MINNESOTA STATE BOARD OF INVESTMENT MEETING
December 18, 1990
&
INVESTMENT ADVISORY COUNCIL MEETING
December 17, 1990

EXECUTIVE DIRECTOR
HOWARD J. BICKER

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

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

STATE BOARD OF INVESTMENT

September 19, 1990

The State Board of Investment (SBI) met at 8:30 A.M. on Wednesday, September 19, 1990 in Room 125, State Capitol, Saint Paul, Minnesota. Governor Rudy Perpich, Chair; Secretary of State Joan Anderson Growe; State Treasurer Michael A. McGrath; and Attorney General Hubert H. Humphrey III were present. State Auditor Arne H. Carlson was absent.

The minutes of the June 6, 1990 meeting were approved.

EXECUTIVE DIRECTOR'S INVESTMENT REPORT

Howard Bicker, Executive Director, stated that he would review the investment performance for the fiscal year ending June 30, 1990 of the Basic Retirement Funds and the Post Retirement Investment Fund compared to the fund objectives. (See Exhibit A) He stated that the Basic Funds have three objectives: the first is to provide a real rate of return of three to five percent over a 10 year period; the second is to provide performance above the median return of other public and private funds over a five year period; the third is to provide returns above a weighted market index over a 5 year period. He reported that the Basic Funds provided a return of 6.1 percentage points above inflation for the fiscal year and a return of 8.4 percentage points in excess of inflation for the 10 year period. He stated that the Basic Funds without alternative assets provided an 11.9 percent return for the fiscal year compared to 10.0 percent for the median fund and a 14.0 percent return for the five year period compared to 13.3 percent for the median fund. Mr. Bicker then stated that the Basic Funds provided a 10.8 percent rate of return for the fiscal year compared to 9.8 percent for the composite market index, and provided an annual return over the five year period of 13.0 percent which matched the return of the composite index.

Mr. Bicker stated that the objectives of the Post Fund are to generate a realized return of 5 percent as required by statute and to generate at least a 3 percent additional return for post retirement benefit increases. He reported that the Post Fund has met the 5 percent return objective and has provided an annualized benefit increase for retirees of 6.6 percent, over the last five years which was well above the inflation rate for the period.

Mr. Bicker stated that staff wished to update the Board concerning significant market changes that have occurred since June 30, 1990 partly as a result of the Iraqi invasion of Kuwait. He displayed a chart which showed that the stock market had declined with the result that the Basic Funds had given up much of the gains of the past few quarters. He stated that during July and August 1990 the stock market declined approximately 11 percent and the Basic Funds declined approximately 7.5 percent. He stated that staff would have a more detailed report at the next Board meeting.

Mr. Bicker referred members to the meeting materials and stated that the Basic Funds increased by 4.3 percent during the second quarter 1990 and had no significant changes in asset mix. He stated that the Post Fund experienced an increase in assets of 5.2 percent during the quarter due to increases in contributions and investment returns. He then reported that the Post Fund had an increase in cash due to large transfers on June 30. He explained that the transfers to the Post result from the large number of teachers that retire at the end of the school year.

Mr. Bicker then stated that as of June 30, 1990 the State Board of Investment had $16.3 billion under management.

STATUS REPORT ON THE EXECUTIVE DIRECTOR'S EVALUATION

Governor Perpich requested that Peter Hutchinson, Commissioner of Finance, make his presentation before he had to leave for another meeting. Mr. Hutchinson stated that he was reporting on the process used to evaluate the Executive Director. He stated that the process was just completed and that it was very similar to the process used last year for the same purpose. He stated that he had discussed all the evaluations returned by the Board members with Mr. Bicker. He added that Mr. Bicker signed the evaluations which will be placed in his personnel file.

EXECUTIVE DIRECTOR'S ADMINISTRATIVE REPORT

Mr. Bicker referred Board members to the budget and travel reports in the meeting materials.

Mr. Bicker provided a status report on local police and fire fund consolidation with the Public Employees Retirement Association. He stated that under the 1987 legislation, 11 local plans consolidated during 1987, 1988, and 1989. He stated that one plan merged in March 1990 and that three others were set to merge in September 1990. He added that several plans were considering consolidation that could take place December 31, 1990.

Mr. Bicker then reported on two items concerning the Investment Advisory Council. He stated that James Hacking had resigned his position as Executive Director of PERA and that Mary Most Vanek had been named Acting Executive Director and would be serving on the IAC. He stated that Judith Mares resigned from the IAC after accepting a position with a firm in Chicago. He then stated that the terms of five other members of the IAC would expire in January 1991. Mr. Bicker stated that the terms would be filled according to the requirements of the open appointments law. He stated that staff suggests the Board, as it has in the past, appoint a committee of their deputies to review applicants and to report to the Board at the December 1990 meeting with a recommendation concerning IAC appointments. Mr. McGrath moved approval of the staff recommendation. Ms. Growe seconded. The motion was approved.

Mr. Bicker then stated that the SBI's contract for a computerized accounting and portfolio management system will expire June 30, 1991. He stated that staff would normally recommend that a request for proposal and search process be undertaken for a new contract. He stated that the retirement systems are considering proposals to change the Post Fund benefit increase mechanism and that the SBI's accounting needs would be affected if a change were made. He stated that given these circumstances staff recommends that the current contract with Financial Control Systems (formerly Compensation and Capital) be extended for one year and a request for proposal process be conducted in late calendar 1991. Ms. Growe moved approval of the staff recommendation. Mr. McGrath seconded. The motion was approved.

INVESTMENT ADVISORY COUNCIL COMMITTEE REPORTS
EQUITY MANAGER COMMITTEE

Ms. Yeomans stated that the Committee reviewed the performance of the active managers. She stated that staff and the IAC conducted a detailed review of Investment Advisers Incorporated, a local manager. She referred the Board to the report in the meeting materials. She stated that staff has specific qualitative and quantitative concerns about the firm's performance, but that the Board's Manager Continuation Policy does not require that IAI be terminated at this time. She stated that consistent with the Manager Continuation Policy, staff recommends that IAI be reviewed in one year if performance relative to its benchmark does not improve. She added that the Committee and staff will closely review IAI's performance quarterly.

Ms. Yeomans reported that contractual arrangements were being finalized between the SBI, Wilshire Associates, and State Street Bank concerning the implementation of the tilted index fund. She stated that the details of the information exchange between the Board's consultant, Richards and Tierney, and Wilshire Associates to implement the strategy had been worked out.

FIXED INCOME MANAGER COMMITTEE

Ms. Yeomans stated that the Committee reviewed the performance of the enhanced index managers and agreed with staff that the performance was within expectations. She stated that the Committee reviewed the performance of the active managers and observed that the active managers in aggregate outperformed the Salomon Broad Investment Grade Index and the aggregate benchmark during the quarter and for the five year period.

Ms. Yeomans stated that the Committee considered an in-depth review of Western Asset Management, the manager with the largest actively managed bond portfolio. She stated that the review was positive and that staff concludes that Western Asset be considered for future investments.

Ms. Yeomans then stated that the Committee discussed the structure of the active manager program. She stated that staff will seek potential managers to provide more specialized expertise and will report to the Committee on their findings.

ALTERNATIVE INVESTMENT COMMITTEE

Ms. Yeomans reported that the Alternative Investment Committee reviewed and reaffirmed the Board's current strategy with respect to alternative investments. She reported that the Committee held annual review sessions with two venture capital managers, one resource manager, and two real estate managers. She stated that the Committee concluded that the managers were performing according to expectations, but that there was some dissatisfaction with how Aetna, a real estate manager, was processing requests to withdraw funds from their commingled fund. In response to a question from Ms. Growe, Ms. Yeomans stated that measuring the performance of real estate managers is difficult. She stated that there is an expectation that an investment in real estate will generate returns in excess of inflation, so that it is reasonable to compare real estate returns to the rate of inflation. She also stated that it is important to compare manager returns to the performance of other real estate managers. In response to another question from Ms. Growe, Ms. Yeomans stated that the SBI evaluates oil and gas managers in a similar fashion.

PROPOSED RESOLUTION CONCERNING THE PROXY VOTING COMMITTEE

Peter Sausen, Assistant Commissioner of Finance, introduced himself as the Governor's representative on the Proxy Committee and Chair of the Proxy Committee. He stated that the Board was being asked to adopt a resolution concerning the authority of the Proxy Voting Committee. He explained that as shareholders the SBI votes on issues presented to shareholders at annual company meetings. He stated that the issues are of two major types: social responsibility and corporate governance. He stated that the Proxy Committee meets each year to review policies that have been established on issues in past years and to discuss new issues coming before the Board. He stated that Committee members review issues, establish a voting guideline, and direct staff to vote according to the policies established by the Committee. He further explained that staff will bring an issue before the Committee when the issue differs from established policy. Mr. Sausen then referred Board members to the proxy voting guidelines presented in the meeting materials. He described the guidelines in general terms and highlighted the position taken by the Proxy Committee that, in general, the SBI casts votes to preserve existing mangement's discretion concerning corporate governance issues of the company that is incorporated or is headquartered in Minnesota.

In response to a question from Ms. Growe, Mr. Sausen stated that the Committee has voted proxies to support Minnesota companies for several years. He stated that the Committee continues to discuss whether the policy is appropriate when it considers issues of Minnesota companies. He stated that the Committee generally supports management of a Minnesota company but does not automatically vote with management. Ms. Growe then stated that she is serving on a task force considering the role of pension funds in corporate governance and she is convinced that the Proxy Committee needs to review the policy. Mr. McGrath then moved adoption of the resolution as presented in the meeting materials. (See Exhibit B) Ms. Growe seconded. The motion was approved.

Ms. Growe stated that she proposes a resolution directing the Proxy Committee to monitor the status of companies with respect to signing the Valdez Principles, which is a set of guidelines concerning a corporation's responsibilities toward the environment. She stated that the resolution also calls for the Proxy Committee to report to the Board concerning the feasibility of sponsoring and cosponsoring shareholder resolutions on the issue. Ms. Growe then moved adoption of the resolution. (See Exhibit C) Mr. McGrath seconded. The motion was approved.

The meeting adjourned at 9:10 A.M.

Respectfully submitted,

Howard Bicker

Howard J. Bicker
Executive Director

Attachments

Fiscal Year 1990

Investment Results
Compared to Fund Objectives

Basic Retirement Funds

Post Retirement Fund

BASIC RETIREMENT FUNDS

OBJECTIVE # 1:

Provide Real Return

Provide real rates of return that are 3-5 percentage points greater than the rate of inflation over moving 10 year periods.

OBJECTIVE #2:

Exceed Median Fund

Outperform the median fund from a universe of public and private funds with a balanced asset mix, excluding alternative assets over moving 5 year periods.

OBJECTIVE #3:

Exceed Composite Market Index

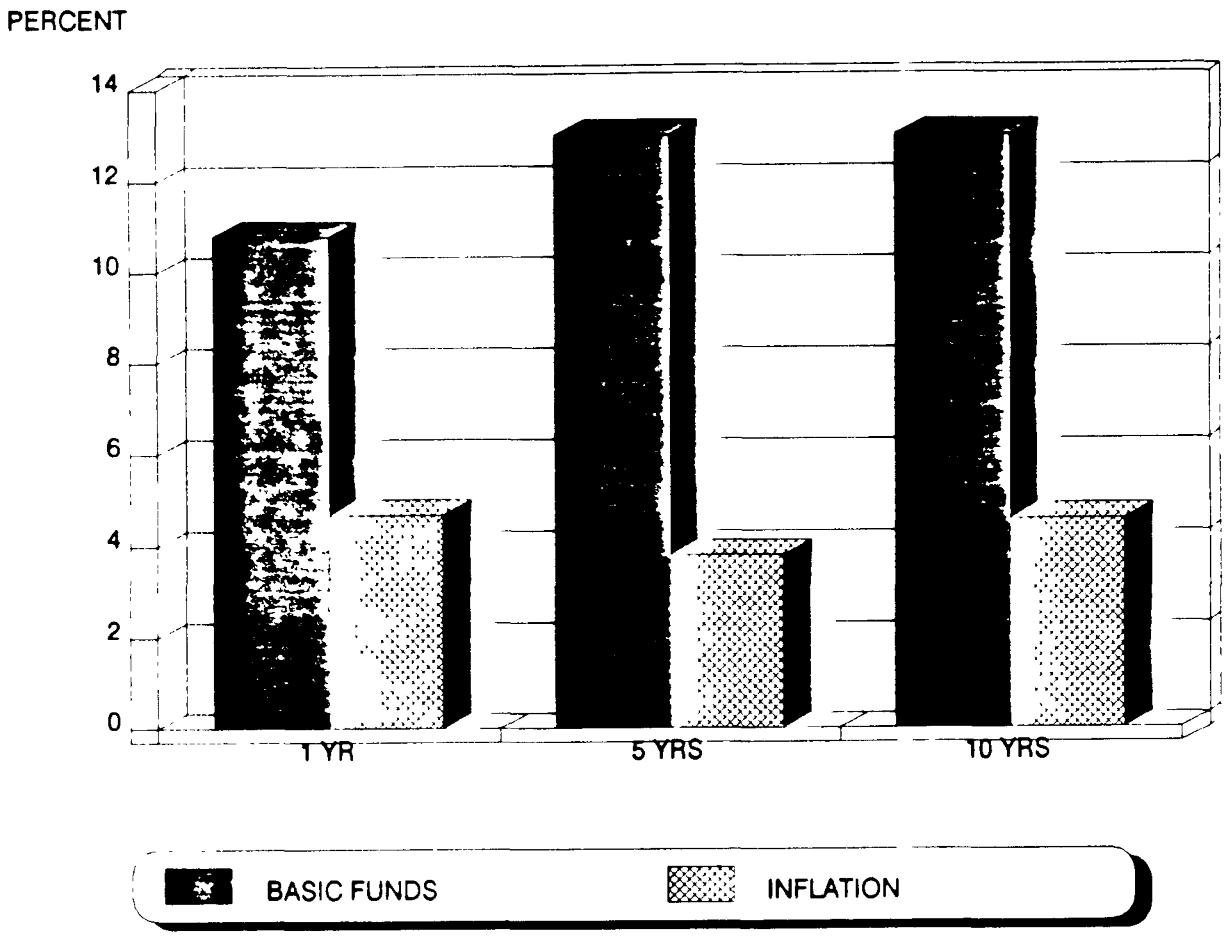
Outperform a composite index weighted in a manner that reflects the long term asset allocation of the Basic Funds over moving 5 year periods.

BASIC RETIREMENT FUNDS

Total Fund

vs.

Inflation



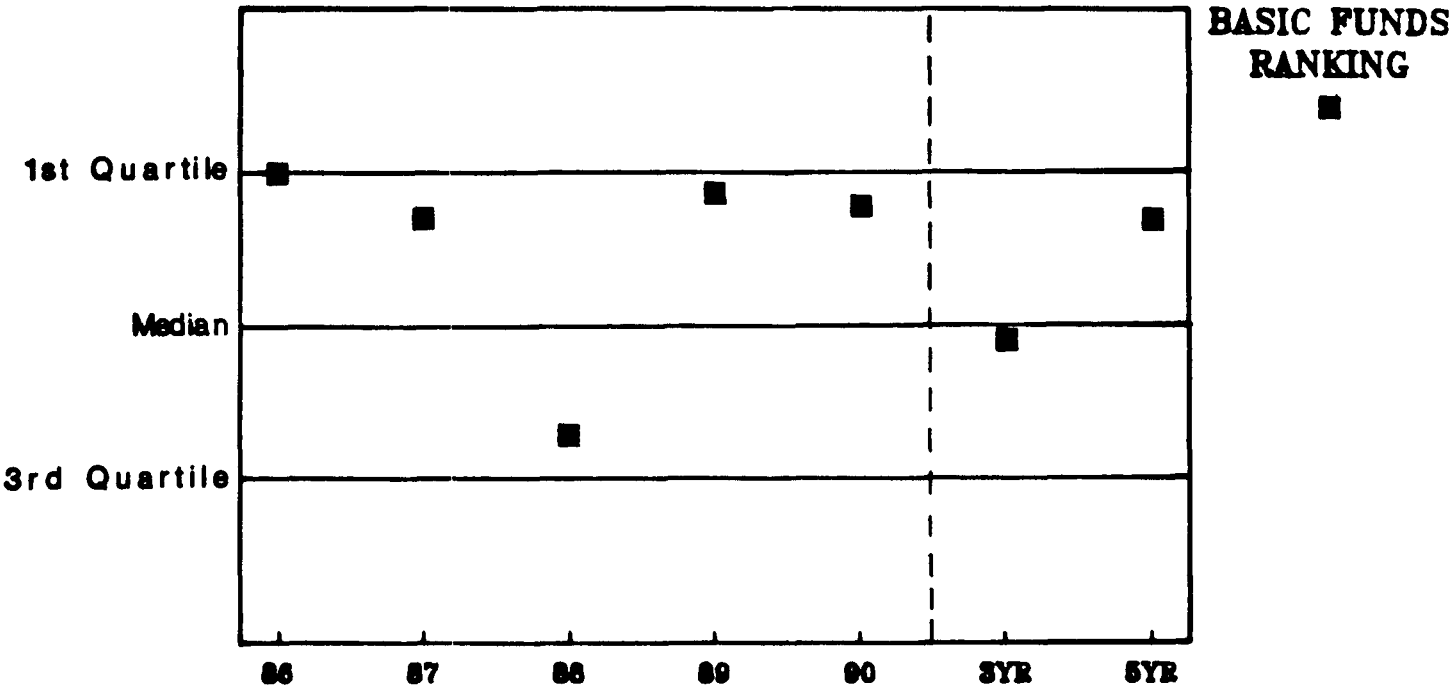
	1 Yr. FY 90	5 Yrs. FY 86-90 Annualized	10 Yrs. FY 81-90 Annualized
Basic Funds	10.8%	13.0%	13.0%
Inflation (CPI)	4.7	3.8	4.6
Real Return	6.1	9.2	8.4

BASIC RETIREMENT FUNDS

Total Fund

vs.

Public and Private Funds



	Fiscal Year					Annualized	
	1986	**1987**	**1988**	**1989**	**1990**	**3 Yr.**	**5 Yr.**
Basic Funds*	28.9%	15.8%	-0.8%	15.9%	11.9%	8.8%	14.0%
TUCS Balanced Funds**							
1st Quartile	29.5	16.7	4.3	16.4	13.2	9.8	14.5
Median	25.3	13.7	1.1	14.3	10.0	8.9	13.3
3rd Quartile	21.9	10.3	-1.7	12.4	7.9	7.7	12.0

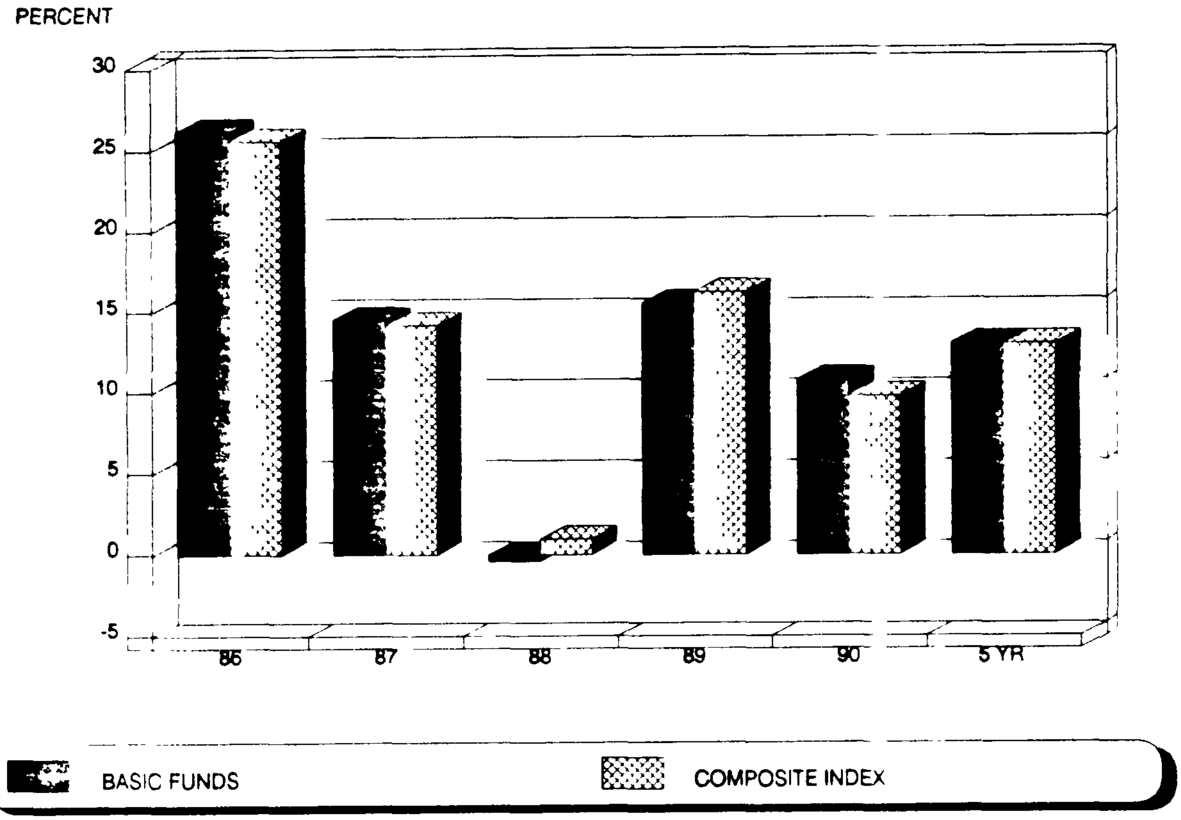
* Basic Funds returns without alternative investments

** Trust Universe Comparison Service (TUCS) contains returns from more than 800 public and private pension funds

Source: Trust Universe Comparison Service

BASIC RETIREMENT FUNDS

Total Fund
vs.
Composite Index



	Fiscal Year					Annualized
	1986	1987	1988	1989	1990	5 Yr.
Basic Funds	26.2%	14.5%	-0.4%	15.5%	10.8%	13.0%
Composite	25.6	14.2	1.0	16.2	9.8	13.0

Composite Index as of 6/30/90:

60.0%	Wilshire 5000 Index
24.0	Salomon BIG Index
10.0	Wilshire Real Estate Index
2.5	Venture Capital Funds
2.5	Resource Funds
1.0	91 Day T-Bills
100.0%	

POST RETIREMENT FUND

OBJECTIVE #1:

Maintain Current Benefits

Generate 5% realized earnings each year to maintain current benefits.

OBJECTIVE #2:

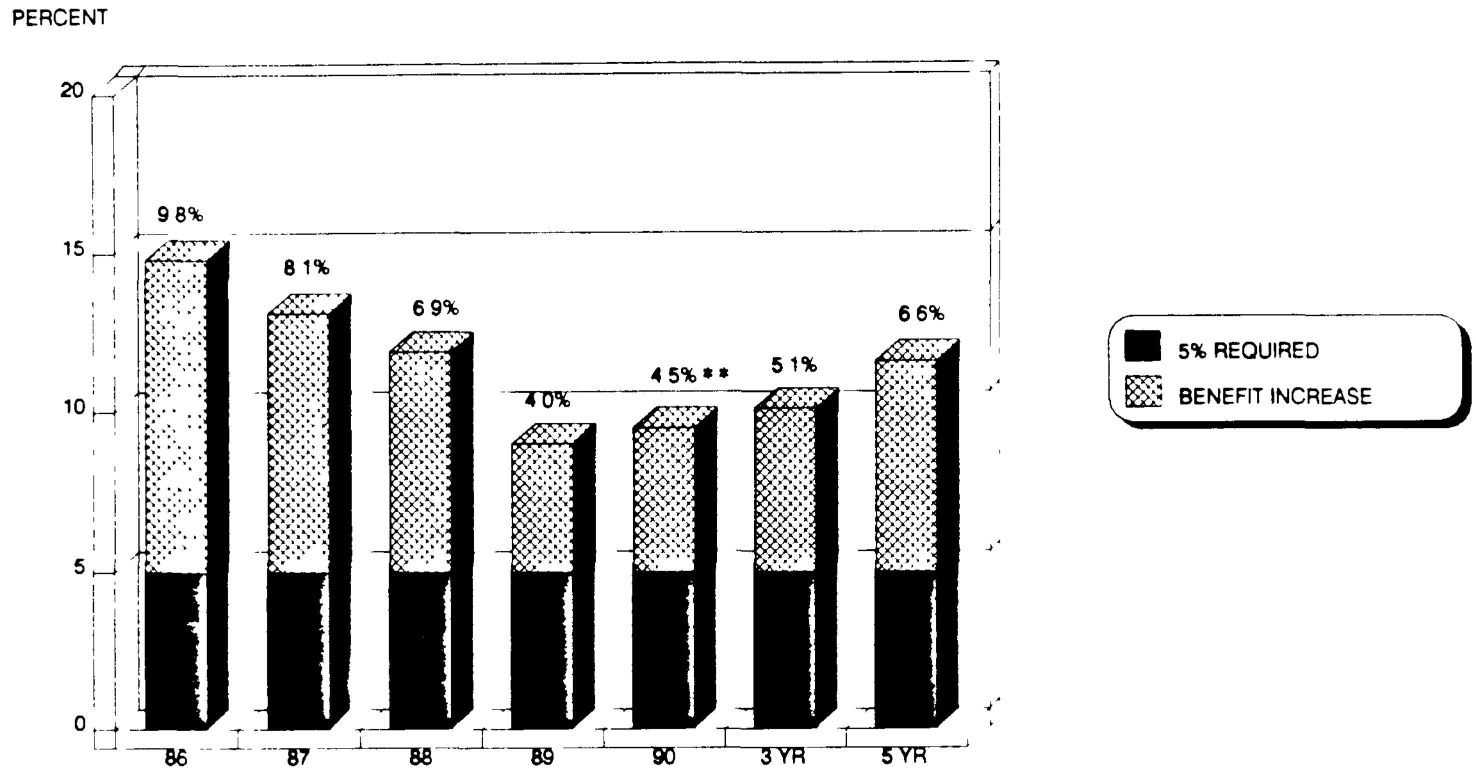
Provide Benefit Increases

Generate at least 3% additional realized earnings to provide benefit increases.

POST RETIREMENT FUND

Realized Earnings

FY 1986 - FY 1990



	Fiscal Year					Annualized	
	1986	**1987**	**1988**	**1989**	**1990**	**3 Yr.**	**5 Yr.**
Earnings	14.8%	13.1%	11.9%	9.0%	10.0%	10.3%	11.7%
Benefit Increase*	9.8	8.1	6.9	4.0	4.5**	5.1	6.6
Inflation	1.7	3.7	3.9	5.2	4.7	4.6	3.8

* Payable starting January 1 of the following calendar year.

** Estimate. Actual increase will not be calculated until actuarial data is received in late calendar year 1990.

EXHIBIT B

RESOLUTION OF THE
MINNESOTA STATE BOARD OF INVESTMENT
CONCERNING PROXY VOTING

WHEREAS, as a stockholder, the Minnesota State Board of Investment (SBI) is entitled to sponsor and cosponsor shareholder resolutions and participate in corporate annual meetings by casting its votes by proxy or through direct attendance at the meetings; and

WHEREAS, the SBI has previously established a Proxy Committee; and

WHEREAS, the Proxy Committee has proposed proxy voting guidelines:

NOW THEREFORE, BE IT RESOLVED THAT:

1. The SBI hereby approves and adopts the Proxy Voting Guidelines attached hereto and incorporated by reference herein (the Guidelines).

2. To advise and assist the SBI in the implementation of these proxy voting guidelines, the SBI hereby authorizes and reaffirms the establishment of the SBI Proxy Committee composed of a representative selected by each member of the SBI to be chaired by the designee of the Governor and convened as necessary in accord with the Guidelines.

3. The SBI further authorizes the SBI Proxy Committee to review the Guidelines periodically and report to the SBI as necessary.

4. The SBI further directs its staff to advise and assist the Proxy Committee in the implementation of this resolution and directs its Executive Director to obtain such consulting and reporting services as may be necessary.

5. This resolution shall take effect immediately.

Adopted this 19th day of September, 1990.

Rudy Perpich

GOVERNOR RUDY PERPICH
Chair, Minnesota State
Board of Investment

RESOLUTION OF THE MINNESOTA STATE BOARD OF INVESTMENT CONCERNING THE VALDEZ PRINCIPLES

WHEREAS, the Minnesota State Board of Investment (SBI) has previously established a Proxy Committee and adopted Proxy Voting Guidelines; and

WHEREAS, the Guidelines provide that, in general, the SBI supports resolutions which require a corporation to report or disclose to the shareholders company efforts in the environmental area and progress toward achieving the objectives of the Valdez Principles (see Attachment A);

NOW THEREFORE, BE IT RESOLVED THAT:

1. The SBI hereby requests the SBI Proxy Committee to monitor the status of companies with respect to signing the Valdez Principles, report to the Board concerning the feasibility of sponsoring or cosponsoring resolutions designed to encourage corporations in which the Board has invested to adopt the Valdez Principles, and review the financial and legal considerations involved in such actions.

2. The SBI further directs its staff to advise and assist the Proxy Committee in the implementation of this resolution and directs its Executive Director to obtain such consulting and reporting services as may be necessary.

3. This resolution shall take effect immediately.

Adopted this 19th day
of September, 1990.

Rudy Perpich

GOVERNOR RUDY PERPICH
Chair, Minnesota State
Board of Investment

AGENDA

STATE BOARD OF INVESTMENT MEETING

Tuesday, December 18, 1990
10:00 A.M. - Room 123
State Capitol
Saint Paul

		TAB
1.	Approval of Minutes of September 19, 1990 Meeting	
2.	Report from the Executive Director (H. Bicker)	
	A. Quarterly Investment Review (July 1-Sept. 30, 1990)	A
	B. Portfolio Statistics (September 30, 1990)	B
	C. Administrative Report	C
	1. Budget and Travel Reports	
	2. Report on Rebalancing in the Basic Funds	
	3. Post Retirement Fund Increase for January 1, 1991	
	4. Meeting Dates for Calendar 1991	
3.	Report from the SBI Administrative Committee (M. McGrath)	D
	A. Submission of FY 92-93 Biennial Budget	
	B. Appointment of a Manager Selection Committee for the Assigned Risk Plan	
	C. Approval of Contract Amendments for the Deferred Compensation Plan	
4.	Reports from Investment Advisory Council Committees (J. Yeomans)	
	A. Equity Manager Committee (J. Eckmann)	E
	1. Review of Manager Performance	
	2. Special Review of Forstmann Leff	
	3. Status Report on Implementation of Custom Tilted Index Fund	
	B. Fixed Income Manager Committee	F
	1. Review of Manager Performance	
	2. Special Review of Lehman Ark	
	3. Discussion on the Structure of the Active Bond Manager Program	
	4. Report on 1990-1993 GIC Bid	
	C. Alternative Investment Committee	G
	1. Report on Fund Manager Annual Reviews	
	2. Approval of Commitments to Real Estate Managers (Heitman V, Zell/Equity)	

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Room 105, MEA Building
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MINUTES

INVESTMENT ADVISORY COUNCIL

September 18, 1990

The Investment Advisory Council met on Tuesday, September 18, 1990 at 2:00 P.M. in the MEA Building, Saint Paul, Minnesota.

MEMBERS PRESENT: Harry Adams; John Bohan; Jim Eckmann; Peter Hutchinson; Vernell Jackels; David Jeffery; Malcolm McDonald; Joseph Rukavina; Raymond Vecellio; Deborah Veverka; and Jan Yeomans.

MEMBERS ABSENT: Elton Erdahl; Paul Groschen; Ken Gudorf; Gary Norstrem; Mary Most Vanek; and Debbie Veverka.

SBI STAFF: Howard Bicker; Beth Lehman; Harriet Balian; and Charlene Olson.

OTHERS ATTENDING: Gary Austin; Christie Eller; John Hagman, REAM; Richard Helgeson; Arvin Herman; John Manahan; O. M. Ousdigian; Tom Richards, Richards & Tierney; Peter Sausen; Jay Stoffel; and Ed Stuart, REAM.

The minutes of the June 6, 1990 meeting were approved.

EXECUTIVE DIRECTOR'S INVESTMENT REPORT

Howard Bicker, Executive Director, stated that he would report the investment performance for the fiscal year ending June 30, 1990 of the Basic Retirement Funds and the Post Retirement Investment Fund compared to the fund objectives. He stated that the Basic Funds have three objectives: the first is to provide a real rate of return of three to five percent over a ten year period; the second is to provide performance above the median return of other public and private funds over a five year period; the third is to provide performance over a five year period above the returns of a weighted composite market index. He reported that the Basic Funds provided a return of 6.1 percentage points above inflation for the fiscal year and a return of 8.4 percentage points in excess of inflation for the 10 year period. He then referred members to an overhead chart showing returns for the Basic Funds compared to other public and private funds. He stated that the Basic Funds provided an 11.9 percent return for the fiscal year compared to 10.0 percent for the median fund and a 14.0 percent return for the five year period compared to 13.3 percent for the median fund. Mr. Bicker then stated that the Basic Funds provided a 10.8 percent rate of return for the fiscal year compared to 9.8 percent for the composite market index, and provided an annual return over the five year period of 13.0 percent to match the return of the composite index.

Mr. Bicker stated that the objectives of the Post Fund are to generate a realized return of 5 percent as required by statute and to generate at least a 3 percent additional return for post retirement benefit increases. He reported that over the past five years the Post Fund has met the 5 percent return objective and has provided over this five year period an annualized benefit increase for retirees of 6.6 percent annually which was almost double the inflation rate for the period.

Mr. Bicker stated that staff wished to update members concerning significant market changes that occurred since June 30, 1990 partly as a result of the Iraqi invasion of Kuwait. He displayed a chart which showed that the stock market had declined with the result that the Basic Funds had given up much of the gains of the past few quarters. He stated that during July and August 1990 the market declined approximately 11 percent and the Basic Funds declined approximately 7.5 percent.

Mr. Bicker referred members to the meeting materials and stated that the Basic Funds increased by 4.3 percent during the second quarter 1990 and had no significant changes in asset mix. He stated that the Post Fund experienced an increase in assets of 5.2 percent during the quarter due to increases in contributions and investment returns. He then reported that the Post Fund had an increase in cash due to large transfers on June 30. He explained that the transfers to the Post result from the large number of teachers that retire at the end of the school year.

Mr. Bicker then stated that as of June 30, 1990 the State Board of Investment had $16.3 billion under management.

EXECUTIVE DIRECTOR'S ADMINISTRATIVE REPORT

Mr. Bicker referred members to the budget and travel reports in the meeting materials.

Mr. Bicker provided a status report on local police and fire fund consolidation with the Public Employees Retirement Association. He stated that under the 1987 legislation, 11 local plans consolidated during 1987, 1988, and 1989. He stated that one plan merged in March 1990 and that three others were set to merge in September 1990. He added that several plans were considering consolidation that could take place December 31, 1990.

Mr. Bicker then reported on two items concerning the Investment Advisory Council. He stated that James Hacking had resigned his position as Executive Director of PERA and that Mary Most Vanek had been named Acting Executive Director and would be serving on the IAC. He stated that Judy Mares resigned from the IAC after accepting a position with a firm in Chicago. He then stated that the terms of five other members of the IAC would expire in January 1991. Mr. Bicker stated that the terms would be filled according to the requirements of the open appointments law. He stated that staff suggests the Board, as it has in the past, appoint a committee of their deputies to review applicants, encourage existing IAC members to reapply, and to report to the Board at a future meeting with a recommendation concerning IAC appointments.

Mr. Bicker then stated that the contract for the accounting and portfolio management system will expire June 30, 1991. He stated that staff would normally recommend that a request for proposal and search process be undertaken for a new contract. He stated that the retirement systems are considering proposals to change the Post Fund benefit increase mechanism and that the SBI's accounting needs would be affected if a change were made. He stated that given the circumstances staff recommends that the current contract be extended for one year and a request for proposal process be conducted in late calendar 1991.

INVESTMENT ADVISORY COUNCIL COMMITTEE REPORTS
EQUITY MANAGER COMMITTEE

Mr. Eckmann stated that the Committee reviewed the performance of the active managers. He stated that staff and the Committee conducted a detailed review of Investment Advisers Incorporated and referred members to the report in the meeting materials. He stated that staff and the Committee had specific qualitative and quantitative concerns about the firm's performance, but that the Board's Manager Continuation Policy does not require that IAI be terminated at this time. He stated that consistent with the Manager Continuation Policy, staff recommends that IAI be reviewed in one year if performance relative to its benchmark does not improve. He added that the Committee suggested staff closely monitor IAI's performance on a quarterly basis.

Mr. Eckmann then reported that the Committee reviewed the status of the implementation of the tilted index fund. Mr. Bicker stated that contractual arrangements were being finalized between the SBI, Wilshire Associates, and State Street Bank.

FIXED INCOME MANAGER COMMITTEE

Mr. Jeffery reported three information items. He stated that the Committee reviewed the performance of the active managers. He stated that the active managers in aggregate outperformed the Salomon Broad Investment Grade Index and the aggregate benchmark during the quarter and for the five year period.

