MINNESOTA STATE BOARD OF INVESTMENT MEETING
January 10, 1990
&
INVESTMENT ADVISORY COUNCIL MEETING
January 9, 1990

AGENDA
STATE BOARD OF INVESTMENT
MEETING

Wednesday, January 10, 1990
8:30 A.M.
Room 15 - State Capitol
Saint Paul

	TAB
1. Approval of Minutes of October 4, 1989 Meeting	
2. Executive Director's Report (H. Bicker)	
A. Quarterly Investment Review (July 1 - Sept. 30, 1989)	A
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C. Administrative Report	C
1. Reports on Budget and Travel	
2. Notice of Various Meeting Dates	
3. Fiscal Year 1989 Annual Report and Audit Opinion	
4. Post Fund Benefit Increase	
5. Status Report on Police and Fire Fund Consolidation	
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A. Status of the Committee (Laid over from 10-4-89)	
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A. Organization and Goals of the Task Force	
B. Recommendation on Active/Passive Mix	
5. Reports from Investment Advisory Council Committees (J. Yeomans)	
A. Asset Allocation Committee	F
1. Recommendation on Real Estate Allocation Target	
2. Future Topics to be Considered by the Committee	
B. Equity Manager Committee	G
1. Stock Manager Round Table	
2. Review of Active Manager Performance	
3. Special Review of BMI Performance	
C. Fixed Income Manager Committee	H
1. Review of Active Manager Performance	
2. Review of Enhanced Index Manager Performance	
3. Results of 1989-1992 GIC Bid	
4. Report on Plans to Use Flexible Repurchase Agreements	
D. Alternative Investment Committee	I
1. Report on Fund Manager Annual Reviews	
2. Progress Report on PRISA Withdrawal, Matrix III Fee Schedule, and Apache II Sale	
3. Approval of Resource Commitment (AMGO V)	

EXECUTIVE DIRECTOR
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MINUTES

STATE BOARD OF INVESTMENT

October 4, 1989

The State Board of Investment (SBI) met on Wednesday, October 4, 1989 in Room 15 of the State Capitol at 8:30 A.M. Governor Rudy Perpich, Chair; Secretary of State Joan Growe; Attorney General Hubert H. Humphrey III; and State Auditor Arne H. Carlson were present. State Treasurer Michael A. McGrath was absent.

The minutes of the June 7, 1989 meeting were approved.

EXECUTIVE DIRECTOR'S INVESTMENT REPORT

Howard Bicker, Executive Director, reported on the investment results for fiscal year 1989. Mr. Bicker stated that the Board adopted three goals for the Basic Retirement Funds. He stated that the first goal is to provide a 3 to 5 percent real rate of return over a ten year period; that the second goal is to outperform other public and private funds over a five year period; and that the third goal is to exceed a composite market index over a five year period. Mr. Bicker reported that the Basic Retirement Funds earned 12.7 percent a year over the ten year period ending June 30, 1989 compared to an inflation rate of 5.6 percent a year for a real rate of return of 7.1 percent, a figure which exceeds the goal set for real returns. Mr. Bicker then reported that the Basic Funds outperformed the median return of other public and private funds in 4 of the past 5 years. He then stated that over the entire 5 year period the Basic Funds outperformed the median fund and met the stated objective. He then reported that the Basic Funds underperformed the return of the composite by a small amount, 0.2 percent annualized over the last five fiscal years.

Mr. Bicker then stated that the objectives of the Post Retirement Investment Fund are to generate realized income equal to 5 percent each year in order to support promised benefits, and to provide additional earnings of at least 3 percent each year in order to provide benefit increases. He reported that the Post Fund generated the required 5 percent realized return and provided benefit increases for retirees equal to 7.3 percent a year over the five year period.

Mr. Bicker then referred Board members to the Portfolio Statistics in the quarterly report materials and stated that as of June 30, 1989 the Board had assets totalling nearly $15 billion under management.

EXECUTIVE DIRECTOR'S ADMINISTRATIVE REPORT

Mr. Bicker referred Board members to the budget, travel, and rebalancing reports in the meeting materials. He stated that at the end of fiscal year 1989 the SBI had a $14,000 budget balance, a total that represents less than 1 percent of the budget. He then stated that the Board has a policy to rebalance an asset class back to its established allocation target when the asset class exceeds the target by certain amounts. He reported that staff moved $300 million from stocks in the Basic Retirement Funds to bonds during July and August. He added that the transfer was from the passively managed equity portfolio to the semi-passively managed bond portfolio. He further reported that because stocks have continued to perform well, staff will make additional transfers from stocks to bonds in the Basic Funds. He said the additional transfers involve moving funds from active equity managers, including BMI and Investment Advisers. He stated that staff would report the details of the latest transfers at the next quarterly meeting.

ADMINISTRATIVE COMMITTEE REPORT

Ms. Growe stated that there were two information items from the Administrative Committee to report. She stated that the Board seminar has been set for November 16, 1989 from 8:00 A.M. to 12:00 P.M. She stated that Mr. Carlson, Mr. McGrath, Mr. Humphrey and she planned to attend. Further, she said there is agreement that unless four Board members are present the seminar will be cancelled. Ms. Growe reported that the National Association of State Investment Officers meets annually and that this year the meeting would be held in Minnesota on October 29 through November 1, 1989.

She then reported that the Committee had two items requiring action by the Board. She stated that the first item was the Executive Director's Fiscal Year 1990 Work Plan. She stated that the Committee reviewed the work plan and recommends that the Board approve or modify it. Mr. Carlson moved approval of the plan. Mr. Humphrey seconded. The motion was approved.

She stated that the second action item concerned the State's Deferred Compensation Program. She stated that the Board is responsible for selecting outside vendors to offer annuity options to participants in the plan. She stated that the Deferred Compensation Review Committee was formed to review the program, and it reported back to the Administrative Committee with several recommendations. She stated that the Committee recommended that the SBI make no changes in the current vendor relationships, but that the relationships be formally reviewed every three years. Further, she reported that the Committee recommended that there be an annual report to the Board from the Executive Director of the Minnesota State Retirement System on the Deferred Compensation Program. Ms. Growe then moved approval of the Committee recommendations. Mr. Carlson seconded. The motion passed.

Ms. Growe then stated that because Mr. McGrath, the Chair of the Administrative Committee, was absent, a discussion about the continuation of the Administrative Committee would be deferred until the December 1989 Board meeting.

INVESTMENT ADVISORY COUNCIL COMMITTEE REPORTS
EQUITY MANAGER COMMITTEE

Ms. Yeomans reported that the Equity Manager Committee reviewed each of the active managers and focused special attention on Waddell & Reed, as the Board requested at its June meeting. She referred the Board to the supporting documents prepared by staff in the meeting materials. She stated that the basis for the examination was the Manager Continuation Policy as adopted by the Board. She stated that based on the policy the Equity Committee determined that Waddell & Reed should be continued as an equity manager and, accordingly, recommends that the Board take no action regarding the manager. In response to an observation by Mr. Carlson that Waddell & Reed had underperformed the Wilshire 5000, Ms. Yeomans stated that the issue may be that the policy focuses on the manager's performance relative to a benchmark portfolio. She stated that Waddell & Reed has outperformed the benchmark portfolio against which the firm is measured as required by the Manager Continuation Policy.

Mr. Carlson asked whether there are good reasons to retain Waddell & Reed outside of the fact that the firm has outperformed its benchmark. Ms. Yeomans responded that she believed that in order to justify retaining Waddell & Reed the Board must have the expectation that the small capitalization, high technology stocks that Waddell & Reed purchase will outperform the market in the future to make up for the period of underperformance these stocks have been experiencing. In response to a question from Ms. Growe about changing the Board's policy, Ms. Yeomans stated that if the Board is not comfortable with the managers it retains under its current policy, then the Board ought to examine its policy framework.

In response to a question from Mr. Perpich, Ms. Yeomans stated that it is very important to have a specific decision making process and to apply it consistently over time. After observing that the outside managers have consistently underperformed the equity index, Mr. Carlson stated that he believed at some point the Board must decide that it must change its policy and not continue retaining active managers. Ms. Yeomans then stated that history is often a poor guide for the decision. She observed that there have been periods in the past, although not as prolonged as the current period, in which the market has outperformed active managers. She stated that these periods have been followed by periods in which active managers easily outperform the market. She cautioned that the Board must decide carefully so as not to make a decision to abandon active managers just when they may enter a period during which they could perform well. She then stated that some active managers have done very well, and that the challenge is to find the good ones and eliminate early the ones that perform below expectations. After some discussion, Ms. Yeomans stated that there is a very large subjective factor and an element of luck in evaluating investment managers.

Mr. Humphrey stated that he believed that staff and the IAC are trying to adhere to the goals and objectives set by the Board. He stated that if the Board does not agree with those goals and objectives, then it needs to discuss specific proposals for changing its policies. Ms. Growe then moved that staff and the IAC review the Manager Continuation Policy. Mr. Humphrey seconded. Mr. Carlson moved to amend the motion to direct staff, the consultant, and the IAC to review the policy to use active money managers. Ms. Growe then stated she would support Mr. Carlson's amendment as a separate motion and asked to separate the motion. Mr. Perpich then requested a vote on the Growe motion to review the Manager Continuation Policy. The motion was passed. Mr. Carlson then restated his motion to review the use of both active stock and active bond managers. Ms. Growe seconded. The motion passed. Mr. Bicker stated that the review of both the Manager Continuation Policy and the active versus passive issue may not be completed until the March 1990 meeting of the Board.

FIXED INCOME MANAGER COMMITTEE

Ms. Yeomans reported that the Fixed Income Manager Committee had one item requiring action by the Board. She stated that because Lehman Management has undergone a change in ownership the Committee recommends that the Board place Lehman on probation pending an examination of the effect of the buyout on management continuity and on the investment style of the organization. Mr. Humphrey moved approval of the Committee recommendation. Ms. Growe seconded. The motion passed.

ALTERNATIVE INVESTMENT COMMITTEE

Ms. Yeomans reported that the Alternative Investment Committee had four items requiring action by the Board. She stated that the first item is a recommendation concerning indices to be used for the measurement of performance in the alternative investment area. She stated that the Committee recommends use of the Wilshire Real Estate Index in the Basic Funds composite index. She stated the Wilshire index is a broad based index that represents the types of investments available to the Board. She then stated that staff, the consultant and the IAC were unable to identify acceptable indices that represent the types of investments undertaken by the Board in the venture capital and resource areas. She stated that the Committee therefore proposes that the actual returns of SBI investments in those areas be included in the computation of composite returns. Mr. Carlson moved approval of the Committee recommendation concerning indices. Mr. Humphrey seconded. In response to a question from Mr. Carlson, Ms. Yeomans stated that the Wilshire Real Estate Index represents the investments of about thirty large real estate funds whose returns are combined on a quarterly basis. In response to another question from Mr. Carlson, Mr. Bicker stated that while most large fund managers use independent appraisers to report property values, each property may not be appraised each quarter. He stated that the resulting differences in reported values are not significant over time and the value of the real estate is established when the property is sold. The Governor called for a vote on the Carlson motion. The motion passed.

Ms. Yeomans stated that the second action item is the Committee's recommendations that arise from the special project real estate study performed by the special project real estate consultant, Laventhol & Horwath. She stated that the recommendations include withdrawing the Board's investment of approximately $69 million in the open-end real estate fund managed by the Prudential Insurance Company. Mr. Humphrey moved approval of the Committee recommendations regarding the real estate study. Ms. Growe seconded. In response to a question from Ms. Growe, Ms. Yeomans stated that the reason cited to withdraw from the Prudential fund is that the fund has not performed as well as other real estate funds and not that the Board has lost money in the Prudential fund. The motion passed.

Ms. Yeomans stated that the third action item is the potential sale of an investment in Apache 1985 Acquisition Notes. She stated that the investment no longer appears viable, and that many of the investors, including IBM and the Wisconsin Investment Board, have publicly determined that it would be in their best interests to sell their participations in these particular acquisition notes. She stated that under terms of the deal, Apache would buy them out. Mr. Carlson moved approval of the Committee recommendation. Ms. Growe seconded. The motion passed.

Ms. Yeomans then stated that the last action item was an additional investment in a venture capital group called Matrix Partners. She stated that the Board invested in Matrix Fund II and the Committee recommends the Board authorize the Executive Director to invest up to $10 million in Matrix Fund III provided that an acceptable fee can be negotiated. Mr. Carlson moved approval of the Committee recommendation. Ms. Growe seconded. The motion passed.

EXECUTIVE DIRECTOR'S PERFORMANCE REVIEW

Mr. Carlson stated that he believed it appropriate for Christie Eller, legal counsel to the Board, to outline the legal constraints surrounding a discussion of the Executive Director's performance review. Ms. Eller referred Board members to materials she distributed concerning relevant information from the state's Data Practices Act and a recent Minnesota Supreme Court decision referred to as the Annandale case. She stated that it is very clear that information on the personnel review form completed by each Board member is considered to be private data. She stated that if that private data were discussed, then Board members would be subject to potential sanctions of up to a $10,000 fine and a misdemeanor charge.

Ms. Eller explained that the Annandale decision changed the law in the area so that it is now possible to close a public meeting for very limited purposes when discussing personnel data. She stated that the Annandale decision made it very clear that the closing of the meeting is limited. She stated that if the Board decided to review the personnel review forms, then the members would need to close the meeting. If the Board decided to have a general discussion about fund performance as it relates to job performance, then the Board would not need to close the meeting. Mr. Humphrey stated he would agree to discuss particular performance standards at greater length, but that he is strongly in favor of doing as much of the work as possible in public. He added that he believed the process has been helpful to him and that he is satisfied with it. In response to a question from Mr. Carlson concerning whether the Board could discuss the contents of the personnel reports, Ms. Eller affirmed that the Board could not do so without closing the meeting. The Governor asked for comments from Tom Triplett, Commissioner of Finance. Mr. Triplett stated that the Board's approval of the Executive Director's work plan will improve the review process in the future because there now exists a measurable work plan for future reviews.

The meeting was adjourned at 10:15 A.M.

Respectfully submitted,

Howard Bicker

Howard J. Bicker
Executive Director

AGENDA
INVESTMENT ADVISORY COUNCIL
MEETING

Tuesday, January 9, 1990
2:00 P.M.
MEA Building - Conference Rooms "B" & "C"
Saint Paul

		TAB
1.	Approval of Minutes of October 3, 1989 Meeting	
2.	Executive Director's Report (H. Bicker)	
	A. Quarterly Investment Review (July 1- Sept. 30, 1989)	A
	B. Portfolio Statistics (Sept. 30, 1989)	B
	C. Administrative Report	C
	1. Reports on Budget and Travel	
	2. Notice of Various Meeting Dates	
	3. Fiscal Year 1989 Annual Report and Audit Opinion	
	4. Post Fund Benefit Increase	
	5. Status Draft on Police and Fire Fund Consolidation	
	6. Status Report on Executive Director's FY 1990 Work Plan	
	7. Report on Rebalancing in the Basic Funds	
3.	Report from the SBI Administrative Committee	D
	A. Status of the Committee (Laid over from 10-4-89)	
4.	Report from the Task Force on Manager Retention (J. Mares)	E
	A. Organization and Goals of the Task Force	
	B. Recommendation on Active/Passive Mix	
5.	Reports from Investment Advisory Council Committees	
	A. Asset Allocation Committee (J. Yeomans)	F
	1. Recommendation on Real Estate Allocation Target	
	2. Future Topics to be Considered by the Committee	
	B. Equity Manager Committee (J. Mares)	G
	1. Stock Manager Round Table	
	2. Review of Active Manager Performance	
	3. Special Review of BMI Performance	
	C. Fixed Income Manager Committee (G. Norstrem)	H
	1. Review of Active Manager Performance	
	2. Review of Enhanced Index Manager Performance	
	3. Results of 1989-1992 GIC Bid	
	4. Report on Plans to Use Flexible Repurchase Agreements	
	D. Alternative Investment Committee (K. Gudorf)	I
	1. Report on Fund Manager Annual Reviews	
	2. Progress Report on PRISA Withdrawal, Matrix III Fee Schedule, and Apache II Sale	
	3. Approval of Resource Commitment (AMGO V)	

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MINUTES

INVESTMENT ADVISORY COUNCIL

October 3, 1989

The Investment Advisory Council met on Tuesday, October 3, 1989 at 2:00 P.M. in the MEA Building, Saint Paul, MN.

MEMBERS PRESENT:	Harry Adams, John Bohan, Jim Eckmann, Elton Erdahl, Ken Gudorf, Jim Hacking, Vern Jackels, David Jeffery, Malcolm McDonald, Judy Mares, Gary Norstrem, Joe Rukavina, Tom Triplett, Debbie Veverka, and Jan Yeomans.
MEMBERS ABSENT:	Ray Vecellio and Paul Groschen.
SBI STAFF:	Howard Bicker, Beth Lehman, Jim Heidelberg, Harriet Balian, and Charlene Olson.
OTHERS ATTENDING:	Shane Allers, Gary Austin, Ed Burek, Christie Eller, John Gardner, Arvin Herman, Ken Lang, Jake Manahan, Mike Ousdigian, Peter Sausen, Elaine Voss, and Bob Whitaker.

Ms. Yeomans moved approval of the minutes of the June 6, 1989 meeting. Mr. McDonald seconded. The motion passed.

EXECUTIVE DIRECTOR'S INVESTMENT REPORT

Howard Bicker, Executive Director, stated that he would report the investment results for fiscal year 1989 according to the format of the Quarterly Report on Objectives as recommended by the IAC and adopted by the Board. Mr. Bicker stated that the Board adopted three goals for the Basic Retirement Funds. He stated that the first goal is to provide a 3 to 5 percent real rate of return over a ten year period; that the second goal is to outperform other public and private funds over a five year period; and that the third goal is to exceed a composite market index over a five year period. Mr. Bicker reported that the Basic Retirement Funds earned 12.7 percent a year over the ten year period ending June 30, 1989 compared to an inflation rate of 5.6 percent a year for a real rate of return of 7.1 percent, a figure which exceeds the goal set for real returns. Mr. Bicker then reported that the Basic Funds outperformed the median return of other public and private funds in 4 of the past 5 years. He stated that over the entire 5 year period the Basic Funds outperformed the median fund and met the stated objective. He then reported that the Basic Funds underperformed the return on the composite index by a small amount, 0.2 percent annualized.

Mr. Bicker then stated that the objectives of the Post Retirement Investment Fund are to generate realized income equal to 5 percent each year in order to support promised benefits, and to provide additional earnings of at least 3 percent each year in order to provide benefit increases. He reported that the Post Fund generated the 5 percent realized returns and provided benefit increases for retirees equal to 7.3 percent a year over the five year period.

Mr. Bicker said that the funding status of the retirement plans will change due to the benefit increase bill passed by the 1989 Legislature, and that new information will be available when the actuarial valuations are made known in December.

Mr. Bicker referred to the Portfolio Statistics in the meeting materials and stated that as of June 30, 1989 the Board had assets totalling nearly $15 billion under management.

EXECUTIVE DIRECTOR'S ADMINISTRATIVE REPORT

Mr. Bicker referred IAC members to the budget, travel, and rebalancing reports in the meeting materials. He stated that at the end of the fiscal year the SBI had a $14,000 budget balance, a total that represents less than one percent of the budget. He then stated that the Board has a policy to rebalance an asset class back to its established allocation target when the asset exceeds the target by more than 10 percent. He reported that staff moved $300 million from stocks in the Basic Retirement Funds to bonds during July and August. He added that the transfer was from the passively managed equity portfolio to the semi-passively managed bond portfolio. He further reported that because stocks have continued to perform well, staff has been required to take additional funds from equities to rebalance and to raise cash. He stated that after the latest transfers the Basic Funds' actual allocation would be about 61 percent equities and 25 percent bonds, with the allocation in bonds being greater than the target allocation in bonds due to an underallocation in real estate. He stated that staff would report the details of the latest transfers at the next quarterly meeting.

SBI ADMINISTRATIVE COMMITTEE REPORT

Mr. McDonald gave the Administrative Committee report. He stated that the Administrative Committee recommends that the Board discuss whether the Administrative Committee should continue in its present form. He then referenced the two information items in the meeting materials concerning the November 16, 1989 Board seminar and the annual meeting of the National Association of State Investment Officers being hosted by Minnesota October 29 through November 1, 1989. Mr. McDonald next reported that the Committee reviewed and adopted the Executive Director's 1990 Work Plan as presented, a copy of which appears in the meeting materials. Finally, he stated that the Committee reviewed and concurred with the findings of the Deferred Compensation Review Committee. He stated that the Administrative Committee recommends that the SBI make no change in vendor relationships at this time, that the SBI formally review the relationships every three years, and that the SBI request an annual report on the Deferred Compensation Plan from the Executive Director of the Minnesota State Retirement System.

Mr. Bicker stated that because the State Treasurer would not be attending the October 4, 1989 Board meeting that the discussion about the Administrative Committee would be postponed to the December 1989 Board meeting. Ms. Yeomans asked the IAC members for their thoughts on whether the IAC should be involved in administrative matters. In response to a question from Mr. Norstrem, Mr. McDonald stated that both he and Ms. Yeomans represent the IAC on the Administrative Committee and that they agree with the recommendation that the Board review the continuation of the Committee. He stated that the Committee was formed to review administrative matters and to provide a forum for policy discussions when needed. He stated that the Committee has reviewed and taken action on administrative matters such as capital expenditures and travel budgets. He added that Mr. Bicker and staff have done a good job of providing detailed information for the Committee. Mr. McDonald then stated that he believed that because only two Board members participate on the Committee that the quality of the discussions originally envisioned has not been happening.

Ms. Yeomans stated that she believed the IAC was not the appropriate vehicle for reviewing administrative matters. She suggested that the IAC can be available as an information source on an ad hoc basis. Mr. Triplett stated that the Board deputies meet monthly and could look at administrative matters. In response to a question from Mr. Gudorf, Mr. Bicker stated that the level of involvement of the IAC depends on the decision of the Board concerning the form of the Administrative Committee. In response to a question from Mr. Bohan, Ms. Yeomans affirmed that the IAC would continue to be apprised of the Executive Director's work plan even if the Administrative Committee no longer exists.

INVESTMENT ADVISORY COUNCIL REPORTS

EQUITY MANAGER COMMITTEE

Ms. Veverka reported that the Equity Manager Committee reviewed the active managers and conducted a special review of Waddell & Reed Asset Management, as requested by the Board. She stated that the active managers in aggregate outperformed their benchmarks and the Wilshire 5000 during the first three quarters of calendar 1989, but underperformed the Wilshire 5000 during fiscal year 1989. She stated that the Committee asked staff to provide additional information on the performance, investment philosophy and organization of BMI and IAI for the Committee to consider at its next meeting.

Ms. Veverka stated that Waddell & Reed has maintained a consistent investment style but that its style has performed poorly relative to the market. She stated that the manager has outperformed its benchmark for the period since January 1, 1984. She stated that the Equity Manager Committee recommends no change in the manager's status at this time. In response to a question from Ms. Yeomans, Ms. Veverka stated that 1984 was a difficult year for Waddell & Reed but that the manager's performance since then has been satisfactory. In response to a statement by Mr. Bicker about rebalancing, Ms. Veverka stated that the Equity Manager Committee was aware that staff was taking moneys from BMI and IAI. She said their decision was due, in part, to the relative poor performance of both firms.

FIXED INCOME MANAGER COMMITTEE

Mr. Norstrem gave the Fixed Income Committee report. In response to a question from Mr. Norstrem, Mr. Bicker reported that the September 14, 1989 "roundtable" with bond managers achieved its purpose of providing an informal opportunity for Board deputies and IAC members to meet several of the SBI's bond managers. Mr. Norstrem stated that the Fixed Income Committee reviewed the performance of the two semi-passive bond managers. He reported that there was a pricing problem in the second quarter 1989 that contributed to a slight underperformance, but that the performance is within the expected tracking error for a semi-passive management approach for the entire fiscal year.

Mr. Norstrem stated that the Committee reviewed the active managers. He referred IAC members to the Committee report in the meeting materials. He stated that Lehman Management has undergone a change in ownership. He stated that the Committee recommends that the Board place Lehman on probation and that staff monitor Lehman for continuity in management and investment approach. Mr. Norstrem then moved the Committee recommendation. Mr. Rukavina seconded. The motion passed.

ALTERNATIVE INVESTMENT COMMITTEE

Mr. Gudorf stated that the Alternative Investment Committee had four items requiring action. He stated that the first item is a recommendation concerning indices to be used for the construction of the composite index. He stated that the Committee recommends using the Wilshire Real Estate Index. He stated that there were no well established venture or resource indices that reflect the opportunities in which the SBI invests, and that, therefore, the Committee has no recommendation for those two asset classes.

He stated that the second action item includes the recommendations that arise from the special project real estate study performed by the real estate consultant, Laventhol and Horwath. He stated that there is some difference of opinion on the Committee concerning the allocation to real estate. He stated that the Committee suggests that the Asset Allocation Committee review the allocation to real estate in the Basic Funds. He stated that the Committee recommends future investments in real estate be made on a very selective basis and focused on specialty funds to enhance returns. He stated that the Committee concurs with the recommendation of the consultant to withdraw from the Prudential open-end real estate fund. In response to a question from Ms. Yeomans, Mr. Gudorf stated that the money received from the withdrawal from the Prudential fund would be invested in real estate, assuming that the allocation to real estate remains at the current level.

Mr. Gudorf stated that the third action item is the potential sale of the investment in Apache 1985 Acquisition Notes. He stated that it is a disappointing investment due to the decline in oil prices. Mr. Bicker stated that the Board's special project consultant in oil and gas, Gene Graham, believes that it is appropriate to sell this investment. He stated that IBM and other participants have expressed a desire to sell their share of the investment. He stated that staff requests the authority to liquidate the investment when acceptable sale terms are negotiated.

Mr. Gudorf stated that the fourth item is an additional investment with Matrix Partners, a venture fund group based in Boston with which the SBI currently invests. He stated that the Committee recommends an investment of up to $10 million in Matrix Fund III, subject to successful negotiation of a modified fee structure.

Mr. McDonald moved approval of the Committee's recommendations concerning each of the four action items. Mr. Gudorf seconded. The motion passed.

The meeting adjourned at 3:15 P.M.

Respectfully submitted,

Howard Bicker

Howard J. Bicker
Executive Director

Tab A

QUARTERLY REPORT ON OBJECTIVES

BASIC RETIREMENT FUNDS	Status as of September 30, 1989
Market Value	**$6.7 billion**
Total Return (Annualized)	
■ Real (10 years) 3 to 5 percentage points over inflation	13.1% (nominal) 7.8 percentage points over
■ Relative (5 years) for the Total Fund Above composite index return	16.0% (nominal) Same as the composite index return
■ Relative (5 years) for Stocks, Bonds and Cash Above median fund return	17.1% (nominal) 0.8 percentage points above
Liquidity	
■ Minimal cash	0.6% of total fund

POST RETIREMENT FUND	Status as of September 30, 1989
Market Value	**$5.1 billion**
Realized Earnings	$384 million in FY 1989
■ Above 8% per year	9% in FY 1989
Liquidity	
■ Minimal cash	2.5% of total fund

FUNDING (Basic + Post Funds)*	Status as of 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.

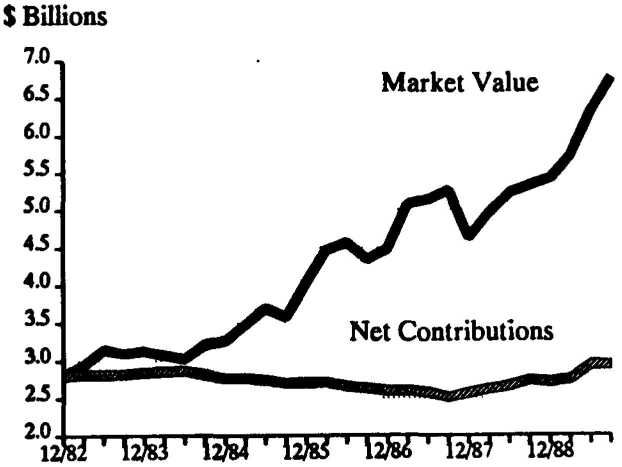
The executive summary highlights the asset mix, performance standards and investment results for the Basic Retirement Funds and the Post Retirement Fund. Additional detail on these funds as well as information on other funds managed by the Board can be found in the body of the Quarterly Investment Report.

EXECUTIVE SUMMARY

Basic Retirement Funds

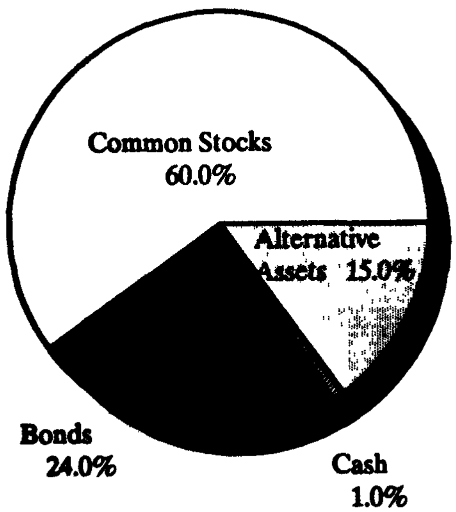
Asset Growth

The market value of the Basic Funds increased 7.0% during third quarter of 1989. The increase was due primarily to stock appreciation.



	Asset Growth During Third Quarter 1989 (Millions)
Beginning Value	$6,325
Net Contributions	-6
Investment Return	444
Ending Value	$6,763

Asset Mix



Policy 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, $300 million of equity assets were reallocated to bonds to rebalance the asset mix back towards the long term policy. The rebalancing was necessary after recent large stock appreciation gains.

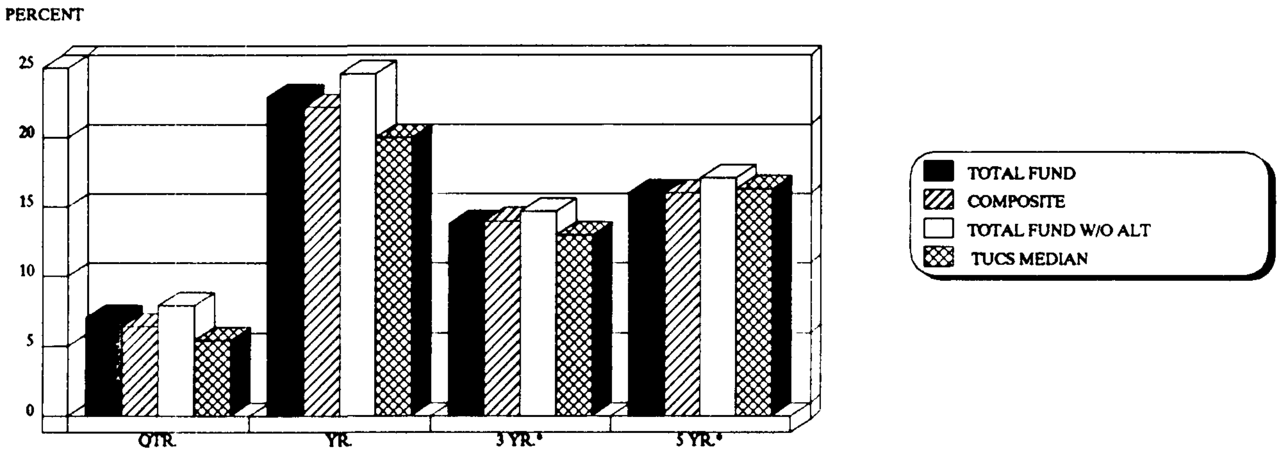
	Policy Asset Mix	Actual Mix 9/30/89	Actual Market Value (Millions)
Stocks	60.0%	63.5%	$4,291
Bonds	24.0	24.1	1,633
Alternative Assets	15.0	11.8	796
Unallocated Cash	1.0	0.6	43
	100.0%	100.0%	$6,763

Basic Funds (Con't.)

