

**MINNESOTA STATE BOARD
OF INVESTMENT
MEETING
June 2, 1993
&
INVESTMENT ADVISORY
COUNCIL MEETING
June 1, 1993**

**AGENDA
STATE BOARD OF INVESTMENT
MEETING**

**Wednesday, June 2, 1993
8:30 A.M. - Room 125
State Capitol - Saint Paul**

TAB

- 1. Approval of Minutes of March 11, 1993**

- 2. Report from the Executive Director (H. Bicker)**
 - A. Quarterly Investment Review (January 1-March 31, 1993) **A**
 - B. Portfolio Statistics (March 31, 1992) **B**
 - C. Administrative Report **C**
 1. Budget and Travel Reports
 2. Legislative Update
 3. SBI/IAC Meeting Dates for Calendar 1993
 4. Authorization to Establish a Deferred Compensation Review Committee

- 3. Report from the SBI Administrative Committee (M. McGrath)** **D**
 - A. Update on Master Custody RFP
 - B. Update on 403(b) Contracts
 - C. Approval of Executive Director's Workplan for FY94
 - D. Approval of Administrative Budget Plan for FY94
 - E. Approval of Fiduciary Education Plan
 - F. Approval of Process for Executive Director's FY93 Evaluation

- 4. Report from the Manager Search Committee (P.Sausen)** **E**

- 5. Reports from the Investment Advisory Council (J. Yeomans)**
 - A. Asset Allocation and Stock and Bond Manager Committee** **F**
 1. Approval of Total Fund Objectives and Report Format
 2. Review of Manager Continuation Policy

 - B. Stock and Bond Manager Committee** **G**
 1. Review of Manager Performance
 2. In-depth Review of Forstmann Leff
 3. Annual Review of BEA Associates
 4. Annual Review of Voyager Asset Management
 5. Recommendation Concerning Fidelity
 6. Annual Review of Manager Contract Guidelines
 7. Recommendation to Renew Manager Contracts
 8. Update on Manager Allocations for July 1, 1993
 9. Approval of Active International Stock Manager Interview Candidates
 10. Approval of Expanded Investment Guidelines for Short-Term Cash Accounts

- C. Alternative Investment Committee** **H**
 1. Results of Annual Review Sessions
 2. Status of First Reserve
 3. Recommendation to Reaffirm Commitment to a Venture Capital Manager (Great Northern Partners)

- 6. Report from the Task Force on Divestment**

STATE BOARD OF INVESTMENT

Minutes State Board of Investment March 11, 1993

The State Board of Investment (SBI) met at 9:00 A.M. on Thursday, March 11, 1993 in Room 125, State Capitol, St. Paul, Minnesota. Governor Arne H. Carlson, Chair; Secretary of State Joan Anderson Growe; State Treasurer Michael A. McGrath; State Auditor Mark B. Dayton were present. Attorney General Hubert H. Humphrey III was absent.

Mr. Carlson called the meeting to order and the minutes of the December 9, 1992 meeting were approved.

Executive Director's Report

Mr. Bicker, Executive Director, referred Board members to Tab A of the meeting materials. He stated that the Basic Funds had exceeded the inflation rate over the last ten years (Basics Total Fund 12.4% vs. Inflation 3.8%), outperformed the composite index over the five year period (Basics Total Fund 13.1% vs. Composite 12.6%), and outperformed the median fund over the five year period (Basics-Excluding Alternative Assets 14.1% vs. Median Fund 13.2%). Mr. Bicker stated that the Basic Funds' market value increased by 4.7% for the quarter ending December 31, 1992. He noted that during the quarter, the international investment program was implemented and that at the end of the quarter 3.2% of the Basic Funds were invested in international stocks. He reported that the Basic Funds had outperformed the composite index for the quarter (Basic Total Fund 4.3% vs. Composite 3.9%) and median fund for the quarter (Basics-Excluding Alternative Assets 5.2% vs. Median 3.4%). He stated that the stock segment outperformed its target for the quarter (Basic stocks 8.0% vs. Wilshire 5000 Adjusted 7.5%) and the bond segment slightly outperformed its target for the quarter (Basic bonds 0.5% vs. Salomon BIG Index 0.4%).

Mr. Bicker directed members to the Post Retirement Fund summary and noted the new asset allocation policy for the Post Fund. He stated that the fund is currently over 30% invested in stocks and that the fund will continue to move towards the 50% allocation target. He noted the benefit increase of 4.6% which was payable January 1, 1993. He reported that the total fund had slightly underperformed its composite index for the quarter (Post Total Fund 1.3% vs. Composite 1.4%). Mr. Bicker stated that the stock segment is still in a transition phase and had underperformed for the quarter (Post stocks 4.8% vs. S&P 500 5.1%). He added that the bond segment had outperformed its benchmark for the latest quarter (Post bonds 0.4% vs. Shearson Index 0.1%).

Mr. Bicker reported that the Assigned Risk Plan underperformed its composite index for the quarter (Total Fund 0.4% vs. Composite 0.9%) but outperformed it for the year (Total Fund 7.8% vs. Composite 7.4%). He noted that the stock segment had outperformed for

the quarter (Equity segment 7.5% vs. Benchmark 5.7%) and year (Equity segment 12.0% vs. Benchmark 7.4%). He added that the bond segment had underperformed its benchmark for the quarter (Bond segment -0.8% vs. Benchmark 0.0%) and year (Bond segment 7.2% vs. Benchmark 7.4%). Mr. Bicker stated that as of December 31, 1992, the SBI was responsible for over \$20 billion in assets.

Mr. Bicker referred members to Tab C of the meeting materials for updates on the budget and travel. He updated the members on the progress of the SBI's Administrative Bill in the Legislature and stated that the bill was heard in the Senate Governmental Operations Committee, passed out of that Committee and was now on General Orders in the Senate. He noted that there have been no hearings in the House on the bill yet. He concluded his report by referencing the schedule for SBI/IAC meeting dates for the remainder of calendar year 1993 and he noted that the dates had been cleared with all Board members except the Governor.

Manager Search Committee Report

Mr. Sausen reported that the Committee had conducted three manager searches during the quarter. He stated that ten firms were interviewed for the domestic stock manager search and that the following six firms were being recommended by the Committee to be hired: Brinson Partners, Inc.; Investment Advisors, Inc. - Regional Fund; Jundt Associates; Lincoln Capital Management; Oppenheimer Capital; and Weiss Peck and Greer.

Mr. Sausen said that during the domestic bond manager search nine firms were interviewed and that the following five firms were originally recommended for retention by the Committee: BEA Associates; Goldman Sachs Asset Management; Standish, Ayer & Wood; IDS Advisory; and Trust Company of the West. He noted that IDS would manage a government/corporate portfolio only and that TCW would manage portfolio consisting of only mortgage securities. Mr. Sausen updated the Board on a situation concerning Goldman Sachs and distributed a memo from the Committee (see Exhibit A) which includes a revised recommendation that excludes Goldman Sachs. He noted the staff will monitor the situation at Goldman and that a recommendation to retain Goldman could be considered at a future date. Mr. McGrath moved approval of the Committee's recommendation for active domestic stock managers, as stated in the Committee Report and the revised recommendation for domestic bond managers, as stated in Exhibit A. Ms. Growe seconded the motion. The motion passed.

Mr. Sausen stated that the Committee is also recommending that the SBI retain two international active country/passive stock managers: Baring International and Brinson Partners. Ms. Growe moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Dayton seconded the motion. The motion passed.

Asset Allocation Committee Report

Ms. Yeomans stated that there are no action items from the Committee. She referenced the Committee's review of the Post Fund transition and the creation of interim benchmarks to be used until the Committee makes a formal recommendation on appropriate total fund

performance objectives at the June 1993 meeting. She added that a search for active international managers would take place over the next several months resulting in a potential recommendation regarding the selection of managers being presented to the Board in September 1993.

Stock and Bond Manager Committee Report

Ms. Yeomans referenced the stock and bond manager performance data included in the Committee Report and stated that the Committee is recommending that: the SBI place Fidelity Management Trust on probation as provided in the SBI's Manager Continuation Policy; the Committee should review the ability of Lincoln and Fidelity to take on additional assets; and the Board should authorize a semi-passive bond manager search. Mr. Dayton stated that he feels it is important to compare the current two semi-passive managers with other firms qualified to manage these funds. Ms. Yeomans concurred. Mr. Dayton moved approval of the Committee's recommendations. Mr. McGrath seconded the motion. The motion passed.

Ms. Yeomans reported that the Committee had completed an in-depth review of GeoCapital during the quarter and that both staff and the Committee were satisfied with the firm's performance.

Ms. Yeomans stated that staff and the Committee had reviewed the formula used to determine performance-based fees for active stock managers and she briefly described the proposed formula change. In response to a question from Mr. McGrath, Mr. Bicker stated that staff had received favorable comments from all proposed new managers and the SBI's current managers. Ms. Growe moved approval of the Committee's performance-based fee recommendation, as stated in the Committee Report. Mr. Dayton seconded the motion. The motion passed.

Ms. Yeomans reviewed the proposed active domestic stock and bond manager allocations, as described in the Committee Report. In response to a question from Mr. McGrath, Mr. Bicker stated that the contract that expires on June 30, 1993 with Ark Asset Management was under review. Mr. McGrath moved approval of the Committee's recommendation for the domestic stock and bond managers' allocations, as stated in the Committee Report. Ms. Eller clarified that the recommendation does not include an allocation for Goldman Sachs. Mr. Bicker and Ms. Yeomans agreed. The motion passed.

Ms. Yeomans stated that the Committee is also recommending that the contracts with the SBI's investment managers be changed from 1 year contracts to 3 year contracts. She added that the State's normal 30 day "escape clause" would still apply. Ms. Growe moved approval of the Committee's contract recommendation, as stated in the Committee Report. Mr. McGrath seconded the motion. The motion passed.

Mr. Bicker noted that the Board still needed to act on the recommendation to allocate funds for the two international active/passive managers. Mr. McGrath moved approval of

the Committee's recommendation, as stated in the Committee Report. Ms. Growe seconded the motion. The motion passed.

Alternative Investment Committee Report

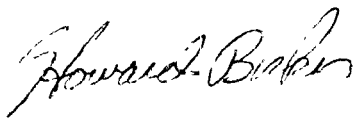
Ms. Yeomans stated that the Committee is recommending a follow-on investment of \$20 million or 20%, whichever is less, with Golder Thoma Cressey, a current venture capital manager. In response to a question from Mr. Carlson, Ms. Yeomans reviewed the performance of the SBI's current investment with the manager and noted that the 1987 Fund had returned 18.8% annualized since inception. Mr. McGrath moved approval of the Committee's recommendation, as stated in the Committee Report. Ms. Growe seconded the motion. The motion passed.

Proxy Committee Report

In response to a request from Mr. Carlson, Mr. Sausen reviewed the status of the recommendation from the Proxy Committee that the SBI lift investment restrictions concerning liquor and tobacco companies. Mr. Dayton noted that while he still had some of the same concerns he had at the previous Board meeting, he agreed with much of what Mr. Carlson said on the subject at the previous meeting. He added that since there does not seem to be any interest on the part of the Legislative Pension Commission to put this type of restriction language in statute, that he sees no reason to oppose the recommendation. Mr. McGrath stated that he also has difficulty opposing the recommendation despite the remarks made by the Attorney General at the September 1992 meeting. He moved that the Board adopt the Committee's recommendation, as stated in the Committee Report dated December 7, 1992. Ms. Growe seconded the motion. The motion passed.

The meeting adjourned at 9:30 A.M.

Respectfully submitted,



Howard J. Bicker
Executive Director

COMMITTEE REPORT

DATE: March 10, 1993

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

FROM: **Manager Search Committee**

Revised Recommendation on Bond Manager Search/Goldman Sachs

In a report dated March 2, 1993, the Manager Search Committee recommended that the State Board of Investment (SBI) retain five (5) additional active domestic bond managers:

- BEA Associates
- Goldman Sachs Asset Management
- Standish Ayer & Wood
- IDS Advisory
- Trust Company of the West

On March 5, 1993, SBI staff were informed that the head of the fixed income group at Goldman Sachs had been suspended after internal reports of trading irregularities in his accounts. On March 8, 1993, Sharmin Mossavar-Rahmini (formerly head of the fixed income group at Fidelity and the portfolio manager for the SBI's semi-passive account with that firm) was named as the new head of Goldman's fixed income group. Based on information received to date, Goldman appears to have responded promptly. It will take additional time, however, to determine what other additional corrective action will be necessary and how day to day operations at Goldman will be affected by any changes in personnel or procedures.

Due to the above, the Manager Search Committee met on March 8, 1993 to reconsider its recommendation on Goldman Sachs. After discussion, the Committee agreed that it is inappropriate to move forward on the recommendation to retain Goldman Sachs at the March 11, 1993 meeting of the SBI.

The Committee has directed SBI staff to monitor the situation at Goldman over the next three months and report back to the Search Committee and the Stock and Bond Manager Committee of the IAC. After further review, those Committees will recommend that Goldman Sachs be retained as an active or semi-passive bond manager or withdrawn from current consideration as a potential manager. The Committees should make that determination before the June 1993 meeting of the SBI.

While it is deferring the decision on Goldman Sachs for one quarter, the Search Committee continues to recommend that the SBI move forward with the recommendations to retain the other four (4) firms. The revised recommendation for the March 11, 1993 meeting of the SBI is shown below:

RECOMMENDATION (Revised):

The Committee recommends that the SBI authorize the executive director, with assistance from SBI legal counsel, to negotiate and execute contracts with the following firms for active domestic bond management:

BEA Associates	New York, NY
Standish Ayer & Wood	Boston, MA
IDS Advisory (government/corporate portfolio)	Minneapolis, MN
Trust Company of the West/TCW(mortgage portfolio)	Los Angeles, CA

**AGENDA
INVESTMENT ADVISORY COUNCIL
MEETING**

**Tuesday, June 1, 1993
2:00 P.M. - SBI Conference Room
Room 105, MEA Building - Saint Paul**

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- 4. Report from the Manager Search Committee (P. Sausen)** **E**

- 5. Reports from the Investment Advisory Council**
 - A. Asset Allocation and Stock and Bond Manager Committee (J. Bohan)** **F**
 1. Approval of Total Fund Objectives and Report Format
 2. Review of Manager Continuation Policy

 - B. Stock and Bond Manager Committee (J. Eckmann)** **G**
 1. Review of Manager Performance
 2. In-depth Review of Forstmann Leff
 3. Annual Review of BEA Associates
 4. Annual Review of Voyageur Asset Management
 5. Recommendation Concerning Fidelity
 6. Annual Review of Manager Contract Guidelines
 7. Recommendation to Renew Manager Contracts
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 - C. Alternative Investment Committee (D. Veverka)** **H**
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- 6. Report from the Task Force on Divestment**

STATE BOARD OF INVESTMENT

Minutes Investment Advisory Council Meeting March 10, 1993

The Investment Advisory Council met on Wednesday, March 10, 1993 at 2:00 P.M. in the State Board of Investment (SBI) Conference Room, 55 Sherburne Avenue, St. Paul, Minnesota.

MEMBERS PRESENT: John Bohan; Jim Eckmann; Ken Gudorf; Keith Johnson; Han Chin Liu; Malcolm McDonald; Barbara Schnoor; Michael Troutman; and Jan Yeomans

MEMBERS ABSENT: Gary Austin; David Bergstrom; John Gunyou; Laurie Hacking; David Jeffery; Peter Kiedrowski; Gary Norstrem; and Deborah Veverka.

SBI STAFF: Howard Bicker; Beth Lehman; Jim Heidelberg; Deborah Griebenow; Charlene Olson; and Linda Nadeau.

OTHERS ATTENDING: Allan Emkin, Pension Consulting Alliance; Tom Richards, Richards & Tierney; Jeff Bailey, Richards & Tierney; Secretary of State Joan Anderson Growe; Arvin Herman, Minnesota State Retirement System; Judy Hunt, Public Employees Retirement Association; John Wicklund, Teachers Retirement Association; John Hagman; John Manahan; Christie Eller; Lisa Rotenberg; Peter Sausen; and Elaine Voss.

Ms. Yeomans called the meeting to order and the minutes of the December 8, 1992 meeting were approved.

Executive Director's Report

Mr. Bicker, Executive Director, referred Board members to Tab A of the meeting materials. He stated that the Basic Funds had exceeded the inflation rate over the last ten years (Basics Total Fund 12.4% vs. Inflation 3.8%), outperformed the composite index over the five year period (Basics Total Fund 13.1% vs. Composite 12.6%), and outperformed the median fund over the five year period (Basics-Excluding Alternative Assets 14.1% vs. Median Fund 13.2%). Mr. Bicker stated that the Basic Funds' market value increased by 4.7% for the quarter ending December 31, 1992. He noted that during the quarter, the international investment program was implemented and that at the end of the quarter 3.2% of the Basic Funds were invested in international stocks. He reported that the Basic Funds had outperformed the composite index for the quarter (Basic Total Fund 4.3% vs. Composite 3.9%) and had slightly underperformed the composite for the year (Basic Total Fund 6.8% vs. Composite 6.9%). He stated that the Basic Funds had

outperformed the median fund for the quarter (Basics-Excluding Alternative Assets 5.2% vs Median 3.4%) and year (Basics-Excluding Alternative Assets 8.2% vs Median 7.5%). He stated that the stock segment outperformed its target for the quarter (Basic stocks 8.0% vs. Wilshire 5000 Adjusted 7.5%) and the bond segment slightly outperformed its target for the quarter (Basic bonds 0.5% vs. Salomon BIG Index 0.4%)

Mr. Bicker directed members to the Post Retirement Fund summary and noted the new asset allocation policy for the Post Fund. He stated that the fund is currently over 30% invested in stocks and that the fund will continue to move towards the 50% allocation target. He noted the benefit increase of 4.6% which was payable January 1, 1993. He reported that the total fund had slightly underperformed its composite index for the quarter (Post Total Fund 1.3% vs. Composite 1.4%). Mr. Bicker stated that the stock segment is still in a transition phase and had underperformed for the quarter (Post stocks 4.8% vs. S&P 500 5.1%). He added that the bond segment had outperformed its benchmark for the latest quarter (Post bonds 0.4% vs. Shearson Index 0.1%).

Mr. Bicker reported that the Assigned Risk Plan underperformed its composite index for the quarter (Total Fund 0.4% vs. Composite 0.9%) but outperformed it for the year (Total Fund 7.8% vs. Composite 7.4%). He noted that the stock segment had outperformed for the quarter (Equity segment 7.5% vs. Benchmark 5.7%) but he added that the bond segment had underperformed its benchmark for the quarter (Bond segment -0.8% vs. Benchmark 0.0%). Mr. Bicker stated that as of December 31, 1992, the SBI was responsible for over \$20 billion in assets.

Mr. Bicker referred members to Tab C of the meeting materials for updates on the budget and travel. He updated the members on the progress of the SBI's Administrative Bill in the Legislature and stated that the bill was heard in the Senate Governmental Operations Committee, passed out of that Committee and was now on General Orders in the Senate. He noted that there have been no hearings in the House on the bill yet. He concluded his report by noting the schedule for SBI/IAC meeting dates for the remainder of calendar year 1993.

Manager Search Committee

Mr. Sausen reported that the Manager Search Committee had conducted three manager searches during the quarter. He stated that ten firms were interviewed for the domestic stock manager search, and that the Committee was recommending the retention of the following six firms as domestic stock managers: Brinson Partners, Investment Advisors-Regional Fund, Jundt Associates, Lincoln Capital, Oppenheimer Capital, and Weiss, Peck & Greer. He noted that the Committee is recommending a smaller allocation to the IAI Regional Fund and that all manager allocation decisions and recommendations were handled separately by the Stock and Bond Manager Committee.

Mr. Sausen stated that nine firms were interviewed for the domestic bond manager search, with the Committee recommending that the following five firms be retained as domestic bond managers: BEA Associates, Goldman Sachs, Standish Ayer & Wood, IDS Advisory.

and Trust Company of the West. He noted that the Committee is recommending that IDS manage a government/corporate portfolio only and that Trust Company of the West manage a mortgage portfolio only.

Mr. Sausen stated that due to a very recent development at Goldman Sachs, the Committee held a special meeting and concluded that their original recommendation should be revised, removing Goldman Sachs from the recommended list for a domestic bond manager at this time. He added that staff will monitor Goldman Sachs over the next three months and that after this further review and prior to the June 1993 Board meeting, both the Manager Search Committee and the Stock and Bond Manager Committee will make a recommendation to either retain Goldman or withdraw the firm from current consideration as a potential manager. Mr. Bicker briefly explained the situation of some alleged improper bond trading practices by one of Goldman's fixed income portfolio managers. He stated that Goldman has responded quickly to the problem by notifying all regulatory agencies and suspending the manager in question. He said that staff and the Committee do not feel comfortable recommending Goldman as a potential manager until the magnitude of the situation is known. Mr. Bicker added that Sharmin Mossavar-Rahmani, the SBI's portfolio manager for assets with Fidelity Management Trust, had terminated her relationship with Fidelity and has been made a full partner at Goldman Sachs, replacing the suspended manager. He stated that staff and the Committee feel that the most appropriate action for the SBI to take at this time is to monitor the situation and the firm over the next three months before making any further recommendations.

Mr. Sausen stated that the third search conducted during the quarter was for international active country/passive stock managers. He said that the four firms interviewed were: Baring International, Brinson Partners, IDS International, and Morgan Stanley Asset Management. He stated that the Committee was recommending Baring International and Brinson Partners to provide international stock management services. Mr. Bicker clarified that the recommendations to select managers is segregated from the recommendations for funding levels of the managers and he noted that the manager allocation recommendations would follow during the Stock and Bond Manager Committee Report.

In response to a question from Mr. Troutman, Ms. Lehman stated that while Baring International is primarily an active manager, it has for the past five years also had an active country/passive stock product that has done well. She said that Baring utilizes State Street Bank in this area and that the country allocation decisions are the same for both their actively managed portfolios and the active country/passive stock portfolios. Mr. Bicker added that State Street Bank had just been reviewed by the SBI when it was hired as the international index manager for the Basic Funds, so there is some additional comfort in already being familiar with them.

Ms. Rotenberg asked the members of the IAC who represent private pension funds to share their opinions of the IAI Regional Fund. Mr. Eckmann stated that Dayton Hudson has not invested in the fund. Mr. Bohan commented that Pillsbury has not invested with the fund but that he has heard favorable comments about the fund's performance. Ms.

Yeomans stated that 3M had invested in the fund indirectly at various points in time through mutual fund investments managed by IAI. Mr. Troutman noted that his company had not invested with the fund, but that he had been personally invested in it at times.

Ms. Yeomans noted that Brinson is a firm that is being recommended in two categories, for domestic and international equities. Mr. Bicker stated that Brinson was also a potential manager candidate in the domestic bond manager search but that the Committee had removed them from the list since they were already being considered in the other two searches. Mr. Sausen stated that Brinson had the most support from the Committee in their ability to add value to their benchmark. Mr. Bohan stated that Pillsbury had just retained Brinson as a manager. Mr. McDonald made a motion to affirm the Committee's recommendations regarding the retention of new managers, as stated in the Committee Report. Mr. Eckmann seconded the motion. The motion passed. In response to a question from Mr. Gudorf, Ms. Yeomans clarified that the allocation decisions were a separate issue to be discussed in the Stock and Bond Manager Committee Report.

Asset Allocation Committee Report

Mr. Bohan referred members to Tab E of the meeting materials and he noted that none of the items on the Committee's agenda require Board action at this time.

Mr. Bohan reviewed the progress made in the Post Fund asset allocations transition and stated that as of January 31, 1993 the fund was invested 32.4% in stocks, 64.1% in bonds and 3.5% in cash. Mr. Bicker confirmed that the Post Fund should reach its new long-term allocation targets by June 30, 1993. Mr. Bohan summarized the Committee's review of the interim benchmarks for the Post Fund as stated in the Committee Report. He stated that after the Post Fund transition is complete, the Fund will employ the same asset class targets as the Basic Funds.

Mr. Bohan stated that the Committee had focused on identifying appropriate total fund performance objectives for the Basic Funds and the Post Fund, as well as establishing objectives for the Combined Funds (Basics plus Post), since both funds now have a similar long range focus. He reported that the asset allocation for the Combined Funds, based on market values as of 1/31/93, was: Domestic Stocks 50.0%; International Stocks 5.5%; Alternative Assets 8.3%; Domestic Bonds 34.3%; and Cash Equivalents 1.9%. He noted that the total equity exposure for the Combined Fund is 63.8% which is higher than the Trust Universe Comparison Service (TUCS) public funds median as of September 30, 1992. He referred members to Attachments A and C included in the Committee Report for a comparison of the current performance objectives for the Basic Funds and the new objectives being proposed for the Combined Funds. Mr. Bicker stressed the importance of the upcoming asset allocation decisions and stated that everyone will have an opportunity to discuss the issues when the next asset allocation meeting takes place.

Mr. Troutman stated that he likes the overall framework and the long-term strategy outlined in the Committee Report. Mr. Troutman questioned the need for a comparison against a median fund. Mr. Bicker stated that there has always been a strong interest in

seeing the SBI compared to other similar funds, even though it can never be an "apples-to-apples" comparison. Mr. Bohan noted that he felt it is important to include the median comparison along with the other objectives, as stated. Mr. Troutman also queried whether the composite objective should be to outperform the composite index by a specified amount. Mr. Richards stated that returns are calculated net of fees and that he would recommend leaving the objective stated as it is. Mr. Bicker said that since passive management will always slightly underperform its target due to transaction costs, active management already needs to add value above the composite.

Mr. Bohan updated members on the international index manager funding and noted that from October to February the percentage of trades crossed at little or no transaction costs was 56%, which is higher than the 20-40% initially anticipated. In response to a question from Ms. Growe, Mr. Bicker stated that an additional \$2-3 million had been saved due to crossing opportunities. Mr. Bohan reviewed the implementation strategy for international investing. Mr. Bicker stated that staff will be working with the Asset Allocation Committee to review fully active (active country and active stock) managers and to present a list of ten (10) candidates by the June 1993 SBI/IAC meetings. He added that those candidates approved by the Board will be interviewed over the summer months and recommendations would be made to the Board at the September 1993 meeting.

Stock and Bond Manager Committee Report

Mr. Eckmann summarized the performance of the stock and bond managers. He stated that the Committee is recommending that the SBI: place Fidelity on probation due to the organizational changes which violate the SBI's Manager Continuation Policy, direct the Committee to review the ability of Lincoln and Fidelity to take on additional assets, and authorize a search for another semi-passive bond manager. Mr. Bicker noted that even if the two current semi-passive managers continue to be retained it might be more prudent to have the funds distributed among more than two managers, especially since the bond segment may be receiving additional assets to manage. He listed the possible candidates for semi-passive bond managers and added that Goldman could also be a candidate in this category if the SBI feels comfortable with the outcome of Goldman's current situation.

In response to questions from Ms. Growe regarding Franklin Portfolio Associates' and Ark Asset Managements' performance, Mr. Bicker reviewed the SBI's Manager Continuation Policy and noted that Franklin had been retained for less than 5 years. He stated that under the current policy, a manager may be reviewed at any time and that if a manager's performance falls below the termination level at any time, the manager may be terminated. Ms. Yeomans noted that her organization had terminated its relationship with Franklin three years ago, however, she noted that under the SBI's existing policy, such action is not yet warranted. Mr. Eckmann stated that the current policy has been reviewed several times and he reminded members of Franklin's relatively short evaluation period. Mr. Bicker stated that the Board would review the Manager Continuation Policy at the June 1993 Board meeting. Ms. Growe stated that the Board needs to be able to understand why there might be reason for keeping a manager who has underperformed for an extended period. Mr. Bicker stated that the SBI is one of only a few organizations that

has any kind of written manager retention policy and he noted that most plans, either public or private, do not terminate managers as quickly as the SBI. Mr. Troutman stated his belief that with as many managers as the SBI has, there will always be a small group of underperformers and he added that the question really becomes how much confidence the SBI has in a manager going forward. Mr. Bicker reminded members that if the Board concurs with the allocation recommendations being presented this quarter, Ark Asset Management would have its allocation eliminated as of July 1, 1993, resulting in Ark's contract not being renewed.

Ms. Rotenberg asked IAC members who are familiar with Franklin and Lieber, about their perceptions of the two firms. Ms. Lehman stated that Lieber is being monitored closely by staff. She acknowledged that the firm has made poor stock selections lately and that there had been some organizational problems that have recently been addressed. Mr. Han Chin Liu asked whether a better manager monitoring system is needed. Ms. Yeomans stated that the SBI has a monitoring system in place and that according to that system, termination is not warranted at this time. Mr. Richards summarized a study that Richards & Tierney had completed analyzing a manager's performance since being fired by the SBI in 1988. He reported that in the four years since termination, the manager had outperformed and that overall performance for the entire period was positive. He stressed the need to not let quantitative information be the only factor when evaluating managers. In response to a suggestion from Mr. Bohan, Mr. Bicker stated that a copy of the Manager Continuation Policy would be provided to all IAC and Board members for their review.

In response to a question from Ms. Growe, Mr. Bicker stated that the international active country/passive stock managers would be evaluated against EAFE. Ms. Yeomans referred members back to the Committee's recommendations regarding semi-passive bond managers and asked for a motion. Mr. McDonald moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Johnson seconded the motion. The motion passed.

Mr. Eckmann summarized the findings of the in-depth review of GeoCapital Corporation. He stated that qualitatively, the firm has consistently applied its investment approach, the firm's assets have grown at a moderate pace, and that an appropriate benchmark had been developed. He added that GeoCapital has added significant value since inception. He concluded by stating that staff and the Committee concur that GeoCapital should continue to be retained and that no other action is required at this time.

Mr. Eckmann reviewed the current performance based fee formula and summarized the new revised formula, as described in the Committee Report. He stated that the Committee is recommending that the SBI adopt the revisions to the performance based fee formula for domestic active stock managers. In response to a question from Mr. Bohan, Mr. Bicker stated that the SBI's current managers understand the revised formula better than the existing formula and are comfortable working under the new formula. Mr. Richards added that Richards & Tierney is supportive of the revised formula. Mr. Johnson moved

approval of the Committee's recommendation, as stated in the Committee Report. Mr. McDonald seconded the motion. The motion passed.

Mr. Eckmann stated that the Manager Search Committee had requested that the Stock and Bond Manager Committee make recommendations concerning manager allocations for the active domestic stock and bond managers, as well as the new international active/passive stock managers. He noted that these allocations will become effective July 1, 1993 and that the proposed allocations will result in approximately 50% active and 50% passive management in each segment. He reviewed the allocation framework, as presented in the Committee Report. Mr. Eckmann noted that Ark Asset Management is losing its entire allocation and that Goldman Sachs has been removed from consideration as a bond manager at this time and will not be included in the allocation process. Mr. McDonald moved approval of the Committee's recommendations regarding manager allocations, as stated in the Committee Report. Mr. Bohan seconded the motion. In response to a question from Mr. Han Chin Liu, Mr. Bicker stated that these are initial allocations which are very flexible and subject to change over time.

In response to questions from Mr. Bohan, Mr. Bicker stated that percentage allocations to both Western Asset Management and Alliance Capital are being reduced but the total dollars to each organization would not be reduced. He explained that Alliance is experiencing several organizational changes, including the loss of a key senior partner and the merger of Equitable Capital Management. Mr. Bicker stated that staff feels comfortable with having no more than a double percentage allocation with Alliance compared to other active stock managers. Mr. Troutman noted the impact of a 7% allocation with Alliance should they have a period of negative performance. Mr. Bicker stated that staff will be monitoring the situation at Alliance closely. The motion made earlier by Mr. McDonald passed.

Mr. Eckmann stated that the Committee's last recommendation involves adopting three year contracts for all the external stock and bond managers. Mr. Bicker reminded members of the state law which requires a 30-day termination provision, thus making the underlying contract period irrelevant. A discussion followed regarding whether the SBI's contracts could specify a less than 30 day escape clause. Ms. Eller said she believes the law stipulates a 30 day maximum period, so that the SBI could shorten the period. Several members agreed that the escape clause period should be shortened to less than 30 days. Mr. Eckmann offered to modify the recommendation to reflect such a change. Mr. Bicker suggested approving the current recommendation with the 30 day escape clause and the three year period now and that any modifications to the escape clause could be approved at the June 1993 meeting, after further analysis on the issue has been completed. Mr. Gudorf moved approval of the Committee's recommendation regarding contracts, as stated in the Committee Report. Mr. McDonald seconded the motion. The motion passed.

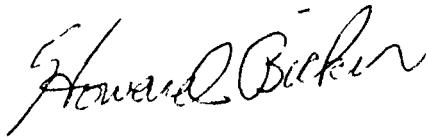
Alternative Investment Committee Report

Mr. Gudorf reported that during the quarter the Committee had held annual review sessions with three managers, Northwest, Summit and Investment Advisors. He stated that overall the meetings had gone well. He noted that Northwest had returned some funds to the SBI and that there would likely be no further investment in that fund.

Mr. Gudorf stated that the Committee is recommending an additional investment of \$20 million or 20%, whichever is less, with Golder Thoma Cressey, a venture capital manager that has performed well for the SBI. Ms. Schnoor moved approval of the recommendation, as stated in the Committee Report. Mr. Eckmann seconded the motion. The motion passed.

The meeting adjourned at 3:35 P.M.

Respectfully submitted,

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

Howard J. Bicker
Executive Director

Tab A

ACTUARIAL VALUATIONS

MSRS, TRA, PERA General Plans June 30, 1992

	Active (Basics)	Retired (Post)	Total (Basics & Post)
Liability Measures			
1. Current and Future Benefit Obligation	\$14.7 billion	\$5.7 billion	\$20.4 billion
2. Accrued Liabilities	10.5	5.7	16.2
Asset Measures			
3. Current and Future Actuarial Value	\$14.0 billion	\$5.7 billion	\$19.7 billion
4. Current Actuarial Value	7.2	5.7	12.9
Funding Ratios			
Future Obligations vs. Future Assets (3 ÷ 1)	95%	100%	97%
Accrued Liabilities vs Current Actuarial Value (4 ÷ 2)	69%	100%	80%*

* Ratio most frequently used by the Legislature and Retirement Systems.

The funding ratio required by Governmental Standard Accounting Board Statement No. 5 compares Cost Value of assets to the Current Benefit Obligation. This calculation provides funded ratios of 79% for the Basics, 100% for the Post and 87% for the Total, respectively.

Notes:

1. Present value of projected benefits that will be due to all current participants.
2. Liabilities attributed to past service calculated using entry age normal cost method.
3. Present value of future statutory contributions plus current actuarial value.
4. Same as required reserves for Post. Cost plus one-third of the difference between cost and market value for Basics.

Actuarial Assumptions:

Salary Growth: 6.5%

Interest//Discount Rate: 8.5% Basics, 5.0% Post

Full Funding Target Date: 2020

RETURN OBJECTIVES
Basic Retirement Funds**\$9.8 Billion Market Value**

	Period Ending 3/31/93 Actual	Compared to Objectives
Total Return		
Total Fund over 10 years Exceed inflation by 3-5 percentage points	12.4%	8.5 percentage points above
Total Fund over 5 years Exceed composite market Index	12.8%	0.6 percentage points above
Stocks, Bonds, Cash over 5 years Exceed median fund	13.6%	1.4 percentage points above

Post Retirement Fund**\$7.8 Billion Market Value**

Realized Earnings	Actual	Benefit Increase Provided
Earnings over 1 year (Fiscal Year 1992)	9.6%	4.6% effective Jan. 1, 1993
Earnings over 5 years (Fiscal Years 1988-1992)	10.0%	5.0% annualized

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

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

EXECUTIVE SUMMARY

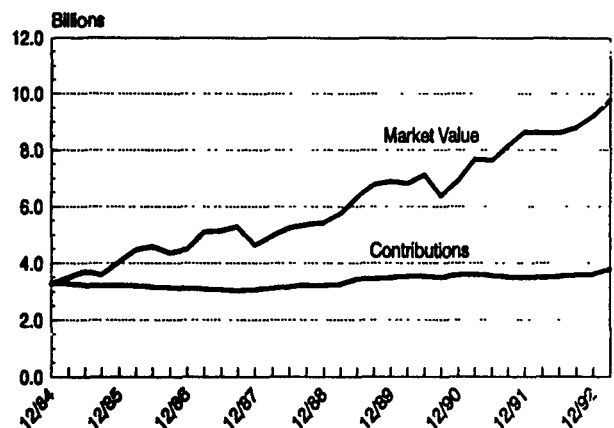
Basic Retirement Funds

Asset Growth

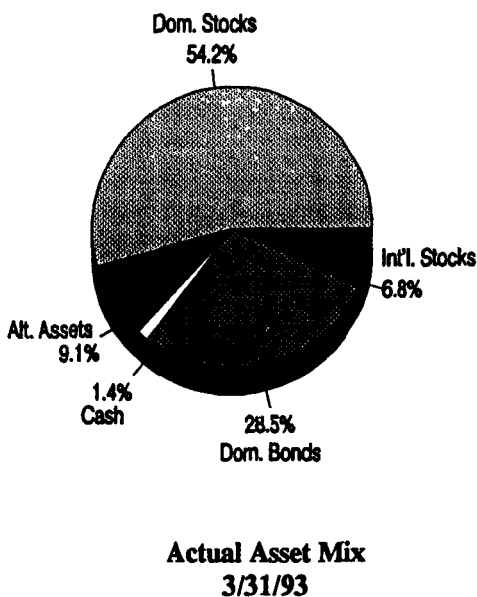
The market value of the Basic Funds increased 6.4% during the first quarter of 1993. The increase resulted from positive returns from the bond and stock markets.

Asset Growth During First Quarter 1993 (Millions)

Beginning Value	\$9,191
Net Contributions	172
Investment Return	417
Ending Value	\$9,780



Asset Mix



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

The actual asset mix changed from the prior quarter, resulting from the reallocation from domestic stocks to international stocks and positive returns from stocks and bonds.

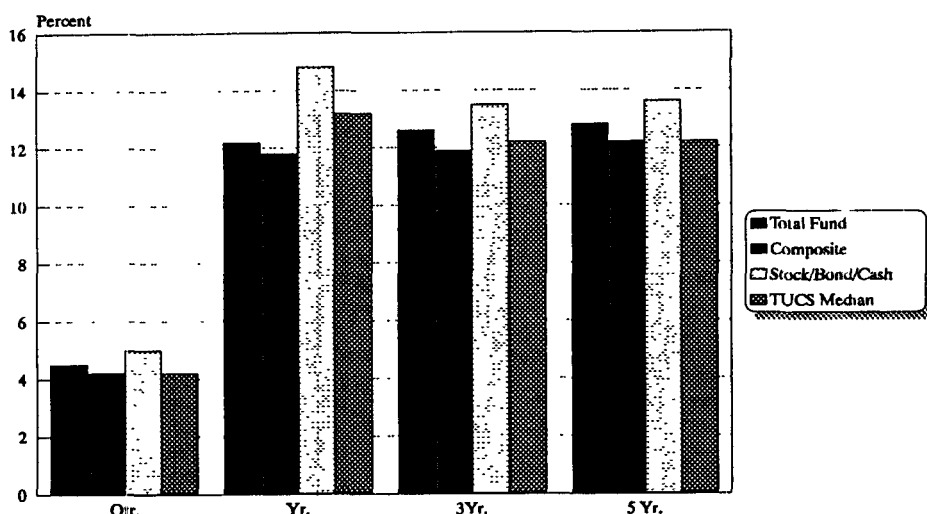
	Policy Asset Mix	Actual Mix 3/31/93	Actual Market Value (Millions)
Domestic Stocks	50.0%	54.2%	\$5,296
Int'l. Stocks	10.0	6.8	664
Domestic Bonds	24.0	28.5	2,789
Alternative Assets	15.0	9.1	890
Unallocated Cash	1.0	1.4	141
	100.0%	100.0%	\$9,780

Basic Funds (Con't.)

Total Fund Performance

The total fund including alternative assets exceeded the market composite for the quarter and for the latest year. The total fund excluding alternative assets also exceeded the median fund 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 when stocks perform better than other asset classes and underperform when returns are lower than other asset classes.



Period Ending 3/31/93

	Qtr.	Yr.	Annualized	
			3 Yr.	5 Yr.
Total Fund	4.5%	12.2%	12.6%	12.8%
Composite Index*	4.2	11.8	11.9	12.2
Stocks, Bonds and Cash Only	5.0	14.8	13.5	13.6
TUCS Median Fund**	4.2	13.2	12.2	12.2

* Composite Index is weighted in a manner that reflects the policy asset mix of the Basic Funds. The index has been adjusted to reflect the restrictions on liquor and tobacco stocks.

** Median Master Trust from the Trust Universe Comparison Service (TUCS).

Domestic Stocks

	(Annualized)			
	Qtr.	Yr.	3 Yr.	5 Yr.
Stock Segment	4.4%	14.8%	13.4%	14.5%
Wilshire 5000*	4.3	15.6	13.8	14.8

*Adjusted for liquor and tobacco restrictions

Domestic Bonds

	(Annualized)			
	Qtr.	Yr.	3 Yr.	5 Yr.
Bond Segment	4.6%	14.1%	13.1%	11.2%
Salomon Broad Index	4.2	13.4	12.6	11.0

International Stocks

	Qtr.	Since 10/1/92
Int'l. Stocks	11.9%	7.6%
EAFE	12.0	7.7

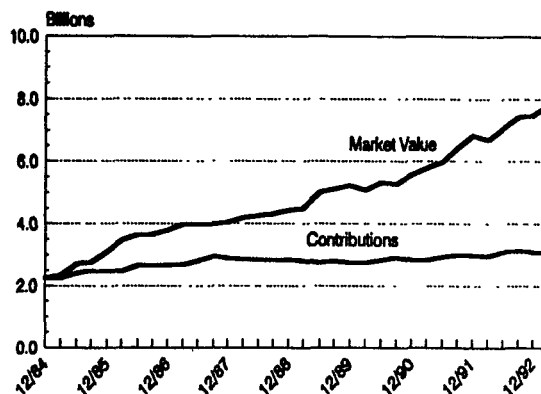
EXECUTIVE SUMMARY
Post Retirement Fund

Asset Growth

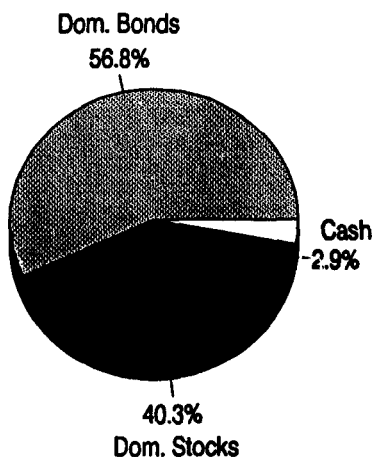
The market value of the Post Fund increased by 4.1% during the first quarter of 1993. Assets increased due to positive stock and bond returns.

Asset Growth
During First Quarter 1993
(Millions)

Beginning Value	\$7,500
Net Contributions	-26
Investment Return	330
Ending Value	7,804



Asset Mix



Actual Asset Mix
3/31/93

The SBI has adopted a new long-term asset allocation strategy for the Post Fund effective beginning in fiscal year 1993. The new policy reflects the new post retirement benefit increase formula recently enacted by the Legislature. Throughout fiscal year 1993, the actual asset mix of the Post Fund will move toward the policy targets shown below.

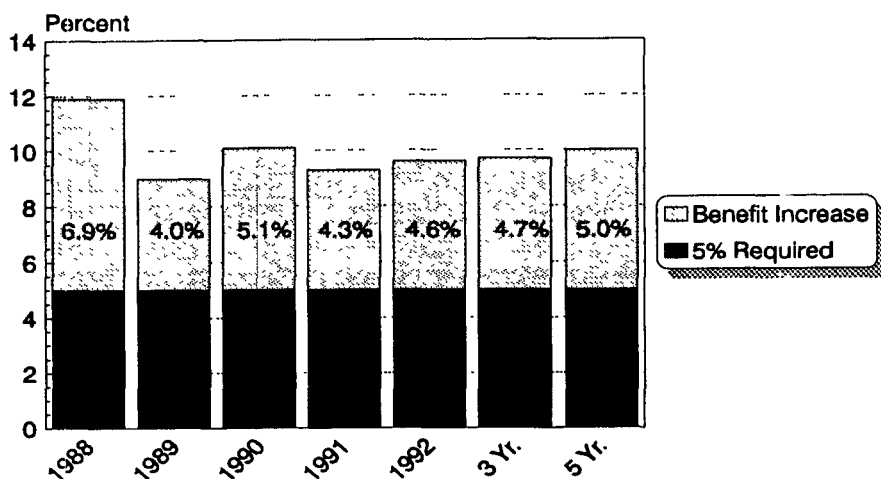
	Policy Asset Mix	Actual Mix 3/31/93	Actual Market Value (Millions)
Domestic Stocks	50.0%	40.3%	\$3,146
Domestic Bonds	47.0	56.8	4,433
Unallocated Cash	3.0	2.9	225
	100.0%	100.0%	\$7,804

Post Fund (Con't.)

Total Fund Performance for Fiscal Years 1988 - 1992

Through fiscal year 1992 benefit increases were based upon realized earnings during a fiscal year and were effective at the start of the following calendar year.

(Starting in fiscal year 1993 benefit increases will be based on total return.) Benefit increases generated for the last five years are shown below.



	1988	1989	1990	1991	1992	(Annualized)	
						3 Yrs.	5 Yrs.
Realized Earnings*	11.9%	9.0%	10.1%	9.3%	9.6%	9.7%	10.0%
Benefit Increase**	6.9	4.0	5.1	4.3	4.6	4.7	5.0
Inflation	3.9	5.2	4.7	4.7	3.1	4.2	4.3

* Interest, dividends and net realized capital gains.

** Payable starting January 1, of the following calendar year.

Total Fund Performance Beginning Fiscal Year 1993

The total fund trailed its composite index for the latest quarter.

	Qtr.	Since 7/1/92
Total Fund	4.4%	10.5%
Composite Index	4.7	11.0

Stock Segment Performance

The stock segment of the Post Fund trailed its target for the latest quarter.

	Qtr.	Since 7/1/92
Stock Segment	4.0%	10.0%
S&P 500	4.3	13.0

Bond Segment Performance

The bond segment of the Post Fund matched its target for the latest quarter.

	Qtr.	Since 7/1/92
Bond Segment	4.7%	10.5%
Shearson Index	4.7	9.9

Assigned Risk Plan

Investment Objective

The Assigned Risk Plan has two investment objectives: to minimize the mismatch between assets and liabilities and to provide sufficient liquidity for the payment of on-going claims and operating expenses.

Asset Mix

The Assigned Risk Plan is invested in a balanced portfolio of common stocks and bonds. The actual asset mix will fluctuate in response to changes in the Plan's liability stream.

	3/31/93 Target	3/31/93 Actual
Stocks	15.0%	14.4%
Bonds	85.0	84.2
Unallocated Cash	0.0	1.4
Total	100.0%	100.0%

Investment Management

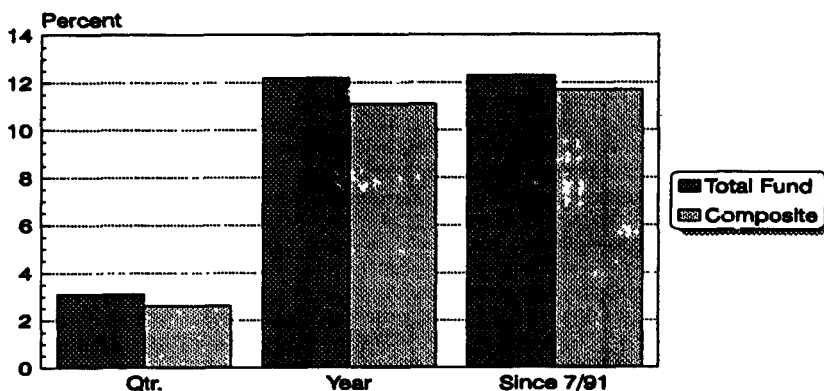
External management is utilized by the Assigned Risk Plan. The entire fund is managed by Voyager Asset Management. The portfolio was transferred from the Department of Commerce to the SBI on May 1, 1991.

Performance Benchmarks

A custom benchmark has been established for the fixed income portfolio. It reflects the duration of the liability stream and the long-term sector allocation of Voyager Asset Management. The equity benchmark is a custom benchmark consisting of A or greater rated S&P 500 stocks less utilities and restricted stocks. The total fund benchmark is a combination of the fixed income and equity benchmarks, weighted according to the asset allocation target.

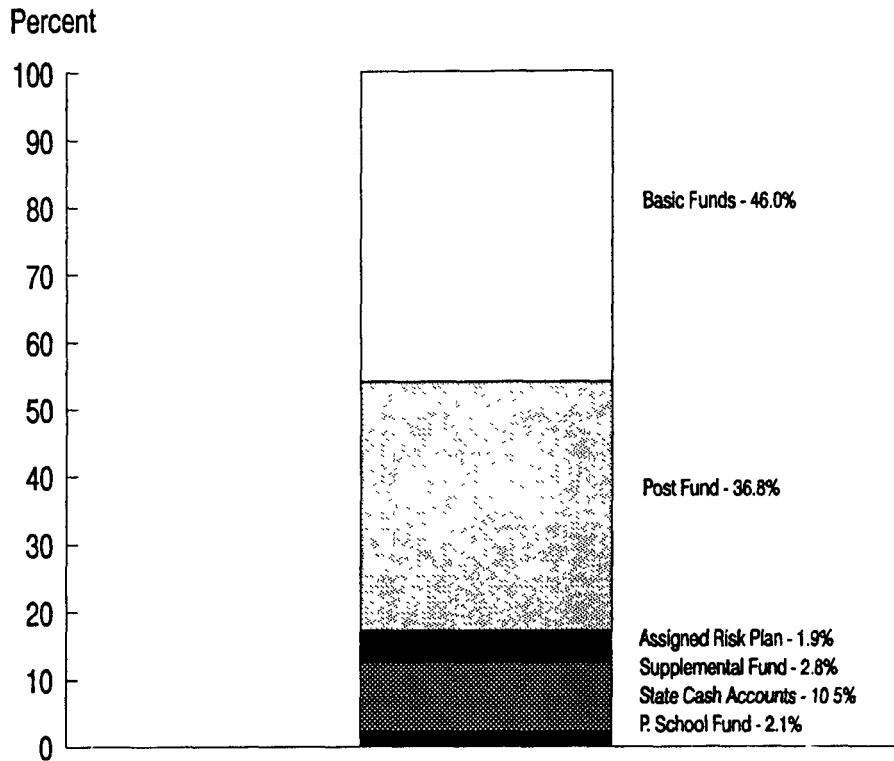
Market Value

On March 31, 1993 the market value of the Assigned Risk Plan was \$392 million.



