MINNESOTA * STATE BOARD OF INVESTMENT

MINNESOTA STATE BOARD
OF INVESTMENT
MEETING
March 18, 1998

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INVESTMENT ADVISORY COUNCIL MEETING March 3, 1998



Governor Arne H. Carlson
State Auditor Judi Dutcher
State Treasurer Michael A. McGrath
Secretary of State Joan Anderson Growe
Attorney General Hubert H. Humphrey III

AGENDA STATE BOARD OF INVESTMENT MEETING

Wednesday, March 18, 1998 8:30 A.M. -Room 125 State Capitol - Saint Paul

1.	Approval of Minutes of December 12, 1997	TAB
2.	Report from the Executive Director (H. Bicker) A. Quarterly Investment Review (October 1, 1997 - December 31, 1997) B. Administrative Report 1. Reports on budget and travel 2. Results of FY97 audit 3. Legislation update for 1998 Session 4. Update on litigation 5. Update on tobacco information	A B
3.	Report from the Master Custodian Committee (P. Sausen)	C
4.	Report from the Accounting System Review Committee (P. Sausen)	D
5.	Reports from the Investment Advisory Council (J. Yeomans) A. Domestic Manager Committee 1. Review of manager performance 2. Review of Investment Advisers, Inc. and Weiss Peck & Greer 3. Recommendation to terminate Independence Investment Associates to facilitate rebalancing needs	E
	 B. International Manager Committee 1. Review of manager performance 2. Review of the rebalancing of the international program 3. Recommendation to remove Scudder from the watch list 4. Recommendation to revise the statement of philosophy on currency management 	F
	 C. Alternative Investment Committee 1. Review of current strategy 2. Approval of commitments to follow-on investments (Coral Partners, Warburg Pincus Equity Partners, Thoma Cressey, GTCR Golder Rauner, and First Reserve) and a new investment (Fox Paine) for the Basic Retirement Funds. 	G

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Minutes State Board of Investment December 12, 1997

The State Board of Investment (SBI) met at 8:30 A.M. Wednesday, December 12, 1997 in Room 125 State Capitol, St. Paul, Minnesota. Governor Arne H. Carlson; State Auditor Judith H. Dutcher; State Treasurer Michael A. McGrath; and Secretary of State Joan Anderson Growe were present. Attorney General Hubert H. Humphrey III was absent. The minutes of the September 3, 1997 Board meeting were approved.

Executive Director's Report

Mr. Bicker, Executive Director, referred members to Tab A of the meeting materials and reported that the Combined Funds had exceeded inflation over the ten year period ending September 30, 1997 (Combined Funds 12.1% vs. Inflation 3.4%), exceeded the median fund (33rd percentile) and outperformed its composite index (Combined Funds 15.2% vs. Composite 14.7%) for the most recent five year period. He stated that the Basic Funds had exceeded its composite index (Basics 15.5% vs. Composite 15.2%) over the last five years and reported that the Post Fund had outperformed its composite index for the period since July 1, 1993 (Post Fund 14.6% vs. Composite 14.0%).

Mr. Bicker reported that the Basic Funds' assets increased 6.3% for the quarter ending September 30, 1997 due to positive investment returns. He said that the asset mix is essentially on target and that the Funds outperformed its composite index for the quarter (Basics 7.4% Composite 6.9%) and for the year (Basics 27.8% vs. Composite 26.3%).

Mr. Bicker reported that the Post Fund's assets increased 7.0% for the quarter ending September 30, 1997 due to positive investment returns. He said that the asset mix is essentially on target and that the Fund had outperformed its composite index for the quarter (Post 6.4% vs. Composite 5.7%) and for the year (Post 25.8% vs. Composite 23.5%).

Mr. Bicker reported that the domestic stock manager group outperformed for the quarter (Domestic Stocks 10.1% vs. Wilshire 5000 9.8%) and for the year (Domestic Stocks 38.8% vs. Wilshire 5000 38.0%). He said that the international stock manager group outperformed for the quarter (International Stocks 0.1% vs. Int'l Composite –1.9%) and for the year (International Stocks 18.1% vs. Int'l. Composite 11.5%). He added that the bond segment outperformed for the quarter (Bonds 3.7% vs. Lehman Aggregate 3.3%) and year (Bonds 10.9% vs. Lehman Aggregate 9.7%).

Mr. Bicker reported that the Assigned Risk Plan (ARP) had outperformed its composite for the quarter (ARP 4.1% vs. Composite 3.6%) and for the year (ARP 17.1% vs. Composite 14.4%). He concluded his report with the comment that as of September 30, 1997 the SBI was responsible for over \$39 billion in assets.

Executive Director's Administrative Report

Mr. Bicker referred members to Tab B for the Portfolio Statistics and Tab C of the current budget and travel reports.

Mr. Bicker stated that as of January 1, 1998, retirees in the Post Retirement Fund will receive a 10.1% benefit increase. In response to a question from Ms. Growe, Mr. Bicker confirmed that this is the largest benefit increase ever granted.

Mr. Bicker reported that the Office of the Legislative Auditor is nearly finished with its financial audit of the SBI for FY97. He noted that no major findings are expected and that a formal report will be made to the Board at its March 1998 meeting.

Mr. Bicker reported that staff is recommending that an administrative bill for the 1998 Legislative session is not needed. He stated that the retirement systems are proposing a piece of legislation related to the asset based charge imposed in the Supplemental Investment Fund (SIF). He explained that currently, the SBI deducts 0.4% annually for participants in all plans participating in the SIF to cover administrative costs bore by the various retirement systems. He stated that the proposed legislation will allow the retirement systems to calculate their own costs and the amount of the asset based charge which would be accounted for by the retirement systems instead of the SBI. He added that staff supports this proposal because it will simplify the accounting process for the SIF and clearly separate the investment management costs from the other administrative costs for participants.

Mr. Bicker asked Christie Eller, Assistant Attorney General, to update members on the status of litigation concerning Mercury Finance Corporation. Ms. Eller explained that the Attorney General's Office is involved in very active settlement negotiations with the company, its outside directors and its accounting firm.

Mr. Bicker referred members to the meeting materials in his Administrative Report for an update on tobacco information. Ms. Growe reminded members that at a prior SBI meeting, the Governor had given staff a directive to have the stock managers provide written notification to staff of any decision to purchase new or additional shares of any company which obtains more that 50% of its revenues from the sale of tobacco. She said that since this has become a Board policy, that she had prepared a resolution to be formally approved by the Board (see **Attachment A**). In response to a question from Mr. Carlson, Mr. Bicker confirmed that staff is currently following the same procedures as worded in the proposed resolution. Ms. Growe moved approval of the resolution as stated in Attachment A. Mr. McGrath seconded the motion. The motion passed.

Mr. Bicker referred members back to Tab C of the meeting materials and noted that staff had set tentative meeting dates for calendar year 1998 and that staff will continue to verify the availability of Board members.

Mr. Bicker informed members that Michael Stutzer, who had been a Professor of Finance at the University of Minnesota, had resigned from the Investment Advisory Council

(IAC). He said that the SBI Deputies are recommending that the SBI appoint Michael Troutman, who oversees the Evangelical Lutheran Church's Board of Pensions, to fill the current vacancy. He noted that Mr. Troutman had previously served on the IAC prior to completing mission work in Central America. Ms. Growe moved approval of the recommendation, as stated in the Executive Director's Administrative Report, which reads: "The SBI Deputies recommend that the SBI appoint Michael L. Troutman to the currency vacancy among Board appointees to the Investment Advisory Council." Ms. Dutcher seconded the motion. The motion passed.

Deferred Compensation Review Committee Report

Mr. Sausen referred members to Tab D of the meeting materials and reported that during the 1997 Legislative session, the SBI was mandated to prepare a report concerning the evaluation of insurance companies used in the 403(b) employer matching opportunity for school districts and teachers and the most effective delivery mechanism for bringing 403(b) retirement savings products to employees. He said that the Committee, with concurrence from the IAC, is recommending that the Board adopt the Committee's recommendation that the most effective delivery mechanism for bringing 403(b) retirement savings products to employees is through the creation of a statewide, state sponsored 403(b) plan. Ms. Dutcher moved approval of the Committee's recommendation, as stated in the Committee Report, which reads: "The Committee recommends that the Board adopt the attached 403(b) report and authorize the Executive Director to work with the Legislature to implement the report's recommendations." Ms. Growe seconded the motion. Mr. Carlson asked for further information. Mr. Bicker briefly explained the inefficiencies, lack of information available to employees, and complicated record keeping requirements of the current program structure. He stated that the creation of a state-wide, state sponsored 403(b) plan would reduce costs, provide increased flexibility and provide consistent information to all employees. In response to questions from Mr. Carlson, Mr. Bicker stated that the plan could be administered by the Teachers Retirement Association or some other new entity. He said that the SBI would not administer the plan, however, that the SBI could be involved in the selection of investment options. He clarified that whoever is retained as the third party administrator would be responsible and liable for the complicated Maximum Exclusion Allowance calculations. The motion passed.

Asset Allocation Committee Report

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Ms. Yeomans referred members to Tab E of the meeting materials and stated that the Committee is recommending that the Permanent School Fund position paper be adopted as its written policy statement and that the SBI support further constitutional changes that will enhance the SBI's ability to manage the portfolio and increase the expected total return of the Fund. She said that the additional constitutional changes would be to eliminate the required offset of net capital losses/gains against spendable income, to allow for a set spending target rather than spending only net dividend and interest income. She added that the setting of a spending target eliminates the need to "forecast" what the markets will do and also eliminate budgeting uncertainty. In response to questions from Ms. Growe, Mr. Bicker confirmed that changes to the Constitution will be necessary to implement this recommendation and he verified that a legislative proposal is

already being worked on and that it will also allow these changes to apply to the Environmental Trust Fund. Mr. Carlson stated that he would like the Department of Finance to examine ways to restructure various miscellaneous state funds to better utilize these monies and make them more efficient to invest. Mr. Sausen said he would forward the request to Commissioner Simoneau. The Committee recommendation, as stated in the Committee Report, passed. The recommendation reads as follows: "The Committee recommends that the SBI adopt the attached position paper as its written policy statement on the Permanent School Fund. In addition, the Committee recommends that the SBI support further constitutional changes that will enhance the SBI's ability to manage the portfolio and increase the expected total return of the Fund."

Domestic Manager Committee Report

Ms. Yeomans referred members to Tab F of the meeting materials and stated that the Committee had several recommendations that required action. She stated that the Committee's first recommendation is to place Voyageur Asset Management on a "watch list" due to the firm having organizational changes resulting from the firm being purchased by Delaware Management Holdings. She added that during the quarter, the Committee reviewed American Express Asset Management (formerly named IDS Advisory) and Independence Investment Associates. She reported that the Committee is recommending that no action be taken on American Express since their mandate had recently changed and that Independence be added to the "watch list" due to organizational changes at the firm.

Mr. McGrath moved approval of the Committee's recommendations involving Voyageur, American Express and Independence, as stated in the Committee Report, which reads: "In accordance with the qualitative guidelines in the SBI's Manager Continuation Policy, the Committee recommends that Voyageur be placed on the "watch list" due to organizational changes. The Committee recommends that no action be taken with respect to American Express Asset Management Group at this time. In accordance with the SBI Manager Continuation Policy, the Committee recommends that the SBI place Independence Investment Associates on the "watch list" due to organizational changes at the firm." Ms. Growe seconded the motion. The motion passed.

Ms. Yeomans stated that the Committee is recommending that the Board adopt an updated resolution concerning repurchase agreements. She said that currently only Chase Manhattan Bank and the Bank of New York have the facilities to act as tri-party banks. In response to a comment from Mr. Carlson, Mr. Bicker stated that the repurchase resolution is administrative in nature and will give the Executive Director the discretion to add or subtract banks from the list, thus eliminating Board action for each change. Mr. McGrath moved approval of the Committee's recommendation, as stated in the Committee Report, which reads: "The Committee recommends that the SBI adopt the updated resolution concerning repurchase agreements." Ms. Growe seconded the motion. The motion passed. (See Attachment B.)

Ms. Yeomans stated the Committee's final recommendation is to allow staff to use triparty agreements for securities lending for the State Cash Accounts. Mr. McGrath

moved approval of the Committee's recommendation, as stated in the Committee Report, which reads: "The Domestic Manager Committee recommends that the SBI authorize SBI staff to use tri-party agreements to lend securities in State Cash Accounts under the SBI's control in order to generate additional income for these portfolios. That the SBI authorize SBI staff to lend securities in State Cash Accounts to organizations designated as primary dealers by the Federal Reserve Bank of New York provided that collateral is held at a tri-party bank that is unrelated to the borrower. That the SBI authorize the Executive Director, with the assistance of SBI legal counsel, to negotiate and execute necessary agreements with tri-party banks for the securities lending activity in State Cash Accounts." Ms Dutcher seconded the motion. The motion passed.

International Manager Committee Report

Ms. Yeomans referred members to Tab G of the meeting materials and briefly reviewed the performance of the international segment. She stated that the Committee is recommending that the SBI remove Montgomery Asset Management from the "watch list". She noted that staff and the Committee are satisfied with the personnel and investment process used by the firm since its sale to Commerzbank in July 1997. Ms. Growe moved approval of the Committee's recommendation, as stated in the Committee Report, which reads: "In accordance with the Manager Continuation Policy, the Committee recommends that the SBI remove Montgomery Asset Management from probation status." The motion passed.

