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

MINNESOTA STATE BOARD OF INVESTMENT MEETING
October 4, 1989

&

INVESTMENT ADVISORY COUNCIL MEETING
October 3, 1989

AGENDA
STATE BOARD OF INVESTMENT
MEETING

Wednesday, October 4, 1989
8:30 A.M.
Room 15 - State Capitol
Saint Paul

		TAB
1.	Approval of Minutes of June 7, 1989 Meeting	
2.	Executive Director's Report (H. Bicker)	
	A. Quarterly Investment Review (April 1 - June 30, 1989)	A
	B. Portfolio Statistics (June 30, 1989)	B
	C. Administrative Report 1. Reports on Budget and Travel 2. Report on Basic Retirement Funds Rebalancing	C
3.	Report from the SBI Administrative Committee (J. Growe)	D
	A. Update on Board Seminar B. Dates for National Association of State Investment Officers Meeting C. Approval of Executive Director's FY 1990 Work Plan D. Approval of Report from the Deferred Compensation Review Committee	
4.	Reports from Investment Advisory Council Committees (J. Yeomans)	
	A. Equity Manager Committee 1. Review of Active Manager Performance 2. Special Review of Waddell & Reed Performance	E
	B. Fixed Income Manager Committee 1. Date for Bond Manager Round Table 2. Review of Semi-Passive Manager Performance 3. Review of Active Manager Performance	F
	C. Alternative Investment Committee 1. Report on Fund Manager Annual Reviews 2. Approval of Alternative Asset Indices for Composite Index 3. Approval of Real Estate Study Recommendation 4. Authorization to Sell Resource Investment 5. Approval of Venture Capital Commitment	G
5.	Executive Director's Performance Review	

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

EXECUTIVE DIRECTOR
HOWARD J BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
Room 105, MEA Building
55 Sherburne Avenue
St Paul, MN 55155
Tel (612) 296-3328
FAX (612) 296-9572

MINUTES

STATE BOARD OF INVESTMENT

June 7, 1989

The State Board of Investment (SBI) met on Wednesday, June 7, 1989 in Room 112 of the State Capitol at 8:30 A.M. Secretary of State Joan Anderson Growe, Acting, Chair; Governor Rudy Perpich; State Treasurer Michael A. McGrath; Attorney General Hubert H. Humphrey III; and State Auditor Arne H. Carlson were present.

Mr. McGrath moved approval of the minutes of the February 8, 1989 special meeting with a typographical error correction on Pages 24 and 25 of the meeting materials. Mr. Humphrey seconded. The motion passed. Mr. Humphrey moved approval of the minutes of the March 1, 1989 meeting. Mr. McGrath seconded. The motion passed.

EXECUTIVE DIRECTOR'S INVESTMENT REPORT

Howard Bicker, Executive Director, referred the Board to the quarterly investment report in the Board folder. He stated that the first page in the report contained the Quarterly Report on Objectives that was established with the adoption of the report of the Task Force on Fund Objectives. He stated that the report showed performance against return and liquidity objectives for the Basic Retirement Funds and the Post Retirement Fund.

Mr. Bicker then gave his quarterly investment report for the period ending March 31, 1989. He stated that the market value of the Basic Funds increased 5.7 percent during the quarter with the increase coming primarily from investment returns. He stated that the Funds had net contributions of $32 million. He stated that the cash component of the Funds was higher than normal at 4.3 percent due to transactions necessary to fund new managers effective April 3, 1989. He stated that the Funds' total rate of return with and without alternative assets outperformed the median fund in the Trust Universe Comparison Service (TUCS) for the quarter and year ending March 31, 1989 and for the three year period ending March 31, 1989. He stated that the stock segment of the Funds outperformed the Wilshire 5000 target for the quarter, but underperformed the target for the latest year. He stated the bond segment outperformed the Salomon Broad Index for the quarter and for the latest year.

Mr. Bicker then reported on the Post Retirement Fund. He stated that the market value of the Fund increased by 1.1% during the first quarter 1989. He stated that the Fund had net contributions of negative $50 million. He stated that cash holdings in the Fund decreased and bond holdings increased during the quarter due to further rebalancing in the dedicated bond portfolio. He then stated that the benefit increases generated by the Fund averaged 8.3% over the past three years and 7.9% over the past five years. He stated that the stock segment of the Fund exceeded its benchmark for the quarter and latest year by substantial margins.

Mr. Bicker stated that all funds under management by the State Board of Investment totalled $13.4 billion as of March 31, 1989.

EXECUTIVE DIRECTOR'S ADMINISTRATIVE REPORT

Mr. Bicker referred the Board to the budget and travel reports in the meeting materials. Next, he stated that there were several pieces of legislation of interest to the SBI that were enacted by the 1989 Legislature. He stated that the SBI submitted a "same-level" request budget and received a two percent reduction from that request. He stated that a major pension bill contained several benefit enhancements including a Rule of 90 for MSRS and TRA; a level formula for MSRS, TRA PERA; elimination of the Variable Annuity Fund within TRA; and a fiduciary responsibility measure. Mr. Bicker then asked Christie Eller, Assistant Attorney General and SBI legal counsel, to address the ramifications of the fiduciary responsibility provision.

Ms. Eller referenced a memo she prepared for Board members and stated that the fiduciary responsibility measure, in general, has little impact on the SBI (see Exhibit A). She stated that the measure establishes standards for smaller pension funds that already apply to the SBI. She stated that the standard of care in the bill is very similar to the standard of care under which the Board has been operating. She stated that the SBI has consistently abided by the open meeting law which the bill extends to the smaller pension funds. She stated that the provision allowing the SBI to pass a resolution to indemnify Board members, the Executive Director, and members of the Investment Advisory Council has minimal impact. She said the Board's statute already provides for indemnification for IAC members and that Board members and the Executive Director are similarly covered by other provisions of existing law. She stated that the provision requiring continuing education for the

Board will have minimal impact due to existing efforts in the area.

Mr. Bicker stated that the last item in his administrative report is an update on discussions he has had with various groups concerning the Post Retirement Fund. He stated that the Board directed him to discuss the report of the Task Force on Fund Objectives concerning possible changes in the Post Fund. He said he will report to the Board with further information at a later meeting.

SBI ADMINISTRATIVE COMMITTEE REPORT

Mr. McGrath stated that there are several items from the Administrative Committee. He stated that the only information item is a proposal to hold a Board seminar to review fund policies. He stated that the staff have proposed to conduct the seminar in September or October 1989 at a location outside the Capitol complex and have suggested that the seminar replace the regular quarterly Board meeting. He stated that the Administrative Committee recommends that if there is sufficient commitment from Board members to proceed with a seminar that Mr. Bicker plan the agenda with a task force of Board member designees and IAC members.

Ms. Growe invited comments from the Board members concerning their interest in such a seminar. Mr. Humphrey stated that he thought a seminar held in lieu of a quarterly meeting would be acceptable to him, and commented that the seminar should not be held at the same time as a special session. Mr. McGrath stated that he was convinced that the seminar would be a worthwhile exercise if the Board chose to proceed with it. Mr. Carlson stated that he would attend. Ms. Growe then stated that there was a commitment from four Board members to attend and instructed Mr. Bicker to search for an appropriate date.

Mr. McGrath stated that the first action item from the Administrative Committee is the approval of the consultant contract. He stated that the Consultant Review Committee interviewed four firms and recommended that the current consultant, Richards & Tierney, be retained for a period of three years at an amount not to exceed $175,000 a year. Mr. McGrath moved approval of the recommendation. Mr. Humphrey seconded. Mr. Carlson said that he thought the Board ought to hire a new consultant to bring some fresh and creative ideas to bear on the issue of improving investment performance.

Ms. Growe introduced Mr. Peter Sausen as Chair of the Consultant Review Committee. Mr. Sausen stated that the Committee met three times. He stated that at the first meeting the Committee reviewed a draft of the request for proposal (RFP) and a list of firms to which the RFP would be sent. He stated that at the second meeting the Committee reviewed the responses and chose four firms to be interviewed. He stated that the

Committee interviewed the four firms at a third meeting and discussed which firm to recommend. He explained that the Committee determined that the consultant has two major areas of responsibilities: one is the quantitative analysis that the consultant provides the SBI, and the other is the general investment advice the consultant provides to the Board and IAC. Mr. Sausen stated that the Committee agreed that Richards & Tierney would provide the best quantitative analysis, but said that the Committee did not agree that Richards & Tierney would provide the best general consulting. He said that the Committee agreed that Richards & Tierney needed to improve its communication with the Board. In response to a question from Mr. Carlson, Mr. Sausen stated that the Committee did not believe it was their role to question the investment policies established by the Board as part of the RFP process. Mr. Carlson then asked Mr. Sausen if the Committee took into account the frequency of evaluation of the external equity managers, the toughness of the evaluation standards and the willingness to enforce those standards. Mr. Sausen responded in the negative. In response to a question from Mr. Humphrey, Mr. Carlson stated that he had a preference for a different firm which was evaluated along with other firms by the Review Committee.

Ms. Growe stated that a possible agenda item for the fall seminar would be to discuss the Board's need for consultants and how the Board may use consultants. Mr. Carlson then moved that the decision concerning hiring the consultant be deferred until the September meeting. The motion failed for lack of support. Ms. Growe then asked for a vote on the McGrath motion to retain Richards & Tierney as stated in the Administrative Committee Report. The motion passed.

Mr. McGrath stated that the second item requiring action was the approval of the Fiscal Year 1990 Management and Budget Plan. He directed the Board to reports in the meeting materials concerning management initiatives undertaken during fiscal year 1989, management initiatives proposed for fiscal year 1990, and the proposed administrative budget for fiscal year 1990. He noted that the proposed budget took into account the two percent reduction enacted by the 1989 Legislature. Mr. McGrath then moved acceptance of the Administrative Committee recommendation to proceed with the implementation of the 1990 Management and Budget Plan as presented. Mr. Humphrey seconded. The motion passed.

Mr. McGrath stated that the third item requiring action is the approval of the Board member travel policy. He stated that given the recent budget reduction the Committee concluded that the policy should be reviewed annually. He then moved that the Board adopt the Committee recommendation to allocate up to $2000 to each Board member for travel related to SBI matters in fiscal year 1990. Mr. Humphrey seconded. The motion passed.

Mr. McGrath stated that the fourth action item is the approval of a revised position description for the Executive

Director. He stated that at the request of the Committee he reviewed and updated the position description. He stated that the Committee recommends adopting the draft as presented. Mr. Carlson stated that he was unsure what the Board would do with the new position description. He stated that the Board individually evaluated the Executive Director for the first time in nine years and sent the evaluations to the Chair for compilation. He stated that he wanted the Board members to meet as a Board and evaluate the Executive Director. Mr. McGrath stated that one of the objectives in drafting the new position description was to structure it so that it could be used as an evaluation tool. Ms. Growe stated that she believed that each Board member agreed to a process in the fall of 1988 whereby the Board members would evaluate the Executive Director individually and then send the evaluations to the Governor as Chair of the Board who would combine the evaluations and discuss the results with Mr. Bicker. She stated that at the time the individual evaluations were conducted, certain Board members realized that the position description required revision, and that the Board, through the Administrative Committee, took action to revise it. Mr. Carlson stated that there was never an agreement not to have a Board meeting at which the Board would evaluate the Executive Director.

Ms. Growe stated that the Board was discussing two issues: whether to revise the Executive Director position description and how to evaluate the Executive Director. Ms. Growe moved approval of the revised position description. Mr. Humphrey seconded. The motion passed.

Ms. Growe then stated that the Board completed an evaluation process to which Board members had agreed. She stated that if there are concerns with the process then the process should be reviewed in advance of the next evaluation. She suggested that Mr. Carlson head a small subcommittee of the Board to determine the appropriate evaluation process and present it to the full Board for approval.

Mr. Carlson requested that staff provide Board members with the minutes of the meetings concerning the Executive Director's evaluation. He said he did not think a subcommittee was necessary to deal with the issue. He moved that the Board annually review its Executive Director, that the review be conducted as outlined by the Department of Employee Relations on an individual basis and that the Board as a whole meet to share those reviews with the Executive Director. Mr. McGrath seconded. Mr. McGrath stated that he supported the motion because the Board has not previously had such a proposal before it. He stated that in the fall of 1988 the Board directed the Administrative Committee to determine the process for the evaluation, and that the Board agreed to that process. In response to a question from Mr. Humphrey, Mr. Carlson stated that the time and place of the evaluation would be at the mutual agreement of the Chair of the Board and the Executive Director. He then suggested that the evaluation be performed at the September 1989 Board meeting. Mr.

Humphrey stated that the Board members attend meetings and work very closely with the Executive Director. He stated that in the process of working with the Executive Director the Board members are evaluating the Executive Director's job performance on a continual basis. He said he disagreed with the idea that the Board members are not performing their duties if they do not have a formal approach to the evaluation process. He then stated that the Administrative Committee could review the evaluation process. Ms. Growe called for a vote on the Carlson motion. The motion passed.

Mr. McGrath stated that the last item requiring action was an item laid over at the March 1, 1989 Board meeting concerning a proposal to purchase U.S. Government Guaranteed Agricultural Export loan participations. Mr. McGrath stated that he recommends that the SBI approve the IAC recommendation and that the SBI authorize the Executive Director, with assistance from legal counsel, to negotiate and execute a commitment of up to $30 million to the First National Bank of Chicago Agricultural Export Loan Program sponsored by the U.S. Commodity Credit Corporation. Mr. Carlson seconded. Mr. Humphrey stated that he would abstain from voting on the issue because his office is involved in litigation with the U.S. Secretary of Agriculture. The motion passed.

INVESTMENT ADVISORY COUNCIL COMMITTEE REPORTS

EQUITY MANAGER COMMITTEE

Ms. Yeomans stated that the Committee had two information items to report, the review of active manager performance and the review of new manager funding. She stated that there is no Board action required concerning manager status. Mr. Carlson stated that it appears that Waddell & Reed has been underperforming its benchmarks. He requested that the IAC and the Board review Waddell & Reed at the September 1989 meetings. Ms. Yeomans agreed to have the IAC review the firm and report to the Board at the September 1989 meeting.

Mr. McGrath moved that the Board adopt the recommendation from the Committee concerning contract renewals for seven existing equity managers. Mr. Humphrey seconded. The motion passed.

FIXED INCOME MANAGER COMMITTEE

Ms. Yeomans stated that the Committee reviewed the performance of the active and semi-passive managers. She stated that no Board action is required because the managers performed satisfactorily. In response to a comment from Mr. Carlson, Mr. Bicker stated that the performance numbers shown for the managers are reported net of fees.

Ms. Yeomans reported that the rebalancing of the dedicated bond portfolio within the Post Retirement Fund was completed during the quarter since additional cash was available. She stated that all projected liabilities are now funded in the dedicated bond portfolio.

Ms. Yeomans referred the Board to meeting materials concerning revised investment manager guidelines. She said that the Committee reviewed the revised guidelines and said that the revised guidelines would be incorporated into future bond manager contracts or renewals.

Ms. Yeomans reported that there were two items requiring action by the Board concerning manager contracts. She stated that the Committee recommends that the contracts of the active managers be renewed under the same terms and conditions as the existing contracts. Mr. Humphrey moved approval of the Committee recommendation. Mr. McGrath seconded. The motion passed. Ms. Yeomans stated that the Committee recommends that the contracts of the semi-passive managers be renewed with a change in the fee structure. She stated that the Committee believes that the existing fee structure provides too much incentive to be active managers rather than semi-passive managers. As a result, she said, the Committee recommends that the range of fees that could be paid to the semi-passive managers be compressed. If the managers perform as anticipated, Ms. Yeomans said the amount of fees paid will be less than is currently expended. Mr. Carlson moved approval of the Committee recommendation. Mr. McGrath seconded. The motion passed.

ALTERNATIVE INVESTMENT COMMITTEE

Ms. Yeomans reported that the Committee held annual review sessions with four real estate managers: Heitman Advisory Corporation, Rosenberg Real Estate Equity Funds (RREEF), Trust Company of the West (TCW), and Aldrich Eastman Waltch (AEW). She stated that no action is required, although the Committee concluded that no additional investment should be considered with RREEF due to concern about performance of the existing investment.

Ms. Yeomans next reported that the review of the real estate portfolio performed by the special project consultant retained by the State Board had been completed. She stated that the consultant concluded, in general, that the SBI's real estate investments have provided the diversification and returns that the SBI was seeking when it initiated its real estate investment program. She stated that the consultant made several recommendations which are listed in the Committee report. She also referred the Committee to the report on potential indices for the real estate, oil and gas, and venture capital investments.

Ms. Yeomans stated that the only item requiring Board action was the approval of the contract to retain the resource consultant, Gene Graham of the Sterling Group, for another year. Mr. McGrath moved approval of the Committee recommendation. Mr. Humphrey seconded. The motion passed.

The meeting adjourned at 9:45 A.M.

Respectfully submitted,

Howard J. Bicker

Howard J. Bicker
Executive Director

Attachment

EXHIBIT A

DEPARTMENT ATTORNEY GENERAL

STATE OF MINNESOTA

Office Memorandum

DATE June 5, 1989

TO THE HONORABLE MEMBERS OF THE STATE BOARD OF INVESTMENT

FROM CHRISTIE B. ELLER CBE
Assistant Attorney General

PHONE 6-9421

SUBJECT Minnesota Public Pension Plan Fiduciary Responsibility and Liability Act

Pursuant to the request of Howard Bicker, the Executive Director of the State Board of Investment (SBI), I have reviewed the recently enacted Minnesota Public Pension Plan Fiduciary Responsibility and Liability Act (the "Act") which is article 7 of Senate File 783 of the pension bill. The Act will become effective the day following final enactment. Based upon my review, it is my opinion that the Act will have little impact upon the SBI since the SBI is already operating consistently with most provisions of the Act. Should there be any specific questions with respect to the provisions of this Act, I would be glad to discuss them with you at your convenience.

The legislation establishes as Minnesota Statute ch. 356A standards governing fiduciaries including the members of the governing body of public pension funds, their chief administrative officers, the State Board of Investment and the Investment Advisory Council to the State Board of Investment (the "IAC"). The following is a section by section summary of the Act.

Summary of the Act

Section 1 of the Act contains definitions.

Section 2 of the Act clearly identifies members of the State Board of Investment, members of the Investment Advisory Council and the Executive Director of the SBI as fiduciaries covered by the Act. It is important to note that this bill as finally enacted, does not include in the definition of a fiduciary investment advisers and other consultants to the SBI.

Section 3 provides that no individual convicted of a felony may serve on the Investment Advisory Council or as the Executive Director to the SBI for a period of five years following the conviction or on conditional release from incarceration if the individual was incarcerated. The Act further provides that in determining compliance with this section, the SBI may rely on disclosure forms. The SBI will need to prepare and obtain disclosure forms from all SBI members, the executive director and members of the IAC.

Section 4 of the Act establishes the standard of fiduciary conduct. The standard is very similar to that under which the State Board of Investment has operated. The Act provides that:

> A fiduciary . . . shall act in good faith and shall exercise that degree of judgment and care, under the circumstances then prevailing, that persons of prudence, discretion, and intelligence would exercise in the management of their own affairs, not for speculation, considering the probable safety of the plan capital as well as the probable investment return to be derived from the assets.

Section 5 provides that the activities of fiduciaries of covered pension plans are to be carried out to provide authorized benefits, and to pay reasonable expenses in accordance with law and the plan documents.

Section 6 sets forth a number of duties and requires that assets be held by the plan, its nominee or a depository agent; requires diversification of assets; requires the absence of personal profit by fiduciaries from investment or management of plan assets; requires members of the SBI and the Investment Advisory Council and the Executive Director to file statements of economic interest (this represents no change from current law); requires the disclosure of SBI investment business and investment commissions; limits authorized investments for funds other than the SBI; establishes minimum liquidity requirements; and prohibits fiduciaries of the plans from engaging self-dealing.

Section 7 relates to pension plans and requires preparation of a benefit provision summary, an annual financial report and a summary of review procedure rights for recipients in the event of disputes.

Section 8 provides that the open meeting law is applicable and prohibits fiduciaries or direct relatives of fiduciaries from receiving any direct or indirect compensation, fee, or other item of more than nominal value from a third party in consideration for a pension plan disbursement.

Section 9 provides that remedies available for breaches of fiduciary duties are those specified by statute or available at common law.

Section 10 establishes co-fiduciary liability absent a specific delegation of responsibility.

Section 11 provides that a member of the State Board of Investment, the Investment Advisory Council or the Executive Director of the State Board of Investment may be indemnified. It provides indemnification is at the discretion of the State Board of Investment and must apply to indemnify all other eligible fiduciaries of a similar rank. There is no requirement that the indemnification be made prospectively. Members of the Investment Advisory Council are already indemnified by statute pursuant to Minn. Stat. § 11A.08, subd. 5. Members of the State Board of Investment and the Executive Director are already covered pursuant to the terms of the Tort Claims Act, Minn. Stat. § 3.736, subd. 9.

Section 12 provides the district court has jurisdiction, requires personal service, and establishes the statute of limitations as three years after the date of the alleged breach or one year after the date of discovery of the alleged breach.

Section 13 establishes a requirement for continuing fiduciary education for a fiduciary of a covered pension plan. It provides that a fiduciary of a covered pension plan must make efforts to obtain knowledge and skills sufficient to enable the fiduciary to function adequately and requires governing boards of covered pension plans to develop and revise a program for the continuing education of board members and of any chief administrative officer who is not reasonably considered to be experts with respect to fiduciary activities. The section specifically applies only to "a fiduciary of a covered pension plan." It is somewhat unclear whether this provision applies to the State Board of Investment. "Fiduciary" is defined in section 1, subd. 12 and section 2 of the Act to include any member of the State Board of Investment and any member of the Investment Advisory Council and the chief administrative officer of the State Board of Investment. "Covered pension plan" means pension plans or funds listed in section 356.20, subd. 2 or 356.30, subd. 3, of the Minnesota Statutes. The State Board of Investment invests assets of those funds. "Governing board of a pension plan" is defined in section 1, subd. 15 of the Act to mean the body of a pension plan that is assigned or undertakes chief policy-making powers and management duties of the plan. Arguably, the State Board of Investment is not a governing board of a governing pension plan, since it is not the body of a pension plan that undertakes the chief policy-making powers and management duties of the plan but only governs the investment of the covered plan assets. However, the State Board of Investment is a fiduciary of the covered plan in that it does invest plan assets. Accordingly, despite the ambiguity of the language, it is my opinion that the language is intended to cover the State Board of Investment and the Investment Advisory Council and the Executive Director of the State Board of Investment. This may not have much actual impact upon activities of the State Board of Investment, as the State Board of Investment already provides certain educational programs such as its annual seminar, indepth programs such as the one held at Spring Hill and periodically reviews important issues through the development of position papers. In addition, the State Board of Investment travel policy provides money available to members of the State Board of Investment for travel. With respect to members of the Investment Advisory Council, most of the members are professional in the investment and pension community.

Article 8 of Senate File 783 contains conforming amendments to the new Act to the existing pension fund statutes including those of the SBI.

CBE:bbl

AGENDA
INVESTMENT ADVISORY COUNCIL
MEETING

Tuesday, October 3, 1989
2:00 P.M.
MEA Building - Conference Room "A"
Saint Paul

		TAB
1.	Approval of Minutes of June 6, 1989 Meeting	
2.	Executive Director's Report (H. Bicker)	
	A. Quarterly Investment Review (April 1- June 30, 1989)	A
	B. Portfolio Statistics (June 30, 1989)	B
	C. Administrative Report 1. Reports on Budget and Travel 2. Report on Basic Retirement Funds Rebalancing	C
3.	Report from the SBI Administrative Committee (M. McDonald) A. Update on Board Seminar B. Dates for National Association of State Investment Officers Meeting C. Approval of Executive Director's FY 1990 Work Plan D. Approval of Report from the Deferred Compensation Review Committee	D
4.	Reports from Investment Advisory Council Committees	
	A. Equity Manager Committee (D. Veverka) 1. Review of Active Manager Performance 2. Special Review of Waddell & Reed Performance	E
	B. Fixed Income Manager Committee (G. Norstrem) 1. Date for Bond Manager Round Table 2. Review of Semi-Passive Manager Performance 3. Review of Active Manager Performance	F
	C. Alternative Investment Committee (K. Gudorf) 1. Report on Fund Manager Annual Reviews 2. Approval of Alternative Asset Indices for Composite Index 3. Approval of Real Estate Study Implementation Plan 4. Authorization to Sell Resource Investment 5. Approval of Venture Capital Commitment	G

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

EXECUTIVE DIRECTOR
HOWARD J BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
Room 105, MEA Building
55 Sherburne Avenue
St Paul, MN 55155
Tel (612) 296-3328
FAX (612) 296-9572

MINUTES

INVESTMENT ADVISORY COUNCIL

June 6, 1989

The Investment Advisory Council met on Tuesday, June 6, 1989 at 2:00 P.M. in the MEA Building, Saint Paul, MN.

MEMBERS PRESENT: Harry Adams, John Bohan, Elton Erdahl, Ken Gudorf, Jim Hacking, Vern Jackels, David Jeffery, Malcolm McDonald, Joe Rukavina, Ray Vecellio, Debbie Veverka, and Jan Yeomans.

MEMBERS ABSENT: Jim Eckmann, Paul Groschen, Judy Mares, Gary Norstrem, and Tom Triplett.

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

OTHERS ATTENDING: Gary Austin; Ed Burek; Joan Anderson Growe; Arvin Herman; Ralph Jewell, REAM; Mike Ousdigian; Tom Richards, Richards & Tierney; Peter Sausen; Elaine Voss; and Bob Whitaker.

The minutes of the special Investment Advisory Council meeting of January 30, 1989 were approved. The minutes of the February 28, 1989 meeting were approved.

EXECUTIVE DIRECTOR'S INVESTMENT REPORT

Howard Bicker, Executive Director, directed the IAC members to the one page Quarterly Report on Objectives and stated that it was the first time the report had been compiled since the Task Force Report on Objectives had been adopted. He reported the results for the period ending March 31, 1989.

He stated the Basic Retirement Funds over the past 10 years posted a rate of return 6.5 percentage points over inflation, exceeding the real return objective. He stated that the five year return with alternative assets of 14.2 percent fell 1.1 percentage points below the composite index return target, and that the five year return without alternative assets of 14.9 percent was 0.1 percentage points over the median fund return target. He stated that the cash portion equal to 4.3 percent of the total fund exceeded the objective of holding minimal cash because excess cash was needed to fund the four new equity managers effective April 3, 1989.

Mr. Bicker stated that the Post Retirement Fund generated realized earnings in fiscal year 1988 equal to 3.9 percentage points above the target of eight percent per year. He stated that the fund held 1.8 percent in cash. Mr. Bicker then stated that the three statewide retirement plans were 72 percent funded based on fiscal year 1988 actuarial reports.

Mr. Bicker then gave his quarterly investment report for the period ending March 31, 1989. He stated that the market value of the Basic Funds increased 5.7 percent during the quarter with the increase coming primarily from investment returns. He stated that the Funds had net contributions of $32 million. He stated that the cash component of the Funds was higher than normal at 4.3 percent due to transactions necessary to fund new managers effective April 3, 1989. He stated that the Funds' total rate of return with and without alternative assets outperformed the median fund in the Trust Universe Comparison Service (TUCS) for the quarter and year ending March 31, 1989 and for the three year period ending March 31, 1989. He stated that the stock segment of the Funds outperformed the Wilshire 5000 target for the quarter, but underperformed the target for the latest year. He reported that the bond segment outperformed the Salomon Broad Index for the quarter and for the latest year.

Mr. Bicker then reported on the Post Retirement Fund. He stated that the market value of the Fund increased by 1.1% during the first quarter 1989. He stated that the Fund had net contributions of negative $50 million. He stated that cash holdings in the Fund decreased and bond holdings increased due to further rebalancing in the dedicated bond portfolio. He then stated that the benefit increases generated by the Fund averaged 8.3% over the past three years and 7.9% over the past five years. He stated that the stock segment of the Fund exceeded its benchmark for the quarter and year by substantial margins.

Mr. Bicker stated that all funds under management by the State Board totalled $13.4 billion as of March 31, 1989.

EXECUTIVE DIRECTOR'S ADMINISTRATIVE REPORT

Mr. Bicker then gave his Administrative Report. He directed the Committee to the budget report for expenditures through April 30, 1989, the travel report for February 16 through May 15, 1989, and a report on action taken by the 1989 Legislature. He stated that the SBI's budget was reduced 2% from the original budget request. He stated that he believed the reduction could be accommodated through reductions in travel and equipment expenditures and other reallocation of spending items. He stated that he had reviewed a reallocation proposal with the SBI Administrative Committee and would report actual expenditures to the Board through regular quarterly expenditure reports.

Mr. Bicker then stated that the Legislature enacted significant changes in pension policy including a Rule of 90 for TRA and MSRS; a level benefit formula for PERA, MSRS, and TRA; elimination of the Variable Annuity Fund; and passage of a fiduciary responsibility measure. He stated that Christie Eller, Assistant Attorney General, would provide more specific advice regarding the SBI's responsibilities under the new law.

Finally, Mr. Bicker referenced the report of the Task Force on Fund Objectives and stated that the Board did not adopt recommendations of the report to change the structure and operation of the Post Retirement Fund. He stated that the Board directed him to discuss the report with the retirement systems and other affected parties and report back to the Board. He stated that he has met with the three retirement system boards and several retiree groups concerning possible modifications to the current benefit increase formula. He stated that the SBI is not proposing a specific change but that staff is willing to work on the issue with the retirement systems. He said discussions will continue in the coming months.

In response to a question from Mr. Rukavina, Mr. Bicker stated that all assets of the Variable Annuity Fund will be transferred to the Basic Funds and the Post Fund effective June 30, 1989. In response to a question from Mr. Bohan, Mr. Bicker stated that the discussions about the Post Fund have been productive because the retirees now have a better understanding that the high increases from the current formula are not attainable within the current interest rate environment. He stated that the retirees also now have a better understanding that if there is no change in the current formula, future benefit increases will not be as high as those of the recent past.

In response to questions from Mr. Bohan and Mr. Gudorf, Mr. Bicker stated that the effect of new legislation on the actuarial status of the retirement funds will be available when the new actuarial reports for July 1, 1989 are released in late 1989. In response to a question from Mr. Bohan, Mr. Hacking stated that he did not know the source for the $1.5 billion increase in unfunded accrued liability resulting from the recently enacted pension legislation as reported in local news stories. Mr. Hacking stated that a rough estimate of the actuarial status of the PERA fund showed that the funded status would drop from about 71 percent to about 69.5 percent as a result of the legislation. In response to comments from several members, Mr. Bicker agreed that he would work with the pension funds to assemble a rough estimate of the actuarial cost of the recently passed pension legislation and a rough estimate of the actuarial status of the funds.

Christie Eller reported that the fiduciary responsibility measure will not greatly impact the SBI because the SBI has been performing most procedures that are required under the new legislation. She discussed each of the points contained in her memorandum to the Board dated June 5, 1989.

SBI ADMINISTRATIVE COMMITTEE REPORT

Mr. McDonald gave the Administrative Committee report. He introduced Peter Sausen, Chair of the Consultant Review Committee. Mr. Sausen reported that the Committee met three times. He stated that at the first meeting the Committee reviewed the Request for Proposal (RFP) and the list of firms to which the RFP would be sent. He stated that at the second meeting the Committee reviewed responses and chose four finalists, and that at the third meeting the Committee interviewed the finalists. Mr. Sausen then stated that the Committee agreed that the consultant's responsibilities were twofold: one part is the quantitative analysis and the other is the actual consulting with Board members, deputies, and the IAC.

He stated that the Committee agreed that Richards & Tierney was the best qualified to perform the quantitative analysis duties but that the Committee was not fully in agreement that Richards & Tierney was the best for the general consulting services. He stated that after discussion the Committee agreed to recommend Richards & Tierney. Further, he said that if the Board chose to add a second consultant the Committee would recommend Rogers, Casey & Associates.

Mr. McDonald moved that the IAC recommend to the Board that the Executive Director, with assistance from SBI's legal counsel, negotiate and execute a contract to retain Richards & Tierney for a three year period at an amount not to exceed $175,000 a year. In response to a question from Mr. Gudorf, Mr. Sausen stated that the cost of retaining two consultants would exceed $175,000 a year. Mr. Gudorf stated that he believed that Richards & Tierney's quantitative analysis work was very good, but that a general consultant was needed. In response to a question from Mr. Vecellio, Mr. Bicker stated that the $175,000 a year represents an increase from the current contract amount of $120,000 a year. Debbie Veverka seconded. The motion passed.

Mr. McDonald then stated he had one information item to report. He stated that the Administrative Committee directed Mr. Bicker to contact each Board member individually to discuss a proposal to hold a seminar in September and to determine a format for the seminar that would be most beneficial to the Board. Ms. Growe stated that she would want more discussion among Board members and less of a lecture format. She stated that if there were not a commitment from at least four Board members to spend a half day in September, then there should not be a seminar. Mr. Bicker agreed that he would contact each Board member to discuss holding the seminar and explore setting a date.

Mr. McDonald then reported that the Administrative Committee reviewed and concurred with the staff Fiscal Year 1990 Management and Budget Plan and with adoption of the proposal to provide $2000 for each Board member to be used for travel for SBI related matters. He then stated that the Administrative Committee drafted a revised position description for the Executive Director and recommends that the Board approve the revision.

Mr. McDonald stated that the Administrative Committee discussed an item laid over by the Board at its March 1, 1989 meeting. He stated that the Committee discussed, but took no further action on, a proposal that the IAC had earlier recommended to the Board concerning the purchase of U.S. Government Guaranteed Agricultural Export Loan participations. In response to a question from Ms. Growe, Ms. Eller stated that the Attorney General will abstain from voting on the issue. Mr. Bohan stated that the purchase carried a competitive rate.

Mr. McDonald moved approval of the recommendations to accept the Fiscal Year 1990 Management and Budget plan, to recommend that the Board approve the revised position description for the Executive Director, to recommend the Board approve for one year the Board's travel policy, and to reiterate the IAC recommendation to proceed with the export loan participation purchase. Mr. Gudorf seconded. The motion passed.

INVESTMENT ADVISORY COUNCIL REPORTS

EQUITY MANAGER COMMITTEE

Ms. Veverka stated that the Equity Manager Committee reviewed the active equity managers and reported that no action was necessary concerning manager status. She then stated that the Committee reviewed the funding program undertaken to fund the four new equity managers April 3, 1989. She stated that each of the four were initially funded with $100 million consisting of a combination of stock and cash from the index fund.

Ms. Veverka then reported that there was one action item to consider. She stated that the contracts with seven equity managers were due to expire June 30, 1989 and needed to be renewed. Mr. Rukavina moved that the contracts be renewed. Mr. Gudorf seconded. The motion passed.

FIXED INCOME MANAGER COMMITTEE

Mr. Rukavina provided the report on the Fixed Income Manager Committee. He stated that the Committee reviewed the performance of the active bond managers and the semi-passive bond managers. He stated that no action is required by the Board concerning manager status. He stated that the Committee reviewed further action on the rebalancing of the dedicated bond portfolio. He said that staff undertook an additional $135 million purchase program in March to fully fund the Post Fund projected liabilities. He stated that the Committee reviewed and concurred with the staff revisions to the investment manager guidelines as specified in the Board folder material.

Mr. Rukavina stated that there were two items requiring action. He stated that the contracts with all active bond managers were due to expire on June 30, 1989 and required renewal. Mr. Rukavina moved the Committee's recommendation that the contracts be renewed. Mr. Vecellio seconded. The motion passed. Mr. Rukavina then stated that the contracts with the two semi-passive bond managers also were due to expire on June 30, 1989. He stated that they required renewal with a proposed change in the fee structure. Mr. Bicker stated that the fee changes would lower the expected fee payments under most probable outcomes and lower the impact of the performance component of the fee structure. He stated that these changes are consistent with the goal of semi-passive management. Mr. Rukavina moved approval of the Committee's recommendation. Ray Vecellio seconded. The motion passed.

ALTERNATIVE INVESTMENT COMMITTEE

Mr. Gudorf stated he would discuss the action items first. He stated that the Alternative Investment Committee believes the SBI should continue the consulting relationship with Gene Graham of the Sterling Group under terms and conditions similar to the 1988 contract at a cost not to exceed $20,000 for the fiscal year 1990. He stated that through March 1989 billings under the current contract totalled only $3200. Mr. Gudorf then moved approval of the Committee's recommendation. Mr. McDonald seconded. The motion passed.

Mr. Gudorf then reported that the Committee had not agreed on appropriate indices for real estate, venture capital and resource funds. He cited the need for these indices as recommended by the Task Force on Fund Objectives presented to the Board in February 1989. He stated that the Committee was close to agreement on an index for real estate, but not as close for venture capital or resource funds. He stated that the presence of the large investment in KKR made the suggested venture capital index difficult. He stated that the suggested index for resource funds must be re-evaluated. He then stated that the Committee expects to make a final recommendation to the IAC and Board at the September 1989 meetings.

