate their recommendation on specific managers. First, the Committee recommends that BMI be placed on probation for quantitative reasons. Second, Beutel Goodman should remain on probation for quantitative reasons. Third, Waddell & Reed and Investment Advisers should be removed from probation. Finally, Peregrine Capital should be terminated. Mr. McGrath moved approval of these recommendations. In response to a question from Mr. Carlson, Ms. Yeomans said Peregrine was recommended for termination for both qualitative and quantitative reasons. Recent changes in the firm's organization require this action. Ms. Growe called for a vote on the McGrath motion. The motion passed (Aye - Growe, McGrath; Nay - Carlson).

Ms. Yeomans stated the full IAC had developed a recommendation concerning the disposition of the $215 million which becomes available as a result of the above manager actions. This recommendation was contained in a supplementary report from the IAC to the Board (see Exhibit D). Mr. Carlson objected to the proposed distribution and suggested that all funds be placed in the index fund. In response to a question from Ms. Growe, Ms. Yeomans said the Council's recommendation was based on a belief that value has been and will be added by active management. She said managers that have successfully added value relative to their benchmark would receive the assets.

Mr. Carlson moved that the assets be placed in the index fund and that a committee of the Board, staff and IAC be formed to search for additional managers. The motion failed for lack of a second. Mr. McGrath then moved to adopt the recommendation of the IAC. The motion passed. (Aye - Growe, McGrath; Nay - Carlson).

The last item considered by the Equity Manager Committee was the Completeness Fund Policy Paper. Ms. Yeomans stated the Equity Manager Committee was unable to support the specific staff recommendation concerning implementation of the Completeness Fund. Ms. Yeomans said the Committee wanted to analyze implementation alternatives before presenting a recommendation to the Board on this issue.

FIXED INCOME MANAGER COMMITTEE

Ms. Yeomans stated that the Fixed Income Committee recommended the BEA Contract be renewed for one year. She said the Committee feels BEA has successfully added value to their portfolio through the use of three cash enhancement strategies. Ms. Yeomans said the Committee also recommends that the current limits placed on BEA regarding allocation to certain futures strategies be relaxed. Mr. McGrath moved approval. The motion passed unanimously.

Ms. Yeomans stated that the other items from the Fixed Income Committee were informational. She reported that plans are well underway for the bond index fund and the final recommendation should be presented to the Board at the June meeting. Finally, Ms. Yeomans stated that the external bond managers performance was reviewed and no changes were recommended at this time.

ALTERNATIVE INVESTMENT COMMITTEE

Ms. Yeomans stated that there were three action items considered by the Alternative Investment Committee. The first was to invest in Summit Ventures II, a follow-on venture capital fund. She said the Committee recommended a commitment of up to $35 million to the new fund. Mr. McGrath moved approval. The motion passed unanimously. Ms. Yeomans stated that the second recommendation was for an investment of up to $15 million in First Reserve Secured Energy Assets Fund. Mr. Carlson moved approval. The motion was unanimously approved.

Ms. Yeomans stated the final recommendation was a $5 million investment with a new manager, First Chicago Venture Partnership Acquisition Fund. In response to a question from Mr. carlson, Ms. Yeomans said this type of fund represents a lower risk investment than many other venture capital fund investments. Mr. Carlson moved approval. The motion was unanimously approved.

The meeting adjourned at 11:45 A.M.

Respectfully submitted,

Howard Bicker

Howard J. Bicker
Executive Director

Attachments (4)

RESOLUTION OF THE STATE BOARD OF INVESTMENT

WHEREAS, Minnesota Statutes § 525.161 provides all monies, stocks, bonds, notes, mortgages and other securities, and all other property so escheated is given to the State Treasurer; and

WHEREAS, Minnesota Statutes § 11A.10, subd. 2 provides the Commissioner of Finance shall report to the State Board of Investment all personal property other than money received by the State as escheated property; and

WHEREAS, attached as Exhibit A is a listing of certain property received by the State as escheated property; and

WHEREAS, Minnesota Statutes § 11A.10, subd. 2 provides that the SBI may elect to sell such property; and

WHEREAS, investigation by the staff of the SBI and the State Treasurer has determined that it is in the best interest of the State to sell the property listed in Exhibit A.

NOW THEREFORE BE IT RESOLVED that:

The State Treasurer be directed to use his best efforts to sell the property listed on Exhibit A and credit all money received from the sale to the general fund of the State.

Date:

Joan A. Growe

JOAN A. GROWE
Secretary of State, Member
State Board of Investment

EXHIBIT A

Property Listed by Estate

Anderson, John T.
23 promissory notes. Total $5,110.00

Bencheff, Samuel D.
State Co-operative Oil
Company is dissolved.
National Leather Co.
Company is dissolved.

Camiel, Mayer
Grand National Films, Inc.
Company status unkown
The Minneapolis & St. Louis RR of Iowa
Company status unknown

Draga, Natalia
Vendor's interest in Contract for Deed

Duncan, Andrew
Liberty Oil & Gas Co.
No records on company - possibly dissolved.

Fuller, Earl
Northern States Power Co.
Company is doing business.
Philadelphia Electric Co.
Company status unknown.

Gorman, John
Alminster Oils Limited
No information on Canadian company
August Porcupine Gold Mines, Ltd.
No information on Canadian company
Aurlando Consolidated Mining Corp., Ltd.
No information on Canadian company
Erndale Mines, Ltd.
No information on Canadian company
Goldrich Yellowknife Mines, Ltd.
No information on Canadian company
Kelsira Kirkland Gold Mines, Ltd.

No information on Canadian company
Ox-Box Silver Mining Co., Ltd.
No information on Canadian company
Pyramid Oils, Ltd.
No information on Canadian company
Signal Oils & Metals Co., Ltd.
No information on Canadian company
Tonto Yellowknife Mines, Ltd.
No information on Canadian company
Trans-Leduc Oils, Ltd.
No information on Canadian company
Transucal Explorations, Ltd.
No information on Canadian company

Jones, John Henry
Minnesota Co-operative Plantation
Company is dissolved
Nolan Rubber Heel Co.
Company is dissolved

Larson, Phillip D.
Northern States Power Co.
Company is doing business
City Service Co.
Company status unknown

Machuga, Walter
U.S. Government Bonds - Series E

Pearson, John G.
Western Union Mining & Development
Company is dissolved

Sorby, Harry
$5.10 Participating Trust
Certificate from Blackduck State
Bank, Minnesota (Canadian Security)

EXHIBIT B

EXECUTIVE DIRECTOR
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February 29, 1988

TO: Members, State Board of Investment

FROM: Howard J. Bicker, Executive Director
Administrative Committee of the IAC
Tom Triplett, Chair
Jan Yeomans
Malcolm McDonald

SUBJECT: Response to Auditor Carlson's Letter Dated November 19, 1987

At your meeting on November 25, 1987, the Board discussed a letter from Auditor Carlson which stated his concerns about the management and policies of the State Board of Investment (SBI). You directed staff to review the letter and respond to the issues raised by Mr. Carlson. This memo is a joint response from Board staff and the Administrative Committee of the Investment Advisory Council (IAC).

While this memo responds to the questions raised by Mr. Carlson, it may not address questions other Board members may have. It is our recommendation that the Board establish a regular forum that will facilitate discussion between Board members or their designees, the IAC and Board staff. Specifically, we suggest the Administrative Committee of the IAC meet on a monthly basis to discuss administrative and policy issues of current interest to Board members. We would encourage Board members or their designees to attend so they can be more fully briefed on activities of the staff and IAC. These meetings would also provide a forum to discuss policy issues with Board members or their designees more completely than is possible at quarterly Board meetings.

Mr. Carlson's letter is attached. This response is structured to address the issues he raised in the same order as the letter.

I. MANAGEMENT

A. Budget Request Review

The SBI's biennial budget request is reviewed by the Administrative Committee of the Investment Advisory Council (IAC) and their comments, if any, are sent to the Board as part of a Committee report. The agenda and minutes of the IAC and Board meetings reflect this process.

The FY86-87 and FY88-89 budgets were "same level" requests. As a result, copies of the budget document itself were not included in the Board's quarterly folder.

A salary schedule has not been reviewed in the past. The Executive Director's salary range is established in state statute and set by the Governor. All other positions at the SBI are assigned a salary range by the Department of Employee Relations. Employees in those positions are compensated under the terms of the state's negotiated labor agreements or plans covering the respective position.

Suggested Action:

We suggest the Administrative Committee of the IAC continue to review the SBI's biennial budget request and send their comments to the Board. The budget document and salary schedule can be included in the Board folder as a matter of routine at the time the proposed budget is reviewed.

B. Budget-to-Actual-Review

Budget-to-actual data is not regularly reviewed by the Board or the IAC. Mr. Bicker has provided this type of data to members of the Board upon their request.

Suggested Action:

If the Board chooses, expenditure reports can be included in all future quarterly Board folders or transmitted to the Board members as a separate report. An example report is included as an attachment.

C. Review of Travel

The SBI expends funds on travel for several reasons: to evaluate existing and potential investment managers; to resolve specific operational problems with managers or custodians of SBI funds; to attend seminars that provide continuing education opportunities for Board members and staff.

We believe such expenditures are both justifiable and appropriate elements of the SBI's investment management program.

Suggested Action:

If the Board wishes to review this expenditure category, we suggest that a report summarizing all travel by the staff and Board members and their designees be included in the Board's quarterly folder or transmitted to the Board members as a separate report. A report on SBI travel since the last Board meeting is attached as an example.

D. Review of Executive Director

Currently, the position of Executive Director is reviewed on an ad hoc basis by the Administrative Committee of the Investment Advisory Council. The last review took place in 1986.

Suggested Action:

There are many alternatives to the current practice, including the one suggested by the Auditor. The Executive Director should utilize any review process that the Board deems appropriate.

If the Administrative Committee remains involved, we suggest they conduct an annual review during August of each year and report to the Board at its September meeting. We suggest The Executive Director's goals and objectives for the coming year be reviewed by the committee and be used as the basis for the subsequent evaluation.

E. Code of Ethics

At the time staff are hired, they are apprised of their rights and responsibilities as a state employee. One of these responsibilities includes compliance with the code of ethics in MS 43A.38. Employees are not re-informed on this matter on a regular basis.

The Executive Director, the Assistant Executive Director, and all members of the IAC are required by statute to file a statement of economic interest with the Board of Ethical Practices.

As you know, IAC members are governed by the conflict of interest standards anticipated in MS 11A.08 subdivision 6. The Executive Director and persons in other positions that meet the definition of a public official are governed by the conflict of interest standards in MS 10A.07.

In addition to these measures, Board members receive a report on securities held by staff members and their immediate families. These reports have been submitted on a quarterly basis since April 1980.

Suggested Action:

We do not feel additional action on this issue is necessary. However, if the Board has any concerns in this area they should be discussed.

F. Investment Conference

The SBI has sponsored an investment conference for the past five years. Its purpose is to provide an educational forum for individuals with pension and investment responsibilities who have some relationship with the SBI. Participants include Board members and their deputies; SBI staff; IAC members; legislative leadership and other legislators on the Pension Commission and Governmental Operations Committees; and retirement system administrators whose plan assets are managed by the SBI. In the past, the staff established the agenda and introduced the speakers.

Suggested Action:

We would very much encourage greater participation in the conference by Board members. We suggest that a committee comprised of the Board member deputies be formed to review future agendas and determine to what extent each Board member would wish to participate.

II. POLICY

A. Relationship with the Consultant

The Board has retained a consultant since 1982. (Evaluation Associates, 1982-1986; Richards & Tierney, 1986 - present).

The SBI has spent considerable time and effort to develop policies that address asset allocation, appropriate performance benchmarks, use of active vs. passive management and performance evaluation for each fund managed by the Board. These policies are contained in the position papers written by the staff, reviewed by the IAC and the consultant, and submitted to the Board for approval. Most recently, the Board reviewed and approved comprehensive policies on the Basic Retirement Funds.

The consultant plays an important role during the development of these policies and provides valuable input and advice to the Board, IAC and staff in the policy making and review process.

In addition to the advisory role, the consultant provides several technical services to the SBI. These include maintaining benchmark portfolios for individual managers, calculating manager performance relative to those benchmarks, and analyzing the value added to the Basic Retirement Funds on both a policy level and manager level.

Suggested Action:

The consultant regularly attends the meetings of the Board and the full IAC to act as a resource during their deliberations. We suggest this practice continue. Further, we suggest that a report from the consultant be included as an agenda item for each meeting of the Board and full IAC.

It is our understanding that the Board's current consultants, Richards & Tierney, will be meeting with several Board members prior to the March, 1988 Board meeting. These meetings grew out of the discussion at the November, 1987 Board meeting. We are certain that Richards & Tierney would be happy to arrange subsequent meetings with Board members on a regular or ad hoc basis.

B. Reporting Format

The Board's quarterly investment report grew in length and detail over the last five to seven years. During the last quarter, staff worked with the consultant and the IAC to make these reports more concise.

On February 10, 1988 a draft of a new quarterly report format was sent to IAC and Board members for their review and comments. Like the previous report, the new format includes performance results on total fund, asset class segment and manager levels. The purpose of the report is to assist the Board in evaluating of the performance of each fund relative to the policies and performance standards adopted by the Board. The new format consolidates this information in a way that we hope you find more readable.

Staff has also worked with the consultant to develop a reporting format for the evaluation of individual stock and bond managers. This format was transmitted to the Board and IAC as part of the staff position paper containing a Manager Continuation Policy. The Board and the IAC will discuss the paper and the report format at their March 1988 meetings.

Suggested Action:

Staff will continue to develop and refine reports on the funds under management by the State Board of Investment. We suggest the reporting formats be annually reviewed by the IAC. We would be glad to discuss modifications that enhance the Board's understanding of the operation of the SBI.

We hope this response is helpful. Please let us know if we can be of further assistance on any of these issues.

STATE BOARD OF INVESTMENT
OPERATING BUDGET SUMMARY

FY 88: July 1, 1987 - January 31, 1988

This summary highlights major expenditure categories and expenditures year-to-date.

With five months remaining in the fiscal year, slightly more than half the operating budget has been expended. Overall, current and projected expenditures are within budget. A small surplus is currently projected at the end of FY 88.

BUDGET CATEGORY	BUDGETED AMOUNT	EXPENDITURE TO DATE	PERCENT EXPENDED TO DATE	PROJECTED SURPLUS/ DEFICIT AT YEAR END
Personal Services	$1,257,490	$687,759	54.7%	$6,014
Contractual Services	297,000	157,279	53.0	164
Operating Expenses	68,000	23,493	34.5	1,500
Supplies & Materials	9,000	8,300	92.2	-1,212
Equipment	13,000	7,068	53.1	2,495
Total	$1,644,790	$883,899	53.7%	$8,961

The Managers Financial Report produced by the Statewide Accounting System (SWA) is attached. It contains a more detailed breakdown of expenditures.

STATEWIDE ACCOUNTING SYSTEM
MANAGERS FINANCIAL REPORT
DEPT 38 INVESTMENT BOARD — FISCAL YEAR 8
PAID THRU 0131; PRIOR YEAR PAYROLL THRU 012087, CURRENT YEAR THRU 011988

REPORT INCLUDES : ALL ENCUMBRANCES
DEPT 38 DIV 000 THRU DEPT 38 DIV 999
FUND 01 THRU FUND 98 - OBJ 000 THRU OBJ 999

REPORT IS SORTED/SUBTOTALED BY:
DEPT FUND APID OBJ1 OBJ2

	AMOUNT PAID PRIOR Y.T.D.	BUDGET	AMOUNT PAID CURRENT Y.T.D.	OBLIGATIONS	BALANCE
FUND 10 GENERAL					
APID 16120-00-10 OPERATIONS INVEST BOARD 6323800					
0 PERSONAL SERVICES					
01 REGULAR CLASSIFIED	120,509	217,200	118,822	96,506	1,872
02 REGULAR UNCLASSIFIED	541,317	1,040,290	568,422	467,211	4,657
08 MISCELLANEOUS PAYROLL	0	0	515	0	515-
TOTAL - 0	661,826	1,257,490	687,759	563,717	6,014
1 EXPENSES/CONTRACTUAL SRVCS					
10 RENTS & LEASES	50,509	90,000	52,780	34,336	2,884
12 REPAIRS/ALTERATIONS/MAINT	3,985	7,000	3,902	5,817	2,719-
14 PRINTING & BINDING	6,612	15,000	32	7,868	7,100
16 PROFESSIONAL/TECHNICAL SRVC	2,934	3,000	3,107	943	1,050-
17 DATA PROCESS & SYSTEMS SRVC	55,000	162,000	81,000	81,000	0
18 PURCHASED SERVICES	12,357	20,000	16,458	9,592	6,050-
TOTAL - 1	131,396	297,000	157,279	139,557	164
2 MISC OPERATING EXPENSES					
20 COMMUNICATIONS	9,262	20,000	10,609	9,391	0
21 TRAVEL & SUBSIST, IN-STATE	220	2,000	208	1,792	0
22 TRAVEL & SUBSIST, OUT-OF-MN	19,769	40,000	9,442	30,558	0
29 FEES & OTHER FIXED CHARGES	3,311	6,000	3,234	1,266	1,500
TOTAL - 2	32,562	68,000	23,493	43,007	1,500
3 SUPPLIES/MATERIALS/PARTS					
30 SUPPLIES/MATERIALS/PARTS	11,683	9,000	8,300	1,912	1,212-
TOTAL - 3	11,683	9,000	8,300	1,912	1,212-
4 CAPITAL EQUIPMENT-$300 & UP					
40 CAPITAL EQUIPMENT-$300 & UP	8,471	13,300	7,068	3,737	2,495
TOTAL - 4	8,471	13,300	7,068	3,737	2,495
TOTAL - APID 16120-00-10	845,939	1,644,790	883,899	751,930	8,961
TOTAL - FUND 10	845,939	1,644,790	883,899	751,930	8,961
FUND 46 SUPP INVEST INDEX					
APID 16120-19-46 MN SUPP INVEST INDEX 6323898					
1 EXPENSES/CONTRACTUAL SRVCS					
16 PROFESSIONAL/TECHNICAL SRVC	19	100,000	67	99,933	0
TOTAL - 1	19	100,000	67	99,933	0

STATE BOARD OF INVESTMENT
TRAVEL SUMMARY

FY 88: December 1, 1987 - February 15, 1988

Name & Purpose of Trip	Destination	Dates	Total Cost
Douglas Gorence Richards & Tierney	Chicago	12/14-15	$ 187.67
Douglas Gorence Beutel Goodman	Houston	12/23	$ 517.00
Howard Bicker Inst Investors conf	New York	1/5-8	$ 613.00
Douglas Gorence Inst Investors conf BEA meeting	New York	1/5-8	$ 704.58
John Griebenow Leveraged Buyout seminar	Chicago	1/14-15	$ 732.83
John Griebenow Laventhol & Horwath real estate consultant interview	Philadelphia	1/29	$ 45.00
Douglas Gorence Richards & Tierney	Chicago	1/28-29	$ 470.50
Mike Schmitt presentation Scandia/Hibbing	Hibbing	2/10-11	$ 53.62
Howard Bicker speeches: Scandia/Hibbing	Hibbing	2/10-11	$ 53.62

STATE OF MINNESOTA

OFFICE OF THE STATE AUDITOR

SAINT PAUL 55103

612-296-2551

ARNE H. CARLSON
STATE AUDITOR

STATE EXECUTIVE COUNCIL
STATE BOARD OF INVESTMENT
LAND EXCHANGE BOARD
HOUSING FINANCE AGENCY
RURAL FINANCE ADMINISTRATION
PRESIDENT, PUBLIC EMPLOYEES
RETIREMENT ASSOCIATION

November 19, 1987

The Honorable Rudy Perpich
Governor of Minnesota
Room 130 Capitol Building
St. Paul, Minnesota 55155

Dear Rudy:

At the next meeting of the State Board of Investment, I will make a series of suggestions that I feel will more clearly define the role of the State Board of Investment relative to the staff, the Investment Advisory Council, and the consultant. For purposes of organization, let me divide the matter into two parts:

I. MANAGEMENT

a. Our Board has an obligation to review the budget of the State Board of Investment prior to submission to the Legislature and prior to its implementation. This review should also include a salary schedule.

b. At each meeting of the State Board of Investment, staff should submit to the Board, for review, a statement of budget-to-actual in order to give us information relative to what has been spent compared to the allocation.

c. The review of the annual budget should also contain all anticipated travel by members of the staff. Any additional travel should be disclosed to the Board at a meeting prior to the travel expenditure.

d. Annually, each member of the Board should submit an evaluation of its employee, the Executive Director, on the prescribed form.

e. We should make absolutely certain that all staff is aware of the fact that it is governed by Minnesota Statutes, Section 43A.48 which defines a code of ethics for employees in the Executive Branch.

f. The Board should make certain that staff submits to the Board its plans for the annual orientation meeting. As you know, this proposal emanated from the Board and we should not lose control of it. I would personally suggest that the Chairman of the State Board of Investment open the conference and that other members of the Board introduce various speakers and play a meaningful role in the conference. After all, this is our conference and we are the hosts and hostesses.

II. POLICY

a. The relationship between the Board and the consultant should be more clearly defined. It should be understood that the consultant works for us, not the staff or the IAC. There is a reason for that line of authority and it relates to our fiduciary responsibility. I would look to the consultant as an individual who meets with us, as members of the Board, individually and collectively, for the purpose of sharing with us his best judgment relative to the guidance of the funds.

Part of his responsibilities should include the following:

1. A review of the investment strategy that has been adopted by the State Board of Investment. Did we lay out the right course of action? Was our asset allocation strategy appropriate? Did our active managers outperform their own benchmarks and how did they do against various industry indexes?

2. The consultant should assist us in explaining why active equity management has fallen so far behind the performance of the Wilshire 5000 Index Fund. The primary purpose of active management is to add value and a losing strategy warrants very close scrutiny.

3. The consultant should assist us in evaluating the quality and quantity of our staff operations.

4. The consultant should assist us in designing a system that evaluates our overall performance relative to other public funds as well as private funds. I think it is important for us to know how we are doing against Honeywell, 3M, General Motors, etc.

b. Staff should be directed to reorganize the presentation of its data so that it lends itself to an easier understanding of how we evaluate outside managers. I have submitted to Howard Bicker a form that will alleviate this problem. It includes the following items - name of manager, the amount of money allocated, the quarterly period, manager's portfolio results on a quarterly basis, manager's benchmark results on a quarterly basis, the rolling two or three-year figure, and quarterly numbers for the performance of the S & P, Wilshire 5000, and the CPI. The same would be applicable on the bond side except the appropriate bond indices would be used. There should also be the annual results of outside managers, annual results of internal managers and annual results for the Index Fund vs. the appropriate stocks and bonds indexes.

I have attached a copy of this form.

I very much appreciate your help and understanding in this matter. Further, I hope that if you have any questions, you will feel free to call me.

Warmest regards,

ARNE H. CARLSON
State Auditor

AHC:mgt

Enclosure

PROPOSED TABLE
(From inception of the use of outside managers)

Manager	Amount of assets	Quarterly Period	Manager's Portfolio	Benchmark Quarterly	Rolling two-year	S & P	Wilshire 5000	CPI
Annual results for outside managers		vs.		S & P			Wilshire 5000	
Annual results for internal managers		vs.		S & P			Whilshire 5000	
Annual results for Index Fund		vs.		S & P			Whilshire 5000	

(Same applies to appropriate bond indexes)

RESOLUTION OF THE STATE BOARD OF INVESTMENT

WHEREAS, the State Board of Investment (SBI) is authorized by Minnesota Statutes section 11A.24, subdivision 4 to enter into repurchase agreements and reverse repurchase agreements; and

WHEREAS, the SBI staff recommend that the SBI from time to time enter into repurchase and reverse agreements in order to best maximize the return on short term debt securities held by the SBI; and

WHEREAS, tri-party repurchase and reverse repurchase agreements provide for greater security for the assets of the SBI by providing for perfection of the SBI's security interest in the collateral;

WHEREAS, the SBI staff has identified banks and trust companies listed in Exhibit A as capable of providing demand deposit accounts or custody accounts for the purposes of facilitating tri-party repurchase and reverse repurchase agreements; and

WHEREAS, pursuant to Minnesota Statutes section 11A.07 the SBI Executive Director is authorized to execute administrative and investment functions in conformity with the policies and directives of the SBI; and

WHEREAS, the Administrative Committee of the Investment Advisory Council has reviewed the matter and recommends the SBI authorize the Executive Director to establish accounts with such banks and trust companies as may be necessary to facilitate tri-party repurchase and reverse repurchase agreements; and

NOW THEREFORE, the SBI:

1. Authorizes the establishment of demand deposit accounts or custody accounts at any of the banks or trust companies listed in Exhibit A as the SBI Executive Director or his designee determines is necessary in order to facilitate tri-party repurchase and reverse repurchase agreemets.

2. Authorizes the SBI Executive Director or his designees to give instructions on behalf of the SBI to such banks or trust companies listed in Exhibit A with which a demand deposit account or custody account is established.

3. Authorizes the banks and trust companies listed on Exhibit A with which the SBI establishes a demand deposit account or custody account to rely on instruction to make deposits to and withdrawals from the demand deposit account or custody account provided it reasonably believes such instructions are instructions from the SBI Executive Director or his designee whether the instructions are given orally or by telex, telecopier, electronically or other means of giving instructions not manually signed or bearing a facsimile signature.

4. Directs the SBI Executive Director or his designee, to execute such authorizations or account agreements with any of the banks or trust companies as may be reasonably required to facilitate tri-party repurchase and repurchase agreements.

BE IT FURTHER RESOLVED that:

1. The Resolution shall remain in full force and effect until such time as the SBI takes action to amend or rescind this resolution.

March 2, 1988.

Joan A. Growe

JOAN A. GROWE
Secretary of State, Member
State Board of Investment

EXHIBIT A

BANK OF NEW YORK

CHASE MANHATTAN BANK

CUSTODIAL TRUST COMPANY

IRVING TRUST COMPANY

MANUFACTURERS HANOVER TRUST COMPANY

MARINE MIDLAND BANK

SECURITY PACIFIC NATIONAL TRUST COMPANY

EXHIBIT D

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

March 1, 1988

TO: Members, State Board of Investment

FROM: Investment Advisory Council

SUBJECT: Action Taken at March 1, 1988 Meeting

The Investment Advisory Council (IAC) discussed the staff recommendation concerning implementation of a completeness fund at its meeting on March 1, 1988.

While the Council feels the completeness fund concept has merit, the IAC does not recommend that it be implemented at this time. Rather, the IAC recommends the Equity Manager Committee and the staff examine and consider alternative methods of constructing and managing such a fund and report back to the Council and the Board.

Staff also recommended that the assets now managed for the Basic Funds by the internal manager and the assets of the manager recommended for termination be re-directed from active management to the passive completeness fund. Based on January 31, 1988 market values these two portfolios total $215 million. In view of its recommendation on the completeness fund, the Council agrees with a staff proposal that these assets be reallocated to the five managers shown below:

	Value Added Annualized Since (1/1/84)	Portfolio Value (1/31/88)	Proposed Reallocation
1. Alliance Capital	6.7%	$ 148.8 Million	$ 30 Million
2. Forstmann Leff	2.4	128.9 Million	30 Million
3. Lieber & Co.	1.8	39.4 Million	50 Million
4. Waddell & Reed	1.5	102.4 Million	30 Million
5. Wilshire Index Fund	---	1,900.0 Million	75 Million
			$215 Million

AGENDA

INVESTMENT ADVISORY COUNCIL
MEETING

Tuesday, June 7, 1988
2:00 P.M.
MEA Building - Conference Room "A"
41 Sherburne Avenue
Saint Paul

		TAB
1.	Approval of Minutes of March 1, 1988	
2.	Executive Director's Report (H. Bicker)	A
	A. Quarterly Investment Review (January 1-March 31, 1988) 1. Basic Retirement Funds 2. Post Retirement Fund and Other Investment Funds	
	B. Portfolio Statistics (March 31, 1988)	B
	C. Administrative Report 1. Budget and Travel Reports 2. Board Member Travel Policy 3. Consultant Contract Renewal 4. Master Custodian Review 5. 1988 Legislative Review 6. Fiscal Year 1989 Management Plan	C
3.	Report from the Board's Consultant	
4.	Reports from Investment Advisory Council Committees	
	A. Equity Manager Committee (J. Eckmann) 1. Value of Active Management Reports 2. Equity Manager Contract Renewals 3. Equity Manager Selection Process Review 4. Completeness Fund Progress	D
	B. Fixed Income Manager Committee (G. Norstrem) 1. Value of Active Management Reports 2. Fixed Income Manager Contract Renewals 3. Report from the Bond Index Fund Manager Selection Committee 4. Reallocation of Assets to the Bond Index Fund	E
	C. Alternative Investment Committee (K. Gudorf) 1. Real Estate Manager Annual Reviews 2. Recommendations for New Commitments 3. Recommendations for a Real Estate Special Project Consultant 4. Recommendations for a Resource Fund Consultant	F

EXECUTIVE DIRECTOR
HOWARD J. BICKER

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MINUTES
Investment Advisory Council
March 1, 1988

The Investment Advisory Council met on Tuesday, March 1, 1988 at 2:00 P.M. in the MEA Building, St. Paul.

MEMBERS PRESENT: Harry Adams, James Eckmann, Elton Erdahl, Paul Groschen, Ken Gudorf, James Hacking, Vern Jackels, Malcolm McDonald, Judy Mares, Gary Norstrem, Joe Rukavina, Tom Triplett, Ray Vecellio, and Jan Yeomans

MEMBERS ABSENT: Debbie Veverka

SBI STAFF: Howard Bicker, Beth Lehman, Doug Gorence, Debbie Griebenow, John Griebenow, Daralyn Peifer, Harriet Balian, and Charlene Olson

OTHERS ATTENDING: Shane Allers, Gary Austin, Christie Eller, Jake Manahan, Mike Ousdigian, Peter Sausen, Elaine Voss, and Robert Whitaker

The minutes of the November 24, 1987 meeting were approved.

Executive Director's Report

Howard Bicker, Executive Director, stated that assets of the Basic Retirement Funds decreased by 12.1% during the fourth quarter of 1987. He said the decrease was due largely to the stock market decline in October, 1987. Also, Mr. Bicker noted that for the first time in more than four years the Basic Funds received a positive cash flow. Assuming no new early retirement incentives are passed by the Legislature, he stated the Basic Funds should continue to benefit from positive net contributions in the future. Mr. Bicker reported that the Basic Retirement Funds returned -13.2% for the fourth quarter and 3.8% for the year. He stated the equity segment returned -22.3% for the quarter, outperforming the Wilshire 5000, which returned -23.1%. For the year, the stock segment gained 2.6%, exceeding the Wilshire 5000 return of 2.3%. He stated that the bond segment gained 5.2% for the quarter, slightly underperforming the Salomon index return of 5.8%. For the year the bond managers slightly outperformed the index with a gain of 2.8% versus a market return of 2.6%.