	Period Ending 3/31/93		
	Qtr.	Yr.	Since 7/1/91
Total Fund	3.1%	12.1%	12.3%
Composite Index	2.6	11.1	11.7
Equity Segment	-0.5	12.8	13.8
Benchmark	-0.6	10.4	13.5
Bond Segment	3.8	12.2	12.3
Benchmark	3.2	11.2	11.3

EXECUTIVE SUMMARY
Funds Under Management



3/31/93
Market Value
(Billions)

Basic Retirement Funds	\$9.8
Post Retirement Fund	7.8
Assigned Risk Plan	0.4
Supplemental Investment Fund	0.6
State Cash Accounts	2.2
Permanent School Fund	0.4
Total	\$21.2

MINNESOTA STATE BOARD OF INVESTMENT

QUARTERLY INVESTMENT REPORT

First Quarter 1993

(January 1, 1993 — March 31, 1993)

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VARIOUS CAPITAL MARKET INDICES

	Period Ending 3/31/93				
	Qtr.	Yr.	3 Yr.	5 Yr.	10 Yr.
Domestic Equity					
Wilshire 5000	4.3%	15.1%	14.0%	15.1%	14.6%
Dow Jones Industrials	4.9	9.5	11.8	15.6	16.3
S&P 500	4.3	15.3	13.5	15.5	15.5
Russell 2000	4.3	14.9	14.1	12.1	10.5
Domestic Fixed Income					
Salomon BIG	4.2	13.4	12.6	11.0	11.8
Shearson Gov't./Corp.	4.7	14.3	12.7	10.9	11.6
90 Day U.S. Treasury Bills	0.8	3.4	5.4	6.5	7.3
International					
EAFE*	12.0	11.6	1.7	0.8	17.4
Salomon Non U.S. Gov't. Bond	6.0	16.6	16.6	7.8	14.4
Inflation Measure					
Consumer Price Index (CPI)	1.2	3.1	3.7	4.3	3.9

* Morgan Stanley Capital International Index of Europe, Australia and the Far East

FINANCIAL MARKETS REVIEW

DOMESTIC STOCKS

During the quarter, the domestic stock market increased 4.3%. For the quarter, value stocks performed much better than growth stocks as shown by the Wilshire style indexes below. The difference between large and small capitalization stocks was relatively minor. Also, there was a high level of divergence among the various industries. The consumer durables, energy, finance, and utilities performed well while the consumer non-durables and materials and services performed poorly. The quarterly results reflect the market's anticipation that interest rates will stay low and that economic growth will start to pick up.

The Wilshire 5000 provided a 4.3% return for the quarter. Performance among the different Wilshire Style Indexes for the quarter are shown below:

Large Value	9.2%
Small Value	9.3
Large Growth	-1.3
Small Growth	0.9

The Wilshire 5000 increased 15.1% during the latest year.

DOMESTIC BONDS

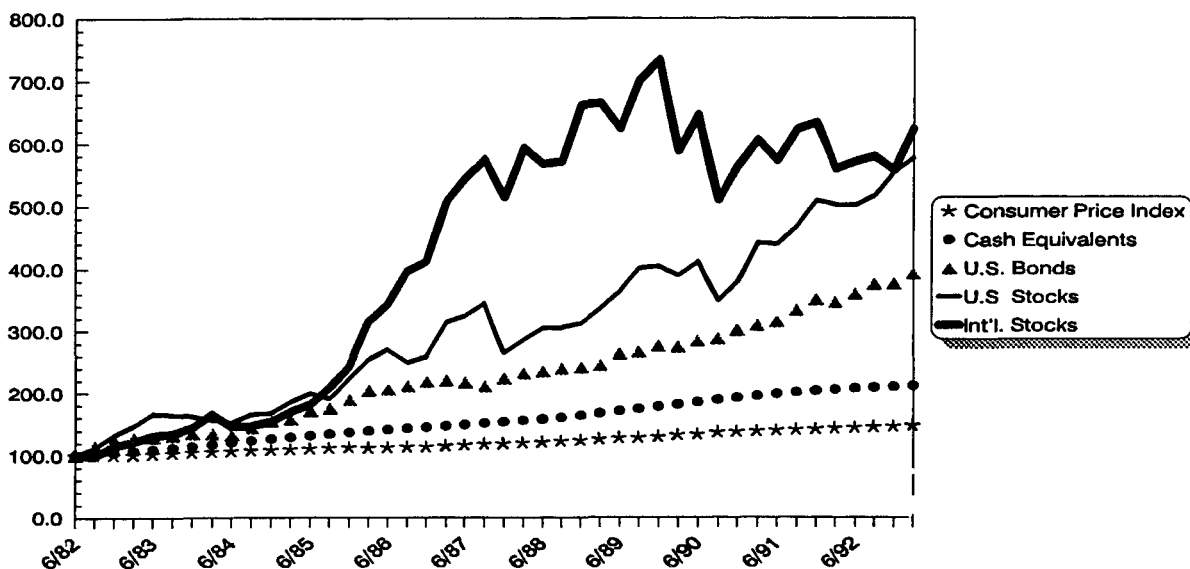
Bonds generated high returns this quarter as Treasury yields declined 0.60 to 0.65% during the quarter. The decline was not uniform across the yield curve with five year yields declining by 0.80% and long yields falling only 0.47%. Rates fell because economic reports reflected a weak recovery and subdued inflation. The falling interest rates increased mortgage refinancings which caused mortgages to perform poorly when compared to treasuries and corporates.

Overall, the Salomon Brothers Broad Investment Grade (BIG) Index increased 4.2% for the quarter. The Salomon BIG sector returns for the quarter were:

Treasury/Agency	4.5%
Corporates	5.1
Mortgages	2.9

The Salomon BIG increased 13.4% for the latest year.

PERFORMANCE OF CAPITAL MARKETS
Cumulative Returns



Indices used are: Morgan Stanley's Index of Europe, Australia and the Far East (EAFE); Wilshire 5000 Index; Salomon Broad Investment Grade (BIG) Bond Index; 91 Day Treasury Bills; and the Consumer Price Index.

FINANCIAL MARKETS REVIEW**INTERNATIONAL STOCKS**

In aggregate, the international stock markets (as measured by the EAFE index) provided a return of 12.0% for the quarter. As shown below, performance varied widely among the major markets.

Japan	18.6%
United Kingdom	2.4
Germany	11.7
France	10.8

The EAFE index increased by 11.6% during the latest year. The index is compiled by Morgan Stanley Capital International. It is an index of 18 markets located in Europe, Australia and the Far East (EAFE). The major markets listed above comprise about 75% of the value of international markets.

REAL ESTATE

The real estate market still faces capital shortages, oversupply and slow demand. Many real estate portfolios have experienced significant writedowns over the last year, reflecting the weak real estate markets. Longer term, lower interest rates and a significant decline in construction activity are both favorable developments for the real estate market.

VENTURE CAPITAL

According to the Venture Capital Journal, after shrinking by an average of 25% a year for four years, new venture capital raised in 1992 more than doubled over 1991. In 1991, \$1.27 billion was raised by 30 firms. In 1992, \$2.55 billion was raised by 41 firms.

RESOURCE FUNDS

Currently, spot prices of West Texas Intermediate oil are \$20.45 per barrel. This compares to \$21.00 per barrel a year ago.

Spot prices of natural gas are approximately \$2.08 per MCF (thousand cubic feet) compared to \$1.53 per MCF a year ago.

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.

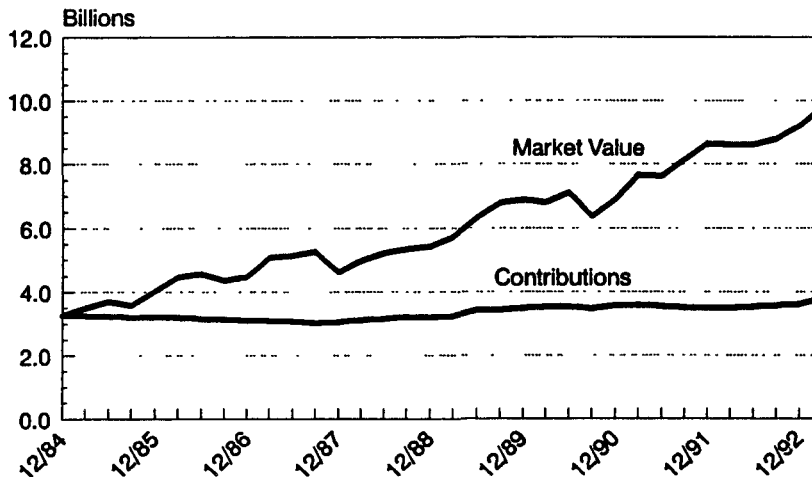
The Board has established three return objectives for the Basic Funds:

1. 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.
2. 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.
3. The total fund should outperform a composite index weighted in a manner that reflects the long term asset allocation of the Basic Funds over moving 5 year periods.

Asset Growth

The market value of the Basic Retirement Funds' assets increased 6.4% during the first quarter of 1993.

Most of the increase resulted from strong stock returns.



	In Millions					
	12/88	12/89	12/90	12/91	12/92	3/93
Beginning Value	\$4,628	\$5,420	\$6,875	\$6,919	\$8,639	\$9,191
Net Contributions	146	269	91	-92	-34	172
Investment Return	646	1,186	-47	1,812	586	417
Ending Value	\$5,420	\$6,875	\$6,919	\$8,639	\$9,191	\$9,780

BASIC RETIREMENT FUNDS

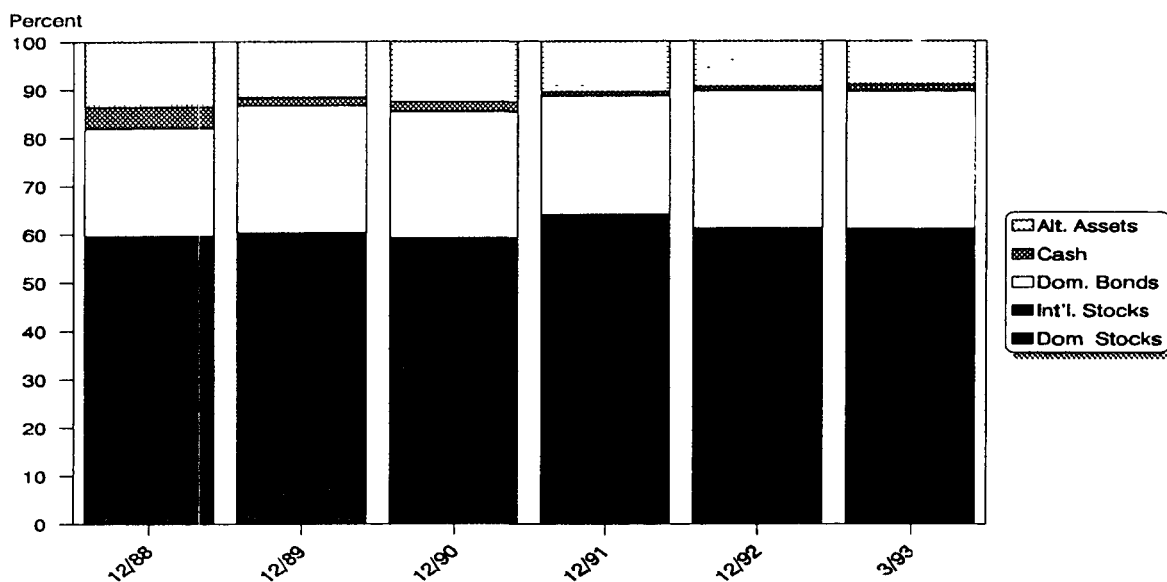
Asset Mix

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:

The actual asset mix changed from the prior quarter, resulting from the reallocation from domestic stocks to international stocks.

Domestic Stocks	50.0%
Int'l. Stocks	10.0
Domestic Bonds	24.0
Alternative Assets*	15.0
Unallocated Cash	1.0

*Alternative assets include real estate, venture capital and resource funds.



	Last Five Years					Latest Qtr.
	12/88	12/89	12/90	12/91	12/92	3/93
Domestic Stocks	59.5%	60.2%	59.1%	63.9%	57.9%	54.2%
Int'l. Stocks	0.0	0.0	0.0	0.0	3.2	6.8
Domestic Bonds	22.4	26.4	26.2	24.7	28.5	28.5
Real Estate	9.0	7.5	7.0	4.8	4.2	3.9
Venture Capital	3.1	2.8	4.2	4.7	4.2	4.1
Resource Funds	1.5	1.4	1.5	1.1	1.2	1.1
Unallocated Cash	4.5	1.7	2.0	0.8	0.8	1.4
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

BASIC RETIREMENT FUNDS

Total Fund Performance vs. Standards

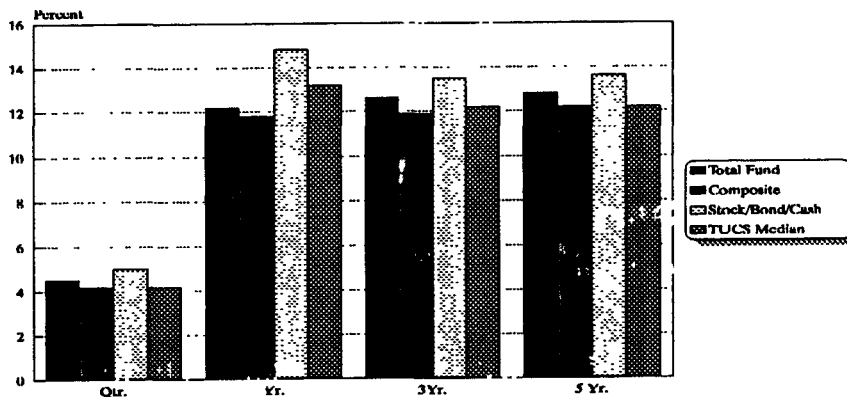
The Basic Funds' long-term rate of return performance is evaluated relative to two specific benchmarks:

1. **Composite Index.** The returns provided by the total portfolio are expected to exceed those derived from a composite of market indices, weighted in a manner that reflects the long-term asset allocation of the Funds. Alternative asset and bond weights are reset each quarter to reflect the amount of unfunded commitments in the alternative asset classes. As of 1/1/93, the composite index is weighted: 56.0% Wilshire 5000 Adjusted, 4.0% Morgan Stanley EAFE, 29.0% Salomon BIG, 4.5% Wilshire Real Estate Index, 4.5% Venture Capital Funds, 1.0% Resource Funds, and 1.0% 91 Day T-Bills.

2. **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 pension funds. The sample universe used by the Board is the Master Trust portion of 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 in which stocks outperform other asset classes and, conversely, to underperform the median fund when stocks underperform other assets.

The Basic Funds total portfolio exceeded its composite index for the latest quarter and for the year. Excluding alternative assets, the Basic Funds ranked in the top quarter (24th percentile) of the TUCS universe for the quarter. In addition, it ranked in the top quarter (20th percentile) for the latest year and the top quarter (14th percentile) for the last five years.



Period Ending 3/31/93

	*(Annualized)			
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Fund	4.5%	12.2%	12.6%	12.8%
Composite Index**	4.2	11.8	11.9	12.2
Stocks, Bonds and Cash Only	5.0	14.8	13.5	13.6
TUCS Median Fund	4.2	13.2	12.2	12.2

**Adjusted to reflect the SBI's restrictions on liquor and tobacco stocks.

BASIC RETIREMENT FUNDS

Segment Performance vs. Standards

Domestic Stocks

Target: Wilshire 5000 Adjusted*

Expectation: If half of the segment is actively managed and half is passively managed, the entire segment is expected to exceed the target by +.20-.45% annualized, over time.

	Annualized			
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Domestic Stocks	4.4%	14.8%	13.4%	14.5%
Wilshire 5000*	4.3	15.6	13.8	14.8

*Adjusted for liquor and tobacco restrictions.

International Stocks

Target: EAFE

Expectation: Currently, the entire segment is passively managed. The index fund is expected to track the target by +/- .20%, over time.

	Since	
	Qtr.	10/1/92
Int'l. Stocks	11.9%	7.6%
EAFE	12.0	7.7

Domestic Bonds

Target: Salomon Broad Investment Grade (BIG) Index

Expectation: If half of the segment is actively managed and half is managed semi-passively, the entire segment is expected to exceed the target by +.20-.35% annualized, over time.

	Annualized			
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Domestic Bonds	4.6%	14.1%	13.1%	11.2%
Salomon BIG	4.2	13.4	12.6	11.0

Alternative Assets

Expectation: Real assets (primarily real estate and resource funds) are expected to exceed the rate of inflation by 3-5% annualized, over the life of the investment.

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.

Expectation: Private equity investments (primarily venture capital) are expected to provide annualized returns at least 3% greater than historical public equity returns, over the life of the investment. This equates to an absolute return of approximately 13-14% annualized.

The SBI began its venture capital and resource programs in the mid-1980's. Some of the investments, therefore, are relatively immature and returns may not be indicative of future results.

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

	Annualized			
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Real Estate	-2.6%	-6.5%	-6.4%	-1.2%
Real Estate Index	-2.6	-11.5	-8.1	-2.9
Inflation	1.2	3.1	3.7	4.3
Venture Capital	3.8	-11.9	19.1	17.0
Resource Fund	-0.2	1.5	12.3	6.0

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 employee's 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.

Through fiscal year 1992, unrealized capital gains (or losses) were excluded from the statutory definition of earnings. For this reason the Post Fund previously was not designed to maximize long-term total rates of return.

Through fiscal year 1992, the Post Fund was not oriented toward maximizing long-term rate of return.

Rather, the SBI attempted to generate a high, consistent stream of earnings for the Post Fund that maintained current benefits, as well as produce benefit increases over time. Through fiscal year 1992, the Board established two earnings objectives for the Post Fund:

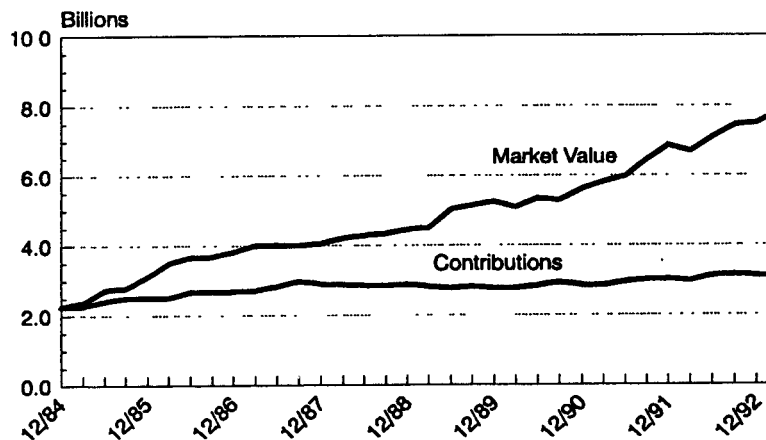
1. generate 5% realized earnings to maintain current benefits
2. generate at least 3% additional realized earnings to provide benefit increases

Beginning in fiscal year 1993, the post retirement benefit increase formula will be based on total return rather than realized earnings. As a result, the Board has adopted a new long-term asset allocation strategy for the Post Fund which incorporates a 50% commitment to common stocks. New investment objectives and performance standards will be developed to reflect the new asset allocation during the year as well.

Asset Growth

The market value of the Post Retirement Fund increased by 4.1% during the first quarter of 1993. The majority

of the increase was due to positive stock returns.



	In Millions					
	12/88	12/89	12/90	12/91	12/92	3/93
Beginning Value	\$4,047	\$4,434	\$5,238	\$5,590	\$6,855	\$7,500
Net Contributions	-27	25	88	162	95	-26
Investment Return	414	779	264	1,103	550	330
Ending Value	\$4,434	\$5,238	\$5,590	\$6,855	\$7,500	\$7,804

POST RETIREMENT FUND

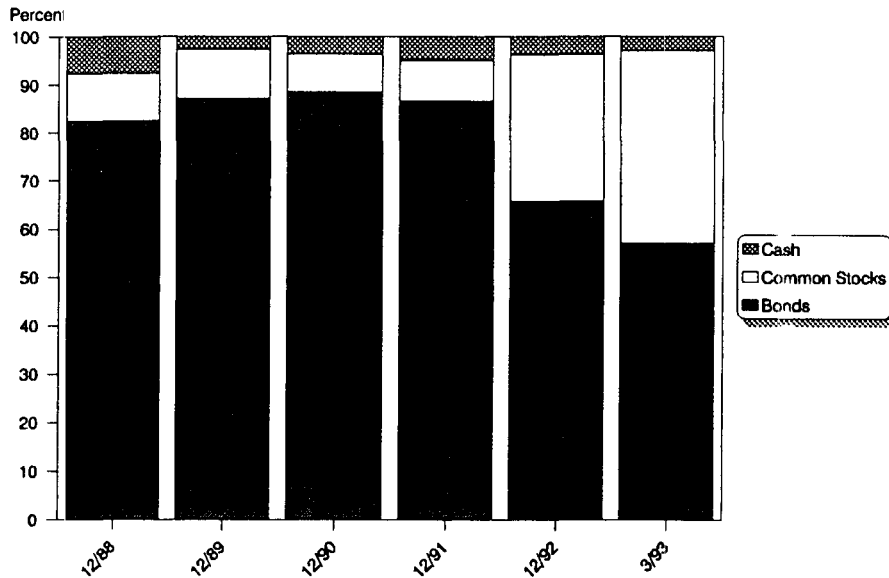
Asset Mix

The Board adopted a new asset allocation strategy for the Post Fund effective for fiscal year 1993. The new policy targets reflect the new post retirement benefit increase formula recently enacted by the Legislature. Throughout fiscal year 1993, the actual asset mix of the Post Fund will move toward the following long-term policy targets:

Stocks	50.0%
Bonds	47.0
Unallocated Cash	3.0
Total	100.0%

The large allocation to common stocks will allow the Fund to increase the long-term earning power of its assets and allow the Fund to focus on generating higher long-term total rates of return.

During the most recent quarter, the stock segment grew and the bond segment was reduced. These changes were part of the transition to the new asset allocation policy.



	Last Five years					Latest Qtr.
	12/88	12/89	12/90	12/91	12/92	3/93
Bonds	82.3%	87.1%	88.5%	80.0%	65.6%	56.8%
Stocks	10.1	10.2	7.9	15.7	30.6	40.3
Unallocated Cash	7.6	2.7	3.6	5.0	3.8	2.9
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

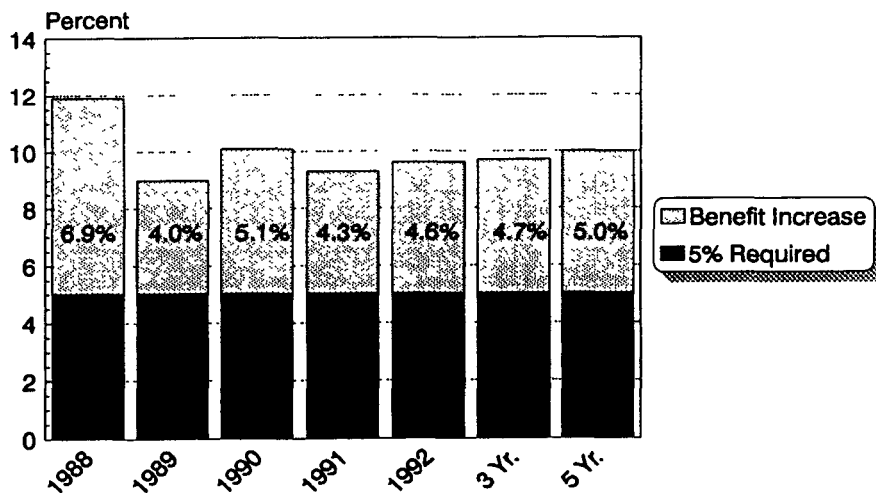
POST RETIREMENT FUND

Fund Performance Through 6/30/92

Through fiscal year 1992, the ability of the Post Fund to maintain current benefit levels and provide future benefit increases depended upon its earnings. Previously, state statutes had defined 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) had no direct impact on the benefits paid out to retirees. Unrealized capital gains (or losses) were excluded from defined earnings in order to make benefit payments largely insensitive to near-term fluctuations in the capital markets.

Through fiscal year 1992 benefit increases were based upon earnings during a fiscal year and were effective at the start of the following calendar year. Benefit increases generated over the last five years are shown below.

Realized Earnings
Fiscal Years 1988-1992



	1988	1989	1990	1991	1992	(Annualized)	
						3 Yrs.	5 Yrs.
Realized Earnings*	11.9%	9.0%	10.1%	9.3%	9.6%	9.7%	10.0%
Benefit Increase**	6.9	4.0	5.1	4.3	4.6	4.7	5.0
Inflation	3.9	5.2	4.7	4.7	3.1	4.2	4.3

* Interest, dividends and net realized capital gains.

** Payable starting January 1 of the following calendar year.

POST RETIREMENT FUND
Fund Performance Since 7/1/92

Beginning fiscal year 1993, total rate of return is the relevant measure for performance. Actual returns for the

total fund and stock and bond segments are shown below along with appropriate market index comparisons.

Total Fund Performance

The total fund slightly trailed its composite index for the quarter. On 3/31/93 the composite was weighted:

Stocks 40.0%
 Bonds 60.0

The composite weighting changes each month to reflect the on-going transition from bonds to stocks. The weighting shown above reflects the actual asset mix of the total portfolio during March.

	Period Ending 3/31/93	
	Qtr.	Since 7/1/92
Total Fund	4.4%	10.5%
Composite Index	4.7	11.0

Stock Segment Performance

Stock segment performance relative to the S&P 500 is shown in the table. During the transition to the new asset allocation, this index will be the most representative market comparison for the stock portfolio.

	Period Ending 3/31/93	
	Qtr.	Since 7/1/92
Stock Segment	4.0%	10.0%
S&P 500	4.3	13.0

Bond Segment Performance

Bond segment performance relative to the Shearson Lehman Government Corporate Bond Index is shown in the table. During the transition, that index will be the most appropriate market comparison for the bond portfolio.

	Period Ending 3/31/93	
	Qtr.	Since 7/1/92
Bond Segment	4.7%	10.5%
Shearson Index	4.7	9.9

ASSIGNED RISK PLAN

Investment Objective

The Assigned Risk Plan has two investment objectives: to minimize the mismatch between assets and liabilities and to provide sufficient liquidity for the payment of on-going claims and operating expenses.

Asset Mix

The Assigned Risk Plan is invested in a balanced portfolio of common stocks and bonds. The actual asset mix will fluctuate in response to changes in the Plan's liability stream.

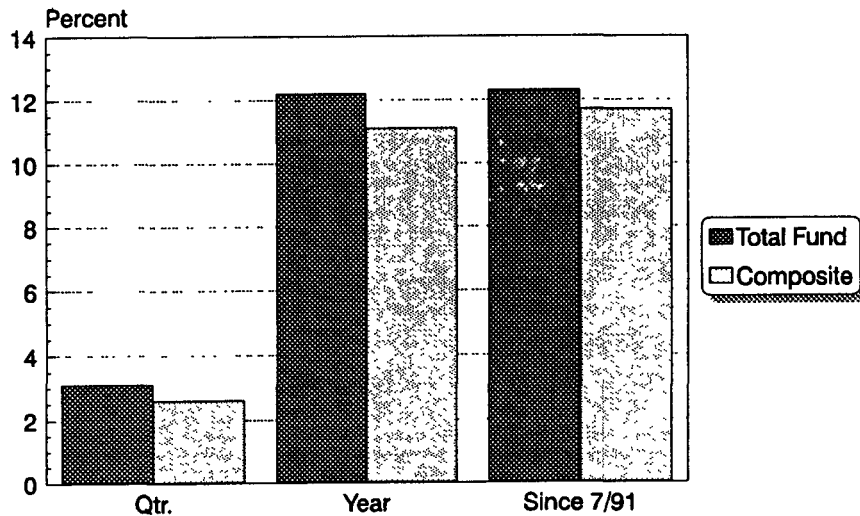
Investment Management

External management is utilized by the Assigned Risk Plan. The entire fund is managed by Voyageur Asset Management. The portfolio was transferred from the Department of Commerce to the SBI on May 1, 1991.

Market Value

On March 31, 1993 the market value of the Assigned Risk Plan was \$392 million.

	3/31/93 Target	3/31/93 Actual
Stocks	15.0%	14.4%
Bonds	85.0	84.2
Unallocated Cash	0.0	1.4
Total	100.0%	100.0%



	Period Ending 3/31/93		
	Qtr.	Yr.	Since 7/1/91
Total Account	3.1%	12.1%	12.3%
Composite	2.6	11.1	11.7
Equity Segment	-0.5	12.8	13.8
Benchmark	-0.6	10.4	13.5
Bond Segment	3.8	12.2	12.3
Benchmark	3.2	11.2	11.3

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:

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

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

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

On March 31, 1993 the market value of the entire fund was \$596 million.

Investment Options

Income Share Account - a 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.

Fixed Interest 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.

Investment Management

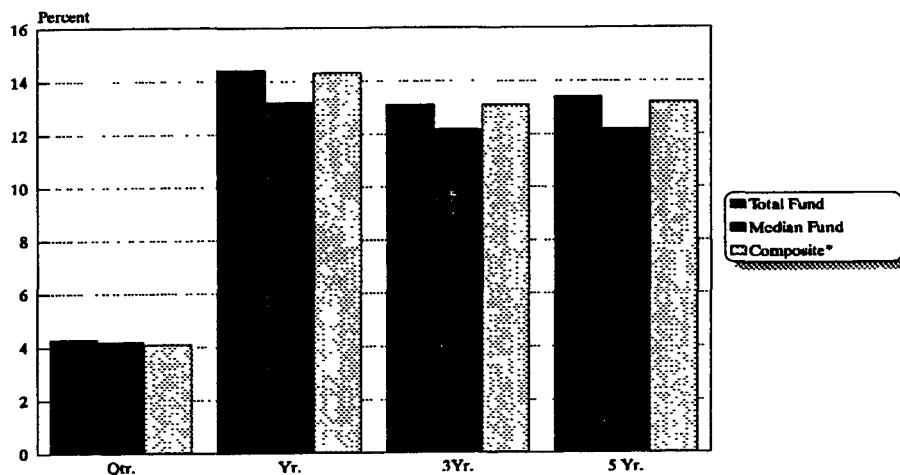
The Account combines internal and external management. Internal investment staff manage the entire fixed income segment. Currently, the entire stock segment is managed by Wilshire Associates as part of a passively managed index fund designed to track the Wilshire 5000. Prior to April 1988, a significant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

Market Value

On March 31, 1993 the market value of the Income Share Account was \$309 million.

	Target	Actual
Stocks	60.0%	61.3%
Bonds	35.0	31.2
Unallocated Cash	5.0	7.5
	100.0%	100.0%

Income Share Account



	Period Ending 3/31/93			
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	4.3%	14.4%	13.1%	13.3%
Median Fund*	4.2	13.2	12.2	12.2
Composite**	4.1	14.3	13.1	13.2
Equity Segment	4.3	15.6	13.9	14.9
Wilshire 5000***	4.3	15.6	13.8	14.8
Bond Segment	4.9	14.6	12.9	11.2
Salomon Bond Index	4.2	13.4	12.6	11.0

*TUCS Median Master Trust

**60% Wilshire 5000/35% Salomon Broad Bond Index/5% T-Bills Composite. Wilshire 5000 is adjusted to reflect liquor and tobacco restrictions.

*** Adjusted for liquor and tobacco restrictions.

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.

Investment Management

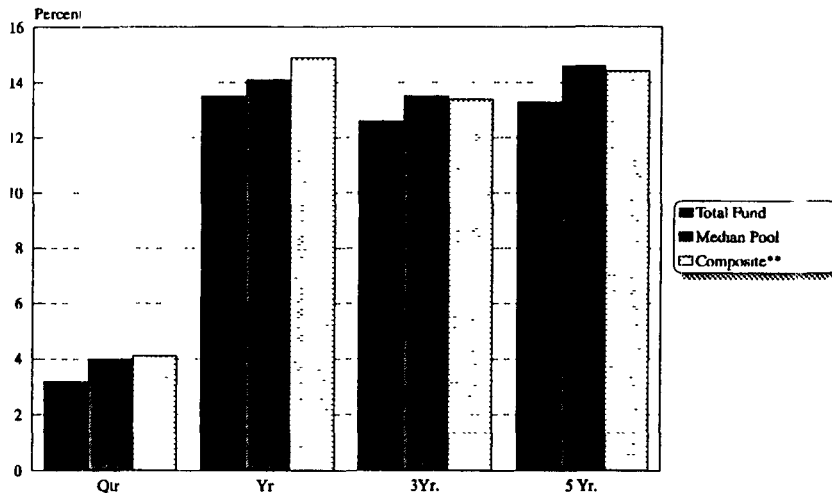
Currently, the entire Account is managed by the same group of active external stock managers utilized by the Basic Retirement Funds. Prior to April 1988, other active managers controlled a substantial portion of the account.

Market Value

On March 31, 1993 the market value of the Growth Share Account was \$97 million.

	Target	Actual
Stocks	95.0%	92.1%
Unallocated Cash	5.0	7.9
	100.0%	100.0%

Growth Share Account



Period Ending 3/31/93

	Annualized			
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	3.2%	13.5%	12.6%	13.3%
Median Pool*	4.0	14.1	13.5	14.6
Composite**	4.1	14.9	13.4	14.4
Equity Segment	3.4	14.1	13.3	13.7
Wilshire 5000***	4.3	15.6	13.8	14.8

* TUCS Median Equity Pool

** 95% Wilshire 5000/5% T-Bills Composite. Wilshire 5000 is adjusted for liquor and tobacco restrictions.

*** Adjusted for liquor and tobacco restrictions.

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.

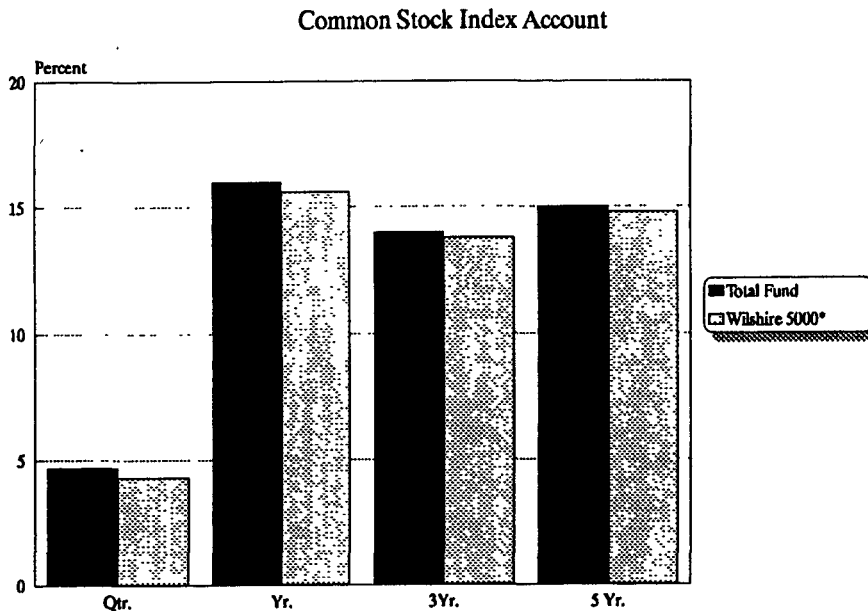
The Account is invested 100% in common stock.

Investment Management

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

Market Value

On March 31, 1993 the market value of the Common Stock Index Account was \$34 million.



Period Ending 3/31/93
Annualized
Qtr. Yr. 3 Yr. 5 Yr.

Total Account	4.7%	16.0%	14.0%	15.0%
Wilshire 5000*	4.3	15.6	13.8	14.8

*Adjusted for liquor and tobacco restrictions.

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

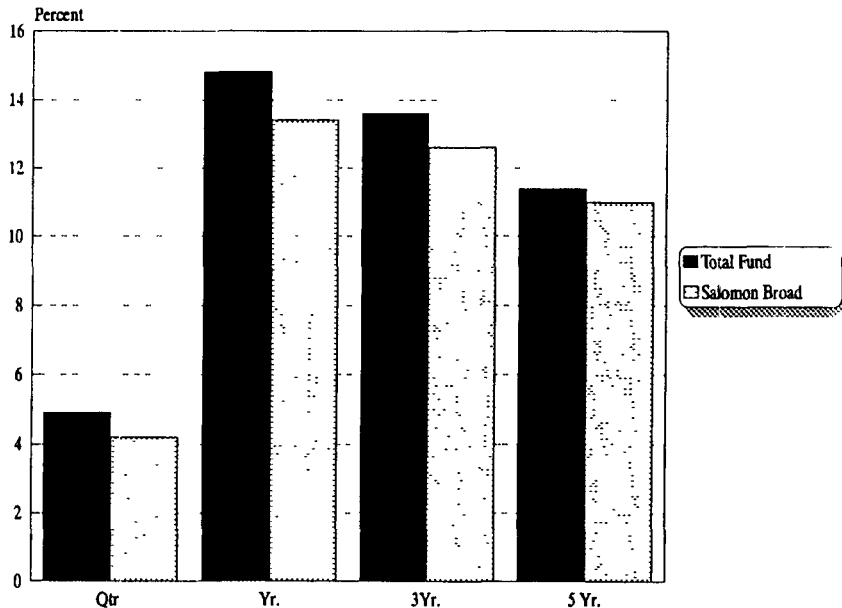
Investment Management

The entire Account is managed by the same group of active external bond managers utilized by the Basic Retirement Funds.

Market Value

On March 31, 1993 the market value of the Bond Market Account was \$18 million.

Bond Market Account



Period Ending 3/31/93

Annualized

Qtr. Yr. 3 Yr. 5 Yr.

Total Account	4.9%	14.8%	13.5%	11.4%
Salomon BIG*	4.2	13.4	12.6	11.0

* Salomon Broad Investment Grade Index

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.

Asset Mix

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

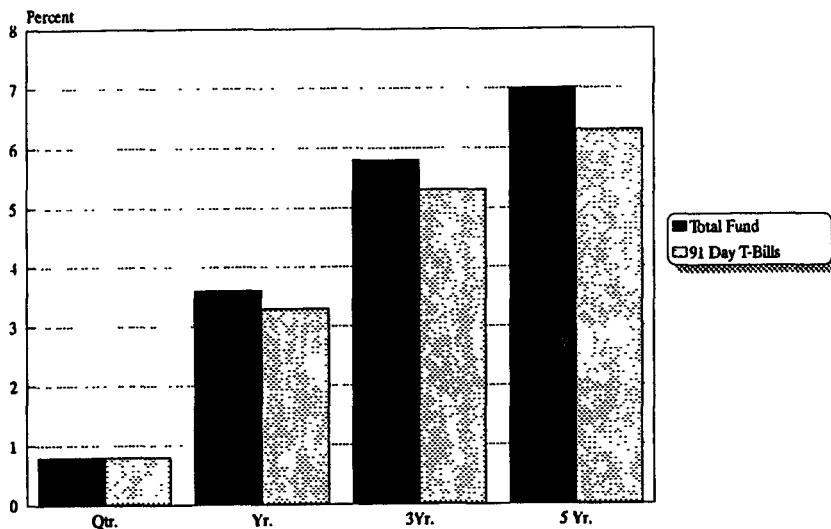
Investment Management

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

Market Value

On March 31, 1993 the market value of the Money Market Account was \$68 million.

Money Market Account



Period Ending 3/31/93

Annualized

	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	0.8%	3.6%	5.8%	7.0%
91 Day T-Bills	0.8	3.3	5.3	6.3

SUPPLEMENTAL INVESTMENT FUND

Fixed Interest Account

Investment Objectives

The investment objectives of the Fixed Interest 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 Fixed Interest 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 Fixed Interest Account over the following twelve months.

Market Value

On March 31, 1993 the market value of the Fixed Interest Account was \$71 million.

Contract Period	Annual Effective Interest Rate	Manager
Nov. 1, 1990-Oct. 31, 1993	8.765%	Mutual of America/Provident National (blended rate)
Nov. 1, 1991-Oct. 31, 1994	6.634%	Continental Assurance/Provident National (blended rate)
Nov. 1, 1992-Oct. 31, 1995	5.280%	Norwest Bank Minnesota

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 have been influenced by the 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 have limited 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, has invested 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 remained essentially unchanged for the quarter. The Permanent School fund continues to hold only fixed income securities.

	Target	Actual
Bonds	95.0%	98.9%
Unallocated Cash	5.0	1.1
Total	100.0%	100.0%

Investment Management

The entire fund is managed by the SBI investment staff.

Asset Growth

The market value of the Permanent School Fund's assets increased 2.2% during the first quarter. Positive returns contributed to the increase.

**Asset Growth
During First Quarter 1993
(Millions)**

Beginning Value	\$428.2
Net Contributions	-2.2
Investment Return	11.6
Ending Value	\$437.6

Bond Segment Performance

The composition of the Permanent School Fund's bond portfolio was essentially unchanged during the quarter. The bond portfolio is structured with a laddered distribution of maturities to minimize the Fund's exposure to re-investment rate risk. At the quarter's-end, the portfolio had a current yield of 7.69%, an average life of 7.60 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
3/31/93**

Value at Market	\$425,098,919
Value at Cost	366,185,453
Average Coupon	8.77%
Current Yield	7.69
Yield to Maturity	6.91
Current Yield at Cost	8.92
Time to Maturity	15.12 Years
Average Duration	7.60 Years
Average Quality Rating	AAA
Number of Issues	128

STATE CASH ACCOUNTS

Description

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

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

1. Trust Fund Pool contains the cash balances of retirement-related accounts managed internally and cash balances in the Permanent School Fund.
2. 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.

Period Ending 3/31/93

	Market Value (Millions)	Qtr.	Yr.	3 Yrs. Annualized
Treasurer's Cash Pool	\$1,781	1.1%	5.1%	7.0%
Trust Fund Cash Pool	29	1.4	5.4	6.6
Benchmark*		1.1		
91-Day T-Bills		0.8	3.3	5.3

* 75 % State Street Short Term Investment Fund/25 % 1-3 Year Treasuries.

Tab B

PORTFOLIO STATISTICS

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I. Composition of State Investment Portfolios 3/31/93	1
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III. Monthly Transactions and Asset Summary - Retirement Funds	4

STATE BOARD OF INVESTMENT
Composition of State Investment Portfolios By Type of Investment
Market Value March 31, 1993
(in Millions)

	Cash And Short Term Securities	Bonds		Stocks		External Int'l.	Alternative Assets	Total
		Internal	External	Internal	External			
BASIC RETIREMENT FUNDS:								
Teachers Retirement Fund	\$45,858 1.05%	\$0 28.51%	\$1,248,036 28.51%	\$0 54.27%	\$2,375,737 54.27%	\$302,396 6.91%	\$405,663 9.26%	\$4,377,690 100%
Public Employees Retirement Fund	\$32,539 1.51%	\$0 28.32%	\$608,585 28.32%	\$0 54.06%	\$1,161,837 54.06%	\$148,082 6.89%	\$197,997 9.22%	\$2,149,040 100%
State Employees Retirement Fund	\$31,924 1.69%	\$0 28.27%	\$534,917 28.27%	\$0 53.98%	\$1,021,427 53.98%	\$129,915 6.86%	\$174,030 9.20%	\$1,892,213 100%
Public Employees Police & Fire Fund	\$15,362 1.74%	\$0 28.25%	\$249,923 28.25%	\$0 53.95%	\$477,185 53.95%	\$60,745 6.87%	\$81,310 9.19%	\$884,525 100%
Highway Patrol Retirement Fund	\$2,652 1.89%	\$0 28.21%	\$39,662 28.21%	\$0 53.87%	\$75,730 53.87%	\$9,638 6.85%	\$12,904 9.18%	\$140,586 100%
Judges Retirement Fund	\$1 0.01%	\$0 30.70%	\$2,190 30.70%	\$0 51.99%	\$3,709 51.99%	\$521 7.30%	\$713 10.00%	\$7,134 100%
Public Employees P.F. Consolidated	\$11,211 4.87%	\$42,516 18.45%	\$35,187 15.27%	\$34,591 15.02%	\$92,344 40.08%	\$6,095 2.65%	\$8,436 3.66%	\$230,380 100%
Correctional Employees Retirement	\$1,780 1.81%	\$0 28.23%	\$27,790 28.23%	\$0 47.06%	\$46,318 47.06%	\$6,748 6.86%	\$15,789 16.04%	\$98,425 100%
POST RETIREMENT FUND	\$224,520 2.88%	\$4,432,742 56.80%	\$0	\$0 40.32%	\$3,146,989 40.32%	\$0	\$0	\$7,804,251 100%

	Cash And Short Term Securities	Bonds		Stocks		External Int'l	Alternative Assets	Total
		Internal	External	Internal	External			
MINNESOTA SUPPLEMENTAL FUNDS:								
Income Share Account	\$23,067 7.48%	\$96,221 31.18%	\$0	\$189,295 61.34%	\$0	\$0	\$308,583 100%	
Growth Share Account	\$7,644 7.86%	\$0	\$89,582 92.14%	\$0	\$0	\$0	\$97,226 100%	
Money Market Account	\$67,634 100%	\$0	\$0	\$0	\$0	\$0	\$67,634 100%	
Common Stock Index Account	\$0	\$0	\$34,026 100%	\$0	\$0	\$0	\$34,026 100%	
Bond Market Account	\$0	\$0	\$18,084 100%	\$0	\$0	\$0	\$18,084 100%	
Fixed Interest Account	\$0	\$0	\$70,594 100%	\$0	\$0	\$0	\$70,594 100%	
TOTAL RETIREMENT FUNDS	\$464,192 2.55%	\$4,571,479 25.15%	\$2,834,968 15.59%	\$34,591 0.19%	\$8,714,179 47.93%	\$664,140 3.66%	\$896,842 4.93%	\$18,180,391 100%
ASSIGNED RISK PLAN	\$5,612 1.43%	\$329,882 84.21%	\$0	\$56,269 14.36%	\$0	\$0	\$391,763 100%	
PERMANENT SCHOOL FUND	\$4,692 1.07%	\$432,939 98.93%	\$0	\$0	\$0	\$0	\$437,631 100%	
TREASURERS CASH	\$1,781,093 100%	\$0	\$0	\$0	\$0	\$0	\$1,781,093 100%	
HOUSING FINANCE AGENCY	\$109,770 57.57%	\$80,886 42.43%	\$0	\$0	\$0	\$0	\$190,656 100%	
MINNESOTA DEBT SERVICE FUND	\$7,210 25.04%	\$21,579 74.96%	\$0	\$0	\$0	\$0	\$28,789 100%	
MISCELLANEOUS ACCOUNTS	\$44,995 21.29%	\$166,317 78.71%	\$0	\$0	\$0	\$0	\$211,312 100%	
GRAND TOTAL	\$2,417,564 11.39%	\$5,603,082 26.40%	\$2,834,968 13.36%	\$90,860 0.43%	\$8,714,179 41.06%	\$664,140 3.13%	\$896,842 4.23%	\$21,221,635 100%

**STATE OF MINNESOTA
STATE BOARD OF INVESTMENT**

**Net Cash Flow Available For Investment
January 1, 1993 - March 31, 1993**

Teachers Retirement Fund	\$47,500,000.00
Public Employees Retirement Fund	(6,500,000.00)
State Employees Retirement Fund	9,252,000.00
Public Employees Police & Fire	4,000,000.00
Highway Patrol Retirement Fund	846,000.00
Judges Retirement Fund	(1,876,000.00)
Public Employees P&F Consolidated	117,567,784.74
Correctional Employees Retirement Fund	804,000.00
Post Retirement Fund	(26,463,558.31)
Supplemental Retirement Fund - Income	(41,820,088.62)
Supplemental Retirement Fund - Growth	1,868,697.94
Supplemental Retirement Fund - Money Market	(818,517.43)
Supplemental Retirement Fund - Index	1,974,653.59
Supplemental Retirement Fund - Bond Market	582,090.73
Supplemental Retirement Fund - Fixed Interest	(1,093,344.50)
Total Retirement Funds Net Cash Flow	\$105,823,718.14
Assigned Risk Plan	\$3,415,686.51
Permanent School Fund	(\$12,898,020.99)
Total Net Cash Flow	\$96,341,383.66

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Transaction and Asset Summary
Retirement Funds

	<u>Net Transactions</u>			<u>Asset Summary (at Market Value)</u>				
	Bonds (Millions)	Stocks (Millions)	Total (Millions)	Cash Flow (Millions)	Short-Term % of Fund	Bonds % of Fund	Equity % of Fund	Total Mkt. Value (Millions)
January 1990	-\$37	\$6	-\$31	\$85	3.9%	52.0%	44.1%	\$12,126
February	-12	115	103	48	3.4	51.1	45.5	12,232
March	-3	7	4	8	3.4	50.5	46.1	12,334
April	105	3	108	8	2.7	51.4	45.9	12,070
May	-6	27	21	52	2.8	50.0	47.2	12,721
June	23	-22	1	122	3.7	50.3	46.0	12,916
July	130	3	133	65	3.1	51.6	45.3	12,962
August	98	-38	60	53	3.2	53.3	43.5	12,293
September	61	-42	19	13	3.2	55.1	41.7	12,098
October	35	8	43	11	3.0	56.0	41.0	12,103
November	-58	61	3	106	3.7	54.2	42.1	12,652
December	-59	115	56	33	3.4	53.3	43.3	12,967
January 1991	6	-2	4	47	3.6	52.3	44.1	13,356
February	-6	11	5	60	3.9	50.6	45.5	13,790
March	82	1	83	6	3.3	50.8	45.9	13,961
April	-24	-9	-33	9	3.6	50.9	45.5	14,045
May	33	1	34	66	3.8	49.8	46.4	14,308
June	25	2	27	115	4.4	50.5	45.1	14,106
July	124	0	124	48	3.8	50.4	45.8	14,527
August	85	21	106	55	3.3	50.8	45.9	14,891
September	22	1	23	5	3.1	51.4	45.5	15,105
October	21	1	22	14	3.1	51.2	45.7	15,285
November	81	-48	33	64	3.3	52.3	44.3	15,083
December	-4	9	5	25	3.2	51.2	45.6	16,065
January 1992	-42	-3	-45	11	3.6	50.3	46.1	15,878
February	-19	0	-19	57	4.1	49.4	46.5	16,086
March	292	-300	-8	2	4.2	51.6	44.2	15,870
April	-6	2	-4	4	4.2	51.5	44.3	15,905
May	-13	5	-8	72	4.7	51.3	44.0	16,127
June	-22	0	-22	150	5.7	51.5	42.8	16,264
July	389	152	541	123	3.0	53.3	43.7	16,726
August	-149	151	2	-11	3.0	53.1	43.9	16,627
September	-200	200	0	-10	2.9	52.0	45.1	16,809
October	-282	282	0	10	2.9	49.8	47.3	16,771
November	-248	270	22	-9	2.7	47.5	49.8	17,057
December	-500	518	18	4	2.6	44.7	52.7	17,305
January 1993	-138	158	20	40	2.6	44.0	53.4	17,617
February	-253	266	13	2	2.6	42.9	54.5	17,811
March	-272	335	63	70	2.6	40.7	56.7	18,180

Tab C

EXECUTIVE DIRECTOR'S ADMINISTRATIVE REPORT

DATE: May 25, 1993

TO: Members, State Board of Investment

FROM: Howard J. Bicker

1) Budget and Travel Reports

A report on the SBI's FY93 administrative budget for the period ending April 30, 1993 is **Attachment A**.

A travel report for the period from February 16, 1992 - May 15, 1992 is included as **Attachment B**.

2. Legislative Update

Bills of interest to the SBI considered during the 1993 Legislative Session are included in **Attachment C**. Weekly updates of this summary were distributed to SBI deputies/designees throughout the session:

- The **SBI's administrative bill** is Laws 1993, Chapter 300. There were no significant amendments to the language that was introduced as H.F. 378/S.F. 376.
- The **SBI's administrative budget request** for FY94-95 was increased by \$50,000/year over to cover costs associated with new responsibilities for review and selection of vendors for a variety of tax deferred/tax sheltered retirement savings plans (Deferred Compensation, 403(b) Program, Individual Retirement Account Plan). These costs will be assessed against the companies that are awarded contracts. The SBI's total general fund appropriation for FY94 is \$2,013,000 and for FY95 is \$2,031,000. The entire amount will be billed back to the various funds and accounts under the supervision of the SBI.
- A new **requirement to disclose expenses paid for SBI members and staff** by firms that do business with the SBI was enacted as part of the Omnibus Appropriation Bill (S.F. 1620, Section 37). The new language which will be codified as MS 11A.075 is in **Attachment D**.