Mr. Gudorf then reported on the status of the real estate study conducted by Laventhol and Horwath. He said the consultant did a good job and he provided a summary of key conclusions from the study. He stated that the general conclusion was that the SBI's overall investment strategy in real estate was sound. He stated that the consultant recommended that the SBI establish an appropriate method for withdrawal from the Prudential fund. He reported that the consultant recommended that further real estate investments be placed in specialized funds. He stated that the consultant also recommended that statutory changes be made to require just two additional parties in an investment rather than the four required currently and to allow the SBI to participate in 25 percent to 35 percent of an investment rather than the current 20 percent. He said staff will work with the Committee to develop an appropriate implementation plan based on the recommendations.

Referring to the earlier discussion concerning the impact of new legislation, Mr. Gudorf stated that the SBI needs to review the asset allocation issue given retirement fund liability changes and to consider whether an investment policy change is necessary. Mr. Bohan asked when the IAC would have a rough estimate of retirement fund funding levels. Mr. Gudorf stated that the SBI needs more information concerning the liabilities of the funds so that it could consider investment policy needs. As previously indicated, Mr. Bicker agreed to attempt to collect the necessary information from the retirement systems.

Mr. Gudorf reported that there were annual review sessions with four of the SBI's real estate managers, Heitman Advisory Corporation, Rosenberg Real Estate Equity Funds (RREEF), Trust Company of the West (TCW), and Aldrich, Eastman, Waltch (AEW). He stated that the only concern was with the performance of RREEF. He stated that the Committee does not recommend additional investments with RREEF.

The meeting adjourned at 3:20 P.M.

Respectfully submitted,

Howard J. Bicker

Howard J. Bicker
Executive Director

Tab A

QUARTERLY REPORT ON OBJECTIVES

BASIC RETIREMENT FUNDS	Status June 30, 1989
Market Value	**$6.3 billion**
Total Return (Annualized)	
■ Real (10 years) 3 to 5 percentage points over inflation	12.7% (nominal) 7.1 percentage points over
■ Relative (5 years) with Alternative Assets Above composite index return	16.1% (nominal) 0.2 percentage points below
■ Relative (5 years) without Alternative Assets Above median fund return	17.1% (nominal) 0.5 percentage points above
Liquidity	
■ Minimal cash	1.2% of total fund

POST RETIREMENT FUND	Status June 30, 1989
Market Value	**$5.0 billion**
Realized Earnings	$384 million in FY 1989
■ Above 8% per year	9% in FY 1989
Liquidity	
■ Minimal cash	2.6% of total fund

FUNDING (Basic + Post Funds)*	Status June 30, 1988
Achieve full funding by 2009	
■ Actuarial accrued liability	$11.6 billion
■ Actuarial value of assets	$8.3 billion
■ Percent funded	72%

* TRA, MSRS, PERA General Plans only. Based on FY88 valuation by State's actuary. Does not include impact of legislation passed during the 1989 Legislative Session.

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

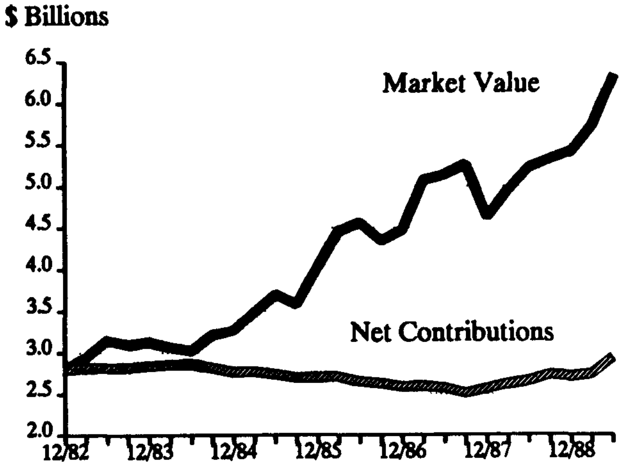
Additional detail on these funds as well as information on other funds managed by the Board can be found in the body of the Quarterly Investment Report.

EXECUTIVE SUMMARY

Basic Retirement Funds

Asset Growth

The market value of the Basic Funds increased 10.5% during second quarter of 1989. The increase was due to investment return and the transfer of the Variable Annuity Fund to the Basics. Stock and bond appreciation provided the majority of the investment return.



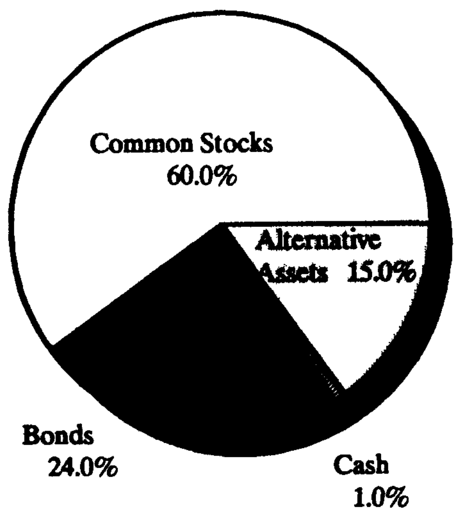
Asset Growth During Second Quarter 1989 (Millions)

Beginning Value	$5,727
Net Contributions	195
Investment Return	403
Ending Value	$6,325

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.

During the quarter, common stocks increased due to the strong performance of the market and the transfer of stock holdings from the Variable Annuity Fund to the Basic Funds.



Policy Asset Mix

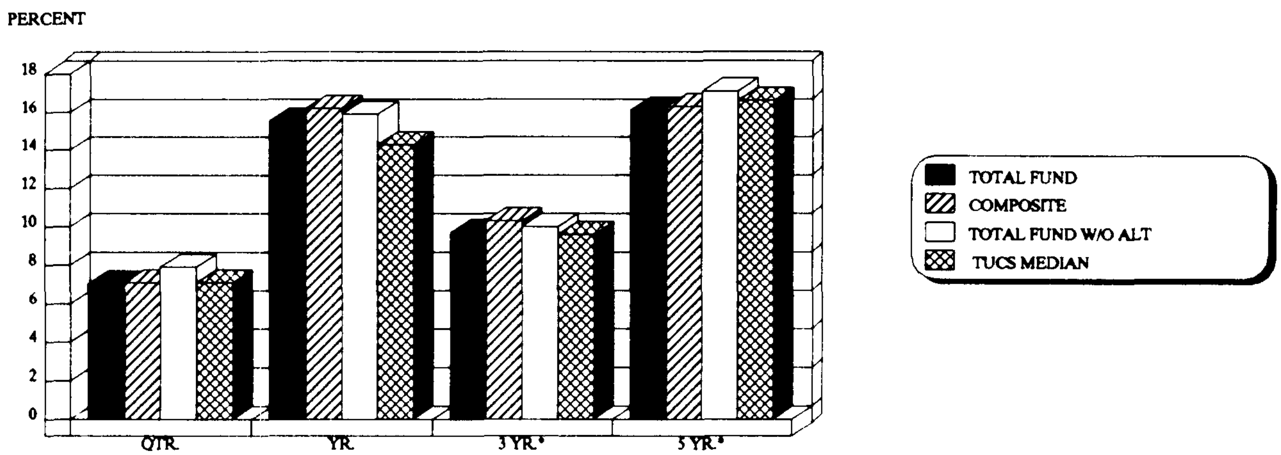
	Policy Asset Mix	Actual Mix 6/30/89	Actual Market Value (Millions)
Stocks	60.0%	65.7%	$4,154
Bonds	24.0	20.8	1,318
Alternative Assets	15.0	12.3	779
Unallocated Cash	1.0	1.2	74
	100.0%	100.0%	$6,325

Basic Funds (Con't.)

Total Fund Performance

Excluding alternative assets, the Basic Funds' exceeded the return on the median fund for the quarter and latest year. The total fund trailed the return of the composite index during both periods.

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 6/30/89

			*(Annualized)	
	Qtr.	**Yr.**	**3 Yr.**	**5 Yr.**
Total Fund	**7.0%**	**15.5%**	**9.7%**	**16.1%**
Composite Index **	7.1	16.2	10.3	16.3
Total Fund Without Alternative Assets	**7.9**	**15.9**	**10.0**	**17.1**
TUCS Median Balanced Fund***	7.1	14.3	9.6	16.6

** Composite Index is weighted in a manner that reflects the policy asset mix of the Basic Funds.
*** Trust Universe Comparison Service (TUCS) includes returns of over 800 public and private tax-exempt investors

Stock Segment Performance

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

			(Annualized)	
	Qtr.	**Yr.**	**3 Yr.**	**5 Yr.**
Stock Segment	8.3%	18.0%	10.1%	18.5%
Wilshire 5000	8.5	19.5	10.5	19.1

Bond Segment Performance

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

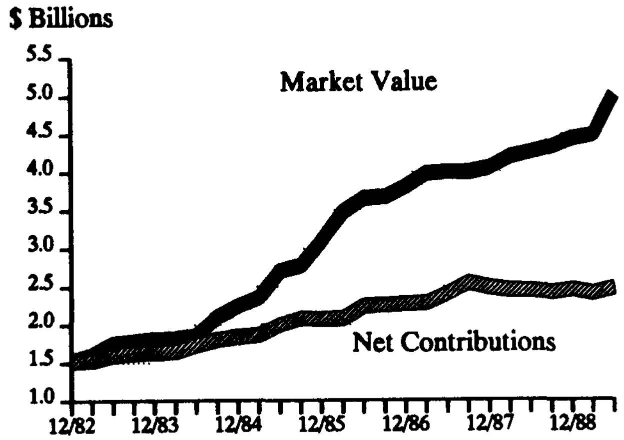
			(Annualized)	
	Qtr.	**Yr.**	**3 Yr.**	**5 Yr.**
Bond Segment	7.2%	12.1%	9.3%	14.2%
Salomon Broad Index	7.9	12.2	8.6	14.8

EXECUTIVE SUMMARY

Post Retirement Fund

Asset Growth

The market value of the Post Fund increased by 11.8% during second quarter 1989.

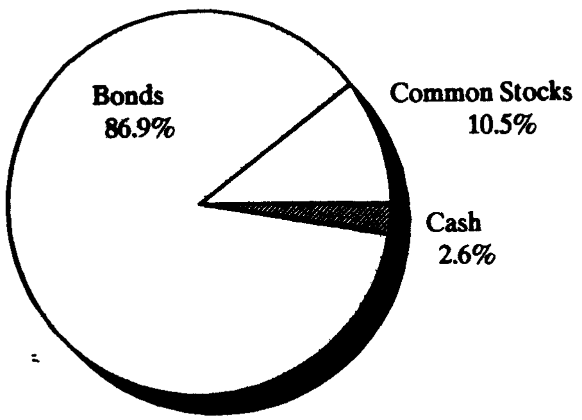


	Asset Growth During Second Quarter 1989 (Millions)
Beginning Value	$4,484
Net Contributions	66
Investment Return	464
Ending Value	$5,014

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.

During the quarter there were no significant changes to the asset mix.



Actual Asset Mix
6/30/89

	Actual Market Value (Millions)	Asset Mix 6/30/89
Common Stocks	$524	10.5%
Bonds	4,358	86.9
Unallocated Cash	132	2.6
	$5,014	100.0%

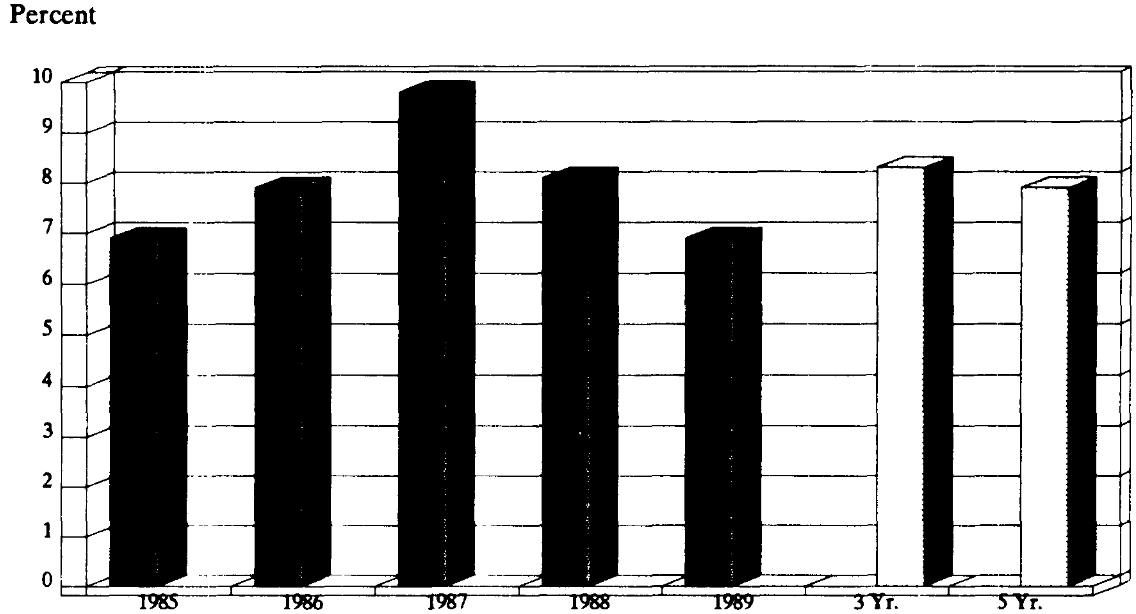
Post Fund (Con't.)

Total Fund Performance

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

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

Benefit Increases



Calendar Year

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

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

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

Stock Segment Performance

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

Period Ending 6/30/89

	Qtr.	Yr.	(Annualized) 3 Yr.	5 Yr.
Stock Segment	8.7%	22.9%	10.7%	16.8%
Post Fund Benchmark	9.0	20.3	N.A.	N.A.

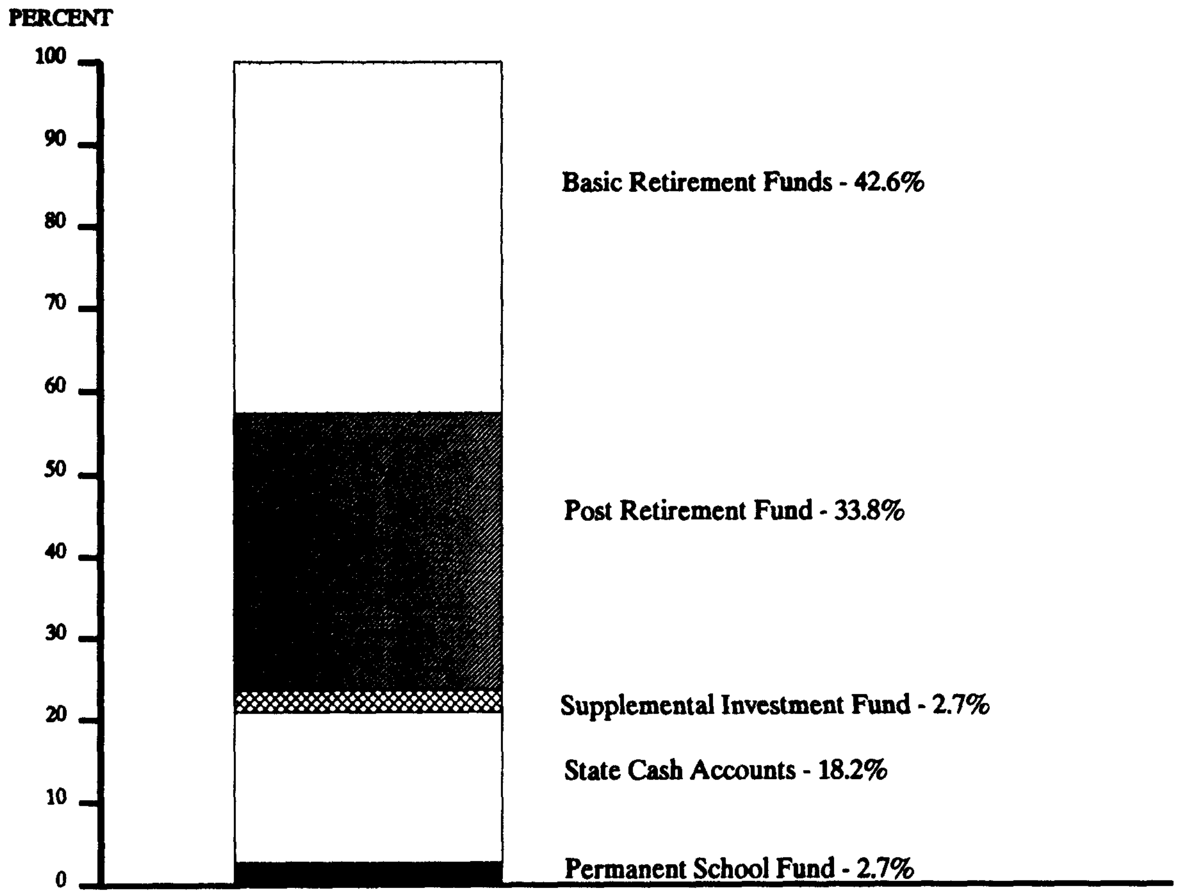
Bond Segment Performance

At the close of the quarter, the dedicated bond portfolio had a current yield of 7.69% and average duration of 8.00 years. The market value of the dedicated bond portfolio was $4.3 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 10.3% return for the quarter and a 17.1% return for the year. This is consistent with the design of the dedicated bond portfolio.

EXECUTIVE SUMMARY

Funds Under Management



	6/30/89 Market Value (Billions)
Basic Retirement Funds	$6.3
Post Retirement Fund	5.0
Supplemental Investment Fund	0.4
State Cash Accounts	2.7
Permanent School Fund	0.4
Total	$14.8

Note: The Variable Annuity Fund was eliminated on June 30, 1989. Assets of the Variable Fund were transfered to the Basic Funds and the Post Fund on that date in accordance with Laws 1989, Chapter 319, Article 9.

MINNESOTA STATE BOARD

OF INVESTMENT

QUARTERLY INVESTMENT REPORT

Second Quarter 1989

(April 1, 1989 - June 30, 1989)

Table of Contents

FINANCIAL MARKETS REVIEW

STOCK MARKET

Stock prices advanced during the second quarter due to numerous economic indicators showing that the economy was gradually slowing down. This gradual slowdown was perceived by the market as an indication that the economy might be going into a soft landing rather than a recession. Overall, the Wilshire 5000 stock index provided a total return of 8.5% during the quarter and had a 19.5% return for the latest year.

There was a wide disparity in the price performance of different sectors during the quarter. Utilities were the best performing sector with a return of 13.3%. The worst performing sector was the consumer durables sector with a return of 2.3%.

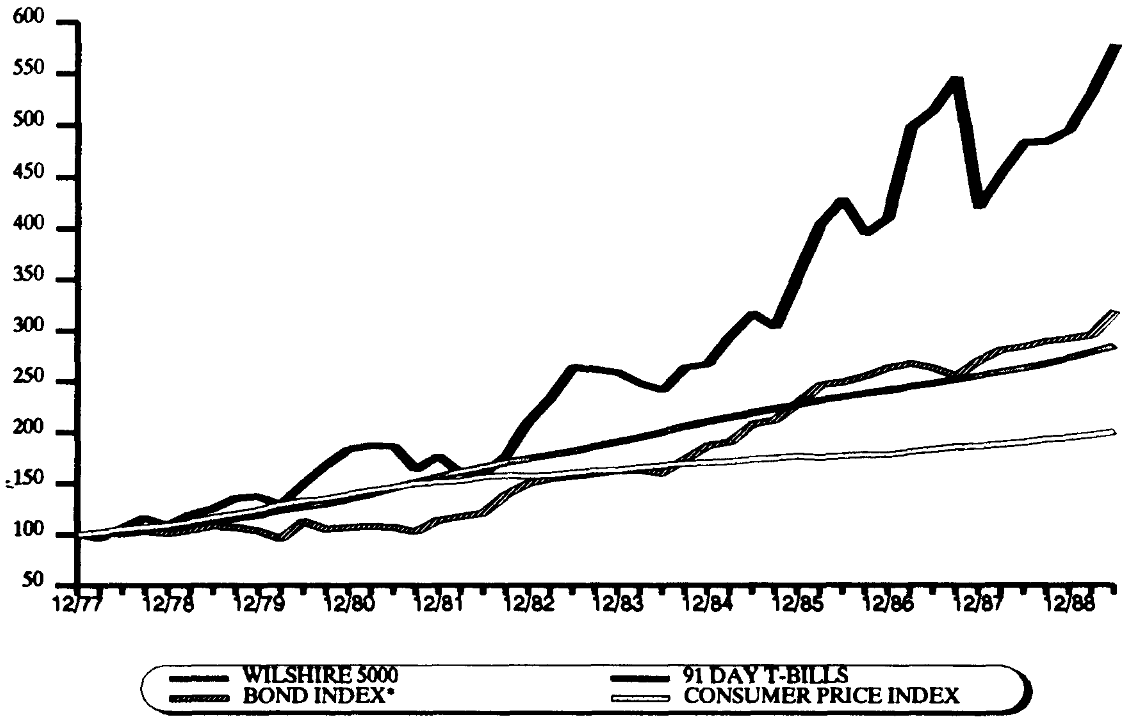
BOND MARKET

Bond prices increased significantly during the quarter due to a strong dollar, which caused an increase in foreign investor purchases, and indications of a weaker economy. A weaker economy was perceived by the market as an indication that the Federal Reserve will allow interest rates to drop to prevent a recession.

Overall, the Salomon Brothers Broad Investment Grade (BIG) Index gained 7.9% for the quarter and had a 12.2% return for the latest year. Treasury securities were the best performing sector with a gain of 8.1% and Agency issues provided the lowest return of 7.3%.

PERFORMANCE OF CAPITAL MARKETS

Cumulative Returns



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

FINANCIAL MARKETS REVIEW

REAL ESTATE

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

VENTURE CAPITAL

Thirty seven independent private venture capital firms raised $1.1 billion of net new capital in the first six months of 1989, down 21% from the $1.4 billion raised by 44 funds in the first half of 1988.

A combination of factors has contributed to the decline in funding levels. First, funds initiated within the last five years have provided somewhat disappointing returns to date. Second, strong performance from stocks and bonds has made venture capital returns less competitive. Finally, funding has been influenced by the conditions of the public market, which has not been receptive to new issues. (Source: Venture Economics)

RESOURCE FUNDS

West Texas Intermediate oil ended the quarter at $20 per barrel. Increased demand and continued effects from oil industry mishaps kept the price at this level in spite of increased OPEC production. Most analysts think prices will decline as OPEC production continues to increase and demand declines.

BASIC RETIREMENT FUNDS

Investment Objectives

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

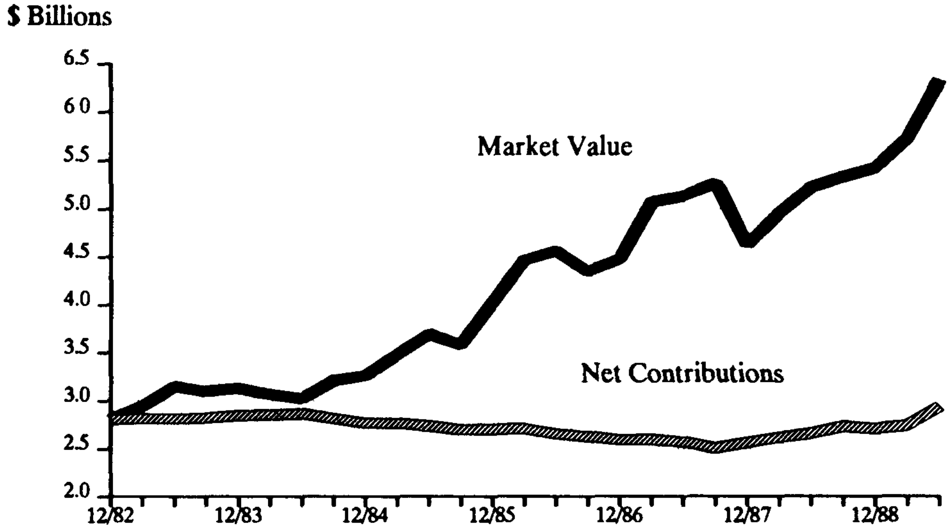
Based upon the Basic Funds' adequate funding levels and participant demographics, its investment time horizon is quite long. This extended time horizon permits the Board to take an aggressive, high expected return investment policy which incorporates a sizable equity component.

The Board has established three return objectives for the Basic Funds:

- provide real rates of return that are 3-5 percentage points greater than the rate of inflation over moving 10 year periods.
- outperform the median fund from a universe of public and private funds with a balanced asset mix over moving 5 year periods, excluding alternative assets.
- outperform a composite index weighted in a manner that reflects the long term asset allocation of the Basic Funds over moving 5 year periods.

Asset Growth

The market value of the Basic Retirement Funds' assets increased 10.5% during the second quarter of 1989. The increase was due to investment return and the transfer of assets from the Variable Annuity Fund to the Basic Funds on June 30, 1989. Stock and bond appreciation provided the majority of the investment return.



In Millions

	12/84	12/85	12/86	12/87	12/88	3/89	6/89
Beginning Value	$3,129	$3,265	$4,030	$4,474	$4,628	$5,420	$5,727
Net Contributions	-78	-62	-113	-26	146	32	195
Investment Return	214	827	557	180	646	275	403
Ending Value	$3,265	$4,030	$4,474	$4,628	$5,420	$5,727	$6,325

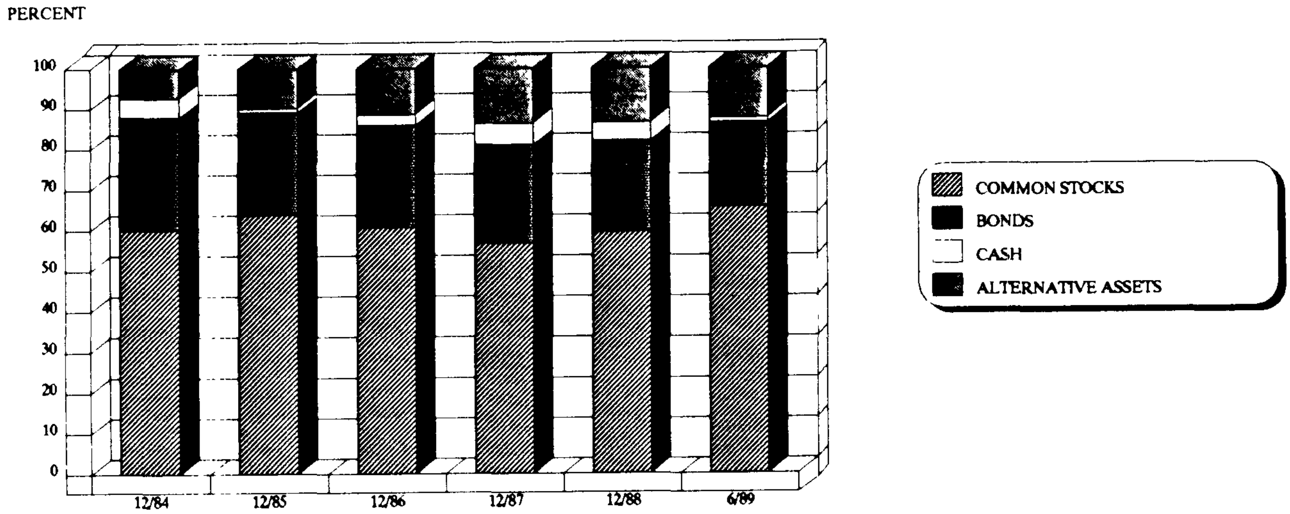
BASIC RETIREMENT FUNDS

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	24.0
Real Estate	10.0
Venture Capital	2.5
Resource Funds	2.5
Unallocated Cash	1.0

During the quarter, the common stock segment increased significantly. This was due to recent strong performance of the stock market and to the transfer of stock holdings from the Variable Annuity Fund to the Basic Funds on June 30, 1989. In addition, cash holdings were reduced when four new equity managers were funded at the start of the quarter.



	Last Five Years					Latest Qtrs.	
	12/84	**12/85**	**12/86**	**12/87**	**12/88**	**3/89**	**6/89**
Stocks	60.1%	63.8%	60.6%	56.7%	59.5%	61.0%	65.7%
Bonds	27.9	25.3	25.3	24.2	22.4	21 4	20.8
Real Estate	5.4	7.2	8.3	9.5	9.0	8.7	7.9
Venture Capital	0.9	1.3	1.8	2.8	3.1	3.0	2.9
Resource Funds	0.9	1.3	1.4	1.4	1.5	1.6	1.5
Unallocated Cash	4.8	1.1	2.6	5.4	4.5	4.3	1.2
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100 0%	100.0%

BASIC RETIREMENT FUNDS

Total Fund Performance vs. Standards

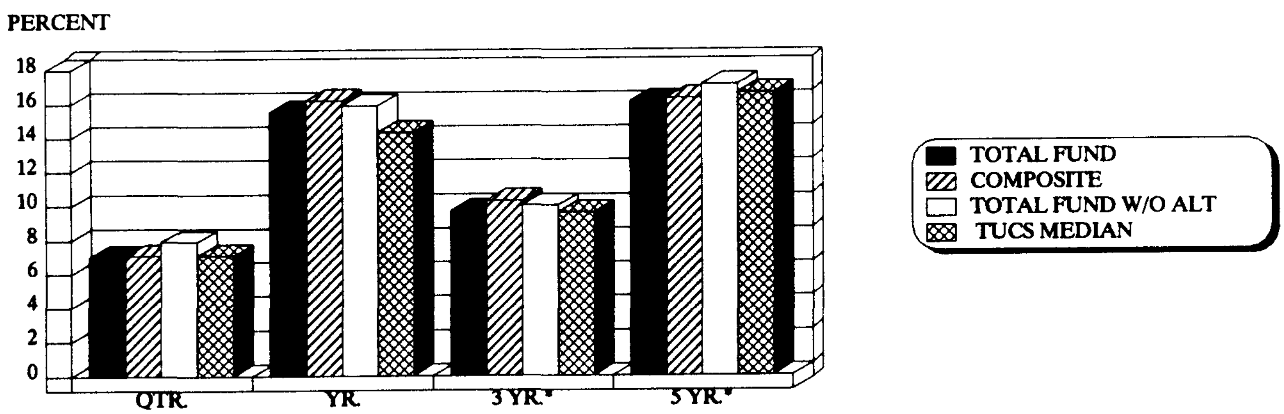
The Basic Funds' long-term rate of return performance is evaluated relative to two specific benchmarks:

- **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. The composite index is weighted: 60% Wilshire 5000 Stock Index, 22% Salomon Broad Bond Index, 10% Real Estate Funds, 2.5% Venture Capital Funds, 2.5% Resource Funds, and 3% 91 Day T-Bills.

- **Median Tax-Exempt Fund.** Excluding alternative assets, 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).

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 trailed its composite index for the latest quarter and year. Because of the Basic Funds sizable stock allocation and relatively good performance of the stock market, the Basic Funds' exceeded the median balanced fund during the second quarter and year. Excluding alternative assets, the Basic Funds ranked near the top quarter (27th percentile) of the TUCS universe for the latest quarter. It ranked in the top third (29th percentile) for the latest year and in the top half (39th percentile) for the last five years.



Period Ending 6/30/89

	Qtr.	Yr.	3 Yr.	5 Yr.
			*(Annualized)	
Total Fund	**7.0%**	**15.5%**	**9.7%**	**16.1%**
Composite Index	7.1	16.2	10.3	16.3
Total Fund WithoutAlternative Assets	**7.9**	**15.9**	**10.0**	**17.1**
TUCS Median Balanced Fund	7.1	14.3	9.6	16.6

BASIC RETIREMENT FUNDS

Segment Performance vs. Standards

Stock Segment

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

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Stock Segment	8.3%	18.0%	10.1%	18.5%
Wilshire 5000	8.5	19.5	10.5	19.1

Bond Segment

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

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Bond Segment	7.2%	12.1%	9.3%	14.2%
Salomon Bond Index	7.9	12.2	8.6	14.8

Real Estate Segment

The real estate segment of the Basic Funds trailed its target for the latest quarter but exceeded its target for the latest year.

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Real Estate Segment	1.5%	8.4%	7.4%	7.6%
Real Estate Index	2.3	7.6	7.9	8.7

The Wilshire Real Estate Index contains returns of 30 commingled funds. The index does not include returns from funds that are less than 3 years old or are not fully invested.

Venture Capital and Resource Funds

Comprehensive data on returns provided by the resource and venture capital markets are not available at this time. Actual returns from these assets are shown in the table.

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Venture Capital Segment	1.5%	22.4%	10.9%	6.5%
Resource Fund Segment	0.2	3.6	6.3	1.8

The SBI began its venture capital and resource programs in the mid-1980's. Current returns reflect the relative immaturity of the investments.

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 active and passive common stock managers exceeded the performance of their aggregate benchmark for the latest quarter but trailed their aggregate benchmark for the latest year.

The performance of the individual active managers for the quarter was varied. Five out of the eleven managers exceeded their benchmark. A comprehensive analysis of the individual managers' performance is included in this quarter's Equity Manager Committee Report.

	Percent of Segment 6/30/89	Market Value 6/30/89 (Thousands)	Quarter Ending 6/30/89		Year Ending 6/30/89		(Annualized) Since 1/1/84	
			Actual	Bmrk	Actual	Bmrk	Actual	Bmrk
Active Managers								
Alliance	8.3%	$346,710	11.7%	8.3%	19.2%	16.0%	19.0%	12.8%
BMI	1.9	81,006	3.5	6.7	8.7	16.2	10.0	12.6
Concord	2.5	101,959	7.1	9.0				
Forstmann	4.3	180,135	2.1	6.2	10.4	14.9	14.6	12.8
Franklin	2.5	104,736	10.1	9.0				
IDS	3.6	149,221	7.5	8.6	13.7	18.7	15.4	15.7
IAI	2.6	107,011	6.5	7.2	15.2	18.4	13.9	15.6
Lieber & Co.	2.6	106,613	6.1	6.4	14.8	13.1	13.5	12.0
Rosenberg	2.5	103,796	9.1	8.7				
Sasco	2.5	102,546	7.9	6.7				
Waddell & Reed	3.8	157,503	10.4	5.9	10.6	12.0	12.5	11.8
Aggregate Active	37.1%	$1,541,236	7.9%		13.9%		13.8%	
Passive Manager								
Wilshire Associates	62.9%	$2,612,978	8.4%	8.5%	19.4%	19.4%	15.7%	15.6%
Aggregate Passive	62.9%	$2,612,978	8.4%		19.4%		15.7%	
Total Stock Segment	**100.0%**	**$4,154,214**	**8.3%**	**8.1%**	**18.0%**	**18.4%**	**15.1%**	**15.4%**
Wilshire 5000 Index			8.5%		19.5%		15.7%	

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

Concord, Franklin, Rosenberg and Sasco were retained effective April 3, 1989.

BASIC RETIREMENT FUNDS

Bond Manager Performance vs. Benchmarks

Bond 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 bond 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 Fixed Income Manager Committee of the Investment Advisory Council.

As a group, the active and passive bond managers exceeded the performance of their aggregate benchmark for the quarter and the latest year.

The performance of the individual managers for the quarter was varied. Two exceeded their benchmarks considerably while the others underperformed relative to their benchmark. A comprehensive analysis of the individual managers' performance is included in this quarter's Fixed Income Manager Committee Report.

	Percent of Segment 6/30/89	Market Value 6/30/89 (Thousands)	Quarter Ending 6/30/89 Actual	Quarter Ending 6/30/89 Bmrk	Year Ending 6/30/89 Actual	Year Ending 6/30/89 Bmrk	(Annualized) Since 7/1/84 Actual	(Annualized) Since 7/1/84 Bmrk
Active Managers								
IAI	4.1%	$53,581	9.8%	8.4%	14.0%	12.6%	15.2%	14.5%
Lehman	8.8	116,718	7.0	7.2	12.7	11.4	13.6	13.7
Miller Anderson	12.9	169,516	4.4	7.9	9.6	12.2	14.3	14.8
Morgan Stanley	8.5	111,468	6.8	7.1	10.1	10.5	13.6	14.2
Western Asset	15.9	209,988	8.3	7.8	14.5	12.4	16.1	14.5
Aggregate Active	50.2%	$661,271	6.9%		12.1%		14.8%	
Semi-Passive Managers								
Fidelity Management	24.9%	$328,138	7.6%	8.0%	12.0%	12.2%		
Lincoln Capital	24.9	328,521	7.5	8.0	12.2	12.2		
Aggregate Passive	49.8%	$656,659	7.6%		12.1%			
Total Bond Segment	**100.0%**	**$1,317,930**	**7.2%**	**7.8%**	**12.1%**	**12.1%**	**14.0%**	**14.4%**
Salomon Broad Index			7.9%		12.2%		14.8 %	

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

The semi-passive managers were retained effective July 1, 1988.

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.

Unrealized capital gains (or losses) are excluded from the statutory definition of earnings. For this reason the Post Fund is not designed to maximize long-term total rates of return.