Mr. Bicker then summarized the performance of the Post Retirement Fund. He reported the assets of the Post Retirement Fund increased by 1.4% for the quarter. He stated the modest asset growth occurred despite net withdrawals from the Fund of over $62 million. Mr. Bicker reported the asset mix of the Post Retirement Fund at the end of 1987 was 83.7% fixed income, 9.3% common stocks, and 7.0% cash.

Mr. Bicker stated that as of December 31, 1987 all assets under management at the State Board of Investment were $11.5 billion.

Mr. Bicker then presented information concerning three issues: performance of the Basic Retirement Funds and Post Retirement Fund from fiscal year 1983 to present; a proposal for a Manager Continuation Policy to evaluate the Board's stock and bond managers; and a proposed Completeness Fund within the common stock segment of the Basic Retirement Funds.

RESPONSE TO AUDITOR CARLSON'S LETTER

Mr. Triplett briefly reviewed a response to Mr. Carlson's letter from the IAC Administrative Committee and the Executive Director. He highlighted on the second paragraph of the response which suggested the IAC Administrative Committee meet on a monthly basis and serve as regular forum for discussion between Board members and the IAC. Malcolm McDonald and Jan Yeomans commented that roles of the Board, IAC and consultant appear unclear. Mr. Triplett and Mr. Bicker said they felt the monthly meetings would serve as an educational forum where a variety of policy issues could be discussed.

John Manahan, Deputy Treasurer, spoke from for the audience. He said the IAC is extremely important to the Board's decision process and he stated Mr. Carlson's letter should not be taken to mean otherwise. Ken Gudorf said the Board needs to recognize the complexity of the investment issues considered by the IAC and acknowledge that discussion among Board members would not replace the deliberation of the Council. Judy Mares said she felt the policy debate that takes place between staff and IAC members is not fully reflected in the information that is presented to the Board. Generally, she said, the Board sees only the final recommendation on an issue. Mr. Bicker commented that while most often a joint recommendation will come to the Board, the IAC is very independent from Board staff. He said there is frequently considerable debate on an issue before a position is presented to the Board for approval.

INVESTMENT ADVISORY COUNCIL COMMITTEE REPORTS

ALTERNATIVE INVESTMENT COMMITTEE

Ken Gudorf stated that the Committee met several times during the quarter. The Committee recommended commitments to three funds: up to $35 million to Summit Ventures II, a follow-on venture capital fund; up to $15 million in First Reserve Secured Energy Assets Funds; and a $5 million investment with a new manager, First Chicago Venture Partnership Acquisition Fund. Mr. Gudorf moved approval of all three investments. The motion passed unanimously. Mr. Gudorf informed the Council members that the Alternative Investment Committee is actively looking for specialized consulting assistance in both real estate and oil and gas.

FIXED INCOME MANAGER COMMITTEE

Gary Norstrem presented the report from the Fixed Income Manager Committee. He said the Committee intends to utilize the Manager Continuation Policy to review the bond managers beginning next quarter. He informed the Council that the search for a bond index fund manager will be completed during the next quarter and that manager recommendations will be made at the June Board meeting. Mr. Norstrem reported that the performance of the external bond managers was reviewed and the Committee recommended no changes at this time. Mr. Norstrem stated that the Committee reviewed the performance of the BEA cash enhancement program and recommends the contract be renewed for one year. He stated that the Committee also recommends that the current limits on BEA concerning allocation to certain futures strategies be eliminated. In response to a question raised by Ray Vecellio, Mr. Bicker stated that BEA has successfully added value under the current strategy limits but that a relaxation of the restrictions could offer higher value-added without undue risk to the portfolio. Gary Norstrem moved approval of the Committee report. The motion passed unanimously.

ADMINISTRATIVE COMMITTEE REPORT

Mr. Triplett stated that there were several information items discussed by the Administrative Committee. First, he reported the 1987 Annual Report was distributed in late February 1988. Second, Mr. Triplett provided an update on the status of the Board's legislative package. Third, he pointed out that staff had revised and condensed the quarterly report document.

Mr. Triplett also reported on several recommendations of the Committee. He said the Committee renewed its recommendation that the Board adopt a staff position paper concerning overall performance evaluation in the Basic Retirement Funds. Mr. Triplett reported the Committee also recommended the Board adopt the staff position paper containing a policy on manager continuation. He said the policy proposes a consistent framework by which to evaluate the Board's stock and bond managers. Finally, he said the Committee recommended the Board adopt a resolution which authorizes the Executive Director to establish third party relationships with several banks. Mr. Triplett said this action would further secure the collateral pledged to repurchase agreements. Mr. Triplett moved adoption of the Committee report. The motion passed unanimously.

EQUITY MANAGER COMMITTEE

Jim Eckmann presented the report from the Equity Manager Committee. He stated that the Committee used the Manager Continuation Policy to formulate their recommendations on specific managers. He said the Committee recommends that BMI be placed on probation for quantitative reasons; that Beutel Goodman remain on probation for quantitative reasons; that Waddell & Reed and Investment Advisers be removed from probation; and Peregrine Capital be terminated as an equity manager. Mr. Eckmann moved approval of the recommendation. The motion passed unanimously. (The abstention of Judy Mares was noted).

The final item considered by the Committee was the Completeness Fund Policy Paper. Mr. Eckmann said the Committee felt the concept had merit, but the Committee was unable to support the staff recommendation concerning implementation. In response to a question from Jim Hacking, Mr. Bicker stated that if the Board does not implement the completeness fund now, the Committee will continue to study implementation alternatives. Dave Tierney, Richards & Tierney, stated that a completeness fund would be a valuable management tool and should be carefully examined by staff and the IAC. Harry Adams moved that the concept be studied further before presentation to the Board. The motion passed unanimously.

In light of the last action, Mr. Eckmann said the staff recommendation concerning the distribution of the internal manager portfolio and Peregrine Capital portfolio needed to be re-examined. He suggested those assets be reallocated to five managers: Alliance Capital, $30 million; Forstmann Leff, $30 million; Lieber & Co., $50 million; Waddell & Reed, $30 million; and the Wilshire Index Fund, $75 million. Mr. McDonald moved approval. The motion passed unanimously.

The meeting adjourned at 3:55 P.M.

Respectfully submitted,

Howard Bicker

Howard J. Bicker
Executive Director

Tab A

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

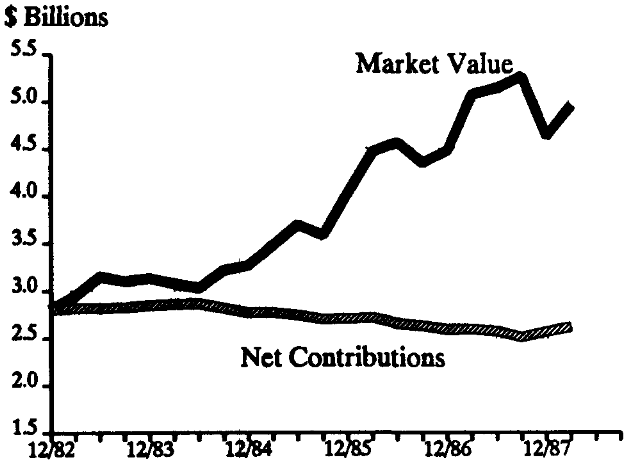
Basic Retirement Funds

Asset Growth

The market value of the Basic Funds increased 7.1% during first quarter 1988. The increase was attributable to rising stock prices based on economic reports showing improving trade deficits and moderate economic growth. In addition a strong performance in the small capitalization stocks improved stock market gains. The bond market benefited from slightly lower interest rates during the quarter. In addition, the Basic Funds received net contributions of $53 million during the quarter.

Asset Growth During First Quarter 1988 (Millions)

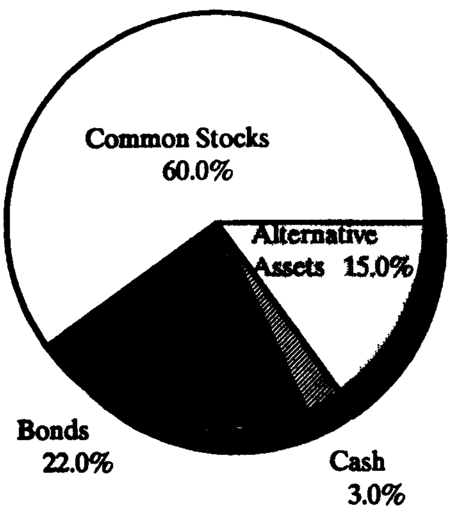
Beginning Value	$4,628
Net Contributions	53
Investment Return	277
Ending Value	$4,958



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.

The Basic Funds asset mix changed during the first quarter and partially corrected the underweighting of the common stock segment that occurred in the fourth quarter of 1987. The change in the stock segment was due to performance and cash contributions. The cash segment is overweighted due to large cash holdings by outside active equity and bond managers.



Policy Asset Mix

	Actual Market Value (Millions)	Actual Mix 3/31/88
Common Stocks	$2,816	56.8%
Bonds	1,054	21.2
Cash*	469	9.5
Alternative Investments	619	12.5
	$4,958	100.0%

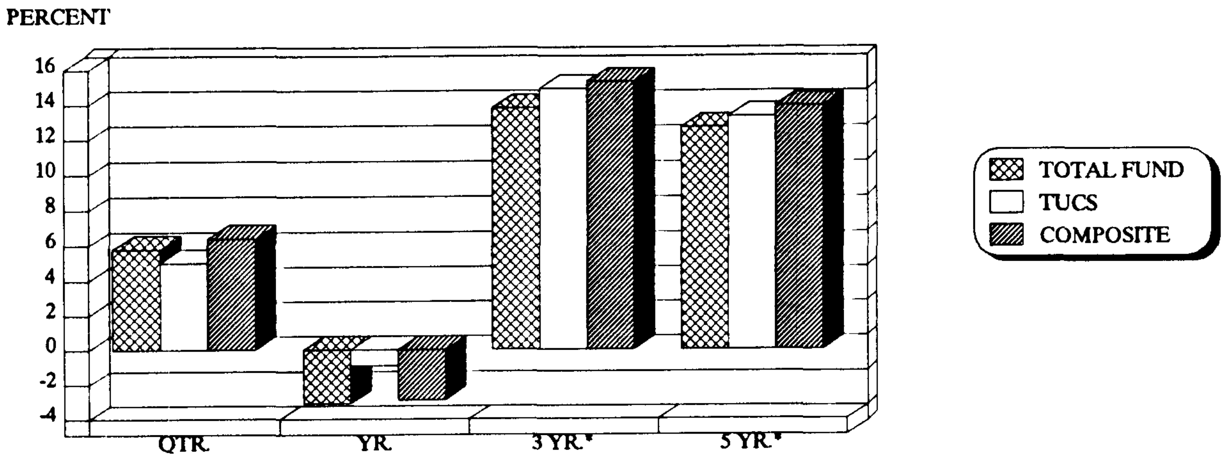
* Includes cash uncommitted to long-term assets plus all cash held by external managers.

Basic Funds (Con't.)

Total Fund Performance

The Basic Funds' total portfolio exceeded its assigned performance standards for the most recent quarter but trailed its performance standards for the last 12 months.

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.



Period Ending 3/31/88

			*(Annualized)	
	Qtr.	**Yr.**	**3 Yr.**	**5 Yr.**
Total Fund	5.9%	-3.0%	13.9%	12.1%
Total Fund Without Alternative Assets	7.0	-3.9	14.9	12.7
TUCS** Median Balanced Fund	5.0	-0.9	14.9	13.3
Stock/Bond/Cash/Composite	6.4	-2.9	15.3	13.8

** 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 equaled the performance of its target for the latest quarter and exceeded its target for the latest year. Details on individual manager stock performance can be found on page 7 of the report.

			(Annualized)	
	Qtr.	**Yr.**	**3 Yr.**	**5 Yr.**
Stock Segment	8.0%	-8.2%	15.2%	12.7%
Wilshire 5000	8.0	-8.7	15.5	14.2

Bond Segment Performance

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

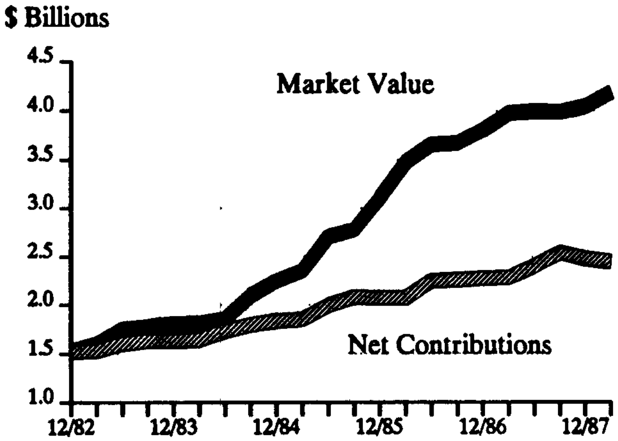
			(Annualized)	
	Qtr.	**Yr.**	**3 Yr.**	**5 Yr.**
Bond Segment	3.7%	4.3%	13.4%	12.4%
Salomon Broad Index	3.8	5.1	13.8	12.7

EXECUTIVE SUMMARY

Post Retirement Fund

Asset Growth

The market value of the Post Fund increased by 3.6% during first quarter 1988. The moderate asset growth occurred despite net withdrawals from the Fund of $32 million.



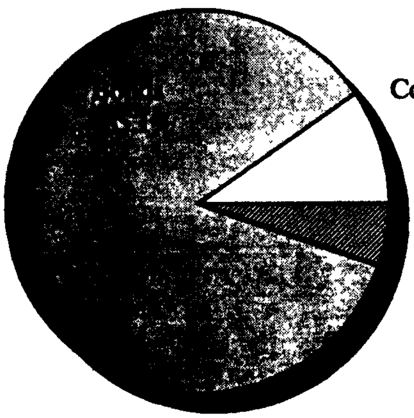
Asset Growth During First Quarter 1988 (Millions)

Beginning Value	$4,047
Net Contributions	-32
Investment Return	178
Ending Value	$4,193

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.

The cash segment of the Post Fund was reduced to purchase additional bonds that were needed when the dedicated bond portfolio was rebalanced in the first quarter. The increase in the dedicated bond portfolio was required to cover additional liabilities generated by an increase in new retirees.



Actual Asset Mix 3/31/88

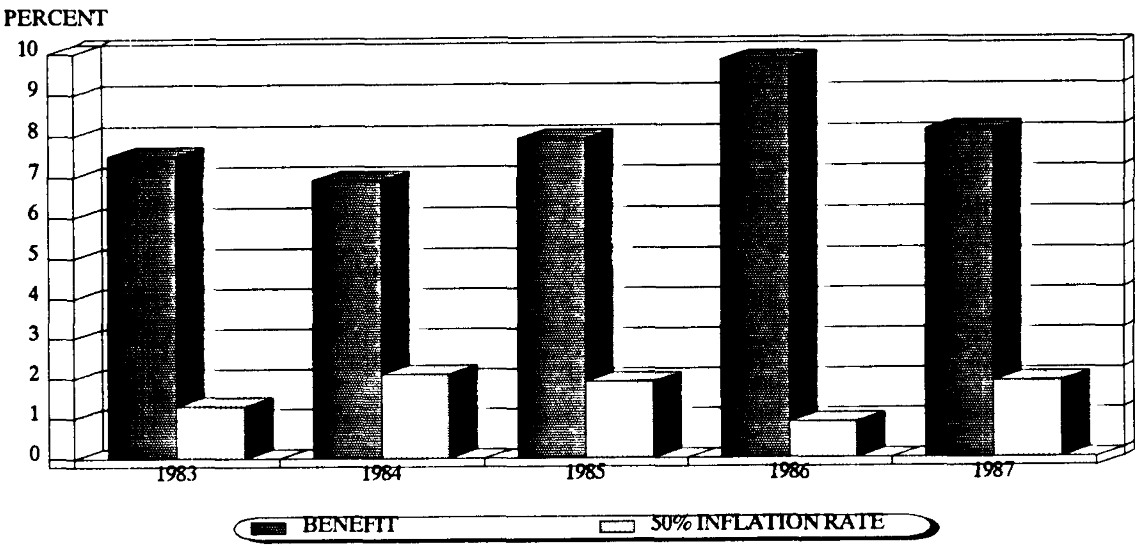
	Actual Market Value (Millions)	Asset Mix 3/31/88
Common Stocks	$402	9.6%
Bonds	3,569	85.1
Cash	222	5.3
	$4,193	100.0%

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 generated over the last five years are shown below.



	Fiscal Year					(Annualized)	
	1983	1984	1985	1986	1987	3 Yrs.	5 Yrs.
Benefit Increases*	7.5%	6.9%	7.9%	9.8%	8.1%	8.6%	8.0%
50% Inflation	1.3	2.1	1.9	0.9	1.9.	1.6	1.6

* Benefit increases are effective January 1 of the following year.

Stock Segment Performance

The stock segment of the Post Fund underperformed its benchmark for the quarter.

	Period Ending 3/31/88			
		Since	(Annualized)	
	Qtr.	7/87	3 Yr.	5 Yr.
Stock Segment	11.9%	-12.0%	9.2%	10.3%
Post Fund Benchmark	13.1	-10.3	N.A.	N.A

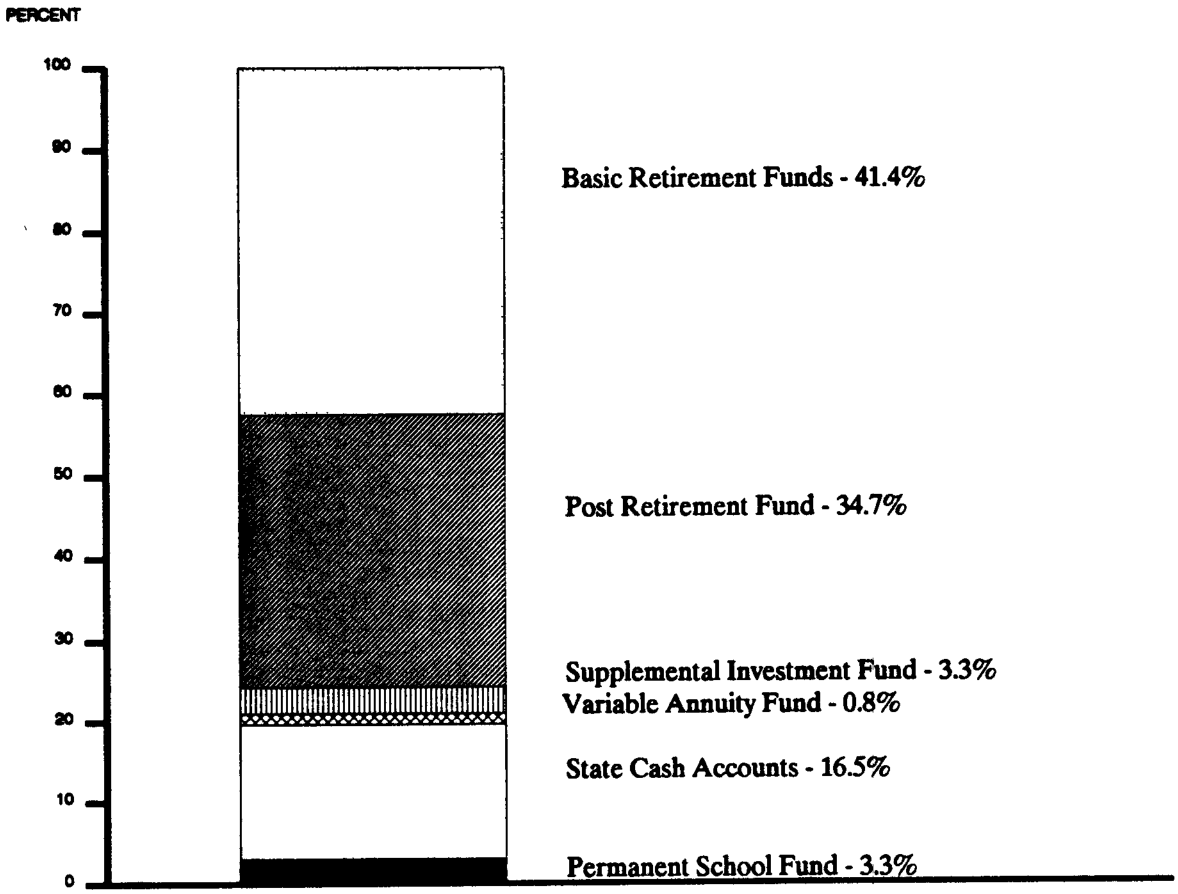
Bond Segment Performance

At the close of the quarter, the dedicated bond portfolio had a current yield of 8.44% and average duration of 7.90 years. The market value of the dedicated bond portfolio was $2.7 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 3.8% return for the quarter and a 1.9% return for the year. This is consistent with the design of the dedicated bond portfolio.

EXECUTIVE SUMMARY

Funds Under Management



	3/31/88 Market Value (Billions)
Basic Retirement Funds	$5.0
Post Retirement Fund	4.2
Supplemental Investment Fund	0.4
Variable Annuity Fund	0.1
State Cash Accounts	2.0
Permanent School Fund	0.4
Total	$12.1

MINNESOTA STATE BOARD

OF INVESTMENT

INVESTMENT REPORT

First Quarter 1988

(January 1, 1988 - March 31, 1988)

Table of Contents

FINANCIAL MARKETS REVIEW

STOCK MARKET

Stock prices rose during the first quarter supported by reports of moderate economic growth and improvements in trade deficit figures. These events reduced fears of a post-October 19 recession. Overall, the Wilshire 5000 stock index provided a total return of 8.0% during the quarter. Because of the dramatic market decline on October 19, 1987, the Wilshire index lost 8.7% for the latest year.

There was a wide disparity in the price performance of different sectors during the quarter. Consumer durables, energy and transportation were the best performing groups with returns of 18.6%, 15.6%, and 14.1% respectively. The two worst performing sectors were technology stocks which rose 2.0% and capital goods which gained 4.1%.

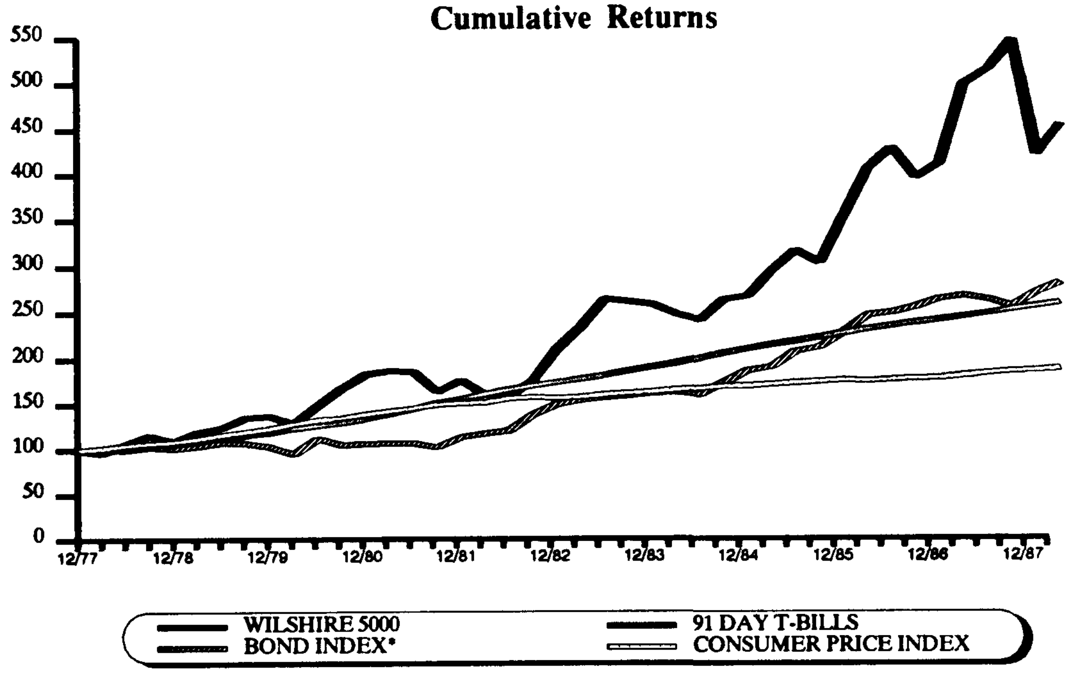
BOND MARKET

Interest rates continued to trend downward at the start of the quarter sustaining the rally in long term bond prices that began after the October 19 stock market decline. Later, the bond market leveled off and then saw a slight rise in interest rates. The rate increase was due to economic reports showing low unemployment and moderate economic growth. According to analysts, the market reacted to concerns that the economy would overheat and cause an increase in inflation or a rise in interest rates.

Overall, the Salomon Brothers Broad Investment Grade (BIG) Index gained 3.8% for the quarter and had a 5.1% return for the latest year. Mortgages were the best performing sector with a gain of 4.4% and Treasury issues provided the lowest return of 3.4%.

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

The real estate market currently faces oversupply and slow demand growth. 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 into 1988.

VENTURE CAPITAL

The venture capital industry continues to grow. Total capital under management increased by 20% in 1987 to end the year at $29 billion compared to $24.1 billion at the end of 1986. This $4.9 billion jump in capital resources is 9% greater than 1986's $4.5 billion hike and is the largest amount of net new capital committed in a single year.

RESOURCE FUNDS

On April 23, 1988 an unprecedented meeting took place in Vienna between select non-OPEC producing countries and OPEC members to negotiate production cuts. The meeting was unsuccessful and offered no real change in production levels or price. As a result, oil prices are expected to remain in the $16-$18 per barrel trading range in the near term.

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:

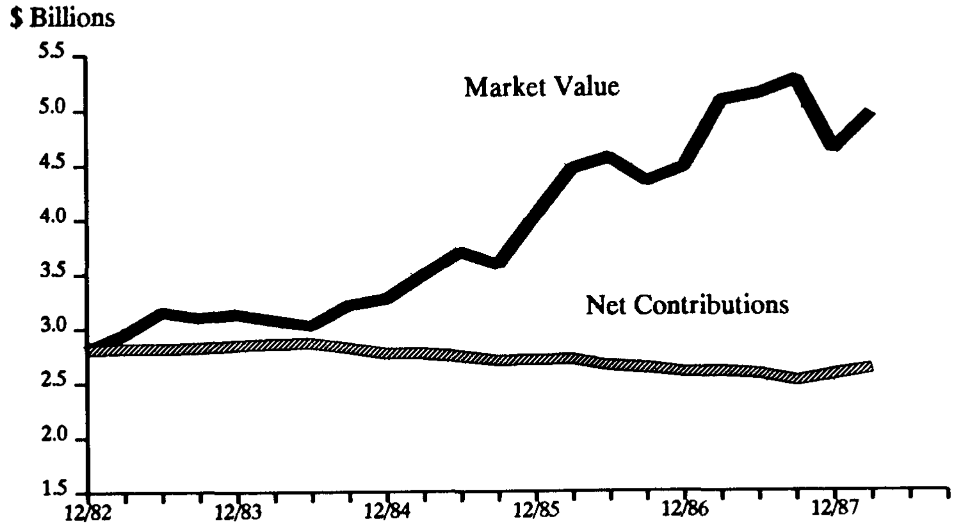
- To secure the benefits promised public employees covered by the statewide retirement plan.
- To reduce employer/employee contributions and/or increase promised benefits.
- To avoid excessive volatility in portfolio returns over the short-run.

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 7.1% during the first quarter. The increase was attributable to rising stock prices based on economic reports showing improving trade deficits and moderate economic growth. In addition, strong performance of small capitalization stocks improved stock market gains. The bond market benefited from slightly lower interest rates during the quarter. The Basic Funds received net contributions of $53 million during the quarter.



	In Millions				
	12/84	**12/85**	**12/86**	**12/87**	**3/88**
Beginning Value	$3,129	$3,265	$4,030	$4,474	$4,628
Net Contributions	-78	-62	-113	-26	53
Investment Return	214	827	557	180	277
Ending Value	$3,265	$4,030	$4,474	$4,628	$4,958

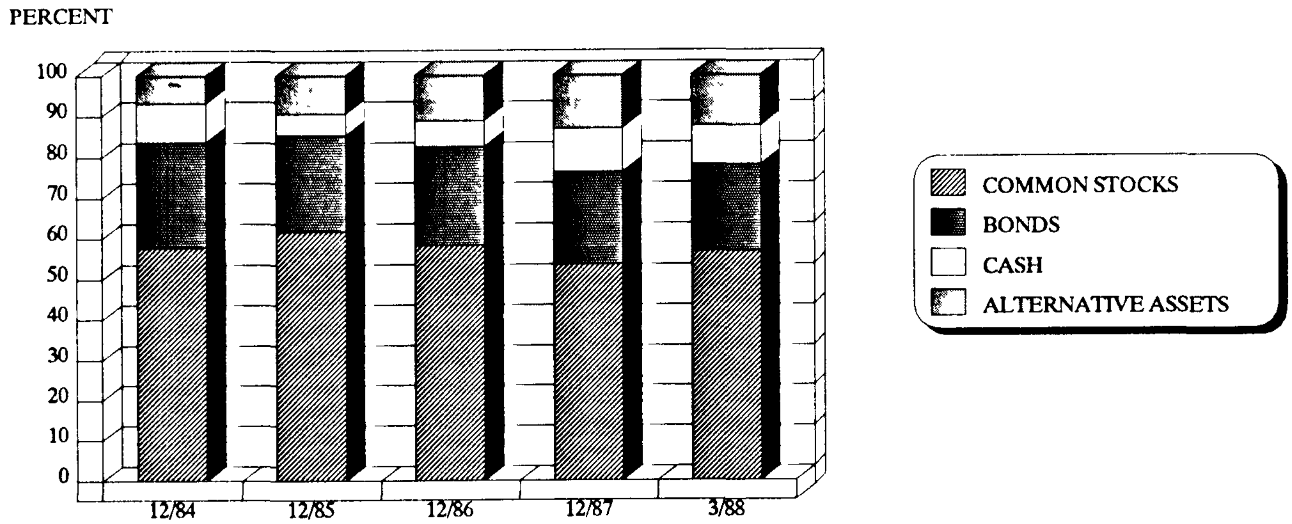
BASIC RETIREMENT FUNDS

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:

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

The Basic Funds asset mix changed during the first quarter and partially corrected the underweighting of the common stock segment that occurred in the fourth quarter of 1987. The change in the stock segment was due to performance and cash contributions. The cash segment was overweighted due to large cash holdings by outside active equity and bond managers.