Ms. Yeomans stated that the Committee is recommending that the SBI execute a new five year contract with Record Treasury Management to provide the currency overlay program on the EAFE Index Fund. Ms. Dutcher moved approval of the Committee's recommendation but asked that the IAC give a formal recommendation on whether or not the overlay program should continue. Ms. Yeomans noted that several members of the Committee and the IAC had differing opinions regarding the program, but that members were in agreement that the contract with Record Treasury should be continued until a final recommendation on the program is approved. Mr. Bicker added that the Committee expects to bring a recommendation to the Board at its March 1998 meeting. recommendation, as stated in the Committee Report, reads as follows: "The Committee recommends that the SBI authorize the Executive Director, with assistance from SBI's legal counsel, to negotiate and execute a contract with Record Treasury Management Ltd., Windsor, England, for currency overlay on the EAFE index fund. The contract should cover the five year period from January 1, 1998-December 31, 2003 and be subject to the standard contract clause that allows immediate termination." In response to a question from Mr. McGrath, Mr. Bicker confirmed that the contract with Record Treasury will include an immediate termination clause. In response to a question from Ms. Dutcher, Ms. Yeomans explained that it can take time to "unwind" an overlay program, but that it is possible to expedite the process by selling the underlying hedge Ms. Growe noted that initially she had some reservations about the program, but that to date the results had been very positive and she asked that additional meetings be scheduled prior to the next Board meeting to further discuss this policy issue. Mr. Carlson agreed and Mr. Bicker concurred. Ms. Growe stated that even though there may not be unanimous agreement on this issue by the IAC, that it is helpful to hear all

sides of the issue. Mr. Bicker noted that he does not expect it to be a unanimous vote. The motion made earlier by Ms. Dutcher passed.

Alternative Investment Committee Report

Ms. Yeomans referred members to Tab H of the meeting materials and stated that the Committee is recommending two investments for the Basic Retirement Funds, one with an existing real estate manager, Colony Capital, in Colony Investors III, L.P. and the other with an existing private equity manager, Summit Partners, in Summit Ventures Fund V, L.P. In response to a question from Mr. Carlson, Mr. Bicker reviewed the performance of previous funds with Summit Partners. Ms. Yeomans added that the Committee is also recommending an investment for the Basics with an existing resource manager, SCF Partners, in SCF Partners Investment Fund IV, L.P. Ms. Dutcher moved approval of all three Committee recommendations, as stated in the Committee Report, "The Committee recommends that the SBI authorize the Executive which reads: Director, with assistance from the SBI's legal counsel, to negotiate and execute a commitment of up to \$100 million or 20%, whichever is less, in Colony Investors III. This commitment will be allocated to the Basic Retirement Fund. Approval by the SBI of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and neither the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by Colony Capital upon this approval. Until a formal agreement is executed by the Executive Director on behalf of the SBI, further due diligence and negotiations may result in the imposition of additional terms and conditions on Colony Capital or reduction or termination of the commitment."

"The Committee recommends that the SBI authorize the Executive Director, with assistance from the SBI's legal counsel, to negotiate and execute a commitment of up to \$100 million or 20%, whichever is less, in Summit Ventures Fund V, L.P. This commitment will be allocated to the Basic Retirement Fund. Approval by the SBI of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and neither the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by Summit Partners upon this approval. Until a formal agreement is executed by the Executive Director on behalf of the SBI, further due diligence and negotiations may result in the imposition of additional terms and conditions on Summit Partners or reduction or termination of the commitment."

"The Committee recommends that the SBI authorize the Executive Director, with assistance from the SBI's legal counsel, to negotiate and execute a commitment of up to \$100 million or 20%, whichever is less, in SCF Partners Investment Fund IV. This commitment will be allocated to the Basic Retirement Fund. Approval by the SBI of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and neither the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by SCF Partners upon this approval. Until a formal agreement is executed by the Executive Director on behalf of the SBI, further due

diligence and negotiations may result in the imposition of additional terms and conditions on SCF Partners or reduction or termination of the commitment." The motion passed.

Mr. Bicker announced the departure of Beth Lehman, Assistant Executive Director from the SBI and members wished her well.

Respectfully submitted,

Howard Breder

Howard J. Bicker

Executive Director

RESOLUTION OF THE MINNESOTA STATE BOARD OF INVESTMENT

Whereas, funds under the direction of the State Board of Investment (SBI) contain investments in companies that manufacture tobacco products;

Whereas, the State of Minnesota is in litigation with a number of these tobacco companies, alleging ongoing violations of Minnesota law and seeking substantial monetary recoveries and significant changes in the companies' business activities and that the trial is scheduled to commence on January 20, 1998;

Whereas, tobacco companies are the subject of similar actions brought by at least forty other states, and a number of other cities and counties, each seeking large monetary recoveries and changes in the companies' operations; and more governmental jurisdictions may file similar actions;

Whereas, tobacco companies are the subject of an ever-increasing level of legal activity, including a large and growing number of individual private actions and private class actions;

Whereas, according to published reports, the activities of tobacco companies currently are under criminal investigation by one or more federal grand juries;

Whereas, federal regulations promulgated in 1996 were upheld in US District Court in North Carolina and are now on appeal to the US Fourth Circuit Court of Appeals, and, if fully implemented, would alter the business activities of these tobacco companies in significant respects;

Whereas, there is a risk that some or all of the foregoing activities will substantially affect the profitability of tobacco companies;

Whereas, the ability of the market and investment advisors to evaluate this risk is limited because much of the evidence is unavailable to the public;

Whereas, on June 20, 1997, some companies and some states agreed on federal legislation to be proposed to settle various legal claims and would involve, among other provisions, payment by the tobacco companies of at least \$368.5 billion over twenty five years to settle various legal actions, and to date there has been no Congressional action to implement the proposed settlement;

Whereas, during the five year period ending September 30, 1997, tobacco stocks have exhibited higher volatility and lower annualized returns than many other industry groups, and, as a result, may pose excessive and unnecessary risks;

Whereas, the Board considers it prudent to monitor the exposure of its funds to the foregoing risks until those risks have been further clarified and in light of the Board's fiduciary responsibility;

NOW THEREFORE be it resolved:

- 1. Each stock manager of the SBI must notify the SBI Executive Director in writing of their decision to purchase new or additional shares of any company which obtains more than 50% of its revenues from the sale of tobacco. Separate notification must be given for each purchase and must include a statement regarding why the manager believes the action is in accordance with its fiduciary responsibility as a manager for the SBI.
- 2. To identify the companies in #1, above, the SBI Executive Director and SBI stock managers are directed to rely on information compiled by the Investor Responsibility Research Center (IRRC), Washington, D.C., as published in the most recent edition of IRRC publication entitled "The Tobacco Industry".
- 3. This resolution shall apply to all internally and externally managed stock portfolios of the SBI and shall remain in effect until further order of the State Board of Investment.

Adopted the 12 day of December, 1997.

Governor Arne H. Carlson

Chair, Minnesota State Board of Investment

RESOLUTION OF THE STATE BOARD OF INVESTMENT

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

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

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

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

NOW THEREFORE, the SBI:

1. Authorizes the establishment of demand deposit accounts, and such other custody or clearing accounts as may be necessary, at The Chase Manhattan Bank or The Bank of New York, or their successors or assigns, or such other financial institutions as identified by the Executive Director and the SBI's repurchase agreement counterparties, to have net applicable Federal Reserve standards and to provide the level of custodial and servicing capabilities that are necessary to serve as a custody agent under a master repurchase agreement.

2. Authorizes the SBI Executive Director or his/her designees to give instructions on

behalf of the SBI to such banks or trust companies with which a demand deposit account

or custody account is established in order to facilitate tri-party repurchase and reverse

repurchase agreements.

3. Authorizes the banks and trust companies with which the SBI establishes a

demand deposit account or custody account to rely on instruction to make deposits to,

and withdrawals from the demand deposit account or custody account provided it

reasonably believes such instructions are instructions from the SBI Executive Director or

his/her designee whether the instructions are given orally or by telex, telecopier, facsmile,

electronically or other means of giving instructions not manually signed or bearing a

facsimile signature.

4. Directs the SBI Executive Director or his/her designee, to execute such

authorizations or account agreements with banks or trust companies or such other

financial institutions as may be reasonably required to facilitate tri-party repurchase and

repurchase agreements.

BE IT FURTHER RESOLVED that:

1. The Resolution shall remain in full force and effect until such time as the SBI

takes action to amend or rescind this resolution.

Adopted this \(\sum_{\lambda} \) day of December, 1997

Governor, Arne H. Carlson Chair, Minnesota State Board

of Investment

AGENDA INVESTMENT ADVISORY COUNCIL MEETING

Tuesday, March 3, 1998 2:00 P.M. - SBI Conference Room Room 105, MEA Building - Saint Paul

1.	Approval of Minutes of December 2, 1997	TAB
2.	Report from the Executive Director (H. Bicker) A. Quarterly Investment Review (October 1, 1997 - December 31, 1997) B. Administrative Report 1. Reports on budget and travel 2. Results of FY97 audit 3. Legislation update for 1998 Session 4. Update on litigation 5. Update on tobacco information	A B
3.	Report from the Master Custodian Committee (P. Sausen)	C
4.	Report from the Accounting System Review Committee (P. Sausen)	D
5.	Reports from the Investment Advisory Council (J. Yeomans) A. Domestic Manager Committee (J. Bohan) 1. Review of manager performance 2. Review of Investment Advisers, Inc. and Weiss Peck & Greer 3. Recommendation to terminate Independence Investment Associates to facilitate rebalancing needs	E
	 B. International Manager Committee (J. Mares) 1. Review of manager performance 2. Review of the rebalancing of the international program 3. Recommendation to remove Scudder from the watch list 4. Recommendation to revise the statement of philosophy on currency management 	F
	 C. Alternative Investment Committee (K. Gudorf) Review of current strategy Approval of commitments to follow-on investments (Coral Partners, Warburg Pincus Equity Partners, Thoma Cressey, GTCR Golder Rauner, and First Reserve) and a new investment 	G

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Minutes Investment Advisory Council December 2, 1997

MEMBERS PRESENT: Gary Austin; John Bohan; Roger Durbahn; Han Chin Liu;

Judy Mares; Malcolm McDonald; Bob McFarlin; Wayne

Simoneau; Mary Vanek; and Jan Yeomans.

MEMBERS ABSENT: Dave Bergstrom; Doug Gorence, Ken Gudorf; P. Jay

Kiedrowski; Gary Norstrem; and Daralyn Peifer;

SBI STAFF: Howard Bicker; Beth Lehman; Jim Heidelberg; Sheila

Berube; Lois Buermann; Debbie Griebenow; Kristine Hanson; Mike Menssen; Mark Regal; Karen Vnuk; Carol

Nelson and Charlene Olson.

OTHERS ATTENDING: Ann Posey, Richards & Tierney; Christie Eller; Carey Moe;

Peter Sausen; Bob Heimerl, Lloyd Belford, REAM; and

Carl Simmons.

The minutes of the September 2, 1997 meeting were approved.

Executive Director's Report

Mr. Bicker, Executive Director, referred members to Tab A of the meeting materials and reported that the Combined Funds had exceeded inflation over the ten year period ending September 30, 1997 (Combined Funds 12.1% vs. Inflation 3.4%), exceeded the median fund (33rd percentile) and outperformed its composite index (Combined Funds 15.2% vs. Composite 14.7%) for the most recent five year period. He stated that the Basic Funds had exceeded its composite index (Basics 15.5% vs. Composite 15.2%) over the last five years and reported that the Post Fund had outperformed its composite index for the period since July 1, 1993 (Post Fund 14.6% vs. Composite 14.0%).

Mr. Bicker reported that the Basic Funds' assets increased 6.3% for the quarter ending September 30, 1997 due to positive investment returns. He said that the asset mix is essentially on target and that the Funds outperformed its composite index for the quarter (Basics 7.4% Composite 6.9%) and for the year (Basics 27.8% vs. Composite 26.3%).

Mr. Bicker reported that the Post Fund's assets increased 7.0% for the quarter ending September 30, 1997 due to positive investment returns. He said that the asset mix is essentially on target and that the Fund had outperformed its composite index for the quarter (Post 6.4% vs. Composite 5.7%) and for the year (Post 25.8% vs. Composite 23.5%).

Mr. Bicker reported that the domestic stock manager group outperformed for the quarter (Domestic Stocks 10.1% vs. Wilshire 5000 9.8%) and for the year (Domestic Stocks 38.8% vs. Wilshire 5000 38.0%). He said that the international stock manager group outperformed for the quarter (International Stocks 0.1% vs. Int'l Composite –1.9%) and for the year (International Stocks 18.1% vs. Int'l. Composite 11.5%). He added that the bond segment outperformed for the quarter (Bonds 3.7% vs. Lehman Aggregate 3.3%) and year (Bonds 10.9% vs. Lehman Aggregate 9.7%).

Mr. Bicker reported that the Assigned Risk Plan (ARP) had outperformed its composite for the quarter (ARP 4.1% vs. Composite 3.6%) and for the year (ARP 17.1% vs. Composite 14.4%). He concluded his report with the comment that as of September 30, 1997 the SBI was responsible for over \$39 billion in assets.

Executive Director's Administrative Report

Mr. Bicker referred members to Tab B for the Portfolio Statistics and Tab C for the current budget and travel reports.

Mr. Bicker stated that the Post Retirement benefit increase, payable January 1, 1998, is 10.1%. He reminded members of the unusually strong returns in the various markets in recent years and he said that staff is continuing to talk with retiree groups to make them understand that it is unlikely that the benefit increases will continue to be so large in future years.

Mr. Bicker noted that the Office of the Legislative Auditor is nearly finished with its financial audit of the SBI and that no significant findings are expected. Mr. Bicker reported that staff is recommending that an SBI Administrative bill for the 1998 Legislative session is not needed. He stated that the retirement systems are proposing legislation related to the asset based charge in the Supplemental Investment Fund (SIF). He explained that currently, the SBI deducts 0.4% annually for participants in all plans to cover administrative costs bore by the various retirement systems. He said that the proposed legislation will allow the retirement systems to calculate their own costs and collect their asset based charge instead of the SBI. He added that staff supports this proposal because it will simplify the accounting process for the SIF.

Mr. Bicker asked Ms. Eller, Assistant Attorney General, to update members on the status of litigation concerning Mercury Finance. She stated that the SBI and its counsel have been designated as lead plaintiff in this case. She explained that originally the court had wanted to have the SBI's counsel selected through a bidding process which the Attorney General's Office objected to. She said that settlement negotiations are proceeding. Mr. Bicker and Ms. Eller briefly reviewed the background of the case and why the SBI became involved as lead plaintiff.