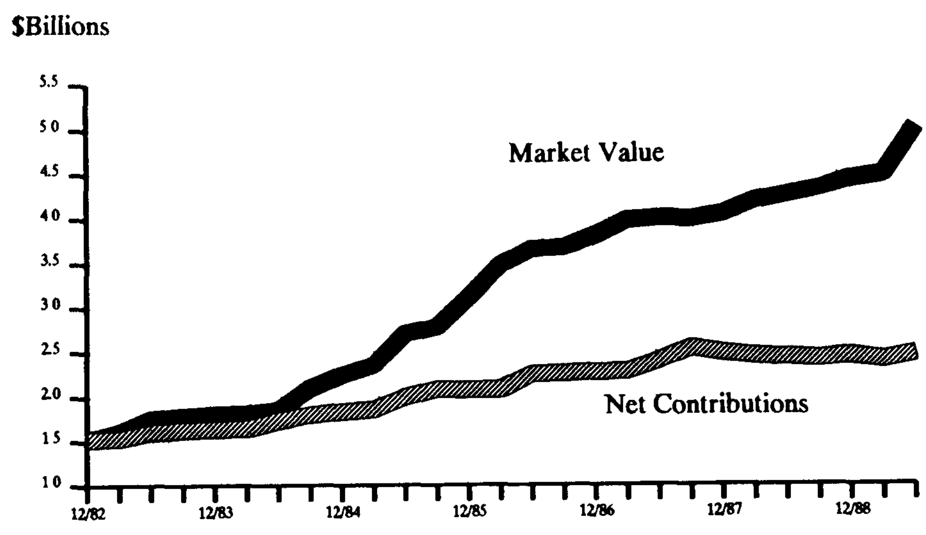
The Board has established two earnings objectives for the Post Fund:

- generate 5% realized earnings to maintain current benefits.
- generate at least 3% additional realized earnings to provide benefit increases.

The Post Fund is not oriented toward maximizing long-term total rate of return. 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 11.8% during the second quarter of 1989. Significant asset growth was achieved through investment returns with net contributions $66 million for the quarter.



In Millions

	12/84	12/85	12/86	12/87	12/88	3/89	6/89
Beginning Value	$1,803	$2,246	$3,107	$3,808	$4,047	$4,434	$4,484
Net Contributions	201	239	199	207	-27	-50	66
Investment Return	242	622	502	32	414	100	464
Ending Value	$2,246	$3,107	$3,808	$4,047	$4,434	$4,484	$5,014

POST RETIREMENT FUND

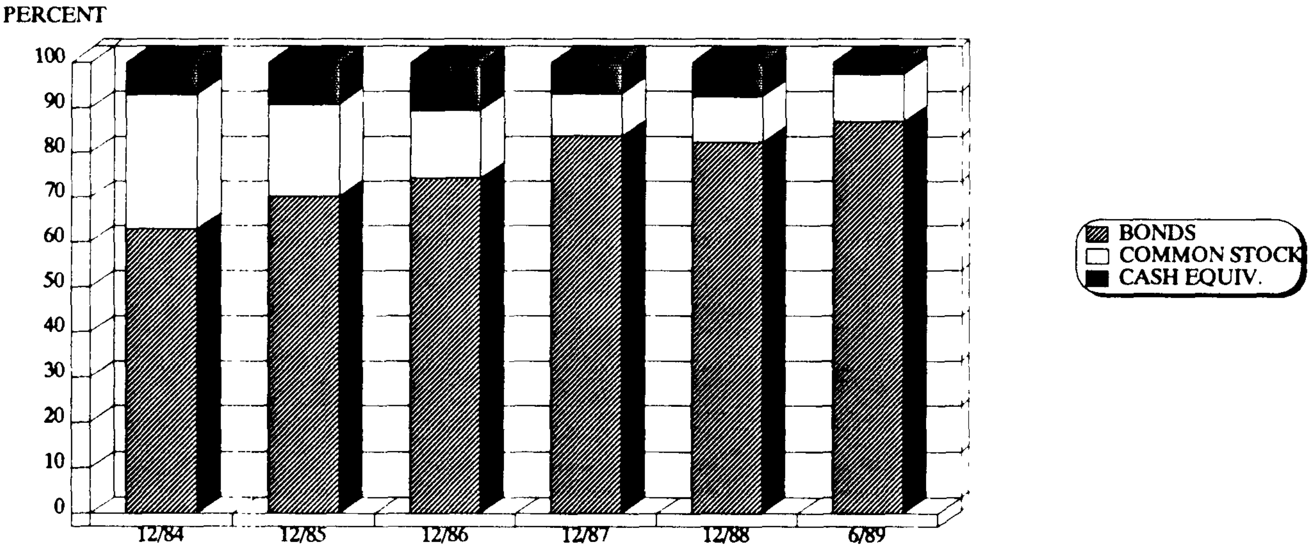
Asset Mix

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.

During the quarter there were no significant changes to the asset mix.



	Last Five Years					Latest Qtr.	
	12/84	**12/85**	**12/86**	**12/87**	**12/88**	**3/89**	**6/89**
Bonds	62.9%	70.2%	74.2%	83.7%	82.3%	87.5%	86.9%
Stocks	30.0	20.5	15.1	9.3	10.1	10.7	10.5
Unallocated Cash	7.1	9.3	10.7	7.0	7.6	1.8	2.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

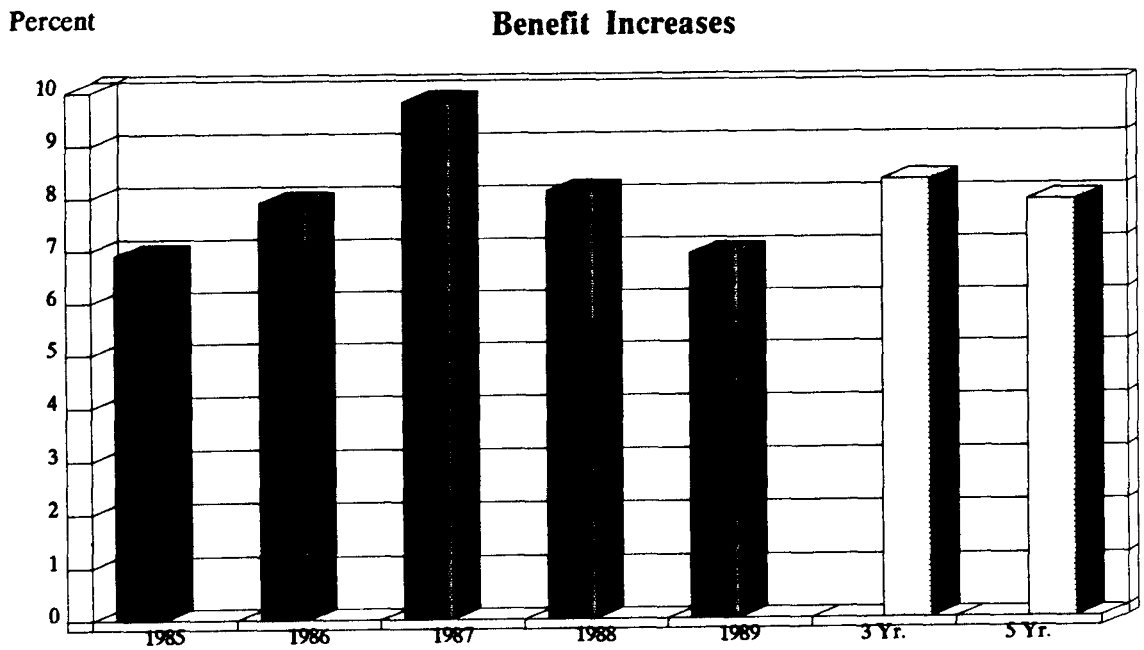
POST RETIREMENT FUND

Total Fund Performance

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

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

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



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

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

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

POST RETIREMENT FUND

Segment Performance

Stock Segment Performance

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

	Period Ending 6/30/89		(Annualized)	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Stock Segment	8.7%	22.9%	10.7%	16.8%
Post Fund Benchmark	9.0	20.3	N.A.	N.A.

Bond Segment Performance

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

The Post Fund's bond portfolio provided a 10.3% total rate of return for the quarter and a 17.1% 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
6/30/89

Value at Market	$ 4,273,789,014
Value at Cost	3,875,581,151
Average Coupon	5.67%
Current Yield	7.69
Yield to Maturity	8.54
Current Yield at Cost	8.48
Time to Maturity	15.95 Years
Average Duration	8.00 Years
Average Quality Rating	AAA
Number of Issues	413

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 June 30, 1989 the market value of the entire fund was $426 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

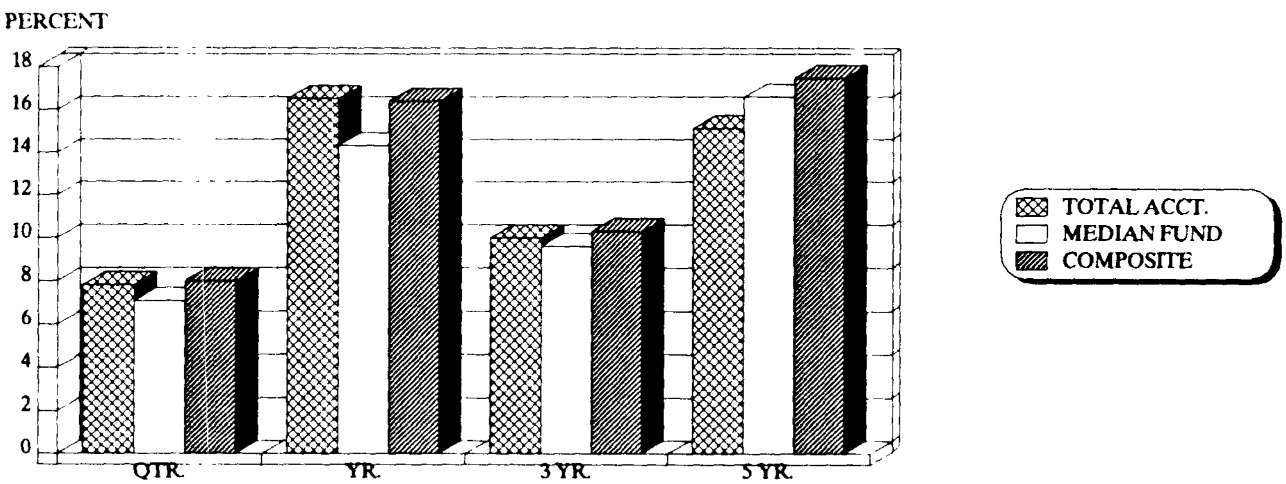
Investment Objective
The primary investment objective of the Income Share Account is similar to that of the Basic Retirement Funds. The Account seeks to maximize long-term real rates of return, while limiting short-run portfolio return volatility.

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%	64.1
Bonds	35.0	30.2
Unallocated Cash	5.0	5.7
	100.0%	100.0%

Investment Management
The Account combines internal and external management. Internal investment staff manage the entire fixed income segment. Currently, the entire stock segment is managed by Wilshire Associates as part of a passively managed index fund designed to track the Wilshire 5000. Prior to April, 1988, a significant portion of the stock segment was actively managed.

Market Value
On June 30, 1989 the market value of the Income Share Account was $222 million.



Period Ending 6/30/89

			Annualized	
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	7.8%	16.5%	10.0%	15.1%
Median Fund*	7.1	14.3	9.6	16.6
Composite**	8.0	16.4	10.3	17.5
Equity Segment	8.5	19.4	10.0	15.8
Wilshire 5000	8.5	19.5	10.5	19.1
Bond Segment	7.4	12.5	9.5	15.1
Salomon Bond Index	7.9	12.2	8.6	14.8

* TUCS Median Balanced Portfolio

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

SUPPLEMENTAL INVESTMENT FUND

Growth Share Account

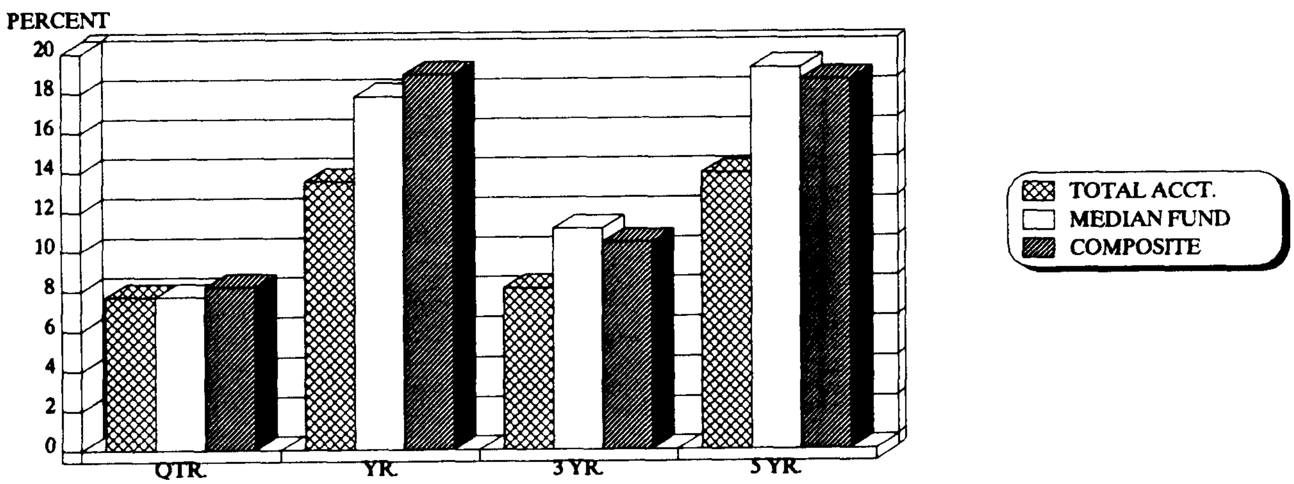
Investment Objective
The Growth Share Account's investment objective is to generate above-average returns from capital appreciation on common stocks.

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

	Target	Actual
Stocks	95.0%	99.9%
Unallocated Cash	5.0	0.1
	100.0%	100.0%

Investment Management
Currently, 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.) Prior to April, 1988, other active managers controlled a substantial portion of the account.

Market Value
On June 30, 1989 the market value of the Growth Share Account was $73 million.



Period Ending 6/30/89

			Annualized	
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	7.7%	13.5%	8.1%	13.9%
Median Fund*	7.7	17.8	11.1	19.2
Composite**	8.2	18.9	10.4	18.6
Equity Segment	7.8	13.6	8.3	15.1
Wilshire 5000	8.5	19.5	10.5	19.1

* TUCS Median Managed Equity Portfolio

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

SUPPLEMENTAL INVESTMENT FUND

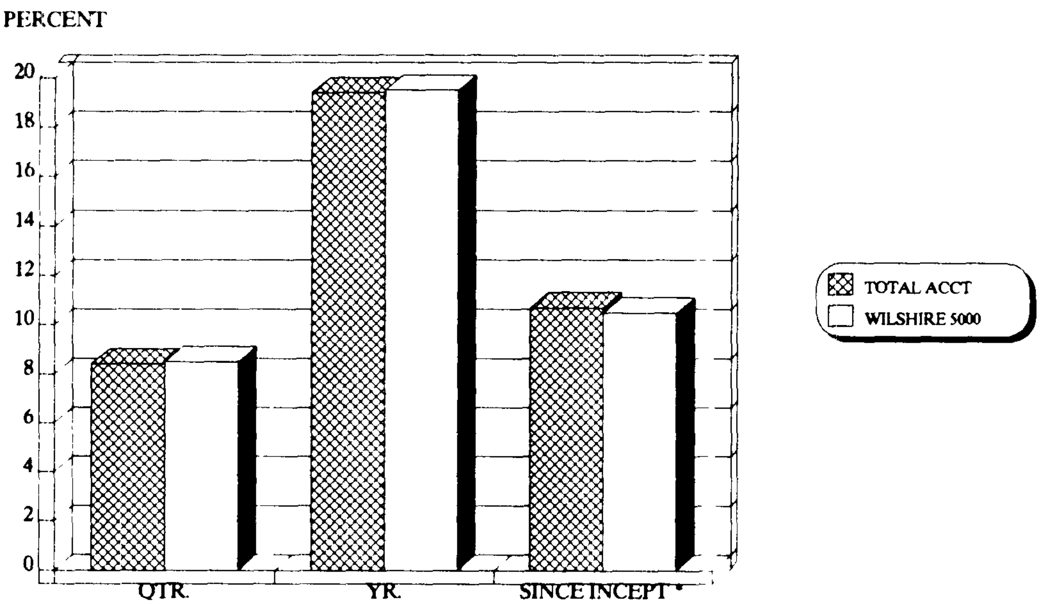
Common Stock Index Account

Investment Objective 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 June 30, 1989 the market value of the Common Stock Index Account was $5 million.



Period Ending 6/30/89

	Qtr.	Yr.	Since Inception Annualized*
Total Account	8.4%	19.4%	13.4%
Wilshire 5000	8.5	19.5	13.2

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

SUPPLEMENTAL INVESTMENT FUND

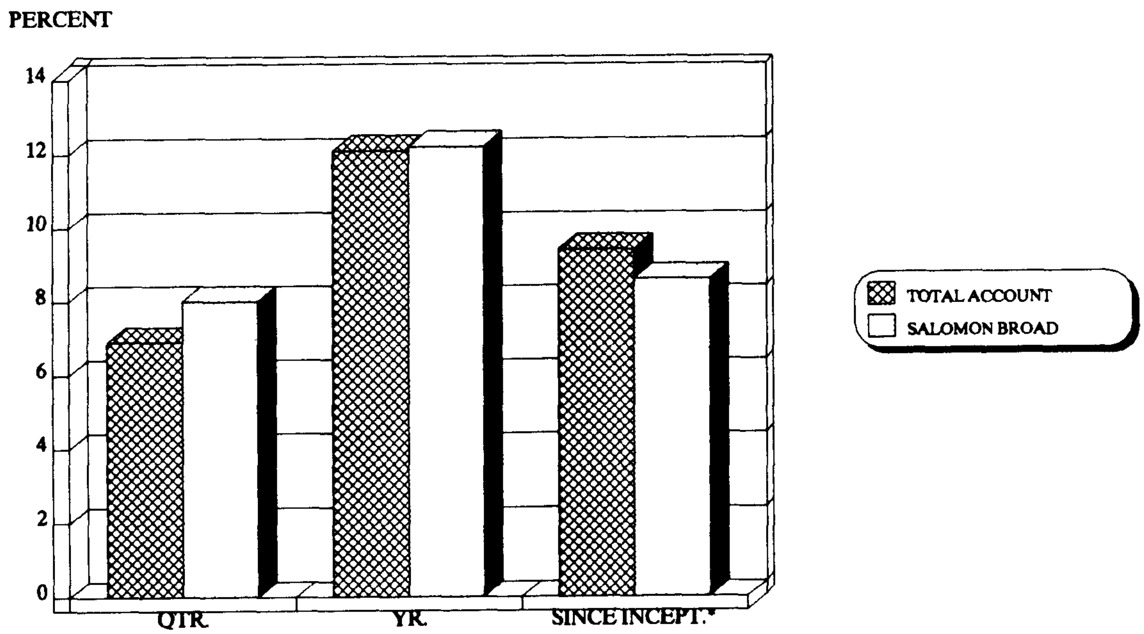
Bond Market Account

Investment Objective
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 June 30, 1989 the market value of the Bond Market Account was $3 million.



Period Ending 6/30/89

	Qtr.	Yr.	Since Inception Annualized*
Total Account	6.9%	12.1%	9.2%
Salomon Broad	7.9	12.2	8.5

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

SUPPLEMENTAL INVESTMENT FUND

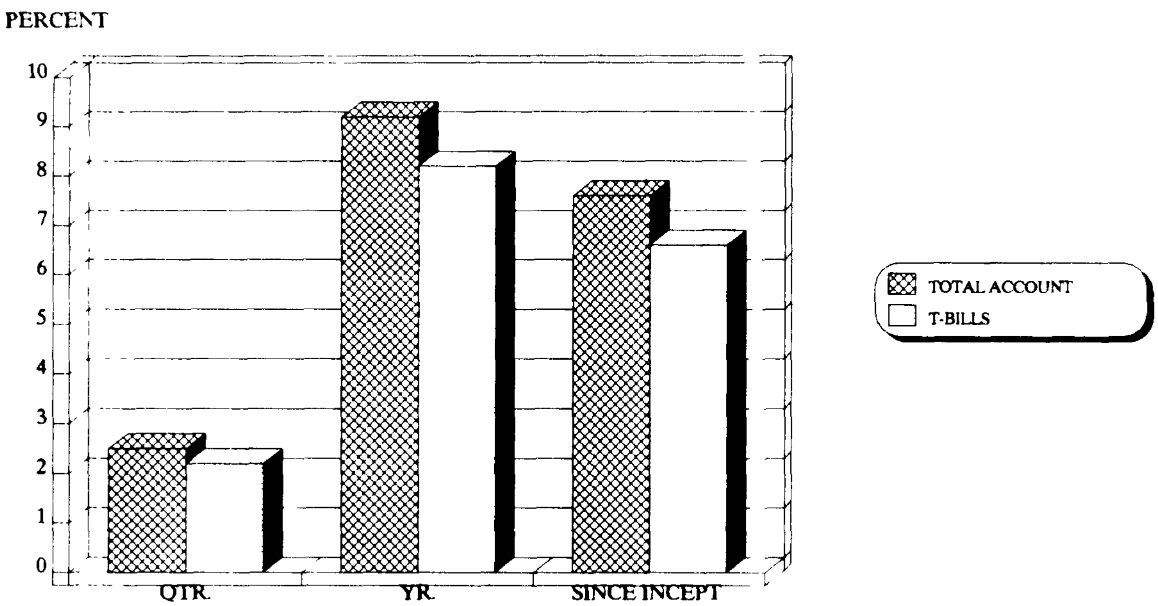
Money Market Account

Investment Objective
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 June 30, 1989 the market value of the Money Market Account was $74 million.



Period Ending 6/30/89

	Qtr.	Yr.	Since Inception Annualized*
Total Account	2.5%	9.2%	7.7%
91 Day T-Bills	2.2	8.1	6.7

* 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 June 30, 1989 the market value of the Guaranteed Return Account was $49 million.

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

PERMANENT SCHOOL FUND

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

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

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

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

	Target	Actual
Bonds	95.0%	97.5%
Unallocated Cash	5.0	2.5
Total	100.0%	100.0%

Investment Management
The entire fund is managed by the SBI investment staff.

Asset Growth
The market value of the Permanent School Fund's assets increased 10.6% during the second quarter. The asset growth was almost entirely due to appreciation of the bond portfolio.

Asset Growth
During Second Quarter 1989
(Millions)

Beginning Value	$347.6
Net Contributions	1.5
Investment Return	35.5
Ending Value	$384.6

Bond Segment Performance
The composition of the Permanent School Fund's bond portfolio was essentially unchanged during the quarter. The bond portfolio is structured with a laddered distribution of maturities to minimize the Fund's exposure to re-investment rate risk. At the quarter's-end, the portfolio had a current yield of 8.81%, an average life of 7.41 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
6/30/89

Value at Market	$364,271,678
Value at Cost	345,650,959
Average Coupon	9.05%
Current Yield	8.81
Yield to Maturity	8.63
Current Yield at Cost	9.29
Time to Maturity	15.47 Years
Average Duration	7.41 Years
Average Quality Rating	AAA
Number of Issues	133

STATE CASH ACCOUNTS

Description

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

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

- **Trust Fund Pool** contains the cash balances of retirement-related accounts managed internally and cash balances in the Permanent School Fund.

- **Treasurer's Cash Pool** contains the cash balances of special or dedicated accounts necessary for the operation of certain State agencies and the balance of the Invested Treasurer's Cash.

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

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

Investment Objectives

- **Safety of Principal.** To preserve capital.

- **Competitive Rate of Return.** To provide a high level of current income.

- **Liquidity.** To meet cash needs without the forced sale of securities at a loss.

Asset Mix

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

Investment Management

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

Performance

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

Period Ending 6/30/89

	Market Value (Millions)	Qtr.	Yr.
Treasurer's Cash Pool	$2,475	2.3%	8.7%
Trust Fund Cash Pool	224	2.3	8.8
91-Day T-Bills		2.2	8.2

Tab B

PORTFOLIO STATISTICS

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
COMPOSITION OF STATE INVESTMENT PORTFOLIOS BY TYPE OF INVESTMENT
MARKET VALUE JUNE 30, 1989
(in 000's)

	CASH AND SHORT TERM SECURITIES	BONDS		STOCKS		ALTERNATIVE ASSETS	TOTAL
		INTERNAL	EXTERNAL	INTERNAL	EXTERNAL		
BASIC RETIREMENT FUNDS:							
TEACHERS RETIREMENT FUND	$ 36,306	$ -0-	$ 580,102	$ -0-	$1,926,202	$344,417	$ 2,887,027
	1.26%		20.09%		66.72%	11.93%	100%
PUBLIC EMPLOYEES RETIRE. FUND	6,670	-0-	320,259	-0-	967,088	190,132	1,484,149
	.45%		21.58%		65.16%	12.81%	100%
STATE EMPLOYEES RETIRE. FUND	21,653	-0-	268,723	-0-	811,465	159,524	1,261,365
	1.72%		21.30%		64.33%	12.65%	100%
PUBLIC EMP. POLICE & FIRE FUND	5,874	-0-	112,830	-0-	340,714	66,986	526,404
	1.12%		21.43%		64.72%	12.73%	100%
HIGHWAY PATROL RETIRE. FUND	1,904	-0-	20,131	-0-	60,791	11,950	94,776
	2.01%		21.24%		64.14%	12.61%	100%
JUDGES RETIREMENT FUND	36	-0-	695	-0-	2,099	413	3,243
	1.11%		21.43%		64.72%	12.74%	100%
PUBLIC EMP. P.F. CONSOLIDATED	274	-0-	2,242	-0-	6,758	1,325	10,599
	2.59%		21.15%		63.76%	12.50%	100%
CORRECTIONAL EMPLOYEES RETIREMENT	1,172	-0-	12,947	-0-	39,097	7,686	60,902
	1.92%		21.26%		64.20%	12.62%	100%
POST RETIREMENT FUND	131,644	4,358,321	-0-	523,587	-0-	-0-	5,013,552
	2.63%	86.93%		10.44%			100%
MINNESOTA SUPPLEMENTAL FUNDS:							
INCOME SHARE ACCOUNT	12,686	66,966	-0-	-0-	142,051	-0-	221,703
	5.72%	30.21%			64.07%		100%
GROWTH SHARE ACCOUNT	96	-0-	-0-	-0-	72,762	-0-	72,858
	0.13%				99.87%		100%
MONEY MARKET ACCOUNT	74,363	-0-	-0-	-0-	-0-	-0-	74,363
	100%						100%
COMMON STOCK INDEX ACCOUNT	-0-	-0-	-0-	-0-	4,730	-0-	4,730
					100%		100%
BOND MARKET ACCOUNT	-0-	-0-	3,172	-0-	-0-	-0-	3,172
			100%				100%
GUARANTEED RETURN ACCOUNT	-0-	-0-	48,695	-0-	-0-	-0-	48,695
			100%				100%

	CASH AND SHORT TERM SECURITIES	BONDS INTERNAL	BONDS EXTERNAL	STOCKS INTERNAL	STOCKS EXTERNAL	ALTERNATIVE ASSETS	TOTAL
TOTAL RETIREMENT FUNDS	$ 292,678	$4,425,287	$1,369,796	$523,587	$ 4,373,757	$782,433	$11,767,538
	2.49%	37.60%	11.64%	4.45%	37.17%	6.65%	100%
PERMANENT SCHOOL FUND	9,609	374,993	-0-	-0-	-0-	-0-	384,602
	2.50%	97.50%					100%
TREASURERS CASH	2,475,155	-0-	-0-	-0-	-0-	-0-	2,475,155
	100%						100%
HOUSING FINANCE AGENCY	178,064	-0-	-0-	-0-	-0-	-0-	178,064
	100%						100%
MINNESOTA DEBT SERVICE FUND	42,380	-0-	-0-	-0-	-0-	-0-	42,380
	100%						100%
MISCELLANEOUS ACCOUNTS	112,283	-0-	-0-	-0-	-0-	-0-	112,283
	100%						100%
GRAND TOTAL	$3,110,169	$4,800,280	$1,369,796	$523,587	$4,373,757	$782,433	$14,960,022
	20.79%	32.09%	9.15%	3.50%	29.24%	5.23%	100%

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

For period of
April 1, 1989 - June 30, 1989

Teachers Retirement Fund	$ 180,759,874.61
Public Employees Retirement Fund	(10,000,000.00)
State Employees Retirement Fund	21,034,000.00
Public Employees Police & Fire	1,000,000.00
Highway Patrol Retirement Fund	1,403,000.00
Judges Retirement Fund	(647,000.00)
Public Emp. P & F Consolidated	(29,997.01)
Correctional Employees Retirement Fund	1,285,000.00
Post Retirement Fund	65,972,778.00)
Supplemental Retirement Fund - Income	(300,983.68)
Supplemental Retirement Fund - Growth	(2,417,513.54)
Supplemental Retirement Fund - Money Market	2,699,646.93
Supplemental Retirement Fund - Index	334,583.75
Supplemental Retirement Fund - Bond Mkt.	518,803.92
Supplemental Retirement Fund - Guaranteed	330,462.39
Minnesota Variable Annuity Fund	$(181,165,192.35)
Total Retirement Funds Net Cash Flow	$ 80,777,463.02
Permanent School Fund	1,503,603.55
Total Net Cash Flow	$ 82,281,066.57

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

TRANSACTION AND ASSET SUMMARY
RETIREMENT FUNDS

	Net Transactions				Asset Summary (at market)			
	Bonds (000,000)	Stocks (000,000)	Total	Cash Flow	Short-term % of Fund	Bonds % of Fund	Equity % of Fund	Total (000,000) (at market)
September 1986	14	(67)	(53)	(48)	4.9	47.0	48.1	8490
October	4	(117)	(113)	10	6.2	46.5	47.3	8724
November	(17)	(3)	(20)	40	6.8	46.0	47.2	8864
December	(51)	44	(7)	12	7.0	46.0	47.0	8772
January 1987	34	21	42	15	6.2	44.4	49.4	9283
February	120	(9)	111	50	5.4	44.4	50.2	9576
March	76	(15)	61	18	4.9	44.5	50.6	9614
April	100	(7)	93	4	4.1	45.0	50.9	9383
May	3	(136)	(133)	33	5.9	44.6	49.5	9403
June	(42)	(22)	(64)	141	7.8	42.6	49.6	9706
July	283	(119)	164	52	6.4	44.9	48.7	10028
August	181	(14)	167	40	5.2	44.7	50.1	10020
September	50	10	60	59	5.3	44.5	50.2	9850
October	(12)	(37)	(49)	20	6.5	50.1	43.4	9077
November	9	(10)	(1)	69	7.4	51.1	41.5	8890
December	(3)	34	31	0	6.8	50.1	43.1	9180
January 1988	(5)	118	113	57	5.9	50.0	44.1	9572
February	102	1	103	47	5.2	49.8	45.0	9841
March	25	(10)	15	6	5.2	49.8	45.0	9686
April	(9)	16	7	11	5.2	49.1	45.7	9667
May	(2)	(2)	(4)	41	5.7	48.3	46.0	9633
June	(3)	18	15	75	6.1	47.5	46.4	10045
July	91	(5)	86	56	5.8	48.1	46.1	10003
August	(3)	14	11	55	6.3	48.2	45.5	9920
September	(7)	(3)	(10)	19	6.4	48.0	45.6	10208
October	(7)	0	(7)	(27)	6.2	48.2	45.6	10329
November	129	1	130	88	5.8	48.6	45.6	10217
December	(1)	2	1	83	6.5	47.8	45.7	10414
January 1989	88	(10)	78	3	5.6	47.7	46.7	10760
February	60	18	78	38	5.3	47.9	46.8	10633
March	150	5	155	12	3.9	48.8	47.3	10783
April	(16)	188	172	16	2.3	48.1	49.6	11113
May	(2)	4	2	43	2.6	47.6	49.8	11461
June	119	10	129	119	2.5	49.2	48.3	11768

Tab C

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

EXECUTIVE DIRECTOR
HOWARD J. BICKER

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

September 5, 1989

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

FROM: Howard Bicker

SUBJECT: Executive Director's Administrative Report

1) Budget Report

The final budget-to-actual report for the SBI's FY 1989 administrative budget is included on Attachment A. Overall, actual expenditures were approximately $14,600 less than budgeted. This amount is less than 1% of the SBI's $1.7 million budget for the year.

2) Travel Report

A summary of SBI travel expenditures for May 16 - August 15, 1989 is included as Attachment B.

3) Rebalancing Report

The SBI has established a policy that requires the Basic Retirement Funds to be rebalanced toward its long term allocation targets when its actual asset mix moves significantly above or below long term targets. The mandatory and discretionary ranges are shown in the following chart.

On June 30, 1989, the stock segment of the Basic Funds was overweighted by 6 percentage points and the bond segment was underweighted by 3 percentage points. Under the Board's policy, the Basic Funds required rebalancing.

Basic Funds Asset Mix 6/30/89		Long Term Target	Required Rebalancing Ranges	Discretionary Rebalancing Ranges	Approximate Dollar Value of Over/Under Wtg. (+/-)
Stocks	66%	60%	Over 66%, Under 54%	55% - 65%	+ $360 Mil.
Bonds	21	24	Over 26%, Under 22%	23% - 25%	- $200 Mil.
Alt. Assets	12	15			
Cash	1	1			
	100.0%				

The overweighting in stocks was due to two factors:

- Growth in the value of the stock portfolio due to strong performance of the stock market in recent months.

- Stock holdings added to the Basic Funds when assets of the Variable Annuity Fund (approximately $180 million) were transferred to the Basic Funds on the last day of the quarter, June 30, 1989. This transfer was mandated in legislation passed during the 1989 legislative session.

In late June, staff planned for a $300 million transfer from stocks to bonds. The transfer was implemented in two steps:

- On July 1, 1989, $100 million was transferred from the passive stock manager, Wilshire Associates, to the semi-passive manager bond managers, Lincoln and Fidelity. Each semi-passive manager received half of the transfer.

- On August 1, 1989, $200 million was transferred from stocks to bonds in a similar manner.

Wilshire Associates was directed to sell stock holdings and raise cash to the amounts targeted for transfer. Stock exposure was maintained on the cash through the use of futures until the transfer dates. The semi-passive bond managers received cash on July 1 and August 1 which they invested in bonds within the next few working days.

After the transfers were completed on August 1, 1989, the actual asset mix of the Basic Funds was estimated to be:

Stocks	63%
Bonds	24
Alternative Assets	12
Cash	1
	100%

Estimated Market Value 8/1/89:	$6.6 Billion

Given the size of Basic Funds on June 30, 1989, a $300 million transfer should have moved the stock portfolio to a 60-61% allocation. However, due to the exceptional performance of the stock market during the transfer period, growth in the value of the stock portfolio offset a portion of the transfer.

While stocks remain overweighted relative to long term targets, the amount is within the discretionary rebalancing range. Further transfers from stocks to bonds will be necessary if the stock market continues to perform well relative to the bond market.

(Blank)

ATTACHMENT A

STATE BOARD OF INVESTMENT
FISCAL YEAR 1989 ADMINISTRATIVE BUDGET REPORT
GENERAL FUND APPROPRIATION
FISCAL YEAR 1989 FINAL

ITEM	FISCAL YEAR 1989 BUDGET	FISCAL YEAR 1989 EXPENDITURES
PERSONAL SERVICES		
CLASSIFIED EMPLOYEES	$ 222,572	$ 228,372
UNCLASSIFIED EMPLOYEES	1,050,000	1,040,007
PART-TIME EMPLOYEES	0	0
SEVERENCE PAY	10,600	0
MISCELLANEOUS PAYROLL	6,000	-326
SUBTOTAL	**$ 1,289,172**	**$ 1,268,053**
EXPENSES & CONTRACTUAL SERVICES		
RENTS & LEASES	97,000	88,699
REPAIRS/ALTERATIONS/MAINTENANCE	9,000	8,486
PRINTING & BINDING	18,000	14,267
PROFESSIONAL/TECHNICAL SERVICES	5,000	13,213
DATA PROCESSING & SYSTEM SERVICES	162,000	162,300
PURCHASED SERVICES	20,000	27,389
SUBTOTAL	**$ 311,000**	**$ 314,354**
MISCELLANEOUS OPERATING EXPENSES		
COMMUNICATIONS	20,000	23,075
TRAVEL, IN-STATE	3,000	394
TRAVEL, OUT-STATE	40,000	32,802
FEES & OTHER FIXED CHARGES	7,000	4,448
SUBTOTAL	**$ 70,000**	**$ 60,719**
SUPPLIES/MATERIALS/PARTS	**15,000**	**25,886**
CAPITAL EQUIPMENT	**22,000**	**23,522**
TOTAL GENERAL FUND	**$ 1,707,172**	**$ 1,692,534**

(Blank)

ATTACHMENT B

STATE BOARD OF INVESTMENT

Travel Summary by Date
May 16, 1989 - August 15, 1989

Purpose	Name(s)	Destination and Date	Total Cost
Manager Monitoring **Venture Capital Manager** KKR Annual Meeting	J. Griebenow	San Francisco 5/22-23	$ 694.50
Manager Monitoring **Ded. Bond Portfolio** **Software Vendor** Bankers Trust	R. Henry	Philadelphia 6/5-6	$ 369.59
Staff Education Bond Anal. & Port. Mgmt. Seminar sponsored by Exec. Enterprises	R. Henry	New York 6/6-9	$1,005.59
Miscellaneous **Supp. Fund Presentation** Statewide Fire Department Association Meeting	J. Heidelberg	Alexandria, MN 6/16	$ 55.02
Miscellaneous **Strategic Investing** **Project** Inst. for Fiduciary Ed. & the Ford Found.	H. Bicker	Boston 6/19-21	$ 830.50
Staff Education Tactical Asset Allocation Symposium sponsored by the Invest. Mgmt. Inst.	B. Lehman	Williamsburg 6/22-24	$ 665.95
Consultant Meeting Richards & Tierney	H. Bicker B. Lehman D. Gorence	Chicago 7/10-11	$1,541.26
Board Member Education International Investing Basics Conference sponsored by the State Auditor	M. McGrath J. Manahan R. Helgeson	Minneapolis 8/14-15	$ 735.00
Staff Education International Investing Basics Conference sponsored by the State Auditor	H. Bicker B. Lehman	Minneapolis 8/14-15	$ 490.00

Tab D

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

MICHAEL A. McGRATH
Treasurer

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

September 5, 1989

TO: Members, State Board of Investment

FROM: Michael A. McGrath, Chair
SBI Administrative Committee

SUBJECT: Committee Report

The SBI Administrative Committee met on August 16, 1989 to discuss the following items:

INFORMATION ITEMS:

1) Update on Board Seminar

At the June 1989 Board meeting, Board members agreed to participate in a half-day seminar to discuss issues of current interest to the SBI. The seminar will be held on Thursday, November 16, 1989 from 8:00 A.M. - 12:00 P.M. at the Minnesota Club in downtown St. Paul. Secretary of State Growe, Auditor Carlson, Treasurer McGrath and Attorney General Humphrey will attend.