Total Fund Performance

Both the total fund and total fund without alternative assets exceeded the return on the median fund and the composite index for the quarter and latest year.

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



Period Ending 9/30/89

			*(Annualized)	
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Fund	**7.0%**	**22.9%**	**13.8%**	**16.0%**
Composite Index **	6.4	22.2	14.0	16.0
Stocks, Bonds and Cash Only	**7.9**	**24.6**	**14.7**	**17.1**
TUCS Median Balanced Fund***	5.4	20.0	13.0	16.3

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

			(Annualized)	
	Qtr.	Yr.	3 Yr.	5 Yr.
Stock Segment	10.5%	31.1%	17.0%	18.9%
Wilshire 5000	10.1	31.4	17.2	19.3

Bond Segment Performance

The bond segment of the Basic Funds exceeded the performance of its target for the latest quarter but trailed it for the latest 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	1.2%	11.1%	8.8%	12.7%
Salomon Broad Index	1.0	11.2	8.1	13.2

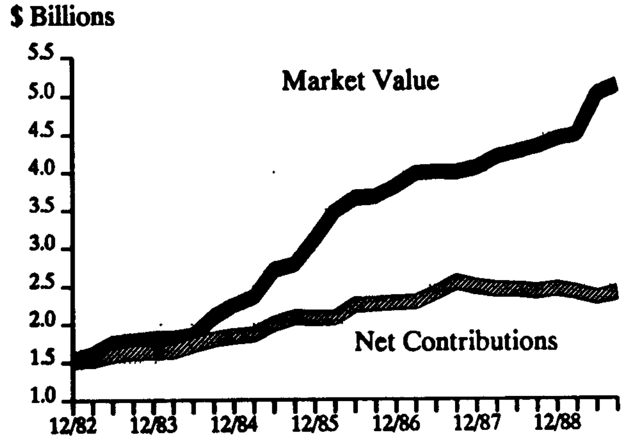
EXECUTIVE SUMMARY

Post Retirement Fund

Asset Growth

The market value of the Post Fund increased by 2.2% during third quarter 1989.

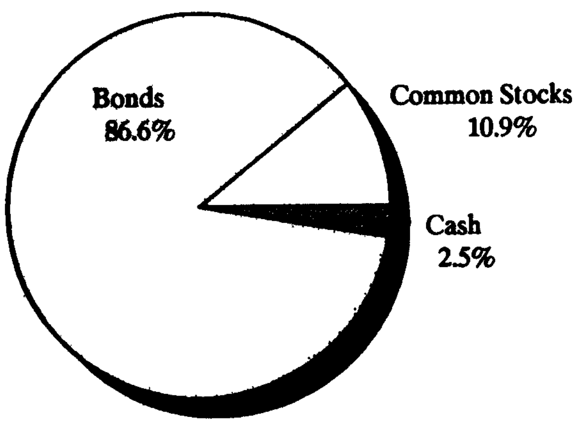
	Asset Growth During Third Quarter 1989 (Millions)
Beginning Value	$5,014
Net Contributions	59
Investment Return	50
Ending Value	$5,123



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
9/30/89

	Actual Market Value (Millions)	Asset Mix 9/30/89
Common Stocks	$558	10.9%
Bonds	4,437	86.6
Unallocated Cash	128	2.5
	$5,123	100.0%

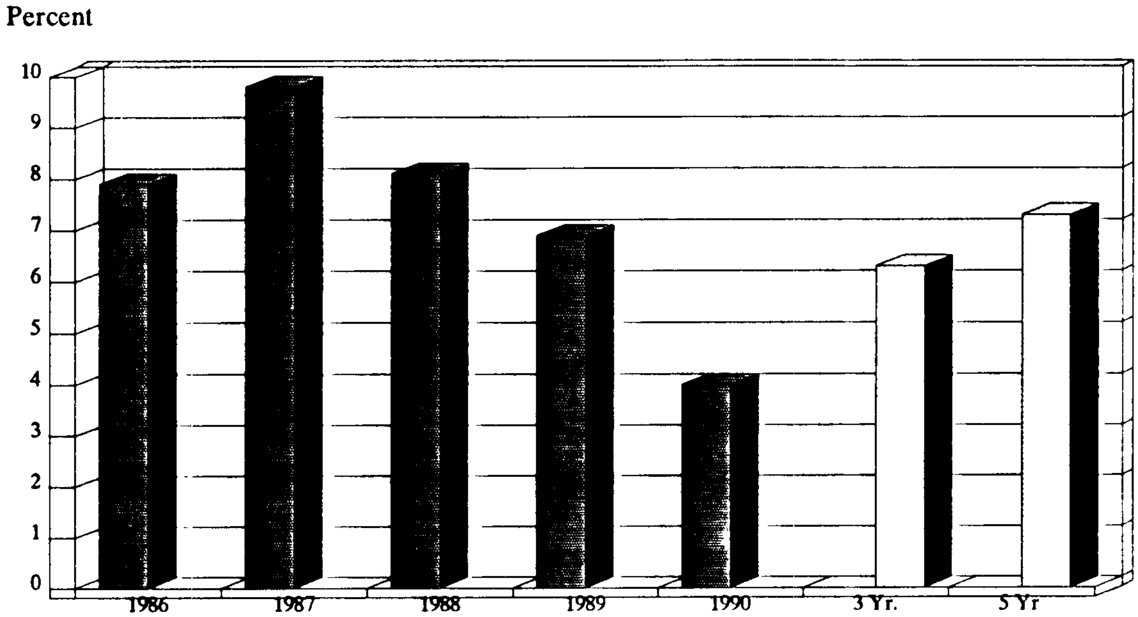
Post Fund (Con't.)

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

	1986	1987	1988	1989	1990	(Annualized) 3 Yrs.	5 Yrs.
Benefit Increases	7.9%	9.8%	8.1%	6.9%	4.0%	6.3%	7.3%

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 3.7% on an annualized basis over the last five years (calendar 1985-1989).

Stock Segment Performance

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

Period Ending 9/30/89

	Qtr.	Yr.	(Annualized) 3 Yr.	5 Yr.
Stock Segment	9.4%	34.0%	16.2%	16.3%
Post Fund Benchmark	10.3	32.2	N.A.	N.A.

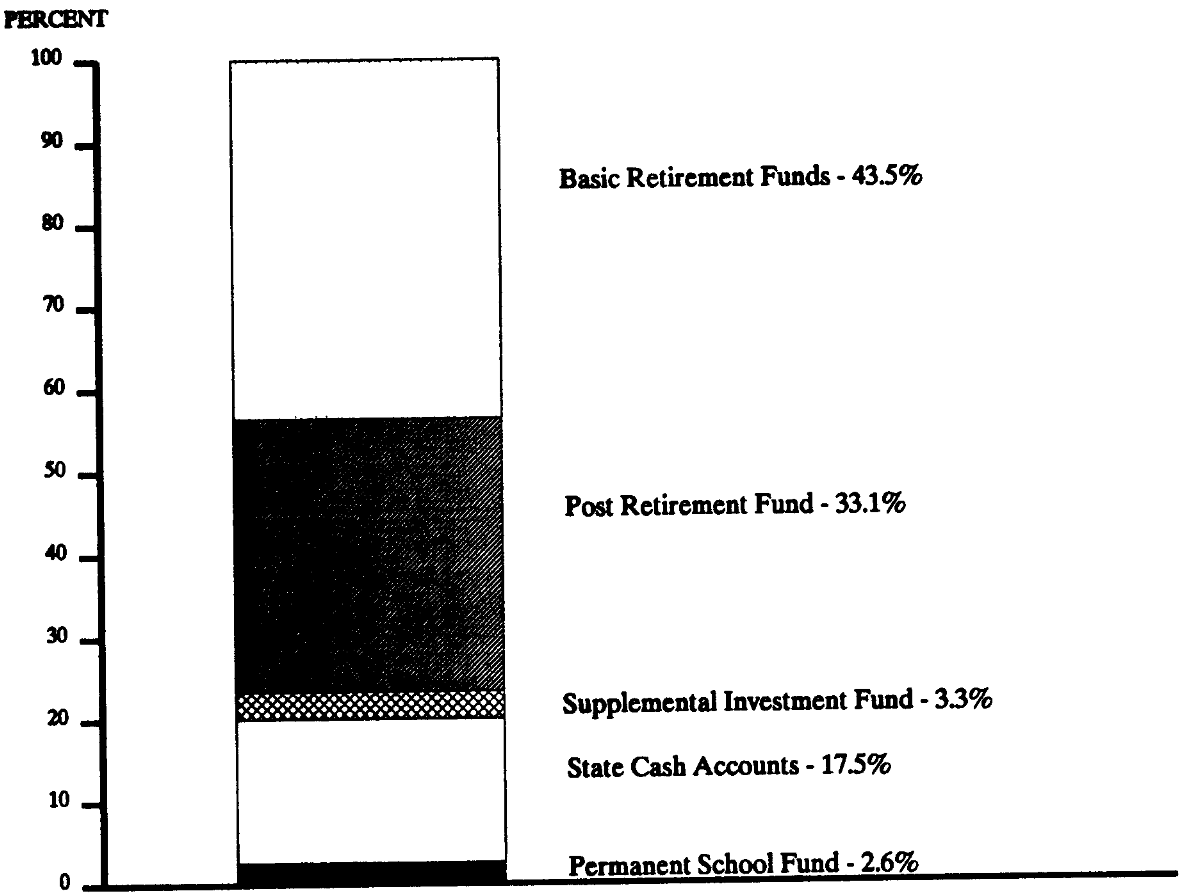
Bond Segment Performance

At the close of the quarter, the dedicated bond portfolio had a current yield of 7.84% and average duration of 7.94 years. The market value of the dedicated bond portfolio was $4.4 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 0.4% return for the quarter and a 14.4% return for the year. This is consistent with the design of the dedicated bond portfolio.

EXECUTIVE SUMMARY

Funds Under Management



	9/30/89 Market Value (Billions)
Basic Retirement Funds	$6.7
Post Retirement Fund	5.1
Supplemental Investment Fund	0.5
State Cash Accounts	2.7
Permanent School Fund	0.4
Total	$15.4

MINNESOTA STATE BOARD

OF INVESTMENT

QUARTERLY INVESTMENT REPORT

Third Quarter 1989

(July 1, 1989 - September 30, 1989)

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FINANCIAL MARKETS REVIEW

STOCK MARKET

Stock prices advanced strongly during the third quarter. The major factors in the rise of the stock market were mergers and acquisitions, especially in the transportation sector, and continuing strength in consumer purchases. There was also increased demand for interest sensitive stocks due to the market perception that interest rates will start to decrease in 1990. This interest rate decrease is based on the general consensus that the economy will start to slow down in 1990 and the Federal Reserve will have to lower interest rates to prevent a recession. Overall, the Wilshire 5000 stock index provided a total return of 10.1% during the quarter and had a 31.4% return for the latest year.

There was a wide disparity in the price performance of different sectors during the quarter. Transportation was the best performing sector with a return of 16.0%. The worst performing sector was the technology sector with a return of 4.3%.

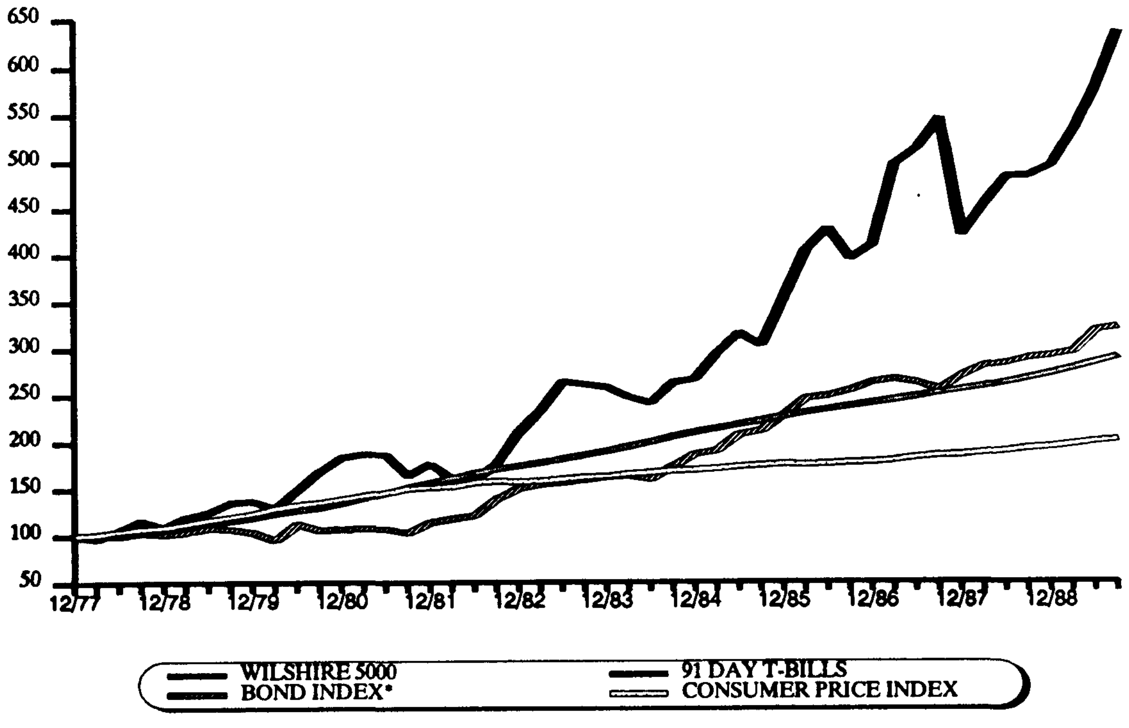
BOND MARKET

Bond prices did not change significantly during the third quarter. The static bond market was due to the Federal Reserve maintaining its current monetary policy. Economic indicators have not shown that the economy is slowing down. Until they do, the Federal Reserve is likely to continue its current monetary policy to accomplish its long term goal of zero inflation.

Overall, the Salomon Brothers Broad Investment Grade (BIG) Index gained 1.0% for the quarter and had a 11.2% return for the latest year. Mortgage securities were the best performing sector with a gain of 1.6% and Treasury issues provided the lowest return of 0.8%.

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 1990.

VENTURE CAPITAL

There continues to be a heavy flow of venture capital offerings. However, these funds are taking longer to raise less money than in the past.

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.

RESOURCE FUNDS

West Texas Intermediate oil ended the quarter at $20 per barrell despite increased OPEC production. Increased demand and an accelerating decline in U.S. crude production has kept the price at this level. With increased demand and slowing production, the U.S. oil import dependency is rising. Imports supplied 44% of first-half 1989 demand vs. 40% in the same 1988 period. Experts expect demand to slow causing price declines if OPEC continues to increase production.

BASIC RETIREMENT FUNDS

Investment Objectives

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

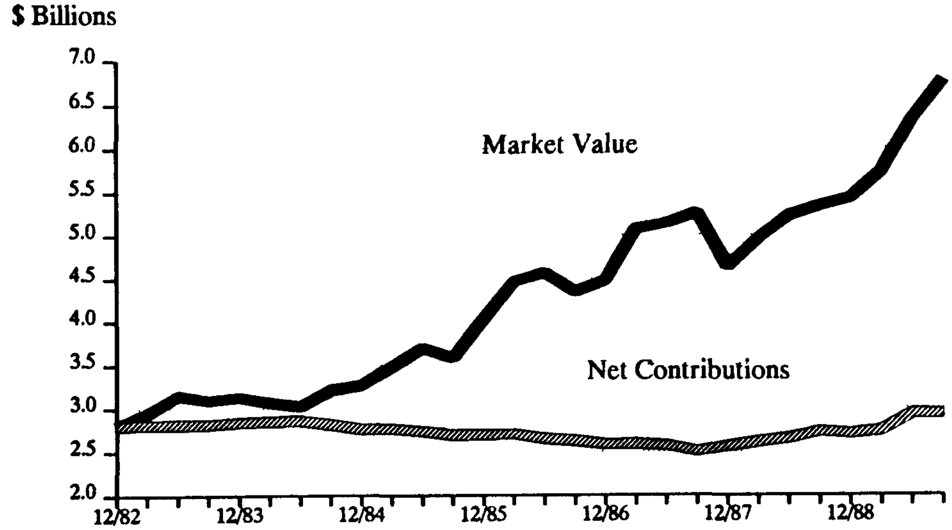
Based upon the Basic Funds' adequate funding levels and participant demographics, its investment time horizon is quite long. This extended time horizon permits the Board to take an aggressive, high expected return investment policy which incorporates a sizable equity component.

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

- The total fund should provide real rates of return that are 3-5 percentage points greater than the rate of inflation over moving 10 year periods.
- Stocks, bonds and cash should 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.
- The total fund should 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 7.0% during the third quarter of 1989. The increase was due primarily to stock appreciation. Both bonds and alternative assets had positive returns. However, they were small relative to the equity return.



In Millions	12/84	12/85	12/86	12/87	12/88	3/89	6/89	9/89
Beginning Value	$3,129	$3,265	$4,030	$4,474	$4,628	$5,420	$5,727	$6,325
Net Contributions	-78	-62	-113	-26	146	32	195	-6
Investment Return	214	827	557	180	646	275	403	444
Ending Value	$3,265	$4,030	$4,474	$4,628	$5,420	$5,727	$6,325	$6,763

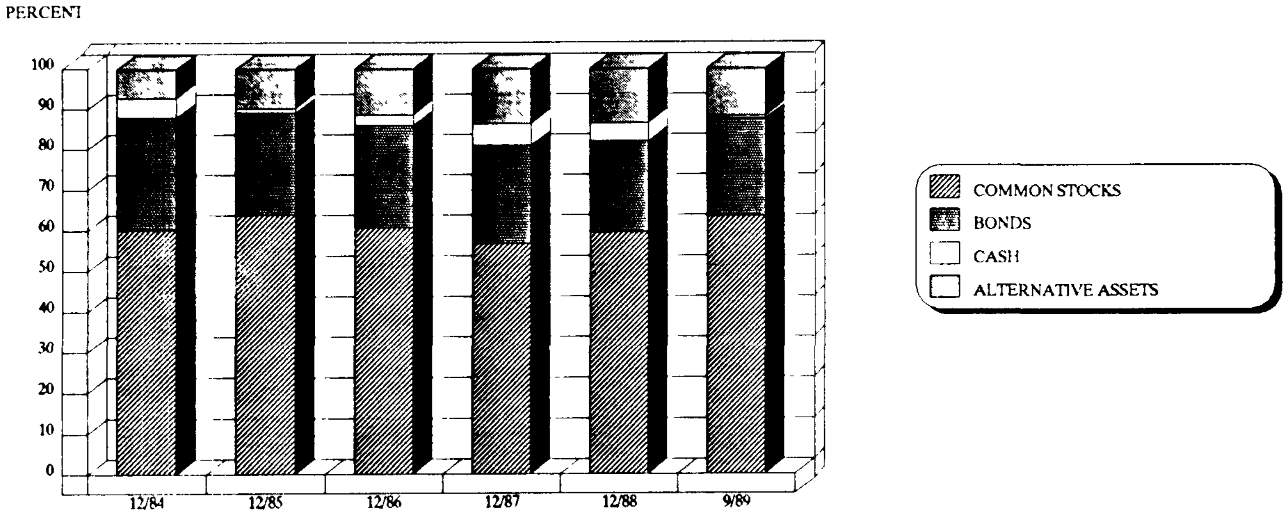
BASIC RETIREMENT FUNDS

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, $300 million of stock assets were reallocated to bonds to rebalance the asset mix back towards the long term policy. The rebalancing was necessary after recent large stock appreciation gains and the transfer of stock assets from the Variable Annuity Fund to the Basic Funds.



	Last Five Years					Latest Qtrs.		
	12/84	12/85	12/86	12/87	12/88	3/89	6/89	9/89
Stocks	60.1%	63.8%	60.6%	56.7%	59.5%	61 0%	65.7%	63.5%
Bonds	27.9	25.3	25.3	24.2	22.4	21 4	20.8	24.1
Real Estate	5.4	7.2	8.3	9.5	9.0	8 7	7.9	7.5
Venture Capital	0.9	1.3	1.8	2.8	3.1	3 0	2.9	2.9
Resource Funds	0.9	1.3	1.4	1.4	1.5	1 6	1.5	1.4
Unallocated Cash	4.8	1.1	2.6	5.4	4.5	4 3	1.2	0.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100 0%	100.0%	100.0%

BASIC RETIREMENT FUNDS

Total Fund Performance vs. Standards

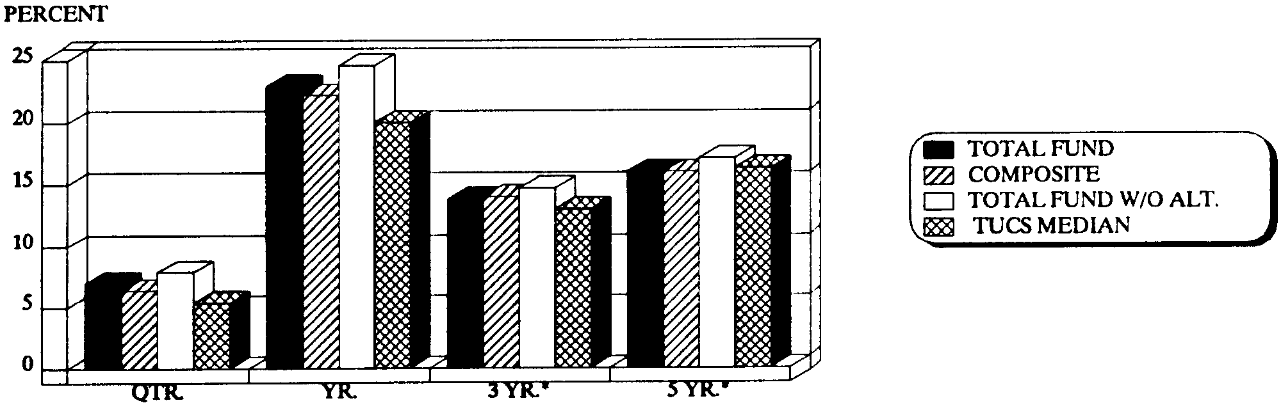
The Basic Funds' long-term rate of return performance is evaluated relative to two specific benchmarks:

- **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. As of 7/1/89, the composite index is weighted: 60% Wilshire 5000 Stock Index, 24% Salomon Broad Bond Index, 10% Real Estate Funds, 2.5% Venture Capital Funds, 2.5% Resource Funds, and 1% 91 Day T-Bills.

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

The Basic Funds total portfolio exceeded 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 quarter and year. Excluding alternative assets, the Basic Funds ranked in the top quarter (18th percentile) of the TUCS universe for the latest quarter. It also ranked in the top quarter (19th percentile) for the latest year and near the top third (34th percentile) for the last five years.



Period Ending 9/30/89

*(Annualized)

	Qtr.	Yr.	3 Yr.	5 Yr.
Total Fund	**7.0%**	**22.9%**	**13.8%**	**16.0%**
Composite Index	6.4	22.2	14.0	16.0
Stocks, Bonds and Cash Only	**7.9**	**24.6**	**14.7**	**17.1**
TUCS Median Balanced Fund	5.4	20.0	13.0	16.3

BASIC RETIREMENT FUNDS

Segment Performance vs. Standards

Stock Segment

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

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Stock Segment	10.5%	31.1%	17.0%	18.9%
Wilshire 5000	10.1	31.4	17.2	19.3

Bond Segment

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

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Bond Segment	1.2%	11.1%	8.8%	12.7%
Salomon Bond Index	1.0	11.2	8.1	13.2

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.

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.

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Real Estate Segment	1.0%	7.3%	7.2%	7.7%
Real Estate Index	1.4	7.2	7.7	8.4

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.

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

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Venture Capital Segment	1.1%	17.5%	11.3%	6.7%
Resource Fund Segment	0.0	0.7	9.0	1.5

BASIC RETIREMENT FUNDS

Stock Manager Performance vs. Benchmarks

Common stock manager returns are evaluated against the performance of customized indices constructed to represent the managers' specific investment approaches. These custom indices are commonly referred to as "benchmark portfolios." The benchmark portfolios take into account the equity market forces that at times favorably or unfavorably impact certain investment styles. Thus, benchmark portfolios are the appropriate targets 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 very good. Nine 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 9/30/89	Market Value 9/30/89 (Thousands)	Quarter Ending 9/30/89		Year Ending 9/30/89		(Annualized) Since 1/1/84	
			Actual	Bmrk	Actual	Bmrk	Actual	Bmrk
Active Managers								
Alliance	9.3%	$399,457	15.2%	10.7%	42.4%	29.7%	21.0%	14.2%
BMI	2.0	86,547	6.7	9.5	16.8	28.3	10.8	13.8
Concord	2.6	109,510	7.3	9.1				
Forstmann	4.6	198,086	9.8	7.8	24.5	23.6	15.8	13.6
Franklin	2.7	116,439	11.1	7.4				
IDS	4.1	172,994	15.8	8.8	36.7	28.9	17.7	16.7
IAI	2.8	120,470	12.4	8.4	30.9	28.6	15.6	16.7
Lieber & Co.	2.7	116,148	8.8	8.0	23.9	23.3	14.5	13.0
Rosenberg	2.7	115,046	10.7	9.5				
Sasco	2.6	111,935	9.1	8.5				
Waddell & Reed	4.1	176,739	12.1	7.9	31.7	22.9	14.1	12.7
Aggregate Active	40.2%	$1,723,281	11.7%		30.9%		15.3%	
Passive Manager								
Wilshire Associates	59.8%	$2,567,688	9.7%	10.1%	30.7%	31.2%	16.8%	16.8%
Aggregate Passive	59.8%	$2,567,688	9.7%		30.7%		16.8%	
Total Stock Segment	**100.0%**	**$4,290,969**	**10.5%**	**9.6%**	**31.1%**	**29.8%**	**16.4%**	**16.5%**
Wilshire 5000 Index			10.1%		31.4%		16.9%	

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 targets 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 9/30/89	Market Value 9/30/89 (Thousands)	Quarter Ending 9/30/89		Year Ending 9/30/89		(Annualized) Since 7/1/84	
			Actual	Bmrk	Actual	Bmrk	Actual	Bmrk
Active Managers								
IAI	3.4%	$54,340	0.4%	0.9%	12.4%	11.5%	14.5%	13.9%
Lehman	7.2	117,846	1.1	1.2	10.3	10.7	13.2	13.2
Miller Anderson	10.4	170,079	0.4	1.0	8.0	11.2	13.7	14.3
Morgan Stanley	6.9	113,055	1.5	1.2	9.9	9.9	13.3	13.8
Western Asset	13.1	213,642	1.8	1.0	13.5	11.2	15.7	14.0
Aggregate Active	41.0%	$668,962	1.2%		10.8%		14.2%	
Semi-Passive Managers								
Fidelity Management	29.5%	$481,389	1.1%	1.0%	11.3%	11.2%		
Lincoln Capital	29.5	482,510	1.3	1.0	11.5	11.2		
Aggregate Passive	59.0%	$963,899	1.2%		11.4%			
Total Bond Segment	**100.0%**	**$1,632,861**	**1.2%**	**1.1%**	**11.1%**	**11.1%**	**13.6%**	**13.9%**
Salomon Broad Index			1.0%		11.2%		14.3%	

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

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

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.

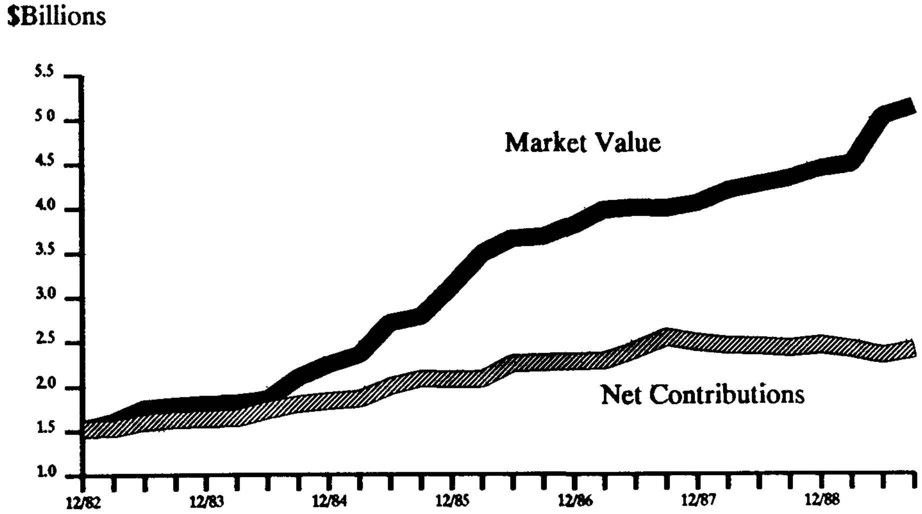
The Board has established two earnings objectives for the Post Fund:

- 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 2.2% during the third quarter of 1989. Asset growth was achieved through both investment returns and net contributions of $59 million for the quarter.