Mr. Jeffery stated that the Committee considered an in-depth review of Western Asset Management and noted that the manager had the largest portfolio among the active managers. He stated that the review was positive and that staff concludes that Western Asset be considered for future investments as an enhanced index manager. He then stated that the Committee discussed the structure of the active manager program and stated that staff will seek potential managers to provide specialized expertise to add value and will report to the Committee on their progress.

Mr. Bicker stated that when the Board first retained its fixed income managers in 1983 and 1984 the Board did not hire enhanced index managers because fixed income indexing was new. He stated that since that time the Board has indexed half of the fixed income portfolio. He stated that staff now believes that the Board should explore adding specialized managers to enhance returns in its active fixed income program. He stated that staff will be reviewing the fixed income program and interviewing potential managers, and will report to the Committee and the IAC at future meetings.

ALTERNATIVE INVESTMENT COMMITTEE

Mr. McDonald reported that the Alternative Investment Committee reviewed and reaffirmed the Board's current strategy with respect to alternative investments. He stated that the Committee is concerned with the proportion of the venture capital portfolio invested in KKR, but is pleased with KKR's performance. He observed that many of the venture capital investments are maturing and should be displaying more positive returns in the future.

He stated that the Committee seeks additional opportunities in the resource area. He stated that the Committee is also concerned with the decline in values in the real estate market. In response to a question from Ms. Yeomans, Mr. McDonald stated that the Committee and staff held an annual review session with Aetna, a real estate manager. Mr. Bicker stated that Aetna had a problem with how it was processing requests to withdraw funds from their commingled fund, but has made some administrative changes to address the issue. Mr. Bicker observed that the real estate managers have provided roughly a 7.5 percent annual rate of return, which translates to a real rate of return that is within the original expectations for the real estate program.

Mr. Bicker then reported that Gene Graham had left her consulting firm and will be working for a firm marketing to the SBI. He stated that the change required that the SBI sever its relationship with her. He further stated that staff will consider searching for a replacement.

The meeting adjourned at 2:45 P.M.

Respectfully submitted,

Howard Bicker

Howard J. Bicker
Executive Director

AGENDA

INVESTMENT ADVISORY COUNCIL
MEETING

Monday, December 17, 1990
2:00 P.M.
MEA Building - Conference Rooms "A" & "B"
Saint Paul

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	3. Status Report on Implementation of Custom Tilted Index Fund	
	B. Fixed Income Manager Committee (G. Norstrem)	F
	1. Review of Manager Performance	
	2. Special Review of Lehman Ark	
	3. Discussion on the Structure of the Active Bond Manager Program	
	4. Report on 1990-1993 GIC Bid	
	C. Alternative Investment Committee (K. Gudorf)	G
	1. Report on Fund Manager Annual Reviews	
	2. Approval of Commitments to Real Estate Managers (Heitman V, Zell/Equity)	

Tab A

QUARTERLY REPORT ON OBJECTIVES

BASIC RETIREMENT FUNDS	Status as of September 30, 1990
Market Value	**$6.4 billion**
Total Return (Annualized)	
■ Real (10 years) 3 to 5 percentage points over inflation	11.8% (nominal) 7.1 percentage points over
■ Relative (5 years) for the Total Fund Above composite index return	11.3% (nominal) 0.2 percentage points below
■ Relative (5 years) for Stocks, Bonds and Cash Above median fund return	11.8% (nominal) 0.2 percentage points below
Liquidity	
■ Minimal cash	1.4% of total fund

POST RETIREMENT FUND	Status as of September 30, 1990
Market Value	**$5.3 billion**
Realized Earnings	$458 million in FY 1990
■ Above 8% per year	10% in FY 1990
Liquidity	
■ Minimal cash	3.9% of total fund

FUNDING (Basic + Post Funds)*	Status as of September 30, 1989
Achieve full funding by 2020	
■ Actuarial accrued liability	$12.9 billion
■ Actuarial value of assets	$9.4 billion
■ Percent funded	73%

* TRA, MSRS, PERA General Plans only. Based on FY89 valuation by State's actuary. Includes 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.

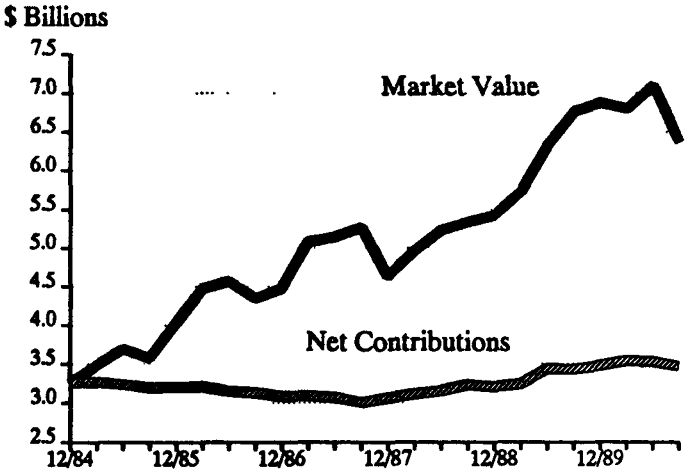
Additional detail on these funds as well as information on other funds managed by the Board can be found in the body of the Quarterly Investment Report.

EXECUTIVE SUMMARY

Basic Retirement Funds

Asset Growth

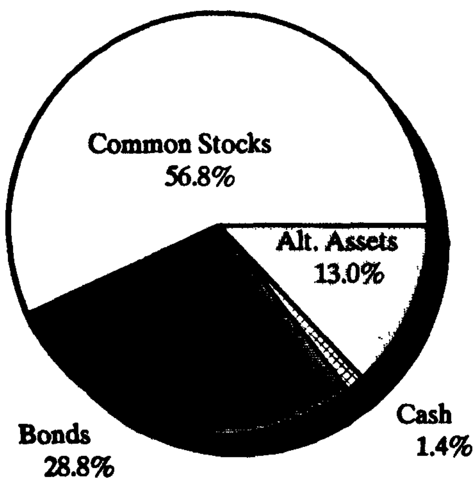
The market value of the Basic Funds decreased 10.3% during the third quarter of 1990. The decrease was due to negative equity returns.



Asset Growth
During Third Quarter 1990
(Millions)

Beginning Value	$7,106
Net Contributions	-56
Investment Return	-684
Ending Value	$6,382

Asset Mix



Actual Asset Mix
9/30/90

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 third quarter equities decreased due to negative returns in the equity market. All the other asset classes recorded small positive returns, causing their asset mix to increase proportionately.

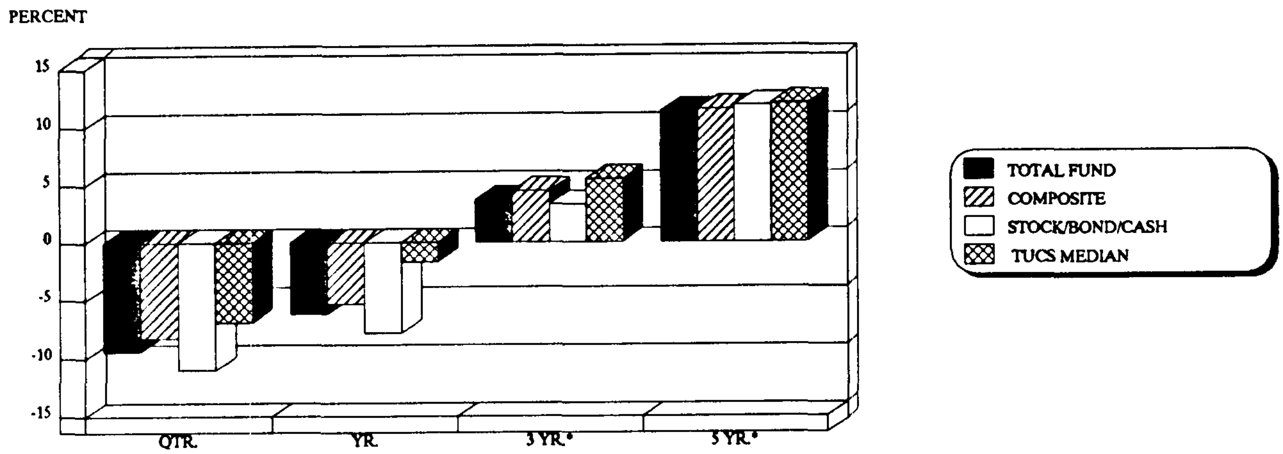
	Policy Asset Mix	Actual Mix 9/30/90	Actual Market Value (Millions)
Stocks	60.0%	56.8%	$3,627
Bonds	24.0	28.8	1,836
Alternative Assets	15.0	13.0	832
Unallocated Cash	1.0	1.4	87
	100.0%	100.0%	$6,382

Basic Funds (Con't.)

Total Fund Performance

Both the total fund and total fund without alternative assets trailed the return on the median fund and the composite index for the quarter and 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 9/30/90

	Qtr.	Yr.	*(Annualized) 3 Yr.	5 Yr.
Total Fund	-9.4%	-6.2%	3.7%	11.3%
Composite Index **	-8.3	-5.2	4.5	11.5
Stocks, Bonds and Cash Only	-11.0	-7.8	3.3	11.8
TUCS Median Balanced Fund***	-6.9	-1.7	5.5	12.0

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

Stock Segment Performance

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

	Qtr.	Yr.	(Annualized) 3 Yr.	5 Yr.
Stock Segment	-16.0%	-14.1%	0.0%	12.2%
Wilshire 5000	-15.2	-13.2	0.4	12.8

Bond Segment Performance

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

	Qtr.	Yr.	(Annualized) 3 Yr.	5 Yr.
Bond Segment	0.5%	6.7%	10.1%	10.1%
Salomon Broad Index	1.0	7.7	10.7	10.4

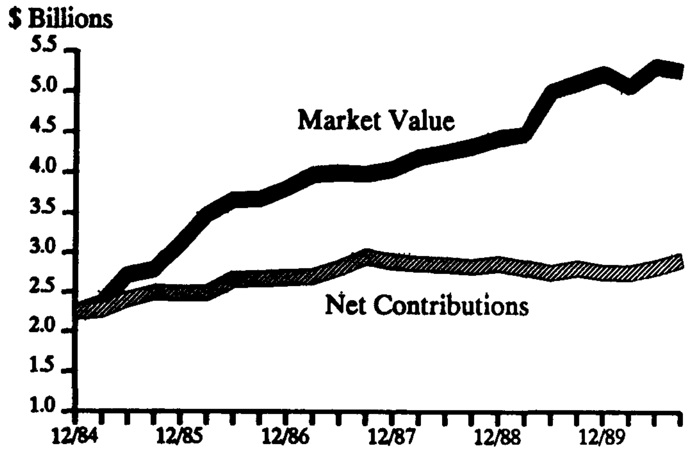
EXECUTIVE SUMMARY

Post Retirement Fund

Asset Growth

The market value of the Post Fund decreased by 1.1% during the third quarter of 1990.

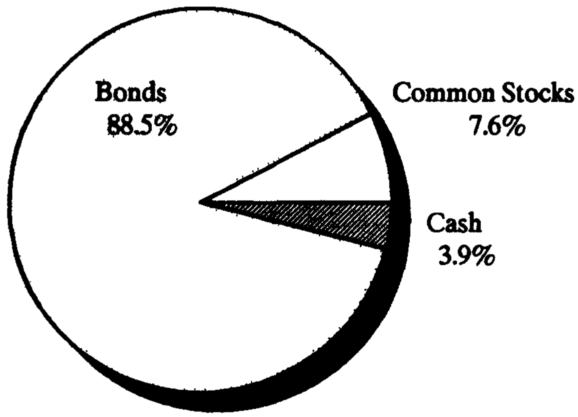
	Asset Growth During Third Quarter 1990 (Millions)
Beginning Value	$5,339
Net Contributions	94
Investment Return	-155
Ending Value	$5,278



Asset Mix

The asset mix of the Post Retirement fund is chosen to create a sizable, steady stream of income sufficient to pay currently promised benefits. This income stream is created by a large commitment to bonds, primarily through a dedicated bond portfolio. Assets not committed to bonds are invested in cash equivalents or common stocks.

The bond weighting increased due to negative returns in the equity market and the purchase of bonds to incorporate transfers received last quarter.



Actual Asset Mix
9/30/90

	Actual Market Value (Millions)	Asset Mix 9/30/90
Common Stocks	$402	7.6%
Bonds	4,670	88.5
Unallocated Cash	206	3.9
	$5,278	100.0%

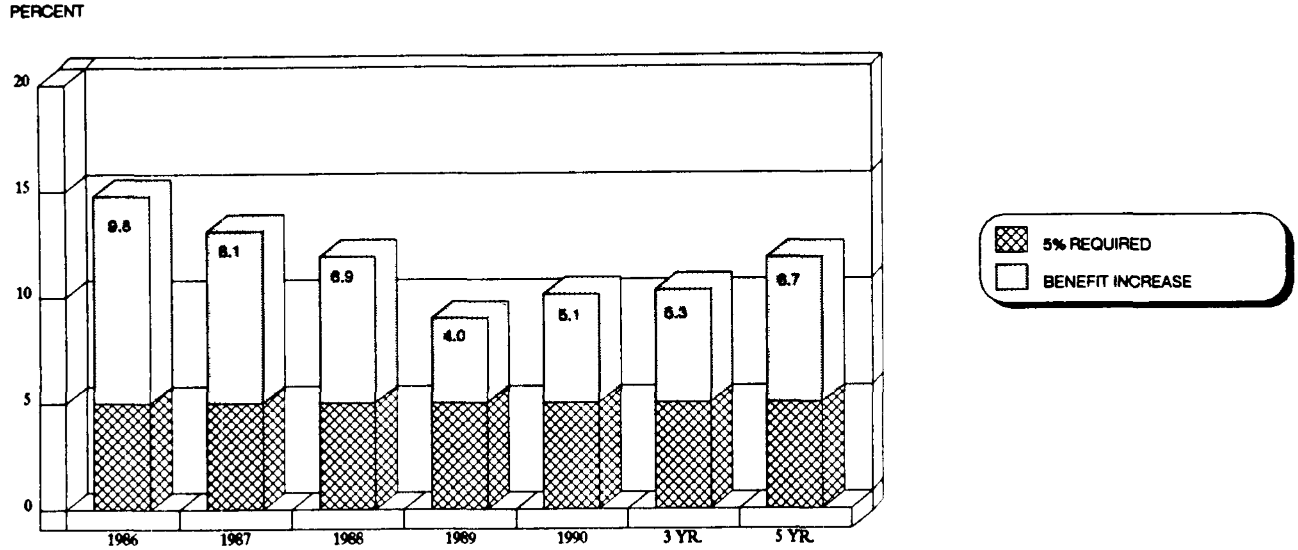
Post Fund (Con't.)

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.

Realized Earnings
Fiscal Years 1986 - 1990



	1986	1987	1988	1989	1990	(Annualized) 3 Yrs.	5 Yrs.
Realized Earnings*	14.8%	13.1%	11.9%	9.0%	10.1%	10.3%	11.7%
Benefit Increase**	**9.8**	**8.1**	**6.9**	**4.0**	**5.1**	**5.3**	**6.7**
Inflation	1.7	3.7	3.9	5.2	4.7	4.6	3.8

* Interest, dividends and net realized capital gains.
** Payable starting January 1 of the following calendar year.

Stock Segment Performance

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

Period Ending 9/30/90

	Qtr.	Yr.	(Annualized) 3 Yr.	5 Yr.
Stock Segment	-19.5%	-24.3%	-2.0%	7.5%
Post Fund Benchmark	-18.2	-21.0	-2.5	N.A.

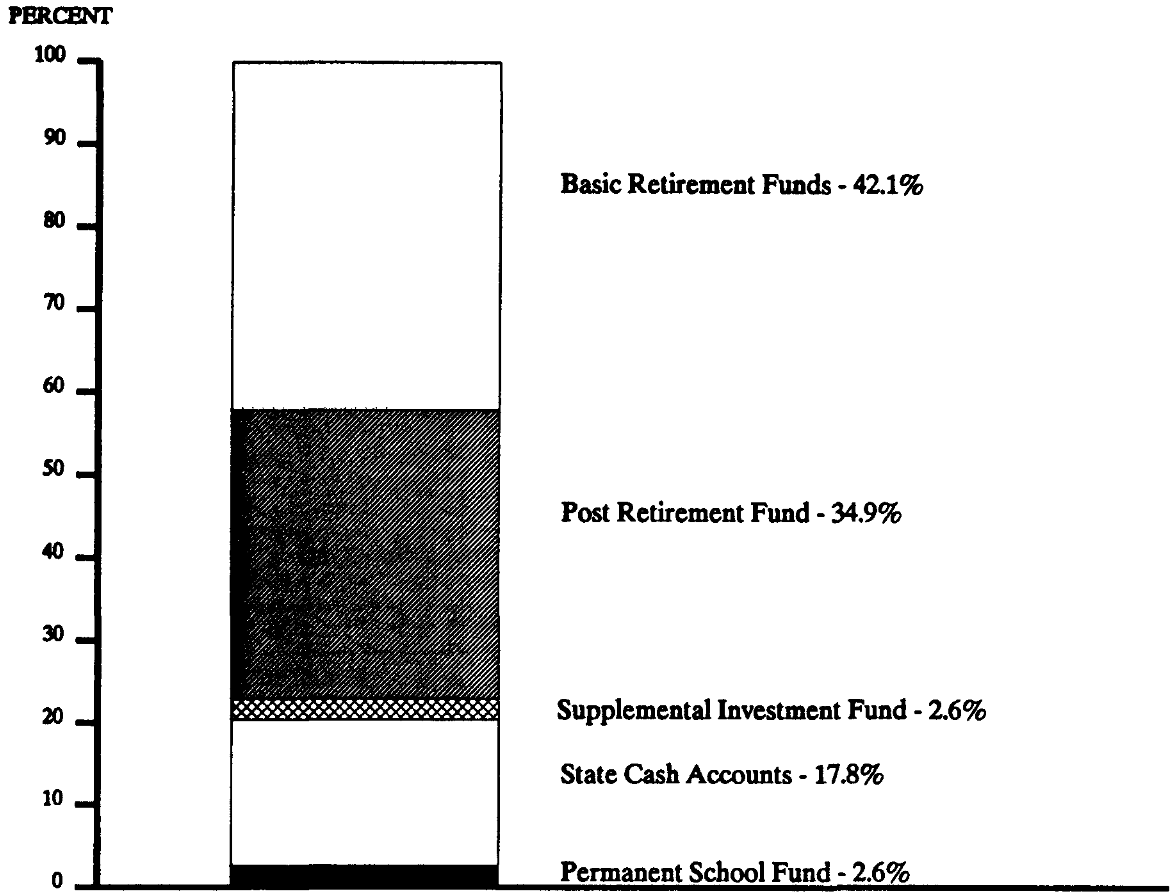
Bond Segment Performance

At the close of the quarter, the dedicated bond portfolio had a current yield of 8.13% and average duration of 7.53 years. The market value of the dedicated bond portfolio was $4.7 billion at the end of the quarter.

The dedicated bond portfolio is designed such that cash inflows from portfolio income and principal payments match required cash outflows to retirees. Thus, total return is not a relevant performance measure for the portfolio. Nevertheless, the bond segment provided a -1.3% return for the quarter and a 3.7% return for the year. This is consistent with the design of the dedicated bond portfolio.

EXECUTIVE SUMMARY

Funds Under Management



	9/30/90 Market Value (Billions)
Basic Retirement Funds	$6.4
Post Retirement Fund	5.3
Supplemental Investment Fund	0.4
State Cash Accounts	2.7
Permanent School Fund	0.4
Total	$15.2

MINNESOTA STATE BOARD

OF INVESTMENT

QUARTERLY INVESTMENT REPORT

Third Quarter 1990

(July 1, 1990 - September 30, 1990)

Table of Contents

FINANCIAL MARKETS REVIEW

STOCK MARKET

Overall, stock prices decreased during the third quarter. The market decreased all three months, but primarily the last two months due to the Iraq invasion of Kuwait, which caused the price of oil to double. The market perceives the rapid increase in the price of oil and consequently short-term inflation as impetus for an economic recession.

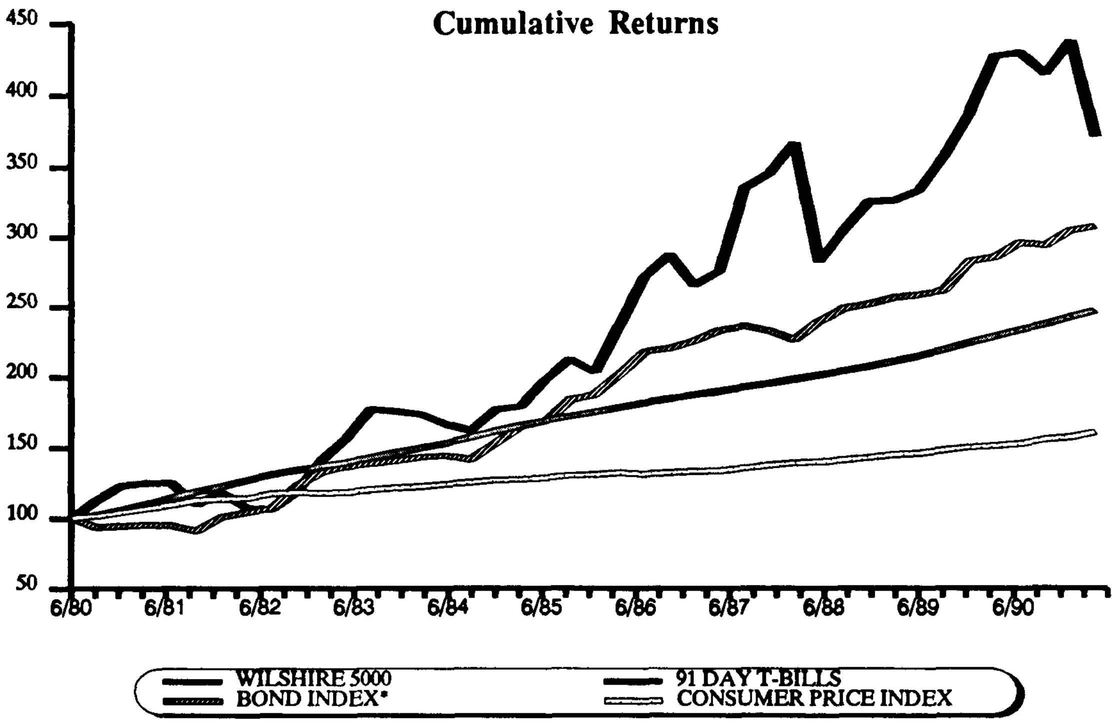
The Wilshire 5000 decreased 15.2% for the quarter. Price performance among the different sectors varied widely. Energy was the best performing sector with a return of 4.7% The worst performing sectors were the consumer durables and finance sectors with a return of -25.6% and -25.2% respectively. Largely due to the downturn during the quarter, the Wilshire 5000 lost 13.2% during the latest year.

BOND MARKET

The bond market recorded a slight positive total rate of return for the quarter because interest payments were more than enough to offset the decrease in bond prices. Bond prices dropped due to the rise in oil prices, but not significantly because the market perceives the higher oil prices and corresponding inflation to be short-term in nature. The anticipated recession did cause the corporate bond sector to record the lowest total rate of return for the quarter of the various sectors.

Overall, the Salomon Brothers Broad Investment Grade (BIG) Index increased 1.0% for the quarter. Mortgage securities were the best performing sector with a gain of 1.7% and corporate securities provided the lowest return of 0.1%. The Salomon BIG Index gained 7.7% for the latest year.

PERFORMANCE OF CAPITAL MARKETS



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

FINANCIAL MARKETS REVIEW

REAL ESTATE

The real estate market still faces oversupply and slow demand. Regional malls, industrials and apartments are faring the best. Office (especially suburban), smaller retail, hotel and land are not doing well. Preliminary 1990 census data indicate California, Florida, Texas and other warm weather states are market winners, mostly at the expense of northern industrial centers and rural areas.

VENTURE CAPITAL

According to the *Venture Capital Journal*, a preliminary look at first quarter venture capital disbursements for 1990 indicates:

- investment in software companies appears to be surging
- medical and health care investments are growing strongly
- telephone and data communication investments are weak
- early stage investments are losing ground to expansion financings
- Mid-Atlantic and West Coast investments are increasing, at the expense of the Southwest and Midwest

RESOURCE FUNDS

Since the invasion of Kuwait by Iraq, spot prices of West Texas Intermediate oil jumped to as high as $41.15 per barrel in October compared to a low of $15.06 in June.

Natural gas prices, not directly affected by a possible oil supply disruption in the Middle East, have not increased to the degree oil prices have. Spot prices of natural gas have reached a recent high of approximately $2.00 per MCF (thousand cubic feet) compared to a midsummer low of approximately $1.50 per MCF.

BASIC RETIREMENT FUNDS

Investment Objectives

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

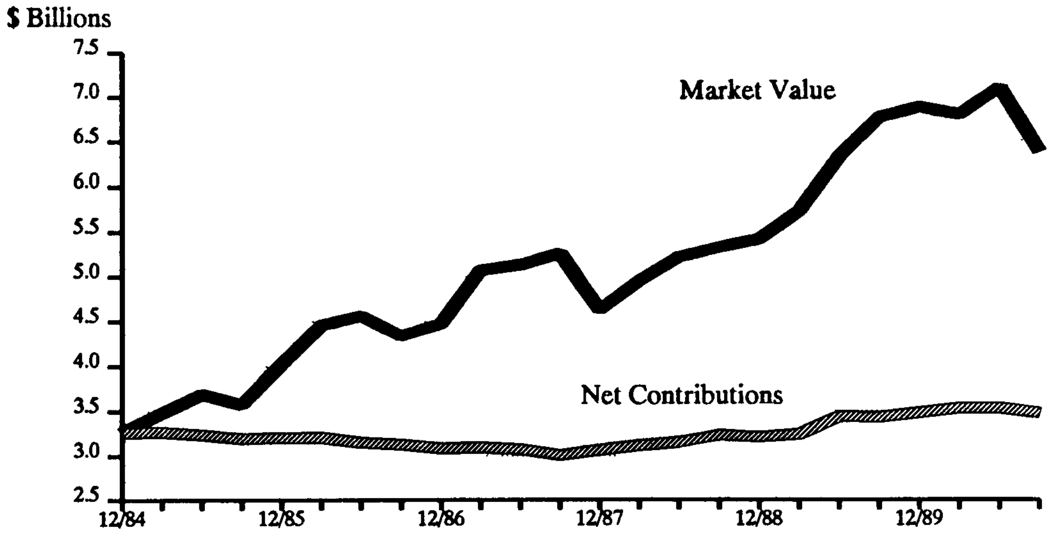
Based upon the Basic Funds' adequate funding levels and participant demographics, its investment time horizon is quite long. This extended time horizon permits the Board to take an aggressive, high expected return investment policy which incorporates a sizable equity component.

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.
- 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 decreased 10.3% during the third quarter of 1990. The decrease was due to negative equity returns. All other asset classes recorded small positive returns for the quarter.



In Millions

	12/85	12/86	12/87	12/88	12/89	3/90	6/90	9/90
Beginning Value	$3,265	$4,030	$4,474	$4,628	$5,420	$6,875	$6,798	$7,106
Net Contributions	-62	-113	-26	146	269	55	-5	-56
Investment Return	827	557	180	646	1,186	-132	313	-684
Ending Value	$4,030	$4,474	$4,628	$5,420	$6,875	$6,798	$7,106	$6,382

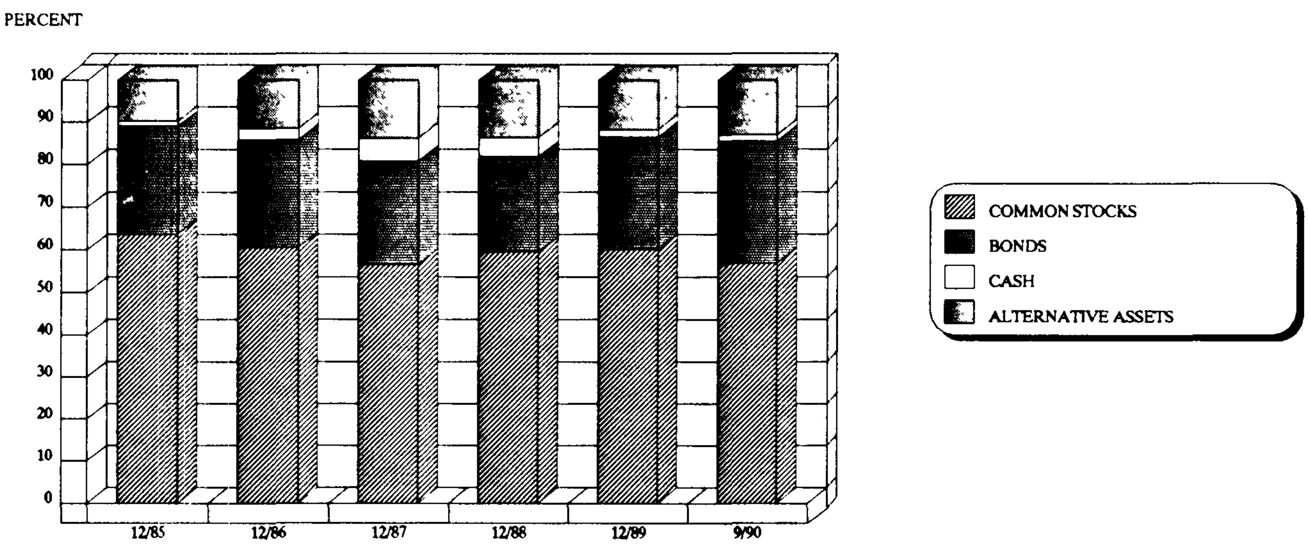
BASIC RETIREMENT FUNDS

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 equities decreased due to negative returns in the equity market. All the other asset classes recorded small positive returns, causing their percentages to increase proportionately.



	Last Five Years					Latest Qtrs.		
	12/85	12/86	12/87	12/88	12/89	3/90	6/90	9/90
Stocks	63.8%	60.6%	56.7%	59.5%	60.2%	61.3%	61.3%	56.8%
Bonds	25.3	25.3	24.2	22.4	26.4	26.2	25.9	28.8
Real Estate	7.2	8.3	9.5	9.0	7.5	7.5	7.4	7.6
Venture Capital	1.3	1.8	2.8	3.1	2.8	2.9	3.4	4.0
Resource Funds	1.3	1.4	1.4	1.5	1.4	1.1	1.2	1.4
Unallocated Cash	1.1	2.6	5.4	4.5	1.7	1.0	0.8	1.4
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

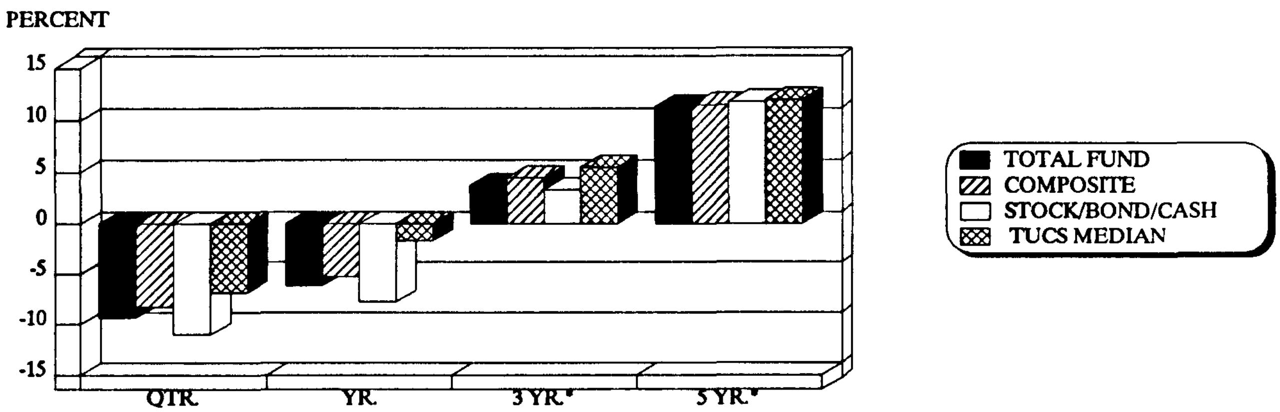
The Basic Funds' long-term rate of return performance is evaluated relative to two specific benchmarks:

- **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 are expected to outperform the median return produced by a representative sample of other public and private tax-exempt balanced funds. The sample universe used by the Board is the Wilshire Associates Trust Universe Comparison Service (TUCS).

The 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 trailed its composite index for the latest quarter and year. Because of the Basic Funds sizable stock allocation and performance of the stock market, the Basic Funds' trailed the median balanced fund for the latest quarter and year. Excluding alternative assets, the Basic Funds ranked in the lowest quartile (84th percentile) of the TUCS universe for the quarter. In addition, it ranked in the lowest quartile (86th percentile) for the latest year and the middle third (52nd percentile) for the last five years.



Period Ending 9/30/90

	Qtr.	Yr.	3 Yr. *(Annualized)	5 Yr.
Total Fund	**-9.4%**	**-6.2%**	**3.7%**	**11.3%**
Composite Index	-8.3	-5.2	4.5	11.5
Stocks, Bonds and Cash Only	**-11.0**	**-7.8**	**3.3**	**11.8**
TUCS Median Balanced Fund	-6.9	-1.7	5.5	12.0

BASIC RETIREMENT FUNDS

Segment Performance vs. Standards

Stock Segment

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

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Stock Segment	-16.0%	-14.1%	0.0%	12.2%
Wilshire 5000	-15.2	-13.2	0.4	12.8

Bond Segment

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

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Bond Segment	0.5%	6.7%	10.1%	10.1%
Salomon Bond Index	1.0	7.7	10.7	10.4

Real Estate Segment

The real estate segment of the Basic Funds trailed its target for the latest quarter but exceeded it 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	0.5%	5.4%	6.9%	7.2%
Real Estate Index	0.8	3.2	5.8	6.8
Inflation	2.2	6.2	4.9	4.1

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	5.5%	5.8%	11.3%	8.2%
Resource Fund Segment	0.5	-13.3	0.0	-2.4

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 trailed the performance of their aggregate benchmark for the latest quarter but exceeded it for the latest year.

Individually, three out of the eleven managers exceeded their benchmark for the quarter. A comprehensive analysis of the individual managers' performance is included in this quarter's Equity Manager Committee Report.

	Percent of Segment 9/30/90	Market Value 9/30/90 (Thousands)	Quarter Ending 9/30/90 Actual	Quarter Ending 9/30/90 Bmrk	Year Ending 9/30/90 Actual	Year Ending 9/30/90 Bmrk	(Annualized) 5 Yrs. Ending 9/30/90 Actual	(Annualized) 5 Yrs. Ending 9/30/90 Bmrk
Active Managers								
Alliance	9.9%	$ 358,962	-16.4%	-18.3%	-10.3%	-15.3%	17.6%	10.1%
Concord	2.5	89,799	-19.9	-17.5	-18.4	-18.9		
Forstmann	4.9	179,088	-8.2	-14.6	-10.1	-12.5	12.7	9.8
Franklin	2.5	91,835	-18.8	-17.0	-21.5	-18.5		
GeoCapital	1.2	43,246	-30.1	-22.3				
IDS	4.2	150,459	-19.4	-14.7	-13.4	-12.7	13.1	12.6
IAI	2.2	81,387	-14.3	-13.3	-11.8	-9.3	12.3	13.5
Lieber & Co.	3.0	108,642	-21.4	-20.7	-24.0	-25.0	7.2	6.3
Rosenberg	2.7	96,507	-16.9	-16.1	-16.5	-14.8		
Sasco	2.4	85,521	-19.8	-15.4	-24.0	-17.1		
Waddell & Reed	4.2	153,988	-15.4	-17.4	-13.2	-16.6	11.1	9.3
Aggregate Active	39.7%	$1,439,434	-17.1%		-15.4%		10.9%	
Passive Manager								
Wilshire Associates	60.3%	$2,187,841	-15.2%	-15.1%	-13.2%	-13.0%	12.6%	12.7%
Aggregate Passive	60.3%	$2,187,841	-15.2%		-13.2%		12.6%	
Total Stock Segment	**100.0%**	**$3,627,275**	**-16.0%**	**-15.8%**	**-14.1%**	**-14.3%**	**12.2%**	**12.1%**
Wilshire 5000 Index			-15.2%		-13.2%		12.8%	

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

GeoCapital retained effective 4/90. Concord, Franklin, Rosenberg, Sasco retained 4/89.

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 trailed the performance of their aggregate benchmark for the latest quarter and year.

Individually, none of the six bond managers exceeded their benchmark for the quarter. A comprehensive analysis of the individual managers' performance is included in this quarter's Fixed Income Manager Committee Report.