Mr. Bicker is working with Board members and their designees to select discussion topics and finalize logistical arrangements. More information may be available by the time the SBI meets on October 4, 1989.

2) National Association of State Investment Officers Meeting

SBI staff participate in the National Association of State Investment Officers. The association sponsors an annual conference each year and the location rotates among the membership. This year, Minnesota is the host state. The conference will be held October 29 - November 1, 1989 at the Radisson University Hotel next to the University of Minnesota Campus.

ACTION ITEMS:

1) Executive Director's FY 1990 Work Plan

At the Committee's request, Mr. Bicker prepared a Work Plan for FY 1990 (see Attachment A). The work plan is based on the FY 1990 Management Plan previously approved by the Board and follows the outline of responsibilities in Mr. Bicker's position description.

Tom Richards, the Board's Consultant, commented on the Work Plan at the Committee meeting. The Committee asked that his comments be forwarded to the Board. A synopsis follows.

Mr. Richards told the Committee that Richards & Tierney (R&T) had reviewed the plan in detail and saw its purpose as threefold:

- o To allow staff to document the items they believe they should work on during the next year.
- o Since SBI approval is required, to raise and resolve the question of whether or not these are appropriate issues to address.
- o To form a basis upon which the Executive Director may be evaluated at the end of the fiscal year.

Mr. Richards commented that in R&T's judgement, the plan is very ambitious but that everything in the plan is relevant to the success of the SBI's investment program. He said that R&T has views on many of the anticipated projects and that he will make those views and comments known to the Board, IAC and staff as the projects are undertaken.

RECOMMENDATION:

The Committee recommends that:

- o The members of the SBI review the Work Plan and determine whether it should be approved or modified.
- o The Executive Director prepare a status report on implementation of the plan approved by the SBI for the December 1989 meeting of the Board.
- o The members of the SBI discuss how an approved work plan would be used to evaluate the Executive Director.

ACTION ITEMS (con't)

2) Report from the Deferred Compensation Review Committee

By statute, the SBI is responsible for selecting outside vendors to offer investment options for the State's Deferred Compensation Program. The current vendors were selected in 1980 through a bidding process and have not been formally reviewed by the SBI since that time.

The Administrative Committee requested that a Deferred Compensation Review Committee be formed to review the vendors and to consider whether those relationships should continue or be modified. Membership of the Review Committee included a designee of each Board member and the Executive Directors of the statewide retirement systems (MSRS, TRA, PERA).

The two outside vendors selected by the SBI in 1980 were Great West Life and a joint offering through Minnesota Mutual Life/Northwestern National Life. Currently, both vendors offer fixed and variable annuity products to participants in the Deferred Compensation Plan. The annuity products are offered to participants along with the investment options in the Supplemental Investment Fund which is managed by the SBI.

The Deferred Compensation Plan is administered by the Executive Director of the Minnesota State Retirement System (MSRS). He oversees the on-going operation of the outside product vendors. In addition, he has established contractual relationships with two agencies to market all investment products to public employees across the state. The two marketing agencies are National Benefits and the Ochs Agency. The SBI is not involved in monitoring the contractual relationships with these firms.

The Administrative Committee discussed the report from the Deferred Compensation Review Committee (see Attachment B). Overall, the Review Committee is satisfied with investment products offered to participants and does not feel it is necessary to re-open the bidding process at this time.

RECOMMENDATION:

The Administrative Committee concurs with the findings of the Review Committee and recommends that:

- o The SBI make no change in the current relationships at this time.
- o The SBI formally review the relationships every three years.
- o The SBI request an annual report on the Deferred Compensation Plan from the Executive Director of the Minnesota State Retirement System.

ACTION ITEMS (con't)

3) Status of the Administrative Committee

The SBI Administrative Committee was instituted March 1988. Its membership includes representation by each Board member or a designee, as well as the chair and vice-chair of the Investment Advisory Council. The Committee is chaired by the State Treasurer.

RECOMMENDATION:

The Committee recommends that the Board discuss the membership and operation of the Committee at the October 4, 1989 meeting of the SBI and determine whether the Administrative Committee should continue in its present form.

ATTACHMENT A

SBI EXECUTIVE DIRECTOR'S WORK PLAN

FY 1990

(Categories A,B,C,D, & E correspond to structure of the position description)

A. Development of Investment Policies

1. Review structure of the Post Retirement Fund.
2. Review feasibility of marketing timing strategies in the Basic Retirement Funds.
3. Develop international equity program structure for the Basic Retirement Funds.
4. Continue study of completeness fund alternatives.
5. Review feasibility of performance based fees for active bond managers.
6. Review and develop guidelines for use of private placement debt.
7. Develop plans to address real estate study recommendations.
8. Review liquidity needs of the short term cash accounts.
9. Develop guidelines for use of dollar-denominated international securities in the short term portfolios.

FY 90 WORK PLAN (con't)

B. Implementation of Investment Policies Approved by the SBI

1. Implement new/replacement manager search process for active stock and bond managers.

2. Consider additional investments with new/existing alternative investment managers.

3. Review investment guidelines for stock and bond managers on an annual basis.

4. Review continued use of specialized consultants for alternative investment area.

5. Meet or exceed the performance objectives established for the Basic Retirement Funds.

   - Obtain returns that are 3-5 percentage points over inflation over the last 10 years (FY81 - FY90).

   - Outperform the median fund from the TUCS universe of public and private balanced funds over the last five years (FY86 -FY90).

   - Outperform a composite of market indices over the last five years (FY86 - FY 90).

6. Meet or exceed the performance objectives established for the Post Retirement Fund.

   - Generate 5% realized earnings in FY 90 to maintain current benefits.

   - Generate at least 3% additional realized earnings in FY 90 to provide a benefit increase to current retirees on January 1, 1991.

FY 90 WORK PLAN (con't)

C. Review and Control of Investment Policies

1. Monitor and evaluate active stock and bond manager performance in accordance with the SBI's Manager Continuation Policy.

2. Monitor implementation of Northern Ireland mandate.

3. Monitor implementation of the Board's resolution on South Africa.

4. Monitor implementation of proxy voting procedures.

5. Conduct review of current vendors in the Deferred Compensation Plan.

6. Review opportunities for in-state investing with Proxy Committee.

FY 90 WORK PLAN (con't)

D. Administration and Management of Staff Operations

1. Execute FY 1990 Management and Budget Plan.

2. Prepare FY 1991 Management and Budget Plan.

3. Cooperate in all respects with the annual audit of SBI operations by the Legislative Auditor.

FY 90 WORK PLAN (con't)

E. Communication and Reporting

1. Prepare quarterly reports on investment results and the status of the management and budget plan for review by the SBI, IAC and Consultant.

2. Meet with the SBI and IAC on a quarterly basis and at other times as required.

3. Meet with the Board's designees on a monthly basis, as requested.

4. Review quarterly report format and recommend appropriate changes.

5. Prepare FY 1989 Annual Report.

6. Conduct joint seminar for Board/IAC to review SBI investment policies.

7. Coordinate potential round table discussions with SBI's external managers.

8. Conduct investment conference for SBI clientele.

9. Conduct information sessions for Supplemental Investment Fund user groups.

ATTACHMENT B

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

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
Room 105, MEA Building
55 Sherburne Avenue
St Paul, MN 55155
Tel (612) 296-3328
FAX (612) 296-9572

August 11, 1989

TO: Members, SBI Administrative Committee

FROM: Deferred Compensation Review Committee

SUBJECT: Committee Report

The Deferred Compensation Review Committee met on August 9, 1989:

- o To review the outside vendors the SBI hired in 1980 for the Deferred Compensation Plan.
- o To consider whether to continue or to make modifications to the vendor relationships.

The Committee reviewed and discussed background information concerning the statewide deferred compensation plan, and information gathered by staff concerning the quality of product offered by the vendors. See Attachment A.

<u>RECOMMENDATION</u>:

The Committee recommends that:

- o The SBI make no change in the current vendor relationships at this time;
- o The SBI formally review the relationships every three years;
- o The SBI annually request a report on the plan from Mr. Paul Groschen, chief administrative officer of the plan and Executive Director of the Minnesota State Retirement System.

ATTACHMENT B (con't)

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

EXECUTIVE DIRECTOR
HOWARD J BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
Room 105, MEA Building
55 Sherburne Avenue
St Paul, MN 55155
Tel (612) 296 3328
FAX (612) 296-9572

August 11, 1989

TO: Members, SBI Administrative Committee

FROM: SBI Staff

SUBJECT: State Deferred Compensation Program
Revised Background Information

This memo provides background information for Committee members concerning the statewide deferred compensation plan.

Committee Charge

At its May 17, 1989 meeting the Administrative Committee requested that Howard Bicker coordinate with Paul Groschen, Director of MSRS, a committee to review the outside vendors the SBI hired in 1980 for the statewide deferred compensation plan and to make recommendations concerning whether to continue or to make modifications to the vendor relationships.

History

The State Board of Investment is responsible for the bidding of contracts for the hiring of the outside vendors.

In the 1970's it was recognized that the state's deferred compensation program lacked exposure and annuity products. In 1980, the decision was made to hire private firms to provide marketing services and offer annuity products to participants.

At the time of the bidding, it was understood that the relationship with the two organizations be long term to provide necessary continuity for retirement purposes. It was understood at that time that movement between different carriers would cause participants individual financial hardship.

The two insurance carriers continue to offer their annuity products. The relationship with these firms has not been formally reviewed since their 1980 retention.

Criteria to Review Vendors

Criteria by which to review the vendor relationships would include at least the following:

- o Do participants have an appropriate range of investment options?
- o Do the investment products offer competitive investment returns?
- o Are the vendor annuity rates competitive with other annuity products in the market?
- o Are the vendor service/administrative charges reasonable and/or competitive with similar fees charged by other companies in the market?
- o How do other states structure their deferred compensation programs and how does Minnesota's plan compare?

Appendices

A - Administrative Structure of the Minnesota Plan
B - Other Government Plans
C - Vendor Descriptions
D - Withdrawal Options

352.96 DEFERRED COMPENSATION.

Subdivision 1 **Entitlement to defer compensation.** At the request of an officer or employee of the state, an officer or employee of a political subdivision, or an employee covered by a retirement fund in section 356 20, subdivision 2, the appointing authority shall by payroll deduction defer the payment of part of the compensation of the officer or employee The amount to be deferred must be as provided in a written agreement between the officer or employee and the employing unit The agreement must be in a form specified by the executive director of the Minnesota state retirement system in such a manner as will qualify the deferred amount for benefits under federal and state tax laws, rules, and rulings

Subd 1a **Failure to implement plan.** Implementation of the deferred compensation plan by the employing unit must be completed within 30 days of the request as provided in subdivision 1. If the employing unit fails to implement the deferred compensation plan, the employing unit may not defer compensation under any existing or new deferred compensation plan from the date of the request until the date on which the deferred compensation plan provided for in this section is implemented. The executive director of the Minnesota state retirement system may order any employing unit that fails to implement the deferred compensation plan provided for in this section upon a valid request to undertake that implementation and may enforce that order in appropriate legal proceedings

Subd. 2 **Purchase of shares.** The amount of compensation so deferred may be used to purchase.

(1) shares in the Minnesota supplemental investment fund established in section 11A 17,

(2) saving accounts in federally insured financial institutions,

(3) life insurance contracts, fixed annuity and variable annuity contracts from companies that are subject to regulation by the commissioner of commerce; or

(4) a combination of (1), (2), or (3), as specified by the participant

The shares accounts or contracts purchased shall stand in the name of the state or other employing unit, for the officer or employee whose deferred compensation purchased the shares, until distributed to the officer or employee in a manner agreed upon by the employee and the executive director of the Minnesota state retirement system, acting for the employer This subdivision does not authorize an employer contribution The state, political subdivision, or other employing unit is not responsible for any loss that may result from investment of the deferred compensation.

Subd 3. **Executive director to administer section.** This section shall be administered by the executive director of the system under subdivision 4 If the state board of investment so elects, it may solicit bids for options under subdivision 2, clauses (2) and (3) All contracts must be approved before execution by the state board of investment Contracts must provide that all options in subdivision 2 must be presented in an unbiased manner, be presented in a manner conforming to applicable rules adopted by the executive director, be reported on a periodic basis to all employees participating in the deferred compensation program, and not be the subject of unreasonable solicitation of state employees to participate in the program The contract may not call for any person to jeopardize the tax-deferred status of money invested by state employees under this section All costs or fees in relation to the options provided under subdivision 2, clause (3), must be paid by the underwriting companies ultimately selected by the state board of investment

Subd 4. **Executive director to establish rules.** The executive director of the system shall establish rules and procedures to carry out this section including allocation of administrative costs against the assets accumulated under this section Funds to pay these costs are appropriated from the fund or account in which the assets accumulated under this section are placed The rules established by the executive director must conform to federal and state tax laws, regulations, and rulings, and are not subject to the administrative procedure act Rules adopted after July 1, 1977, relating to the options provided under subdivision 2, clauses (2) and (3), must be approved by the state board of investment. A state employee must not make payments under a plan until the plan or applicable component of the plan has been approved for tax-deferred status by the internal revenue service.

Subd 5. **Other laws not applicable.** No provision of this chapter or other law specifically referring to this chapter applies to this section unless this section is specifically mentioned

Subd 6 **Exemption from process.** As money to which legal title is vested in the state of Minnesota, no amount of deferred compensation is assignable or subject to execution, levy, attachment, garnishment, or other legal process, except as provided in section 518.58, 518.581, or 518.611.

History: *1987 c 157 s 3, 1987 c 229 art 6 s 1; art 11 s 1, 1987 c 284 art 4 s 2,3*

APPENDIX A

ADMINISTRATIVE STRUCTURE OF THE MINNESOTA PLAN

I. Investment Choices

A. Public employees have the choice of three different vendors for their deferred compensation plan investments:

	As of 12-31-88 Plan Assets	Participants
State Board of Investment (SBI)	$127,528,251	7,849
Minnesota Mutual Life (MM)	73,944,637	6,803
Great West (GW)	137,688,137	12,573
	$339,161,025	27,225

B. The three vendors operate independently:

- o Each vendor establishes its own set of investment alternatives.
- o Each vendor establishes its own administrative and withdrawal fees.
- o Each vendor establishes its own restrictions on transfers between accounts.

C. Employees may place new contributions with any vendor but they may only use one of the insurance vendors at a time and they may not move past contributions between vendors.

D. Local units government may offer their own deferred compensation program and contract with vendors. A public employee may contribute to both a local plan and the state plan.

II. Annuity Choices

A. Funds with SBI may be used to purchase an annuity from GW or MM at payout time.

B. Funds with GW may not be used to purchase an annuity from MM or vice versa because of the tax treatment of the deferred compensation plan.

- o The plan is an IRS code section 457 plan.
- o Assets are held in the employer's name.
- o No intrastate transfers are allowed.

Note that lump sum and installment payout options are available in lieu of an annuity purchase.

III. Marketing

A. All three plans are marketed statewide to public employees by the Ochs Agency or National Benefits, Inc.

- o Ochs Agency is affiliated with Minnesota Mutual
- o National Benefits is affiliated with Great West

B. Each marketing group is assigned a "territory," or group of state agencies by MSRS. (e.g., National Benefits is assigned to the SBI.)

- o The territories were established at the beginning of the Ochs and National Benefits contract with MSRS. The two marketing groups divided the State agencies in the Twin City area. The remainder of the State is divided on a county by county basis.

C. In practice, a public employee has two vendor choices for his/her contributions:

- o SBI investment options in the Supplemental Investment Fund.
- o Products from one insurance company depending on the marketing entity assigned to his/her employer.

D. At payout time:

- o Funds with SBI either may be withdrawn in a lump sum, in installments, or used to purchase an annuity from GW or MM.
- o Funds with either of the insurance vendors must be withdrawn under the options offered by that particular vendor.

At present, the annuity rates offered by Great West are superior to those offered by Minnesota Mutual. These rates change periodically and the relative standing may change as well.

IV. Reimbursement For Marketing Services

A. MSRS Reimbursement to Ochs and National for Marketing SBI Products

MSRS pays National Benefits Inc. and Ochs Agency 1% of all new contributions to the SBI products.

B. Sales fee paid to individual agents by the marketing organizations:

Percent of New Contributions
Paid to Agent

Product Sold	Nat'l Benefits Agent	Ochs Agent
SBI	1% first year only	2% first year only
MM	None	3.1% of monies deferred to the Fixed Annuity Account and 1% of monies deferred to the Variable Annuity Account.
GW	3.5% of the first year contributions	None

C. Remittance of Employee Contributions to the Vendors

- MM/GW

  Each employer totals the contributions and sends the money directly to MM or GW. MSRS is not involved in any way.

- SBI

  Each employer totals the contributions and sends the money to MSRS. MSRS remits the contributions once each month to the SBI.

  MSRS financial statement on Deferred Compensation makes the following statement:

  "Contributions can only be invested in the Supplemental Investment Fund once a month. Therefore, the contributions are invested in short term securities until the transfer date...The interest earned on these investments is applied to the administrative expenses and will defer any increase in the 1.5% administrative expense applied to contributions."

V. Contracts with Marketers and Insurance Companies

MSRS has contracts with the marketing groups and the insurance companies for their services.

The contracts have no end date, but could be reviewed and rebid at any time.

APPENDIX B

OTHER GOVERNMENT PLANS

The National Association of Government Deferred Compensation Administrators published a Survey of Membership in May 1988 which covered the 1987 plan year.

The following information is based on survey results from 37 states plans. (Note that county and municipal plans also responded but are not included in this information.)

A. Number of Investment Carriers:

The number of investment carriers most often cited were 1,2, or 3. The most carriers involved was 8. See Table A below. Minnesota offers 3; 2 outside insurance carriers and the State Board of Investment (through the Supplemental Investment Fund).

Table A

Number of Investment Carriers
Offered by the Plans

Number of Carriers	State Plans
1	7
2	7
3	7
4	4
5	4
6	1
7	3
8	1

Note: 3 plans had no answer.

B. Number of Investment Options

Of the 26 plans reporting that they offered fixed and variable annuity options, most offered 2 to 5 additional investment options. Minnesota offers 6 investment options in addition to fixed and variable annuity options. See Table B.

Table B

Number of Investment Options Offered in Addition to Fixed and Variable Annuities

Number of Additional Options	State Plans
1	2
2	5
3	2
4	5
5	6
6	3
7	2
8	1

Note: 11 plans did not offer both fixed and variable annuity options.

C. Forms of Administration

A majority of the state plans, 21 of 37, use a third party for at least one administrative function: marketing, investments, and record keeping. Minnesota uses third parties for marketing and investment purposes and the record keeping associated with those participants who choose investment options from third parties. See Table C.

Table C

Form of Administration	Number of State Plans
Entirely in house	8
Uses third party for one or more, but not all functions	21
Uses third party for entire administration	8

Of the 21 that use some third party administration, 16 report that third parties provide marketing efforts. Minnesota is one of those 16.

APPENDIX C

VENDOR DESCRIPTIONS

For Deferred Compensation Plan

Supplemental Investment Fund (SIF)

6 Options Available:

Growth Share Account	Stock
Common Stock Index	Stock
Income Share Account	Stock/Bond
Bond Market Account	Bond
Money Market Account	Money Market
Guaranteed Return Account	GIC

Administrative Fees: 1.5% front end load on new contributions.

If employee goes through marketing agent, MSRS pays National Benefits and Ochs 1.0% MSRS retains 0.5%. If employee contacts MSRS directly, MSRS retains entire 1.5%.

Withdrawal Fees: None.

Transfer Policy: No charge, limit 2 per calendar year.

Transfer not allowed from GIC during contract period.

Other transfers only at month end.

Payout Options:

1) Lump sum withdrawal.

2) Lump sum purchase of a fixed or variable annuity contract through MM or GW.

3) Installments payments:

   - o level installments through GW or MM over specified period of time.

   - o constant number of shares over 2-240 months from Income Share, Growth Share, Bond Market and Common Stock Index Accounts. Minimum of 10 shares/month.

   - o decreasing installment payments over 2-240 months from Guaranteed Return or Money Market Accounts.

Minnesota Mutual/Northwestern National Life (MM)

2 Options Available:

Variable Annuity Account	Stock
Fixed Annuity Account	Deposit Account

Administrative Fees:	Variable - 1.0% front end load Fixed - None MM retains all fees. MSRS receives $2 per person/per year from MM for MSRS's record keeping and administrative expense.
Withdrawal Fees:	None, if the account is over 10 years old. If account is less than 10 years old, the participant receives 94% of account value during the first year. Withdrawal value increases by .05% per month until withdrawal value equals accumulated value.
Transfer Policy:	Variable to Fixed, no charge, no limit. Fixed to Variable, no charge, but can transfer no more than twice a year.
Payout Options:	1) Annuity purchase through Minnesota Mutual/Northwestern National Life for: Life of participant; or Life of participant, or period certain, whichever is greater; or Joint lifetime of participant and named beneficiary 2) Lump sum payment, but withdrawal fees apply if the account is less than 10 years old. 3) Installment payments over 1 to 20 years, but withdrawal fees apply if account is less than 10 years old.

Great West (GW)

3 Options Available:

Variable Annuity: Growth Fund	Stock (managed by Drexel-Burnham). Daily quotes available.
Fixed Annuity: Daily Investment Guaranteed Fund	Money market. Rate is set monthly.
Guaranteed Certificate Fund	36/60/84 month certificates. Rate is set monthly.

Administrative Fees: $10 annual charge for all accounts used by the employee.

1.25% front end load on Growth Fund.

GW retains all fees. MSRS receives $2 per person per year from GW for MSRS's record keeping and administrative expense.

Withdrawal Fees: None, if annuitizing account over 3 years or longer. If not annuitized, 6% of last 72 months contributions are deducted.

Transfer Policy: First two each year, no charge. Thereafter, $10 per transfer (no limit). Can transfer any time not just month end.

No transfer out of a certificate during the term of the certificate.

Payout Options:

1) Annuity purchase through Great West for:

   Life of participant, or

   Life of participant, or period certain, whichever is greater; or

   Joint lifetime of participant and named beneficiary.

2) Lump sum payment, but withdrawal fees apply.

3) Installment payments over 3 to 20 years with no withdrawal fees.

RETURN DATA ON INVESTED CONTRIBUTIONS

Deferred Compensation Vendors

	Percent Return in Calendar Year						
	1983	1984	1985	1986	1987	1988	7-89 Rate
Stock Accounts							
SIF - Growth Share	12.3	3.7	22.6	8.2	1.9	12.3	
SIF - Common Stock Index				2.6*	2.0	18.3	
MM - Variable Annuity	30.8	0.8	15.6	-2.0	1.4	15.1	
GW - Growth Fund			25.5	13.2	4.4	16.5	
Stock/Bond Accounts							
SIF - Income Share	10.7	9.4	21.3	8.2	3.6	14.2	
Bond Account							
SIF - Bond Market				6.9*	2.8	8.8	
Money Market Accounts							
SIF - Money Market				2.6*	6.9	7.9	9.18
GW - Daily Interest					6.5	8.7	9.25
Deposit Account							
MM - Fixed Annuity	8.65	8.65	8.65	8.65	8.65	8.65	8.5

GIC/CD Accounts	Current Rates		
SIF - Guaranteed Return 36 Month GIC	7.72%	11-1-86 - 10-31-89	Principal Mutual Life
	8.45	11-1-87 - 10-31-90	Principal Mutual Life
	9.01	11-1-88 - 10-31-91	Mutual of America
GW - 36 Month Cert.	7.97%	(7/89 rate, changes monthly)	
60 Month Cert.	8.15	(7/89 rate, changes monthly)	
84 Month Cert.	8.38	(7/89 rate, changes monthly)	

SIF = Supplemental Investment Fund
GW = Great West
MM = Minnesota Mutual Life/Northwestern National

* Rates of return for 5 month period only; Account not available until 7/1/86

APPENDIX D

WITHDRAWAL OPTIONS

Deferred Compensation Plan

SBI Products

1. Lump Sum

2. Monthly payments ranging from 2 to 240 months as you select, but not to exceed your average life expectancy.

   o Payments from the Money Market Account and Guaranteed Return Account will include the monthly interest earned on the invested balanced. This produces a decreasing monthly payment. For example:

$100,000 accumulation with 20 year payout

	@ 7%	@ 8%	@ 9%
1st Month			
Principal	$ 416.67	$ 416.67	$ 416.67
Interest	583.33	666.67	750.00
Total	$1000.00	$1083.34	$1166.67
120th Month			
Principal	$ 416.67	$ 416.67	$ 416.67
Interest	291.60	333.33	375.00
Total	$ 708.27	$ 750.00	$ 791.67
240th Month			
Principal	$ 416.67	$ 416.67	$ 416.67
Interest	--	--	--
Total	$ 416.67	$ 416.67	$ 416.67

   o Payments from Income Share, Growth Share, Bond Market or Common Stock Index Account are based on liquidation of a set number of shares. (Value of shares and value of monthly payouts will, therefore, fluctuate with market).

3. A lump sum purchase of an annuity contract by MSRS with either Minnesota/Mutual Northwestern National or Great WestLife Insurance Companies.

   o $100,000 at 56 for a 20 year period certain and life produces level monthly payments of:

   - GW: $783/mo. (equivalent to 7.2% interest)
   - MM: $772/mo. (equivalent to 7.0% interest)

GW and MM Products

GW and MM offer:

- o Lump sum payouts
- o Installment payouts
- o Annuity payouts

An example of a monthly payout is offered below. Monthly payouts over longer payout periods will provide higher returns to the participant.

Payouts for $100,000 Accumulation

	5 Yrs.	7 Yrs.	10 Yrs.	20 Yrs.
GW $/mo.	$2032	$1582	$1259	$885
MM $/mo.	2003	1548	1214	854
GW % return	8.0%	8.47%	8.86%	8.77%
MM % return	7.48%	7.79	8.01	8.28

Withdrawal Rates Offered By Other Carriers

The following tables provide information on withdrawal rates provided by two sources. The payout rates are single premium annuity rate quotes not quotes specifically for deferred compensation plan annuities.

- Best's Retirement Income Guide
  - 116 companies
  - monthly life income with 20 years certain for males age 65
  - October 1988 rates

- Best's Flitcraft Compendium
  - 177 companies
  - monthly life income with 10 years certain for males age 65
  - April 1988 rates

Note that the figures including those for GW and MM are quoted for males, and are not derived from unisex tables.

Note that the monthly payout figures differ for different payout periods.

BEST'S RETIREMENT INCOME GUIDE

20 Years Certain for Males Age 65
Monthly Payout for Each $1,000 of Accumulated Savings

	October 1988 Rates
Low	$5.26
High	8.57
Mean	7.74
GW	8.24
MM	7.81

BEST'S FLITCRAFT COMPENDIUM

10 Years Certain for Males Age 65
Monthly Payout for Each $1,000 of Accumulated Savings

	April 1988 Rates
Low	$ 6.35
High	10.97
Mean	8.72
GW	8.85
MM	9.50

ATTACHMENT B (con't)

EXAMPLE OF VARYING ANNUITY RATES

HISTORICAL ANNUITY INCOME AS OF JANUARY 1ST*

Monthly Payments Per $10,000 of Cash Value

	10 YEAR INSTALLMENT						20 YEAR INSTALLMENT					
			STATE OF MINNESOTA PLAN						STATE OF MINNESOTA PLAN			
YEAR	AETNA PLAN		GREAT-WEST		MINNESOTA MUTUAL		AETNA PLAN		GREAT-WEST		MINNESOTA MUTUAL	
1989	$122.30	8.18%	$125.98	8.87%	$121.40	8.01%	$ 86.80	8.50%	$ 91.31	9.21%	$ 85.40	8.28%
1988	120.90	7.92%	122.88	8.29%	123.90	8.48%	85.60	8.31%	88.58	8.78%	87.10	8.55%
1987	114.40	6.67%	120.98	7.93%	123.90	8.48%	81.40	7.64%	84.33	8.11%	87.10	8.55%
1986	127.30	9.12%	126.14	8.90%	128.80	9.39%	94.10	9.64%	93.90	9.61%	92.90	9.45%
1985	129.20	9.46%	134.90	10.49%	136.10	10.71%	99.40	10.43%	102.10	10.83%	101.90	10.81%
1984	124.40	8.57%	135.03	10.51%	136.10	10.71%	87.70	8.64%	104.30	11.16%	101.90	10.81%
1983	136.60	10.80%	132.71	10.10%	133.61	10.26%	102.50	10.89%	99.58	10.46%	98.90	10.36%
1982	124.40	8.58%	136.31	10.74%	133.70	10.28%	87.70	8.64%	105.74	11.37%	98.90	10.36%
1981	114.40	6.67%	128.80	9.39%	123.90	8.48%	80.00	7.40%	96.50	10.00%	87.10	8.55%
1980	109.90	5.78%	128.80	9.39%	123.90	8.48%	70.40	5.78%	96.50	10.00%	87.10	8.55%

* Historical rates should not be considered to be indicative of future annuity rates. Annuity rates are subject to periodic changes through out the year. There are also other options available for payout of your account. Contact a representative of the plan to review payment plan options.

Source: Aetna Life

2/24/89

Tab E

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

EXECUTIVE DIRECTOR
HOWARD J BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

August 23, 1989

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

FROM: Equity Manager Committee

SUBJECT: Committee Report

The Committee met on August 16, 1989. The agenda items included:

- o Review of Active Managers
- o Special Review of Waddell & Reed Asset Management

In addition, staff updated the Committee on the recent rebalancing in the Basic Retirement Funds. More information on this item is included in the Executive Director's Administrative Report under Tab C.

None of the issues discussed require action by the Board at this time. A summary of Committee discussion follows:

INFORMATION ITEMS:

1) Review of Active Managers

The Committee reviewed the performance reports for the active equity managers. No action is required by the Board since all managers currently meet the established qualitative and quantitative guidelines. The value of active management (VAM) reports for each manager are attached beginning on page 35 of this tab section.

The Committee noted that the current group of active managers has outperformed its aggregate benchmark by 1.7 percentage points on an annualized basis since the end of 1983, a period of five and one-half years. The current manager group has equalled the performance the Wilshire 5000 on an annualized basis over the same time period.

Four new equity managers were funded on April 3, 1989. Three of the four new equity managers outperformed their benchmark portfolios for the quarter ending June 30, 1989. The value of active management (VAM) reports for each of the four new managers do not include a VAM graph. VAM graphs will not be available for these managers until a sufficient performance history (12 months) is established. The qualitative section of the VAM report for each of the four new managers is attached at the end of this tab section following the VAM graphs.

The Committee noted the continued underperformance of BMI Capital and Investment Advisers relative to their benchmarks. While the Manager Continuation Policy does not require that action be taken at this time, the Committee has requested that staff provide additional information regarding the organization, investment philosophy and performance of both firms at its next meeting.

2) Special Review of Waddell & Reed Asset Management

At its June 2, 1989 meeting, the Board requested that the IAC conduct a special review of Waddell & Reed Asset Management. At issue is the Board's concern regarding the firm's cumulative performance. While the firm has outperformed its benchmark portfolio cumulatively through June 30, 1989, the performance of Waddell & Reed has lagged the Wilshire 5000 on a cumulative basis since the end of 1983.

Waddell & Reed was evaluated according to the guidelines established in the Board's Manager Continuation Policy. The results of this evaluation are contained in a staff memo to the Committee dated August 14, 1989. This memo is included with this report beginning on page 3 of this tab section.

As part of its report, staff provided the Committee with a document containing a detailed analysis of Waddell & Reed. This analysis includes a review of the firm's organization, investment philosophy and performance. This document is included in the attachments.

The Committee concurs with the staff conclusion concerning Waddell & Reed. To summarize, the Committee can identify no issues warranting a decision to place the firm on probation or terminate its contract with Waddell & Reed. Further, the Committee is satisfied that Waddell & Reed has adhered to its stated investment approach.

The Committee recommends that no action be taken with respect to Waddell & Reed at this time.

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

EXECUTIVE DIRECTOR
HOWARD J BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

August 14, 1989

TO: Members, IAC Equity Manager Committee

FROM: Doug Gorence

SUBJECT: Waddell & Reed Asset Management Review

At its June 2, 1989 meeting, the Board requested that the IAC review Waddell & Reed Asset Management (W&R). At issue is the Board's concern regarding the firm's cumulative performance. While the firm has outperformed its benchmark portfolio cumulatively through June 30, 1989, the performance of W&R benchmark has lagged the Wilshire 5000 on a cumulative basis since the end of 1983.

In March 1988, the Board adopted a Manager Continuation Policy that established qualitative and quantitative guidelines for evaluating the SBI's active equity and fixed-income managers. A summary review of W&R is against these established guidelines follows. See Attachment B for an outline of the Board's current Manager Continuation Policy. Detailed information pertaining to W&R's organization, investment approach, and performance is provided in Attachment C.

QUALITATIVE REVIEW

According to the Board's Manager Continuation Policy, a manager will be placed on probation if any of the following events occur:

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

- o A significant gain or loss in the number of client relationships (accounts) during the previous year.

Under the Board's policy the firm must satisfactorily address these issues within two quarters or the manager will be terminated.

Ownership/Staff

Since the inception of the SBI's account there has been no change in ownership. W&R is a wholly-owned subsidiary of Torchmark Corporation.

No significant staff turnover has occurred since the inception of the SBI's account. The firm has had a number of junior and some middle-level personnel, primarily securities analysts, leave the firm. In general, these departures are the result of higher compensation levels offered by east coast money managers.

Investment Style

W&R's holdings are concentrated in small capitalization stocks with an orientation toward cyclical companies and immature growth companies, particularly technology companies. W&R is an active market timer willing to make significant asset mix shifts at any point in the market cycle.

In order to monitor the consistency with which a firm implements its investment style, SBI staff monitors fundamental risk factors and industry exposures on a monthly basis. Looking at W&R's historical risk factor exposures, a distinctive and consistent pattern of exposures is clearly visible. This is evidence that W&R and has consistently applied its stated investment approach.

Benchmark Portfolio

Currently, the firm is maintaining an appropriate benchmark portfolio. A description of the benchmark construction process and measures of appropriateness are provided in Section II.C. of the Manager Detail in Appendix C.

Account Gains/Losses

During the past year the number of accounts managed in the aggressive equity style by Henry Herrmann remained the same. For additional information, please refer to Attachment C, Section I.C, Assets Under Management.