	Last Five Years				Latest Qtr.
	12/84	12/85	12/86	12/87	3/88
Stocks	57.8%	61.6%	58.3%	53.6%	56.8%
Bonds	25.9	23.8	24.3	22.6	21.2
Cash*	9.4	5.1	6.2	10.6	9.5
Real Estate	5.5	7.1	8.2	9.3	9.0
Venture Capital	0.7	1.2	1.6	2.5	2.3
Resource Funds	0.7	1.2	1.4	1.4	1.2
Total	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

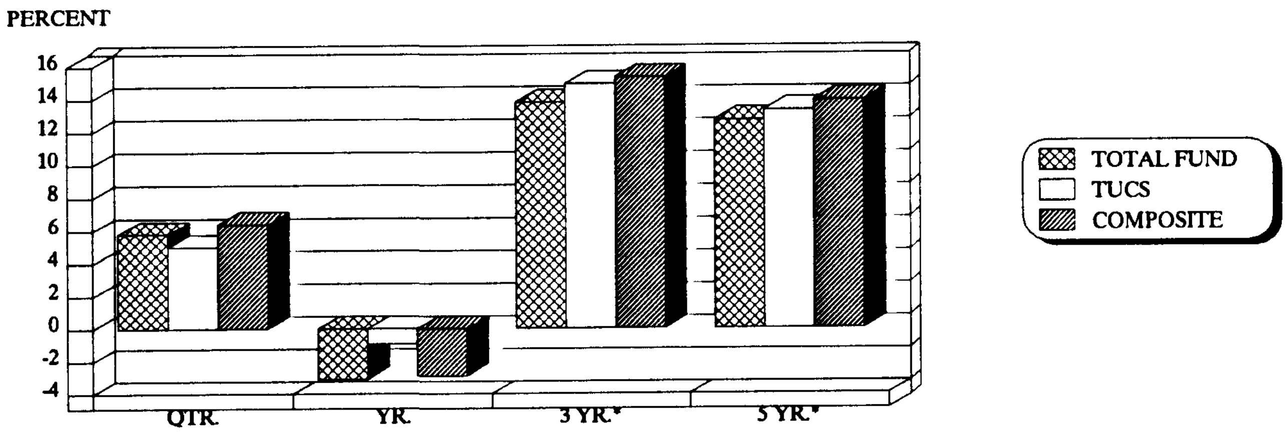
The Basic Funds' long-term rate of return performance is evaluated relative to two specific benchmarks:

- **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 outperformed its assigned performance standards for the most recent quarter but underperformed for the last year. Because of the Basic Funds sizable stock allocation and relatively good performance of the stock market, the Basic Funds' exceeded the median balanced portfolio performance during the first quarter. However, the poor performance of the stock market during fourth quarter 1987 caused the Basic Funds' performance to trail the median balance portfolio for the year.



Period Ending 3/31/88

***(Annualized)**

	Qtr.	Yr.	3 Yr.	5 Yr.
Total Fund	5.9%	-3.0%	13.9%	12.1%
Total Fund WithoutAlternative Assets	7.0	-3.9	14.9	12.7
TUCS Median Balanced Fund	5.0	-0.9	14.9	13.3
Stock/Bond/Cash Composite	6.4	-2.9	15.3	13.8

BASIC RETIREMENT FUNDS

Segment Performance vs. Standards

Stock Segment

The Basic Funds' common stock segment equaled its performance target for the most recent quarter and exceeded its target for the latest year. The outperformance for the latest year was attributable to the active stock managers, who held a portion of their portfolios in cash reserves during the sharp downturn in the stock market.

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Stock Segment	8.0%	-8.2%	15.2%	12.7%
Wilshire 5000	8.0	-8.7	15.5	14.2

Bond Segment

The bond segment of the Basic Funds trailed the performance of its target for the quarter and latest year. The bond managers are still maintaining a defensive position by holding portfolios of shorter duration than their target. With interest rates continuing to trend downward at the start of the quarter, the shorter durations of the manager's portfolios resulted in minor underperformance.

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Bond Segment	3.7%	4.3%	13.4%	12.4%
Salomon Bond Index	3.8	5.1	13.8	12.7

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	1.8%	7.1%	7.4%	7.7%
91 Day T-Bills	1.4	5.8	6.5	7.6

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	2.1%	8.0%	5.7%	7.5%

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.

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

As a group, the 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 by comfortable margins while others underperformed their benchmarks. A comprehensive analysis of the individual managers' performance is included in this quarter's Equity Committee Report.

Managers	Market Value 3/31/88 (Thousands)	Quarter Ending 3/31/88 Actual	Quarter Ending 3/31/88 Bmrk	Year Ending 3/31/88 Actual	Year Ending 3/31/88 Bmrk	(Annualized) Since 1/1/84 Actual	(Annualized) Since 1/1/84 Bmrk
Alger	$ 86,002	1.6%	11.9%	-16.5%	-7.0%	9.9%	13.4%
Alliance	131,072	4.0	6.8	-5.3	-12.2	17.6	11.2
Beutel	103,421	9.8	15.1	-3.9	-2.5	12.3	16.7
BMI	63,102	23.9	12.5	-9.0	-11.2	9.6	10.9
Forstmann	114,858	6.9	6.7	-2.9	-4.7	15.6	11.7
IDS	108,802	0.6	7.5	-12.4	-6.0	15.0	14.6
IAI	78,911	-1.5	5.6	-5.5	-6.6	13.3	14.4
Lieber	37,214	16.2	15.0	-9.5	-9.9	12.8	10.7
Peregrine	83,333	12.9	11.5	-5.8	-5.2	N.A.	N.A.
Waddell	92,830	8.1	11.1	-3.7	-3.5	11.9	11.1
Internal	108,441	12.9	10.2	-7.6	-3.2	N.A.	N.A.
Wilshire	1,947,762	8.4	7.9	-8.4	-8.6	14.0	14.1
Stock Segment	$2,955,748	8.0	8.5	-8.2	-7.8	13.6	14.0
Wilshire 5000		8.0%		-8.7%		14.1%	

BASIC RETIREMENT FUNDS

Bond Manager Performance vs. Benchmarks

Staff is in the process of working with the Board's bond managers to develop appropriate benchmark portfolios. Three of the six managers have completed their benchmark portfolios. Returns for these portfolios are reported below. For the remaining three managers, the benchmark portfolio currently 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 bond managers matched the performance of their benchmark for the quarter but trailed the performance of their benchmark for the year. Of the six active bond managers, only Western Asset Management exceeded its benchmark for the quarter. Their strong performance offset the relatively minor underperformance of the other managers. A comprehensive analysis of the individual managers' performance is included in this quarter's Fixed Income Committee Report.

Managers	Market Value 3/31/88 (Thousands)	Quarter Ending 3/31/88 Actual	Quarter Ending 3/31/88 Bmrk	Year Ending 3/31/88 Actual	Year Ending 3/31/88 Bmrk	(Annualized) Since 6/1/84 Actual	(Annualized) Since 6/1/84 Bmrk
IAI	$ 45,024	3.2%	3.7%	5.4%	5.2%	16.2%	15.6%
Lehman	250,089	3.2	3.4	4.8	5.9	14.6	14.9
Miller	263,279	3.6	3.7	4.5	5.2	16.2	15.6
Morgan	213,535	3.1	3.7	4.2	5.2	15.5	15.6
Peregrine	118,775	3.2	3.7	4.2	5.6	13.1	15.7
Western	272,062	5.3	4.0	3.8	5.1	17.2	15.6
Bond Segment	$1,162,764	3.7	3.7	4.3	5.2	15.2	15.6
Salomon Bond Index		3.8%		5.1%		16.2%	

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:

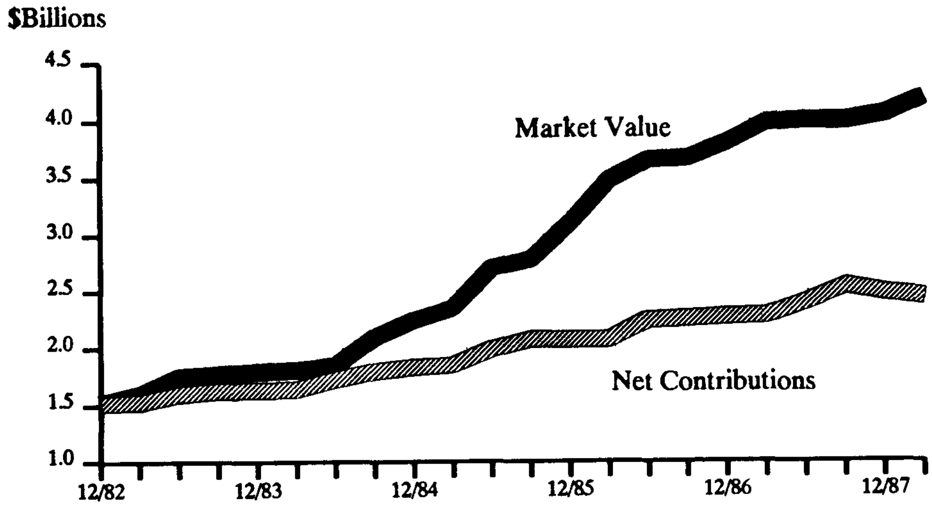
- To produce annual earnings sufficient to maintain promised benefits at current levels
- To generate additional earnings which allow benefits to be increased at a rate which compensates, to some degree, for inflation

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 3.6% during the first quarter of 1988. The moderate asset growth occurred despite net withdrawals from the Fund of over $32 million.



In Millions

	12/84	12/85	12/86	12/87	3/88
Beginning Value	$1,803	$2,246	$3,107	$3,808	$4,047
Net Contributions	201	239	199	207	-32
Investment Return	242	622	502	32	178
Ending Value	$2,246	$3,107	$3,808	$4,047	$4,193

POST RETIREMENT FUND

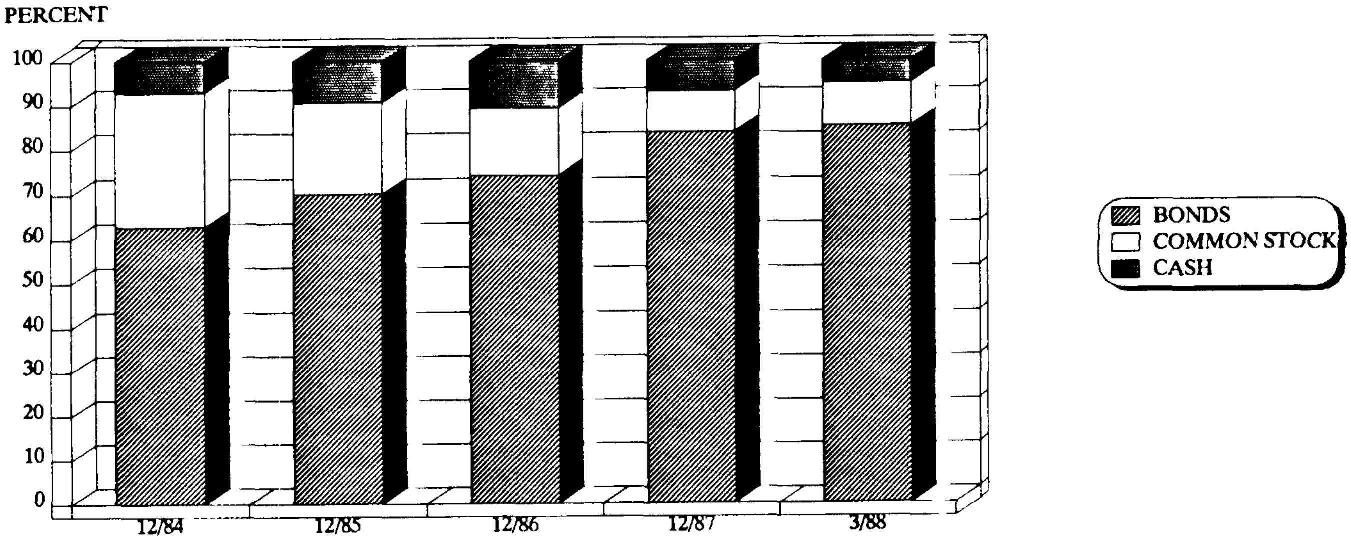
Asset Mix

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.

The cash segment of the Post Fund was reduced during the quarter to purchase additional bonds that were needed when the dedicated bond portfolio was rebalanced in the first quarter. The increase in the dedicated bond portfolio was required to cover additional liabilities generated by an increase in new retirees.



	Last Five Years				Latest Qtr.
	12/84	12/85	12/86	12/87	3/88
Bonds	62.9	70.2	74.2	83.7	85.1
Stocks	30.0	20.5	15.1	9.3	9.6
Cash	7.1	9.3	10.7	7.0	5.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%

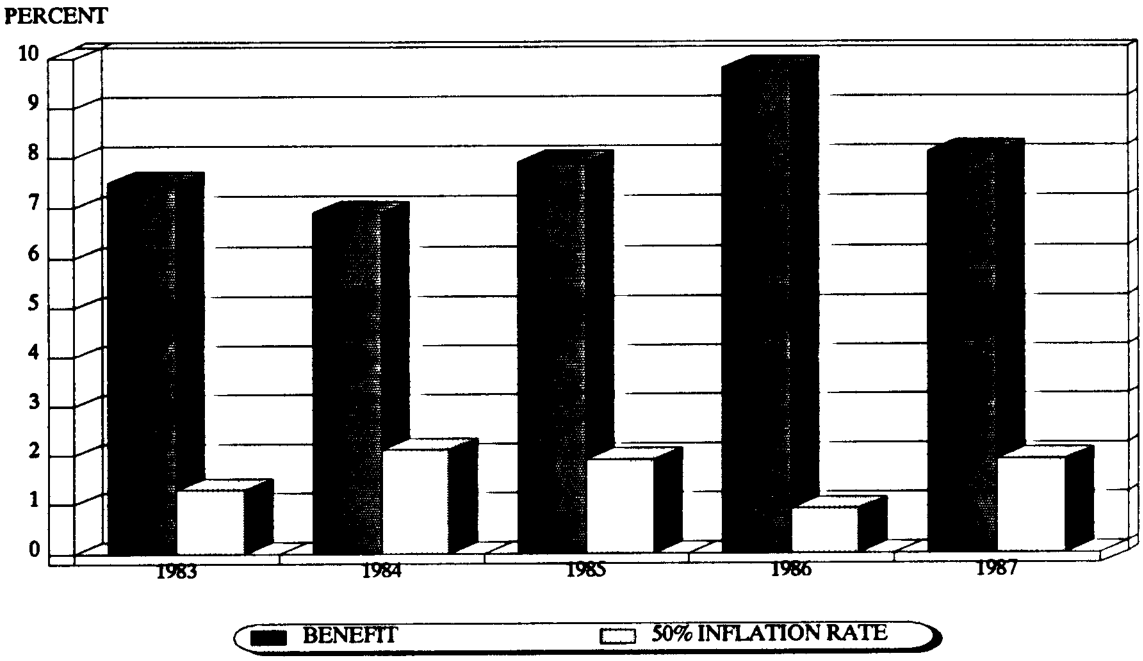
POST RETIREMENT FUND

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 generated over the last five years are shown below.

Benefit Increases Compared to Inflation



Fiscal Year

	1983	1984	1985	1986	1987	(Annualized) 3 Yrs.	5 Yrs.
Benefit Increases*	7.5%	6.9%	7.9%	9.8%	8.1%	8.6%	8.0%
50% of Inflation	1.3	2.1	1.9	0.9	1.9	1.6	1.6

* Benefit increases are based upon earnings during a fiscal year (July - June) and are effective at the start of the following calendar year (January).

POST RETIREMENT FUND

Segment Performance

Stock Segment Performance

The stock segment of the Post Fund underperformed its benchmark for the quarter.

	Period Ending 3/31/88			
		Since	(Annualized)	
	Qtr.	7/87	3 Yrs.	5 Yrs.
Stock Segment	11.9%	-12.0%	9.2%	10.3%
Post Fund Benchmark	13.1	-10.3	N.A.	N.A.

Bond Segment Performance

The composition of the Post Retirement Investment Fund's dedicated bond portfolio changed during the first quarter. Treasury issues increased from 63.6% to 71.0% with small decreases in the other sectors.

The Post Fund's bond portfolio provided a 3.8% rate of return for the quarter and a 1.9% 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
3/31/88

Value at Market	$ 2,707,784,137
Value at Cost	2,562,691,357
Average Coupon	6.10%
Current Yield	8.44
Yield to Maturity	8.89
Current Yield at Cost	8.92
Time to Maturity	16.86 Years
Average Duration	7.90 Years
Average Quality Rating	AAA
Number of Issues	284

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 March 31, 1988 the market value of the entire fund was $384 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.

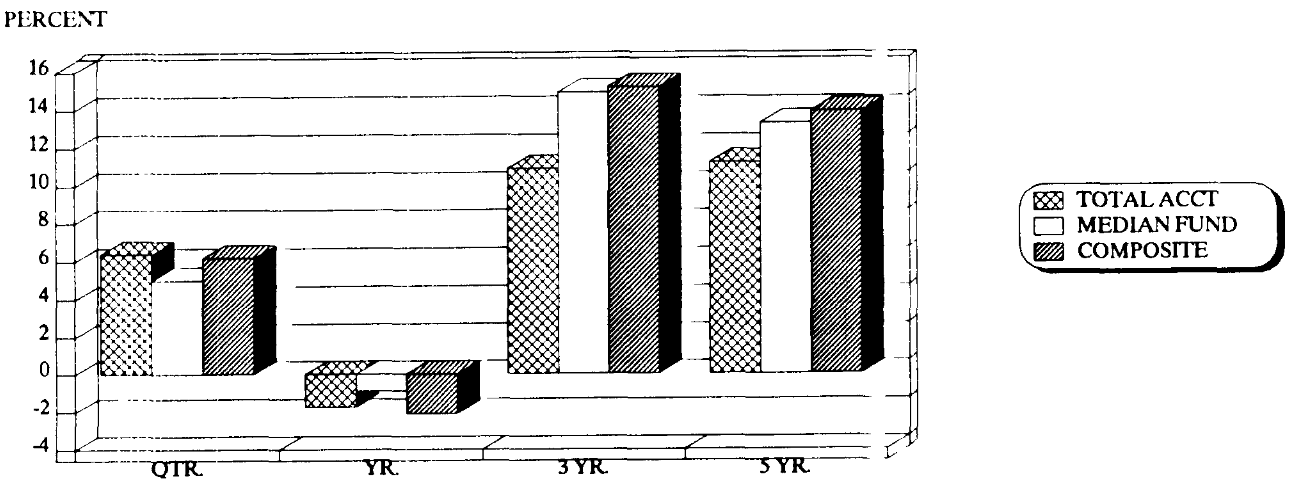
Asset Mix
The Income Share Account is invested in a balanced portfolio of common stocks and fixed income securities. Common stocks provide the potential for significant capital appreciation, while bonds act as a deflation hedge and provide portfolio diversification.

	Target	Actual
Stocks	60.0%	58.6
Bonds	35.0	32.2
Cash*	5.0	9.4
	100.0%	100.0%

* Includes cash held by the external managers

Investment Management
The Account combines internal and external management. Internal investment staff manage the entire fixed income segment. Three quarters of the stock segment is managed by Wilshire Associates as part of a passively managed index fund designed to track the Wilshire 5000. The balance of the stock segment is actively managed by the same group of external managers utilized by the Basic Retirement Funds. (See page 7 for performance results for these managers.)

Market Value
On March 31, 1988 the market value of the Income Share Account was $207 million



Period Ending 3/31/88

	Qtr.	Yr.	3 Yr. (Annualized)	5 Yr. (Annualized)
Total Account	6.4%	-1.7%	10.9%	11.2%
Median Fund*	5.0	-0.9	14.9	13.3
Composite**	6.2	-2.2	15.2	13.8
Equity Segment	8.9	-8.8	9.7	10.1
Wilshire 5000	8.0	-8.7	15.5	14.2
Bond Segment	3.5	7.9	13.1	13.1
Salomon Bond Index	3.8	5.1	13.8	12.7

* 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.

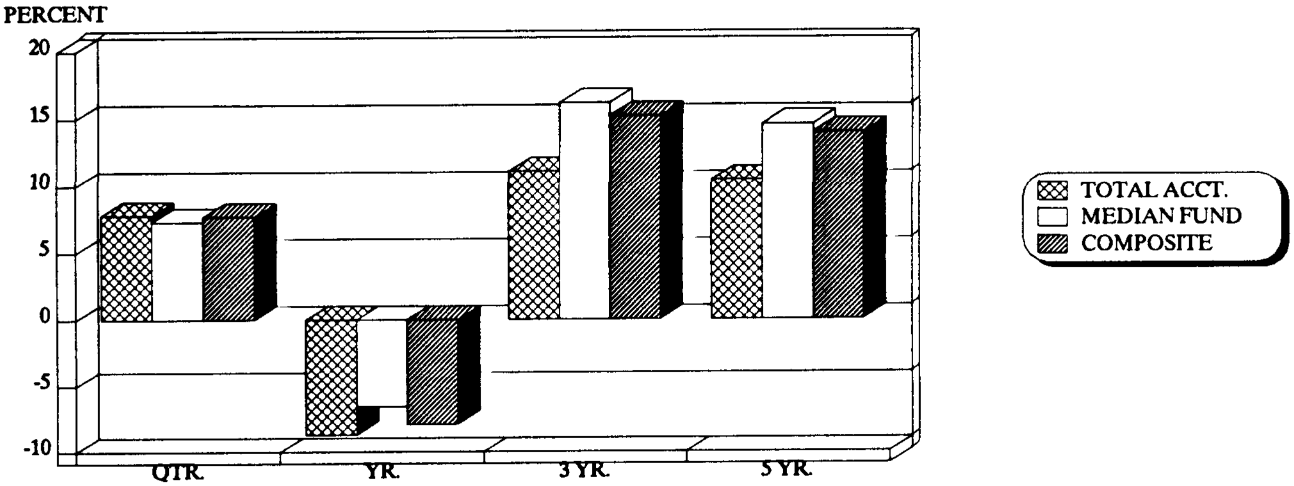
Asset Mix
The Growth Share Account is invested almost entirely in common stocks. The small cash equivalents component represents the normal cash reserves held by the Account as a result of net contributions not yet allocated to stocks.

	Target	Actual
Stocks	95.0%	88.7
Cash*	5.0	11.3
	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 March 31, 1988 the market value of the Growth Share Account was $79 million.



Period Ending 3/31/88

	Qtr.	Yr.	Annualized 3 Yr.	Annualized 5 Yr.
Total Account	7.8%	-8.7%	11.1%	10.4%
Median Fund*	7.3	-6.6	16.2	14.6
Composite**	7.7	-7.8	15.2	14.0
Equity Segment	7.9	-8.7	11.6	9.3
Wilshire 5000	8.0	-8.7	15.5	14.2

* TUCS Median Managed Equity Portfolio

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

SUPPLEMENTAL INVESTMENT FUND

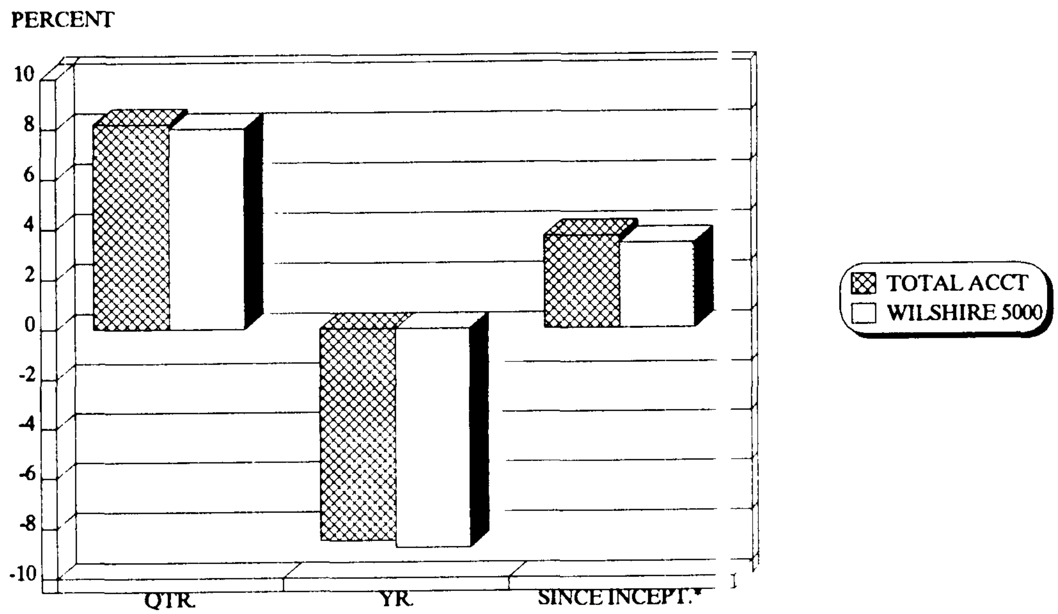
Common Stock Index Account

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 March 31, 1988 the market value of the Common Stock Index Account was $3 million.



Period Ending 3/31/88

	Qtr.	Yr.	Annualized Since Inception* 7/1/86
Total Account	8.2%	-8.5%	3.7%
Wilshire 5000	8.0	-8.7	3.4

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

SUPPLEMENTAL INVESTMENT FUND

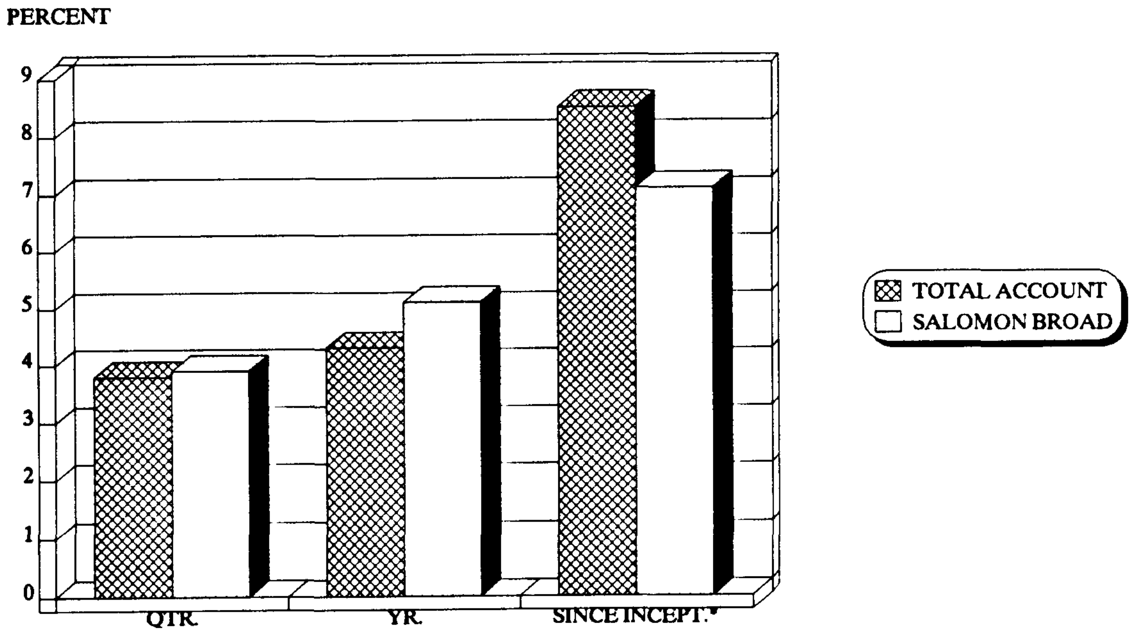
Bond Market Account

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 March 31, 1988 the market value of the Bond Market Account was $1 million.



	Period Ending 3/31/88		
	Qtr.	Yr.	Annualized Since Inception* 7/1/86
Total Account	3.8%	4.3%	8.5%
Salomon Broad Bond Index	3.8	5.1	7.1

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

SUPPLEMENTAL INVESTMENT FUND

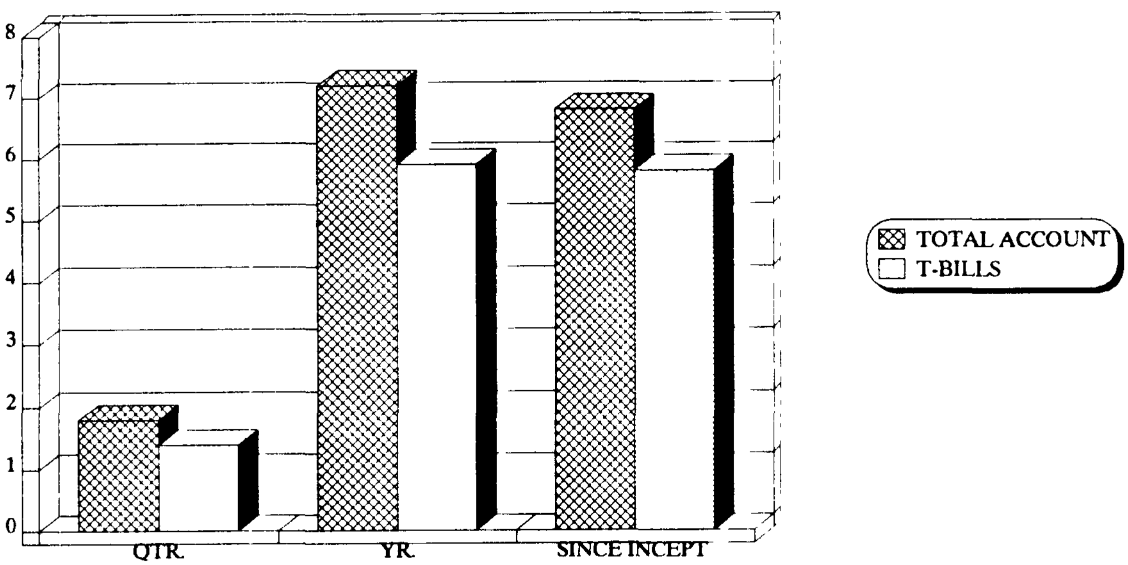
Money Market Account

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.

Assset 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 March 31, 1988 the market value of the Money Market Account was $74 million.



Period Ending 3/31/88

	Qtr.	Yr.	Annualized Since Inception* 7/1/86
Total Account	1.8%	7.1%	6.8%
91 Day T-Bills	1.4	5.8	5.8

* 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 March 31, 1988 the market value of the Guaranteed Return Account was $21 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

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%	87.9
Cash*	5.0	12.1
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 7.5% during the first quarter of 1988. The increase was attributable to rising stock prices during the period.

	Asset Growth During First Quarter 1988 (Millions)
Beginning Value	$140.6
Net Contributions	-0.5
Investment Return	11.1
Ending Value	151.2

Performance
The Variable Annuity Fund outperformed the Median Fund for the quarter but trailed the target for the latest year.

	Period Ending 3/31/88		Annualized	
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Fund	7.9%	-8.7%	11.6%	10.6%
Median Fund*	7.3	-6.6	16.2	14.6
Composite**	7.7	-7.8	15.2	14.0
Equity Segment	7.9	-8.6	11.9	10.5
Wilshire 5000	8.0	-8.7	15.5	14.2

* 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 accounting 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 accounting 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 first quarter. The Permanent School fund continues to hold only fixed income securities. Under current accounting limitations, common stocks are not appropriate vehicles for the Fund.