	Percent of Segment 9/30/90	Market Value 9/30/90 (Thousands)	Quarter Ending 9/30/90 Actual	Quarter Ending 9/30/90 Bmrk	Year Ending 9/30/90 Actual	Year Ending 9/30/90 Bmrk	(Annualized) 5 Yrs. Ending 9/30/90 Actual	(Annualized) 5 Yrs. Ending 9/30/90 Bmrk
Active Managers								
IAI	6.1%	$ 111,618	-0.6%	0.1%	4.9%	6.5%	9.0%	10.2%
Lehman	6.9	126,035	1.2	1.2	7.3	7.8	9.6	9.8
Miller Anderson	9.8	179,760	-0.5	1.0	6.0	7.7	10.2	10.4
Western Asset	20.8	382,859	0.1	0.8	5.9	7.8	11.1	10.4
Aggregate Active	43.6%	$ 800,272	-0.1%		5.9%		10.2%	
Semi-Passive Managers								
Fidelity Management	28.2	$ 517,861	0.8%	1.0%	7.6%	7.7%		
Lincoln Capital	28.2	517,407	0.9	1.0	7.2	7.7		
Aggregate Passive	56.4%	$1,035,268	0.9%		7.4%			
Total Bond Segment	**100.0%**	**$1,835,540**	**0.5%**	**0.9%**	**6.7%**	**7.6%**	**10.1%**	**10.1%**
Salomon Broad Index			1.0%		7.7%		10.4%	

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.

Fidelity, Lincoln retained 7/88.

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.

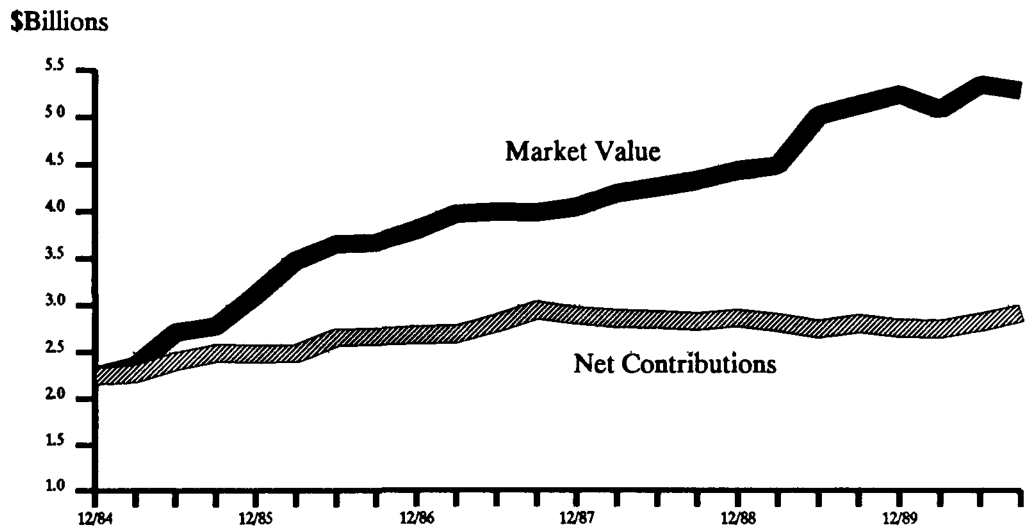
The Board has established two earnings objectives for the Post Fund:

- 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 decreased by 1.1% during the third quarter of 1990. Asset growth decreased due to a negative investment return for the equity portfolio.



In Millions

	12/85	12/86	12/87	12/88	12/89	3/90	6/90	9/90
Beginning Value	$2,246	$3,107	$3,808	$4,047	$4,434	$5,238	$5,073	$5,339
Net Contributions		239	199	207	25	-11	77	94
Investment Return	622	502	32	414	779	-154	189	-155
Ending Value	$3,107	$3,808	$4,047	$4,434	$5,238	$5,073	$5,339	$5,278

POST RETIREMENT FUND

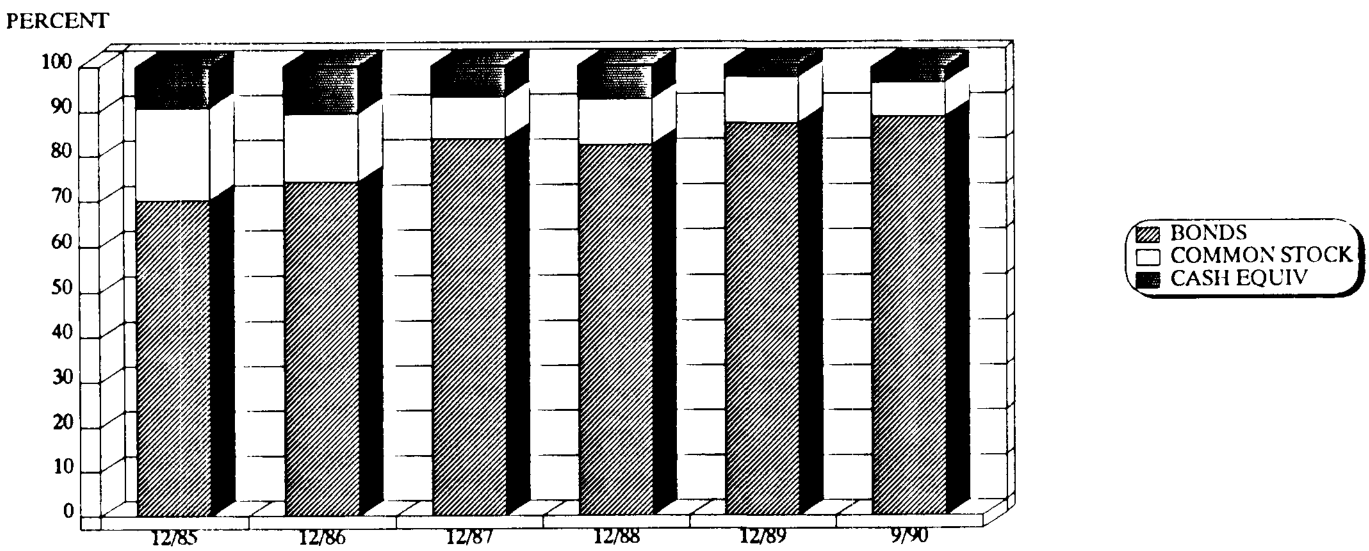
Asset Mix

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

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

Assets not committed to the dedicated bond portfolio generally are invested in common stocks and cash equivalents.

The bond weighting increased due to negative returns in the equity market and the purchase of bonds to incorporate transfers received last quarter.



	Last Five Years					Latest Qtrs.		
	12/85	12/86	12/87	12/88	12/89	3/90	6/90	9/90
Bonds	70.2%	74.2%	83.7%	82.3%	87.1%	84.8%	84.5%	88.5%
Stocks	20.5	15.1	9.3	10.1	10.2	10.1	9.6	7.6
Unallocated Cash	9.3	10.7	7.0	7.6	2.7	5.1	5.9	3.9
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

POST RETIREMENT FUND

Total Fund Performance

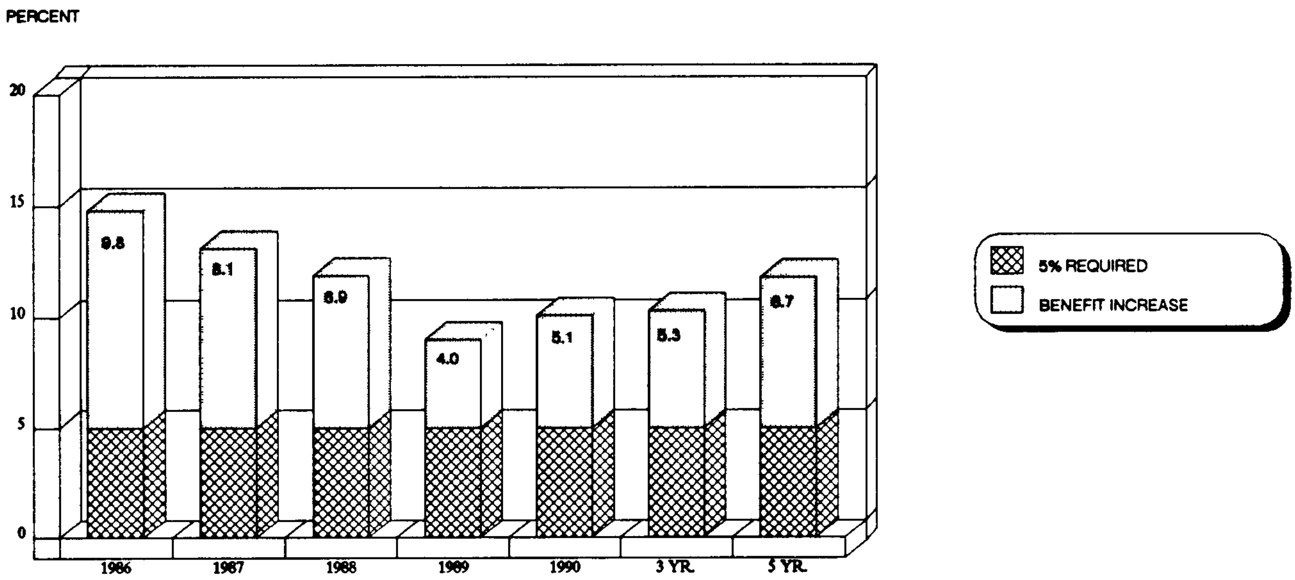
The ability of the Post Fund to maintain current benefit levels and provide future benefit increases depends upon its earnings. State statutes define earnings for the Post Fund as interest and dividend income as well as realized equity and fixed income capital gains (or losses). Unrealized capital gains (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.

Realized Earnings

Fiscal Years 1986 - 1990



	1986	1987	1988	1989	1990	(Annualized) 3 Yrs.	5 Yrs.
Realized Earnings*	14.8%	13.1%	11.9%	9.0%	10.1%	10.3%	11.7%
Benefit Increase**	**9.8**	**8.1**	**6.9**	**4.0**	**5.1**	**5.3**	**6.7**
Inflation	1.7	3.7	3.9	5.2	4.7	4.6	3.8

* Interest, dividends and net realized capital gains.
** Payable starting January 1 of the following calendar year.

POST RETIREMENT FUND

Segment Performance

Stock Segment Performance

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

	Period Ending 9/30/90		(Annualized)	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Stock Segment	-19.5%	-24.3%	-2.0%	7.5%
Post Fund Benchmark	-18.2	-21.0	-2.5	N.A.

Bond Segment Performance

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

The Post Fund's bond portfolio provided a -1.3% total rate of return for the quarter and a 3.7% 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
9/30/90

Value at Market	$ 4,670,180,158
Value at Cost	4,426,607,767
Average Coupon	5.73%
Current Yield	8.13
Yield to Maturity	9.27
Current Yield at Cost	8.38
Time to Maturity	15.47 Years
Average Duration	7.53 Years
Average Quality Rating	AAA
Number of Issues	439

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 and the Public Employees Defined Contribution 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, 1990 the market value of the entire fund was $447 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

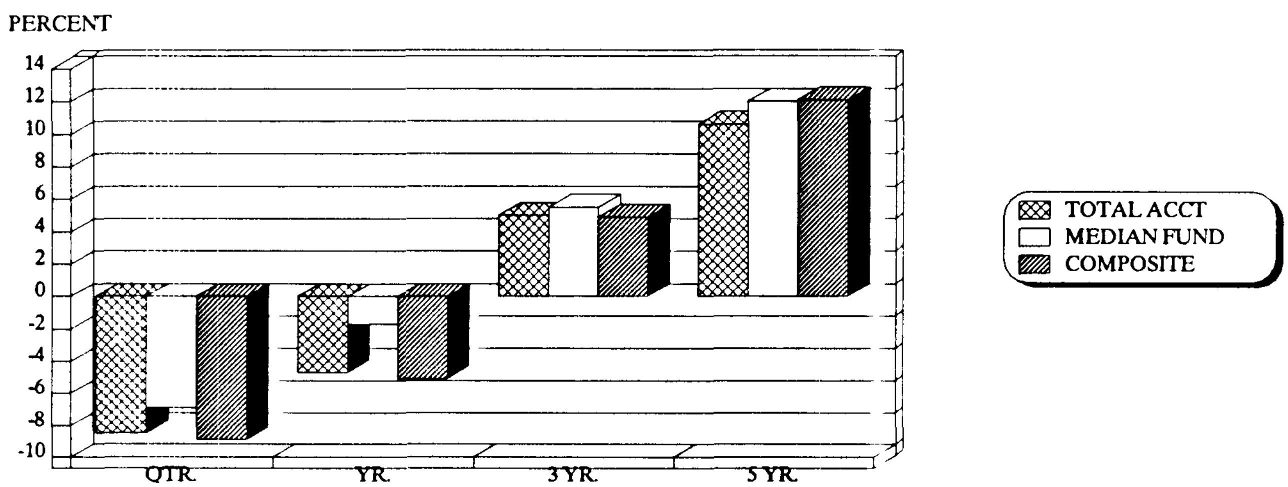
Investment Objective
The primary investment objective of the Income Share Account is similar to that of the Basic Retirement Funds. The Account seeks to maximize long-term real rates of return, while limiting short-run portfolio return volatility.

Asset Mix
The Income Share Account is invested in a balanced portfolio of common stocks and bonds. 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%	54.5%
Bonds	35.0	38.3
Unallocated Cash	5.0	7.2
	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, 1990 the market value of the Income Share Account was $224 million.



Period Ending 9/30/90

	Qtr.	Yr.	Annualized 3 Yr.	Annualized 5 Yr.
Total Account	-8.5%	-4.7%	5.0%	10.6%
Median Fund*	-6.9	-1.7	5.5	12.0
Composite**	-8.9	-5.1	4.9	12.1
Equity Segment	-15.2	-13.2	0.6	10.3
Wilshire 5000	-15.2	-13.2	0.4	12.8
Bond Segment	1.0	7.6	10.7	10.3
Salomon Bond Index	1.0	7.7	10.7	10.4

* TUCS Median Balanced Portfolio

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

SUPPLEMENTAL INVESTMENT FUND

Growth Share Account

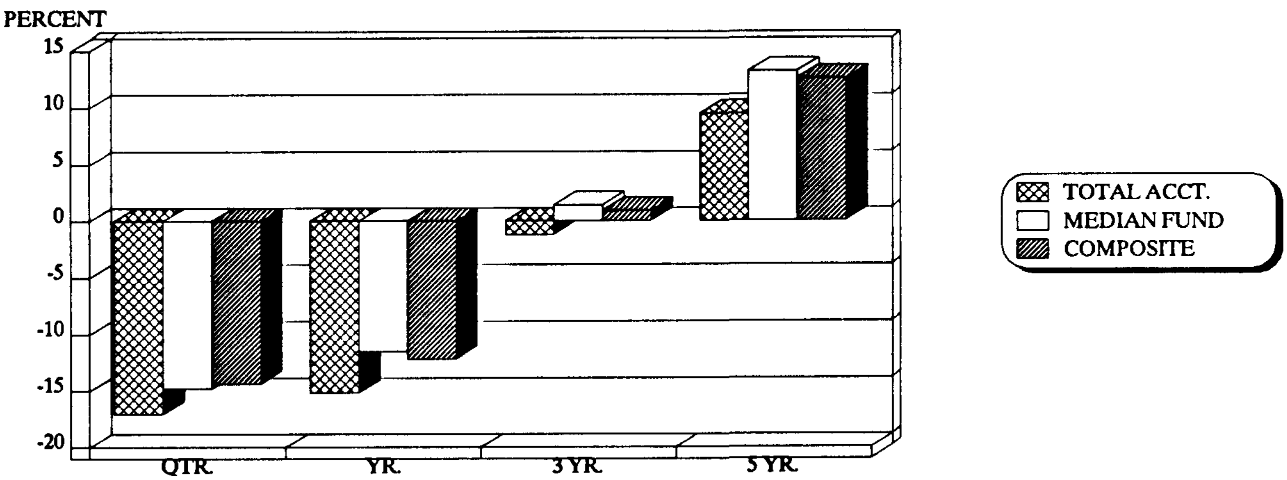
Investment Objective
The Growth Share Account's investment objective is to generate above-average returns from capital appreciation on common stocks.

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

	Target	Actual
Stocks	95.0%	99.4%
Unallocated Cash	5.0	0.6
	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, 1990 the market value of the Growth Share Account was $61 million.



Period Ending 9/30/90

	Qtr.	Yr.	Annualized 3 Yr.	Annualized 5 Yr.
Total Account	-17.1%	-15.2%	-1.2%	9.5%
Median Fund*	-14.8	-11.5	1.4	13.2
Composite**	-14.4	-12.2	0.9	12.6
Equity Segment	-17.1	-15.5	-1.2	9.7
Wilshire 5000	-15.2	-13.2	0.4	12.8

* TUCS Median Managed Equity Portfolio

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

SUPPLEMENTAL INVESTMENT FUND

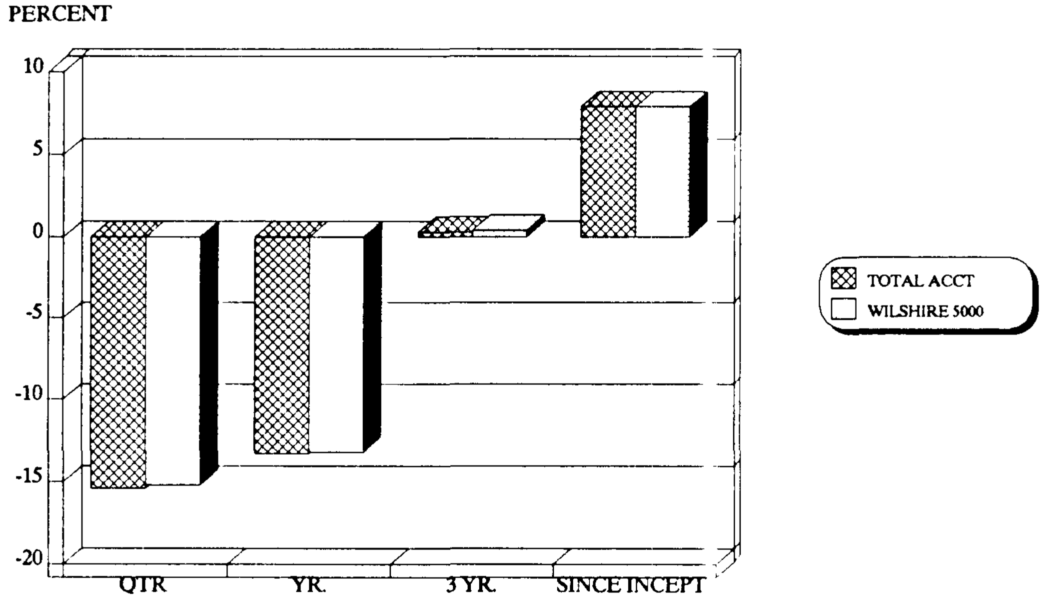
Common Stock Index Account

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, 1990 the market value of the Common Stock Index Account was $9 million.



Period Ending 9/30/90

	Qtr.	Yr.	3 Yrs. Annualized	Since Inception Annualized*
Total Account	-15.4%	-13.3%	0.3%	7.9%
Wilshire 5000	-15.2	-13.2	0.4	7.9

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

SUPPLEMENTAL INVESTMENT FUND

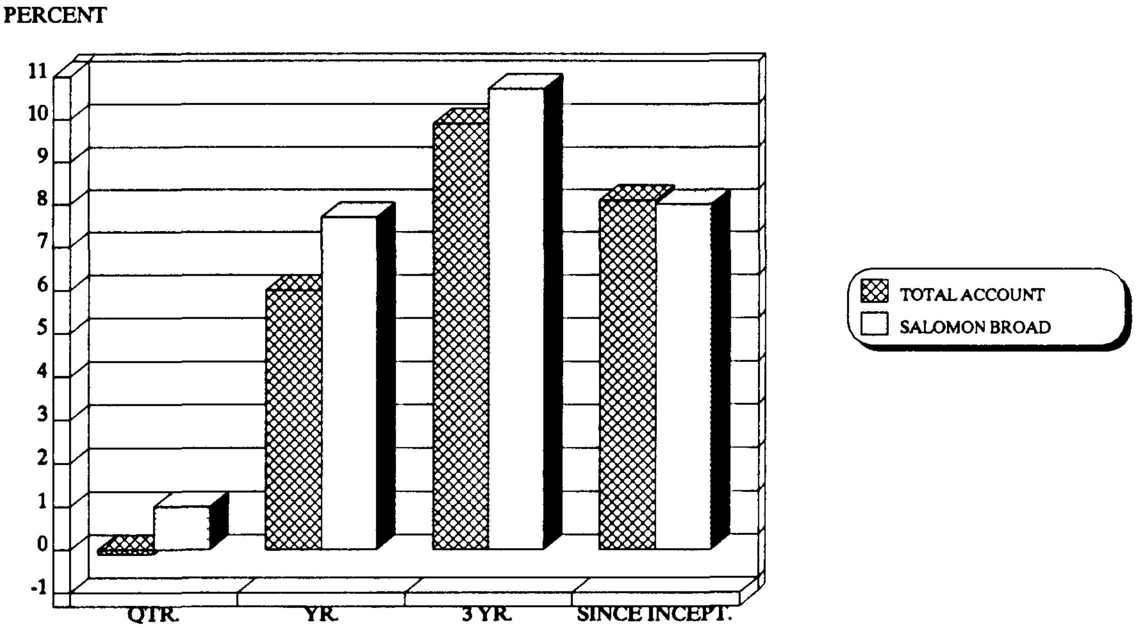
Bond Market Account

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, 1990 the market value of the Bond Market Account was $7 million.



Period Ending 9/30/90

	Qtr.	Yr.	3 Yrs. Annualized	Since Inception Annualized*
Total Account	-0.1%	6.0%	9.9%	8.1%
Salomon Broad	1.0	7.7	10.7	8.0

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

SUPPLEMENTAL INVESTMENT FUND

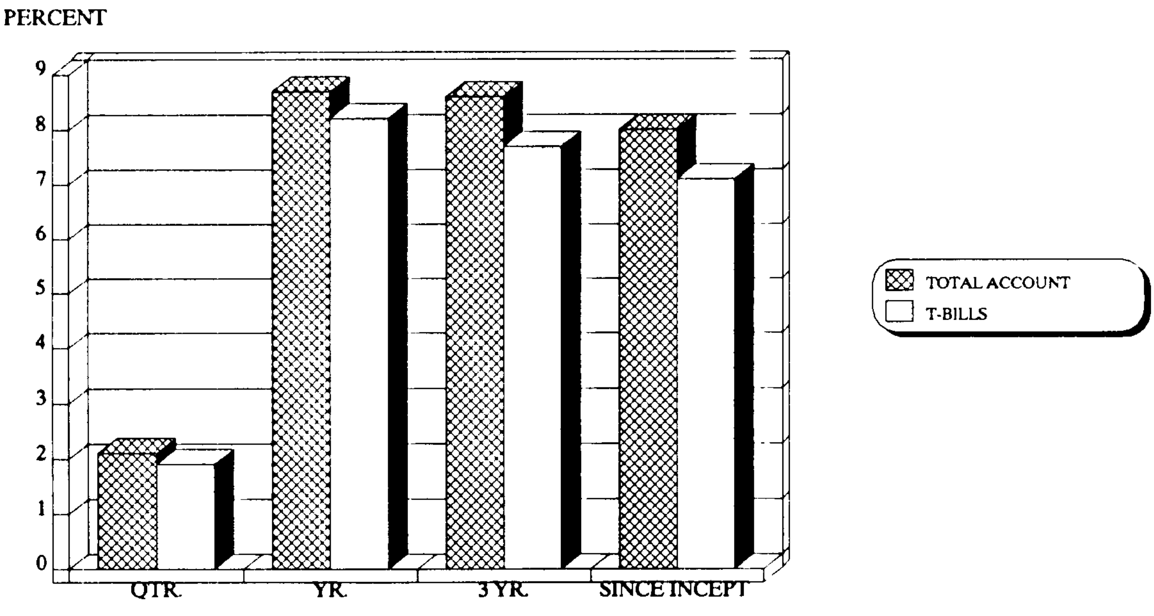
Money Market Account

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, 1990 the market value of the Money Market Account was $84 million.



Period Ending 9/30/90

	Qtr.	Yr.	3 Yrs. Annualized	Since Inception Annualized*
Total Account	2.1%	8.7	8.6%	8.0%
91 Day T-Bills	1.9	8.1	7.7	7.0

* 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 and banks.

Investment Management
Annually, the Board accepts bids from banks and insurance companies that meet the financial quality criteria defined by State statute. Generally, the insurance company or bank 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, 1990 the market value of the Guaranteed Return Account was $61 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 second quarter. The Permanent School fund continues to hold only fixed income securities. Under current legal limitations, common stocks are not appropriate vehicles for the Fund.

	Target	Actual
Bonds	95.0%	97.2%
Unallocated Cash	5.0	2.8
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 decreased 0.6% during the third quarter. The decrease in assets was due primarily to a decrease in bond prices.

Asset Growth
During Third Quarter 1990
(Millions)

Beginning Value	$377.2
Net Contributions	2.1
Investment Return	-2.4
Ending Value	$376.9

Bond Segment Performance
The composition of the Permanent School Fund's bond portfolio was essentially unchanged during the quarter. The bond portfolio is structured with a laddered distribution of maturities to minimize the Fund's exposure to re-investment rate risk. At the quarter's-end, the portfolio had a current yield of 9.26%, an average life of 7.12 years, and a AAA quality rating. The portfolio remains concentrated in Treasury and Agency issues with the remainder primarily distributed among mortgages, industrials and utilities.

Bond Portfolio Statistics
9/30/90

Value at Market	$376,932,568
Value at Cost	360,258,358
Average Coupon	9.00%
Current Yield	9.26
Yield to Maturity	9.49
Current Yield at Cost	9.20
Time to Maturity	15.35 Years
Average Duration	7.12 Years
Average Quality Rating	AAA
Number of Issues	135

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 latest quarter and year.

	Period Ending 9/30/90 Market Value (Millions)	Qtr.	Yr.
Treasurer's Cash Pool	$2,411	2.2%	8.9%
Trust Fund Cash Pool	185	2.2	8.7
91-Day T-Bills		1.9	8.1

Tab B

PORTFOLIO STATISTICS

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
COMPOSITION OF STATE INVESTMENT PORTFOLIOS BY TYPE OF INVESTMENT
MARKET VALUE SEPTEMBER 30, 1990
(in 000's)

	CASH AND SHORT TERM SECURITIES	BONDS		STOCKS		ALTERNATIVE ASSETS	TOTAL
		INTERNAL	EXTERNAL	INTERNAL	EXTERNAL		
BASIC RETIREMENT FUNDS:							
TEACHERS RETIREMENT FUND	$ 39,165	$ -0-	$ 850,016	$ -0-	$1,671,215	$381,629	$ 2,942,025
	1.33%		28.89%		56.81%	12.97%	100%
PUBLIC EMPLOYEES RETIRE. FUND	19,498	-0-	416,949	-0-	827,568	187,196	1,451,211
	1.34%		28.73%		57.03%	12.90%	100%
STATE EMPLOYEES RETIRE. FUND	18,530	-0-	353,821	-0-	702,269	158,853	1,233,473
	1.50%		28.69%		56.93%	12.88%	100%
PUBLIC EMP. POLICE & FIRE FUND	7,351	-0-	157,059	-0-	311,734	70,514	546,658
	1.34%		28.73%		57.03%	12.90%	100%
HIGHWAY PATROL RETIRE. FUND	190	-0-	26,938	-0-	53,466	12,094	92,688
	0.21%		29.06%		57.68%	13.05%	100%
JUDGES RETIREMENT FUND	81	-0-	1,692	-0-	3,358	760	5,891
	1.38%		28.72%		57.00%	12.90%	100%
PUBLIC EMP. P.F. CONSOLIDATED	516	-0-	11,237	-0-	22,279	5,040	39,072
	1.32%		28.76%		57.02%	12.90%	100%
CORRECTIONAL EMPLOYEES RETIREMENT	1,269	-0-	17,828	-0-	35,386	8,004	62,487
	2.03%		28.53%		56.63%	12.81%	100%
POST RETIREMENT FUND	205,974	4,670,278	-0-	402,202	-0-	-0-	5,278,454
	3.90%	88.48%		7.62%			100%
MINNESOTA SUPPLEMENTAL FUNDS:							
INCOME SHARE ACCOUNT	16,112	85,968	-0-	-0-	122,091	-0-	224,171
	7.19%	38.35%			54.46%		100%
GROWTH SHARE ACCOUNT	392	-0-	-0-	-0-	60,417	-0-	60,809
	0.64%				99.36%		100%
MONEY MARKET ACCOUNT	84,117	-0-	-0-	-0-	-0-	-0-	84,117
	100%						100%
COMMON STOCK INDEX ACCOUNT	-0-	-0-	-0-	-0-	9,278	-0-	9,278
					100%		100%
BOND MARKET ACCOUNT	-0-	-0-	6,949	-0-	-0-	-0-	6,949
			100%				100%
GUARANTEED RETURN ACCOUNT	-0-	-0-	61,348	-0-	-0-	-0-	61,348
			100%				100%

	CASH AND SHORT TERM SECURITIES	BONDS INTERNAL	BONDS EXTERNAL	STOCKS INTERNAL	STOCKS EXTERNAL	ALTERNATIVE ASSETS	TOTAL
TOTAL RETIREMENT FUNDS	$ 393,195	$4,756,246	$1,903,837	$402,202	$ 3,819,061	$824,090	$12,098,631
	3.25%	39.31%	15.74%	3.32%	31.57%	6.81%	100%
PERMANENT SCHOOL FUND	10,497	366,436	-0-	-0-	-0-	-0-	376,933
	2.78%	97.22%					100%
TREASURERS CASH	2,410,793	-0-	-0-	-0-	-0-	-0-	2,410,793
	100%						100%
HOUSING FINANCE AGENCY	183,426	-0-	-0-	-0-	-0-	-0-	183,426
	100%						100%
MINNESOTA DEBT SERVICE FUND	14,705	-0-	-0-	-0-	-0-	-0-	14,705
	100%						100%
MISCELLANEOUS ACCOUNTS	114,639	-0-	-0-	-0-	-0-	-0-	114,639
	100%						100%
GRAND TOTAL	$3,127,255	$5,122,682	$1,903,837	$402,202	$3,819,061	$824,090	$15,199,127
	20.57%	33.70%	12.53	2.65%	25.13%	5.42%	100%

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

For period of
July 1, 1990 - September 30, 1990

Teachers Retirement Fund	$(16,500.000.00)
Public Employees Retirement Fund	(5,000,000.00)
State Employees Retirement Fund	(43,018,000.00)
Public Employees Police & Fire	8,000,000.00
Highway Patrol Retirement Fund	(2,725,000.00)
Judges Retirement Fund	2,950,000.00
Public Emp. P & F Consolidated	82,086.94
Correctional Employees Retirement Fund	21,000.00
Post Retirement Fund	94,136,320.45
Supplemental Retirement Fund - Income	332,002.50
Supplemental Retirement Fund - Growth	(752,311.57)
Supplemental Retirement Fund - Money Market	490,462.82
Supplemental Retirement Fund - Index	1,331,383.79
Supplemental Retirement Fund - Bond Mkt.	358,446.68
Supplemental Retirement Fund - Guaranteed	176,627.91
Total Retirement Funds Net Cash Flow	$ 39,883,019.52
Permanent School Fund	2,090,445.45
Total Net Cash Flow	$ 41,973,464.97

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)
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
October	113	(154)	(41)	8	2.6	52.5	44.9	12342
November	45	0	45	78	2.8	52.1	45.1	12494
December	14	6	20	24	2.8	51.8	45.4	12581
January 1990	(37)	6	(31)	85	3.9	52.0	44.1	12126
February	(12)	115	103	48	3.4	51.1	45.5	12232
March	(3)	7	4	8	3.4	50.5	46.1	12334
April	105	3	108	8	2.7	51.4	45.9	12070
May	(6)	27	21	52	2.8	50.0	47.2	12721
June	23	(22)	1	122	3.7	50.3	46.0	12916
July	130	3	133	65	3.1	51.6	45.3	12962
August	98	(38)	60	53	3.2	53.3	43.5	12293
September	61	(42)	19	13	3.2	55.1	41.7	12098

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 10, 1990

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

FROM: Howard Bicker

SUBJECT: Executive Director's Administrative Report

1) <u>Budget and Travel Reports</u>

A budget report for the period ending November 1990 is included as Attachment A.

A travel report for the period from August 16 - November 15, 1990 is included as Attachment B.

2) <u>Report on Rebalancing in the Basic Funds</u>

The SBI has established a policy that requires the Basic Retirement Funds to be rebalanced toward its long term allocation targets when its actual asset mix moves significantly above or below long term targets.

The stock market declined significantly during August and September 1990 leaving the Basic Funds underweighted in equities (see following table).

In order to bring the Basic Funds closer to its long term targets, $160 million was moved from bonds and unallocated cash to stocks. The rebalancing occurred in two steps:

- o In November, $60 million was transferred. This amount represented the majority of the cash held by the bond managers at that time.

- o In December, an additional $100 million was transferred. this required the sale of some bond holdings in addition to the transfer of cash assets.

Basic Funds Asset Mix 9/30/90		Long Term Target	Required Rebalancing Ranges	Discretionary Rebalancing Ranges	Approximate Dollar Value of Over/Under Wtg. (+/-)
Stocks	56.9%	60%	Over 66%, Under 54%	55% - 65%	- $202 Mil
Bonds	28.8	24	Over 26% Under 22%	23% - 25%	+ 304
Alt. Assets	12.9	15	-	-	- 125
Cash	1.4	1	-	-	+ 23
Total	100.0%	100%			

After the $160 million transfers the asset mix was estimated to be:

Stocks	60%
Bonds	26
Alternative Assets	13
Cash	1
	100%

The managers affected by the rebalancing were:

From:	Millions	To:	Millions
Western (active bonds)	$ 25	GeoCapital (active stocks)	$ 30
Lehman (active bonds)	25	Franklin (active stocks)	20
Fidelity (passive bonds)	45	Sasco (active stocks)	10
Lincoln (passive bonds)	45	Wilshire (passive stocks)	100
Unallocated Cash	20		
	$160		$160

3) Post Retirement Benefit Increase

The Post Retirement Fund generated realized earnings sufficient to support a 5.100% lifetime benefit increase for eligible retirees beginning January 1, 1991.

4) SBI and IAC Meeting Dates for Calendar 1991

Quarterly meeting schedules for the SBI and IAC are included as Attachment C.

ATTACHMENT A

STATE BOARD OF INVESTMENT
FISCAL YEAR 1991 ADMINISTRATIVE BUDGET REPORT
GENERAL FUND APPROPRIATION
FISCAL YEAR TO-DATE THROUGH NOVEMBER 30,1990

ITEM	FISCAL YEAR 1991 BUDGET	FISCAL YEAR 1991 EXPENDITURES
PERSONAL SERVICES		
CLASSIFIED EMPLOYEES	$ 243,500	$ 96,831
UNCLASSIFIED EMPLOYEES	1,138,910	434,261
PART-TIME EMPLOYEES	0	0
WORKERS COMPENSATION INSURANCE	0	606
MISCELLANEOUS PAYROLL	0	-7
SUBTOTAL	**$ 1,382,410**	**$ 531,691**
EXPENSES & CONTRACTUAL SERVICES		
RENTS & LEASES	97,000	36,956
REPAIRS/ALTERATIONS/MAINTENANCE	9,000	3,587
PRINTING & BINDING	18,000	6,508
PROFESSIONAL/TECHNICAL SERVICES	5,000	2,294
DATA PROCESSING & SYSTEM SERVICES	162,000	54,000
PURCHASED SERVICES	20,000	9,382
SUBTOTAL	**$ 311,000**	**$ 112,727**
MISCELLANEOUS OPERATING EXPENSES		
COMMUNICATIONS	20,000	7,558
TRAVEL, IN-STATE	3,000	591
TRAVEL, OUT-STATE	40,000	20,980
FEES & OTHER FIXED CHARGES	7,000	2,476
SUBTOTAL	**$ 70,000**	**$ 31,605**
SUPPLIES/MATERIALS/PARTS	**15,000**	**19,005**
CAPITAL EQUIPMENT	**19,100**	**8,999**
TOTAL GENERAL FUND	**$ 1,797,510**	**$ 704,027**

ATTACHMENT B

STATE BOARD OF INVESTMENT

Travel Summary by Date
August 16, 1990 - November 15, 1990

Purpose	**Name(s)**	**Destination and Date**	**Total Cost**
Manager Monitoring **Active Stock Managers** Forstmann, Geo, Sasco Lieber, Franklin	B. Lehman M. Menssen	Boston, New York 9/11-13	$1,877.37
Staff Education "Repurchase Agreements" sponsored by Institute for International Research	J. Kinne	New York 9/25-28	$1,959.62
Miscellaneous **SIF Meeting** Volunteer Firefighters Association Meetings	J. Heidelberg	Plato MN 9/25 Clara City MN 10/8	$ 78.44
Staff Education "Plan Sponsor Round Table for Public Funds" sponsored by The Institutional Investor	H. Bicker	Chicago 9/25-26	$ 200.99
Staff Education "3rd Annual Public Pension Fund Conference" sponsored by the Auditor	H. Bicker	Minneapolis 9/27-29	$ 225.00
Board Member Travel "3rd Annual Public Pension Fund Conference" sponsored by the Auditor	J. Manahan	Minneapolis 9/27-29	$ 225.00
Staff Education Franklin Client Conference	D. Gorence	Boston 10/3-5	$ 419.00
Staff Conference National Council of Teacher Retirement Systems	H. Bicker	Baltimore 10/1-5	$1,491.80
Manager Monitoring **Active Stock Manager** Waddell & Reed	B. Lehman M. Menssen	Kansas City 10/8	$1,160.00
Manager Monitoring **Resource Manager** AMGO Annual Meeting	J. Griebenow	Houston 10/9-11	$ 508.00

ATTACHMENT B (Con't)

Purpose	Name(s)	Destination and Date	Total Cost
Miscellaneous PERA Board Meeting	H. Bicker	Windom MN 10/11-12	$ 63.70
Staff Education "Performance Measurement" sponsored by Institute for Int'l Research	M. Menssen	San Francisco 10/22-23	$ 529.65
Manager Search **GIC Manager** 1990-93 GIC Bid	J. Heidelberg	Boston 10/24-25	$ 518.54
Staff Education National Association of State Investment Officers Annual Meeting	H. Bicker B. Lehman	Sacramento 10/28-31	$2,140.46
Staff Education "Proxy Activism and Social Investment" sponsored by Assoc. for Investment Management and Research	A. Blauzda	Washington D.C. 10/29-30	$1,290.73
Staff Education "The Plan Sponsor Real Estate Conference" sponsored by Pension Real Estate Association	M. Perry	San Francisco 11/2-7	$1,408.10

ATTACHMENT C

SBI/IAC Meetings
Tentative 1991 Schedule

The State Board of Investment (SBI) and Investment Advisory Council (IAC) meet on the first consecutive Tuesday and Wednesday of the last month of each quarter.