QUANTITATIVE REVIEW

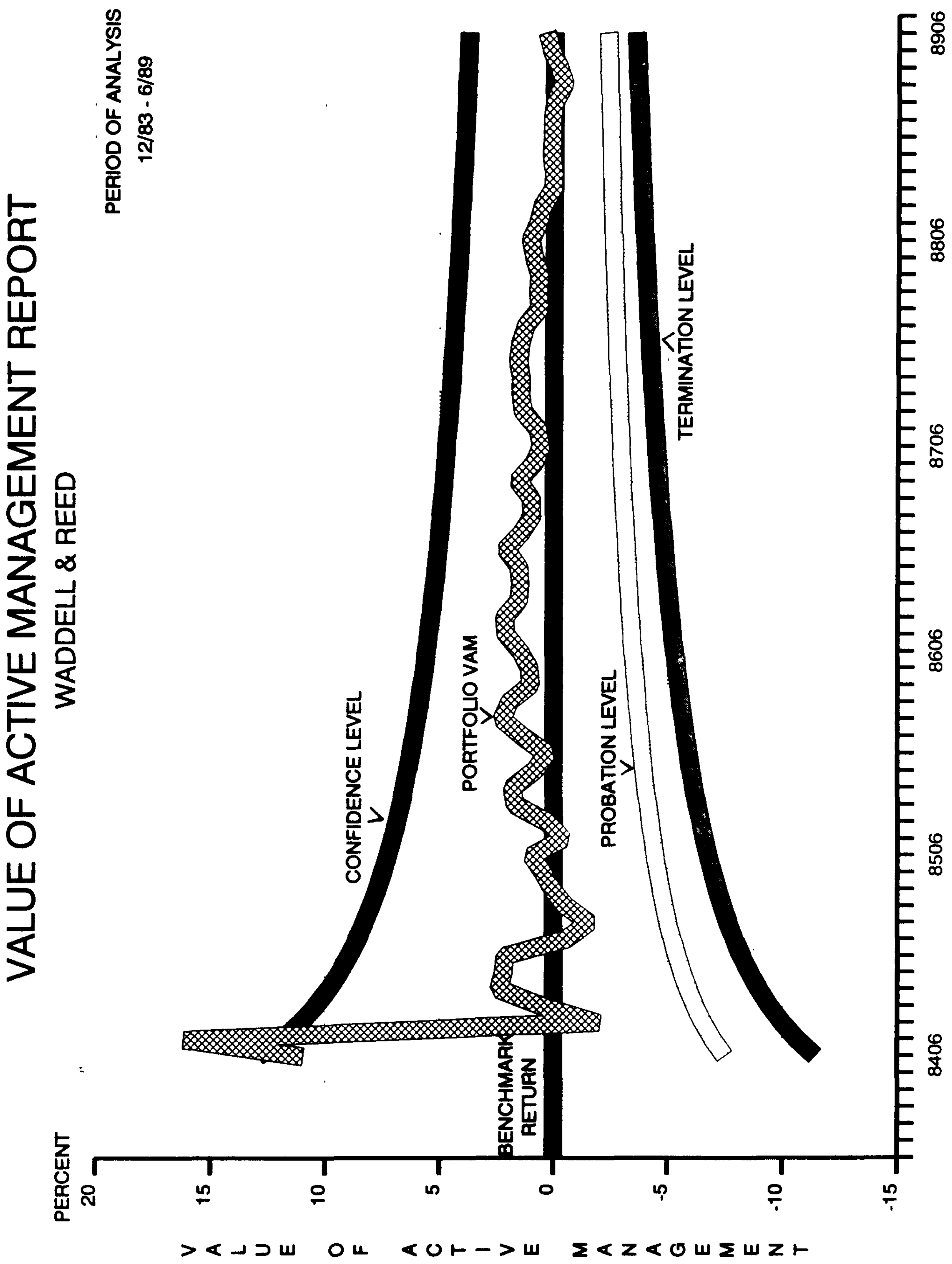
The Board's Manager Continuation Policy measures the value that a manager's actual performance adds/detracts from its individual benchmark. Using statistical methods, a confidence interval is constructed based on the manager's actual cumulative return relative to the manager's benchmark. Cumulative returns falling outside the confidence interval represent superior or inferior performance significant enough that the odds of it being due to chance alone are low. The confidence interval narrows over time. As more performance data is received, the ability to infer the presence or lack of skill increases.

Attachment A depicts W&R's Value of Active Management (VAM) graph. Through June 30, 1989, W&R's performance is slightly above that of its benchmark:

	Actual	Benchmark
Cumulative:	90.6%	84.6%
Annualized:	12.5%	11.8%

STAFF CONCLUSION

Reviewing the firm against the Board's Manager Continuation Policy at this time, staff can identify no issues that warrant placing the firm on probation or terminating its contract with Waddell & Reed. In particular, the quantitative criteria established in the Board's Manager Continuation Policy are being met by the firm as of June 30, 1989. W&R's cumulative performance is above the benchmark portfolio established for the manager. By this measure, W&R added value through its active investment.


VALUE OF ACTIVE MANAGEMENT REPORT
WADDELL & REED
PERIOD OF ANALYSIS
12/83 - 6/89
CONFIDENCE LEVEL
PORTFOLIO VAM
BENCHMARK RETURN
PROBATION LEVEL
TERMINATION LEVEL
PERCENT
20
15
10
5
0
-5
-10
-15
8406
8506
8606
8706
8806
8906
VALUE OF ACTIVE MANAGEMENT

ATTACHMENT B

MANAGER CONTINUATION POLICY
SUMMARY

Probation/termination decisions for the SBI's active equity and fixed income managers are based on a quarterly review of qualitative and quantitative factors.

Qualitative

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

- A change in the firm's ownership or in the members of its management team.
- A change in the manager's investment style.
- An inability to create and maintain an appropriate benchmark portfolio.
- A significant gain or loss in number of accounts or clients under management over the previous year.

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

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

Quantitative

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

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

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

A manager who continues on probation status for two successive quarters will be formally reviewed by staff and the appropriate committee of the IAC during the following quarter. The manager will be required to appear at the offices of the SBI and respond to a list of specific questions/concerns about its investment process and actual performance. Board members and their deputies will be notified of the review sessions. The IAC will recommend continuation or termination of the firm based on the results of the evaluation.

ATTACHMENT C

EXTERNAL EQUITY MANAGER DETAIL

WADDELL & REED

Exhibits

Appendices

ATTACHMENT C

EXTERNAL EQUITY MANAGER DETAIL

WADDELL & REED

I. ORGANIZATIONAL BACKGROUND

A. OWNERSHIP

Waddell & Reed is a wholly-owned subsidiary of Torchmark Corporation. Torchmark is a diversified insurance and financial services company based in Birmingham, AL.

B. PROFESSIONAL STAFF

The SBI's account is managed by Henry Herrmann. Mr. Herrmann is President and Chief Investment Officer of Waddell & Reed Asset Management.

C. ASSETS UNDER MANAGEMENT

EQUITY ASSETS UNDER MANAGEMENT
($ MIL)

December 1984		December 1985		December 1986		December 1987		December 1988		June 1989	
# of Accts	Market Value	# of Accts	Market Value	# of Accts	Market Value	# of Accts	Market Value	# of Accts	Market Value	# of Accts	Market Value
9	$605	10	$748	7	$903	6	$435	6	$496	4	$280

The firm has always had a policy of limiting the growth of its separately managed aggressive equity accounts. This self-imposed constraint is based on the firm's desire to maintain its investment flexibility.

Prior to June 1989, the accounts and assets provided in the table include two mutual funds managed by Henry Herrmann in the firm's aggressive equity style. Mr. Herrmann made a decision to focus on separate pension account business and delegated the management of both the United Vanguard and United New Concepts Funds to other W&R personnel.

D. PERSONNEL TURNOVER

No significant turnover has occurred since the SBI account's inception. The firm has had a number of junior and some middle-level personnel, primarily research analysts, leave the firm. This has been the result of higher compensation levels offered by east coast money managers.

II. INVESTMENT APPROACH

A. OVERALL PHILOSOPHY

Waddell & Reed (W&R) stresses three aspects of portfolio management:

- o market timing
- o sector concentration
- o stock selection

With respect to market timing, Waddell & Reed believes that the market reacts to near-term earning expectations and interest rates. These factors cause stock prices to cyclically fluctuate around equilibrium values determined by long-run earnings power. The key to W&R market timing decisions is based on its view of the long-run earnings power of corporations as measured by a proprietary tool called the Central Value Index. When stock process are believed to be above their "central value", equity exposure is reduced. Positions are reestablished as prices decline below their "central value". Decisions based on the market's "central value" are tempered by the firm's near-term interest rate and earnings outlook.

With respect to sector concentration and stock selection, W&R emphasizes ownership of immature, high-growth emerging companies. W&R employs a quality/growth matrix to classify its universe of available candidates. There are four (4) quality rankings essentially keyed to the maturity of a company. There are also four (4) growth groups: high, moderate, stable, and cyclical. For its aggressive accounts such as the SBI's, W&R believes in taking large bets on specific sectors and companies, focusing on the low quality (i.e., immature) growth and cyclical companies. In addition, W&R looks for companies with unique characteristics such as strong management or a profitable proprietary product.

The firm has been very eclectic in its choice of stocks in recent years. The firm has demonstrated a willingness to make significant bets against its benchmark portfolio 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 (See Exhibit 1).

B. PROMINENT CHARACTERISTICS

An analysis of the firm's past portfolios reveal a number of prominent risk factors and industry exposures. The following risk and sector exposure highlights were derived from Exhibit 2.

Risk Exposure Highlights: Consistent with its small capitalization, high growth investment approach, W&R's historical portfolios have exhibited distinctive exposures across a number of risk factors. In particular, W&R's exposure to market risk, small companies, growth, and earnings variability stand out.

Sector Exposure Highlights: W&R's portfolios have been concentrated in consumer durables, basic materials and technology companies. The firm has consistently underweighted the consumer nondurables, energy and utility sectors of the market. The firm has exhibited a willingness to make aggressive shifts among sectors.

C. BENCHMARK CONSTRUCTION

Benchmark Universe

The selection of Waddell & Reed's benchmark universe is tailored to the specific investment process of the manager. In this case, the initial benchmark focused on the classification system used by Waddell & Reed to rate the earnings growth pattern and earnings quality of the stocks which it considers for purchase.

Each stock in the Compustat database is assigned to a growth and quality rating. With respect to growth the firm selects stocks that exhibit either consistently high earnings growth (greater than 12% annually) or cyclical earnings with some secular positive growth trend. Stocks in these two categories receive a "1" and "3" classification respectively.

The firm also categorizes each stock in the initial universe according to earnings "quality". Earnings quality is a function of company size, maturity, return on equity (ROE), leverage, and acquisition activity. There are four quality categories A,B,C, and D. The firm seeks stocks that exhibit low quality earnings (C and D rated).

A screening process is used to produce the benchmark universe reflecting the earnings growth/earnings quality stock selection process described above. The following screening variables and parameters are applied to the Compustat database semi-annually to produce the initial benchmark universe:

- o Minimum market capitalization of $50 million.
- o Net Income (before extraordinaries) less than $10 million.

- o Zacks EPS growth forecast greater than or equal to 10%; or two or more years of down earnings in the last ten (10) years.
- o Long-term debt to equity greater than 40%.
- o Return on equity (3 year average) less than 13%.
- o Earnings volatility (year over year) greater than 40%.
- o Less than 10 year EPS and dividend history.

From this initial universe of securities the following securities are excluded:

- o ADRs, REITs, MLPs, preferred stocks and investment funds.
- o Food Processors.
- o Utilities.
- o Banks, Savings & Loans, Finance and Leasing Companies.
- o International Oils.
- o Any security restricted by the SBI (i.e. liquor, tobacco, and South Africa restrictions).

Benchmark Security Weights

The benchmark weighting scheme is designed to approximate the impact of liquidity on Waddell & Reed's ability to hold certain securities. The capitalization tiers and weights that follow were based on Waddell & Reed's historical market capitalization data. Stocks falling within a particular tier are equal-weighted.

Capitalization (Million $)	Weight (%)
50 - 499	20
500 - 999	25
1000 - 1999	25
2000 - 4999	20
5000 and over	10
	100

Waddell & Reed is an aggressive market timer. Cash has always been held at relatively high levels in the portfolio (See Exhibit 1). Based on these factors, a 20% weighting in cash is included in the manager's benchmark portfolio.

Benchmark Risk Factor and Profile

A valid benchmark should exhibit risk factor and sector exposures similar in direction and magnitude to historical portfolio exposures.

As can be seen from Exhibit 2 and the supporting tables in Appendix A, the W&R benchmark risk-sector profile shows a close similarity to that of W&R's past portfolios. The actual portfolios have exhibited a persistently higher exposure to success and trading activity risk factors.

With respect to sector weights, the actual portfolios have exhibited a persistently higher exposure to financial and technology sectors and a lower exposure to consumer nondurables relative to the benchmark portfolio.

Benchmark Coverage and Turnover

Benchmark portfolio coverage measures the extent to which the benchmark contains securities actually held by the manager. Coverage will vary depending on the level of discipline exhibited in the managers definition and implementation of its investment style. Coverage in the range of 80-90% is considered indicative of a valid benchmark. Further, the weighting of each of the manager's actual holdings should exceed the corresponding weights of the same securities in the benchmark. As shown in the table below, this occurs nearly 100% of the time.

Benchmark turnover measures the proportion of the benchmark's total market value that is applied towards the purchase of new or additions to existing security positions at each rebalancing period. A valid and investable benchmark must experience reasonable levels of turnover. It has been suggested that semi-annual turnover in the 15-30% range is consistent with realistic passive management implementation of a manager's benchmark.

A summary of W&R's benchmark coverage and turnover is shown below:

12/83-6/89 Semi-Annual Data	Actual Port. Contained in Bnmk	Actual Port. % Inv. > Bnmk % Inv.	Semi-Annual Benchmark Turnover
Average	66.954%	99.998%	20.273%
Minimum	39.829	99.141%	13.292%
Maximum	91.462	100.000%	28.642%

In terms of coverage, the Waddell & Reed benchmark has captured only 67% of the W&R actual portfolio composition since inception. A closer examination of the data indicates that coverage has greatly improved since 1987 and is now averaging close to 85%. In terms of the security weights, the W&R's actual portfolio weights are larger than those of the benchmark. Finally, the benchmark has experienced reasonable levels of turnover.

III. PERFORMANCE ANALYSIS

A. BENCHMARK EXPLANATORY POWER

Because the manager's benchmark more accurately represents the manager's investment style than does the market, it should do a better job of explaining the returns generated by the manager. One measure of the benchmark's explanatory power is the information ratio (IR). The IR compares the Value of Active Management (VAM) to the standard deviation of the VAM. A valid benchmark should produce an IR larger than that generated when the market serves as the benchmark. For the period January 1, 1984 through June 30, 1989 the following performance analysis was conducted on the actual returns generated by the SBI's portfolio. These returns were compared to two different benchmarks: (1) the manager's current benchmark, and (2) the S&P 500.

	W&R Actual vs. W&R Benchmark	W&R Actual vs. S&P 500
Cumulative Annualized VAM	0.613%	-3.827%
Annualized Standard Deviation of VAM	6.628%	7.400%
Information Ratio	0.092	-0.517
Information Ratio t-statistic	.216	-1.237
Percentage of Months VAM > 0	57.58%	39.39%

The W&R benchmark produces a much larger information ratio than does the S&P 500. The increase is due to both the increase VAM generated by the benchmark and the reduction in the standard deviation of VAM. This data clearly reflect the tremendous negative impact that W&R's style has had on its cumulative performance.

The explanatory power of the manager's benchmark can also be derived from correlations between the manager's actual portfolio returns versus those of the market (EXM), the manager's benchmark returns versus those of the market (MFT), and the manager's VAM. A valid benchmark should exhibit a positive correlation between EXM and MFT. That is, when the manager's benchmark (or investment style) performs well versus the market, one would expect the manager's portfolio will also perform well versus the market. On the other hand, a valid benchmark should over time produce a roughly zero correlation between MFT and VAM. In this instance the manager's actual performance relative to the benchmark is not affected by the performance of the benchmark relative to the market.

Waddell & Reed
Residual Correlation Matrix

	EXM	MFT	VAM
EXM	1.000		
MFT	0.499	1.000	
VAM	0.713	-.252	1.000

The W&R benchmark exhibits a positive correlation between EXM and MFT. The negative correlation between MFT and VAM, while too small to cause concern, suggests that when the manager's benchmark performs well versus the market, the manager's actual portfolio has had difficulty outperforming the benchmark.

B. PERFORMANCE RELATIVE TO THE WILSHIRE 5000

On a cumulative basis Waddell & Reed has performed poorly relative to the broad market since the beginning of 1984. As shown in Exhibit 3, the equity-only performance of Waddell & Reed's customized benchmark portfolio has significantly lagged the Wilshire 5000. This points to a poor environment for the firm's investment style over the full period analyzed. Because W&R has maintained significant cash holdings, the total portfolio returns have lagged the Wilshire 5000 as well.

C. PERFORMANCE ATTRIBUTION

Equity-only

The equity-only performance of the manager's actual portfolio [illegible] lagged that of the equity-only customized benchmark [illegible]ating that the sector and stock selection bets of [illegible]ager have not added value (See Exhibits 3 and 4). [illegible]is, over the period analyzed, the manager has don[illegible] poor job of selecting stocks within his area of expertise or universe.

The stock selection and sector bets can be evaluated by comparing the equity-only performance of the SBI account to the equity-only benchmark performance.

For the full period, the actual equity-only account performance underperformed the equity-only benchmark portfolio (73.0% vs. 88.3%). Upon closer examination, this underperformance is largely due to the portfolio's abysmal equity-only performance during one year, 1984 (-23.5% vs. -6.2%). A sizable majority of this underperformance can be attributed to poor stock selection, especially in the technology and finance sectors, and to a lesser extent to the consumer durables and capital goods sector. In addition the firm's underexposure to the utility sector also hurt relative performance.

A different picture emerges when 1984 is removed from the cumulative equity-only performance. Excluding 1984, the equity-only portfolio outperformed the equity-only benchmark on a cumulative basis (126.1% vs. 100.6%).

The equity-only portfolio performance has been quite variable. This is the result of the firm's aggressive and concentrated portfolios. The equity-only portfolio outperformed the equity-only benchmark in only 10 of 22 quarters (45% of the time). Again, when 1984 is dropped the results improve: the equity-only portfolio outperforms the equity-only benchmark 9 of 18 quarters (50% of the time). More recently, through the first half of 1989, Waddell & Reed has produced a 6.0 percentage point advantage over the equity-only benchmark (20.9% vs. 14.9%). This is a good example of the variability of returns to be expected from the firm's aggressive investment style.

Market Timing

Because the market has been up consistently since 1984, any manager avoiding a fully invested equity position will show negative performance relative to the market.

W&R has rarely lowered its cash below the benchmark level. For the most part, this allowed the firm to avoid the negative performance of the following poor equity markets:

- 1st and 2nd Quarters 1984
- 3rd Quarter 1985
- 3rd Quarter 1986
- 4th Quarter 1987

Total Fund

Within the context of the total portfolio (i.e. all portfolio investments including cash holdings) the firm has outperformed its customized benchmark portfolio (See Exhibit 5). Over the full period analyzed, the manager's cumulative performance was 90.9% versus the benchmark's return of 84.6%. While the manager's stock and sector selection decisions have hurt the total portfolio performance, the manager's market timing decisions have added value.

IV. SUMMARY OF BOARD/IAC ACTIONS TO DATE

On January 14, 1983 the Board approved a recommendation to hire Waddell & Reed Asset Management. The firm was funded on March 1, 1983 with $10 million of assets from the Supplemental Investment Fund.

From March 1983 through August 1985, W&R served as a manager for the Growth Share Account in the Supplemental investment Fund. Since September 1985, W&R has managed assets in the Supplemental Investment Fund, the Basic Retirement Funds and the Variable Annuity Fund as part of the SBI's active stock manager pool. During that time the firm has received additional SBI assets totaling $110 million.

Waddell & Reed was placed on probation at the Board meeting held on November 25, 1987. The firm was placed on probation due to the difficulty of designing an appropriate benchmark portfolio for the firm's investment style. At its March 2, 1988 meeting the Board removed Waddell & Reed from probation because the firm had satisfactorily resolved this issue.

At its meeting on June 2, 1989, the SBI requested that the IAC perform a special review of the performance of Waddell & Reed. At issue is the Board's concern regarding the firm's cumulative performance versus the broad market.

EXHIBIT 1

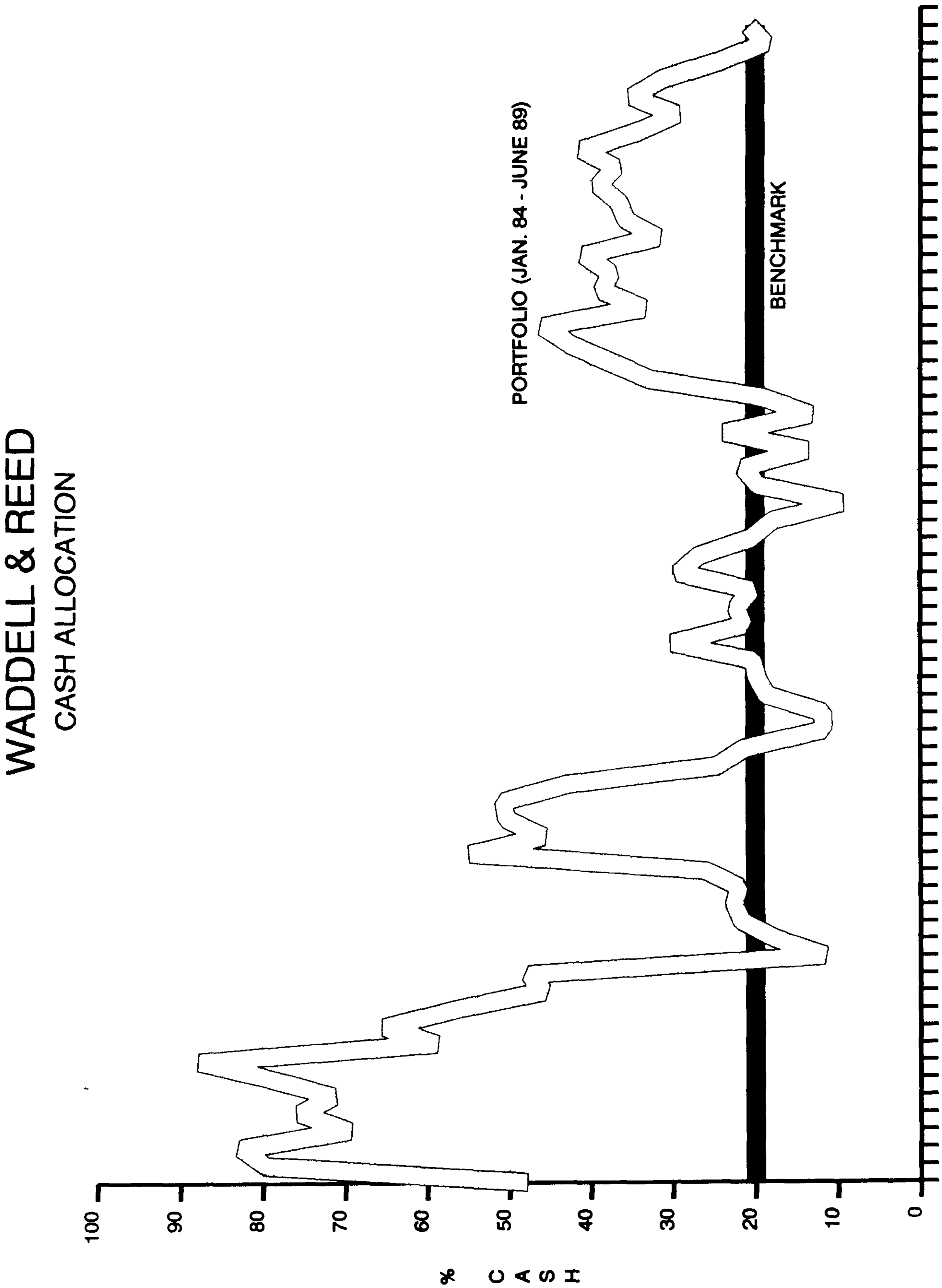

WADDELL & REED
CASH ALLOCATION
PORTFOLIO (JAN. 84 - JUNE 89)
BENCHMARK
% CASH
100
90
80
70
60
50
40
30
20
10
0
84
85
86
87
88

EXHIBIT 2

WADDELL & REED

Past Portfolio Data
Available Monthly (1/84 - 6/89)

RISK FACTOR EXPOSURES

	Beta	Var in Mkts	Success	Size	Trading Activity	Growth	E/P	B/P	Earn Var	Finl Lev	Foreign Income	Labor Int	Div Yield	% Cash	% S&P
Minimum Stock	0.500	-1.465	-4.281	-3.919	-1.478	-1.856	-3.858	-1.454	-0.822	-1.341	-0.935	-3.719	-1.663	9.6	56.3
Portfolio Average	1.210	0.646	0.154	-0.694	0.823	0.524	-0.121	-0.005	0.519	0.023	0.073	0.357	-0.483	36.5	68.5
Maximum Stock	2.197	4.383	3.606	2.150	4.500	3.347	3.425	4.500	4.099	4.500	4.500	2.911	3.221	87.7	81.7

SECTOR WEIGHTS

Actual Portfolio Weight Less S&P 500 Weight

	Cons Non-Dur	Cons Durables	Basic Materials	Capital Goods	Energy	Technology	Transport	Utilities	Financial
Portfolio Minimum	-12.20	0.72	-9.46	-7.27	-18.96	-5.32	-2.30	-13.80	-8.36
Portfolio Average	-3.25	4.08	5.49	0.93	-7.46	5.45	3.25	-10.11	1.62
Portfolio Maximum	5.18	22.82	14.35	14.20	2.99	17.36	10.01	4.84	16.06

See Appendix A for monthly data.
See Appendix B for glossary of risk factors.

EXHIBIT 3

/

WADDELL & REED ASSET MANAGEMENT

Comparison of Customized Benchmark Portfolio Performance
With Wilshire 5000

(all figures are percentages)

	EQUITY-ONLY Actual	EQUITY-ONLY Benchmark	TOTAL FUND Actual	TOTAL FUND Benchmark	WILSHIRE 5000
1Q 1984	-13.9	-7.4	-2.2	-5.4	-4.2
2Q	-10.1	-4.1	-0.9	-2.7	-2.8
3Q	-2.2	6.6	1.0	6.0	9.2
4Q	1.1	-1.0	1.5	-0.3	1.3
	-23.5	-6.2	-0.7	-2.8	3.0
1Q 1985	8.0	9.7	5.2	8.2	10.3
2Q	8.8	5.4	7.0	4.7	7.5
3Q	-5.0	-4.8	-2.0	-3.4	-4.3
4Q	18.3	15.9	10.4	13.0	16.8
	32.2	27.5	21.7	23.6	32.6
1Q 1986	19.8	14.8	16.4	12.1	14.4
2Q	2.4	2.9	2.0	2.7	5.8
3Q	-8.3	-9.0	-6.4	-6.9	-7.7
4Q	6.2	3.3	5.1	3.0	4.0
	19.4	11.0	16.8	10.4	16.1
1Q 1987	22.9	27.5	18.4	22.0	21.2
2Q	2.6	4.2	2.4	3.6	3.3
3Q	11.6	7.1	9.8	6.0	6.2
4Q	-25.1	-26.9	-20.8	-21.0	-23.1
	5.4	4.0	5.4	5.9	2.3
1Q 1988	12.8	13.6	8.1	11.1	8.0
2Q	9.8	6.5	7.3	5.5	6.6
3Q	-9.6	-2.5	-5.9	-1.6	0.2
4Q	0.4	0.7	1.2	0.9	2.3
	12.4	18.6	10.4	16.4	17.9
1Q 1989	6.7	7.6	5.2	6.5	7.4
2Q	13.3	6.8	10.4	5.9	8.5
Cumulative	73.0	88.3	90.9	84.6	123.1

EXHIBIT 4

W&R EQUITY-ONLY

Normalized Cumulative Returns

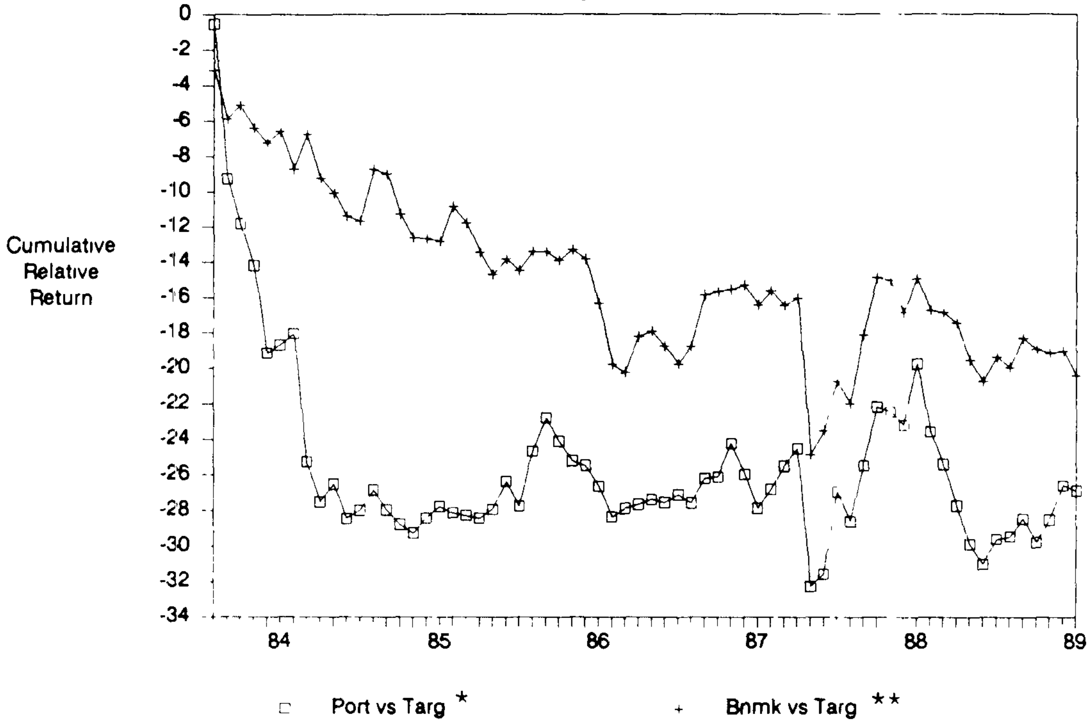
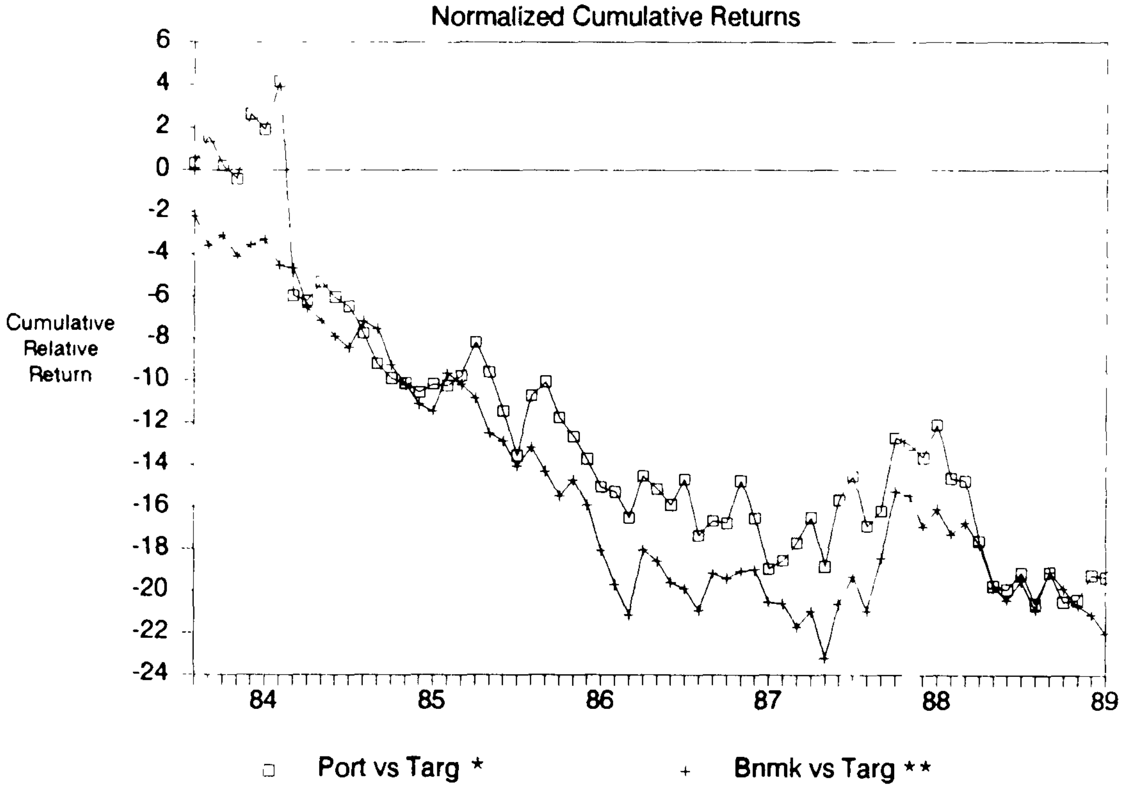


EXHIBIT 5

W&R TOTAL FUND

Normalized Cumulative Returns



* Actual Portfolio vs. the Wilshire 5000
** Benchmark Portfolio vs. the Wilshire 5000

APPENDIX A

HISTORICAL RISK-SECTOR EXPOSURES

WADDELL & REED
HISTORICAL PORTFOLIO SECTOR WEIGHTS

PERIOD	CONS NON-DUR	CONS DURABLE	BASIC MAT	CAPTIAL GOODS	ENERGY	TECH	TRANSP	UTIL	FINL
8401	18.27	9.17	3.30	6.88	0.42	29.37	6.04	10.94	15.61
8404	20.69	21.24	1.12	22.31	0.00	6.37	5.26	0.49	22.52
8407	23.56	28.49	1.16	0.79	0.00	17.77	12.52	0.00	15.71
8410	28.37	13.02	0.95	5.31	4.01	27.92	1.77	4.42	14.23
8501	19.57	9.38	0.94	3.71	0.00	24.77	1.65	17.87	22.12
8504	15.75	11.87	12.98	4.03	2.30	11.21	7.88	13.85	20.14
8507	20.45	10.68	15.37	4.76	2.10	7.19	5.76	15.00	18.69
8510	25.20	7.18	17.95	6.58	5.62	10.50	4.91	3.86	18.21
8601	26.05	8.00	21.07	6.79	3.57	12.14	8.44	0.53	13.41
8604	21.45	8.41	19.16	5.78	2.75	13.35	7.14	0.59	21.37
8607	34.49	6.40	18.56	5.64	0.52	10.18	6.32	0.77	17.11
8610	27.03	5.62	16.83	9.66	10.02	12.74	5.67	1.92	10.52
8701	30.28	9.02	17.63	9.18	9.97	8.73	3.78	0.89	10.51
8704	30.64	10.75	12.71	8.90	12.03	16.79	1.95	2.68	3.56
8707	33.82	7.95	12.96	10.11	4.54	25.54	1.64	0.00	3.44
8710	27.11	6.41	12.50	10.45	6.72	18.69	6.62	8.68	2.82
8801	31.40	8.69	20.82	11.55	5.26	16.98	3.98	1.29	0.03
8804	20.43	8.64	23.16	13.76	10.00	15.75	5.84	2.21	0.20
8807	21.18	9.11	21.50	14.19	3.82	21.17	8.21	0.76	0.06
8810	28.32	8.97	24.88	15.32	4.64	11.26	6.57	0.00	0.05
8901	34.36	12.52	16.46	12.09	3.53	7.39	6.33	0.00	7.31
Minimum	15.75	5.62	0.94	0.79	0.00	6.37	1.64	0.00	0.03
Average	25.64	10.55	13.90	8.94	4.37	15.51	5.63	4.13	11.32
Maximum	34.49	28.49	24.88	22.31	12.03	29.37	12.52	17.87	22.52

WADDELL & REED
BENCHMARK PORTFOLIO SECTOR WEIGHTS

PERIOD	CONS NON-DUR	CONS DURABLE	BASIC MAT	CAPTIAL GOODS	ENERGY	TECH	TRANSP	UTIL	FINL
8401	26.77	8.34	21.59	12.43	10.91	12.39	6.11	0.22	1.24
8407	28.85	7.16	20.45	11.00	12.36	12.77	5.97	0.26	1.17
8501	28.16	8.46	22.40	10.77	10.73	12.69	5.07	0.59	1.12
8507	31.75	6.09	20.59	10.93	10.51	12.46	6.25	0.37	1.05
8601	31.45	7.40	21.04	10.03	10.03	12.09	6.41	0.39	1.15
8607	36.19	7.49	18.76	11.18	8.59	9.76	6.06	0.25	1.70
8701	35.34	7.77	18.62	10.83	8.48	11.31	5.85	0.82	0.97
8707	37.06	7.67	18.64	10.94	7.36	12.13	5.30	0.26	0.64
8801	37.41	7.01	20.08	10.03	8.04	11.48	5.04	0.29	0.60
8807	36.45	7.04	19.47	10.65	7.96	11.71	5.89	0.20	0.65
8901	37.53	7.63	18.45	10.81	8.02	10.58	6.18	0.22	0.58
Minimum	26.77	6.09	18.45	10.03	7.36	9.76	5.04	0.20	0.58
Average	33.36	7.46	20.01	10.87	9.36	11.76	5.83	0.35	0.99
Maximum	37.53	8.46	22.40	12.43	12.36	12.77	6.41	0.82	1.70