	Target	Actual
Bonds	95.0%	91.1
Cash	5.0	8.9
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 increased 0.4% during first quarter. Withdrawals from the fund exceeded contributions by 12.5 million. This offset most of the investment gains from moderately strong performance by the bond market.

Asset Growth
During First Quarter 1988
(Millions)

Beginning Value	$351.8
Net Contributions	-12.5
Investment Return	13.9
Ending Value	353.2

Bond Segment Performance
The composition of the Permanent School Fund's bond portfolio remained the same during the first quarter. The bond portoflio 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 9.3%, an average life of 8.0 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
3/31/88

Value at Market	$314,798,193
Value at Cost	312,739,277
Average Coupon	9.07%
Current Yield	9.28
Yield to Maturity	9.19
Current Yield at Cost	9.34
Time to Maturity	17.32 Years
Average Duration	7.99 Years
Average Quality Rating	AAA
Number of Issues	125

Tab B

PORTFOLIO STATISTICS

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
COMPOSITION OF STATE INVESTMENT PORTFOLIOS BY TYPE OF INVESTMENT
MARKET VALUE MARCH 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	$ 81,453 3.84%	$ -0-	$ 497,297 23.46%	$ -0-	$1,264,155 59.63%	$276,997 13.07%	$ 2,119,902 100%
PUBLIC EMPLOYEES RETIRE. FUND	40,715 3.17%	-0-	303,487 23.62%	-0-	771,464 60.05%	169,043 13.16%	1,284,709 100%
STATE EMPLOYEES RETIRE. FUND	50,094 5.00%	-0-	232,162 23.18%	-0-	590,155 58.91%	129,315 12.91%	1,001,726 100%
PUBLIC EMP. POLICE & FIRE FUND	17,105 4.07%	-0-	98,265 23.40%	-0-	249,791 59.49%	54,734 13.04%	419,895 100%
HIGHWAY PATROL RETIRE. FUND	22 .03%	-0-	18,270 24.40%	-0-	46,419 61.98%	10,177 13.59%	74,888 100%
JUDGES RETIREMENT FUND	163 3.85%	-0-	994 23.47%	-0-	2,526 59.63%	553 13.05%	4,236 100%
PUBLIC EMP. P.F. CONSOLIDATED	5 .09%	-0-	1,390 24.38%	-0-	3,533 61.96%	774 13.57%	5,702 100%
CORRECTIONAL EMPLOYEES RETIREMENT	1,786 3.84%	-0-	10,899 23.46%	-0-	27,704 59.63%	6,071 13.07%	46,460 100%
POST RETIREMENT FUND	221,612 5.29%	3,568,958 85.12%	-0-	402,074 9.59%	-0-	-0-	4,192,644 100%
MINNESOTA SUPPLEMENTAL FUNDS:							
INCOME SHARE ACCOUNT	17,448 8.44%	66,785 32.29%	-0-	27,083 13.10%	95,488 46.17%	-0-	206,804 100%
GROWTH SHARE ACCOUNT	67 .08%	-0-	-0-	17,286 21.80%	61,946 78.12%	-0-	79,299 100%
MONEY MARKET ACCOUNT	73,613 100%	-0-	-0-	-0-	-0-	-0-	73,613 100%
COMMON STOCK INDEX ACCOUNT	-0-	-0-	-0-	-0-	2,675 100%	-0-	2,675 100%
BOND MARKET ACCOUNT	-0-	-0-	1,150 100%	-0-	-0-	-0-	1,150 100%
GUARANTEED RETURN ACCOUNT	-0-	-0-	20,875 100%	-0-	-0-	-0-	20,875 100%

	CASH AND SHORT TERM SECURITIES	BONDS INTERNAL	BONDS EXTERNAL	STOCKS INTERNAL	STOCKS EXTERNAL	ALTERNATIVE ASSETS	TOTAL
MINNESOTA VARIABLE ANNUITY	361 .24%	-0-	-0-	35,050 23.17%	115,837 76.59%	-0-	151,248 100%
TOTAL RETIREMENT FUNDS	$ 504,444 5.21%	$3,635,743 37.54%	$1,184,789 12.23%	$481,493 4.97%	$ 3,231,693 33.36%	$647,664 6.69%	$ 9,685,826 100%
PERMANENT SCHOOL FUND	31,525 8.92%	321,698 91.08%	-0-	-0-	-0-	-0-	353,223 100%
TREASURERS CASH	1,683,319 100%	-0-	-0-	-0-	-0-	-0-	1,683,319 100%
HOUSING FINANCE AGENCY	176,438 100%	-0-	-0-	-0-	-0-	-0-	176,438 100%
MINNESOTA DEBT SERVICE FUND	18,204 100%	-0-	-0-	-0-	-0-	-0-	18,204 100%
MISCELLANEOUS ACCOUNTS	88,426 100%	-0-	-0-	-0-	-0-	-0-	88,426 100%
MINNESOTA STATE BUILDING FUNDS	67,828 100%	-0-	-0-	-0-	-0-	-0-	67,828 100%
GRAND TOTAL	$2,570,184 21.29%	$3,957,441 32.78%	$1,184,789 9.81%	$481,493 3.99%	$3,231,693 26.77%	$647,664 5.36%	$12,073,264 100%

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

For period of
January 1, 1988 - March 31, 1988

Teachers Retirement Fund	$ 20,187,000.00
Public Employees Retirement Fund	15,000,000.00
State Employees Retirement Fund	(29,017,484.71)
Public Employees Police & Fire	4,250,000.00
Highway Patrol Retirement Fund	(3,000,000.00)
Judges Retirement Fund	-0-
Public Emp. P & F Consolidated	4,340,583.57
Correctional Employees Retirement Fund	41,017,484.71
Post Retirement Fund	(31,842,634.83)
Supplemental Retirement Fund - Income	(550,944.23)
Supplemental Retirement Fund - Growth	(1,165,180.80)
Supplemental Retirement Fund - Money Market	1,794,318.27
Supplemental Retirement Fund - Index	105,415.10
Supplemental Retirement Fund - Bond Mkt.	490,284.86
Supplemental Retirement Fund - Guaranteed	(261,841.62)
Minnesota Variable Annuity Fund	$ (468,682.20)
Total Retirement Funds Net Cash Flow	$ 20,878,318.12
Permanent School Fund	(12,490,780.35)
Total Net Cash Flow	$ 8,387,537.77

S INESOTA
STATE INVESTMENT

TRANSACT D ASSET SUMMARY
R T 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)
December 1985	(3)	(76)	(79)	16	5.5	43.1	51.4	7583
January 1986	(7)	13	6	13	5.5	42.9	51.6	7618
February	36	(8)	28	34	5.3	42.9	51.8	8049
March	1	(3)	(2)	27	5.4	42.9	51.7	8429
April	(3)	(131)	(134)	20	7.3	42.9	49.8	8384
May	(2)	8	6	44	7.7	40.8	51.5	8450
June	226	326	552	625	8.3	41.4	50.3	8715
July	175	2	177	33	6.8	44.8	48.4	8488
August	147	59	206	39	4.6	45.5	49.9	8884
September	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

Tab C

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

May 24, 1988

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

FROM: Howard Bicker

SUBJECT: Executive Director's Administrative Report

The SBI Management Committee has recommended that the Administrative Committee of the IAC be dissolved and that the SBI Management Committee assume its responsibilities.

Since the IAC Administrative Committee did not meet during the quarter, I am presenting the following items as the Executive Director's Administrative Report. I anticipate these issues would be referred to the SBI Management Committee in the future.

1) Budget and Travel Reports

A budget-to-actual report on the Board's FY 88 Administrative Budget is included as Attachment A. Overall, current and projected expenditures are within budget. A small surplus of approximately $2,000 is expected at the close of FY 88.

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

2) SBI Board Member Travel Allocation Policy

Under current policy, each Board member is allocated up to $2,000 annually for travel by him or herself and their staff for purposes related to Board matters. I recommend the Board renew this policy for fiscal year 1989.

3) Consultant Contract Renewal

Richards & Tierney has served as the Board's consultant for the past two years. Its current contract will expire on June 30, 1988. During its tenure, the firm has assisted the Board in its decision-making by providing a number of services, including:

- o Benchmark portfolio construction and maintenance
- o Value of active management analysis
- o Investment policy design
- o Attendance at Board and IAC meetings
- o Asset mix simulation software
- o Responses to special requests

A more detailed outline of the services provided by Richards & Tierney is included as Attachment C. I recommend the Board renew the firm's contract for the next fiscal year at an unchanged fee of $120,000.

If the renewal is approved by the Board, Richards & Tierney 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 a consultant on a three year cycle. Therefore, I recommend the Board establish a Consultant Search Committee for this purpose. I recommend members of the Committee include a designee of each Board member, the chair of the Investment Advisory Council (IAC) and one other appropriate member of the Council. The Committee would review RFP responses and interview candidates in April and May 1989.

4) Master Custodian Review

The Board's current contract for master custodial services with State Street Bank and Trust Company will expire September 30, 1988. I recommend the Board establish Master Custodian Review Committee to review the services provided by State Street and determine whether the current contract should be renewed or if a new RFP should be let. I recommend the Committee include a designee of each Board member, the chair of IAC and one other appropriate member of the Council.

5) 1988 Legislative Update

The 1988 Legislative enacted three measures of particular interest to the SBI.

- o SBI Legislative Proposal (Laws 1988, Chapter 453)

  This legislation adds international securities as authorized investments for the SBI subject to certain limits.

- o Northern Ireland (Laws 1988, Chapter 687)

  This legislation requires the SBI to monitor U.S. companies with business operations in Northern Ireland and to sponsor and support shareholder resolution that encourage companies to take action that will eliminate ethnic and religious discrimination in the workplace.

- o Environmental Trust Fund (Laws 1988, Chapter 690)

  This legislation establishes an environmental trust fund upon approval of a constitutional amendment. If approved, the trust fund moneys would be invested by the SBI.

A more complete description of these laws is included as Attachment D.

5) Management Goals for Fiscal Year 1989

As part of our staff planning process, I have established management goals for fiscal year 1989. The investment strategies and administrative initiatives we plan to undertake are outlined in Attachment E. Additional detail will be presented to the SBI Management Committee at its June 30, 1988 meeting.

Attachments

ATTACHMENT A

STATE BOARD OF INVESTMENT
FISCAL YEAR 1988 ADMINISTRATIVE BUDGET REPORT
GENERAL FUND APPROPRIATION

ITEM	FISCAL YEAR 1988 BUDGET	FISCAL YEAR 1988 EXPENDITURES THROUGH 4/30/88	FISCAL YEAR 1988 EXPENDITURES PROJECTED 6/30/88
PERSONAL SERVICES			
CLASSIFIED EMPLOYEES	$ 215,700	$ 168,624	$ 215,334
UNCLASSIFIED EMPLOYEES	1,012,290	804,098	1,019,694
PART-TIME EMPLOYEES	0	1,133	5,478
SEVERENCE PAY	23,500	17,859	24,859
MISCELLANEOUS PAYROLL	0	7,433	7,433
SUBTOTAL	$ 1,251,490	$ 999,147	$ 1,272,798
EXPENSES & CONTRACTUAL SERVICES			
RENTS & LEASES	$ 90,000	$ 69,521	$ 79,920
REPAIRS/ALTERATIONS/MAINTENANCE	7,000	4,915	7,847
PRINTING & BINDING	15,000	351	6,869
PROFESSIONAL/TECHNICAL SERVICES	5,000	4,279	7,400
DATA PROCESSING & SYSTEM SERVICES	162,000	121,500	162,000
PURCHASED SERVICES	20,000	22,882	25,271
SUBTOTAL	$ 299,000	$ 223,448	$ 289,307
MISCELLANEOUS OPERATING EXPENSES			
COMMUNICATIONS	$ 20,000	16,108	19,965
TRAVEL, IN-STATE	2,000	395	500
TRAVEL, OUT-STATE	40,000	14,813	32,000
FEES & OTHER FIXED CHARGES	6,000	4,652	5,135
SUBTOTAL	$ 68,000	$ 35,968	$ 57,600
SUPPLIES/MATERIALS/PARTS	13,000	11,550	12,168
CAPITAL EQUIPMENT	13,300	9,871	10,805
TOTAL GENERAL FUND	$ 1,644,790	$ 1,279,984	$ 1,642,678

ATTACHMENT B

STATE BOARD OF INVESTMENT
TRAVEL SUMMARY

FY88: February 16, 1988 - May 15, 1988

Name & Purpose of Trip	Destination	Dates	Total Cost
Howard Bicker Meet with Chicago Financial Analyst Society & Citicorp	Chicago	3/3/88	$ 335.50
John Manahan Natl. Assoc. State Treas. Meet with brokers	Wash. D.C.	3/12-18	$1,064.58
Michael McGrath Natl. Assoc. State Treas. Meet with brokers	Wash. D.C.	3/12-18	$ 855.16
Beth Lehman Richards & Tierney	Chicago	3/16/88	$ 362.00
Doug Gorence Richards & Tierney	Chicago	3/16/88	$ 297.51
Mark Edwards Plan Sponsor Conference	Wash. D.C.	4/6-8	$ 742.25
Howard Bicker Natl. Conference on Public Employees Retirement	Chicago	4/10-14	$ 695.18
Doug Gorence Richards & Tierney	Chicago	4/29/88	$ 211.00
Howard Bicker Gov't Finance Officers Meeting	Atlanta	5/1-2	$ 710.39
Mark Edwards Consultant Meeting Sponsor Conference	Chicago	5/2-3	$ 347.49

(continued)

ATTACHMENT B - p. 2

Name & Purpose of Trip	Destination	Dates	Total Cost
Howard Bicker Bond Index Fund Manager Interview - Lincoln Capital	Chicago	5/12/88	$ 340.75
Roger Henry Bond Index Fund Manager Interview - Lincoln Capital	Chicago	5/12/88	$ 339.50
Gary Norstrem Bond Index Fund Manager Interview - Lincoln Capital	Chicago	5/12/88	$ 316.00
Richard Helgeson Bond Index Fund Manager Interview - Lincoln Capital	Chicago	5/12/88	$ 293.00
John Manahan Bond Index Fund Manager Interview - Lincoln Capital	Chicago	5/12/88	$ 293.00
Elaine Voss Bond Index Fund Manager Interview - Lincoln Capital	Chicago	5/12/88	$ 293.00
			$7,496.31

ATTACHMENT C

Services Provided By
Board Consultant
Richards & Tierney, Inc.

I. Benchmark Portfolio Construction and Maintenance

Richards & Tierney (R&T) builds benchmark portfolios for a number of the Board's equity managers. The benchmark construction process requires that R&T conduct research into the manager's investment styles and develop appropriate custom security selection and weighting procedures. R&T also collects benchmark portfolios from the Board's managers who choose to supply their own benchmark portfolios.

Whether constructed by R&T or supplied by another source, R&T maintains benchmark portfolios for all of the Board's managers. This maintenance entails accounting for corporate events, such as stock splits, mergers, liquidations, etc., which affect the composition of the benchmark. By maintaining the Board's equity manager benchmark portfolios, R&T provides the Board with a centralized and consistent source of benchmark return and risk data.

II. Value of Active Management Analysis

The Value of Active Management (VAM) analysis offered by R&T identifies sources of value in the Basic Funds' investment management program. The VAM analysis brings together performance measurement data and the Board's investment policy into an analysis which isolates the contributions made by the various components of the Basic Funds' investment management structure.

III. Investment Policy Design

R&T consults with the staff, IAC, and the Board regarding the establishment of appropriate investment policies for the funds under the Board's management. For example, R&T provided advice during the development of the Basic Fund's investment policy. This advice ranged from the establishment broad investment objectives to the selection of an investment management structure.

IV. Attendance at Board/IAC Meetings

The principals of R&T regularly attend the Board and IAC meetings and meet individually with the Board members. At these meetings, they are frequently requested to comment on a wide range of investment policies and other matters under consideration by the Board or the IAC.

V. Asset Mix Simulation Software

R&T has provided staff with a sophisticated software package designed to simulate the impact of alternative investment policies on pension plan performance. Most recently, this software was used to prepare part of the policy paper discussion of the Basic Retirement Funds target asset allocation.

VI. Responses to Special Requests

R&T is available, on request, to consult with the Board on any investment-related issues. The firm is often requested to provide formal or informal analyses of specific issues of interest to the Board, IAC, or staff. For example, in 1987, at the request of the Board, R&T investigated and prepared a report describing the economic impact of divestment on the Basic Funds.

ATTACHMENT D

1988 Legislative Summary

The 1988 Legislature enacted the following measures of interest to the SBI:

1) SBI Legislative Proposal

- Introduced as HF 1806 (Simoneau); SF 1784 (D. Moe).

- Became Laws 1988, Chapter 453. Most provisions were effective the day following enactment.

- Contents of the new law include the following changes:

  a) Adds international securities as authorized investments for the SBI. Use of international securities will be "capped" by limits set in statute.

  b) Eliminates the Bond Account in the Supplemental Investment Fund.

  c) Adds the Guaranteed Return Account as an investment option for other participants in the Supplemental Investment Fund.

  d) Deletes obsolete references and makes grammatical changes in several sections of the SBI's statute.

2) Northern Ireland Bill

- Introduced as HF 453 (O'Connor); SF 722 (Hughes).

- Conference committee resolved differences between House language (which was in bill form) and Senate language (which was in resolution form).

- Became Laws 1988, Chapter 687 and will be effective August 1, 1988.

- The language of the legislation calls for the SBI:

  a) to "compile a list of corporations that, directly or through a subsidiary, do business in Northern Ireland and in whose stocks or obligations the board has invested...";

  b) to "determine whether each corporation on the list has, during the preceding year, taken affirmative action to eliminate religious or ethnic discrimination in Northern Ireland"; and

c) "Whenever feasible, [to] sponsor, cosponsor, or support shareholder resolutions designed to encourage corporations in which the board has invested to pursue a policy of affirmative action in Northern Ireland."

- The SBI must create the list and determine company compliance by January 1 of each year beginning 1989.
- The legislation does not require divestment of current holdings nor prohibit future investment.
- The legislative intent, based on conference committee and floor debate, would appear to require the SBI:

  a) to rely upon IRRC publications in order to create the list of companies and to monitor those companies activities in Northern Ireland; and

  b) to cosponsor or support shareholder resolutions of others because it may not be "feasible" to sponsor resolutions within current agency resources.

3) <u>Pension Bill</u>

- <u>Laws 1988</u>, Chapter 709, contains provisions from three large pension vehicle bills that were discussed during the latter part of the session.
- The law creates a new defined contribution plan for state university and community college faculty hired after June 30, 1988 but does <u>not</u> allow transfer of assets from the Basic Funds to the new plan.
- Major items under discussion during the 1988 session that were <u>not</u> included in the legislation are:

  a) Fiduciary responsibility bill

  b) Age 62 normal retirement with level formula benefits

  c) Rule of 90

4) <u>Environmental Trust Fund Bill</u>

- <u>Laws 1988</u>, Chapter 690 establishes an environmental trust fund upon approval of a Constitutional amendment. If approved, the trust fund moneys would be invested by the SBI under the provisions of section 11A.24.

ATTACHMENT E

STATE BOARD OF INVESTMENT

Management Plan Goals
FY 89

I. Implement Investment Strategies	Time Frame
A. Asset Allocation	
1. Develop and implement international investment program	
o Establish target allocation	Jul. 1988 - Dec. 1988
o Develop program structure	Jul. 1988 - Mar. 1989
o Conduct manager search	Jan. 1989 - Jun. 1989
2. Review asset allocation in alternative investment area	Jul. 1988 - Dec. 1988
B. Equities	
1. Develop implementation plan for completeness fund*	Jul. 1988 - Mar. 1989
2. Review equity asset class target*	Jul. 1988 - Dec. 1988
3. Review index fund manager*	Oct. 1988 - Dec. 1988
4. Implement new/replacement manager search process*	On-going
C. Fixed Income	
1. Implement customized bond index fund	Jul. 1988 - Mar. 1989
2. Review software vendors for dedicated bond portfolio rebalancing	Oct. 1988 - Dec. 1988
3. Complete development of bond manager benchmark portfolios	Oct. 1988 - Mar. 1989
4. Review short-term portfolio liquidity needs	Oct. 1988 - Mar. 1989
D. Alternative Investments	
1. Conduct real estate portfolio review with special project consultant*	Jul. 1988 - Dec. 1988
2. Investigate new investment vehicles for inclusion in portfolios	Jan. 1989 - Jun. 1989

* Pending approval by the Board.

ATTACHMENT E - p. 2

STATE BOARD OF INVESTMENT

Management Plan Goals
FY 89

II. <u>Implement Administrative Initiatives</u>	<u>Time Frame</u>
A. FY 90-91 Budget	
1. Develop budget proposal	Jul. 1988 - Dec. 1988
B. Master Custodian	
1. Review services and associated costs	Jul. 1988 - Sept. 1988
C. Northern Ireland Legislation	
1. Develop implementation plan	Jul. 1988 - Dec. 1988
D. South Africa Resolution	
1. Implement Phase IV	Jan. 1989 - Jun. 1989
E. SBI Investment Conference	
1. Plan conference agenda and make all necessary arrangements	Jul. 1988 - Sept. 1988
2. Conduct conference	Sept. 1988
F. Deferred Compensation Plan	
1. Review SBI involvement in administration of plan	Oct. 1988 - Mar. 1989
G. Consultant RFP	
1. Develop RFP	Jan. 1989 - Mar. 1989
2. Conduct search	Apr. 1989 - Jun. 1989
H. Information Sessions for Supplemental Fund Participants	
1. Plan and conduct information sessions around the state	On-going

Tab D

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

May 24, 1988

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

FROM: Equity Manager Committee

SUBJECT: Committee Report

The Committee convened at 10:30 A.M. on Thursday, May 19, 1988. The agenda items included:

- o Review of Equity Manager Performance and Manager Recommendations
- o Equity Manager Contract Renewals
- o Equity Manager Selection Process Review
- o Completeness Fund Progress

A summary of Committee discussion, and recommendations for each agenda item is provided below.

1) <u>EQUITY MANAGER RECOMMENDATIONS</u>

The Committee reviewed the performance evaluation reports for each of the Board's external equity managers and concurred with the following staff recommendations:

a) Terminate Beutel Goodman Capital Management

The firm was placed on probation for quantitative reasons at the November 1987 meeting. Continued poor performance has placed Beutel Goodman's cumulative performance below the termination level specified by the Value of Active Management Report.

The Committee recommends that the assets of the terminated manager be placed in the index fund. The value of the terminated portfolio on March 31, 1988 was approximately $122 million.

b) Place Fred Alger Management on probation for quantitative reasons.

Fred Alger's cumulative performance through 3/31/88 has breeched the probation level specified by the firm's Value of Active Management Report. In addition, the firm has experienced excessive account loss recently, causing some concern.

c) Remove BMI Capital from probation.

The firm was placed on probation at the March 1988 meeting for quantitative reasons. The firm's recent performance was very strong, moving the firm's cumulative performance well above the probation level.

When the BMI action was reviewed, the Committee discussed the idea of a minimum probation period. BMI Capital was placed on probation in March 1988 for quantitative reasons. BMI's removal from probation raised a concern that managers may go on and off probation one quarter to the next. At this time, the Committee decided not to specify a minimum probation period for quantitative probation status. This question may be re-examined in the future.

2) <u>MANAGER CONTRACT RENEWALS</u>

Contracts with each of the Board's active common stock managers expire on June 30, 1988. Consistent with the above recommendations, the Committee recommends the Board authorize the Executive Director, with assistance from the Board's legal counsel, to negotiate and execute contract extensions with the following eight managers:

- Fred Alger Management
- Alliance Capital Management
- BMI Capital Management
- Forstmann Leff Associates
- IDS Advisory
- Investment Advisers, Inc.
- Lieber & Co.
- Waddell & Reed

All contracts would be subject to a 30 day cancellation clause and all firms would continue to be compensated using the current performance-based fee formula.

3) MANAGER SELECTION PROCESS

The Committee reviewed a staff memorandum which contains several recommendations concerning the process used to select new managers for the Board's active common stock program. A copy of the memo is included as Attachment A.

The Committee approves of the process as outlined and concurs with a staff recommendation to build a "recommended list" of candidates from which the Board's future active stock managers will be chosen. The Committee agrees that staff should begin building the list by identifying a number of qualified "value" managers.

If these recommendations are adopted by the Board, a Selection Committee could review two to three "value" candidates for final selection and approval at the September, 1988 Board meeting. Subsequently, the Committee recommends that staff expand its research process to include the broad range of available investment management styles.

4) COMPLETENESS FUND PROGRESS

The Committee discussed alternatives to the implementation of a completeness fund for the Basic Funds' common stock segment. The Committee recommends the following approach to the completeness fund decision:

1. Run a "paper" completeness portfolio for six months beginning October 1, 1988. If the Board chooses to renew Richards & Tierney's contract, they will provide this service. The "paper" completeness portfolio will provide the Board and IAC with simulated operational and performance data.

2. Develop a completeness fund operational plan for approval at the March 1989 Board meeting based on experience with the paper portfolio and other research.

3. Expand the role of the index fund manager to include:

   - completeness fund implementation

   - transitional management (i.e. preserve value and maintain appropriate equity exposure when managers are terminated, added or replaced)

   In order to accommodate the additional management roles, the Committee concurs with a staff recommendation that the index fund manager contract be reopened. This does not imply dissatisfaction with the current vendor. However, with the index fund potentially playing an expanded role in the future, it is prudent to review the capabilities of other index-based managers. The investment objective of the index fund manager and appropriate selection criteria will be addressed by the Committee at a subsequent meeting. The Board could consider a recommendation for a completeness/index manager at its meeting in June 1989.

Subject to final Board approval, the Committee recommends the Board target the implementation of the index/completeness fund for July 1, 1989.

ATTACHMENT A

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

May 11, 1988

TO: Members, Equity Manager Committee

FROM: Doug Gorence

SUBJECT: Equity Manager Selection Process Review

As part of the Board's current external equity manager program, new equity managers will be retained on an on-going basis. The desire to hire new managers will likely occur for the following reasons:

- o The Board may determine that a particular new manager can do a better job than an existing manager.
- o The Board may identify an active manager whose area of specialization is not represented by an existing manager. (One result of the completeness fund process is the identification of market segments not represented in the current common stock program).
- o The Board, through its flexible passive/active policy allocation, may decide to increase the active management component from its current level. Depending on the magnitude of the shift, this may require adding new managers.

Hiring new managers for the Board's active common stock program raises a number of important issues which need to be addressed by the Board:

- o Replacing existing managers.
- o Identifying competent candidates.
- o Creating an appropriate selection process.

REPLACING EXISTING MANAGERS

The Board's recently-adopted manager continuation policy describes a specific set of evaluation guidelines that assists the Board in its decisions concerning retention and termination of existing equity managers. The Board's manager continuation policy focuses on the level and consistency of investment performance, as well as qualitative considerations regarding a manager's organization and investment approach. By applying the evaluation criteria set forth in the policy, the Board has a consistent and fair framework for determining its level of confidence in any one of its existing managers.

As a result of this evaluation process, the Board may, from time to time, decide to replace an existing manager with a new manager. The Board's decision to replace an existing manager does not necessarily imply that the Board is dissatisfied with the manager. The Board may simply have greater confidence in another manager's ability to add value in the future.

Replacing an existing manager requires that the terminated manager's portfolio be transferred in whole or in part to the new manager. The resulting costs can be substantial. Wilshire Associates has estimated the average manager transition cost to be at least two percent of the portfolios's market value. Therefore, a decision to replace an existing manager should be made on the basis that the alternative, net of transition costs, has a high probability of improving future results.

IDENTIFYING MANAGER CANDIDATES

The task of identifying superior money management skill is a difficult process. Assessing the skill level of the Board's existing managers is a complex task. Judging the investment management expertise of firms with which the Board has no actual experience is even more difficult.

Most of the criteria adopted by the Board for the purpose of evaluating existing managers is now being applied to the task of searching for prospective money managers. The application of these qualitative and quantitative criteria to prospective managers imposes a discipline that guides the Board in its search for qualified manager candidates.

The continuing search for qualified candidates focuses on four major qualitative issues relating to the manager's organization and investment approach. The four issues are:

- The level of the firm's investment competence
- The clarity of the firm's investment approach and investment process
- The soundness of the firm's business strategy

- o The firm's ability to satisfy client's investment objectives

Exhibit I provides a summary of the qualitative criteria be used to screen prospective managers.

In addition to these qualitative factors, the search process requires the collection and analysis of certain quantitative factors:

- o The collection of monthly composite portfolio holdings for as many periods as possible (preference is for at least five years).
- o Analysis of actual performance versus risk.
- o Identification of "active bets" taken by the manager which have added or detracted from performance.

All risk/return comparisons are made relative to an appropriate benchmark. If no appropriate benchmark is available, a broad market index is used. Comparisons with a broad market index helps to identify potential style biases present in historical portfolios.

The use of manager benchmark portfolios is integral to the Board's common stock program. As a precondition to becoming part of the Board's active manager group, staff recommends that prospective managers provide, or agree to develop, an appropriate benchmark portfolio. If a customized benchmark is not in place at the time the manager is hired, a market index will be used as a proxy until an appropriate benchmark is developed. A new manager's benchmark must be in place no later than six months after being retained.

IMPLEMENTING AN EFFICIENT SEARCH PROCESS

The Board's flexible passive/active allocation policy requires a continuous ability to add or replace managers. This requires the identification of a number of qualified candidates from which to select final candidates:

1. On-going identification and review
   - o Staff must maintain a knowledge of the universe of available active and passive managers. Staff has been in contact with a number of prospective managers over the past few years.
   - o Staff has developed a standardized set of screening procedures to ensure that similar information is collected from all prospective managers, information

collected is concise and well organized, and meetings with prospective managers are conducted in a time-efficient manner. Exhibit II provides an example of a prospective manager questionnaire to be completed by each manager prior to the initial screening interview.

2. Maintenance of recommended candidate list

- o The goal of this on-going process will be to construct and maintain a list of qualified manager candidates covering a variety of investment styles. The managers that comprise this list will be selected on the basis of their ability to satisfy the quantitative and qualitative criteria described earlier. The resulting list will serve as the universe from which the Board will select new managers and is expected to include up to 30 managers at any point in time.

- o All managers on the list will be closely monitored. This will include the regular collection of performance and composite portfolio data as well as occasional face-to-face interviews. Over time, managers will be added and dropped from the list as information gathered from the on-going process produces or rejects manager candidates.

- o Some of the managers on the list will be identified as possible replacement candidates for specific existing managers. These replacement candidates would be identified on the similarity of investment approaches when compared to the styles of existing managers. The termination of an existing manager could increase the aggregate portfolio's misfit to an unacceptable level. Prior to completeness fund deployment, the identified replacement manager(s) could provide the diversification necessary to offset the misfit.