Meeting dates for 1991 are:

SBI	IAC
Wednesday, March 6, 1991	Tuesday, March 5, 1991
Wednesday, June 5, 1991	Tuesday, June 4, 1991
Wednesday, September 4, 1991	Tuesday, September 3, 1991
Wednesday, December 4, 1991	Tuesday, December 3, 1991

The Executive Council, SBI and Land Exchange Board meet consecutively on the meeting day between 8:00 A.M. and 12:00 P.M. Generally, meetings are held in the State Capitol.

IAC meetings are held at 2:00 P.M. in Conference Room A, MEA Building, 41 Sherburne.

The above dates are tentative. Each meeting will be confirmed three or four weeks in advance.

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 10, 1990

TO: Members, State Board of Investment

FROM: Michael A. McGrath, Chair
SBI Administrative Committee

SUBJECT: Committee Report

The SBI Administrative Committee met on December 4, 1990 to review the following items:

1) <u>Status Report on FY 92-93 Biennial Budget Submission</u>

At its meeting in June 1990, the Board approved submission of a "same level" administrative budget request as defined by the guidelines issued by the Department of Finance (DOF) and directed the Executive Director to make any adjustments necessary to meet those guidelines.

After the June 1990 meeting, the DOF issued budget instructions which changed the definition of "same level" expenditures from that used in prior biennia. Specifically, the guidelines directed agencies to anticipate salary increases and other inflationary costs but did not provide any allowance for these increased costs within a "same level" budget. In effect, the guidelines required state agencies to fund all projected salary and inflationary increases by making programatic reductions within their current budgets.

The budget document submitted to the DOF in October 1990 is included as Attachment A. The Committee noted that the Executive Director may be required to make other changes to meet future directives from the DOF.

2) Appointment of a Manager Selection Committee for the Assigned Risk Plan

The Assigned Risk Plan was established in 1983 to provide workers' compensation coverage to employers rejected by a licensed insurance company. Currently, plan assets of approximately $200 million are managed by an outside money management firm selected by the Department of Commerce. Pursuant to legislation enacted in 1990, investment management responsibility for the assets will be transferred from the Department of Commerce to the SBI in May 1991.

In order to assure a smooth transition, a specific recommendation on the manager to be used for the plan must be presented to the SBI at its March 1991 meeting. As a result, a Manager Selection Committee should be convened during the next quarter.

RECOMMENDATION:

The Committee recommends that the SBI establish a Manager Selection Committee for the Assigned Risk Plan. The Committee should include a designee of each board member as well as two members of the IAC. The Committee should recommend one or more finalists to the SBI at its March 1991 meeting.

3) Approval of Contract Amendments for the Deferred Compensation Plan

By statute, the SBI must approve contractual relationships with the insurance companies offering annuity products to participants in the state's Deferred Compensation Plan. Two issues regarding these relationships require action by the SBI:

- Past Contract Amendments with Both Vendors

  While the SBI signed the original contracts with Minnesota Mutual/Northwestern National Life and Great West Life Assurance in 1979, it has not been a signator on amendments to the contracts since that time. The SBI's legal counsel has advised the Executive Director that the existing contracts should be brought up-to-date by executing a housekeeping amendment which includes the SBI as a signator to the amendments. This action would simply ratify the existing contractual relationships. An explanatory memo from SBI's legal counsel on this issue is included as Attachment B.

- Requested Contract Amendment with Minnesota Mutual

  Minnesota Mutual has received approval from the Securities and Exchange Commission (SEC) and the Minnesota Department of Commerce to expand the investment options it makes available to participants in its variable annuity product. They have requested that participants in the Deferred Compensation Plan be authorized to participate in the new investment options.

The expansion will reorganize the existing variable annuity fund (Minnesota Mutual Variable Fund D) into a unit investment trust with several sub-accounts (MIMLIC Series Fund) and give participants greater investment flexibility:

Stock Portfolio	(existing option)
Bond Portfolio	(new option)
Money Market Portfolio	(new option)
Managed Portfolio	(new option)
Mortgage Securities Portfolio	(new option)
Stock Index Portfolio	(new option)

The fee rates paid by participants in the new options will increase over the rate paid by participants in the existing stock option. It should be pointed out, however, that the SEC has determined that the new fees are still among the lowest in the annuity industry and the fees charged to Deferred Compensation Plan participants will be the same as those charged to all other users of Minnesota Mutual's variable annuity product.

RECOMMENDATIONS:

The Committee recommends:

- o that the SBI authorize the Executive Director, with assistance from SBI's legal counsel, to negotiate and execute any necessary contract amendments with Minnesota Mutual/Northwestern National Life and Great West which include the SBI as a signator.

- o that the SBI authorize the Executive Director, with assistance from SBI's legal counsel, to negotiate and execute any necessary contract amendments with Minnesota Mutual Life which will offer new investment options within the MIMLIC Series Fund to participants in the Deferred Compensation Plan.

ATTACHMENT A

ISSION:

he State Board of Investment (SBI) develops and implements investment policies and strategies for e state's retirement funds, trust funds and cash accounts. The statutory goal of SBI is "to establish andards which will ensure that state and pension assets.....will be responsibly invested to maximize e total rate of return without incurring undue risk." (M.S. Chapter 11A.01)

he SBI, composed of 5 constitutional officers, provides investment management for the Basic etirement Funds, the Post Retirement Fund, the Permanent School Fund, and the Supplemental vestment Fund. In addition, the SBI manages Invested Treasurer's Cash and approximately 50 her state cash accounts. On 6-30-90, assets managed through the board totaled $16.3 billion.

he board retains an executive director, an internal investment management staff and external vestment managers to execute its policies. In performing its duties, the board works in conjunction ith the Investment Advisory Council, composed of 17 persons with investment and retirement fund pertise.

he SBI staff recommends strategic planning alternatives to the board and council, and executes the oard's decisions. The staff also provides internal management for approximately 50% of the board's sets, closely monitors the performance of all external managers retained by the board and reviews rospective investment vehicles for legislative consideration. The majority of the board's activity lates to investment of retirement funds (roughly 85%). Primary clients are the current and retired embers of the 3 statewide retirement systems - PERA, TRA, MSRS. For cash accounts, the oard's largest clients are the State Treasurer and the Department of Finance.

IAJOR POLICY DRIVERS:

ll activities of the board are governed under M.S. Chapters 22A and 356.A. To meet the goals erein established, the SBI must:

- Establish and periodically update the investment objectives, asset allocation and investment management structure for each of the funds. Seek and retain superior money managers to manage the assets of each fund.
- Monitor and evaluate investment performance to insure investment objectives are met.
- Assess developments in the broad financial markets and evaluate their potential impact on SBI operations and policies.
- Communicate its investment policies to clients and constituents.

vestment activity is divided into 2 major areas; externally and internally managed funds. Each re- uires different strategies and investment vehicles.

xternally managed funds. Assets of the Basic Retirement Funds and the Supplemental Investment und (approximately 50% of the total) are under external management.

he Basic Retirement Funds invest the contributions of public employees and employers during the mployees' years of public service. Approximately 312,000 public employees in 8 statewide retirement nds participate in the Basic Funds. The purpose is to function in a fiduciary capacity, investing ension contributions to provide sufficient funds to finance promised benefits at retirement.

he Supplemental Investment Fund is a multi-purpose investment program that offers a range of vestment options to state and local employees. It serves a wide range of participants and vestment goals, and is, therefore, structured much like a family of mutual funds.

Internally managed funds. The SBI directly invests about 50% of the assets with which it is entrusted. This includes the assets of the Post Retirement Fund and all money in state cash accounts.

The Post Retirement Fund contains the assets of approximately 59,000 retired public employees covered by 9 statewide retirement plans. Upon retirement, money sufficient to finance fixed monthly annuities for the life of the retiree are transferred from the Basic Funds to the Post Fund.

The Post Fund's main purpose is to ensure that each retiree's initially promised benefit is paid. Benefit increases are granted if earnings exceed the statutory 5% required income.

State Cash Accounts represent the cash balance in more than 400 separate accounts that flow through the Minnesota State Treasury. These accounts, ranging from $5,000 to over $400 million, are invested by SBI through 2 commingled short-term investment pools. The objectives are to preserve capital, provide a high level of current income and to meet the cash needs of state government without the forced sale of securities at a loss. The pools are expected to generate investment income equal to or greater than other money market-type funds.

EXPLANATION OF BUDGET ISSUES AND ALTERNATIVES:

In the past biennium SBI absorbed the inflation cost increases in all areas except salaries. By re-prioritizing expenditures, SBI should be able to absorb 1992-93 non-salary inflationary costs without impacting programs dramatically. The SBI cannot, however, absorb projected salary increases within its current structure. If a salary supplement is not available, SBI will be forced to move internally managed stock and bond portfolios to external money management firms and reduce 3 staff positions. The additional costs associated with external management would be paid from the assets of the retirement funds. The General Fund dollars associated with the 3 positions would be used to fund F.Y. 1992-93 salary increases for the remaining 22 positions.

By statute, SBI bills the statewide retirement funds and non-General Fund cash accounts for approximately 90% of its General Fund appropriations. These receipts are deposited in the General Fund as non-dedicated revenue. The General Fund appropriation not recovered (approximately 10%) represents that part of SBI's budget associated with investment of the General Fund portion of the Invested Treasurer's Cash Fund.

PERFORMANCE MEASURES:

Statutes establish investment goals for the Basic and Post Retirement funds. In addition, the board has set more exacting standards for investment returns. The table below reflects that short and long-term performance has generally exceeded both statutory requirements and the board's investment performance targets.

ATTACHMENT A (con't)

Basic Retirement Funds
(Status as of 6-30-90)

	Actual	Compared to Objective
Iarket Value		$7 1 billion
l Return - Annualized		
'otal Fund over 10 years	13 0%	8 4% over inflation
'otal Fund over 5 years	13.0%	equals Market composite
tocks/Bonds/Cash over 5 years	14.0%	1 2% over median fund
idity		
Iinimal cash	0.8%	less than 1 0% ceiling

Post Retirement Fund
(Status as of 6-30-90)

	Actual	Compared to Objective
Iarket Value		$5.3 billion
Realized Earnings-Annualized		$458 million - F.Y. 1990
Year	10 0%	5 0% over required
Year	11.3%	6.3% over required
idity	5 9%	4 9% over 1.0% ceiling

Supplemental Investment Fund
(Period ending 6-30-90)

	F Y. 1990	Annualized 3 Year	5 Year
me Share Account			
'otal Account	11 1%	9 1%	11 7%
TUCS Median Balanced Fund	10 0	8 4	12.7
Market Composite	11 0	9 1	13.8
(60% Wilshire 5000/35% Solomon Broad/5% T-Bills)			
wth Share Account			
'otal Account	14.2	7.2	12.3
TUCS Median Equity manager	12.4	8.8	15 8
Market Composite	12.6	8.3	15.2
(95% Wilshire 5000/5% T-Bill)			
nmon Stock Index Account			
'otal Account	12.5	8.1	13.2
Wilshire 5000 Stock Index	12.7	8.2	13.1
d Market Account			
'otal Account	7.3	9.6	9.1
Solomon Broad Bond Index	7.7	9.3	10 6

	F.Y. 1990	Annualized 3 Year	5 Year
Money Market Account			
Total Account	8 9	8.5	8 0
91 Day U.S. T-Bills	8.2	7.5	7.0

Guaranteed Return Account
On 6-30-90, the market value of the Guaranteed Return Account was $60 million.

State Cash Accounts (Year Ending 6-30-90)

	Market Value	Return
Treasurer's Cash Pool	$2.655 billion	9 0%
Trust Fund Cash Pool	0 333 billion	8.8
91 Day U.S. T-Bills		8 2

Some accounts within the Supplemental Investment Fund have not experienced the same high returns associated with retirement funds. However, the primary objectives of these accounts are capital preservation and current income. Returns for the State Cash Accounts, were well over target return levels. Overall, most funds managed by the SBI have met or exceeded their performance objectives.

INVBD.AGY
11-29-90 1:11pm jms

1992-1993 BIENNIAL BUDGET
(DOLLARS IN THOUSANDS)

AGENCY: BOARD OF INVESTMENT
PROGRAM: INVESTMENT OF FUNDS
ACTIVITY: INVESTMENT OF FUNDS

ACTIVITY SUMMARY:	FY 1989	FY 1990	Est. FY 1991	FY 1992 Base Adj./	FY 1992 Agency Base		FY 1993 Base Adj./	FY 1993 Agency Base	
DETAIL BY CATEGORY:									
STATE OPERATIONS:									
PERSONAL SERVICES	1,269	1,336	1,383	19	1,402		13	1,396	
EXPENSES/CONTRACTUAL SRVCS	314	311	311		311			311	
MISC OPERATING EXPENSES	60	68	70		70			70	
SUPPLIES/MATERIALS/PARTS	26	20	15		15			15	
CAPITAL EQUIPMENT	24	6	19		19			19	
TOTAL STATE OPERATIONS	1,693	1,741	1,798	19	1,817		13	1,811	
TOTAL EXPENDITURE BY CATEGORY	1,693	1,741	1,798	19	1,817		13	1,811	
SOURCES OF FINANCING:									
DIRECT APPROPRIATIONS:									
GENERAL	1,693	1,741	1,798	19	1,817		13	1,811	
STATUTORY APPROPRIATIONS:									
TOTAL FINANCING	1,693	1,741	1,798	19	1,817		13	1,811	

ATTACHMENT B

DEPARTMENT: ATTORNEY GENERAL

STATE OF MINNESOTA

OFFICE MEMORANDUM

DATE: December 5, 1990

TO: THE HONORABLE MEMBERS OF THE STATE BOARD OF INVESTMENT

FROM: CHRISTIE B. ELLER CBE
Assistant Attorney General

PHONE: 296-9421

SUBJECT: **Deferred Compensation**

Two items are on the agenda for the December meeting of the State Board of Investment (SBI) relating to approval of contract amendments for the deferred compensation plan. These items are on the agenda because all deferred compensation contracts and amendments thereto are subject to approval by the SBI for the reasons discussed in this memorandum.

Minnesota statutes give both the Minnesota State Retirement System (MSRS) and the SBI responsibilities with respect to the deferred compensation program. The SBI is authorized by Minn. Stat. § 352.96, subds. 2 and 3 (1990) to take bids and purchase guaranteed investment contracts and fixed and variable annuity contracts. The executive director of MSRS is authorized to establish rules and procedures to administer the program by Minn. Stat. § 352.96, subds. 3 and 4 (1990). State Board of Investment approval of contracts relating to fixed and variable annuity contracts for the deferred compensation program is required pursuant to Minn. Stat. § 352.96, subd. 3 (1990). It provides as follows:

> Subd. 3. **Executive director to administer section**. This section must be administered by the executive director of the system under subdivision 4. Fiduciary activities of the deferred compensation plan must be undertaken in a manner consistent with chapter 356A. If the state board of investment so elects, it may solicit bids for options under subdivision 2, clauses (2) and (3) [including fixed and variable annuity contracts]. All contracts must be approved before execution by the state board of investment. Contracts must provide that all options in subdivision 2 must: be presented in an unbiased manner and in a manner that conforms to rules adopted by the executive director, be reported on a periodic basis to all employees participating in the deferred compensation program, and not be the subject of unreasonable solicitation of state employees to participate in the program. The contract may not call for any person to jeopardize the tax-deferred status of money invested by state employees under this section. All costs or fees in relation to the options provided under subdivision 2, clause (3), must be paid by the underwriting companies ultimately selected by the state board of investment.

(Emphasis added.)

Pursuant to this section, the SBI solicited bids for fixed and variable annuity contracts. The SBI subsequently entered into contracts with Minnesota Mutual/Northwestern National Life and Great West Life. The State of Minnesota is designated as the contract holder on each of the contracts and each contract was executed by Governor Albert H. Quie, for the SBI, and Paul Groschen, as the executive director of MSRS. The SBI as a signatory to the original contract should as a matter of contract law be a signatory to any amendments.

The relevant sentence in Minn. Stat. § 352.96, subd. 3 (1990) expressly provides that "[a]ll contracts must be approved before execution by the state board of investment." It is my view that this clause means that the SBI must at least approve the terms of the contracts. The statute does not require that it be the SBI that executes the contract, it only requires that the SBI approve the contract. However, since the SBI was party to the original contracts both Minnesota Mutual/Northwestern National Life and Great West Life and they were executed by Governor Quie on behalf of the SBI, the SBI is a party to contracts and by the express terms of the contracts must be a party to any amendments. While the statute also provides that the executive director of the MSRS shall administer the system, that does not eliminate the responsibility the SBI also is given under the section. Under the canons of construction every law is to be construed, if possible, to give effect to all of its provisions, Minn. Stat. § 645.16 (1990); the entire statute is intended to be effective and certain, Minn. Stat. § 645.17(2) (1990); and when a general provision in a law is in conflict with a special provision, the two shall be construed to the extent possible so that effect may be given to both, Minn. Stat. § 645.26, subd. 1 (1990).

Based upon the express language of the annuity contracts, Minn. Stat. § 352.96, subd. 3 (1990) and the above-cited canons of statutory construction, it is my view that the SBI must approve and execute any contract amendments.

A list of the contracts and amendments is set forth below. Those denoted with an asterisk are the ones which were not approved or executed by the SBI. Each of the prior amendments are favorable to the State or make adjustments otherwise required by law.

I hope this information is of assistance.

LIST OF CONTRACTS

Minnesota Mutual Life Insurance Company Contract No. 088048
Minnesota Mutual Life Insurance Company Contract No. 844047
Amendment to Contract No. 844047 unnumbered
* Amendment No. 2 to Contract No. 844047
* Amendment No. 3 to Contract No. 844047
* Amendment No. 4 to Contract No. 844047
* Amendment No. 5 (dated October 4, 1988) to Contract No. 844047
* Amendment No. 5 (dated March 23, 1989) to Contract No. 844047

Great West Life Contract No. 71744GP
Great West Life Policy No. 13988GP
* No formal execution of any amendment with respect to the sex neutrals tables in 1983
* No formal amendment or approval by the SBI to certain changes made on November 5, 1985

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 10, 1990

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

FROM: Equity Manager Committee

SUBJECT: Committee Report

The IAC Equity Manager Committee met on December 5, 1990, to review the following agenda:

- o Review of Active Manager Performance
- o In-Depth Review of Forstmann-Leff Associates
- o Status Report on Tilted Index Fund Implementation

None of the items require action by the Board at this time.

INFORMATIONAL ITEMS:

1) Review of Active Manager Performance

For the quarter ending September 31, 1990, the active manager group underperformed both its aggregate benchmark and the Wilshire 5000 (Managers -17.1% vs. Aggregate Benchmark -17.0% vs. Wilshire 5000 -15.2%). For the latest one and five year periods, the current active manager group has outperformed its aggregate benchmark but underperformed the Wilshire 5000.

The evaluation reports for each manager are attached at the end of this tab section.

2) <u>In-Depth Review of Forstmann-Leff Associates</u>

Last quarter the committee requested that staff conduct a formal review of Forstmann-Leff Associates. A copy of staff's full report on Forstmann-Leff is attached. A summary of staff findings follows:

- **Qualitative Strengths**

  Forstmann-Leff Associates adheres to and consistently implements its investment process. Forstmann-Leff's managing directors maintain a strong, viable organization that should be able to continue to implement its investment philosophy in the future.

- **Quantitative Strengths**

  Forstmann-Leff has generated value added since the inception of the account. Sector and stock selection have both added value relative to Forstmann-Leff's benchmark.

Staff's only minor concern continues to be the somewhat high turnover that Forstmann-Leff incurs among its professional staff. While Forstmann-Leff's investment decision process and strong leadership tend to negate any potential impact on the SBI's portfolio, staff will continue to monitor any changes among the investment professionals at the firm.

Reviewing the firm against the Board's Manager Continuation Policy, staff can not identify any issues that warrant placing the firm on probation or terminating the contract with Forstmann-Leff Associates. Staff remains confident in the ability of the firm to add value in the future relative to its benchmark. Upon review, the Committee concurs with the staff's conclusion concerning Forstmann-Leff Associates.

3) <u>Status Report on Tilted Index Fund Implementation</u>

Contractual arrangements for the tilted index fund were finalized between the SBI, Wilshire Associates, and State Street Bank in September 1990. Initial trading to reposition the index fund began in October, and continues to be on schedule. The Committee will review the first three months of operation at its next meeting.

Detailed Review of

Forstmann-Leff Associates

EXTERNAL MANAGER DETAIL

FORSTMANN-LEFF ASSOCIATES

I. ORGANIZATIONAL DETAIL

A. Ownership

Forstmann-Leff's ownership changed several times since the inception of the SBI account. Initially Forstmann-Leff Associates (FLA) was a privately held, employee owned firm. In October, 1986 FLA merged with Guinness Peat Group PLC located in Great Britain. In 1987 Equiticorp International PLC, a New Zealand financial services group, obtained a 61% controlling interest of Guinness Peat. In 1989 Equiticorp declared bankruptcy and FLA proceeded to repurchase a majority of its outstanding shares. Currently five senior executives of FLA own 95% of the firm and Guinness Peat Group PLC holds a 5% non-voting interest in FLA.

B. Portfolio Management Responsibilities

Originally Steve Reynolds managed the SBI's account. However, in 1984 FLA asked Mr. Reynolds to leave due to their dissatisfaction with his performance and assigned the account to Richard Walton. Subsequently, in January, 1985 Mr. Walton decided to leave the firm to form his own investment firm and Joel Leff, one of the founding partners, took over management of the SBI portfolio.

C. Assets Under Management

Equity Assets Under Management

	Number of Accounts	Market Value (In Millions)
Dec. 1983	150	$4,892
Dec. 1984	129	3,924
Dec. 1985	86	3,744
Dec. 1986	85	4,228
Dec. 1987	88	4,003
Dec. 1988	85	3,831
Dec. 1989	79	4,052
Jun. 1990	79	3,697

FLA's account status shows a substantial decrease since 1983 with the majority of the decrease occurring in 1984 and 1985. During 1984 and 1985 a majority of the account loss occurred due to clients' dissatisfaction with performance and FLA's venture into fixed income, real estate, and LBO investments. Subsequently, FLA sold their interest in these other investment vehicles. In addition, FLA lost some accounts because several portfolio managers left the firm to start their own firms and some of FLA's clients left with them.

D. Personnel Turnover

FLA's turnover among its professional staff historically has been high. Since the inception of the SBI account, eight portfolio managers and four analysts have left the firm. Some resigned to form their own investment firms, while others left for personal reasons. In addition, FLA asked some to leave due to dissatisfaction with their performance.

Historically, the high turnover among FLA's professional staff has not affected its ability to effectively implement its investment process. The structure of FLA's investment process reduces the impact of a high turnover rate because the majority of the investment decisions occur in a committee setting. The asset mix and sector weighting decisions occur at the committee level while the individual portfolio managers retain some control over the stock selection process. In addition, the stability of senior management minimizes the impact of the professional staff turnover. Staff continues to express its concern regarding turnover among FLA's professional staff by highlighting it in the qualitative evaluation section of the quarterly report.

II. INVESTMENT APPROACH

A. Investment Philosophy

FLA's investment philosophy's primary objective to preserve capital through asset allocation. FLA wants to participate in up markets and avoid negative returns in down markets. FLA also attempts to add value within its equity allocation through sector weighting and stock selection.

<u>Asset Allocation</u>

FLA uses a committee approach in making the asset allocation decision. Initially, the Investment Committee, consisting of all the managing partners, portfolio managers, and analysts, meet once a week to discuss any changes in the social, economic, monetary, and political inputs used to make their asset allocation decision. FLA uses both quantitative and qualitative inputs in making their asset allocation decision. Some of the quantitative inputs used include:

- Dividend discount model

- Monetary comparisons using changes in the money supply, savings rate, and debt levels relative to historical levels.

- Market comparisons using corporate profits, dividends, and book value relative to historical levels when compared to the S&P 500.

For the qualitative inputs, FLA uses a variety of inputs including:

- Consumer sentiment

- Institutional equity holdings

- Purchasing managers expectations

- Anticipated business investments

The Investment Policy Committee, consisting of the managing directors, meets to make the final asset allocation decision. FLA will go to 100% equities cash or bonds if the fundamentals overwhelmingly support such a position. Most of the time, however, mitigating circumstances prevent them from taking such an extreme position.

Sector Weightings

The same committee process also determines the sector allocation decision. All professional staff provide input to facilitate discussion to what the appropriate sector weightings should be. The Investment Policy Committee again makes the final decision. The sector allocation decision starts by looking at long term market trends and than analyzing the shorter term cyclical cycles occurring in the economy. Both committees use the same information generated in analyzing the asset allocation decision and supplements it with information specific to each sector to better define each sector's secular and cyclical trends.

Once the Investment Policy Committee determines the final sector weightings, the portfolio managers can not deviate by more than 5% from the assigned weightings in a clients portfolio.

Stock Selection

FLA does not commit to one style of stock selection, such as "growth stocks" or "value stocks". Instead they evaluate stocks on the basis of expected return. To determine the most attractive stocks, FLA considers a number of fundamental criteria including:

- An analysis of the company's business relative to the overall economy.

- Total expected return for the next year.

- Discounted cashflow of future earnings and dividends.

- Price to book value.

- Quality of earnings.

- Balance sheet structure.

- Credit rating.

The stock selection process uses a two step approach. Approximately 50% of the clients equity investments consist of stocks determined by the Investment Committee to have the greatest potential for above average returns. FLA allows the remaining equity investments to be at the discretion of the individual portfolio manager. The constraints on the portfolio managers regarding sector bets and individual stock investments helps to produce consistency among FLA's client portfolios.

Approximately 50% of FLA's research originates in-house. They augment this information with resources provided by major and regional brokerage firms.

B. Prominent Characteristics

An analysis of the firm's past portfolios reveals a number of prominent risk factors and sector exposures. The following risk and sector exposure highlights were derived from Exhibits 1 and 2.

Risk Exposure Highlights: FLA's portfolios relative to the BARRA Hicap Universe show a consistent bias towards a higher exposure to beta, growth, and market variance and lower exposure to yield and size. The wide range between FLA's maximum and minimum positions indicate a definite willingness by FLA to make significant bets over time.

Sector Exposure Highlights: FLA's portfolios relative to the S&P 500 show a overweighting in basic materials, financial, and consumer non-durables and an underweighting in capital goods, utility, and energy stocks. The maximum and minimum positions again show that, over time, FLA takes significant bets relative to the S&P 500 in almost all the sectors.

C. Benchmark Construction

Prior to the first quarter of 1988 FLA used a benchmark constructed by staff. The original benchmark construction process combined two separate portfolios. The first portfolio provided a broadly diversified portfolio to reflect FLA's willingness to hold stocks in any industry. The second portfolio reflected FLA's bias toward higher growth orientated stocks. The final portfolio combined the broadly diversified and growth portfolios in a 60/40 mix respectively. The resulting portfolio combined with a 30% cash position provided a better benchmark than the broad market but left room for improvement.

In 1987 FLA, with the assistance of a consulting firm, revisited the benchmark construction process to try to better define FLA's investment universe. Implementation of the current benchmark construction process started on January, 1988.

The current construction process uses the following criteria in selecting the individual stocks that will go into the benchmark portfolio.

1. Market capitalization greater than $100 million.

2. Only securities traded on the NYSE, AMEX, or OTC with the following exceptions:

   a. No ADR's unless listed on NYSE with a market capitalization greater than $500 million.

   b. No OTC financial stocks with less than $500 million market capitalization.

   c. No OTC bank stocks with less than $750 million in market capitalization.

3. Market price per share greater than $5.00.

4. Issues have been in existence for at least one year and BARRA E2 information available, unless market capitalization is greater than $500 million.

5. Common risk factor exposures within specific ranges defined by the analysis of past portfolio holdings.

6. Beta greater than 0.5 and less than 2.0.

7. No REIT's or closed funds and no master limited partnerships with less than $500 million in market capitalization.

8. Stocks held in the previous benchmark that no longer meet the selection criteria are retained for one additional quarter.

9. SBI restricted stocks (liquor, tobacco, and South Africa) are eliminated.

The weighting scheme for the Forstmann-Leff benchmark set out to accomplish three primary objectives:

1. Allocate weights based on the market capitalization in a manner consistent with Forstmann-Leff's investment approach.

2. Achieve a target benchmark equity-only beta.

3. Achieve an approximate S&P 500 representation for each S&P 500 security held in the benchmark.

Initially, the weighting structure assigned all stocks above $10 billion in market capitalization 100 times the weight that a stock with $100 million in market capitalization. All stocks with market capitalization in between received a weight from 1 to 100 in proportion to their market capitalization. Following the initial weighting computation, individual stocks were adjusted to shift the benchmark beta towards 1.18 and to achieve a more S&P 500 representation for the S&P 500 stocks in the benchmark without significantly affecting the weights produced by the initial weighting scheme. Finally the benchmark process eliminates all stocks with a portfolio weight less than .025%.

Lastly, the benchmark received a 30% cash allocation due to FLA's willingness to make significant shifts in asset mix. On average, FLA has held a 30% cash position in its portfolios.

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 1, the FLA's average benchmark risk factor profile shows a reasonably close similarity to the average (mean) of FLA's past portfolios. With respect to sector weights, Exhibit 2 shows that the actual portfolios, on average, held a higher exposure in the basic material and energy sectors and a lower exposure in the capital goods, utilities, and financial sectors. One of the primary reasons for the large difference between the average portfolio sector exposure and the average benchmark sector exposure is that the economy, since the inception of the account, has not gone through a full cycle. Therefore, FLA's investment process has not fully rotated through all the various sectors. After a full rotation or two a benchmark should show a close similarity between its actual average sector exposure and its average benchmark sector exposure.

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 a manager's definition and implementation of its investment process. A valid benchmark should produce a coverage ratio in the range of 80-90%. In addition, a stock held in the actual portfolio implies that the manager believes that particular stock will do well relative to the other stocks in the manager's benchmark. Therefore, the weighting of each of the holdings in the active portfolio should exceed the corresponding weights assigned to the same securities in the benchmark.

Benchmark turnover measures the proportion of the benchmark's total market value that represents either the purchase of new securities or additions or reductions to existing positions at each rebalancing period. A valid and investable benchmark should experience reasonable levels of turnover. However, a realistic passive management implementation of a manager's benchmark should not incur a semi-annual turnover greater than 15%.

The table below shows a summary of FLA's benchmark and coverage results.

Table I

1/88-6/90 Semi-Annual Data	Benchmark Coverage	Actual Portfolio Weights Greater Than Benchmark Weights	Semi-Annual Benchmark Turnover
Average	90.09%	100.00%	12.03%
Minimum	73.12	99.52	10.05
Maximum	97.31	100.00	17.07

In terms of coverage, the current FLA benchmark, on average, captures 90% of the FLA actual portfolio since the inception of the current benchmark. In addition,

Table I shows that nearly all the actual portfolio weights exceeded their corresponding benchmark weights. Both of these measures support the validity of using FLA's benchmark as a baseline from which to conduct performance attribution analysis.

In regards to benchmark turnover, FLA's benchmark maintains a low level of turnover. This provides an additional indication that FLA's benchmark represents a valid and investable benchmark.

III. PERFORMANCE ANALYSIS

A. Benchmark Explanatory Power

Because the manager's benchmark more accurately represents the manager's investment style than the broad market, it should do a better job of explaining the returns generated by the manager. Calculating an information ratio (IR) provides an useful analytical measure to determine the benchmark's explanatory power. 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 one generated when the market (e.g. Wilshire 5000) serves as the benchmark. Holding everything else constant, a valid benchmark should reduce the VAM standard deviation, thereby reducing the time period needed to prove at a certain confidence level whether the manger can add value. Table II summarizes an IR analysis of FLA's actual returns relative to their benchmark and the Wilshire 5000.

Table II

For the Time Period 1/1/84 to 6/30/90	FLA Actual vs. FLA Benchmark	Actual vs. W 5000
Cumulative Annualized VAM	1.22	-2.88
Annualized Standard Deviation of VAM	5.10	6.50
Information Ratio	.24	- .44
Information Ratio T-Statistic	.60	-1.15
Percentage of months VAM > 0	53.85%	44.87%

As expected, the FLA benchmark reduces the VAM standard deviation relative to using the Wilshire 5000 as a benchmark. However, even with the lower VAM standard deviation, the analysis period still does not provide enough data to produce a statistically significant t-statistic for the IR (.60). The above analysis presents positive evidence that the benchmark provides a better baseline than the market. However, the analysis cannot confirm at a reasonable confidence level that the manager can add value relative to its benchmark.

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), and the manager's VAM, and the manager's benchmark returns versus those of the market (MFT). A valid benchmark should exhibit a positive correlation between EXM and MFT. Intuitively the correlation should be positive because 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 relative to the market. On the other hand, a valid benchmark should over time produce a roughly zero correlation between MFT and VAM, because 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. Table III displays FLA's correlation analysis.

Table III

Forstmann-Leff
Residual Correlation Matrix

	EXM	MFT	VAM
Portfolio vs. Market (EXM)	1.00		
Benchmark vs. Market (MFT)	.62	1.00	
Portfolio vs. Benchmark (VAM)	.75	-.05	1.00

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

B. Performance Relative To The Wilshire 5000

Exhibit 3 shows that on a cumulative basis since January 1984, FLA's benchmark return (82.7%) lagged the broad market return for the Wilshire 5000 (113.3%). This points to a poor environment for FLA's investment style over the time period analyzed. FLA's equity investments tend to be biased towards smaller capitalization growth stocks than the general market. During the time period analyzed smaller capitalization growth stocks constituted the poorest performing subset of the equity market. This underperformance due to FLA's style bias can also be seen in Exhibit 3 comparing FLA's equity only benchmark performance (82.2%) relative to the Wilshire 5000 (113.3%). In addition to the poor equity style performance, FLA's significant cash position (see Exhibit 4) caused the total portfolio returns to lag the Wilshire 5000 during a time period that saw a secular rise in the stock market.

C. Portfolio Performance Attribution

FLA, with the assistance of a consulting firm, computes a performance attribution report that breaks value added returns relative to FLA's benchmark into three components: 1) market timing; 2) sector allocation; and 3) stock selection. However, FLA's performance attribution analysis only goes back to January, 1987. Staff provides some additional attribution analysis by looking at total portfolio and equity only returns since inception of the FLA account.

<u>Market Timing</u>

FLA's market timing detracted from total portfolio performance. Exhibit 5 shows that market timing generated value added of -1.56% (-0.42% annualized) for the time period January 1987 through August 1990.

Since January 1984, FLA's market timing decisions generated negative value added returns. Exhibit 3 shows that FLA's total portfolio return underperformed relative to its equity only return while FLA's benchmark total return outperformed its equity only return. Exhibit 4 provides an overview of FLA's asset allocation for the same time period.

Exhibit 4 shows that for the majority of the time FLA's actual equity allocation remained close to or under the benchmark allocation since the inception of the account. Since the market has shown a general trend upward over this time period, FLA's neutral to underweighting in stocks has hurt its total performance relative to its benchmark. Exhibit 4 also shows that FLA will substitute short or intermediate term bonds for some or all of the cash allocation. The investment in bonds will depend on the risk premium difference between stocks, bonds, and cash determined by FLA's asset allocation decision process.

From January 1987 - August 1990, FLA did not show an ability to add value through their asset allocation decisions. However, given the short time frame of the analysis, it would not be prudent to restrict FLA's investment process to concentrate their active bets in the areas that they have added value.

Sector Allocation

Exhibit 5 shows that since January 1987, sector allocation contributed positive value added returns of 4.49% (1.21% annualized) relative to FLA's benchmark. Broken down by calender year, only 1988 produced a negative value added rate of return.

When broken down by sector (see Exhibits 6 and 7), utilities, technology, basic materials, and energy, generated the the majority of the positive value added. Only the financial sector produced a significant negative return. FLA primarily added value by underweighting utilities in 1987 and technology in 1989, overweighting energy in 1989 and 1990, and basic materials from 1987 through 1990. The negative impact of the financial sector resulted from an underweighting of the sector from 1988 through 1990. Exhibits 5 and 6 show that FLA has provided fairly consistent value added returns from their sector allocation decisions.