S&P 500
HISTORICAL PORTFOLIO SECTOR WEIGHTS

PERIOD	CONS NON-DUR	CONS DURABLE	BASIC MAT	CAPTIAL GOODS	ENERGY	TECH	TRANSP	UTIL	FINL
8401	25.26	6.05	10.53	8.49	17.05	12.00	2.81	11.32	6.49
8404	24.91	5.57	10.57	8.11	18.86	11.69	2.65	11.18	6.46
8407	26.59	5.67	9.98	8.06	17.91	11.68	2.51	11.65	5.95
8410	26.00	5.75	9.65	8.22	17.36	11.86	2.59	12.20	6.38
8501	26.05	5.83	9.64	8.26	16.20	11.69	2.43	13.03	6.85
8504	27.11	5.44	9.50	8.24	16.30	11.00	2.45	12.96	7.01
8507	28.40	5.28	8.99	8.68	14.02	10.77	2.51	13.66	7.69
8510	28.14	5.20	9.37	8.62	14.45	11.32	2.53	13.14	7.22
8601	28.31	5.13	9.41	8.55	12.83	11.88	2.43	13.48	7.97
8604	29.87	5.73	9.75	8.61	11.03	10.83	2.53	12.97	8.67
8607	32.20	5.24	9.43	8.21	11.04	10.30	2.24	13.32	8.02
8610	30.38	4.90	9.68	8.77	12.38	9.76	2.32	13.93	7.88
8701	31.29	4.82	10.08	8.69	12.28	9.12	2.27	13.87	7.58
8704	31.63	5.20	10.68	8.60	12.76	10.05	2.17	11.82	7.09
8707	31.71	5.41	10.50	8.38	13.19	10.25	2.34	11.36	6.86
8710	32.17	5.08	11.11	8.80	11.96	10.20	2.48	11.43	6.76
8801	32.07	4.79	11.19	8.37	12.14	9.92	2.33	12.87	6.32
8804	32.37	5.23	10.81	8.74	12.69	8.92	2.21	12.70	6.33
8807	30.80	5.17	11.10	8.72	12.07	9.51	2.11	12.71	7.81
8810	32.17	4.98	10.53	8.43	11.89	8.44	2.14	13.00	8.41
8901	31.88	4.88	10.46	8.39	12.06	8.55	2.19	13.29	8.30
8904	31.92	5.18	10.27	8.00	12.37	7.55	2.10	13.45	9.15
8907	32.81	4.95	9.95	8.00	11.64	7.19	2.06	13.99	9.40
Minimum	24.91	4.79	8.99	8.00	11.03	7.19	2.06	11.18	5.95
Average	29.74	5.28	10.14	8.43	13.67	10.20	2.37	12.75	7.42
Maximum	32.81	6.05	11.19	8.80	18.86	12.00	2.81	13.99	9.40

WADDELL & REED ASSET MANAGEMENT
HISTORICAL PORTFOLIO RISK DATA

PERIOD	BETA	VIM	SCS	SIZ	TRA	GRO	E/P	B/P	EVR	FLV	FOR	LBI	YLD
8401	1.316	0.982	0.775	-1.197	0.910	0.945	-0.291	-0.364	0.645	0.157	-0.344	0.208	-0.724
8404	1.204	0.421	0.018	-0.453	0.496	0.661	0.106	-0.261	0.675	0.186	0.491	0.458	-0.503
8407	1.453	1.118	-0.651	-0.529	1.737	1.315	0.818	-0.095	1.963	0.108	0.311	0.277	-0.777
8410	1.234	0.578	-0.224	-0.314	1.089	0.514	0.112	-0.049	0.532	-0.112	-0.016	0.277	-0.429
8501	1.174	0.522	0.054	-0.414	0.924	0.511	0.026	0.066	0.580	0.015	-0.155	0.213	-0.380
8504	1.159	0.421	0.163	-0.391	0.813	0.323	0.155	0.202	0.567	0.144	-0.051	0.054	-0.114
8507	1.143	0.435	0.289	-0.320	0.665	0.204	0.244	0.161	0.458	0.099	-0.111	0.069	-0.053
8510	1.165	0.408	0.210	-0.386	0.534	0.333	0.083	0.072	0.413	0.253	0.008	0.219	-0.273
8601	1.208	0.602	0.264	-0.461	0.589	0.381	0.023	-0.022	0.390	0.136	0.063	0.283	-0.430
8604	1.205	0.624	0.235	-0.341	0.532	0.340	-0.127	0.178	0.397	0.171	0.156	0.287	-0.419
8607	1.208	0.646	0.275	-0.387	0.486	0.368	-0.035	-0.127	0.203	0.041	0.147	0.372	-0.513
8610	1.118	0.288	0.153	-0.161	0.404	0.228	0.029	0.024	0.158	-0.016	0.230	0.280	-0.236
8701	1.112	0.284	0.145	-0.335	0.488	0.174	-0.065	0.141	0.324	0.005	0.388	0.250	-0.176
8704	1.182	0.549	0.109	-0.630	0.691	0.353	-0.138	0.085	0.441	0.075	0.363	0.260	-0.377
8707	1.238	0.577	0.135	-0.526	0.806	0.574	-0.180	-0.015	0.404	-0.030	0.408	0.489	-0.548
8710	1.200	0.642	0.221	-0.871	0.918	0.501	-0.335	-0.040	0.548	0.027	0.129	0.278	-0.380
8801	1.240	0.856	0.239	-1.277	1.196	0.785	-0.358	-0.052	0.717	0.003	-0.177	0.502	-0.630
8804	1.211	0.747	0.170	-1.181	1.062	0.717	-0.349	-0.010	0.686	-0.044	-0.348	0.473	-0.641
8807	1.210	0.736	0.319	-1.004	0.969	0.686	-0.235	-0.084	0.587	-0.214	-0.110	0.528	-0.714
8810	1.248	0.867	0.063	-1.243	1.070	0.721	-0.322	-0.041	0.699	-0.164	-0.198	0.543	-0.762
8901	1.248	0.754	0.140	-0.822	0.898	0.607	-0.114	0.117	0.658	0.059	-0.272	0.490	-0.576
MIN	1.112	0.284	-0.651	-1.277	0.404	0.174	-0.358	-0.364	0.158	-0.214	-0.348	0.054	-0.777
AVG	1.213	0.622	0.148	-0.631	0.823	0.535	-0.045	-0.005	0.574	0.043	0.044	0.324	-0.460
MAX	1.453	1.118	0.775	-0.161	1.737	1.315	0.818	0.202	1.963	0.253	0.491	0.543	-0.053

WADDELL & REED ASSET MANAGEMENT
HISTORICAL BENCHMARK RISK DATA

PERIOD	BETA	VIM	SCS	SIZ	TRA	GRO	E/P	B/P	EVR	FLV	FOR	LBI	YLD
8401	1.191	0.543	0.290	-0.985	0.504	0.538	-0.366	-0.099	0.357	0.266	-0.050	0.312	-0.551
8407	1.175	0.403	-0.090	-0.829	0.511	0.492	-0.275	-0.052	0.334	0.249	-0.078	0.254	-0.419
8501	1.176	0.442	-0.103	-0.886	0.468	0.545	-0.210	0.123	0.322	0.235	-0.093	0.263	-0.498
8507	1.177	0.471	-0.045	-0.974	0.401	0.533	-0.229	0.017	0.294	0.240	-0.072	0.294	-0.512
8601	1.179	0.516	-0.069	-1.030	0.335	0.562	-0.314	0.020	0.361	0.304	-0.044	0.304	-0.555
8607	1.185	0.512	-0.130	-1.129	0.348	0.595	-0.288	-0.001	0.383	0.341	-0.105	0.337	-0.594
8701	1.185	0.492	-0.137	-1.087	0.379	0.612	-0.237	0.028	0.338	0.311	-0.056	0.380	-0.600
8707	1.192	0.545	-0.014	-1.271	0.367	0.642	-0.260	-0.032	0.411	0.333	-0.073	0.405	-0.620
8801	1.151	0.584	-0.002	-1.055	0.373	0.559	-0.151	0.052	0.320	0.247	-0.093	0.388	-0.536
8807	1.159	0.630	-0.054	-1.111	0.406	0.580	-0.200	-0.006	0.353	0.211	-0.122	0.429	-0.607
8901	1.182	0.603	-0.041	-1.112	0.370	0.538	-0.194	0.063	0.343	0.397	-0.143	0.417	-0.568
MIN	1.151	0.403	-0.137	-1.271	0.335	0.492	-0.366	-0.099	0.294	0.211	-0.143	0.254	-0.620
AVG	1.177	0.522	-0.036	-1.042	0.406	0.563	-0.248	0.010	0.347	0.285	-0.084	0.344	-0.551
MAX	1.192	0.630	0.290	-0.829	0.511	0.642	-0.151	0.123	0.411	0.397	-0.044	0.429	-0.419

APPENDIX B

GLOSSARY OF FUNDAMENTAL RISK MODEL TERMS

Staff analysis of a manager's past portfolios, in part, utilizes the BARRA E2 fundamental risk model. The BARRA model contains a number of risk factors that staff has found to correlate highly with managers' investment styles. That is, managers tend to exhibit consistent exposures to many of these risk factors over time. The benchmark construction process includes identifying these persistent exposures and capturing them in the benchmark portfolio. The following definitions describe the risk factors that staff uses in its manager monitoring.

BETA

Beta is a forecast of the sensitivity of a stock's return to the return on the market portfolio. The BARRA E2 beta is a forecasted beta, based on a company's exposure to thirteen common risk factors and fifty-five industry.

BOOK-TO-PRICE (B/P)

Composed of a single element. It is the book value of a company's common equity dividend by market capitalization.

EARNINGS-TO-PRICE (E/P)

Incorporates several variants of a company's earnings-price ratio. It includes the current earnings-price ratio, the normalized (5 year) earnings-price ratio, and analysts' forecasted earnings-price ratio as compiled by IBES.

EARNINGS VARIABILITY (EVR)

Indicates the variability of a company's earnings. It is comprised of six descriptors: historical earnings variance, cash flow variance, earnings covariability with the economy, the level of concentration of the company's earnings from various sources, the incidence of extraordinary items, and the variability of the company's earnings estimates as compiled by IBES.

FINANCIAL LEVERAGE (FLV)

Measures the extent to which a company utilizes financial leverage to finance its operations. It is made up of three descriptors: debt-to-total assets (at market), debt-to-total assets (at book), and uncovered fixed charges.

FOREIGN INCOME (FOR)

Composed of a single descriptor: the extent to which a company's operating income is generated outside of the U.S.

GROWTH (GRO)

Indicates potential growth in a company's earnings over the next five years. Seven descriptors make up this factor: most recent five-year dividend payout, most recent five-year dividend yield, most recent five-year earnings-price ratio, change in capital structure, normalized (5 year) earnings-price ratio, recent earnings change, and forecasted earnings growth.

LABOR INTENSITY (LBI)

Measures the degree to which labor, as opposed to capital, is used by a company as a factor of production. It is derived from three descriptors: labor expense relative to assets, fixed plant and equipment (inflation-adjusted) relative to equity, and depreciated plant value relative to gross plant value.

SIZE (SIZ)

Indicates the relative size of the company. It includes three descriptors: market capitalization, total assets, and the length of earnings history.

SUCCESS (SCS)

Describes the extent to which a company has been "successful" in the recent past, in terms of both earnings and stock prices. It is composed of six descriptors: most recent five-year earnings growth, most recent one-year earnings growth, forecasted next year's earnings growth, historical alpha, and relative strength. (The last two descriptors are calculated over the most recent year and most recent five-years.)

TRADING ACTIVITY (TRA)

Measures the trading characteristics of a company's stock. Six descriptors constitute this factor: most recent five-year share turnover, most recent year share turnover, quarterly share turnover, stock price, trading volume relative to stock price variance, and the number of IBES analysts following the stock.

VARIABILITY IN MARKETS (VIM)

Measures the volatility of a stock's return related to its past behavior and the behavior of its options. Variants of the factor are calculated for optioned stocks, listed but not optioned stocks, and thinly traded stocks. A partial list of the descriptors that make up this factor include: historical beta, option-implied standard deviation of return, daily standard deviation of return, cumulative price range, stock price, and share turnover.

YIELD (YLD)

Composed of one descriptor: a predictor of dividend yield for the coming year.

FACTOR EXPOSURE LEVEL

Factor exposures are calibrated relative to the approximately 1400 largest market capitalization (HICAP) companies. An exposure level of 0 for a particular stock to a particular factor indicates that the stock has the same exposure as the capitalization-weighted average of the HICAP stocks. Around that zero exposure, deviations are measured in standard deviation units. Thus, an exposure level of +1 indicates that the stock has an exposure to the factor larger than roughly 68% of the HICAP stocks.

ACTIVE EQUITY MANAGERS

Value of Active Management Reports

Second Quarter 1989

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

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

Staff Recommendations
Staff recommends the following actions concerning manager status:

- No action required.

Managers	Market Value 6/30/89 (Thousands)	Quarter Ending 6/30/89 Actual	Bmrk	Calendar Year To Date Actual	Bmrk	Year Ending 6/30/89 Actual	Bmrk	(Annualized) Since 1/1/84 Actual	Bmrk
Alliance	$363,078	11.7%	8.3%	22.8%	15.6%	19.2%	16.0%	19.0%	12.8%
BMI	84,831	3.5	6.7	11.9	15.8	8.7	16.2	10.0	12.6
Concord	106,773	7.1	9.0						
Forstmann	188,639	2.1	6.2	10.5	12.9	10.4	14.9	14.6	12.8
Franklin	109,681	10.1	9.0						
IDS	156,266	7.5	8.6	16.3	15.7	13.7	18.7	15.4	15.7
IAI	112,063	6.5	7.2	14.3	14.1	15.2	18.4	13.9	15.6
Lieber & Co.	111,646	6.1	6.4	13.7	14.0	14.8	13.1	13.5	12.0
Rosenberg	108,696	9.1	8.7						
Sasco	107,387	7.9	6.7						
Waddell & Reed	164,939	10.4	5.9	16.1	12.8	10.6	12.0	12.5	11.8
Aggregate Active*		7.9	7.6	16.8	14.8	13.9	16.1	15.7	13.8
Wilshire 5000			8.5%		16.6%		19.5%		15.7%

* Historical performance reflects composite of current managers only.

ALLIANCE CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Jack Koltes

ASSETS UNDER MANAGEMENT: $363,077,775

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION

(Reported By Exception)

The firm's exceptional strengths continue to be:

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

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
Alliance Capital Actual	11 7%	22.8%	19 2%	19 0%
Alliance Capital Benchmark	8.3	15.6	16.0	12.8

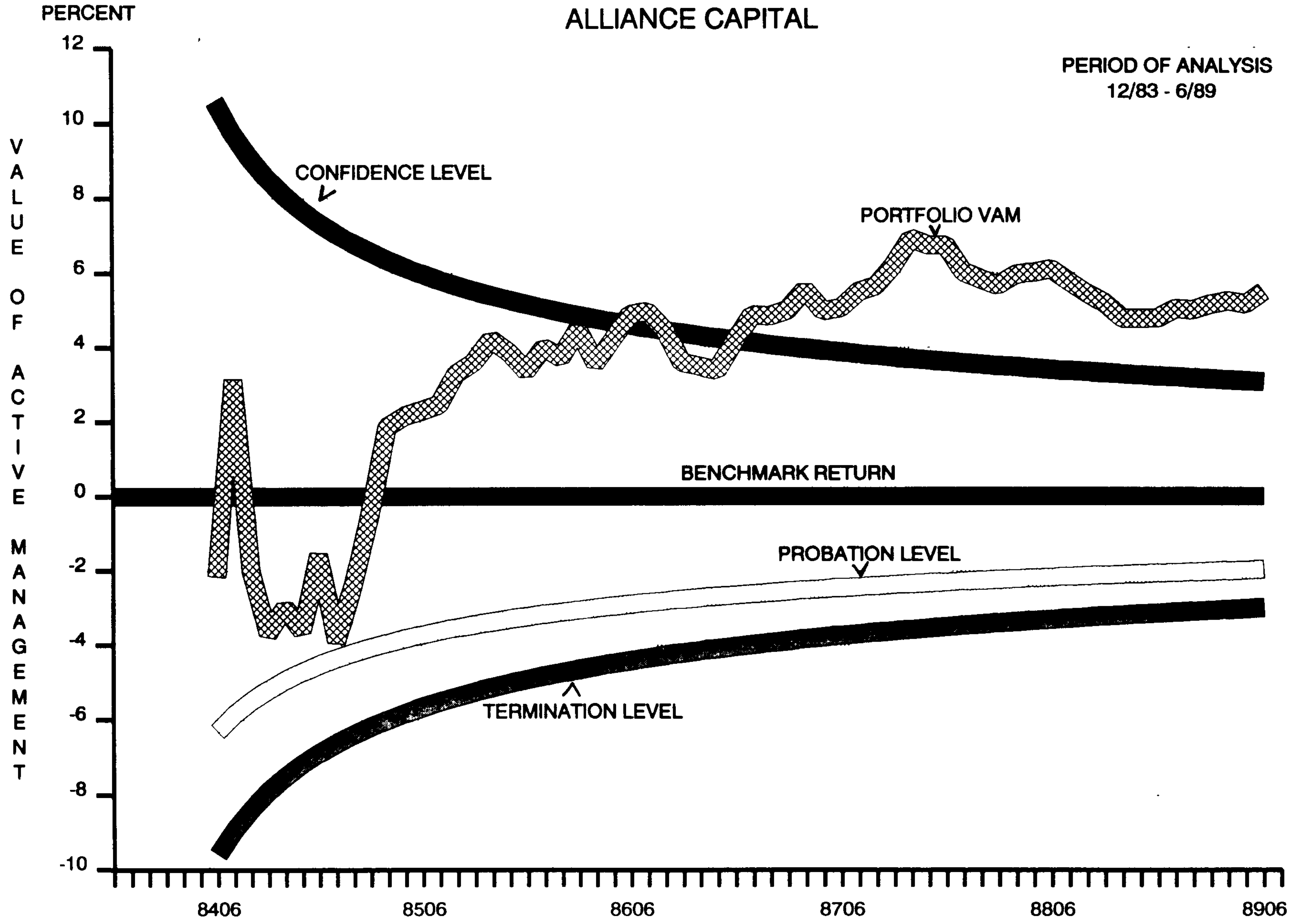
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

ALLIANCE CAPITAL



BMI CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Frank Houghton, James Awad

ASSETS UNDER MANAGEMENT: $84,830,517

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Lack of clearly identifiable leadership.

This issue, while not serious, warrants continued monitoring.

The firm's exceptional strengths continue to be:

- Extensive securities research process.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
BMI Capital Actual	3.5%	11.9%	8.7%	10.0%
BMI Capital Benchmark	6.7	15.8	16.2	12.6

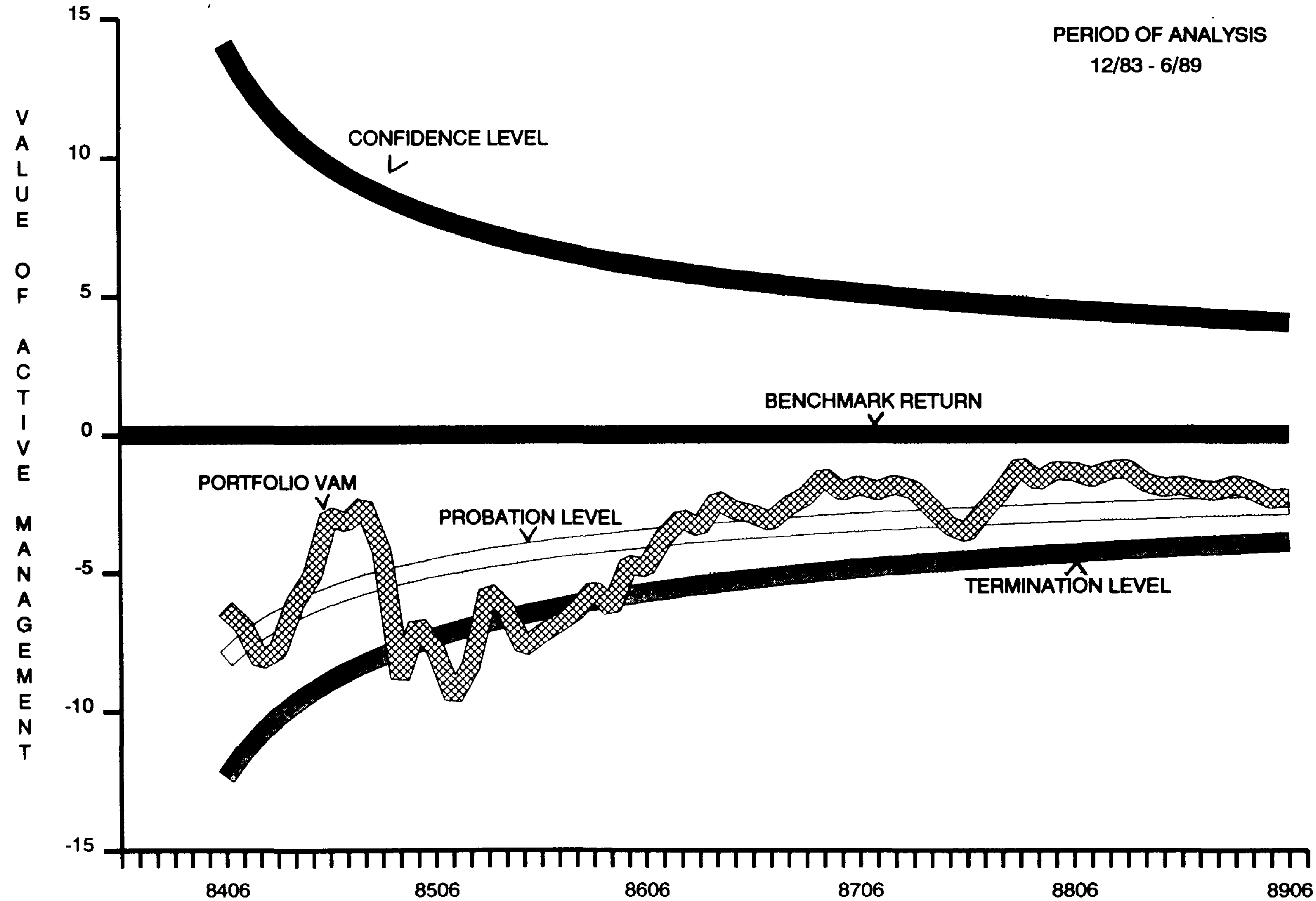
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

BMI CAPITAL



FORSTMANN LEFF ASSOCIATES

PORTFOLIO MANAGER: Joel Leff **ASSETS UNDER MANAGEMENT: $188,638,481**

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Relatively high turnover among firm's professionals.

This issue, while not serious, remains outstanding.

The firm's exceptional strengths continue to be:

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

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
Forstmann-Leff Actual	2 1%	10.5%	10.4%	14.6%
Forstmann-Leff Benchmark	6.2	12.9	14.9	12.8

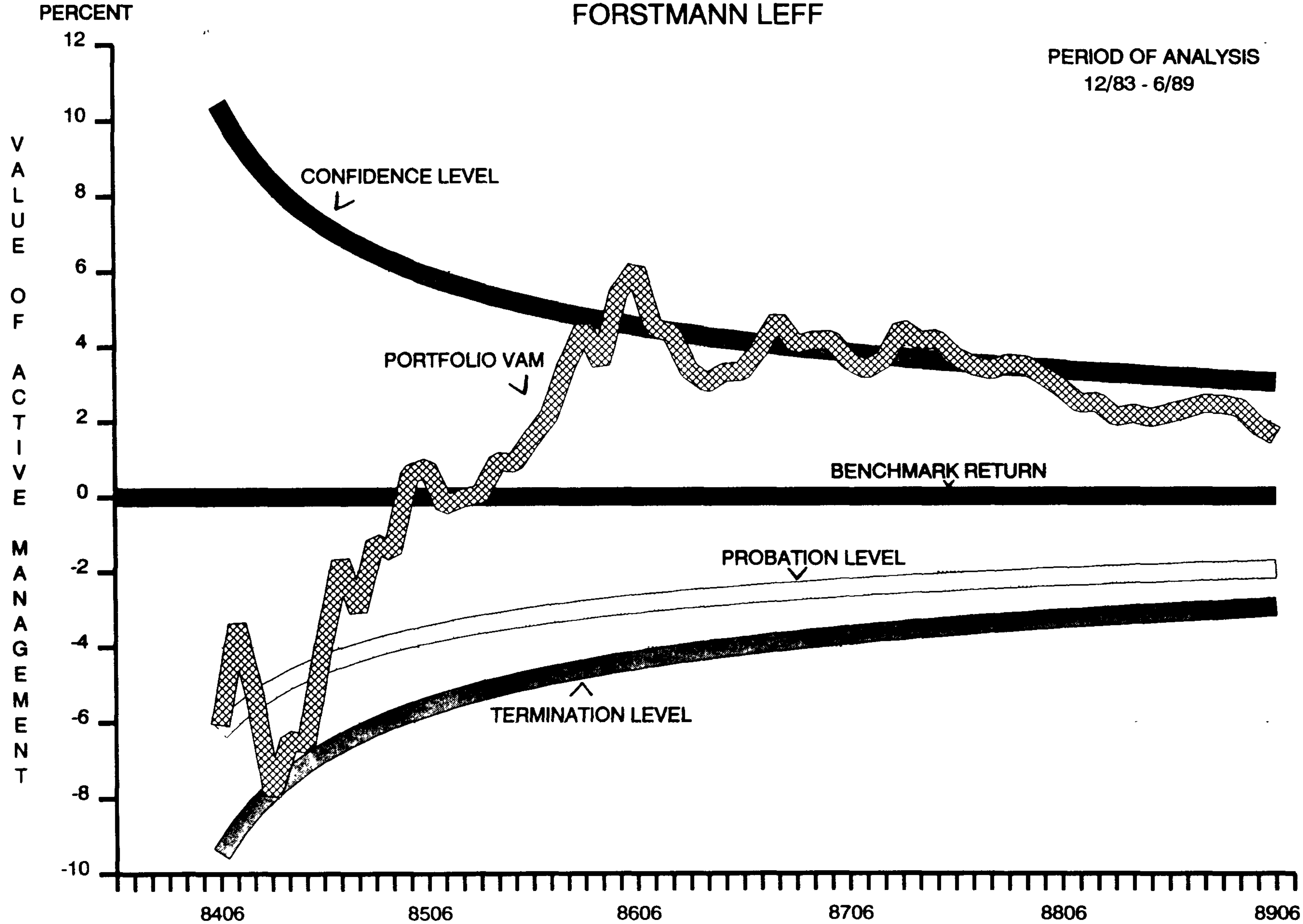
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

FORSTMANN LEFF



IDS ADVISORY

PORTFOLIO MANAGER: Mitzi Malevich

ASSETS UNDER MANAGEMENT: $156,266,245

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.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
IDS Advisory Actual	7.5%	16.3%	13.7%	15.4%
IDS Advisory Benchmark	8.6%	15.7	18.7	15.7

(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.
- Account load for portfolio managers is large.

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

The firm's exceptional strengths continue to be:

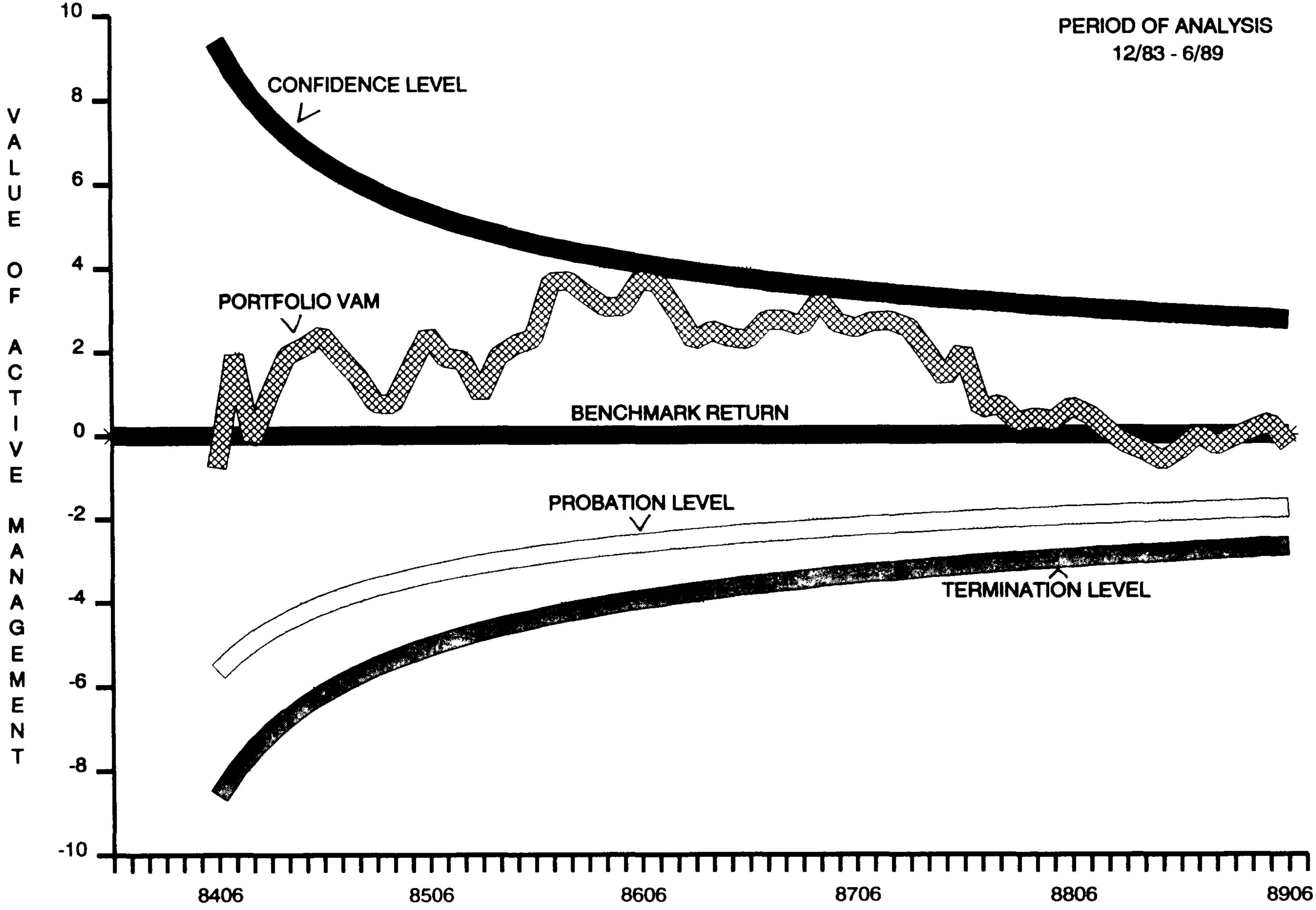
- Investment style consistently and successfully applied over a variety of market environments.

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

IDS ADVISORY



INVESTMENT ADVISERS

PORTFOLIO MANAGER: Charles Webster

ASSETS UNDER MANAGEMENT: $112,063,443

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.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
IAI Actual	6.5%	14.3%	15.2%	13.9%
IAI Benchmark	7.2	14.1	18.4	15.6

(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.
- Lack of familiarity with needs of large institutional clients.

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

The firm's exceptional strengths continue to be:

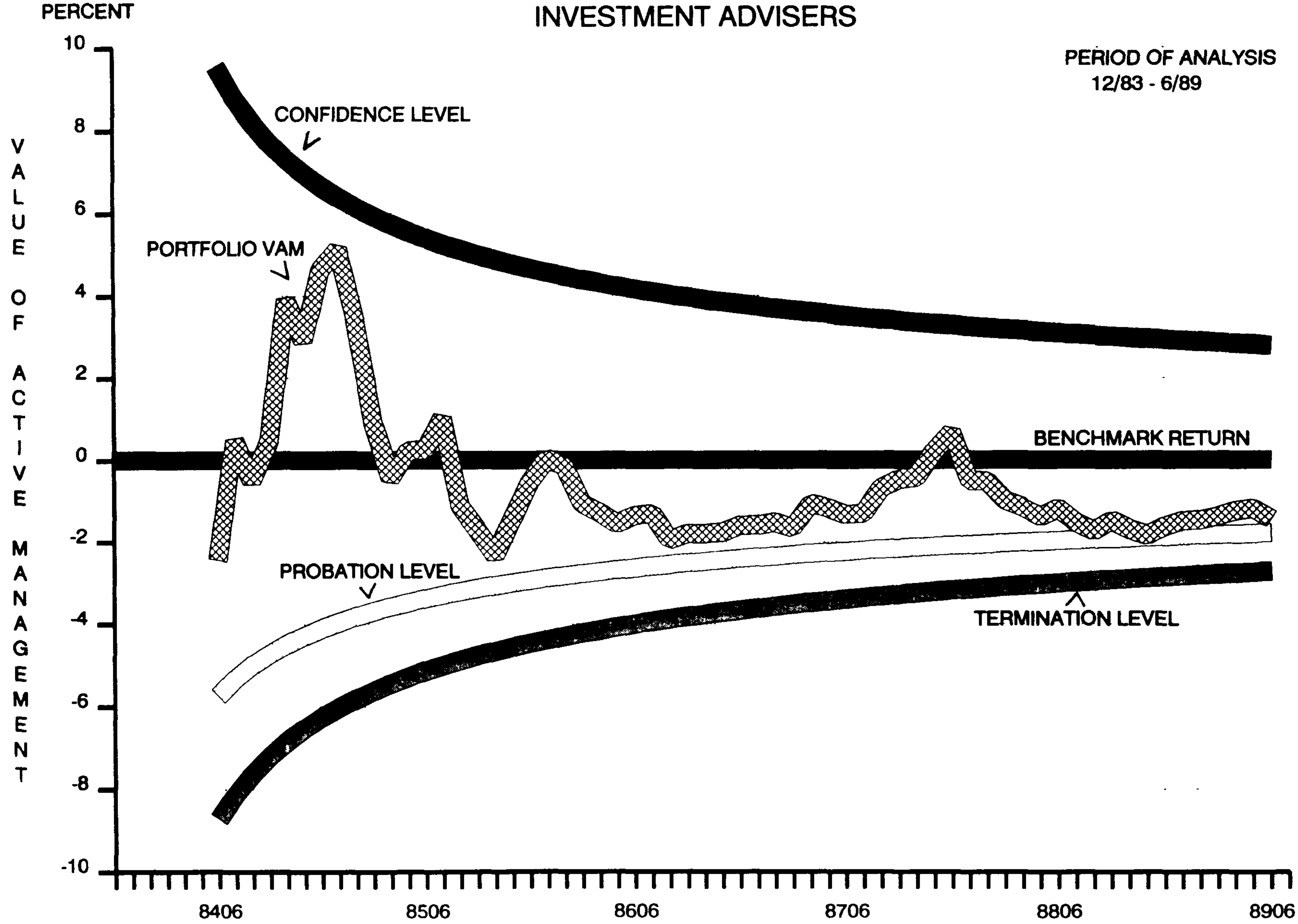
- Investment style consistently applied over a variety of market environments.

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

INVESTMENT ADVISERS



LIEBER & COMPANY

PORTFOLIO MANAGER: Stephen Lieber, Nola Falcone

ASSETS UNDER MANAGEMENT: $111,646,039

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.

This item, while not serious, warrants additional monitoring.

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	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
Lieber & Co. Actual	6.1%	13.7%	14.8%	13.5%
Lieber & Co. Benchmark	6.4	14.0	13.1	12.0

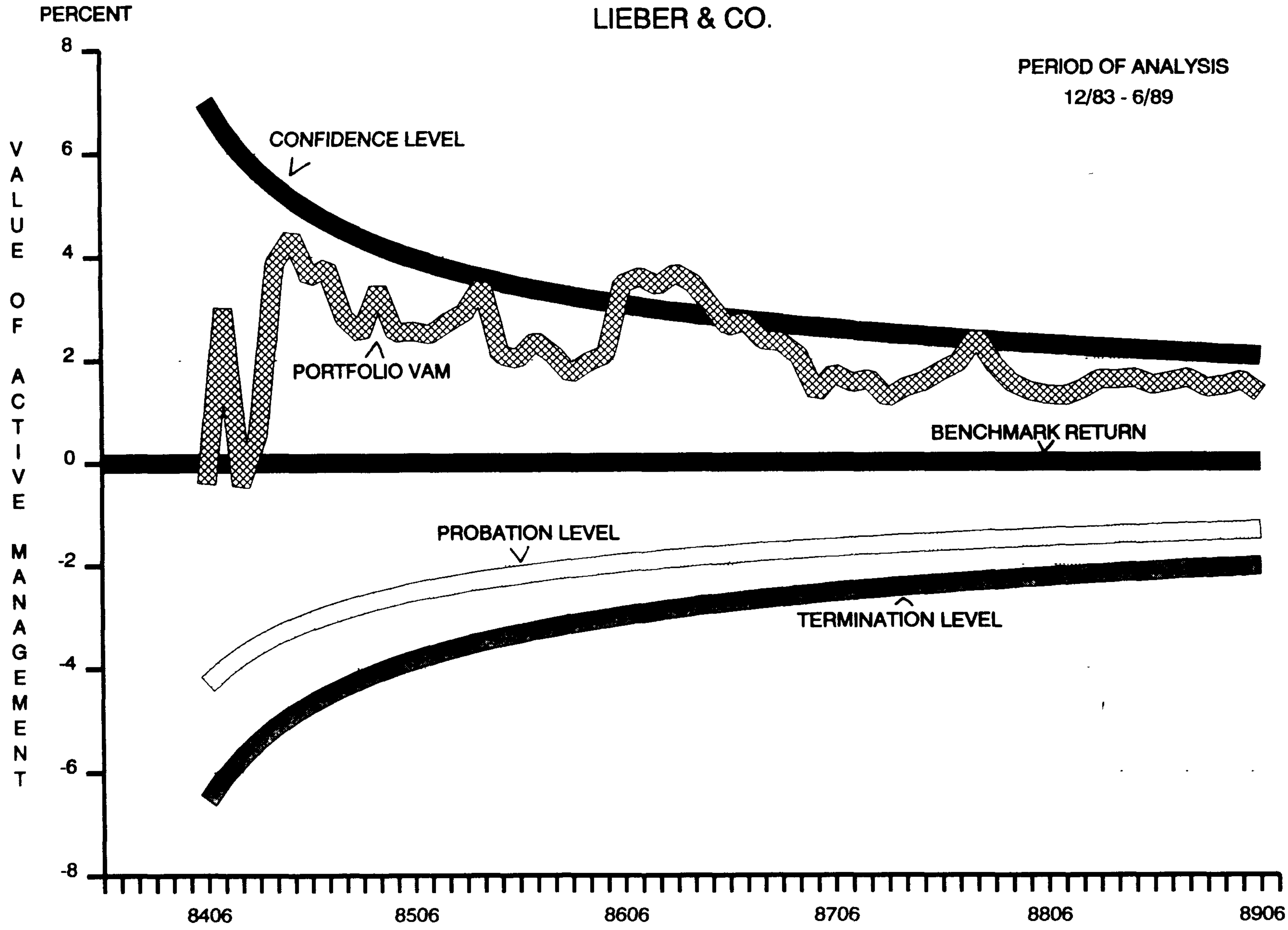
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

LIEBER & CO.