3. SBI/IAC Meetings for Calendar 1993

The quarterly meetings of the SBI/IAC during the remainder of calendar 1993 have been scheduled for:

SBI
Thursday, September 16, 1993
Wednesday, December 8, 1993

IAC
Wednesday, September 15, 1993
Tuesday, December 7, 1993

The September date has been cleared with all the Members of the Board. A change to the December Board meeting is possible due to conflicts on the part of one or more members.

Generally, the Executive Council, SBI and Land Exchange Board meet consecutively on the meeting date beginning at 8:30 A.M. in the State Capitol.

The IAC will meet from 2:00-4:00 P.M. on the meeting date in the SBI Conference Room at 55 Sherburne Avenue St. Paul.

4. Consulting Services for Deferred Compensation Programs

As referenced above, the SBI has responsibility for evaluating and selecting vendors for three tax deferred/tax sheltered retirement savings plans for public employees statewide. All three use insurance companies to deliver annuity products to participants.

- Deferred Compensation Plan (administered by MSRS)
- 403(b) Program (administered by local school districts)
- Individual Retirement Account Plans (administered by Community College System and State University System)

The SBI received additional funding (\$50,000/year) to cover its administrative costs for these programs.

I recommend that the SBI retain specialized consulting/actuarial services to assist with all three of these mandates. The Board is required by law to obtain consulting assistance for the 403(b) and IRAP plans. While it is not required by law to do so for the Deferred Compensation Plan, I believe outside assistance would be beneficial for this program as well.

RECOMMENDATION:

I recommend that the SBI authorize a Deferred Compensation Review Committee to solicit proposals for consulting services to assist the SBI in its

responsibilities for evaluating current and potential vendors for the Deferred Compensation Plan, 403(b) Program and IRAP and to make recommendations to SBI. The Committee should be comprised of a designee of each Board member and the executive directors of MSRS and TRA.

ATTACHMENT A

**STATE BOARD OF INVESTMENT
FISCAL YEAR 1993 ADMINISTRATIVE BUDGET REPORT
GENERAL FUND APPROPRIATION
FISCAL YEAR TO DATE THROUGH APRIL 30,1993**

ITEM	FISCAL YEAR 1993 BUDGET	FISCAL YEAR 1993 EXPENDITURES
PERSONAL SERVICES		
CLASSIFIED EMPLOYEES	\$ 286,000	\$ 251,693
UNCLASSIFIED EMPLOYEES	1,206,000	891,165
SEVERENCE PAYOFF	3,000	0
WORKERS COMPENSATION INSURANCE	0	0
MISCELLANEOUS PAYROLL	0	5,121
SUBTOTAL	\$ 1,495,000	\$ 1,147,979
EXPENSES & CONTRACTUAL SERVICES		
RENTS & LEASES	96,000	66,089
REPAIRS/ALTERATIONS/MAINTENANCE	9,000	7,137
BONDS AND INSURANCE	0	117
PRINTING & BINDING	20,000	15,220
PROFESSIONAL/TECHNICAL SERVICES	15,000	5,069
DATA PROCESSING & SYSTEM SERVICES	162,000	121,500
PURCHASED SERVICES	30,000	29,925
SUBTOTAL	\$ 332,000	\$ 245,057
MISCELLANEOUS OPERATING EXPENSES		
COMMUNICATIONS	25,000	20,642
TRAVEL, IN-STATE	3,000	238
TRAVEL, OUT-STATE	40,000	23,439
FEES & OTHER FIXED CHARGES	9,000	5,147
SUBTOTAL	\$ 77,000	\$ 49,466
SUPPLIES/MATERIALS/PARTS	29,700	34,682
CAPITAL EQUIPMENT	34,300	79,294
TOTAL GENERAL FUND	\$ 1,968,000	\$ 1,556,478

ATTACHMENT B

STATE BOARD OF INVESTMENT

Travel Summary by Date
February 16, 1993 - April 15, 1993

<u>Purpose</u>	<u>Name(s)</u>	<u>Destination and Date</u>	<u>Total Cost</u>
Staff Education Training for "Proxy Edge" Computer program	A. Blauzda	Chicago 2/18-19	\$697.12
Staff Conference State Street Bank Annual Client Conference	H. Bicker M. Schmitt	Phoenix AZ 3/27-31	\$704.00
Manager Search Semi-Passive Bond Manager Goldman, T. Rowe Price	J. Lukens	New York Baltimore 4/5-6	\$1,362.52
Manager Search International Active Managers Alliance, Clay Finlay, Oeschle, Putnam, Lazard, Scudder, BEA	J. Guckeen B. Lehman	New York Boston 4/12-14	\$1,915.20

ATTACHMENT C

**Bills of Interest to the Minnesota State Board of Investment
1993 Legislative Session
Includes Action Through 5/17/93**

Description of Bill	HF/SF # and Author	Current Status
SBI Bill	HF 378 (Reding) SF 376 (Metzen)	Laws of 1993, Chapter 300
- Various Provisions		
Omnibus State Gov't. Appropriations Bill	HF 1750 SF 1620	Laws of 1993, Chapter 192
- SBI will receive direct appropriation for selecting outside vendors for deferred compensation programs		
- Requires disclosure of expenses paid by managers to staff and board members		
PERA/MSRS Bill	HF 574 (Reding)	Conference committee report adopted
- Administrative provisions	SF 519 (Stumpf)	Conference committee report adopted Sent to Governor for signature
- Public pension fund investment audit	Bill passed <u>without</u> public pension fund investment audit provision	
Consolidating St. Paul Teachers Fund with TRA	HF 637 (Dawkins)	On General Orders
- Financing for Minneapolis and St. Paul Teachers	SF 553 (Kelly)	On General Orders
- Consolidation with TRA as study only	Bill does <u>not</u> require consolidation of pension fund with TRA	

ATTACHMENT D

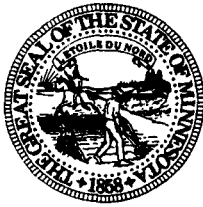
32 Sec. 37. [11A.075] [DISCLOSURE OF EXPENSE REIMBURSEMENT.]

33 (a) A member or employee of the state board must annually
34 disclose expenses paid for or reimbursed by: (1) each
35 investment advisor, consultant, or outside money manager under
36 contract to the state board; (2) each investment advisor,
1 consultant, or outside money manager that has bid on a contract
2 offered by the state board during that year; and (3) each
3 business, including officers or employees of the business, in
4 which the state board has invested money under the board's
5 control during the annual reporting period. The disclosure
6 requirement of this paragraph does not apply to expenses or
7 reimbursements from an investment advisor, consultant, money
8 manager or business if the board member or employee received
9 less than \$50 during the annual reporting period from that
10 person or entity.

11 (b) For purposes of this section, expenses include payments
12 or reimbursements for meals, entertainment, transportation,
13 lodging, and seminars.

14 (c) The disclosure required by this section must be filed
15 with the ethical practices board by April 15 each year. Each
16 disclosure report must cover the previous calendar year. The
17 statement must be on a form provided by the ethical practices
18 board. An individual who fails to file the form required by
19 this section or who files false information, is subject to
20 penalties specified in sections 10A.09 and 10A.10.

Tab D



**STATE OF MINNESOTA
OFFICE OF THE STATE TREASURER**

303 State Administration Building
50 Sherburne Avenue
Saint Paul, Minnesota 55155

MICHAEL A. McGRATH
Treasurer

(612) 296-7091
Fax (612) 296-8615

DATE: May 25, 1993

TO: Members, State Board of Investment

FROM: Michael A. McGrath, Chair
SBI Administrative Committee

SUBJECT: **Committee Report**

The SBI Administrative Committee met on May 21, 1993 and took action on the following items:

1) RFP for Master Custody Services

The SBI's contract with State Street Bank for master custody services expires September 30, 1993. It is the SBI's practice to review the contract through a request for proposal (RFP) on at least a five year basis.

The Committee approved the RFP that was drafted by staff. The RFP will be announced in the State Register and responses will be due by June 25. A Master Custody Review Committee will review the responses and make a recommendation to the SBI at its September 1993 meeting. The Committee will include a designee of each Board member and representatives from the IAC.

2) 403(b) Contracts

In December 1992, the SBI authorized contracts with insurance companies to provide 403(b) tax sheltered annuities to school district employees statewide.

Contract negotiations are now complete. The Executive Director reported that the following eight (8) firms will sign contracts and provide annuities under Laws 1992, Chapter 487, Section 4:

Aetna Life
Great West Life
IDS Life
Metropolitan
Minnesota Mutual
Nationwide
United Investors
VALIC

A ninth company (Mutual of America) was approved by the SBI but declined to sign a contract. That company objected to paying the cost assessed to each firm as required by law.

3) Executive Director's FY94 Workplan

Mr. Bicker presented his proposed workplan for FY94. Like the previous workplans, the FY94 plan follows the same category order found in the Executive Director's position description. The plan is a compilation of on-going responsibilities as well as the new initiatives the Executive Director will undertake during the next year.

A summary of the proposed plan is shown in **Attachment A**. Supporting information was sent to each Board member as part of the FY94 Management and Budget Plan document.

RECOMMENDATION:

The Committee recommends that the SBI approve the FY94 Executive Director's workplan. Further, the Committee recommends that the workplan serve as the basis for the Executive Director's performance evaluation for FY94.

4) FY94 Administrative Budget Plan

The SBI's administrative budget is funded by a legislative appropriation from the general fund. All expenditures are billed back to the various funds under the supervision of the SBI and the receipts are deposited in the general fund as non-dedicated revenue.

An overview and summary of the budget plan is in **Attachment B**. It is based on the appropriation for FY94-95 made by the 1993 Legislature. Supporting information was sent to each Board Member as part of the FY94 Management and Budget Plan.

RECOMMENDATION:

The Committee recommends that the SBI approve the FY94 Administrative Budget Plan.

5) Fiduciary Education Plan

Minnesota Statutes Chapter 356A requires each public pension plan to establish a continuing education plan for its fiduciaries. The plan approved by the Committee is contained in Attachment C. Please note that the travel allocation policy for Board members and their designees is included in the plan.

RECOMMENDATION:

The Committee recommends that the SBI adopt the attached Continuing Fiduciary Education Plan.

6) Process for Executive Director's FY93 Evaluation

The Committee discussed the process that will be used by the Board to evaluate the Executive Director for FY93. The Committee members agreed that the performance review should be completed prior to the September 1993 meeting of the SBI and should follow the process used in the past.

RECOMMENDATION:

The Committee recommends that the SBI adopt the following process for the Executive Director's FY93 performance evaluation:

- o The evaluation will be completed prior to the September 1993 meeting of the SBI.**
- o The evaluation will be based on the results of the Executive Director's workplan for FY93.**
- o The SBI deputies/designees will develop an appropriate evaluation form for use by each member.**
- o As the chair of the Board, the Governor, or his representative, will coordinate distribution and collection of the evaluation forms and will forward the completed forms to the Executive Director. Board Members are encouraged to meet individually with the Executive Director to review their own evaluation.**

ATTACHMENT A

STATE BOARD OF INVESTMENT

Executive Director's Proposed Workplan

FY94

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

	Projected Time Frame
A. DEVELOPMENT OF INVESTMENT POLICIES	
1. Review insurance company that provide annuity products in three retirement related programs: Deferred Compensation, 403(b) Program, Individual Retirement Account Plan (IRAP).	Jul. - Jun.
2. Continue development and implementation of Emerging Stock Manager Program.	Jul. - Sep.
3. Consider alternative management structures for the Money Market Account in the Supplemental Investment Fund.	Jan. - Jun.
B. IMPLEMENTATION OF INVESTMENT POLICIES APPROVED BY THE SBI	
1. Meet or exceed the performance objectives established for the Basic, Post, and Combined Funds.	On-going, reported quarterly
• Obtain returns that are 3-5 percentage points over inflation over the last 10 years (FY85-FY94).	
• Outperform the median fund from the TUCS universe of Master Trusts over the last 5 years (FY90-FY94).	
• Outperform a composite of market indices over the last 5 years (FY90-FY94).	

ATTACHMENT A (con't)

- | | |
|--|--------------------------|
| 2. Implement new/replacement manager search process for domestic active stock and bond managers. | On-going |
| 3. Consider additional investments with new/existing alternative investment managers. | On-going |
| 4. Implement new/replacement manager search process for international stock managers. | Jul. - Sep.,
On-going |

C. REVIEW AND CONTROL OF INVESTMENT POLICIES

- | | |
|---|------------------------|
| 1. Monitor and evaluate active stock and bond manager performance in accordance with the SBI's Manager Continuation Policy. | On-going |
| 2. Review investment guidelines for active stock and bond managers on an annual basis. | Apr. - Jun. |
| 3. Monitor implementation of Northern Ireland mandate. | On-going |
| 4. Monitor implementation of the Board's resolution on South Africa. | On-going |
| 5. Monitor implementation of the Board's guidelines on international investing. | Jul.-Dec.,
On-going |
| 6. Monitor implementation of proxy voting procedures. | On-going |
| 7. Provide staff support for initiatives assigned to the Proxy Committee. | On-going |

D. ADMINISTRATION AND MANAGEMENT OF STAFF OPERATIONS

- | | |
|--|-------------|
| 1. Cooperate in all respects with the annual audit of SBI operations by the Legislative Auditor. | Jul. - Dec. |
| 2. Conduct RFP for master custody services. | Jul. - Sep. |

ATTACHMENT A (con't)

- | | |
|---|-------------|
| 3. Prepare and seek approval of the SBI's legislative proposal for 1994 Legislative Session, if needed. | Oct. - Apr. |
| 4. Prepare FY95 Management and Budget Plan. | Mar. - Jun. |

E. COMMUNICATION AND REPORTING

- | | |
|--|----------------------------|
| 1. Prepare reports on investment results. | Quarterly |
| 2. Prepare status reports on the Executive Director's FY94 workplan for review by the SBI, IAC and Consultant, as requested. | As requested |
| 3. Meet with the SBI and IAC on a quarterly basis and at other times as required. | Quarterly, or as requested |
| 4. Meet with the Board's designees on a monthly basis, as requested. | Monthly, or as requested |
| 5. Prepare FY93 Annual Report. | Jul. - Feb. |
| 6. Coordinate round table discussions with SBI's external managers. | Periodic, 2-3 per year |

ATTACHMENT B

Budget Plan FY94 Administrative Budget Plan Overview

	FY93 ACTUAL/ PROJECTED	FY94 REQUEST	FY94 LEGISLATIVE APPROPRIATION
Personnel	\$1,434,000	\$1,447,000	\$1,447,000
Contractual Services	323,000	364,500	364,500
Operating Expenses	76,000	77,000	77,000
Supplies and Equipment	134,000	74,500	74,500
Deferred Compensation	-0-	-0-	50,000
	<u>\$1,967,000</u>	<u>\$1,963,000</u>	<u>\$2,013,000</u>

Personnel Costs

The FY94-95 budget request was prepared using the guidelines issued by the Department of Finance. As a result, no allowance for salary increases has been made.

Salary increases are covered by collective bargaining agreements negotiated on a statewide basis. The SBI will not know what salary increases will be for the next biennium until contracts are negotiated during the summer of 1993. No funding for salary increases will be available if increases are awarded. Any increases will have to be absorbed within current funding, which may necessitate layoffs.

Other Expense Categories

The large increase (+\$41,500) in contractual services reflects the cost of the new contract for the SBI's Accounting and Management system which goes in to effect on July 1, 1993.

The large decrease (-\$59,500) in supplies and equipment reflects the purchase of a new Kodak copier during FY93. This was one-time cost that increased expenditures in this category during FY93.

The Legislature appropriated \$50,000 in each year of the biennium to cover costs associated with deferred compensation programs. The majority of this amount will be used for consulting services and legal service fees.

It should be noted that unforeseen increases in data processing costs and other necessary contractual services could require adjustments in the amounts allocated to various expenditures categories.

ATTACHMENT C

CONTINUING FIDUCIARY EDUCATION PLAN

REQUIRED BY MS 356A.13

The State Board of Investment (SBI) undertakes the following activities related to fiduciary education. Taken as a group, these activities shall constitute the plan for continuing fiduciary education required by Minnesota Statutes 356A.13 (copy attached). In addition, pursuant to statutory requirements of qualification, the SBI executive director and many members of the Board's Investment Advisory Council (IAC) can be reasonably considered to be experts with respect to their duties as fiduciaries.

1. Briefing for New Board/IAC Members

Shortly after election to the Board or appointment to the IAC, each new member is briefed on SBI operations and policies. As part of the briefing, SBI's legal counsel will review the member's fiduciary obligations and responsibilities as specified in Minnesota Statutes Chapters 11A and 356A.

2. Development and Review of Investment Policies

The SBI adopts comprehensive investment policies for each fund under its control. The policies cover investment objectives, asset allocation, management structure and performance evaluation. Policy papers or reports on these topics are developed and written by SBI staff in conjunction with the IAC and consultants. Relevant research and analyses from the academic and professional investment fields are used to formulate these policy guidelines.

After they are formally adopted by the Board, these written policies guide the management of all assets under the SBI's control. The SBI intends to review its stated investment policies periodically. This review may occur within the framework of the SBI's regular quarterly meetings or may take place at special meetings or seminars specifically designated for this purpose.

3. Input from Board's Consultants

The SBI retains outside investment consultants to advise the Board members on a wide variety of investment management issues. As part of its contract with the SBI, the consultants offer to meet with the Board members or their designees to discuss investment-related issues. These individual consultations occur throughout the year. In addition, the consultant is available at each meeting of the Board and IAC. These meetings are supplemented by quarterly reports on investment performance prepared by the consultant.

ATTACHMENT C (con't)

4. **Manager "Round Tables"**

The SBI intends to convene small groups of its external money managers to discuss issues related to investment management and the financial markets. These "round table" discussions will be held periodically throughout the year and will be open to Board members and their designees, IAC members and other interested parties. It is anticipated that 2-3 round tables will be held each year.

5. **Travel Allocation**

The SBI allocates \$2,000 annually to each Board member (or their designee) for costs associated with attendance at investment-related seminars and conferences. This allocation is used at the discretion of each Board member.

Date: May, 1993

1992 Minnesota Statutes

356A.13. CONTINUING FIDUCIARY EDUCATION.

Subdivision 1. **Obligation of fiduciaries.** A fiduciary of a covered pension plan shall make reasonable effort to obtain knowledge and skills sufficient to enable the fiduciary to perform fiduciary activities adequately. At a minimum, a fiduciary of a covered pension plan shall comply with the program established in accordance with subdivision 2.

Subd. 2. **Continuing fiduciary education program.** The governing boards covered pension plans shall each develop and periodically revise a program for the continuing education of any of their board members and any of their chief administrative officers who are not reasonably considered to be experts with respect to their activities as fiduciaries. The program must be designed to provide those persons with knowledge and skills sufficient to enable them to perform their fiduciary activities adequately.

Tab E

COMMITTEE REPORT

DATE: May 25, 1993

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

FROM: **Manager Search Committee**

In April, the manager search committee conducted a semi-passive bond manager search. The members of the Committee for this search were:

<i>Name</i>	<i>Title</i>	<i>Representing</i>
Peter Sausen	Assistant Commissioner of Finance	Governor Carlson
Christie Eller	Assistant Attorney General	Atty. General Humphrey
Jake Manahan	Deputy State Treasurer	State Treasurer McGrath
Lisa Rotenberg	Deputy State Auditor	State Auditor Dayton
Elaine Voss	Deputy Secretary of State	Secretary of State Growe
Gary Austin	Executive Director, TRA	IAC
Gary Norstrem	Senior Vice President of Institutional Marketing, Piper	IAC

The Committee interviewed three firms on April 28, 1993. Each of these firms has expertise in managing semi-passive portfolios against broad market indices and extensive quantitative and risk management models. The firms interviewed were:

Lincoln Capital Management
Goldman Sachs Asset Management
T Rowe Price Associates

The Committee interviewed Lincoln Capital Management, a current SBI manager, as the result of a special meeting of the Stock and Bond Manager Committee on March 18, 1993. Although the Committee was comfortable with Lincoln's investment approach and risk monitoring capabilities, their returns have been below expectations. The recommendation of the Stock and Bond Manager Committee was that Lincoln be interviewed along with the other semi-passive candidates.

On the basis of the interviews, questionnaire responses and supporting information gathered by staff and the SBI's consultant, Richard's & Tierney, the Search Committee is recommending that two firms be retained by the SBI:

Lincoln Capital Management
Goldman Sachs Asset Management

The Committee asked that the Stock and Bond Manager Committee of the IAC recommend the amount of assets to be allocated to each firm. Brief descriptions of each firm are attached.

On May 21, 1993, the Stock and Bond Manager Committee reviewed the actions of the Search Committee and endorsed the recommendations shown below

RECOMMENDATION:

The Committee recommends that the SBI authorize the executive director, with assistance from SBI legal counsel, to negotiate and execute contracts with the following firms for semi-passive domestic bond management:

Lincoln Capital Management	Chicago, Illinois
Goldman Sachs Asset Management	New York, New York

**DOMESTIC BOND MANAGER
FACT SHEET**

Manager: *Lincoln Capital Management*

Investment Approach

Lincoln has been an enhanced index manager for the SBI since July 1, 1988. Their investment approach has not changed since we hired them.

Lincoln begins by creating a universe of Treasury, Agency, corporate and mortgage securities. Securities are chosen that meet internally derived liquidity, credit and qualitative criteria. From here, a proprietary linear program is used to break the index down into 54 variables, called duration cells. The linear program chooses securities from the universe that will create a portfolio that matches the attributes and risk parameters of the benchmark across these duration cells. This quantitative model monitors the degree of risk exposure in the portfolio versus the benchmark portfolio across the entire maturity spectrum.

If just these securities were purchased in the amount suggested from the model, the return of the portfolio would theoretically match the return of the benchmark less transactions costs. Therefore, to create an enhanced index portfolio, the fixed income staff takes the security suggestions from the model and makes slight modifications based on their perception of current market conditions and outlook for the future. These modifications are essentially active bets versus the benchmark and are designed to enhance the benchmark return. The magnitude of these bets determines how closely the portfolio tracks the benchmark. The resulting portfolio can be analyzed using the model to determine how the portfolio will react in several interest rate and yield curve scenarios.

To date, Lincoln's returns have been slightly below the Salomon BIG net of fees.

Assets Under Management (as of 3/31/93)

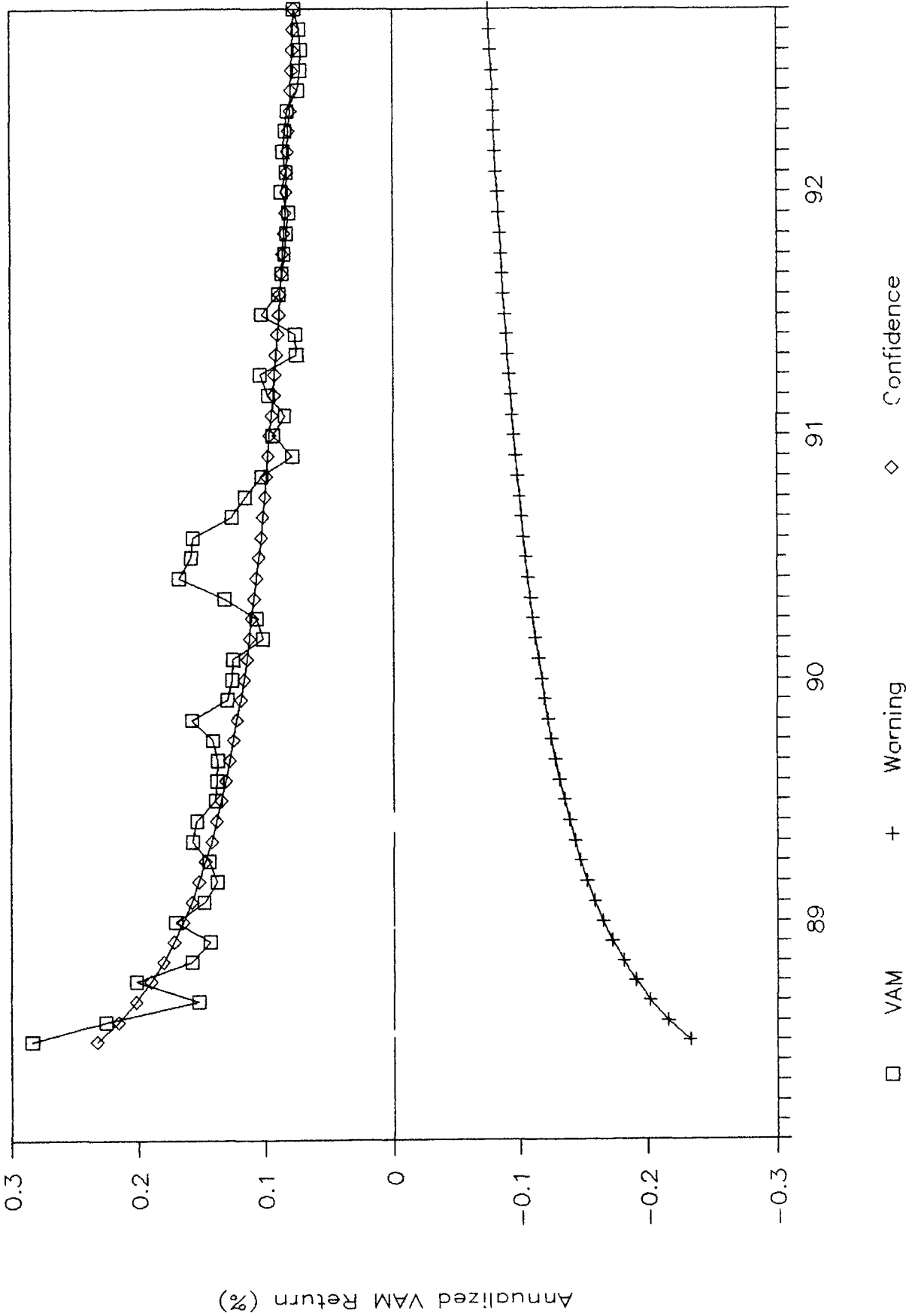
Total Fixed Income Assets	\$ 17.2 billion
Enhanced Index Fixed Income Assets	\$ 6.7 billion
Number of Enhanced Index Fixed Income Accounts	16

Investment Manager: LINCOLN CAPITAL
 Benchmark: SB BROAD BOND INDEX

	----PORTFOLIO----		----BENCHMARK----		-----VAM-----	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
88 Q1			3.85%			
Q2			1.23%			
Q3	2.07%		1.95%		0.12%	
Q4	0.78%	2.87%	0.76%	7.98%	0.02%	0.14%
89 Q1	1.21%		1.20%		0.01%	
Q2	7.97%		7.95%		0.02%	
Q3	1.04%		1.03%		0.01%	
Q4	3.72%	14.52%	3.69%	14.45%	0.03%	0.07%
90 Q1	-0.72%		-0.76%		0.04%	
Q2	3.62%		3.61%		0.00%	
Q3	0.96%		0.97%		-0.01%	
Q4	5.24%	9.30%	5.07%	9.09%	0.16%	0.19%
91 Q1	2.55%		2.63%		-0.08%	
Q2	1.76%		1.80%		-0.04%	
Q3	5.76%		5.70%		0.06%	
Q4	5.04%	15.92%	5.02%	15.96%	0.02%	-0.04%
92 Q1	-1.20%		-1.16%		-0.04%	
Q2	4.09%		4.06%		0.03%	
Q3	4.33%		4.32%		0.01%	
Q4	0.25%	7.56%	0.28%	7.59%	-0.03%	-0.03%
93 Q1	4.21%		4.17%		0.04%	
Latest:						
1 yr		13.45%		13.40%		0.05%
Cum 88Q3-93Q1		11.44%		11.36%		0.08%
Std Dev		4.12%		4.11%		0.13%

LINCOLN CAPITAL

Value of Active Mgmt



DOMESTIC BOND MANAGER FACT SHEET

Manager *Goldman Sachs Asset Management*

Investment Approach

Goldman Sachs, a strong firm in active bond management, recently hired Sharmin Mossavar-Rahmani from Fidelity Management Trust as Chief Investment Officer for U.S. Dollar-Denominated Bonds. She is a leader in the bond index field and specializes in the management of enhanced index funds. She will be responsible for fixed income investment policy for both actively managed and semi-passively managed accounts.

Goldman's approach to semi-passive management is similar to its active management approach. The process is bottom-up focusing on security selection to add incremental value. Portfolio duration of semi-passive accounts is constrained to within .25 of a year of the benchmark. This is in contrast to its active portfolios which are normally within .5 of a year of the benchmark.

The approach consists of implementing long-term strategic investment tilts in the portfolio combined with short-term tactical trading opportunities. This combination of strategic investment tilts with tactical trading is expected to enable the portfolio to outperform the Salomon BIG by 40 to 50 basis points (prior to fees) on an annual basis.

Using the extensive global resources of Goldman Sachs, GSAM can concentrate on adding value through security selection. In both active and enhanced index portfolios, security selection is the primary focus of GSAM's portfolio management. When analyzing Treasuries, the firm models Treasury coupons with an arbitrage-based pricing model. This model determines the spread between actual market yields and what they determine is the intrinsic value. This helps determine the relative richness or cheapness of securities.

GSAM takes a highly quantitative and analytical approach to mortgage securities as well. Using proprietary research and internally developed models, extremely complex mortgage securities are analyzed and undervalued securities are uncovered. In the corporate sector, GSAM performs its own credit review of each issuer. Credit analysts and portfolio managers try to meet with or interview the management of companies in which they invest. Extensive research, tempered with market knowledge and trading skill allows GSAM to maximize returns.

Assets Under Management (as of 3/31/93)

Total Fixed Income Assets	\$14.7 billion
Enhanced Index Fixed Income Assets	\$ 2.8 billion
Number of Enhanced Index Fixed Income Accounts:	9

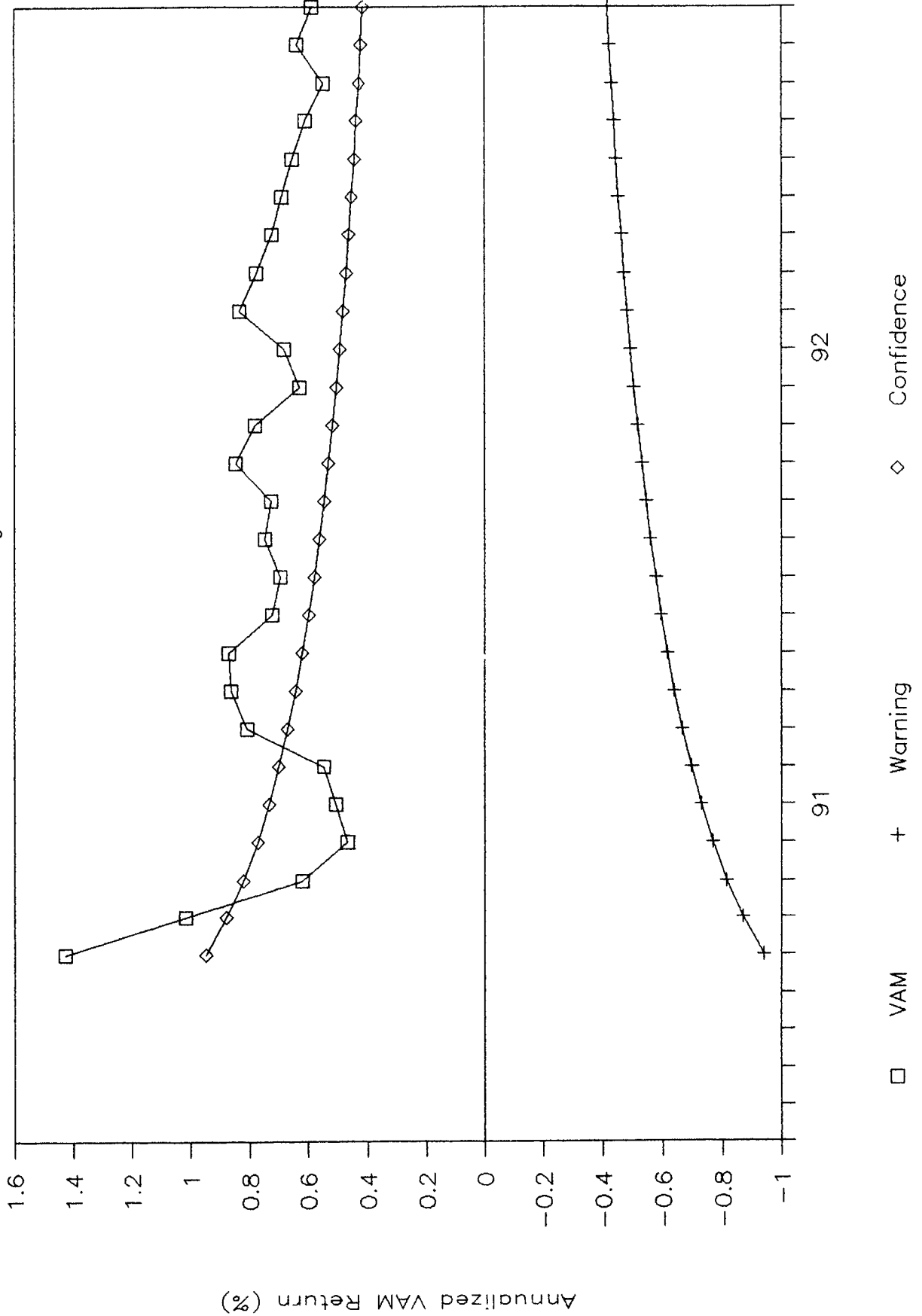
Investment Manager: GOLDMAN SACHS
 Benchmark: SB BROAD BOND INDEX

	---PORTFOLIO---		---BENCHMARK---		---VAM---	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
90 Q1			-0.76%			
Q2			3.61%			
* Q3	0.98%		0.97%		0.11%	
Q4	5.64%	6.68%	5.07%	9.09%	0.54%	0.65%
91 Q1	2.57%		2.63%		-0.06%	
Q2	1.63%		1.80%		-0.17%	
Q3	6.23%		5.70%		0.51%	
Q4	5.01%	16.28%	5.02%	15.96%	-0.01%	0.27%
92 Q1	-0.76%		-1.16%		0.41%	
Q2	3.97%		4.06%		-0.09%	
Q3	4.58%		4.32%		0.25%	
Q4	0.20%	8.13%	0.28%	7.59%	-0.08%	0.50%
93 Q1	4.27%		4.17%		0.10%	
Latest:						
1 yr		13.60%		13.40%		0.18%
Cum 90Q3-93Q1		13.87%		13.20%		0.59%
Std Dev		3.39%		3.30%		0.52%

* Partial period return for Portfolio and VAM.

GOLDMAN SACHS

Value of Active Mgmt



Tab F

COMMITTEE REPORT

DATE: May 25, 1993

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

FROM: **Asset Allocation Committee**
Stock and Bond Manager Committee

The Asset Allocation and Stock and Bond Manager Committees met jointly on April 15, 1993 to consider the following agenda:

- revisions to total fund objectives and reporting format
- review of the Manager Continuation Policy

The Board is asked to take action on both items.

1. Total Fund Objectives and Report Format

At the March 1993 meetings, the Asset Allocation Committee reported that it was discussing potential revisions to the return objectives for the Basic and Post Funds and the accompanying report format. After further review during the last quarter, the Committees are bringing a final proposal to the SBI/IAC for action.

Total Fund Objectives

In February 1989, the Task Force on Fund Objectives recommended several performance objectives for the Basic Retirement Funds and the Post Retirement Funds. The Board adopted the recommended standards for each fund and the approved objectives were incorporated into subsequent quarterly and annual investment performance reports.

Staff recommended that the existing standards be reviewed and modified due to the significant changes in the long term asset allocation targets of the Post Fund. When the new allocation targets are in place, both the Basic and Post Funds will be oriented toward maximizing long term total rates of return. This change should be reflected in the performance objectives used to measure investment results of each fund in future time periods. Since both funds will have a similar long range focus they can be compared to appropriate objectives on a combined basis as well.

Staff and the Committees recommend that the objectives for the Combined, Basic and Post Funds follow the structure of the existing standards for the Basic Funds:

- provide real rates of return
- exceed median fund
- exceed market index composite

The Committee and staff agree that the first two objectives (real return and median fund comparisons) are appropriate for the measuring the performance of the Combined Funds since both are now oriented toward maximizing long term total rates of return. They also agree that separate composites should be used to measure performance against the third objective (market index composite comparisons)

The current objectives for the Basic Funds and the modifications necessary to accommodate the proposed changes are shown in **Attachment A**

At the March 1993 meetings, the Asset Allocation Committee discussed whether or not the goal of exceeding the median fund in TUCS is an appropriate objective. In the past, Board members have suggested higher goals (e.g. performance in the top third of all pension funds) and have asked what changes would need to be made to reach such a goal. The Committee stated that it believes the current objective to exceed the performance of the median fund over moving 5 year periods is an aggressive goal for the Funds given their current constraints. Members believe that higher rankings against other pension funds are not realistic given the historical asset allocation targets approved by the Board.

Report Format

At the March 1993 meetings, the Asset Allocation Committee reported that it was reviewing the existing "Return Objectives" report now included as the first page of Tab A of the quarterly "Board Folder." The Committee's goal was to finalize the format changes and bring a final proposal to the Board at the June 1993 meeting. After further discussion, the Committees recommend that the SBI adopt the format shown in **Attachment B**.

Since the revised asset allocation of the Post Fund will not be in place until the start of fiscal year 1994, the new format will incorporate returns from the Post Retirement Fund beginning July 1, 1993. Similarly, results for the Combined Funds (Basic and Post) will reflect only the performance of the Basic Retirement Funds for all periods before July 1, 1993.

RECOMMENDATION:

The Committees recommend that the SBI adopt the total fund objectives for the Basic, Post and Combined Funds shown in *Attachment A* and the accompanying report format shown in *Attachment B* for the period beginning July 1, 1993.

2. **Manager Continuation Policy**

The SBI formalized its qualitative and quantitative decision guidelines concerning the evaluation of stock and bond managers in a position paper adopted in March 1988. Subsequently, the policy was reviewed and the IAC Task Force on Manager Retention and the SBI adopted the suggested revisions in June 1990. Due to ongoing concerns about the application of the policy, the Committees and staff reviewed the policy again and now are recommending further modifications in the SBI's Manager Continuation Policy.

The Manager Continuation Policy is designed to assist the SBI in evaluating the performance of its stock and bond managers. To the best of staff's knowledge, no other pension fund, public or private, has attempted to create detailed written guidelines on this subject. As a result, there are no broadly accepted standards that the SBI can point to as a model for revising the existing policy.

Based on the concerns expressed by the Board and the IAC, staff proposed several modifications. A complete copy of the staff review and comments from the SBI's consultant, Richards & Tierney, are in **Attachment C**. After discussion, the Committees concurred with all suggested revisions. The proposal can be summarized as follows:

- **Qualitative Guidelines.** No change is recommended to the qualitative guidelines at this time. It is appropriate that specified events in a manager's organization or investment approach (e.g., change in ownership, loss of a key member of the investment team, significant account loss or gain, failure to create or maintain an appropriate benchmark) should place a firm "on probation" and dictate a prompt re-evaluation of the Board's relationship with the firm. The firm should be terminated if the issues are not resolved satisfactorily within six months.
- **Quantitative Guidelines.** Currently, the policy uses Value of Active Management (VAM) graphs to plot cumulative performance annualized performance, net of fees, relative to an appropriate benchmark and establish a "confidence interval." Cumulative performance that breaches the lower band of the confidence interval mandates termination. The recommendation would use a rolling five year, rather than cumulative, confidence interval. The lower band would be viewed as a "warning level" that indicates serious under performance over the most recent five years. Performance that breaches the lower band would trigger a comprehensive review of the manager during the following quarter, including a presentation to the Stock and Bond Manager Committee. In effect, the manager would be "re-interviewed" and the SBI would make an explicit decision to continue or terminate the firm.
- **Review Cycle.** Staff proposed several modifications to the manager review cycle. Quarterly VAM reports and Investment Commentaries will continue, but the cycle

of in-depth written reviews will be modified to handle the growing number of managers retained by the SBI.

The Committees believe that these changes will improve the policy. During discussion, several members stated that they believe that it is not possible to define a single numerical decision rule to signal the termination of a manager. Rather, they feel many inputs, both qualitative and quantitative, viewed over a variety of time frames are needed to make judgments about the ability of a manager going forward.

RECOMMENDATION:

The Committees recommend that the SBI adopt the proposed revisions to the Manager Continuation Policy described in *Attachment C*. Further, staff should be directed to revise the written position paper accordingly.

**ATTACHMENT A
TOTAL FUND OBJECTIVES**

CURRENT OBJECTIVES Basic Retirement Funds	PROPOSED OBJECTIVES Basic, Post or Combined (as noted)
<p><i>Provide Real Return</i></p> <p>Provide real returns that are 3-5 percentage points greater than the rate of inflation over moving 10 year periods.</p>	<p><i>Provide Real Return</i></p> <p>Use same objective for <i>Combined Funds</i>.</p>
<p><i>Exceed Median Fund</i></p> <p>Outperform the median fund from a universe of public and private funds with a balanced asset mix, excluding alternative investments, over moving 5 year periods.</p>	<p><i>Exceed Median Fund</i></p> <p>Modify for <i>Combined Funds</i> as follows: Outperform the median fund from a universe of public and private funds with a balanced asset mix over moving 5 year periods.</p>
<p><i>Exceed Composite Market Index</i></p> <p>Outperform a composite index weighted in a manner that reflects the long term asset allocation of the Basic Funds over moving 5 year periods.</p>	<p><i>Exceed Composite Market Index</i></p> <p><i>Basic Funds:</i> Outperform a composite index weighted in a manner that reflects the long term asset allocation of the Basic Funds over moving 5 year periods.</p> <p><i>Post Fund:</i> Outperform a composite index weighted in a manner that reflects the long term asset allocation of the Post Fund over moving 5 year periods.</p> <p><i>Combined Funds:</i> Outperform a composite index weighted in a manner that reflects the actual asset mix of the Combined Funds over moving 5 year periods.*</p>

* *The composite index for the Combined Funds will need to be changed each month to reflect the changes in market value in each of the funds. The SBI does not establish long term asset allocation targets for the Combined Funds.*

ATTACHMENT B
RETURN OBJECTIVES REPORT FORMAT
Period Ending xx/xx/xx

COMBINED FUNDS: \$xx.x Billion	Return	Compared to Objective
---------------------------------------	---------------	------------------------------

<i>Provide Real Return (10 yr.)</i>	x.x%*	x.x percentage points above/below target
--	--------------	---

Provide returns that are 3-5 percentage points greater than inflation over moving 10 year periods

<i>Exceed Median Fund (5 yr.)</i>	x.x%*	x x percentage points above/below target
--	--------------	---

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

<i>Exceed Composite Index (5 yr.)</i>	x.x%*	x.x percentage points above/below target
--	--------------	---

Outperform a composite index weighted in a manner that reflects the *actual asset mix* of the Combined Funds over moving 5 year periods

BASIC RETIREMENT FUNDS: \$x.x Billion	Return	Compared to Objective
--	---------------	------------------------------

<i>Exceed Composite Index (5 yr.)</i>	x.x%	x.x percentage points above/below target
--	-------------	---

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

POST RETIREMENT FUND: \$x.x Billion	Return	Compared to Objective
--	---------------	------------------------------

<i>Exceed Composite Index (5 yr.)</i>	x.x%**	x.x percentage points above/below target
--	---------------	---

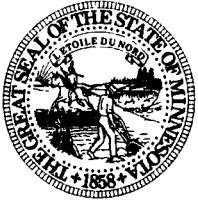
Outperform a composite index weighted in a manner that reflects the *long term asset allocation* of the Post Fund over moving 5 year periods

* Reflects performance of Basic Funds only through 6/30/93, Combined Funds thereafter.

** Since asset allocation transition was completed, 7/1/93

ATTACHMENT C

MINNESOTA
STATE
BOARD OF
INVESTMENT



Board Members:

Governor
Arne H. Carlson

State Auditor
Mark B. Dayton

State Treasurer
Michael A. McGrath

Secretary of State
Joan Anderson Growe

Attorney General
Hubert H. Humphrey III

Executive Director:

Howard J. Bicker

Suite 105, MEA Bldg.
55 Sherburne Avenue
St. Paul, MN 55155
(612)296-3328
FAX (612)296-9572

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Date: April 7, 1993
To: Members, Investment Advisory Council
From: Beth Lehman *Beth Lehman*
Re: **Potential Revisions to the Manager Continuation Policy**

As you know, the Asset Allocation and Stock and Bond Manager Committees of the IAC are meeting jointly:

April 15, 1993
2:00-4:30 p.m.
SBI Conference Room

One of the items on the agenda is a review of the SBI's Manager Continuation Policy. A copy of the policy was sent to you last week along with the agenda for that meeting.

We asked Richards & Tierney to comment on the current policy and suggest potential changes. A copy of their response is attached for your review.

Staff has also reviewed the policy and suggests that the revisions outlined below be discussed at the meeting on April 15. Members are encouraged to bring alternative recommendations to the meeting as well.

Background on the Manager Continuation Policy

The SBI has developed and adopted a comprehensive policy for evaluating the performance of its stock and bond managers. To the best of our knowledge, no other pension fund, public or private, has attempted to create detailed written guidelines on this subject. As a result, there are no broadly accepted standards that the SBI can point to as a model for revising the existing policy.

The decision framework in the Manager Continuation Policy (MCP) attempts to balance both qualitative and quantitative elements of manager evaluations. Staff believes that the basic structure of the MCP is sound. Any changes to the policy should reflect and enhance the goals articulated in the position paper:

- to provide a comprehensive and consistently applied analysis
- to foster a long-term attitude toward performance evaluation
- to communicate investment objectives between the SBI and its managers

Qualitative Guidelines

Staff recommends no change to the qualitative guidelines at this time. We continue to believe that the following events in a manager's organization or investment approach should place a firm "on probation" and dictate a prompt re-evaluation of the Board's relationship with the firm:

- change in the firm's ownership or important members of its management team
- change in the manager's investment style or philosophy
- inability to create or maintain an appropriate benchmark portfolio
- significant gain or loss of accounts over the previous year

Staff continues to believe that a firm should remain on probation for qualitative reasons for no longer than six months. The manager should be terminated if the issues are not resolved satisfactorily within that time.

Quantitative Guidelines

The MCP uses Value of Active Management (VAM) graphs to plot cumulative annualized performance, net of fees, relative to an appropriate benchmark and establish a "confidence interval." Currently, the following decision guidelines are in place:

- Cumulative performance that breaches the lower band of the confidence interval mandates termination.
- Performance that falls within the confidence interval but is below the benchmark return over the latest five years triggers an in-depth analysis of the firm by staff. The analysis results in a vote of "confidence" or "no confidence" in a manager's ability to add value to its benchmark in the future. The staff analysis is presented to the Stock and Bond Manager Committee and the Committee accepts or rejects the staff conclusion.

Concerns About the Current Quantitative Guidelines

The weakness in the first decision criteria is that it cannot rule out the possibility that a manager is terminated who in fact can add value in the future. The SBI's experience with Fred Alger, a stock manager, is a case in point. Alger's VAM was approaching the termination line when the SBI decided to terminate the firm in December 1988. Since that time, the firm has produced consistently positive VAM for its clients according to data maintained by Richards & Tierney.

The concern expressed by some Board and IAC members about the second decision guideline is that the focus on five year performance does not flag under performance soon enough. In addition, some members have been concerned that

the guideline does not mandate that a manager be terminated for performance that lags the benchmark over some specified period of time.

Staff continues to believe that strict numerical decision rules are inadvisable. Investment returns are quite variable even when measured against an appropriate benchmark.

The confidence interval approach attempts to take this variability or volatility into account. The bands are calculated so that there is an 80% probability that a manager's return will fall within upper or lower bands and a 20% probability that it will fall outside the bands (10% above, 10% below). Please refer to Appendix A in the MCP paper for more information on the calculation.

Typical confidence interval ranges for active managers are shown below. The more volatile the manager, the wider the range will be:

**Estimated Confidence Interval Ranges
for Active Managers**

Time Period	Domestic Stock	Domestic Bond	Int'l Stock
3 yr. annualized	± 3.0-5.0%	± 1.5-3.0%	± 6.0-8.0%
5 yr. annualized	± 2.0-4.0%	± 1.0-2.5%	± 5.0-7.0%

Source: Estimates based on SBI staff records of active manager returns.

Given this level of volatility, staff believes that it is not appropriate to consider terminating a manager unless performance lags a benchmark by substantial amounts over relatively short time periods. Returns that lag a benchmark by small increments over the short term are not a reliable indicator of the manager's ability to add value in the future.

Alternative Framework for Quantitative Guidelines

After examining the concerns expressed about current quantitative guidelines, staff suggest that the IAC consider the following alternative framework:

- Substitute a rolling five year confidence interval for the current cumulative VAM. The lower band would be viewed as a "warning level" that indicates serious under performance over the most recent five years.
- Performance that plots below the warning level would trigger a comprehensive review of the manger during the following quarter. Staff would prepare a written analysis that includes organizational issues, investment approach and performance analysis relative to the benchmark. The performance analysis should include cumulative performance of the SBI account with the manager as

well as the performance history that led the SBI to retain the firm. In addition, the manager would be required to make a presentation to the Stock and Bond Manager Committee of the IAC. In effect, the manager would be "re-interviewed."

- Based on the analysis and the manager's presentation, the Committee would then recommend to the SBI that the firm be continued or terminated.

This alternative attempts to address the concerns that have been raised about the current guidelines:

- It shifts the focus of the evaluation from cumulative performance to a five year time frame. Staff is concerned that this may foster a short-term attitude toward performance evaluation. However, this concern is mitigated somewhat by focusing on returns that fall outside, not within, the confidence interval.
- It highlights significant under performance rather than returns that lag a benchmark by as little as 0.1 percentage point. Given the inherent volatility of active manager returns, staff believes this change in focus is appropriate.
- It requires an explicit decision from the Stock and Bond Manager Committee to recommend that a manager be continued or terminated in the face of serious under performance over recent periods.

For your information, VAM graphs for the SBI's current active managers using five year rolling confidence intervals are attached.

Regular Reviews

The current MCP requires an "in-depth" written review of each active stock and bond manager every three years regardless of performance above or below the benchmark. Given the increasing number of managers retained by the SBI, this schedule would require 3-4 in-depth reviews each quarter in the future.

Staff believes that the following review schedule is more productive:

- Staff will continue to prepare the quarterly performance evaluation reports on each active and semi-passive manager. These one-page VAM reports appear in each Board folder and highlight performance relative to the qualitative and quantitative guidelines in the MCP.
- Staff will continue to prepare the quarterly Investment Commentaries on each active manager and semi-passive manager. These one-page write-ups also appear in each Board folder and highlight the manager's significant active bets relative to the manager's benchmark over the most recent quarter and year.

- Staff will prepare an annual review of all domestic stock manager benchmarks. This written analysis will be presented to the Stock and Bond Manager Committee and will focus on concerns about benchmark quality. (A similar analysis for domestic bond managers and international stock managers is not necessary at this time since they use market indices rather than customized benchmarks for evaluation purposes.)
- Staff will meet with each stock and bond manager annually, either at SBI offices or the manager's place of business. A one to two page write-up will be prepared after each meeting that summarizes the results of the meeting and highlights changes in the organization or shifts in investment approach. The write-ups will be reviewed by the Stock and Bond Manager Committee. It is anticipated that 6-10 manager meetings will take place each quarter. (Currently, the goal is to meet with each active manager twice each year, once at SBI offices and once at the manager's place of business. With more than 30 managers, this schedule is no longer feasible.)
- Staff will prepare an in-depth written review on a manager if performance is below the warning level over the most recent five year period or if a manager is placed on probation for qualitative reasons.

We look forward to discussing these alternatives with you at the meeting on April 15. In the meantime, please contact me if you have any questions.