3. Final selection process

- o When the need arises, staff will refer a number of potential candidates from the "recommended" list to a Selection Committee. The selection of candidates should be based on the manager's ability to satisfy the immediate needs of the SBI (i.e., replacement of an existing manager, addition of a new investment style.)

- o The Selection Committee should be composed of the IAC Equity Manager Committee and the designee of each Board member. Staff will assist the Selection Committee and provide detailed manager background information gathered through the on-going review process.

- o Staff recommends that the Selection Committee interviews be conducted at the SBI's offices in order to facilitate committee members' schedules. However, at times, it may require that interviews be conducted at the prospective manager's place of business.

CONCLUSION

As stated earlier, staff has screened prospective managers for some time. However, this process has not included creation of a recommended candidate list or established a final selection process.

Staff recommends that specific identification of a "recommended" list begin by identifying a number of qualified "value" managers. The "value" style may soon be under represented in the aggregate portfolio and causes immediate concerns regarding diversification of the common stock segment because:

- o Peregrine Capital was recently terminated and the assets of an internally managed portfolio were absorbed by the index fund. Both of these portfolios were managed in the "value" style.
- o Beutel Goodman, the only remaining "value" manager was placed on probation for quantitative reasons last year. It is likely that the Board will replace Beutel Goodman unless performance improves significantly in the near future.

If this implementation plan is accepted, the Selection Committee could review two to three "value" candidates for final selection and approval at the September, 1988 Board meeting. Subsequently, staff proposes to expand the recommended candidate list to include the broad range of available investment management styles.

I would like to discuss the process outlined in this memo with the Equity Manager Committee at your next meeting on May 19, 1988. If you have any questions prior to that meeting, please contact me.

EXHIBIT I

PROSPECTIVE MANAGER EVALUATION
QUALITATIVE CRITERIA

I. ORGANIZATION/STAFF

A. Experience and Quality

1. Professionals exhibit a high degree of competence and experience.

2. Professionals have managed money successfully under variety of market conditions.

3. Professionals are familiar with needs of large institutional clients.

4. Firm demonstrates its commitment to integrity and fiduciary responsibility.

B. Stability

1. Current group of professionals is responsible for firm's track record.

2. Turnover has not been extraordinary in terms of either numbers of people or reasons for their departures.

3. Control or business emphasis of firm has not changed, or in those case where it has, the firm's investment process has remained intact.

C. Leadership

1. An individual is clearly accountable for directing and motivating the firm's professionals.

D. Growth in Assets/Accounts

1. Firm has growth policy in place, consistent with its investment approach.

2. Account load of portfolio managers is not excessive.

3. No extreme gain or loss of accounts has occurred in recent years.

EXHIBIT I (Cont'd)

E. Client Relations

1. Support staff is adequate to provide satisfactory client servicing.

2. Firm demonstrates willingness to cooperate with clients to achieve client goals.

II. INVESTMENT APPROACH

A. Investment Style

1. Investment style is attractive in that it reflects a thoughtful consideration of reasonable risk-return opportunities.

2. Investment style has been consistently applied over a variety of market environments.

3. Investment style is represented by an appropriate benchmark. (If no benchmark is available, comparisons to broad market indices are used.)

B. Decision-Making Process

1. Portfolio construction procedures are specified, efficient, and consistent with the investment style.

2. Investment research coverage is thorough.

3. Decision-making hierarchy among professionals is clearly specified.

4. Firm demonstrates a willingness to make short-term active bets relative to its benchmark (or market index).

C. Performance Review Process

1. Comparisons of risk-return performance relative to a pre-determined benchmark (or market index) are made.

2. Performance results, sources of returns, and investment strategy are clearly presented to prospective clients.

EXHIBIT II

MINNESOTA STATE BOARD OF INVESTMENT
EXTERNAL COMMON STOCK MANAGER PROGRAM

PROSPECTIVE MANAGER QUESTIONNAIRE

1. Please provide a brief description of your firm's investment approach.

2. For performance evaluation and investment strategy purposes, does your firm utilize any customized common stock performance benchmarks that differ in some way from the broad market indices?

3. How many equity-only accounts does your firm have under management? What is the current market value of these accounts in aggregate?

4. Who are your five largest tax-exempt equity-only clients? What is the current dollar size of each of these accounts?

5. Please provide biographies of your firm's key common stock investment personnel.

ACTIVE STOCK MANAGERS

Value of Active Management Reports

First 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 changes in manager status.

- Terminate Beutel Goodman.
- Place Fred Alger on probation for quantitative reasons.
- Remove BMI from probation status.

Managers	Market Value 3/31/88 (Thousands)	Quarter Ending 3/31/88		Year Ending 3/31/88		(Annualized) Since 1/1/84	
		Actual	Bmrk	Actual	Bmrk	Actual	Bmrk
Alger	$101,171	1.6%	11.9%	-16.5%	-7.0%	9.9%	13.4%
Alliance	154,189	4.0	6.8	-5.3	-12.2	17.6	11.2
Beutel	121,661	9.8	15.1	-3.9	-2.5	12.3	16.7
BMI	74,231	23.9	12.5	-9.0	-11.2	9.6	10.9
Forstmann	135,116	6.9	6.7	-2.9	-4.7	15.6	11.7
IDS	127,992	0.6	7.5	-12.4	-6.0	15.0	14.6
IAI	92,828	-1.5	5.6	-5.5	-6.6	13.3	14.4
Lieber	43,778	16.2	15.0	-9.5	-9.9	12.8	10.7
Waddell	109,203	8.1	11.1	-3.7	-3.5	11.9	11.1
Wilshire 5000		8.0%		-8.7%		14.1%	

FRED ALGER MANAGEMENT

PORTFOLIO MANAGER: David Alger **ASSETS UNDER MANAGEMENT: $101,170,778**

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 are expected 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.
- Relatively high commission costs.

The firm recently lowered its commission charges. The first item remains outstanding.

New items of concern are:

- Significant account loss experienced during past year.

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		
	Latest Quarter	Latest Year	Since 12/31/83 Annualized
Fred Alger Actual	1.6%	-16.5%	9.9%
Fred Alger Benchmark	11.9%	-7.0	13.4

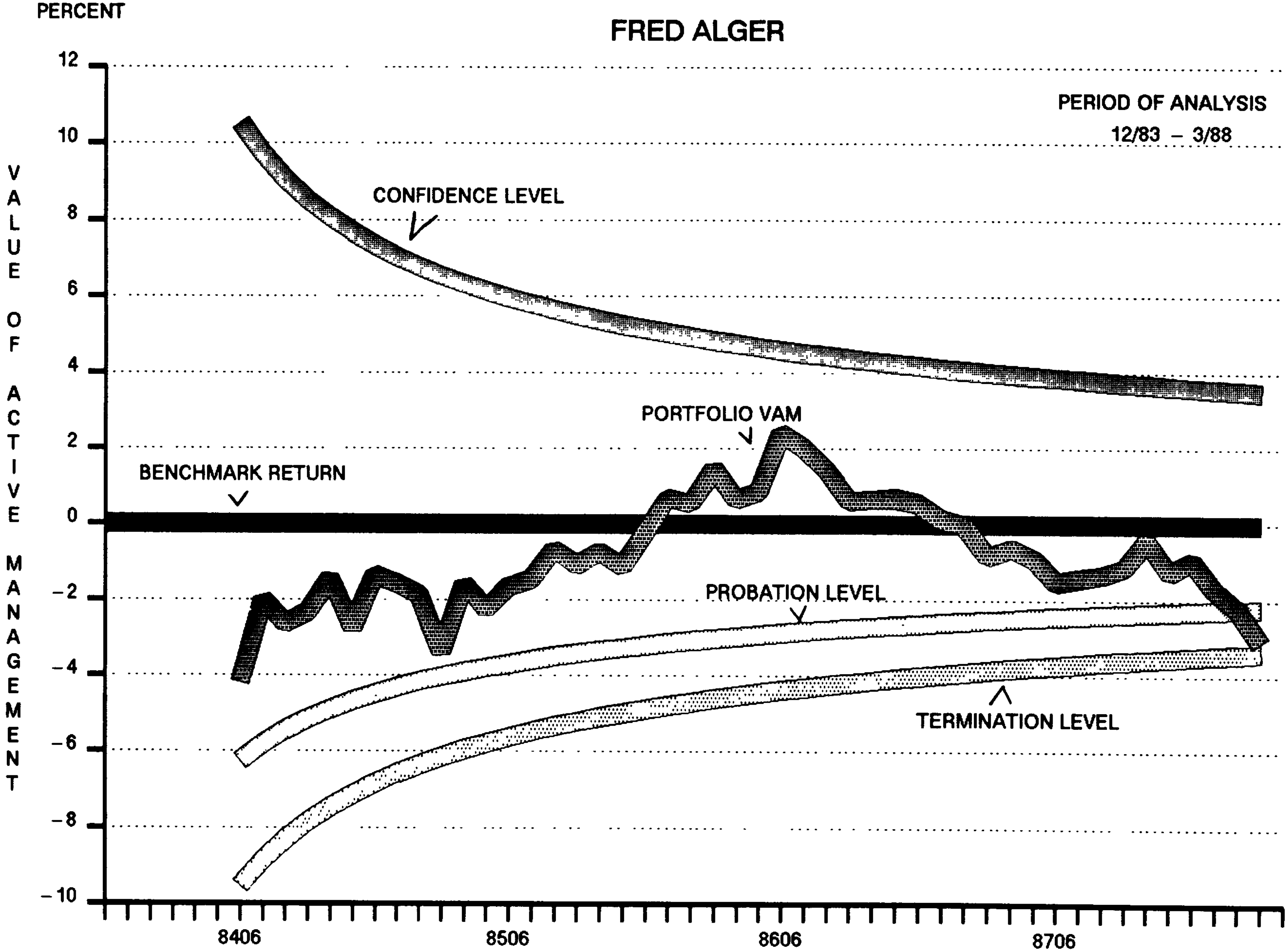
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

Place firm on probation. Fred Alger continues to perform poorly relative to benchmark. First quarter results place firm well below the probation level.

VALUE OF ACTIVE MANAGEMENT REPORT

FRED ALGER



ALLIANCE CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Jack Koltes

ASSETS UNDER MANAGEMENT: $154,189,387

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.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Latest Year	Since 12/31/83 Annualized
Alliance Capital Actual	4.0%	-5.3%	17.6%
Alliance Capital Benchmark	6.8	-12.2	11.2

(See Value of Active Management graph below)

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Growth plan not in place.
- Asset growth significant in recent years.
- Insufficient effort to understand performance relative to an appropriate benchmark.

These concerns have been discussed with the firm. The first two items have been explained to staff's satisfaction. Discussions regarding the third issue continue.

The firm's exceptional strengths continue to be:

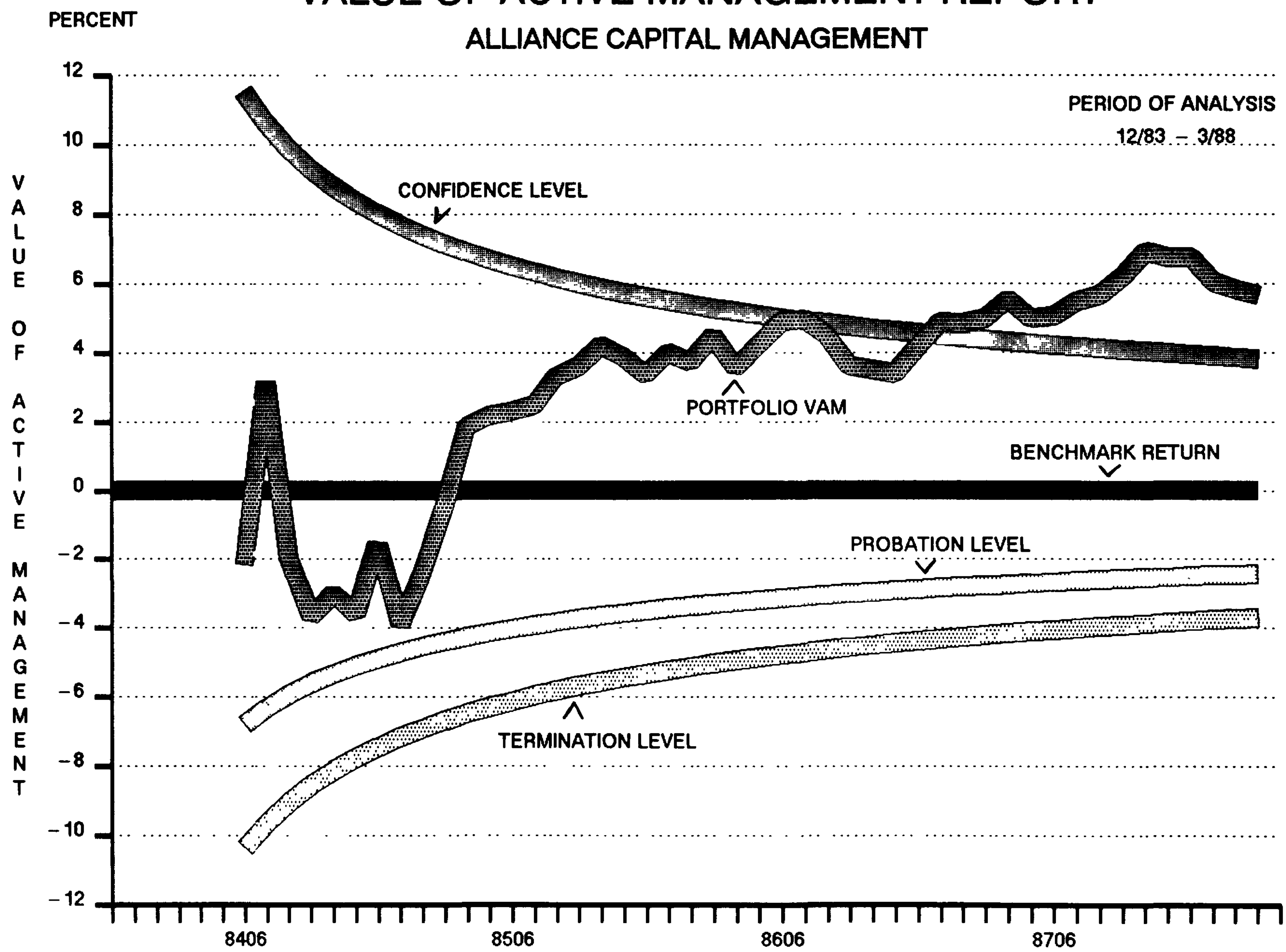
- Highly successful and experienced professionals.
- Organizational continuity and strong leadership.
- Well-acquainted with needs of large clients.
- Investment style consistently and successfully applied over a variety of market environments.

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

ALLIANCE CAPITAL MANAGEMENT



BEUTEL GOODMAN CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Richard Andrews, Robert McFarland **ASSETS UNDER MANAGEMENT: $121,661,394**

INVESTMENT PHILOSOPHY

Beutel Goodman searches for companies whose stock prices are low in comparison to estimated tangible book value or companies whose P/E's are low in relation to earnings quality and expected earnings growth. This "value" investment approach is contrarian and defensive by nature. The firm tends to make concentrated bets in stocks it perceives to be undervalued. Beutel Goodman is not an active market timer and is almost always fully invested.

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Significant account loss in recent years.

This issue has been discussed with the firm and warrants continued monitoring.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark		
	Latest Quarter	Latest Year	Since 12/31/83 Annualized
Beutel Goodman Actual	9.8%	-3.9%	12.3%
Beutel Goodman Benchmark	15.1	-2.5	16.7

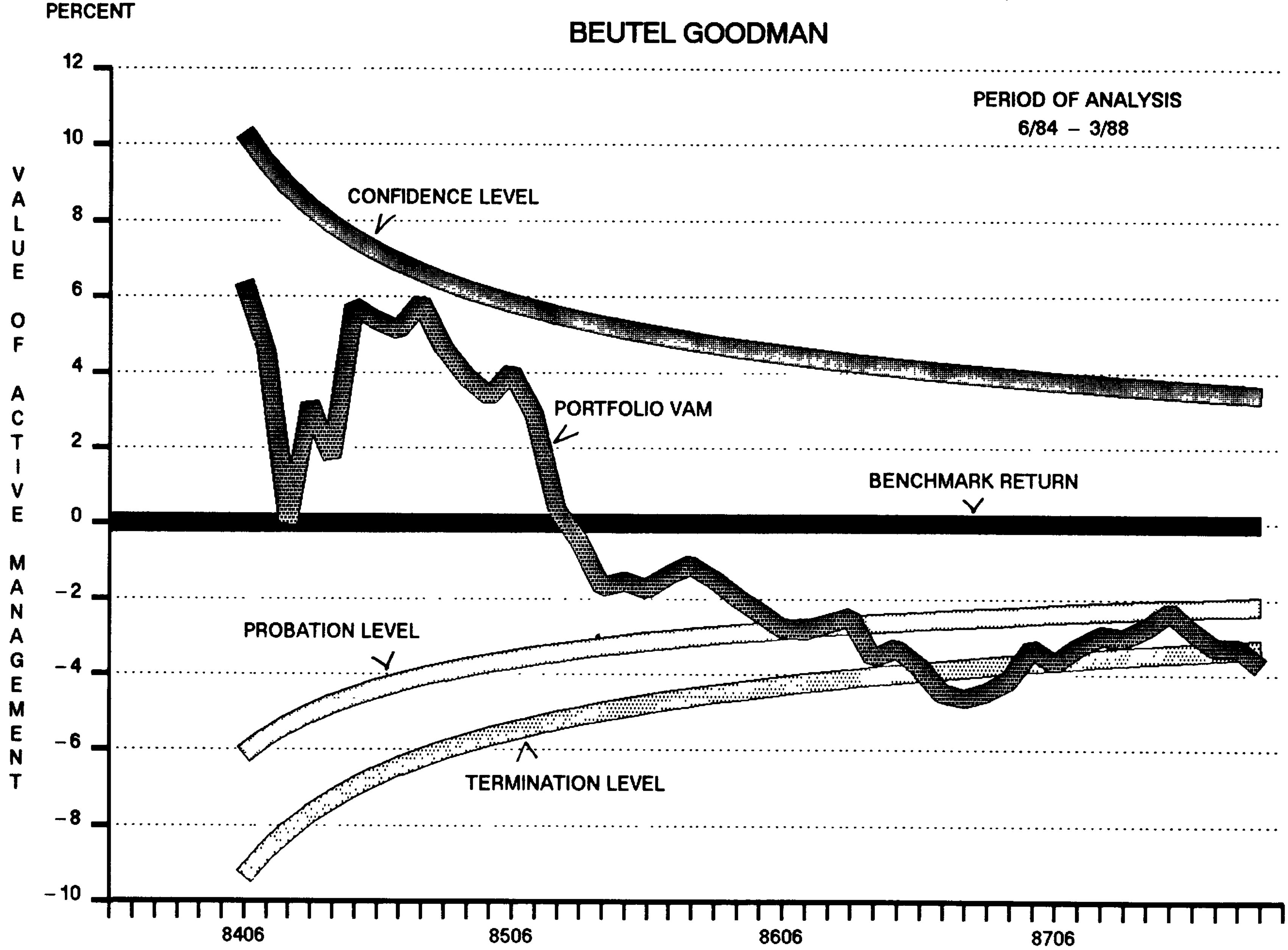
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

Terminate manager. The firm was placed on probation for performance reasons last year. The firm's recent performance relative to its benchmark has placed it below the termination level.

VALUE OF ACTIVE MANAGEMENT

BEUTEL GOODMAN



BMI CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Frank Houghton, James Awad **ASSETS UNDER MANAGEMENT: $74,231,350**

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.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark		
	Latest Quarter	Latest Year	Since 12/31/83 Annualized
BMI Capital Actual	23.9%	-9.0	9.6%
BMI Capital Benchmark	12.5%	-11.2	10.9

(See Value of Active Management graph below)

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Number of new professionals added in recent years.
- Lack of clearly identifiable leadership.

While the first issue has been satisfactorily addressed by the firm, the second issue, while not serious, warrants continued monitoring.

The firm's exceptional strengths continue to be:

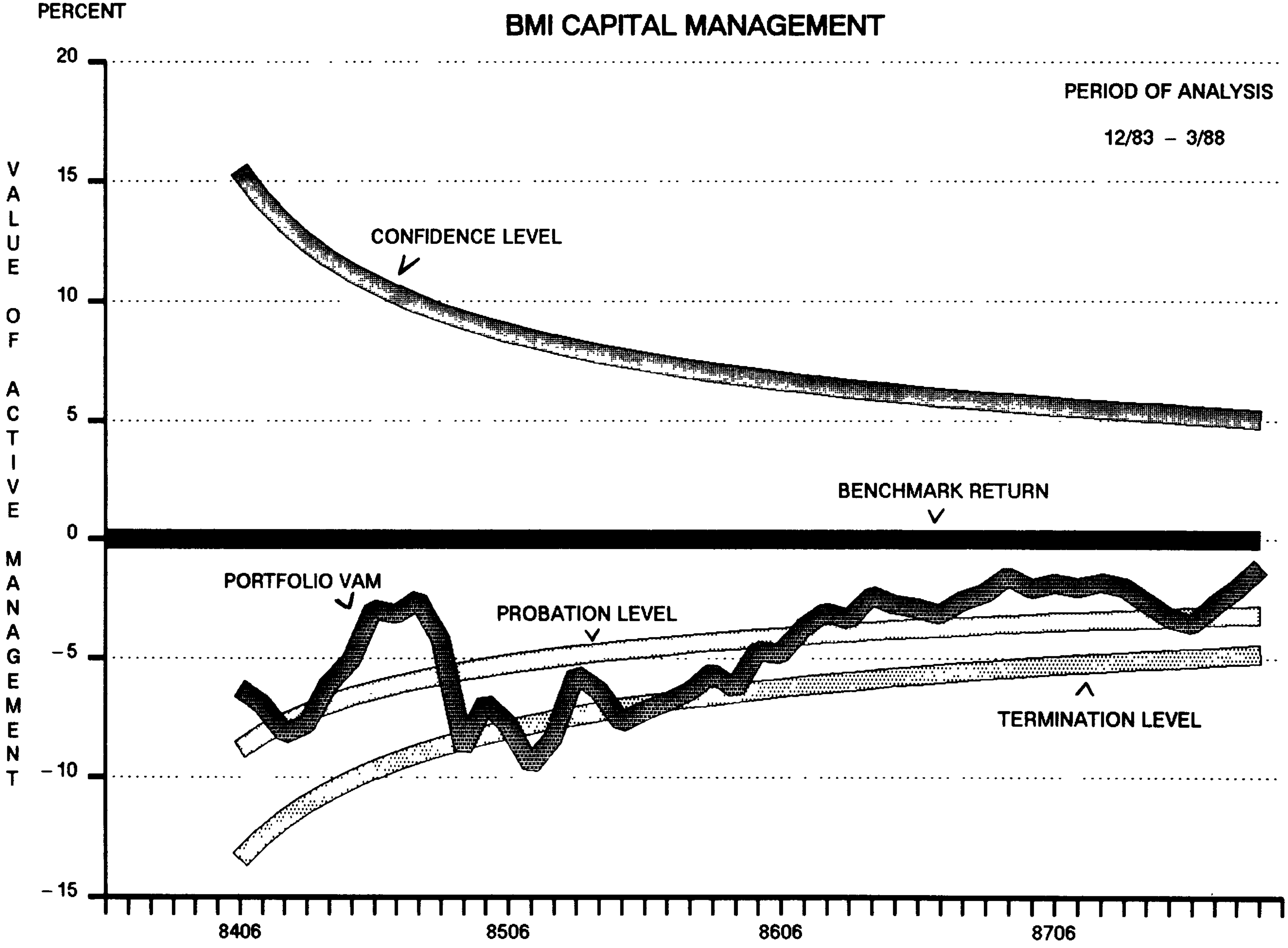
- Extensive securities research process.

STAFF RECOMMENDATIONS

Remove from probation. The firm's latest quarter performance was exceptional, placing it well above the probation level.

VALUE OF ACTIVE MANAGEMENT REPORT

BMI CAPITAL MANAGEMENT



FORSTMANN LEFF ASSOCIATES

PORTFOLIO MANAGER: Joel Leff

ASSETS UNDER MANAGEMENT: $135,115,524

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.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark		
	Latest Quarter	Latest Year	Since 12/31/83 Annualized
Forstmann-Leff Actual	6.9%	-2.9%	15.6%
Forstmann-Leff Benchmark	6.7%	-4.7	11.7

(See Value of Active Management graph below)

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Relatively high turnover among firm's professionals.
- Valuation process not clearly defined.

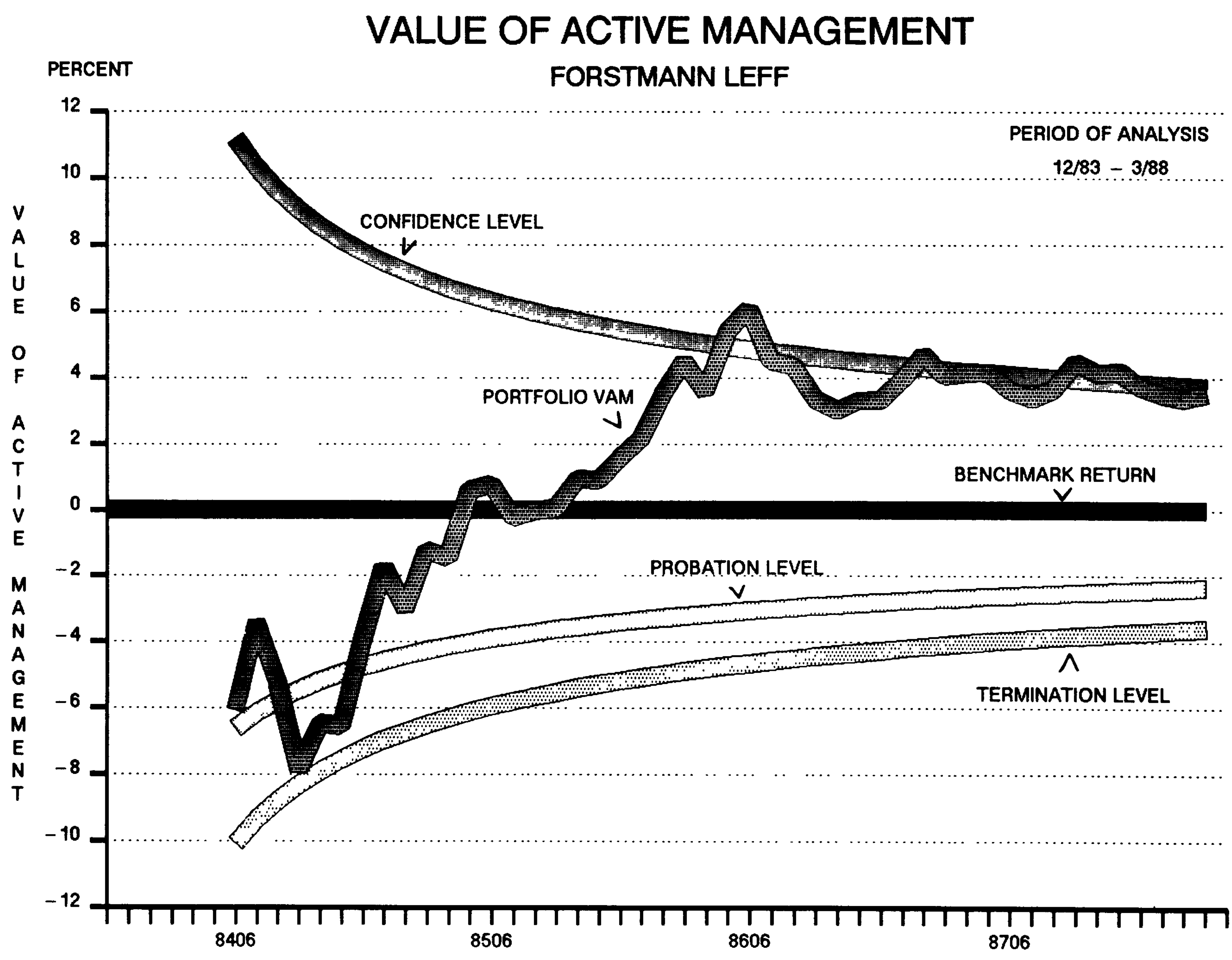
While not serious, these issues remain outstanding.

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.

STAFF RECOMMENDATIONS

No action required.