WADDELL & REED

PORTFOLIO MANAGER: Henry Herrman

ASSETS UNDER MANAGEMENT: $164,939,216

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

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

Staff is satisfied with the progress the firm has made to resolve this issue.

The firm's exceptional strengths continue to be:

- Highly successful and experienced professionals.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
Waddell & Reed Actual	10.4%	16.1%	10.6%	12.5%
Waddell & Reed Benchmark	5.9	12.8	12.0	11.8

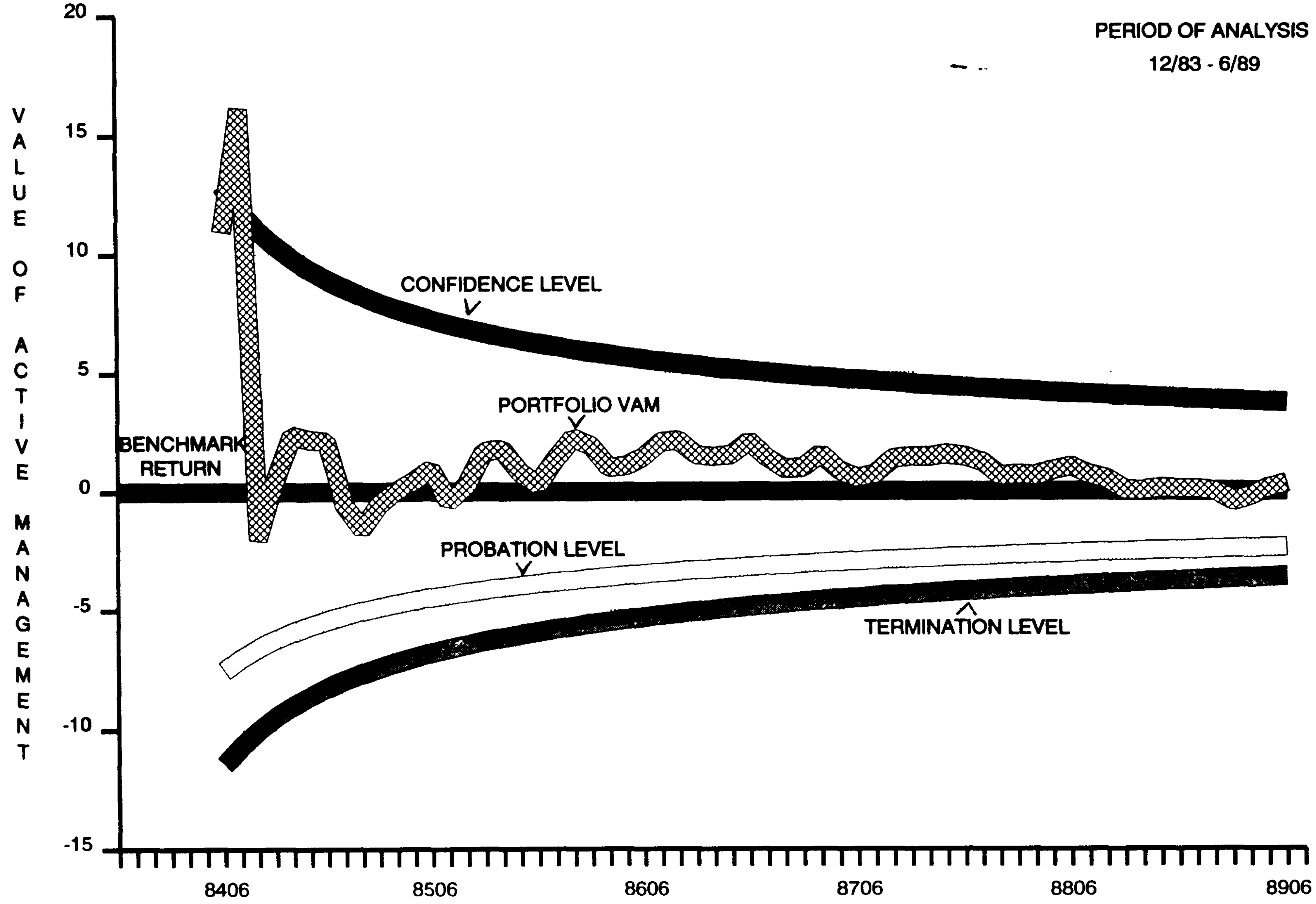
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

WADDELL & REED



CONCORD CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Bob Boldt **ASSETS UNDER MANAGEMENT: $106,772,912**

INVESTMENT PHILOSOPHY

Concord is an opportunistic theme investor that does not limit itself to any particular group of stocks, avoiding preconceptions about where value currently lies. Concord believes that the marketplace is generally efficient but that there exist isolated opportunities. These opportunities are due to biases inherent in the traditional approaches that the majority of the investment profession uses to search for investment opportunities. Concord's non-traditional approach allows them to discover these opportunities early and to capture the total appreciation of the undervalued stocks. Concord's goal is to remain as fully invested as possible, therefore, they rarely raise cash above a minimal level.

QUALITATIVE EVALUATION

(Reported By Exception)

The firm's exceptional strengths are:

- Highly successful and experienced professionals.
- Investment style consistently and successfully applied over a variety of market environments.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
Concord Capital Actual	7.1%	N/A	N/A	N/A
Concord Capital Benchmark	9.0	N/A	N/A	N/A

STAFF RECOMMENDATIONS

No action required.

FRANKLIN PORTFOLIO ASSOCIATES

PORTFOLIO MANAGER: John Nagorniak **ASSETS UNDER MANAGEMENT: $109,680,586**

INVESTMENT PHILOSOPHY

The firm's investment decisions are quantitatively driven and controlled. The firm believes that consistent application of integrated multiple valuation models produces superior investment results. The firm's stock selection model is a composite model comprised of thirty (30) valuation measures each of which falls into one of the following groups: fundamental momentum, relative value, future cash flow, and economic cycle analysis. The firm believes that a multi-dimensional approach to stock selection provides greater consistency than reliance on a limited number of valuation criteria. The firm attributes its value-added to its stock picking ability. Franklin's portfolio management process focuses on buying and selling the right stock rather than attempting to time the market or pick the right sector or industry groups. The firm will always remain fully invested.

QUALITATIVE EVALUATION

(Reported by Exception)

The firm's exceptional strengths are:

- Familiar with the needs of large institutional clients.
- Firm's investment approach has been consistently applied over a number of market cycles.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
Franklin Actual	10.1	N/A	N/A	N/A
Franklin Benchmark	9.0	N/A	N/A	N/A

STAFF RECOMMENDATIONS

No action required.

ROSENBERG INSTITUTIONAL EQUITY MANAGEMENT

PORTFOLIO MANAGER: Ken Reid **ASSETS UNDER MANAGEMENT: $108,695,754**

INVESTMENT PHILOSOPHY

Rosenberg Institutional Equity Management believes the market is inefficient in the relative valuation of individual companies within groups of similar companies. Rosenberg uses quantitative techniques to identify and purchase undervalued stocks. The firm's valuation system, as embodied in several computer programs, analyzes accounting data on over 3,500 companies. Unlike traditional analysis which assigns an entire company to one industry, Rosenberg compares each company's separate business segments with similar business operations of other companies. These separate valuations are then integrated into a single valuation for the total company. The difference between Rosenberg's valuation and the current market price is the expected profit opportunity. Stocks with large positive profit opportunity are candidates for purchase. The firm does not strive to outperform its benchmark by timing the market or by "betting" on factors. The firm will always remain fully invested.

QUALITATIVE EVALUATION

(Reported by Exception)

The firms's exceptional strengths are:

- Attractive, unique investment approach.
- Highly successful and strong leadership.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year ToDate	Latest Year	Since 1/1/84 Annualized
Rosenberg Actual	9.1	N/A	N/A	N/A
Rosenberg Benchmark	8.7	N/A	N/A	N/A

STAFF RECOMMENDATIONS

No action required.

SASCO CAPITAL INC.

PORTFOLIO MANAGER: Bruce Bottomley

ASSETS UNDER MANAGEMENT: $107,387,479

INVESTMENT PHILOSOPHY

Sasco is a long term investor that concentrates exclusively on stock selection. Sasco looks for companies that are selling at a discount to both their asset value and future earnings power. Sasco analyzes a corporation's individual business segments and invests in those that are undergoing major fundamental and structural change to increase their value. Sasco does not attempt to time the market. The firm strives to remain fully invested at all times.

QUALITATIVE EVALUATION

(Reported By Exception)

The firm's exceptional strengths are:

- Investment style consistently and successfully applied over a variety of market environments.
- Attractive, unique investment approach.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
Sasco Capital Actual	7.9%	N/A	N/A	N/A
Sasco Capital Benchmark	6.7%	N/A	N/A	N/A

STAFF RECOMMENDATIONS

No action required.

Tab F

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

EXECUTIVE DIRECTOR
HOWARD J BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

August 24, 1989

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

FROM: Fixed Income Committee

SUBJECT: Committee Report

The IAC Fixed Income Manager Committee met on August 23, 1989 to review the following agenda:

- o Bond Manager "Round Table"
- o Review of Semi-Passive Managers
- o Review of Active Managers

In addition, staff updated the Committee on the recent rebalancing in the Basic Retirement Funds. Information on this item is included in the Executive Director's Administrative Report under Tab C.

INFORMATION ITEMS:

1) Bond Manager Round Table

As part of the SBI's Fiscal Year 1990 Management Plan, staff will coordinate several discussion sessions with the Board's external managers. The first "Round Table" discussion will bring together four of the SBI's bond managers on Thursday September 14, 1989. The firms participating are:

Firm	Portfolio Manager
Fidelity Management Trust	Sharmin Mossavar-Rahmani
Investment Advisers, Inc.	Larry Hill
Lehman Management Company	Paul Hutter
Miller, Anderson Sherrerd	Tom Bennett

The Round Table will be an informal discussion designed to give SBI Board members, deputies, and Advisory Council members the opportunity to meet several of the SBI's bond managers and to review the outlook for the economy and bond market.

2) Review of Semi-Passive Managers

On June 30, 1989 the semi-passed/enhanced bond index managers completed their first year with the SBI.

Their performance is shown below:

Period	Fidelity	Lincoln	Total	Salomon BIG Index
3Q 1988	1.76%	1.86%	1.81	1.95
4Q 1988	.96	1.16	1.06	.76
1Q 1989	1.30	1.22	1.26	1.20
2Q 1989	7.63	7.54	7.59	7.95
FY 1989	12.03	12.17	12.10	12.22

The short fall in the most recent quarter was due in large measure to the impact of mortgage roll programs and seasoned mortgaged pricing. State Street Bank will adjust for these pricing problems in the next quarter.

For the year, the performance of each manager is well within the range of expected tracking error for a semi-passive management approach.

ACTION ITEM:

1) Review of Active Managers

The Committee reviewed the performance reports for the active bond managers. The value of active management (VAM) reports for each manager are attached.

The latest quarter was an exceptionally strong period for bonds with the Salomon BIG index rising 7.95%. The active managers returned 6.9%, trailing their benchmark composite of 7.6%. The managers achieved a 12.3% return for the fiscal year, bettering both their aggregate benchmark and the Salomon BIG return.

a) Quantitative Assessment

Currently, all the active managers meet the quantitative performance guidelines established by the SBI's Manager Continuation Policy.

The Committee noted that Morgan Stanley has the poorest performance relative to its benchmark among the manager group and the Committee intends to monitor the firm's performance closely during the next quarters.

Staff reported that a pricing problem on two large holdings in the Miller Anderson portfolio is believed to be the primary reason for Miller's poor performance relative to their benchmark during the last quarter. Staff will work with Miller Anderson and State Street Bank to resolve this pricing issue. Any adjustments will be reflected in results for the quarter ending September 30, 1989.

b) Qualitative Assessment

Staff noted a concern regarding the ownership of Lehman Management. Lehman Management has been part of the institutional money management division of Shearson Lehman. In August 1989, offices within the Lehman Management completed a leveraged buy-out which separates the group from Shearson Lehman. Shearson Lehman will maintain a 20% ownership position in the new organization.

The SBI's Manager Continuation Policy requires that a manager be placed on probation if it undergoes an ownership change or loses key management personnel. The purpose of the probation is to review the impact of the change on personnel and investment approach.

RECOMMENDATION:

The Committee recommends that the Board place Lehman Management on probation for qualitative reasons associated with the ownership change. SBI staff will monitor Lehman Management over the next several months to ensure continuity of management and investment approach.

No other action regarding the active manager group is required at this time.

ACTIVE BOND MANAGERS

Value of Active Management Reports

Second Quarter 1989

Fixed income 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 factor in bond market influences that at times favorably or unfavorably impact certain investment styles. Thus, benchmark portfolios are the appropriate standards against which to judge the managers' performance.

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 actions concerning manager status:

- Place Lehman Management on probation for qualitative reasons.

Managers	Market Value 6/30/89 (Thousands)	Quarter Ending 6/30/89 Actual	Bmrk	Calendar Year To Date Actual	Bmrk	Year Ending 6/30/89 Actual	Bmrk	(Annualized) Since 7/1/84 Actual	Bmrk
IAI	$53,838	9.8%	8.4%	11.2%	9.5%	14.0%	12.6%	15.2%	14.5%
Lehman	117,278	7.0	7.2	8.3	8.5	12.7	11.4	13.6	13.7
Miller Anderson	170,329	4.4	7.9	5.9	9.2	9.6	12.2	14.3	14.8
Morgan Stanley	112,003	6.8	7.1	7.9	8.3	10.1	10.5	13.6	14.2
Western Asset	210,995	8.3	7.8	9.9	9.1	14.5	12.4	16.1	14.5
Aggregate Active		6.9	7.6	8.3	8.9	12.1	12.0	14.8	14.3
Salomon Broad Investment Grade Index		7.9%		9.2%		12.2%		14.8%	

INVESTMENT ADVISERS

PORTFOLIO MANAGER: Larry Hill **ASSETS UNDER MANAGEMENT: $53,837,852**

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION

(Reported By Exception)

The current evaluation notes the following concern:

- New benchmark adopted.

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

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 6/30/84 Annualized
IAI Actual	9.8%	11.2%	14.0%	15.2%
IAI Benchmark	8.4	9.5	12.6	14.5

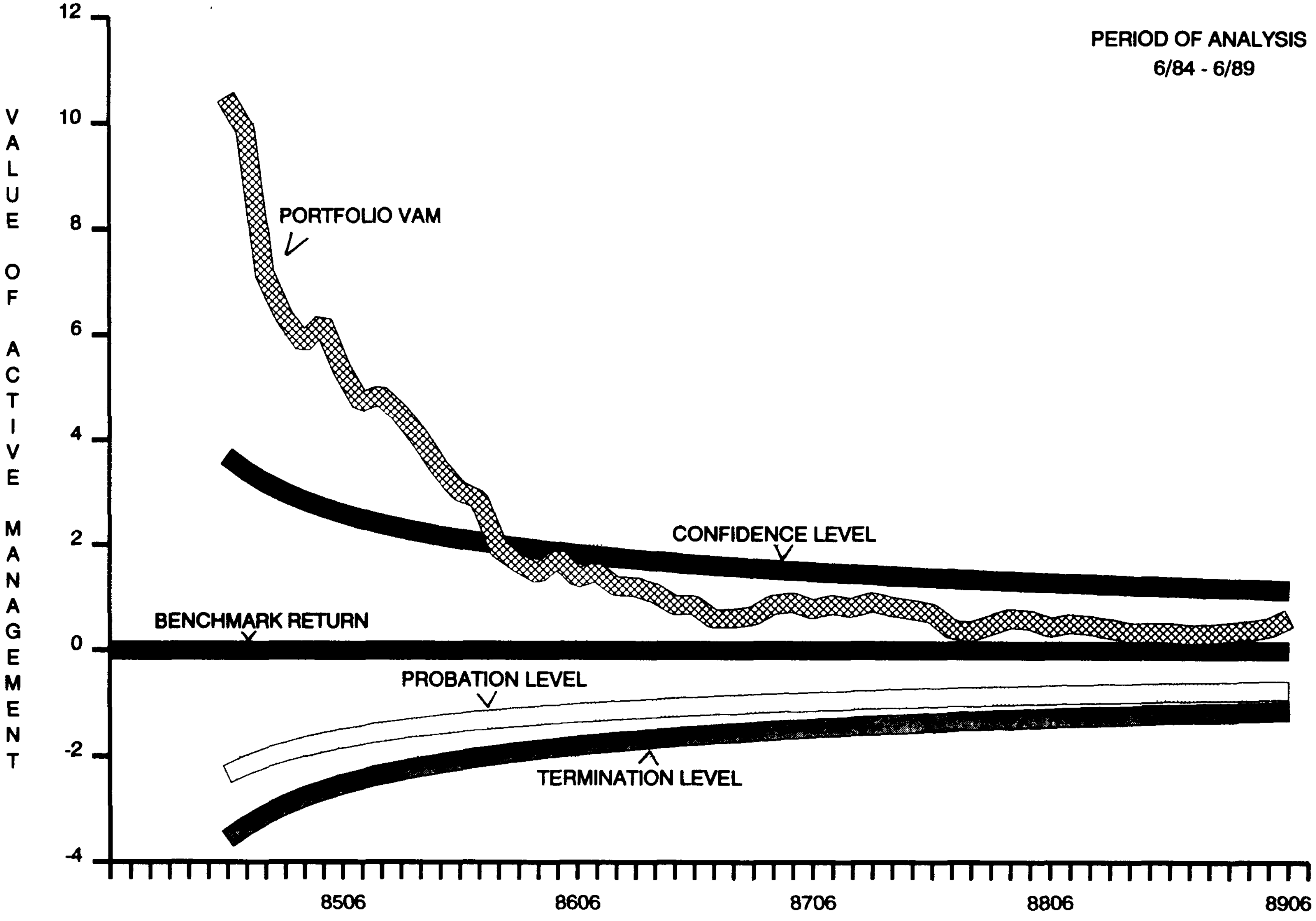
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

INVESTMENT ADVISERS



LEHMAN MANAGEMENT

PORTFOLIO MANAGER: Paul Hutter

ASSETS UNDER MANAGEMENT: $117,277,637

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.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 6/30/84 Annualized
Lehman Actual	7.0%	8.3%	12.7%	13.6%
Lehman Benchmark	7.2	8.5	11.4	13.7

(See Value of Active Management graph below)

QUALITATIVE EVALUATION

(Reported By Exception)

The current evaluation notes the following concern:

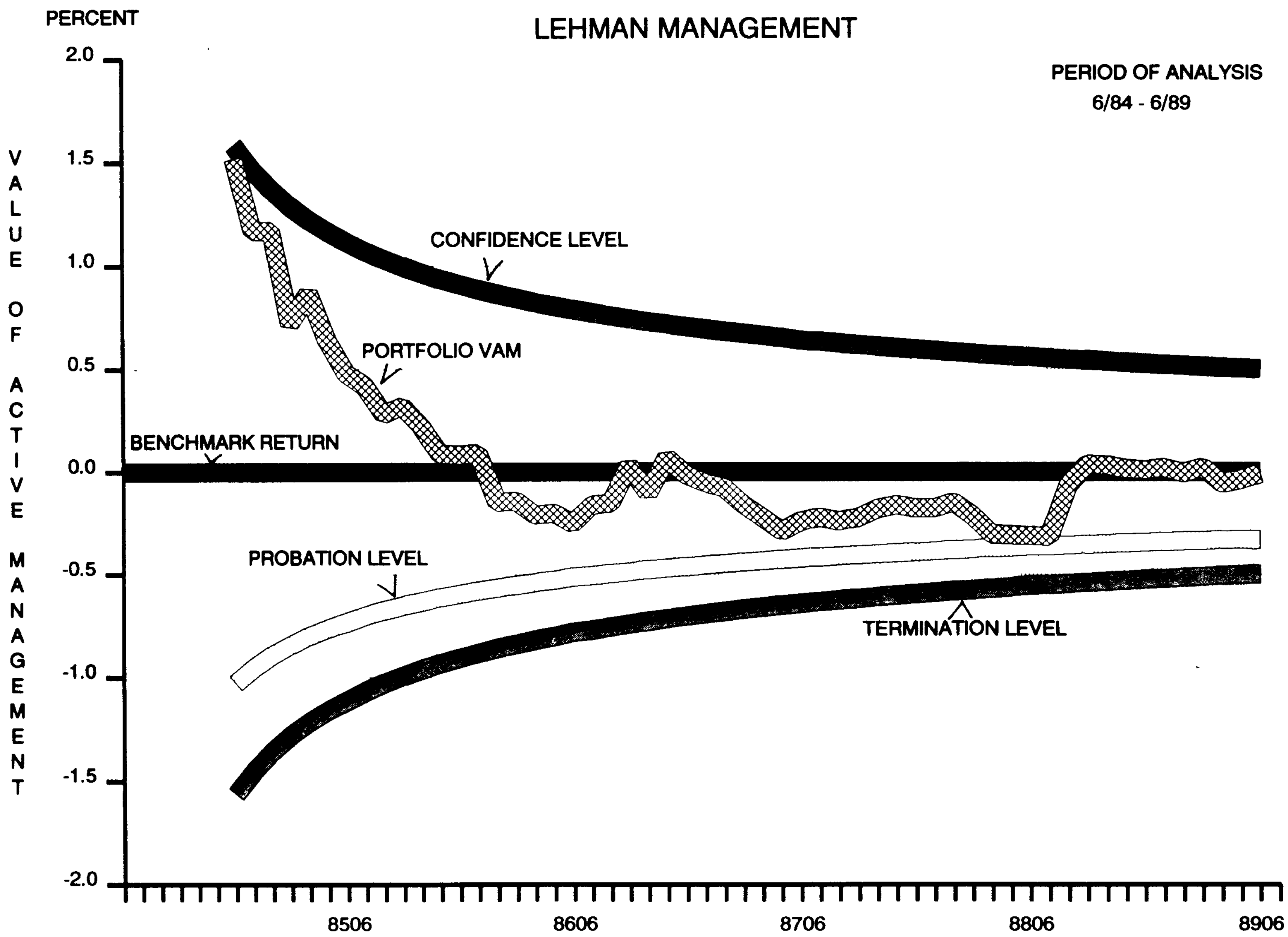
- Lehman Management employees initiated a management leveraged buy out of the institutional money management division. Shearson Lehman will maintain a 20% ownership in the new firm.

STAFF RECOMMENDATIONS

Place Lehman Management on probation for qualitative reasons. The SBI manager guidelines call for probationary status whenever firm ownership changes. The staff will monitor developments in portfolio management style and personnel stability over the next two quarters to ensure continuity of management of the SBI portfolio.

VALUE OF ACTIVE MANAGEMENT REPORT

LEHMAN MANAGEMENT



MILLER ANDERSON

PORTFOLIO MANAGER: Tom Bennet

ASSETS UNDER MANAGEMENT: $170,329,146

INVESTMENT PHILOSOPHY

Miller Anderson focuses its investments in misunderstood or under-researched classes of securities. Over the years this approach has led the firm to emphasize mortgage-backed and specialized corporate securities in its portfolios. Based on its economic and interest rate outlook, the firm establishes a desired maturity level for its portfolios. This decision is instituted primarily through the selection of specific types of securities and cash levels that are consistent with the portfolio's desired maturity. However, such moves are made gradually over an interest rate cycle and extremely high cash positions are never taken. Total portfolio maturity is always kept within an intermediate three-to-seven year duration band. Unlike other firms that also invest in mortgage securities, Miller Anderson intensively researches and, even in some cases manages, the mortgage pools in which it invests.

QUALITATIVE EVALUATION

(Reported By Exception)

The firm's exceptional strengths continue to be:

- Highly successful and experienced professionals.
- Extensive securities research process.

QUANTITATIVE EVALUATION

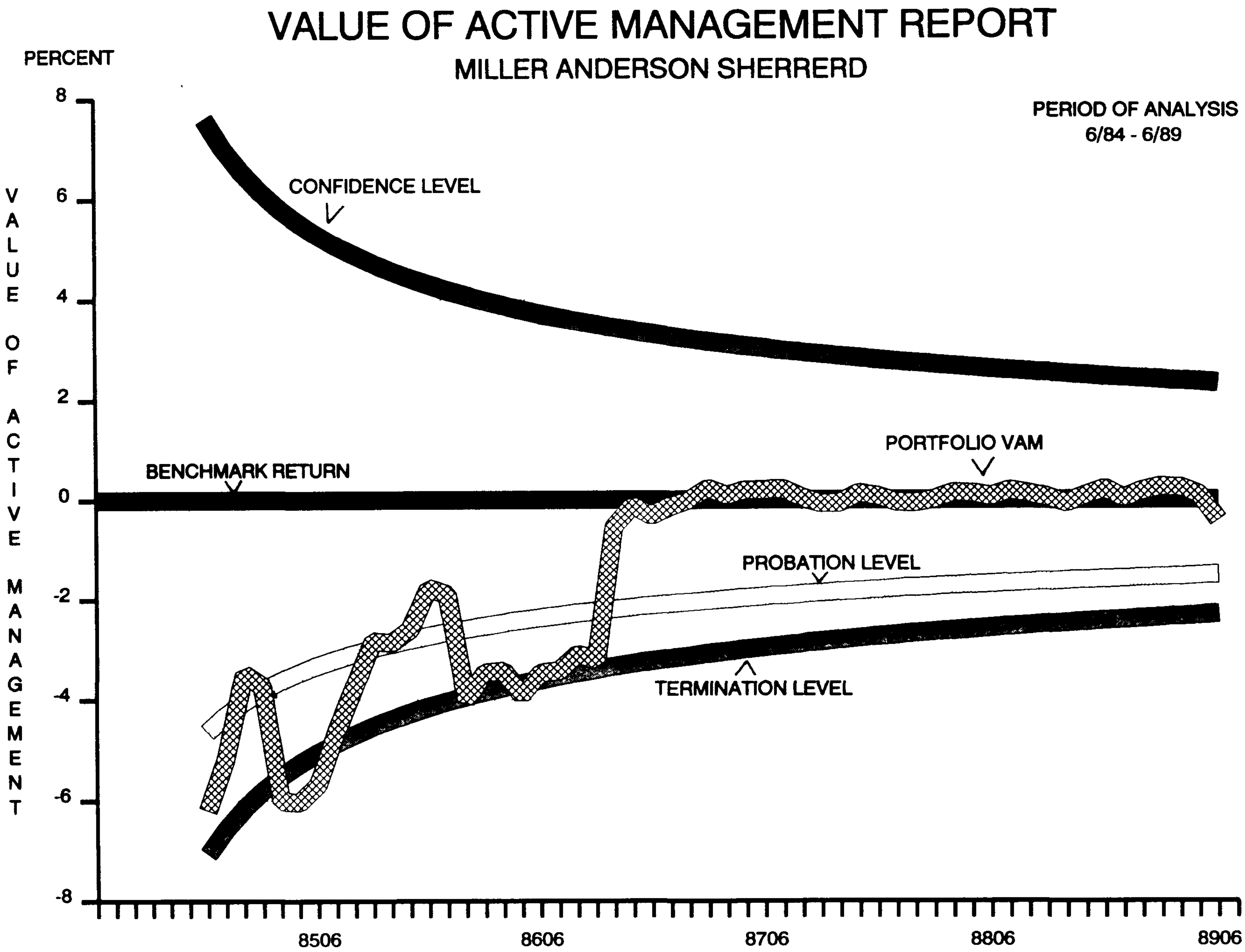
Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 6/30/84 Annualized
Miller Actual	4.4%	5.9%	9.6%	14.3%
Miller Benchmark	7.9	9.2	12.2	14.8

(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.


VALUE OF ACTIVE MANAGEMENT REPORT
MILLER ANDERSON SHERRERD
PERCENT
PERIOD OF ANALYSIS
6/84 - 6/89
VALUE OF ACTIVE MANAGEMENT
8
6
4
2
0
-2
-4
-6
-8
CONFIDENCE LEVEL
BENCHMARK RETURN
PORTFOLIO VAM
PROBATION LEVEL
TERMINATION LEVEL
8506
8606
8706
8806
8906

MORGAN STANLEY

PORTFOLIO MANAGER: Geoffrey Gettman **ASSETS UNDER MANAGEMENT: $112,002,823**

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION

(Reported By Exception)

The current evaluation notes the following concern:

- New benchmark adopted.

The SBI approved a customized benchmark for Morgan at its December 1988 meeting. This issue deserves close monitoring over the next several quarters to judge the continuing appropriateness of the new benchmark and Morgan Stanley's returns relative to that benchmark.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 6/30/84 Annualized
Morgan Actual	6.8%	7.9%	10.1%	13.6%
Morgan Benchmark	7.1	8.3	10.5	14.2

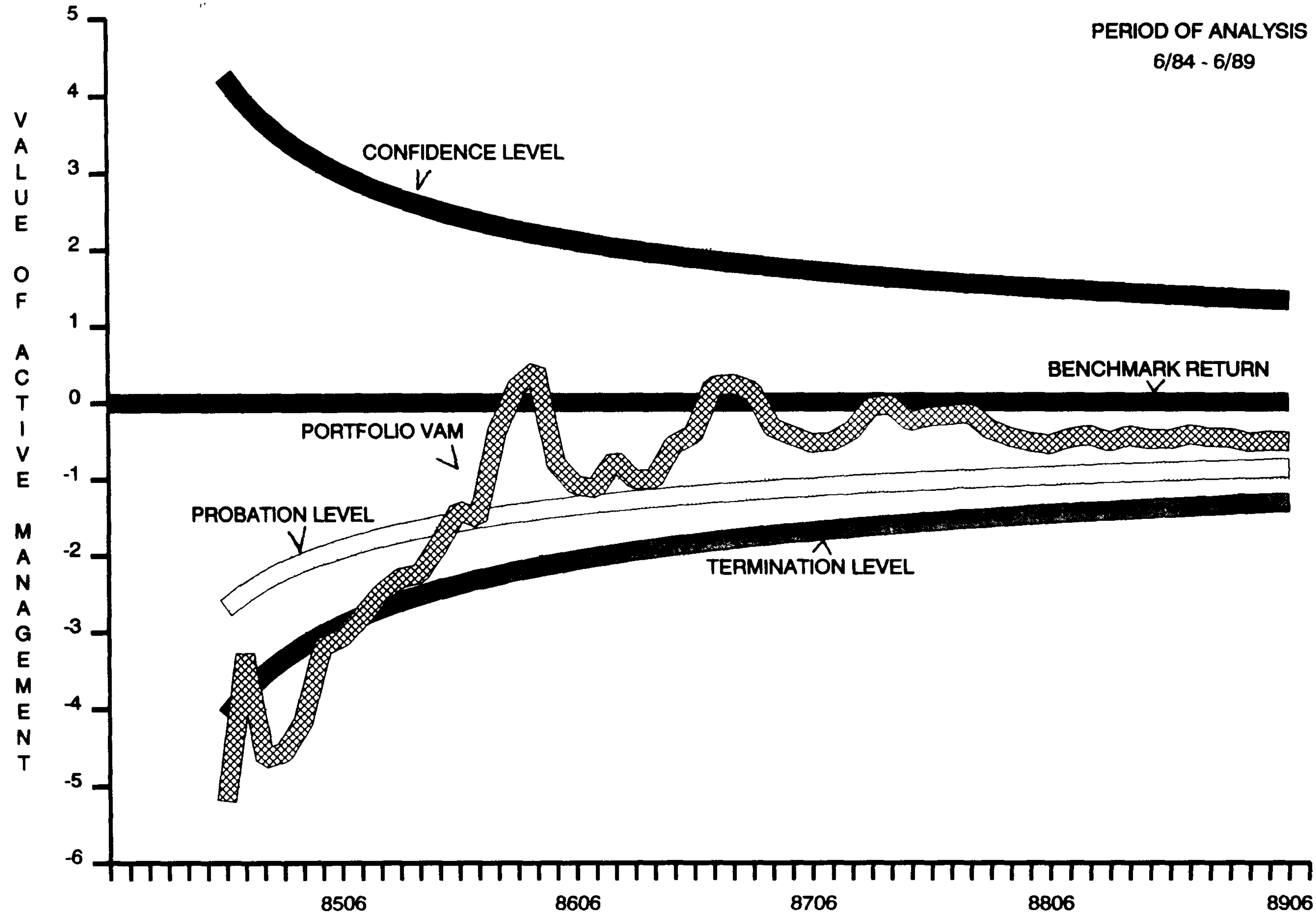
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

MORGAN STANLEY



WESTERN ASSET MANAGEMENT

PORTFOLIO MANAGER: Edgar Robie, Jr.

ASSETS UNDER MANAGEMENT: $210,995,026

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION

(Reported By Exception)

The firm's exceptional strengths continue to be:

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

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 6/30/84 Annualized
Western Actual	8.3%	9.9%	14.5%	16.1%
Western Benchmark	7.8	9 1	12.4	14.5

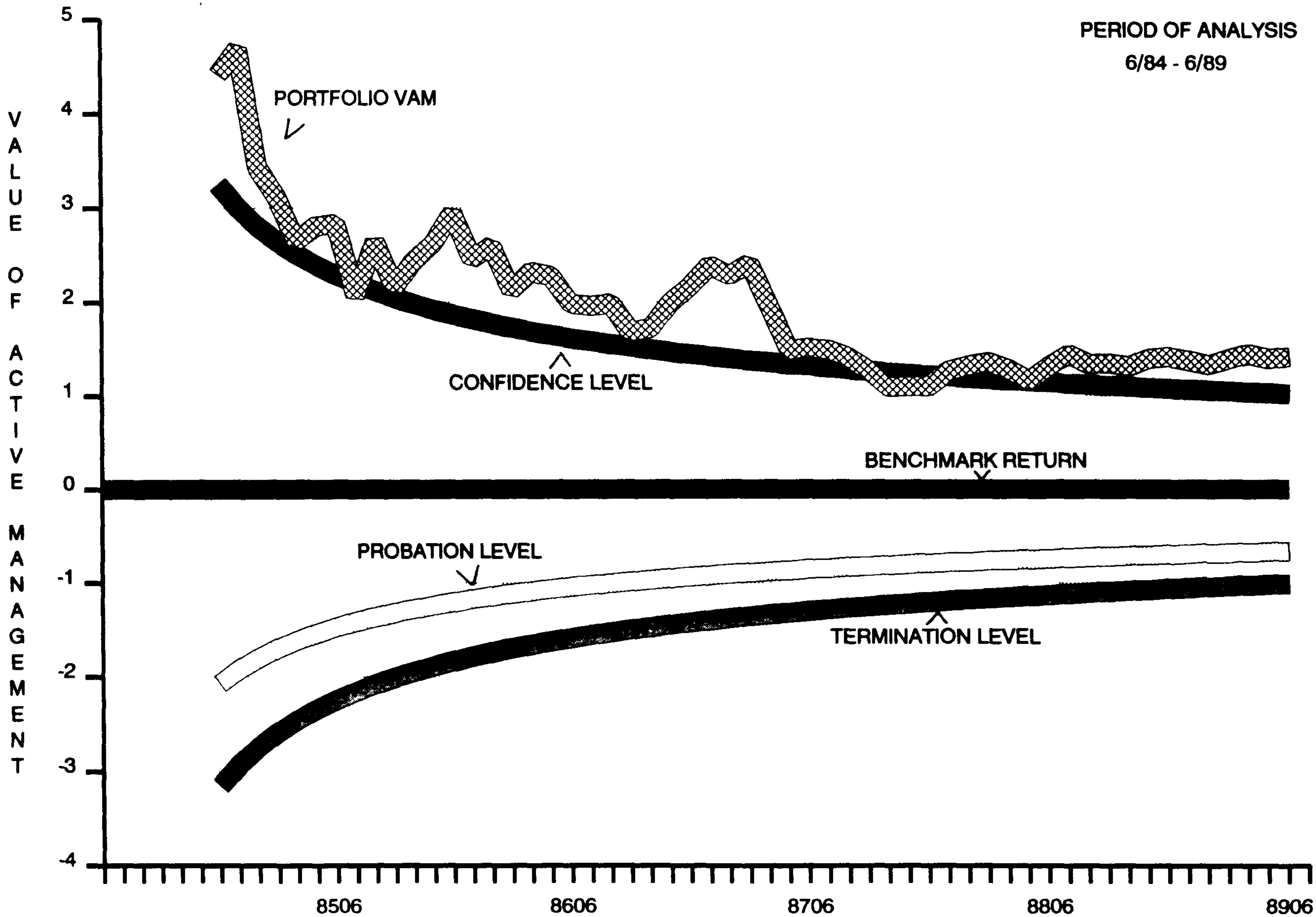
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

WESTERN ASSET MANAGEMENT



Tab G

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

EXECUTIVE DIRECTOR
HOWARD J BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
Room 105, MEA Building
55 Sherburne Avenue
St Paul, MN 55155
Tel (612) 296-3328
FAX (612) 296-9572

August 31, 1989

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

FROM: Alternative Investment Committee

SUBJECT: Committee Report

The Alternative Investment Committee met several times during the quarter to review the following information and action items:

INFORMATION ITEMS:

- o Review of current strategy
- o Results of annual review sessions with existing managers

ACTION ITEMS:

- o Indices for alternative assets
- o Real estate study recommendations
- o Potential sale of Apache II investment
- o Additional investment with Matrix Partners, an existing venture capital manager

A summary of Committee discussion and recommendations on these items follows.