In Millions

	12/84	12/85	12/86	12/87	12/88	3/89	6/89	9/89
Beginning Value	$1,803	$2,246	$3,107	$3,808	$4,047	$4,434	$4,484	$5,014
Net Contributions	201	239	199	207	-27	-50	66	59
Investment Return	242	622	502	32	414	100	464	50
Ending Value	$2,246	$3,107	$3,808	$4,047	$4,434	$4,484	$5,014	$5,123

POST RETIREMENT FUND

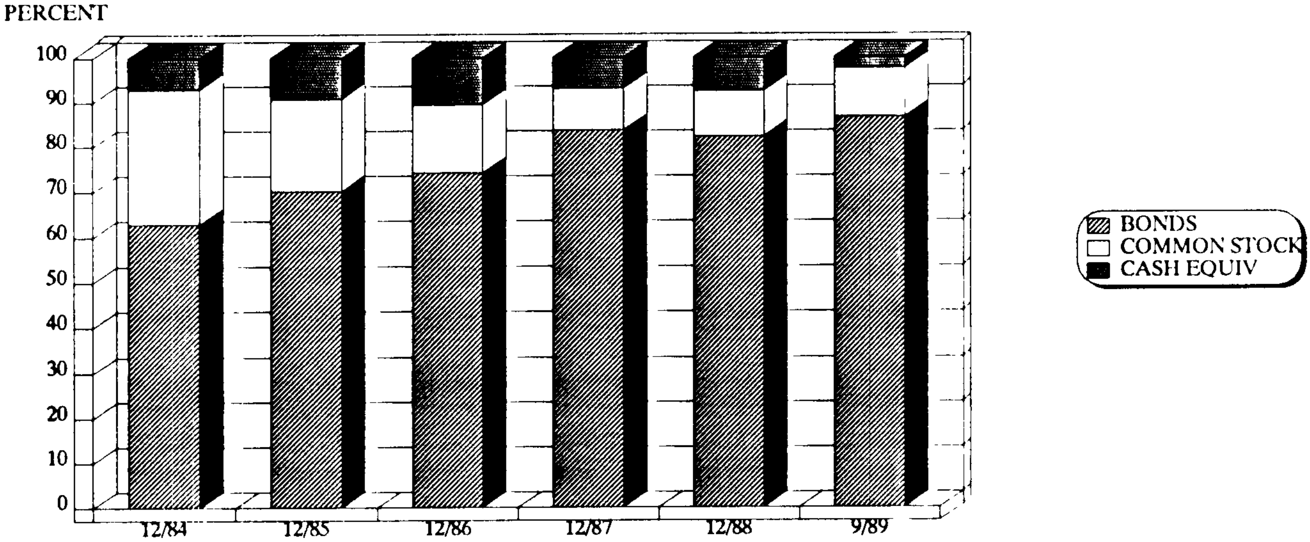
Asset Mix

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 Qtrs.		
	12/84	12/85	12/86	12/87	12/88	3/89	6/89	9/89
Bonds	62.9%	70.2%	74.2%	83.7%	82.3%	87 5%	86.9%	86.6%
Stocks	30.0	20.5	15.1	9.3	10.1	10.7	10.5	10.9
Unallocated Cash	7.1	9.3	10.7	7.0	7.6	1.8	2.6	2.5
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

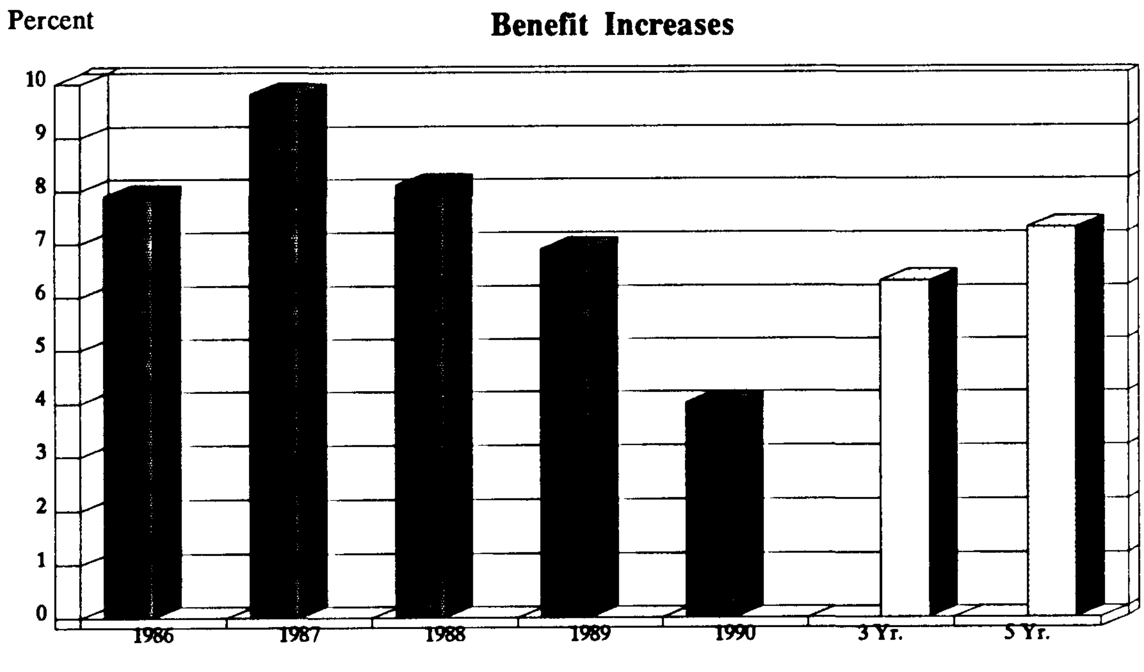
POST RETIREMENT FUND

Total Fund Performance

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

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

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



	1986	1987	1988	1989	1990	(Annualized) 3 Yrs.	5 Yrs.
Benefit Increases	7.9%	9.8%	8.1%	6.9%	4.0%	6.3%	7.3%

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 3.7% on an annualized basis over the last five years (calendar 1985-1989).

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 latest year.

	Period Ending 9/30/89			
			(Annualized)	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Stock Segment	9.4%	34.0%	16.2%	16.3%
Post Fund Benchmark	10.3	32.2	N.A.	N.A.

Bond Segment Performance

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

The Post Fund's bond portfolio provided a 0.4% total rate of return for the quarter and a 14.4% 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
9/30/89

Value at Market	$ 4,345,707,443
Value at Cost	4,018,397,449
Average Coupon	5.76%
Current Yield	7.84
Yield to Maturity	8.77
Current Yield at Cost	8.48
Time to Maturity	16.09 Years
Average Duration	7.94 Years
Average Quality Rating	AAA
Number of Issues	423

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 September 30, 1989 the market value of the entire fund was $453 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

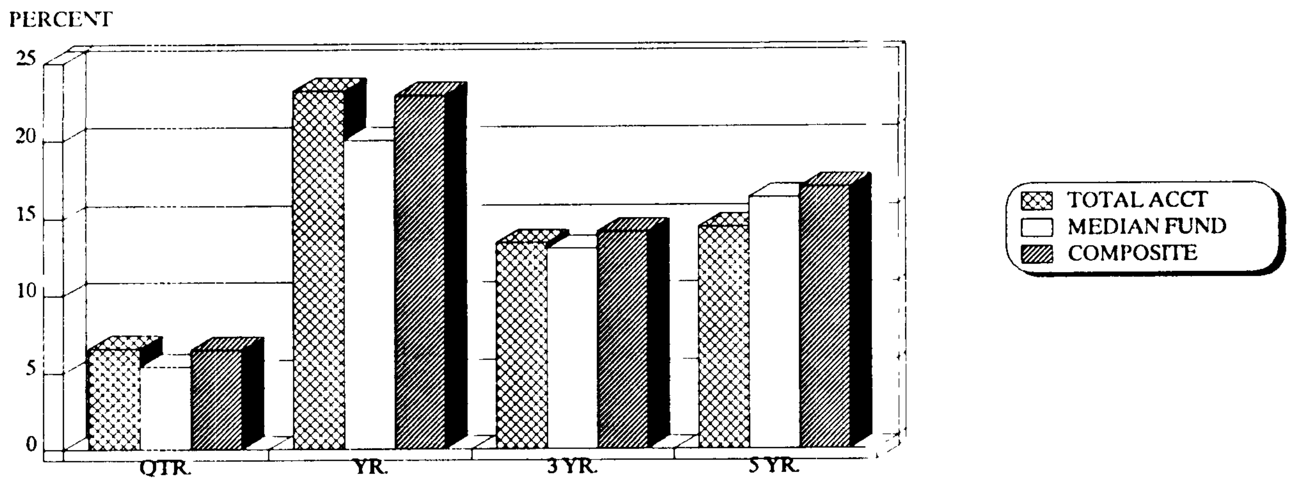
Investment Objective
The primary investment objective of the Income Share Account is similar to that of the Basic Retirement Funds. The Account seeks to maximize long-term real rates of return, while limiting short-run portfolio return volatility.

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%	61.7%
Bonds	35.0	29.4
Unallocated Cash	5.0	8.9
	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 September 30, 1989 the market value of the Income Share Account was $236 million.



Period Ending 9/30/89

	Qtr.	Yr.	Annualized 3 Yr.	Annualized 5 Yr.
Total Account	6.6%	23.2%	13.4%	14.4%
Median Fund*	5.4	20.0	13.0	16.3
Composite**	6.5	22.9	14.1	17.0
Equity Segment	9.7	30.7	16.0	15.6
Wilshire 5000	10.1	31.4	17.2	19.3
Bond Segment	1.2	11.5	8.9	13.2
Salomon Bond Index	1.0	11.2	8.1	13.2

* TUCS Median Balanced Portfolio

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

SUPPLEMENTAL INVESTMENT FUND

Growth Share Account

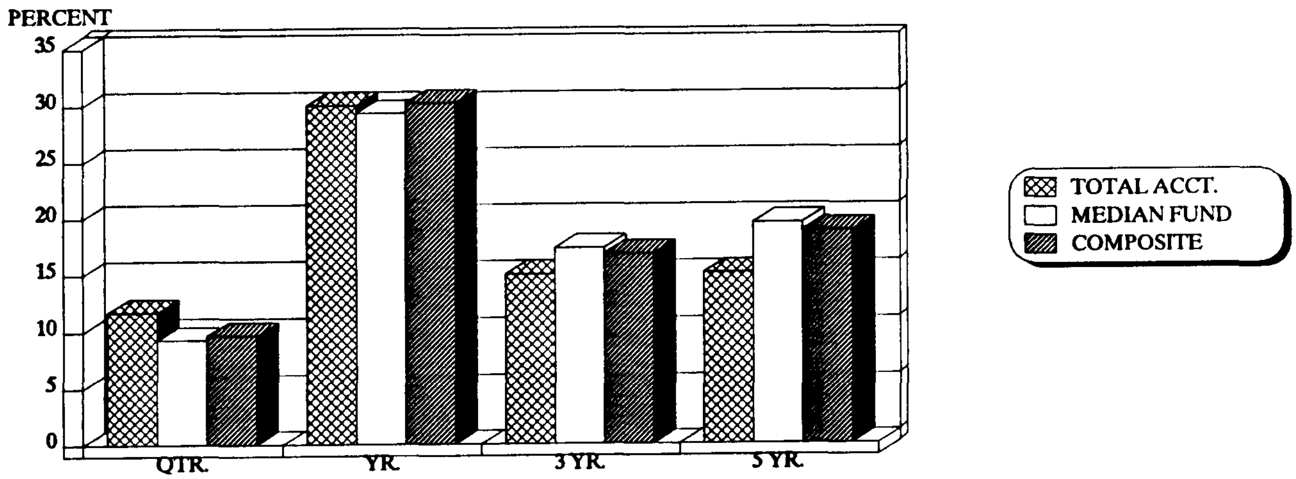
Investment Objective
The Growth Share Account's investment objective is to generate above-average returns from capital appreciation on common stocks.

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%	100.0%
Unallocated Cash	5.0	0.0
	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 September 30, 1989 the market value of the Growth Share Account was $80 million.



Period Ending 9/30/89

	Qtr.	Yr.	Annualized 3 Yr.	Annualized 5 Yr.
Total Account	11.7%	30.0%	15.0%	15.1%
Median Fund*	9.3	29.3	17.3	19.5
Composite**	9.7	30.2	16.8	18.8
Equity Segment	11.7	30.5	15.3	15.8
Wilshire 5000	10.1	31.4	17.2	19.3

* TUCS Median Managed Equity Portfolio

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

SUPPLEMENTAL INVESTMENT FUND

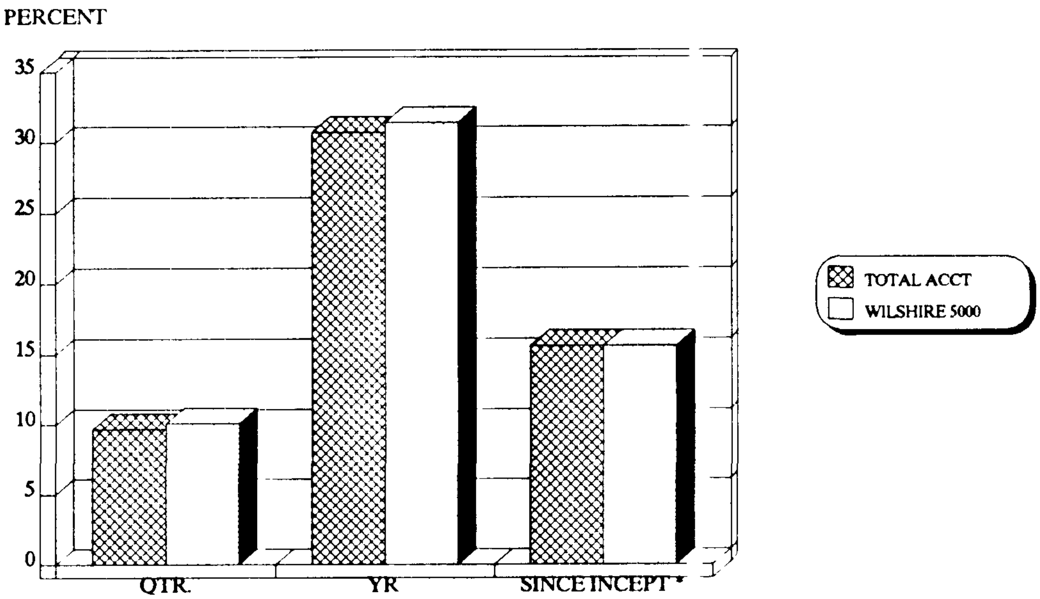
Common Stock Index Account

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



Period Ending 9/30/89

	Qtr.	Yr.	Since Inception Annualized*
Total Account	9.7%	30.7%	15.6%
Wilshire 5000	10.1	31.4	15.6

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

SUPPLEMENTAL INVESTMENT FUND

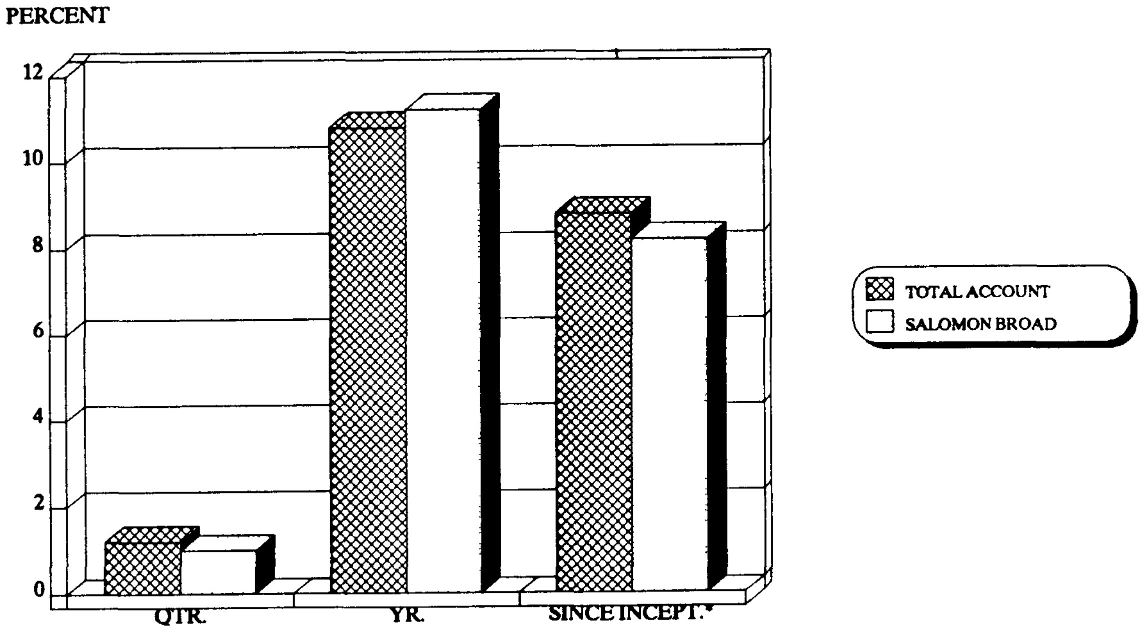
Bond Market Account

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 September 30, 1989 the market value of the Bond Market Account was $4 million.



Period Ending 9/30/89

	Qtr.	Yr.	Since Inception Annualized*
Total Account	1.2%	10.8%	8.8%
Salomon Broad	1.0	11.2	8.2

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

SUPPLEMENTAL INVESTMENT FUND

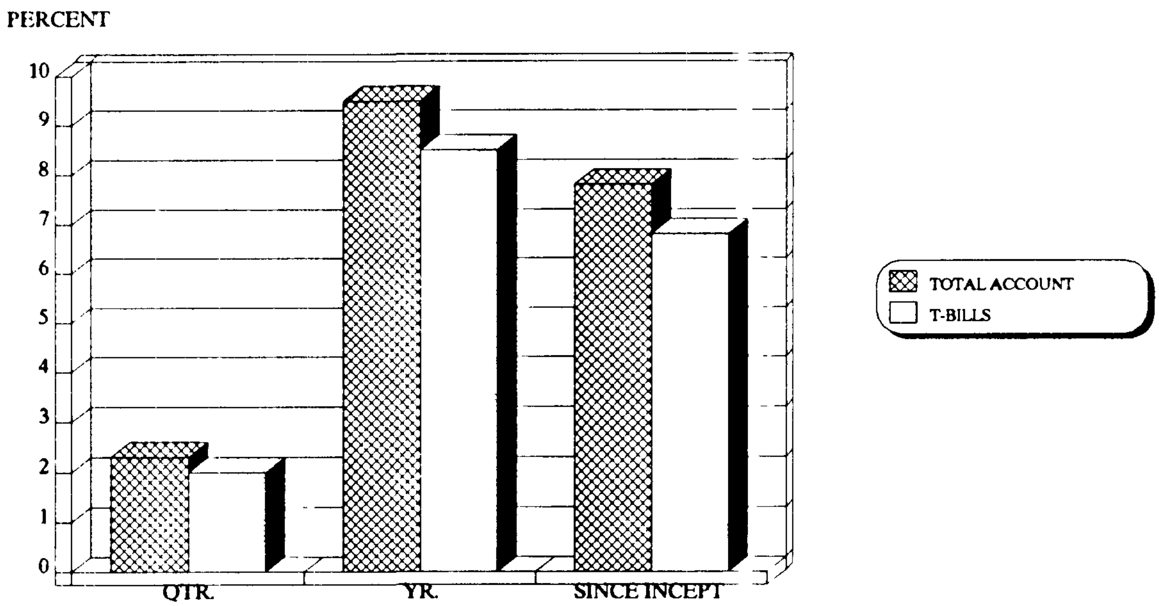
Money Market Account

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 September 30, 1989 the market value of the Money Market Account was $78 million.



Period Ending 9/30/89

	Qtr.	Yr.	Since Inception Annualized*
Total Account	2.3%	9.5%	7.8%
91 Day T-Bills	2.0	8.5	6.8

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

SUPPLEMENTAL INVESTMENT FUND

Guaranteed Return Account

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

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

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

Market Value
On September 30, 1989 the market value of the Guaranteed Return Account was $50 million.

Contract Period	Annual Effective Interest Rate	Manager
Nov. 1, 1987 - Oct. 31, 1990	8.45%	Principal Mutual Life
Nov. 1, 1988 - Oct. 31, 1991	9.01%	Mutual of America
Nov. 1, 1989 - Oct. 31, 1992	8.40%	John Hancock

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 third 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%	93.6%
Unallocated Cash	5.0	6.4
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 1.1% during the third quarter. The asset growth was due to appreciation of the bond portfolio as well as $1.7 million in contributions.

Asset Growth
During Third Quarter 1989
(Millions)

Beginning Value	$384.6
Net Contributions	1.7
Investment Return	2.7
Ending Value	$389.0

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 8.92%, an average life of 7.55 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
9/30/89

Value at Market	$356,113,433
Value at Cost	342,822,910
Average Coupon	9.03%
Current Yield	8.92
Yield to Maturity	8.82
Current Yield at Cost	9.26
Time to Maturity	15.95 Years
Average Duration	7.55 Years
Average Quality Rating	AAA
Number of Issues	132

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 9/30/89		
	Market Value (Millions)	**Qtr.**	**Yr.**
Treasurer's Cash Pool	$2,233	2.3%	9.1%
Trust Fund Cash Pool	155	2.2	9.1
91-Day T-Bills		2.0	8.4

Tab B

PORTFOLIO STATISTICS

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

For period of
July 1, 1989 - September 30, 1989

Teachers Retirement Fund	$ 30,000,000.00
Public Employees Retirement Fund	(42,000,000.00)
State Employees Retirement Fund	(1,363,000.00)
Public Employees Police & Fire	5,000,000.00
Highway Patrol Retirement Fund	739,000.00
Judges Retirement Fund	1,761,000.00
Public Emp. P & F Consolidated	-0-
Correctional Employees Retirement Fund	252,000.00
Post Retirement Fund	42,752,767.97
Supplemental Retirement Fund - Income	(279,920.56)
Supplemental Retirement Fund - Growth	(1,490,891.63)
Supplemental Retirement Fund - Money Market	1,603,783.90
Supplemental Retirement Fund - Index	141,683.10
Supplemental Retirement Fund - Bond Mkt.	585,450.23
Supplemental Retirement Fund - Guaranteed	643,940.85
Total Retirement Funds Net Cash Flow	$ 38,345,813.86
Permanent School Fund	1,727,198.56
Total Net Cash Flow	$ 40,073,012.72

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

	CASH AND SHORT TERM SECURITIES	BONDS INTERNAL	BONDS EXTERNAL	STOCKS INTERNAL	STOCKS EXTERNAL	ALTERNATIVE ASSETS	TOTAL
BASIC RETIREMENT FUNDS:							
TEACHERS RETIREMENT FUND	$ 30,524	$ -0-	$ 750,370	$ -0-	$1,972,114	$367,648	$ 3,120,656
	.98%		24.04%		63.20%	11.78%	100%
PUBLIC EMPLOYEES RETIRE. FUND	5,365	-0-	373,966	-0-	982,758	183,224	1,545,313
	.35%		24.20%		63.60%	11.85%	100%
STATE EMPLOYEES RETIRE. FUND	4,683	-0-	326,377	-0-	857,697	159,908	1,348,665
	.35%		24.20%		63.60%	11.85%	100%
PUBLIC EMP. POLICE & FIRE FUND	1,974	-0-	137,570	-0-	361,524	67,402	568,470
	.35%		24.20%		63.59%	11.86%	100%
HIGHWAY PATROL RETIRE. FUND	355	-0-	24,729	-0-	64,985	12,116	102,185
	.35%		24.20%		63.59%	11.86%	100%
JUDGES RETIREMENT FUND	-0-	-0-	1,318	-0-	3,287	646	5,251
			25.10%		62.60%	12.30%	100%
PUBLIC EMP. P.F. CONSOLIDATED	112	-0-	2,728	-0-	7,157	1,332	11,329
	.99%		24.08%		63.17%	11.76%	100%
CORRECTIONAL EMPLOYEES RETIREMENT	346	-0-	15,806	-0-	41,537	7,744	65,433
	.53%		24.16%		63.48%	11.83%	100%
POST RETIREMENT FUND	128,654	4,436,853	-0-	557,645	-0-	-0-	5,123,152
	2.51%	86.60%		10.89%			100%
MINNESOTA SUPPLEMENTAL FUNDS:							
INCOME SHARE ACCOUNT	21,102	69,321	-0-	-0-	145,649	-0-	236,072
	8.94%	29.36%			61.70%		100%
GROWTH SHARE ACCOUNT	7	-0-	-0-	-0-	79,807	-0-	79,814
	0.01%				99.99%		100%
MONEY MARKET ACCOUNT	77,676	-0-	-0-	-0-	-0-	-0-	77,676
	100%						100%
COMMON STOCK INDEX ACCOUNT	-0-	-0-	-0-	-0-	5,343	-0-	5,343
					100%		100%
BOND MARKET ACCOUNT	-0-	-0-	3,792	-0-	-0-	-0-	3,792
			100%				100%
GUARANTEED RETURN ACCOUNT	-0-	-0-	50,376	-0-	-0-	-0-	50,376
			100%				100%

	CASH AND SHORT TERM SECURITIES	BONDS INTERNAL	BONDS EXTERNAL	STOCKS INTERNAL	STOCKS EXTERNAL	ALTERNATIVE ASSETS	TOTAL
TOTAL RETIREMENT FUNDS	$ 270,798	$4,506,174	$1,687,032	$557,645	$ 4,521,858	$800,020	$12,343,527
	2.19%	36.51%	13.67%	4.52%	36.63%	6.48%	100%
PERMANENT SCHOOL FUND	24,805	364,240	-0-	-0-	-0-	-0-	389,045
	6.38%	93.62%					100%
TREASURERS CASH	2,233,420	-0-	-0-	-0-	-0-	-0-	2,233,420
	100%						100%
HOUSING FINANCE AGENCY	191,521	-0-	-0-	-0-	-0-	-0-	191,521
	100%						100%
MINNESOTA DEBT SERVICE FUND	20,716	-0-	-0-	-0-	-0-	-0-	20,716
	100%						100%
MISCELLANEOUS ACCOUNTS	270,330	-0-	-0-	-0-	-0-	-0-	270,330
	100%						100%
GRAND TOTAL	$3,011,590	$4,870,414	$1,687,032	$557,645	$4,521,858	$800,020	$15,448,559
	19.49%	31.53%	10.92	3.61%	29.27%	5.18%	100%

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
July	121	(100)	21	44	2.6	49.0	48.4	12287
August	275	(205)	70	51	2.4	49.8	47.8	12311
September	47	11	58	32	2.2	50.2	47.6	12344

Tab C

EXECUTIVE DIRECTOR
HOWARD J. BICKER

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

December 20, 1989

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

FROM: Howard Bicker

SUBJECT: Executive Director's Administrative Report

1) Budget Report

A budget-to-actual report for the SBI's FY 1990 administrative budget is included as Attachment A. It covers expenditures through November 30, 1989.

2) Travel Report

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

3) Cancellation of SBI Seminar

As you know, the half-day seminar to discuss investment policies that was announced for November 16, 1989 was cancelled because only three of the Board members could attend on the scheduled date. At the suggestion of several of the Board deputies, we will not attempt to reschedule the seminar until after the 1990 Legislative Session has adjourned.

4) SBI Client Conference

The Annual Investment Conference for SBI clientele will be held during February, 1989. Staff are working with Board deputies to set the agenda and finalize other logistics. You will be notified of the date and location within 1-2 weeks.

5) SBI and IAC Meetings During Calendar 1990

The SBI and IAC hold regular meetings four times a year on the first consecutive Tuesday and Wednesday in March, June, September and December. The schedule for calendar 1990 is in Attachment C.

6) Fiscal Year 1989 Annual Report and Audit Opinion

Draft copies of the SBI annual report were sent to Board members, Board deputies and IAC members in October. The final version was sent to the printer on December 15, 1989. Printed copies should be distributed by mid-January 1990.

The SBI is audited annually by the Office of the Legislative Auditor. The auditor's opinion letter regarding the financial statements is included in the SBI's annual report. I am pleased to report that the SBI received a "clean opinion" for FY 1989. No findings or exceptions were cited. A copy of the opinion letter is in Attachment D.

7) Post Retirement Benefit Increase

Based on fiscal year 1989 returns, the Post Retirement Fund generated sufficient realized earnings to provide a benefit increase of 4.04% effective January 1, 1990.

8) Executive Director's Work Plan Status Report

The Board approved my FY1990 work plan at its last meeting. A status report for the first half of the year is included as Attachment E. Overall, the projects outlined in the work plan are proceeding according to schedule.

9) Status Report on Police and Fire Fund Consolidation

In 1987, legislation was enacted that established procedures for voluntary consolidation of local police and fire plans with PERA (Minnesota Statutes Chapter 353A).

When a merger takes place, assets are transferred from the local plan to the Basic and Post Funds. SBI staff work with each plan to ensure that the securities being transferred are acceptable. Under MS 353A, the SBI executive director has authority to accept assets in-kind or to require that individual holdings be converted to cash prior to the transfer.

During 1987 and 1988, three plans with assets totaling $24.5 million elected to merge:

- Buhl Police
- Duluth Police
- West St. Paul Fire

On December 31, 1989, six plans with assets totaling $32.0 million will merge:

- o Hibbing Fire
- o Hibbing Police
- o Red Wing Fire
- o Rochester Police
- o St. Cloud Fire
- o Winona Fire

The memberships of three other plans have approved consolidation. If their respective city councils provide final approval, the following plans will merge on December 31, 1989 as well:

- o Anoka Police
- o Red Wing Police
- o St. Louis Park Police

10) 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.

At your last meeting, I reported that staff moved $300 million from passively managed stocks to semi-passively managed bonds during July and August in order to bring the Basic Funds closer to its long term targets. After these moves, the Basic Funds' common stock segment was 63.5%, still above the long term target of 60.0%:

Basic Funds Asset Mix 9/30/89		Long Term Target	Required Rebalancing Ranges	Discretionary Rebalancing Ranges	Approximate Dollar Value of Over/Under Wtg. (+/-)
Stocks	63.5%	60%	Over 66%, Under 54%	55% - 65%	+ $200 Mil.
Bonds	24.1	24	Over 26%, Under 22%	23% - 25%	-0-
Alt. Assets	11.8	15	-	-	- $180 Mil.
Cash	0.6	1	-	-	- $ 20 Mil.
	100.0%				

Staff undertook further rebalancing on October 1, 1989 in order to reduce the remaining overweighting in stocks and to raise a limited amount of cash:

Assets Moved From:		Assets Moved To:	
Active Stocks - IAI	$ 30 mil	Active Bonds - IAI	$ 50 mil
Active Stocks - BMI	30 mil	Active Bonds - Western	50 mil
Passive Stocks - Wilshire	90 mil	Cash Equivalents	50 mil
Total	$150 mil	Total	$150 mil

Assets were taken from the two active stock managers due to poor performance relative to their benchmarks. Western received assets due to strong performance relative to its benchmark. IAI received assets because it has had a significantly smaller portfolio than the other active bond managers but is providing returns that are above its benchmark on a cumulative basis.

The index fund manager, Wilshire Associates, acted as a transition manager during the transfer in an effort to keep transaction costs to a minimum. Stock holdings taken from the active stock managers were merged with the index fund. Wilshire Associates was directed to sell index 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 date. The bond managers received cash on October 1 which they invested within the next few working days.

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

Stocks	61.3%
Bonds	25.6
Alternative Assets	11.8
Cash	1.3
	100.0%

ATTACHMENT A

STATE BOARD OF INVESTMENT
FISCAL YEAR 1990 ADMINISTRATIVE BUDGET REPORT
GENERAL FUND APPROPRIATION
FISCAL YEAR TO-DATE THROUGH NOVEMBER 30,1989

ITEM	**FISCAL YEAR 1990 BUDGET**	**FISCAL YEAR 1990 EXPENDITURES**
PERSONAL SERVICES		
CLASSIFIED EMPLOYEES	$ 263,080	$ 92,634
UNCLASSIFIED EMPLOYEES	1,094,000	430,308
PART-TIME EMPLOYEES	0	0
SEVERENCE PAY	0	0
MISCELLANEOUS PAYROLL	0	333
SUBTOTAL	**$ 1,357,080**	**$ 523,275**
EXPENSES & CONTRACTUAL SERVICES		
RENTS & LEASES	92,000	38,844
REPAIRS/ALTERATIONS/MAINTENANC	8,000	3,022
PRINTING & BINDING	16,500	5,938
PROFESSIONAL/TECHNICAL SERVICE	10,000	1,254
DATA PROCESSING & SYSTEM SERVI	162,000	54,000
PURCHASED SERVICES	20,000	11,215
SUBTOTAL	**$ 308,500**	**$ 114,273**
MISCELLANEOUS OPERATING EXPENSES		
COMMUNICATIONS	18,000	7,479
TRAVEL, IN-STATE	1,000	2,040
TRAVEL, OUT-STATE	34,000	11,162
FEES & OTHER FIXED CHARGES	7,000	2,297
SUBTOTAL	**$ 60,000**	**$ 22,978**
SUPPLIES/MATERIALS/PARTS	**15,000**	**5,911**
CAPITAL EQUIPMENT	**17,000**	**2,361**
TOTAL GENERAL FUND	**$ 1,757,580**	**$ 668,798**

ATTACHMENT B

STATE BOARD OF INVESTMENT

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

Purpose	Name(s)	Destination and Date	Total Cost
Manager Meeting Weiss, Peck & Greer Consultant Meeting Richards & Tierney	H. Bicker	Chicago 8/21-22	$ 506.27
Manager Monitoring Active Stock Manager Waddell & Reed	D. Gorence M. Menssen	Kansas City 9/11-12	$ 805.75
Manager Monitoring Active Stock Managers BMI, Lieber, Forstmann Sasco, Franklin	D. Gorence M. Menssen	New York Boston 9/18-21	$1,970.00
Manager Monitoring Semi-Passive Bond Manager Lincoln Capital Bond Analytical Service Capital Management Services	J. Lukens	Chicago 9/18-19	$ 631.81
Staff Education Northern Ireland Proxy Workshop sponsored by IRRC	J. Heidelberg	Boston 9/19/89	$ 915.39
Staff Education "Quantifying Market Risk Premium" seminar sponsored by the Institute of Chartered Financial Analysts Manager Monitoring Derivatives Manager BEA Associates	M. Edwards	New York 9/25-29	$1,068.44
Miscellaneous Meeting with retired educators	H. Bicker	Rochester MN 10/10	$ 30.13
Staff Conference "Annual Pension Symposium" sponsored by the Nat'l Investment Sponsor Federation	B. Lehman	Chicago 10/10-11	$ 941.17

Travel Summary by Date (con't.)