Enclosures: Rolling five year VAM graphs
Richards & Tierney comments on MCP

cc: Board Members
Board Member Designees
Richards & Tierney

Richards & Tierney, Inc.
Specialized Investment Services
111 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604
(312) 461-1100
FAX (312) 461-0001

March 24, 1993

Ms. Beth Lehman
Assistant Executive Director
Minnesota State Board of Investment
55 Sherburne Avenue, Room 105
St. Paul, Minnesota 55155

**Re: Minnesota State Board of Investment
Manager Continuation Policy (MCP)**

Dear Beth:

In response to your request for comments concerning the Minnesota State Board of Investment's Manager Continuation Policy (MCP), R&T would like to make several points.

1. The current MCP is a well-conceived policy tool. It is comprehensive in its scope. It attempts to appropriately balance subjective interpretations of manager skill with quantitative data.

We work with many large, highly knowledgeable plan sponsors. To our knowledge, none of them has developed a manager continuation policy approaching the sophistication of SBI's. That fact alone highlights the inherent difficulty of determining when confidence in a manager is no longer warranted. Virtually all plan sponsors follow ad hoc, undocumented procedures when evaluating their current managers.

We mention this because as you consider changes to the current MCP, we believe that you should be seeking enhancements rather than wholesale changes. The current MCP should be left largely intact.

2. The qualitative criteria of the MCP is straightforward and grounded in common sense. We would make one addition. We suggest that at the semi-annual managers meetings, the managers be required to speak directly to their active bets during the previous six months -- what were those bets, how did they turn out and why? Further, what are their current bets and why do they expect them to work well? Whether managers can clearly articulate their strategies and provide an attribution of their results should be a specific qualitative evaluation criterion.

3. On the quantitative side, we propose one addition. The current quantitative guidelines call for evaluating managers relative to their benchmarks over the entire time of their retention by the SBI. There has arisen some concern about managers who might be experiencing very poor recent performance, but over the entire period are performing near their benchmarks.

One solution might be to examine manager performance over moving 36 or 60 month windows. Rolling confidence bands could be created. Managers violating those bands on the downside would then be subject to review.

As always, we recommend against a policy of immediately terminating a manager due solely to poor performance. Such a rigid policy may lock in losses at precisely the wrong time. Extremely poor recent performance, however, should trigger an extensive review in which termination is a strong possibility.

4. We believe that the biggest problem with the current MCP is not the various guidelines for identifying inferior or superior performance. Rather there exists no formal structure for making a decision once qualitative or quantitative information has been received that call into question a manager's investment management capabilities.

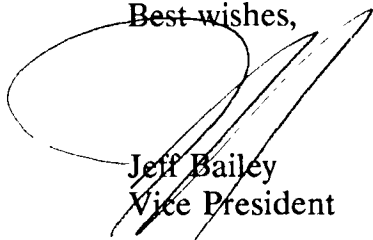
In such a situation, we suggest that the MCP incorporate a "zero-based budgeting" approach to reviewing the manager. That is, the same process that is currently applied to hiring new managers would be used to review an existing manager whose abilities are in doubt. A SBI-designated committee, in effect, would be asked to consider hiring the manager anew. The same types of materials, such as investment process descriptions and past performance (not just the SBI's experience) would be collected. The committee would be convened to meet with the manager. After that meeting the committee would be asked to vote on whether the manager should be "hired" and the committee's recommendation would be passed on to the SBI.

The advantage of this approach is that it uses an existing decision-making framework, which the SBI, the IAC and staff have found workable. If the committee format can make sound decisions regarding new managers, can it not make equally sound decisions regarding existing managers?

Ms. Beth Lehman
Board Minnesota State Board of Investment
Manager Continuation Policy (MCP)
Page 3

I hope these suggestions are of help. We look forward to discussing these issues with the SBI, the IAC, and staff in the near future. In the meantime, please call if you have any questions.

Best wishes,

A handwritten signature in black ink, appearing to read "Jeff Bailey", written over a large, light-colored oval shape.

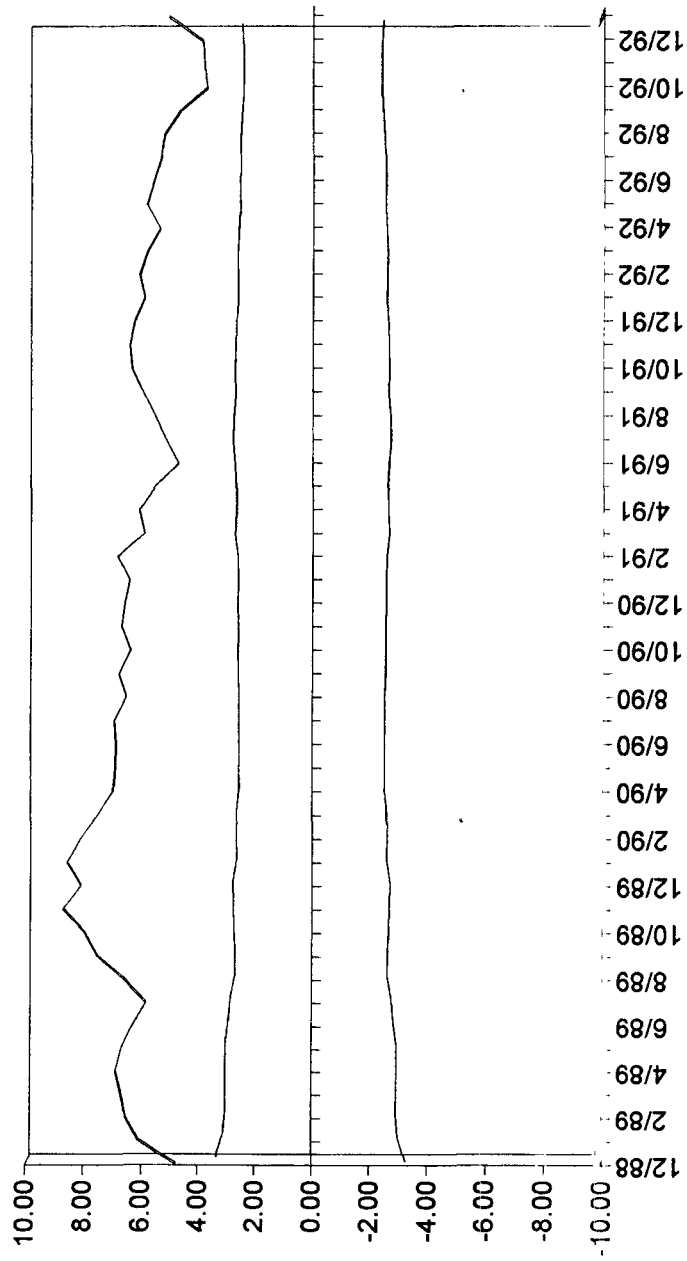
Jeff Bailey
Vice President

JVB/cj
MSBILEMN.JVB

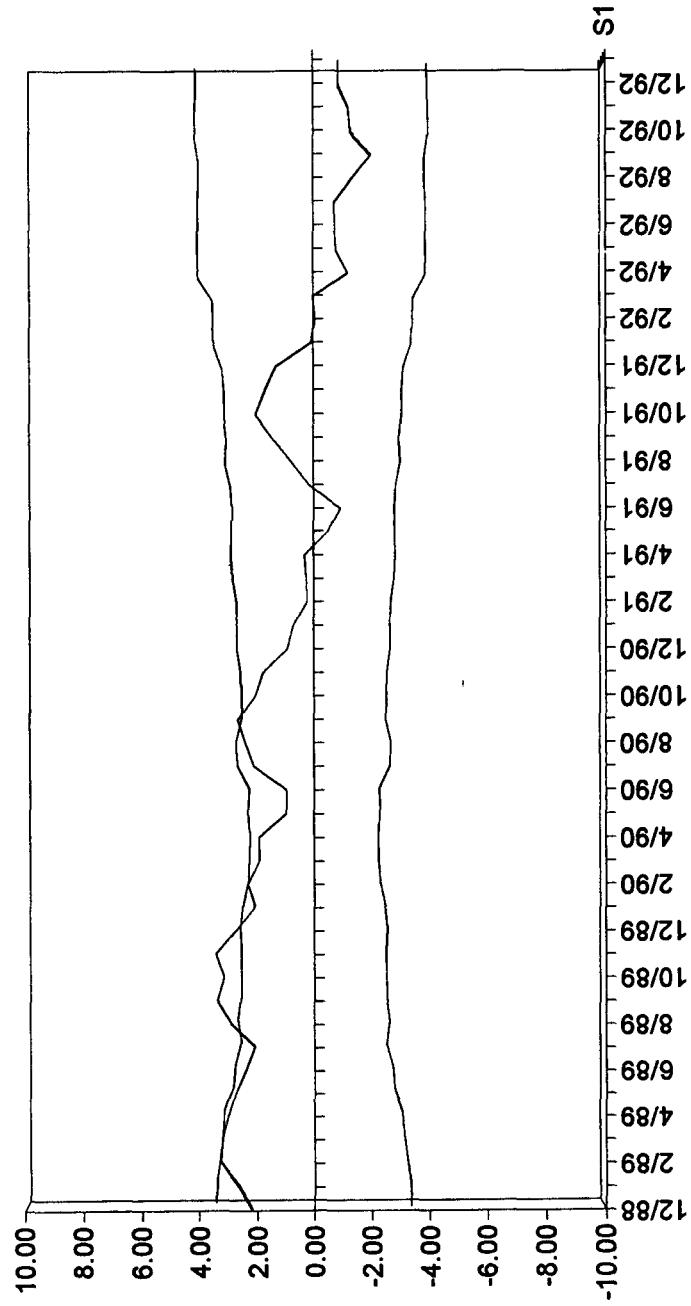
**FIVE YEAR ROLLING VAM'S
Current Managers**

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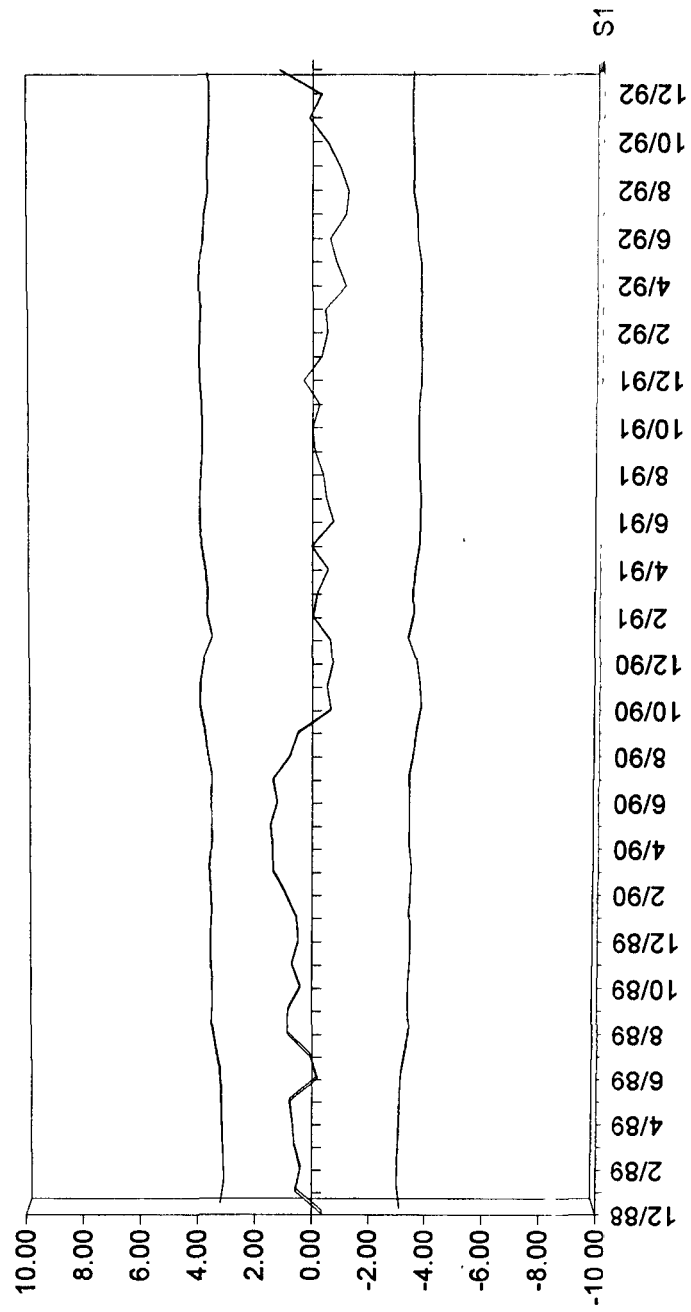
Alliance -- 5 year rolling



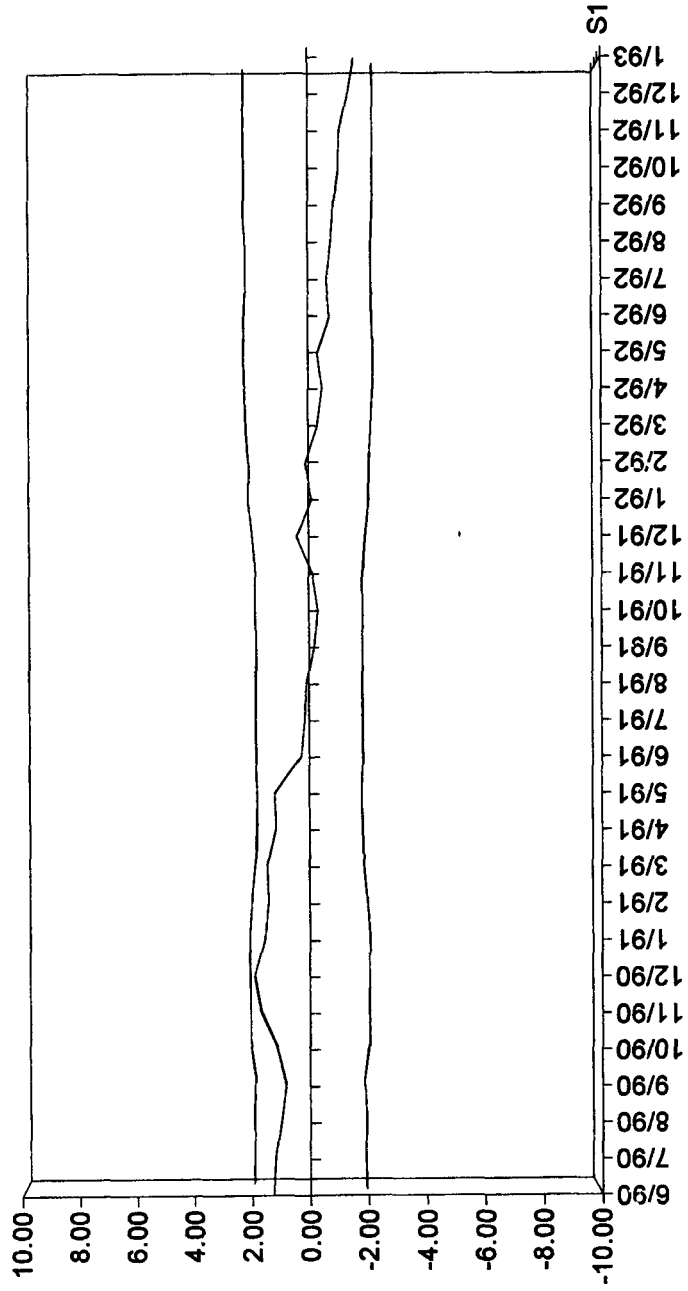
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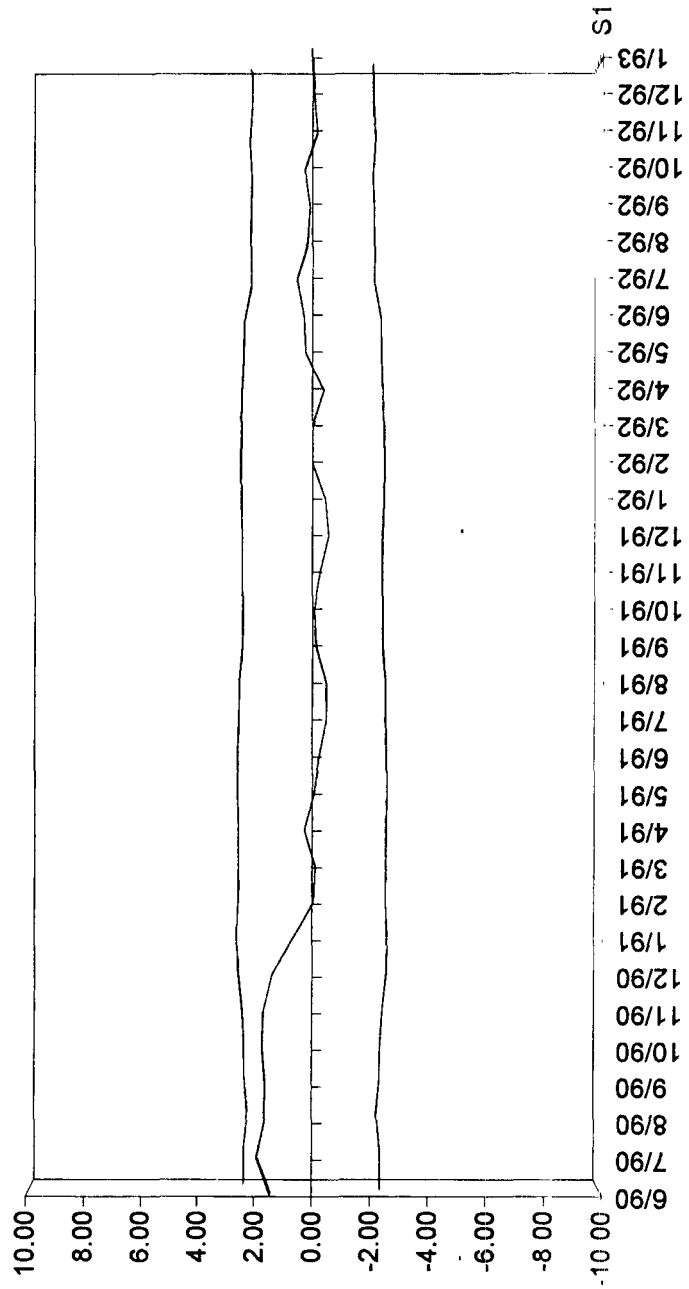
IDS -- 5 Year Rolling



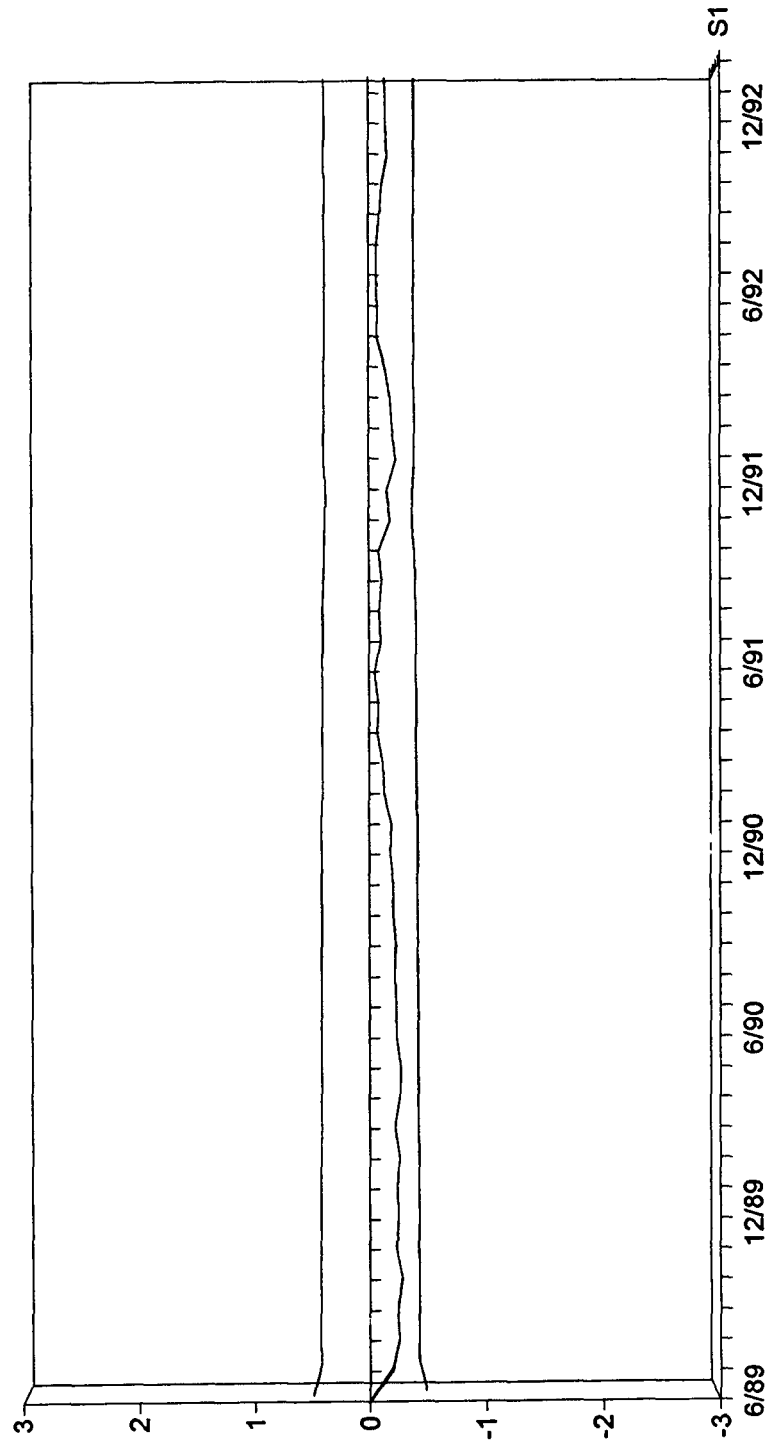
Lieber -- 5 year rolling



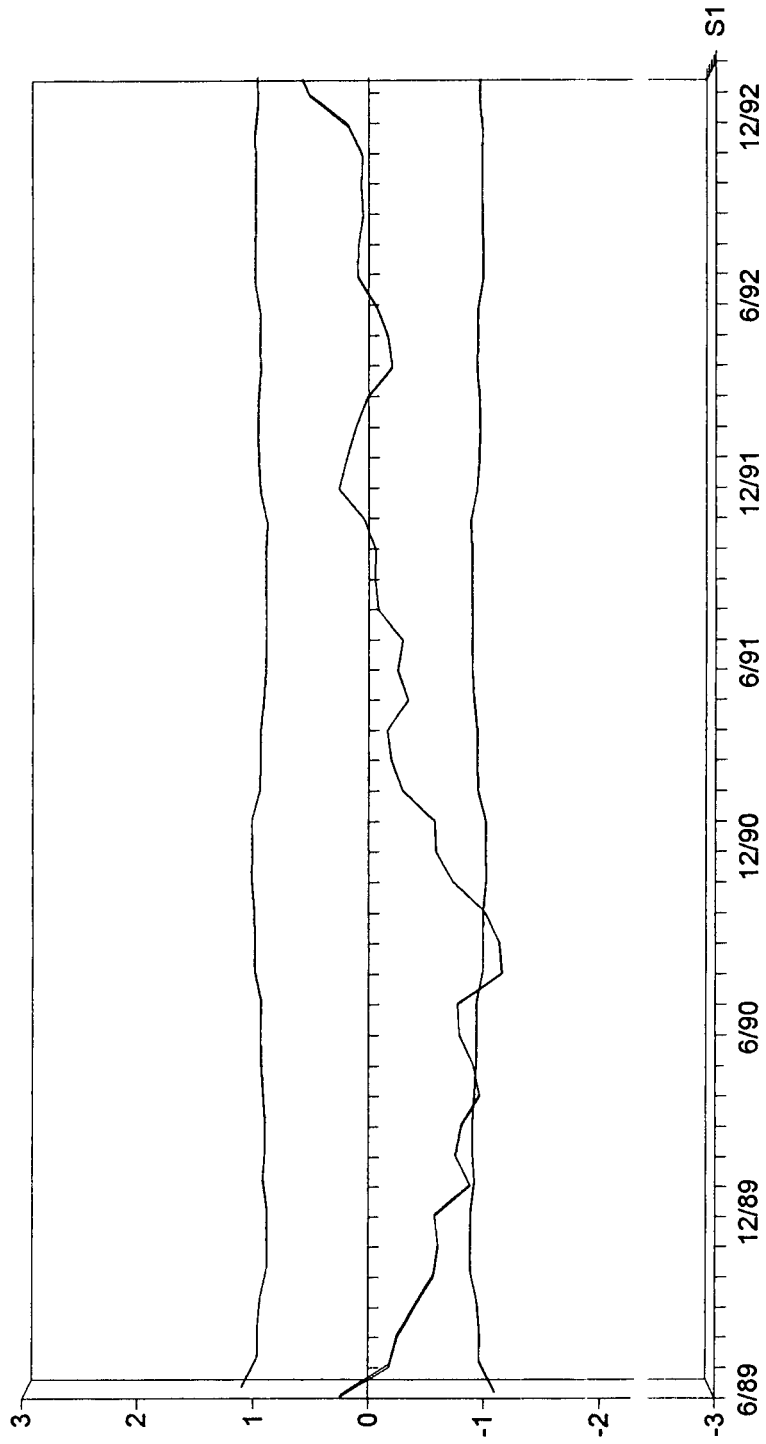
Waddell & Reed -- 5 year rolling



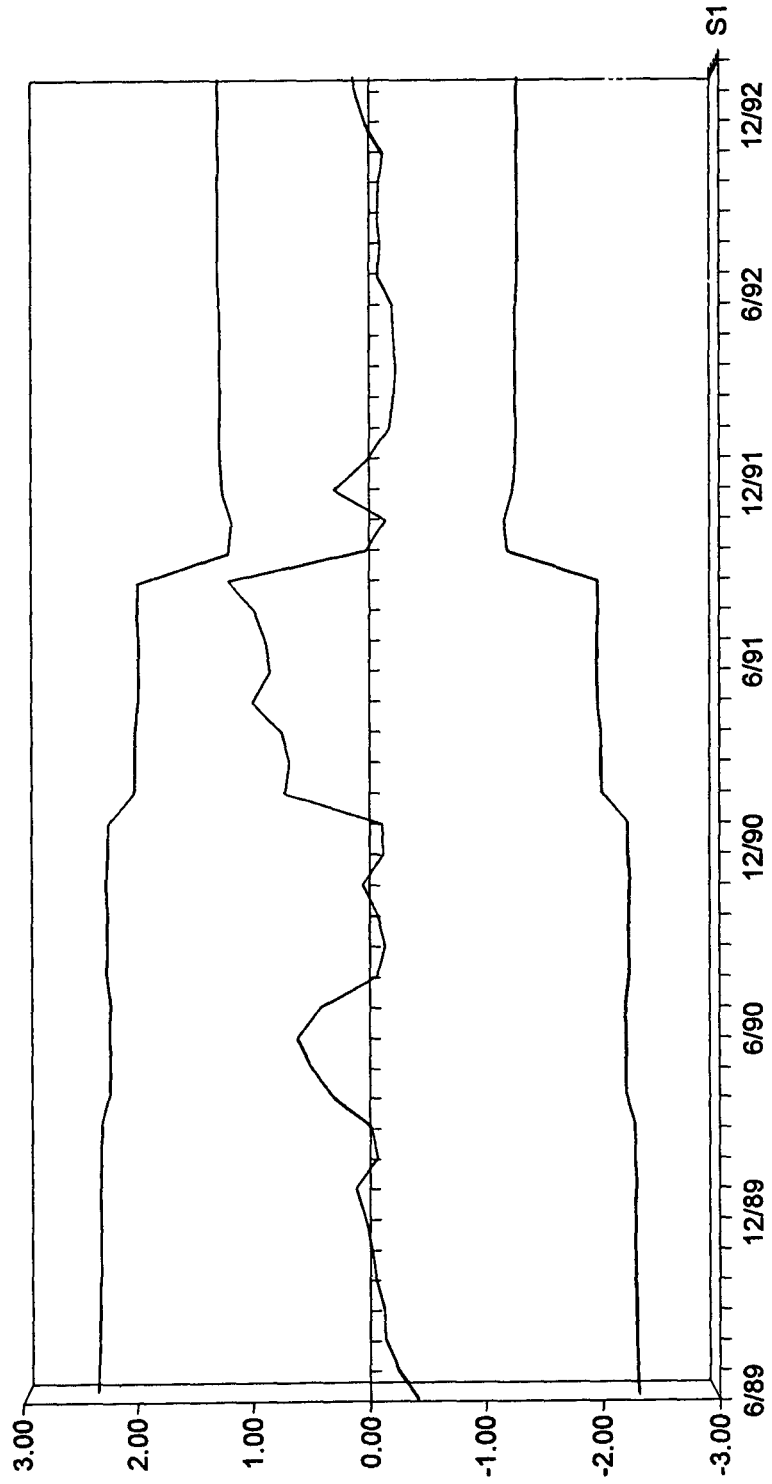
ARK 5 YR ROLLING



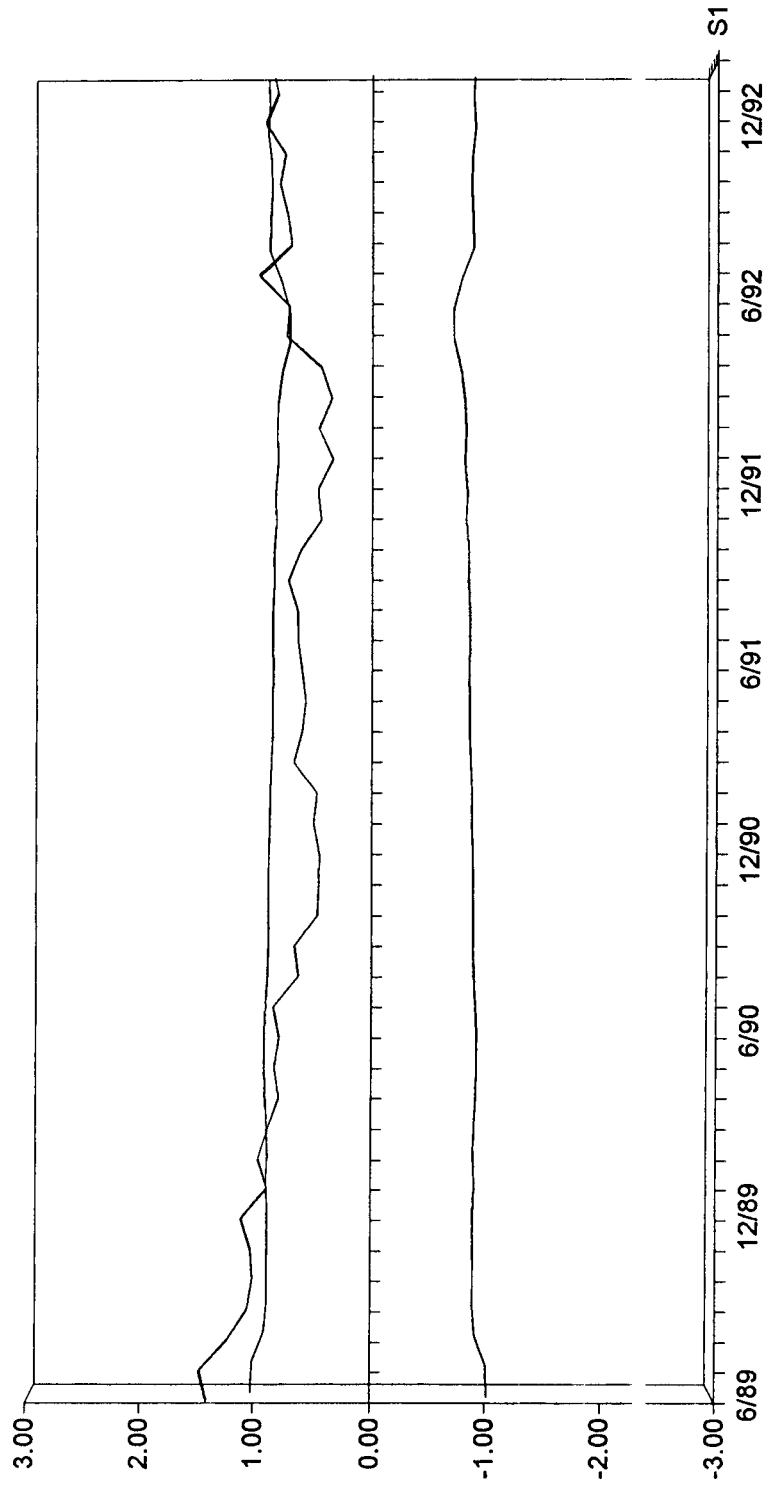
IAI 5 YR ROLLING



MILLER 5 YR ROLLING



WESTERN 5 YR ROLLING



Tab G

COMMITTEE REPORT

DATE: May 25, 1993

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

FROM: **Stock and Bond Manager Committee**

The Stock and Bond Manager Committee met on May 21, 1993 to review the following agenda:

- Review of manager performance for the period ending March 31, 1993
- In-depth review of Forstmann Leff (active stock manager)
- Annual review of BEA Associates (enhanced cash manager)
- Annual review of Voyageur Asset Management (Assigned Risk Plan manager)
- Recommendation to remove Fidelity (semi-passive bond manager) from probation status
- Annual review of investment guidelines for stock and bond manager contracts
- Recommendations to renew manager contracts expiring on June 30, 1993
- Approval of manager allocations for July 1, 1993
- Approval of active international stock manager interview candidates
- Approval of expanded investment guidelines for short term cash accounts

The last six items require action by the SBI.

INFORMATION ITEMS:

1) Review of Manager Performance

- **Stock Managers**

For the quarter ended March 31, 1993, the Basic Funds' domestic equity program outperformed its aggregate benchmark and the Wilshire 5000 Adjusted (Equity Program 4.4%; Aggregate Benchmark 3.9%; vs. Wilshire 5000 Adjusted 4.3%). The current equity managers in the Basic Funds matched their aggregate benchmark and underperformed versus the Wilshire 5000 Adjusted for the latest year (Equity Managers 15.1%; Aggregate Benchmark 15.1%; vs. Wilshire 5000 Adjusted 15.6%). For the latest five year period, the current equity managers outperformed their aggregate benchmark and the Wilshire 5000 Adjusted.

- **Bond Managers**

The Basic Funds' bond portfolio returned 4.6% vs 4.2 % for its benchmark, the Salomon Broad Investment Grade Index (BIG). The portfolio performed well primarily because the duration was longer than the BIG as interest rates fell. The portfolio also outperformed the BIG for the year(14.2% vs. 13.4%) and for the last five years (11.2% vs.11.0%).

The performance evaluation reports and investment commentaries for stock managers start on **page 113**. The reports and commentaries for bond managers start on **page 133**.

2) In-Depth Review of Forstmann-Leff Associates

The SBI's existing Manager Continuation Policy requires that an in-depth review be conducted every three years for each active manager. Due to this policy and concerns regarding recent performance, staff prepared an in-depth review of Forstmann-Leff Associates (FLA). A copy of staff's full report is begins on **page 9**. A summary of staff's findings follows:

- **Quantitative**

FLA has generated value added of 1.0% annualized since the inception of the account. Stock selection has provided the majority of the value added relative to FLA's benchmark.

FLA can add value over time, but to capture that positive value added, shorter periods of underperformance will have to be tolerated. FLA's investment process takes aggressive bets that should generate significant positive value added over time. However, sometimes their aggressive bets will incur a substantial short term negative return.

- **Qualitative**

FLA adheres to and consistently implements its investment process. FLA has a strong and viable organization. The assets and number of accounts have been stable over the last seven years. FLA also has a benchmark which provides an appropriate baseline for evaluation purposes.

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

Staff concludes that Forstmann-Leff Associates should continue to be retained as an equity manager for the SBI. Upon review, the Committee concurs with the staff's conclusions regarding Forstmann-Leff.

3) Annual Review of BEA Associates

BEA has managed a cash enhancement portfolio for the Post Retirement Fund since April 1987. Its goal is to outperform short term cash returns through the use of low risk, fully hedged futures and options strategies. To date, BEA has provided an annualized return of 8.21% vs. 6.82% for its benchmark.

Due to the new asset allocation and management structure strategy adopted for the Post Fund, staff recommends that BEA's contract for enhanced cash management be allowed to expire on June 30, 1993. However, staff recommends that BEA be allowed to use the same enhancement strategies in the bond portfolio they have been hired to manage starting July 1, 1993. The Committee concurred with this recommendation.

Staff's complete review begins on **page 29**.

4) Review of Voyager Asset Management

Voyager manages the portfolio for the Assigned Risk Plan (ARP). The ARP provides workers' compensation and employers' liability coverage to Minnesota employers unable to obtain insurance in the private market. The main objective of the fund is to provide cash for the fund liabilities on the required dates. Staff worked with Voyager to establish an asset allocation and benchmarks for both the bond and stock portfolios that would allow the fund to meet this objective. Currently, amounts representing liabilities less than ten years (85%) are invested in bonds while the rest is invested in equities.

When compared to the aggregate benchmark, Voyager has added value (0.59% annualized) to the portfolio. Voyager primarily added value because the bond portfolio duration was slightly longer than the bond benchmark as interest rates declined.

Staff recommends that the Voyager Asset Management continue to manage the ARP portfolio. The Committee concurs. Staff's complete review begins on **page 35**.

ACTION ITEMS:

1) Recommendation Concerning Fidelity Management Trust

At the March its 1993 meeting, the SBI placed Fidelity Management Trust, one of the semi-passive bond managers, on probation. Such action is mandated under the SBI's Manager Continuation Policy when a key member of a firm's investment team leaves an organization. In this case, the SBI's designated portfolio manager, Sharmin Mossavar Rhamini, left Fidelity to join Goldman Sachs.

The Committee and staff met with several members of the portfolio management team from Fidelity, including the new head of the fixed income group, Tom Steffanci. Mr. Steffanci has been designated as the portfolio manager for the SBI account. Based on this meeting, the Committee and staff believe that the personnel changes should not adversely affect the management of the SBI portfolio and therefore are recommending that the firm be removed from probationary status.

RECOMMENDATION:

The Committee recommends that the SBI remove Fidelity Management Trust from probation status.

2) Annual Review of Manager Contract Guidelines

The Committee completed the annual review of the external stock and bond manager guidelines. These guidelines govern the investment actions of the managers and are part of the contract between the Board and the manager.

Staff recommended several technical changes to the **domestic active stock manager** guidelines: 1) removal of references to liquor and tobacco restrictions; 2) removal of authority to hold bonds or ADRs; 3) authorization to hold no more than 5% of the portfolio in convertible bonds; and 4) modification of requirements concerning commodity futures and options trading agreements.

Staff recommended several technical changes to the **domestic bond manager** guidelines: 1) creation of separate guidelines for BEA Associates to reflect special investment authority for market-neutral strategies using futures and options; 2) modification of the corporate credit guidelines for the semi-passive bond managers, combining AAA with AA credits and A with BBB credits; and 3) modification of requirements concerning commodity futures and options trading agreements.

Staff recommended new contract guidelines for the active/passive and fully active **international stock managers** which are patterned after the guidelines for domestic managers.

Copies of all the guidelines begin on page 43. After discussion, the Committee concurred with the guidelines as presented.

RECOMMENDATION:

The Committee recommends that the SBI adopt the contract guidelines on pages 43-66.

3) Recommendation to Renew Manager Contracts Expiring June 30, 1993

Several contracts with stock and bond managers expire on June 30, 1993. The Committee recommends the following action with respect to each.

RECOMMENDATIONS:

The Committee recommends that the SBI authorize the Executive Director, with assistance from SBI's legal counsel, to negotiate and execute three year contract extensions with the following firms subject to the standard 30 day termination provision:

• *Active Stock Managers*

**Alliance Capital Management
Forstmann-Leff Associates
Franklin Portfolio Associates Trust
GeoCapital
IDS Advisory
Independence Investment Associates, Inc.
Lieber & Company
Lynch & Mayer, Inc.
Waddell & Reed Asset Management**

• *Active and Semi-Passive Bond Managers*

**IAI
Miller Anderson & Sherrerd
Western Asset Management
Fidelity Management Trust
Lincoln Capital**

• *Assigned Risk Plan*

Voyageur Asset Management

The Committee recommends that the following contracts be allowed to expire on June 30, 1993:

- **Ark Management (active bond manager)**
- **BEA Associates (enhanced cash management)**

4) Review of Manager Allocations for July 1, 1993

The Committee reviewed the manager allocations ranges for July 1, 1993 shown on pages 67-68. These allocations are necessary to absorb the assets of the Post Retirement Fund and will establish the amounts allocated to the SBI's current and new domestic stock and bond managers in the Basic and Post Funds. These allocations are very similar to the ranges discussed at the March 1993 meetings. It should be noted that the assets allocated to semi-passive bond management will be equally divided between the three managers retained by the SBI.

RECOMMENDATION:

The Committee recommends that the SBI adopt the allocation ranges for July 1, 1993 shown on pages 67-68.

5) Approval of Active International Stock Manager Interview Candidates

The Committee discussed interview candidates for the international active manager search to be held next quarter and recommended that ten firms be interviewed. The Committee anticipates that approximately three firms will be retained to manage fully active portfolios (active country/active stock) and will receive approximately \$100 million each. This would be the last implementation phase of the SBI's international stock program.

The candidates were chosen from a list of 49 which firms were recommended by SBI members, IAC members, SBI consultants and SBI staff. Of these recommended firms, a small number were eliminated from consideration because the firm was effectively closed to new business or had a regional specialty rather than a broad EAFE mandate. In addition, the two firms hired by the SBI as active/passive managers (Baring and Brinson) were not considered.

Staff met with each remaining firm in SBI offices during February, March and April. In addition, staff made on-site visits to nineteen firms located in the United States or the United Kingdom in order to better understand the firms' investment processes and organizations.

After consultation with the SBI's international consultant (PCA/InterSec), staff suggest the firms shown below for finalist status. The two current active/passive managers (Baring and Brinson) have adequately covered the "primarily top down" category so additional candidates in this area are not suggested at this time.

The suggested finalists meet the following broad criteria:

- at least five years of history attributable to key members of the current investment team
- at least \$300 million under management (i.e. a new \$100 million portfolio would represent no more than 25% of their business)
- significant value added to EAFE over the last three to five years (generally greater than 6% annualized).

The firms suggested by staff as interview candidates are:

Primarily Bottom Up	Orientation	Location
Lazard Freres Asset Management	value	New York
Templeton Asset Management	value	Florida
Walter Scott & Partners	growth	Edinburgh
Combination, but more Top Down		
Hill Samuel/Investment Advisers	value	London
Rowe-Price Fleming	growth	London
Scudder, Stevens & Clark	theme/value	New York
Combination, but more Bottom Up		
Baillie Gifford	quality/value	Edinburgh
Bank of Ireland Asset Management	theme/value	Dublin
Marathon Asset Management	value	London
JP Morgan Investment Management	value	London

The Committee reviewed the qualitative and quantitative data on the firms and concurred that the above ten (10) firms be approved as interview candidates. Descriptions and return histories of the firms are found starting on page 69.

RECOMMENDATION:

The Committee recommends that the SBI authorize a Search Committee to interview the above firms and make recommendations to the SBI at its September 1993 meeting.

6) Proposed Modifications to Short Term Guidelines

Staff has been exploring alternatives to enhance short term cash yields and further diversify the short term portfolio. Two alternatives that will accomplish this without incurring additional credit risk are maturity extension and investment in U.S. dollar-denominated international debt. A copy of the staff's complete proposal begins on **page 109**.

After discussion, the Committee endorsed the proposal. Originally, staff did not propose a limit on the maturity extension. The Committee suggested that the extension be limited to securities with maturities of less than 10 years. Staff concurred with this request and the change is reflected in the attachment and recommendation below.

RECOMMENDATION:

The Committee recommends that the SBI adopt the following revisions to its existing investment guidelines for short term cash portfolios:

- **A maximum of 5% of an internal or external short term debt portfolio may be invested in securities with maturities between three and ten years, subject to existing guidelines on credit, quality, and issue concentration.**
- **A maximum of 20% of an internal or external short term debt portfolio may be invested in U.S. dollar-denominated international securities, subject to existing guidelines on credit, quality, and issue concentration for comparable domestic securities. These securities include: debt issued by foreign banks, including bankers' acceptances; commercial paper issued by foreign corporations; supra-national agency debt; and sovereign and sovereign-backed debt.**

In December 1992, the SBI adopted country guidelines recommended by the International Investing Guidelines Task Force. These guidelines were developed at the time the SBI began implementing its international equity program. Consistent with the SBI's past action on investment restrictions, the country guidelines should apply to active stock managers but not to other asset classes.

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 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 to form his own investment firm and Joel Leff, one of the founding partners, took over management of the SBI portfolio. Mr. Leff has been the designated portfolio manager since that time.

C. Assets Under Management

As of December 31, 1992, FLA had \$3.5 billion under management in 90 separate accounts. The SBI's account market value was \$330 million. Table I shows the firm's historical asset growth since the inception of the SBI account.

Table I
Forstmann-Leff
Historical Equity Assets
(\$ in millions)

	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
Dec. 1990	77	3,302
Dec. 1991	81	3,482
Dec. 1992	90	3,478

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 and formed their own investment firms, taking some of FLA's clients with them. In the last few years, FLA has added some accounts and assets at a rate staff finds acceptable.

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 six 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. However, staffs experience with other investment firms has shown that there can be a relationship between high turnover and poor performance. Therefore, 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. In addition, staff monitors this concern to make sure that future performance of the SBI account is not affected.

II. INVESTMENT APPROACH

A. Investment Philosophy

FLA adds value through a three step approach. First, FLA wants to preserve capital through asset allocation. FLA wants to participate in up markets and avoid negative returns in down markets. Second, FLA adds value within its equity allocation by making aggressive sector weighting. Third, FLA adds value within its sector weightings by making aggressive stock selection bets.

Asset Allocation

FLA uses a committee approach in making the asset allocation decision. The Investment Committee, consisting of all the managing partners, portfolio managers, and analysts, meets 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 and the S&P 500.

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

- Consumer sentiment
- Percentage of total equity held by institutional investors
- 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% in either 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 process starts by looking at long term market trends and then analyzing the shorter term cyclical cycles occurring in the economy. Both committees use the same information generated in analyzing the asset allocation decision and supplement 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 cannot deviate by more than 5% from the assigned weightings in a client's 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:

- Analysis of the company's business relative to the overall economy.
- Total expected return for the next year.
- Discounted cash flow 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. A majority of the equity investments consist of stocks that the Investment Policy Committee considers to have the greatest potential for above average returns. FLA does not set a specific

percentage that the above stocks must meet. However, the Investment Policy Committee continually monitors all client portfolios to make sure that none of them deviate significantly below the rest. 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: Exhibit 1 shows that FLA's portfolios relative to the market (S&P 500) have a consistent bias towards a higher exposure to beta, growth, trading, and market and earnings variance and lower exposure to yield and size. The wide range between FLA's maximum and minimum positions relative to the market indicate a definite willingness by FLA to make significant bets over time.

Sector Exposure Highlights: Exhibit 2 shows that FLA's portfolios relative to the market (S&P 500) have an overweighing in basic materials, financial, and consumer non-durables and an under weighting in capital goods and utility stocks. The maximum and minimum positions relative to the market 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 fourth quarter of 1987 FLA used a benchmark constructed by SBI staff. The original benchmark construction process combined two separate portfolios. The first provided a broadly diversified portfolio to reflect FLA's willingness to hold stocks in any industry. The second reflected FLA's bias toward higher growth oriented stocks. The stock segment of the benchmark was weighted 60% in the broad portfolio and 40% in the growth portfolio. The benchmark also included a 30% cash position.

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 in October 1987. 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 (South Africa and American Home Products) are eliminated.

The assigned weighting scheme for the FLA benchmark accomplishes three primary objectives:

- Allocate weights based on the market capitalization in a manner consistent with FLA's investment approach.
- Achieve a target benchmark equity-only beta of 1.18
- Achieve an approximate S&P 500 representation for each S&P 500 security held in the benchmark.

Initially, the weighting structure assigns 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 \$100 million and \$10 billion receive a weight from 1 to 100 in proportion to their market capitalization. Following the initial weighting computation, individual stocks are adjusted to shift the benchmark beta towards the 1.18 target and to achieve a more S&P 500 like weighting for the S&P 500 stocks in the benchmark, without significantly affecting the weights produced by the initial weighting scheme. Lastly the 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.

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 close similarity to the average (mean) of FLA's past portfolios. In addition, the benchmark more closely resembles the actual portfolios, over time, than the market (S&P 500).

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 sector. However, the benchmark did track the actual portfolio better than the market (S&P 500). One of the primary reasons for the difference between the average portfolio sector exposure and the average benchmark sector exposure is that the economy, since the inception of the account, has gone through no more than one full cycle.

Given FLA's willingness to take large bets, the time frame analyzed does not provide a long enough period to properly evaluate the benchmark on a risk factor and sector weight basis. It would be necessary to have data covering at least two market cycles to properly evaluate risk factor and sector weights in the benchmark.

Benchmark Coverage, Active Positions, and Turnover

FLA's benchmark coverage, turnover and active position statistics are as follows:

Table II
Forstmann-Leff
Benchmark Statistics
Coverage, Turnover, and Active Positions

1/88-12/92 Annual Semi-Annual Data	Benchmark Coverage	Actual Portfolio Weights Greater Than Benchmark Weights	Semi- Benchmark Turnover
Average	88.3%	99.6%	24.1%
Minimum	76.4	97.7	18.6
Maximum	97.3	100.00	36.3

Benchmark coverage measures the percentage of securities held in the actual portfolio which also are contained in the benchmark portfolio. If a benchmark truly captures the securities on which the manager has an opinion, it will have a high coverage ratio. Coverage ratios vary according to 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%. As seen in Table II, Forstmann-Leff's average benchmark coverage ratio is 88.3% since the beginning of 1988, which is well within that range

An **active position** is the difference between the actual portfolio weight of a security less the corresponding benchmark weight of the same security. A good benchmark will generate positive active positions with very rare exceptions. The weighting of each holding in the active portfolio should exceed the corresponding weights assigned to the same securities in the benchmark because if a manager finds a particular stock attractive, he will hold more than the benchmark position. Conversely, if a manager finds a security unattractive, he will not hold the security at all. As seen in the above table, the percentage of positions in FLA's portfolio which are positive is nearly 100%

Benchmark turnover measures the proportion of the benchmark's market value allocated to purchases and reinvestment of income during a periodic rebalancing. A valid and investable benchmark should experience reasonable levels of turnover. Semi-annual turnover in the 30-40% range is consistent with a passive investment in the benchmark. The FLA benchmark incurs a reasonable semi-annual turnover of 24.1%.

The turnover, coverage, and active positions data on FLA are well within the acceptable guidelines for benchmarks, indicating that the FLA benchmark represents a valid and investable benchmark.

III. PERFORMANCE ANALYSIS

A. Benchmark Explanatory Power

Active risk provides another useful measure to determine the explanatory power of a customized benchmark. It is the variability (standard deviation) of the manager's value of active management or VAM (active portfolio return less benchmark return). Since a customized benchmark represents a manager's investment style, a good benchmark should produce lower active risk than using a market index as the benchmark, all else equal. This indicates that the benchmark more effectively screens out random noise associated with factors unrelated to a manager's investment style. To indicate the amount of return the manager generates relative to the risk they take, an information ratio has been calculated. An IR is calculated by dividing the VAM by the active risk (standard deviation of VAM). In general, the higher the information ratio the shorter the time frame that is needed to determine whether the manager can or cannot add value at a statistically significant level. Table III summarizes the active risk analysis of FLA's actual returns relative to their benchmark and the Wilshire 5000.