Mr. Bicker referred members to the meeting materials for an update on tobacco information that was included for the Board's information.

Mr. Bicker stated that staff had set tentative Board/IAC meeting dates for calendar year 1998 and that staff will continue to verify the availability of all members.

Mr. Bicker stated that the SBI Deputies are recommending that Michael Troutman be appointed to the IAC. Mr. Bicker explained that Mr. Troutman had previously served on the IAC prior to his sabbatical to do missionary work in Nicaragua.

Deferred Compensation Review Committee Report

Mr. Bicker referred members to Tab D of the meeting materials and stated that the SBI is in the process of redesigning the Deferred Compensation Plan and issuing an RFP. He noted that a final recommendation is expected to be presented to the Board at its June 1998 meeting.

Mr. Bicker stated that the Legislature had mandated the SBI to evaluate insurance companies used in the 403(b) employer matching program for school districts and teachers, and to recommend what would be the most effective delivery mechanism for bringing 403(b) retirement savings products to employees by February 1, 1998. He explained several factors which make the current program structure inefficient for both participants and the school districts. He said that the Committee had reviewed the report prepared by staff and concurred with the recommendation that the most effective delivery mechanism for bringing 403(b) retirement savings products to employees is through the creation of a state-wide, state sponsored 403(b) plan. Mr. Bicker said that participants would benefit by receiving more comparable information on all products from one source, lower fees and greater portability among the products and vendors. He said that the SBI has been discussing these potential changes with the Minnesota Education Association (MEA) and interested insurance companies.

In response to a question from Mr. McFarlin, Mr. Bicker stated that the insurance companies had initiated the legislation and that the SBI had further amended it to include a full review of the program. Mr. Bohan said that action is not required on the recommendation by the IAC, but he suggested that the IAC go on record as endorsing the recommendation. In response to a question from Mr. Liu, Mr. Bicker said that the 403(b) program could end up being similar to the state's deferred compensation plan. Mr. McDonald moved approval of endorsing the Committee's recommendation, as stated in the Committee Report. Mr. Simoneau seconded the motion. Mr. Simoneau reminded members of some previous investment options for the Teachers Retirement Association that were poorly structured and stated that he believed the proposed recommendation is appropriate. The motion passed.

Asset Allocation Committee Report

Mr. McDonald referred members to Tab E of the meeting materials and stated that the Committee had met during the quarter to review an updated position paper on the needs and objectives of the Permanent School Fund. Mr. Bicker stated that the paper deals with the history of the Fund and how and why the asset mix has evolved from a 100% fixed income portfolio to a 50% equities/50% fixed income portfolio. He noted that the SBI supports further Constitutional changes which would eliminate the required offset of net

capital gains/losses against spendable income and allow for a spending target rather than spending only net dividend and interest income for both the Permanent School Fund and the Environmental Trust Fund. Mr. McDonald moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Bohan seconded the motion. The motion passed.

Domestic Manager Committee Report

Mr. Bohan referred members to Tab F of the meeting materials and briefly reviewed the performance of the domestic stock and bond managers. He stated that staff had a list of nine firms that are candidates for the Bond Manager Monitoring Program. He added that these managers would be considered if a current manager needed to be replaced or if a new manager needed to be added.

Mr. Bohan stated that the Committee is recommending that Voyageur Asset Management be put on probation due to organizational changes. Ms. Yeomans reminded members that the Board would prefer that the term "probation" not be used in these types of recommendations. A discussion followed and members agreed on using the phrase "on watch." Mr. Bohan made a motion to place Voyageur Asset Management on watch. Ms. Mares seconded the motion. The motion passed.

Mr. Bohan stated that during the quarter, the Committee had reviewed American Express and Independence Investment Associates because both managers' five year performance has been below their benchmark for one year. He said that the Committee's recommendation is to take no action at this time with respect to American Express but to put Independence on watch. He added that the Committee felt American Express should be given more time before being further evaluated since their investment mandate had recently changed to a more concentrated portfolio approach. He said that in the case of Independence, staff also has some concerns regarding the recent departure of a key member of the management team. Mr. Bohan moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Durbahn seconded the motion. The motion passed.

Mr. Bohan reported that the Committee is recommending that members approve the resolution allowing the SBI to use tri-party agreements to lend securities in the State Cash Accounts, (see attachment A). He noted that the resolution needs to be updated since several banks previously included no longer qualify. He said that the resolution would authorize transactions with The Chase Manhattan Bank and The Bank of New York. Mr. Bohan moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. McDonald seconded the motion. In response to a question from Ms. Yeomans, Mr. Bicker confirmed that many of the banks previously included had either merged or changed their name. The motion passed.

Mr. Bohan stated that the Committee is recommending that SBI staff be authorized to use tri-party agreements to lend securities in the State Cash Accounts and he moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. McDonald seconded the motion. The motion passed.

International Manager Committee Report

Ms. Mares referred members to Tab G of the meeting materials and briefly reviewed the international managers' performance. She noted that staff and the Committee had discussed Marathon's performance which is being affected by their holdings in small capitalization and value stocks. She said that work will continue on developing better international benchmarks for the managers.

Ms. Mares stated that the Committee is recommending that Montgomery Asset Management be removed from probation status. She said staff has not seen any adverse effects from the firm's sale to Commerzbank and she moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Bohan seconded the motion. The motion passed.

Ms. Mares stated that the Committee has been reviewing the currency overlay program and she briefly summarized the history of decisions made regarding the SBI's currency management. She stated that staff has some concerns regarding the size of the currency overlay program and the impact it can have on the international segment. She said that staff had presented the Committee with several alternatives and that the Committee had asked staff to do further work on this issue prior to making a recommendation. Ms. Mares noted, however, that the contract for Record Treasury Management expires in December 1997 and that the Committee feels comfortable with their performance and is recommending that their contract be renewed. Mr. Bicker confirmed that the contract will include the standard immediate termination clause. Ms. Mares encouraged members to attend the next Committee meeting and participate in the discussions regarding currency management. Ms. Mares moved approval of the Committee's recommendation to retain Record Treasury Management, as stated in the Committee Report. Mr. McDonald seconded the motion. The motion passed.

Alternative Investment Committee Report

Mr. McDonald referred members to Tab H of the meeting materials and stated that the Committee is recommending an investment for the Basic Retirement Funds with an existing real estate manager, Colony Capital, in Colony Investors III, L.P. and he moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Durbahn seconded the motion. The motion passed.

Mr. McDonald stated that the Committee is recommending an investment for the Basics with an existing private equity manager, 'Summit Partners, in Summit Ventures Fund V, L.P. He briefly reviewed the performance of previous Summit funds the SBI has invested in and he moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Liu seconded the motion. The motion passed.

Mr. McDonald reported that the Committee is also recommending an investment for the Basics with an existing resource manager, SCF Partners, in SCF Partners Investment Fund IV, L.P. and he moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Austin seconded the motion. The motion passed. Mr. Bicker noted that the SBI may not be able to invest the entire \$100 million in the Summit fund

since the fund is significantly oversubscribed. In response to comments from Ms. Yeomans, Mr. Bicker said that it is difficult to negotiate with firms in the private equity area right now because some funds are so significantly oversubscribed. Mr. Bicker announced that Ms. Lehman, Assistant Executive Director, would be leaving the SBI and members wished her well.

Respectfully submitted,

Howard Bickey

Howard J. Bicker

Executive Director

Tab A

LONG TERM OBJECTIVES Period Ending 12/31/97

COMBINED FUNDS: \$32.4 Billion	Result	Compared to Objective
Provide Real Return (10 yr.)	13.8% (1)	10.4 percentage points above CPI
Provide returns that are 3-5 percentage points greater than inflation over the latest 10 year period.		
Exceed Composite Index (5 yr.)	14.5% (1)	0.5 percentage point above composite index
Outperform a composite market index weighted in a manner that reflects the actual asset mix of the Combined Funds over the latest 5 year period.		
Exceed Median Fund (5 yr.)	31st percentile (2)	above the median fund in TUCS
Provide returns that are ranked in the top half of universe of public and corporate plans over the latest 5 year period.	r3.00mm (2)	1005

BASIC RETIREMENT FUNDS: \$17.1 Billion	Result	Compared to Objective
Exceed Composite Index (5 Yr.)	14.9%	0.4 percentage point above target
Outperform a composite market index weighted in a manner that reflects the long-term asset		
allocation of the Basic Funds over the latest 5 year period.	. •	

POST RETIREMENT FUND: \$15.3 Billion	Result	Compared to Objective
Exceed Composite Index	14.0% (3)	0.7 percentage point above target (3)
Outperform a composite market index weighted in a manner that reflects the long-term asset		3 ()
allocation of the Post Fund over the latest 5 year period.		

- (1) Reflects performance of Basic Funds only through 6/30/93, Combined Funds thereafter. Performance is calculated net of fees.
- (2) The SBI's stated objective is to rank in the top half (above 50th percentile) of the comparative universe. The SBI will strive to achieve performance which ranks in the top third (above 33rd percentile). Performance is ranked gross of fees.
- (3) Since asset allocation transition to 50% domestic stocks was completed, 7/1/93, annualized.

SUMMARY OF ACTUARIAL VALUATIONS

MSRS, TRA, PERA General Plans July 1, 1997

•	Active (Basics)	Retired (Post)	Total (Combined)
Liability Measures 1. Current and Future Benefit Obligation 2. Accrued Liabilities	\$18.7 billion 13.7	\$9.8 billion 9.8	\$28.5 billion 23.5
Asset Measures 3. Current and Future Actuarial Value 4. Current Actuarial Value	\$19.9 billion 12.6	\$9.8 billion 9.8	\$29.8 billion 22.4
Funding Ratios Future Obligations vs. Future Assets (3 ÷ 1)	107%	100%	104%
Accrued Liabilities vs. Current Actuarial Value (4 ÷ 2)	92%	100%	95%*

^{*} 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 103% for the Basics, 100% for the Post and 102% 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, 6.0% Post

Full Funding Target Date: 2020

EXECUTIVE SUMMARY

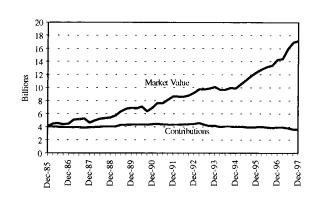
Basic Retirement Funds (Net of Fees)

Asset Growth

The market value of the Basic Funds increased 1.4% during the fourth quarter of 1997. Positive investment returns accounted for the rise.

Asset Growth During Fourth Quarter 1997 (Millions)

	(MIIIIOIIS)
Beginning Value	\$ 16,916
Net Contributions	-47
Investment Return	277
Ending Value	\$ 17,146

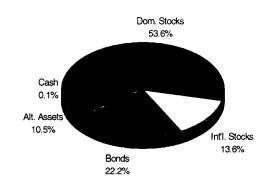


Asset Mix

During the quarter, the allocation to international stocks declined reflecting weaknesses within the foreign equity markets.

	Policy Targets	Actual Mix 12/31/97	Actual Market Value (Millions)
Domestic Stocks	45.0%	53.6%	\$9,196
Int'l. Stocks	15.0	13.6	2,324
Bonds	24.0	22.2	3,802
Alternative Assets*	15.0	10.5	1,801
Unallocated Cash	1.0	0.1	23
	100.0%	100.0%	\$17,146

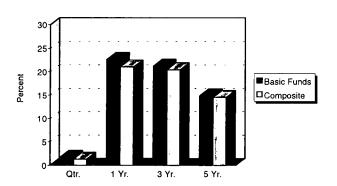
^{*} Any uninvested allocation is held in domestic stocks



Fund Performance (Net of Fees)

The Basic Funds outperformed its composite market index for the quarter and the year.

	Qtr.	1 Yr.	3 Yr.	5 Yr.
Basics	1.7%	22.6%	21.2%	14.9%
Composite	1.3	21.0	20.4	14.5



EXECUTIVE SUMMARY

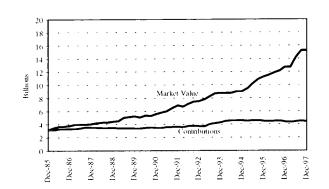
Post Retirement Fund (Net of Fees)

Asset Growth

The market value of the Post Fund increased 0.4% during the fourth quarter of 1997. The rise was due to positive investment returns.

Asset Growth During Fourth Quarter 1997 (Millions)

	(14111110113)
Beginning Value	\$15.220
Net Contributions	-71
Investment Return	124
Ending Value	\$15,273

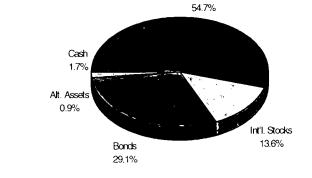


Dom Stocks

Asset Mix

During the quarter, the allocation to international stocks declined reflecting weaknesses within the foreign equity markets.

	Policy	Actual Mix	Actual Market Value
	Targets	12/31/97	(Millions)
Domestic Stocks	50.0%	54.7%	\$8.352
Int'l. Stocks	15.0	13.6	2,076
Bonds	27.0	29.1	4,450
Alternative Assets*	5.0	0.9	135
Unallocated Cash	3.0	1.7	260
	100.0%	100.0%	\$15,273

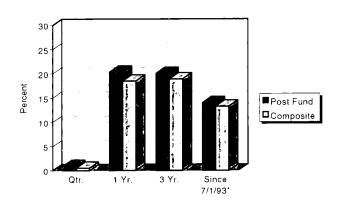


Fund Performance (Net of Fees)

The Post Fund outperformed its composite market index for the quarter and for the year.

	Qtr.	1 Yr.	3 Yr.	Since 7/1/93*
Post	0.9%	20.3%	20.1%	14.0%
Composite	0.5	18.5	18.9	13.3

 Date asset allocation transition to 50% domestic common stocks was completed.