Purpose	Name(s)	Destination and Date	Total Cost
Manager Monitoring **Venture Capital Manager** Summit Partners Annual Meeting **Semi-Passive Bond Manager** Fidelity Management	J. Lukens	Boston 10/18-20	$ 773.06
Manager Search **GIC Manager** 1989-1992 GIC Bid at State Street Bank	J. Heidelberg	Boston 10/24-25	$769.48
Staff Education Proxy Workshop sponsored by IRRC	A. Blauzda	Chicago 10/27	$ 547.29
Staff Conference Nat'l Association of State Investment Officers Annual Meeting	H. Bicker B. Lehman	Minneapolis 10/30-11/1	$1,000.00
Staff Education "Real Estate Investment Strategies for Pension Funds" conference sponsored by the Northwest Center	H. Bicker	Atlanta 11/4-8	$1,429.41
Miscellaneous Meeting with retired educators	H. Bicker	Owatonna MN 11/13	$ 29.40

CALENDAR 1990 MEETING DATES

The quarterly meetings of the State Board of Investment (SBI) and the Investment Advisory Council (IAC) aor 1990 are:

IAC	SBI
Tuesday, March 6, 1990	Wednesday, March 7, 1990
Tuesday, June 5, 1990	Wednesday, June 6, 1990
Tuesday, September 4, 1990	Wednesday, September 5, 1990
Tuesday, December 4, 1990	Wednesday, December 5, 1990

Normally, the IAC meets from 2:00 P.M. - 4:00 P.M. in Conference Room A, MEA Building, 51 Sherburne Ave., St. Paul, MN.

Normally, the Executive Council, SBI and Land Exchange Board meet consecutively between 8:00 A.M. - 12:00 P.M. on the meeting date. Meetings are held in the State Capitol Building, 75 Constitution Avenue, St. Paul, MN.

ATTACHMENT D

STATE OF MINNESOTA
OFFICE OF THE LEGISLATIVE AUDITOR
VETERANS SERVICE BUILDING, ST. PAUL, MN 55155 • 612/296-4708
JAMES R NOBLES, LEGISLATIVE AUDITOR

Independent Auditor's Report

The State Board of Investment
and
Howard J. Bicker, Executive Director

We have audited the accompanying financial statements of the Supplemental Retirement Fund, the Post Retirement Investment Fund, and the Variable Annuity Fund, which constitute the Investment Trust Funds of the State of Minnesota as of and for the year ended June 30, 1989, as shown on pages 2 to 7. These financial statements are the responsibility of the State Board of Investment's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

The financial statements present only the Investment Trust Funds of the State of Minnesota and are not intended to present fairly the financial position and results of operations of the State Board of Investment or the State of Minnesota in conformity with generally accepted accounting principles.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets and participation of the Investment Trust Funds of the State of Minnesota at June 30, 1989, and the results of their operations and changes in their net assets for the year then ended, in conformity with generally accepted accounting principles.

Our audit was made for the purpose of forming an opinion on the financial statements taken as a whole. The combining financial statements and supporting schedules on pages 10 to 74 are presented for purposes of additional analysis and are not a required part of the financial statements of the Investment Trust Funds of the State of Minnesota. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

James R. Nobles
Legislative Auditor

John Asmussen, CPA
Deputy Legislative Auditor

December 1, 1989

ATTACHMENT E

Executive Director's FY 1990 Work Plan

Status Report

July - December 1989

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

A. Development of Investment Policies

1. Review structure of the Post Retirement Fund.

Original Time Frame: July 1989 - December 1989

Status: In February 1989, the Board reviewed a report from the Task Force on Fund Objectives which recommended that the benefit increase formula in the Post Retirement Fund be changed. The Board did not adopt this recommendation. Board members stated they would not endorse legislative action regarding the Post Fund without support from the retirement systems.

The retirement system directors and I have developed a proposal which makes the benefit increase formula more sensitive to the rate of inflation. This proposal will be discussed with the boards of PERA, TRA, and MSRS at a joint board meeting of the retirement systems in February 1990. I will report on the outcome of the joint board meeting at the SBI meeting in March 1990.

2. Review feasibility of marketing timing strategies in the Basic Retirement Funds.

Original Time Frame: October 1989 - June 1990

Status: On-schedule. A staff position paper on this issue is being prepared. Staff plan to discuss a working draft with the Asset Allocation Committee in February 1990.

3. Develop international equity program structure for the Basic Retirement Funds.

Original Time Frame: July 1989 - June 1990

Status: Postponed. Staff will continue research on this issue but Board action is not anticipated during FY 1990.

ATTACHMENT E (con't)

A. Development of Investment Policies (con't)

4. Continue study of completeness fund alternatives.

   Original Time Frame: July 1989 - June 1990

   Status: On-schedule. Staff plan to discuss recommendations with the Equity Manager Committee in February 1990.

5. Review feasibility of performance based fees for active bond managers.

   Original Time Frame: January 1990 - June 1990

   Status: Not addressed during this reporting period.

6. Review and develop guidelines for use of private placement debt.

   Original Time Frame: October 1989 - March 1990

   Status: On-schedule. Staff will discuss proposed guidelines with the Fixed Income Manager Committee in February 1990.

7. Develop plans to address real estate study recommendations.

   Original Time Frame: July 1989 - December 1989

   Status: Completed. Recommendations based on the findings of the Laventhol and Horwath study were presented to the Board in October 1989. At that time, the Board authorized withdrawal of its investment in Prudential's open-end fund and endorsed the use of specialty or targeted real estate investments in the future. In addition, the Board asked that the Asset Allocation Committee review the long term target for real estate in the Basic Funds. The Committee's recommendation will be presented to the Board in January 1990.

8. Review liquidity needs of the short term cash accounts.

   Original Time Frame: July 1989 - December 1989

   Status: Temporarily delayed. Work on the development of flexible repurchase agreements (see #10 below) has pre-empted this initiative. This project will be completed during the remainder of FY 1990.

ATTACHMENT E (con't)

A. Development of Investment Policies (con't)

9. Develop guidelines for use of dollar-denominated international securities in the short term portfolios.

Original Time Frame: October 1989 - March 1990

Status: Postponed. Staff will continue research on this issue but Board action is not anticipated during FY 1990.

10. Develop flexible repurchase agreements (flex repos) to address unanticipated changes in cash flows in and out of the short term portfolios.

Original Time Frame: New Project

Status: During July - October 1989, staff identified a need for flex repos and conducted research on their application in the SBI portfolios. Necessary contractual agreements are being developed with the assistance of SBI's legal counsel. Flex repos are expected to be operational by March 1990.

11. Re-examine Board policies on the use of active managers.

Original Time Frame: New Project

Status: In October 1989, the Board asked that the IAC re-examine the active/passive mix in the Basic Funds and review the Board's Manager Continuation Policy. The Task Force on Manager Retention was formed in November. Its recommendation on active/passive mix will be presented to the Board in January 1990. If the Board elects to continue active management, the Task Force expects to present recommendations on the Manager Continuation Policy in March or June 1990.

ATTACHMENT E (con't)

B. Implementation of Investment Policies Approved by the SBI

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

   Original Time Frame: On-going

   Status: Staff continue to collect background information and return data on a variety of managers. No recommendations for additional managers were presented during the reporting period.

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

   Original Time Frame: On-going

   Status: Real Estate - In October 1989, Board approved plans to focus future investments on targeted/speciality funds and approved withdrawal of the SBI's investment in PRISA. No recommendations for new commitments were made during the reporting period.

   Venture Capital - In October 1989, Board approved an additional commitment to Matrix Partners.

   Resource Funds - In October 1989, Board authorized the sale of one of the SBI's investments with Apache Corp. A recommendation to make an additional commitment to First Reserve Corp. will be considered by the Board in January 1990.

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

   Original Time Frame: March 1990 - June 1990

   Status: Not addressed during this reporting period.

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

   Original Time Frame: July 1989 - September 1989

   Status: A longer time frame is necessary to complete the project. A consulting relationship for resource investments is in place with Gene Graham of the Sterling Group. The real estate special project review conducted by Laventhol & Horwath was completed in late FY 1989. At this time, staff have not determined whether an on-going consulting relationship is appropriate for real estate.

ATTACHMENT E (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.

   Original Time Frame: On-going

   Status: In October 1989, the Board adopted a staff/IAC recommendation to put one active bond manager (Lehman) on probation due to a management change within the firm. A staff recommendation to terminate one active stock manager (BMI) will be presented to the Board in January 1990. The remainder of the SBI's active stock and bond managers satisfy both the qualitative and quantitative criteria established by the policy.

2. Monitor implementation of Northern Ireland mandate.

   Original Time Frame: On-going

   Status: Thirty (30) companies in the SBI's portfolios are affected by the statutory mandate. The SBI will sponsor or co-sponsor up to 29 shareholder resolutions during calendar 1990. These resolutions will call for corporations to report on their operations in Northern Ireland or to endorse the MacBride Principles. The Proxy Committee is reviewing all actions with respect to the statutory mandate.

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

   Original Time Frame: On-going

   Status: On a monthly basis, SBI staff update the active stock managers on companies with direct investments in South Africa. At the start of fiscal year 1990, approximately 1.5 million shares in the active stock manager portfolios were affected by the resolution. At the end of November 1989, this had been reduced by over 500,000 shares through the divestment by attrition policy. The South Africa Task Force plans to meet in February 1990 to review progress in implementing the requirements of the Board's revised resolution.

ATTACHMENT E (con't)

C. <u>Review and Control of Investment Policies (con't)</u>

4. <u>Monitor implementation of proxy voting procedures</u>.

   Original Time Frame: On-going

   Status: Proxy voting activity has been minimal since the start of the fiscal year. Staff are updating voting records to reflect all 1989 votes and will be holding overview sessions with the Proxy Committee during February - March 1990 to prepare for the 1990 proxy season. Proxy activity peaks during March - May when the majority of corporations hold their annual meetings.

5. <u>Conduct review of current vendors in the Deferred Compensation Plan</u>.

   Original Time Frame: July 1989 - December 1989

   Status: Completed. The Deferred Compensation Review Committee met in August 1989 and presented recommendations to the Board in October 1989. No change was recommended in the current vendor relationships. In the future, the SBI will review the relationships every three years and will receive an annual report from MSRS on the Deferred Compensation Plan.

6. <u>Review opportunities for in-state investing with the Proxy Committee</u>.

   Original Time Frame: On-going

   Status: In October 1989, staff updated the Committee on current SBI investments that have a direct impact on Minnesota. The Institute for Fiduciary Education recently completed a nation-wide survey on in-state investing. The project was funded by the Ford Foundation and I served on the advisory committee. Analysis of the study results will occur during the remainder of FY 1990.

ATTACHMENT E (con't)

D. Administration and Management of Staff Operations

1. Execute FY 1990 Management and Budget Plan.

   Original Time Frame: July 1989 - June 1990

   Status: The FY 1990 Management and Budget Plan served as the basis for my work plan. The status of projects identified in the Management Plan are detailed in this report. Budget reports are submitted to the Board on a quarterly basis. Thus far, FY 1990 expenditures are on target.

2. Prepare FY 1991 Management and Budget Plan.

   Original Time Frame: March 1990 - June 1990

   Status: Not addressed in this reporting period.

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

   Original Time Frame: July 1989 - December 1989

   Status: Completed. The auditing staff finished their work on the FY 1989 audit in December 1989. The SBI received a "clean opinion," i.e. there were no findings or exceptions cited in the audit opinion on the Board's financial statements.

ATTACHMENT E (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.

   Original Time Frame: On-going

   Status: Reports on investment results are prepared for each quarterly meeting of the SBI. After approving my work plan in October 1989, the Board asked that I prepare status report on the plan for the next Board meeting. This report fulfills that request.

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

   Original Time Frame: Quarterly

   Status:

SBI Meetings	IAC Meetings
October 4, 1989	October 3, 1989
January 10, 1990	January 9, 1990
March 7, 1990*	March 6, 1990*
June 6, 1990*	June 5, 1990*

   * Scheduled but not confirmed.

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

   Original Time Frame: Monthly

   Status: Generally, I meet with Board designees during the first week of each month to review a variety of items relating to the SBI. I expect these meetings will continue during the remainder of FY 1990.

4. Review quarterly report format and recommend appropriate changes.

   Original Time Frame: December 1989 - June 1990

   Status: Not addressed in this reporting period.

ATTACHMENT E (con't)

E. Communication and Reporting (con't)

5. Prepare FY 1989 Annual Report.

Original Time Frame: September 1989 - February 1990

Status: On-schedule. Draft copies of the report were sent to SBI/IAC members and Board deputies in October 1989 for comment. The final version was sent to the printer in mid-December 1989 and should be ready for distribution by mid-January 1990.

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

Original Time Frame: July 1989 - September 1989

Status: Postponed. Due to Board member scheduling conflicts, an acceptable meeting date could not be scheduled during September - December 1989.

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

Original Time Frame: On-going

Status: Two "round tables" have been conducted to date. Meetings with bond managers and stock managers were held in September and December 1989, respectively. Staff plan to hold 1 or 2 more round tables during the remainder of FY 1990.

8. Conduct investment conference for SBI clientele.

Original Time Frame: October 1989 - March 1990

Status: On-schedule. The conference will be held in February 1990. I have worked with Board member designees to set the agenda and identify speakers.

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

Original Time Frame: On-going

Status: Staff made a presentation on the Supplemental Fund in October 1989 at the 3rd Annual Public Pension Conference sponsored by Auditor Carlson's office. Police and fire funds from all areas of the state attended the conference. In addition, staff meet with individual police or fire plans to review their investment options in the Fund as requested.

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

December 20, 1989

TO: Members, State Board of Investment

FROM: Michael McGrath, Chair
SBI Administrative Committee

SUBJECT: Item Laid Over at October 4, 1989 Board Meeting

The Administrative Committee did not meet during October-December 1989 and does not have any new information or action items to present to the Board.

At our last meeting on October 4, 1989, the following action item from the Administrative Committee was laid over:

STATUS OF THE ADMINISTRATIVE COMMITTEE:

The SBI Administrative Committee was instituted in 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 and determine whether the Administrative Committee should continue in its present form.

Tab E

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

December 20, 1989

TO: Members, Investment Advisory Council

FROM: Task Force on Manager Retention

SUBJECT: Task Force Report

At its meeting on October 4, 1989, the Board asked that the IAC examine two issues relating to active managers:

- o Use of active and passive management strategies with stocks and bonds
- o Review and application of the Board's Manager Continuation Policy

Organization of the Task Force

The IAC has formed an ad hoc task force to review both of these topics. Membership of the Task Force on Manager Retention is:

Judy Mares, Chair
Jim Eckmann, Dayton-Hudson
Jim Hacking, PERA
Debbie Veverka, Honeywell
Jan Yeomans, 3M

The Task Force met on November 16, 1989 to review the use of active and passive strategies, and its recommendation on that issue is contained in this report. Consideration of the Manager Continuation Policy has been set aside pending the outcome of the Board's decision on the active/passive issue.

Consideration of Active/Passive Mix

Currently, Board policy calls for at least one-half of the stock and bond assets in the Basic Retirement Funds to be managed passively.

- Stocks

  Passive management was first used in 1983. At that time, two-thirds (2/3) of the stock segment was indexed and one-third (1/3) was placed with active managers. This 2/3 passive, 1/3 active split has remained fairly constant since 1983.

- Bonds

  Semi-passive management was introduced at the start of fiscal year 1989. At that time, one-half (1/2) of the bond segment was moved from active managers to enhanced index managers. The 1/2 passive, 1/2 active division has remained quite stable since semi-passive management was added.

The Task Force endorses the Board's existing policy on active/passive mix. The Task Force bases its endorsement on two conclusions:

- The Task Force believes that active management can add value over the long term. As a result, the Task Force believes it is appropriate for the SBI to utilize active stock and bond managers in its management of the Basic Funds.

  The Task Force urges the SBI to look at more than very recent experience when making long-term decisions on the use of active management. In the 1970's and early 1980's, most active managers, regardless of the style orientation, had little difficulty "beating the market." In the mid 1980's, just at the time the SBI first retained external active stock managers, this pattern reversed itself and most active managers began underperforming relative to the market. The pattern could easily reverse itself again during the 1990's and active managers could once again consistently beat the market.

- Given the large size of the Basic Funds, the Task Force believes that assets committed to active management must be constrained. A 1/2 active, 1/2 passive policy guideline means the SBI would maintain more than $3 billion under active management over the next few years. This translates to at least 15-20 stock and bond managers with portfolios of $150-200 million each. The Task Force believes that the universe of active managers capable of handling accounts of this size is somewhat limited. In addition, there are practical constraints on the number of managers that can be monitored and evaluated effectively by SBI staff. The 1/2 active, 1/2 passive guideline addresses these constraints on a practical level.

Recommendation

The Task Force recommends that the Board reaffirm its current policy guideline that up to one half of the stock and bond segments in the Basic Funds be actively managed. This recommendation is made based on the belief that active management can add value over the long term.

Tab F

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

December 20, 1989

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

FROM: Asset Allocation Committee

SUBJECT: Committee Report

The Asset Allocation Committee met on November 16, 1989. Agenda items included:

- o Review of the allocation to real estate
- o Discussion of future topics for the Committee

ACTION ITEM:

1) Review of the Allocation to Real Estate in the Basic Retirement Funds

At its meeting on October 4, 1989, the Board asked the Asset Allocation Committee to review the target allocation to real estate in the Basic Retirement Funds. The Committee has concluded that the current long-term 10% allocation to real estate remains appropriate. A summary of the Committee's discussion follows.

Background

In 1983, the Board established a long-term target of 10% to real estate in the Basic Funds. The SBI has committed $385 million to real estate over the last 9 years. As of September 30, 1989, these investments were valued at $510 million, or 7.5% of the Basic Funds.

When the 10% allocation target was established in 1983, SBI staff outlined two long-term goals for the SBI's real estate program:

- o Real estate investments should provide a hedge against inflation. That is, real estate returns should exceed the rate of inflation.

- o Real estate investments should provide diversification benefits. That is, the addition of real estate should reduce the volatility of returns without reducing the overall level of returns for the total fund over the long term.

As shown in Attachment A, the SBI's actual experience with its real estate investment program has met these two goals:

- o The SBI's real estate investments have outpaced inflation by approximately 4.5 percentage points on an annualized basis.

- o The SBI's real estate investments show a negative correlation with stocks and bonds and have dampened fluctuations in returns on a year-to-year basis.

Allocation Level

The pension fund managers represented on the Committee have long-term allocations of 7% or more. Information from broader samples of pension funds with real estate investments is included as Attachment B.

The Committee believes it is necessary to incorporate inflation hedge asset classes in the Basic Funds and assumes that real estate will continue to have a strong positive correlation to inflation in the future. While the Committee believes there is no single "right" allocation level, a 10% allocation is well within the range of current practice among other pension plans. The Committee does not see a persuasive reason to change the 10% target at this time.

Future Investments

As cited previously, the SBI's current investments in real estate comprise 7.5% of the Basic Funds. The Committee does not believe the SBI should commit additional assets to real estate simply to reach the 10% target. Rather, the Committee endorses prior recommendations from the Alternative Investment Committee on this matter. Specifically, the Committee believes that:

- o In the future, the SBI should emphasize targeted or specialty real estate funds with the goal of enhancing returns from the real estate segment.

- In the near term, the SBI should make new commitments very selectively and should not be concerned that its total investments in real estate may be less than the long-term 10% target.

RECOMMENDATION:

The Asset Allocation Committee recommends that the Board reaffirm its policy that 10% of the Basic Retirement Funds should be invested in real estate over the long term. In the near term, the Committee recommends that new investments in real estate should be made on a selective basis with the goal of enhancing returns from the real estate segment.

INFORMATION ITEM:

1) Future Topics for the Asset Allocation Committee

The Committee will meet on a quarterly basis to review and discuss topics related to asset allocation strategy. Future agenda items may include:

- review of an up-coming staff position paper on market timing or tactical asset allocation.
- review of the return and standard deviation assumptions that were used as inputs for developing the asset allocation policy for the Basic Funds.
- review of the long-term asset allocation policy for the Basic Retirement Funds compared to the allocation targets used by other public and private pension plans.
- review of the performance attribution reporting system utilized by Richards & Tierney.

ATTACHMENT A

REAL ESTATE RETURNS
HISTORICAL STUDIES vs. SBI ACTUAL

Returns	(1) 1947-1978	(2) 1960-1984	(3) SBI Actual FY1981-1987	(4) SBI Actual 1/84-9/89
Annualized				
Nominal	8.1%	8.5%	9.5%	8.2%
Real	4.4	3.7	4.7	4.5
Expected Range*	± 3.5	± 4.2	Actual	Actual
Low	4.6%	4.3%	4.8%	6.9%
High	11.6	12.7	14.7	11.7
Correlation of Real Estate to:				
Stocks	- 0.2	0.1	- 0.2	---
Bonds	0.0	0.2	- 0.5	---
T-Bills	0.6	0.7	---	---
Inflation	---	---	0.9	---

* Expected range is one standard deviation above and below the nominal return.

(1) Ibbotson and Fall, Journal of Portfolio Management, Fall 1979. This study was cited in the 1983 staff position paper on real estate.

(2) Ibbotson, Seigel and Fall, Journal of Portfolio Management, Fall 1985.

(3) Laventhol & Horwath, An Analysis of MSBI Real Estate Portfolio, Feb. 1989. Does not include impact of cash held by real estate managers.

(4) Richards & Tierney performance attribution system. Includes impact of cash held by real estate managers.

ATTACHMENT B

Real Estate Allocations Among Pension Funds

	Data Source	Number of Funds with Real Estate	Median Allocation	Range
1)	Greenwich Associates			
	Corporate Plans	415	6%	1-20%
	Public Plans	120	5%	1-20%
2)	SBI Survey of Public Funds	31	6%	1-15%

1) Greenwich Associates, 1988. Included 943 corporate plans and 273 public plans. Asset size categories ranged from under $25 million to over $500 million.

2) Informal survey of public plans conducted by SBI staff in 1989. Included 47 statewide plans from 36 states. Asset size ranged from $300 million to $55 billion.

Tab G

EXECUTIVE DIRECTOR
HOWARD J. BICKER

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STATE BOARD OF INVESTMENT
Room 105, MEA Building
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Tel (612) 296-3328
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December 20, 1989

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

FROM: Equity Manager Committee

SUBJECT: Committee Report

The Committee met on December 5, 1989. The agenda items included:

- Stock Manager "Round Table"
- Review of Active Managers
- Special Review of BMI Capital

In addition, staff provided the Committee with a memorandum summarizing the asset allocation shift from common stocks to bonds that occured during the third quarter of 1989. More information on this item is included in the Executive Director's Administrative report under Tab C.

A summary of Committee discussion on the agenda items follows.

INFORMATION ITEMS:

1) Stock Manager Round Table

As part of the SBI's Fiscal Year 1990 Management Plan, staff are coordinating discussion sessions with the Board's external managers. The second of these "Round Tables" was held on December 13, 1989 with four of the SBI's stock managers:

Firm	Portfolio Manager
Alliance Capital	John Koltes
Forstmann Leff	Joel Leff
Sasco Capital	Bruce Bottomley
Waddell & Reed	Hank Herrmann

The Round Tables are informal, question-and-answer sessions that are designed to give Board members, Board member deputies and Advisory Council members the opportunity to meet several of the SBI's managers and to learn more about their differing investment styles and outlooks.

2) Review of Active Managers

Common stock returns for the third quarter of 1989 were excellent. The active manager group outperformed the market by 1.6 percentage points for the quarter (active managers at 11.7% vs. Wilshire 5000 at 10.1%). Six out of eleven managers outperformed the Wilshire 5000 and nine out of eleven outperformed their benchmark portfolios.

The Committee noted that the current group of active managers in aggregate has outperformed the Wilshire 5000 by 0.4 percentage points on an annualized basis since the end of 1983. Over the same the period, the current manager group has outperformed its aggregate benchmark by 2.2 percentage points per annum.

The Committee reviewed the performance reports for the active equity managers. With the exception of BMI Capital, all managers currently meet the established qualitative and quantitative guidelines. A discussion and recommendation pertaining to BMI Capital is provided below. The value of active management (VAM) reports for each manager are attached beginning on page 27 of this tab section.

ACTION ITEM:

1) Special Review of BMI Capital

During the previous quarter, the Committee noted the continued underperformance of BMI Capital and Investment Advisers relative to their respective benchmark portfolios. The Committee requested that staff provide additional analysis for each of these firms at future Committee meetings. For this meeting, staff provided an in-depth analysis of BMI Capital. Staff has recommended that BMI be terminated. A summary of the discussion and Committee recommendation follows.

Staff Analysis

BMI Capital was evaluated according to the guidelines established in the Board's Manager Continuation Policy. The results of this evaluation are contained in a staff memorandum to the Committee dated December 5, 1989. It includes a detailed review of the firm's organization, investment philosophy and performance. The memo begins on page 5 of this tab section.

Staff's recommendation to terminate BMI is based on two factors:

- o Staff has been concerned about a lack of clearly identifiable leadership at BMI. This has been cited in several prior evaluations. In November 1989, staff was notified that BMI removed a key member of the portfolio management team from the SBI's account. Staff was not satisfied with the firm's explanation for the change and believe the re-assignment may be a reaction to the firm's poor performance.

- o BMI's cumulative performance relative to its benchmark is poor enough to cause serious concern. Under the Board's Manager Continuation policy, BMI should be placed on probation at this time. This would be the second time within two years that probationary status was warranted.

Neither of these factors is sufficient to warrant termination on its own. Taken together, however, they indicate a serious problem. Staff has lost confidence in BMI's ability and therefore recommend termination at this time. Staff recommends that BMI's assets be transferred to the index fund.

Committee Discussion

While no Committee member disagreed with the recommendation to terminate BMI, two issues were raised:

- o Some Committee members believe that it is not appropriate to reduce exposure to active management. This is based on the opinion that most active managers will fare better in the future relative to the market.

- o Some Committee members believe that it may be an inopportune time to reduce exposure to BMI's style, i.e. a small capitalization growth stock orientation. This is based on the opinion that small cap growth stocks are undervalued by the market at the present time and these stocks may provide significant gains in the future.

After further discussion, the Committee concluded that BMI's termination would have little impact on either of these issues. On October 1, 1989, BMI had a portfolio of less than

$60 million within the Basic Funds' stock segment of $4.3 billion. Any action with respect to BMI will have minimal impact on the active/passive mix or the exposure to small growth stocks in the Basic Funds' stock segment.

RECOMMENDATION:

The Committee concurs with the staff's conclusions regarding BMI. Therefore, the Committee recommends that the Board terminate BMI Capital and transfer its assets to the index fund.

This action should not be interpreted as a recommendation to reduce the SBI's commitment to active management. The Committee urges that appropriate managers be identified to maintain or increase the SBI's exposure to active management.

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December 5, 1989

TO: Members, IAC Equity Manager Committee

FROM: Mike Menssen

SUBJECT: BMI Asset Management Review

At the last IAC Equity Committee meeting, staff provided the Committee with a review of Waddell and Reed. The Committee requested that staff prepare a similar analysis for the managers that have been unable to outperform their respective benchmark portfolio. For this Committee meeting, staff presents the results of an analysis of BMI Capital, Inc. The baseline for this review process has been the qualitative and quantitative guidelines outlined in the Manager Continuation Policy that was adopted by the Board in March 1988. Detailed information pertaining to BMI's organization, investment approach, and performance is attached.

QUALITATIVE REVIEW

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

1) A change in the firm's ownership or in the key members of its management team.

2) A change in the manager's investment style.

3) An inability to create and maintain an appropriate benchmark portfolio.

4) 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. BMI is a wholly-owned subsidiary of Brean Murray, Foster Securities, Inc.

Initially, the portfolio manager assigned to the account was not the portfolio manager specified during the search process. Staff was not notified ahead of time of the change and requested that the portfolio manager specified during the search process be assigned to our account. BMI agreed to the request and reassigned the portfolio responsibilities.

The SBI account has been co-managed by James Awad and Frank Houghton. In November 1989, BMI notified the SBI that Mr. Awad will be taking over as lead manager for all its institutional accounts. Mr. Houghton, while continuing as an active investment participant, is being transferred out of the institutional area. The lack of clearly identifiable leadership has been a concern of staff for some time. The above organizational changes do not resolve the problem, but instead increases the concern the staff has on this qualitative issue.

BMI has had moderate investment analyst turnover. This turnover occurred because some of the analysts hired over the past six years did not fit into the non-traditional nature of BMI's research. There has been no turnover among the firm's portfolio managers.

Because of the recent portfolio management changes, staff has become even more concerned about the lack of clearly identifiable leadership within the firm.

Investment Style

BMI's holdings are concentrated in small capitalization stocks that are expected to exhibit strong sustained earnings growth. BMI attempts to identify two types of "growth" companies:

- Misperceived companies that are in the process of undergoing dynamic changes that will cause them to produce materially higher earnings over the near-term.

- Small-to-medium sized companies that have the potential for rapid future earnings growth.

The firm concentrates almost exclusively on stock selection, only rarely raising cash to significant levels.

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 BMI's historical risk factor exposures, a fairly consistent pattern of exposures is visible. However, the portfolios have shown a trend of increasing exposure to higher book-to-price, earnings variance and financial leverage over the time period analyzed (see Exhibit 3). Overall, BMI has remained consistent in the implementation of their investment style.

Benchmark Portfolio

Currently, BMI has a benchmark portfolio being maintained by the consulting firm BARRA. A description of the benchmark construction process and measures of appropriateness are attached. Based on the analysis, the benchmark is an appropriate reflection of BMI's investment style and does a better job of explaining the returns generated by the manager than the market does. However, because of the particular methodology used to construct the benchmark, some aspects of the benchmark (benchmark coverage and turnover) could be improved.

Account Gain/Loss

From 1984 thru 1986 BMI suffered a net loss of accounts due to poor performance. Since 1987, BMI has had a net increase in accounts. This is a result of a desire on the part of a number of plan sponsors to increase their exposure to small capitalization stocks.

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 are low. The confidence interval narrows over time because as more performance data is collected, the ability to infer the presence or lack of skill increases.

Exhibit 1 depicts BMI's Value of Active Management (VAM) graph. At no time since January 1984 has BMI's cummulative performance exceeded the benchmark.

	Actual	Benchmark
Cumulative	80.2%	110.2%
Annualized	10.8	13.8

STAFF CONCLUSION

Staff recommends that BMI be terminated. The manager has failed to satisfy certain qualitative and quantitative criteria. First, there has been a change in the leadership of the firm. Secondly, the manager's performance relative to its benchmark is sufficiently poor to cause concern. In normal circumstances, the Board's manager continuation policy would require that the manager be placed on probation, which would be the second time in less than two years. Given the unique circumstances of BMI Capital, staff has lost confidence in the manager's ability and recommends termination.

EXTERNAL EQUITY MANAGER DETAIL

BMI CAPITAL

Exhibits

EXTERNAL EQUITY MANAGER DETAIL

BMI CAPITAL

I. ORGANIZATIONAL BACKGROUND

A. OWNERSHIP

BMI is a wholly owned subsidiary of Brean Murray, Foster Securities, Inc. a privately owned broker/dealer and New York Stock Exchange Member. BMI's offices are located at 67 Wall Street, New York, NY.

B. PROFESSIONAL STAFF

The SBI's account is managed by Frank Houghton and James Awad. Mr. Houghton and Mr. Awad are Co-Chief Investment Officers of BMI Capital Corporation. According to BMI, Mr. Awad will be taking over as lead manager for all its institutional accounts. Mr. Houghton, while continuing as an active investment participant, is being transferred out of the institutional area.