Table III
Forstmann-Leff
Benchmark Active Risk

For the Time Period	FLA Actual	Actual
10/1/87 to 12/31/92	vs.	vs.
	FLA Benchmark	W 5000
Cumulative Annualized VAM	-1.34	-1.67
Annualized Standard Deviation of VAM	5.8	7.3
Information Ratio	-0.23	-0.2
Information Ration T-Statistic	-0.5	-0.5

As expected, the FLA benchmark reduces the VAM standard deviation relative to using the Wilshire 5000 as a benchmark (5.8 vs. 7.3). 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 (-0.50). This indicates that the analysis cannot confirm at a reasonable confidence level whether or not the manager can add value relative to its benchmark. More observations, achieved through the passage of time, will be necessary to provide this confirmation. However, the lower active risk relative to the Wilshire 5000 does indicate that FLA's benchmark represents a more appropriate benchmark than the broad market.

The explanatory power of the manager's benchmark can also be evaluated by looking at the correlation between the manager's actual portfolio returns versus those of the market (EXM), 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 IV displays FLA's correlation analysis.

Table IV
Forstmann-Leff Benchmark
Residual Correlation Matrix

For the Time Period		EXM	MFT	VAM
10/1/87 to 12/31/92				
Portfolio vs. Market (EXM)		1.00		
Benchmark vs. Market (MFT)		0.68	1.00	
Portfolio vs. Benchmark (VAM)		0.71	-0.01	1.00

The FLA benchmark exhibits high positive correlation between EXM and MFT (.70). A good benchmark will have an EXM/MFT correlation greater than 0.60. Also the correlation between MFT and VAM is very close to zero (-0.01). This analysis shows that the FLA benchmark represents a valid and investable benchmark and 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. Portfolio Performance Attribution

The following conclusions can be made regarding FLA's performance:

1. FLA's benchmark provides a better basis from which to evaluate performance than does a broad market index. Therefore, conclusions drawn from analysis using FLA's benchmark are more reliable than those based upon a comparison to a broad market index.
2. As shown in Exhibit 4, FLA has generated a positive value added of 0.89% annualized since 1986. Also the VAM graph in Exhibit 6 shows that FLA has produced a positive value added of 1.0% annualized since January of 1984.
3. Exhibit 4 shows that since the beginning of 1986 FLA has added value through their market timing (0.35% annualized), and stock selection (2.04% annualized). Performance attributed to sector bets (-0.37% annualized) and trading and other (-1.10% annualized) detracted from FLA's total positive value added of 0.89% annualized.

FLA's performance attribution for FLA is calculated on a monthly basis. The attribution analysis is broken down into four areas: 1) market timing; 2) sector allocation; 3) stock selection; and 4) trading and other.

Market Timing

Market timing measures the contribution to performance generated by the allocation of portfolio assets among various asset classes (e.g. stocks, bonds, and cash). Exhibit 4 shows that since 1986 FLA produced a value added of 0.35% annualized.

Exhibit 3 shows that FLA has had positive bets in equities during 1986 and 1990 through 1992. In general the market has recorded reasonably strong positive returns during this time frame. This explains why FLA's asset allocation decisions did well during 1986 and 1991 and poorly in 1988 and 1989. In 1987 their asset allocation decisions generated positive value added because they were overweighted early in the year and underweighted when the market crashed in October of 1987.

Sector Allocation

Sector allocation measures the contributions to performance of the allocation of portfolio assets among various sectors relative to the benchmark. Exhibit 4 shows that since January 1987, sector allocation contributed negative value

added of 0.37% annualized relative to FLA's benchmark. Broken down by calendar year, FLA generated a positive annualized return through 1989. However, the last three years have been negative producing an annualized negative return for the total time frame. Exhibit 5 shows that the major contributors to the negative performance were the energy and technology sectors while only the financial sector produced a significant positive excess return.

Stock Selection

Stock selection measures the contribution to performance of the allocation of assets to specific securities held in the portfolio relative to the benchmark. Exhibit 4 shows that stock selection provided the greatest value added among the four sources of return, contributing 2.04% annualized since January 1986. Exhibit 5 provides more detail by breaking down the stock selection by sector. FLA significantly added value in the consumer non-durable sector, and added smaller amounts in basic materials and technology. The stock selection data provides evidence that FLA can provide positive value added returns from their stock selection process on a fairly consistent basis.

Trading/Other

Trading and other captures the impact on performance that a "buy and hold" attribution analysis cannot measure. These factors would include trading costs, manager fees, and the impact of portfolio changes during the month. FLA's fees are approximately, on average, 0.40% since 1986 leaving about 0.70% due to negative trading effects. In general, active stock managers will incur trading costs in the range of 0.50% to 1.00% annually.

Total Performance

Exhibit 4 shows that even though FLA has not performed well lately, they have added value over a longer period of time (0.89% annualized since January 1986). In addition, Exhibit 6 shows that FLA has added 1.0% value added since the inception of the account. Staff has confidence that FLA can add value over time, but to capture that positive value added, shorter periods of under performance will have to be tolerated. FLA investment process does not try to tightly control risk and generate small positive value added returns consistently year over year. Instead, their investment process takes aggressive bets that should generate significant positive value added over time. However, they will not always be right and sometimes their aggressive bets will incur a substantial short term negative return. The annual excess returns shown in Exhibit 4 verifies the high volatility that the FLA investment process incurs.

IV. SUMMARY OF BOARD/IAC ACTIONS TO DATE

In January 1983 the Board approved a recommendation to hire FLA. 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.

In April of 1992 FLA received an additional \$49 million of SBI assets.

V. CONCLUSION

Comparing the performance of FLA against the guidelines set forth in the Board's Manager Continuation Policy, it can be concluded that FLA meets the SBI's expectations, both qualitatively and quantitatively and should be retained as a manager for the SBI.

Qualitative

- FLA adheres to and consistently implements its investment process. FLA management maintains a strong, viable organization that should enable it to implement its investment process in the future.
- FLA's assets and number of accounts has been stable over the last seven years.
- FLA has a benchmark which provides an appropriate baseline for evaluation purposes.

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.

Quantitative

- FLA has generated value added of 1.0% annualized since inception of the account. Stock selection has provided the majority of the value added relative to FLA's benchmark.
- FLA can add value over time, but to capture that positive value added, shorter periods of under performance will have to be tolerated. FLA investment process

does not try to tightly control risk and generate small positive value added returns consistently year over year. Instead, their investment process takes aggressive bets that should generate significant positive value added over time. However, they will not always be right and sometimes their aggressive bets will incur a substantial short term negative return.

EXHIBIT 1

**RISK ANALYSIS SUMMARY
FLA ASSET MANAGEMENT
January 1984 - December 1992**

Actual Portfolio Less Benchmark Portfolio

	BETA	VAR. MKTS	SUC	SIZE	TRADE	GRO	E/P	B/P	EARN. VAR.	FIN. LEV.	FOR. INC.	LABOR INT.	YIELD
Minimum	-0.13	-0.31	-0.27	-0.67	0.00	-0.51	-0.28	-0.39	-0.27	-0.25	-0.33	-0.58	-0.72
Average	0.03	0.19	0.23	-0.01	0.38	0.04	0.07	-0.08	0.15	0.02	0.10	-0.13	-0.19
Maximum	0.31	0.93	0.73	0.84	1.22	0.72	0.37	0.20	0.41	0.36	0.63	0.16	0.22
Std. Dev.	0.10	0.31	0.24	0.44	0.26	0.26	0.13	0.13	0.16	0.13	0.27	0.15	0.22
Bnmk Avg.	1.14	0.41	0.02	-0.50	0.30	0.34	-0.04	-0.01	0.18	0.07	-0.07	0.23	-0.33

Actual Portfolio Less S&P 500

	BETA	VAR. MKTS	SUC	SIZE	TRADE	GRO	E/P	B/P	EARN. VAR.	FIN. LEV.	FOR. INC.	LABOR INT.	YIELD
Minimum	0.01	0.06	-0.25	-1.66	0.16	-0.11	-0.34	-0.44	0.01	-0.23	-0.62	-0.30	-1.14
Average	0.17	0.65	0.26	-0.84	0.64	0.43	0.01	-0.08	0.37	0.08	-0.11	0.08	-0.57
Maximum	0.42	1.30	0.79	-0.13	1.34	1.11	0.34	0.25	0.65	0.39	0.43	0.37	-0.14
Std. Dev.	0.09	0.35	0.26	0.46	0.26	0.26	0.15	0.14	0.17	0.15	0.30	0.13	0.24
Bnmk Avg.	1.00	-0.07	-0.02	0.30	0.03	-0.05	0.01	-0.01	-0.04	0.01	0.12	0.01	0.05

EXHIBIT 2

SECTOR WEIGHTS

ACTUAL PORTFOLIO WEIGHT LESS BENCHMARK PORTFOLIO

	Cons Non-Dur.	Cons Dur.	Basic Mat.	Cap Goods	Energy	Tech.	Trans.	Util.	Fin.
MINIMUM PORTFOLIO	-17.35	-5.77	-7.36	-7.29	-13.76	-10.55	-3.69	-10.70	-16.64
PORTFOLIO AVERAGE	2.36	-1.87	3.73	-3.25	5.42	-2.27	-0.40	-2.46	-1.26
MAXIMUM PORTFOLIO	23.04	13.64	21.83	2.53	28.48	13.57	6.03	14.14	21.04
STANDARD DEVIATION	9.98	3.26	8.43	2.06	10.88	6.03	2.69	5.77	9.53
BENCHMARK AVERAGE	34.69	4.70	12.45	6.92	6.08	9.89	3.26	13.22	8.89

SECTOR WEIGHTS

ACTUAL PORTFOLIO WEIGHT LESS S&P 500

	Cons Non-Dur.	Cons Dur.	Basic Mat.	Cap Goods	Energy	Tech.	Trans.	Util.	Fin.
MINIMUM PORTFOLIO	-15.93	-5.25	-6.14	-7.87	-18.41	-11.50	-2.08	-14.81	-9.42
PORTFOLIO AVERAGE	3.64	-1.80	6.17	-3.59	-1.20	-0.80	0.80	-8.90	5.67
MAXIMUM PORTFOLIO	24.39	11.69	26.25	1.49	22.39	14.06	7.27	7.38	27.37
STANDARD DEVIATION	9.54	2.69	9.65	1.98	10.47	5.66	2.64	4.68	9.83
BENCHMARK AVERAGE	34.09	4.58	9.77	6.92	12.43	8.05	2.05	13.22	8.89

Forstmann Leff Asset Allocation

January 1986 - March 1993

EXHIBIT 3

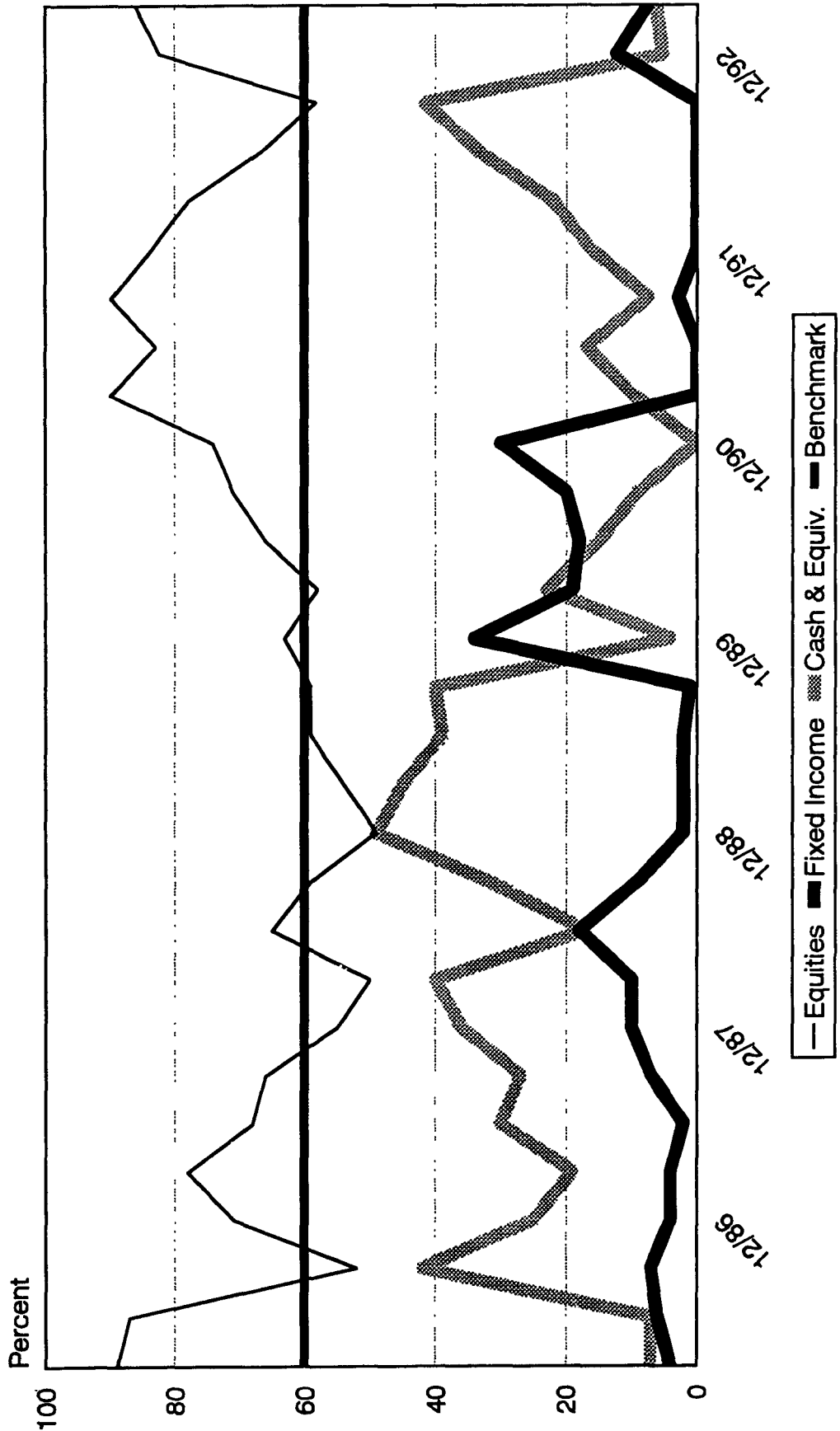


EXHIBIT 4

FORSTMANN-LEFF PERFORMANCE ATTRIBUTION

JANUARY 1986 - DECEMBER 1992

	Market Timing	Sector Allocation	Stock Selection	Trading/ Other	Total
1/1/86 - 12/31/86	0.93%	0.60%	2.66%	2.59%	6.95%
1/1/87 - 12/31/87	1.91	2.26	4.78	-3.94	4.90
1/1/88 - 12/31/88	-1.68	-2.09	2.11	-1.95	-3.62
1/1/89 - 12/31/89	-0.80	1.56	-1.34	-0.84	-1.43
1/1/90 - 12/31/90	-0.02	-1.21	2.30	-2.70	-1.69
1/1/91 - 12/31/91	2.22	-2.25	7.53	0.57	8.06
1/1/92 - 12/31/92	-0.04	-1.37	-3.39	-1.34	-6.01
CUMULATIVE	0.35	-0.37	2.04	-1.10	0.89

EXHIBIT 5

FORSTMANN-LEFF PERFORMANCE ATTRIBUTION ANALYSIS SECTOR BREAKDOWN ANNUALIZED RETURNS

JANUARY 1986 - DECEMBER 1992

Sector	Sector Allocation	Stock Selection	Total
Consumer Non-Durables	0.05%	1.65%	1.70%
Consumer Durables	0.13	-0.07	-0.06
Basic Materials	-0.04	0.50	0.46
Capital Goods	-0.04	-0.10	-0.14
Energy	-0.59	-0.01	-0.60
Technology	-0.32	0.39	0.07
Transportation	0.10	-0.39	-0.28
Utilities	-0.14	-0.05	-0.19
Financial	0.45	0.18	0.62
Miscellaneous	0.03	-0.05	-0.02
Sub Total	-0.37	2.04	2.02
Market Timing			0.35
Trading/Other			-1.10
Total			0.89

VALUE OF ACTIVE MANAGEMENT REPORT

FORSTMANN LEFF

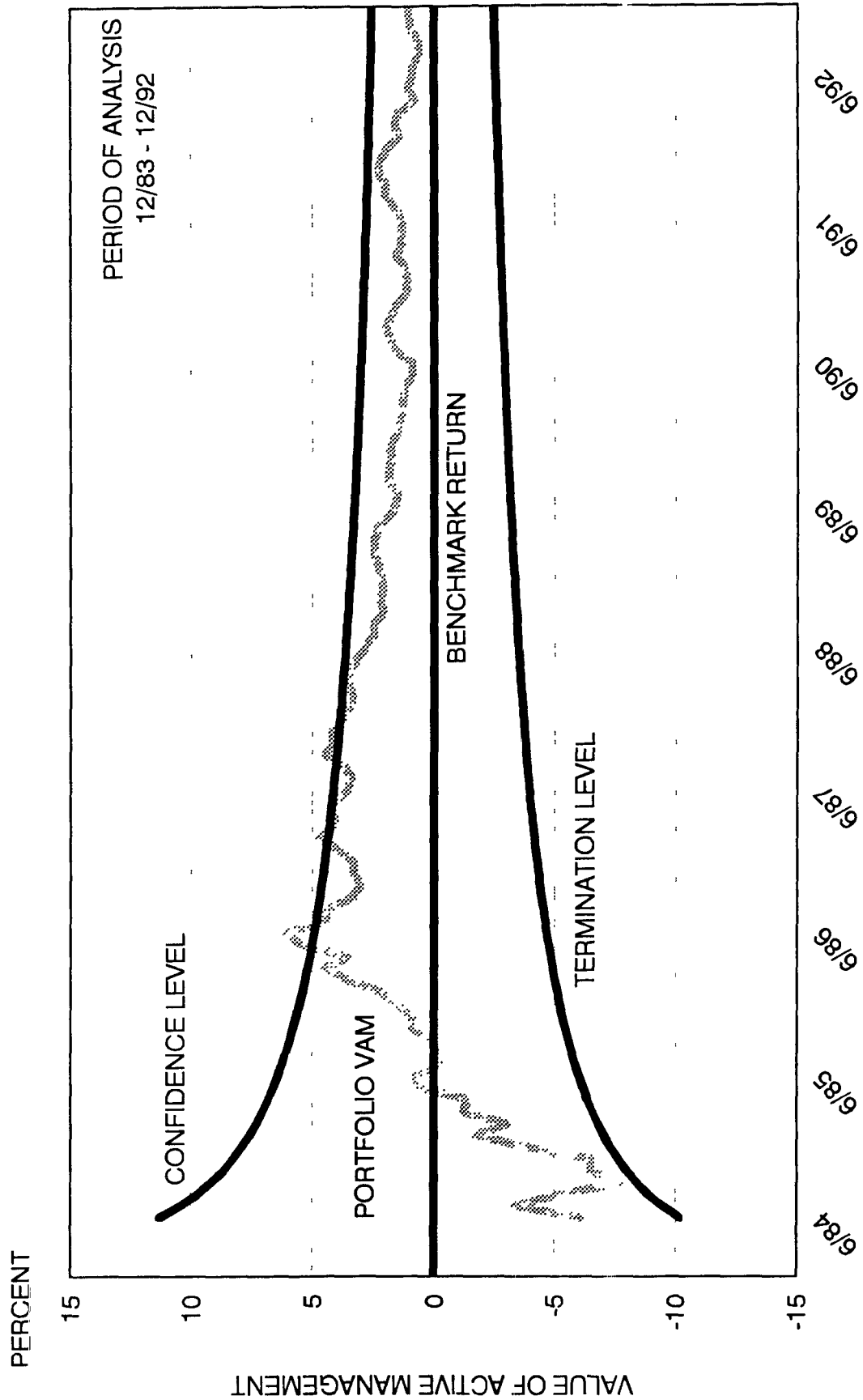


EXHIBIT 6

ANNUAL REPORT OF BEA ASSOCIATES CONTRACT

I. Overview

In April 1987, BEA Associates was retained by the SBI to manage a cash enhancement program using low risk index futures and options strategies. The objective is to improve the rate of return earned on cash equivalent investments in the Post Retirement Fund. Going forward, the firm is expected to exceed the return on the State Street Short Term Investment Fund (STIF) by 75 to 100 basis points annualized.

II. Investment Approach

The cash enhancement strategies utilized by BEA all involve "hedged positions" using futures and option contracts. The purchase/sale combinations are constructed to capture a perceived mispricing between the different contracts without incurring market risk. Although there is little market risk, there is the risk that mispricings do not realign as expected and that returns fall short of the STIF benchmark.

Mispricing opportunities are not always present and once they are corrected by the market, BEA profits by closing out its futures and options positions. When not committed to enhancement strategies, assets are invested in short term money market securities subject to the same guidelines as the State Street STIF.

The strategies used by BEA in the SBI account are:

- Hedged Puts
- Market Spreads
- Box Spreads
- Hedged Currency Positions

Hedged puts involve the simultaneous purchase (sale) of listed index options offset by the sale (purchase) of index futures. The decision to purchase the listed option or future is determined by market volatility. If future volatility is likely to fall (rise), the value of the listed option will also fall (rise) relative to that of the future contract. In this case BEA would purchase (sell) the future and sell (purchase) the listed option in amounts necessary to eliminate or "hedge" market risk. The perceived mispricing results from the difference between BEA's estimate of future volatility and that which is implied in the current market price of the option. If BEA is correct, the market's re-evaluation of volatility will result in a profit on the hedged position.

Market spreads capture mispricings between market indices of differing composition (intermarket spread) or with different time to expiration (calendar spread). Again, the

strategy calls for the simultaneous purchase and sale of two similar index future or option contracts.

Box spreads are the simultaneous purchase and sale of multiple index options. The intent is to provide liquidity to options dealers for the period defined by the term of the options. By providing liquidity, BEA earns a rate above that available on alternative short-term money market instruments with equivalent terms

Hedged currency positions are market neutral and similar to the hedged put strategies using stock index options and futures. To implement their strategy, BEA uses foreign exchange contracts and currency options and futures. BEA has been using the currency strategy in the SBI's portfolio since 4/1/91.

BEA has primarily used the hedged put and hedged currency strategies since account inception and over the last twelve months. BEA rarely finds an opportunity to use the market and box spread strategies because the market has become more efficient in these areas and there are fewer mispricings.

III. Performance

Table I on the following page shows BEA's quarterly, calendar year, and cumulative performance relative to its benchmark. For the period April 1, 1987 to February 28, 1993, BEA outperformed its benchmark by 1.41% annualized.

Table II breaks the full period into three non overlapping sub-periods. The period covering April 1, 1987 to March 31, 1989 (A) represents the period prior to a change in BEA's assignment on April 1, 1989. The change, (See "Summary of Board Actions to Date,") allowed BEA to take more risk managing the portfolio and gave the potential to add more value to the portfolio. With this added risk, BEA was expected to outperform its benchmark by 100 to 200 basis points (B). On June 30, 1992, BEA was given more money and instructed to manage the money with less risk as they had prior to April 1, 1989. After the change, BEA is expected to outperform by 75 to 100 basis points annualized (C).

TABLE 1

**BEA Associates
Comparison of Actual Portfolio Performance with
State Street STIF Benchmark**

		Market Value \$(000)	Total Portfolio	Benchmark	Value Added
1987	2Q	101,358	1.37%	1.60%	
	3Q	103,525	2.14	1.65	
	4Q	105,867	2.26	1.77	
			5.87	5.10	0.73%
1988	1Q	108,161	2.17	1.73	
	2Q	109,828	1.54	1.72	
	3Q	112,179	2.14	1.90	
	4Q	114,633	2.19	2.05	
		8.28	7.60	0.63%	
1989*	1Q	21,393	2.06	2.26	
	2Q	21,806	1.99	2.36	
	3Q	22,253	2.05	2.18	
	4Q	23,402	5.16	2.11	
		11.71	9.21	2.29%	
1990	1Q	24,233	3.55	2.04	
	2Q	25,039	3.33	2.03	
	3Q	25,480	1.76	1.98	
	4Q	26,138	2.58	1.95	
		11.69	8.25	3.18%	
1991	1Q	26,738	2.30	1.76	
	2Q	27,058	1.20	1.52	
	3Q	27,398	1.22	1.44	
	4Q	27,604	1.48	1.30	
		6.34	6.15	0.18%	
1992*	1Q	28,234	1.55	1.12	
	2Q	28,425	0.68	0.99	
	3Q	129,167	0.92	0.88	
	4Q	131,019	1.43	0.81	
		4.66	3.86	0.77%	
1993	1Q	132,117	0.84	0.78	
Cumulative			60.53	48.56	
Annualized			8.21	6.82	

* Approximately \$96 million was withdrawn from BEA's account effective 3/31/89.

* Approximately \$100 million was added to BEA's account effective 7/1/92

TABLE II

**BEA Associates
Comparison of Sub-Period Cumulative Performance**

	Total Portfolio	Benchmark	Value of Active Mgmt
A. For period 4/1/87 thru 3/31/89 (24 months)			
Cumulative	17.00%	15.65%	
Annualized	8.17	7.54	0.58%
Std. Dev.	0.65	0.25	0.64
B. For period 4/1/89 thru 6/30/92 (39 months)			
Cumulative	32.91%	25.33%	
Annualized	9.151	7.19	1.82%
Std. Dev.	2.15	0.48	1.99
C. For period 7/1/92 thru 2/28/93 (8 months)			
Cumulative	2.94%	2.24%	

The following table shows how BEA has added value since 4/1/89 BEA provides this performance attribution which is not available prior to 4/1/89.

TABLE III

**Sources of Return
4/1/89-3/31/93**

	Cumulative	Annualized
Hedged Puts	7.07%	1.72%
Market Spread	0.00	0.00
Currency Straddle	(0.04)	N.A
Box spread + Cash Management	30.21	6.82

Table III shows that most of the absolute return is from the box spread and cash management (30.21%). This compares to a State Street STIF return of 27.40% over

the same period. Most of the value-added during this period was from hedged put positions. During this period, BEA had no market spread positions.

IV. Summary of Board Actions to Date

In April 1987, the SBI retained BEA Associates to manage a \$100 million enhanced cash program for the Post Retirement Fund.

Effective April 1989, the SBI reduced BEA's portfolio from \$117 million to \$21 million. Of the \$117 million under management with BEA in April 1989, approximately \$100 million was in short-term money market instruments. These securities provided both return stability and necessary collateral for BEA's index future positions. Because the \$100 million represented a two percent (2%) additional cash position for the Post Fund, the SBI decided to reduce BEA's portfolio and lower the Post Fund's cash allocation. The SBI determined that BEA only needed \$20 million in cash collateral for its enhancement strategies. The remaining collateral was changed from cash positions held in BEA's account to pledges of bonds held at State Street Bank.

On July 1, 1992, the Post Fund's asset allocation was changed to include three percent cash. BEA was given an additional \$100 million to manage as part of this three percent allocation and no collateral in now held as bonds. Therefore, BEA is again managing the portfolio as they did prior to April 1989.

V. Conclusions

BEA has added value on an annualized basis since the inception of the account consistent with expectations:

	Annualized Performance	Value Added Annualized Basis
4/1/87-3/31/89	8.17%	0.58%
4/1/89-6/30/92	9.15	1.82
7/1/92-2/28/93	2.94	N.A.

Due to the new asset allocation and management structured strategy adopted for the Post Fund, staff recommends that BEA's contract for enhanced cash management not be renewed. However, since BEA has been hired as an active bond manager, they should be allowed to apply the same strategies they have used to enhance cash returns to enhance bond returns. Staff recommends that in addition to the current strategies, BEA should also be allowed to take "hedged positions" on foreign exchanges. This is consistent with the market neutral strategies already employed by BEA for the cash enhancement program.

VOYAGEUR ASSET MANAGEMENT ASSIGNED RISK PLAN

I. BACKGROUND

Overview

In May, 1989, Voyager Asset Management was retained by the Department of Commerce to manage the State of Minnesota's Assigned Risk Plan (ARP). The SBI became responsible for the portfolio in May 1991 and entered a new contract with Voyager effective July, 1991. Voyager Asset Management Group is owned by Dougherty, Dawkins, Inc. ALLIED Mutual Insurance, Inc. is 35% owner of ALLIED Group which is 100% owner of Dougherty, Dawkins, Inc. The primary contact at Voyager is Jane Wyatt and she is also the fixed income manager. Jim King is the equity manager and he works for Allied in Des Moines, IA. This review covers only the time period from July, 1991 to March 31, 1993.

General Description

The ARP provides workers' compensation and employers' liability coverage to Minnesota employers unable to obtain insurance in the private market. The characteristics of the plan make predicting liability cash flows for the fund difficult. Since the ARP covers companies that have been rejected by private insurers, the underwriting losses are greater for these riskier companies than with other companies. Also, it is hard to predict what share of the market the ARP will have. These are just two examples that show why cash flows are difficult to predict.

Objectives and Asset Allocation for the ARP

The main objective of the fund is to provide cash for the fund liabilities/payments on the required dates. The rate of return should be considered only when compared to an appropriate benchmark that represents the liability stream. The fund has a low risk tolerance and the biggest risk is not meeting liability payments. Due to the relatively short term of most of the liabilities, the plan must be very liquid.

Because of the objective to fund liabilities, the requirement that the fund be liquid and the uncertainty of premium and liability cash flows, the fund is invested conservatively. Amounts representing liabilities of less than ten years are invested in bonds while amounts for liabilities greater than ten years are invested in equities. Currently, 85 percent of the portfolio is invested in fixed income securities with an overall duration target of 2.6-3.0 years. This high fixed income allocation minimizes

the chance of a future fund deficit while the equity exposure hedges some of the inflation risk

II. PORTFOLIO MANAGEMENT

The fixed income portfolio dominates so the main emphasis of this report is an analysis of the fixed income portfolio. Historically, as workers compensation funds grow, the shorter liabilities grow the fastest. If the ARP continues to grow, the fixed income portfolio will represent an even larger percentage of the portfolio in the future.

Fixed Income Benchmark

Staff worked with Voyageur to create a benchmark that approximates the duration of the short-term liabilities and represents Voyageur's long-term asset allocation within fixed income. Matching the duration increases the probability of meeting the primary objective of making liability payments. The following benchmark was created using Merrill Lynch indices.

Merrill Index	Percentage
Government (1-2.99 yr)	20%
Corporate (1-2.99 yr)	20
Government (3-4.99 yr)	3
Corporate (3-4.99 yr)	3
Government (5-6.99 yr)	10
Corporate (5-6.99 yr)	6
Mortgage	25
Asset Backed	13
Total	100%

In aggregate, liabilities of less than ten years have a duration of three years. The duration of the benchmark has ranged from 2.63 to 3.00 years since July 1991. The benchmark duration declined as the mortgage sector duration declined due to increased prepayments. If interest rates stabilize or increase causing prepayments to decrease, staff expects the overall duration to return to around three years.

In the future, the SBI should consider changing the benchmark to include a cash component since cash continues to flow into the fund. Voyageur has no choice but to accept this cash and it will lower portfolio returns over time. Therefore, the benchmark should include some cash component. Staff intends to resolve this issue within the next 3-6 months.

Equity Benchmark

Voyageur invests in large capitalization growth companies with an S&P rating of "A" or better. They have created a benchmark that includes all "A" or better rated companies excluding utilities and SBI restricted securities. Analysis by Richards & Tierney shows that this customized benchmark is a better performance benchmark than the broad market but with some slight alteration, could be better. Staff is currently working with Voyageur to try and improve the benchmark. For example, cash continues to flow into the fund and the SBI may want to consider adding a cash component to the benchmark to reflect this.

III. PERFORMANCE

Table I compares Voyageur's portfolio returns to its benchmark returns. Voyageur has outperformed its segment and total fund benchmarks for the period July 1, 1991 - March 31, 1993 (1.75 yrs.).

TABLE I

Quarter	Fixed Income		Equity		Total Fund	
	Port.	Bench.	Port	Bench.	Port	Bench.
3Q '91	5.31%	4.33%	2.10%	5.43%	4.13%	4.54%
4Q '91	4.60	4.36	10.12	11.01	5.90	5.39
Total '91	10.15	8.88	12.43	17.03	10.27	10.17
1Q '92	-0.83	-0.34	-1.22	-3.35	-0.88	-0.80
2Q '92	4.48	3.92	0.80	0.15	4.13	4.54
3Q '92	4.24	3.65	4.65	4.91	4.30	3.85
4Q '92	-0.82	0.04	7.46	5.73	0.37	0.89
Total '92	7.12	7.39	11.97	7.37	7.83	7.42
1Q '93	3.72	3.20	-0.50	-0.62	3.09	2.63
Cumulative	22.39%	20.67%	25.26%	24.88%	22.57%	21.45%
Annualized	12.24	11.33	13.73	13.54	12.33	11.74

IV. FIXED INCOME PORTFOLIO CHARACTERISTICS

Table II shows the overall quarterly characteristics of Voyager's fixed income portfolio.

Table II

Sector Weights

Qtr	Gov.	Corp.	Mort.	Asset Backed	Duration	
					Port.	Bench.
Qtr 3 '91	47.77%	13.03%	23.67%	9.63%	3.23 yrs.	2.99 yrs.
Qtr 4 '91	26.76	33.42	25.81	8.89	3.27	3.00
Qtr 1 '92	28.77	33.38	30.34	7.51	3.29	2.84
Qtr 2 '92	32.04	34.48	28.94	4.54	2.74	2.77
Qtr 3 '92	26.07	44.40	23.20	5.82	3.22	2.63
Qtr 4 '92	27.60	41.56	23.35	7.17	3.01	2.75
Qtr 1 '93	27.42	43.55	25.39	3.65	2.95	2.63
Benchmark	33%	29%	25%	13%	NA	NA

Staff believes Voyager has primarily enhanced returns by having a duration longer than the market while interest rates declined significantly. (From 7/1/91 to 3/31/93, the yield on a three year Treasury bond declined from 7.33% to 4.35%. Yield on a five year bond declined from 7.92% to 5.23%.) The above table also shows that Voyager added value by underweighting government securities and overweighting corporate securities. These weightings enhanced returns since the corporate sector outperformed all sectors during this time period.

V. EQUITY PORTFOLIO CHARACTERISTICS

Exhibits 1 and 2 show the characteristics of Voyager's stock portfolio. Since the data represents less than two years of data and Voyager does not do a lot of trading, it is hard to draw firm conclusions. However, relative to the BARRA Hicap Universe (Exhibit 1), Voyager's portfolios tend to have a slight growth tilt and do not appear to be too much different from the market. Exhibit 2 shows that Voyager invests primarily in consumer non-durable goods. Finally, according to analysis using BARRA, Voyager primarily has added value through stock selection and industry selection when compared to the S&P 500.

VI. CONCLUSION

Voyageur has added value (0.59% annualized) to the portfolio while maintaining an asset allocation and fixed income duration that allows the plan to meet the main objective of the fund, i.e., providing cash for the fund liabilities on the required date. Since fixed income dominates the portfolio, Voyageur's decision to have a duration longer than the fixed income benchmark is the primary reason the overall portfolio performed well. However, the portfolio's duration has only been slightly longer than the liability duration of three years, allowing the portfolio to meet the fund's liability cash flows. In the future, both the fixed income and stock benchmarks should be reviewed for possible changes such as adding cash to the benchmarks.

Staff recommends that the SBI renew its contract with Voyageur Asset Management to manage the ARP portfolio.

Exhibit 1
Risk Analysis Summary
Voyageur Asset Management

Month	Var		Size	Trade	Growth	E/P	B/P	Earn Var	Fin Lev.	For. Inc.	Labor Int.	Yld
	Mkts.	Scs.										
Jul-91	-0.06	-0.10	-0.05	-0.20	0.14	0.03	-0.23	-0.36	0.14	0.11	0.39	-0.31
Aug-91	-0.12	-0.16	-0.10	-0.27	0.11	0.06	-0.21	-0.35	0.07	-0.01	0.38	-0.25
Sep-91	-0.13	-0.18	-0.11	-0.25	0.11	0.06	-0.20	-0.34	0.09	0.00	0.38	-0.25
Oct-91	-0.12	-0.22	-0.11	-0.26	0.10	0.07	-0.19	-0.35	0.08	0.01	0.37	-0.21
Nov-91	-0.12	-0.16	-0.12	-0.26	0.12	0.07	-0.20	-0.33	0.07	-0.03	0.37	-0.23
Dec-91	-0.11	-0.20	-0.11	-0.26	0.09	0.07	-0.19	-0.33	0.10	-0.01	0.35	-0.20
Jan-92	-0.14	-0.17	-0.09	-0.26	0.08	0.08	-0.20	-0.34	0.11	0.00	0.34	-0.20
Feb-92	-0.18	-0.15	-0.09	-0.26	0.12	0.11	-0.20	-0.38	0.05	-0.01	0.39	-0.27
Mar-92	-0.14	-0.14	-0.09	-0.25	0.13	0.11	-0.19	-0.38	-0.01	0.01	0.40	-0.29
Apr-92	-0.12	-0.12	-0.12	-0.23	0.12	0.12	-0.20	-0.37	-0.01	0.02	0.39	-0.29
May-92	-0.09	-0.11	-0.11	-0.25	0.11	0.14	-0.20	-0.38	0.02	0.02	0.39	-0.29
Jun-92	-0.08	-0.12	-0.12	-0.23	0.14	0.11	-0.23	-0.37	0.01	-0.01	0.38	-0.33
Jul-92	-0.08	-0.07	-0.13	-0.22	0.15	0.12	-0.22	-0.37	-0.02	-0.01	0.39	-0.32
Aug-92	-0.06	-0.04	-0.13	-0.21	0.14	0.12	-0.22	-0.37	-0.07	-0.02	0.38	-0.31
Sep-92	-0.01	0.00	-0.12	-0.24	0.13	0.11	-0.24	-0.39	-0.05	-0.03	0.41	-0.33
Oct-92	-0.06	0.03	-0.10	-0.22	0.11	0.11	-0.22	-0.39	-0.05	-0.04	0.40	-0.33
Nov-92	-0.07	0.00	-0.09	-0.23	0.09	0.11	-0.24	-0.40	-0.03	-0.02	0.38	-0.32
Dec-92	-0.08	-0.06	-0.08	-0.23	0.09	0.11	-0.25	-0.41	-0.04	-0.01	0.40	-0.31
Jan-93	-0.13	-0.11	-0.08	-0.25	0.08	0.13	-0.24	-0.43	-0.07	0.01	0.41	-0.28
Feb-93	-0.12	-0.16	-0.09	-0.23	0.08	0.13	-0.22	-0.46	-0.12	0.02	0.42	-0.25
Average	-0.10	-0.11	-0.10	-0.24	0.11	0.10	-0.21	-0.37	0.01	0.00	0.38	-0.28
Maximum	-0.01	0.03	-0.05	-0.20	0.15	0.14	-0.19	-0.33	0.14	0.11	0.42	-0.20
Minimum	-0.18	-0.22	-0.13	-0.27	0.08	0.03	-0.25	-0.46	-0.12	-0.04	0.34	-0.33
Std. Dev.	0.04	0.07	0.02	0.02	0.02	0.03	0.02	0.03	0.07	0.03	0.02	0.04

**Exhibit 2
Sector Weights**

Month	Cons. Non Dur.	Cons. Dur	Basic Materials	Cap Goods	Energy	Tech	Trans	Util	Financial
Jul-91	59.33	6.10	9.81	5.48	6.11	10.11	0.00	0.00	3.07
Aug-91	55.10	5.13	12.56	5.24	8.81	8.19	0.00	0.00	4.98
Sep-91	55.18	5.35	12.00	5.32	8.99	8.16	0.00	0.00	5.00
Oct-91	54.62	5.32	11.83	5.35	9.11	8.18	0.00	0.00	5.60
Nov-91	57.26	5.09	11.09	5.10	8.35	7.55	0.00	0.00	5.57
Dec-91	56.19	5.43	11.40	5.21	7.96	8.06	0.00	0.00	5.75
Jan-92	56.20	5.21	11.77	5.23	7.56	8.41	0.00	0.00	5.63
Feb-92	55.72	5.31	8.73	7.93	5.04	9.35	0.00	0.00	7.92
Mar-92	54.81	5.19	9.08	8.22	4.98	9.65	0.00	0.00	8.09
Apr-92	54.66	5.04	9.65	7.91	5.37	9.48	0.00	0.00	7.90
May-92	54.89	5.05	9.75	7.84	5.46	9.06	0.00	0.00	7.94
Jun-92	57.97	4.90	9.52	6.81	5.58	6.80	0.00	0.00	8.42
Jul-92	57.46	4.70	9.64	7.05	5.46	7.10	0.00	0.00	8.59
Aug-92	58.08	4.75	9.39	7.16	5.67	6.31	0.00	0.00	8.64
Sep-92	57.82	4.79	9.23	7.29	5.53	6.25	0.00	0.00	9.10
Oct-92	58.59	4.85	8.59	7.30	5.10	6.39	0.00	0.00	9.20
Nov-92	58.90	4.88	8.41	7.28	4.77	6.72	0.00	0.00	9.04
Dec-92	57.94	4.82	8.67	7.53	4.76	6.93	0.00	0.00	9.36
Jan-93	57.56	4.83	8.61	7.49	4.77	7.09	0.00	0.00	9.65
Feb-93	57.03	4.88	8.78	7.35	4.96	7.29	0.00	0.00	9.71
Average	56.76	5.08	9.92	6.70	6.22	7.85	0.00	0.00	7.46
Maximum	59.33	6.10	12.56	8.22	9.11	10.11	0.00	0.00	9.71
Minimum	54.62	4.70	8.41	5.10	4.76	6.25	0.00	0.00	3.07
Std. Dev.	1.50	0.32	1.30	1.10	1.54	1.17	0.00	0.00	1.88

EXHIBIT B

MINNESOTA STATE BOARD OF INVESTMENT

INVESTMENT GUIDELINES EXTERNAL ACTIVE DOMESTIC COMMON STOCK MANAGERS

The investment actions of State Board of Investment (SBI) external active domestic common stock managers will be governed and evaluated by the following guidelines:

1. RETURN/RISK OBJECTIVES

The external common stock managers are expected to deliver cumulative returns that exceed a predetermined benchmark portfolio by at least 1.0 percentage point, net of fees, annually (see Benchmarks below). Over time, each manager will be expected to produce portfolios which differ from the manager's benchmark portfolio in the following manner:

- (a) The actual portfolio will realize active risk (annualized residual standard deviation), relative to the benchmark, in excess of one (1) percent.
- (b) The actual portfolio will generate positive cumulative excess returns significant enough to compensate the SBI for the active risk assumed. Generally, the ratio of annualized excess return to active risk in (a) above should be .50 or greater.

2. BENCHMARKS

Each manager must provide and maintain a customized benchmark (normal) portfolio, agreed upon by both manager and SBI, for the purpose of performance evaluation and risk measurement. The benchmark portfolio provided by the manager must satisfy the following characteristics:

- (a) **Unambiguous.** The names and weights of securities comprising the benchmark are clearly delineated.
- (b) **Investable.** The option is available to forego active management and simply hold the benchmark portfolio.
- (c) **Measurable.** It is possible to readily calculate the benchmark's return on a monthly basis.
- (d) **Appropriate.** The benchmark is consistent with the manager's investment style or biases.

- (e) **Reflective of current investment opinions.** The manager has current investment opinions (be they positive, negative, or neutral) on the securities which make up the benchmark.
- (f) **Specified in advance.** The benchmark must be available prior to the start of an evaluation period.

3. ELIGIBLE INVESTMENTS

The investment managers will be restricted to holding common and preferred stocks, convertible bonds, equity options, warrants, stock index futures and cash equivalents. The investments of each manager must satisfy the following criteria and constraints:

- (a) The stocks held must be issued by corporations organized under the laws of the U.S or its states, the Dominion of Canada or its provinces
- (b) Total SBI holdings in any one corporation shall not exceed five (5) percent of the total outstanding shares of that corporation. Individual investment manager holdings will be monitored by the SBI staff to assure compliance.
- (c) Cash equivalent reserves shall be invested in the SBI's STIF fund, managed by its custodian bank.
- (d) Total SBI holdings in convertible bonds shall not exceed five (5) percent of the total market value of the portfolio.
- (e) Investment Managers are not constrained regarding:
 - (1) transaction turnover
 - (2) use of covered call options as hedging devices
 - (3) liquidity requirements
 - (4) number of individual equity issues which must be held at any given time
 - (5) the percentage of assets held in cash reserves which must be held at any given time
 - (6) the use of stock index futures to adjust the effective equity exposure of the portfolio from 0 to 100%.

4. SBI RESTRICTIONS

The SBI may establish constraints to insure that the managers, both individually and collectively, are in compliance with Minnesota statutes and SBI policy.

- (a) Currently, the SBI prohibits investment in American Home Products (AHP).

- (b) In March 1989, the SBI adopted a resolution which requires the SBI to restrict its holdings in companies that do business in South Africa.

The SBI maintains a list of prohibited and restricted stocks. This list is updated and provided to managers on a monthly basis.

5. PERFORMANCE EVALUATION

Manager performance will be evaluated according to the guidelines established in the SBI's Manager Continuation Policy. These guidelines assist the SBI in its decisions concerning retention and termination of investment managers.

6. COMMUNICATION

The SBI requires its investment managers to communicate with SBI staff on a regular basis.

- (a) Managers are expected to meet with staff to review the results of the manager's investment decision-making process at least annually. In reviewing past and current investment strategies and performance, the manager is expected to present the analysis relative to the benchmark portfolio.

- (b) Managers are expected to provide SBI staff with a status report pertaining to the status of accounts, assets under management, and relevant personnel and ownership changes on a monthly basis.

7. PROXY VOTING

The SBI is responsible for proxy voting.

8. COMMODITY FUTURES TRADING AGREEMENT

Any commodity futures trading agreement entered into by the Manager must provide that SBI liability for margin requirements, commissions and fees is limited solely to funds of the SBI and does not constitute a general obligation of the State of Minnesota.

9. FUTURE MODIFICATIONS

The SBI reserves the right to modify these investment guidelines at any time. Managers will be notified in advance of changes to the investment guidelines.

Revised: May 1993

EXHIBIT B

Minnesota State Board of Investment External Active Fixed Income Manager Investment Guidelines

The investment actions of State Board of Investment (SBI) external active fixed income managers will be governed and evaluated using the following guidelines:

1. RISK/RETURN OBJECTIVES

A manager's portfolio is expected to differ from the benchmark in a way consistent with its investment philosophy. Staff will evaluate differences based on characteristics such as duration, sector weighting, industry weighting, and coupon and company selection.

A manager's portfolio is expected to deliver annualized returns of at least 25 basis points above the benchmark, over time, after fees. Excess returns should be commensurate with portfolio risk measured using annualized standard deviation.

2. BENCHMARKS

A manager's benchmark is used to evaluate performance and measure risk.

- o Managers who invest in all sectors of the investment grade bond universe are compared to the Salomon Broad Investment Grade Index (BIG).
- o Managers who invest in all sectors except mortgages are compared to the government/corporate sector of the BIG.
- o Managers who invest only in mortgages are compared to the mortgage portion of the BIG.

These indices satisfy the following characteristics:

- a) **Unambiguous.** The securities comprising the benchmarks are clearly delineated.
- b) **Investable.** The option is available to forego active management and hold the benchmark portfolios.
- c) **Measurable.** It is possible to calculate each benchmark's return on a monthly basis.
- d) **Appropriate.** The benchmarks are consistent with the investment styles of the SBI's active managers.

- e) *Specified in Advance.* The benchmarks are established prior to the start of the evaluation period.

3 ELIGIBLE INVESTMENTS

The investment managers may hold fixed income instruments, fixed income options and futures, and cash equivalents. The investments of each manager must satisfy the following criteria and constraints:

- a) Government obligations of the U.S. or its agencies, Canada or its provinces, or obligations of other U.S. sponsored organizations must be payable in U.S. dollars and comply with the provisions of Minnesota Statutes 11A.24 subdivision 2.
- b) U.S. and Canadian corporate obligations must be payable in U.S. dollars, be rated among the top four quality categories by a nationally recognized rating agency, and comply with all provisions of Minnesota Statutes 11A.24 subdivision 3.
- c) Other obligations not specified in (a) or (b) must meet the provisions of Minnesota Statutes 11A.24 subdivision 4, clauses 1 through 5.
- d) Total portfolio duration must stay within a 3 to 7 year band.
- e) Cash equivalent reserves shall be invested in the SBI's STIF fund, managed by its custodian bank.

Investment managers are not constrained regarding:

- 1) transaction turnover.
- 2) use of covered call options as hedging devices
- 3) liquidity requirements.
- 4) number of fixed income issues held.
- 5) the percentage of assets held in cash reserves.

4. PERFORMANCE EVALUATION

Manager performance is evaluated using the guidelines established in the SBI's Manager Continuation Policy. These guidelines help the SBI decide whether to continue or terminate investment managers.

5. COMMUNICATION

The SBI requires its investment managers to communicate with SBI staff on a regular basis.

- a) On at least an annual basis, managers will review the results of their investment decisions with staff. The manager must review strategies and performance relative to the benchmark.
- b) On a monthly written basis, managers will inform staff of account status, assets under management, and relevant personnel and ownership changes.

6. COMMODITY FUTURES TRADING AGREEMENT

Any commodity futures or options trading agreement entered into by a manager must provide that SBI liability for margin requirements, commissions and fees is limited solely to funds of the SBI and does not constitute a general obligation for the State of Minnesota.

7. FUTURE MODIFICATIONS

The SBI reserves the right to modify these investment guidelines at any time to insure the managers, both individually and collectively, are in compliance with Minnesota statutes and SBI policy. Managers will be notified in advance of changes to these guidelines.

Revised: May 1993

EXHIBIT B

Minnesota State Board of Investment External Active Fixed Income Manager Investment Guidelines BEA Associates

The investment actions of BEA Associates are governed and evaluated using the following guidelines:

1. RISK/RETURN OBJECTIVES

BEA's portfolio is expected to differ from the benchmark in a way consistent with its investment philosophy. Staff will evaluate differences based on characteristics such as duration, sector weighting, industry weighting, and coupon and company selection.

BEA's portfolio is expected to deliver annualized returns of at least 25 basis points above the benchmark, over time, after fees. Excess returns should be commensurate with portfolio risk measured using annualized standard deviation.

2. BENCHMARKS

BEA's benchmark is the Salomon Broad Investment Grade Index (BIG) since it invests in all sectors of the investment grade bond universe. This index satisfies the following characteristics:

- a) ***Unambiguous.*** The securities comprising the benchmark are clearly delineated.
- b) ***Investable.*** The option is available to forego active management and hold the benchmark portfolio.
- c) ***Measurable.*** It is possible to calculate the benchmark's return on a monthly basis.
- d) ***Appropriate.*** The benchmark is consistent with the investment style of BEA.
- e) ***Specified in Advance.*** The benchmark is established prior to the start of the evaluation period.

3. ELIGIBLE INVESTMENTS

BEA may hold fixed income instruments, options and futures, and cash equivalents. The investments must satisfy the following criteria and constraints:

- a) Government obligations of the U.S. or its agencies, Canada or its provinces, or obligations of other U.S. sponsored organizations must be payable in U.S. dollars and comply with the provisions of Minnesota Statutes 11A.24 subdivision 2.
- b) U.S. and Canadian corporate obligations must be payable in U.S. dollars, be rated among the top four quality categories by a nationally recognized rating agency, and comply with all provisions of Minnesota Statutes 11A.24 subdivision 3.
- c) BEA is authorized to use market neutral strategies described in section four of these guidelines.
- d) Other obligations not specified in (a) or (b) must meet the provisions of Minnesota Statutes 11A.24 subdivision 4, clauses 1 through 5.
- e) Total portfolio duration must stay within a 3 to 7 year band.