^{*} Any uninvested allocation is held in bonds

8.1%

7.5

11.0%

10.4

EXECUTIVE SUMMARY

Stock and Bond Manager Performance (Net of Fees)

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for the year.

The domestic stock manager group (active,		Qtr.	1 Yr.	3 Yr.	5 Yr.
semi-passive and passive combined) outperformed its target for the quarter and	Dom. Stocks	2.4%	32.3%	29.6%	19.1%
the year.	Wilshire 5000*	1.7	31.3	29.5	19.2
	* Buy/hold ind restrictions th through 10/31	rough 3/3	-		
International Stocks					- <u>.</u>
The international stock manager group (active and passive combined) outperformed its target for		Qtr.	1 Yr.	3 Yr.	5 Yr.
the quarter and the year.	Int'l. Stocks	-8.9%	4.3%	9.0%	13.0%
	Composite Inde	x* -9.1	-0.1	5.5	10.9
	* EAFE-Free th				
	13% Emerging	g Markets	s Free as of	12/31/96.	
Bonds					
The bond manager group (active and semi-passive combined) underperformed its	<u> </u>	Qtr.	1 Yr.	3 Yr.	5 Yr.
semi-passive comomed) underperformed its		• • •	40.00	44.00	0.10

Bonds

Lehman Agg.*

10.2%

9.7

2.8%

2.9

Note: The above returns reflect the performance of the Basic Funds' managers through 6/30/93 and of the Combined Funds (Basic and Post) since 7/1/93.

target for the quarter and outperformed its target

Wilshire 5000: The Wilshire 5000 stock index reflects the performance of all publicly traded stocks of companies domiciled in the U.S.

Lehman Aggregate: The Lehman Brothers Aggregate Bond Index reflects the performance of all investment grade (BAA or higher) bonds, U.S. treasury and agency securities and mortgage obligations with maturities greater than one year.

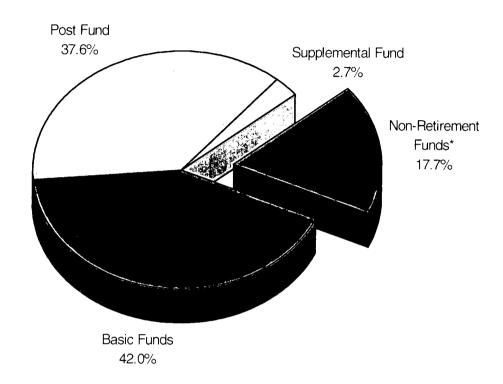
EAFE: The Morgan Stanley Capital International index of 20 stock markets in Europe, Australia and the Far East. EAFE-Free includes only those securities foreign investors are allowed to hold.

Emerging Markets Free: The Morgan Stanley Capital International index of 26 markets in developing countries throughout the world.

^{*} Prior to 7/1/94, the Salomon Broad Investment Grade Bond Index was used.

EXECUTIVE SUMMARY

Funds Under Management



12/31/97 Market Value (Billions)

Retirement Funds		
Basic Retirement Funds	\$17.1	
Post Retirement Fund	15.3	
Supplemental Investment Fund	1.1	
Non Retirement Funds*		
Assigned Risk Plan	0.6	
Permanent School Fund	0.5	
Environmental Trust Fund	0.2	
State Cash Accounts	5.9	
Total	\$ 40.7	

MINNESOTA STATE BOARD OF INVESTMENT

QUARTERLY INVESTMENT REPORT

Fourth Quarter 1997 (October 1, 1997 - December 31, 1997)

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Common Stock Index Account International Share Account Bond Market Account Money Market Account Fixed Return Account	
Assigned Risk Plan	20
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State Cash Accounts	23

VARIOUS CAPITAL MARKET INDICES

Period	Ending	12/31/97
--------	---------------	----------

	Qtr.	Yr.	3 Yr.	5 Yr.	10 Yr.
Domestic Equity					
Wilshire 5000	1.7%	31.3%	29.5%	19.3%	17.6%
Dow Jones Industrials S&P 500 Russell 2000	0.0 2.9 -3.3	24.9 33.3 22.4	30.1 31.2 22.3	22.0 20.3 16.4	18.6 18.1 15.8
Domestic Fixed Income					
Lehman Aggregate*	2.9	9.7	10.4	7.5	9.2
Lehman Gov't./Corp. 90 Day U.S. Treasury Bills	3.2 1.3	9.8 5.3	10.4 5.5	7.6 4.7	9.1 5.7
International					
EAFE** Emerging Markets Free*** Salomon Non U.S. Gov't. Bond	-7.8 -17.5 -1.4	1.8 -11.6 -4.3	6.3 -3.9 6.0	11.4 7.6 7.8	6.2 18.2 7.3
Inflation Measure					
Consumer Price Index****	0.0	1.7	2.5	2.6	3.4

^{*} Lehman Brothers Aggregate Bond index. Includes governments, corporates and mortgages.

^{**} Morgan Stanley Capital International index of Europe, Australia and the Far East (EAFE).

^{***} Morgan Stanley Capital International Emerging Markets Free index.

^{****} Consumer Price Index (CPI) for all urban consumers, also known as CPI-U.

FINANCIAL MARKETS REVIEW

DOMESTIC STOCKS

The stock market moved moderately higher during the quarter due to moderate economic growth, low inflation, and declining interest rates. The turmoil in Southeast Asia, however, was of major concern to the market causing a shift to value stocks. Large cap continued to outperform small cap.

The Wilshire 5000 provided a 1.7% return for the quarter. Performance among the different Wilshire Style Indexes for the quarter is shown below:

Large Value	3.89
Small Value	3.2
Large Growth	1.6
Small Growth	-8.9

The Wilshire 5000 increased 31.3% for the year ending December 31, 1997.

DOMESTIC BONDS

The bond market generated positive returns for the quarter. Bond prices increased due to reports of low, stable inflation along with moderate economic growth. Also investors leaving the troubled Asian markets defaulted to the U.S. treasury market as a safe haven. As a result the bond market appears to believe that the Federal Reserve will not raise short term rates and could potentially lower rates some time this year.

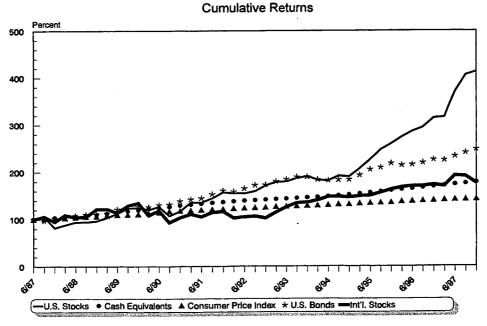
Overall, the Lehman Brothers Aggregate Bond Index increased 2.9% for the quarter. The Lehman Aggregate sector returns for the quarter were:

Treasury/Agency	3.3%
Corporates	2.9
Mortgages	2.4

The Lehman Aggregate increased 9.7% for the latest year.

Indices used are: Morgan Stanley's Index of Europe, Australia and the Far East (EAFE); Wilshire 5000 Stock Index; Lehman Brothers Aggregate Bond Index; 91 Day Treasury Bills; and the Consumer Price Index.

PERFORMANCE OF CAPITAL MARKETS



FINANCIAL MARKETS REVIEW

INTERNATIONAL STOCKS

In aggregate, international stock markets (as measured by the EAFE-Free index) provided a return of -7.9% for the quarter. As shown below, performance varied widely among the major markets:

Japan	-19.8%
United Kingdom	0.3
Germany	0.2
France	-1.4

The EAFE-Free index increased by 1.5% during the latest year.

The EAFE-Free index is compiled by Morgan Stanley Capital International (MSCI) and is a measure of 20 markets located in Europe, Australia and the Far East (EAFE), adjusted for free-float. The major markets listed above comprise about 65% of the value of the international markets in the index.

EMERGING MARKETS

Emerging markets (as measured by MSCI Emerging Markets Free index) provided a return of -17.5% for the quarter. The performance of the five largest stock markets in the index is shown below:

Brazil	-14.5%
Mexico	-3.4
South Africa	-17.0
Taiwan	-19.5
India	-12.3

The Emerging Markets Free index increased by -11.6% for the year.

The Emerging Markets Free index is compiled by MSCI and measures performance of 26 stock markets in Latin America, Asia, Africa and Eastern Europe. The markets listed above comprise about 60% of the value of the index.

REAL ESTATE

Nationally, many real estate markets are now strong. Property types most favored by buyers at the present time include apartments, industrial parks and suburban office buildings.

PRIVATE EQUITY

Private equity fund raising and returns remain strong. Domestic private equity limited partnerships of all kinds raised \$51 billion in 1997, a 41% increase from the \$33.6 billion reported for 1996. It was the sixth consecutive annual rise.

RESOURCE FUNDS

During the fourth quarter of 1997, West Texas Intermediate crude oil averaged \$19.96 per barrel compared to an average price of \$19.94 per barrel during the third quarter of 1997. Despite the low oil prices, oil companies are continuing to aggressively drill for oil and gas.

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COMBINED FUNDS

The "Combined Funds" represent the assets of both the Basic and Post Retirement Funds. While the Combined Funds do not exist under statute, the Board finds it instructive to review asset mix and performance of all defined benefit pension assets under its control. This more closely parallels the structure of other public and corporate pension plan assets and therefore allows for more meaningful comparison with other pension fund investors.

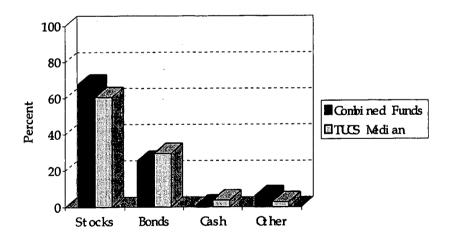
The comparison universe used by the SBI is the Trust Universe Comparison Service (TUCS). Only funds with assets over \$1 billion are included in the comparisons shown in this section.

Asset Mix Compared to Other Pension Funds

On December 31, 1997, the actual asset mix of the Combined Funds was:

	\$ Millions	%
Domestic Stocks	\$17,548	54.1%
International Stocks	4,400	13.6
Bonds	8,252	25.4
Alternative Assets	1,936	6.0
Unallocated Cash	283	0.9
Total	\$32,419	100.0%

Comparisons of the Combined Funds' asset mix to the median allocation to stocks, bond and other assets of the public and corporate funds in TUCS over \$1 billion are shown below:



	Stocks*	Bonds*	Cash	Other
Combined Funds	67.7%	25.4%	0.9%	6.0%
Median Allocation in TUCS**	60.5	29.5	3.7	2.7

^{*} Both domestic and international.

^{**} Public and corporate plans over \$1 billion.

COMBINED FUNDS Performance Compared to Other Pension Funds

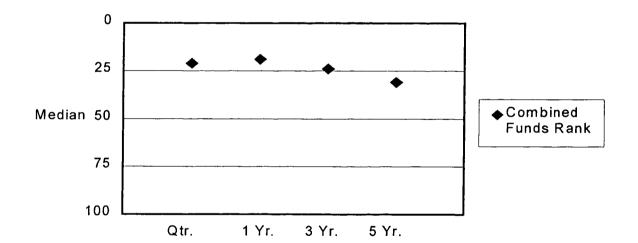
While the SBI is naturally concerned with how its returns compare to other pension investors, universe comparisons should be used with great care. There are several reasons why such comparisons will provide an "apples to oranges" look at performance:

- Differing Allocations. Asset allocation will have a dominant effect on return. The allocation to stocks among the funds in TUCS typically ranges from 20-90%, a very wide range for meaningful comparison. In addition, it appears that many funds do not include alternative asset holdings in their reports to TUCS. This further distorts comparisons among funds.
- Differing Goals/Liabilities. Each pension fund structures its portfolio to meet its own liabilities and risk tolerance. This will result in different choices on asset mix. Since asset mix will largely determine investment results, a universe ranking is not relevant to a discussion of how well a plan sponsor is meeting its long-term liabilities.

With these considerations in mind, the performance of the Combined Funds compared to other public and corporate pension funds in Trust Universe Comparison Service (TUCS) are shown below.

The SBI's returns are ranked against public and corporate plans with over \$1 billion in assets. All funds in TUCS report their returns gross of fees.

The SBI's stated performance objective is that the Combined Funds will rank in the top half of the universe (above the 50th percentile) over the most recent five year period. The SBI will strive to achieve performance which ranks in the top third (above the 33rd percentile).



	Period Ending 12/31/97				
	Qtr.	Yr.	3 Yr.	5 Yr.	
Combined Funds					
Percentile Rank in TUCS*	21 st	19 th	24 th	31^{st}	

^{*} Compared to public and corporate plans greater than \$1 billion, gross of fees.

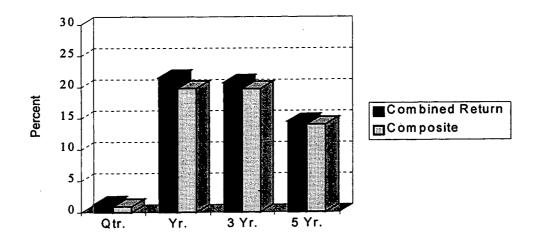
COMBINED FUNDS Performance Compared to Composite Index

The Combined Funds' performance is evaluated relative to a composite of market indices. The composite is

weighted in a manner that reflects the asset allocation of the Combined Funds:

	Market Index	Combined Index Weights 4Q97
Domestic Stocks	Wilshire 5000	50.1%*
Int'l. Stocks	Int'l. Composite	15.0
Bonds	Lehman Aggregate	27.4*
Alternative Assets	Wilshire Real Estate	2.0*
	Venture Capital Funds	2.9*
	Resource Funds	0.6*
Unallocated Cash	91 Day T-Bills	2.0
		100.0%

^{*} Alternative asset, bond and domestic equity weights are reset in the composite at the start of each quarter to reflect the amount of unfunded commitments in alternative asset classes.



Period Ending 12/31/97

	Qtr.	Yr.	Annualized	
			3 Yr.	5 Yr.
Combined Funds**	1.3%	21.5%	20.7%	14.5%
Composite Index***	0.9	19.8	19.7	14.0

^{**}Includes performance of Basic Funds through 6/30/93, Basic and Post Funds thereafter. Actual returns are reported net of fees.