Stock Selection

Exhibit 5 shows that stock selection provided the greatest value added among the three sources of return contributing 8.99% (2.38% annualized) since January 1987. Exhibit 8 provides more detail by breaking down the stock selection by sector. FLA significantly added value in the financial, energy, consumer non-durable, and consumer durable sectors, and recorded a significant negative value added in transportation. The stock selection data provides evidence that FLA can provide positive value added returns from their stock selection process on a fairly consistent basis.

In addition, Exhibit 3 shows that FLA'S equity investment decisions (sector and stock selection) generated significant value added returns from January 1984 through September 1990 relative to its benchmark. FLA recorded a 33.3% (115.5 vs. 82.2) cumulative value added (4.35% annualized) during this time period.

Performance Analysis Conclusions

Based on the above analysis the following observations can be made:

- FLA's benchmark provides a better baseline from which to evaluate FLA's performance relative to using a broad market average. Therefore, a higher degree of reliability can be assigned to the conclusions drawn from the performance analysis using FLA's benchmark rather than a broad market average.

- The VAM graph (Exhibit 9) shows that FLA has consistently been able to add value since June 1985.

- FLA's ability to add value comes from its equity investment decisions (sector and stock selection).

- FLA's market timing decisions over the time period analyzed detracted from performance.

IV. SUMMARY OF BOARD/IAC ACTIONS TO DATE

In January 1983 the Board approved a recommendation to hire Forstmann-Leff Associates. The firm received $50 million in March 1983.

In April 1984 the Board placed FLA on a "probation list" due to the high turnover in the investment staff at the firm. In August 1984 the Board removed FLA from the "probation list" because the personnel situation at the firm appeared to have stabilized.

In January and April of 1988 FLA received an additional $30 million of SBI assets.

V. CONCLUSION

FLA has implemented its stated investment philosophy consistently:

- o Quantitative Strengths. FLA has generated value added since the inception of the account. Sector and stock selection have both added value relative to FLA's benchmark.

- o Qualitative Strengths. FLA adheres to and consistently implements its investment process. FLA management maintains a strong, viable organization that should be able to continue to implement its investment philosophy in the future.

Staff's only minor concern continues to be the somewhat high turnover that FLA incurs among its professional staff. While FLA's investment decision process and strong leadership tend to negate any potential impact on the SBI's portfolio, staff will continue to monitor any changes among the investment professionals at the firm.

EXHIBIT 1

RISK ANALYSIS SUMMARY
FLA ASSET MANAGEMENT

DATE	# STKS	SPEC RISK	EQ. BETA	VAR. MKTS	EAR. VAR	BOOK/ PRICE	SIZE RISK	GROWTH RISK	EAR./ PRICE	YIELD	FIN. RISK
01/01/84	39	0.86	1.07	0.06	0.28	-0.14	0.17	0.19	-0.04	-0.31	0.19
04/01/84	37	0.87	1.11	0.12	0.03	-0.08	-0.04	0.13	-0.07	-0.24	0.24
07/01/84	31	0.98	1.15	0.27	0.14	0.09	-0.08	0.14	-0.06	-0.24	0.33
10/01/84	31	1.02	1.15	0.30	0.16	0.07	0.07	0.12	-0.03	-0.20	0.11
01/01/85	31	0.99	1.11	0.17	0.22	0.09	0.15	0.19	0.08	-0.19	0.18
04/01/85	27	1.12	1.19	0.38	0.29	-0.03	0.19	0.49	0.01	-0.33	0.12
07/01/85	33	1.07	1.19	0.43	0.15	-0.19	0.20	0.43	-0.02	-0.48	0.13
10/01/85	48	1.14	1.23	0.82	0.28	-0.04	-0.46	0.35	-0.19	-0.54	0.07
01/01/86	71	0.94	1.22	0.79	0.47	-0.12	-0.60	0.55	-0.20	-0.65	0.23
04/01/86	76	0.86	1.23	0.75	0.34	-0.04	-0.74	0.56	-0.12	-0.56	0.13
07/01/86	56	1.10	1.38	1.20	0.41	-0.11	-1.14	0.97	-0.06	-0.99	0.00
10/01/86	36	1.36	1.42	1.26	0.42	0.03	-1.33	1.07	-0.05	-1.08	0.11
01/01/87	31	1.56	1.32	0.92	0.10	-0.33	-0.54	0.75	-0.15	-0.75	0.07
04/01/87	27	1.22	1.19	0.52	-0.01	-0.42	-0.18	0.48	-0.19	-0.67	0.12
07/01/87	35	1.42	1.13	0.43	-0.03	-0.33	0.05	0.27	-0.18	-0.44	0.10
10/01/87	37	1.20	1.10	0.35	0.10	-0.12	-0.18	0.28	-0.06	-0.31	0.09
01/01/88	34	1.14	1.03	0.11	0.11	-0.09	-0.25	0.25	-0.01	-0.25	0.18
04/01/88	31	1.19	1.06	0.11	0.06	-0.20	-0.10	0.15	0.02	-0.18	0.36
07/01/88	39	0.99	1.12	0.28	0.14	-0.10	0.02	0.30	0.07	-0.38	0.12
10/01/88	37	1.04	1.11	0.28	0.21	-0.10	0.01	0.20	0.14	-0.29	0.09
01/01/89	38	1.06	1.13	0.34	0.33	-0.11	0.03	0.28	0.16	-0.33	0.27
04/01/89	29	1.27	1.08	0.27	0.40	-0.24	0.01	0.18	0.35	-0.29	0.40
07/01/89	30	1.31	1.10	0.37	0.31	-0.20	-0.20	-0.04	0.29	-0.25	0.18
10/01/89	27	1.64	1.04	0.40	0.38	-0.23	-0.28	-0.10	0.26	-0.42	0.05
01/01/90	30	1.52	1.07	0.38	0.38	-0.14	-0.57	0.16	0.13	-0.46	-0.02
04/01/90	33	1.58	1.14	0.55	0.56	-0.02	-0.80	0.24	0.23	-0.46	-0.03
07/01/90	38	1.43	1.12	0.48	0.53	0.02	-0.71	0.22	0.16	-0.43	0.12
MEAN	37	1.22	1.16	0.49	0.26	-0.15	-0.34	0.35	0.04	-0.46	0.14
MIN	23	0.76	1.01	0.05	-0.04	-0.45	-1.35	-0.14	-0.35	-1.08	-0.08
MAX	81	1.65	1.42	1.26	0.56	0.09	0.20	1.07	0.36	-0.14	0.40
STD DEV	12	0.23	0.10	0.32	0.16	0.12	0.40	0.29	0.18	0.24	0.11
BNMK AVG			1.13	0.35	0.15	-0.04	-0.50	0.34	-0.05	-0.33	0.07

EXHIBIT 2

SECTOR WEIGHTS

ACTUAL PORTFOLIO WEIGHT LESS BENCHMARK PORTFOLIO

	CONS NON-DUR	CONS DURABLE	BASIC MATERIALS	CAPITAL GOODS	ENERGY	TECH.	TRANS.	UTIL.	FIN.
MINIMUM PORTFOLIO	-15.88	-5.48	-5.37	-6.56	-13.76	-9.67	-3.69	-10.80	-16.64
PORTFOLIO AVERAGE	0.79	-0.15	6.84	-2.83	3.99	-0.68	-0.42	-3.40	-4.12
MAXIMUM PORTFOLIO	23.05	13.64	13.64	2.53	26.09	13.57	4.52	12.37	12.72
BENCHMARK AVERAGE	32.51	4.70	13.18	7.54	6.52	10.40	3.42	7.34	14.38

SECTOR WEIGHTS

ACTUAL PORTFOLIO WEIGHT LESS S&P 500

	CONS NON-DUR	CONS DURABLE	BASIC MATERIALS	CAPITAL GOODS	ENERGY	TECH.	TRANS.	UTIL.	FIN.
MINIMUM PORTFOLIO	-13.33	-5.26	-4.17	-7.34	-18.42	-9.61	-1.76	-14.06	-11.15
PORTFOLIO AVERAGE	3.74	-0.55	8.17	-3.33	-5.81	0.59	1.08	-9.47	5.59
MAXIMUM PORTFOLIO	23.56	11.69	19.47	1.61	18.78	13.79	6.01	3.37	26.69
MARKET AVERAGE (S&P 500)	30.33	5.17	10.17	7.72	13.66	9.78	2.31	13.04	7.83

EXHIBIT 3

FORSTMANN-LEFF

Comparison of Actual Portfolio Performance with Customized Benchmark and Wilshire 5000

(all figures are percentages)

QUARTER		T-BILLS	EQUITY-ONLY ACTUAL	EQUITY-ONLY BENCHMARK	TOTAL PORTFOLIO ACTUAL	TOTAL PORTFOLIO BENCHMARK	WILSHIRE 5000
1984	1Q	2.4	-8.0	-5.0	-5.8	-2.7	-4.2
	2Q	2.6	-2.0	-3.5	-1.6	1.6	-2.8
	3Q	2.7	6.1	9.2	4.2	7.4	9.2
	4Q	2.3	3.7	0.9	3.5	1.3	1.3
		10.4	-0.8	1.0	0.0	4.1	3.1
1985	1Q	2.1	12.2	10.7	10.9	8.2	10.3
	2Q	1.9	9.6	6.5	8.1	5.2	7.5
	3Q	1.9	-5.6	-5.3	-4.2	-3.1	-4.3
	4Q	1.8	21.6	17.8	16.3	12.9	16.8
		7.9	41.2	31.6	33.6	24.4	32.6
1986	1Q	1.8	20.6	15.0	18.8	11.0	14.4
	2Q	1.6	10.1	4.7	8.9	3.8	5.8
	3Q	1.4	-16.0	-8.7	-10.8	-5.6	-7.7
	4Q	1.3	5.7	3.1	3.4	2.6	4.0
		6.3	17.9	13.3	19.3	11.6	16.1
1987	1Q	1.4	25.7	22.7	19.8	16.1	21.2
	2Q	1.4	2.1	2.4	1.6	2.1	3.4
	3Q	1.5	12.0	5.3	8.4	4.2	6.2
	4Q	1.5	-29.2	-23.8	-17.6	-16.1	-23.1
		5.9	1.8	0.7	8.8	3.7	2.3
1988	1Q	1.4	10.9	9.0	6.9	6.7	8.0
	2Q	1.5	5.6	7.2	3.4	5.5	6.5
	3Q	1.7	-4.1	-0.6	-2.6	0.1	0.2
	4Q	1.9	3.3	1.4	2.6	1.6	2.3
		6.8	16.0	17.7	10.4	14.6	17.9
1989	1Q	2.1	10.9	8.1	8.3	6.3	7.4
	2Q	2.2	1.7	7.8	2.1	6.2	8.6
	3Q	2.0	14.7	10.2	9.8	7.8	10.1
	4Q	2.0	-3.7	-2.3	-2.2	-1.0	0.6
		8.6	24.6	25.5	18.7	20.4	29.2
1990	1Q	2.0	-3.7	-2.7	-2.7	-1.3	-3.5
	2Q	2.0	3.4	6.1	2.9	5.0	5.6
	3Q	1.9	-11.3	-21.2	-8.2	-14.6	-15.2
CUMULATIVE		64.9	115.5	82.2	108.6	82.7	113.3

EXHIBIT 4

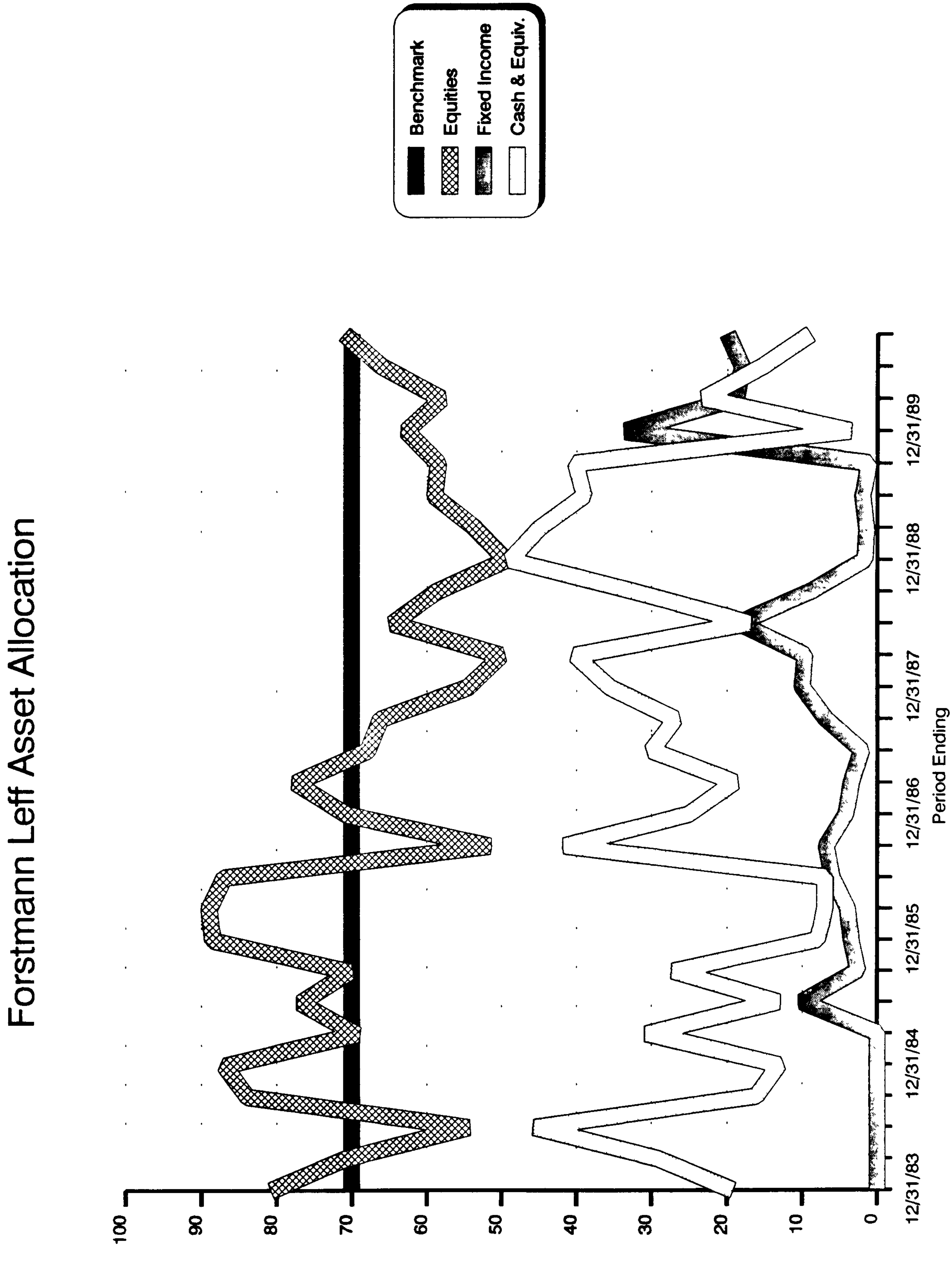

Forstmann Leff Asset Allocation
Benchmark
Equities
Fixed Income
Cash & Equiv.
100
90
80
70
60
50
40
30
20
10
0
12/31/83
12/31/84
12/31/85
12/31/86
12/31/87
12/31/88
12/31/89
Period Ending

EXHIBIT 5

FORSTMANN-LEFF
PERFORMANCE ATTRIBUTION

JANUARY 1987 - AUGUST 1990

	MARKET TIMING	SECTOR ALLOCATION	STOCK SELECTION	TOTAL
1/1/87 - 12/31/87	1.44%	3.71%	3.95%	9.36%
1/1/88 - 12/31/88	-1.80	-2.51	2.68	-1.70
1/1/89 - 12/31/89	-0.90	2.63	-2.21	-0.53
1/1/90 - 8/31/90	-0.28	0.70	4.42	4.85
CUMULATIVE	-1.56%	4.49%	8.99%	12.12%

EXHIBIT 6

FORSTMANN-LEFF
PERFORMANCE ATTRIBUTION ANALYSIS
SECTOR ALLOCATION

JANUARY 1987 - AUGUST 1990

SECTOR	1987	1988	1989	1990	TOTAL CUMM.
BASIC MAT.	1.16%	0.30%	-0.54%	0.37%	1.29%
CAPITAL GOODS	-0.73	0.75	-0.27	-0.12	-0.38
CONSUMER DUR.	1.11	-0.15	-0.36	-0.03	0.57
CONSUMER NON	1.43	-0.45	-0.39	-0.59	-0.02
ENERGY	0.05	-2.15	1.92	1.09	0.86
FINANCIAL	1.19	-0.74	-1.90	-0.10	-1.56
TECHNOLOGY	-2.17	-0.79	5.16	-1.12	0.92
TRANSPORTATION	-0.21	0.42	-0.51	0.38	0.07
UTILITIES	1.02	0.11	-0.24	0.39	1.28
MISC.	-0.02	0.05	-0.19	0.00	-0.16

EXHIBIT 7

FORSTMANN-LEFF

Quarterly Sector Weights
Actual Portfolio Less Benchmark

	CONS NDUR	CONS DUR	BASIC MAT	CAPITAL	ENERGY	TECH	TRANS	UTIL	FIN
8401	8.7	13.6	-5.4	-4.0	-7.2	4.0	1.8	-8.2	-3.4
8404	11.7	4.0	-0.7	-1.9	-11.9	6.7	2.3	-8.5	-1.6
8407	11.8	3.2	-0.5	-4.0	-13.8	7.1	3.8	-7.0	-0.6
8410	2.0	3.8	4.2	-4.8	-13.8	7.0	0.2	-10.6	12.0
8501	-1.1	8.7	4.6	-6.6	-10.7	3.0	1.7	-10.5	10.8
8504	-4.6	7.1	0.8	-3.1	-9.9	5.3	1.2	-10.7	13.8
8507	8.8	1.3	-2.5	-3.0	-7.1	0.2	2.1	-10.6	10.8
8510	20.7	-0.1	-4.4	-0.9	-2.9	-8.3	-0.8	-8.3	5.0
8601	0.0	0.5	6.9	-1.2	-4.7	-8.7	2.8	-8.3	12.7
8604	-3.1	-2.6	2.2	-5.6	-6.1	-6.5	4.9	-4.1	21.0
8607	5.9	-5.0	-3.1	-4.3	-4.8	8.5	2.1	-8.3	9.0
8610	11.3	-0.6	-0.5	-5.2	-4.2	-0.5	2.6	-9.4	6.5
8701	23.0	-5.2	2.8	-5.6	-4.8	-7.2	-1.8	-8.5	7.3
8704	7.3	-5.3	7.9	-6.1	-1.1	-3.8	-2.3	-10.0	13.4
8707	-1.9	-5.5	11.2	-6.3	0.8	13.6	-0.6	-9.1	-2.3
8710	3.0	-5.0	18.4	-4.1	-4.6	5.5	-1.5	-0.7	-10.9
8801	7.8	1.8	-3.3	-4.5	-7.7	-4.6	4.5	12.3	-6.4
8804	8.7	-2.0	6.1	-2.7	-2.5	-5.9	0.7	12.4	-14.8
8807	-6.4	1.3	13.3	-3.3	2.7	8.8	-1.8	-1.1	-13.5
8810	-3.9	1.2	14.1	-3.0	3.5	6.3	-2.0	0.4	-16.6
8910	-7.3	-2.0	10.5	-2.6	9.9	6.7	-2.1	-0.2	-12.9
8904	1.0	-4.1	13.2	-4.6	18.9	-5.5	-3.6	-1.4	-13.8
8907	8.6	-3.3	15.0	-1.9	10.4	-9.7	-3.2	-2.8	-13.2
8910	-6.2	-3.1	13.2	2.4	24.3	-9.3	-3.7	-2.8	-14.9
9001	-12.6	-2.7	12.5	-1.2	26.1	-6.6	-2.9	-2.7	-9.8
9004	-15.9	-3.2	14.1	-0.1	22.4	-6.2	-2.9	-3.8	-4.3
9007	-14.2	1.7	7.3	2.5	19.8	-7.4	-2.8	-4.6	-2.3

EXHIBIT 8

FORSTMANN-LEFF
PERFORMANCE ATTRIBUTION ANALYSIS
STOCK SELECTION

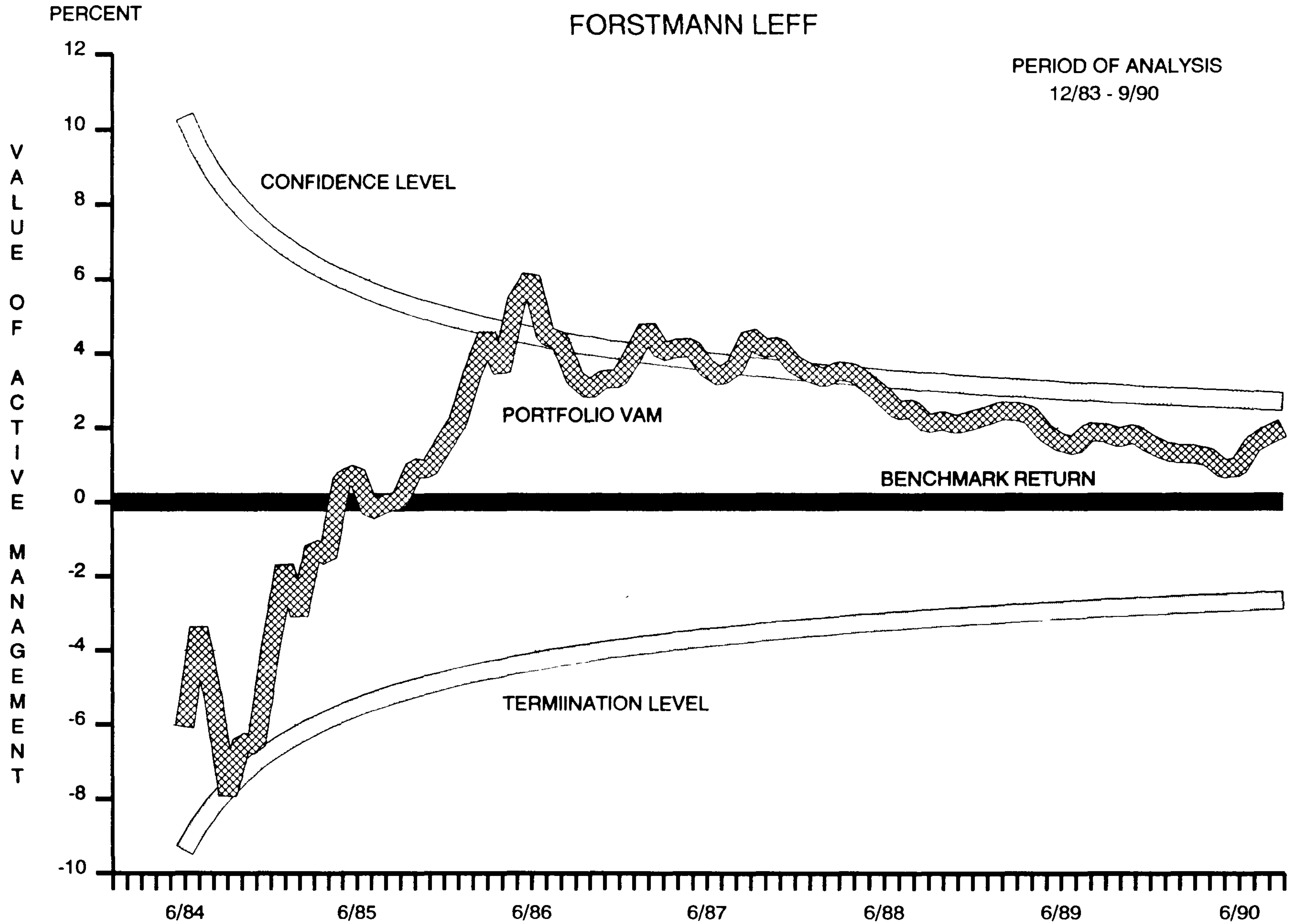
JANUARY 1987 - AUGUST 1990

SECTOR	1987	1988	1989	1990	TOTAL CUMM.
BASIC MAT.	1.32%	0.32%	-1.24%	0.60%	0.99%
CAPITAL GOODS	0.66	-1.08	0.27	0.07	-0.09
CONSUMER DUR.	-0.62	1.89	0.53	-0.06	1.74
CONSUMER NON	1.99	-0.42	1.84	0.61	4.06
ENERGY	-0.16	2.64	0.16	-0.16	2.48
FINANCIAL	-0.47	0.16	1.75	1.73	3.18
TECHNOLOGY	3.03	-0.20	-5.16	1.55	-0.97
TRANSPORTATION	-0.76	-0.63	-0.29	-0.10	-1.77
UTILITIES	-0.41	0.22	-0.12	-0.07	-0.37
MISC.	-0.09	-0.29	0.23	0.15	0.00

EXHIBIT 9

VALUE OF ACTIVE MANAGEMENT REPORT

FORSTMANN LEFF



ACTIVE EQUITY MANAGERS

Value of Active Management Reports

Third Quarter 1990

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:

- Perform an in-depth review of Alliance Capital as part of the regular three-year review cycle.

Managers	Market Value 9/30/90 (Thousands)	Quarter Ending 9/30/90 Actual	Bmrk	Year Ending 9/30/90 Actual	Bmrk	Annualized Five Years Ending 9/30/90 Actual	Bmrk
Alliance	$ 374,028	-16.4%	-18.3%	-10.3%	-15.3%	17.6%	10.1%
Concord	93,568	-19.9	-17.5	-18.4	-18.9		
Forstmann	186,525	-8.2	-14.6	-10.1	-12.5	12.7	9.8
Franklin	95,690	-18.8	-17.0	-21.5	-18.5		
GeoCapital	45,061	-30.1	-22.3				
IDS	156,775	-19.4	-14.7	-13.4	-12.7	13.1	12.6
IAI	84,803	-14.3	-13.3	-11.8	-9.3	12.3	13.5
Lieber & Co.	113,202	-21.4	-20.7	-24.0	-25.0	7.2	6.3
Rosenberg	100,558	-16.9	-16.1	-16.5	-14.8		
Sasco	89,111	-19.8	-15.4	-24.0	-17.1		
Waddell & Reed	160,452	-15.4	-17.4	-13.2	-16.6	11.1	9.3
Aggregate Active*		-17.1	-17.0	-15.2	-16.2	12.5	10.2
Wilshire 5000		-15.2%		-13.2%		12.8%	

* Historical performance reflects composite of current managers only.

ALLIANCE CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Jack Koltes **ASSETS UNDER MANAGEMENT: $374,028,271**

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)

Exceptional strengths are:

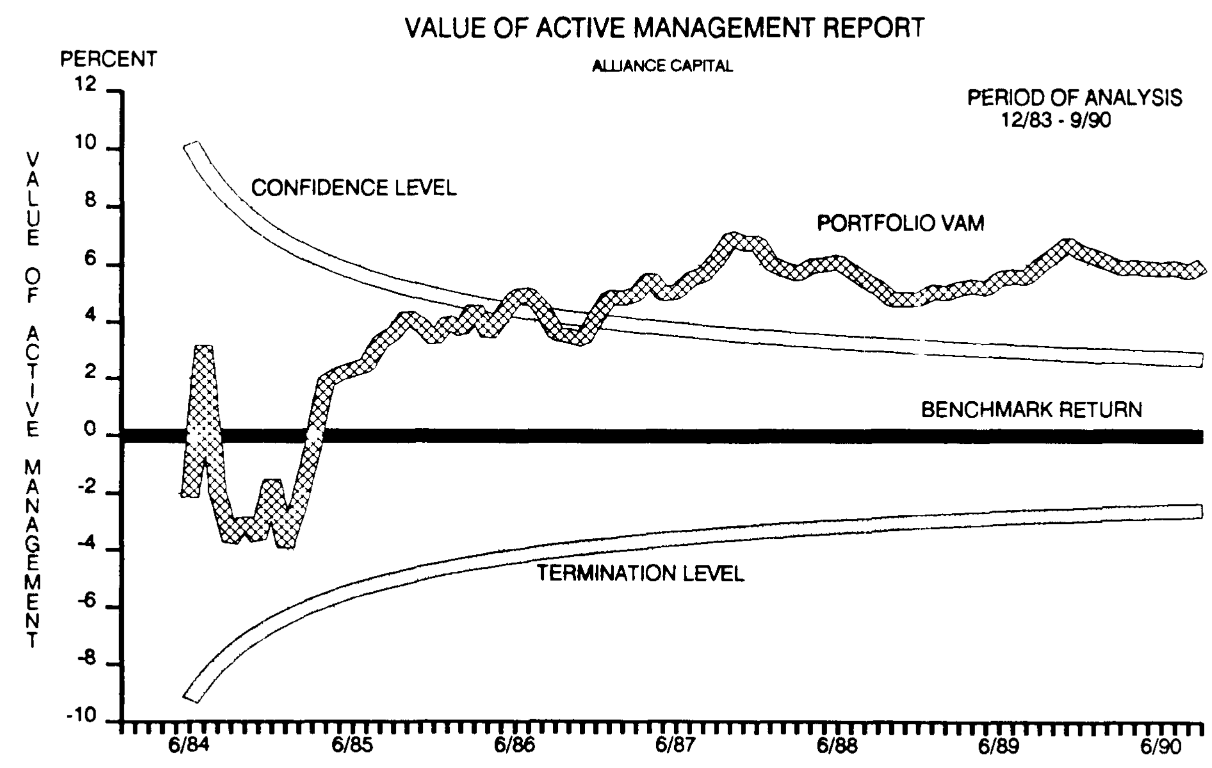
- Highly successful and experienced professionals.
- Organizational continuity and strong leadership.
- Well-acquainted with needs of large clients.
- Investment style consistently and successfully applied over a variety of market environments.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	-16.4%	-10.3%	17.6%	15.8%
Benchmark	-18.3	-15.3	10.1	9.2

STAFF RECOMMENDATIONS

Perform an in-depth review as part of the regular three year review cycle.



CONCORD CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Bob Boldt **ASSETS UNDER MANAGEMENT: $93,568,017**

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)

Exceptional strengths are:

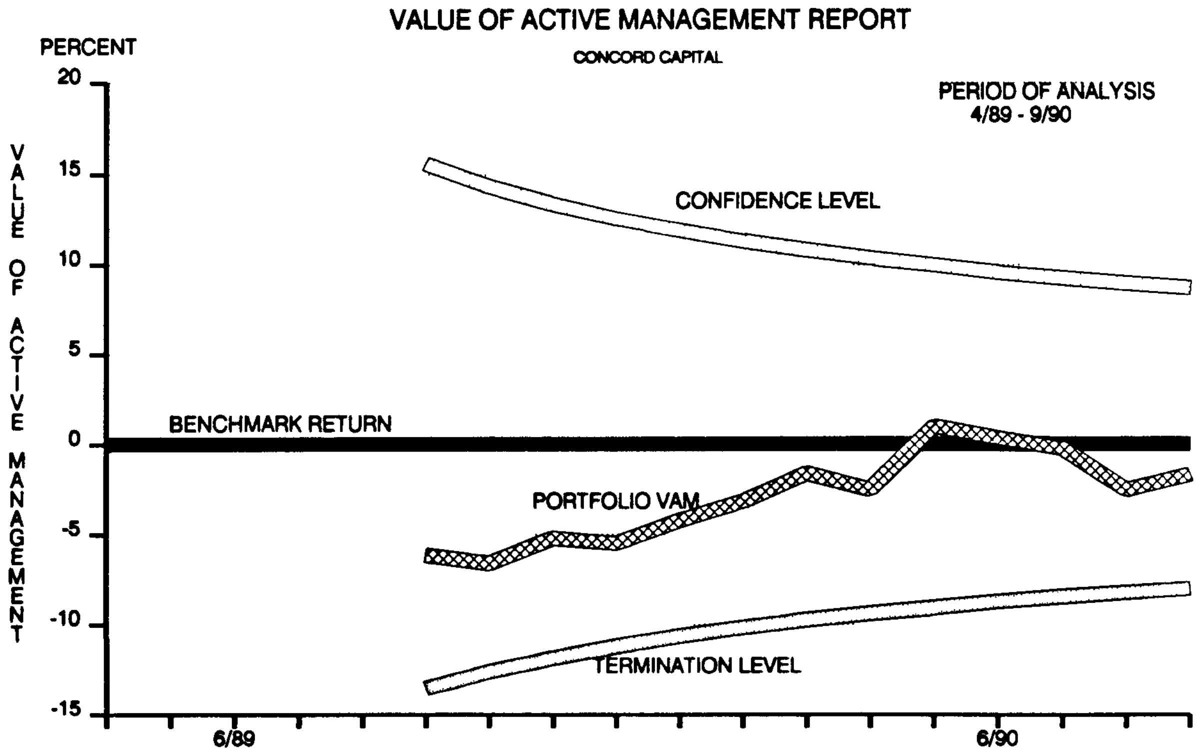
- Highly successful and experienced professionals.
- Investment style consistently and successfully applied over a variety of market environments.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 4/1/89
Actual Return	-19.9%	-18.4%	N.A.	-4.4%
Benchmark	-17.5	-18.9	N.A.	-2.8

STAFF RECOMMENDATIONS

No action required.



FORSTMANN LEFF ASSOCIATES

PORTFOLIO MANAGER: Joel Leff **ASSETS UNDER MANAGEMENT: $186,604,820**

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)

Current concerns are:

- Relatively high turnover among firm's professionals. This issue, while not serious, remains outstanding.

Exceptional strengths are:

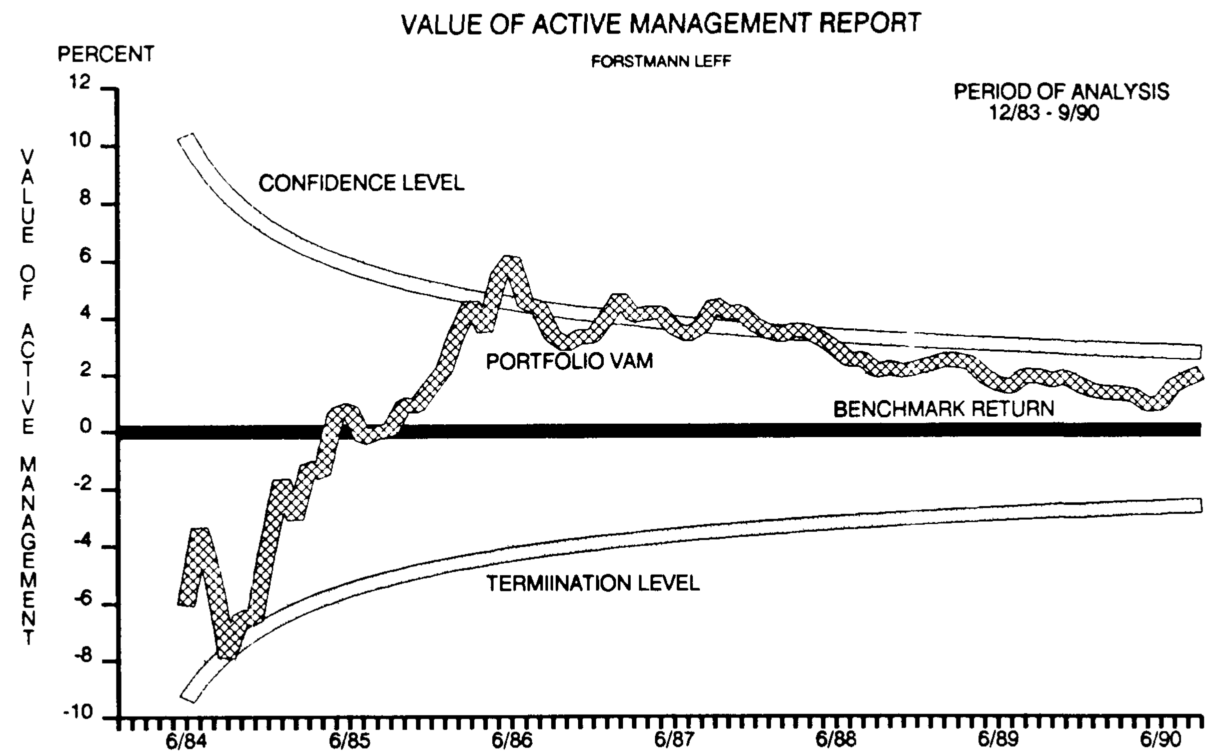
- Highly successful and experienced professionals.
- Investment style consistently and successfully applied over a variety of market environments.
- Well-acquainted with needs of large clients.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	-8.2%	-10.1%	12.7%	11.5%
Benchmark	-14.6	-12.5	9.8	9.3

STAFF RECOMMENDATIONS

No action required



FRANKLIN PORTFOLIO ASSOCIATES

PORTFOLIO MANAGER: John Nagorniak **ASSETS UNDER MANAGEMENT: $95,689,571**

INVESTMENT PHILOSOPHY

Franklin's investment decisions are quantitatively driven and controlled. The firm's stock selection model uses 30 valuation measures covering the following factors: 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. 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 remains fully invested at all times.