VALUE OF ACTIVE MANAGEMENT
FORSTMANN LEFF
PERCENT
PERIOD OF ANALYSIS
12/83 – 3/88
CONFIDENCE LEVEL
PORTFOLIO VAM
BENCHMARK RETURN
PROBATION LEVEL
TERMINATION LEVEL
VALUE OF ACTIVE MANAGEMENT
12
10
8
6
4
2
0
–2
–4
–6
–8
–10
–12
8406
8506
8606
8706

IDS ADVISORY

PORTFOLIO MANAGER: Mitzi Malevich

ASSETS UNDER MANAGEMENT: $127,991,911

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

The firm has addressed the third item, although additional work is needed. The first two 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

	Latest Quarter	Latest Year	Since 12/31/83 Annualized
IDS Advisory Actual	0.6%	-12.4%	15.0%
IDS Advisory Benchmark	7.5%	-6.0	14.6

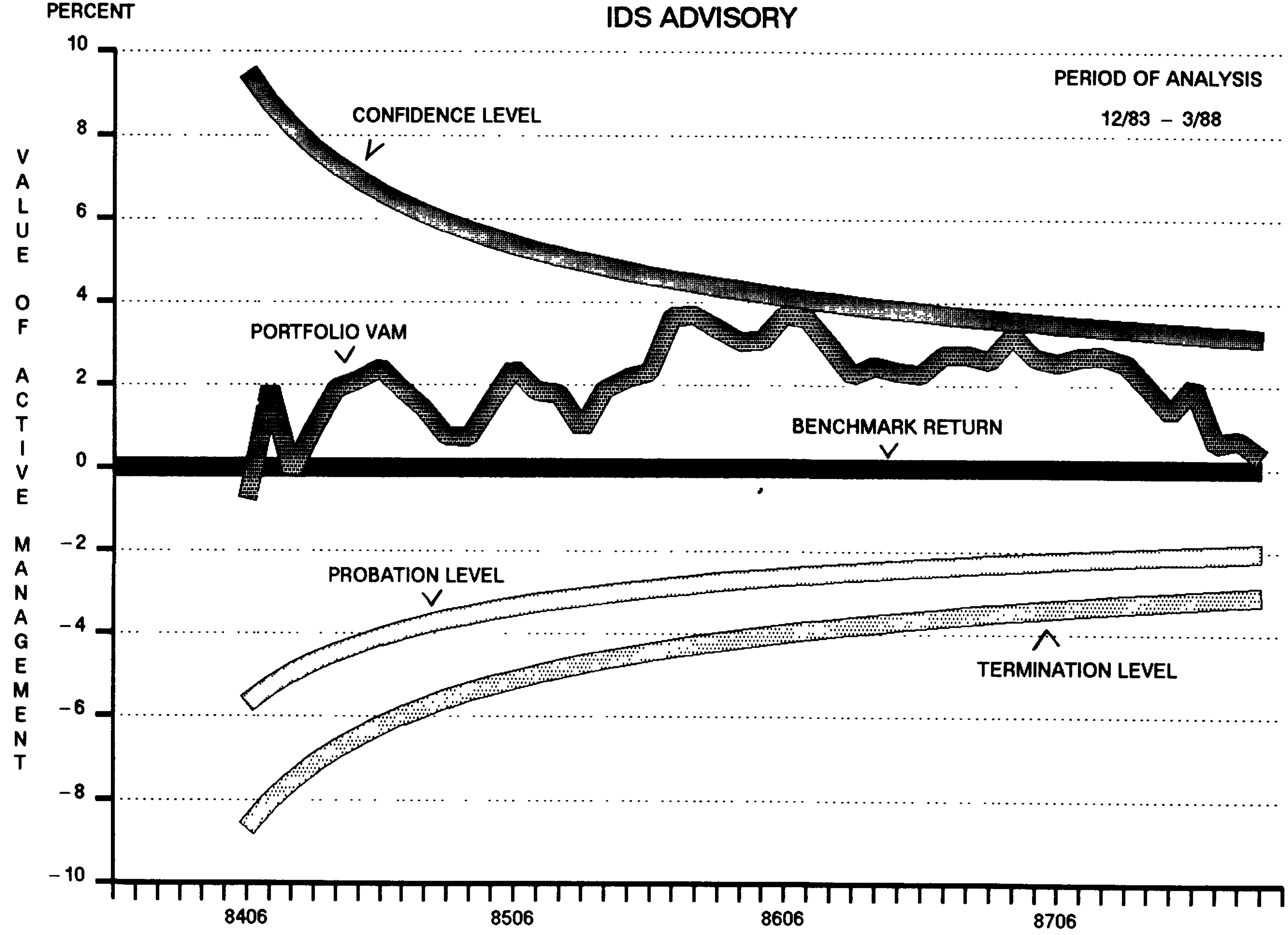
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

IDS ADVISORY



INVESTMENT ADVISERS

PORTFOLIO MANAGER: Charles Webster **ASSETS UNDER MANAGEMENT: $92,828,453**

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 has made efforts 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

	Latest Quarter	Latest Year	Since 12/31/83 Annualized
IAI Actual	-1.5%	-5.5%	13.3%
IAI Benchmark	5.6	-6.6	14.4

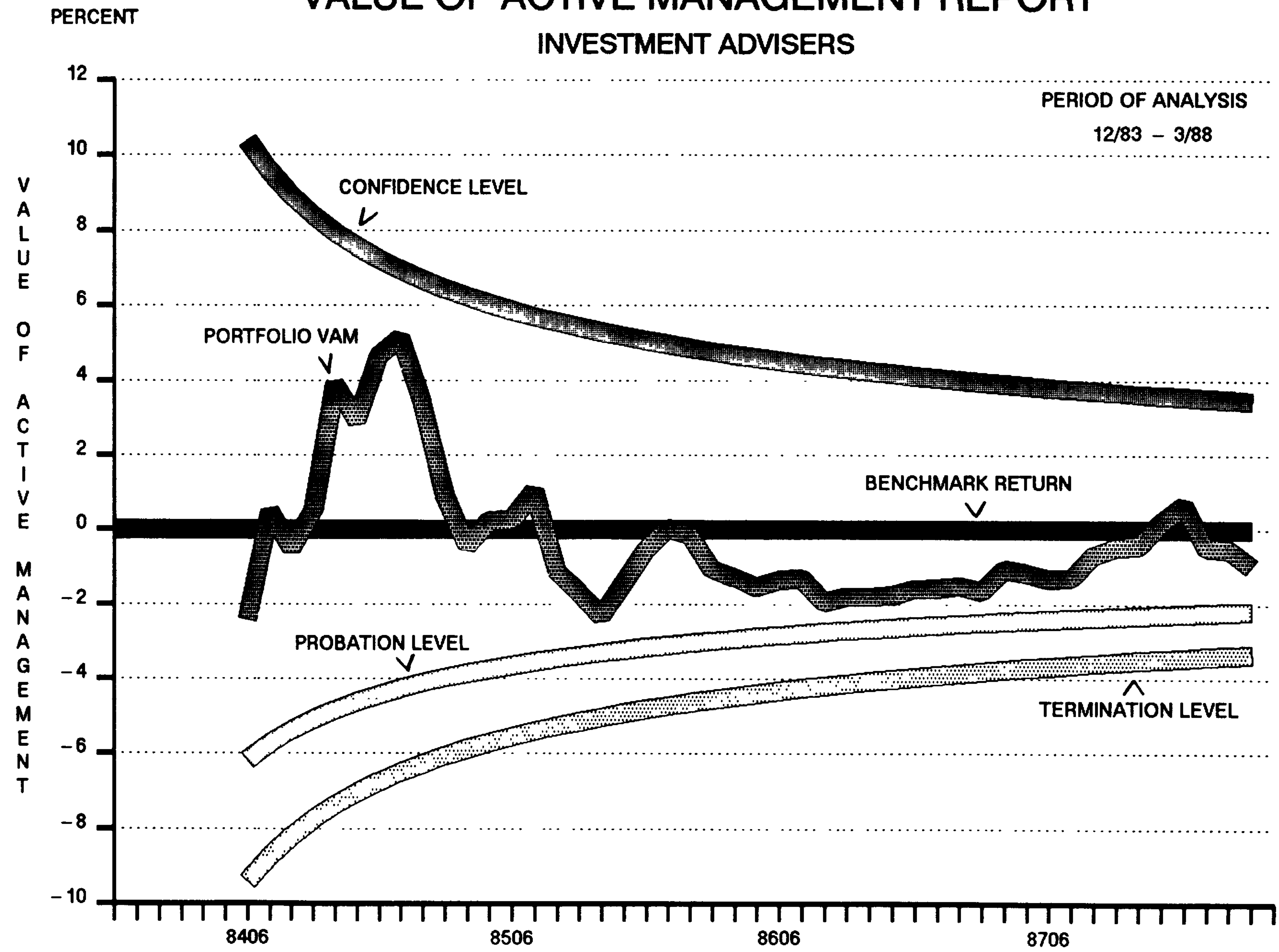
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

INVESTMENT ADVISERS



LIEBER & COMPANY

PORTFOLIO MANAGER: Stephen Lieber, Nola Falcone — **ASSETS UNDER MANAGEMENT: $43,777,958**

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 issues remain outstanding, despite attempts to resolve them. However, the firm as recently undertaken the task of developing its own customized benchmark portfolio. Staff expects that this will lead to satisfactory resolution of these issues in the 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		
	Latest Quarter	Latest Year	Since 12/31/83 Annualized
Lieber & Co. Actual	16.2%	-9.5%	12.8%
Lieber & Co. Benchmark	15.0	-9.9	10.7

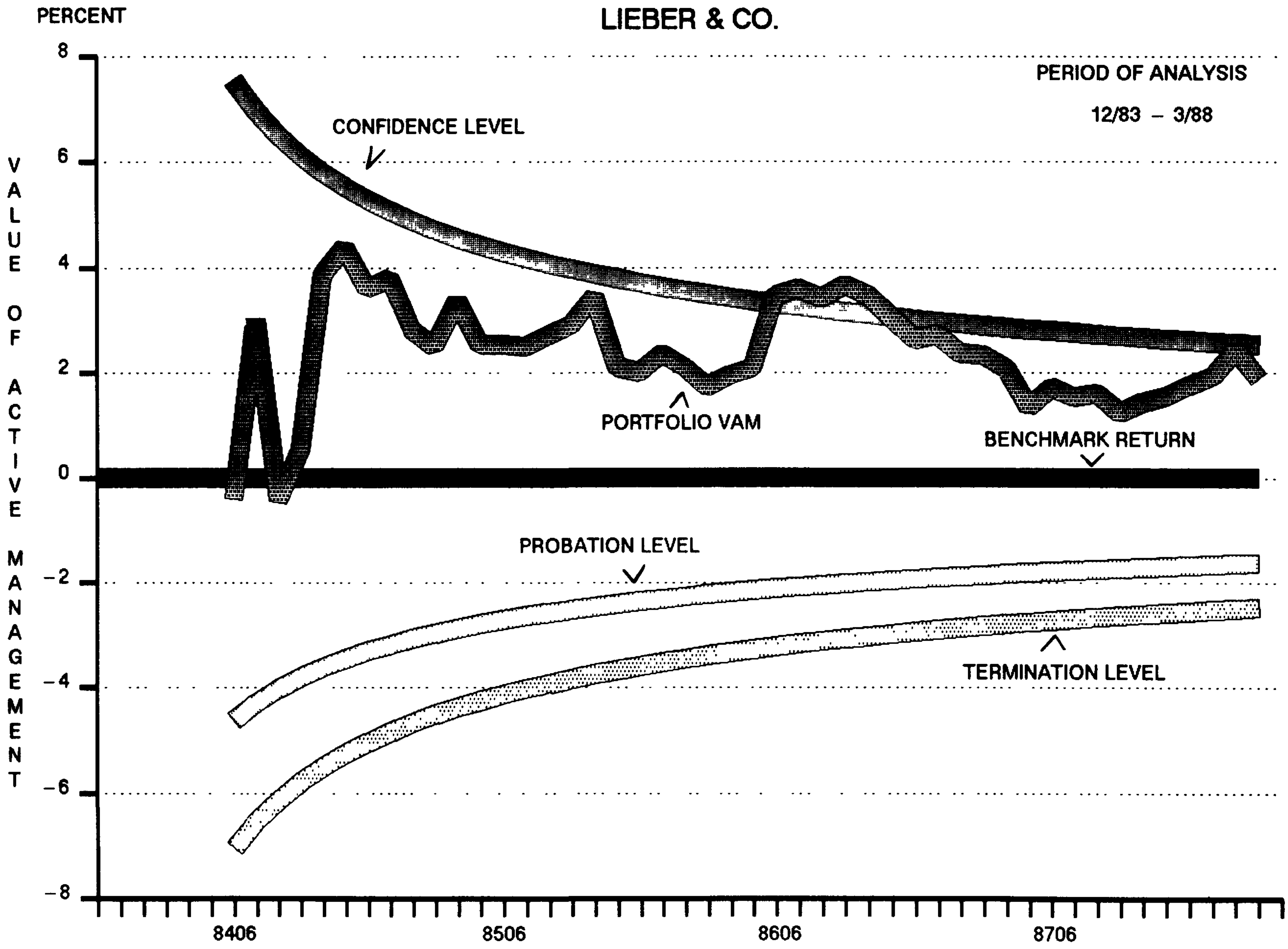
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

LIEBER & CO.



WADDELL & REED

PORTFOLIO MANAGER: Henry Herrman **ASSETS UNDER MANAGEMENT: $109,202,978**

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.

QUANTITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Insufficient effort to understand performance relative to an appropriate benchmark.
- Valuation process not well-defined.

These two issues warrant 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		
	Latest Quarter	Latest Year	Since 12/31/83 Annualized
Waddell & Reed	8.1%	-3.7%	11.9%
Waddell & Reed Benchmark	11.1	-3.5	11.1

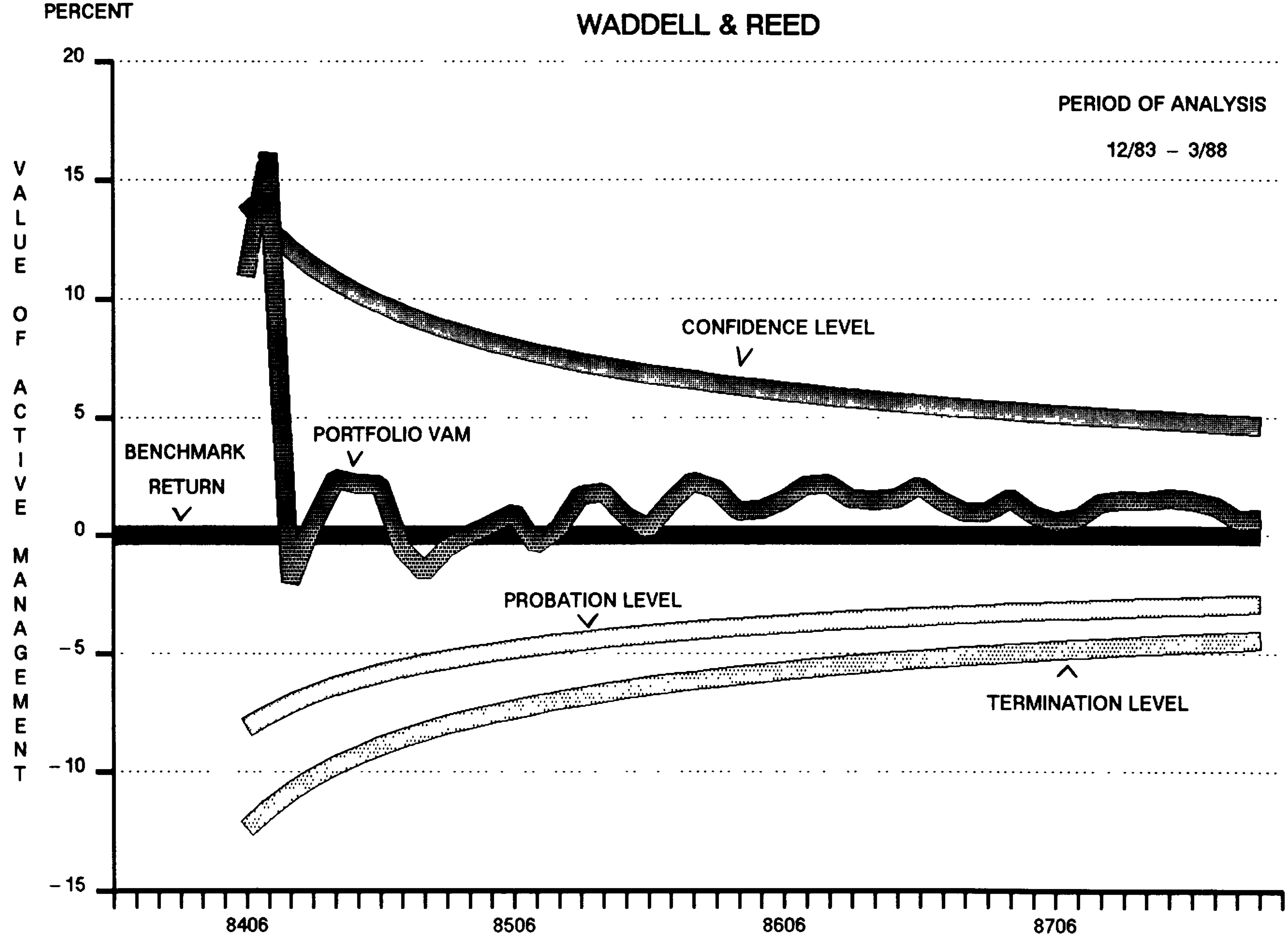
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

WADDELL & REED



Tab E

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
Room 105, MEA Building
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Tel. (612) 296-3328
FAX: (612) 296-9572

May 27, 1988

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

FROM: Fixed Income Manager Committee

SUBJECT: Committee Report

The IAC Fixed Income Manager Committee met on May 25, 1988 to review the following agenda:

- o Review of active managers
- o Manager contract renewals
- o Bond Index Fund Manager Search Committee Report
- o Asset allocation recommendations for index fund
- o Timetable for implementation of the enhanced bond index fund

1) <u>REVIEW OF ACTIVE MANAGERS</u>

The first discussion item was a review of the Value of Active Management (VAM) Reports. Staff reviewed the reports with Committee in detail since this is the first time the VAM report format has been used for the bond managers. The Committee recommends the following actions:

- o Place Morgan Stanley on probation for qualitative reasons.

  The firm has been unable to build an appropriate benchmark and recently violated the Board's direction concerning portfolio duration. This indicates an unwillingness to adjust its management process to the needs of the SBI.

- o Place Lehman Management on probation for quantitative reasons.

  The firm's performance has breeched the probation level specified by the VAM analysis.

- o Terminate Peregrine Capital.

  Peregrine has lagged its benchmark for some time and cumulative performance has breeched the termination level specified by the VAM analysis.

The second item of discussion was manager benchmarks. Staff noted that the SBI has agreed on benchmarks for Lehman, Peregrine, and Western Asset. Further analysis is required to determine appropriate benchmarks for Investment Advisers, Miller Anderson and Morgan Stanley.

2) <u>MANAGER CONTRACT RENEWALS</u>

All active bond manager contracts expire on June 30, 1988. Based on the above evaluations the Committee recommends the Board authorize the Executive Director, with assistance from the Board's legal counsel, to negotiate and execute contract extentions with the following five managers:

- o Investment Advisers, Inc.
- o Lehman Management
- o Miller, Anderson Sherrerd
- o Morgan Stanley
- o Western Asset Management

All contracts will have a 30 day termination clause and the managers will continue to be compensated under the fee schedule currently in place.

3) <u>BOND INDEX FUND SEARCH COMMITTEE REPORT</u>

Mr. Gary Norstrem reviewed the Search Committee Report for the Fixed Income Committee. Ms. Elaine Voss, Mr. Gary Norstrem, Mr. John Manahan and Mr. Peter Sausen, members of the Search Committee, were present to discuss their findings. The Fixed Income Committee accepts the report of the Bond Index Fund Manager Search Committee and recommends that the Board authorize the Executive Director, with assistance from the Board's legal counsel, to negotiate and execute contracts with the following firms:

- o Lincoln Capital Management, Chicago IL

- o Fidelity Management, Boston MA

The full report from the Search Committee is included as Attachment A.

4) SHIFT OF ASSETS TO THE INDEX FUND

The final action item concerns a shift of assets from active managers to the bond index fund managers. Staff recommended the shift be based on the following factors:

- manager performance
- portfolio size
- overall manager diversification needs

The Committee concurred with the following staff recommendation for specific shifts:

MANAGER	PORT. MARKET VALUE 3/31/88 ($000)	PROPOSED ALLOCATION ($000)	ASSET SHIFT TO INDEX (000)
IAI	$ 45,069	$ 45,000	$ -0-
Lehman	250,336	100,000	150,336
Miller	263,539	150,000	113,539
Morgan	213,746	100,000	113,746
Peregrine	118,892	-0-	118,892
Western	272,331	185,000	87,331
Lincoln	-0-	290,000	
Fidelity	-0-	290,000	
	$1,162,764	$1,160,000	$583,844

5) INDEX FUND IMPLEMENTATION SCHEDULE

The SBI staff discussed the timetable on the steps necessary to establish an enhanced index fund in the bond segment of the Basic Funds. If the Board approves the Search Committee recommendation, the steps with highest priority are completion of contract discussions, preparation of asset transfers from active managers, and development of operating guidelines for the index managers. The Committee recommended that staff proceed with these actions.

ATTACHMENT A

EXECUTIVE DIRECTOR
HOWARD J BICKER

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STATE BOARD OF INVESTMENT
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May 20, 1988

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

FROM: Bond Index Manager Search Committee
Christie Eller, Assistant Attorney General
Richard Helgeson, Deputy Auditor
Jake Manahan, Deputy Treasurer
Gary Norstrem, Chair, IAC Fixed Income Committee
Peter Sausen, Assistant Commissioner, Dept. of Finance
Elaine Voss, Deputy Secretary of State
Jan Yeomans, IAC Chair

SUBJECT: Committee Recommendations

The Search Committee has completed its evaluation of potential managers for the enhanced bond index component of the Basic Retirement Funds. The Committee recommends the Board adopt the following recommendations:

- Retain Lincoln Capital, Chicago, IL and Fidelity Management, Boston, MA as the SBI's enhanced bond index fund managers.
- Compensate these managers through an incentive fee structure.

These recommendations represent the conclusions of the search committee after a careful review of the options available to the SBI. These conclusions follow a search process which involved the review of fifteen index fund manager questionnaires in April, continued with interviews at the SBI by the Search Committee of the top seven prospective managers in May, and culminated with on-site interviews by the Search Committee of the three finalists.

The objectives of the search process were twofold. First, the Search Committee wanted to develop the background information and first-hand experience with prospective managers to make an informed manager selection recommendation. Second, the Committee sought a detailed knowledge of the operating procedures of the prospective managers to improve the SBI's ability to monitor development of the index program over time. As a result of these interviews, the Committee recommends that Lincoln Capital and Fidelity Management be retained.

The Committee's specific recommendations are limited to the selection of the index managers. SBI staff will work with the Fixed Income Committee of the Advisory Council to address specific issues of implementation. The topics which need review are:

- implementation timetable
- selection of appropriate index standard
- allocation of assets from active managers to the index managers
- timetable for development of the SBI custom index.

Recommendations on each of these issues will be presented to the Board by the Fixed Income Committee of the IAC at a later time.

Overview of Search Process

Review of Questionnaire

Based on research by SBI staff, an index fund questionnaire was sent to seventeen prospective managers in late March (see copy attached). Fifteen firms replied. In order to reduce the list of prospective managers to a manageable group to be interviewed, the SBI staff and the Board's consultant, Richards & Tierney, reviewed each proposal and selected the seven most qualified firms. The seven firms were selected using the following criteria:

- o quality, depth and experience of staff
- o management history in structured bond products
- o management information systems capabilities
- o enhancement capabilities
- o structured portfolio performance histories

The seven managers selected for initial interviews are all well qualified firms and represent a diversity of index fund management approaches.

Bankers Trust Company
Fidelity Management Trust Company
Lincoln Capital Management Company
Mellon Bond Associates
T. Rowe Price Associates, Inc.
Wells Fargo Investment Advisers
Western Asset Management Company

Manager Interviews

The Search Committee interviewed the seven firms at the SBI offices on May 3 and 5, 1988. Summaries on each of the seven candidates are included as attachments to this report. Each write-up provides a short summary of the firm and highlights the salient features of the management style and interview responses.

Based upon the quality of the responses to the index fund questionnaire and on the skills exhibited in the manager presentations, the Search Committee narrowed the list for the final interview schedule:

Lincoln Capital
Fidelity Management
Mellon Bond

The Committee made on-site visits to each of these firms on May 12, 16 and 17, 1988.

Manager Recommendation

The Search Committee met with SBI staff on May 20, 1988 to review the information obtained in the search process. The factors used in the assessment process included:

- o breadth and quality of management
- o integrity of methodology
- o index fund management experience
- o customization capabilities
- o enhancement goals and techniques
- o potential for ancillary contributions to the SBI bond management program

Based on the above criteria, the Committee believes that Lincoln Capital and Fidelity Management represent the best candidates for managing the SBI enhanced index account.

The Committee discussed several reasons for this decision. First, the combination of these two firms provides the SBI with two distinct methodologies with respect to index fund construction. The SBI staff will have the opportunity to monitor both processes to judge their relative fits with SBI objectives over time. Second, the use of two firms gives the staff access to the fixed income staffs of two very respected firms. Third, because the firms use different enhancement techniques, a combination approach should add some diversity to the expected return pattern. At different points in the interest rate cycle, contribution of excess returns are expected to vary between Lincoln and Fidelity. Finally, the use of a two firm strategy preserves more options for asset allocation in the future. As additional cash flows or manager allocation adjustments occur, the Board will have the option to retain the style(s) it believes to be most appropriate.

BOND INDEX FUND MANAGER SEARCH
INITIAL COMMITTEE INTERVIEWS
BANKERS TRUST

Firm Summary

Bankers Trust is a firm with significant exposure in both active and passive financial strategies. The firm manages over $60 billion in total equity and bond assets. They offer a broad range of options in structured fixed income portfolio management. Of the $2.5 billion in bond index accounts, about $2 billion is in enhanced index strategies. Their methodology differs from stratified sampling in that they seek to match duration and cash flow characteristics. One different aspect to Bankers Trust's approach is the routing of the decision process through the active portfolio management division and through trading channels. It is not clear how research and portfolio management sections are divided. A large trading volume gives Bankers Trust excellent exposure to Wall Street trading desks and improves their bond swapping capabilities. Their recommendations on enhancement goals were in line with others in the group. Turnover and tracking error were in line at 70% and 35 basis points, respectively.

Proposal Highlights

- Duration match methodology.
- Large assets under management.
- High trading volume and trading expertise.
- Lower turnover methodology.
- Extensive discussion on adjusting for call and prepayment risks in the corporate and mortgage sectors.

Interview Highlights

- Bankers Trust seemed the most accommodating with regard to establishing customized index components.
- Trading capabilities support a quick implementation schedule.
- Ms. Patricia Mahoney, proposed manager contact, did not have extensive bond management experience.
- Presentation less dynamic than others.
- Uncertain chain of authority between active and index management groups.

BOND INDEX FUND MANAGER SEARCH
INITIAL COMMITTEE INTERVIEWS
FIDELITY MANAGEMENT

Firm Summary

Fidelity Management Trust Company offers broad range of financial asset management services. The Fixed Income Group was formed in May 1987 to provide structured bond management and quantitative investment strategies. Fidelity manages $4.2 billion in bond assets of which $300 is in structured products. Fidelity uses a team approach to management of accounts to combine practical and academic skills in portfolio management and option strategy. Mr. Nemerever's expertise is in immunized strategies, while Ms. Mossaver-Rahmani's background is in index funds. Fidelity Management and Research has additional portfolio management and credit research personnel that are available to the SBI management team. The enhancement goal of Fidelity is 25 to 75 basis points depending on the underlying volatility of the bond market. They employ a wide set of enhancement techniques which would include arbitrage between the cash and futures market.

Proposal Highlights

- Proposed manager contacts would be Bill Nemerever and Ms. Sharmin Mossaver-Rahmani.
- Experienced staff within a new management structure.
- Small existing base of index assets.
- Detailed proposal on methodology for isolating call protection.
- Hybred stratified sampling methodolgy.
- Aggressive enhancement goals and techniques.

Interview Highlights

- Privately owned with significant profit sharing incentives for portfolio managers.
- Mr. Nemerever and Ms. Rahmani exhibited impressive management skills.
- Excluding callable bonds has a dramatic impact on expected portfolio turnover.
- Extensive research facilities.

BOND INDEX FUND MANAGER SEARCH
INITIAL COMMITTEE INTERVIEWS
LINCOLN CAPITAL

Firm Summary

Lincoln Income Group is a division of Lincoln Capital and specializes in a variety of structured fixed income portfolios. The ten investment professionals at LCM have an average experience level of 20 years. Bond portfolios are managed on a team basis. The index construction process of Lincoln is unique and involves comparing a portfolio versus an index on the expected return for changes in 54 key variables such as level of interest rates, yield curve changes, sector spreads, and coupon spreads. Unlike most managers, Lincoln does not use yield curve strategies. The bulk of the expected enhancement goal originates in a deferred settlement strategy for the mortgage sector and in issue selection. They expect to have a high turnover because their strategy uses a high number of arbitrage transactions in the Treasury/Agency sector to capture small mispricings.

Proposal Highlights

- Experienced staff with very low turnover.
- Internally developed software capabilities.
- Unique expected return variance methodology.
- Different return enhancement techniques.
- Highest expected portfolio turnover.
- Brian Johnson and Ken Meyers would be principal contacts.

Interview Highlights

- Firm has $1.8 billion in enhanced structured bond portfolios.
- No longer accepting new active management accounts.
- Return enhancement goal of 25 basis points.
  10-20 b.p. Arbitrage Transactions
  0-10 b.p. Sector Strategies
  5-10 b.p. Deferred Settlement Strategy
- Importance of cash flow match to index tracking and valuation.
- Willingness to work with incentive fee structure.
- Impressive management skills shown by all employees.

BOND INDEX FUND MANAGER SEARCH
INITIAL COMMITTEE INTERVIEWS
MELLON BOND

Firm Summary

Mellon bond associates has a relatively long history in bond indexation which dates back to 1983 with the inception of the E.B. Composite portfolio designed to track the Shearson Government/Corporate Index. At this time they have $16.9 billion in structured bond portfolios and $5.6 billion in index products. They have a wide variety of products under the umbrella of structured bond portfolios. Mellon Bond uses a hybred methodology which incorporates risk matching on duration, maturity structure, average coupon, coupon distribution and sector weightings. They use a strategy sampling technique in the mortgage sector. Mellon targets a modest goal of 15 to 20 basis points of added value above the index return. Mellon will not use duration bets to enhance returns. They prefer to concentrate their efforts on arbitrage trading to take advantage of security mispricing. A second avenue to augment returns is mismatching maturity structure to profit from what they view as discrepancies in maturity valuation.

Proposal Highlights

- Large structured asset base of $16.9 billion.
- Second highest level of index assets.
- Hybred duration match/sampling indexation technique.
- Lowest fee schedule.

Interview Highlights

- Modest implementation costs due to trading skills.
- Do not use credit analysis, but simply use investment grade securities.
- Modest enhancement goal of 15-20 basis points.
- Aggressive growth goals in index assets.
- They use BARRA reports for risk analysis and performance attribution.
- Appeared less responsive to SBI customized requirements.

BOND INDEX FUND MANAGER SEARCH
INITIAL COMMITTEE INTERVIEWS
T. ROWE PRICE

Firm Summary

T. Rowe Price has a more tightly designated set of product offerings relative to the other managers under consideration. Their focus is primarily in the index and enhanced index categories with approximately $2 billion under management. The staff has 26 bond investment professionals with relatively high levels of average experience. The T. Rowe Price proposal is the most aggressive of the group. They target a return enhancement of 70 to 80 basis points. To accomplish this objective they would use a combination of duration bets, yield curve shifts, sector substitutions, and security swaps. They would also like additional flexibility on duration within sectors. The combination of these requests makes it more difficult to compare the enhancement goals of T. Rowe Price with the other proposals. The specific indexing methodology involves a combination of stratified sampling and duration or risk matching.

Proposal Highlights

- Aggressive management structure with duration bets and significant sector weighting shifts.
- Highest return objective at 70-80 basis point enhancement.
- Expected standard deviation of 70 to 100 basis points per year.
- Modest historic return enhancement.
- Extensive review on sector weighting guidelines.
- Emphasis on independent credit research.

Interview Highlights

- Firm emphasized close ties with active management operation.
- Firm required longest period (3 months) to implement transition to index fund.
- Enhancement goals were consistent with more aggressive active management.
- Emphasized importance of credit analyst opinions.