^{***}Adjusted to reflect the SBI's restrictions on liquor and tobacco stocks through 3/31/93 and AHP restriction through 10/31/93.

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BASIC RETIREMENT FUNDS Investment Objectives

The Basic Retirement Funds are composed of the retirement assets for currently working participants in eight statewide retirement funds. The Funds serve as accumulation pools for the pension contributions of public employees and their employers during the employees' years of active service. Approximately 256,000 public employees participate in the Basic Funds.

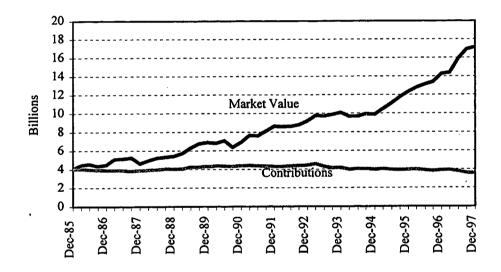
Employee and employer contribution rates are specified in state law as a percentage of an employee's salary. The rates are set so that contributions plus expected investment earnings will cover the projected cost of promised pension benefits. In order to meet these projected pension costs, the Basic Retirement Funds must generate investment returns of at least 8.5% on an annualized basis, over time.

Normally, pension assets will accumulate in the Basic Retirement Funds for thirty to forty years during an employee's years of active service. This provides the Basic Funds with a long investment time horizon and permits the Board to take an aggressive, high expected return investment policy which incorporates a sizeable equity component in order to meet or exceed its actuarial return target.

Asset Growth

The market value of the Basic Retirement Funds' assets increased 1.4% during the fourth quarter of 1997.

Positive investment returns accounted for the increase during the quarter. Net contributions were negative.



			Last Five 1	(ears			•			
	In Millions								Latest Qtr.	
	12/92	12/93	12/94	12/95	12/96	3/97	6/97	9/97	12/97	
Beginning Value	\$8,639	\$9,191	\$10,086	\$9,890	\$12,338	\$14,275	\$14,405	\$15,914	\$16,916	
Net Contributions	-34	-239	-206	-29	-59	24	-137	-177	-47	
Investment Return	586	1,134	-10	2,477	1,996	106	1,646	1,180	277	
Ending Value	\$9,191	\$10,086	\$9,890	\$12,338	\$14,275	\$14,405	\$15,914	\$16,916	\$17,146	

BASIC RETIREMENT FUNDS Asset Mix

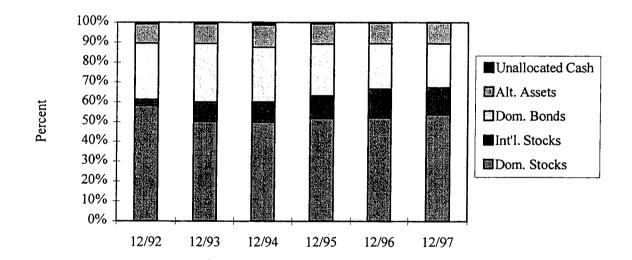
The long-term asset allocation of the Basic Funds is based on the superior performance of common stocks over the history of the capital markets. The asset allocation policy is designed to add value to the Basic Funds over their long-term investment time horizon.

Domestic Stocks	45.0%
Int'l. Stocks	15.0
Bonds	24.0
Alternative Assets*	15.0
Unallocated Cash	1.0

* Alternative assets include equity-oriented real estate, venture capital and resource funds. Any uninvested allocation is held in domestic stocks.

In October 1995, the Board revised its long term asset allocation targets for the Basic Funds, increasing international stocks from 10% to 15% and decreasing domestic stocks from 50% to 45%. The change was implemented over several quarters. Over the last year, assets have moved from domestic stocks and bonds to international stocks to reflect the Board's new asset allocation targets and to accommodate normal fund rebalancing.

During the last quarter, the allocation to domestic stocks moved up reflecting strong performance in the US equity market.



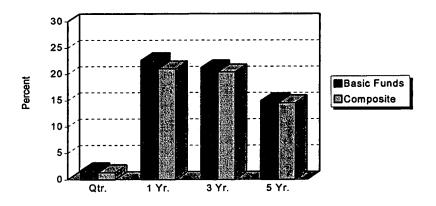
	Last Five Years							Latest Qtr.	
	12/92	12/93	12/94	12/95	12/96	3/97	6/97	9/97	12/97
Domestic Stocks	49.9%	49.7%	51.7%	52.0%	52.0%	50.4%	51.7%	53.0%	53.6%
Int'l. Stocks	10.0	10.3	11.3	14.5	14.5	14.7	16.2	15.1	13.6
Bonds	29.4	27.5	26.1	22.8	22.8	24.0	22.3	21.7	22.2
Real Estate	4.1	4.6	4.1	3.4	3.9	3.8	3.4	3.5	4.1
Private Equity	4.6	5.6	5.4	4.9	5.5	5.5	4.9	5.0	5.0
Resource Funds	1.1	0.9	0.7	1.0	1.0	1.0	1.0	1.2	1.4
Unallocated Cash	0.9	1.4	0.7	0.3	0.3	0.6	0.5	0.5	0.1
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

BASIC RETIREMENT FUNDSTotal Fund Performance (Net of Fees)

The Basic Funds' performance is evaluated relative to a composite of market indices. The composite is weighted in a manner that reflects the long-term asset allocation of the Funds:

	Basics Target	Market Index	Basics Composite 4Q97
Domestic Stocks	45.0%	Wilshire 5000	50.2%*
Int'l. Stocks	15.0	Int'l Composite	15.0
Bonds	24.0	Lehman Aggregate	24.0
Alternative Assets	15.0	Wilshire Real Estate	3.5*
		Private Equity Funds	5.0*
		Resource Funds	1.3*
Unallocated Cash	1.0	91 Day T-Bills	1.0
	100.0%		100.0%

^{*} Alternative asset and domestic stock weights are reset in the composite each quarter to reflect the uninvested portion of the allocation to alternative assets.



Period Ending 12/31/97

			Annualized		
	Qtr.	Yr.	3 Yr.	5 Yr.	
Basic Funds**	1.7%	22.6%	21.2%	14.9%	
Composite Index***	1.3	21.0	20.4	14.5	

^{**}Returns are reported net of fees.

Effective July 1, 1993, the Basic and Post Funds share the same domestic stock, international stock, and bond managers. See page 15 for the performance of these asset pools. Performance of the Basic Funds' alternative assets is on page 15.

^{***}Adjusted to reflect the SBI's restrictions on liquor and tobacco stocks through 3/31/93 and AHP restriction through 10/31/93.

POST RETIREMENT FUND

The Post Retirement Investment Fund contains the pension assets of retired public employees covered by statewide retirement plans. Approximately 82,000 retirees receive monthly annuities from the assets of the Fund.

Upon an employee's retirement, a sum of money sufficient to finance the fixed monthly annuity is 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 6% on its invested assets on an annualized basis. If the Post Fund exceeds this earnings rate, excess earnings are used to finance permanent benefit increases for eligible retirees.

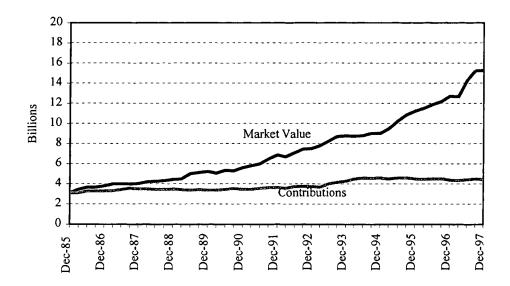
Through fiscal year 1992, unrealized capital gains (or losses) were excluded from the statutory definition of earnings. For this reason the Post Fund previously was not designed to maximize long-term total rates of return. Rather, the SBI attempted to generate a high, consistent stream of realized earnings for the Post Fund that maintained current benefits, as well as produced benefit increases over time.

Since fiscal year 1993, the post retirement benefit increase formula has been based on total return rather than realized earnings. As a result, the Board has adopted a long-term asset allocation strategy for the Post Fund which incorporates a substantial commitment to common stocks. The transition to a 50% allocation to domestic stocks was completed by the end of fiscal year 1993.

Asset Growth

The market value of the Post Retirement Fund increased by 0.4% during the fourth quarter of 1997.

The increase resulted from positive investment returns.



In Millions								I	∟atest Qtr.
	12/92	12/93	12/94	12/95	12/96	3/97	6/97	9/97	12/97
Beginning Value	\$6,855	\$7,500	\$8,766	\$9,001	\$11,216	\$12,705	\$12,677	\$14,230	\$15,220
Net Contributions	95	386	314	-102	-94	-88	98	84	-71
Investment Return	550	880	-79	2,317	1,583	60	1,455	906	124
Ending Value	\$7,500	\$8,766	\$9,001	\$11,216	\$12,705	\$12,677	\$14,230	\$15,220	\$15,273

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POST RETIREMENT FUND Asset Mix

The Board adopted an asset allocation strategy for the Post Fund in fiscal year 1993 which reflects the post retirement benefit increase formula enacted by the Legislature. Throughout fiscal year 1993, the actual asset mix of the Post Fund moved toward a 50% allocation to common stocks. In fiscal year 1994, the Board added allocations to international stocks and alternative investments.

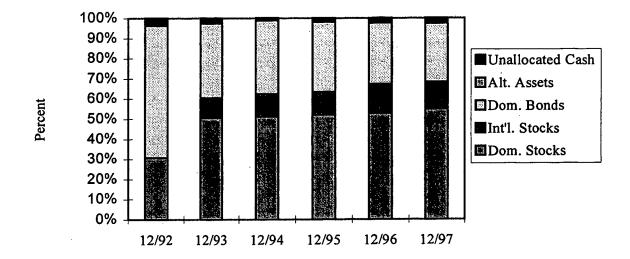
Domestic Stocks	50.0%	
Int'l. Stocks	15.0	
Bonds	27.0	
Alternative Assets*	5.0	
Unallocated Cash	3.0	
Total	100.0%	-

* Alternative assets include yield oriented investment vehicles. Any uninvested allocation is held in bonds.

The large allocation to common stocks allows 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.

In October 1995, the Board revised its long term asset allocation targets for the Post Fund, increasing international stocks from 10% to 15% and decreasing bonds from 32% to 27%.

Over the last year, assets have moved from bonds and domestic stocks to international stocks to reflect the Board's new asset allocation targets and to accommodate normal fund rebalancing. During the last quarter, the allocation to domestic stocks moved up reflecting strong performance in the US equity market.



		Ι	ast Five yo	ears					Latest Qtr.
	12/92	12/93	12/94	12/95	12/96	3/97	6/97	9/97	12/97
Dom. Stocks	30.6%	50.5%	51.2%	51.9%	52.7%	51.0%	51.6%	53.7%	54.7%
Int'l. Stocks	0.0	10.0	11.0	11.4	14.6	14.8	16.2	15.1	13.6
Bonds	65.6	36.9	36.5	34.7	30.2	31.5	29.4	28.6	29.1
Alt. Assets	0.0	0.0	0.1	0.2	0.6	0.7	0.7	0.7	0.9
Unallocated Cash	3.8	2.6	1.2	1.8	1.9	2.0	2.1	1.9	1.7
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

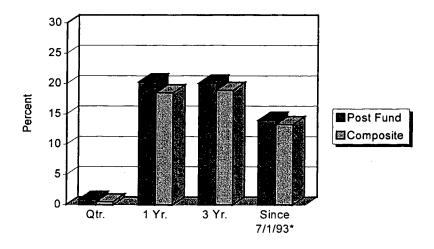
POST RETIREMENT FUND Total Fund Performance (Net of Fees)

The Post Fund's performance is evaluated relative to a composite of market indices. The composite is weighted in a manner that reflects the long-term asset allocation of the Fund:

Asset Class	Post Target	Market Index	Post Composite 4Q97*
Domestic Stocks	50.0%	Wilshire 5000	50.0%
Int'l. Stocks	15.0	Int'l. Composite	15.0
Bonds	27.0	Lehman Aggregate	31.2*
Alternative Assets	5.0	Wilshire Real Estate	0.3*
Unallocated Cash	3.0	Private Equity Funds	0.5*
		91 Day T-Bills	3.0
	100%		100.0%

^{*}Alternative assets and bonds are reset in the composite each quarter to reflect the uninvested portion of the allocation to alternative assets.

The asset mix of the Post Fund moved to a 50% stock allocation during fiscal year 1993. The performance of the fund since 7/1/93 is shown below.



		alized		
	Qtr.	1 Yr.	3 Yr.	Since 7/1/93
Post Fund**	0.9%	20.3%	20.1%	14.0%
Composite Index	0.5	18.5	18.9	13.3

^{**} Returns are reported net of fees.

Effective July 1, 1993, the Basic and Post Funds share the same domestic stock, international stock, and bond managers. See page 15 for the performance of these asset pools.

STOCK AND BOND MANAGERS

Performance of Asset Pools (Net of Fees)

Domestic Stock Pool

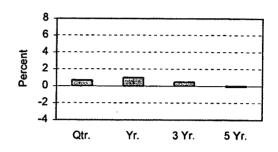
Target: Wilshire 5000 Adjusted*

Expectation: If half of the pool is actively managed and half is passively and semi-passively managed, the entire pool is expected to exceed the target by +.25-.55% annualized, over time.

			Annualized			
,	Qtr.	Yr.	3 Yrs.	5 Yrs.		
Stock Pool	2.4%	32.3%	29.6%	19.1%		
Wilshire 5000*	1.7	31.3	29.5	19.2		

^{*}Adjusted for liquor and tobacco restrictions through 3/31/93 and AHP restriction through 10/31/93.

Value Added to Wilshire 5000 Adjusted*



Bond Pool

200

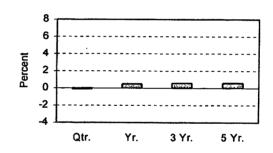
Target: Lehman Brothers Aggregate Bond Index Expectation: If half of the pool is actively managed and

half is managed semi-passively, the entire pool is expected to exceed the target by +.20-.35% annualized, over time.