C. ASSETS UNDER MANAGEMENT

Equity Assets Under Management
($ mil)

Dec. 84		Dec. 85		Dec. 86		Dec. 87	
# of Accts	Market Value	# of Accts	Market Value	# of Accts	Market Value	# of Accts	Market Value
17	$277	14	$260	10	$243	10	$220

Dec. 88		Dec. 89	
# of Accts	Market Value	# of Accts	Market Value
11	$342	14	$419

From 1984 thru 1986 the firm suffered a net loss of accounts due to poor performance. Since 1987, BMI has had a net increase in accounts. This is a result of a desire on the part of a number of plan sponsors to increase their exposure to small capitalization stocks. BMI only accepts new clients on a referral basis. BMI has never aggressively marketed its services.

D. PERSONNEL TURNOVER

BMI has had moderate professional staff turnover. This turnover has occurred because some of the analysts hired did not fit into the non-traditional nature of BMI's research. There has been no turnover among the firm's portfolio managers, although the individuals assigned to the SBI's portfolio have been changed several times.

II. INVESTMENT APPROACH

A. OVERALL PHILOSOPHY

BMI's investment approach is a bottom-up stock selection process, focusing on companies expected to exhibit strong sustained earnings gains. BMI attempts to identify two types of "growth" companies:

- Misperceived companies that BMI believes are in the process of undergoing dynamic change that will cause them to produce materially higher earnings over the next several quarters. Further, the market must not yet have recognized the earnings impact of these changes. Such companies usually are medium-sized, sell at or below book value, and have an above average yield.

- Rapidly growing small to medium size companies which exhibit the potential for rapid future earnings growth. These stocks generally sell at an above average relative P/E.

In addition, BMI uses a valuation analysis that identifies the best growth opportunities at the most reasonable price between the two types of growth companies cited above. The valuation analysis looks at operating cashflow and computes a payback period. The Payback calculation includes the current market value of the outstanding common stock plus debt and preferred stock. They also calculate the maximum price that provides an adequate rate of return after servicing the debt. This value is compared to its current price to determine a value.

While the smaller high growth companies tend to dominate the portfolio risk characteristics, the weighting of the two types of growth companies within the portfolio will vary over time depending upon economic and financial conditions. For example, the weighting of rapidly growing companies will increase in a period of strong economic growth where as the weighting for misperceived companies will increase during a period of economic uncertainty or recession. Generally, however, the misperceived companies will make up the majority of the portfolio.

BMI does all of its research in-house and believes that its value-added comes from concentrating on under researched companies that institutions have not yet efficiently priced. BMI holds very small concentrated portfolios with cash being a residual of the stock selection process.

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 3.

Risk Exposure Highlights: Consistent with its small capitalization, high growth investment approach, BMI's historical portfolios have exhibited prominent exposures to market risk (beta), small companies (size), growth, variability in markets, and dividend yield.

Sector Exposure Highlights: BMI's portfolios have overweighted consumer non-durables, consumer durables, and technology. They have underweighted the energy, and utility sectors. BMI has shown a willingness to take significant bets within a sector and to aggressively shift among sectors.

C. BENCHMARK CONSTRUCTION

Benchmark Universe

The selection of BMI's benchmark universe is tailored to the specific investment process of the manager. BMI's current benchmark is being built by the consulting firm BARRA. BARRA's approach to building a benchmark portfolio involves screening a large universe of stocks for certain characteristics. The goal is to produce a list of stocks which, when properly weighted, exhibit the same portfolio characteristics as the average of BMI's actual portfolios.

The stocks in BARRA's primary data base with a market capitalization of $50 million or greater are the initial universe. The risk factor screens, based on BMI's historical portfolios, that are applied to this starting universe are as follows:

Variability in Markets	> -0.25 S.D.*
Growth	> -0.25
Success	> -1.75
Financial Leverage	< 1.75
Trading Activity	> -0.50

* These units of measure are based on standard deviations (S.D.) from the mean of the 1400 largest most liquid stocks traded (BARRA's HIGHCAP Universe).

Prior to establishing the weighting scheme for the benchmark securities, the SBI prohibited list of stocks as well as a separate exclusion list provided by BMI are removed from the benchmark.

Based on BMI's historical market capitalization distribution data, capitalization tiers and weights are set. The distribution of weights among capitalization tiers is as follows:

Capitalization (Million)	Target Weight (Percent)	Tier Equal or Cap. Wtd.
50 - 199	10%	Cap.
200 - 499	20	Cap.
500 - 999	30	Eq.
1,000 - 3,999	30	Eq.
4,000 and above	10	Eq.

In addition to the above constraints, the following industry limits were also imposed:

Precious Metals	< = FRMSU Weighting*
Thrifts	< = FRMSU
Misc. Finance	< = FRMSU
Services	< = 4%

* FRMSU stands for BARRA's Fundamental Risk Management Service Universe. This universe is capitalization weighted.

BMI rarely raises cash to a significant level. Cash holdings are usually due to a lack of attractive investment opportunities. As a result, the benchmark portfolio is assigned a minimal 5% cash position.

Prior to June 30, 1987 BMI's benchmark was based on a construction process designed by staff. The construction process designed by staff was very similar to BARRA's methodology.

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 3, the BMI benchmark risk-factor profile shows a close similarity to that of BMI's past portfolios. The actual portfolios have shown a persistently higher exposure to the trading activity and earnings variance risk factors relative to its benchmark. With respect to sector weights, B-2 shows that the actual portfolios have had a higher exposure to the consumer durable, non-durable, and technology sectors and a lower exposure to basic materials, transportation, and financial sectors relative to its benchmark.

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 holdings should exceed the corresponding weights of the same securities in the benchmark. As shown in Table I below, this occurs 100% of the time.

Benchmark turnover measures the proportion of the benchmark's total market value that is applied towards the purchase of new securities or additions to existing security positions at each rebalancing period. A valid and investable benchmark should 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 BMI's benchmark coverage and turnover is shown below:

Table I

12/83-6/89 Semi-Annual Data	Actual Portfolio Contained in Benchmark	Actual Portfolio % Investment > Benchmark % Investment	Semi-Annual Benchmark Turnover Investment
Average	47.135	100.000	50.666
Minimum	14.910	100.000	28.080
Maximum	71.696	100.000	76.247

In terms of coverage, the BMI benchmark has captured on average only 47% of the BMI actual portfolio composition since the inception. In addition, the maximum coverage that a semi-annual benchmark has achieved is 72%, which is still below the range that is considered adequate for a valid benchmark. Finally, the benchmark has experienced turnover rates well above the level that is considered realistic for passive management implementation of a manager's benchmark. Many of these shortcommings can be traced to BARRA's methodology for constructing benchmark portfolios. However, the validity of the benchmark and its ability to provide a better explanation of the managers ability is not materially affected as shown in the next section. Staff has been working with BMI to improve its benchmark building process and changes made in the second half of 1989 resulted in considerable improvement.

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 benchmarks 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 (e.g. Wilshire 5000) 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.

For Time Period 1/1/84 to 6/30/89	BMI Actual vs. BMI Benchmark	BMI Actual vs. S&P 500
Cumulative Annualized VAM	-2.154	-5.942
Annualized Standard Deviation of VAM	7.200	10.181
Information Ratio	-.299	-.584
Information ratio T-Statistic	-.709	-1.411
Percentage of Months VAM > 0	46.97%	37.88%

The BMI benchmark produces a better information ratio, however, it is still negative because of BMI's failure to add value relative to its benchmark over the period analyzed.

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 relative to the market, one would expect the manager's portfolio will also do 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 ability to add value relative to the benchmark should not be affected by the performance of the benchmark (i.e. style) relative to the market.

BMI
Residual Correlation Matrix

	EXM	MFT	VAM
EXM	1.000		
MFT	.709	1.000	
VAM	.761	.082	1.000

The BMI benchmark exhibits a positive correlation between EXM and MFT. The correlation between VAM and MFT is almost zero. This analysis shows that the explanatory power of BMI's benchmark is very good. Therefore, a higher degree of reliability can be assigned to the conclusions drawn from performance analysis using BMI's benchmark rather than a broad market average.

B. Benchmark Performance Relative To The Wilshire 5000

On a cumulative basis BMI's benchmark returns have significantly lagged the broad market (see Exhibit 2). This points to a poor environment for the firm's investment style over the time period analyzed. This is not surprising since BMI's style is biased toward small to medium capitalization growth stocks. Small cap growth has been the poorest performing subset of the equity market for the time period analyzed.

C. Portfolio Performance Attribution

Equity-Only

The actual performance for BMI has lagged that of the customized benchmark indicating that the stock selection bets of the manager have not added value. The stock selection bets can be evaluated by comparing the equity-only performance of the SBI account to the equity-only benchmark performance (see Appendix B-1). For the full period, the actual equity-only performance underperformed the equity-only benchmark portfolio (91.4% vs. 110.2%). The equity-only performance has shown a high degree of variability relative to it's equity-only benchmark return. This is a result of BMI's philosophy of investing in a very small and aggressive portfolio of 25-35 stocks. However, BMI has only outperformed its equity-only benchmark on a quarterly basis 48% of the time. On a yearly basis, it outperformed its benchmark two out of the six years. If strong performance in the first quarter of 1988 were excluded, BMI would have outperformed its benchmark in only one year (1986).

Total Fund

BMI's total portfolio has underperformed its customized benchmark even more than its equity-only performance (see Exhibit 2). Since January 1, 1984, BMI's cumulative performance was 80.2% versus the benchmark's performance of 110.2%. Comparing these results to the equity-only numbers it appears that BMI's cash allocation decisions have hurt its performance. This was largely due to BMI's decision not to deploy a new cash contribution in the rising market of the fourth quarter of 1985. The total fund return also shows a high degree of variability relative to its benchmark.

A statistical analysis of BMI's total performance relative to its benchmark is conducted by constructing a Value of Active Management graph (see Exhibit 1). The graph shows that BMI has never achieved a positive value added.

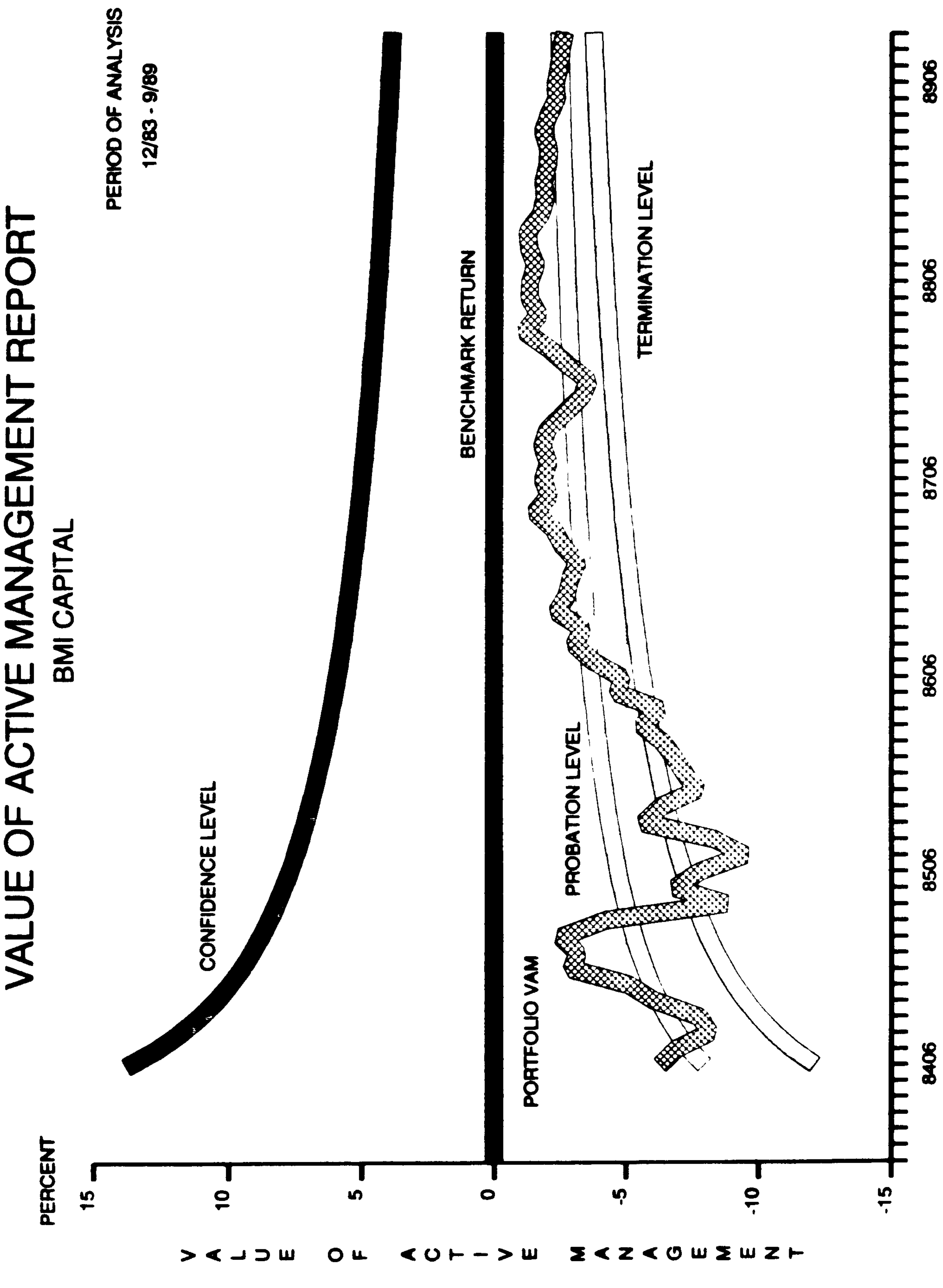
IV. SUMMARY OF BOARD/IAC ACTIONS TO DATE

On January 14, 1983 the Board approved a recommendation to hire BMI Capital Management. The firm was funded on March 1, 1983 with $10 million. In July, 1985 BMI received additional SBI assets totalling $40 million. In October, 1989 $30 million was withdrawn from BMI as part of a large rebalancing program for the Basic Retirement Funds. After the withdrawal, BMI's portfolio totaled approximately $60 million.

From March 1983 through June 1985, BMI served as a manager for the Growth Share Account in the Supplemental Investment Fund. Since September 1985, BMI 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.

BMI was placed on probation at the Board meeting held on March 2, 1988. The firm was placed on probation due to poor performance. At its June 9, 1988 meeting the Board removed BMI from probation due to the outstanding performance it recorded in the first quarter of 1988.

EXHIBIT 1



VALUE OF ACTIVE MANAGEMENT REPORT
BMI CAPITAL
PERIOD OF ANALYSIS
12/83 - 9/89
CONFIDENCE LEVEL
BENCHMARK RETURN
PORTFOLIO VAM
PROBATION LEVEL
TERMINATION LEVEL
PERCENT
15
10
5
0
-5
-10
-15
VALUE OF ACTIVE MANAGEMENT
8406
8506
8606
8706
8806
8906

EXHIBIT 2

BMI CAPITAL CORPORATION

Comparison of Customized Benchmark portfolio Performance With Wilshire 5000

(all figures are percentages)

		EQUITY-ONLY		TOTAL PORTFOLIO		WILSHIRE
		Actual	Benchmark	Actual	Benchmark	5000
1984	1Q	-14.5%	-9.0%	-14.5%	-8.4%	-4.2%
	2Q	2.2	-1.9	2.0	-1.7	-2.8
	3Q	4.2	6.5	3.4	6.3	9.2
	4Q	2.4	-1.1	2.2	-.9	1.3
		-6.8	-6.0	-7.9	-5.1	3.0
1985	1Q	10.3%	12.4%	9.3%	11.9%	10.3%
	2Q	-.7	6.2	-.9	6.0	7.5
	3Q	-10.0	-5.5	-2.5	-4.3	-4.3
	4Q	19.2	17.3	11.1	16.5	16.8
		17.5	32.3	17.3	32.2	32.6
1986	1Q	18.6%	16.2%	17.8%	15.4%	14.4%
	2Q	7.2	6.5	7.0	6.3	5.8
	3Q	-9.7	-12.7	-9.4	-12.0	-7.7
	4Q	5.8	4.9	5.5	4.8	4.0
		21.5	13.3	20.4	13.1	16.1
1987	1Q	25.8%	24.3%	24.8%	23.1%	21.2%
	2Q	1.2	.2	1.1	.3	3.3
	3Q	5.4	5.4	4.1	5.2	6.2
	4Q	-30.5	-26.7	-30.2	-25.2	-23.1
		-6.7	-3.8	-8.3	-2.9	2.3
1988	1Q	25.3%	13.1%	23.9%	12.5%	8.0%
	2Q	5.4	6.8	5.2	6.5	6.6
	3Q	-.9	-1.0	-.8	-.9	.2
	4Q	-2.3	1.2	-2.2	1.3	2.3
		27.9	21.0	26.5	20.3	17.9
1989	1Q	8.5%	8.8%	8.2%	8.5%	7.4%
	2Q	3.7	7.0	3.5	6.7	8.5
	3Q	7.0	9.8	6.7	9.5	10.1
Cumulative		91.4%	110.2%	80.2%	110.2%	145.7%

EXHIBIT 3

BMI CAPITAL

Past Portfolio Data
Available Monthly (1/84 - 7/89)

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	Mo. T/O	% Cash
Minimum Stock	1.17	0.42	-0.54	-1.60	0.36	0.46	-0.40	-0.47	0.10	-0.34	-0.33	0.42	-1.06	0.00	0.5
Portfolio Average	1.22	0.72	-0.08	-1.40	0.79	0.76	-0.23	-0.05	0.49	0.16	-0.04	0.55	-0.84	4.02	6.6
Maximum Stock	1.33	0.94	0.39	-1.09	1.13	1.00	0.03	0.48	0.72	0.65	0.23	0.74	-0.53	15.54	73.8
Benchmark Avg.	1.18	0.58	0.09	-1.40	0.37	0.67	-0.18	-0.25	0.24	0.02	-0.24	0.55	-0.69		

SECTOR WEIGHTS

Actual Portfolio Weight Less Benchmark Portfolio

	Cons Non-Dur	Cons Durables	Basic Materials	Capital Goods	Energy	Technology	Transport	Utilities	Financial
Portfolio Minimum	-7.28	-2.22	-8.76	-6.72	-11.01	-5.12	-5.54	-2.80	-14.24
Portfolio Average	6.08	3.02	-4.64	-1.08	-1.23	3.63	-2.50	-0.65	-2.64
Portfolio Maximum	17.78	20.92	2.11	5.29	6.16	10.35	7.60	2.22	5.35
Benchmark Avg.	37.74	6.30	12.28	10.37	4.50	11.51	3.52	1.13	12.66
Market Avg. (S&P 500)	29.71	5.29	10.11	8.43	13.66	10.23	2.36	12.80	7.41

EXHIBIT 4

BMI

HISTORICAL PORTFOLIO RISK DATA

PERIOD	BETA	VAR IN MKTS	SUCCESS	SIZE	TRADING ACTIVITY	GROWTH	E/P	B/P	EARN VAR	FINL LEV	FOREIGN INCOME	LABOR INT	DIV YIELD
8401	1.225	0.696	0.387	-1.510	0.811	0.714	-0.275	-0.357	0.102	-0.217	-0.168	0.654	-0.678
8404	1.206	0.632	-0.198	-1.600	0.602	0.655	-0.262	-0.434	0.140	-0.229	-0.183	0.734	-0.589
8407	1.223	0.625	-0.096	-1.301	0.594	0.679	-0.082	-0.315	0.213	-0.271	-0.019	0.654	-0.530
8410	1.204	0.522	0.002	-1.091	0.854	0.674	0.030	-0.377	0.247	-0.341	0.064	0.637	-0.543
8501	1.209	0.523	0.136	-1.320	0.831	0.859	-0.167	-0.327	0.274	-0.321	-0.173	0.600	-0.727
8504	1.212	0.574	0.305	-1.299	0.779	0.848	-0.158	-0.470	0.228	-0.335	-0.187	0.624	-0.706
8507	1.195	0.530	-0.006	-1.289	0.593	0.850	-0.183	-0.351	0.318	-0.236	-0.157	0.649	-0.716
8510	1.325	0.908	-0.326	-1.372	0.917	0.904	-0.233	-0.384	0.214	-0.040	-0.154	0.604	-0.904
8601	1.254	0.712	-0.006	-1.222	0.635	0.784	-0.260	-0.103	0.373	0.009	0.088	0.424	-0.705
8604	1.273	0.824	-0.006	-1.443	0.829	0.964	-0.289	-0.195	0.465	0.063	0.006	0.494	-1.007
8607	1.303	0.942	0.132	-1.518	1.043	0.968	-0.261	-0.205	0.413	0.151	0.051	0.588	-1.015
8610	1.239	0.712	0.074	-1.522	0.865	0.975	-0.222	-0.074	0.499	0.146	0.001	0.599	-1.065
8701	1.202	0.517	0.023	-1.309	0.966	0.809	-0.203	-0.027	0.402	0.321	0.055	0.737	-0.910
8704	1.169	0.520	0.022	-1.383	0.835	0.705	-0.339	0.102	0.649	0.389	0.169	0.420	-0.823
8707	1.215	0.684	-0.061	-1.403	1.022	0.631	-0.193	0.171	0.608	0.324	0.030	0.509	-0.771
8710	1.191	0.521	-0.317	-1.369	1.108	0.523	-0.169	0.240	0.502	0.314	0.079	0.553	-0.707
8801	1.177	0.723	-0.478	-1.331	1.063	0.456	-0.070	0.477	0.575	0.273	0.092	0.500	-0.699
8804	1.174	0.823	-0.182	-1.409	0.785	0.641	-0.248	0.229	0.577	0.233	-0.084	0.467	-0.928
8807	1.196	0.842	-0.128	-1.419	0.642	0.744	-0.348	-0.071	0.606	0.453	-0.223	0.538	-0.878
8810	1.187	0.880	-0.176	-1.511	0.546	0.724	-0.366	-0.252	0.616	0.272	-0.106	0.545	-0.869
8901	1.193	0.712	-0.008	-1.479	0.365	0.875	-0.330	-0.164	0.610	0.318	-0.013	0.477	-0.843
8904	1.210	0.722	-0.051	-1.377	0.561	0.863	-0.161	-0.100	0.649	0.154	-0.248	0.504	-0.830
8907	1.246	0.843	-0.332	-1.308	0.639	0.796	-0.122	0.088	0.614	0.297	-0.185	0.519	-0.847

EXHIBIT 4 (con't)

BMI

HISTORICAL BENCHMARK RISK DATA

PERIOD	BETA	VAR IN MKTS	SUCCESS	SIZE	TRADING ACTIVITY	GROWTH	E/P	B/P	EARN VAR	FINL LEV	FOREIGN INCOME	LABOR INT	DIV YIELD
8401	1.192	0.587	0.356	-1.466	0.395	0.666	-0.325	-0.540	0.096	0.025	-0.194	0.602	-0.739
8407	1.188	0.520	-0.081	-1.367	0.296	0.624	-0.306	-0.490	0.113	0.022	-0.266	0.525	-0.593
8501	1.154	0.450	0.062	-1.413	0.185	0.641	-0.256	-0.321	0.077	-0.007	-0.259	0.576	-0.700
8507	1.173	0.561	0.251	-1.435	0.211	0.714	-0.227	-0.449	0.126	0.015	-0.217	0.548	-0.759
8601	1.138	0.462	0.286	-1.477	0.073	0.649	-0.188	-0.421	0.104	0.039	-0.294	0.622	-0.698
8607	1.174	0.573	0.156	-1.663	0.125	0.713	-0.126	-0.401	0.084	0.019	-0.263	0.637	-0.780
8701	1.170	0.530	0.030	-1.653	0.037	0.759	-0.115	-0.282	0.135	0.028	-0.301	0.644	-0.820
8707	1.234	0.723	-0.043	-1.447	0.693	0.753	-0.153	-0.105	0.458	-0.047	-0.186	0.529	-0.718
8801	1.168	0.622	0.044	-1.128	0.689	0.708	-0.157	-0.023	0.451	0.047	-0.163	0.517	-0.629
8807	1.166	0.682	-0.025	-1.224	0.593	0.635	-0.089	0.021	0.434	-0.051	-0.165	0.466	-0.640
8901	1.176	0.605	0.117	-1.210	0.531	0.572	-0.049	0.006	0.314	0.090	-0.303	0.416	-0.569
8907	1.193	0.668	-0.039	-1.320	0.609	0.647	-0.118	-0.028	0.452	0.021	-0.317	0.484	-0.620

EXHIBIT 4 (con't)

BMI
HISTORICAL PORTFOLIO SECTOR WEIGHTS

PERIOD	CONS NON-DUR	CONS DURABLE	BASIC MAT	CAPTIAL GOODS	ENERGY	TECH	TRANSP	UTIL	FINL
8401	27.97	24.42	5.13	14.49	0.00	16.66	4.19	0.00	7.16
8404	39.09	23.81	6.62	14.41	0.00	9.19	3.64	0.00	3.24
8407	38.58	25.24	7.03	15.29	0.00	9.70	0.97	0.00	3.18
8410	39.02	26.18	4.13	16.58	0.00	8.84	5.25	0.00	0.00
8501	53.00	12.35	5.14	17.64	0.00	7.02	4.84	0.00	0.00
8504	52.46	16.05	4.94	15.90	0.00	6.42	4.24	0.00	0.00
8507	47.53	17.94	10.75	7.26	0.00	11.26	5.26	0.00	0.00
8510	44.97	12.88	2.28	12.68	0.00	13.41	10.70	0.00	3.08
8601	43.14	7.88	7.09	6.42	7.87	16.72	3.65	0.00	7.22
8604	48.13	12.33	8.88	4.09	0.98	16.84	0.00	0.00	8.75
8607	49.64	9.19	9.30	6.18	0.00	18.19	0.00	0.00	7.50
8610	40.79	9.71	11.94	7.77	0.00	18.48	0.33	0.00	10.98
8701	45.55	9.95	6.91	8.37	0.00	16.62	0.00	0.00	12.59
8704	45.19	9.08	6.51	7.11	5.30	15.73	0.00	3.26	7.81
8707	45.74	6.47	10.66	6.34	4.49	16.60	0.00	3.01	6.69
8710	43.13	6.90	8.86	13.48	3.68	14.84	1.00	2.07	6.04
8801	40.69	6.15	9.22	13.85	3.41	13.38	0.99	1.60	10.71
8804	45.57	4.96	11.21	9.67	3.76	16.91	0.00	0.00	7.92
8807	42.27	4.83	10.97	7.88	3.86	17.98	0.00	0.00	12.20
8810	49.42	5.07	6.87	5.28	3.56	16.08	0.00	0.00	13.73
8901	44.52	5.47	8.29	6.26	4.25	12.50	0.00	0.00	18.71
8904	37.49	5.81	9.17	5.69	4.10	15.67	0.00	0.00	22.06
8907	38.53	7.59	7.81	4.81	4.62	17.27	0.00	0.00	19.36

EXHIBIT 4 (con't)

BMI

BENCHMARK PORTFOLIO SECTOR WEIGHTS

PERIOD	CONS NON-DUR	CONS DURABLE	BASIC MAT	CAPTIAL GOODS	ENERGY	TECH	TRANSP	UTIL	FINL
8401	35.25	5.76	12.16	14.20	8.15	11.94	3.20	0.67	8.66
8407	36.36	5.26	9.99	14.46	11.01	11.96	3.27	0.45	7.25
8501	40.50	5.95	9.69	12.35	5.55	11.54	3.04	0.39	10.98
8507	43.55	5.93	8.64	9.80	3.44	10.87	3.10	0.44	14.24
8601	41.07	6.55	10.09	10.81	1.71	10.28	2.40	0.32	16.76
8607	44.38	8.65	11.59	11.28	1.34	10.82	3.76	0.88	7.30
8701	44.10	8.01	13.47	10.08	1.86	11.20	2.83	1.04	7.40
8707	34.29	8.09	12.73	8.72	4.79	14.51	4.43	1.38	11.05
8801	29.99	4.43	16.56	11.00	5.56	16.08	5.54	1.40	9.43
8807	31.87	4.97	13.29	8.02	3.56	11.32	3.25	2.80	20.92
8901	36.83	5.20	16.45	5.84	3.07	8.52	3.44	1.53	19.12
8907	34.66	6.77	12.68	7.82	4.01	9.08	3.96	2.21	18.80

ACTIVE EQUITY MANAGERS

Value of Active Management Reports

Third 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:

- Terminate BMI Capital (see manager's report).

Managers	Market Value 9/30/89 (Thousands)	Quarter Ending 9/30/89 Actual	Bmrk	Calendar Year To Date Actual	Bmrk	Year Ending 9/30/89 Actual	Bmrk	(Annualized) Since 1/1/84 Actual	Bmrk
Alliance	$417,955	15.2%	10.7%	41.5%	28.0%	42.4%	29.7%	21.0%	14.2%
BMI	90,555	6.7	9.5	19.4	26.7	16.8	28.3	10.8	13.8
Concord	114,581	7.3	9.1						
Forstmann	207,259	9.8	7.8	21.3	21.6	24.5	23.6	15.8	13.6
Franklin	121,832	11.1	7.4						
IDS	181,005	15.8	8.8	34.6	25.9	36.7	28.9	17.7	16.7
IAI	126,049	12.4	8.4	28.5	24.8	30.9	28.6	15.6	16.7
Lieber & Co.	127,527	8.8	8.0	23.7	22.4	23.9	23.3	14.5	13.0
Rosenberg	120,373	10.7	9.5						
Sasco	117,118	9.1	8.5						
Waddell & Reed	184,924	12.1	7.9	30.1	21.7	31.7	22.9	14.1	12.7
Aggregate Active*		11.7	9.0	30.5	25.2	31.9	27.1	17.3	15.1
Wilshire 5000			10.1%		~~31.4%~~ 28.4		~~28.4%~~ 31.4		16.9%

* Historical performance reflects composite of current managers only.