QUALITATIVE EVALUATION
(Reported by Exception)

Exceptional strengths are:

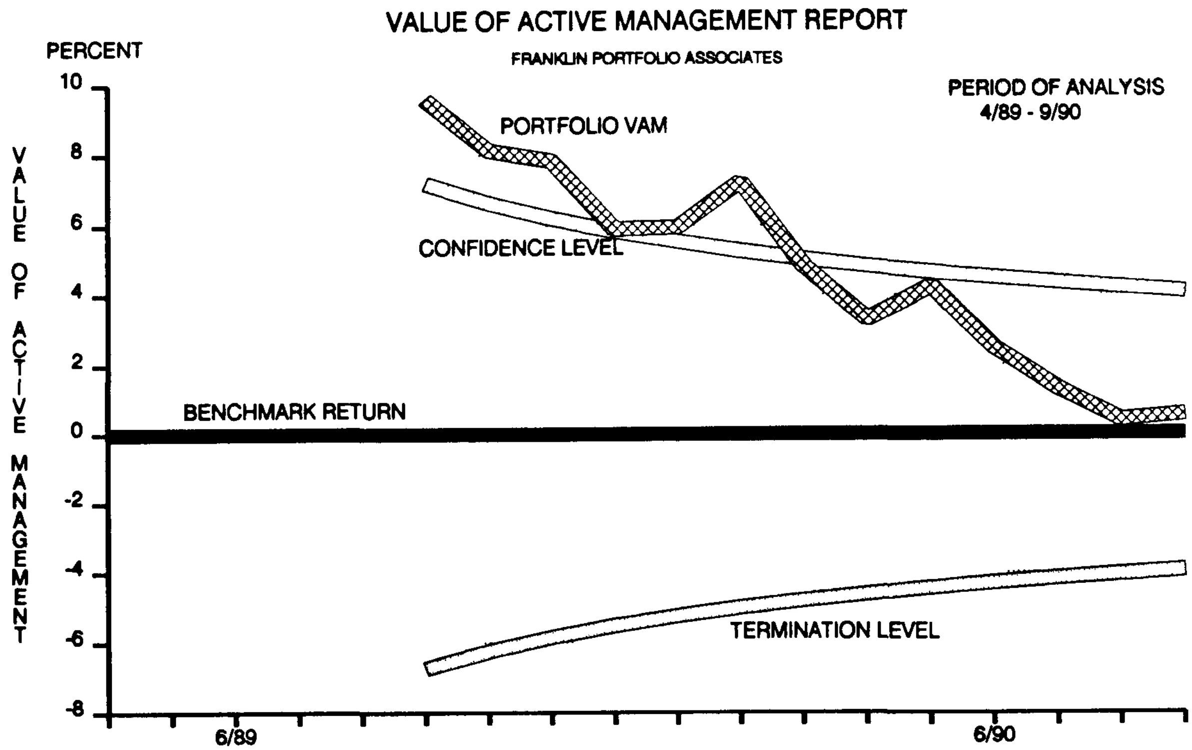
- Familiar with the needs of large institutional clients.
- Firm's investment approach has been consistently applied over a number of market cycles.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 4/1/89
Actual Return	-18.8%	-21.5%	N.A.	-2.9%
Benchmark	-17.0	-18.5	N.A.	-3.4

STAFF RECOMMENDATIONS

No action required.



GEOCAPITAL CORP.

PORTFOLIO MANAGER: Barry Fingerhut **ASSETS UNDER MANAGEMENT: $45,060,701**

INVESTMENT PHILOSOPHY

GeoCapital invests primarily in small capitalization equities with the intent to hold them as they grow into medium and large capitalization companies. The firm uses a theme approach and an individual stock selection analysis to invest in the growth/technology and intrinsic value areas of the market. In the growth/technology area GeoCapital looks for companies that will have above average growth due to a good product development program and limited competition. In the intrinsic value area, the key factors in this analysis are the corporate assets, free cash flow, and a catalyst that will cause a positive change in the company. The firm generally stays fully invested, with any cash positions due to the lack of attractive investment opportunities.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 4/1/90
Actual Return	-30.1%	N.A.	N.A.	-25.9%
Benchmark	-22.3	N.A.	N.A.	-17.6

QUALITATIVE EVALUATION
(Reported by Exception)

Exceptional strengths are:

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

STAFF RECOMMENDATIONS

No action required.

(Vam graph will be provided for period ending 9/30/91.)

IDS ADVISORY

PORTFOLIO MANAGER: Mitzi Malevich **ASSETS UNDER MANAGEMENT: $156,774,517**

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)

Current concerns are:

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

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

Exceptional strengths are:

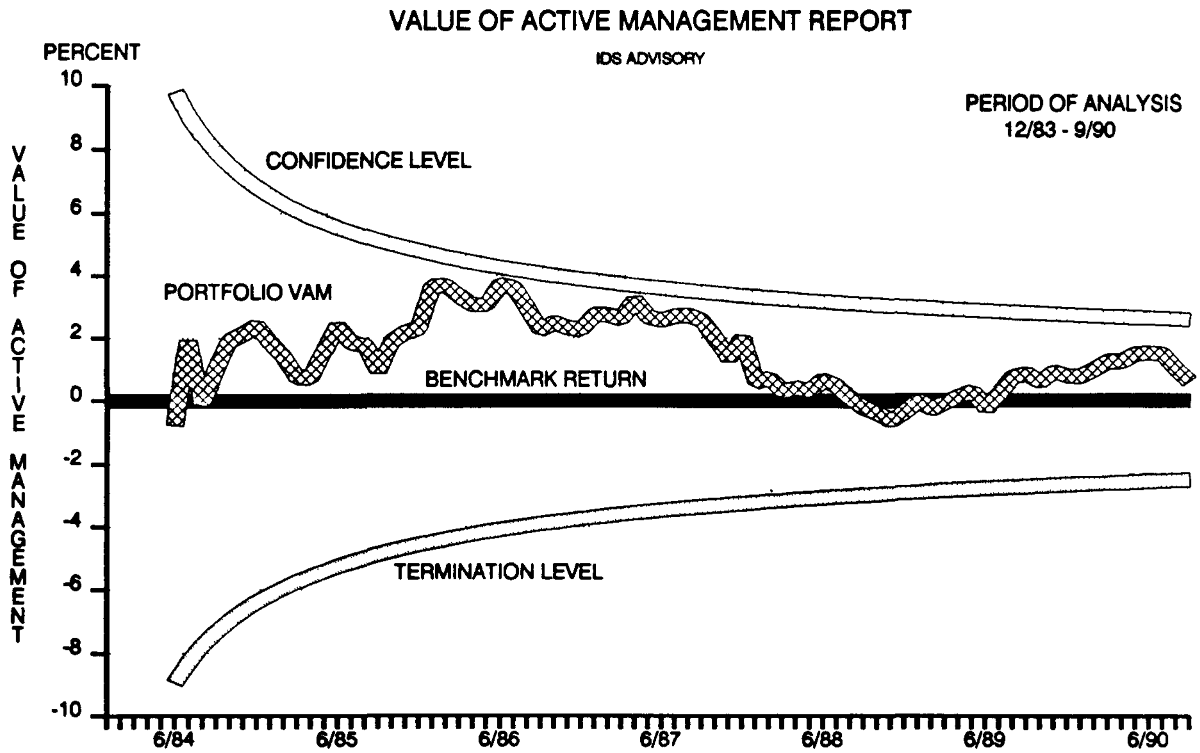
- Investment style consistently and successfully applied over a variety of market environments.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	-19.4%	-13.4%	13.1%	12.4%
Benchmark	-14.7	-12.7	12.6	11.8

STAFF RECOMMENDATIONS

No action required.



INVESTMENT ADVISERS

PORTFOLIO MANAGER: Charles Webster **ASSETS UNDER MANAGEMENT: $84,803,046**

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION
(Reported By Exception)

Current concerns are:

- Growth plan not in place.
- Slow response to administrative information requests from SBI staff

The items, while not serious, should continue to be monitored.

Exceptional strengths are:

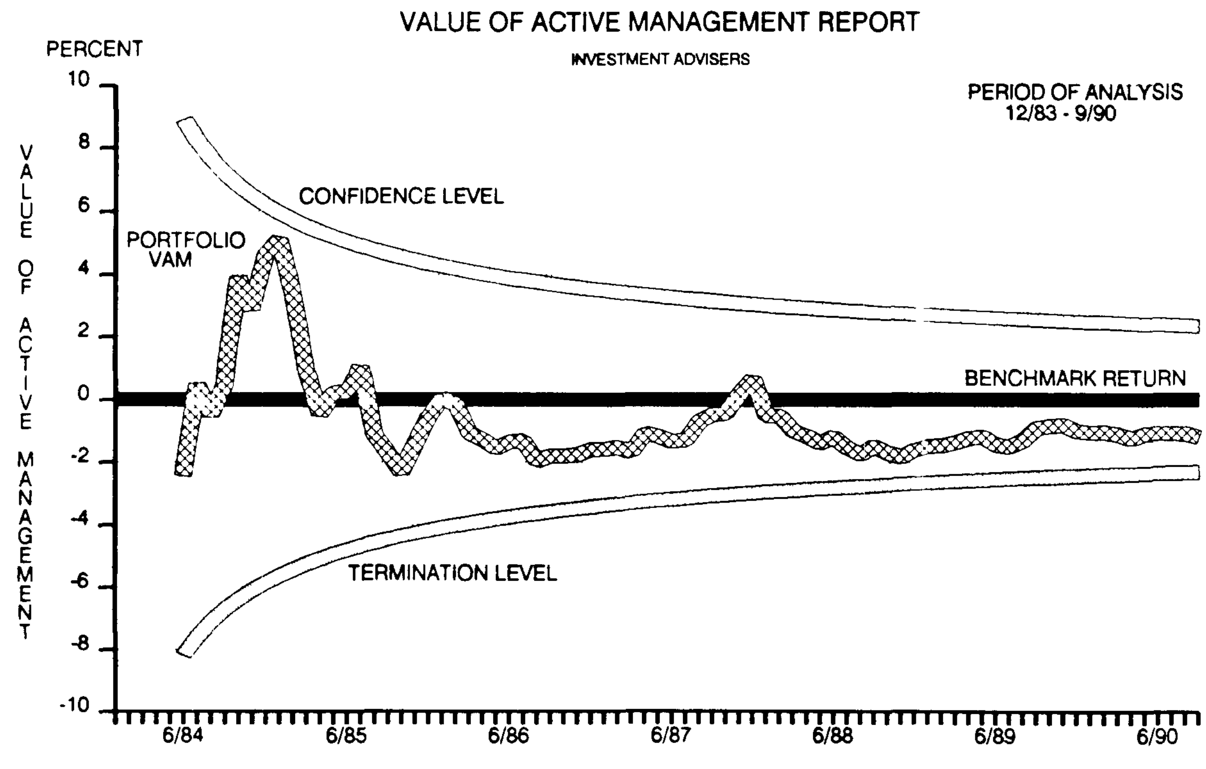
- Investment style consistently applied over a variety of market environments.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	-14.3%	-11.8%	12.3%	11.1%
Benchmark	-13.3	-9.3	13.5	12.4

STAFF RECOMMENDATIONS

No action required.



LIEBER & COMPANY

PORTFOLIO MANAGER: Stephen Lieber, Nola Falcone **ASSETS UNDER MANAGEMENT: $113,201,977**

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 firm focuses on macroeconomic trends and specific product developments within particular industries or companies. Stock selection concentrates on well-managed, small-to-medium sized companies with high growth and high return on equity. Particularly attractive to Lieber are takeover candidates or successful turn around situations. The firm generally is fully invested, with any cash positions the result of a lack of attractive investment concepts.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	-21.4%	-24.0%	7.2%	7.8%
Benchmark	-20.7	-25.0	6.3	6.3

QUALITATIVE EVALUATION
(Reported by Exception)

Current concerns are:

- Firm is unfamiliar with needs of large clients.

This item, while not serious, warrants additional monitoring.

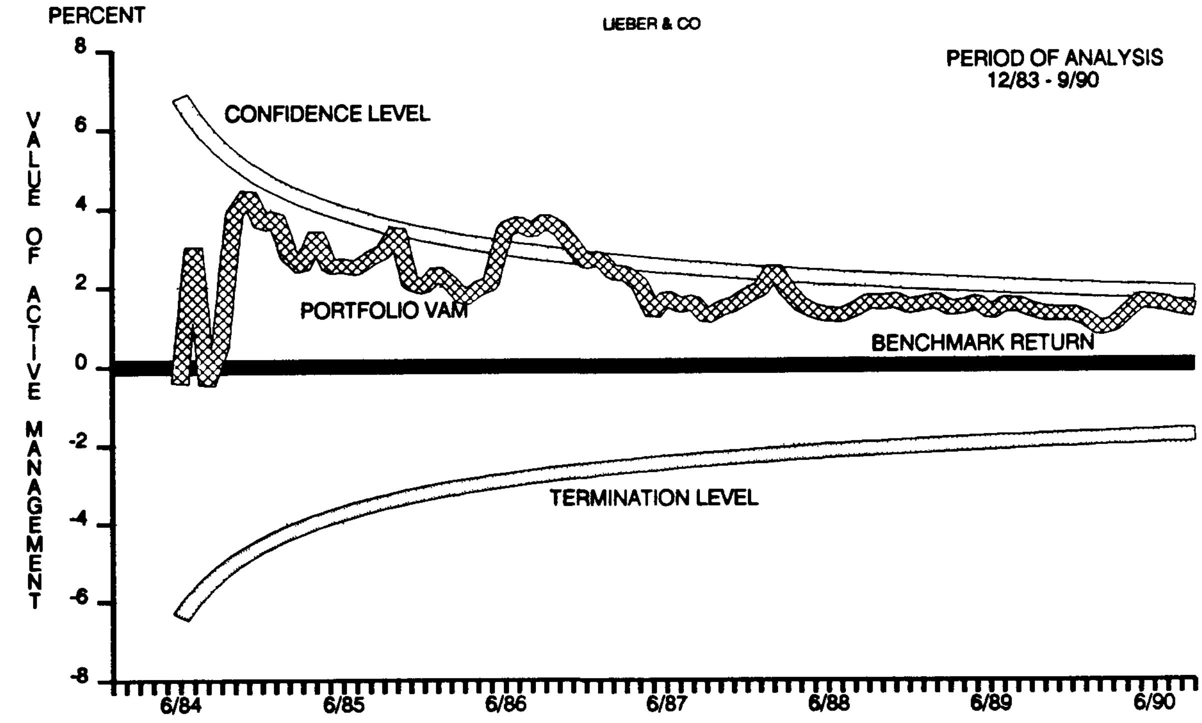
Exceptional strengths are:

- 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.

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT



ROSENBERG INSTITUTIONAL EQUITY MANAGEMENT

PORTFOLIO MANAGER: Ken Reid **ASSETS UNDER MANAGEMENT: $100,557,943**

INVESTMENT PHILOSOPHY

Rosenberg uses quantitative techniques to identify stocks that are undervalued relative to other similar companies. The firm's computerized valuation system analyzes accounting data on over 3,500 companies. Each company's separate business segments are compared to similar business operations of other companies. These separate valuations are then integrated into a single valuation for the total company. Stocks with valuations that are significantly below their current market price are candidates for purchase. The firm remains fully invested at all times.

QUALITATIVE EVALUATION
(Reported by Exception)

Exceptional strengths are:

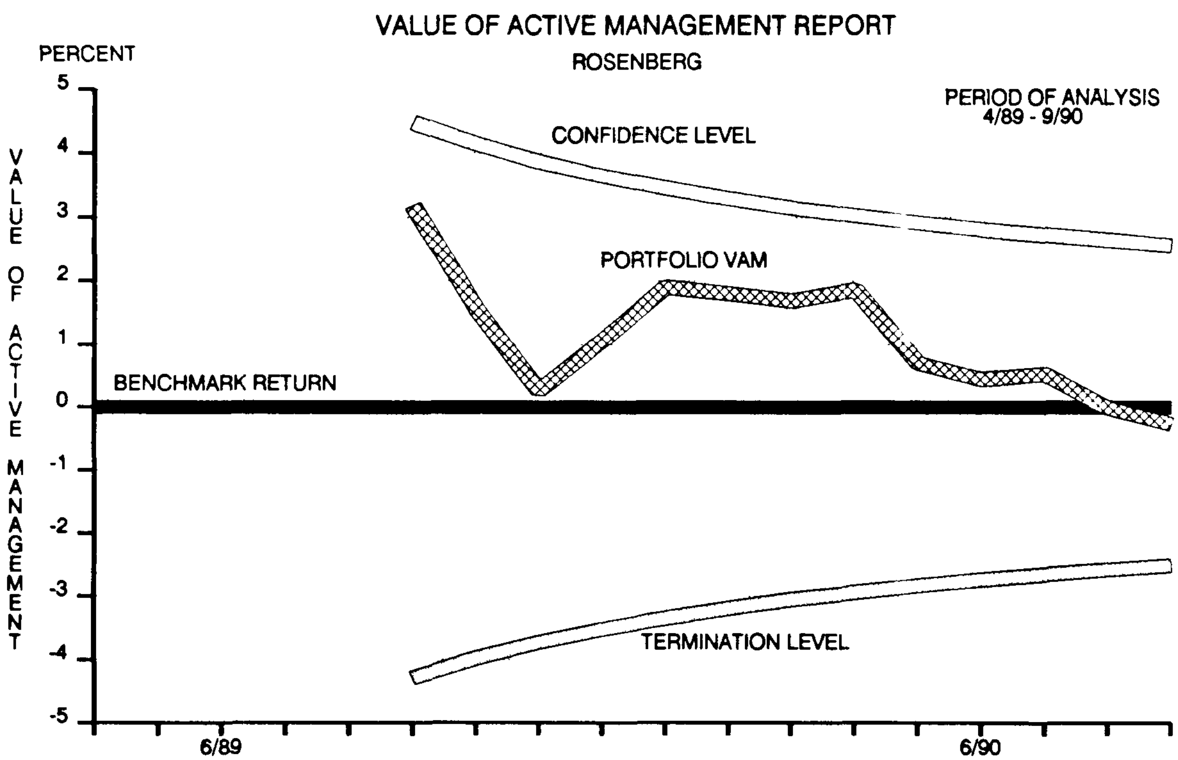
- Attractive, unique investment approach.
- Highly successful and strong leadership.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 4/1/89
Actual Return	-16.9%	-16.5%	N.A.	0.4%
Benchmark	-16.1	-14.8	N.A.	0.6

STAFF RECOMMENDATIONS

No action required.



SASCO CAPITAL INC.

PORTFOLIO MANAGER: Bruce Bottomley **ASSETS UNDER MANAGEMENT: $89,110,951**

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)

Exceptional strengths are:

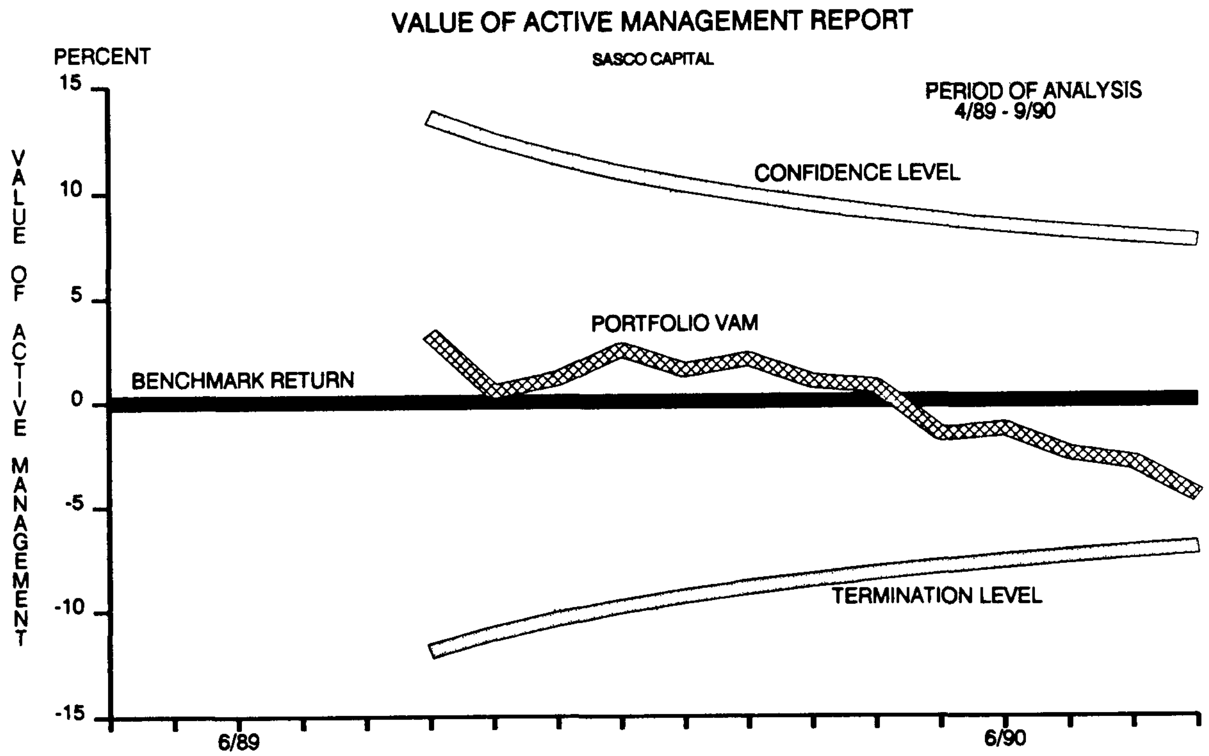
- Investment style consistently and successfully applied over a variety of market environments.
- Attractive, unique investment approach.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 4/1/89
Actual Return	-19.8%	-24.0%	N.A.	-7.4%
Benchmark	-15.4	-17.1	N.A.	-3.0

STAFF RECOMMENDATIONS

No action required.



WADDELL & REED

PORTFOLIO MANAGER: Henry Herrman **ASSETS UNDER MANAGEMENT: $160,451,651**

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)

Exceptional strengths are:

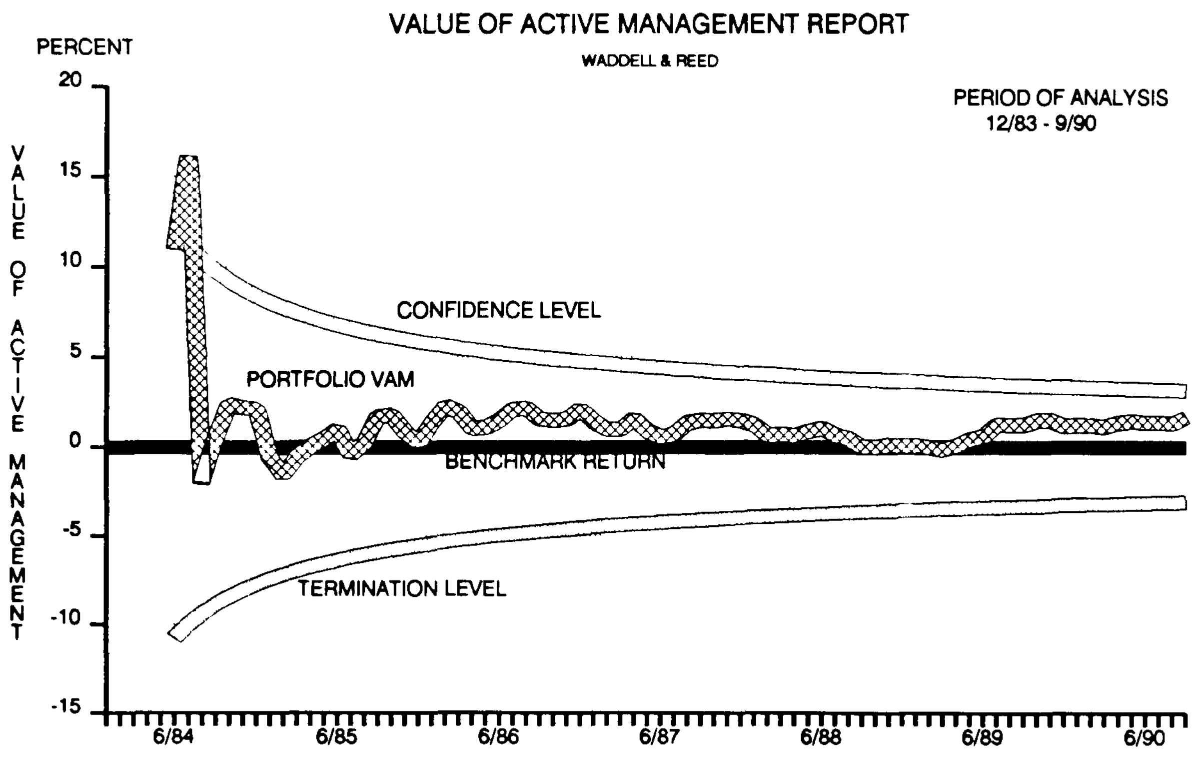
- Highly successful and experienced professionals.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	-15.4%	-13.2%	11.1%	9.6%
Benchmark	-17.4	-16.6	9.3	7.8

STAFF RECOMMENDATIONS

No action required.



POST FUND STOCK SEGMENT

PORTFOLIO MANAGER: SBI Staff **ASSETS UNDER MANAGEMENT: $511,425,330**

INVESTMENT PHILOSOPHY

The Post Fund Stock Segment utilizes a disciplined portfolio management process which relies on quantitative measures of investment characteristics to screen for investment opportunities. Two distinct methodologies are employed to moderate portfolio return volatility and provide diversification. Both methodologies emphasize traditional value criteria. One methodology, Abel Noser, emphasizes low price/earnings and low price/book ratios. The other, R.F. Fargo, focuses on high relative yield. Historically, these value characteristics have provided superior relative returns in down and early cycle markets. The portfolio maintains a fully invested position at all times.

QUALITATIVE EVALUATION
(Reported By Exception)

Current concerns are:

- The fund is using a relatively new benchmark.

This item, while not serious, should continue to be monitored.

Exceptional strengths are:

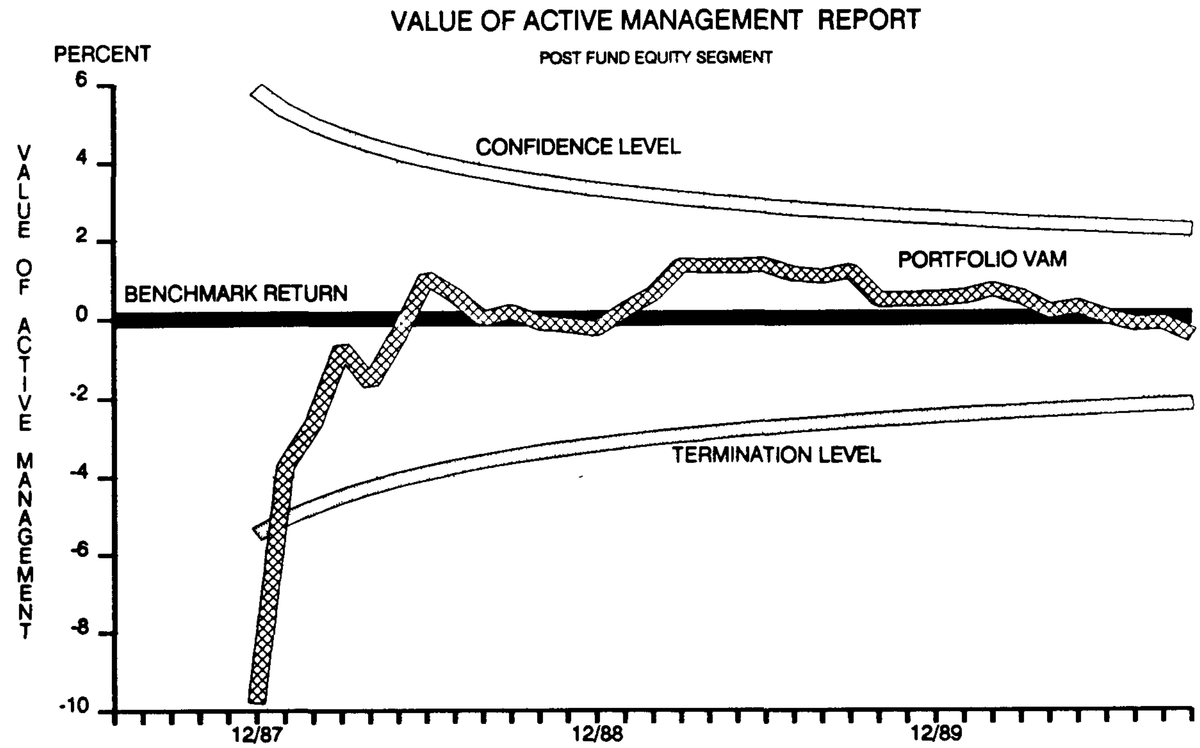
- The investment methodologies used in the portfolio have been applied successfully over various market environments.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/87
Actual Return	-19.5%	-24.3%	7.5	-0.8%
Benchmark	-18.2	-21.0	N.A.	-0.4

STAFF RECOMMENDATIONS

No action required.



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 10, 1990

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 December 4, 1990 with the following agenda:

- o Review of Manager Performance
- o In-depth Review of Lehman Ark Management
- o Discussion on the Structure of the Active Manager Program
- o Results of 1990-1993 GIC Bid

None of the items require action by the Board at this time.

INFORMATION ITEMS:

1) Review of Enhanced Index Manager Performance

Both enhanced index managers underperformed the Salomon Broad Investment Grade (BIG) Index for the quarter ending September 30, 1990 (Lincoln 0.88%, Fidelity 0.84%, Salomon BIG 0.97%).

Since hired in July 1988, both managers have essentially matched the performance of the index. (Lincoln 9.16%, Fidelity 9.20%, Salomon BIG 9.25%). Both managers' performance is within expectations.

2) Review of Active Manager Performance

The Committee reviewed the performance reports for the active bond managers. A copy of the value of active management (VAM) report for each manager is at the end of this tab section.

The active manager group underperformed both the Salomon BIG and its aggregate benchmark for the quarter (Managers -0.1%, Aggregate Benchmark 0.8%, Salomon BIG 1.0%). The managers in aggregate had a longer duration than the benchmark over a period when interest rates rose. This accounted for the below-market return.

The current manager group underperformed its benchmark and the market for the past year. The group matched its benchmark and underperformed the market the last five years.

3) In-Depth Review of Lehman Ark

At the last meeting, the Committee supported a recommendation that staff conduct an in-depth review of Lehman Ark. Staff's review is attached to this tab section. Staff concluded that Lehman should be retained as a manager until an adequate replacement is found. This conclusion was based on two major findings:

- o Lehman has used an index-like management approach with the portfolio. In effect, the SBI is paying active management fees for a passive or semi-passive management approach.

- o Lehman has underperformed its benchmark since the inception of the account. The underperformance has not been sufficient to warrant termination under the Board's Manager Continuation Policy. However, staff has concluded that the firm's index-like approach will make if difficult for Lehman to provide future returns that will compensate for the past underperformance relative to their benchmark.

The review also showed that:

- o Lehman avoids risk by investing in high quality intermediate maturity bonds. Lehman uses its prediction of interest rate and economic trends to position the portfolio in terms of duration, quality and sectors. Lehman avoids large short-run portfolio shifts and changes portfolio composition gradually over the economic cycle. Lehman also tries to add value through security selection. Lehman has generally followed this investment philosophy.

- o Lehman's benchmark is overweighted in governments, cash and intermediate securities. Lehman is underweighted in corporates and mortgages with a duration shorter than the market. Staff believes the benchmark is appropriate for the firm.

- Lehman has underperformed their benchmark and the market (Lehman 12.2%, Benchmark 12.3%, Salomon BIG 13.2% annualized since inception). Lehman has underperformed due to poor sector and duration decisions. According to analysis provided by Lehman, these poor decisions have been partially offset by adding value through trading activities and security selection.

The Committee concurs with staff's conclusion that Lehman should continue as a manager until a replacement is hired. This will occur after the SBI completes its review of the active bond manager program. Staff anticipates that the review will be completed by the end of FY 1991.

4) <u>Discussion on the Structure of the Active Manager Program</u>

As noted above, the entire structure of the active bond manager program is under review. It is likely that new or replacement managers will be recommended before the end of FY 1991.

Staff continues to research potential changes in the active bond manager structure and to meet with prospective managers. Staff is concentrating on a specialist approach where managers would be retained for their expertise in a particular sector of the bond market.

Staff reviewed with the Committee the process used to identify potential managers. More than 125 firms have provided preliminary information on their investment approach. More analysis is needed to determine attractive potential candidates.

5) <u>Results of 1990-1993 GIC Bid</u>

The SBI bid its fifth 3-year guaranteed investment contract (GIC) for the Supplemental Investment Fund on October 25, 1990. Overall, staff was pleased with the bid results.

Two companies, Mutual of America and Provident National, will provide a blended rate of 8.765%, net of expenses, which was 84 basis points over 3 year Treasuries on the bid date. The GIC will include a lump sum of $18.6 million and estimated cash flow of $4.5 million over the next year.

Mutual of America Insurance Company, New York NY, is a $4.7 billion company. It is rated AA by Standard and Poor's and AA+ by Duff & Phelps, two nationally recognized rating agencies.

Provident National Assurance Company, Chattanooga TN, is a $7 billion company. It is rated AA+ by Standard and Poor's and AA by Duff & Phelps.

More information on the GIC bid process is included as Attachment A.

ATTACHMENT A

EXECUTIVE DIRECTOR
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STATE BOARD OF INVESTMENT
Room 105, MEA Building
55 Sherburne Avenue
St Paul MN 55155
Tel (612) 296-3328
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November 26, 1989

TO: Members, Fixed Income Manager Committee

FROM: Jim Heidelberg

SUBJECT: Results of 1990-1993 GIC Bidding

Summary of Results

On October 25, 1990, the SBI bid its fifth 3-year guaranteed investment contract (GIC) for the Guaranteed Return Account in the Supplemental Investment Fund. For the first time, the SBI awarded the bid to two companies. Mutual of America Life Insurance Company and Provident National Assurance Company will provide a melded 8.765 percent annual effective rate, net of expenses, to participants. Each company will invest 50 percent of the lump sum deposit and 50 percent of all contributions.

Contract Period:	Nov. 1, 1990-Oct. 31, 1993 (3 years)
Contribution Period:	Nov. 1, 1990-Oct. 31, 1991 (1 year)

Estimated Lump Sum	$18.6 Million
Estimated Flow	$ 4.5 Million
Estimated Total	$23.1 Million

Bid Award to: 50% Mutual of America Insurance Company at 8.95%
50% Provident National Assurance Company at 8.58%

Net Effective
Annual Interest
Rate to Participants: 8.765%

Mutual of America Life Insurance Company, headquartered in New York, manages assets of about $4.7 billion. The company's primary market is the provision of pension products and retirement benefits to not-for-profit organizations. It serves over 8500 employers and 300,000 employees. The company's claims paying ability is rated AA by Standard and Poor's and AA+ by Duff & Phelps, two nationally recognized rating agencies.

Provident National Assurance Company, headquartered in Chattanooga, Tennessee, is among the countries 40 largest life insurance companies with assets of about $7 billion. The company's focus is providing group pension products for defined contribution plans. The company is ranked among the top ten insurance companies in terms of GIC funds under management. The company's claims paying ability is rated AA+ by Standard and Poor's and AA by Duff & Phelps.

Background and Comparative Data

The 1990-1993 GIC was considerably larger then last year's GIC. Uncertainty in the stock and bond markets may have increased participant interest:

GIC	Total $'s (millions)	GIC Rate	Comparative 3 Year Treasuries Rates
1990-1993	$23.1	8.765%	7.93%
1989-1992	$14.5	8.400	7.81
1988-1991	26.2	9.010	8.37
1987-1990	16.7	8.450	7.94
1986-1989	4.5	7.720	6.53

The 1990-1993 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 sums were pledged to the GIC prior to the start of the contract from the Deferred Compensation Plan, the Unclassified Employees Plan and 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 Public Employees Defined Contribution 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 1990-1993 GIC
Exhibit E - GIC Contract Holders

GIC EXHIBIT A

GIC BIDDING DAY REVIEW

As outlined in the GIC bidding specifications, indicative (not binding) interest rate bids were required on October 23, 1990. Binding bids were required in the morning of October 25, 1990. A final bid was accepted at approximately 1:55 P.M. on October 25, 1990.

Events of the bidding day were as follows:

9:30 A.M. - 11:35 A.M.

By 11:35 A.M., ten companies had submitted bids. Mutual of America submitted the highest bids at 8.90 percent for 50 percent of the placement and 8.78 percent for 100 percent of the placement. Provident National had the next highest bids at 8.53 percent for both 50 percent and 100 percent of the placement.

11:35 A.M. to 1:55 P.M.

At 11:50 A.M. Mutual of America increased its 100 percent bid to 8.81 percent. In an effort to take advantage of Mutual of America's outstanding 50 percent bid and to diversify the portfolio, staff decided to split the bid award if a melded rate within 5 basis points of the 8.81 percent could be achieved, i.e. a rate of 8.76 or better. If not, then 100 percent of the placement would be awarded to Mutual of America. (See Attachment E for a listing of GIC contract holders.) The SBI's GIC consultant strongly recommended splitting the bid to provide some diversification to participants.