Investment managers are not constrained regarding:

- 1) transaction turnover
- 2) use of covered call options as hedging devices
- 3) liquidity requirements
- 4) number of fixed income issues held
- 5) the percentage of assets held in cash reserves
- 6) fixed income futures and options.

4. MARKET NEUTRAL STRATEGIES

BEA is authorized to use the following market neutral strategies for the simultaneous purchase and sale of options and futures:

- a) Hedged volatility transactions
- b) Inter-market spreads
- c) Calendar spreads
- d) Box spreads

At no time shall the combined market exposure of all market neutral strategies exceed 100% of the current portfolio market value.

BEA may invest in puts and call options and future contracts traded on a contract market regulated by a governmental agency or by a financial institution regulated by a governmental agency. This allows BEA to invest in the following:

- a) U.S. or foreign stock index futures
- b) U.S. or foreign stock index options
- c) U.S. or foreign options on stock index futures
- d) U.S. or foreign forward exchange contracts
- e) U.S. or foreign currency options
- f) U.S. or foreign currency futures

5. PERFORMANCE EVALUATION

BEA's performance will be evaluated according to the guidelines established in the SBI's Manager Continuation Policy. These guidelines help the SBI decide whether to continue or terminate investment managers.

6. COMMUNICATION

The SBI requires its investment managers to communicate with SBI staff on a regular basis.

- a) On at least an annual basis, BEA will review the results of their investment decisions with staff. BEA must review strategies and performance relative to the benchmark.
- b) On a monthly written basis, BEA will inform staff of account status, assets under management, and relevant personnel and ownership changes.

7. COMMODITY FUTURES TRADING AGREEMENT

Any commodity futures or options trading agreement entered into by BEA must provide that SBI liability for margin requirements, commissions and fees is limited solely to funds of the SBI and does not constitute a general obligation for the State of Minnesota.

8. FUTURE MODIFICATIONS

The SBI reserves the right to modify these investment guidelines at any time to insure the managers, both individually and collectively, are in compliance with Minnesota statutes and SBI policy. Managers will be notified in advance of changes to these guidelines.

Revised: May 1993

EXHIBIT B

MINNESOTA STATE BOARD OF INVESTMENT INVESTMENT GUIDELINES EXTERNAL SEMI-PASSIVE FIXED INCOME MANAGERS

The investment actions of semi-passive fixed income managers for the Minnesota State Board of Investment (SBI) will be governed and evaluated using the following guidelines:

1. RISK/RETURN OBJECTIVES

The SBI expects the manager to develop and manage the semi-passive portfolio with characteristics similar to the Salomon Broad Investment Grade (BIG) index. The specific manager risk tolerances are specified below in the section on investment parameters. These parameters should generate only moderate tracking error from index performance and are consistent with an enhanced index strategy.

The manager is expected to generate annualized returns of at least 10 basis points above the Salomon BIG index, over time, after fees.

2. ELIGIBLE INVESTMENTS

The investment managers may hold fixed income instruments, fixed income index options and futures, and cash equivalents. The investments of each manager must satisfy the following criteria and constraints:

- (a) Government obligations of the U.S., its agencies, Canada, its provinces, or U.S. sponsored organizations must be payable in U.S. dollars and comply with the provisions of SBI investment guidelines 11A.24 subdivision .2.
- (b) U.S. and Canadian corporate obligations must be payable in U.S. dollars, be rated among the top four quality categories by a nationally recognized rating agency, and comply with all provisions of 11A.24 subdivision 3.
- (c) Other obligations not specified in (a) or (b) must meet the provisions of 11A.24 subdivision 4.

Investment managers are not constrained regarding:

- (1) transaction turnover.
- (2) use of covered call options as hedging devices.
- (3) liquidity requirements.
- (4) number of fixed income issues held.

3. INVESTMENT PARAMETERS

The investment parameters are based on "contribution to duration." Contribution to duration is the sector percentage multiplied by the sector duration.

Sector Weighting Guidelines

Treasury/Agency Sector	$\pm 75\%$ of the Salomon BIG Treasury/Agency sector contribution to duration
Mortgage Sector	$\pm 75\%$ of the Salomon BIG Mortgage sector contribution to duration
Corporate Sector	± 75 of the Salomon BIG Corporate sector contribution to duration
Issues Outside the Index*	Maximum 10% of the Salomon BIG contribution to duration

- * Issues collateralized by securities that are part of index are not considered to be outside the index. For instance, CMO's collateralized by mortgages that are part of the index are not considered to be outside the index.

Corporate Credit Guidelines

AAA/AA	$\pm 75\%$ of the combined Salomon BIG AAA and AA contribution to duration
A/BBB	$\pm 75\%$ of the combined Salomon BIG A and BBB contribution to duration

Duration Guidelines

± 0.2 years of the Salomon BIG Duration

4. COMMUNICATION

The SBI requires its investment managers to communicate with SBI staff on a regular basis.

a) On at least an annual basis, managers will review the results of their investment decisions with staff. The manager must review strategies and performance relative to the benchmark.

b) On a monthly written basis, managers will inform staff of account status, assets under management, and relevant personnel and ownership changes.

5. COMMODITY FUTURES TRADING AGREEMENT

Any commodity futures or options trading agreement entered into by a manager must provide that SBI liability for margin requirements, commissions and fees is limited solely to funds of the SBI and does not constitute a general obligation for the State of Minnesota.

6. FUTURE MODIFICATIONS

The SBI reserves the right to modify these investment guidelines at any time to insure the managers, both individually and collectively, are in compliance with Minnesota statutes and SBI policy. Managers will be notified in advance of changes to these guidelines.

Revised: May 1993

EXHIBIT B

MINNESOTA STATE BOARD OF INVESTMENT INVESTMENT GUIDELINES ACTIVE/PASSIVE INTERNATIONAL EQUITY MANAGER

The investment actions of the State Board of Investment (SBI) active country/passive stock international managers will be governed by the following guidelines:

1. RETURN OBJECTIVE

The manager is expected to deliver returns that exceed the benchmark, net of fees, by at least 1 percentage point annually, over time.

2. PERFORMANCE BENCHMARK

The performance benchmark will be the Morgan Stanley Capital International (MSCI) Index of Europe, Australia and the Far East (EAFE), capitalization weighted, excluding those securities that US investors are not allowed to own. This is commonly referred to as EAFE "Free" by MSCI.

3. PRICING AND PERFORMANCE MEASUREMENT

The portfolio will be priced by the SBI's custodian bank and such prices will be used to measure performance of the SBI account. The manager agrees to accept the prices established by the custodian. The manager will review the custodian's pricing on a monthly basis and report any differences or discrepancies to the custodian and the SBI.

4. ELIGIBLE MARKETS

Subject to the constraints in #5 below, the manager is authorized to purchase securities in the following markets:

Group I. The manager is not restricted regarding publicly traded securities in the following markets:

Australia	France	Japan	Singapore
Austria	Germany	Luxembourg	Spain
Belgium	Greece	Netherlands	Sweden
Canada	Hong Kong	New Zealand	Switzerland
Czechoslovakia	Hungary	Norway	United Kingdom
Denmark	Italy	Poland	Uruguay
Finland	Ireland	Portugal	

Group II. The manager may purchase publicly traded securities in the following markets if the manager believes it would be a breach of fiduciary responsibility not to do so. If the manager chooses to invest in one or more of these markets, the manager must notify the SBI in writing of its decision to do so.

Argentina	Israel	Taiwan
Brazil	Jamaica	Thailand
Chile	Korea, Rep. of	Trinidad & Tobago
Colombia	Malaysia	Turkey
Egypt	Mexico	Venezuela
India	Philippines	

Group III. The manager may invest in publicly traded securities in the following markets if the manager believes it would be a breach of fiduciary responsibility not to do so. If the manager chooses to invest in one or more of these markets, the manager must appear at a meeting of the SBI to present its reason(s) for the decision to do so.

China	Pakistan
Indonesia	South Africa
Kuwait	USSR/former Soviet Union
Nigeria	Yugoslavia

5. ELIGIBLE SECURITIES

Subject to the constraints in #4 above, the manager may hold stocks, warrants, convertibles, financial and commodity futures and commodities and options thereon, currency forwards and cash equivalents provided:

- All securities held must be covered by the authorization in Minnesota Statutes Chapter 11A.24.
- US cash equivalent reserves shall be invested in the SBI's STIF fund, managed by its custodian bank.
- Convertibles shall not comprise more than 5% of portfolio value.
- The stock of companies domiciled in the US shall not be held in the account.
- Non-US stock index futures may be used to adjust the effective equity exposure of the portfolio from 0 to 100%.

The manager is not constrained regarding:

- transaction turnover
- use of covered call options as hedging devices
- liquidity requirements
- number of individual equity issues which must be held at any given time

6. PERFORMANCE EVALUATION

Manager performance will be evaluated according to the guidelines established in the SBI's Manager Continuation Policy. These guidelines assist the SBI in its decisions concerning retention and termination of investment managers.

7. COMMUNICATION

The SBI requires its investment managers to communicate with SBI staff on a regular basis.

- The manager is expected to meet with staff to review the results of the manager's investment decision-making process on at least an annual basis.
- The manager is expected to provide SBI staff with a status report pertaining to number of accounts, assets under management, and relevant personnel and ownership changes on a monthly basis.

8. PROXY VOTING

The SBI retains the right to vote its proxies directly. Unless the SBI notifies the manager that it is exercising this right, the manager shall vote all proxies on behalf of the SBI according to guidelines provided to the manager by the SBI. The manager shall report periodically on its voting practices with respect to the SBI portfolio.

9. COMMODITY FUTURES TRADING AGREEMENT

Any commodity futures or options trading agreement entered into by the Manager must provide that SBI liability for margin requirements, commissions and fees is limited solely to funds of the SBI and does not constitute a general obligation of the State of Minnesota.

10. FUTURE MODIFICATIONS

The SBI reserves the right to modify these investment guidelines at any time. The Manager will be notified in advance of changes to the investment guidelines.

Date: May, 1993

EXHIBIT B

MINNESOTA STATE BOARD OF INVESTMENT INVESTMENT GUIDELINES ACTIVE INTERNATIONAL EQUITY MANAGER

The investment actions of the State Board of Investment (SBI) active international stock managers will be governed by the following guidelines:

1. RETURN OBJECTIVE

The manager is expected to deliver returns that exceed the benchmark, net of fees, by at least 1 percentage point annually, over time.

2. PERFORMANCE BENCHMARK

The performance benchmark will be based on the Morgan Stanley Capital International (MSCI) Index of Europe, Australia and the Far East (EAFE), capitalization weighted, excluding those securities that US investors are not allowed to own. This is commonly referred to as EAFE "Free" by MSCI. Securities affected by the SBI's policy on South Africa will be excluded from the benchmark, but country weightings will be adjusted back to the weights given to markets in the unrestricted MSCI EAFE Free Index.

3. PRICING AND PERFORMANCE MEASUREMENT

The portfolio will be priced by the SBI's custodian bank and such prices will be used to measure performance of the SBI account. The manager agrees to accept the prices established by the custodian. The manager will review the custodian's pricing on a monthly basis and report any differences or discrepancies to the custodian and the SBI.

4. ELIGIBLE MARKETS

Subject to the constraints in #5 below, the manager is authorized to purchase securities in the following markets:

Group I. The manager is not restricted regarding publicly traded securities in the following markets:

Australia	France	Japan	Singapore
Austria	Germany	Luxembourg	Spain
Belgium	Greece	Netherlands	Sweden
Canada	Hong Kong	New Zealand	Switzerland

Czechoslovakia	Hungary	Norway	United Kingdom
Denmark	Italy	Poland	Uruguay
Finland	Ireland	Portugal	

Group II. The manager may purchase publicly traded securities in the following markets if the manager believes it would be a breach of fiduciary responsibility not to do so. If the manager chooses to invest in one or more of these markets, the manager must notify the SBI in writing of its decision to do so.

Argentina	Israel	Taiwan
Brazil	Jamaica	Thailand
Chile	Korea, Rep. of	Trinidad & Tobago
Colombia	Malaysia	Turkey
Egypt	Mexico	Venezuela
India	Philippines	

Group III. The manager may invest in publicly traded securities in the following markets if the manager believes it would be a breach of fiduciary responsibility not to do so. If the manager chooses to invest in one or more of these markets, the manager must appear at a meeting of the SBI to present its reason(s) for the decision to do so.

China	Pakistan
Indonesia	South Africa
Kuwait	USSR/former Soviet Union
Nigeria	Yugoslavia

5. ELIGIBLE SECURITIES

Subject to the constraints in #4 above, the manager may hold stocks, warrants, convertibles, financial and commodity futures and commodities and options thereon, currency forwards and cash equivalents provided:

- All securities held must be covered by the authorization in Minnesota Statutes Chapter 11A.24.
- US cash equivalent reserves shall be invested in the SBI's STIF fund, managed by its custodian bank.
- Convertibles shall not comprise more than 5% of portfolio value.
- The stock of companies domiciled in the US shall not be held in the account.

- Non-US stock index futures may be used to adjust the effective equity exposure of the portfolio from 0 to 100%.

The manager is not constrained regarding:

- transaction turnover
- use of covered call options as hedging devices
- liquidity requirements
- number of individual equity issues which must be held at any given time

6. SBI RESTRICTIONS

In March 1989, the SBI amended and re-stated a resolution which requires its active stock managers to discontinue future purchases of stock in companies that have direct investment in South Africa. The SBI maintains a list of restricted stocks which is updated and provided to managers on a monthly basis.

The SBI may establish additional constraints in the future to insure that managers, both individually and collectively, are in compliance with Minnesota Statutes and SBI policy.

7. PERFORMANCE EVALUATION

Manager performance will be evaluated according to the guidelines established in the SBI's Manager Continuation Policy. These guidelines assist the SBI in its decisions concerning retention and termination of investment managers.

8. COMMUNICATION

The SBI requires its investment managers to communicate with SBI staff on a regular basis.

- The manager is expected to meet with staff to review the results of the manager's investment decision-making process on at least an annual basis.
- The manager is expected to provide SBI staff with a status report pertaining to number of accounts, assets under management, and relevant personnel and ownership changes on a monthly basis.

9. PROXY VOTING

The SBI retains the right to vote its proxies directly. Unless the SBI notifies the manager that it is exercising this right, the manager shall vote all proxies on behalf of

the SBI according to guidelines provided to the manager by the SBI. The manager shall report periodically on its voting practices with respect to the SBI portfolio.

10. COMMODITY FUTURES TRADING AGREEMENT

Any commodity futures or options trading agreement entered into by the Manager must provide that SBI liability for margin requirements, commissions and fees is limited solely to funds of the SBI and does not constitute a general obligation of the State of Minnesota.

11. FUTURE MODIFICATIONS

The SBI reserves the right to modify these investment guidelines at any time. The Manager will be notified in advance of changes to the investment guidelines.

Date: May, 1993

**DOMESTIC STOCK MANAGERS
PROPOSED ALLOCATIONS
July 1, 1993**

	3/31/93 Market Value (\$ Millions)	3/31/93 (%)	7/1/93 Approximate Allocation (\$ Millions)	7/1/93 (%)
<i>Group I</i>				
Alliance	\$672	11%	\$640-675	7.0-7.5%
<i>Group II</i>				
Forstmann	\$332	5%	\$300-340	3.5-4.0%
Franklin	205	3%	300-340	3.5-4.0%
IDS	265	4%	300-340	3.5-4.0%
Independence	221	4%	300-340	3.5-4.0%
Lynch & Mayer	214	3%	300-340	3.5-4.0%
Waddell & Reed	246	4%	300-340	3.5-4.0%
<i>Group III</i>				
GeoCapital	\$229	4%	\$200-240	2.25-2.75%
Lieber	190	3%	200-240	2.25-2.75%
Brinson	--		200-240	2.25-2.75%
IAI Regional	--		100-120	less than 2.75%
Jundt	--		200-240	2.25-2.75%
Lincoln	--		200-240	2.25-2.75%
Oppenheimer	--		200-240	2.25-2.75%
Weiss Peck	--		200-240	2.25-2.75%
<i>Passive</i>				
Wilshire	\$3,300	58%	\$4,300-4,400	50-51%
<i>Approx. Total</i>			\$8,500	100%

**DOMESTIC BOND MANAGERS
PROPOSED ALLOCATIONS
July 1, 1993**

	3/31/93 Market Value (\$ Millions)	3/31/93 (%)	7/1/93 Approximate Allocation (\$ Millions)	7/1/93 (%)
<i>Group I</i>				
Western	\$583	21%	\$800-950	12-15%
<i>Group II</i>				
Ark	\$138	5%	--	--
IAI	198	7%	\$300-500	5-8%
Miller	306	11%	300-500	5-8%
Standish	--		300-500	5-8%
<i>Group III</i>				
BEA	--		\$250-400	4-6%
<i>Group IV</i>				
IDS/Gov-Corp.	--		\$125-250	2-4%
TCW/Mortg.	--		125-250	2-4%
<i>Semi-Passive</i>				
Fidelity	\$795	29%	\$1,000-1,100	16-17%
Lincoln	744	27%	1,000-1,100	16-17%
Goldman Sachs	--		1,000-1,100	16-17%
<i>Approx. Total</i>			\$6,300	100%

MANAGER FACT SHEET

Manager: *Baillie Gifford Overseas Limited*

General Style: Top-down/Bottom-Up with greater emphasis on Bottom-Up
Orientation: Quality/Value

Philosophy:

There are three central themes to the firm's investment philosophy. First is fundamental style. They place heavy emphasis on doing their own fundamental research. Second is a medium term time horizon. They aim to pick stocks which will outperform over the medium term, which they define as 3-5 years. The third theme is quality, then value. When picking stocks, they first look for quality companies that have good growth prospects going forward. Once they have identified quality companies, they determine if these companies are selling at sensible prices.

Portfolio Management:

Baillie Gifford's investment process is based on a team structure. They have an Investment Policy Committee which determines the overall policy and strategic moves for the portfolio. This policy includes country guidelines and currency selection.

Next they have a Pension Fund Team which interprets the strategic decisions made by the Investment Policy Committee for each client's portfolio. The team determines the appropriate regional weightings for portfolios given the client's investment guidelines and restrictions.

Once precise regional weightings have been agreed upon, it is the responsibility of the different geographical teams to determine individual country weightings and to select stocks within countries based on the fundamental research carried out by members of the geographical teams. The teams are organized according to Continental Europe, U.K., Far East and North America.

Stock picking has been the focus of the investment process, but Baillie Gifford also pays attention to the macroeconomic prospects for the different regions and countries in which they invest.

Ownership:

Baillie Gifford is an Edinburgh-based partnership. It was founded in 1908 and employs 180 people.

Statistics

Total Assets in non-U.S. equities:	\$9,865 million
Number of Accounts:	122

Largest Accounts:	Ontario Teachers	\$200 million
	NY State Common	\$74 million
	Guardian Life	55 million

Investment Manager: BAILLIE GIFFORD OVERSEAS LTD
Benchmark: EAFE INDEX

	---PORTFOLIO---		---BENCHMARK---		---VAM---	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
83 Q3	2.11%		2.34%		-0.22%	
Q4	6.78%	9.04%	6.43%	8.92%	0.33%	0.11%
84 Q1	14.27%		15.24%		-0.84%	
Q2	-16.37%		-11.76%		-5.22%	
Q3	5.17%		0.62%		4.52%	
Q4	0.06%	0.56%	4.96%	7.38%	-4.67%	-6.35%
85 Q1	4.97%		9.53%		-4.16%	
Q2	0.62%		6.56%		-5.58%	
Q3	12.27%		14.89%		-2.28%	
Q4	25.05%	48.28%	16.45%	56.16%	7.38%	-5.05%
86 Q1	22.95%		29.87%		-5.33%	
Q2	12.09%		8.75%		3.07%	
Q3	10.89%		15.43%		-3.93%	
Q4	6.10%	62.14%	3.93%	69.44%	2.09%	-4.31%
87 Q1	11.60%		23.27%		-9.47%	
Q2	9.00%		7.05%		1.82%	
Q3	7.40%		5.62%		1.68%	
Q4	-18.01%	7.11%	-10.59%	24.63%	-8.30%	-14.06%
88 Q1	7.69%		15.25%		-6.55%	
Q2	-3.03%		-4.39%		1.42%	
Q3	-3.38%		0.64%		-3.99%	
Q4	11.98%	12.99%	15.66%	28.27%	-3.19%	-11.91%
89 Q1	3.26%		0.28%		2.97%	
Q2	-1.64%		-6.17%		4.83%	
Q3	16.57%		12.39%		3.72%	
Q4	6.20%	25.73%	4.53%	10.54%	1.60%	13.74%
90 Q1	-0.03%		-19.77%		24.61%	
Q2	10.12%		9.55%		0.52%	
Q3	-15.61%		-21.20%		7.09%	
Q4	5.14%	-2.32%	10.53%	-23.45%	-4.88%	27.60%
91 Q1	7.01%		7.43%		-0.39%	
Q2	2.19%		-5.46%		8.09%	
Q3	5.09%		8.57%		-3.21%	
Q4	-0.49%	14.36%	1.68%	12.13%	-2.12%	1.99%
92 Q1	-3.55%		-11.87%		9.43%	
Q2	6.16%		2.11%		3.96%	
Q3	-9.37%		1.51%		-10.71%	
Q4	-1.59%	-8.68%	-3.86%	-12.17%	2.36%	3.98%
Latest:						
1 yr		-8.68%		-12.17%		3.98%
3 yr		0.67%		-8.99%		10.61%
5 yr		7.70%		1.34%		6.28%
Cum 83Q3-92Q4		15.99%		16.08%		-0.08%
Std Dev		18.49%		21.46%		12.32%

MANAGER FACT SHEET

Manager: *Bank of Ireland Asset Management (BIAM)*

General Style: Top-Down/Bottom-Up with greater emphasis on Bottom-Up
Orientation: Thematic/Value

Philosophy:

BIAM's investment philosophy is based on the belief that value arises from the ability of assets to generate income either now or in the future. Their philosophy is fundamental and value-driven. It is also based on the premise that basic economic events, which are thematic in nature, and which may transcend political and geopolitical boundaries, provide the best opportunities for effective investment selection. Historically, BIAM has taken very large "bets" relative to EAFE.

Portfolio Management:

They key decision making areas in the investment process are:

Thematic Selection -- Their approach uses economic and market analysis to identify themes and to specify investment selection criteria which are then consistently applied in a bottom-up stock selection process. The thematic weightings are set by reference to the relative attractiveness of the various themes represented in their portfolios at any time. This is done by the Investment Strategy Committee.

Stock Selection -- Individual stock selection is the responsibility of the Analysis Team. This is done after the appropriate themes have been selected. Fundamentally undervalued stocks are identified by a range of characteristics, including dividend yield, consistency of earnings growth and cash flow, financial strength and liquidity. Valuation comparisons are made on a global basis with other companies in similar sectors. BIAM typically focuses on larger capitalization companies than many other managers.

Portfolio Construction -- Portfolio managers construct client portfolios from selected stock lists screened according to client guidelines. When constructing portfolios, portfolio managers do not have personal discretion in their activities but operate solely within a team structure, thus ensuring similarity between accounts. The portfolios tend towards larger capitalized growth oriented companies with a proven track record of earnings growth. They tend to substantially overweight these companies relative to their market weighting.

Ownership:

Bank of Ireland Asset Management (BIAM) is a wholly owned subsidiary of the Bank of Ireland. BIAM was opened in 1988 and manages assets for U.S.-based clients. The Bank of Ireland manages over \$6 billion in global securities.

Statistics

Total Assets in non-U.S. equities:	\$414 million
Number of Accounts:	37

Largest Accounts:	NY City Police	\$ 73 million
	Maryland Retirement Sys	\$59 million
	New Hampshire Ret Sys	\$30 million

Investment Manager: BANK OF IRELAND
Benchmark: EAFE INDEX

	-----PORTFOLIO-----		-----BENCHMARK-----		-----VAM-----	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
85 Q1	3.87%		9.53%		-5.17%	
Q2	10.65%		6.56%		3.84%	
Q3	15.68%		14.89%		0.68%	
Q4	30.88%	74.01%	16.45%	56.16%	12.39%	11.43%
86 Q1	22.76%		29.87%		-5.48%	
Q2	10.42%		8.75%		1.54%	
Q3	-3.82%		15.43%		-16.68%	
Q4	19.95%	56.38%	3.93%	69.44%	15.41%	-7.71%
87 Q1	25.43%		23.27%		1.75%	
Q2	8.10%		7.05%		0.98%	
Q3	12.72%		5.62%		6.72%	
Q4	-24.81%	14.92%	-10.59%	24.63%	-15.91%	-7.80%
88 Q1	11.90%		15.25%		-2.90%	
Q2	7.39%		-4.39%		12.32%	
Q3	-1.99%		0.64%		-2.62%	
Q4	4.13%	22.64%	15.66%	28.27%	-9.97%	-4.39%
89 Q1	10.70%		0.28%		10.14%	
Q2	-1.88%		-6.17%		4.57%	
Q3	17.27%		12.39%		4.34%	
Q4	11.81%	42.42%	4.53%	10.53%	6.97%	28.54%
90 Q1	3.40%		-19.77%		28.88%	
Q2	6.14%		9.55%		-3.12%	
Q3	-19.01%		-21.20%		2.78%	
Q4	9.86%	-2.35%	10.53%	-23.45%	-0.61%	27.56%
91 Q1	7.09%		7.43%		-0.32%	
Q2	-7.43%		-5.46%		-2.09%	
Q3	7.29%		8.57%		-1.18%	
Q4	6.39%	13.16%	1.68%	12.13%	4.64%	0.92%
92 Q1	3.28%		-11.87%		17.19%	
Q2	15.22%		2.11%		12.83%	
Q3	-2.77%		1.51%		-4.21%	
Q4	-1.85%	13.56%	-3.86%	-12.17%	2.09%	29.30%
Latest:						
1 yr		13.56%		-12.17%		29.30%
3 yr		7.86%		-8.99%		18.51%
5 yr		16.99%		1.34%		15.44%
Cum 85Q1-92Q4		27.20%		17.06%		8.67%
Std Dev		22.63%		22.34%		18.00%

MANAGER FACT SHEET

Manager: *Hill Samuel Investment Advisers (HSIA)*

General Style: Top-Down/Bottom-Up with greater emphasis on Top-Down
Orientation: Value

Philosophy:

The cornerstone of Hill Samuel's investment philosophy is "winning by not losing." HSIA attempts to outperform in down markets and keep pace with the market during rising markets, in order to achieve overall outperformance. They believe this provides three benefits to their clients: 1) consistent above-average performance, 2) superior performance while taking less than market risk, and 3) low volatility relative to other managers and EAFE.

Portfolio Management:

HSIA evaluates each market and security on both a long-term and short-term basis. They believe the single most important ingredient for success is to "know your companies". The firm relies very little on outside resources for research. They have four regional research groups which are headquartered in London: European Equity Group, Far Eastern Equity Group, North American Equity Group and the Fixed Income and Currency Group.

The stock selection process is driven by fundamentals. The bottom-up process starts with security research. They do "screening in" to find stocks which are interesting based on dividend yield, P/E, B/P and cash flow/price ratios. The analysts then evaluate these companies and make recommendations on attractive stocks. To get on the firm's approved list, the stock must first be approved by the Regional Research Committee. Once it passes this, it must be approved by the Investment Committee, which makes the ultimate decision.

The Investment Committee makes the country allocation. They use a geographical model for guidelines in country weightings. This model is the result of an optimizer. They use their judgment to make country allocations based on the model and other factors, such as world economic factors. Different models are used for different types of clients, based on their particular restrictions.

Portfolio managers are responsible for building the portfolios. They take the country weights established by the Investment Committee and choose stocks from the approved list. Each manager is able to deviate $\pm 2\%$ from the established country guidelines.

Ownership:

HSIA is a London-based, SEC registered firm established in 1982. HSIA is part of the Hill Samuel Investment Management Group (HSIMG). HSIMG is owned by the Trustee Savings Bank (TSB) Group plc. Hill Samuel purchased Investment Advisers in 1986.

Statistics

Total Assets in non-U.S. equities:	\$514 million
Number of Accounts:	16

Largest Accounts:	General Motors	\$73 million
	FPL Group	\$71 million
	UAL	\$54 million

Investment Manager: HILL SAMUEL INVESTMENT
Benchmark: EAFE INDEX

	-----PORTFOLIO-----		-----BENCHMARK-----		-----VAM-----	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
80 Q1	-4.20%		-7.02%		3.03%	
Q2	30.30%		21.41%		7.32%	
Q3	7.50%		6.16%		1.26%	
Q4	4.20%	39.83%	2.28%	22.58%	1.87%	14.07%
81 Q1	-2.40%		0.52%		-2.91%	
Q2	1.70%		-1.20%		2.94%	
Q3	-9.40%		-11.81%		2.73%	
Q4	9.70%	-1.35%	11.57%	-2.28%	-1.68%	0.95%
82 Q1	-10.10%		-11.72%		1.83%	
Q2	0.20%		-3.01%		3.31%	
Q3	-14.30%		-1.95%		-12.59%	
Q4	28.20%	-1.03%	16.90%	-1.86%	9.67%	0.84%
83 Q4	3.10%		5.69%		-2.45%	
Q2	8.50%		7.45%		0.98%	
Q3	0.80%		2.34%		-1.50%	
Q4	6.10%	19.64%	6.43%	23.69%	-0.31%	-3.28%
84 Q1	15.30%		15.24%		0.06%	
Q2	-9.50%		-11.76%		2.57%	
Q3	2.20%		0.62%		1.57%	
Q4	0.70%	7.39%	4.96%	7.38%	-4.06%	0.01%
85 Q1	5.60%		9.53%		-3.59%	
Q2	3.70%		6.56%		-2.69%	
Q3	10.20%		14.89%		-4.09%	
Q4	19.70%	44.45%	16.45%	56.16%	2.79%	-7.50%
86 Q1	15.60%		29.87%		-10.99%	
Q2	13.20%		8.75%		4.09%	
Q3	10.70%		15.43%		-4.10%	
Q4	11.50%	61.52%	3.93%	69.44%	7.28%	-4.67%
87 Q1	6.40%		23.27%		-13.69%	
Q2	22.00%		7.05%		13.96%	
Q3	11.10%		5.62%		5.19%	
Q4	-15.90%	21.29%	-10.59%	24.63%	-5.94%	-2.68%
88 Q1	10.60%		15.25%		-4.03%	
Q2	1.90%		-4.39%		6.58%	
Q3	2.20%		0.64%		1.55%	
Q4	9.70%	26.35%	15.66%	28.27%	-5.16%	-1.49%
89 Q1	1.10%		0.28%		0.82%	
Q2	1.80%		-6.17%		8.49%	
Q3	10.30%		12.39%		-1.86%	
Q4	3.90%	17.95%	4.53%	10.53%	-0.60%	6.70%
90 Q1	-6.10%		-19.77%		17.04%	
Q2	6.20%		9.55%		-3.06%	
Q3	-13.90%		-21.20%		9.26%	
Q4	4.10%	-10.62%	10.53%	-23.45%	-5.82%	16.76%
91 Q1	5.99%		7.43%		-1.33%	
Q2	-3.10%		-5.46%		2.49%	
Q3	9.10%		8.57%		0.49%	
Q4	1.70%	13.96%	1.68%	12.13%	0.02%	1.64%

Investment Manager: HILL SAMUEL INVESTMENT
 Benchmark: EAFE INDEX

	---PORTFOLIO---		---BENCHMARK---		---VAM---	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
92 Q1	-0.80%		-11.87%		12.56%	
Q2	2.10%		2.11%		-0.01%	
Q3	-7.30%		1.51%		-8.68%	
Q4	2.20%	-4.04%	-3.86%	-12.17%	6.30%	9.25%
Latest:						
1 yr		-4.04%		-12.17%		9.25%
3 yr		-0.76%		-8.99%		9.04%
5 yr		7.81%		1.34%		6.39%
10 yr		18.14%		16.69%		1.24%
Cum 80Q1-92Q4		16.44%		14.02%		2.12%
Std Dev		18.41%		20.72%		12.23%

MANAGER FACT SHEET

Manager: *J.P. Morgan Investment Management (JPMIM)*

General Style: Top-Down/Bottom-Up with greater emphasis on Bottom-Up
Orientation: Value

Philosophy:

JPMIM uses a very risk controlled investment approach, attempting to outperform EAFE by 300 basis points per annum in both up and down markets. JPMIM's investment philosophy is that fundamental research can establish fair values for assets. These fair values may differ from market prices, but market prices will eventually move toward these fair values. They attempt to capitalize on those situations where the market price and fair value deviate.

Portfolio Management:

The first step in the investment process is the country allocation decision. This involves first making a long-term economic assessment about the various countries. These assumptions are used as input into a country allocation model. The model looks at the dividend discount rate (DDR) for a country and compares that to alternative investments (such as the long bond yield) to determine a risk premium. The model compares this current risk premium with an historical average to determine the current risk premium deviation. If this deviation is positive, the market is undervalued. The firm follows this process for each country and ranks them from the most undervalued to the most overvalued. The Strategy Committee combines the risk premium analysis with subjective assessment to determine portfolio over/underweightings.

The next step is the stock selection process. JPMIM uses regional analysts to perform this. These analysts are also industry experts. They generate earnings and cash flow projections as the chief inputs into their valuation model. Every stock in their research universe is categorized by country into an industry sector. Stocks are placed into a quintile ranking, based upon their dividend discount rates, with the most undervalued stocks in the first quintile and the most overvalued stocks in the lower quintile.

Each portfolio manager, who is a country specialist, works closely with the industry analysts to select the most undervalued stocks within each sector, primarily purchasing stocks ranked in the first quintile. In the event a stock's DDR declines, due to an increase in price or a deterioration of long-term fundamentals, the country specialist may decide to sell the security. Stocks typically become candidates for sale when they drop to the third quintile within their industry sector.

Ownership:

JPMIM is owned by J.P. Morgan & Company.

Statistics

Total Assets in non-U.S. equities	\$4,767 million
Number of Accounts:	77 accounts

Largest Accounts:	International Equity Fund	\$645 million
	Corporate Pension	\$170 million
	Religious Fund	\$150 million

Investment Manager: J.P. MORGAN INVST INTL EQTY
Benchmark: EAFE INDEX

	---PORTFOLIO---		---BENCHMARK---		---VAM---	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
83 Q3	6.33%		2.34%		3.90%	
Q4	3.64%	10.20%	6.43%	8.92%	-2.62%	1.17%
84 Q1	6.08%		15.24%		-7.95%	
Q2	-18.44%		-11.76%		-7.57%	
Q3	7.07%		0.62%		6.41%	
Q4	-1.13%	-8.41%	4.96%	7.38%	-5.80%	-14.70%
85 Q1	9.89%		9.53%		0.33%	
Q2	7.40%		6.56%		0.79%	
Q3	15.58%		14.89%		0.60%	
Q4	21.04%	65.12%	16.45%	56.16%	3.95%	5.74%
86 Q1	29.01%		29.87%		-0.66%	
Q2	10.82%		8.75%		1.91%	
Q3	8.10%		15.43%		-6.35%	
Q4	8.88%	68.29%	3.93%	69.44%	4.77%	-0.68%
87 Q1	16.87%		23.27%		-5.20%	
Q2	7.92%		7.05%		0.80%	
Q3	12.97%		5.62%		6.96%	
Q4	-14.27%	22.15%	-10.59%	24.63%	-4.11%	-1.99%
88 Q1	3.77%		15.25%		-9.96%	
Q2	7.49%		-4.39%		12.42%	
Q3	2.81%		0.64%		2.15%	
Q4	7.99%	23.83%	15.66%	28.27%	-6.63%	-3.45%
89 Q1	-1.34%		0.28%		-1.62%	
Q2	-2.11%		-6.17%		4.33%	
Q3	11.48%		12.39%		-0.81%	
Q4	7.83%	16.08%	4.53%	10.53%	3.16%	5.02%
90 Q1	-12.32%		-19.77%		9.28%	
Q2	9.18%		9.55%		-0.35%	
Q3	-14.61%		-21.20%		8.36%	
Q4	5.61%	-13.68%	10.53%	-23.45%	-4.45%	12.76%
91 Q1	7.80%		7.43%		0.35%	
Q2	-2.61%		-5.46%		3.01%	
Q3	8.93%		8.57%		0.33%	
Q4	2.16%	16.83%	1.68%	12.13%	0.48%	4.20%
92 Q1	-7.54%		-11.87%		4.91%	
Q2	2.58%		2.11%		0.45%	
Q3	-1.23%		1.51%		-2.70%	
Q4	-2.68%	-8.84%	-3.86%	-12.17%	1.22%	3.80%
Latest:						
1 yr		-8.84%		-12.17%		3.80%
3 yr		-2.76%		-8.99%		6.84%
5 yr		5.74%		1.34%		4.34%
Cum 83Q3-92Q4		17.23%		16.08%		0.99%
Std Dev		18.88%		21.46%		10.06%

MANAGER FACT SHEET

Manager: *Lazard Frères Asset Management (LFAM)*

General Style: Primarily Bottom-Up

Orientation: Value

Philosophy:

Lazard employs a systematic, disciplined, bottom-up approach to international investing. The firm takes a value approach to investing. They like "cheap stocks in cheap markets". Historically, Lazard has taken very large "bets" relative to EAFE.

Portfolio Management:

The portfolio management process is done in four stages. The first stage is database screening. They begin with a universe of 4,500 international companies. They screen to find companies which are undervalued versus the local index and the world index. This eliminates approximately 80% of the companies. They also will look elsewhere for companies which may have been missed by the screening process due to accounting distortions, but actually qualify for their universe. They develop a value indicator for each stock to see how much it is undervalued relative to the market.

The next step is the accounting validation process. This is Lazard's check to see if financial productivity and pricing is accurately stated. They determine if the numbers they see initially are the true numbers and focus a lot of effort on analyzing the differences. They have one person employed internally to keep them up-to-date on international accounting conventions.

The third stage is fundamental analysis. They perform research to determine if the returns can be sustained and to determine an outlook for the company.

The final stage is portfolio construction. All portfolio managers are also analysts. Each analyst/manager originating an idea presents it to the Investment Team to determine if the stock should go in the portfolio. The Investment Team makes the final decision.

Country allocation is an outgrowth of stock selection and is looked at from a risk control perspective. Lazard emphasizes undervalued markets and takes into consideration the economic outlook for a market. They develop a value indicator, similar to those developed for the stocks, and determine which countries are undervalued or overvalued relative to the world index. They set their country exposures from this and can deviate quite dramatically from the EAFE index.

Ownership:

Lazard Frères & Co. is a partnership which was founded in 1848. Lazard Frères Asset Management was founded in 1970 as a separate entity. LFAM began managing international equities in 1984.

Statistics

Total Assets in non-U.S. equities:	\$634 million
Number of Accounts:	26 accounts

Largest Accounts:	Cal STRS	\$82 million
	Mississippi PERS	\$77 million
	Consolidated Papers Pension	\$37 million

Investment Manager: LAZARD FRERES

Benchmark: EAFE INDEX

	----PORTFOLIO----		----BENCHMARK----		-----VAM-----	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
87 Q1	20.10%		23.27%		-2.57%	
Q2	7.63%		7.05%		0.54%	
Q3	11.75%		5.62%		5.80%	
Q4	-16.41%	20.75%	-10.59%	24.63%	-6.51%	-3.11%
88 Q1	5.77%		15.25%		-8.22%	
Q2	6.22%		-4.39%		11.09%	
Q3	-0.13%		0.64%		-0.77%	
Q4	10.63%	24.13%	15.66%	28.27%	-4.35%	-3.23%
89 Q1	7.68%		0.28%		7.39%	
Q2	3.27%		-6.17%		10.06%	
Q3	12.52%		12.39%		0.12%	
Q4	5.76%	32.33%	4.53%	10.54%	1.17%	19.72%
90 Q1	0.47%		-19.77%		25.23%	
Q2	9.22%		9.55%		-0.31%	
Q3	-14.95%		-21.20%		7.93%	
Q4	5.59%	-1.46%	10.53%	-23.45%	-4.47%	28.72%
91 Q1	4.57%		7.43%		-2.67%	
Q2	-4.26%		-5.46%		1.27%	
Q3	11.39%		8.57%		2.60%	
Q4	4.25%	16.26%	1.68%	12.13%	2.53%	3.69%
92 Q1	1.24%		-11.87%		14.87%	
Q2	6.85%		2.11%		4.64%	
Q3	-11.67%		1.51%		-12.98%	
Q4	-0.28%	-4.71%	-3.86%	-12.17%	3.73%	8.49%
Latest:						
1 yr		-4.71%		-12.17%		8.49%
3 yr		2.96%		-8.99%		13.13%
5 yr		12.39%		1.34%		10.90%
Cum 87Q1-92Q4		13.74%		4.90%		8.43%
Std Dev		17.36%		22.09%		15.39%

MANAGER FACT SHEET

Manager: *Marathon Asset Management*

General Style: Top-Down/Bottom-Up with greater emphasis on Bottom-Up
Orientation: Value

Philosophy:

Marathon uses a blend of flexible, qualitative disciplines to construct portfolios which exhibit a value bias. Portfolios are constructed to outperform from the top down and bottom up. Style and emphasis will vary over time and by market, depending on Marathon's perception of lowest risk opportunity. Control and monitoring of the portfolio risk relative to the benchmark is an integral component of Marathon's structure and investment technique.

Portfolio Management:

Marathon's focus is on stock and industry selection rather than country allocation. Historically, their country divergence from the EAFE index has been small compared to other managers. They do take large sector bets relative to the index however.

Marathon evaluates sectors based on the long term capital cycle in order to find attractive industries. They believe the amount of competition determines industry profitability. They are attracted to industries where the level of competition is declining, and they will hold a sector position as long as the level of competition does not increase. Within these industries, they attempt to identify those companies that will survive industry competition.

On a stock selection level, Marathon focuses on managerial capabilities, return on reinvested cash flow and risk analysis. They use a management reinvestment matrix when analyzing companies. This matrix is a grid which plots a company's competitive position versus the attractiveness of their products. Each company's location on this grid corresponds to a reinvestment strategy. The strategies include such items as "invest and grow" or "manage for cash". They believe any firm will make money if its investment process is the same as the corresponding strategy from the grid. When Marathon analyzes companies, they determine if a company is following the appropriate strategy. They will invest in companies anywhere on the matrix.

Ownership:

Marathon was founded in 1986. There are three directors/partners. These three individuals own 55% of the firm and the remaining 45% is owned by Sphere Investment Trust plc.

Statistics

Total Assets in non-U.S. equities:	\$500 million
Number of Accounts:	10

Largest Accounts:	GTE Corporation	\$67.9 million
	US Air Inc.	\$57.4 million
	Penn Public Schools	\$49.1 million

Investment Manager: MARATHON - LONDON

Benchmark: EAFE INDEX

	----PORTFOLIO----		----BENCHMARK----		-----VAM-----	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
87 Q2	11.00%		7.05%		3.69%	
Q3	12.60%		5.62%		6.61%	
Q4	-20.60%	-0.76%	-10.59%	1.10%	-11.20%	-1.84%
88 Q1	11.44%		15.25%		-3.30%	
Q2	0.77%		-4.39%		5.39%	
Q3	-2.19%		0.64%		-2.82%	
Q4	14.92%	26.23%	15.66%	28.27%	-0.64%	-1.59%
89 Q1	3.10%		0.28%		2.82%	
Q2	-1.69%		-6.17%		4.77%	
Q3	23.91%		12.39%		10.25%	
Q4	6.85%	34.20%	4.53%	10.54%	2.22%	21.40%
90 Q1	-7.26%		-19.77%		15.60%	
Q2	7.97%		9.55%		-1.45%	
Q3	-16.91%		-21.20%		5.44%	
Q4	2.21%	-14.96%	10.53%	-23.45%	-7.53%	11.08%
91 Q1	7.26%		7.43%		-0.16%	
Q2	1.25%		-5.46%		7.09%	
Q3	5.35%		8.57%		-2.97%	
Q4	0.57%	15.06%	1.68%	12.13%	-1.09%	2.62%
92 Q1	-7.94%		-11.87%		4.46%	
Q2	4.49%		2.11%		2.33%	
Q3	-0.34%		1.51%		-1.82%	
Q4	-2.89%	-6.90%	-3.86%	-12.17%	1.01%	6.00%
Latest:						
1 yr		-6.90%		-12.17%		6.00%
3 yr		-3.06%		-8.99%		6.51%
5 yr		9.06%		1.34%		7.62%
Cum 87Q2-92Q4		7.69%		1.36%		6.25%
Std Dev		19.88%		20.89%		11.34%

MANAGER FACT SHEET

Manager: *Rowe Price-Fleming International, Inc.*

General Style: Top-Down/Bottom-Up with greater emphasis on Top-Down
Orientation: Growth

Philosophy:

The firm believes that world stock markets are segmented and valuation disparities exist between and within individual markets. It believes that active portfolio management can add value by identifying and exploiting the pricing inefficiencies which result and which endure over long periods of time. Finally, they believe growth is frequently underpriced in world stock markets.

Portfolio Management:

Country weightings and individual stock selections are developed through the interplay between their macroeconomic view and the attractiveness of investment opportunities within each market. The investment process is comprised of four components, each of which is performed continuously. The first stage is a review of the economic outlook. The portfolio Management Team performs an on-going evaluation of key economic variables driving world stock markets. Key variables are interest rate trends and earnings momentum.

The next component is the review of the portfolio profile. The Portfolio Management Team performs an assessment of the country allocation, industry/sector breakdown and the currency profile. Portfolios tend to evolve gradually to reflect the long-term nature of pricing inefficiencies.

The third component is stock selection. This is driven by fundamental analysis. Rowe Price emphasizes companies with above-market earnings growth at reasonable valuations and which are consistent with their economic view. The individual portfolio managers are responsible for stock selection within their regional assignments. They also use growth/value screens appropriate to each market during this portion of the portfolio construction process. The stock selection process is what drives the country allocations.

The final component is monitoring and evaluation, which is done on a weekly basis. Rowe Price does performance analysis to determine the contribution to relative performance from country weightings, currency exposure and stock selection. They monitor strategic changes to the portfolio structure and adherence to client guidelines. They also look at the portfolio risk characteristics.

Ownership:

Rowe Price-Fleming International was incorporated and registered with the SEC in 1979. It has three parent organizations: T. Rowe Price of Baltimore owns 50%; Robert Fleming, a U.K.-based investment management firm owns 25%; and Jardine Fleming, a Hong Kong-based investment arm of Robert Fleming, owns approximately 25%.

Statistics

Total Assets in non-U.S. equities:	\$6,200 million
Number of Accounts:	43

Largest Accounts:	State of Oregon	\$334 million
	General Motors	\$250 million
	GTE	\$180 million

Investment Manager: ROWE PRICE-FLEMING INTL
 Benchmark: EAFL INDEX

	PORTFOLIO		BENCHMARK		VAM	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
81	Q2	2.55%	-1.20%		3.79%	
	Q3	-11.78%	-11.81%		0.03%	
	Q4	6.10%	11.57%	-2.78%	-4.91%	-1.27%
82	Q1	-9.36%	-11.72%		2.68%	
	Q2	-0.75%	-3.01%		2.33%	
	Q3	0.57%	-1.95%		2.57%	
	Q4	17.54%	16.90%	-1.86%	0.55%	8.36%
83	Q4	4.38%	5.69%		-1.24%	
	Q2	8.84%	7.45%		1.29%	
	Q3	4.21%	2.34%		1.83%	
	Q4	8.79%	6.43%	23.69%	2.22%	4.13%
84	Q1	7.69%	15.24%		-6.55%	
	Q2	-14.06%	-11.76%		-2.61%	
	Q3	1.42%	0.62%		0.80%	
	Q4	0.70%	4.96%	7.38%	-4.05%	-11.98%
85	Q1	4.69%	9.53%		-4.42%	
	Q2	4.77%	6.56%		-1.68%	
	Q3	13.82%	14.89%		-0.94%	
	Q4	18.45%	16.45%	56.16%	1.71%	-5.30%
86	Q1	25.21%	29.87%		-3.59%	
	Q2	10.18%	8.75%		1.32%	
	Q3	11.95%	15.43%		-3.02%	
	Q4	9.95%	3.93%	69.44%	5.79%	0.21%
87	Q1	11.89%	23.27%		-9.23%	
	Q2	11.61%	7.05%		4.26%	
	Q3	8.26%	5.62%		2.49%	
	Q4	-17.06%	-10.59%	24.63%	-7.24%	-10.03%
88	Q1	5.42%	15.25%		-8.53%	
	Q2	-0.02%	-4.39%		4.56%	
	Q3	-0.61%	0.64%		-1.25%	
	Q4	10.08%	15.66%	28.27%	-4.83%	-10.11%
89	Q1	3.82%	0.28%		3.53%	
	Q2	-1.33%	-6.17%		5.16%	
	Q3	15.60%	12.39%		2.85%	
	Q4	5.13%	4.53%	10.54%	0.57%	12.62%
90	Q1	-3.22%	-19.77%		20.64%	
	Q2	8.90%	9.55%		-0.60%	
	Q3	-18.44%	-21.20%		3.49%	
	Q4	7.56%	10.53%	-23.45%	-2.68%	20.78%
91	Q1	7.65%	7.43%		0.20%	
	Q2	-2.57%	-5.46%		3.05%	
	Q3	8.75%	8.57%		0.17%	
	Q4	2.67%	1.68%	12.13%	0.98%	4.45%
92	Q1	-2.23%	-11.87%		10.93%	
	Q2	5.39%	2.11%		3.21%	
	Q3	-4.23%	1.51%		-5.66%	
	Q4	-1.32%	-3.86%	-12.17%	2.64%	10.87%

Investment Manager: ROWE PRICE-FLEMING INTL
 Benchmark: EAFE INDEX

	----PORTFOLIO----		----BENCHMARK----		-----VAM-----	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
Latest:						
1 yr		-2.63%		-12.17%		10.87%
3 yr		1.78%		-8.99%		11.83%
5 yr		8.64%		1.34%		7.20%
10 yr		17.90%		16.69%		1.03%
Cum 81Q2-92Q4		15.24%		13.58%		1.46%
Std Dev		17.50%		21.03%		9.79%

MANAGER FACT SHEET

Manager: *Scudder, Stevens & Clark*

General Style: Top-Down/Bottom-Up with greater emphasis on Top-Down
Orientation: Thematic/Value

Philosophy:

The firm believes that successful international investing requires knowledge of each country's economy, political situation and financial market. Continuous, thorough research of foreign markets and individual securities is essential. They also believe that since foreign markets do not move in step with each other, diversification and moving from areas of overvaluation to undervaluation -- both by country and industry -- add value and reduce volatility.

Portfolio Management:

The investment process focuses on three areas: country analysis, global themes and unique situations. The global themes portion involves the identification and analysis of industries and sectors most likely to gain or lose during specific phases of a theme's cycle. Themes are identified through a group process. This process often involves discussion with management of relevant companies or other external sources.

Country analysis involves the assessment of regional and local market opportunities. They analyze 18 countries, according to five factors. These factors are: strategic factors, position in the world economic cycle, domestic cyclical indicators, internal stock market valuation and currency indicators. Each factor is given a positive, neutral or negative rating. An overall outlook is developed for each country and for groups of countries with similar economic profiles.

Unique situations is the bottom-up portion of the process. To identify individual companies with exceptional opportunities, they look for unique attributes such as growth potential or innovation.

The decision-making process involves taking ideas from the global themes, country allocation and unique situations and integrating them into the company universe. They perform security analysis on this universe, using their own internal research. They look for companies which have consistent or above average earnings, potential for dividend growth, strong financial ratios, above average return on capital, strong or improving balance sheets, superior management and conservative accounting practices, dominant position in growing industries and satisfactory marketability.