BOND INDEX FUND MANAGER SEARCH
INITIAL COMMITTEE INTERVIEWS
WELLS FARGO

Firm Summary

Wells Fargo specializes in passive investment products focusing on index funds and structured portfolio products in both the equity and fixed income arenas. The bond group has total of $11.1 billion under management, most of which is in index and customized index products. Wells Fargo has a large staff of 116 professionals. The designated manager for the SBI account would be Mr. Bruce Goddard assisted by Ms. Deborah Damon. The Wells Fargo approach incorporates the stratified sampling technique. The goal for enhancement at 25 basis points is similar to the majority of respondents. The bulk of their enhancement effort is in the Treasury sector with corporate substitution for 1-5 year Treasuries being the dominant factor. Wells Fargo devotes substantial resources to trading analysis in an effort to minimize transaction cots. They are able to deliver index returns with the least volatility among any manager interviewed.

Proposal Highlights

- o Largest manager of bond index and enhanced index funds.
- o Large staff with expertise in every area of bond analysis and bond management.
- o Sophisticated software capabilities.
- o Lowest expected tracking error.
- o Large natural order flow among internal accounts.
- o Unique trading procedures provide low-cost execution.
- o Low proposed fee schedule.

Interview Highlights

- o Wells Fargo commands a large scope of resources dedicated to index fund management.
- o The concept of a government swing portfolio to match the constant duration target was simple and effective.
- o The firm had difficulty customizing an index away from standard index features in the corporate sector.
- o Their stratification software was extensive and sophisticated in monitoring cash flow and risk characteristics.

BOND INDEX FUND MANAGER SEARCH
INITIAL COMMITTEE INTERVIEWS
WESTERN ASSET

Firm Summary

Western Asset has been a leader in the development of customized benchmarks for their active portfolio management program. They believe this expertise is transferable into the structured fixed income business. Western Asset does not have a long history in index products. They hired Tom Cooper in 1987 to provide them with expertise in this area of bond management. Western Asset uses a stratified sampling technique in its construction of index portfolios. Within each cell they try to match the effective duration and to replicate the cash flow characteristics. They plan to adjust duration by changing the duration of the Treasury sector. They propose to evaluate their effectiveness using the confidence interval approach used in the construction of the Value of Active Management (VAM) charts for our active managers.

Proposal Highlights

- Leader in customization of portfolio benchmarks and performance analysis relative to customized benchmarks.
- Limited index assets under management.
- Extensive knowledge on software needs in customized portfolio management information systems.
- Positive experience with Western Asset as an active manager.
- Detailed discussion regarding the impact of an inclusionary rule for corporates and mortgages on expected index turnover.

Interview Highlights

- Good discussion on the issues of implementation (transaction costs versus tracking error).
- Significant work on performance attribution reports for internal portfolio management system.
- Solid understanding of SBI bond management needs.
- Firm has a strong commitment from parent company to support investment in index capabilities.
- Synergies between active and index fund management, especially in the corporate sector.

MINNESOTA STATE BOARD OF INVESTMENT
BOND INDEX FUND QUESTIONNAIRE

SECTION 1

A. BACKGROUND DATA

The SBI is looking for managers who have clearly demonstrated their ability to build and manage structured bond portfolios.

1. What experience does your firm have that would lend itself to custom index fund management?

2. Does your firm manage index funds, enhanced index funds, custom, immunized, and/or dedicated bond portfolios?

3. Please give specific information as to the number, size, and performance history of your firm's structured bond accounts, including an indication of tracking error where appropriate.

   We are interested in determining how you can manage accounts with differing objectives. Please provide a detailed account of the cash flows and market values since inception for these accounts. We have provided sheets for organizing the data in the format we need. Please specify the index being matched, the source of return calculations on the index, and the monthly return of the index.

4. Please provide the SBI with information regarding the management structure of your firm:

   a. Number of professionals and experience levels
   b. Employee compensation and turnover experience
   c. Proposed manager for the SBI account

Because it will take us some time to process this information we must receive your response to Section 1 no later than April 8, 1988.

SECTION 2

A. DESIGN OF CUSTOM ASSET CLASS TARGET

The SBI reviewed the role of bonds in the Basic Funds and concluded they serve a dual role as a deflation hedge and as a diversifying asset. We believe a customized index best meets those roles. The staff outlined its recommendations regarding appropriate duration, duration strategy, sector weighting, and quality guidelines in the enclosed position paper. We want your reaction to these guidelines. If you think changes are appropriate then explain why. The SBI intends that the composition and performance of the custom asset class target be generated by a firm independent of the selected investment manager(s). The independent custom index source could be a bond market index publisher (Salomon, Shearson, Merrill, etc.) or a bond consultant.

1. What considerations are important in selecting a source for the custom asset class target?

2. Do you have a preference for the custom index source and if so why?

3. How would your firm work with the SBI and the independent source to build the custom asset class target?

4. Are the suggested corporate and mortgage weightings in the custom target realistic given our desire for strong call and prepayment protection?

   How could call and prepayment protection be structured in the custom target to provide the desired deflation hedge characteristics?

B. DESIGN OF INDEX FUND

Once the custom asset class target has been constructed, the investment manager(s) will build an index fund to track the target.

1. In detail, what approach would your firm take to the building of the index fund?

2. How would your firm interact with the independent provider of the custom asset class target on an on-going basis to obtain information necessary for close tracking by the index fund?

C. IMPLEMENTATION PLAN

1. What do you recommend in terms of handling a shift in assets from our active managers?

   Does it make sense to slice off a portion of all our existing holdings?

2. How do you handle cash inflows and outflows on an on-going basis?

D. ENHANCEMENT GOALS AND TECHNIQUES

1. What is your objective for return enhancement?

2. What approaches would your firm take to add value above the custom target index?

   What risk parameters would you alter to produce added value? (Would you take on active duration risk, yield curve, and/or sector risk?)

3. Do you loan securities? Is it possible for the SBI to access the portfolio for loan privileges?

4. Do you explore private placement opportunities for use in your funds?

5. What impact will enhancement techniques have on portfolio turnover?

E. MONITORING CAPABILITIES

1. Describe your internal software capabilities as they relate to monitoring fund characteristics.

F. PERFORMANCE EVALUATION

1. How do you propose to evaluate your effectiveness as an index fund manager?

2. What is your expectation on monthly standard deviation of tracking error?

3. What means will you use to distinguish the performance impact of index fund design from active management?

   Describe any performance attribution systems utilized by your firm.

4. What report format would you use to communicate with the SBI investment staff?

G. FEES

1. What is your standard fee schedule?

2. Would you consider a performance fee? If so, how might such a fee be designed?

We must receive your response to Section 2 no later than April 15, 1988.

ACTIVE BOND MANAGERS

Value of Active Management Reports

First Quarter 1988

Staff is in the process of working with the Board's bond managers to develop appropriate benchmark portfolios. Three of the six managers have completed their benchmark portfolios. Returns for these portfolios are reported below. For the remaining three managers, the benchmark portfolio currently 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.

Staff Recommendations

Staff recommends the following changes in manager status:

- Terminate Peregrine Capital.
- Place Lehman Management on probation status for quantitative reasons.
- Place Morgan Stanley on probation for qualitative reasons.

Managers	Market Value 3/31/88 (Thousands)	Quarter Ending 3/31/88		Year Ending 3/31/88		(Annualized) Since 6/1/84	
		Actual	Bmrk	Actual	Bmrk	Actual	Bmrk
IAI	$45,068	3.2%	3.7%	5.4%	5.2%	16.2%	15.6%
Lehman	250,336	3.2	3.4	4.8	5.9	14.6	14.9
Miller	263,539	3.6	3.7	4.5	5.2	16.2	15.6
Morgan	213,746	3.1	3.7	4.2	5.2	15.5	15.6
Peregrine	118,892	3.2	3.7	4.2	5.6	13.1	15.7
Western	272,331	5.3	4.0	3.8	5.1	17.2	15.6
Salomon Bond Index		3.8%		5.1%		16.2%	

INVESTMENT ADVISERS

PORTFOLIO MANAGER: Larry Hill

ASSETS UNDER MANAGEMENT: $45,068,558

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. Investment Advisers uses the Salomon Broad Investment Grade (BIG) index as their benchmark.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark		
	Latest Quarter	**Latest Year**	**Since 6/30/84 Annualized**
IAI Actual	3.2%	5.4%	16.2%
IAI Benchmark	3.7	5.2	15.6

(See Value of Active Management graph below)

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

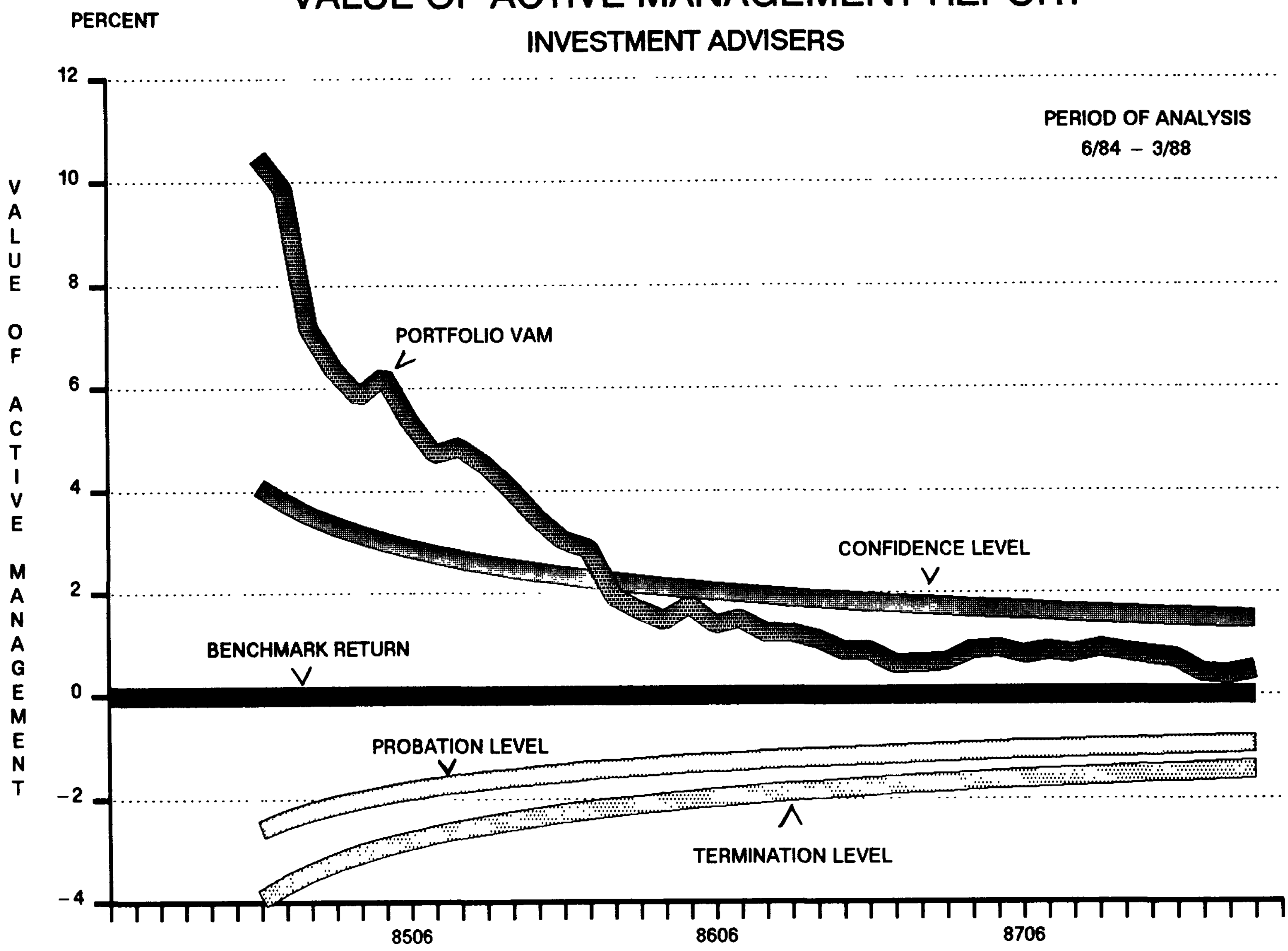
- Insufficient effort to understand performance relative to an appropriate benchmark.

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

INVESTMENT ADVISERS



LEHMAN MANAGEMENT

PORTFOLIO MANAGER: Paul Hutter **ASSETS UNDER MANAGEMENT: $250,336,317**

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. Lehman has a custom benchmark which has a shorter duration and higher quality orientation than the Salomon Broad Investment Grade (BIG) index.

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Firm is matched to a new benchmark since inception.
- Firm's returns are near probation level.

This issue deserves close monitoring over the next three to six months to judge the continuing appropriateness of the new benchmark and Lehman's returns relative to that benchmark.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark		
	Latest Quarter	Latest Year	Since 6/30/84 Annualized
Lehman Actual	3.2%	4.8%	14.6%
Lehman Benchmark	3.4	5.9	14.9

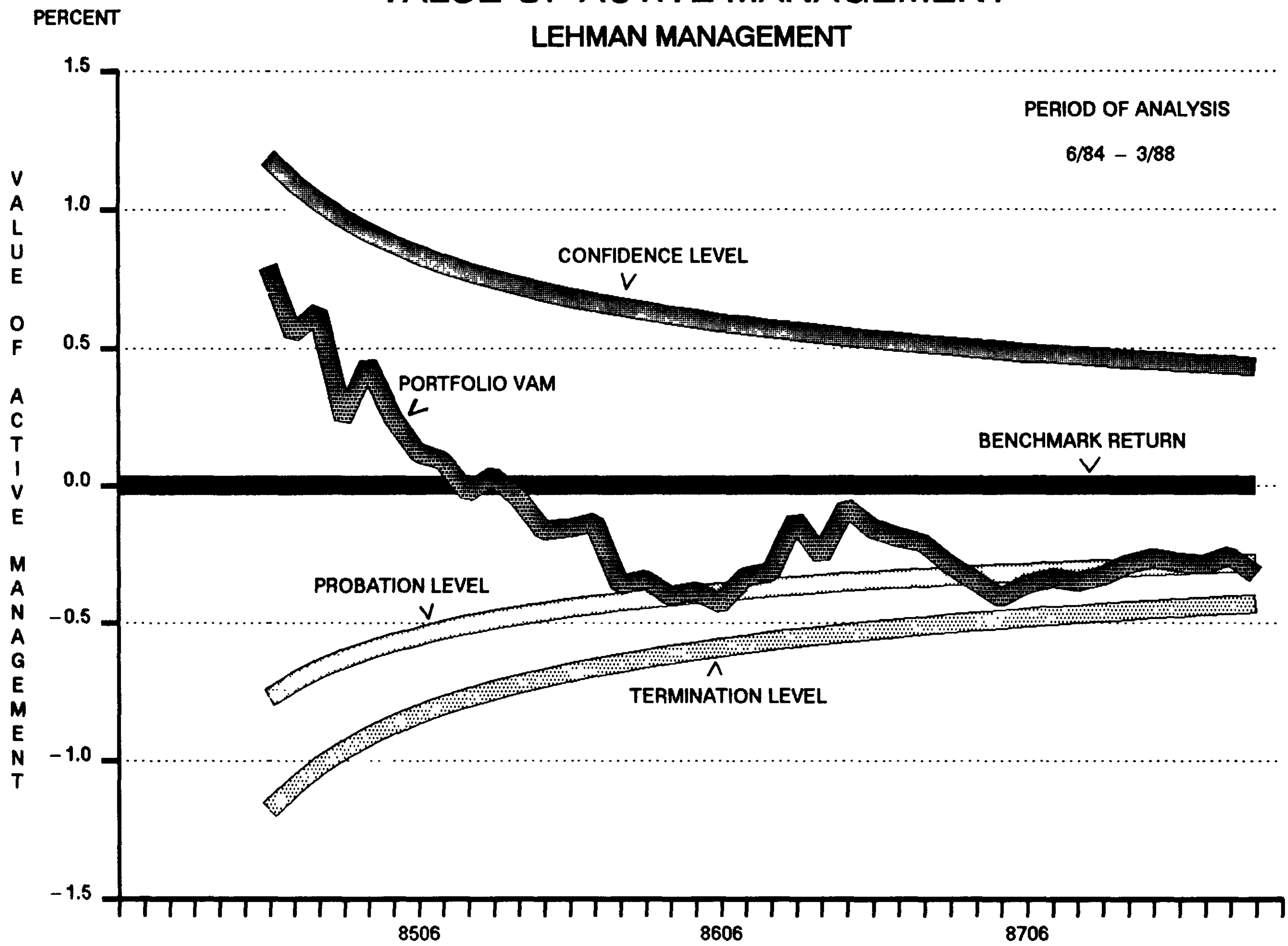
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

Place on probation for quantitative reasons.

VALUE OF ACTIVE MANAGEMENT

LEHMAN MANAGEMENT



MILLER ANDERSON

PORTFOLIO MANAGER: Tom Bennet

ASSETS UNDER MANAGEMENT: $263,539,176

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 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 mortgage securities that have prepayment expectations consistent with the portfolio's desired maturity. The firm will also move in and out of cash. 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. Miller Anderson currently uses the Salomon Broad Investment Grade (BIG) index as their benchmark.

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted the following concern:

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

The firm's exceptional strengths continue to be:

- Highly successful and experienced professionals.
- Extensive research and management skills in mortgage and mortgage-backed securities.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark		
	Latest Quarter	**Latest Year**	**Since 6/30/84 Annualized**
Miller Actual	3.6%	4.5%	16.2%
Miller Benchmark	3.7	5.2	15.6

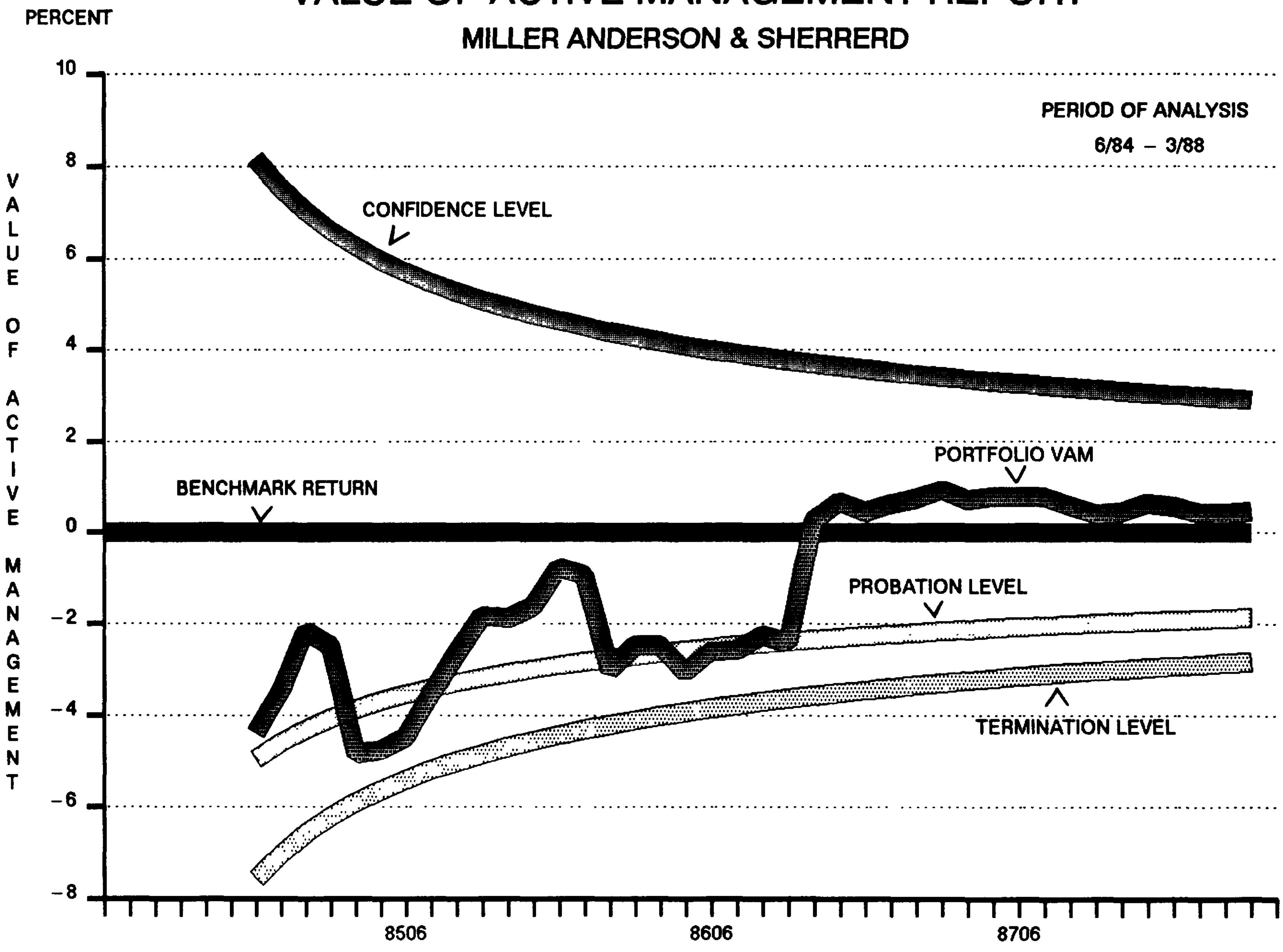
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

MILLER ANDERSON & SHERRERD



MORGAN STANLEY

PORTFOLIO MANAGER: Geoffrey Gettman **ASSETS UNDER MANAGEMENT: $213,746,041**

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. Morgan Stanley uses the Salomon Broad Investment Grade (BIG) index as their benchmark.

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Insufficient effort to understand performance relative to an appropriate benchmark.
- Violation of SBI duration constraints.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark		
	Latest Quarter	Latest Year	Since 6/30/84 Annualized
Morgan Actual	3.1%	4.2%	15.5%
Morgan Benchmark	3.7	5.2	15.6

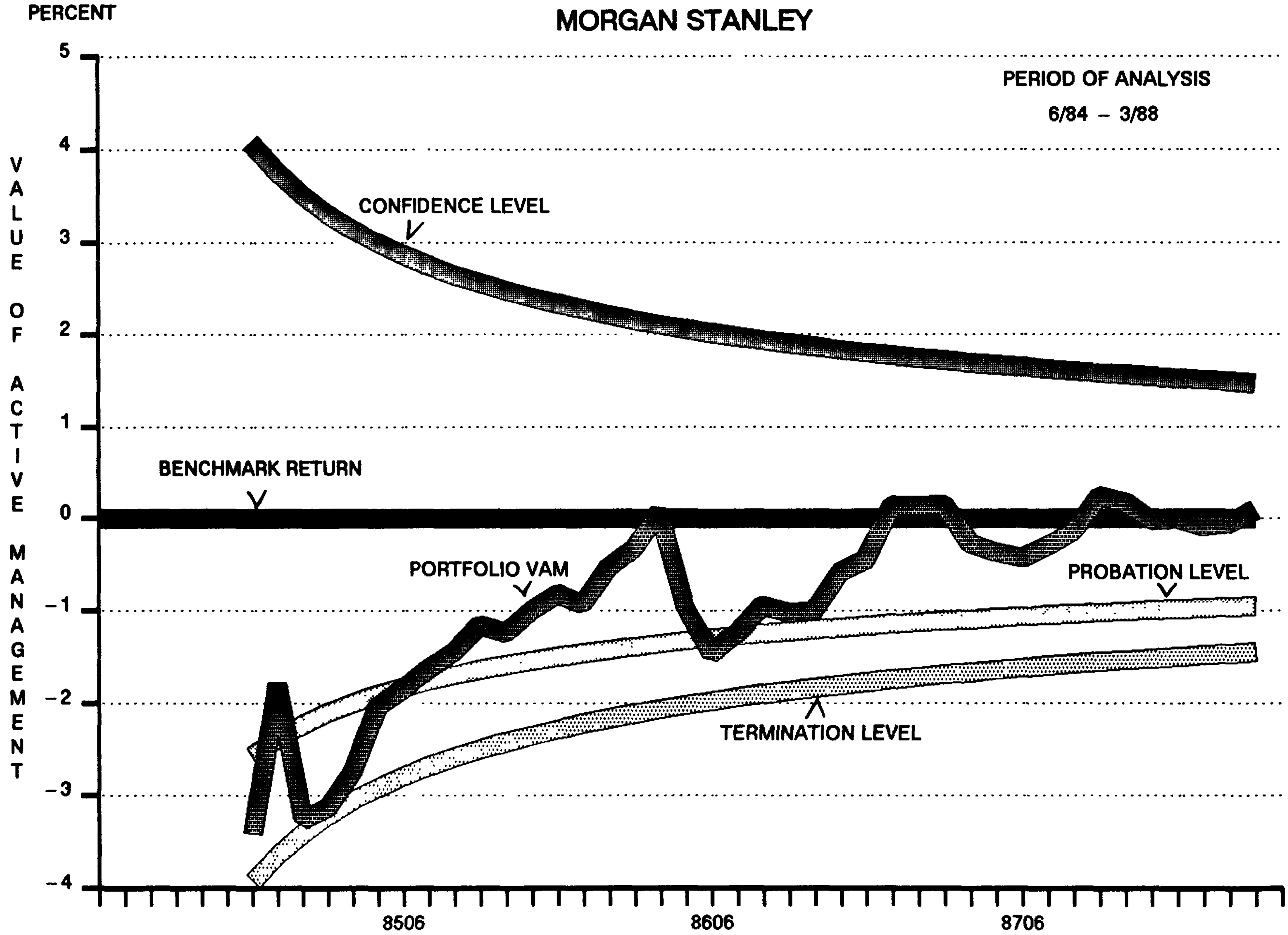
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

Place on probation for qualitative reasons. The inability to develop a benchmark and the violation of the duration bands suggest an unwillingness on the part of Morgan Stanley to adjust its management process to the needs of the SBI.

VALUE OF ACTIVE MANAGEMENT

MORGAN STANLEY



PEREGRINE CAPITAL MANAGEMENT

PORTFOLIO MANAGER: William Giese **ASSETS UNDER MANAGEMENT: $118,892,393**

INVESTMENT PHILOSOPHY

Peregrine Capital stresses consistency of fixed income portfolio relative returns. To accomplish this goal, the firm maintains a portfolio of high quality, liquid securities and a balance of maturity levels avoiding extreme exposures on either the long or short end. Further, Peregrine will make only gradual moves between maturities over an interest rate cycle. The firm also concentrates on exploring misperceived fixed income securities, which has led the firm to make extensive use of mortgage-backed securities and floating rate notes. Peregrine recently completed work on their customized benchmark. It's features include a fixed 3.6 year duration and above average positions in governments and corporates.

QUANTITATIVE EVALUATION

	Performance Relative to Benchmark		
	Latest Quarter	Latest Year	Since 6/30/84 Annualized
Peregrine Actual	3.2%	4.2%	13.1%
Peregrine Benchmark	3.7	5.6	15.7

(See Value of Active Management graph below)

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

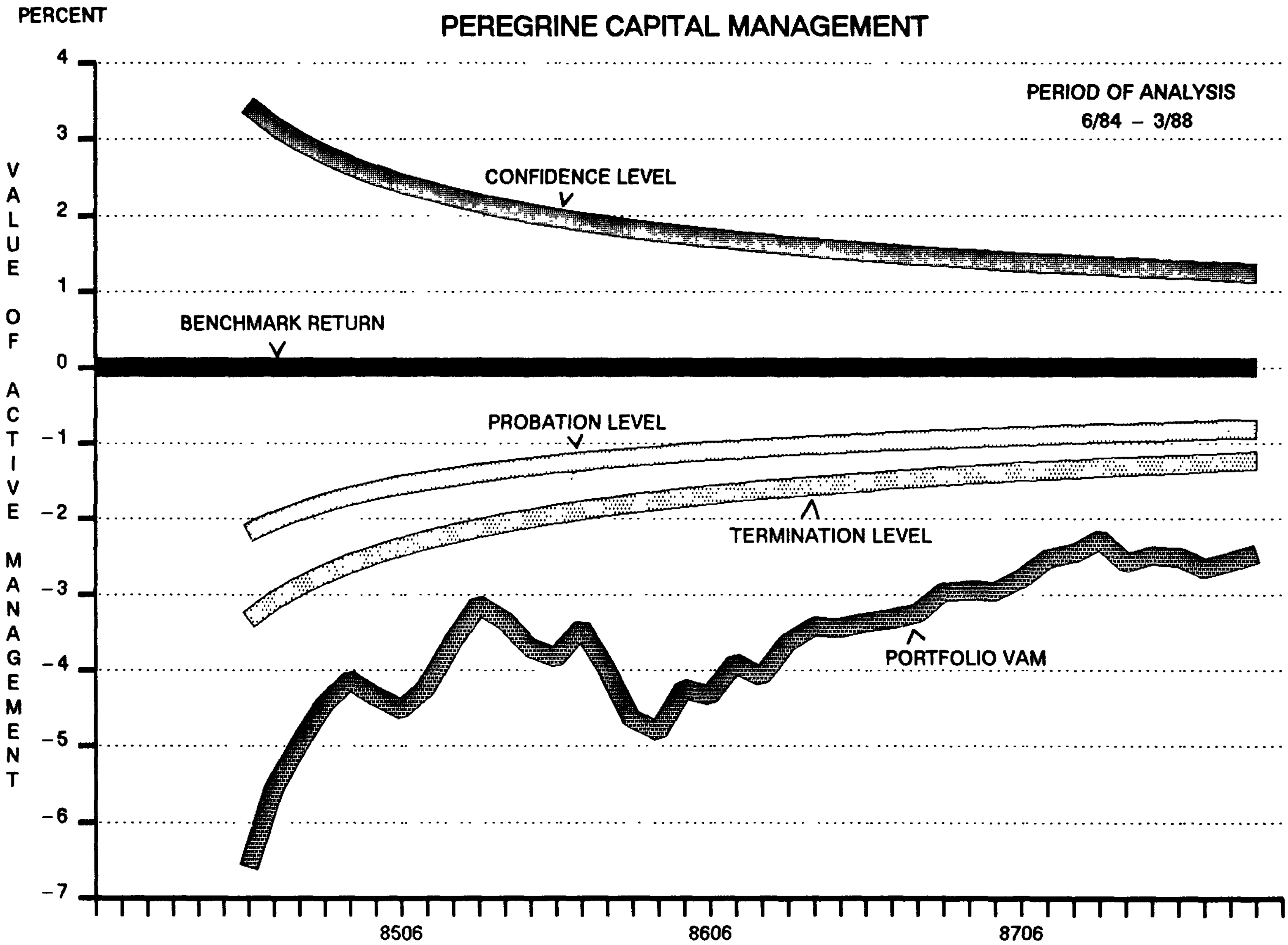
- Performance trailed significantly behind market target. Peregrine worked with Wilshire to redefine a benchmark that more closely matched Peregrine's management style. The new benchmark is incorporated in the firm's value of active management chart.

STAFF RECOMMENDATIONS

Terminate manager. Actual performance violates the termination levels established for this manager.