			Annu	ualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.	
Bond Pool	2.8%	10.2%	11.0%	8.1%	
Lehman Agg.*	2.9	9.7	10.4	75	

^{*} Prior to July 1, 1994, the Salomon Broad Investment Grade Bond Index was used.

Value Added to Lehman Aggregate*



International Stock Pool

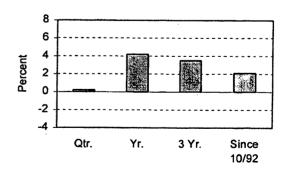
Target: Composite of EAFE-Free and Emerging Markets Free*

Expectation: If half of the pool is managed actively and half managed passively, the entire pool is expected to exceed the target by +.25%-.75% annualized, over time.

			Annu	ıalized
	Qtr.	Yr.	3 Yr.	5 Yrs.
Int'l. Pool	-8.9%	4.3%	9.0%	13.0%
Composite Index*	-9.1	-0.1	5.5	10.9

^{*}As of December 1996, the composite index is weighted 87% EAFE-Free and 13% Emerging Markets Free. Prior to May 1996, the target was 100% EAFE-Free.

Value Added to International Composite*



ALTERNATIVE ASSET MANAGERS

Performance of Asset Pools (Net of Fees)

Real E	Estate	Pool	(Basic	Funds	only)
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Expectation: Real estate investments are expected to					ualized
exceed the rate of inflation by 3-5% annualized, over the life of the investment.		Qtr.	Yr.	3 Yrs.	5 Yrs.
The Wilshire Real Estate Index contains returns of 30 commingled funds. The index does not include returns	Real Estate Real Estate Index	21.6%	41.3% 31.9	16.5% 13.2	9.5% 7.8
from funds that are less than 3 years old or are not fully invested. A return for the current quarter is not available at this time. The return for the one, three and five year periods are computed using the SBI's actual return for the latest quarter.	Inflation	0.0	1.7	2.5	2.6
Private Equity Pool (Basic Funds only)					
Expectation: Private equity investments are expected to provide annualized returns at least 3% greater than historical public equity returns, over the life of the		Qtr.	Yr.	Ann 3 Yrs.	ualized 5 Yrs.
investment. This equates to an absolute return of approximately 13-14% annualized.	Private Equity	2.2%	22.6%	26.9%	19.5%
The SBI began its private equity program in the mid- 1980's and periodically makes new investments. Some of the existing investments, therefore, are relatively immature and returns may not be indicative of future results.					
Resource Pool (Basic Funds only)					
Expectation: Resource investments (primarily oil and gas) are expected to exceed the rate of inflation by 3-5% annualized, over the life of the investment.		Qtr.	Yr.	Annu 3 Yrs.	alized 5 Yrs.
The SBI began its resource program in the mid-1980's and periodically makes new investments. Some of the existing investments, therefore, are relatively immature and returns may not be indicative of future results.	Resource Funds	20.4%	92.4%	42.5%	26.0%
Yield Oriented Pool (Post Fund only)					
Expectation: Yield oriented investments are expected to provide annualized returns at least 2% greater than				Annu	alized Since
historical public debt returns over the life of the investment. This equates to an absolute return of 10-11% annualized. The SBI began adding yield oriented alternative investments to the Post Fund in fiscal year 1996.	Yield Oriented	Qtr. 4.1%	Yr. 9.9%	3 Yrs. 12.1%	3/1/94 9.8%
The SBI made its first commitment to the alternative investment program for the Post Fund in March 1994. All of the investments, therefore, are relatively immature and returns may not be indicative of future results.					

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, Public Employees Defined Contribution Plan and Hennepin County Supplemental Retirement Plan.
- It is one investment vehicle offered to employees as part of the state's Deferred Compensation Plan, the Individual Retirement Account Plan and College Supplemental Retirement Plan.
- 3. 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. They are net of investment management fees but they do not include a deduction for asset based charges used to defray costs of the administering retirement organizations.

On December 31, 1997 the market value of the entire Fund was \$1,094 million.

Investment Options

	12/31/97 Market Value (In Millions)
Income Share Account – a balanced portfolio utilizing both common stocks and bonds.	\$515
Growth Share Account – an actively managed, all common stock portfolio.	\$236
Common Stock Index Account – a passively managed, all common stock portfolio designed to track the performance of the entire U.S. stock market.	\$170
International Share Account – a portfolio of non U.S. stocks that incorporates both active and passive management.	\$22
Bond Market Account - an actively managed, all bond portfolio.	\$30
Money Market Account – a portfolio utilizing short-term, liquid debt securities.	\$49
Fixed Interest Account – an option utilizing guaranteed investment contracts (GIC's), which offer a fixed rate of return for a specified period of time.	\$72

SUPPLEMENTAL INVESTMENT FUND ACCOUNTS

INCOME SHARE ACCOUNT

Investment Objective

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

Asset Mix

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

	Target	Actual
Stocks	60.0%	65.6%
Bonds	35.0	30.8
Unallocated Cash	5.0	3.6
	100.0%	100.0%

Period Ending Annualized Qtr. 1 Yr. 3 Yr. 5 Yr. Total Account 2.4% 23.4% 22.0% 15.0% Wilshire 5000* 2.1 22.2 21.4 14.4

* 60% Wilshire 5000/35% Lehman Aggregate Bond Index/5% T-Bills Composite. Wilshire 5000 is adjusted as noted below.

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 primarily in the common stocks of US companies. The managers in the account also hold varying levels of cash.

	Period Ending				
			Annua	lized	
	Qtr.	1 Yr.	3 Yr.	5 Yr.	
Total Account	2.6%	32.4%	29.0%	18.6%	
Composite*	1.7	31.3	28.8	18.8	

 95% Wilshire 5000/5% T-Bills Composite through October 1996. 100% Wilshire 5000 since November 1996. Wilshire 5000 buy/hold index is adjusted for liquor and tobacco restrictions through 3/31/93 and AHP restriction through 10/31/93.

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 U.S. stock market as a whole. The Account is designed to track the performance of the Wilshire 5000, a broadbased equity market indicator.

	Period Ending				
	Annualized				
	Qtr.	1 Yr.	3 Yr.	5 Yr.	
Total Account	2.1%	31.9%	29.4%	19.7%	
Wilshire 5000*	1.7	31.3	29.5	19.2	

The Account is invested 100% in common stock.

INTERNATIONAL SHARE ACCOUNT

Investment Objective and Asset Mix

The investment objective of the International Share Account is to earn a high rate of return by investing in the stock of companies outside the U.S. Approximately half of the Account is "passively managed" and is designed to track the return of 20 markets included in the Morgan Capital International index of Europe, Australia and the Far East (EAFE-Free). The remainder of the Account is "actively managed" by several international managers and emerging markets specialists who buy and sell stocks in an attempt to maximize market value.

	Annualized				
	Period	Ending		Since	
	Qtr.	1 Yr.	3 Yr.	9/1/94	
Total Account	-8.9%	4.3%	8.9%	6.5%	
Composite	-9.1	-0.1	5.5	3.6	

^{*} As of December 1996, the benchmark is weighted 87% EAFE-Free and 13% Emerging Markets Free. Prior to May 1996, the target was weighted 100% EAFE-Free.

SUPPLEMENTAL INVESTMENT FUND ACCOUNTS

BOND MARKET ACCOUNT

Investment Objective	Period Ending				
The investment objective of the Bond Market Account is				Annua	lized
to earn a high rate of return by investing fixed income		Qtr.	1 Yr.	3 Yr.	5 Yr.
securities.	Total Account	2.8%	10.2%	11.1%	8.2%
	Lehman Agg.*	2.9	9.7	10.4	7.5
Asset Mix	,				
The Bond Market Account invests primarily in high-					

The Bond Market Account invests primarily in highquality, government and corporate bonds that have intermediate to long-term maturities, usually 3 to 20 years.

MONEY MARKET ACCOUNT

Investment Objective	Period Ending				
The investment objective of the Money Market Account				Annual	lized
is to purchase short-term, liquid fixed income		Qtr.	1 Yr.	3 Yr.	5 Yr.
investments that pay interest at rates competitive with	Total Account	1.4%	5.7%	5.8%	5.0%
those available in the money market.	91 Day T-Bills	1.3	5.3	5.4	4.7

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.

FIXED INTEREST ACCOUNT

Investment Objectives	Period Ending				
The investment objectives of the Fixed Interest Account				Annual	lized
are to protect investors from loss of their original investment and to provide competitive interest rates using somewhat longer term investments than typically found in a money market account.	GIC Pool	Qtr. 1.7%	1 Yr. 6.6%		Since 11/1/94 6.8%

Asset Mix

The Fixed Interest Account is invested in guaranteed investment contracts (GIC's) offered by major U.S. insurance companies and banks and GIC type investments. Effective November 1, 1994 new contributions into the Account are deposited into a new pool of GIC's and GIC-type investments. The pool has a blend of maturities and a credited interest rate that changes monthly. The remaining GIC from the prior structure will mature in October 1996.

ASSIGNED RISK PLAN

Investment Objectives

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.

	12/31/97	12/31/97
	Target	Actual
Stocks	20.0%	24.9%
Bonds	80.0	75.1
Total	100.0%	100.0%

Investment Management

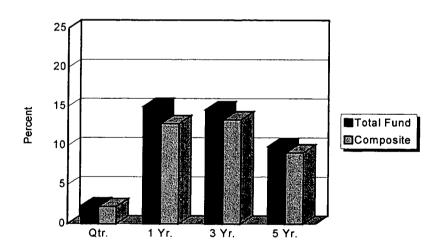
The portfolio was transferred from the Department of Commerce to the SBI on May 1, 1991. Voyageur Asset Management has managed the bond segment of the Fund since inception. Since January 1995, GE Investment Management has managed the equity segment.

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 Voyageur Asset Management. The equity benchmark is the S&P 500 as of July 1, 1994. Prior to that date, the segment used a custom benchmark. The total fund benchmark is a combination of the fixed income and equity benchmarks, weighted according to the total fund asset allocation targets.

Market Value

On December 31, 1997 the market value of the Assigned Risk Plan was \$645 million.



Period Ending 12/31/97

				, , ,
			Annu	alized
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Fund*	2.3%	15.0%	14.6%	9.9%
Composite	2.2	12.8	13.3	9.1
Equity Segment*	3.0	35.0	31.2	17.1
Benchmark	2.9	33.3	31.2	17.8
Bond Segment*	2.9	8.1	9.4	7.1
Benchmark	2.0	7.9	9.0	6.8

* Actual returns are calculated net of fees.

PERMANENT SCHOOL FUND

Investment Objectives

The investment objective of the Permanent School Fund is to produce a growing level of spendable income, within the constraints of maintaining adequate portfolio quality and liquidity. The income from the portfolio is used to offset expenditures on school aid payments to local school districts.

Asset Mix

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Effective with FY98, the Permanent School Fund is invested in a balanced portfolio of common stocks and bonds. Common stocks provide the potential for significant capital appreciation, while bonds provide portfolio diversification and a more stable stream of current income.

	12/31/97	12/31/97
	Target	Actual
Stocks	50.0%	50.4%
Bond	48.0	48.4
Unallocated Cash	2.0	1.2
	100.0%	100.0%

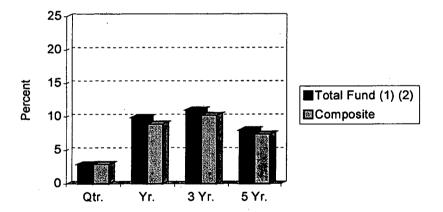
Prior to FY98, the Fund was invested entirely in fixed income securities in order to maximize current income. It is understood that the change in asset mix will reduce portfolio income in the short term, but will enhance the value of the fund, over time.

Investment Management

SBI staff manage all assets of the Permanent School Fund. The stock segment is passively managed to track the performance of the S&P 500. The bond segment is actively managed to add incremental value through sector, security and yield curve decisions.

Market Value

On December 31, 1997 the market value of the Permanent School Fund was \$447 million.



	I	Period End	ing 12/31/9	7
	Qtr.	1 Yr.	3 Yr.	5 Yr.
Total Fund (1) (2)	2.9%	9.9%	11.0%	8.0%
Composite	2.9	8.9	10.2	7.4
Equity Segment (1) (2)	2.9	N/A	N/A	N/A
S&P 500	2.9	N/A	N/A	N/A
Bond Segment (1)	3.1	8.1	11.1	8.0
Lehman Aggregate	2.9	9.7	10.4	7.5

- (1) Actual returns are calculated net of fees.
- (2) Equities were added to the asset mix effective July 28, 1997. Prior to that date the fund was invested entirely in bonds. The composite Index has been weighted accordingly.

ENVIRONMENTAL TRUST FUND

Investment Objective

The Environmental Trust Fund's objective is to produce a growing level of spendable income, within the constraints of maintaining adequate portfolio quality and liquidity.

Asset Mix

The Environmental Trust Fund 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.

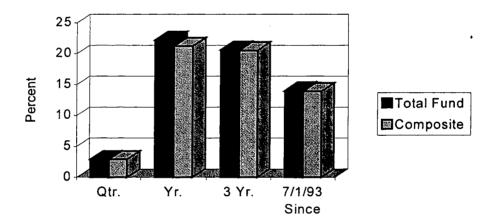
	12/31/97	12/31/97
	Target	Actual
Stocks	50.0%	52.3%
Bonds	48.0	46.8
Unallocated Cash	2.0	0.9
	100.0%	100.0%

Investment Management

SBI staff manage all assets of the Environmental Trust Fund. The bond segment is actively managed to add incremental value through sector, security and yield curve decisions. The stock segment is passively managed to track the performance of the S&P 500.

Market Value

On December 31, 1997 the market value of the Environmental Trust Fund was \$205 million.