INFORMATION ITEMS:

1) Review of Current Strategy

To increase overall portfolio diversification, 15% of the Basic Retirement Funds is allocated to alternative investments. Alternative investments include real estate, venture capital and resource investments where Minnesota State Board of Investment (SBI) participation is limited to commingled funds or other pooled vehicles. A chart summarizing the Board's current commitments is attached (see Attachment A).

The real estate investment strategy calls for the establishment and maintenance of a broadly diversified real estate portfolio comprised of investments that provide overall diversification by property type and location. The main component of this portfolio consists of investments in diversified open-end and closed-end commingled funds. The remaining portion of the portfolio can include investments in less diversified, more focused (specialty) commingled funds. Currently, the SBI has committed $385 million to twelve commingled real estate funds.

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

The strategy for resource investment requires that investment 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 $130 million to eight commingled oil and gas funds.

2) Results of Annual Review Sessions with Existing Managers

During July and August, the Alternative Investment Committee and staff conducted annual review sessions with several of the SBI's existing alternative investment managers:

Real Estate:	Aetna, Equitable
Venture Capital:	Golder Thoma Cressey
Resource Funds:	Apache

Summaries of the review sessions are included as Attachments B,C,D and E to this Committee Report.

Generally, the meetings went well and produced no major surprises.

Golder Thoma, Equitable and Aetna by and large are conforming to their originally stated investment strategies. Staff and the Alternative Investment Committee have been satisfied with the performance and operations of these three managers and would recommend new investments with these managers, when appropriate.

Apache, in response to declining oil prices over the last several years, has changed the original investment strategy for two of the SBI's investments with Apache. A summary of all three investments with Apache follow:

- The SBI's latest and largest investment ($30 million) with Apache, the 1986 Acquisition Net Profits Interest, was incepted after the severe decline in oil and gas prices in late 1985 and should perform essentially in line with original expectations.

- Only $1.5 million of the SBI's original $15 million commitment to the 1984 Equipment Loan has been funded. Due to Apache's decision to significantly scale back oil and gas development for this project, the SBI's commitment has been reduced to $3 million.

- The SBI's $23 million investment in the 1985 Acquisition Notes was made prior to the significant decline in oil and gas prices in late 1985. Returns from this investment will be significantly less than originally expected. Currently, the investor group is exploring the potential sale of this investment. More information on the potential sale is included as Action Item #3 in this report.

ACTION ITEMS:

1) Recommendation on Indices for Alternative Assets

The Report of the Task Force on Fund Objectives was presented to the Board in February 1989. One of the recommendations adopted by the Board called for the construction of a new composite index for the Basic Retirement Funds that includes appropriate indices for real estate, venture capital and resource funds. The Task Force asked that the Alternative Investment Committee recommend specific indices.

During the last two quarters, SBI staff have attempted to identify a variety of potential indices for each alternative asset class. Information on each of the following indices is included in Attachment F.

Real Estate

- o Wilshire Associates Real Estate Index
- o Frank Russell Company Index

Venture Capital

- o An index derived from returns reported by Venture Economics
- o First Chicago Venture Capital Index
- o Venture Capital 100 Index

Resource Funds

- o West Texas Intermediate Oil Prices
- o Resource Company Common Stocks

a) Conclusion on Real Estate Index.

The Committee and staff believe the Wilshire Real Estate Index is preferable because it comes reasonably close to possessing the attributes of a true market index. Laventhol and Horwath, the SBI's special project real estate consultant, has endorsed use of this index as well.

b) Conclusion on Venture Capital and Resource Indices.

The Committee and staff have not been able to identify acceptable market indices for venture capital and resource funds. The problems associated the various alternatives are outlined in Attachment F.

It is expected that market measures for venture capital and resource funds will emerge as these asset classes become more established among institutional investors. Until that time, the Committee endorses using the SBI's actual venture capital and resource returns in the overall composite index for the Basic Retirement Funds.

This approach will avoid possible distortions that would likely be generated from using an unsuitable or inappropriate index. Also, this approach is consistent with the methodology used by Richards & Tierney (R&T) in its on-going analysis of the Basic Retirement Funds.

RECOMMENDATION:

The Committee recommends that the Wilshire Real Estate Index be incorporated in the Basic Funds Composite Index. Until acceptable market measures are available, the Committee recommends that the SBI's actual venture capital and resource fund returns be incorporated in the composite index for these asset classes.

2) <u>Recommendations from the Real Estate Study</u>

The Alternative Investment Committee and staff discussed the Laventhol & Horwath (L&H) special project review of the SBI's real estate program. A summary of their discussion follows.

While the L&H report did not recommend increasing or decreasing the target allocation to real estate, the Committee believes this issue warrants further examination. The Committee suggests that the Asset Allocation Committee should determine whether the current allocation (10% to real estate) continues to be appropriate for the Basic Retirement Funds.

The Committee and staff concur with the L&H finding that the existing group of real estate investments provides sufficient coverage of the institutional real estate market. Also, they concur with the L&H study recommendation that future investments should be focused on targeted or specialty funds in order to enhance overall return from the real estate portfolio. The Committee believes future real estate investments should be made on a very selective basis.

The Committee and staff concur with the L&H recommendation to withdraw from the PRISA account. The report stated that the historical performance and risk profile of the PRISA investment does not provide sufficient added economic and diversification benefits to the SBI to warrant its continued presence in the SBI's real estate portfolio. The SBI's current investment with Prudential is approximately $69 million. Withdrawals are executed at the end of any given quarter. Depending on Prudential's availability of liquid funds to effect the SBI's withdrawal, proceeds could be distributed to the SBI all at once, or over several quarters.

<u>RECOMMENDATIONS</u>:

The Committee recommends the following actions in response to the L&H real estate study:

- The SBI should request that the Asset Allocation Committee review the target allocation to real estate to insure the current 10% allocation is appropriate.

- The SBI should emphasize targeted or specialty funds in its future real estate investments.

- The SBI should authorize the Executive Director, with assistance from SBI's legal counsel, to withdraw the SBI's investment in PRISA, the Prudential open-end real estate fund.

3) <u>Potential Sale of Apache II Investment</u>

During the last quarter, staff updated the Committee on the potential sale of the SBI's investment in the Apache 1985 Acquisition Notes. The significant decline in oil prices since this investment was made, from approximately $30 per barrel to between $10 and $20 per barrel, has markedly altered the economics and viability of this investment to both the lenders and Apache. Therefore, the original lenders in this transaction (including IBM, The Wisconsin Investment Board, Lutheran Brotherhood, Minneapolis Employees Retirement Fund, Teachers Insurance and Annuity Association, Central Life) are currently taking steps to explore the attractiveness of selling the investment.

Over the last year, the lenders have commissioned and reviewed property appraisals, interviewed potential selling agents and taken other steps necessary to properly consider sale of the assets. Under the terms of the original transaction, individual investors have the option to sell their participation back to Apache, to other lenders or to an outside party.

Gene Graham, the SBI's resource consultant, has participated in the review along with SBI staff and members of the Alternative Investment Committee. The Committee and staff concur with Ms. Graham's assessment that sale of the investment is in the best interest of the SBI. Due to the decline in oil prices cited above, a sale will likely result in a loss on the SBI's original investment.

<u>RECOMMENDATION:</u>

The Committee recommends that the SBI authorize the Executive Director, with assistance from SBI's legal counsel, to proceed with negotiations to sell the SBI's interest in the Apache 1985 Acquisition Notes. The authorization should include authority to approve sale terms that are acceptable to the Executive Director, the Alternative Investment Committee an the SBI's resource consultant.

4) <u>Additional Venture Capital Investment with Matrix Partners</u>

Matrix Partners, a venture capital group based in Boston, MA and San Francisco, CA is seeking investors in Matrix Fund III, a new $85 million fund. Matrix Fund III is a follow-on fund to the $44 million Matrix Fund I formed in 1982 and the $70 million Matrix Fund II formed in 1985. As in the two previous funds, Fund III will be structured as a limited partnership and will focus on development-stage and medium-size technology companies concentrated in California and Massachusetts.

Currently, the SBI has a $10 million investment in Matrix Fund II. The Committee and staff have been satisfied with the performance of Fund II and believe it is appropriate to place additional venture capital funds with Matrix Partners, subject to final negotiation and review by legal counsel. The Committee believes the fee structure of the proposed fund should be reduced and urged staff to negotiate modifications, where possible.

RECOMMENDATION:

The Committee recommends that the SBI authorize the Executive Director, with assistance from SBI's legal counsel, to negotiate and execute an investment of up to $10 million in Matrix Fund III, provided an acceptable fee can be negotiated.

ATTACHMENT A

ALTERNATIVE EQUITY INVESTMENTS
SECOND QUARTER 1989

	INCEPT DATE	FUND SIZE (MILLIONS)	SBI COMMITMENT	SBI-FUNDED	SBI-TO BE FUNDED	FUND DESCRIPTION
REAL ESTATE:						
AETNA	Apr-82	$1,573	$40,000,000	$40,000,000	$0	OPEN END - DIVERSIFIED
EQUITABLE	Oct-81	$3,613	$40,000,000	$40,000,000	$0	OPEN END - DIVERSIFIED
HEITMAN I	Jun-84	$113	$20,000,000	$20,000,000	$0	CLOSED END - DIVERSIFIED
HEITMAN II	Oct-85	$238	$30,000,000	$30,000,000	$0	CLOSED END - DIVERSIFIED
HEITMAN III	Nov-86	$200	$20,000,000	$20,000,000	$0	CLOSED END - DIVERSIFIED
PRUDENTIAL	Sep-81	$3,560	$40,000,000	$40,000,000	$0	OPEN END - DIVERSIFIED
RREEF	Apr-84	$773	$75,000,000	$75,000,000	$0	CLOSED END - DIVERSIFIED
STATE STREET III	Jul-85	$103	$20,000,000	$20,000,000	$0	CLOSED END - SPECIALIZED
STATE STREET IV	Jul-86	$86	$15,000,000	$15,000,000	$0	CLOSED END - SPECIALIZED
STATE STREET V	Nov-87	$82	$15,000,000	$15,000,000	$0	CLOSED END - SPECIALIZED
TCW III	Jul-85	$216	$40,000,000	$40,000,000	$0	CLOSED END - SPECIALIZED
TCW IV	Sep-86	$250	$30,000,000	$30,000,000	$0	CLOSED END - SPECIALIZED
TOTAL R.E. PORTFOLIO			$385,000,000	$385,000,000	$0	
VENTURE CAPITAL:						
ALLIED	Jul-85	$40	$5,000,000	$5,000,000	$0	LATER STAGE
DSV	Apr-85	$60	$10,000,000	$10,000,000	$0	EARLY STAGE
FIRST CENTURY	Dec-84	$100	$10,000,000	$4,000,000	$6,000,000	EARLY STAGE
FIRST CHICAGO	Mar-88	$50	$5,000,000	$708,915	$4,291,085	SECONDARY INTERESTS
GOLDER THOMA	Oct-87	$225	$14,000,000	$4,900,000	$9,100,000	LATER STAGE
INMAN/BOWMAN	Jun-85	$44	$7,500,000	$4,500,000	$3,000,000	EARLY STAGE
KKR I	Mar-84	$1,000	$25,000,000	$25,000,000	$0	LBO
KKR II	Dec-85	$2,000	$18,365,172	$18,365,172	$0	LBO
KKR III	Oct-87	$5,600	$146,634,660	$87,455,076	$59,179,584	LBO
MATRIX	Jul-85	$70	$10,000,000	$10,000,000	$0	EARLY STAGE
NORWEST	Jan-84	$60	$10,000,000	$10,000,000	$0	EARLY STAGE
SUMMIT I	Dec-84	$93	$10,000,000	$10,000,000	$0	LATER STAGE
SUMMIT II	May-88	$230	$30,000,000	$7,500,000	$22,500,000	LATER STAGE
SUPERIOR	Jun-86	$35	$6,645,000	$3,322,500	$3,322,500	EARLY STAGE - MN.
T.ROWE PRICE	Mar-86	-	$413,411	$413,411	$0	IPO MANAGER
TOTAL V.C. PORTFOLIO			$308,558,243	$201,165,074	$107,393,169	
RESOURCES:						
AMGO I	Jul-81	$144	$15,000,000	$15,000,000	$0	DEBT WITH EQUITY
AMGO II	Feb-83	$36	$7,000,000	$7,000,000	$0	DEBT WITH EQUITY
AMGO IV	May-88	$75	$12,300,000	$4,285,700	$8,014,300	DEBT WITH EQUITY
APACHE I	May-84	$100	$3,000,000	$1,564,025	$1,435,975	DEBT WITH EQUITY
APACHE II	Oct-85	$180	$23,000,000	$23,000,000	$0	DEBT WITH EQUITY
APACHE III	Dec-86	$190	$30,000,000	$30,000,000	$0	NET PROFITS INTEREST
MORGAN O&G	Jul-88	$135	$15,000,000	$6,840,000	$8,160,000	DEBT WITH EQUITY
B.P. ROYALTY	Feb-89	$500	$25,000,000	$25,000,000	$0	ROYALTY
TOTAL RES. PORTFOLIO			$130,300,000	$112,689,725	$17,610,275	
TOTAL ALT. INV. PORT			$823,858,243	$698,854,799	$125,003,444	

ATTACHMENT B

ANNUAL REVIEW SUMMARY
AETNA REAL ESTATE SEPARATE ACCOUNT (RESA)
July 11, 1989

MANAGER REPRESENTATIVES: Tom Anathan, Maurice Giannotti

ASSETS UNDER MANAGEMENT: $61.1 Million

BACKGROUND AND DESCRIPTION: RESA is a $1.8 billion open-end, commingled, real estate fund managed by Aetna Life and Casualty Company of Hartford, Connecticut. The Fund was formed in January 1978 and has no termination date. Investors have the option to withdraw all or a portion of their investment. RESA primarily makes equity investments in existing real estate. Investments are diversified by location and type of property. On-site management of properties is contracted to outside firms or conducted by a joint venture partner.

QUALITATIVE EVALUATION:

The evaluation noted several items of interest:

In 1988 Aetna undertook a change in strategy in order to enhance the fund's performance. It planned the following:

- o Sell approximately $300 million of selected, lower potential properties.
- o Increase the number of large, premier properties and reduce holdings in smaller properties and the office sector.
- o Rely more heavily on in-depth research to target acquisition activity in markets with barriers to entry.

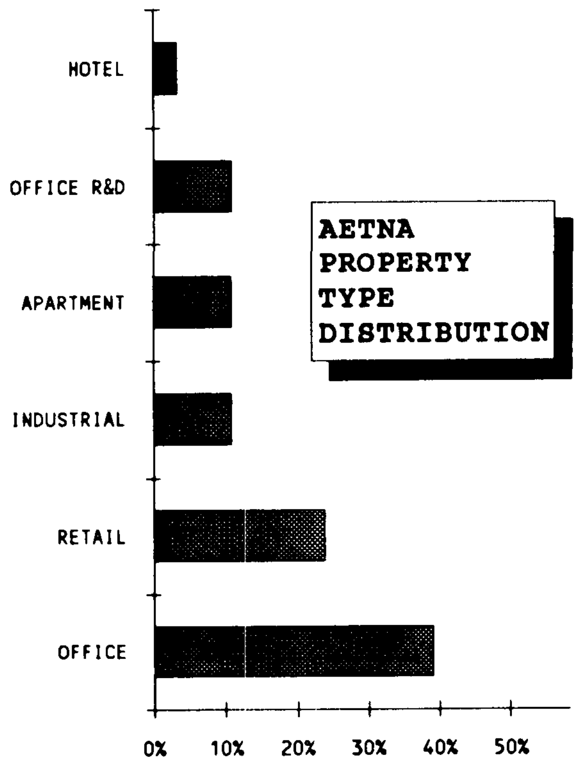
In 1989 Aetna is implementing the strategy to reposition the fund by taking the following actions:

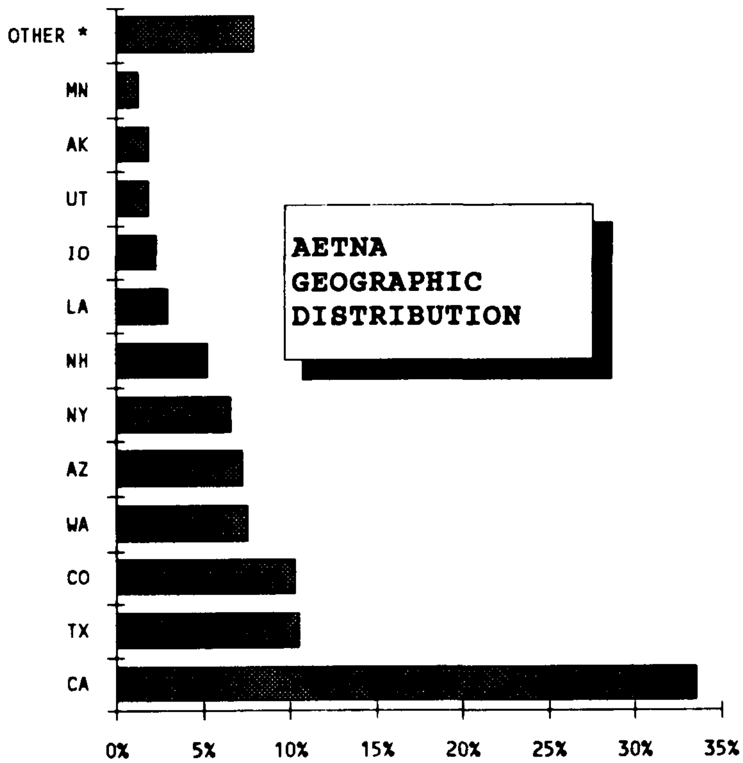
- o Sold $277 million of lower potential properties.
- o Acquired $300 million in premier properties, including $100 million for renovation.
- o Added 2 people to its research staff.
- o Consolidated overall fund portfolio responsibility in a single portfolio manager.

QUANTITATIVE EVALUATION FOR AETNA REAL ESTATE SEPARATE ACCOUNT AGGREGATE AS OF 3/31/89

COMMITMENT	$40.0 Million
FUNDED COMMITMENT:	$40.0 Million
MARKET VALUE OF FUNDED COMMITMENT:	$61.1 Million
CASH DISTRIBUTIONS:	$00.0 Million
INCEPTION DATE(S):	April 1982
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	7.6%

DIVERSIFICATION PROFILE (AS OF 3/31/89)





STAFF COMMENTS AND RECOMMENDATIONS:

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

ATTACHMENT C

ANNUAL REVIEW SUMMARY
EQUITABLE PRIME PROPERTY FUND
July 18, 1989

MANAGER REPRESENTATIVES: David Bradford, Mike Cassidy

ASSETS UNDER MANAGEMENT: $73.1 Million

BACKGROUND AND DESCRIPTION: The Prime Property Fund is a $3.7 billion open-end, commingled real estate fund managed by Equitable Real Estate Group, Inc. of New York. The Fund was formed in August 1973 and has no termination date. Investors have the option to withdraw all or a portion of their investment. The Equitable primarily makes equity investments in existing real estate. Investments are diversified by location and type of property. On-site management of properties is contracted to outside firms or conducted by joint venture partners.

QUALITATIVE EVALUATION:

The evaluation noted several items of interest:

- Equitable continues to provide the highest returns of the three open-end commingled funds held by the SBI. A strong contributor to performance has been a relative overweighting of retail properties and a limited exposure to oil patch properties.

- Looking forward, the fund plans to maintain its current exposure in the retail market, emphasizing selective upgradings of its strong regional mall portfolio, and to increase its industrial holdings. It will be looking at major distribution centers throughout the country for new industrial properties.

- Its strategy in the office sector over the next 2 to 3 years is to deemphasize smaller, suburban markets in favor of larger properties in central business districts that it identifies as strong performers, focusing on Chicago, San Francisco, Los Angeles and Washington D.C.

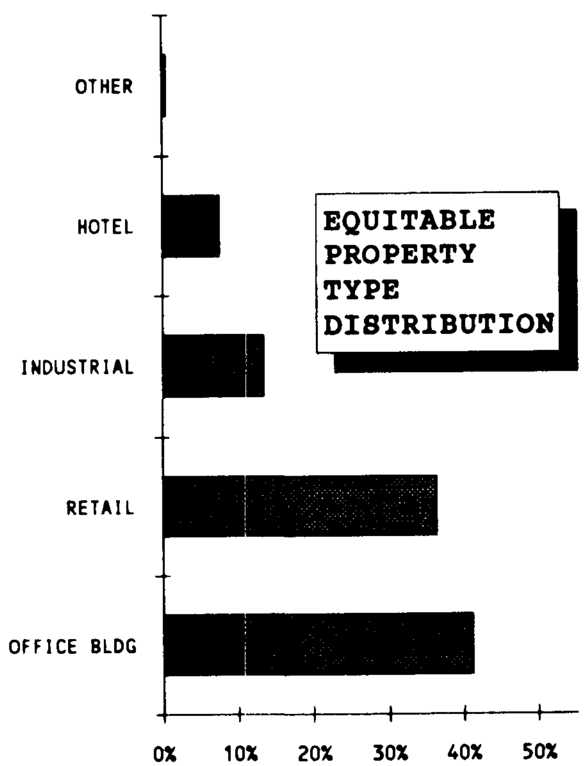
- The fund also plans to continue gradually reducing its investment in hotels, as indicated by its sale of two properties in 1989 and a possible sale of a third.

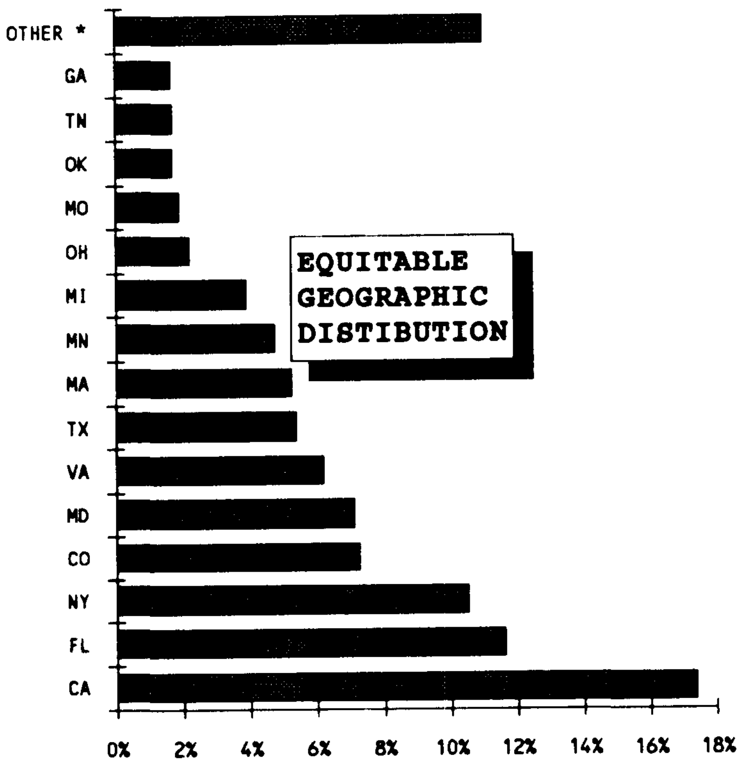
ATTACHMENT C (con't)

QUANTITATIVE EVALUATION FOR EQUITABLE PRIME PROPERTY FUND AGGREGATE AS OF 3/31/89

COMMITMENT	$40.0 Million
FUNDED COMMITMENT:	$40.0 Million
MARKET VALUE OF FUNDED COMMITMENT:	$73.1 Million
CASH DISTRIBUTIONS:	$00.0 Million
INCEPTION DATE(S):	October 1981
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	9.6%

DIVERSIFICATION PROFILE (AS OF 3/31/89)





STAFF COMMENTS AND RECOMMENDATIONS:

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

ATTACHMENT D

ANNUAL REVIEW SUMMARY
GOLDER, THOMA & CRESSEY
August 10, 1989

MANAGER REPRESENTATIVES: Bryan Cressey, Carl Thoma

SBI ASSETS UNDER MANAGEMENT: $4,900,000

BACKGROUND AND DESCRIPTION: Golder, Thoma, & Cressey Fund III was formed by the managing general partners of Golder, Thoma, & Cressey (GTC). The three founding general partners, Stan Golder, Carl Thoma and Bryan Cressey, have worked together since the inception of GTC in 1980. Prior to the formation of GTC, the three founding partners worked together in First Chicago's private equity group. Bruce Rauner, the fourth general partner, has six years of experience at GTC.

GTC focuses on industry consolidations, targeting fragmented industries. GTC buys an existing company that can grow through a series of acquisitions. If they cannot find an existing company that meets their criteria, GTC forms its own management team to do consolidations in the selected industry. The industry consolidations combine the traits of leveraged buyouts and growth equity investments.

QUALITATIVE EVALUATION:

The annual meeting covered several items of interest. GTC has made fourteen investments for Fund III since July, 1988. These investments total $60 million of the $225 million fund. GTC plans to spend a total of $170 million on these companies leaving $55 million for new investments.

Although it is still early in the fund's life, GTC thinks all but one of the investments have an excellent outlook. Most of the investments have been industry consolidations. However, GTC may use some of the money for small leveraged buyouts or early stage venture capital investments.

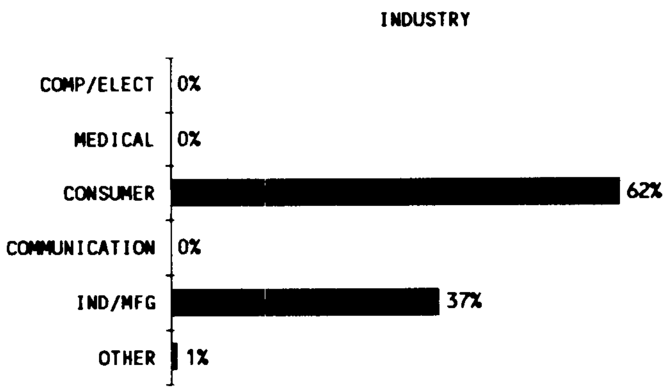
GTC is currently reviewing potential consolidations in the Educational and Billboard industries.

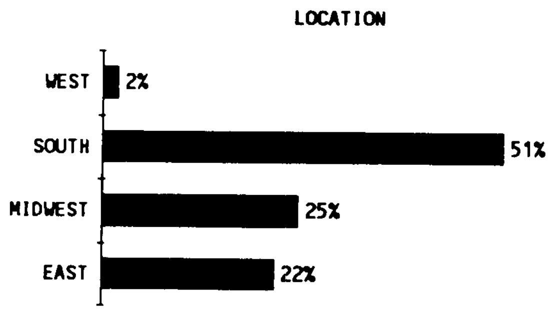
ATTACHMENT D (con't)

QUANTITATIVE EVALUATION

COMMITMENT:	$14,000,000
FUNDED COMMITMENT:	$ 4,900,000
MARKET VALUE OF FUNDED COMMITMENT:	$ 4,581,008
CASH DISTRIBUTIONS:	$ 0
INCEPTION DATE(S):	October 1987
INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	-11.3%

DIVERSIFICATION PROFILE (% OF COST)





STAFF COMMENTS AND RECOMMENDATIONS:

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

ATTACHMENT E

ANNUAL REVIEW SUMMARY
APACHE CORPORATION
July 26, 1989

MANAGER REPRESENTATIVES: Clyde McKensie, David Higgins, Wade Murdy

SBI ASSETS UNDER MANAGEMENT: $54,500,000

BACKGROUND AND DESCRIPTION: The SBI has made three oil and gas investments with Apache. The SBI committed $56 million of which $54.5 million has been funded.

The first investment, the Apache Equipment Loan, began in May, 1984. The SBI's original commitment of $15 million has been reduced to $3 million with $1.5 million funded to date. The notes fund Apache's share of production equipment in a joint venture with Shell Oil Company to develop offshore leases in the Gulf of Mexico. Noteholders receive ten percent per annum fixed interest payments plus two percent of the gross revenues from the joint venture.

A second investment, the Apache 1985 Acquisition Notes, began October, 1985. The SBI committed and funded $23 million of the $118 million private placement. These notes finance acquisition and development of oil and gas properties. Noteholders receive ten percent annual interest payments plus two percent of the gross revenues from the project.

A third investment, the Apache 1986 Acquisition Net Profits Interest, began in December, 1986. The SBI committed and funded $30 million of the $190 million private placement. The money was used to acquire non-operating interests in oil and gas properties acquired from Occidental Petroleum. Investors receive up to ninety percent of the net profits from the properties.

QUALITATIVE EVALUATION:

The evaluation noted several items of concern:

- Due to depressed level of oil and gas prices, the Equipment Loan is being funded at a much slower pace than expected. Therefore our commitment has been reduced from $15 million to $3 million.

- The SBI's $23 million investment in the 1985 Acquisition Notes was made prior to the significant decline in oil and gas prices in late 1985. Returns from this investment will be significantly less than originally expected. Currently, the investor group is exploring the potential sale of this investment.

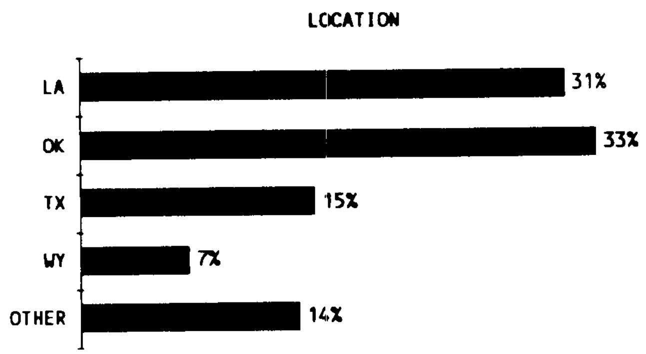
- The 1986 Acquisition Net Profits Interest is performing in line with original expectations.

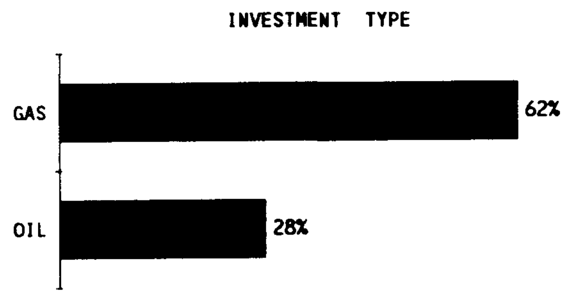
AGGREGATED QUANTITATIVE EVALUATION FOR THE THREE APACHE FUNDS

COMMITMENT:	$56,000,000		
FUNDED COMMITMENT:	$54,500,000		
MARKET VALUE OF FUNDED COMMITMENT*:	$28,400,000		
CASH DISTRIBUTIONS:	$25,300,000		
INCEPTION DATE(S):	Fund I May 1984 Fund II October 1985 Fund III December 1986		
INTERNAL RATES OF RETURN (IRR)*: (annualized, since inception)	Fund I 18.4%	Fund II -14.7%	Fund III 11.0%

* Based on flat oil and gas prices.

DIVERSIFICATION PROFILE (% OF CURRENT VALUE)





STAFF COMMENTS AND RECOMMENDATIONS:

At this time, the Alternative Investment Committee and staff do not recommend additional investments with Apache.

ATTACHMENT F

REAL ESTATE FUND INDICES

The Wilshire Real Estate Index

The Wilshire Associates Real Estate Index is a composite average index representing the performance of 30 open and closed end real estate funds managed by 24 different managers. The Index represents over $20 billion in equity oriented institutional real estate investments. Performance is calculated using an equal-weighted average of total net return for the 30 funds. The Wilshire Real Estate Index was compiled beginning in 1982 and is used by many institutional investors as a performance benchmark.

The Wilshire Associates Real Estate (Wilshire) Index differs from the FRC/NCREIF(1) Index, another commonly used real estate performance index, primarily for two reasons.

- o First, because the Wilshire Index is measured at the fund level, it is more representative of the actual fund performance against which other funds and their managers can be measured. Whereas the FRC index is generated at the property level and is intended to measure the broad condition of the domestic real estate market in general, the Wilshire Index measures performance at the fund level and is directed specifically towards institutional investors.

- o Second, the Wilshire Index is reported net of management fees while the FRC Index is calculated on a gross of fees basis. In addition, the FRC Index, unlike the Wilshire Index, is reported on a weighted basis; therefore bigger properties have an increased impact upon the overall index results. The Wilshire Index is reported as a straight average with each fund receiving equal weighting.

Although the Wilshire Real Estate Index provides a suitable performance benchmark, its components and method of calculation are different from the way the SBI reports returns in the following ways:

- o SBI aggregate reported real estate returns are market-value weighted per manager. Wilshire equal weights each fund for its index.

- o SBI aggregate reported real estate returns include all managers returns from the inception of the SBI's investment. Wilshire excludes immature funds that have not been in existence for at least 3 years and are not fully invested.

(1) FRC/NCREIF - Frank Russell Company/National Council of Real Estate Investment Fiduciarics

VENTURE CAPITAL FUNDS INDICES

Venture Economics Venture Capital Performance Report (VCPR)

Each year, Venture Economics, Inc., a Boston-based venture capital information and consulting firm, publishes the Venture Capital Performance Report (VCPR) which measures, on a yearly basis, the return performance of over 160 private venture capital funds formed over the past 18 years. From the data, an index can be derived which weights individual year returns from the VCPR to reflect the maturities of the SBI's venture capital investments. Major drawbacks of this index include:

- o VCPR returns are calculated as internal rates of return (dollar-weighted). The SBI, on the other hand, calculates time-weighted returns.
- o Return data is compiled only once a year with an approximate six month lag from the end of the calendar year.
- o The VCPR only measures venture capital returns. Returns from exclusive LBO funds are not available at this time.

First Chicago Venture Capital Index

First Chicago Venture Capital Corporation publishes this index. Seventy percent (70%) of this index reflects the return performance of First Chicago's venture capital limited partnership investments. Thirty percent (30%) of the index tracks the return performance of small capitalization stocks within the Wilshire 5000 common stock index. Major drawbacks of this index include:

- o It combines returns of both mature and newly formed venture partnership investments. This will not allow return comparisons of specific SBI fund investments with First Chicago data from funds of the same maturity. Given the significant differences in performance between venture partnerships of different ages, considerable distortions will likely occur.
- o The index does not include returns from funds that use LBO's exclusively.
- o The SBI's venture capital partnership investments are in private, not publicly-traded, companies. The First Chicago index includes a 30% component of publicly-traded companies. The index will exhibit market driven volatility that is not directly related to the underlying value of a venture capital investment.

VENTURE CAPITAL FUNDS INDICES (con't)

Venture Capital 100 Index

This index, published by Venture Economic Inc., tracks the performance of 100 publicly-traded companies that have, at some time, received financial backing from leading venture capital groups. Major drawbacks of this index include:

- This index is comprised exclusively of publicly-traded companies. The SBI's investments are in private, not publicly-traded, companies.
- The index will exhibit market driven volatility that is not directly related to the underlying value of a venture capital investment.

RESOURCE FUNDS INDICES

West Texas Intermediate Oil Prices

The West Texas Intermediate crude oil price is a widely used oil and gas industry benchmark for domestic crude oil prices. Also, it is the designated crude oil for crude oil futures trading on the New York Mercantile Exchange. Major drawbacks of this index include:

- o Does not include a natural gas price performance component. The SBI's resource portfolio is heavily weighted towards natural gas.

- o As a price index, it will not directly reflect the profit margin results of oil and gas investing.

Resource Common Stocks

An index could be constructed to track the performance of oil and gas common stocks. Drawbacks of such an index include:

- o There is a significant amount of extraneous "noise" built into the price performance of resource common stocks. Price movements of resource common stocks will, at times, reflect factors or events unrelated to the company's underlying resource investments. These influencing factors can include the stock market, the overall economy, takeover speculation, profit/loss results of non-resource subsidiaries, etc.

- o Over the last several years, company consolidations, merger and acquisition activity and bankruptcies have provided a continually changing roster of companies that would comprise an oil and gas company index.

- o As a stock price index, it will not directly reflect the profit margin results of oil and gas investing.

- o It will be difficult to isolate pure oil and gas companies to comprise the index.

Gene Graham, the SBI's resource consultant, concurs with this assessment.