VALUE OF ACTIVE MANAGEMENT REPORT

PEREGRINE CAPITAL MANAGEMENT



WESTERN ASSET MANAGEMENT

PORTFOLIO MANAGER: Edgar Robie, Jr. **ASSETS UNDER MANAGEMENT: $272,331,415**

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 previous evaluation noted several items of concern:

- Firm is under new ownership.

This issue, while not serious, should be monitored.

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		
	Latest Quarter	Latest Year	Since 6/30/84 Annualized
Western Actual	5.3%	3.8%	17.2%
Western Benchmark	4 0	5.1	15.6

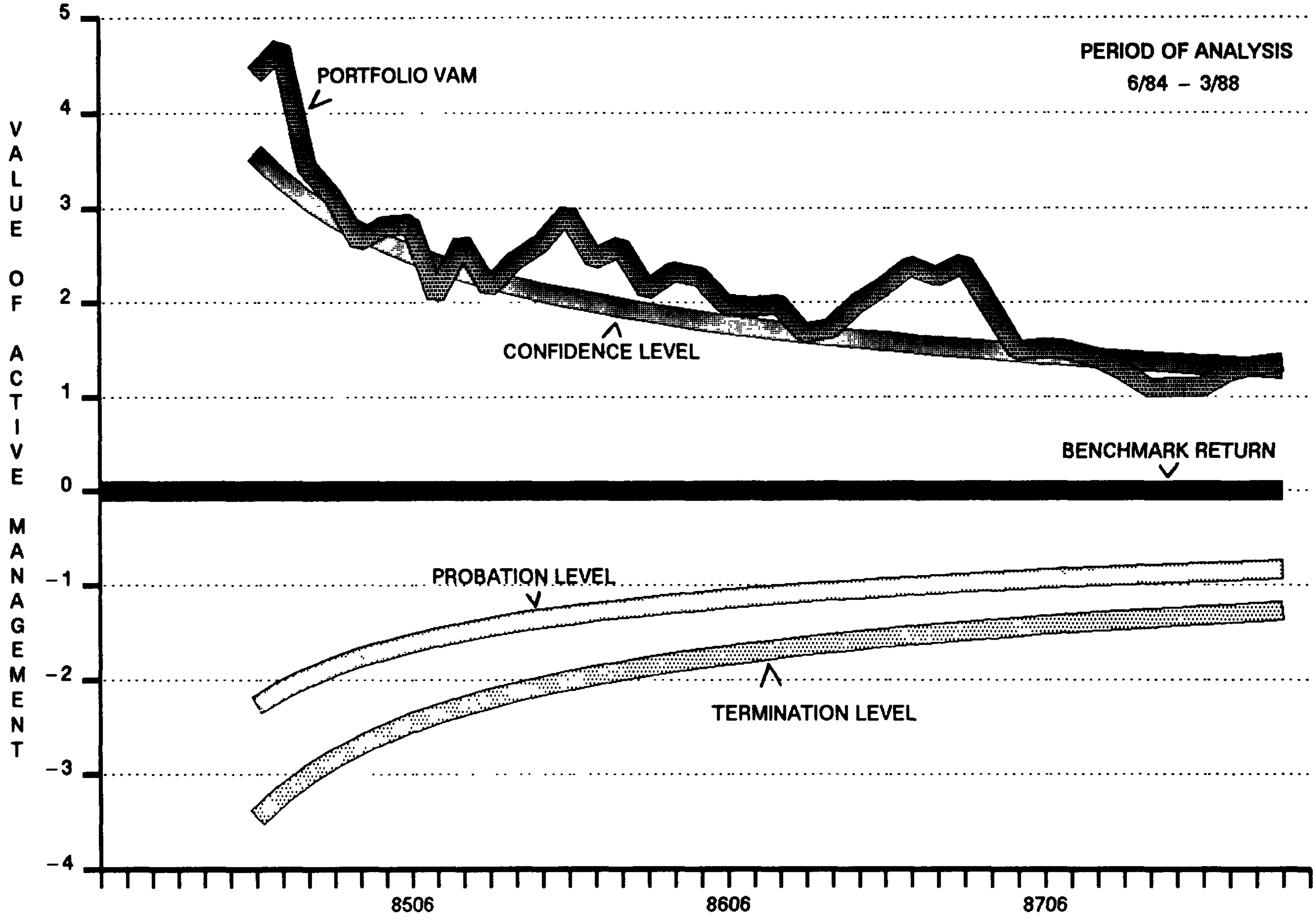
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

WESTERN ASSET MANAGEMENT



Tab F

EXECUTIVE DIRECTOR
HOWARD J BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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55 Sherburne Avenue
St Paul, MN 55155
Tel (612) 296-3328
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May 26, 1988

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:

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.

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 $313.3 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 $105.0 million to six commingled oil and gas funds.

2) Annual Review Sessions

During April, the Alternative Investment Committee and staff conducted annual review sessions with four of the SBI's real estate managers:

- o Heitman Advisory Corporation (Heitman)
- o Rosenberg Real Estate Equity Funds (RREEF)
- o Trust Company of the West (TCW)
- o Aldrich, Eastman, Waltch (AEW/State Street)

Summaries of the review sessions are included as attachments to this committee report.

In aggregate, these managers represent approximately 57% of the SBI's total real estate holdings and approximately 5.4% of the Basic Retirement Funds as of 12/31/87. The SBI's total real estate portfolio was 9.4% of the Basic Funds on 12/31/87.

In general, the four real estate investment managers and funds reviewed are in the early stages of their expected lives. The most mature fund, RREEF, has been in existence for less than four years of its twelve investment term. This makes conclusive judgments regarding performance and strategies difficult.

Nonetheless, in comparing investment strategies, organizational effectiveness and performance to date, TCW and Heitman appear to be the strongest of the managers interviewed. They have been more successful in targeting the current stronger real estate markets and avoiding the weaker ones. To date, they have also produced the highest rates of return on the SBI's investment.

AEW/State Street and RREEF were less able to demonstrate the effectiveness of their current investment strategies. AEW/State Street was hampered by the portfolio managers' lack of preparation to discuss individual property investments. A slight deviation from original strategy was also discussed. RREEF has made some early investments in weak real estate markets which have negatively impacted current performance.

Overall, the Alternative Investment Committee and staff have been satisfied with the strategies and performance of Heitman, TCW and AEW/State Street, in that order. New investments with these managers will be considered, when appropriate. Currently, no new investments are being considered with RREEF.

3) Future Considerations

Going forward, the Alternative Investment Committee agenda will include:

- o Reviewing investment objectives, strategy, asset allocation and performance measurement
- o Considering potential alternative investment consultants
- o Considering additional investments with new and existing managers
- o Conducting annual review sessions with existing alternative investment managers

ACTION ITEMS:

The Alternative Investment Committee considered an investment with a new resource manager during the quarter. Also, the Committee considered potential alternative investment consultants for specific projects in the real estate and oil and gas areas.

Specifically, the Committee recommends the Board authorize the Executive Director, with assistance from the Board's legal counsel, to negotiate and execute contracts with:

- o J.P. Morgan Investment Management, Inc. for a commitment of up to $15 million in J.P. Morgan Investment Petroleum Fund II.
- o Laventhol and Horwath Real Estate Advisory Services for a real estate project review at a cost not to exceed $100,000.
- o The Sterling Group for selected oil and gas project reviews at a cost not to exceed $20,000.

These proposed contractual relationships are summarized below.

1) INVESTMENT WITH A NEW MANAGER:

- o Up to a $15 million investment in J.P. Morgan Investment Petroleum Fund II.

  Petroleum Fund II is the second commingled petroleum fund established by Morgan Guaranty Trust through their subsidiary, J.P. Morgan Investment Management, Inc. A major investor in the petroleum industry for many years, Morgan first offered a vehicle for direct investments in oil and gas projects when it established the $110 million Petroleum Fund I in October 1983. Fund II will follow essentially the same investment strategy as Fund I with primary emphasis on equity interests in property acquisitions and developmental drilling. A summary description of the proposed Petroleum Fund II is attached.

2) CONSULTANT PROJECT REVIEWS:

- o Retention of Laventhol and Horwath for a real estate project review.

  Laventhol and Horwath, a diversified consulting and accounting firm, is one of the largest real estate advisors in the country. Through their real estate Pension Advisory Services division, Laventhol will conduct an overall review of the SBI's real estate portfolio. The review will focus primarily on the appropriateness of goals, objectives and current target policy weights for the SBI's real estate portfolio and changes, if needed, to the current real estate portfolio to best achieve goals and objectives. A summary description of the proposed Laventhol and Horwath project review is attached.

- o Retention of Gene Graham of the Sterling Group for selected oil and gas project reviews.

  Gene Graham is one of seven principals of the Sterling Group, a private financial company in Houston. Prior to joining The Sterling Group in May 1987, Gene was a general manager of J.P. Morgan Investment's Petroleum Fund (1983-1987) and a staff member in Morgan Guaranty's petroleum department (1979-1982) where she had extensive production related lending experience. The focus of Gene's proposed advisory services for the Board would be to apply her experience in the oil and gas industry to assist the Board in screening and structuring of selected oil and gas investment offerings. A summary description of Gene Graham's proposed advisory services is enclosed.

Attachments

ALTERNATIVE EQUITY INVESTMENTS
FIRST QUARTER 1988

	INCEPT DATE	FUND SIZE (MILLIONS)	SBI COMMITMENT	SBI-FUNDED	SBI-TO BE FUNDED	FUND DESCRIPTION
REAL ESTATE:						
AETNA	4/82	$1,791	$40,000,000	$40,000,000	$0	OPEN END - DIVERSIFIED
EQUITABLE	10/81	$3,067	$40,000,000	$40,000,000	$0	OPEN END - DIVERSIFIED
HEITMAN I	6/84	$113	$20,000,000	$20,000,000	$0	CLOSED END - DIVERSIFIED
HEITMAN II	10/85	$238	$30,000,000	$30,000,000	$0	CLOSED END - DIVERSIFIED
HEITMAN III	11/86	$200	$20,000,000	$18,119,115	$1,880,885	CLOSED END - DIVERSIFIED
PRUDENTIAL	9/81	$3,767	$40,000,000	$40,000,000	$0	OPEN END - DIVERSIFIED
RREEF	4/84	$773	$75,000,000	$71,300,000	$3,700,000	CLOSED END - DIVERSIFIED
STATE STREET III	7/85	$103	$20,000,000	$20,000,000	$0	CLOSED END - SPECIALIZED
STATE STREET IV	7/86	$86	$15,000,000	$15,000,000	$0	CLOSED END - SPECIALIZED
STATE STREET V	11/87	$82	$15,000,000	$10,000,000	$5,000,000	CLOSED END - SPECIALIZED
TCW III	7/85	$216	$40,000,000	$40,000,000	$0	CLOSED END - SPECIALIZED
TCW IV	9/86	$250	$30,000,000	$30,000,000	$0	CLOSED END - SPECIALIZED
TOTAL R.E. PORTFOLIO			$385,000,000	$374,419,115	$10,580,885	
VENTURE CAPITAL:						
ALLIED	7/85	$40	$5,000,000	$3,333,334	$1,666,666	LATER STAGE
DSV	4/85	$60	$10,000,000	$10,000,000	$0	EARLY STAGE
FIRST CENTURY	12/84	$100	$10,000,000	$2,500,000	$7,500,000	EARLY STAGE
FIRST CHICAGO	3/88	$50	$5,000,000	$475,000	$4,525,000	SECONDARY INTERESTS
GOLDER THOMA	10/87	$225	$14,000,000	$700,000	$13,300,000	LATER STAGE
INMAN/BOWMAN	6/85	$44	$7,500,000	$3,750,000	$3,750,000	EARLY STAGE
KKR I	3/84	$1,000	$25,000,000	$25,000,000	$0	LBO
KKR II	12/85	$2,000	$18,365,172	$18,365,172	$0	LBO
KKR III	10/87	$4,300	$146,634,660	$37,696,167	$108,938,493	LBO
MATRIX	7/85	$70	$10,000,000	$7,500,000	$2,500,000	EARLY STAGE
NORWEST	1/84	$60	$10,000,000	$10,000,000	$0	EARLY STAGE
SUMMIT I	12/84	$93	$10,000,000	$7,500,000	$2,500,000	LATER STAGE
SUMMIT II	5/88	$230	$35,000,000	$3,500,000	$31,500,000	LATER STAGE
SUPERIOR	6/86	$35	$6,645,000	$3,322,500	$3,322,500	EARLY STAGE - MN.
T.ROWE PRICE	3/86	-	$125,023	$125,023	$0	IPO MANAGER
TOTAL V.C. PORTFOLIO			$313,269,855	$133,767,196	$179,502,659	
RESOURCES:						
AMGO I	7/81	$144	$15,000,000	$15,000,000	$0	DEBT WITH EQUITY
AMGO II	2/83	$36	$7,000,000	$7,000,000	$0	DEBT WITH EQUITY
AMGO IV	5/88	$75	$15,000,000	$0	$15,000,000	DEBT WITH EQUITY
APACHE I	5/84	$100	$15,000,000	$879,908	$14,120,092	DEBT WITH EQUITY
APACHE II	10/85	$180	$23,000,000	$22,170,466	$829,534	DEBT WITH EQUITY
APACHE III	12/86	$190	$30,000,000	$30,000,000	$0	NET PROFITS INTEREST
TOTAL RES. PORTFOLIO			$105,000,000	$75,050,374	$29,949,626	
TOTAL ALT. INV. PORT			$803,269,855	$583,236,685	$220,033,170	

ANNUAL REVIEW SUMMARY
RREEF USA FUND III
April 18, 1988

<u>MANAGER REPRESENTATIVES</u>: Stash Maliszewski, Tom Caputo

<u>ASSETS UNDER MANAGEMENT</u>: $70,033,264

<u>BACKGROUND AND DESCRIPTION</u>: RREEF USA III is a $750 million real estate fund managed by the Rosenberg Real Estate Equity Funds. The SBI's investment commitment was made in May 1984 in the amount of $75 million. At 12/31/87, $67 million of the SBI's investment has been funded. The Fund has a twelve year term. Typically, the Fund purchases 100% of the equity of its properties with cash and does not utilize leverage or mortgages. Properties are diversified by location and type. RREEF's inhouse staff manages the real estate properties. The firm's primary offices are located in San Francisco and Chicago.

<u>QUALITATIVE EVALUATION</u>

The evaluation noted several items of concern:

- o <u>Exposure to oil patch properties</u>. RREEF has approximately 35% of the total portfolio invested in properties located in Oklahoma, Texas and Colorado. RREEF explained that the properties are major retail shopping centers which are not as vulnerable to the weak oil economies as office buildings.

- o <u>Property appraisals</u>. In response to requests for improvement of their appraisal processes, RREEF has switched appraisal firms, hired more appraisers and rescheduled annual appraisals to be conducted on a staggered basis each quarter during the year.

- o <u>Selected office building investments in Atlanta and San Francisco that are currently performing below expectations</u>. The Atlanta property is experiencing competition from new office developments. Despite the weak market, RREEF has achieved a year-end occupancy for this building of 91%. The San Francisco property is contending with a current oversupply of office space. This oversupply should decrease due to a building moratorium that was passed recently in San Francisco.

(continued)

QUANTITATIVE EVALUATION FOR RREEF (12/31/87)

COMMITMENT	$75,000,000.00
FUNDED COMMITMENT:	$67,300,000.00
MARKET VALUE OF FUNDED COMMITMENT:	$70,033,264.00
CASH DISTRIBUTIONS:	$4,101,507.00
INCEPTION DATE:	May 1984
INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	4.6%

DIVERSIFICATION PROFILE (12/31/87)

RREEF GEOGRAPHIC DISTRIBUTION

CA	21.39%
IL	14.95
TX	13.58
OK	13.24
CO	8.69
MD	11.51
NY	8.08
GA	4.86
PA	3.70

RREEF PROPERTY TYPES

INDUSTRIAL	10.94%
OFFICE	32.62
RETAIL	56.44

STAFF COMMENTS AND RECOMMENDATIONS:

At this time, the Alternative Investment Committee and staff do not recommend additional investments with RREEF. In comparison to the SBI's other closed end real estate managers, RREEF appears to have been less successful in targeting current strong real estate markets. In addition, RREEF's performance since inception has lagged that of other managers.

ANNUAL REVIEW SUMMARY
HEITMAN FUNDS I, II AND III
April 18, 1988

MANAGER REPRESENTATIVES: David Glickman, Teresa Myers, Roger Smith

ASSETS UNDER MANAGEMENT: $70,493,425.00

BACKGROUND AND DESCRIPTION: The Heitman Funds I, II and III are managed by Heitman Advisory Corporation. Funds I, II and III were incepted in August 1984, November 1985 and January 1987, respectively. The SBI investment commitment totals $70 million for the three funds. At 12/31/87, $65 million of the SBI's total investment commitment had been funded. Each fund has a twelve year term. The majority of the funds' investments are equity real estate diversified by property type and location. Centre Properties, Ltd., an affiliate of Heitman, manages the funds' wholly owned properties. The firm's primary office is in Chicago.

QUALITATIVE EVALUATION

Although the evaluation noted no particular items of concern, the following are items of interest:

- o Heitman may consider additional leverage if mortgage rates decline.
- o An experienced leasing executive was hired to increase emphasis on aggressive leasing of fund properties.
- o Heitman is considering the sale of two of the funds properties that have performed exceptionally well despite their short holding period.

(continued)

QUANTITATIVE EVALUATION FOR HEITMAN FUNDS I, II, AND III AGGREGATE (12/31/87)

COMMITMENT:	$70,000,000.00
FUNDED COMMITMENT:	$65,000,000.00
MARKET VALUE OF FUNDED COMMITMENT:	$70,493,425.00
CASH DISTRIBUTIONS:	$10,143,797.00
INCEPTION DATE(S):	Fund I - August 1984 Fund II - November 1985 Fund III - January 1987
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	11.8%

DIVERSIFICATION PROFILE (12/31/87)

HEITMAN GEOGRAPHIC DISTRIBUTION

MN	16.25%
CA	15.64
IL	10.24
NY	8.45
VA	6.56
KY	5.29
FL	5.00
PA	4.60
OH	4.16
D.C.	4.10
TX	3.50
NV	3.33
MO	3.06
IA	2.86
OK	2.33
OR	1.87
WI	1.56
TN	1.03
IN	0.17

HEITMAN PROPERTY TYPES

MIXED-USE	7.61%
INDUSTRIAL	14.48
RETAIL	29.53
OFFICE	48.38

STAFF COMMENTS AND RECOMMENDATIONS:

The Alternative Investment Committee and staff have been satisfied with Heitmans' operations and performance to date. Additional investments with Heitman will be considered, when appropriate.

ANNUAL REVIEW SUMMARY
AEW/STATE STREET FUNDS III, IV, V
April 19, 1988

MANAGER REPRESENTATIVES: Todd Johnson, Bob Kilroy, Bob Hannon

ASSETS UNDER MANAGEMENT: $42,233,016.00

BACKGOUND AND DESCRIPTION: The AEW/State Street Funds III, IV and V are managed by Aldrich, Eastman and Waltch under the Trusteeship of State Street Bank and Trust of Boston. Funds III, IV and V were incepted in September 1985, September 1986 and December 1987, respectively. The SBI's investment commitment totals $50 million for the three funds. At 12/31/87, $38 million of the SBI's investment commitment had been funded. Each fund has a 15 year term. The funds' special orientation is the use of creative investment vehicles such as convertible and participating mortgages to maximize real estate returns. The real estate portfolios are diversified by location and property type. On-site property management is typically contracted to outside firms or conducted by joint venture partners. The firm's primary office is in Boston.

QUALITATIVE EVALUATION

The evaluation noted two items of concern:

- New investment in a different property type-(apartments) AEW/State Street explained that recent tax law changes have increased the attractiveness of selected apartment investments. The apartment investment, representing approximately 2% of the funds' total investments, is in a joint venture with an experienced and strong partner.

- Retirement of Mark Waltch, one of the founding partners. Mark's retirement was expected and planned for. The firms' Board of Directors and number of Principals has been expanded to accommodate Marks departure. Mark will remain a Director of AEW and will continue to advise the firm. AEW currently has 105 professional employees with 26 fund Principals.

(continued)

QUANTITATIVE EVALUATION FOR AEW/STATE STREET FUNDS III, IV, V AGGREGATED (12/31/87)

COMMITMENT:	$50,000,000.00
FUNDED COMMITMENT:	$38,333,333.00
MARKET VALUE OF FUNDED COMMITMENT:	$42,233,016.00
CASH DISTRIBUTIONS:	$0.00
INCEPTION DATE(S):	Fund III - September 1985 Fund V - September 1986 Fund V - December 1987
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	6.1%

DIVERSIFICATION PROFILE (12/31/87)

AEW/STATE STREET
GEOGRAPHIC DISTRIBUTION

MN	4.56%
PA	4.77
KS & MO	3.45
TX	24.81
CA	34.27
AZ	9.68
NY	4.31
FL	7.16
KY	6.99

AEW/STATE STREET
PROPERTY TYPES

OFFICE	24.94%
INDUSTRIAL	22.21
RETAIL	50.68
RESIDENTIAL	2.17

STAFF COMMENTS AND RECOMMENDATIONS:

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

ANNUAL REVIEW SUMMARY
TCW FUNDS III AND IV
April 20, 1988

MANAGER REPRESENTATIVES: Bruce Ludwig, Sol Rabin

ASSETS UNDER MANAGEMENT: $68,883,000.00

BACKGOUND AND DESCRIPTION: Management of the TCW Funds is a joint venture between Trust Company of the West (TCW) and Westmark Real Estate Investment Services of Los Angeles. Funds' III and IV were incepted in August 1985 and November 1986, respectively. The SBI's investment commitment totals $70 million for the two funds. At 12/31/87, $64 million of the SBI's investment commitment had been funded. Both funds have ten year terms. The fund managers utilize specialty investment vehicles such as convertible and participating mortgages to enhance real estate returns. In addition, they specialize in real estate research to identify attractive property markets. Generally, investments are diversified by location and property type with some concentration in particular property types and locations identified by internal research. Management of portfolio properties is typically handled by local property management firms.

QUALITATIVE EVALUATION

Although the evaluation noted no particular items of concern, the following are items of particular interest:

- TCW research has identified low-finish industrial distribution facilities in major trans-shipment markets as exceptionally attractive and low risk investment opportunities. Therefore, portfolio concentrations have been in the industrial property type and the Los Angeles and Washington D.C. corridor geographic locations.

- Tax law changes have largely decreased the attractiveness to TCW and potential sellers of using equity-oriented debt when acquiring properties. Therefore, most of TCW's property acquisitions have been all cash, 100% equity purchases.

(continued)

QUANTITATIVE EVALUATION FOR TCW FUNDS III AND IV AGGREGATED (12/31/87)

COMMITMENT:	$70,000,000.00
FUNDED COMMITMENT:	$64,000,000.00
MARKET VALUE OF FUNDED COMMITMENT:	$69,000,000.00
CASH DISTRIBUTIONS:	$ 3,300,000.00
INCEPTION DATE(S):	Fund III - August 1985 Fund IV - November 1986
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	7.2%

DIVERSIFICATION PROFILE (12/31/87)

TCW GEOGRAPHIC DISTRIBUTION

MA	8.90%
TX	6.06
NJ	3.03
FL	3.30
GA	6.60
VA	24.20
CA	47.90

TCW PROPERTY TYPES

INDUSTRIAL	59.00%
RETAIL	14.00
OFFICE	27.00

STAFF COMMENTS AND RECOMMENDATIONS:

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

RESOURCE MANAGER PROFILE

I. BACKGROUND DATA

FUND MANAGER: J.P. Morgan Investment Management Inc.

TYPE OF FUND: Oil and Gas Commingled Fund

TOTAL FUND SIZE: $110 Million

INTERVIEW DATE: 5/2/88

MANAGER CONTACT: Bill Walker

ADDRESS: 1100 Milam Street, Suite 2000
Houston, TX

TELEPHONE: 713-655-0086

II. ORGANIZATION AND STAFF

Morgan Guaranty Trust Company has established a second commingled petroleum fund, Petroleum Fund II. Petroleum Fund II will be managed by the Morgan Petroleum Group, headquartered in Houston, Texas. Three professional staff members manage the investment activities of the Petroleum group. In addition, an independent consultant is on retainer to Morgan to advise on technical and other industry investment issues.

A major investor in the petroleum industry for many years, Morgan first offered a vehicle for direct investments in oil and gas projects when it established the Petroleum Fund I in October 1983. Six corporate pension funds made commitments of $10 million and above to this Fund, with a total commitment of $110 million. The Fund's investments generally range in size from $5 million to $20 million, and have been made in various types of transactions including property acquisitions, development drilling, and exploration. Annualized returns over the last two years have been in excess of 14%. To date, thirteen investments have been made ranging in size from $4.8 million to $20.0 million. 67% of the investments were in producing properties and 22% in development projects.

III. INVESTMENT STRATEGY

Fund II should consist ultimately of 10 to 15 investments diversified by company and geographic area. No investment should represent more than 25% of the fund. A wide range of investments will be considered including purchase of producing properties, development and exploration drilling, secondary or tertiary recovery projects, construction of gas gathering systems and natural gas liquid plants, and royalty or mineral interests.

Morgan anticipates that most investments will take the form of an overriding royalty carved out of a leasehold interest. The overriding royalty interest is payable from gross revenues, but measured by a percentage of net lease operating income (gross revenues less certain operating costs).

IV. DRAWDOWN SCHEDULE

Commitments will be drawndown as needed.

V. TERM

Fund life will be a maximum of 15 years unless all participants elect to extend the term.

VI. FEES

Morgan will receive an annual management fee of 2% of the book value of the Fund. Once investors have received cumulative cash distributions equal to 110% of their total funded commitments, Morgan will receive an additional fee of 8% of the cash distributions made from the Fund.

VII. DISTRIBUTION AND REINVESTMENT

At least 50% of cash net income earned by the Fund each quarter will be distributed to participants. Remaining income, together with that portion of the cash flow representing return of capital (loan amortization, cost depletion, sale of assets), may be reinvested.

VIII. REDEMPTION

Redemption requests from investors can be considererd only after the minimum holding period of six years has elapsed, and then only to the extent that cash is available in the Fund and the remaining participants' interest is not impaired. Each year, after six years have elapsed, the Fund will make every effort to honor requests for redemption up to a maximum of 25% of a participant's initial interest. Such requests must be made prior to April 30 of each year.

REAL ESTATE CONSULTANT PROFILE

I. BACKGROUND DATA

FIRM NAME:	Laventhol and Horwath
FIRM CONTACT:	Richard Rosenberg
INTERVIEW DATE:	4/8/88
ADDRESS:	1845 Walnut Street Philadelphia, PA 19103
TELEPHONE:	(215) 299-1700

II. ORGANIZATION

Laventhol and Horwath, a diversified consulting and accounting firm, is one of the largest real estate advisors in the country. Over 300 professionals, located in 25 offices throughout the country, comprise Laventhol's real estate practice. The consulting staff includes professionals with experience as developers, lenders, mortgage and investment bankers, portfolio management, land use planning, economic and market analysis, valuation and appraisal and public policy.

Richard Rosenberg and Jim Noteware, of Laventhol and Horwath, direct and coordinate the firms' real estate Pension Advisory Services and project reviews. Richard has been a real estate consultant with Laventhol since 1980 and is currently their Director of Pension Advisory Services. Jim has been a real estate consultant with Laventhol since 1979 and is the firms' national Director of Real Estate Advisory Services.

III. PROPOSED SERVICES

Laventhol will conduct an overall review of the SBI's real estate portfolio. Focal points of the review will include:

- o A summary of the existing real estate portfolio;
- o The impact of alternative real estate allocations on total portfolio risk and return;
- o A detailed financial analysis which evaluates the risk, return and diversification characteristics of the portfolio stratified by:

- Investment scale and magnitude
- Individual fund
- Property type
- Geographical location
- Investment type (debt/equity/hybrid)
- Leverage

o The possible reallocation of existing real estate assets in order to optimize the overall portfolio return;

o The optimal asset allocation strategies within the real estate portfolio. This will include:

  - Geographical locations;
  - Property types;
  - Investment structures;

o The optimal strategies related to the timing of future real estate investments and the degree of liquidity that may be required by the portfolio;

IV. FEE AND TERMS

The real estate portfolio analysis will cost a maximum of $100,000.00.

The project can be terminated at any time prior to completion.

If a decision is made to discontinue the review prior to completion, the cost of the review would be based upon time expended and expenses incurred to date.

OIL AND GAS CONSULTANT PROFILE

I. BACKGROUND DATA

FIRM NAME: The Sterling Group

FIRM CONTACT: Gene Graham

INTERVIEW DATE: 3/22/88

ADDRESS: Eight Greenway Plaza
Houston, Texas 77046

TELEPHONE: (713) 877-8257

II. ORGANIZATION AND STAFF

Gene Graham is one of seven principals of the Sterling Group, which is a private financial company in Houston acting as both principal and investment banker in leveraged buyout transactions. Sterling also provides financial advisory services to a limited number of corporate clients, primarily firms in the energy industry.

Prior to joining The Sterling Group in May 1987, Gene was the general manager of J.P. Morgan Investment's Petroleum Fund, a commingled pension trust fund for direct investments in oil and gas. For four years, Gene was responsible for generating, analyzing and negotiating the Fund's investments. During her tenure with the Petroleum Fund, Gene was involved with over $100 million in producing property acquisitions, as well as development and exploratory drilling programs. From 1979 to 1982, prior to managing the Fund, Gene was in Morgan Guaranty's petroleum department where she had extensive production related lending experience.

II. PROPOSED SERVICES

The focus of Genes' proposed advisory services for the Board would be to integrate the economic and technical analysis necessary to screen offerings for high quality projects properly structured to allow the Board to achieve its economic objectives. For each offering analyzed, Gene would expect to provide:

1. Reference checks on the investment manager and/or operating company;

2. An analysis of the manager's or company's track record (performance to date, as well as assumptions used for estimating long-term returns);

3. An engineering and/or geologic consulting report, as required, to assess relevant technical aspects of the offering. For project specific offerings, a consultant's report would include an assessment of the overall quality of the reservoirs, ultimate expected recoveries, production decline curves, development potential and costs, operating concerns and costs, and the overall economics of the project's area of interest;

4. An assessment of the offering to test the potential impact on the Board's expected rate of return given various assumptions related to economic scenarios and reservoir performance variables; and

5. Participation, as required, in closing procedures related to transactions approved for investment by the Board.

IV. FEE AND TERM

For each advisory project undertaken, the SBI will pay Sterling a consulting fee estimated to be between $4,000-$5,000 per individual project review. The total cost of the proposed consulting arrangement with Sterling will be a maximum of $20,000 per year.

The SBI may, at any time, terminate Sterling's work on a project; however, the Board will be obligated to pay Sterling for all advisory services rendered up to such time of termination.