ALLIANCE CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Jack Koltes **ASSETS UNDER MANAGEMENT: $417,955,192**

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	15.2%	41.5%	42.4%	21.0%
Alliance Capital Benchmark	10.7	28.0	29.7	14.2

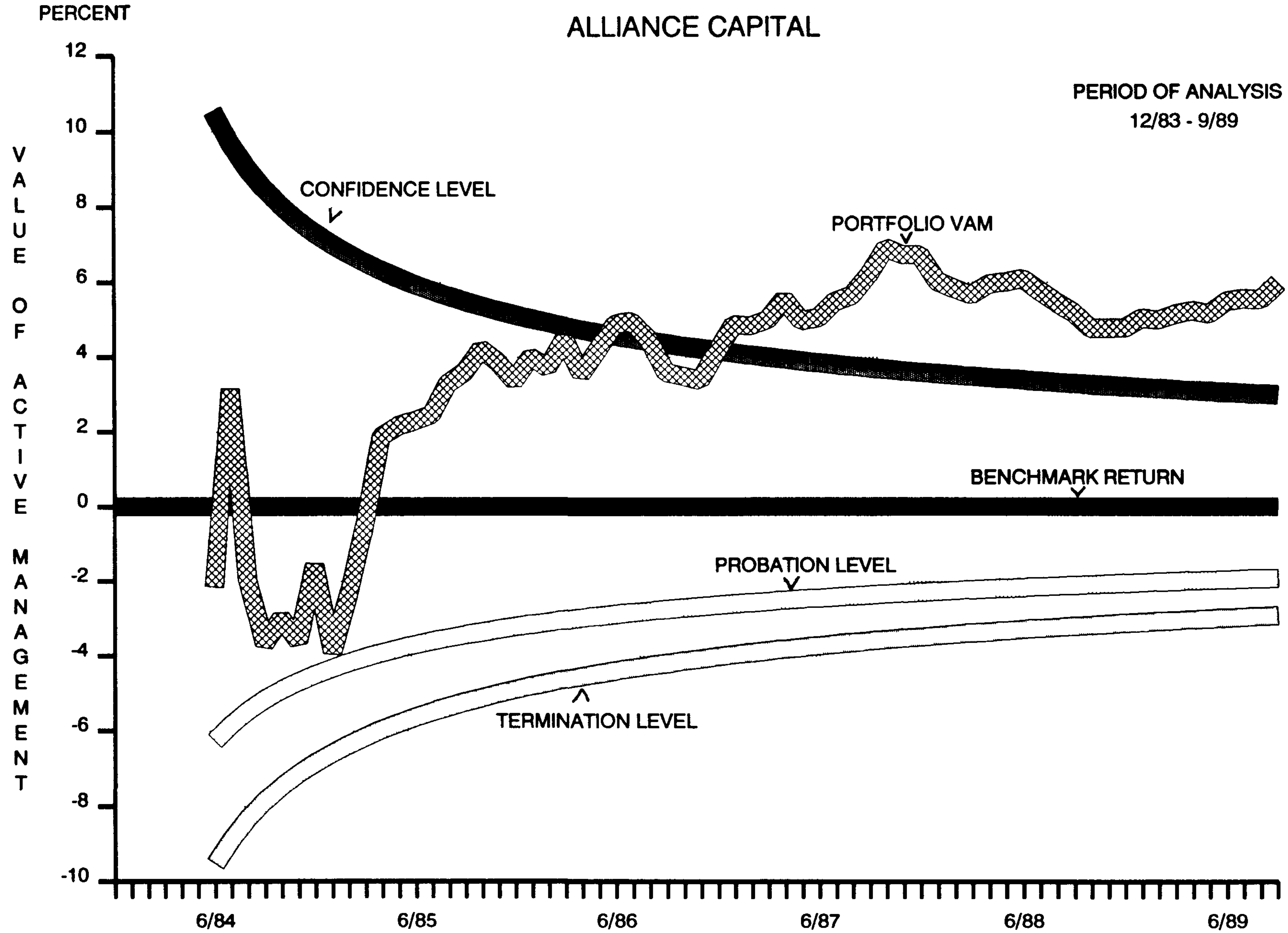
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

ALLIANCE CAPITAL



BMI CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Frank Houghton, James Awad **ASSETS UNDER MANAGEMENT: $90,554,571**

INVESTMENT PHILOSOPHY

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

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
BMI Capital Actual	6.7%	19.4%	16.8%	10.8%
BMI Capital Benchmark	9.5	26.7	28.3	13.8

(See Value of Active Management graph below)

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

- Lack of clearly identifiable leadership.

The firm's exceptional strengths continue to be:

- Extensive securities research process.

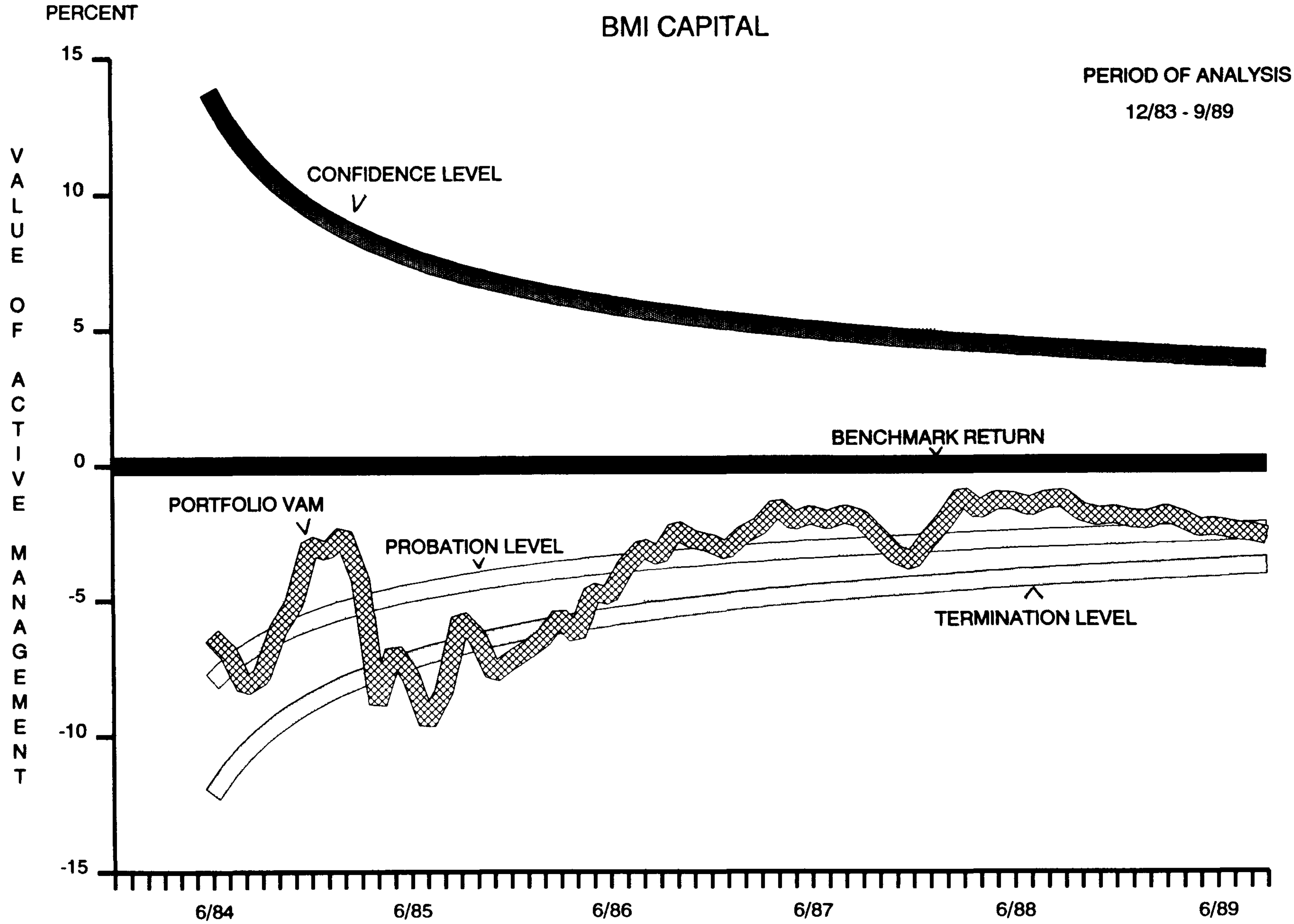
Staff received a letter from the manager dated 11/10/89 indicating a change in the firm's structure.

STAFF RECOMMENDATIONS

Termination. The manager has failed to satisfy certain qualitative and quantitative criteria. First, there has been a change in the leadership of the firm. Secondly, the manager's performance relative to its benchmark is sufficiently poor to cause concern. In normal circumstances, the Board's manager continuation policy would require that the manager be placed on probation. Given the unique circumstances of BMI Capital, staff has lost confidence in the manager's ability and recommends termination.

VALUE OF ACTIVE MANAGEMENT REPORT

BMI CAPITAL



FORSTMANN LEFF ASSOCIATES

PORTFOLIO MANAGER: Joel Leff ASSETS UNDER MANAGEMENT: **$207,258,804**

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	9.8%	21.3%	24.5%	15.8%
Forstmann-Leff Benchmark	7.8	21.6	23.6	13.6

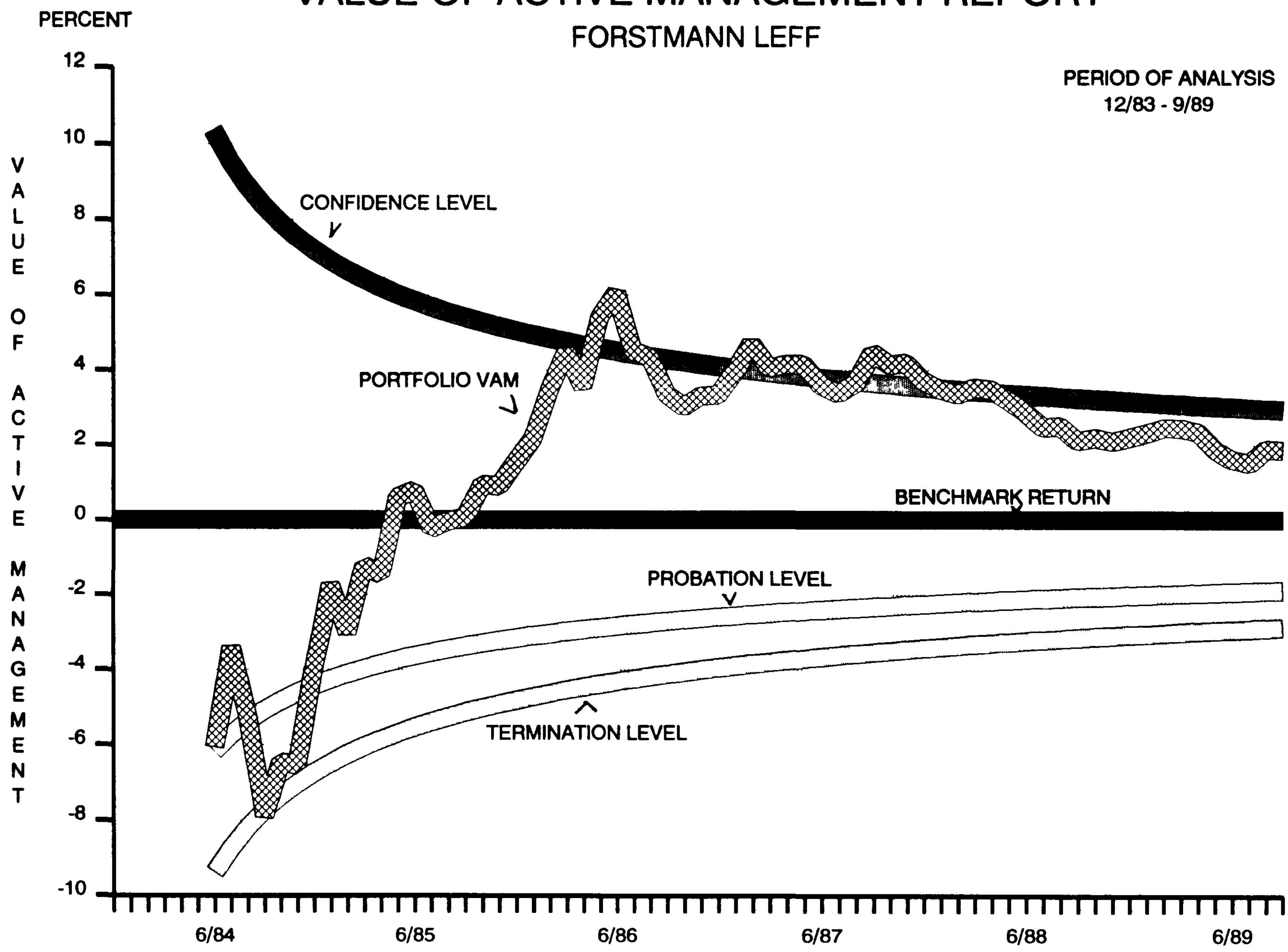
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

FORSTMANN LEFF



IDS ADVISORY

PORTFOLIO MANAGER: Mitzi Malevich

ASSETS UNDER MANAGEMENT: $181,005,256

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION

(Reported By Exception)

The previous evaluation noted several items of concern:

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

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

The firm's exceptional strengths continue to be:

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

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
IDS Advisory Actual	15.8%	34.6%	36.7%	17.7%
IDS Advisory Benchmark	8.8%	25.9	28.9	16.7

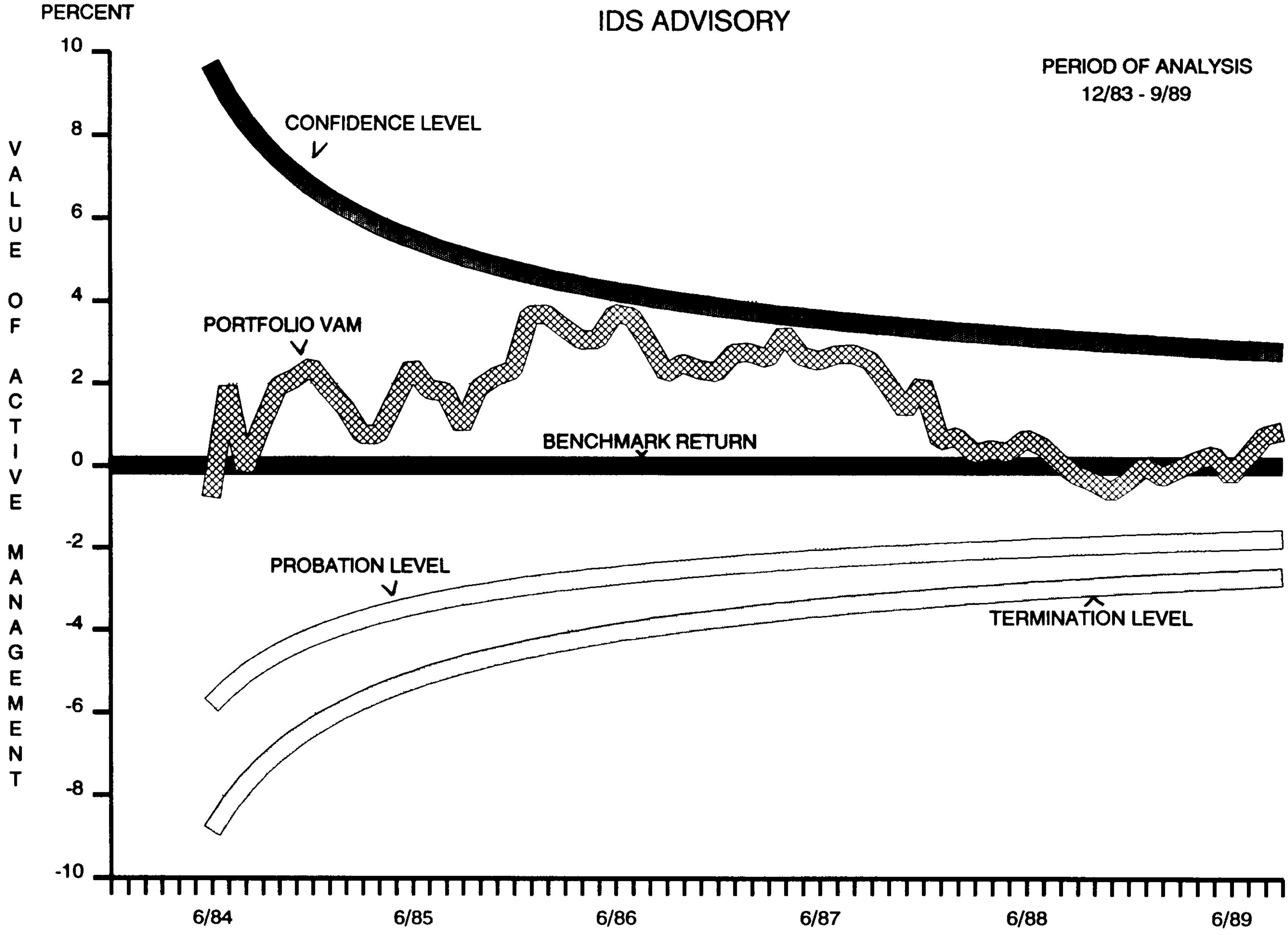
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

IDS ADVISORY



INVESTMENT ADVISERS

PORTFOLIO MANAGER: Charles Webster

ASSETS UNDER MANAGEMENT: $126,048,671

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	12.4%	28.5%	30.9%	15.6%
IAI Benchmark	8.4	24.8	28.6	16.7

(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.
- 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:

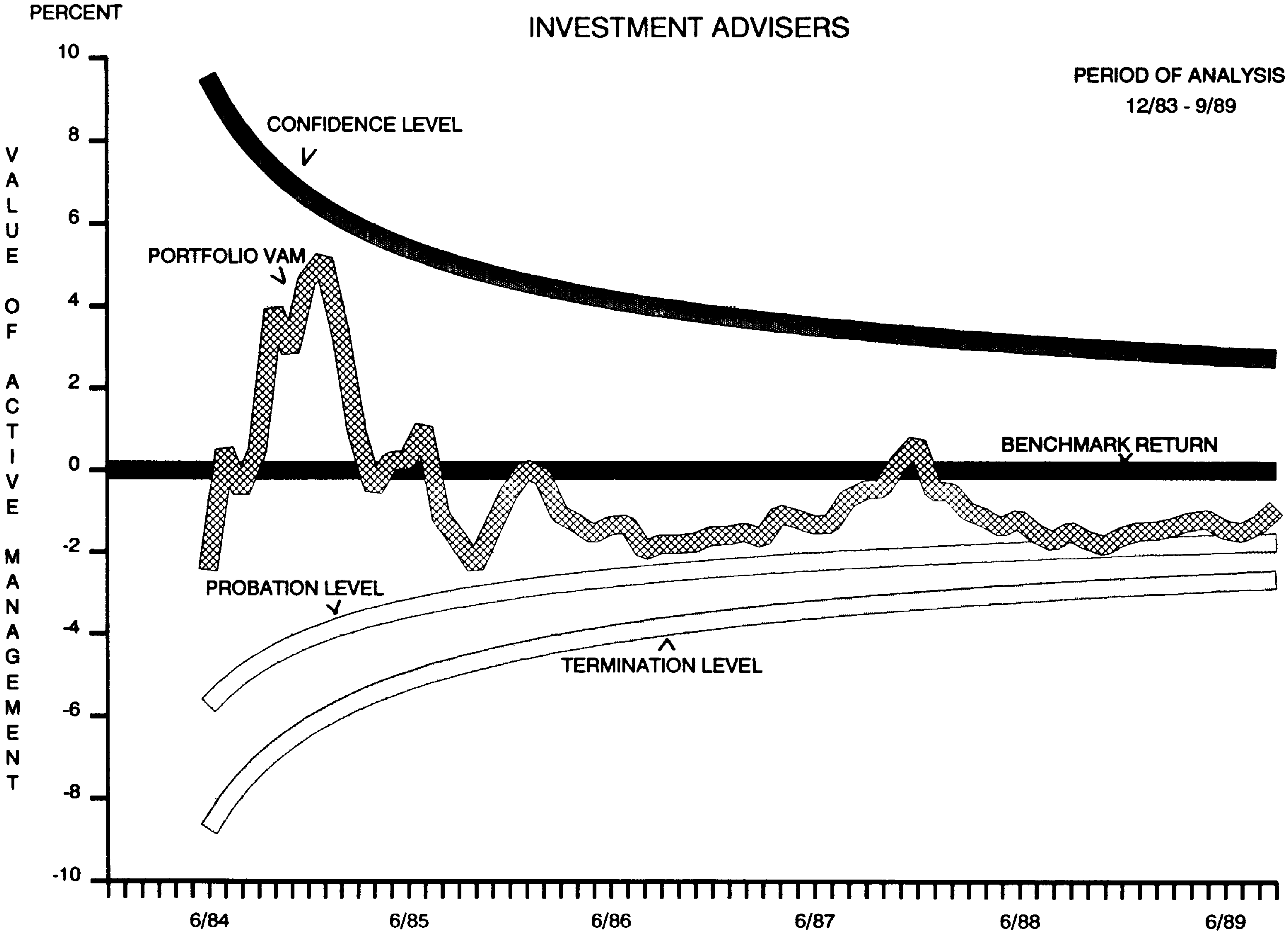
- Investment style consistently applied over a variety of market environments.

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

INVESTMENT ADVISERS



LIEBER & COMPANY

PORTFOLIO MANAGER: Stephen Lieber, Nola Falcone

ASSETS UNDER MANAGEMENT: $127,526,552

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	8.8%	23.7%	23.9%	14.5%
Lieber & Co. Benchmark	8.0	22.4	23.3	13.0

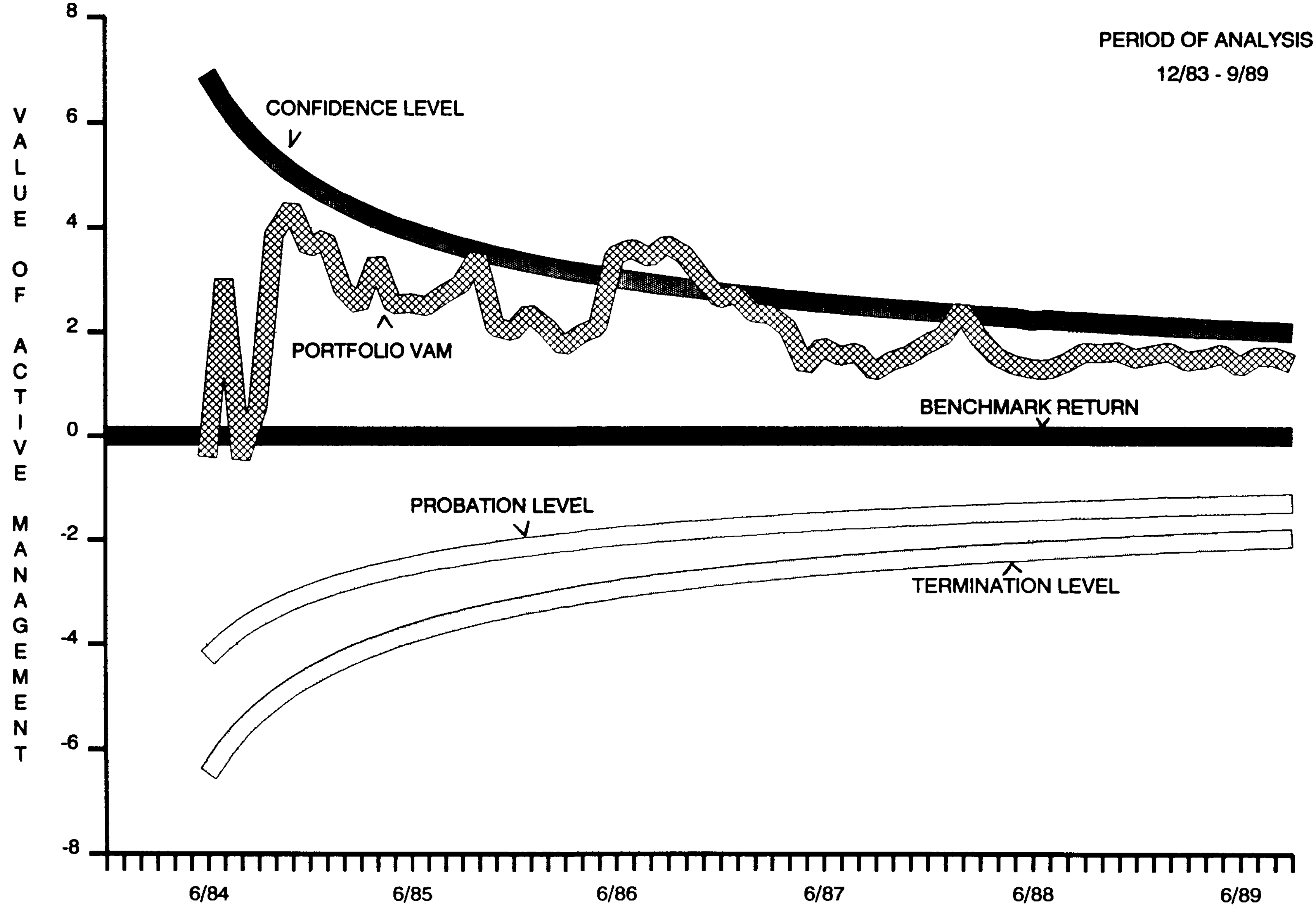
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

LIEBER & CO.



WADDELL & REED

PORTFOLIO MANAGER: Henry Herrman

ASSETS UNDER MANAGEMENT: $184,924,081

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 firm's exceptional strengths continue to be:

- Highly successful and experienced professionals.

QUANTITATIVE EVALUATION

Performance Relative to Benchmark

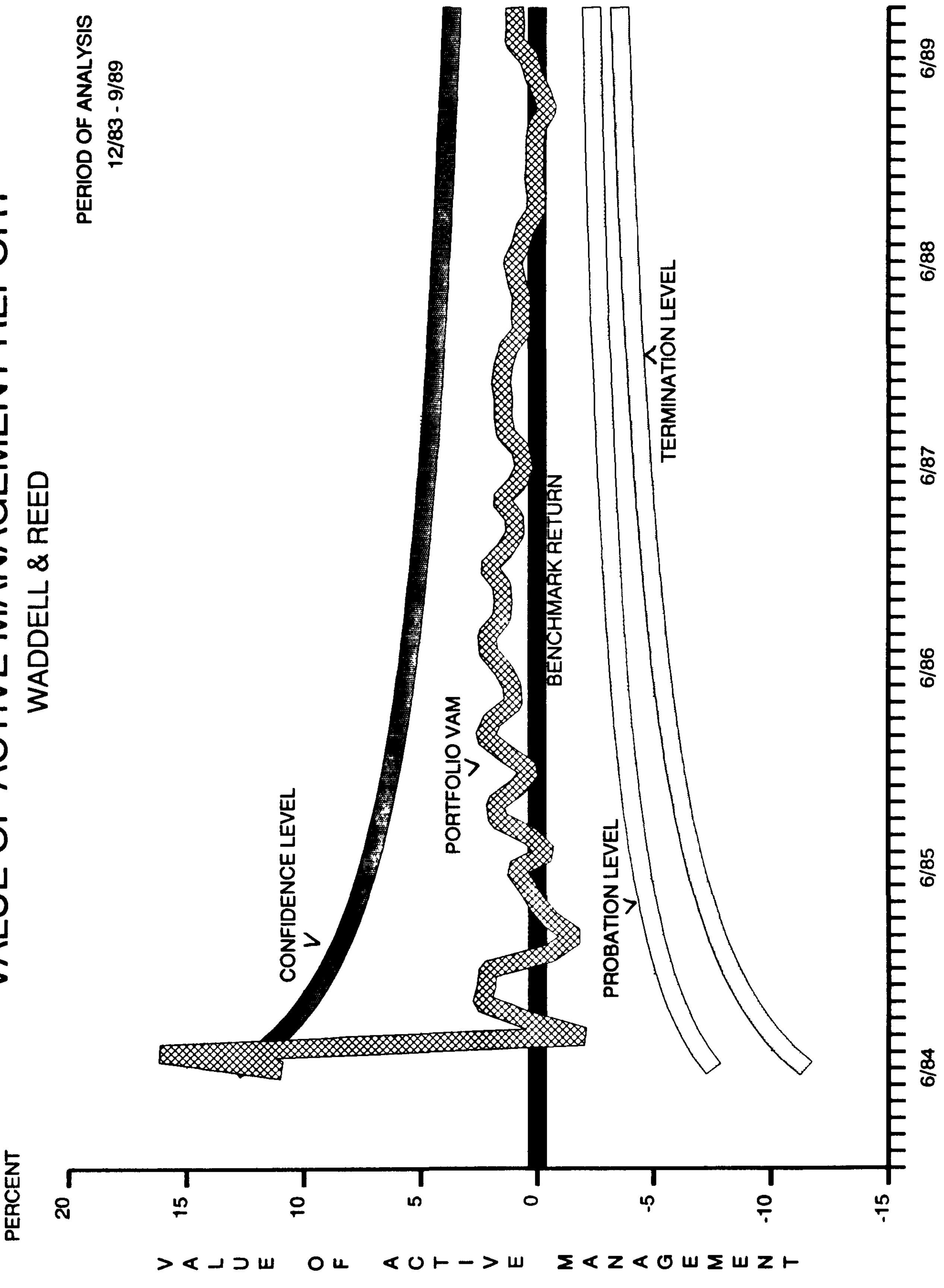
	Latest Quarter	Calendar Year To Date	Latest Year	Since 1/1/84 Annualized
Waddell & Reed Actual	12.1%	30.1%	31.7%	14.1%
Waddell & Reed Benchmark	7.9	21.7	22.9	12.7

(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: $114,581,002**

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 4/1/89 Cumulative
Concord Capital Actual	7.3%	N/A	N/A	14.6%
Concord Capital Benchmark	9.1	N/A	N/A	18.3

STAFF RECOMMENDATIONS

No action required.

FRANKLIN PORTFOLIO ASSOCIATES

PORTFOLIO MANAGER: John Nagorniak

ASSETS UNDER MANAGEMENT: $121,831,593

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 4/1/89 Cumulative
Franklin Actual	11.1%	N/A	N/A	21.8%
Franklin Benchmark	7.4	N/A	N/A	16.4

STAFF RECOMMENDATIONS

No action required.

ROSENBERG INSTITUTIONAL EQUITY MANAGEMENT

PORTFOLIO MANAGER: Ken Reid **ASSETS UNDER MANAGEMENT: $120,373,320**

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 4/1/89 Cumulative
Rosenberg Actual	10.7%	N/A	N/A	20.4%
Rosenberg Benchmark	9.5	N/A	N/A	18.5

STAFF RECOMMENDATIONS

No action required.

SASCO CAPITAL INC.

PORTFOLIO MANAGER: Bruce Bottomley

ASSETS UNDER MANAGEMENT: $117,118,293

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 4/1/89 Cumulative
Sasco Capital Actual	9.1%	N/A	N/A	17.1%
Sasco Capital Benchmark	8.5	N/A	N/A	15.2

STAFF RECOMMENDATIONS

No action required.

Tab H

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

December 20, 1989

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

FROM: Fixed Income Manager Committee

SUBJECT: Committee Report

The IAC Fixed Income Manager Committee met on November 30, 1989 to review the following agenda:

- o Review of Active Managers
- o Review of Enhanced Index Managers
- o Results of 1989-1992 GIC Bid
- o Report on Plans to Use Flexible Repurchase Agreements

Board action is not required on any items. A summary of the Committee's discussion follows.

In addition, staff updated the Committee on rebalancing activity in the Basic Retirement Funds. Please refer to Tab C for more information on that issue.

INFORMATION ITEMS:

1) Review on Active Managers

The Committee reviewed the performance reports for the active bond managers. No action is required by the Board since all managers meet the established quantitative guidelines. The value of active management (VAM) reports for each manager are attached on page 13 of this section.

The active manager group outperformed the bond market by 0.2 percentage points for the quarter (active managers at 1.2% vs. Salomon BIG Index at 1.0%). While the active managers have outperformed their aggregate benchmark by 0.4 percentage points on an annualized basis since mid 1984, the group has trailed the market by a small amount during that period (active managers 14.2% annualized vs. Salomon BIG 14.3% annualized).

Lehman Ark remains on probation for qualitative reasons. The management led buyout of the firm requires probationary status to monitor continuity of portfolio management.

2) Review of Enhanced Index Managers

Both Fidelity Management and Lincoln Capital reported performance results ahead of the Salomon Broad Investment Grade (BIG) Index for the latest quarter. The table below summarizes the quarterly and cumulative performance.

Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 6/30/89 Annualized
Fidelity	1.15%	10.28%	11.34%	10.50%
Lincoln	1.27	10.22	11.50	10.73
Total	1.21	10.25	11.42	10.62
Salomon BIG	1.03%	10.35%	11.18%	10.55%

3) Results of 1989-1992 GIC Bid

The SBI bid its fourth 3-year guaranteed investment contract (GIC) for the Supplemental Investment Fund on October 26, 1989. Overall, staff was pleased with the bid results.

John Hancock Mutual Life Insurance Company, Boston, submitted the winning bid of 8.4% which was 59 basis points over 3 year Treasuries on the bid date. The latest GIC involved a $10.7 million lump sum and an estimated $3.8 million cash flow over the next year.

John Hancock manages over $50 billion in a variety of institutional accounts. Its GIC's are rated AAA by the major rating agencies.

More information on the GIC bid is included in Attachment A.