Both Mutual of America and Provident National were encouraged to raise their 50 percent bids. At 12:45 P.M. Provident National increased its 50 percent bid to 8.56 percent. Between 1:00 P.M. and 1:50 P.M. Mutual of America raised its 50 percent bid to 8.95 percent and Provident National again raised its bid to 8.58 percent.

At 1:55 P.M. the bidding was closed and bids were awarded to both Mutual of America and Provident National, each for 50 percent of the placement. The 8.95 percent bid from Mutual of America for 50 percent of the placement and the 8.58 percent bid from Provident National for 50 percent of the placement provides a melded annual effective rate of 8.765 percent to participants.

GIC EXHIBIT B

INDICATIVE AND FINAL BIDS

NET EFFECTIVE ANNUAL INTEREST RATE

		Indicative Bid 10/23/90		Final Bids 10/25/90	
		50%	100%	50%	100%
Bankers Trust		---	---	8.20%	8.20%
CNA		8.24%	8.26%	8.24	8.26
John Hancock		8.29	8.29	8.34	8.34
Hartford (Boston)		8.20	8.26	8.14	8.20
Hartford (Chi.)/Piper Jaffray		8.18	8.24	8.14	8.20
Metropolitan		---	---	8.50	8.50
Morgan Guaranty		---	---	8.31*	---
Mutual of America		8.90	8.78	8.95	8.81
Pacific Mutual		8.21**	8.28**	8.21**	8.23**
Principal Mutual		8.15	8.15	8.15	8.15
Provident National		8.52	8.52	8.58	8.53
Prudential		8.34	8.34	8.31	8.31
State Mutual		---	---	8.38*	---
Bid Range:	Highs	8.90	8.78	8.95	8.81
		8.52	8.52	8.58	8.53
	Low	8.15	8.15	8.14	8.15

3 Year Treasuries on 10/25/90: 7.93%

* Quote for a $10 million lump sum deposit only
** Cap and floor restrictions on bids

GIC EXHIBIT C

RESPONSES TO BIDDING SPECIFICATIONS

Bidding specifications were sent to 44 financial institutions (36 insurance companies and 8 banks).

Provided indicative or final bids	13	(see Attachment B)
Declined to bid	11	(see below)
Did not respond	20	
	44	

Eleven companies responded that they would not submit bids. They are summarized as follows:

COMPANY	REASON GIVEN FOR DECLINING TO BID
Aetna	Uncompetitive at this time
Allstate	No 3 year money
CIGNA	Uncompetitive on 3 year money
Confederation	No 1990 capacity
First Chicago	Cannot bid on nonqualified money
1st USA Capital	Only 5 year money
Life of Virginia	Cannot bid on nonqualified money
Lincoln National	Does not write benefit responsive contracts
New York Life	Waiting for possible federal tax law changes
Sun Life of Canada	12 month window unacceptable
Travelers	No 3 year money

GIC EXHIBIT D

PARTICIPANTS IN THE 1990-1993 GIC

	Estimated Lump Sum (thousands)	Estimated Flow (thousands)	Estimated Total (thousands)
Deferred Compensation	$16,283	$4,050	$20,333
Unclassified Plan	845	366	1,211
College Supplemental	1,454	60	1,514
Public Employees Defined Contribution Plan*	0	17	17
Police and Fire Plans**	3	0	3
Total	$18,585	$4,493	$23,078

* Plan established November 1, 1988.
** Lump sum pledge from one local volunteer firefighter plan.

GIC EXHIBIT E

PAST AND CURRENT GIC CONTRACT HOLDERS

GIC	Total $'s (Millions)	GIC Rate	Companies
1990-1993	$23.1	8.765%	Mutual of America (50% at 8.95%) Provident National (50% at 8.58%)
1989-1992	14.5	8.40	John Hancock
1988-1991	26.2	9.01	Mutual of America
1987-1990*	16.7	8.45	Principal Mutual
1986-1989*	4.5	7.72	Principal Mutual

* Contracts have matured and are no longer in Guaranteed Return Account Portfolio.

Detailed Review of

Lehman Ark Management

LEHMAN ARK MANAGEMENT REVIEW

I. ORGANIZATION

A. Ownership

Lehman Ark Management Co., Inc. is an employee owned investment management firm. Lehman Ark was formed in 1989 when employees purchased, using an LBO, Lehman Management Co., Inc., then a subsidiary of Shearson Lehman Hutton. Lehman Management provided investment management services since 1929. Lehman Ark manages approximately $14 billion of fixed income, equity, and balanced accounts.

B. Professional Staff

The Lehman fixed income team consists of five portfolio managers and one credit analyst. The team determines portfolio strategy and compliance for all fixed income portfolios.

The SBI portfolio was originally assigned to Paul Hutter who resigned in late 1989. Kevin Hurley is the current SBI portfolio manager. Prior to becoming a managing director at Lehman Ark in 1989, he was the Director of Fixed Income Investments at Mitchell Hutchins Institutional Investors.

C. Fixed Income Assets Under Management

FIXED INCOME ASSETS UNDER MANAGEMENT
($ MIL)

December 1984		December 1985		December 1986		December 1987		December 1988		December 1989		September 1990	
# of Accts	Market Value	# of Accts	Market Value	# of Accts	Market Value	# of Accts	Market Value	# of Accts	Market Value	# of Accts	Market Value	# of Accts	Market Value
39	$3,283	40	$4,538	36	$4,282	41	$4,815	40	$4,667	31	$3,084	30	$2,510

During 1989, Lehman lost nine accounts and their assets under management decreased. In August of 1989, Kevin Hurley replaced Paul Hutter as the manager for the SBI and other accounts. Mr. Hutter did not get the opportunity to own as large of portion of the company as desired and left on his own accord. However, account loss has stabilized during 1990. The large loss in assets probably occurred because of the change in ownership and the abrupt change in portfolio managers.

4.09 years with little deviation from benchmark duration. Lehman only has deviated from their benchmark duration by half a year or more only in the fourth quarters of 1984 and 1985.

III. PORTFOLIO BENCHMARK CONSTRUCTION

Lehman derived their benchmark portfolio to fit their investment philosophy: conservative, risk averse, and value oriented. This benchmark portfolio was formed in December 1986 and defines their neutral investment position. This position is similar to their historical average position. The benchmark portfolio serves as the base from which they construct their investment portfolio.

In deriving their benchmark portfolio, Lehman first examined their investment position and strategies from 1982 through 1986. This allowed them to identify any investment biases and formulate a benchmark portfolio based on average holdings of cash, intermediate governments and corporates, long governments and corporates, and mortgages. This first approximation, based on historical averages, was adjusted to incorporate philosophy, process, changes in style, and investment biases (e.g. the normal position in intermediate corporates exante may have increased). Lehman then compared historical returns of this second approximation to actual portfolio returns using regression analysis. Regression analysis was used to determine the goodness of fit between past portfolio and benchmark returns.

After regressing the actual portfolio returns and the benchmark returns over this five year period, further adjustments were made (e.g. the holdings in a sector such as long governments was changed). These adjustments were needed because the returns and duration of the benchmark portfolio deviated too far from actual returns and durations. Returns for the new benchmark were computed and another regression analysis was performed. This process continued until return and duration deviations were small and until Lehman felt that further changes in the normal portfolio would deviate too far from their investment philosophy, process and style. The following table shows the final normal portfolio compared to the Salomon BIG and Lehman's actual portfolio averages.

Sector	Benchmark	Actual	Salomon BIG as of 9/90
Governments	62.5%	63.4%	53.0%
Mortgages	15.0	10.5	29.3
Corporates	13.5	18.2	17.7
Cash	9.0	7.8	0.0

The table shows that Lehman's actual holdings more closely match their benchmark than the Salomon BIG. Lehman's benchmark overweighting of governments and underweighting in mortgages and corporates is consistent with their risk-averse investment style. Governments have less credit risk and call risk when compared to both corporates and mortgages. However, because there is less risk, yields are lower.

Also consistent with Lehman's risk-averse style is their investment in intermediate securities. The following table shows Lehman's maturity breakdown vs. the Salomon BIG.

Sector	Benchmark	Salomon BIG
Intermediate Governments	51.0%	39.1%
Long Governments	11.5	13.9
Intermediate Corporates	10.0	10.0
Long Corporates	3.5	7.8
Mortgages	15.0	29.3
Cash	9.0	0.0

Intermediate maturity securities are less interest rate sensitive and therefore less risky than bonds with long maturities.

Lehman's benchmark duration is less than the market. Again, this is consistent with their risk averse style. Lehman's actual duration more closely tracks their benchmark than the market.

IV. PERFORMANCE ANALYSIS

A. Benchmark Explanatory Power

1. Comparison of portfolio returns to the benchmark and the Salomon BIG Index.

   Since a benchmark reflects the managers investment style, it should better explain the manager's returns than a broad market index. The standard deviation of the monthly returns and the information ratio are two measures of the benchmark's explanatory power.

   - The standard deviation of actual returns minus benchmark returns (VAM) should be less than the standard deviation of actual returns minus the index returns (EXM).

   - The information ratio (IR) is the ratio of the cumulative annualized VAM to the annual standard deviation of the VAM. The IR value for VAM should be greater than the IR for EXM.

For Time Period 7/1/84 to 6/30/90	(VAM) Manager Actual vs. Benchmark	(EXM) Manager Actual vs. Salomon Brothers BIG Index
Cumulative Annualized Return	-0.123	-0.885
Annualized Standard Deviation	0.790	1.026
Information Ratio	-0.156	-0.863
Information Ratio t-statistic	-0.391	-2.167
Percentage of Months Return > 0	38.7%	36.8%

The following observations can be made from the above table:

- o Lehman underperformed both its benchmark and the Salomon BIG.
- o Lehman outperformed its benchmark on a monthly basis more often than it outperformed the Salomon BIG.
- o The standard deviation of the actual vs. benchmark (VAM) is less than the standard deviation of the actual vs. index (EXM).
- o The information ratio for actual vs. benchmark (VAM) is higher than the actual vs. index (EXM).

Lehman has underperformed their benchmark and the market. However, these findings suggest that Lehman's benchmark is better at explaining Lehman's returns than the market. The VAM standard deviation is lower and IR greater than the EXM standard deviation and IR.

2. Residual Correlations

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 are useful measures of benchmark explanatory power. 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, the manager's portfolio also should do well versus the market. On the other hand, there should be no correlation between MFT and VAM with a valid benchmark. 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.

LEHMAN
Residual Correlation Matrix

	EXM	MFT	VAM
Portfolio vs. market (EXM)	1.000		
Benchmark vs. market (MFT)	.666	1.000	
Portfolio vs. benchmark (VAM)	.560	-0.245	1.000

At the 5% significance level, the hypothesis that the VAM-MFT correlation is zero is rejected. The correlation analysis, therefore, provides mixed signals as to the quality of the Lehman benchmark.

B. Portfolio Performance Relative to the Benchmark and the Salomon BIG Index.

On a cumulative basis, Lehman's returns have lagged both its benchmark and the Salomon BIG index (see exhibit 5). Exhibit 6 shows the VAM chart comparing Lehman's performance to its benchmark.

C. Portfolio Performance Attribution

Precise fixed income performance attribution is difficult due to pricing problems inherent in bond portfolios and lack of historical data in current attribution software. However, examining past portfolios gives a qualitative indication of where a manager has added value.

Generally, Lehman has attempted to add value by:

- o adjusting portfolio duration in anticipation of interest rate moves.
- o over/under weighting various sectors to make gains from narrowing/widening yield spreads.
- o using activities such as security selection and swapping.

DURATION ANALYSIS

Exhibit 7 is a graph showing Lehman's duration and ten year spot rates since they were hired by the SBI. Assuming the spot rates represent general interest rate levels, Exhibit 7 shows that Lehman has generally had a shorter duration than their benchmark while interest rates declined from 1984 through 1990. This contributed to their underperformance. However, from the third quarter of 1986 through the first quarter of 1989, interest rates increased and this short duration helped their performance. According to Lehman, the short duration has caused them to underperform the market by 0.51% in total from January 1988 through June 1990.

Although Lehman has adjusted their duration, the changes have been small. The difference between Lehman's portfolio and benchmark durations have more closely resembled an index manager than an active manager. Kevin Hurley has not changed this style and continues to manage the portfolio in this manner. Exhibit 8 illustrates this by showing the quarterly duration distribution around the benchmark for Lehman, Western, IAI and Miller Anderson along with Lehman's monthly distribution since Kevin Hurley began managing the portfolio.

Exhibit 8 shows that Lehman has not been an active duration manager when compared to the SBI's other managers. The duration of the SBI index managers, Fidelity and Lincoln, is constrained to ± 0.1 years around the Salomon BIG. Exhibit 8 shows that Lehman has been within 0.1 years of their duration 38% of the time increasing to 54% of the time since Mr. Hurley started. IAI, Western and Miller Anderson have been within 0.1 years less than 10% of the time.

Another example of Lehman's limited duration activity is shown by the frequency with which Lehman is within ±0.3 years of their benchmark duration. Lehman has been within ±0.3 years 75% of the time increasing to 85% since Mr. Hurley started. The other active managers have been within ±0.3 years 4% less than 20% of the time. The duration management of the portfolio since Mr. Hurley was hired may not be indicative of future style since he only has been managing the portfolio a year.

SECTOR ANALYSIS, PORTFOLIO WEIGHTINGS RELATIVE TO THE BENCHMARK

Exhibit 9 shows the sector returns from 1984 to the present. Mortgages have the highest returns, corporates second, and treasuries third. Lehman's performance has been hurt during this time period because they have been overweighted relative to their benchmark in treasuries and corporates at the expense of mortgages, the highest performing sector. According to Lehman, this incorrect sector decision has caused them to underperform their benchmark by 0.26% from January 1988 through June 1990.

Lehman has been less aggressive than the other active managers in sector allocations. Exhibit 10 illustrates this showing the sector distributions around each manager's benchmark. Lehman has been within 5 percentage points of their benchmark weight in both corporates and mortgages more often than any other active manager.

Exhibit 10 also shows that since Mr. Hurley started managing the portfolio, there has been even less sector variation. There is only one month when the mortgage and corporate sectors varied by more than 5 percentage points from the benchmark weight. However, this again may not be a good indication of how Mr. Hurley will manage the portfolio since it is based on only one year of data.

INDIVIDUAL SECURITY SELECTION AND SWAP ACTIVITY

Lehman's own performance attribution system shows they have added value through individual security selection, intra month trading and swap activity and market timing trades. Lehman's analysis indicates this area has added 0.7% since January 1988.

PERFORMANCE ATTRIBUTION SUMMARY

Lehman has slightly underperformed their benchmark due to poor sector and duration decisions. According to Lehman, these poor decisions have been partially offset by valued added through trading activities and security selection.

It appears that Lehman has managed the portfolio like an enhanced index manager. They have tried to add value through correct security selection and trading activities. Lehman has not made significant deviations from their benchmark in either duration or sectors.

V. HISTORY OF SBI ACTIONS

- o In July 1984, Lehman received an initial portfolio of $150 million.
- o In July 1988, $148 million was taken from Lehman and given to the newly hired semi-passive managers (Lincoln and Fidelity).
- o In September 1989, Lehman was placed on probation due to a change in ownership and portfolio manager.
- o In March 1989, Lehman was removed from probation. A six month review supported a conclusion of continuity management of the SBI's portfolio.

VI. CONCLUSION

Staff concludes that the SBI's relationship with Lehman should be continued until an adequate replacement is found. This conclusion is based on two findings highlighted in this review:

- Lehman has used an index-like management approach with the portfolio. They have not made significant deviations from their benchmark in either sector or duration bets. In effect, the SBI is paying active management fees for a passive or semi-passive management approach.

- Lehman has underperformed its benchmark since the inception of the account. The underperformance has not been sufficient to warrant termination under the Board's Manager Continuation Policy. However, staff does not have a high level of confidence in Lehman's ability to add value in the future. Staff has concluded that the firm's index-like approach will make it difficult for Lehman to provide future returns that will compensate for the past underperformance relative to their benchmark.

Staff recommends the Lehman be retained until the SBI completes its review of the focus and structure of the active bond manager program. Staff anticipates that the restructuring will occur by the end of FY 1991.

EXHIBIT 1

QUALITY DISTRIBUTION

		GOVERNMENT/ AGENCY	AAA	AA	A	BAA & BELOW
1990	Q3	85.1	0.7	5.3	8.9	0.0
	Q2	88.2	1.0	4.3	6.5	0.0
	Q1	89.8	1.4	3.7	5.1	0.0
1989	Q4	84.2	1.6	3.7	10.5	0.0
	Q3	73.3	4.8	6.4	15.5	0.0
	Q2	62.1	14.0	8.6	15.3	0.0
	Q1	65.6	4.1	13.2	17.1	0.0
1988	Q4	66.8	2.6	13.2	17.2	0.0
	Q3	58.4	10.0	12.9	18.7	0.0
	Q2	65.4	12.6	8.7	13.3	0.0
	Q1	68.7	17.8	5.8	6.6	1.1
1987	Q4	71.5	20.2	0.8	6.6	0.9
	Q3	64.4	25.2	0.0	9.4	1.0
	Q2	76.3	14.1	1.3	7.3	1.0
	Q1	74.8	10.3	5.3	8.1	2.3
1986	Q4	72.0	10.3	9.2	6.3	2.2
	Q3	69.1	10.6	5.7	12.3	2.3
	Q2	77.7	11.2	4.3	4.5	2.3
	Q1	82.0	6.9	4.7	4.0	2.4
1985	Q4	73.0	15.7	4.8	4.1	2.4
	Q3	76.9	9.7	6.4	7.0	0.0
	Q2	80.8	10.0	2.4	6.8	0.0
	Q1	80.5	12.6	2.3	4.6	0.0
1984	Q4	82.5	15.2	0.0	2.3	0.0
	Q3	78.3	17.8	1.3	2.6	0.0

EXHIBIT 2

MATURITY SCHEDULE

	0 - 1	1 - 5	5 - 10	10 - 20	20 +	AVERAGE
1990						
Q3	11.50	50.30	32.50	10.60	3.10	5.60
Q2	4.31	49.10	27.95	11.93	6.70	6.90
Q1	0.63	55.27	20.64	11.75	11.70	7.30
1989						
Q4	2.61	59.44	18.70	8.39	10.87	7.20
Q3	10.69	54.86	18.18	5.34	10.93	6.80
Q2	22.11	42.82	15.35	7.29	12.44	7.00
Q1	28.40	35.21	20.95	2.26	13.17	7.00
1988						
Q4	12.80	31.80	45.50	2.30	7.60	
Q3	18.60	34.60	34.40	5.10	7.30	6.30
Q2	18.20	35.80	35.20	7.70	3.10	6.20
Q1	22.60	22.60	38.00	7.10	9.70	7.20
1987						
Q4	10.80	38.70	45.50	5.00	0.00	5.20
Q3	16.60	36.00	31.70	12.10	2.60	5.90
Q2	8.60	52.60	35.20	0.00	3.60	4.90
Q1	13.20	43.30	39.50	4.00	0.00	5.00
1986						
Q4	12.00	45.50	35.70	6.80	0.00	5.20
Q3	8.80	48.10	33.70	9.50	0.00	5.50
Q2	13.70	47.70	28.90	9.60	0.00	5.40
Q1	6.90	38.60	38.70	15.80	0.00	5.80
1985						
Q4	15.60	35.20	44.00	5.30	0.00	4.70
Q3	7.10	39.90	46.50	6.50	0.00	5.40
Q2	7.90	39.60	44.40	8.10	0.00	5.50
Q1	12.60	36.50	46.90	4.00	0.00	5.40
1984						
Q4	15.10	38.50	32.80	13.60	0.00	5.20
Q3	14.20	32.50	29.00	24.20	0.00	6.50

EXHIBIT 3

SECTOR DISTRIBUTION

	GOVERNMENTS	MORTGAGES	UTILITIES	INDUSTRIALS	FINANCE	CASH EQUIVALENTS
1990						
Q3	69.6	19.0	2.6	4.7	7.6	4.8
Q2	69.5	18.7	1.6	4.9	5.1	0.3
Q1	71.3	18.6	1.7	2.2	5.6	0.6
1989						
Q4	64.9	19.4	1.7	2.5	10.7	0.8
Q3	68.3	4.9	0.9	3.4	19.7	2.8
Q2	57.0	5.0	0.9	2.6	22.6	11.9
Q1	57.5	0.0	0.9	2.7	24.6	14.2
1988						
Q4	59.9	6.9	5.1	2.8	24.9	0.5
Q3	48.2	10.2	4.3	2.8	26.5	8.0
Q2	55.4	10.0	3.7	4.1	18.4	8.4
Q1	57.4	11.3	2.1	4.2	12.5	12.5
1987						
Q4	65.5	6.8	1.2	7.0	8.7	10.8
Q3	53.4	11.1	1.3	8.9	7.7	17.6
Q2	61.7	14.6	1.3	9.0	5.8	7.6
Q1	61.1	12.0	1.3	11.4	7.0	7.2
1986						
Q4	56.9	15.1	3.0	12.4	6.4	6.2
Q3	53.0	16.1	7.8	12.1	8.4	2.6
Q2	60.1	17.6	1.8	8.9	8.7	2.9
Q1	68.4	15.0	0.0	6.6	8.1	2.9
1985						
Q4	60.8	12.1	2.0	5.3	8.5	11.3
Q3	65.8	11.1	2.2	6.9	9.0	5.0
Q2	72.0	8.8	2.2	2.4	6.7	7.9
Q1	77.6	2.9	2.3	0.0	4.6	12.6
1984						
Q4	77.9	4.7	0.0	0.0	2.3	15.1
Q3	78.4	0.0	0.0	3.8	0.0	17.8

EXHIBIT 4

LEHMAN
DURATION VS. SPOT RATE

	10 YEAR SPOT RATE	LEHMAN PORTFOLIO DURATION	BENCHMARK DURATION	MARKET DURATION
1990				
Q2	8.27%	4.07 Years	4.02 Years	4.61 Years
Q1	8.46%	4.09	4.04	4.56
1989				
Q4	7.81	4.08	3.99	4.55
Q3	8.12	3.82	3.94	4.55
Q2	7.91	3.81	3.99	4.45
Q1	9.00	3.68	3.99	4.42
1988				
Q4	8.92	4.11	4.01	4.44
Q3	8.75	3.81	3.95	4.39
Q2	8.73	4.01	3.97	4.46
Q1	8.55	4.03	4.06	4.49
1987				
Q4	8.82	3.90	4.03	4.50
Q3	9.51	3.81	4.00	4.50
Q2	8.31	3.71	4.12	4.45
Q1	7.17	3.88	4.24	4.18
1986				
Q4	7.14	3.90	4.14	4.12
Q3	6.94	4.00	4.00	4.19
Q2	7.25	3.77	3.97	4.19
Q1	7.31	4.01	4.22	3.98
1985				
Q4	8.98	3.34	4.03	3.97
Q3	10.29	3.65	3.86	4.02
Q2	10.28	3.66	3.96	4.00
Q1	11.50	3.62	3.94	3.92
1984				
Q4	11.48	3.38	3.93	4.32
Q3	12.11	3.78	3.82	4.21

EXHIBIT 5

PERFORMANCE COMPARISONS

Comparison of Customized Benchmark Portfolio Performance With Salomon BIG Index

		TOTAL PORTFOLIO		SALOMON
		ACTUAL	BENCHMARK	BIG
1984	3Q	8.5%	7.5%	8.6%
	4Q	6.8	7.1	7.5
		15.9%	15.1%	16.8%
1985	1Q	2.0%	2.3%	2.2%
	2Q	7.6	7.6	8.9
	3Q	2.1	2.2	2.0
	4Q	6.5	6.8	7.7
		19.3%	20.1%	22.3%
1986	1Q	6.5%	6.9%	7.9%
	2Q	1.1	1.4	1.1
	3Q	2.9	2.3	2.5
	4Q	2.8	2.9	3.3
		13.9%	14.1%	15.5%
1987	1Q	1.1%	1.5%	1.3%
	2Q	-1.6	-1.3	-1.6
	3Q	-2.1	-2.1	-2.8
	4Q	5.3	5.2	5.8
		2.6%	3.2%	2.6%
1988	1Q	3.2%	3.4%	3.8%
	2Q	0.7	1.1	1.2
	3Q	3.3	1.8	2.0
	4Q	0.8	0.9	0.8
		8.1%	7.4%	8.0%
1989	1Q	1.3%	1.2%	1.2%
	2Q	7.0	7.2	7.9
	3Q	1.1	1.2	1.0
	4Q	3.2%	3.6	3.7
		13.0%	13.6%	14.4%
1990	1Q	-0.5%	-0.5%	-0.8%
	2Q	3.2	3.4	3.6
	3Q	1.1	1.2	1.0
Cumulative		104.9%	106.8%	117.1%

EXHIBIT 6

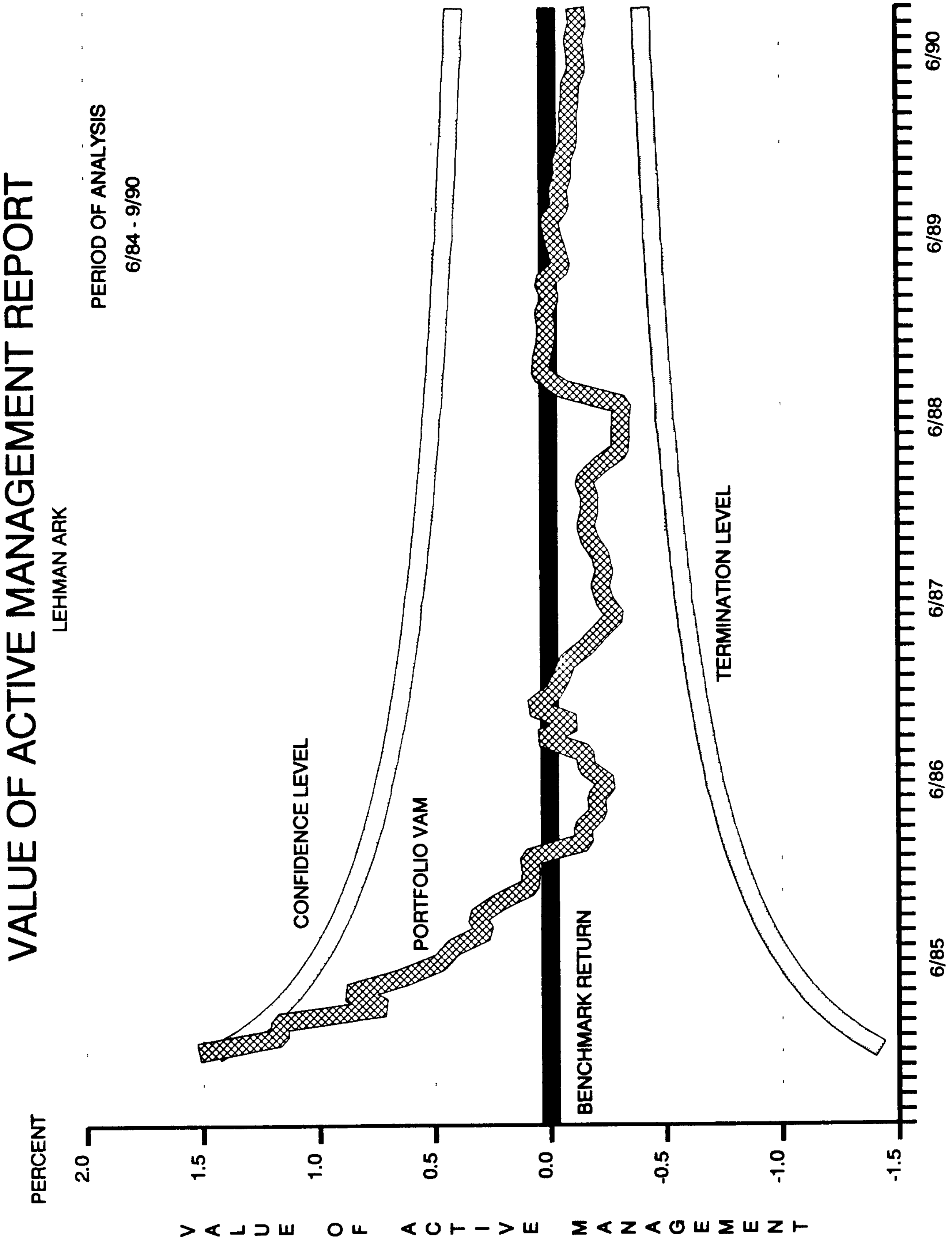

VALUE OF ACTIVE MANAGEMENT REPORT
LEHMAN ARK
PERIOD OF ANALYSIS
6/84 - 9/90
CONFIDENCE LEVEL
PORTFOLIO VAM
BENCHMARK RETURN
TERMINATION LEVEL
PERCENT
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
6/85
6/86
6/87
6/88
6/89
6/90
VALUE OF ACTIVE MANAGEMENT

EXHIBIT 7

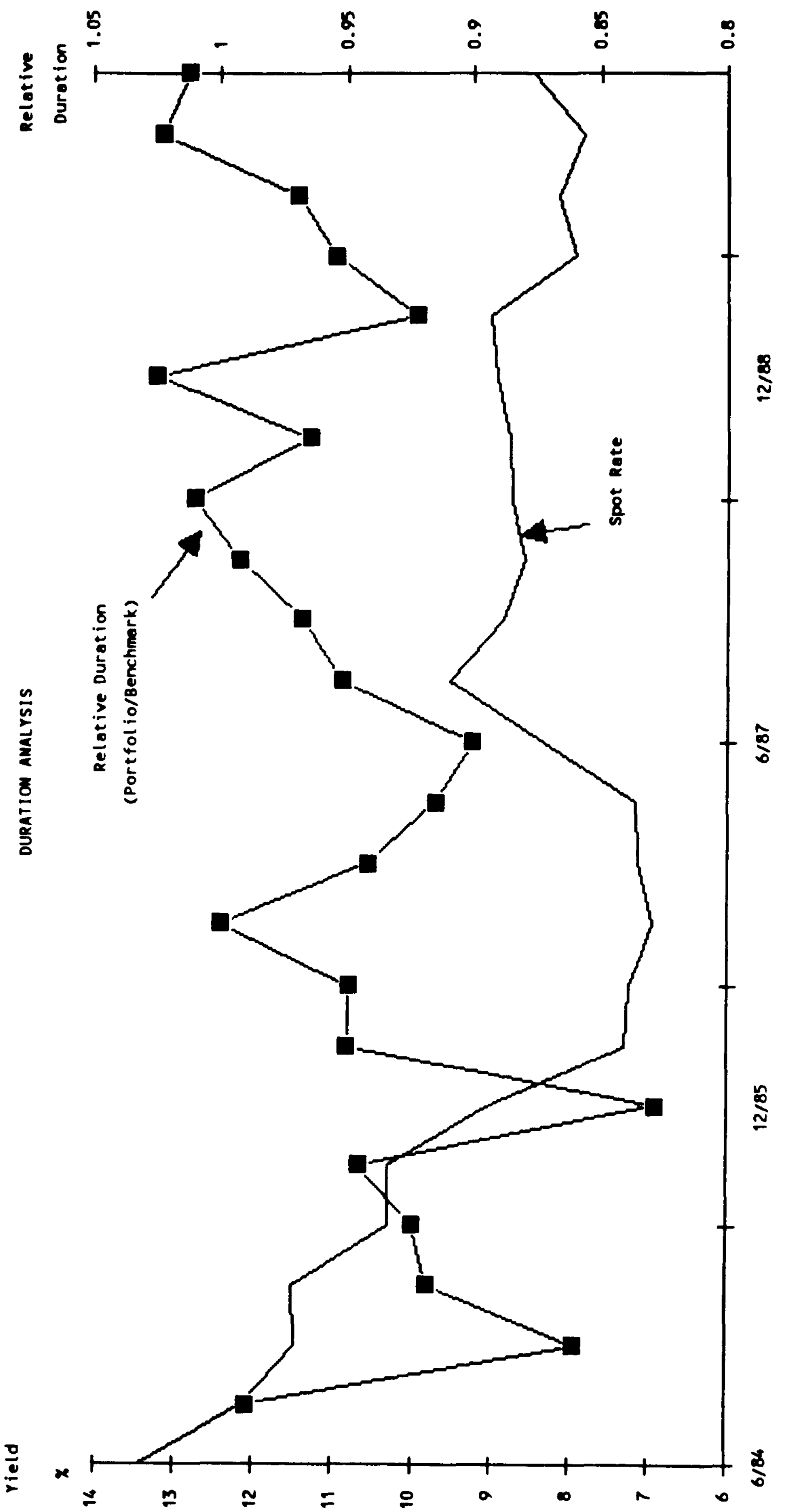

DURATION ANALYSIS
Yield
%
14
13
12
11
10
9
8
7
6
Relative
Duration
1.05
1
0.95
0.9
0.85
0.8
6/84
12/85
6/87
12/88
Relative Duration
(Portfolio/Benchmark)
Spot Rate

EXHIBIT 8

CUMULATIVE DURATION DISTRIBUTION

YEARS	LEHMAN	LEHMAN (1)	WESTERN	IAI	MILLER
± 0.1	37.5%	54%	0.0%	8.3%	8.3%
± 0.2	62.5	70	0.0	8.3	12.5
± 0.3	75.0	85	4.2	8.3	16.7
± 0.4	87.5	85	4.2	8.3	20.8
± 0.5	91.0	100	25.0	8.3	25.0
± 0.6	95.0	100	29.2	8.3	29.2
± 0.7	100.0	100	54.2	8.3	41.7
± 1.0	100.0	100	71.0	16.7	50.0
± 1.5	100.0	100	96.0	58.0	83.3
± 2.0	100.0	100	100.0	92.0	100.0
± 3.0	100.0	100	100.0	95.8	100.0

(1) Since Kevin Hurley began managing the SBI Portfolio.

EXHIBIT 9

YEARLY SECTOR RETURNS

	ANNUALIZED RETURN	THROUGH 9/30/90	1989	1988	1987	1986	1985	1984 2ND HALF
TREASURY/AGENCY	12.39% +	3.13% +	14.22% -	7.90% -	2.13% -	15.48% -	20.46% +	14.97% +
MORTGAGES	14.71 -	5.61 +	15.16 -	8.81 -	4.06 -	13.44 +	25.68 -	20.08 -
CORPORATES	14.17 +	3.17 -	13.97 +	9.45 +	2.06 +	17.03 +	24.93 -	19.22 -

+ Lehman's portfolio was, on average, overweighted in this sector during this time period.
- Lehman's portfolio was, on average, overweighted in this sector during this time period.

EXHIBIT 10

CUMULATIVE SECTOR DISTRIBUTION

		LEHMAN	LEHMAN*	WESTERN	IAI
GOVERNMENTS	± 5	33.3%	45%	54.0%	46%
	± 10	83.3	100	73.2	79
	± 15	87.5	100	77.4	100
	± 20	100.0	100	89.9	100
MORTGAGES	± 5	62.5%	91%	16.7%	25%
	± 10	79.2	100	75.0	63
	± 15	100.0	100	100.0	39
	± 20	100.0	100	100.0	52%
CORPORATES	± 5	42.0%	91%	29.2%	33.0%
	± 10	67.0	100	71.0	71.0
	± 15	92.0	100	87.5	71.0
	± 20	100.0	100	100.0	83.0

FIDELITY GUIDELINES

GOVERNMENTS ± 20% MORTGAGES ± 7.5% CORPORATES ± 5%

* SINCE KEVIN HURLEY BEGAN MANAGING THE SBI PORTFOLIO

D. Personnel Turnover

The replacement of Paul Hutter with Kevin Hurley was the only turnover that had a direct affect on management of the SBI portfolio. There was potential for a change in management style. For this reason, Lehman was placed on probation in September 1989. However, Lehman was removed from probation after a six month review showed the change had little affect on portfolio management. Beside Mr. Hutter and Mr. Hurley, five people have left the firm and two have joined. This turnover had no affect on the SBI portfolio. Lehman Ark believes that the change to employee ownership provides better monetary incentives, increasing performance and reducing staff turnover.

II. INVESTMENT PHILOSOPHY

A. Stated Philosophy

Lehman has a conservative investment approach. They avoid risk by investing in high quality intermediate maturity bonds.

Lehman uses its prediction of interest rate and economic trends to position the portfolio in terms of duration, quality and sectors. However, in line with its conservative investment philosophy, Lehman avoids large short-run portfolio shifts. Lehman instead changes portfolio composition gradually over the economic cycle and does not take extreme portfolio positions.

Lehman also believes value can be added to the portfolio through security selection. Lehman buys securities perceived as undervalued and sells them when fairly valued. Lehman derives its estimate of security mispricing from internal valuation models.

B. Investment Process

To implement their stated philosophy, Lehman employs a group strategy to forecast the general direction of interest rates and the economy. Using this forecast, the portfolio manager sets the portfolio duration, maturity structure, quality and sector targets.

Lehman's portfolio managers form the Fixed Income Policy Committee (FIPC). The FIPC tries to identify the current point of the economy in the business and interest rate cycles and projects trends over the next twelve to eighteen months. This includes projecting trends in GNP, inflation, money and credit, U.S. fiscal policy and the international environment. These projections are based on their own and consensus opinions. The FIPC presents this forecast to the Investment Policy Committee (IPC) which has senior Lehman personnel and representatives of the equity and fixed income management groups. The IPC discusses and approves the forecast, with or without modifications.