Period Ending 12/31/97

Annualized

	Qtr.	1 Yr.	3 Yr.	Since 7/1/93
Total Fund*	2.9%	22.2%	20.6%	14.0%
Composite	2.9	21.2	20.5	13.9
Equity Segment*	2.9	33.7	31.2	21.6
S&P 500	2.9	33.3	31.2	21.5
Bond Segment*	3.1	11.3	11.2	7.6
Lehman Agg.	2.9	9.7	10.4	6.8

* Actual returns are calculated net of fees.

STATE CASH ACCOUNTS

Description

State Cash Accounts represent the cash balances in more than 400 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.
- 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 End	ding 12/31/97	A	alized
	Market Value (Millions)	Qtr.	Yr.	3 Yr.	5 Yr.
Treasurer's Cash Pool*	\$5,204	1.5%	5.3%	5.9%	5.0%
Custom Benchmark**		1.3	5.3	6.0	NA
Trust Fund Cash Pool*	51	1.4	5.8	5.8	5.2
Custom Benchmark***		1.3	5.1	6.0	NA
91-Day T-Bills		1.3	5.3	5.4	4.7

- * Actual returns are calculated net of fees.
- ** Beginning in January 1997, the Treasurer's Cash Pool is measured against a blended benchmark consisting of the Lehman Brother's 1 to 3 year Government Index for the first \$600 million and the IBC all Taxable Money Fund Index for the balance of the portfolio. From April 1993 through December 1996, the benchmark was 75% State Street Short Term Investment Fund/25% 1-3 year Treasuries.
- *** Beginning in January 1997, the Trust Fund Pool is measured against the IBC All Taxable Money Fund Index. From April 1993 through December 1996, the benchmark was 75% State Street Short Term Investment Fund/25% 1-3 year Treasuries.

MINNESOTA STATE BOARD OF INVESTMENT Composition of State Investment Portfolios By Type of Investment Market Value December 31, 1997 (in Thousands)

	Cash And Short Term Securities	Bonds Internal	Bonds External	Stocks Internal	Stocks External	External Int'l.	Alternative Assets	Total
BASIC RETIREMENT FUNDS: Teachers Retirement Fund	6,098 0.08%	-0-	1,608,366 22.18%	-0-	3,893,823 53.69%	985,181 13.59%	758,446 10.46%	7,251,914 100%
Public Employees Retirement Fund	8,146 0.22%	-0-	816,550 22.16%	-0-	1,975,977 53.61%	500,234 13.57%	384,684 10.44%	3,685,591 100%
State Employees Retirement Fund	5,197 0.15%	-0-	782,249 22.16%	-0-	1,894,642 53.67%	479,924 13.59%	368,425 10.43%	3,530,437 100%
Public Employees Police & Fire Fund	2,601 0.15%	-0-	386,906 22.12%	0-	938,492 53.66%	236,848 13.54%	184,200 10.53%	1,749,047 100%
Highway Patrol Retirement Fund	364 0.15%	-0-	54,508 22.16%	-0-	132,021 53.67%	33,442 13.59%	25,672 10.43%	246,007 100%
Judges Retirement Fund	31 0.16%	0-	4,115 21.60%	-0-	10,200 53.54%	2,502 13.13%	2,205 11.57%	19,053 100%
Public Employees P.F. Consolidated	9 -	8,016 1.71%	99,924 21.31%	5,776 1.23%	245,567 52.37%	61,030 13.02%	48,555 10.36%	468,874 100%
Correctional Employees Retirement	276 0.14%	-0-	41,055 21.13%	0-	99,438 51.19%	25.141 12.94%	28,367 14.60%	194,277 100%
TOTAL BASIC FUNDS	22,719 0.13%	8,016 0.05%	3,793,673 22.13%	5,776 0.03%	9,190,160 53.60%	2,324,302 13.56%	1,800,554 10.50%	17,145,200 100%
POST RETIREMENT FUND	259,921 1.70%	-0-	4,449,699 29.13%	-0-	8,351,967 54.69%	2,076,078 13.59%	135,348 0.89%	15,273,013 100%
TOTAL BASIC & POST	282,640 0.87%	8,016 0.02%	8,243,372 25.43%	5,776 0.02%	17,542,127 54.11%	4,400,380 13.58%	1,935,902 5.97%	32,418,213 100%

		Cash And Short Term Securities	Bonds Internal	Bonds External	Stocks Internal	Stocks External	External Int'l.	Alternative Assets	Total
	MINNESOTA SUPPLEMENTAL FUNDS: Income Share Account	18,693	158,478 30.78%	-0-	0,	337,655 65.59%	- 0-	-0-	514.826 100%
	Growth Share Account	0 -	o	þ	oʻ	235,513 100%	0 -	. 0-	235,513 100%
	Money Market Account	48,603 100%	o	, •	o-	-0-	.	0-	48,603 100%
	Common Stock Index Account	- 0-	-	0-	-0-	170,441 100%	o <mark>,</mark>	0-	170,441 100%
25	Bond Market Account	-0-	-	29,965 100%	- 0-	-0-	o <mark>,</mark>	. 0-	29,965 100%
	International Share Account	-0-	o	-	o <mark>,</mark>	-0-	22,100 100%	o-	22,100 100%
	Fixed Interest Account	618 0.86%	o	71,485 99.14%	- 0-	-0-	o <mark>,</mark>	-0-	72,103
	TOTAL SUPPLEMENTAL FUNDS	67,914 6.21%	158,478 14.49%	101,450 9.28%	-0-	743,609 68.00%	22,100 2.02%	- 0-	1,093,551 100%
	TOTAL RETIREMENT FUNDS	350,554 1.05%	166,494 0.50%	8,344,822 24.90%	5,776 0.02%	18,285,736 54.56%	4,422,480 13.20%	1,935,902 5.77%	33,511,764 100%

	Cash And Short Term Securities	Bonds Internal	Bonds External	Stocks Internal	Stocks External	External Int'l.	Alternative Assets	Total
ASSIGNED RISK PLAN	24,399	-0-	466,410 72.26	0 -	154,628 23.96%	-0-	-0-	645,437 100%
ENVIRONMENTAL FUND	1,852 0.90%	95,945 46.77%	-0-	107,347 52.33%	-0-	-0-	-0-	205,144 100%
PERMANENT SCHOOL FUND	5,521 1.23%	216.394 48.35%	-0-	225,617 50.42%	-0-	-0-	-0-	447,532 100%
TREASURERS CASH	5,201,046 100%	-0-	-0-	-0-	-0-	-0-	-0-	5,201,046 100%
HOUSING FINANCE AGENCY	92,185% 41.36%	130,712 58.64%	0-	-0-	-0-	-0-	-0-	222,897 100%
MINNESOTA DEBT SERVICE FUND	541 0.50%%	107,447 99.50%	- 0-	-0-	-0-	-0-	-0-	107,988 100%
MISCELLANEOUS ACCOUNTS	174,201 47.44%	189,322 51.55%	o	3,701 1.01%	-0-	-0-	-0-	367,224 100%
GRAND TOTAL	5,850,299	906,314 2.23%	8,811,232 21.64%	342,441 0.84%	18,440,364 45.30%	4,422,480 10.86%	1,935,902	40,709,032 100%

Tab B

EXECUTIVE DIRECTOR'S ADMINISTRATIVE REPORT

DATE:

February 24, 1998

TO:

Members, State Board of Investment

FROM:

Howard Bicker

1. Budget and Travel

A report on the SBI's administrative budget for the period ending January 31, 1998 is included in **Attachment A**.

A travel report for the period from November 16, 1997 – February 16, 1998 is included as **Attachment B**.

2. Results of FY96 Financial Audit

The Office of the Legislative Auditor has completed its audit of SBI operations for Fiscal Year 1997. I am pleased to report that the SBI received a "clean opinion" on its financial statements.

The Auditor's letter is included in the SBI's FY97 Annual Report. A copy of the complete audit report is included as **Attachment C**.

3. Legislative Update

A summary of legislation of interest to the SBI is in Attachment D.

4. Update on Litigation

The SBI has been designated lead plaintiff in a class action suit against Mercury Finance Corporation. SBI legal counsel will give the Board a verbal update on the status of the litigation at the Board meeting on March 18th.

5. Update on Tobacco Information

Over the last several quarters, I have been asked to provide the Board with information on tobacco issues and the SBI's tobacco-related holdings. This report will briefly update you on recent events.

a. Tobacco-Related Holdings

As of December 31, 1997 the SBI held approximately 10.0 million shares in tobacco related companies identified by the Investor Responsibility Research Center (IRRC). This is an increase of about 300,000 shares from the September 30, 1997 total. The market value of the SBI's holdings in these companies was approximately \$387 million on December 31, 1997. This is an increase of approximately \$50 million from the market value of the shares held on September 30, 1997. Listings of SBI holdings in tobacco-related companies as of September 30, 1997 and December 31, 1997 begin on **page 25.**

As I previously reported, I have directed the SBI's stock managers to inform the SBI staff of the reasons for their decisions to purchase additional shares of companies identified by the IRRC as deriving 50 percent or more of their revenue from the sale of tobacco. During the quarter ending September 30, 1997, one manager reported buying additional shares in these companies.

b. Activity in Other States

During the quarter, there were no new tobacco related activities in other states.

c. Legal Developments Reported by the News Media

There continues to be numerous media reports about the proposed settlements covering the tobacco industry's potential liability, including several analyses critical of certain elements and the possibility of Congressional consideration on the issue.

ATTACHMENT A

STATE BOARD OF INVESTMENT FISCAL YEAR 1998 ADMINISTRATIVE BUDGET REPORT GENERAL FUND APPROPRIATION FISCAL YEAR TO DATE THROUGH JANUARY 31, 1998

	FISCAL YEAR	FISCAL YEAR
	1998	1998
ITEM	BUDGET	EXPENDITURES
PERSONAL SERVICES		
FULL TIME EMPLOYEES	\$ 1,600,000	\$ 908,043
SEVERENCE PAYOFF	20,000	0
WORKERS COMPENSATION INSURANCE	1,000	415
MISCELLANEOUS PAYROLL	1,000	0
GTTD MOTE LT	• • • • • • • • • • • • • • • • • • • •	
SUBTOTAL	\$ 1,622,000	\$ 908,458
STATE OPERATIONS		
RENTS & LEASES	92,500	53,952
REPAIRS/ALTERATIONS/MAINTENANCE	13,000	11,089
BONDS AND INSURANCE	C	0
PRINTING & BINDING	16,000	10,500
PROFESSIONAL/TECHNICAL SERVICES	45,000	15,737
COMPUTER SYSTEMS SERVICES	204,000	67,872
COMMUNICATIONS	26,000	11,665
TRAVEL, IN-STATE	3,000	416
TRAVEL, OUT-STATE	55,000	34,612
SUPPLIES	38,000	20,571
EQUIPMENT	12,500	0
EMPLOYEE DEVELOPMENT	12,000	3,738
OTHER OPERATING COSTS	24,000	14,735
SUBTOTAL	\$ 541,000	\$ 244,887
TOTAL GENERAL FUND	\$ 2,163,000	\$ 1,153,345

ATTACHMENT B

STATE BOARD OF INVESTMENT

Travel Summary by Date November 15, 1997 – February 15, 1998

Purpose	Name(s)	Destination and Date	Total Cost
Manager Monitoring Alternative Investments: Brinson Partners, Equity Group Investments, Equity Office Properties Trust, Golder, Thoma, Cressey, Rauner, Heitman Advisory Corp., J.P. Morgan Investment Mgmt., LaSalle Advisors Limited, SCF Partners	J. Griebenow	Chicago, IL Houston, TX 10/20-10/22	\$1,399.00
Staff Education: WI Deferred Comp Program	J. Heidelberg	Madison, WI 11/13-11/14	\$71.44
Staff Education: "ADP Constituents Conference" sponsored by Automatic Data Processing	D. Griebenow	Chicago, IL 1/13	\$843.00
Staff Conference: "Emerging Markets: Translating Economic Development into Financial Returns" sponsored by Elkind Economics, Inc.	L. Buermann	Dallas, TX 1/20-1/21	\$1,107.40
Manager Search Alternative Investments: Fox Paine & Company LP	M. Regal	San Francisco, CA 1/22-1/23	\$282.35
Manager Monitoring Alternative Investments: Golder, Thoma, Cressey, Rauner	J. Griebenow	Chicago, IL 2/5	\$225.00

Minnesota State Board of Investment

Financial Audit Fiscal Year Ended June 30, 1997

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Public Release

UNTIL JAN 2 9 1998 -10 20 AM

January 1998

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Financial Audit Division Office of the Legislative Auditor State of Minnesota



STATE OF MINNESOTA OFFICE OF THE LEGISLATIVE AUDITOR

JAMES R. NOBLES, LEGISLATIVE AUDITOR

Senator Deanna Wiener, Chair Legislative Audit Commission

Members of the Legislative Audit Commission

Members of the Minnesota State Board of Investment

Howard J. Bicker, Executive Director Minnesota State Board of Investment

We have audited the financial statements of the Minnesota State Board of Investment (SBI) as of and for the fiscal year ended June 30, 1997, as further explained in Chapter 1. The work conducted in the department is part of our Statewide Audit of the State of Minnesota's fiscal year 1997 financial statements. SBI's Annual Report for the year ended June 30, 1997, includes our unqualified audit opinion, dated December 8, 1997, on the Supplemental Investment Fund and the Post Retirement Fund financial statements. The following Summary highlights the audit objectives and conclusions.

We conducted our audit in accordance with generally accepted auditing standards and Government Auditing Standards, as issued by the Comptroller General of the United States. Those standards require that we obtain an understanding of management controls relevant to the audit. The standards also require that we design the audit to provide reasonable assurance that SBI complied with provisions of laws, regulations, contracts and grants that are significant to the audit. The management of SBI is responsible for establishing and maintaining the internal control structure and complying with applicable laws, regulations, contracts, and grants.

This report is intended for the information of the Legislative Audit Commission and the management of SBI. This restriction is not intended to limit the distribution of this report, which was released as a public document on January 29, 1998.