Ownership:

Scudder is a New York based firm which was founded in 1919. It is 100% owned by its employees.

Statistics

Total Assets in non-U.S. equities:	\$2,694 million
Number of Accounts	29

Largest Accounts:	Public Pension	\$193 million
	Public Pension	\$143 million
	Public Pension	\$110 million

Investment Manager: SCUDDER INTL EQUITY MGMT

Benchmark: EAFE INDEX

	---PORTFOLIO---		---BENCHMARK---		---VAM---	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
83 Q4	18.20%		5.69%		11.84%	
Q2	13.60%		7.45%		5.72%	
Q3	1.20%		2.34%		-1.11%	
Q4	5.70%	43.63%	6.43%	23.69%	-0.68%	16.12%
84 Q1	12.20%		15.24%		-2.63%	
Q2	-11.80%		-11.76%		-0.04%	
Q3	3.50%		0.62%		2.86%	
Q4	0.17%	2.60%	4.96%	7.38%	-4.56%	-4.45%
85 Q1	11.07%		9.53%		1.41%	
Q2	6.70%		6.56%		0.13%	
Q3	13.60%		14.89%		-1.13%	
Q4	27.98%	72.30%	16.45%	56.16%	9.90%	10.33%
86 Q1	22.48%		29.87%		-5.69%	
Q2	12.75%		8.75%		3.68%	
Q3	8.20%		15.43%		-6.27%	
Q4	8.30%	61.82%	3.93%	69.44%	4.21%	-4.50%
87 Q1	17.98%		23.27%		-4.29%	
Q2	11.60%		7.05%		4.25%	
Q3	9.66%		5.62%		3.82%	
Q4	-22.06%	12.53%	-10.59%	24.63%	-12.83%	-9.71%
88 Q1	10.00%		15.25%		-4.55%	
Q2	0.77%		-4.39%		5.39%	
Q3	-2.58%		0.64%		-3.20%	
Q4	8.76%	17.45%	15.66%	28.27%	-5.97%	-8.44%
89 Q1	7.66%		0.28%		7.36%	
Q2	3.33%		-6.17%		10.12%	
Q3	15.28%		12.39%		2.57%	
Q4	6.32%	36.35%	4.53%	10.54%	1.71%	23.35%
90 Q1	-3.20%		-19.77%		20.66%	
Q2	7.65%		9.55%		-1.74%	
Q3	-20.40%		-21.20%		1.01%	
Q4	2.86%	-14.68%	10.53%	-23.45%	-6.94%	11.45%
91 Q1	12.02%		7.43%		4.27%	
Q2	-4.43%		-5.46%		1.09%	
Q3	7.73%		8.57%		-0.78%	
Q4	1.05%	16.54%	1.68%	12.13%	-0.62%	3.94%
92 Q1	-1.44%		-11.87%		11.83%	
Q2	4.89%		2.11%		2.72%	
Q3	-1.59%		1.51%		-3.05%	
Q4	-2.64%	-0.95%	-3.86%	-12.17%	1.27%	12.78%
Latest:						
1 yr		-0.95%		-12.17%		12.78%
3 yr		-0.51%		-8.99%		9.32%
5 yr		9.54%		1.34%		8.09%
Cum 83Q1-92Q4		21.98%		16.69%		4.53%
Std Dev		19.75%		20.94%		12.01%

MANAGER FACT SHEET

Manager: *Templeton Investment Counsel, Inc.*

General Style: Primarily Bottom-Up

Orientation: Value

Philosophy:

The firm's goal is to identify those companies selling at the greatest discount to future intrinsic value, which over time will produce the greatest share price with minimal risk. They take a long-term approach to investing, believing that on a long-term basis, markets are efficient and patience will reward those who have identified undervalued stocks. Historically, Templeton has taken very large "bets" relative to EAFE.

Portfolio Management:

Portfolios are structured completely from a stock selection orientation. The primary factor that they look at is a company's current price relative to its future or long term earnings potential or real book value, whichever is appropriate. The stock selection process begins with identifying undervalued securities. This initial work is performed through two sources: ideas from their worldwide network of research sources and screens of their proprietary global database. This initial work provides a list of potentially attractive stocks upon which further analysis is performed.

Once this preliminary list has been developed, the fundamental analysis is done by their analysts. The analysts' job is to distinguish a "cheap" stock from a "bargain". Analysts focus on those factors which may cause earnings and/or assets to increase over the next five years. A stock must also be "cheap" relative to itself historically, its industry globally, other names in its own market, and other names in the research database. The best ideas from the research database are then submitted for inclusion on the "Bargain List". The analysts/portfolio managers generate their stock recommendations, which are presented along with supporting information to their peers for consideration and inclusion on the bargain list. Each stock on the bargain list has an established buy limit and sell target. The bargain list is used to construct all their portfolios.

The normal concentration in a single stock ranges from 1% to 5%. All portfolios are similar and have the same underlying characteristics: low turnover, median variability, low risk, median market capitalization, and dissimilar country/sector weightings from the established indices. Country weightings for a portfolio are the residual of stock selection, as stocks are chosen from the bargain list at the designated price limits. Sector and industry weights are also a residual of stock selection.

Ownership:

Templeton, Galbraith, & Hansberger, LTD (Nassau) is the parent company of Templeton Investment Counsel (Ft. Lauderdale). There are additional research offices in Edinburgh, Toronto, Hong Kong, Melbourne and Singapore.

Statistics

Total Assets in non-U.S. equities: \$1,144.9 million
Number of Accounts: 28

Largest Accounts:

Public Fund	\$113.1 million
Corporate Fund	\$95.1 million
Corporate Fund	\$89.2 million

Investment Manager: TEMPLETON NON-US EQUITY
 Benchmark: EAFE INDEX

	---PORTFOLIO---		---BENCHMARK---		-----VAM-----	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
81	Q1	1.60%	0.52%		1.07%	
	Q2	1.40%	-1.20%		2.63%	
	Q3	-8.80%	-11.81%		3.41%	
	Q4	7.60%	11.57%	-2.28%	-3.56%	3.45%
82	Q1	-6.20%	-11.72%		6.25%	
	Q2	-7.50%	-3.01%		-4.63%	
	Q3	5.10%	-1.95%		7.19%	
	Q4	13.40%	16.90%	-1.86%	-2.99%	5.37%
83	Q4	16.40%	5.69%		10.13%	
	Q2	16.60%	7.45%		8.52%	
	Q3	18.20%	2.34%		15.50%	
	Q4	7.80%	6.43%	23.69%	1.29%	39.81%
84	Q1	9.40%	15.24%		-5.06%	
	Q2	-12.40%	-11.76%		-0.72%	
	Q3	5.00%	0.62%		4.35%	
	Q4	3.20%	4.96%	7.38%	-1.68%	-3.29%
85	Q1	2.80%	9.53%		-6.14%	
	Q2	6.00%	6.56%		-0.53%	
	Q3	9.30%	14.89%		-4.87%	
	Q4	8.80%	16.45%	56.16%	-6.57%	-17.02%
86	Q1	28.70%	29.87%		-0.90%	
	Q2	1.10%	8.75%		-7.04%	
	Q3	2.80%	15.43%		-10.94%	
	Q4	14.80%	3.93%	69.44%	10.46%	-9.37%
87	Q1	20.10%	23.27%		-2.57%	
	Q2	6.40%	7.05%		-0.61%	
	Q3	17.00%	5.62%		10.77%	
	Q4	-22.20%	-10.59%	24.63%	-12.99%	-6.67%
88	Q1	12.90%	15.25%		-2.04%	
	Q2	7.10%	-4.39%		12.01%	
	Q3	1.00%	0.64%		0.35%	
	Q4	8.40%	15.66%	28.27%	-6.28%	3.21%
89	Q1	8.10%	0.28%		7.80%	
	Q2	-2.00%	-6.17%		4.44%	
	Q3	17.50%	12.39%		4.55%	
	Q4	5.30%	4.53%	10.54%	0.74%	18.58%
90	Q1	-2.20%	-19.77%		21.90%	
	Q2	10.90%	9.55%		1.23%	
	Q3	-17.90%	-21.20%		4.19%	
	Q4	2.80%	10.53%	-23.45%	-6.99%	19.57%
91	Q1	9.00%	7.43%		1.46%	
	Q2	-4.70%	-5.46%		0.80%	
	Q3	8.60%	8.57%		0.02%	
	Q4	3.90%	1.68%	12.13%	2.19%	4.53%

Investment Manager: TEMPLETON NON-US EQUITY
 Benchmark: EAFE INDEX

	----PORTFOLIO----		----BENCHMARK----		-----VAM-----	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
92 Q1	1.90%		-11.87%		15.62%	
Q2	7.70%		2.11%		5.47%	
Q3	-8.30%		1.51%		-9.66%	
Q4	-0.90%	-0.27%	-3.86%	-12.17%	3.08%	13.55%
Latest:						
1 yr		-0.27%		-12.17%		13.55%
3 yr		2.28%		-8.99%		12.38%
5 yr		13.18%		1.34%		11.68%
10 yr		22.67%		16.69%		5.13%
Cum 81Q1-92Q4		19.01%		13.33%		5.01%
Std Dev		19.19%		20.82%		13.97%

MANAGER FACT SHEET

Manager: *Walter Scott & Partners*

General Style: Primarily Bottom-Up

Orientation: Growth

Philosophy:

Walter Scott seeks to generate high real returns by combining the best businesses from the best industries in whatever economic area the portfolio is invested. Over the long-term, which the firm defines as an economic cycle of 5-7 years, Walter Scott expects to significantly outperform local market indices and benchmarks. The firm's objective is to target a real rate of return that on average exceeds a minimum of 7%. Historically, Walter Scott has taken very large "bets" relative to EAFE.

Portfolio Management:

The firm is an entirely research based investment management firm. The bulk of the time and effort of the firm's personnel is devoted to originating, validating, valuing and implementing research initiatives. This applies equally to the strategic construction of portfolios and the tactical implementation of these portfolios on a day-to-day basis.

The firm makes investments on a team basis. At the strategic level, the approach is based on the identification of major political/economic shifts that are of a secular nature. The firm's approach is that of a research driven fundamentalist.

The research process results in a "library" of companies that meet every requirement for investment, subject to price. A company is actually purchased when the conjunction of P/E and expected 6-year earnings per share growth is consistent with a forecast return of local cost of living plus 7%. Stocks are typically sold when the relationship between P/E, EPS growth and target return breaks down for any reason. The other type of sale occurs when the success of an investment has taken it above normal prudent portfolio limits.

Investments are focused in the most profitable businesses in the world. The firm believes that earnings drive share prices and superior earnings growth occurs most frequently in areas of economic activity that occupy the top quartile of GNP growth. Therefore, portfolios may be void in industries which are in secular economic decline.

Ownership:

Walter Scott & Partners Limited is an Edinburgh-based partnership. It was established in 1983.

Statistics

Total Assets in non-U.S. equities:	\$270 million
Number of Accounts:	10

Largest Accounts:	Corporate Pension	\$60 million
	Corporate Pension	\$50 million
	State Retirement System	\$50 million

Investment Manager: WALTER SCOTT & PARTNERS
 Benchmark: EAFE INDEX

	---PORTFOLIO---		---BENCHMARK---		---VAM---	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
86 Q1	11.53%		29.87%		-14.13%	
Q2	12.76%		8.75%		3.69%	
Q3	11.99%		15.43%		-2.98%	
Q4	9.73%	54.54%	3.93%	69.44%	5.58%	-8.80%
87 Q1	0.49%		23.27%		-18.49%	
Q2	18.44%		7.05%		10.64%	
Q3	12.62%		5.62%		6.63%	
Q4	-17.01%	11.24%	-10.59%	24.63%	-7.18%	-10.75%
88 Q1	10.74%		15.25%		-3.91%	
Q2	-0.65%		-4.39%		3.91%	
Q3	-2.47%		0.64%		-3.10%	
Q4	5.99%	13.74%	15.66%	28.27%	-8.36%	-11.33%
89 Q1	-1.84%		0.28%		-2.11%	
Q2	3.41%		-6.17%		10.21%	
Q3	10.40%		12.39%		-1.77%	
Q4	2.79%	15.20%	4.53%	10.54%	-1.66%	4.22%
90 Q1	-0.96%		-19.77%		23.45%	
Q2	8.08%		9.55%		-1.34%	
Q3	-13.23%		-21.20%		10.12%	
Q4	3.83%	-3.55%	10.53%	-23.45%	-6.06%	25.98%
91 Q1	7.58%		7.43%		0.14%	
Q2	-1.01%		-5.46%		4.70%	
Q3	2.76%		8.57%		-5.35%	
Q4	1.46%	11.02%	1.68%	12.13%	-0.21%	-0.97%
92 Q1	0.10%		-11.87%		13.58%	
Q2	10.16%		2.11%		7.88%	
Q3	-3.94%		1.51%		-5.36%	
Q4	0.16%	6.10%	-3.86%	-12.17%	4.18%	20.80%
Latest:						
1 yr		6.10%		-12.17%		20.80%
3 yr		4.35%		-8.99%		14.65%
5 yr		8.28%		1.34%		6.85%
Cum 86Q1-92Q4		14.36%		12.33%		1.81%
Std Dev		15.65%		23.03%		17.27%

PROPOSED MODIFICATIONS TO SHORT TERM GUIDELINES

BACKGROUND

In the last three years, slow economic growth, low levels of inflation and the Federal Reserve's easing of monetary policy have led to extremely low short term yields. The yield of the three month U.S. Treasury bill has fallen from 6.6% on 12/31/90 to less than 3% today. Current indications are that short term rates will remain at low levels for some time. For this reason, together with our desire to further diversify our portfolio, staff has been examining several alternatives to enhance the yield of the short term cash accounts, while working within the following investment objectives: 1) preservation of capital 2) maximization of liquidity and 3) maximization of returns.

YIELD ENHANCEMENT ALTERNATIVES

Maturity Extension

Staff has been exploring alternatives that will enhance returns without incurring additional credit risk. One alternative is maturity extension. This involves investing a small portion of the portfolio in longer maturity securities that meet established credit guidelines. In an upward sloping yield curve environment, longer dated securities provide yield advantages without incorporating additional credit risk into the portfolio. Because of the size of the cash funds and the diversity of cash timing needs, extension of maturities will not sacrifice overall portfolio liquidity.

International Securities

Another alternative for enhancing yields while remaining within established credit guidelines is to invest in international securities. There are two main categories of international debt; U.S. dollar denominated and foreign currency denominated.

From the standpoint of the U.S. investor, foreign currency denominated international debt encompasses all issues denominated in currencies other than the U.S. dollar. Currency movements account for a large portion of the return from foreign currency bonds and tend to be the most volatile component of international debt returns. The decision of whether or not to hedge the currency exposure depends on how the investor views of the currency market.

The other category of international debt is payable in U.S. dollars. Because it is denominated in U.S. dollars, currency risk is not present. These debt securities trade at higher yields than comparable U.S. Treasury bonds primarily due to lower liquidity in these issues.

The primary markets for U.S. dollar denominated international debt are the **Eurodollar** market and the **Yankee** market.

- Eurodollar debt is denominated in U.S. dollars, issued and traded outside the jurisdiction of any single country, underwritten by an international syndicate, and issued in bearer form. Borrowers in this market include supranational agencies, such as the World Bank and the European Investment Bank, and sovereign and sovereign-backed entities.
- Yankee debt encompasses securities issued by foreign issuers who register with the SEC and borrow U.S. dollars via issuers underwritten by a U.S. syndicate for delivery in the United States. Supranational agencies (particularly the World Bank) and Canadian provinces are the most prominent Yankee issuers.

Foreign investors play a major role in both the Eurodollar and Yankee markets. The yield spread between U.S. dollar denominated international securities and U.S. domestic securities depends on the degree of interest from foreign buyers. However, the yields on dollar denominated securities are highly correlated with yields on comparable Treasuries.

Although these are the most common markets for U.S. dollar denominated debt, other instruments are available. Examples are bankers' acceptances issued by foreign banks and U.S. dollar denominated commercial paper. Another category of U.S. dollar denominated debt is **sovereign** or **sovereign-backed** debt. This is debt issued by other governments and is backed by the "full faith and credit" of the issuing government.

It is also possible for investors to use foreign securities that have been synthetically re-denominated into U.S. dollars. For example, a **synthetic dollar bond** is exposed to changes in foreign interest rates, but it is relatively insensitive to changes in domestic interest rates. Consequently, such a bond offers an attractive diversification outlet without exchange rate risk.

RECOMMENDATION

Yield enhancement, without increasing liquidity or credit risk, is possible through the extension of maturities and through investment in international securities. Staff is recommending the following changes be made to the short term guidelines:

- 1) A maximum of 5% of an internal or external short term debt portfolio may be invested in securities with maturities between three and ten years.
- 2) A maximum of 20% of an internal or external short term debt portfolio may be invested in U.S. dollar-denominated international securities. This includes:

- Debt issued by foreign banks, including bankers' acceptances
- Commercial paper issued by foreign corporations
- Supra-national agency debt
- Sovereign and Sovereign-backed debt

Investment guidelines currently established for comparable domestic securities (credit quality, percentage of portfolio, etc.) will also apply to international short term securities.

This recommendation will allow diversification and create the possibility for enhanced returns, but will also avoid currency risk. Staff will continue to explore the advantages and disadvantages of using hedged and non-hedged international bonds in a portion of the portfolio.

In December 1992, the SBI adopted country guidelines recommended by the International Investing Guidelines Task Force. These guidelines were developed at the time the SBI began implementing its international equity program.

The recommendations were patterned after the SBI policy on South Africa that affects only active equity managers. The country guidelines in the Task Force report adopted by the Board explicitly apply to active managers, but are silent on which asset classes would be included. Consistent with the SBI's past action on investment restrictions, the country guidelines should apply to stock managers but not to other asset classes.

**STATE BOARD
OF INVESTMENT**

**Stock
Manager
Evaluation
Reports**

First Quarter, 1993

DOMESTIC STOCK MANAGERS

First Quarter 1993

Domestic 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 standards against which to judge the managers' performance.

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

Staff Recommendations:

Staff recommends the following actions concerning manager status:

- Renew contracts for all active managers for July 1, 1993 - June 30, 1996.

Current Managers	Total Market Value 3/31/93 (Millions)	Quarter Ending 3/31/93		Year Ending 3/31/93		Annualized Five Years Ending 3/31/93		Annualized Since Inception***		% of Stock Segment 3/31/93 Basic Funds
		Actual	Bmrk	Actual	Bmrk	Actual	Bmrk	Actual	Bmrk	
Alliance	\$672	3.9%	-1.0%	17.9%	11.3%	19.4%	13.2%	18.6%	12.3%	11.2%
Forstmann	332	1.0	3.3	7.2	12.9	11.1	12.8	13.1	12.2	5.4
Franklin	205	8.5	4.9	23.5	19.3	--	--	14.5	13.8	3.3
GeoCapital	229	-0.6	1.2	4.2	11.8	--	--	17.5	15.1	3.7
IDS	265	4.6	4.8	17.6	18.6	15.5	14.6	15.3	14.6	4.3
Independence	221	5.4	5.3	19.1	17.9	--	--	15.6	14.8	3.6
Lieber & Co.	190	3.0	2.8	7.8	14.2	10.6	12.3	11.6	11.6	3.1
Lynch & Mayer	214	4.2	2.1	14.4	13.6	--	--	12.5	9.6	3.5
Waddell & Reed	246	1.9	3.6	13.1	12.5	12.0	11.8	11.9	11.5	4.0
Wilshire Assoc.	3,511	5.1	5.1	15.4	15.7	14.7	15.0	14.4	14.6	58.1
								Since 1/1/84		
Current Aggregate*		4.4	3.9	15.1	15.1	15.2	14.6	14.8	14.3	100.0
Historical Aggregate**		4.4	3.9	14.9	15.0	14.5	14.4	14.1	14.2	
Wilshire 5000 Adjusted****		4.3		15.6		14.8		14.3		
Wilshire 5000		4.3		15.1		15.1		14.6		

* Includes performance of current managers only.

** Includes performance of terminated managers.

*** Time periods vary for each manager depending on date of retention.

**** Adjusted for liquor and tobacco restriction.

Notes: GeoCapital retained 4/90; Franklin, Lynch & Mayer, Independence retained 2/92.
Wilshire Assoc. began custom tilt in October 1990.

ALLIANCE CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Jack Koltes

ASSETS UNDER MANAGEMENT: \$671,897,334

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.

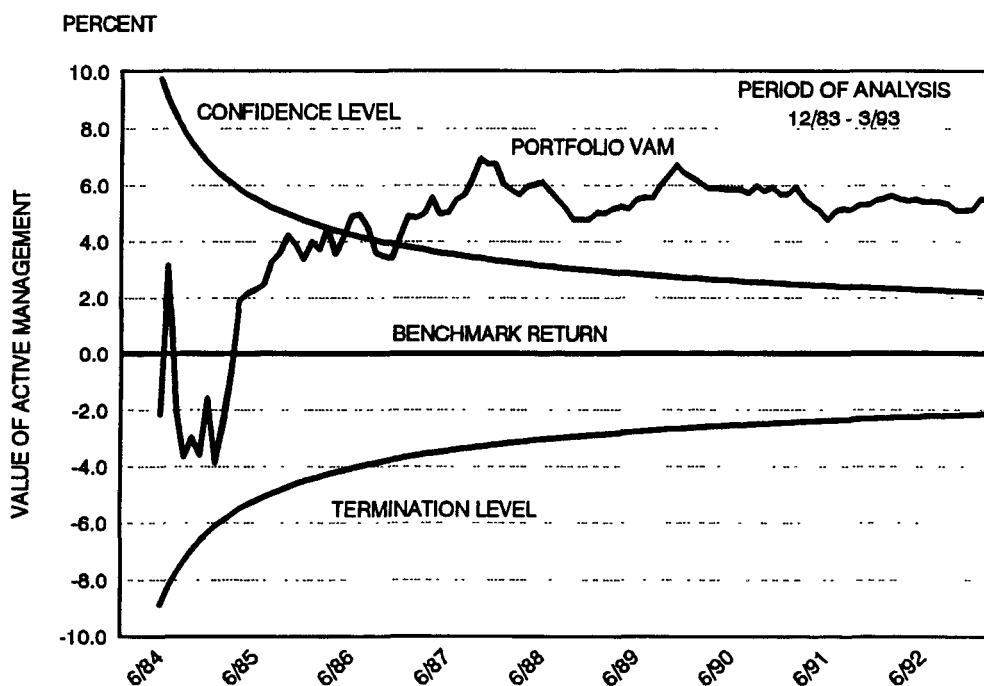
QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	3.9%	17.9%	19.4%	18.6%
Benchmark	-1.0	11.3	13.2	12.3

STAFF RECOMMENDATIONS

Renew contract for July 1, 1993 - June 30, 1996.

VALUE OF ACTIVE MANAGEMENT REPORT
ALLIANCE CAPITAL MANAGEMENT



FORSTMANN LEFF ASSOCIATES

PORTFOLIO MANAGER: Joel Leff

ASSETS UNDER MANAGEMENT: \$332,462,281

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.
- Their investment process is aggressive which creates volatile returns. While not a problem, this needs to be taken into account when evaluating them over shorter time frames.

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

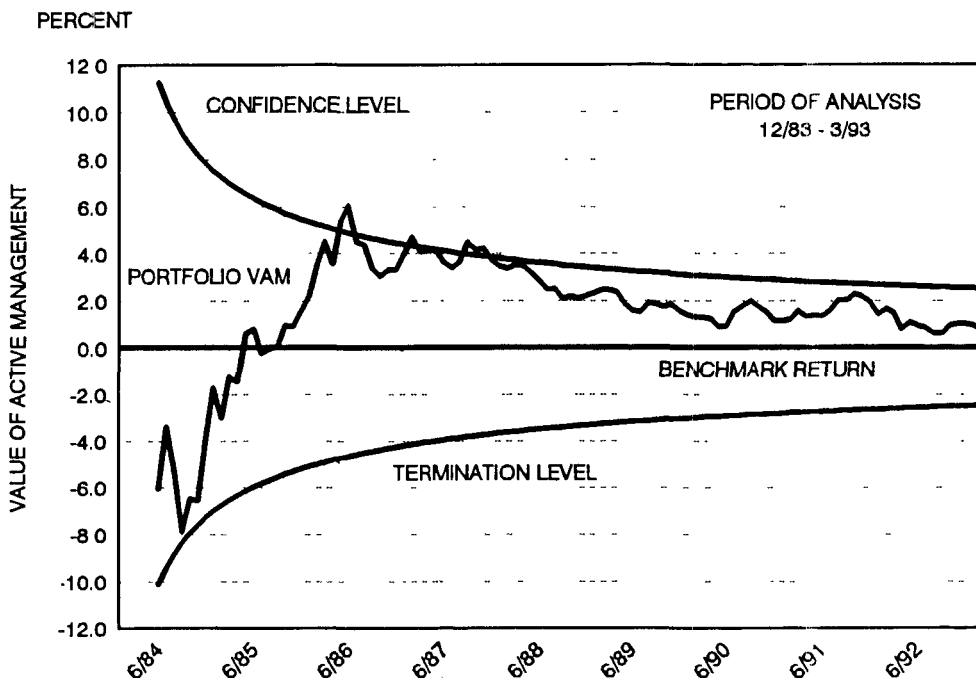
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	1.0%	7.2%	11.1%	13.1%
Benchmark	3.3	12.9	12.8	12.2

STAFF RECOMMENDATIONS

Latest five year returns are below benchmark. In-depth review completed for June 1993 meetings. Renew contract for July 1, 1993 - June 30, 1996.

VALUE OF ACTIVE MANAGEMENT REPORT

FORSTMANN LEFF



FRANKLIN PORTFOLIO ASSOCIATES

PORTFOLIO MANAGER: John Nagorniak

ASSETS UNDER MANAGEMENT: \$205,189,823

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.

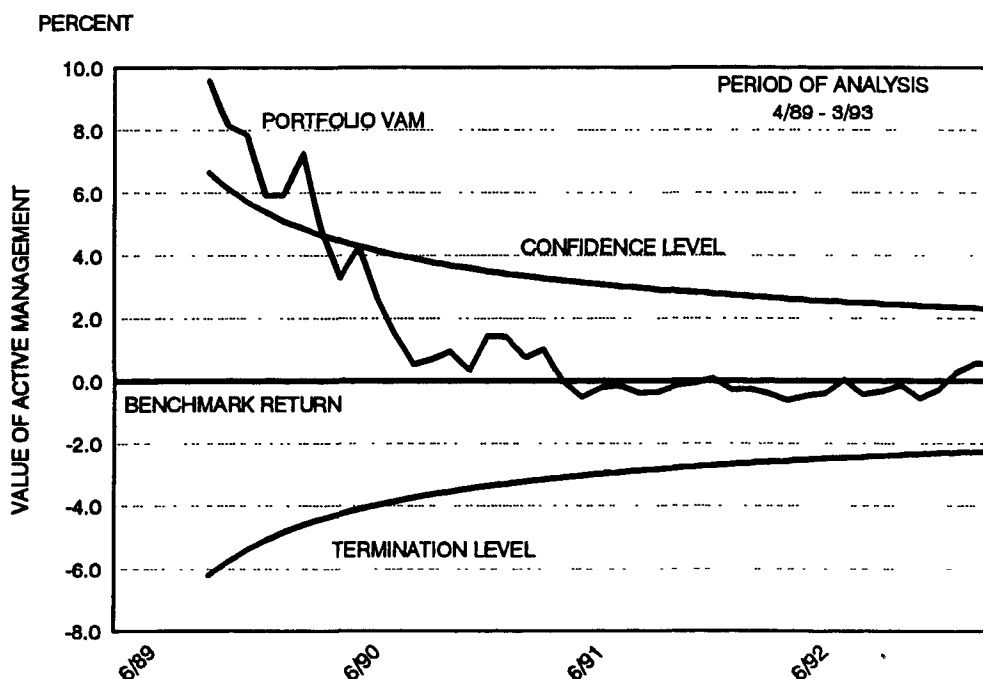
QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 4/1/89
Actual Return	8.5%	23.5%	N.A.	14.5%
Benchmark	4.9	19.3	N.A.	13.8

STAFF RECOMMENDATIONS

Renew contract for July 1, 1993 - June 30, 1996.

**VALUE OF ACTIVE MANAGEMENT REPORT
FRANKLIN PORTFOLIO ASSOCIATES**



GEOCAPITAL CORP.

PORTFOLIO MANAGER: Barry Fingerhut

ASSETS UNDER MANAGEMENT: \$228,872,697

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.

**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.

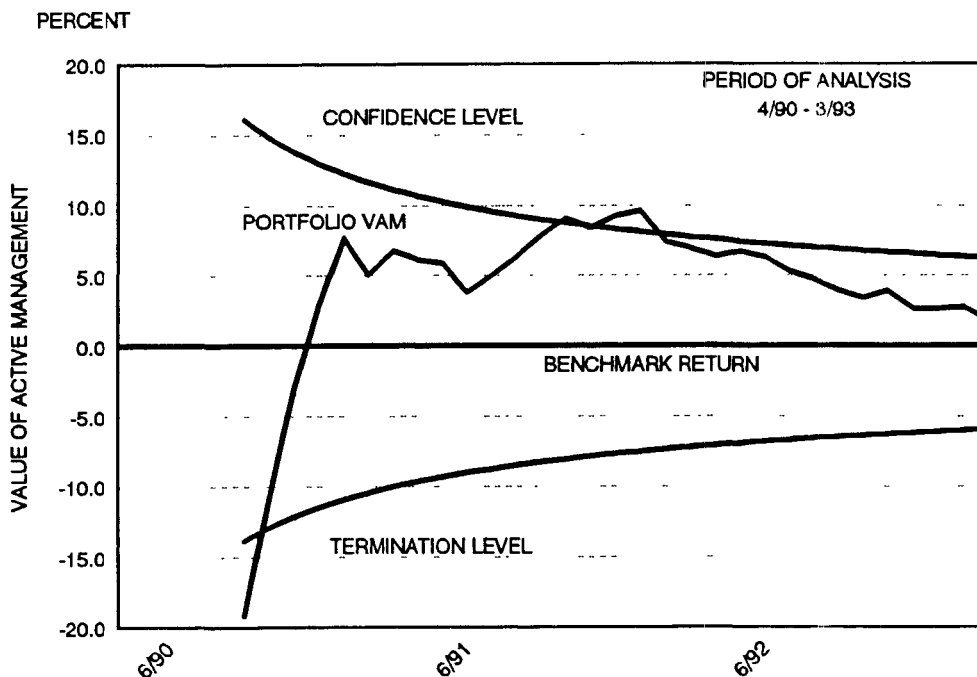
QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 4/1/90
Actual Return	-0.6%	4.2%	N.A.	17.5%
Benchmark	1.2	11.8	N.A.	15.1

STAFF RECOMMENDATIONS

Renew contract for July 1, 1993 - June 30, 1996.

**VALUE OF ACTIVE MANAGEMENT REPORT
GEOCAPITAL CORP.**



IDS ADVISORY

PORTFOLIO MANAGER: Pete Anderson

ASSETS UNDER MANAGEMENT: \$264,666,848

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:

- Manager is currently addressing specific benchmark issues.

Exceptional strengths are:

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

QUANTITATIVE EVALUATION

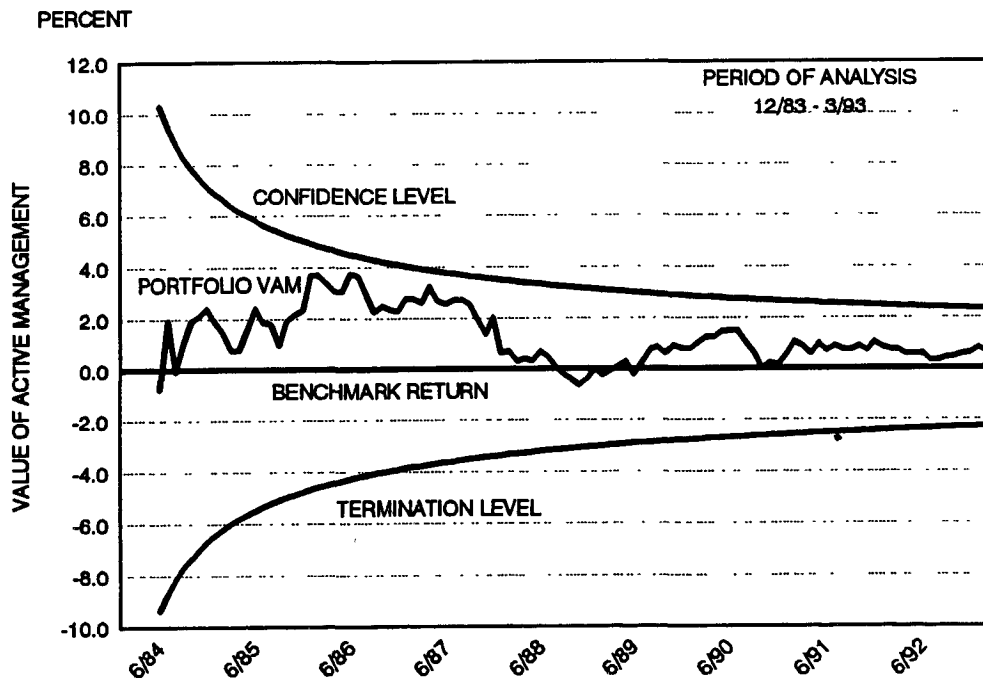
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	4.6%	17.6%	15.5%	15.3%
Benchmark	4.8	18.6	14.6	14.6

STAFF RECOMMENDATIONS

Renew contract for July 1, 1993 - June 30, 1996.

VALUE OF ACTIVE MANAGEMENT REPORT

IDS ADVISORY



INDEPENDENCE ASSOCIATES

PORTFOLIO MANAGER: Bill Fletcher

ASSETS UNDER MANAGEMENT: \$220,752,179

INVESTMENT PHILOSOPHY

Independence believes that individual stocks which outperform the market always have two characteristics: 1) they are intrinsically cheap; and 2) their business is in the process of improving. Independence ranks their universe by using a multifactor model. Using input primarily generated by their internal analysts, the model ranks each stock based on 10 discreet criteria. Independence constricts their portfolio by using the top 60% of their ranked universe and optimizing it relative to the benchmark selected by the client to minimize the market and industry risks. Independence maintains a fully invested portfolio and rarely holds more than a 1% cash position.

**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.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 2/1/92
Actual Return	5.4%	19.1%	N.A.	15.6%
Benchmark	5.3	17.9	N.A.	14.8

STAFF RECOMMENDATIONS

Renew contract for July 1, 1993 - June 30, 1996.

VAM graph will be created for period ending 9/30/93.

LIEBER & COMPANY

PORTFOLIO MANAGER: Stephen Lieber, Nola Falcone

ASSETS UNDER MANAGEMENT: \$189,537,179

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.

QUALITATIVE EVALUATION
(Reported by Exception)

Exceptional strengths are:

- Strong leadership.
- Attractive, unique investment approach.
- Extensive securities research process.

Current concerns are:

- Recent performance has lagged due to poor stock selection.

QUANTITATIVE EVALUATION

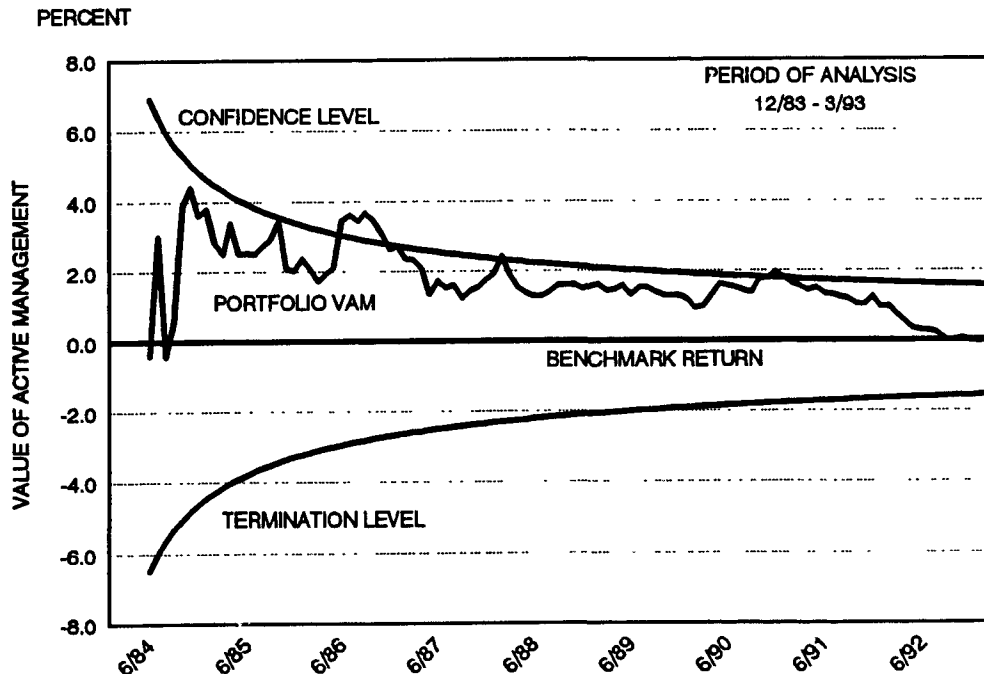
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	3.0%	7.8%	10.6%	11.6%
Benchmark	2.8	14.2	12.3	11.6

STAFF RECOMMENDATIONS

Latest five year returns are below benchmark. In-depth review completed in June 1992. Renew contract for July 1, 1993 - June 30, 1996.

VALUE OF ACTIVE MANAGEMENT REPORT

LIEBER & CO.



LYNCH & MAYER

PORTFOLIO MANAGER: Eldon Mayer

ASSETS UNDER MANAGEMENT: \$213,909,322

INVESTMENT PHILOSOPHY

Lynch and Mayer invest primarily in high-quality large capitalization growth stocks. They believe that outstanding investments are a function of corporate earnings growth considerably above historical trends or consensus expectations. Lynch and Mayer are bottom-up stock pickers and rely on very little economic analysis in their selection process. Lynch and Mayer screens out stocks below a certain market capitalization and liquidity level and then eliminates additional stocks based on various fundamental criteria. After the screening process they look for at least one of the following four factors: 1) acceleration of growth; 2) improving industry environment; 3) corporate restructuring; or 4) turnaround. The firm generally stays fully invested, with any cash due to lack of attractive investment opportunities.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 2/1/92
Actual Return	4.2%	14.4%	N.A.	12.5%
Benchmark	2.1	13.6	N.A.	9.6

QUALITATIVE EVALUATION

(Reported by Exception)

Exceptional strengths are:

- Organizational continuity and strong leadership.
- Highly successful and experienced professionals.

STAFF RECOMMENDATIONS

Renew contract for July 1, 1993 - June 30, 1996.

VAM graph will be created for period ending 9/30/93.

WADDELL & REED

PORTFOLIO MANAGER: Henry Herrman

ASSETS UNDER MANAGEMENT: \$245,654,595

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

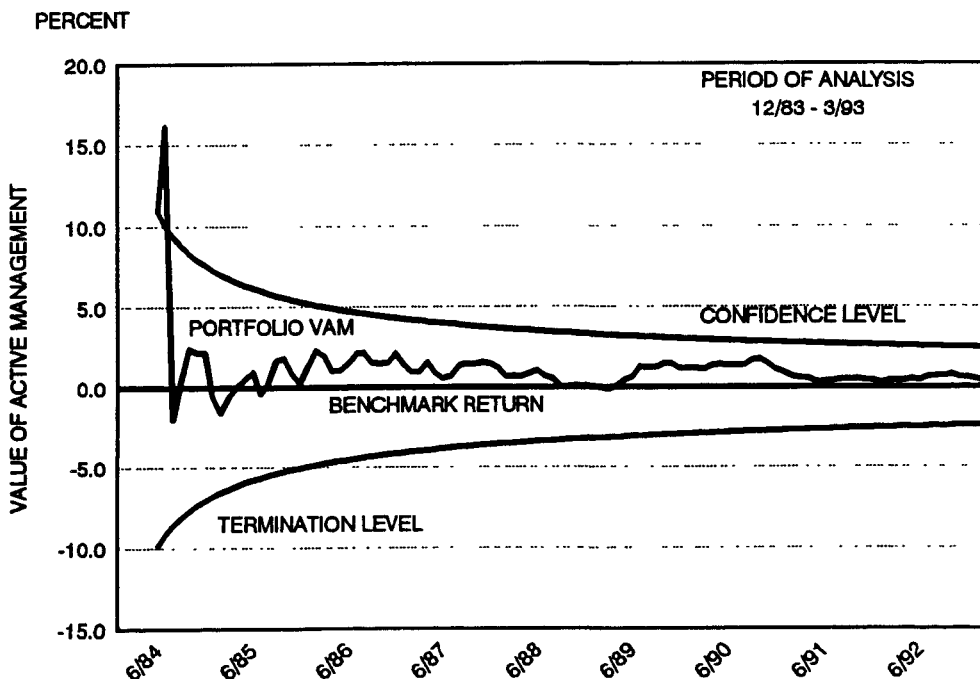
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	1.9%	13.1%	12.0%	11.9%
Benchmark	3.6	12.5	11.8	11.5

STAFF RECOMMENDATIONS

Renew contract for July 1, 1993 - June 30, 1996.

VALUE OF ACTIVE MANAGEMENT REPORT

WADDELL & REED



ALLIANCE CAPITAL MANAGEMENT
Investment Commentary
3/31/93

As of 3/31/93, Alliance's portfolio represented 11.2% of the total stock portfolio and 26.1% of the active stock portfolio. For the most recent quarter and year, Alliance Capital outperformed its benchmark by 5.0% and 5.9% respectively. The breakdown of Alliance Capital's value added for the latest quarter and year are shown below

	Qtr.	Year
Stock Selection	5.5%	8.5%
Sector Allocation	-0.4	-2.7
Trading/Other	-0.1	0.3

SECTOR ALLOCATION

The following table highlights Alliance's largest sector deviations relative to their benchmark.

	Quarter		Latest Year	
	Avg. Actual	Avg. Bnmk.	Avg. Actual	Avg. Bnmk.
Consumer Durable	4.0%	10.7%	4.1%	7.5%
Financial	19.9	9.7	18.2	9.9
Basic Material	7.3	9.3	6.7	11.2

For the quarter, Alliance Capital's sector allocation negative value added was primarily due to underweighting the consumer durables sector (-0.8%). However, this was offset by good performance in the financial sector (0.8%). For the year, the consumer durable (-1.0%), basic material (-1.3%), and technology (-0.6%) contributed to the majority of the negative value added. This was partially offset by good performance in the financial sector (1.1%). In addition, during the latest year Alliance's overweighting of large capitalization growth stocks, relative to its benchmark, generated negative value added.

STOCK SELECTION

For the latest quarter, the basic material (0.5%), consumer non-durables (0.9%), consumer durables (1.1%), technology (1.8%), transportation (0.4%), and financial (0.6%) sectors contributed to the positive value added. For the year, the basic material (2.9%), consumer non-durable (1.1%), consumer durables (1.5%), and technology (1.7%) sectors were the primary contributors to the positive stock selection performance.

FORSTMANN LEFF ASSOCIATES
Investment Commentary
3/31/93

As of 3/31/93, Forstmann-Leff's portfolio represented 5.4% of the total stock portfolio and 12.9% of the active stock portfolio. For the most recent quarter and year, Forstmann-Leff underformed its benchmark by 2.2% and 5.0% respectively. The breakdown of Forstmann-Leff's value added for the latest quarter and year are shown below:

	Qtr.	Year
Stock Selection	-3.3%	-4.3%
Sector Allocation	0.2	0.4
Trading/Other	0.9	-1.1

SECTOR ALLOCATION

The following table highlights Forstmann-Leff's largest sector deviations relative to their benchmark.

	Quarter		Latest Year	
	Avg. Actual	Avg. Bnmk.	Avg. Actual	Avg. Bnmk.
Consumer				
Non-Durable	26.8%	22.7%	27.5%	22.1%
Financial	14.2	12.4	15.5	11.4
Technology	10.5	5.9	7.3	8.6
Cash	19.0	30.0	21.9	30.0

For the quarter, none of the sectors showed a materially large positive or negative value added. For the year, the overweighting of the financial sector (0.6%) and underweighting cash (0.5%) created positive value added but was mostly offset by the overweighting of the consumer non-durable sector (-0.8%).

STOCK SELECTION

For the latest quarter, the consumer non-durable sector (-5.0%) generated all of the negative value added. For the year, good performance in the technology sector (1.5%) was more than offset by poor performance in the consumer non-durable (-5.6%) sector.

FRANKLIN PORTFOLIO ASSOCIATES TRUST
Investment Commentary
3/31/93

As of 3/31/93, Franklin's portfolio represented 3.3% of the total stock portfolio and 7.7% of the active stock portfolio. For the most recent quarter and year, Franklin outperformed its benchmark by 3.4% and 3.5% respectively. The breakdown of Franklin's value added for the latest quarter and year are shown below:

	Qtr	Year
Stock Selection	3.4%	4.3%
Sector Allocation	0.0	0.6
Trading/Other	0.0	-1.3

SECTOR ALLOCATION

The following table highlights Franklin's largest sector deviations relative to their benchmark.

	Quarter		Latest Year	
	Avg. Actual	Avg. Bnmk.	Avg. Actual	Avg. Bnmk.
Technology	8.1%	9.1%	5.9%	8.6%
Financial	18.3	16.1	19.5	15.9
Basic Material	6.7	11.9	5.3	11.9
Consumer Non-Durable	31.0	26.7	28.4	26.7

For the quarter, none of the sectors showed a materially large positive or negative value added. For the year, underweighting basic materials (0.6%) contributed the majority of the positive value added. In addition, Franklin's overweighting in value stocks, relative to its benchmark, produced positive value added for the year.

STOCK SELECTION

For the quarter, the technology (1.4%) and utility (0.7%) sectors contributed the majority of the positive value added. For the year, the consumer non-durable (0.9%) technology (1.9%) and basic materials (1.2%) sectors generated most of the positive value added.

GEOCAPITAL CORPORATION
Investment Commentary
3/31/93

As of 3/31/93, GeoCapital's portfolio represented 3.7% of the total stock portfolio and 8.9% of the active stock portfolio. For the most recent quarter and year, GeoCapital underperformed its benchmark by 1.7% and 6.8% respectively. The breakdown of GeoCapital's value added for the latest quarter and year are shown below:

	Qtr.	Year
Stock Selection	-1.7%	-7.3%
Sector Allocation	0.1	1.4
Trading/Other	-0.1	-0.8

SECTOR ALLOCATION

The following table highlights GeoCapital's largest sector deviations relative to their benchmark.

	Quarter		Latest Year	
	Avg. Actual	Avg. Bnmk.	Avg. Actual	Avg. Bnmk.
Energy	0.0%	3.0%	0.0%	3.6%
Financial	18.5	5.3	17.3	4.4
Capital Goods	0.0	4.2	0.0	4.0
Technology	24.3	28.1	22.5	26.4

For the quarter, positive value added was generated by overweighting financials (1.3%). However, this was offset by underweighting capital goods (-0.6%) and energy (-0.5%). For the year, the overweighting of the financial sector produced a large positive value added (3.2%) with most of the other sectors generating small negative value added that partially offset the good performance in the financial sector.

STOCK SELECTION

For the latest quarter, the negative value added was generated by the consumer non-durable sector (-1.1%) and technology sector (-2.3%). This was partially offset by good stock selection in the financial sector (1.3%). For the year, the consumer non-durable (5.0%) and technology (3.5%) provided all of the negative value added.

IDS ADVISORY
Investment Commentary
3/31/93

As of 3/31/93, IDS's portfolio represented 4.4% of the total stock portfolio and 10.2% of the active stock portfolio. For the most recent quarter and year, IDS underperformed its benchmark by 0.2% and 0.8% respectively. The breakdown of IDS's value added for the latest quarter and year are shown below:

	Qtr.	Year
Stock Selection	1.0%	1.0%
Sector Allocation	-0.9	-1.2
Trading/Other	-0.3	-0.6

SECTOR ALLOCATION

The following table highlights IDS's largest sector deviations relative to their benchmark.

	Quarter		Latest Year	
	Avg. Actual	Avg. Bnmk.	Avg. Actual	Avg. Bnmk.
Transportation	7.6%	2.9%	5.0%	3.8%
Utilities	1.6	11.0	1.2	10.1
Consumer Durable	12.6	7.3	11.2	6.3
Basic Material	21.5	6.0	22.3	8.9
Consumer Non-Durable	12.7	27.0	12.8	27.0

For the quarter, the majority of IDS's sector allocation negative value added was due to overweighting the basic material (-1.4%) and underweighting the utility sector (-0.5%). This was partially offset by underweighting the consumer non-durable sector (0.8%). For the year, the majority of the negative value added came from the basic material (-1.6%) and utility (-0.8%) sectors. This was partially offset by good performance in the consumer non-durable (1.0%) and consumer durable (0.6%) sectors. In addition, during the latest year IDS's overweighting of large capitalization growth stocks, relative to their benchmark, generated negative value added.

STOCK SELECTION

For the quarter, the consumer durable (0.7%), basic material (1.0%) and technology (0.7%) sectors generated the majority of the value added. This was partially offset by poor performance in the consumer non-durable sector (-1.3%). For the year, the technology (2.6%) and basic material (1.1%) sectors generated most of the positive value added. This was partially offset by poor performance in the financial (-1.8%) and consumer non-durable (-1.2%) sectors.

INDEPENDENCE INVESTMENT ASSOCIATES

Investment Commentary

3/31/93

As of 3/31/93, Independence's portfolio represented 3.6% of the total stock portfolio and 8.9% of the active stock portfolio. For the most recent quarter and year, Independence outperformed its benchmark by 0.1% and 0.9% respectively. The breakdown of Independence's value added for the latest quarter and year are shown below:

	Qtr.	Year
Stock Selection	-0.4%	0.0%
Sector Allocation	0.3	1.4
Trading/Other	0.2	-0.4

SECTOR ALLOCATION

The following table highlights Independence's largest sector deviations relative to their benchmark.

	Quarter		Latest Year	
	Avg. Actual	Avg. Bnmk.	Avg. Actual	Avg. Bnmk.
Consumer				
Non-Durable	27.3%	30.6%	27.9%	31.2%
Financial	16.0	12.4	13.9	11.5
Technology	3.8	8.0	4.1	8.1
Capital Goods	7.8	5.5	9.3	5.4

For the quarter, none of the sectors produced a significant positive or negative value added. For the year, the consumer non-durable (0.5%), financial (0.4%), and technology (0.3%) sectors produced the majority of the positive value added.

STOCK SELECTION

For the latest quarter, the consumer durable sector (-0.7%) was the major contributor to the negative stock selection performance. For the year, good stock selection in the basic material sector (0.9%) was offset by poor performance in the consumer durable sector (-0.7%).

LIEBER & COMPANY
Investment Commentary
3/31/93

PERFORMANCE RESULTS

As of 3/31/93, Lieber's portfolio represented 3.1% of the total stock portfolio and 7.7% of the active stock portfolio. For the most recent quarter, Lieber outperformed its benchmark by 0.2% but underperformed for the year by 5.6%. The breakdown of Lieber's value added for the latest quarter and year are shown below:

	Qtr.	Year
Stock Selection	-0.2%	-5.2%
Sector Allocation	0.7	0.5
Trading/Other	-0.3	-1.0

SECTOR ALLOCATION

The following table highlights Lieber's largest sector deviations relative to their benchmark.