4) <u>Report on Plans to Use Flexible Repurchase Agreements</u>

SBI staff are in the process of developing flexible repurchase agreements (flex repos) with several securities dealers. They will be used in the internally managed short term cash pools.

A flex repo is a loan collateralized by U.S. Treasury securities owned by a dealer. In effect, the seller (dealer) sells securities to another party (SBI) with an agreement to buy back or "repurchase" the securities at a future date at a pre-determined interest rate. Flex repos differ from traditional repos in that the value of the loan is not fixed.

Once completed, flex repo agreements will give the SBI greater flexibility in managing cash flow needs for the Department of Finance. The SBI will be able to respond on a more timely basis to changes in cash needs by assuring that the SBI could draw down money on any given day to cover a immediate and unanticipated cash need. Staff believes $50 to $100 million in flex repos should cover all contingency situations. The slightly lower yields on flex repos will not have a material impact on the overall return from the short-term pools.

More information on flex repos is included in Attachment B.

ATTACHMENT A

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

November 27, 1989

TO: Members, Fixed Income Manager Committee

FROM: SBI Staff

SUBJECT: Results of 1989-1992 GIC Bidding

Summary of Results

On October 26, 1989, the SBI bid its fourth 3-year guaranteed investment contract (GIC) for the Guaranteed Return Account in the Supplemental Investment Fund. John Hancock Mutual Life Insurance Company, Boston, submitted the winning bid of 8.40 percent annual effective rate, net of expenses:

Contract Period: Nov. 1, 1989-Oct. 31, 1992 (3 years)
Contribution Period: Nov. 1, 1989-Oct. 31, 1990 (1 year)

Estimated Lump Sum	$10.7 Million
Estimated Flow	$ 3.8 Million
Estimated Total	$14.5 Million
Bid Awarded to:	John Hancock Mutual Life
Net Effective Annual Interest Rate:	8.40%

The John Hancock Mutual Life Insurance Company, headquartered in Boston, Massachusetts, manages assets totalling over $50 billion. It handles the investment of over $17 billion of qualified retirement fund assets for over 3000 retirement programs. John Hancock's GIC's are rated AAA by both Standard and Poor's and Moody's, the highest possible ranking available from these the nationally recognized rating organizations.

Background and Comparative Data

The 1989-1992 GIC was considerably smaller then last year's GIC. Decreases in the general level of interest rates apparently reduced participant interest:

GIC	Total $'s (millions)	GIC Rate	Comparative 3 Year Treasuries Rates
1989-1992	$14.5	8.40%	7.81%
1988-1991	26.2	9.01	8.37
1987-1990	16.7	8.45	7.94
1986-1989	4.5	7.72	6.53

The 1989-1992 GIC was structured like the previous GIC's:

- o The GIC carries a fixed interest rate for three years. No blending of rates with past or future GIC's will occur.
- o Lump sum's were pledged to the GIC prior to the start of the contract from the Deferred Compensation Plan, the Unclassified Employees Plan, and, for the first time, the College Supplemental Plan. On-going contributions may be made by payroll deduction during the first year of the three year contract period from these plans and from the Ambulance Service Personnel Plan.
- o Lump sum pledges to the GIC prior to the start of the contract were allowed from police and firefighter plans that are not part of the PERA Police and Fire Plan.

As an adjunct to their master custodial relationship with the SBI, State Street Bank assisted the SBI in the GIC bid process.

Several documents summarizing the bid process are attached:

Exhibit A - GIC Bidding Day Review
Exhibit B - Indicative and Final Bids
Exhibit C - Responses to Bidding Specifications
Exhibit D - Participants in the 1989-1992 GIC

EXHIBIT A

GIC BIDDING DAY REVIEW

As outlined in the GIC bidding specifications, indicative, but not binding, interest rate bids were required on October 23, 1989. Binding bids were required in the morning of October 25, 1989. A final bid was accepted at approximately 1:30 P.M. on October 25, 1989.

Events of the bidding day were as follows:

9:30 A.M. - 11:30 A.M.

There were indications that financial institutions were waiting for possible market moves in response to the volatile markets of October 24, 1989 before submitting binding bids. By 11:30 A.M., twelve companies had submitted bids. John Hancock submitted the highest bid at 8.36 percent; Principal Mutual, The Hartford (Boston office), and The Hartford (Chicago office)/Piper Jaffray, had the next highest bids at 8.30 percent.

11:30 A.M. to 1:30 P.M.

Bids were left open after 11:30 A.M. to encourage several bidders to increase their bids. John Hancock raised its bid from 8.36 percent to 8.40 percent. Principal Mutual increased its bid from 8.30 percent to 8.32 percent. New York Life increased its bid from 8.20 percent to 8.25 percent. The Hartford (Chicago office)/Piper Jaffray requested additional time to work on their joint bid, but did not submit a revised bid. At 1:30 P.M. the bidding was closed and the bid awarded to John Hancock at an effective interest rate of 8.40 percent.

Indicative and final bids are shown in Attachment B.

ATTACHMENT A (con't)

EXHIBIT B

Indicative and Final Bids
Net Effective Annual Interest Rate

Company		Indicative Bids 10/23/89	Final Bid 10/25/89
Aetna		8.02%	7.84%
Bankers Trust		----	8.12
Hartford (Boston)		8.30	8.30
Hartford (Chi.)/Piper Jaffray		----	8.30
Home Life		8.28	----
John Hancock		----	8.40
Metropolitan		8.27	8.28
Mutual of America		8.18	8.21
Mutual of New York		----	8.10**
New York Life		8.25	8.25
Pacific Mutual		8.22*	8.15
Principal Mutual		8.35	8.32
Prudential		8.12	7.95
Bid Range:			
	High	8.35	8.40
	Low	8.02	7.84

3-Year Treasuries:
on 10/25/89: 7.81%

* Restricted the minimum and maximum size of the GIC the firm was willing to accept.

** Would accept only 50 percent of the GIC.

In addition, the SBI received bids from three firms whose credit ratings and quality of underlying assets supporting the GIC prevented the SBI from considering them. These firms were Executive Life, Southwestern Life and Sun Life.

EXHIBIT C

RESPONSES TO BIDDING SPECIFICATIONS

Bidding specifications were sent to 47 financial institutions (39 insurance companies and 8 banks). Fourteen companies responded that they would not submit bids. They are summarized as follows:

Provided indicative or final bids	16	(see Attachment A)
Declined to bid	15	(see below)
Did not respond	16	
	47	

COMPANY	REASON GIVEN FOR DECLINING TO BID
CNA	Cannot bid on nonqualified money
Confederation Life	No 1989 capacity and no nonqualified money
Connecticut Mutual	Cannot bid on nonqualified money
Equitable	Cannot bid on nonqualified money
General American	Size of GIC too large
Great West	Competes with other products*
Home Life	Cannot bid on nonqualified, benefit responsive money
Life of Virginia	Cannot bid on nonqualified money
Nationwide Life	Not bidding
New England	Cannot bid on nonqualified money
Penn Mutual	Cannot bid on nonqualified money
State Mutual	Not bidding
Sun Life Canada	Not bidding on window contracts
Transamerica	Not bidding
Travelers	No 1989 capacity and no nonqualified money

*Great West indicated this GIC would compete with annuity options they offer to Minnesota public employees through the Deferred Compensation Plan. As a result, they declined to bid.

ATTACHMENT A (con't)

EXHIBIT D

PARTICIPANTS IN THE 1989-1992 GIC

	Estimated Lump Sum (thousands)	Estimated Flow (thousands)	Estimated Total (thousands)
Deferred Compensation	$ 6,895	$3,510	$10,405
Unclassified Plan	606	270	876
College Supplemental*	3,148	32	3,180
Ambulance Service Personnel**	0	1	1
Police and Fire Plans***	15	0	15
Total	$10,664	$3,813	$14,477

* First year of participation in the Guaranteed Return Account.
** Plan, established November 1, 1988, remains small.
*** Lump sum pledge from one local volunteer firefighter plan.

ATTACHMENT B

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

November 29, 1989

TO: Members, Fixed Income Committee

FROM: Howard Bicker

SUBJECT: Flexible Repurchase Agreements

SBI staff are in the process of developing flexible repurchase agreements (flex repos) with several securities dealers. The purpose of this memo is to provide some background information on flex repos and outline how they will be used to enhance the operation of the SBI's internally managed short-term cash pools.

Description

A repurchase agreement (repo) is a type of collateralized loan. Lenders (such as the SBI) loan money to securities dealers for a specified period of time at a pre-determined interest rate. The loan is secured or collateralized by U.S. Treasury securities owned by the dealer. In effect, a repo is a transaction where a seller (the dealer) sells securities to another party with an agreement that the seller will buy back or "repurchase" the securities at a future date. Repos have very short maturities, typically one day or overnight.

Flex repos are similar to repos except that the value of the loan is not fixed at a particular dollar amount. Rather, the dealer has a standing agreement to return any loaned funds within a specified dollar range without prior notice.

Benefits to the SBI

The SBI has used repos in its short-term cash accounts for many years to match maturities with specific cash flows in and out of the State Treasury.

Flexible Repurchase Agreements cont'd
Page Two

The Department of Finance provides the SBI with an analysis of expected cash flows. These anticipated revenue collection and disbursement patterns are used to plan the maturity structure of the cash pools. However, there are times when projected cash flow patterns deviate from actual cash needs and maturities must be altered on very short notice to cover an immediate cash need.

Usually, the deviations are caused by a change in disbursement dates, a change in clearing patterns, or data input error. While these are rare occurrences over the course of a year, the dollars involved can be substantial ($50 million or more). In addition, the deviations are often not apparent until late in the morning when it may be difficult to make appropriate buys and sells to cover the problem for same-day settlement.

Flex repos are an ideal mechanism to protect against this type of situation. They provide assurance that the SBI could draw down money on any given day to cover an immediate and unanticipated cash need.

<u>Implementation</u>

Repos are governed by contractual agreements between the SBI and securities dealers. In addition, the SBI and the dealer enter into a third party agreement with a bank to hold the collateral involved in a repo. In order to move forward with flex repos, these agreements must be amended or modified. SBI staff are working with the Attorney General's office to assure that appropriate documents are drafted.

The SBI usually has $300-500 million invested in repos on a daily basis out of a cash balance of approximately $2 billion. Staff anticipate that flex repos totalling $50-100 million should cover the contingency situations described above. Typically, interest rates on flex repos are one-eighth of a percent (12.5 basis points) lower than repo rates. This difference will have a negligible affect on the overall return from the short-term pools.

ACTIVE BOND MANAGERS

Value of Active Management Reports

Third 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:

- No new action required. Maintain probationary status on Lehman Ark for qualitative reasons.

Managers	Market Value 9/30/89 (Thousands)	Quarter Ending 9/30/89 Actual	Bmrk	Calendar Year To Date Actual	Bmrk	Year Ending 9/30/89 Actual	Bmrk	(Annualized) Since 7/1/84 Actual	Bmrk
IAI	$54,648	0.4%	0.9%	11.7%	10.6%	12.4%	11.5%	14.5%	13.9%
Lehman Ark	118,514	1.1	1.2	9.5	9.8	10.3	10.7	13.2	13.2
Miller Anderson	171,043	0.4	1.0	6.3	10.4	8.0	11.2	13.7	14.3
Morgan Stanley	113,696	1.5	1.2	9.5	9.6	9.9	9.9	13.3	13.8
Western Asset	214,854	1.8	1.0	11.9	10.2	13.5	11.2	15.7	14.0
Aggregate Active*		1.2	1.0	9.6	10.1	10.8	10.9	14.2	13.8
Salomon Broad Investment Grade Index		1.0%		10.4%		11.2%		14.3%	

* Historical performance reflects composite of current managers only.

INVESTMENT ADVISERS

PORTFOLIO MANAGER: Larry Hill **ASSETS UNDER MANAGEMENT: $54,648,251**

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	0.4%	11.7%	12.4%	14.5%
IAI Benchmark	0.9	10.6	11.5	13.9

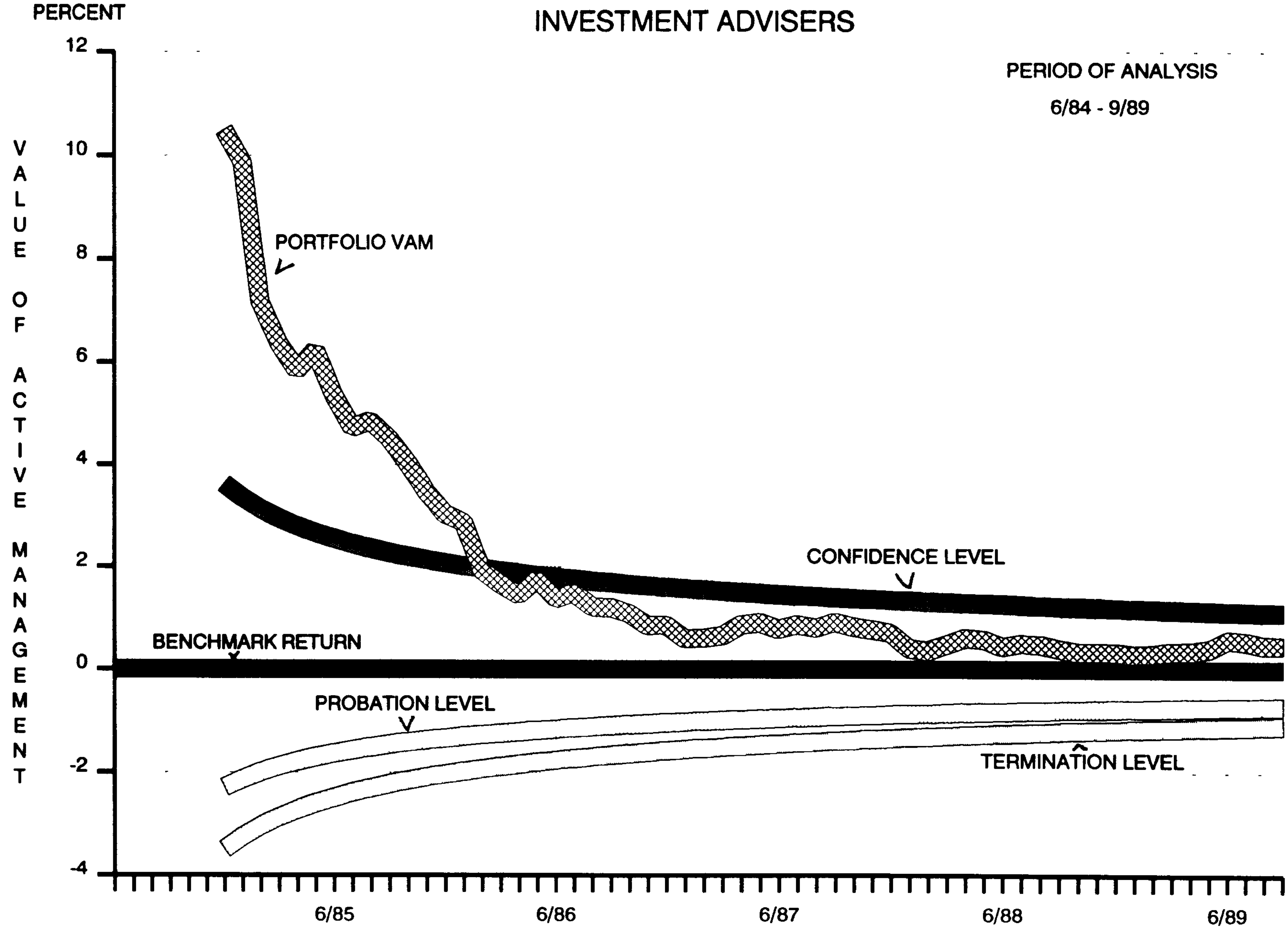
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

INVESTMENT ADVISERS



LEHMAN ARK MANAGEMENT

PORTFOLIO MANAGER: Kevin Hurley **ASSETS UNDER MANAGEMENT: $118,513,672**

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	1.1%	9.5%	10.3%	13.2%
Lehman Benchmark	1.2	9.8	10.7	13.2

(See Value of Active Management graph below)

QUALITATIVE EVALUATION

(Reported By Exception)

The current evaluation notes the following concern:

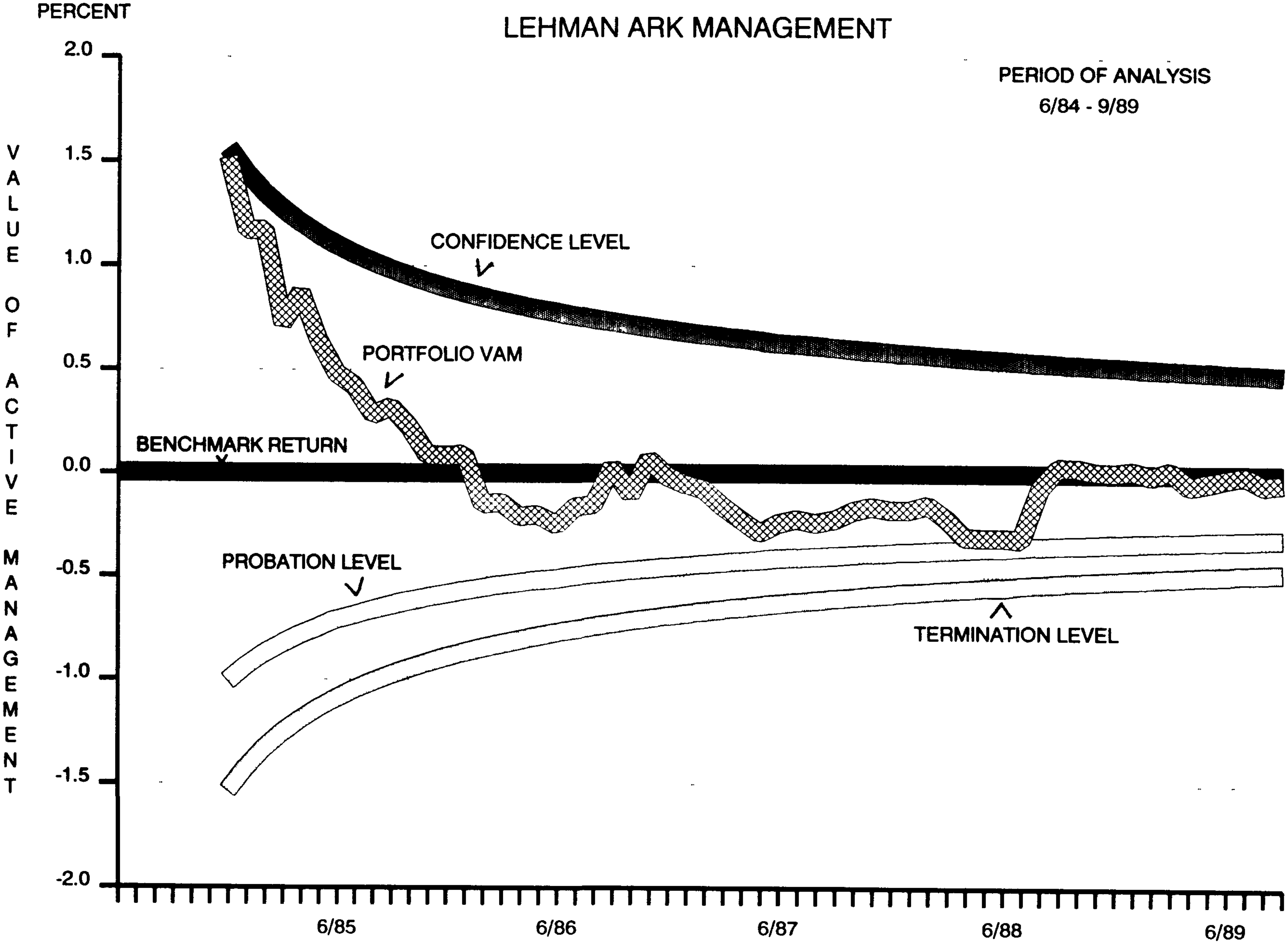
- Lehman Ark Management employees initiated a management leveraged buy out of the institutional money management division. Shearson Lehman will maintain a 20% ownership in the new firm.

STAFF RECOMMENDATIONS

Maintain probationary status for qualitative reasons. Staff will continue to monitor developments in portfolio management style to ensure continuity of SBI portfolio management.

VALUE OF ACTIVE MANAGEMENT REPORT

LEHMAN ARK MANAGEMENT



MILLER ANDERSON

PORTFOLIO MANAGER: Tom Bennet

ASSETS UNDER MANAGEMENT: $171,043,467

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	0.4%	6.3%	8.0%	13.7%
Miller Benchmark	1.0	10.4	11.2	14.3

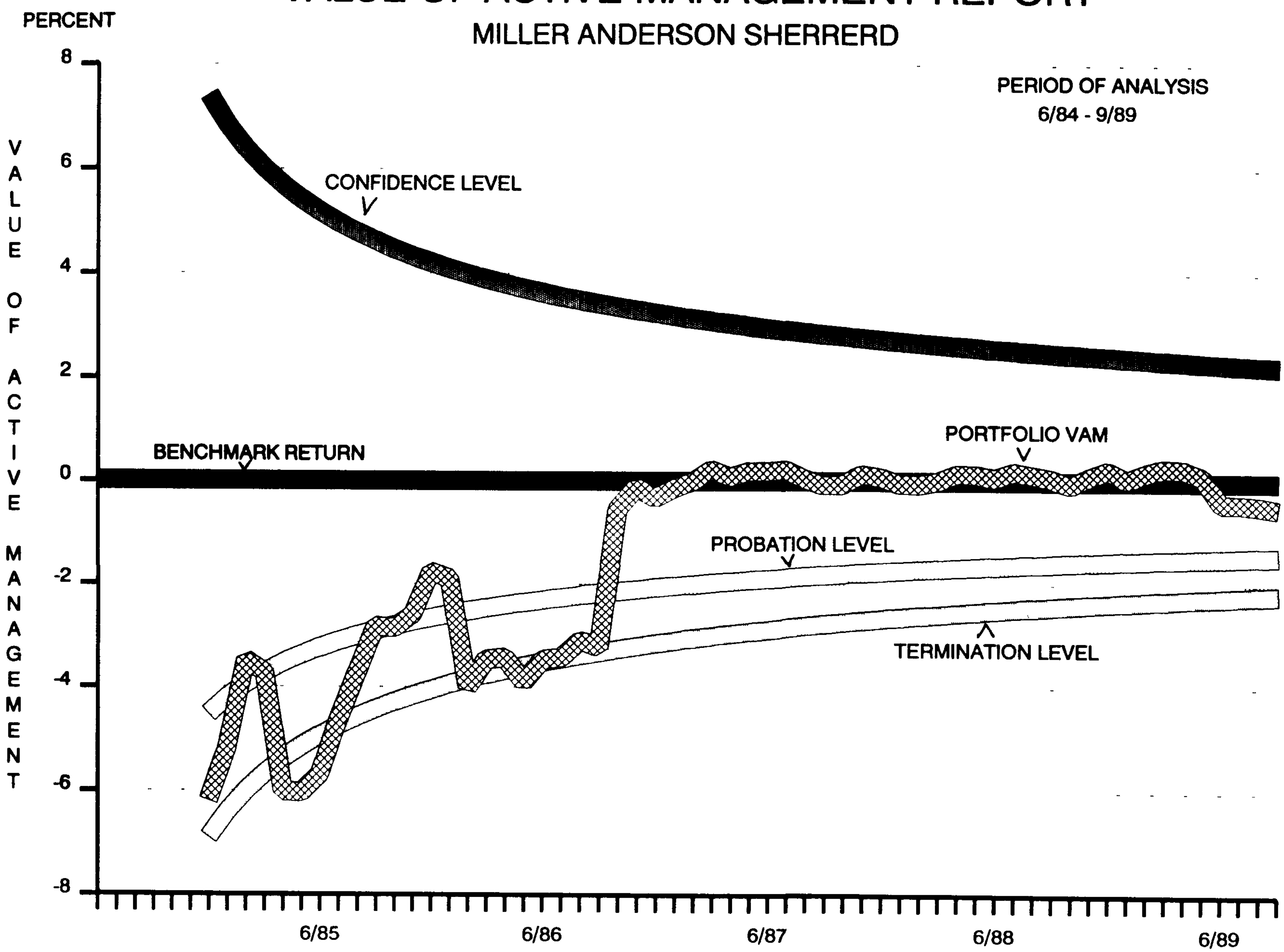
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

MILLER ANDERSON SHERRERD



MORGAN STANLEY

PORTFOLIO MANAGER: Geoffrey Gettman **ASSETS UNDER MANAGEMENT: $113,696,451**

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

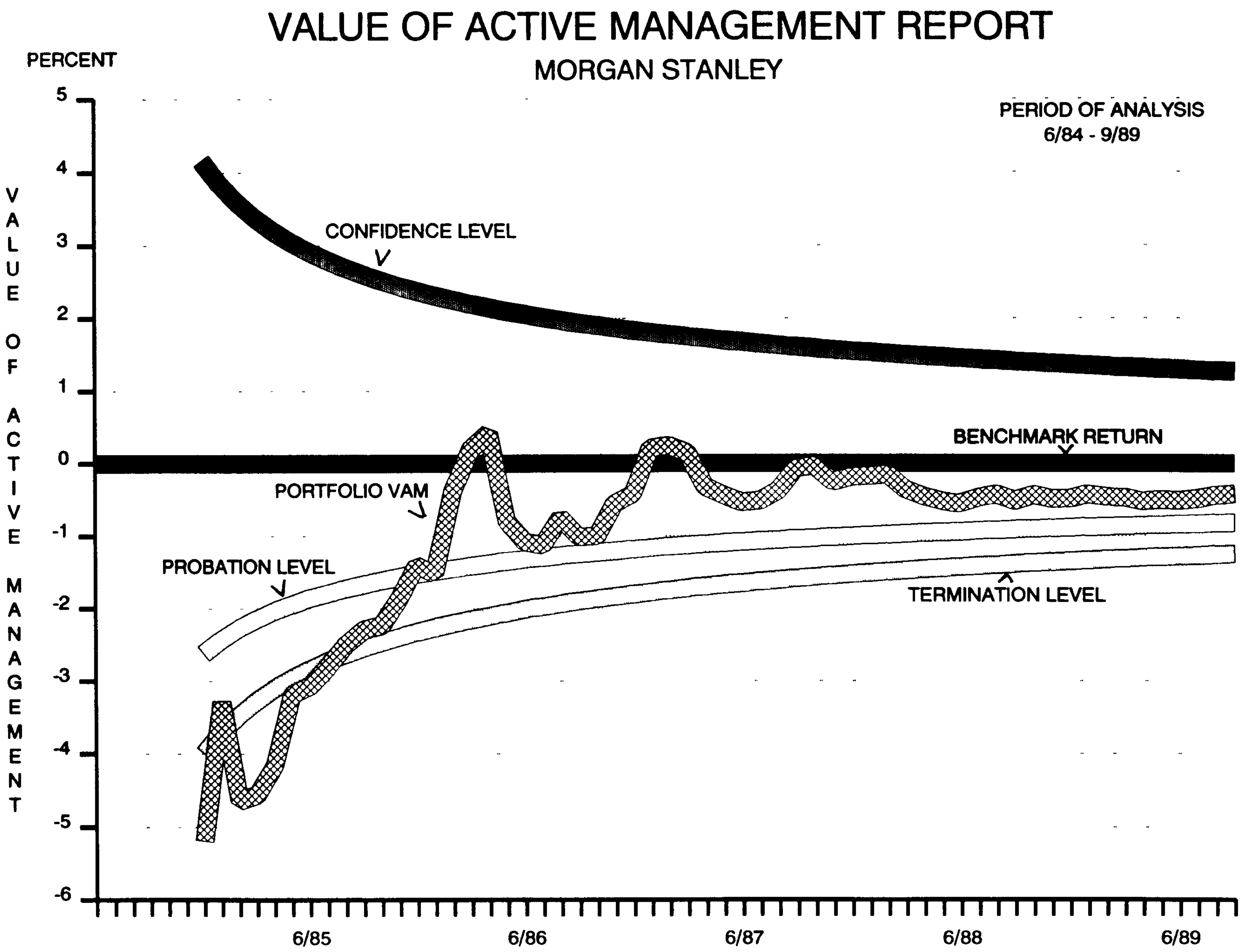
Performance Relative to Benchmark

	Latest Quarter	Calendar Year To Date	Latest Year	Since 6/30/84 Annualized
Morgan Actual	1.5%	9.5%	9.9%	13.3%
Morgan Benchmark	1.2	9.6	9.9	13.8

(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.


VALUE OF ACTIVE MANAGEMENT REPORT
MORGAN STANLEY
PERCENT
PERIOD OF ANALYSIS
6/84 - 9/89
VALUE OF ACTIVE MANAGEMENT
5
4
3
2
1
0
-1
-2
-3
-4
-5
-6
CONFIDENCE LEVEL
BENCHMARK RETURN
PORTFOLIO VAM
PROBATION LEVEL
TERMINATION LEVEL
6/85
6/86
6/87
6/88
6/89

WESTERN ASSET MANAGEMENT

PORTFOLIO MANAGER: Edgar Robie, Jr.

ASSETS UNDER MANAGEMENT: $214,853,580

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	1.8%	11.9%	13.5%	15.7%
Western Benchmark	1.0	10.2	11.2	14.0

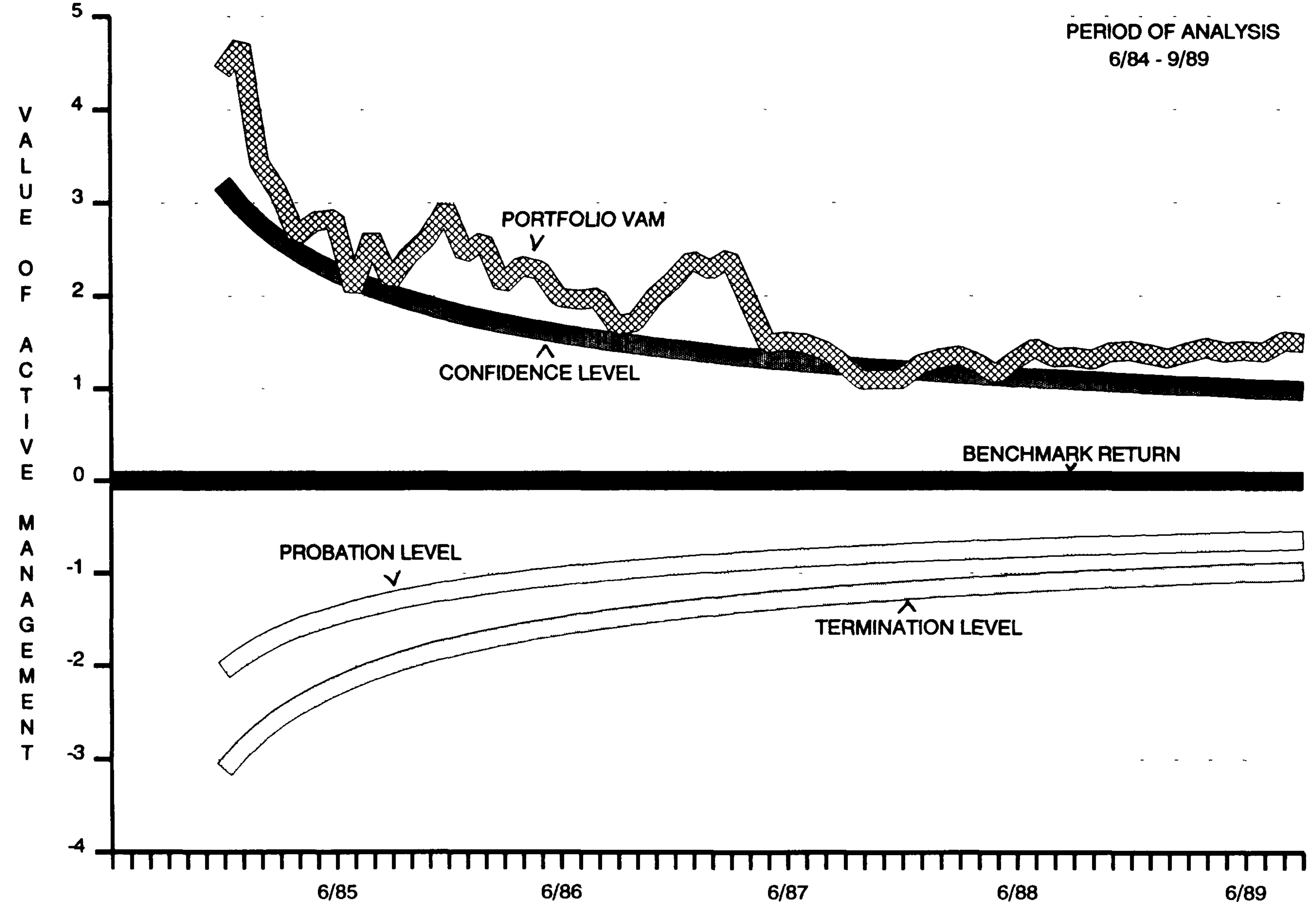
(See Value of Active Management graph below)

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

WESTERN ASSET MANAGEMENT



Tab I

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

December 20, 1989

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

FROM: Alternative Investment Committee

SUBJECT: Committee Report

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

- o Review of current strategy
- o Results of annual review sessions with existing managers
- o Progress report on certain action items from the October 1989 SBI meeting:
  - Withdrawl from Prudential's real estate fund, PRISA
  - Matrix Venture Partnership fee negotiations
  - Sale of the Apache II investment
- o Additional investment with First Reserve, an existing resource investment manager

A summary of Committee discussion and recommendations on these items follows. In addition, the Committee discussed the Asset Allocation Committee's recommendation regarding the real estate allocation target. Please refer to the Asset Allocation Committee report under Tab F.