Using this analysis, Mr. Hurley tries to forecast the position and shape of the yield curve over a twelve to eighteen month period to determine returns for various maturities, and selects a maturity/duration target for the portfolio. For instance, if this analysis shows the best returns will occur in maturities of five to ten years, Lehman's portfolio will be overweighted in this maturity sector.

Mr. Hurley uses the economic, interest rate and yield curve forecasts to select sector and quality weightings. Projected yield spreads are compared with historical norms. As the economy peaks, yield spreads between high quality and low quality issues are historically at their lowest levels. The high quality issues are most attractive when this happens and Lehman tends to move into higher quality issues. Conversely, as the economy troughs, yield spreads are usually high making the lower quality issues more attractive. The portfolio then emphasizes lower quality issues.

Lehman uses a valuation model to search for under and overvalued securities. Lehman uses the model to find securities with price deviations from like securities on the risk-free yield curve (e.g. misvalued issues created by mergers). Lehman conducts credit analysis on the identified securities using their fixed income data base and research supplied by major brokerage firms. Based on output from the valuation model and Lehman's credit research, the portfolio managers make specific security selections within the targeted maturities, qualities and sectors.

C. Implementation of Philosophy

Lehman has generally followed their stated investment philosophy of avoiding risk by investing in high quality intermediate bonds. Exhibit 1 shows they invest primarily in government/agency and AAA rated bonds. Exhibit 2 shows that the majority of their investments are in intermediate bonds with maturities less than ten years.

Lehman also follows their low-risk philosophy of making gradual shifts in sector and duration. For example, Exhibit 3 shows that Lehman's government holdings have ranged from 48.2% to 78.4%. However, the largest quarter to quarter shift occurred in the fourth quarter of 1987 when the holdings increased from 53.4% to 65.5%. Exhibit 4 shows that Lehman has taken little duration risk. The duration has ranged between 3.34 years and

ACTIVE BOND MANAGERS

Value of Active Management Reports

Third Quarter 1990

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:

- perform an in-depth review of Investment Advisers during the next quarter.

Managers	Market Value 9/30/90 (Thousands)	Quarter Ending 9/30/90 Actual	Bmrk	Year Ending 9/30/90 Actual	Bmrk	Annualized Five Years Ending 9/30/90 Actual	Bmrk
IAI	$112,587	-0.6%	0.1%	4.9%	6.5%	9.0%	10.2%
Lehman Ark	127,130	1.2	1.2	7.3	7.8	9.6	9.8
Miller Anderson	181,321	-0.5	1.0	6.0	7.7	10.2	10.4
Western Asset	386,183	0.1	0.8	5.9	7.8	11.1	10.4
Aggregate Active*		-0.1	0.8	5.9	7.6	10.2	10.2
Salomon Broad Investment Grade Index		1.0%		7.7%		10.4%	

* Historical performance reflects composite of current managers only.

INVESTMENT ADVISERS

PORTFOLIO MANAGER: Larry Hill **ASSETS UNDER MANAGEMENT: $112,587,477**

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 and focuses largely on specific bond characteristics such as call provisions.

QUALITATIVE EVALUATION
(Reported By Exception)

The current evaluation notes the following:

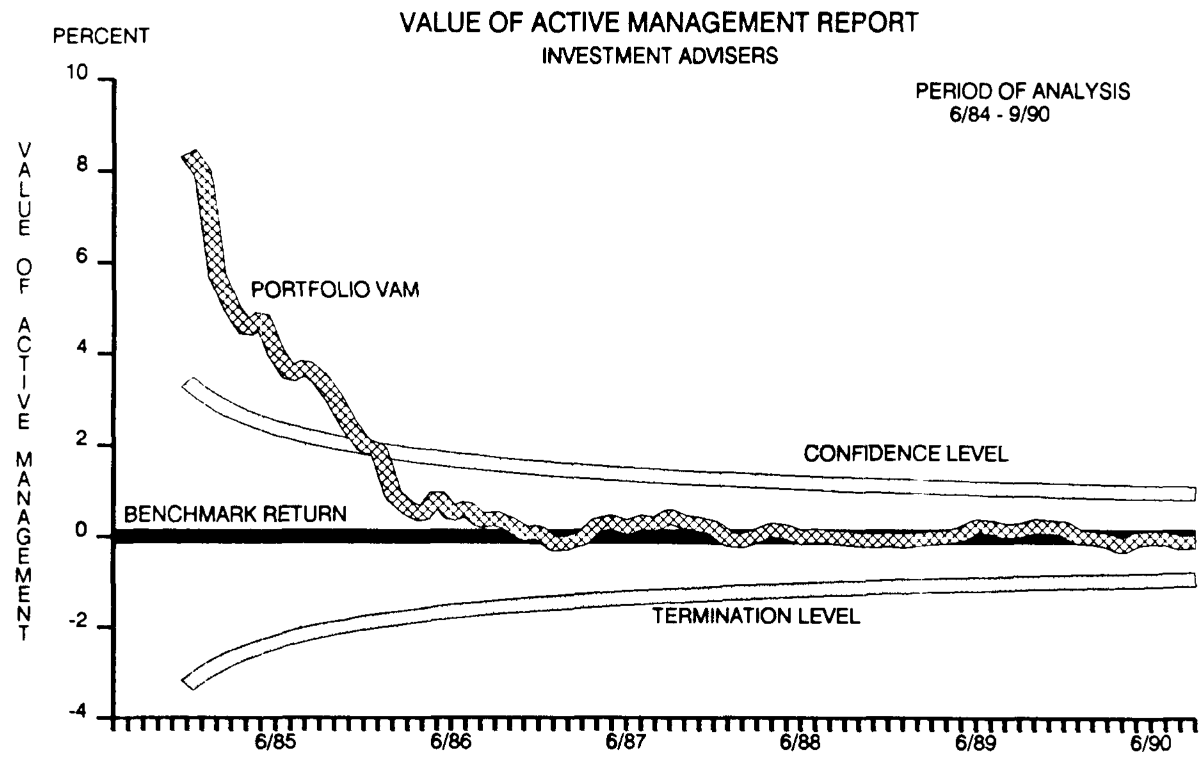
- No current concerns.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return	-0.6%	4.9%	9.0%	12.9%
Benchmark	0.1	6.5	10.2	13.0

STAFF RECOMMENDATIONS

An in-depth review of IAI will be conducted during the next quarter since the firm's performance has lagged its benchmark over the last five years.



LEHMAN ARK MANAGEMENT

PORTFOLIO MANAGER: Kevin Hurley **ASSETS UNDER MANAGEMENT: $127,129,762**

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

QUALITATIVE EVALUATION (Reported By Exception)

The current evaluation notes the following:

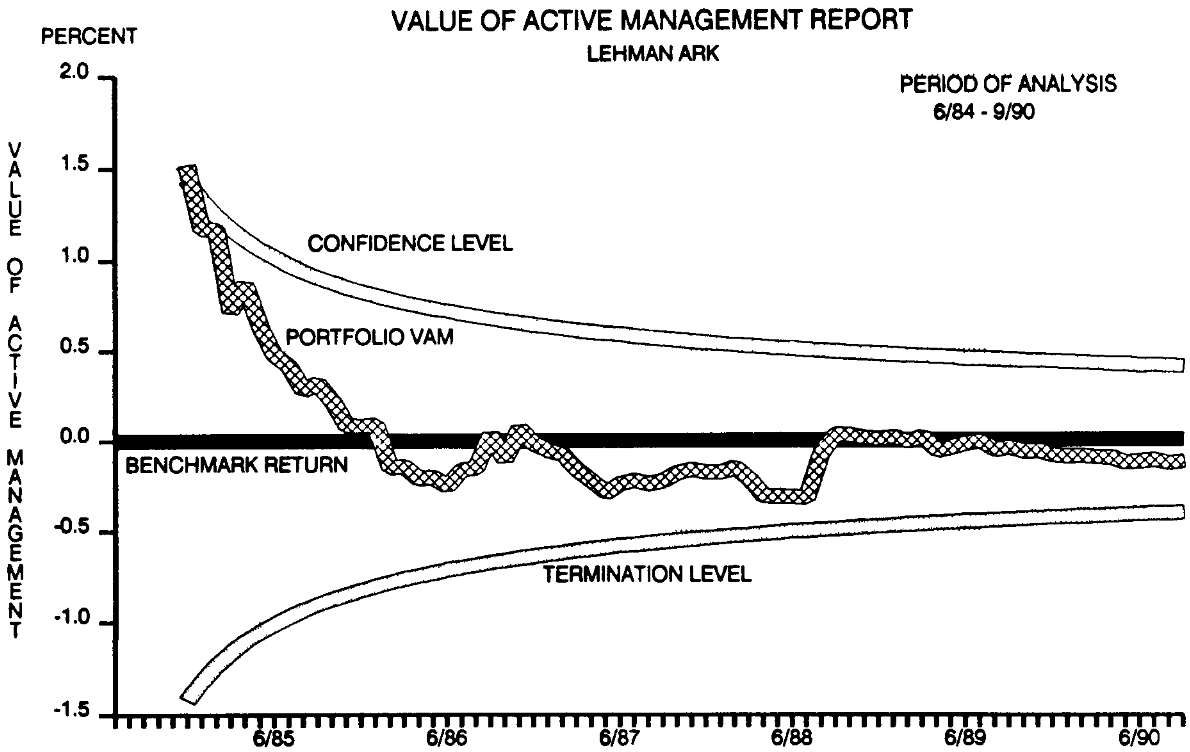
- The firm has used an index-like approach in its management of the portfolio and has made relatively few active bets.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return	1.2%	7.3%	9.6%	12.2%
Benchmark	1.2	7.8	9.8	12.3

STAFF RECOMMENDATIONS

No action required at this time.



MILLER ANDERSON

PORTFOLIO MANAGER: Tom Bennet **ASSETS UNDER MANAGEMENT: $181,321,026**

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. Changes 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 invest in mortgage securities, Miller Anderson intensively researches and, in some cases, manages the mortgage pools in which it invests.

QUALITATIVE EVALUATION
(Reported By Exception)

The firm's strengths continue to be:

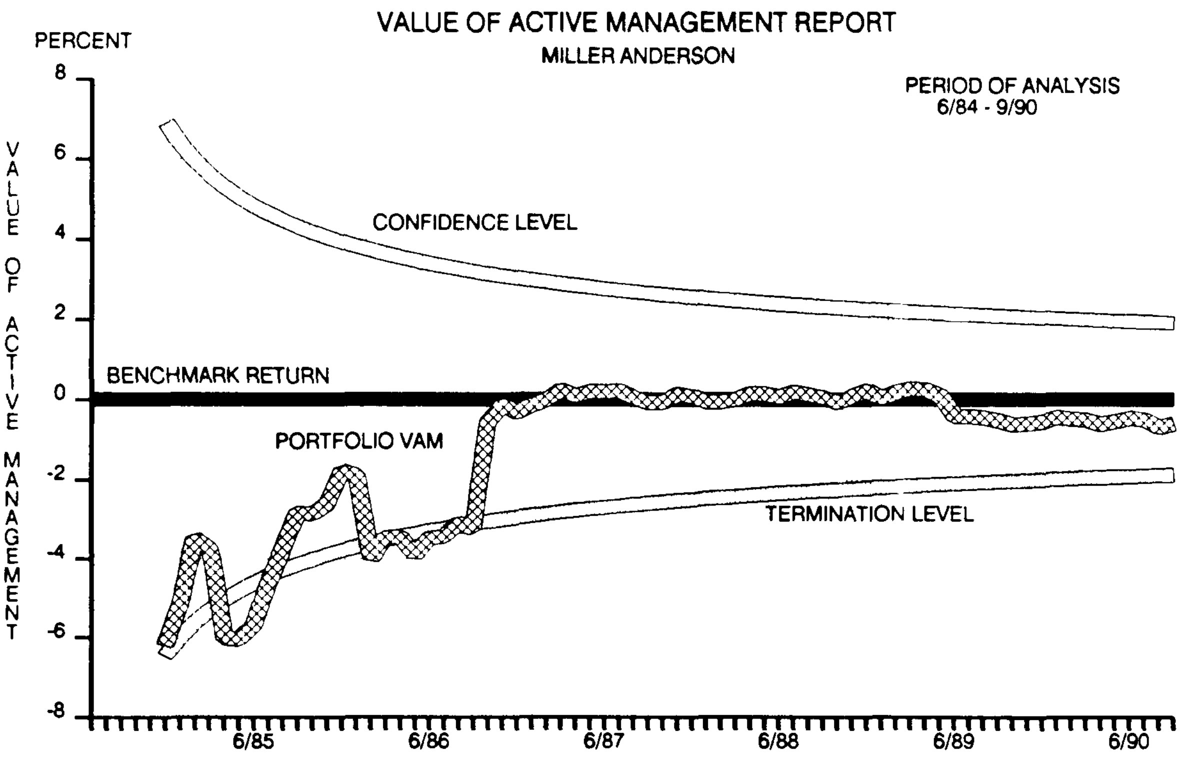
- Highly successful and experienced professionals.
- Extensive securities research process.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return	-0.5%	6.0%	10.2%	12.4%
Benchmark	1.0	7.7	10.4	13.2

STAFF RECOMMENDATIONS

No action required.



WESTERN ASSET MANAGEMENT

PORTFOLIO MANAGER: Edgar Robie, Jr. **ASSETS UNDER MANAGEMENT: $386,183,285**

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:

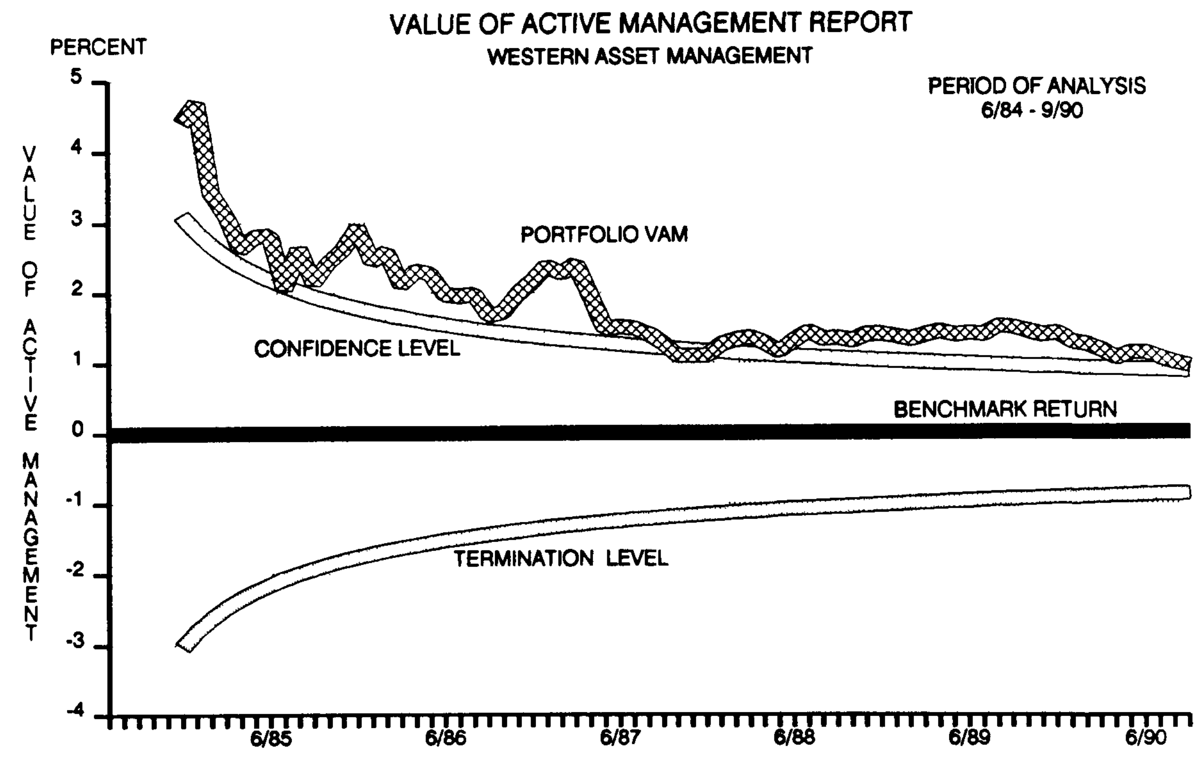
- Highly successful and experienced professionals.
- Extensive research and understanding in the application of normal portfolios to bond management.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return	0.1%	5.9%	11.1%	14.1%
Benchmark	0.8	7.8	10.4	13.0

STAFF RECOMMENDATIONS

No action required.



Tab G

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 10, 1990

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 items:

- o Review of current strategy.
- o Results of annual review sessions with existing managers.
- o Investment with a new specialty real estate manager, Zell/Equity.
- o Additional investment with an existing real estate manager, Heitman Advisory.

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 investment 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. In addition, the SBI has approved investments in the Copley Value Fund for $75 million and the LaSalle Income Parking Fund for $20 million. These new investments are expected to be closed and finalized in the fourth quarter of 1990 or first quarter 1991.

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 $379 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 $124 million to eight commingled oil and gas funds.

2) Results of Annual Review Sessions with Existing Managers

During October, the Alternative Investment Committee and staff conducted annual review sessions with several of the SBI's existing venture capital investment managers, Matrix, Inman Bowman, Allied and DSV.

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

Overall, the meetings went well and produced no major surprises. Three of the four managers interviewed, Matrix, Inman/Bowman and Allied are, by and large, conforming to their originally stated investment strategies.

In comparing strategic and organizational effectiveness and performance to date, staff and the Alternative Investment Committee have been the most satisified with Matrix and would recommend an additional investment with Matrix, when appropriate.

The Committee and staff have been less satisified with the operations and performance to date of Inman/Bowman and Allied and no new investments with either manager would be considered at this time. However, since both investments are at about the mid-point of their terms, it is still too early to tell how they will perform.

The Committee and staff continue to be disappointed 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 funded investor commitments significantly exceed fund investments. The Alternative Investment Committee and staff have asked DSV to return excess cash to the limited partners and fund future investments on an "as needed" basis. DSV has replied back that they will not comply with the SBI's request. The Alternative Investment Committee and staff are continuing to pursue the request with the other limited partners of DSV, and DSV directly. At this time, the Alternative Investment Committee and staff would not recommend additional investments with DSV.

ACTION ITEMS:

1) Investment in the Zell/Merrill Lynch Real Estate Opportunity Partners II Limited Partnership.

Sam Zell and his affiliates (Zell/Equity) and Merrill Lynch are seeking investors in a new $250 million to $1 billion real estate investment fund, Opportunity Partners II. Opportunity Partners II is a follow-on fund to Opportunity Partners I which was formed in August 1988 with $408 in investor commitments. Like Fund I, Fund II will make equity or equity-related investments in opportunistic real estate situations. Over a 22 year period, Zell/Equity has accumulated controlling interests in more than 275 real estate projects nationwide which are valued at approximately $5 billion.

More information on the Zell Fund is included as Attachment F.

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 up to $100 million or 20%, whichever is less, in the Zell Opportunity Partners II Fund.

2) Follow-on Investment with Heitman Advisory Corporation

Heitman Advisory, a real estate investment firm based in Chicago, ILL, is seeking investors in Heitman Real Estate Fund V, a new $100 million to $300 million real estate fund. Fund V is a follow-on fund to Funds I-IV which were formed in succession over the last 6 years. As in the prior funds, Fund V will focus on equity interests in existing shopping centers, industrial and business parks, and office buildings.

Currently the SBI has $20, $30 and $20 million committed to Heitman Funds I, II and III, respectively. The Committee and staff have been satisfied with the performance, operations and strategy of Heitman and feel it is appropriate to place additional real estate funds with Heitman, subject to final negotiations 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 up to $30 million or 20%, whichever is less, in Heitman Real Estate Fund V.

ATTACHMENT A

Summary of Alternative Investments

	Inception Date	Commit. (Millions)	Funded Commit. (Millions)	Mkt. Value Of Funded Commit. (Millions)	Cash Distr. (Millions)	Unfunded Commit. (Millions)	IRR	Measurement Period
Real Estate								
Aetna	4/82	$40.0	$40.0	$64.9	$0.0	$0.0	7.4%	7.9 Yrs.
Equitable	10/81	40.0	40.0	78.5	0.0	0.0	9.3	8.6
Heitman I	8/84	20.0	20.0	21.7	10.3	0.0	11.8	5.4
Heitman II	11/85	30.0	30.0	36.0	7.7	0.0	11.4	4.1
Heitman III	1/87	20.0	20.0	21.2	2.8	0.0	8.5	3.0
Prudential	9/81	40.0	40.0	37.5	36.4	0.0	7.8	8.8
RREEF	9/84	75.0	75.0	81.9	14.6	0.0	6.2	6.2
State Street III	9/85	20.0	20.0	22.5	0.0	0.0	2.9	4.3
State Street IV	9/86	15.0	15.0	16.1	0.0	0.0	2.4	3.3
State Street V	12/87	15.0	15.0	16.9	0.0	0.0	7.1	2.1
TCW III	8/85	40.0	40.0	49.8	9.5	0.0	10.3	4.6
TCW IV	11/86	30.0	30.0	35.6	2.1	0.0	9.8	3.3
Real Estate Totals		**$385.0**	**$385.0**	**$482.5**	**$83.3**	**$0.0**		
Resource (Oil & Gas)								
AMGO I	9/81	$15.0	$15.0	$4.8	$3.0	$0.0	-10.3%	7.8 Yrs.
AMGO II	2/83	7.0	7.0	6.0	1.6	0.0	1.9	6.4
AMGO IV	7/88	12.3	12.3	12.3	0.7	0.0	7.4	1.7
AMGO V	5/90	16.8	10.5	10.5	0.0	6.3	0.0	0.3
Apache I	5/84	3.0	2.0	2.0	0.7	1.0	15.9	6.2
Apache III	12/86	30.0	30.0	20.9	20.3	0.0	13.6	3.5
Morgan O&G	8/88	15.0	8.4	9.3	0.0	6.6	12.0	1.4
British Pet.	2/89	25.0	25.0	28.0	2.7	0.0	23.7	1.0
Resource Totals		**$124.1**	**$110.2**	**$93.8**	**$29.1**	**$13.9**		

(Continued on next page)

Notes: Figures are updated after each manager's annual review session.
IRR indicates internal rate of return.
Totals may not add due to rounding.

11/90

Summary of Alternative Investments

	Inception Date	Commit. (Millions)	Funded Commit. (Millions)	Mkt. Value Of Funded Commit. (Millions)	Cash Distr. (Millions)	Unfunded Commit. (Millions)	IRR	Measurement Period
Venture Capital								
Allied	9/85	$5.0	$5.0	$4.9	$1.3	$0.0	7.7%	4.8 Yrs.
DSV	4/85	10.0	10.0	11.3	0.0	0.0	2.7	5.2
First Century	12/84	10.0	6.5	6.2	2.0	3.5	9.6	5.1
First Chicago	5/88	5.0	4.3	4.2	0.4	0.7	10.7	1.9
First Chicago II	7/90	20.0	0.0	0.0	0.0	20.0	0.0	0.0
Golder Thoma	10/87	14.0	6.3	5.9	0.0	7.7	-4.3	2.7
IAI Ventures II	7/90	10.0	1.0	1.0	0.0	9.0	0.0	0.0
Inman/Bowman	6/85	7.5	5.3	4.5	0.0	2.2	-4.5	5.1
KKR I	3/84	25.0	25.0	26.6	40.4	0.0	26.8	6.3
KKR II	12/85	18.4	18.4	32.3	7.3	0.0	23.0	4.5
KKR III	10/87	146.6	133.7	134.2	7.6	12.9	3.2	2.7
Matrix	8/85	10.0	10.0	11.2	2.0	0.0	8.9	4.9
Matrix II	5/90	10.0	1.0	1.0	0.0	9.0	0.0	0.2
Norwest	1/84	10.0	10.0	8.2	2.5	0.0	1.7	5.5
Summit I	12/84	10.0	10.0	9.4	4.2	0.0	9.3	5.3
Summit II	5/88	30.0	12.0	11.2	0.6	18.0	-2.8	1.9
Superior	6/86	6.6	4.2	3.7	0.0	2.5	-5.4	3.8
T. Rowe Price	11/87	1.1	1.1	0.0	1.3	0.0	32.4	2.6
Zell/Chilmark	7/90	30.0	0.0	0.0	0.0	30.0	0.0	0.0
Venture Capital Totals		**$379.3**	**$263.7**	**$275.9**	**$69.6**	**$115.5**		

SUMMARY

Real Estate Totals	$ 385.0	$ 385.0	$ 482.5	$ 83.3	$ 0.0
Resource Totals	124.1	110.2	93.8	29.1	13.9
Venture Capital Totals	379.3	263.7	275.9	69.6	115.5
GRAND TOTALS	**$888.4**	**$758.9**	**$852.2**	**$182.0**	**$129.4**

Notes: Figures are updated after each manager's annual review session.
IRR indicates internal rate of return.
Totals may not add due to rounding.

11/90

ATTACHMENT B

ANNUAL REVIEW SUMMARY
MATRIX II and III
October 29, 1990

MANAGER REPRESENTATIVES: Mike Humphreys, Paul Ferri, Rick Fluegel, Tim Barrows

SBI ASSETS UNDER MANAGEMENT:

Matrix	II	$10,000,000
	III	$ 1,000,000
Total		$11,000,000

BACKGROUND AND DESCRIPTION: Matrix Partners II and III were formed in August 1985 and March 1990, respectively. Each fund has a term of ten years. The Funds' 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:

Matrix Partners II is fully invested with almost thirty portfolio companies. This fund is halfway through its life, and has a strong emphasis on high-technology firms. Matrix Partners III has made investments in three companies since its inception in March 1990. Following are highlights regarding recent activities:

- Over the past year, Matrix has completed initial public offerings for some of the companies in their portfolio. As a result, Matrix II has distributed 27% of its originally committed capital back to its limited partners.

- As of the end of October, Matrix II has distributed $2.7 million to the SBI. The general partner has indicated that there is the potential for an additional $3 million in distributions to the SBI over the next 12 months.

- Matrix II has several investments which the general partner believes represent potentially significant gains. Eleven of the private companies in the portfolio were profitable in 1990.

- Matrix III is actively evaluating new investment proposals in both San Francisco and Boston. They are pleased with the deal flow they are experiencing in each area, but report that San Francisco is the significantly stronger market.

MATRIX QUANTITATIVE EVALUATION

	Matrix II	Matrix III
COMMITMENT:	$10,000,000	$10,000,000
FUNDED COMMITMENT:	$10,000,000	$ 1,000,000
MARKET VALUE OF FUNDED COMMITMENT:	$11,158,269	$ 1,000,000
CASH DISTRIBUTIONS:	$ 2,743,713	$0
INCEPTION DATE(S):	August 1985	May 1990
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	8.9%	0.0%

DIVERSIFICATION PROFILE (% OF COST)

LOCATION

West	63%
East	28%
South	6%
Midwest	3%

INVESTMENT STAGE

Start-up	31%
Early	29%
Late	28%
Buyout	2%

INDUSTRY

Computer/Electronic	66%
Medical	22%
Consumer	4%
Communications	5%
Other	3%

STAFF COMMENTS AND RECOMMENDATIONS:

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

ATTACHMENT C

ANNUAL REVIEW SUMMARY
ALLIED CAPITAL
October 18, 1990

MANAGER REPRESENTATIVES: Brooks Browne

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:

The Allied Venture Partnership is fully invested with forty portfolio companies, and is halfway through its life. Most of the investments continue to be in low technology ventures in a range of early, growth, and later stage situations. Following are highlights regarding recent activities:

- Fund performance to date has been disappointing due to the poor public markets and certain investments not measuring up to the managers' standards.
- Allied reports that they are seeing more investment opportunities with sources of financing from commercial banks almost nonexistant. However, the current environment is also accelerating problems being experienced by small companies; some of which will not escape the Allied portfolio. Allied doesn't expect this outlook to improve over the coming year.
- Allied is concerned about the current initial public offering (IPO) environment which will hamper their ability to exit some promising situations in the near term.
- Allied Advisory, Inc., the fund manager, has been spun off from the Allied Capital Corporation and is now a publicly traded, registered investment adviser. They report that this will have no impact on the operations of the fund.
- The representative from Allied had difficulty portraying a consistent policy for valuation of portfolio companies, particularly in the case of writedowns. Staff and the Committee have asked Allied to provide more information on valuation policies and how they are applied.

ALLIED QUANTITATIVE EVALUATION

COMMITMENT:	$5,000,000
FUNDED COMMITMENT:	$5,000,000
MARKET VALUE OF FUNDED COMMITMENT:	$4,866,816
CASH DISTRIBUTIONS:	$1,337,834
INCEPTION DATE(S):	September 1985
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	7.7%

DIVERSIFICATION PROFILE (% OF COST)

LOCATION

West	16%
South	17%
Midwest	15%
East	52%

INVESTMENT STAGE

Early	14%
Expansion	3%
Late	29%
Buyout	54%

INDUSTRY

Computers	3%
Medical	12%
Consumer	47%
Communication	4%
Industrial/Mfg.	31%
Other	3%

STAFF COMMENTS AND RECOMMENDATIONS:

Compared to some of the SBI's other venture capital managers, the Alternative Investment Committee and staff have been less satisfied with Allied's operation and performance to date. No additional investments with Allied are being considered at this time. However, at approximately the midpoint of Allied's expected investment term, it is still too early to tell how they will ultimately perform.

ATTACHMENT D

ANNUAL REVIEW SUMMARY
INMAN AND BOWMAN
October 24, 1990

MANAGER REPRESENTATIVES: Kirk Bowman, Grant Inman, Bill Elmore

SBI ASSETS UNDER MANAGEMENT: $5,250,000

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 now has seventeen portfolio companies with a high concentration in computer software ventures. Following are highlights regarding recent activities:

- The fund is now halfway through its life, 80% of the commitment has been called, and the bulk of remaining investments will be follow-on financings with the existing companies.
- The partnership has divested itself of several disappointing investments while adding four new opportunities in the past year.
- One portfolio company was targeted for an IPO during the fall, but was halted due to stock market uncertainties.
- Inman and Bowman are focusing their efforts in the San Francisco East Bay area which they believe will provide better venture opportunities than in the more mature and highly competitive West Bay area.
- Inman and Bowman has indicated that a new trend is developing in later round financings, known as "washouts", whereby co-investors who do not participate in subsequent financings will have their positions diluted, or "washed out."

INMAN/BOWMAN QUANTITATIVE EVALUATION

COMMITMENT:	$7,500,000
FUNDED COMMITMENT:	$5,250,000
MARKET VALUE OF FUNDED COMMITMENT:	$4,535,041
CASH DISTRIBUTIONS:	$0
INCEPTION DATE(S):	June 1985
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	-4.5%

DIVERSIFICATION PROFILE (% OF COST)

LOCATION

West	99%
East	1%

INVESTMENT STAGE

Early	81%
Expansion	15%
Restarts	4%

INDUSTRY

Computer/Electronic	60%
Medical	36%
Consumer	1%
Other	3%

STAFF COMMENTS AND RECOMMENDATIONS:

Compared to some of the SBI's other venture capital managers, the Alternative Investment Committee and staff have been less satisfied with Inman/Bowman's operation and performance to date. No additional investments with Inman/Bowman are being considered at this time. However, at approximately the midpoint of Inman/Bowman's expected investment term, it is still too early to tell how they will ultimately perform.

ATTACHMENT E

ANNUAL REVIEW SUMMARY
DATA SCIENCE VENTURES (DSV)
October 18, 1990

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:

DSV has continued to invest at a much slower pace than expected. Only 28% of fund commitments have been invested so far despite having drawn down 100% of fund commitments. The fund is almost halfway through its life.

The Alternative Investment Committee and staff continue to request that DSV return excess cash holdings to limited partners and draw down funds as needed.

Following are highlights of recent activities:

- DSV now has 16 portfolio companies, having divested itself of a disappointing investment while adding three new opportunities in the past year. Several follow-on financings were executed.
- DSV remains heavily committed to investing in companies with a biotechnical or medical focus.
- The fund is planning 2 new investments in the near term with a focus on the public markets. They are considering opportunities where they can be actively engaged in management and occupy a board seat rather than being a passive investor or trader.
- The general partners believe many of the fund's holdings are progressing favorably while one significant investment has become valueless.

DSV QUANTITATIVE EVALUATION

COMMITMENT:	$10,000,000
FUNDED COMMITMENT:	$10,000,000
MARKET VALUE OF FUNDED COMMITMENT:	$11,256,650
CASH DISTRIBUTIONS:	$0
INCEPTION DATE(S):	April, 1985
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	2.7%

DIVERSIFICATION PROFILE (% OF COST)

LOCATION

West	34%
East	66%

INVESTMENT STAGE

Start-up	41%
Early Stage	42%
Later Stage	17%

INDUSTRY

Data Processing	17%
Automation Equipment	16%
Communications	9%
Medical/Biotechnology	32%
Semiconductor	9%
Other	17%

STAFF COMMENTS AND RECOMMENDATIONS:

Of the four 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 F

REAL ESTATE MANAGER PROFILE

I. BACKGROUND DATA

FUND MANAGER:	Zell/Merrill Lynch
TYPE OF FUND:	Opportunistic and Financially Distressed Situation Real Estate Limited Partnership
TOTAL FUND SIZE:	$275 Million to $1 Billion
INTERVIEW DATE:	December 5, 1990
MANAGER CONTACT:	Sam Zell
ADDRESS:	Two North Riverside Plaza Chicago, IL 60606
TELEPHONE:	312-454-0100

II. ORGANIZATION AND STAFF

Sam Zell and his affiliate, Equity Financial and Management Company (Zell/Equity), will have primary investment responsibility for the fund. Merrill Lynch will have an oversight role and is the fund's lead placement agent.

Samuel Zell is Chairman of Board of Equity Financial and Management Company. Through this entity, founded in 1968, and other affiliated entities, Zell is involved in numerous real estate and corporate investments typically in countercyclical, financially distressed and undervalued situations. Acquisition decisions are made on a centralized basis in Chicago by a group of 17 people supported by 117 professionals. Property development, management, and leasing functions are organized on a more decentralized basis from 18 regional offices consisting of 401 professionals and a property management staff of more than 1,600.

Zell currently has controlling interests in real estate valued in excess of $5 billion. In addition, Zell has corporate investments with aggregate annual revenues of approximately $5 billion and total assets of approximately $6 billion.

Merrill Lynch is a global securities firm with a strong focus in real estate investment banking. During 1989, Merrill Lynch completed real estate-related transactions globally totalling more than $11 billion in value. Merrill Lynch will act as the fund's lead placement agent. Also, Merrill will sit on an Investment Committee for the fund which will consist of four members, two from Merrill and two from Zell/Equity. A majority vote from the Investment Committee is needed to approve fund acquisitions.

This fund is the second Limited Partnership Fund for Zell and Merrill Lynch. The first fund was formed in August, 1988 with equity capital commitments of $408.7 million. Investors in the first fund included, among others, Michigan State Employees; the Illinois State Board; Ameritech; The Boeing Company; Oregon Public Employees; and Northwestern Mutual Life.

III. The investment strategy of the fund is to make equity or equity-related investments in opportunistic real estate situations. The partnership will acquire office, retail, and residential properties and may also invest in mixed-use and industrial properties. Although the focus will be on equity acquisitions, the partnership may acquire convertible or participating mortgages or deeds of trust. The partnership may invest in real estate assets indirectly through the acquisition of controlling interests in partnerships, joint ventures, or corporations whose assets are primarily composed of real estate.

The partnership is being created to take advantage of current economic and real estate conditions by making equity investments in real estate assets which are either underperforming, or owned by entities either seeking to redeploy capital or experiencing financial difficulties.

IV. GENERAL PARTNER'S COMMITMENT

Zell/Merrill Lynch will commit an amount equal to the greater of $25 million or 2.5% of the Limited Partners' equity capital commitments.

V. TAKEDOWN SCHEDULE

It is anticipated that the commitments will be drawn down over a period of up to five years on an as needed basis.

VI. DISTRIBUTIONS

A summary of the distribution schedule is:

A) Cash from operations:

- First, pro rata to all partners until they have received a cumulative return of 9% per annum.

- Second, 85% to all partners and 15% to the Managing General Partner until all partners have received a cumulative return of 13% per annum.

- Third, 70% to all partners and 30% to the Managing General Partner.

B) From Sales or Refinancings:

- First, pro rata to all partners until they have received, on a cumulative compounded basis, a return of 9% per annum.

- Second, pro rata to all partners until they have received a return of all capital.

- Third, 85% to all partners and 15% to the Managing General Partner until all partners have received, on a cumulative compounded basis, an aggregate return of 13% per annum (including amounts previously received.)

- Fourth, 70% to all partners and 30% to the Managing General Partner.

VII. MANAGEMENT FEE

An asset management fee of 75 basis points of the partnership's total capital will be paid annually.

The Managing General Partner will be entitled to receive a 2% acquisition fee in connection with the acquisition of each partnership asset, subject to a potential reduction in the event of a third party brokerage commission.

VIII. TERM

The Managing General Partner will actively pursue opportunities to sell the properties as appropriate, but no later than in the tenth year. In any event, the Managing General Partner will use its best efforts to sell the properties within 15 years of the closing date.