	Quarter		Latest Year	
	Avg. Actual	Avg. Bnmk.	Avg. Actual	Avg. Bnmk.
Energy	0.3%	2.7%	0.4%	3.2%
Financial	31.8	19.9	28.1	20.5
Utilities	0.0	3.6	0.0	4.5
Technology	12.3	11.7	14.1	11.1
Consumer Non-Durable	26.0	29.5	26.5	27.9

For the quarter, the majority of Lieber's sector allocation positive value added was due to overweighting the financial sector (1.0%). For the year, the financial sector generated almost all the positive value added (1.6%). This was partially offset by overweighting technology (-0.5%) and underweighting utilities (-0.7%). Also for the latest year, Lieber's overweighting of large capitalization growth stocks, relative to its benchmark, generated negative value added.

STOCK SELECTION

For the latest quarter, no one particular sector showed a significant positive or negative value added. For the year, the technology (-3.7%), capital goods (-0.8%) and financial (-0.7%) contributed the majority of the negative stock selection performance.

LYNCH & MAYER
Investment Commentary
3/31/93

As of 3/31/93, Lynch & Mayer's portfolio represented 3.5% of the total stock portfolio and 8.7% of the active stock portfolio. For the most recent quarter and year, Lynch & Mayer outperformed its benchmark by 2.1% and 0.7% respectively. The breakdown of Lynch & Mayer's value added for the latest quarter and year are shown below:

	Qtr.	Year
Stock Selection	1.3%	0.6%
Sector Allocation	1.1	0.9
Trading/Other	-0.3	-0.8

SECTOR ALLOCATION

The following table highlights Lynch & Mayer's largest sector deviations relative to their benchmark.

	Quarter		Latest Year	
	Avg. Actual	Avg. Bnmk.	Avg. Actual	Avg. Bnmk.
Consumer Durable	10.6%	7.1%	12.6%	6.1%
Utilities	7.2	4.3	7.0	6.6
Technology	16.4	14.5	16.7	12.6
Basic Material	0.0	8.0	0.1	6.9
Energy	7.3	3.3	3.8	5.2

For the quarter, the basic material (0.4%), energy (0.4%), and utility (0.3%) sectors were the major contributors to the positive value added. For the year, cash (0.4%) and the consumer durable (0.6%), technology (0.7%), and financial (0.3%) sectors produced the majority of the value added. This was partially offset by the underweighting of the energy sector (-0.9%).

STOCK SELECTION

For the latest quarter, the consumer non-durable sector (1.4%) was the major contributor to the positive stock selection performance. For the year, the consumer non-durable sector (2.2%) generated the majority of the positive stock selection performance. This was partially offset by poor performance in the consumer durable sector (-1.4%).

WADDELL & REED
Investment Commentary
3/31/93

As of 3/31/93, Waddell & Reed's portfolio represented 4.0% of the total stock portfolio and 10.0% of the active stock portfolio. For the most recent quarter, Waddell & Reed underperformed its benchmark by 1.6%, but outperformed its benchmark by 0.6% for the latest year. The breakdown of Waddell & Reed's value added for the latest quarter and year are shown below:

	Qtr.	Year
Stock Selection	-2.2%	1.9%
Sector Allocation	-0.9	-1.4
Trading/Other	1.5	0.0

SECTOR ALLOCATION

The following table highlights Waddell & Reed's largest sector deviations relative to their benchmark.

	Quarter		Latest Year	
	Avg. Actual	Avg. Bnmk.	Avg. Actual	Avg. Bnmk.
Consumer				
Non-Durable	28.8%	24.0%	26.8%	25.5%
Financial	9.9	4.1	6.1	1.6
Basic Material	4.7	12.9	6.9	13.9
Technology	7.5	14.6	6.1	13.4
Cash	26.9	20.0	28.7	20.0
Capital Goods	2.5	6.1	3.3	6.1

For the quarter, the majority of Waddell & Reed's sector allocation negative value added was due to overweighting cash (-0.4%) and consumer non-durable (-0.6%) sector. For the year, cash (-0.6%) and the energy (-0.7%) and technology (-0.6%) sectors were the major contributors to the negative performance. This was partially offset by overweighting the financial sector (1.2%). In addition, Waddell & Reed's overweighting of large capitalization growth stocks, relative to its benchmark, during the last year generated negative value added.

STOCK SELECTION

For the latest quarter, the consumer non-durable (-2.4%) was the major contributor to the negative value added. For the year, the transportation (1.7%), basic material (0.8%) and capital goods (1.4%) sectors produced the majority of the good stock selection performance. This was partially offset by poor performance in the consumer non-durable sector (-1.6%).

**STATE BOARD
OF INVESTMENT**

**Bond
Manager
Evaluation
Reports**

First Quarter, 1993

DOMESTIC BOND MANAGERS

First Quarter 1993

Domestic bond manager returns are evaluated against the performance of the Salomon Brothers Broad Investment Grade Index (BIG). The Salomon BIG represents most investment grade bonds (BBB or better). The bond managers initially had customized indices. However, since all the managers add value to their portfolio by using the entire bond market, their benchmarks were changed to the Salomon BIG on 10/1/91.

Manager performance relative to the Salomon BIG is evaluated on a quarterly basis by the Stock and Bond Manager Committee of the Investment Advisory Council.

Staff Recommendations:

Staff recommends the following actions concerning manager status:

- Remove Fidelity from probation status.
- Renew all contracts for the period July 1, 1993 - June 30, 1996 except Ark Asset Management.

Current Managers	Total Market Value 3/31/93 (Millions)	Quarter Ending 3/31/93		Year Ending 3/31/93		Five Years Ending 3/31/93		Annualized Since Inception		% of Bond Segment 3/31/93 Basic Funds
		Actual	Bmrk	Actual	Bmrk	Actual	Bmrk	Actual	Bmrk	
Ark Asset	\$138	4.3%	4.2%	13.6%	13.4%	10.6%	10.6%	12.3%	12.4%	5.0%
IAI	198	5.3	4.2	16.6	13.4	11.6	11.0	13.6	13.2	7.1
Miller Anderson	306	4.5	4.2	14.7	13.4	11.2	11.0	13.3	13.2	11.1
Western Asset	583	5.2	4.2	14.7	13.4	12.2	11.2	14.3	13.1	21.1
Fidelity*	795	4.4	4.2	13.5	13.4	N.A.	N.A.	11.6	11.4	28.8
Lincoln*	744	4.3	4.2	13.5	13.4	N.A.	N.A.	11.4	11.4	26.9
		Since 7/1/84								
Current Aggregate **		4.6	4.2	14.2	13.4	11.3	11.0	13.4	13.0	
Historical Aggregate***		4.6	4.2	14.2	13.4	11.2	11.0	12.9	13.0	
Salomon Broad Investment Grade Index			4.2		13.4		11.0		13.2	

* Semi-passive manager

** Includes performance of current managers only.

*** Includes performance of terminated managers.

ARK ASSET MANAGEMENT

PORTFOLIO MANAGER: Kevin Hurley

ASSETS UNDER MANAGEMENT: \$138,061,417

INVESTMENT PHILOSOPHY

Ark'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.

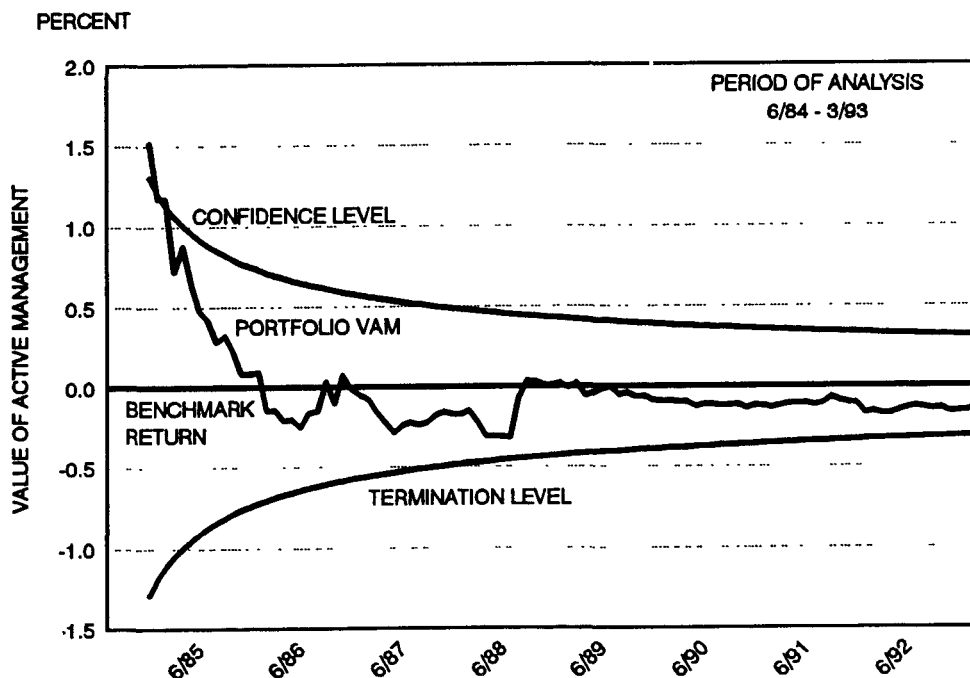
QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return	4.3%	13.6%	10.6%	12.3%
Benchmark	4.2	13.4	10.6	12.4

STAFF RECOMMENDATIONS

Do not renew contract after expiration on June 30, 1993.

VALUE OF ACTIVE MANAGEMENT REPORT
ARK ASSET MANAGEMENT



INVESTMENT ADVISERS

PORTFOLIO MANAGER: Larry Hill

ASSETS UNDER MANAGEMENT: \$197,875,746

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:

- IAI's duration decisions have added value recently.

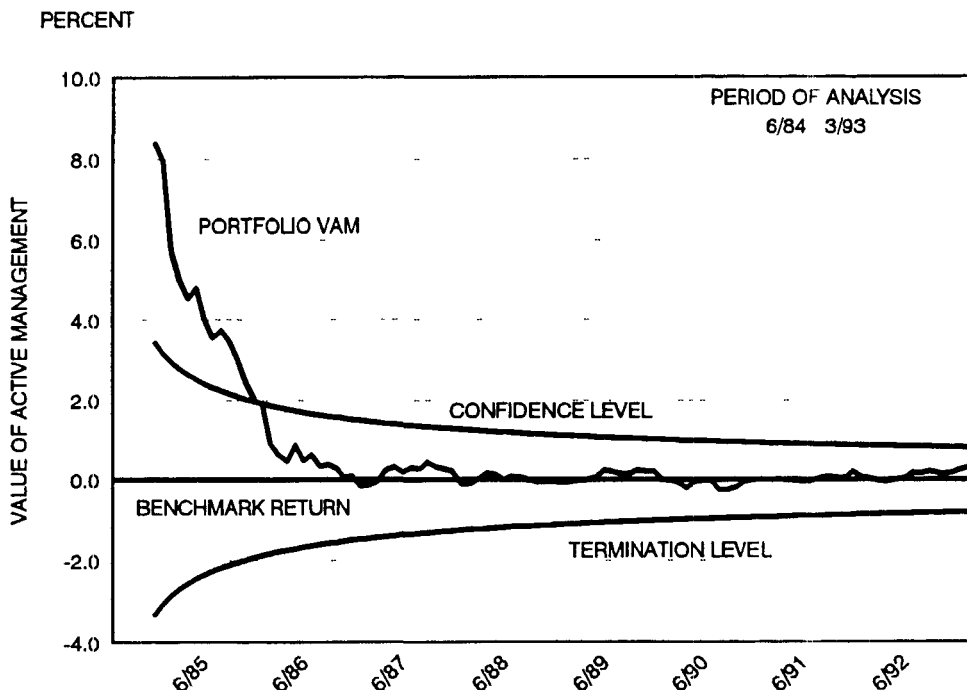
QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return	5.3%	16.6%	11.6%	13.6%
Benchmark	4.2	13.4	11.0	13.2

STAFF RECOMMENDATIONS

Renew contract for July 1, 1993 - June 30, 1996.

VALUE OF ACTIVE MANAGEMENT REPORT
INVESTMENT ADVISERS



MILLER ANDERSON

PORTFOLIO MANAGER: Tom Bennet

ASSETS UNDER MANAGEMENT: \$306,068,751

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

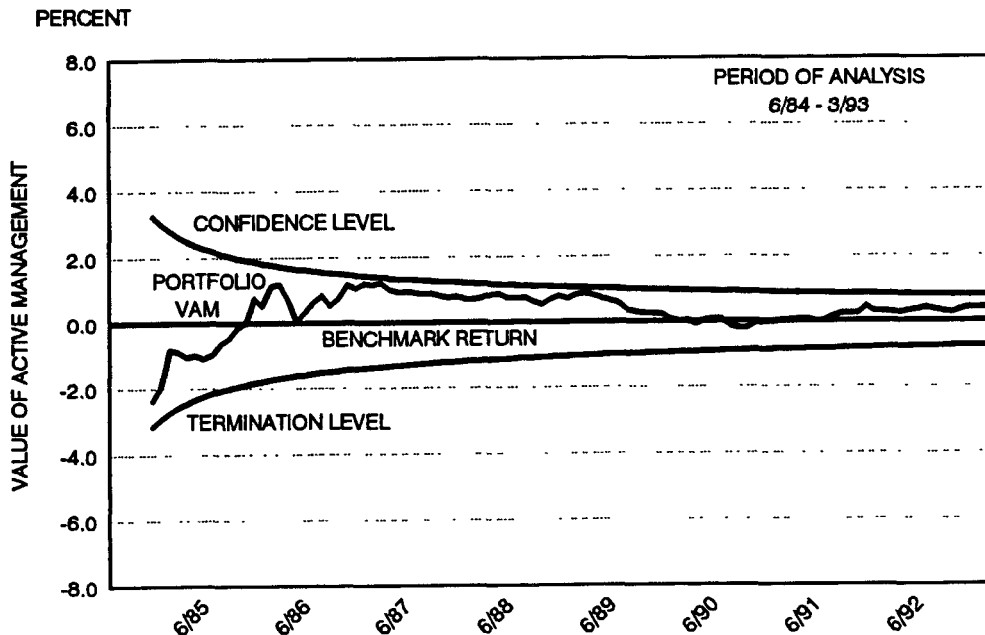
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return				
SBI Pricing	4.5%	14.7%	11.2%	13.3%
Miller Pricing*	4.3	15.2	11.2	13.7
Benchmark	4.2	13.4	11.0	13.2

STAFF RECOMMENDATIONS

Renew contract for July 1, 1993 - June 30, 1996.

* Returns calculated using Miller's pricing. VAM below uses Miller pricing.

VALUE OF ACTIVE MANAGEMENT REPORT
MILLER ANDERSON



WESTERN ASSET MANAGEMENT

PORTFOLIO MANAGER: Kent Engel

ASSETS UNDER MANAGEMENT: \$583,073,960

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 securities research process.

QUANTITATIVE EVALUATION

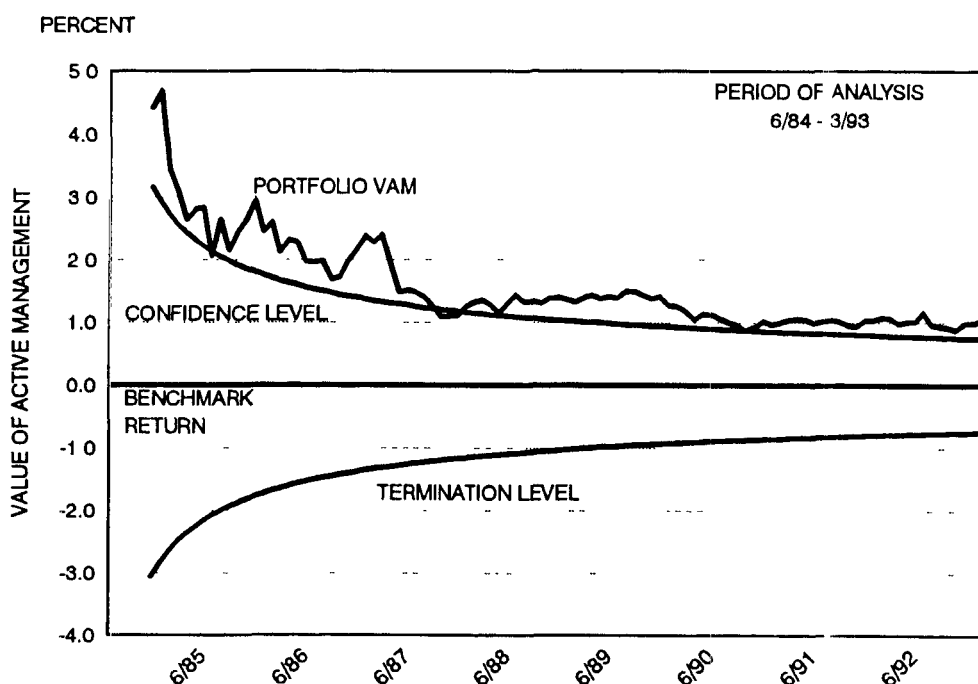
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return	5.2%	14.7%	12.2%	14.3%
Benchmark	4.2	13.4	11.2	13.1

STAFF RECOMMENDATIONS

Renew contract for July 1, 1993 - June 30, 1996.

VALUE OF ACTIVE MANAGEMENT REPORT

WESTERN ASSET MANAGEMENT



FIDELITY MANAGEMENT TRUST

PORTFOLIO MANAGER: Tom Steffanci

ASSETS UNDER MANAGEMENT: \$795,063,590

INVESTMENT PHILOSOPHY

Fidelity is an enhanced index manager who builds an index portfolio using stratified sampling and a risk factor model. Using stratified sampling, Fidelity divides the Salomon BIG into subsectors based on characteristics like maturity, coupon, sector and quality and chooses securities to represent each cell. The portfolio is then compared to the Salomon BIG using a risk factor model. Fidelity adds value to the portfolio through sector selection, issue selection, credit research and yield curve strategies. Fidelity weights sectors based on their relative value and attempts to buy stable credits or credits likely to be upgraded. Finally, Fidelity changes the maturity distribution of the portfolio securities to take advantage of non-parallel shifts in the yield curve.

**QUALITATIVE EVALUATION
(Reported By Exception)**

The firm's strengths are:

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

Current concerns are:

- New portfolio manager as of March 1993. Sharmin Mossavar-Rahmani left the firm to join Goldman Sachs.

QUANTITATIVE EVALUATION

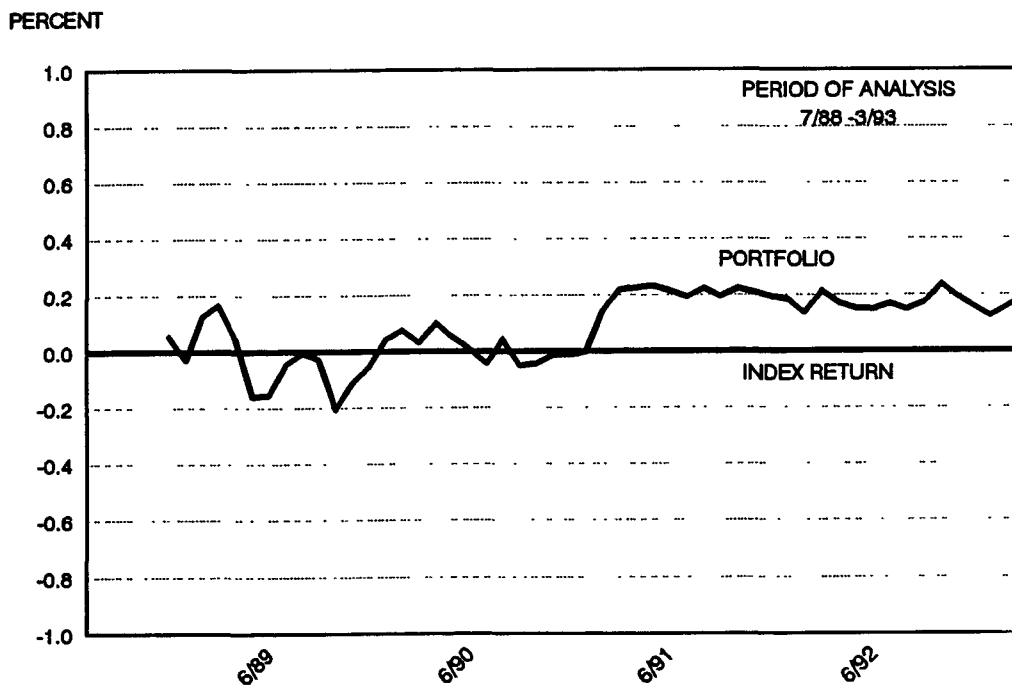
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/88
Actual Return	4.4%	13.5%	N.A.	11.6%
Benchmark	4.2	13.4	N.A.	11.4

STAFF RECOMMENDATIONS

Remove firm from probation status. Renew contract for July 1, 1993 - June 30, 1996.

CUMULATIVE TRACKING REPORT

FIDELITY



LINCOLN CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Brian Johnson

ASSETS UNDER MANAGEMENT: \$713,580,849

INVESTMENT PHILOSOPHY

Lincoln is an enhanced index manager that uses a quantitative approach to managing the portfolio. Lincoln calculates the index's expected return for changes in 54 variables. These variables include interest rates, yield curve shape, call features and sector spreads. Lincoln then constructs a portfolio to match the expected returns for a given change in any of the variables. Lincoln relaxes the return tolerances, defined as the difference between the portfolio's expected returns and that for the index, for an enhanced index fund. The portfolio's securities are selected from a universe of 250 liquid issues using a proprietary risk-valuation model. A linear program or portfolio optimizer then constructs the most undervalued portfolio that still matches the return characteristics of the index.

**QUALITATIVE EVALUATION
(Reported By Exception)**

The firm's strengths are:

- Highly successful and experienced professionals.
- Extensive quantitative capabilities.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/88
Actual Return	4.3%	13.5%	N.A.	11.4%
Benchmark	4.2	13.4	N.A.	11.4

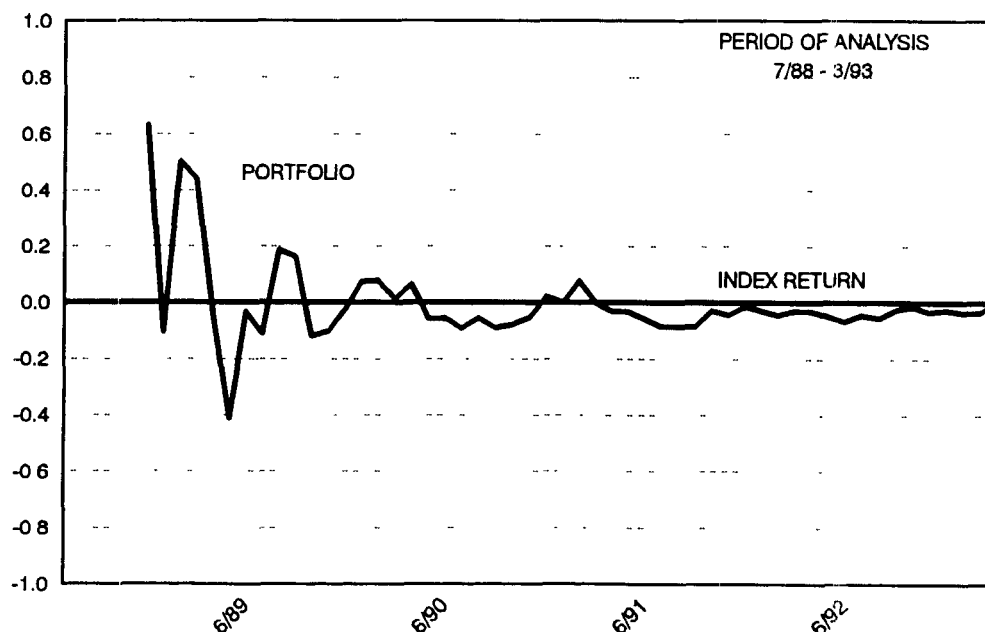
STAFF RECOMMENDATIONS

Renew contract for July 1, 1993 - June 30, 1996.

CUMULATIVE TRACKING REPORT

LINCOLN

PERCENT



ARK ASSET MANAGEMENT COMPANY, INC.
Investment Commentary
3/31/93

As of 3/31/93, Ark's portfolio represented 5% of the SBI's fixed income assets. This quarter, Ark outperformed the benchmark by 16 basis points. For the trailing 12 months, they outperformed by 20 basis points. The duration of their portfolio matched the Salomon BIG, and they were overweighted in mortgages and corporates. Overweighting the corporate sector helped performance since this sector's return was superior to both Treasuries and mortgages.

Ark continues to feel cautious about the new administration and possible ramifications of fiscal policy on inflation and interest rates. As a result, they are maintaining portfolio duration roughly equal to the benchmark. They are matching the benchmark in their mortgage exposure, but continue to overweight asset-backed securities for their yield advantage. Their plan continues to be to concentrate ownership of corporate debt in the intermediate maturity range.

DURATION AND YIELD CURVE POSITIONING

During the quarter, Ark maintained a portfolio duration of 4.5 years. Therefore, the duration decision did not significantly affect performance.

SECTOR ALLOCATION

Below is a breakdown of Ark's sector allocation versus the Salomon Broad Investment Grade Index:

	March 31, 1992		March 31, 1993	
	Ark	Benchmark	Ark	Benchmark
Treasury/Agency	38%	53%	38%	53%
Mortgages	32	29	29	29
Corporates	28	18	33	18
Other	0	0	0	0
Cash	2	0	0	0

During the first quarter, Ark continued to hold two primary sector bets; they underweighted the Treasury/Agency sector and overweighted corporate bond holdings, particularly asset-backed securities. Ark's mortgage holdings roughly equaled the benchmark weighting. Overweighting the corporate sector helped performance since this sector's returns outpaced Treasury and mortgage sector returns for the quarter and the year.

INVESTMENT ADVISERS, INC.
Investment Commentary
3/31/93

As of 3/31/93, Investment Adviser's portfolio represented 7% of the SBI's fixed income assets. Over the past year, IAI outperformed the benchmark by 324 basis points, and this quarter they outperformed by 117 basis points. This above average performance stemmed mostly from IAI's duration and yield curve positioning.

IAI believes that the recovery will continue to be slow and inflation will not be a factor. Despite the Federal Reserve's easing of monetary policy, consumers and businesses continue to pay off debt rather than spend. This, in combination with corporate restructuring and slow job growth has created excess supply of labor, and has contributed to the positive inflation fundamentals. IAI believes inflation is in a secular decline. Because of slow growth and low inflation, they believe long term bond yields will decline further.

IAI continues to significantly underweight the corporate sector. IAI is also slightly underweighted in the mortgage sector in favor of Treasury notes of comparable maturity.

DURATION AND YIELD CURVE POSITIONING

As of 3/31/93, the duration of the portfolio was 5.9 years versus the benchmark duration 4.5 of years. Since long term interest rates declined during the quarter, this duration bet helped IAI's performance.

IAI positioned the portfolio for a flatter yield curve, with long term rates expected to decline relative to intermediate and short term rates. Intermediate rates actually declined more than any other sector, which hurt performance.

SECTOR ALLOCATION

Below is a breakdown of IAI's sector allocation versus the Salomon Broad Investment Grade Index:

	March 31, 1992		March 31, 1993	
	IAI	Benchmark	IAI	Benchmark
Treasury/Agency	72%	53%	66	53%
Mortgages	23	29	23	29
Corporates	3	18	9	18
Other	0	0	0	0
Cash	2	0	2	0

IAI remained overweighted in the Treasury/Agency sector, and they remain significantly underweighted in corporate securities relative to the benchmark. Exposure to the mortgage sector was slightly less than the benchmark. Underweighting corporates hurt performance since this was the best performing sector for the quarter and the year.

MILLER, ANDERSON & SHERRERD

Investment Commentary

3/31/93

As of 3/31/93, Miller, Anderson & Sherrerd's portfolio represented 11% of the SBI's fixed income assets. Over the past year, Miller outperformed the benchmark by 132 basis points, and this quarter outperformed the benchmark by 30 basis points. Miller maintained a portfolio duration longer than the benchmark and held a "barbelled" portfolio in anticipation of a flatter yield curve. Maintaining a longer duration helped performance, while yield curve positioning slightly hurt performance. Overweighting the mortgage sector, however, was the primary drag on performance since this sector underperformed corporates by more than 200 bps.

Miller believes that inflation is under control and that slow, steady growth will continue. They continue to believe that real interest rates are too high and will eventually decline. They shortened portfolio duration to 6.5 years, which is still significantly longer than the benchmark. Additionally, they believe the long end of the yield curve will decline more than the intermediate or short portions, and are therefore positioning for a flattening of the curve. They continue to hold a large portion of the portfolio in the mortgage sector, but also increased corporate holdings. They believe call-protected senior corporate securities remain good values. High quality corporates appear fully valued, so they are looking for value in A and BBB quality issues.

DURATION AND YIELD CURVE POSITIONING

Portfolio duration as of 3/31/93 was 6.5 years, versus the benchmark of 4.5 years. Since long rates declined during the quarter, holding a portfolio with a duration substantially longer than the benchmark had a positive impact on performance. Miller positioned the portfolio for a flatter yield curve, which detracted from performance since intermediate rates performed better than long or short rates.

SECTOR ALLOCATION

Below is a breakdown of Miller's sector allocation versus the Salomon Broad Investment Grade Index:

	March 31, 1992		March 31, 1993	
	Miller	Benchmark	Miller	Benchmark
Treasury/Agency	35%	53%	29%	53%
Mortgages	46	29	48	29
Corporates	15	18	23	18
Other	0	0	0	0
Cash	4	0	0	0

Miller underweighted the Treasury/Agency sector, and overweighted the corporate and mortgage sectors relative to the benchmark. The mortgage sector was the worst performing this quarter, which detracted from performance.

WESTERN ASSET MANAGEMENT
Investment Commentary
3/31/93

As of 3/31/93, Western Asset Management's portfolio represented 21% of the SBI's fixed income portfolio. Over the past year, Western outperformed the benchmark by 127 basis points. For the quarter, Western outperformed the market by 108 basis points. The primary reasons for outperformance over the past quarter were substantial exposure to corporate securities and correct positioning of the portfolio for lower long term rates.

Western believes the economy is growing, but at a modest rate. This will keep inflation under control and help lead to lower long term rates. Therefore, they are maintaining a duration longer than the benchmark. They continue to hold a barbelled maturity structure, as they expect short rates to stabilize and long rates to decline further. Corporate and asset-backed securities are overweighted since Western expects spreads on these sectors to narrow relative to Treasuries. They remain underweighted in mortgages because they believe declining interest rates and accelerated mortgage prepayments will allow the corporate and government sector to outperform the mortgage-backed sector.

DURATION AND YIELD CURVE POSITIONING

Maintaining a portfolio duration longer than the benchmark helped Western's performance. On 3/31/93, Western's portfolio duration was 5.4 years versus the benchmark of 4.5 years.

SECTOR ALLOCATION

Below is a breakdown of Western's allocation to each sector versus the Salomon Broad Investment Grade Index:

	March 31, 1992		March 31, 1993	
	Western	Benchmark	Western	Benchmark
Treasury/Agency	23%	53%	33%	53%
Mortgages	17	29	20	29
Corporates	48	18	46	18
Other	0	0	0	0
Cash	12	0	1	0

Western remained overweighted in the corporate sector this quarter which helped performance. For the quarter and past year, mortgages have significantly underperformed corporates and Treasuries. This quarter, Western remained underweighted in Treasury and mortgage securities and overweighted in corporate securities.

FIDELITY MANAGEMENT TRUST
Investment Commentary
3/31/93

Fidelity's portfolio represents 29% of the SBI's portfolio. For the year, Fidelity's portfolio returned 13.54% versus 13.39% for the Salomon BIG. Fidelity outperformed the BIG for the quarter, 4.41% versus 4.16%. Fidelity outperformed the market for the past year primarily because they overweighted corporate securities and underweighted Treasury securities. Additionally, value was added by emphasizing bank and asset-backed securities within the corporate sector.

DURATION

Since Fidelity is an index manager, they do not add value through duration decisions. The portfolio is consistently within 0.2 year of the Salomon BIG duration.

SECTOR ALLOCATION

The following table compares Fidelity's sector allocations to the Salomon BIG.

	March 92		March 93	
	Fidelity	SAL BIG	Fidelity	SAL BIG
	%	%	%	%
Treasury/Govt Spon.	31	53	30	53
Mortgages	30	29	32	29
Corporates	27	18	35	19
Cash/other	12	0	3	0

The above shows that for the quarter and year, Fidelity overweighted corporate securities. Fidelity was slightly overweighted in mortgages last quarter and for most of the year. The corporate weightings helped performance since corporates performed well for both the quarter and the year. Mortgages hurt performance since the sector performed poorly for both the quarter and the year. Quarterly mortgage and corporate returns were 2.93% and 5.08% while the government sector returned 4.64%. Yearly returns for mortgages and corporates were 11.10% and 14.92% while governments returned 14.09%.

Within the sectors, the majority of the government assets were invested in long duration securities while the corporate securities had a shorter duration. For the quarter, Fidelity added value within the corporate sector by emphasizing the bank and finance subsector. Issue selection also added value to the portfolio.

LINCOLN ASSET MANAGEMENT
Investment Commentary
3/31/93

Lincoln's portfolio represents 27 % of the SBI's portfolio. For the year, Lincoln's portfolio returned 13.51 % versus 13.39% for the Salomon BIG. Lincoln also outperformed the BIG for the quarter, 4.29% versus 4.16%. Lincoln added value primarily through security selection.

DURATION

Since Lincoln is an index manager, they do not add value through duration decisions. The portfolio is consistently within 0.1 year of the Salomon BIG duration

SECTOR ALLOCATION

The following table compares Lincoln's sector allocations to the Salomon BIG.

	March 92		March 93	
	Lincoln %	SAL BIG %	Lincoln %	SAL BIG %
Treasury/Govt Spon.	52	53	52	53
Mortgages	28	29	27	29
Corporates	17	18	17	19
Cash	3	0	3	0

The above shows that Lincoln's portfolio mirrored the market. Lincoln was slightly underweighted in both corporates and mortgages for the year and the quarter. Underweighting mortgages helped returns while underweighting corporates hurt returns. Quarterly mortgage and corporate returns were 2.93% and 5.08% while the government sector returned 4.64%. Yearly returns for mortgages and corporates were 11.10% and 14.92% while governments returned 14.09%.

Within the corporate sector, Lincoln underweighted utilities for the quarter and year because they thought option adjusted spreads were narrow. To offset the yield disadvantage of this underweighting, Government Trust Certificates were and continue to be overweighted versus other agency securities in the government sector. These certificates had and still have wider spreads than other agency securities. Lincoln added and continues to add value by overweighting asset-backed securities. Asset backed represent 5.4 % of the portfolio

Lincoln has maintained a neutral position in mortgages but began to buy more mortgages late in March. Lincoln believes the option adjusted spread for current coupon 15 year mortgages is high and overweighted the holdings of these securities. Lincoln also added value through mortgage deferred settlements.

Tab H

COMMITTEE REPORT

DATE: May 25, 1993

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

FROM: **Alternative Investment Committee**

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

- Review of current strategy.
- Results of annual review sessions with existing managers.
- Status of First Reserve, an existing resource manager
- Review of commitment to Great Northern Capital Partners, L.P.

INFORMATION ITEMS:

1) Review of Current Strategy.

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

The real estate investment strategy calls for the establishment and maintenance of a broadly diversified real estate portfolio comprised of investments that provide overall diversification by property type and location. The main component of this portfolio consists of investments in diversified open-end and closed-end commingled funds. The remaining portion of the portfolio can include investments in less diversified, more focused (specialty) commingled funds. Currently, the SBI has committed \$430 million to fifteen (15) commingled real estate funds.

The venture capital investment strategy is to establish and maintain a broadly diversified venture capital portfolio comprised of investments that provide diversification by industry type, stage of corporate development and location. To

date, the SBI has committed to twenty-four (24) commingled venture capital funds for a total commitment of \$617 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 \$138 million to eight (8) commingled oil and gas funds.

2) Results of Annual Review Sessions with Existing Managers.

During the quarter, the Alternative Investment Committee and staff attended annual review sessions with one of the SBI's private equity managers, First Century, and one of the SBI's real estate managers, TCW. Overall, the meetings went well and produced no major surprises.

Summaries of the review sessions are included as **Attachments B and C** of this Committee Report.

3) Status of First Reserve, an existing resource manager.

As discussed at the December 1992 and March 1993 SBI meetings, First Reserve is involved in litigation which potentially could force them into Chapter 11 bankruptcy. At the December 1992 meeting, the SBI authorized the executive director, with assistance from the SBI's legal counsel and concurrence of the IAC Alternative Investment Committee, to approve or disapprove of partnership changes and to negotiate and execute and amendments that are necessary and appropriate to provide the best management of fund assets of affected partnerships managed by First Reserve.

Since the last SBI meeting, final judgment on the First Reserve litigation has not yet been entered and no action has been taken by the executive director regarding the First Reserve partnerships.

ACTION ITEMS:

1) Investment in Great Northern Capital Partners, L.P.

On May 17, 1993, the Alternative Investment Committee and staff met with Steven Rothmeier to review the SBI's recent commitment to Great Northern Capital Partners, L.P. in light of changes in the General Partner of the Partnership

At the December 1992 SBI meeting, the SBI authorized the Executive Director, with assistance from the SBI's legal counsel, to negotiate and execute a commitment of up to \$20 million or 20%, whichever is less, in Great Northern Capital Partners, L.P.

Since that time, Steven Rothmeier and several of his associates left IAI Capital Group to form a separate legal entity outside of Investment Advisers, Inc. In March 1993, Steven Rothmeier, Ian Packer, Allan Pray and Susan Mickelberg formed Great Northern Capital Corporation which will manage the partnership. David Spreng, another senior professional at IAI Capital Group has not, to date, left IAI Capital Group and joined Mr. Rothmeier and his associates at Great Northern Capital Corporation. Investment Advisers, Inc. remains a General Partner of Great Northern Capital Partners, L.P.

Mr. Rothmeier plans to raise a \$100 million fund. To date, the fund has received commitments of \$61 million (assuming the full \$20 million is available from the SBI). Additional commitments are under consideration by various entities at the present time.

RECOMMENDATION

The Committee recommends that the SBI reaffirm its commitment to Great Northern Capital Partners, L.P. by authorizing the Executive Director, with assistance from the SBI's legal counsel, to negotiate and execute a commitment of up to \$20 million or 20%, whichever is less, in Great Northern Capital Partners, L.P.

ATTACHMENT A

SUMMARY OF ALTERNATIVE INVESTMENTS AS OF 3/31/93

	<u>MARKET VALUE</u>	<u>UNFUNDED COMMITMENT</u>	<u>TOTALS</u>
REAL ESTATE \$ % OF BASIC RET FUND	\$376,716,346 3.85%	\$41,247,646 0.42%	\$417,963,992 4.27%
VENTURE CAPITAL \$ % OF BASIC RET FUND	\$434,912,529 4.45%	\$259,750,301 2.66%	\$694,662,830 7.10%
RESOURCE \$ % OF BASIC RET FUND	\$104,384,583 1.07%	\$13,619,835 0.14%	\$118,004,418 1.21%
TOTALS % OF BASIC RET FUND	\$916,013,458 9.37%	\$314,617,782 3.22%	\$1,230,631,240 12.58%

15 % ALLOCATION TARGET \$1,466,998,684

AMOUNT AVAILABLE FOR INVESTMENT \$236,367,445

* Market Value of Basic Retirement Fund at 3/31/93: \$9,779,991,228

See next page for additional detail

The market value information for alternative investments in this Attachment has been revised based on updated information during April and May 1993.

ATTACHMENT A (con't)

ALTERNATIVE EQUITY INVESTMENTS

	INCEPT DATE	COMMIT	FUNDED COMMIT	MKT VALUE OF FUNDED COMMIT	CASH DISTRIBUTIONS	UNFUNDED COMMIT	IRR	MEASUREMENT PERIOD (YEARS)
REAL ESTATE:								
AETNA	4/82	\$40,000,000	\$40,000,000	\$53,521,558	\$0	\$0	3.03	11.0
EQUITABLE	10/81	\$40,000,000	\$40,000,000	\$67,607,253	\$0	\$0	5.18	11.5
HEITMAN I	8/84	\$20,000,000	\$20,000,000	\$13,824,805	\$11,842,633	\$0	4.45	8.7
HEITMAN II	11/85	\$30,000,000	\$30,000,000	\$29,232,891	\$11,215,800	\$0	5.24	7.5
HEITMAN III	2/87	\$20,000,000	\$20,000,000	\$15,828,919	\$5,283,688	\$0	1.14	6.3
HEITMAN V	12/91	\$20,000,000	\$20,000,000	\$20,426,713	\$240,578	\$0	4.80	1.4
LASALLE	9/91	\$15,000,000	\$6,019,808	\$6,216,749		\$8,980,192	3.40	1.6
PAINE WEBBER *	2/90	\$500,000	\$500,000	\$338,750	\$72,983	\$0	-6.26	3.2
RREEF	5/84	\$75,000,000	\$75,000,000	\$63,181,807	\$21,306,787	\$0	1.87	9.0
AEW III	9/85	\$20,000,000	\$20,000,000	\$20,162,699	\$0	\$0	0.11	7.6
AEW IV	9/86	\$15,000,000	\$15,000,000	\$4,112,879	\$829	\$0	-18.56	6.6
AEW V	12/87	\$15,000,000	\$15,000,000	\$10,012,154	\$65,593	\$0	-7.74	5.4
TCW III	8/85	\$40,000,000	\$40,000,000	\$29,978,141	\$10,900,073	\$0	0.35	7.7
TCW IV	11/86	\$30,000,000	\$30,000,000	\$24,487,929	\$2,399,405	\$0	-2.08	6.5
ZELL	9/91	\$50,000,000	\$17,732,546	\$17,783,100	\$0	\$32,267,454	0.45	1.5
TOTAL R.E. PORTFOLIO		\$430,500,000	\$389,252,354	\$376,716,346	\$63,328,369	\$41,247,646		
VENTURE CAPITAL:								
ALLIED	9/85	\$5,000,000	\$5,000,000	\$3,295,759	\$3,544,838	\$0	6.69	7.6
DSV	4/85	\$10,000,000	\$10,000,000	\$10,304,225	\$1,336,124	\$0	2.13	8
FIRST CENTURY	12/84	\$10,000,000	\$9,350,000	\$7,641,183	\$4,308,419	\$650,000	6.99	8.4
BRINSON	5/88	\$5,000,000	\$5,000,000	\$4,410,919	\$2,328,228	\$0	10.3	5
BRINSON II	7/90	\$20,000,000	\$10,000,000	\$11,079,774	\$3,713,296	\$10,000,000	30.73	2.5
CHURCHILL	10/92	\$20,000,000	\$4,000,000	\$3,867,179	\$80,868	\$16,000,000	-3.42	0.5
GOLDER THOMA	10/87	\$14,000,000	\$10,505,000	\$13,125,659	\$2,557,160	\$3,495,000	14.28	5.5
IAI VENTURES I *	3/91	\$500,000	\$500,000	\$436,532	\$160,827	\$0	8.6	2.1
IAI VENTURES II	7/90	\$10,000,000	\$5,689,284	\$5,856,438	\$286,574	\$4,310,716	5.17	2.8
INMAN/BOWMAN	6/85	\$7,500,000	\$7,500,000	\$6,422,582	\$0	\$0	-3.25	7.9
IMR / JACOBS	7/92	\$30,000,000	\$588,000	\$184,864	\$0	\$29,412,000	-89.36	0.7
KKR I	3/84	\$25,000,000	\$25,000,000	\$49,230,000	\$65,532,856	\$0	31.28	8.9
KKR II	12/85	\$18,365,339	\$18,365,339	\$27,150,000	\$44,259,293	\$0	20.74	7
KKR III	10/87	\$146,634,660	\$131,790,000	\$212,160,000	\$98,483,776	\$14,844,660	14.05	5.5
KKR IV	5/91	\$150,000,000	\$0	\$0	\$0	\$150,000,000	0	0
MATRIX	8/85	\$10,000,000	\$5,000,000	\$4,806,927	\$1,052	\$5,000,000	-2.73	3
MATRIX II	5/90	\$10,000,000	\$10,000,000	\$5,020,417	\$11,805,254	\$0	11.3	7.7
MIDWEST BANK	10/92	\$20,000,000	\$3,000,000	\$2,919,013	\$8,372	\$17,000,000	-9.71	0.5
NORWEST	1/84	\$10,000,000	\$10,000,000	\$5,296,537	\$6,324,104	\$0	2.34	9.3
SUMMIT I	12/84	\$10,000,000	\$10,000,000	\$4,049,241	\$13,073,949	\$0	11.4	8.4
SUMMIT II	5/88	\$30,000,000	\$25,500,000	\$21,017,974	\$18,842,607	\$4,500,000	21.27	5
SUPERIOR	6/86	\$6,645,000	\$6,312,750	\$7,051,955	\$702,586	\$332,250	5.29	6.9
T ROWE PRICE	11/87	\$18,339,455	\$18,339,455	\$7,418,852	\$13,102,984	\$0	28.19	5.5
ZELL/CHILMARK	7/90	\$30,000,000	\$25,794,325	\$22,166,499	\$1,997,854	\$4,205,675	-9.37	2.8
TOTAL V.C. PORTFOLIO		\$616,984,454	\$357,234,153	\$434,912,529	\$292,451,021	\$259,750,301		
RESOURCES:								
AMGO I	9/81	\$15,000,000	\$15,000,000	\$4,290,138	\$3,614,536	\$0	-7.29	11.6
AMGO II	2/83	\$7,000,000	\$7,000,000	\$5,934,855	\$2,325,453	\$0	2.22	10.2
AMGO IV	7/88	\$12,300,000	\$12,300,000	\$15,754,661	\$1,508,552	\$0	9.78	5.0
AMGO V	5/90	\$16,800,000	\$14,535,147	\$15,589,978	\$3,403,869	\$2,264,853	12.86	3.0
APACHE III	12/86	\$30,000,000	\$30,000,000	\$9,235,750	\$33,260,906	\$0	10.98	6.4
MORGAN O&G	8/88	\$15,000,000	\$13,799,697	\$14,985,185	\$786,710	\$1,200,303	4.44	4.7
B P ROYALTY	2/89	\$25,000,000	\$25,000,000	\$31,250,000	\$13,247,449	\$0	18.69	4.2
SIMMONS OFS	7/91	\$17,000,000	\$6,845,321	\$7,344,016	\$10,000	\$10,154,679	11.15	1.7
TOTAL RES. PORTFOLIO:		\$138,100,000	\$124,480,165	\$104,384,583	\$58,157,475	\$13,619,835		
TOTAL ALT. INV. PORTFOLIO.		\$1,185,584,454	\$870,966,672	\$916,013,458	\$413,936,865	\$314,617,782		

ATTACHMENT B

ANNUAL REPORT SUMMARY FIRST CENTURY PARTNERSHIP March 9, 1993

MANAGER REPRESENTATIVES: Sage Givens, David Lobel

SBI ASSETS UNDER MANAGEMENT: \$7,641,183

BACKGROUND AND DESCRIPTION:

First Century III was formed in December, 1984 and has a term of 10 years. This is the third fund formed by the firm since 1972. The partnership was originated by Smith Barney Venture Corp., a subsidiary of Smith Barney Harris Upham and Company. On January 1, 1992, the six general partners of the fund were spun-off from Smith Barney as an independent firm. First Century has offices in New York and San Francisco. The partnership invests primarily in early stage, high technology companies that are diversified by location and industry group.

QUALITATIVE EVALUATION:

- First Century has shifted its primary focus away from high technology to a more balanced portfolio with 70% of the fund's capital invested in the areas of healthcare, consumer/retail, and special situations (recapitalizations of middle market service - intensive businesses). These three areas have substantially outperformed the technology category over the last several years. As of December 31, 1992, the three non-technology sectors had produced a return for the fund portfolio of 31.4% versus a -8.0% for the technology sector.
- To date, the fund has provided the SBI with an annualized internal rate of return of 8.4%. The fund has drawn \$9.36 million of the SBI's \$10 million commitment and has returned \$4.3 million in cash distributions with a remaining market value of \$7.6 million.
- The manager expects that over the life of the partnership, limited partners will experience a compounded annual return of 15-20%.
- The two general partners focusing primarily on the technology sectors, Steven Bird and Gary Masner, left the firm during the year.

ATTACHMENT B (con't)

QUANTITATIVE EVALUATION: (through March 31, 1993)

COMMITMENT:	\$10,000,000
FUNDED COMMITMENT	\$9,360,000
MARKET VALUE OF FUNDED COMMITMENT:	\$7,641,183
CASH DISTRIBUTIONS:	\$4,308,419
INCEPTION DATE(S):	December, 1984
INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	8.4%

DIVERSIFICATION PROFILE

LOCATION	PERCENTAGE
West	41%
Southeast	12
Midwest	14
Northeast	18
Southwest/Rockies	<u>15</u>
	100%

STAGE OF DEVELOPMENT	PERCENTAGE
Early	47%
Expansion	23
Buyout	15
Late	<u>15</u>
	100%

INDUSTRY	PERCENTAGE
Technology	30%
Healthcare	28
Retail	30
Special Situation	<u>12</u>
	100%

ATTACHMENT C

**ANNUAL REVIEW SUMMARY
TCW FUNDS III AND IV
May 10, 1993**

MANAGER REPRESENTATIVES:	Bruce Ludwig
SBI ASSETS UNDER MANAGEMENT:	TCW III \$29,978,141
	TCW IV <u>\$24,487,929</u>
	\$54,466,070

BACKGROUND AND DESCRIPTION:

Management of TCW Funds is a joint venture between Trust Company of the West (TCW) and Westmark Real Estate Investment Services of Los Angeles. Funds III and IV were begun in August 1985 and November 1986, respectively. The SBI's investment commitment totals \$70 million for the two funds. As of December 31, 1988, the entire \$70 million has been funded. Both funds have ten year terms. The fund managers utilize specialty investment vehicles such as convertible and participating mortgages to enhance real estate returns. In addition, they specialize in real estate research to identify attractive property markets. Generally, investments are diversified by location and property type with some concentration in particular property types and locations identified by internal research. management of portfolio properties is typically handled by local property firms.

QUALITATIVE EVALUATION:

- Performance continues to be disappointing for the two TCW Funds during the past year and generally reflective of the depressed real estate market.
- Since inception, TCW III (7.7 years old) and IV (6.5 years old) have provided the SBI with annualized internal rates of return of .35% and -2.08%, respectively.
- TCW has had a significant portion of its portfolio in Southern California, and Washington, D.C. which continue to be hampered by ongoing economic adversity. The performance of the funds will continue to be depressed until the economies of these markets begin to rebound.
- The manager is projecting increased cash flow for each fund through 1995. This should result from the completion of the anticipated upgrades, remodeling and renovations to portfolio properties as well as the decline in free rents and excess tenant improvements and leasing commissions.
- Occupancy rates for TCW Funds III and IV were 88% and 90%, respectively, at 12/31/92. At 12/31/91, occupancy rates for Fund III and IV were 88% and 90%, respectively.

ATTACHMENT C (con't)

QUANTITATIVE EVALUATION: (through March 31, 1993)

	TCW III	TCW IV
COMMITMENT:	\$40,000,000	\$30,000,000
FUNDED COMMITMENT	\$40,000,000	\$30,000,000
MARKET VALUE OF FUNDED COMMITMENT:	\$29,978,141	\$24,487,929
CASH DISTRIBUTIONS:	\$10,900,073	\$2,399,405
INCEPTION DATE(S):	August 1985	November 1986
INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	0.35%	-2.08%

DIVERSIFICATION PROFILE

LOCATION		PROPERTY TYPE	
Northeast	15%	Office	48%
Midwest	1	Retail	19
Southwest	3	Industrial/R&D	<u>33</u>
Southeast	42		100%
Pacific	<u>39</u>		
	100%		