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 $309 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:

Venture Capital:	Superior, KKR, Matrix, Allied, Inman Bowman and DSV
Resource Funds:	First Reserve

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

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

Superior, KKR, Matrix, Allied and First Reserve 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 five managers and would consider new investments with these managers, when appropriate.

Inman and Bowman have also generally followed their originally stated investment strategies. However, it is too early to tell how effective the strategies will be.

The Committee and staff have been less satisfied with the operations and performance of DSV. In general, DSV has invested at a pace much slower than originally expected and partnership cash holdings of investor commitments significantly exceed fund investments. The Alternative Investment Committee and staff are in the process of asking DSV to return excess cash to the limited partners and fund future investments on an "as needed" basis. At this time, the Alternative Investment Committee and staff would not recommend additional investments with DSV.

4) <u>Progress Report on Certain Action Items from the October 1989 SBI Meeting</u>

At the October 1989 SBI meeting, the SBI authorized the Executive Director, with the assistance from the SBI's legal counsel, to:

- **Withdraw the SBI's Approximate $70 million investment in the Prudentials open-end fund, PRISA.**

  The Alternative Investment Committee and staff have requested the withdrawal from PRISA and accepted the following withdrawl schedule:

March 30, 1990	25% of the balance
June 30, 1990	33% of the remaining balance
September 30, 1990	50% of the remaining balance
December 30, 1990	100% of the remaining balance

- **Negotiate and execute an investment of up to $10 million in Matrix Venture Capital Partnership III, provided an acceptable fee can be arranged.**

In conjunction with another potential investor, First Chicago, the Committee and staff are still working with Matrix to lower the current proposed fee schedule on Matrix III. Negotiations will likely continue into the first quarter of 1990.

- **Negotiate a sale of the SBI's interest in the Apache 1985 acquisition notes (Apache II).**

  IBM, one of the eight investors in the Apache notes, has sold their investment interest to Apache. Central Life, also one of the investors, has decided not to sell their notes, under any circumstance. The remaining group of six investors, including the SBI, are continuing to negotiate with Apache in seeking a higher bid for their investment interests. At this time, the results of these negotiations are not known.

ACTION ITEM:

1) Additional Resource Investment with First Reserve

First Reserve, a resource investment group based in Greenwich CT, is seeking investors in First Reserve's AmGO V, a new $100-150 million fund. AmGO is a follow-on fund to Funds IV, III, II and I which were formed in 1988, 1986, 1983 and 1981, respectively. As in the four previous funds, Fund V will be structured as a limited partnership and will focus on oil and gas equity and equity related investments.

Currently, the SBI has a total of $34 million committed to three prior First Reserve Funds (AmGO I, II and IV). The Committee and staff have been satisfied with performance, strategy and operations of First Reserve and feel it is appropriate to place additional resource funds with First Reserve, subject to final negotiation and review by legal counsel.

RECOMMENDATION:

The Committee recommends that the SBI authorize the Executive Director, with assistance from the SBI's legal counsel, to negotiate and execute an investment of up to $20 million or 20%, whichever is less, in First Reserve's AmGO Fund V.

ATTACHMENT A

ALTERNATIVE EQUITY INVESTMENTS
THIRD 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	$6,500,000	$3,500,000	EARLY STAGE
FIRST CHICAGO	Mar-88	$50	$5,000,000	$2,502,000	$2,498,000	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	$100,333,077	$46,301,583	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	-	$899,850	$899,850	$0	IPO MANAGER
TOTAL V.C. PORTFOLIO			$309,044,682	$218,822,599	$90,222,083	
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	$6,573,000	$5,727,000	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	$8,400,000	$6,600,000	DEBT WITH EQUITY
B.P. ROYALTY	Feb-89	$500	$25,000,000	$25,000,000	$0	ROYALTY
TOTAL RES. PORTFOLIO			$130,300,000	$116,537,025	$13,762,975	
TOTAL ALT. INV. PORT			$824,344,682	$720,359,624	$103,985,058	

ATTACHMENT B

ANNUAL REVIEW SUMMARY
MATRIX II
October 11, 1989

MANAGER REPRESENTATIVES: Mike Humphreys, Paul Ferri, Rick Fluegel

SBI ASSETS UNDER MANAGEMENT: $10,000,000

BACKGROUND AND DESCRIPTION: Matrix Partners II was formed in August, 1985 and has a term of ten years. The fund's investment emphasis is on high-technology firms in the early and expansion stages of corporate development. However, for diversification, the Fund's portfolio includes a sizable component of non-technology firms. The portfolio may include several small leveraged buyout investments as well. The partners have offices in Boston, San Jose, and San Francisco.

QUALITATIVE EVALUATION:

The general partners of Matrix feel these factors will contribute to the performance of their portfolio:

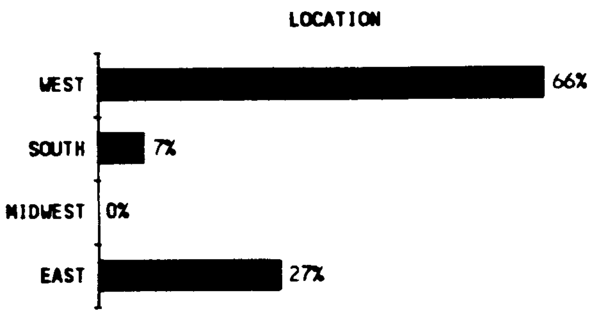
- Fewer investments overall but with increased ownership positions in portfolio companies. This allows more influence on company strategies.
- Continued investments in unique areas such as in Medchoice Warehouse Club, Inc., a discount medical and dental supply warehouse.
- Continued investments in niche computer markets with an emphasis on services and software.
- Less dependence on initial public offerings for existing portfolio companies.
- Continued concentration on services and proven products in the medical care area.
- No investments in biotech or personal computer software.

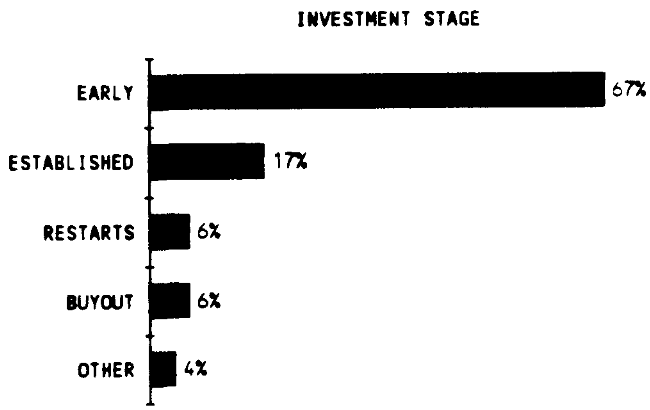
ATTACHMENT B (cont'd)

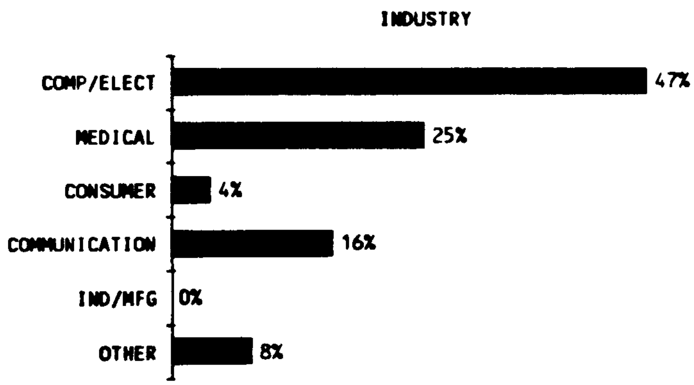
QUANTITATIVE EVALUATION

COMMITMENT:	**$10,000,000**
FUNDED COMMITMENT:	**$10,000,000**
MARKET VALUE OF FUNDED COMMITMENT:	**$11,146,574**
CASH DISTRIBUTIONS:	**$0**
INCEPTION DATE(S):	**August, 1985**
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	**4.9%**

DIVERSIFICATION PROFILE (% OF COST)







STAFF COMMENTS AND RECOMMENDATIONS:

The Alternative Investment Committee and staff have been satisfied with Matrix's operation and performance to date. The SBI approved a follow-on commitment to Matrix III in October 1989.

ATTACHMENT C

ANNUAL REVIEW SUMMARY
INMAN AND BOWMAN
October 12, 1989

MANAGER REPRESENTATIVES: Kirk Bowman, Grant Inman

SBI ASSETS UNDER MANAGEMENT: $4,500,000

BACKGROUND AND DESCRIPTION: Inman and Bowman was formed in June, 1985. Its investment focus is early-stage, high-technology firms. The fund will emphasize investments in California, where the general partner, Inman and Bowman Management, is based. Inman and Bowman work closely with Rainier Venture Partners, a small Washington venture firm. They expect to make several co-investments with Rainier in the Pacific Northwest. The partnership has a ten year term.

QUALITATIVE EVALUATION:

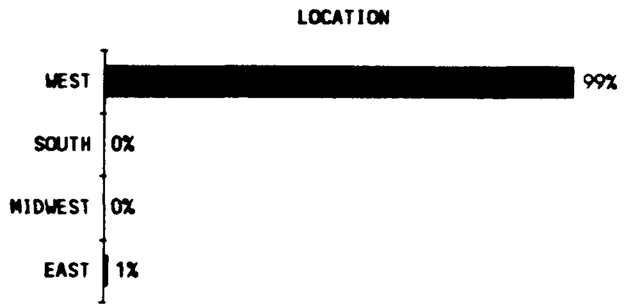
Inman and Bowman invested in three new companies this year and now has invested in 18 companies. During the coming year, Inman and Bowman expect to:

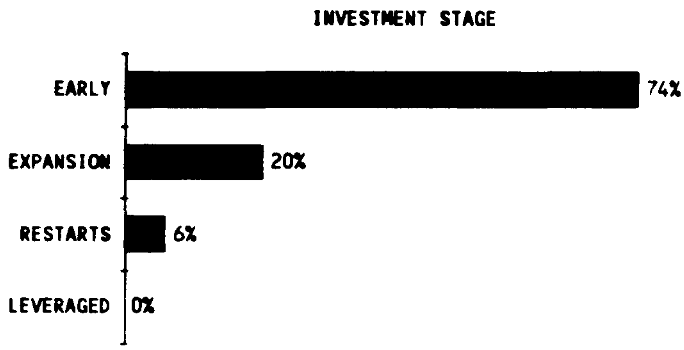
- Finish making new investments, adding four to six companies to the portfolio.
- Continue to make investments in software, an area where their new partner, Bill Elmore, has helped them.
- Concentrate on the service sector in the electronic industry.
- Continue investing in firms with good management teams who have a knowledge of the market.
- Continue investing in companies they feel can survive a recession.

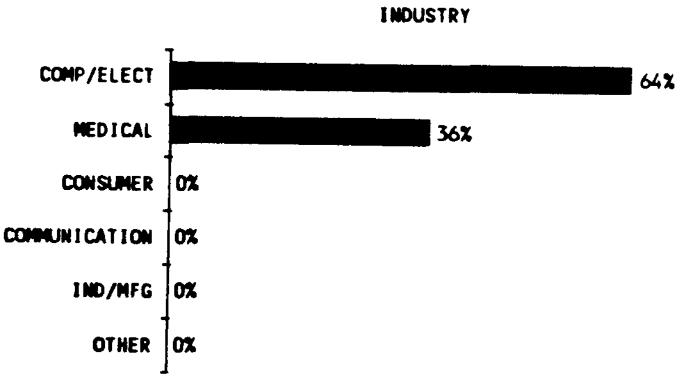
QUANTITATIVE EVALUATION

COMMITMENT:	$7,500,000
FUNDED COMMITMENT:	$4,500,000
MARKET VALUE OF FUNDED COMMITMENT:	$3,641,230
CASH DISTRIBUTIONS:	$0
INCEPTION DATE(S):	June, 1985
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	-7.4%

DIVERSIFICATION PROFILE (% OF COST)







STAFF COMMENTS AND RECOMMENDATIONS:

Inman and Bowman have generally followed their originally stated strategies. However, it is too early to tell how well the fund will do.

ATTACHMENT D

ANNUAL REVIEW SUMMARY
DATA SCIENCE VENTURES
October 13, 1989

MANAGER REPRESENTATIVES: Rob Hillas

SBI ASSETS UNDER MANAGEMENT: $10,000,000

BACKGROUND AND DESCRIPTION: DSV Partners IV was formed in April, 1985. It has a twelve year term. DSV Partners IV is the fourth venture fund to be managed by DSV Management since the firm's inception in 1968. The firm's primary office is located in Princeton, New Jersey. However, the firm opened a new California office in 1986. DSV Partners' investment emphasis is on portfolio companies in the start-up and early stages of corporate development. The geographic focus of the partnership is on east and west coast firms. Investments are diversified by industry type.

QUALITATIVE EVALUATION:

To date, DSV has invested at a much slower pace than expected. Only 21% of fund commitments have been invested so far. However, 100% of fund commitments have been drawn down in accordance with the original drawdown schedule.

The Alternative Investment Committee and staff are in the process of asking DSV to reassess their cash position and return excess cash holdings to limited partners. Further DSV investments could be funded as needed.

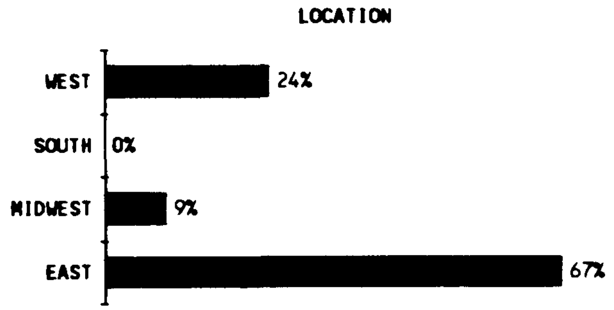
In the future, DSV plans to:

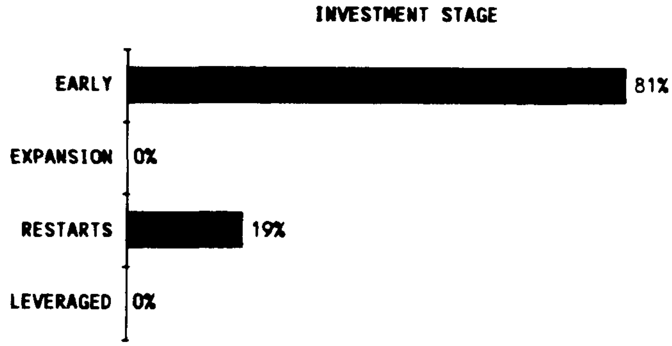
- Invest in more environment related companies.
- Invest in more later stage companies.
- Avoid communication and computer hardware companies.
- Remain active in biotech and specialty material investments.

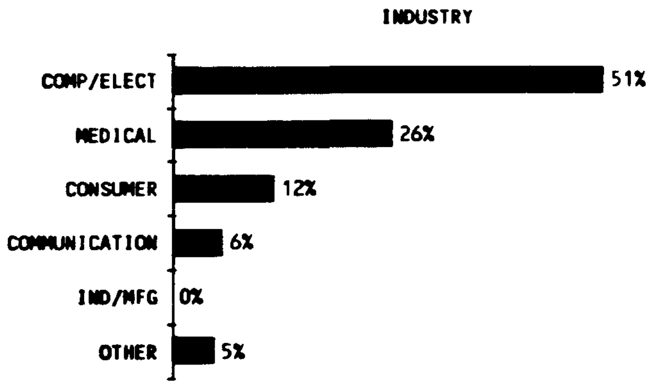
QUANTITATIVE EVALUATION

COMMITMENT:	**$10,000,000**
FUNDED COMMITMENT:	**$10,000,000**
MARKET VALUE OF FUNDED COMMITMENT:	**$11,488,228**
CASH DISTRIBUTIONS:	**$0**
INCEPTION DATE(S):	**April, 1985**
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	**4.0%**

DIVERSIFICATION PROFILE (% OF COST)







STAFF COMMENTS AND RECOMMENDATIONS:

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

ATTACHMENT E

ANNUAL REVIEW SUMMARY
SUPERIOR VENTURES
October 16, 1989

MANAGER REPRESENTATIVES: Mitch Dann

SBI ASSETS UNDER MANAGEMENT: $3,322,500

BACKGROUND AND DESCRIPTION: Superior Ventures is a Minnesota-based venture capital limited partnership. It was formed in June, 1986 and has an eleven year term. Superior Ventures is managed by IAI Venture Capital Group, a subsidiary of Investment Advisers, Inc. Up to 15% of the fund will be invested in other Minnesota-based venture capital limited partnerships. The remainder of the fund will be invested in operating companies located within the state.

QUALITATIVE EVALUATION:

Investment Advisers has optimistic expectations for this fund. They feel there is great potential for discovering and cultivating new investment opportunities within Minnesota.

IAI has tried to make the fund recession resistant by investing in a diverse set of companies. IAI has this outlook for their investments:

- Two companies may return 50% to 100% of the fund each.
- Five companies are emerging winners.
- Three companies are so new that it is too soon to tell how well they will do.
- Three companies are not doing very well and are on IAI's watch list.

IAI expects to invest in six to ten new companies by the end of 1990, completing all new investments. IAI will use the remaining 35%-40% of the fund for follow-on investments.

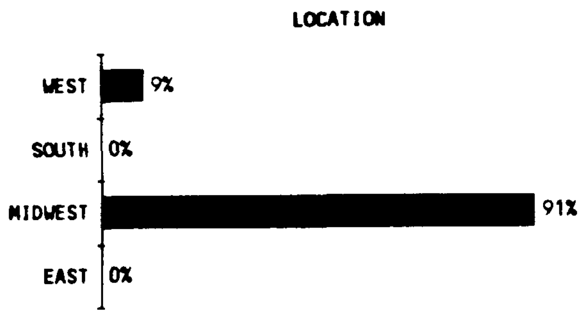
On the administrative side, IAI has lost one partner and gained two. Steve Weisbrod left because his investment philosophy differed with IAI's. IAI added David Koehler and David Spring. Koehler was the CEO of a financial services training company. Spring was an investment banker from Dain Bosworth.

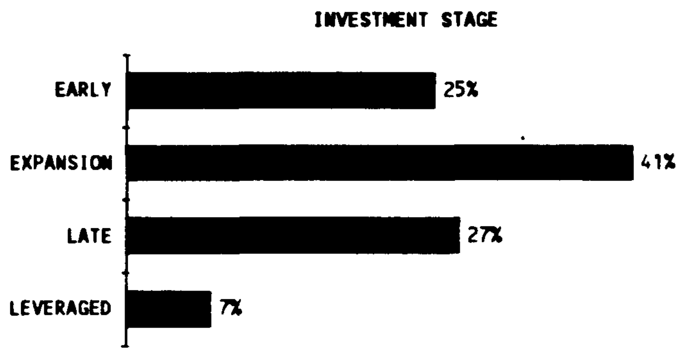
ATTACHMENT E (cont'd)

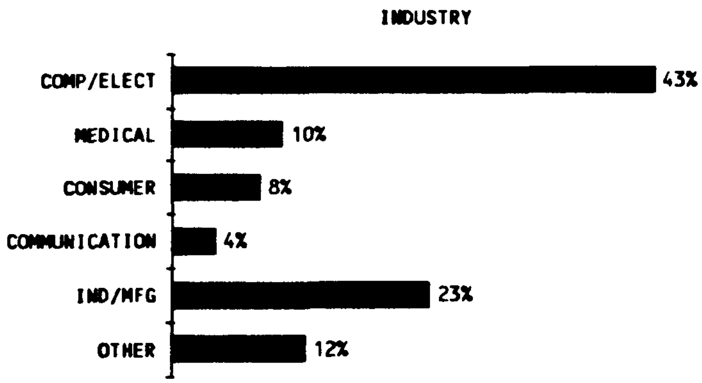
QUANTITATIVE EVALUATION

COMMITMENT:	$6,645,000
FUNDED COMMITMENT:	$3,322,500
MARKET VALUE OF FUNDED COMMITMENT:	$3,212,221
CASH DISTRIBUTIONS:	$0
INCEPTION DATE(S):	June, 1986
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	-1.6%

DIVERSIFICATION PROFILE (% OF COST)







STAFF COMMENTS AND RECOMMENDATIONS:

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

ANNUAL REVIEW SUMMARY
ALLIED CAPITAL
October 17, 1989

MANAGER REPRESENTATIVES: George Williams

SBI ASSETS UNDER MANAGEMENT: $5,000,000

BACKGROUND AND DESCRIPTION: Allied Venture Partnership was formed in September, 1985 and has a ten year term. Based in Washington D.C., the fund focuses on later stage, low technology companies located in the Southeastern and Eastern U.S. Most investments will be made in syndication with Allied Capital, a large publicly-owned venture capital corporation formed in 1958.

QUALITATIVE EVALUATION:

Allied does not expect to change strategy given the success of their current investment approach. Allied's strategy includes:

- o Investing in low technology companies that other venture capitalists ignore.
- o Being lead investor whenever possible so they can exert maximum control over company direction.
- o Maintaining a proactive search for new investments instead of waiting for potential investments to approach them.

In the future, Allied plans to:

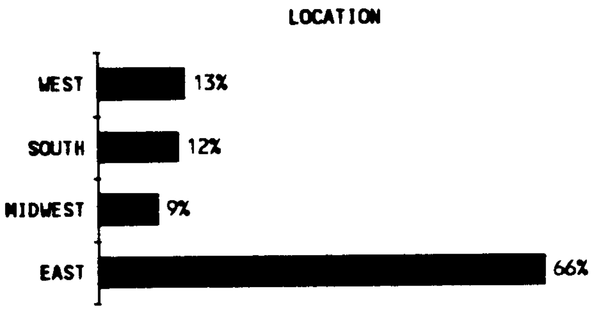
- o Concentrate on later stage investments.
- o Work with poorer performing companies within the portfolio so Allied does not lose money when the companies are sold.
- o Invest in companies that have a price to earnings ratio of five to one or lower.
- o Be fully invested by July 1990, reserving $3,000,000 for follow-on investments.

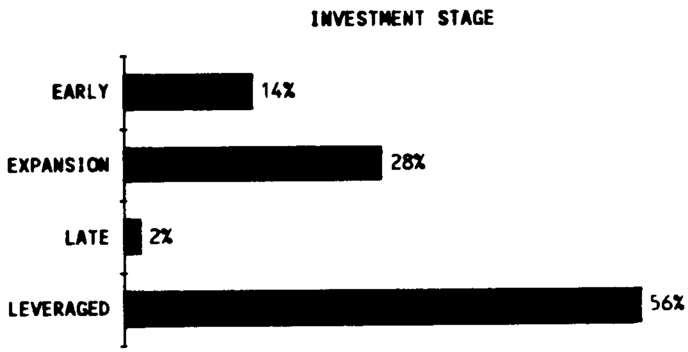
ATTACHMENT F (cont'd)

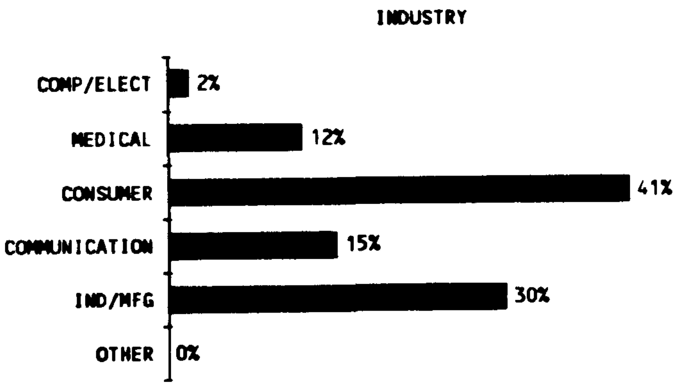
QUANTITATIVE EVALUATION

COMMITMENT:	$5,000,000
FUNDED COMMITMENT:	$5,000,000
MARKET VALUE OF FUNDED COMMITMENT:	$5,084,432
CASH DISTRIBUTIONS:	$760,032
INCEPTION DATE(S):	September, 1985
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	7.9%

DIVERSIFICATION PROFILE (% OF COST)







STAFF COMMENTS AND RECOMMENDATIONS:

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

ATTACHMENT G

ANNUAL REVIEW SUMMARY
KKR 1984, 1986 AND 1987 FUNDS
October 18, 1989

MANAGER REPRESENTATIVES: Perry Golkin

SBI ASSETS UNDER MANAGEMENT: $143,698,416

BACKGROUND AND DESCRIPTION: The KKR 1984, 1986 and 1987 Funds are managed by Kohlberg, Kravis, Roberts and Company and started in March 1984, December 1986 and September 1987, respectively. SBI committed $190 million to the three Funds. On 9/30/89, $143.7 million of the SBI's total commitment had been funded. Each fund has a twelve year term. The investment focus of KKR is on large management leveraged buyouts. KKR operates out of offices in San Francisco and New York.

QUALITATIVE EVALUATION:

The evaluation noted several items of interest:

- Since 1984, KKR has made 17 investments. Three have been sold and nine have been partially liquidated.
- The market value of investments and cash distributions are 1.46 times the SBI's original investment.
- KKR has considered investments in England and in regulated industries such as banking. To date, no investments have been made in these areas.
- Given the current lack of deal flow, KKR is concentrating on improving the value of current holdings.
- KKR added one professional to their staff, the CFO out of Pace Industries.
- KKR is satisifed with all investments but one, Seamen Furniture. However, with work, KKR thinks the company will be a success.

QUANTITATIVE EVALUATION

COMMITMENT:	$190,000,000
FUNDED COMMITMENT:	$143,698,416
MARKET VALUE OF FUNDED COMMITMENT:	$147,191,765
CASH DISTRIBUTIONS:	$ 63,012,465
INCEPTION DATE(S):	1984 Fund March 1984 1986 Fund December 1986 1987 Fund September 1987
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	24.3%

DIVERSIFICATION PROFILE (% OF COST)

COMPANIES

MALONE & HYDE	2.45%
COLE NATIONAL	1.93
PACE INDUSTRIES	4.38
MOTEL 6	2.89
M & T	.62
UNION TEXAS PETROLEUM	5.75
STORER	5.07
BEATRICE	6.03
SAFEWAY	3.22
OWENS-ILLINOIS	4.43
JIM WALTER	3.50
SEAMEN FURNITURE	.92
STOP AND SHOP	2.35
DURACELL	8.29
RJR/NABISCO	35.01
K-III	2.32
TEXACO	10.84
	100.00%

STAFF COMMENTS AND RECOMMENDATIONS:

The Alternative Investment Committee and staff have been satisfied with KKR's performance and operation to date. Additional investments with KKR would be considered, if appropriate.

ATTACHMENT H

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

MANAGER REPRESENTATIVES: John Hill

SBI ASSETS UNDER MANAGEMENT: $32,330,000

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

QUALITATIVE EVALUATION:

During 1989, First Reserve was very active making new investments, selling prior investments, and providing expansion financing. During the year, the returns for the AmGO I and AmGO II portfolios were 14.0% and 12.6% respectively. The returns for AmGO I and II were due to asset sales, higher oil and gas prices, and cash flow advances in several investments. AmGO IV is still being invested and most investments are carried at cost.

During the year, First Reserve reduced reserve holdings and propane investments.

- The property segment of the industry was priced attractively for most of the year. Due to these high prices, First Reserve reduced reserve investments and sold a portion of its reserve holdings.

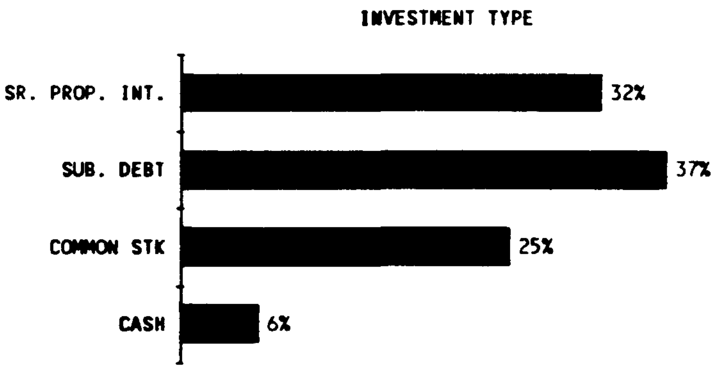
- Acquisition prices were high in the propane industry while reasonable in other parts of the industry.

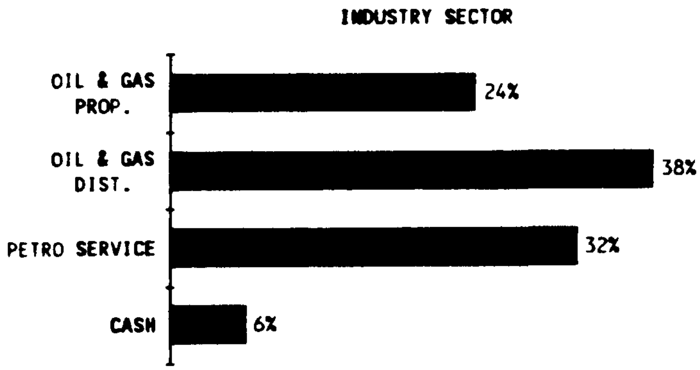
In 1990, First Reserve expects deal flow to remain strong. However, they are fully invested and need additional funding to maintain deal flow and take advantage of the favorable investment climate. To obtain the additional funding, First Reserve is raising a fifth fund. First Reserve will manage this fund similar to the previous funds.

QUANTITATIVE EVALUATION

COMMITMENT:		**$34,300,000**	
FUNDED COMMITMENT:		**$32,330,700**	
MARKET VALUE OF FUNDED COMMITMENT:		**$21,185,958**	
CASH DISTRIBUTIONS:		**$ 4,745,515**	
INCEPTION DATE(S):	**AmGO I Sept. 1981**	**AmGO II Feb. 1983**	**AmGO IV May 1988**
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)		**-3.7%**	

DIVERSIFICATION PROFILE (% OF COST)





STAFF COMMENTS AND RECOMMENDATIONS:

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