Claudia J. Gudvangen, CPA

Deputy Legislative Auditor

James R. Nobles

Legislative Auditor

James R. Aller

End of Fieldwork: December 8, 1997

Report Signed On: January 23, 1998

SUMMARY

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Minnesota State Board of Investment Financial Audit Fiscal Year Ended June 30, 1997

Public Release Date: January 29, 1998

No. 98-3

Background Information

The Minnesota State Board of Investment (SBI) administers the investment of state funds, primarily retirement funds. Minn. Stat. Chapter 11A governs the investment activities of the board. Howard J. Bicker is the executive director of the board.

The board uses both internal staff and external investment managers to fulfill its responsibilities. The external firms invest and manage the assets of the Post Retirement Fund and Supplemental Investment Fund, as well as the assets of the basic retirement funds and the assigned risk plan. SBI staff manage the other investments.

The basic retirement funds contain the pension assets of the active participants in the following eight statewide retirement plans, Teachers Retirement Fund, Public Employees Retirement Fund, State Employees Retirement Fund, Public Employees Police and Fire Fund, Police and Fire Consolidation Fund, Highway Patrol Retirement Fund, Correctional Employees Fund, and Judges Retirement Fund.

Audit Objectives and Scope

The primary objective of our audit was to render an opinion on the Investment Trust Fund financial statements. These financial statements are included both in SBI's Annual Report and in the State of Minnesota's Comprehensive Annual Financial Report for fiscal year 1997. Our objective included determining whether SBI's financial statements presented fairly the financial position, results of operations, and changes in net assets in conformity with generally accepted accounting principles.

As part of our work we gained an understanding of the internal control structure over investment purchases and sales, investment custody and valuation, investment income and allocation, security lending income and management fee payments, and reimbursement cycles. We also ascertained whether SBI complied with laws and regulations that may have had a material effect on its financial statements. In addition, we audited administrative expenditures.

Conclusions

SBI's Annual Report and the state of Minnesota's Comprehensive Annual Financial Report for the year ended June 30, 1997, include our unqualified audit opinions on the Investment Trust Fund's financial statements dated December 8, 1997. We found that SBI designed internal controls to provide reasonable assurance that investments were adequately safeguarded, authorized, and properly recorded in accounting records and financial statements. SBI designed controls to provide reasonable assurance that administrative expenditures were authorized for a proper purpose and accurately recorded in the accounting records and financial statements. For items tested, we also found SBI to be in compliance with material financial legal provisions.

State Board of Investment

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Chapter 4. Administrative Expenditures	!	8
Status of Prior Audit Issues		10

Audit Participation

The following members of the Office of the Legislative Auditor prepared this report:

Claudia Gudvangen, CPA	Deputy Legislative Auditor
Jim Riebe, CPA	Audit Manager
Michael Hassing	Audit Director
Beaujon Guerin	Auditor
Susan Kong	Auditor
Marina Mirman	Auditor
Rick Weinmeyer	Auditor
Keith Bispala	Intern

Exit Conference

We discussed this report and minor issues involving the internal control structure with the following SBI staff at an exit conference on January 22, 1998:

Howard Bicker	Executive Director
L. Michael Schmitt	Administrative Director
Mansco Perry	Manager, Research and Development

Chapter 1. Background Information

The Minnesota State Board of Investment (SBI) administers and directs the investment of state funds, primarily retirement funds. Article XI, Section 8 of the Constitution of the State of Minnesota created the State Board of Investment. The board is comprised of the governor, state auditor, state treasurer, secretary of state, and attorney general. Minn. Stat. Chapter 11A governs the investment activities of the board. Howard J. Bicker is the executive director of the board.

The Legislature also established a seventeen member Investment Advisory Council to advise the board and its staff on investment matters. The full council reviews all proposed investment policies, including asset allocation and investment manager selection, before they are presented to the board for official action. The council is comprised of ten members from the corporate investment community, the state Commissioner of Finance and the executive directors of the three statewide retirement systems, and three employee plan participants.

The board uses both internal staff and external investment managers to fulfill its responsibilities. The external firms invest and manage the Post Retirement Fund and Supplemental Investment Fund, as well as the assets of the basic retirement funds and the assigned risk plan. SBI staff manage the other investments. The Post Retirement Fund is composed of the reserves or retirement benefits to be paid to retired employees. The Supplemental Investment Fund includes assets of the state deferred compensation plan, other supplemental retirement plans, various retirement funds for local police and firefighters, and the unclassified employees of the state.

The basic retirement funds contain the pension assets of the active participants in eight statewide retirement plans:

- Teachers Retirement Fund
- State Employees Retirement Fund
- Police and Fire Consolidation Fund
- Correctional Employees Fund

- Public Employees Retirement Fund
- Public Employees Police and Fire Fund
- Highway Patrol Retirement Fund
- Judges Retirement Fund.

SBI prepares its financial statement in accordance with pronouncements of the Governmental Accounting Standards Board (GASB). In fiscal year 1997, SBI implemented GASB Statement No. 28 titled "Accounting and Financial Reporting for Securities Lending Transactions." This statement requires disclosure of financial activity related to securities lending transactions.

State Board of Investment

Table 1-1 shows the total funds under the management of the State Board of Investment as of June 30, 1997.

Table 1-1 State Board of Investment Market Value of Investments by Fund At June 30, 1997 (in millions)

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Basic Retirement Funds	1	\$15,914
Post Retirement Fund	1	14,323
State Cash Accounts		4,816
Supplemental Investment Fund	1	990
Assigned Risk Plan	1	591
Permanent School Fund	i	437
Environmental Trust Fund	,	<u>179</u>
	:	
Total	1	\$37,250

Source: State Board of Investment Fiscal Year 1997 annual report.

Audit Scope, Objectives, and Conclusions

The primary objective of our audit was to render an opinion on the financial statements of the Post Retirement Fund and the Supplemental Investment Fund which comprise the Investment Trust Funds of the state of Minnesota. These financial statements are included both in SBI's Annual Report and in the State of Minnesota's Comprehensive Annual Financial Report for fiscal year 1997. Our objective included determining whether the financial statements presented fairly the financial position, results of operations, and changes in net assets in conformity with generally accepted accounting principles. We also ascertained whether SBI complied with laws and regulations that may have had a material effect on its financial statements.

As part of our work, we gained an understanding of the following internal control cycles:

- investment purchases and sales,
- investment custody and valuation,
- investment income collection and allocation, and
- management fee payments and reimbursements.

In addition, we considered the annual actuarial valuation performed by the Legislative Commission on Pension and Retirement's actuary. We used the actuarial information to determine the impact of mortality gains and losses and assumption changes on the basic retirement funds participation in SBI's Post Retirement Fund.

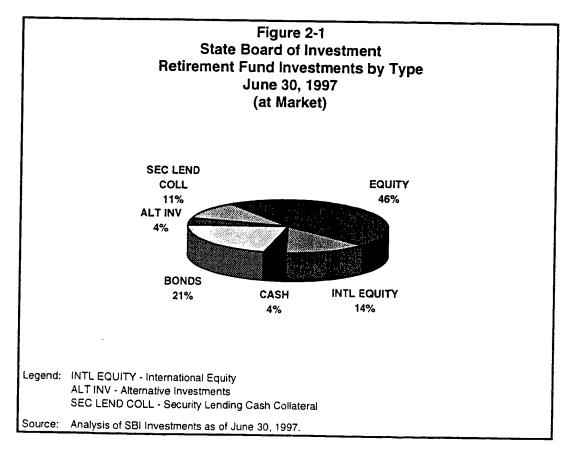
SBI's Annual Report and the state of Minnesota's Comprehensive Annual Financial Report for the year ended June 30, 1997, include our unqualified audit opinions on the Investment Trust Fund's financial statements, dated December 8, 1997.

Chapter 2. External Investment Cycle

Chapter Conclusions

Investments and investment income for externally managed investments were fairly presented in the financial statements. The State Board of Investment designed internal controls to provide reasonable assurance that investments managed by private investment firms were adequately safeguarded and that investments were authorized and properly recorded in the accounting records and financial statements. The State Board of Investment also complied with material financial legal provisions relating to investments for those items tested, except that SBI exceeded the authorized limit of stock ownership in two companies for a period of time.

The SBI contracts with outside investment management firms to invest the majority of retirement assets under its control. SBI groups external managers into several investment pools which are segregated by asset class. The objectives of this investment management structure are greater operating efficiency within asset classes and lower management costs for all participants. Figure 2-1 shows the main classes of investments by type. Alternative investments include real estate, resources (oil and gas), and venture capital accounts.



State Board of Investment

SBI contracts with approximately 80 external investment managers, of which nearly one-half are retained as alternative investment pool managers. The board has the authority to invest up to 15 percent of the assets in the alternative investment market, but has not yet fully funded this pool.

SBI evaluates the investment managers' performance against preestablished benchmarks. If a manager fails to meet the expected rate-of-return, SBI may terminate the contract and reinvest funds with another manager. SBI meets with all of the external managers at least once a year.

The investing and recording of investment transactions is a complicated, multidimensional process. All external manager trades and investment transactions must clear through the state's custodial bank, State Street Bank and Trust of Boston, Massachusetts (the custodial bank). The custodial bank, in accordance with it's contract, has the authority to process investment transactions on behalf of SBI. The asset managers do not have physical access to cash or investment securities. The custodial bank maintains access to the cash accounts of the external investment managers. Any uninvested cash from the managers accounts is invested by the custodial bank.

The custodial bank records and verifies all SBI investment transactions. The custodial bank provides monthly reports to SBI for all investment transactions and balances. As an additional control, SBI contracts with Financial Control Systems, an accounting service in Pennsylvania that receives data directly from State Street Bank for all investment transactions. This service prepares detailed asset listings and transaction reports with independent pricing verification for SBI. The physical custody of stocks and securities is maintained by the Depository Trust Company in New York.

We focused our audit for external investments on the following questions:

- Were the investment balances and associated investment income fairly presented on the financial statements?
- Did SBI design internal controls to provide reasonable assurance that investments were adequately safeguarded and that transactions were authorized and properly reported in the accounting records and financial statements?
- Did SBI comply with material financial legal provisions related to the investment of assets?

Our audit methodology included confirming investment balances with all external managers. We then verified the confirmed balances with State Street Bank and Financial Control Systems investment records. We also reconciled the accounts for timing and transaction differences to verify the accuracy of accounting reports which are used for financial statement preparation. We verified the valuation of a sample of securities to an independent pricing source. We also reviewed an independent auditor's report on the policies and procedures of custody functions at State Street Bank. We verified that SBI reported assets and income associated with security lending transactions in compliance with Governmental Accounting Standards Board (GASB) Statement No. 28.

State Board of Investment

We found that SBI fairly presented investments and investment income in the financial statements. SBI designed internal controls to provide reasonable assurance that investments were adequately safeguarded and that investments were authorized and properly recorded in the accounting records and financial statements.

We noted, however, that SBI exceeded the authorized limit of stock ownership in two companies. Minn. Stat. Section 11A.24 Subd. 5(b) limits SBI's investment to no more than five percent of the total outstanding shares of any company. SBI had stock ownership of approximately 16 and 7 percent of the two companies, respectively. The total value of the SBI's ownership in excess of the five percent restriction for these two companies was approximately \$1.1 million. SBI identified the noncompliance and initiated corrective action in August 1996. SBI instructed the equity manager to liquidate the securities. Due to the restricted nature of the private placement securities, however, the manager could not sell the securities for a period of time. The securities were ultimately liquidated in September 1997. SBI made two policy changes as a result of this situation. First, portfolio managers are no longer allowed to purchase restricted stock or private placement offerings. In addition, SBI will monitor compliance with the stock ownership limitation on a quarterly basis rather than annually. For all other items tested, we found that SBI complied with material financial legal provisions.

Chapter 3. Internal Investment Cycle

Chapter Conclusions

Investments and investment income for internally managed investments were fairly presented in the financial statements. The State Board of Investment (SBI) designed internal controls to provide reasonable assurance that investments managed by its staff were adequately safeguarded and that investments were authorized and properly recorded in the accounting records and financial statements. SBI also complied with material financial legal provisions relating to investments for those items tested.

SBI is directly responsible for investing the assets of the Permanent School Fund, the Environmental Trust Fund, and the state's cash accounts. The cash accounts, referred to as Trust Fund Pool and Invested Treasurers Cash, represent the cash balances of internally managed retirement fund assets and other state agencies. Table 3-1 shows the values of the internal investments managed by SBI.

Table 3-1 State Board of Investment Internally Managed Investments At June 30, 1997 (in millions)

Fund

,	
Invested Treasurer Cash	\$4,297
Trust Fund Pool	44
Permanent School Fund	437
Environmental Trust Fund	179
Other State Accounts	<u>475</u>
Total	\$5,432

Source: SBI Annual Report 1997.

First Trust National Association, Saint Paul, Minnesota. was the state's custodial and clearing bank for all internally managed state accounts during fiscal year 1997. First Trust does not have independent authority to enter into investment transactions. SBI must initiate, authorize and approve all transactions processed by First Trust on behalf of the state. On July 1, 1997, SBI transferred the custodial duties for the Permanent School Fund, Environmental Trust Fund and the Assigned Risk Plan to State Street Bank, Boston.

State Board of Investment

SBI established an equity pool and a fixed income pool as investment vehicles for the Permanent School Fund and Environmental Trust Fund. The Permanent School Fund is a trust fund established for the benefit of Minnesota public schools. Historically, the Permanent School Fund only invested in fixed income securities. The Environmental Trust Fund is a trust established for the protection and enhancement of Minnesota's environment. State law allows it to be invested in both equity and fixed income securities.

SBI invests the internal cash funds in short-term, liquid, high quality debt securities. These investments include U.S. Treasury and Agency issues, repurchase agreements, bankers acceptances, and commercial paper. The Department of Finance is responsible for allocating the short-term income to the appropriate state accounts and agencies.

SBI initiates investment transactions based on the State Treasurer's determination of available cash on a daily basis. SBI then contacts First Trust Saint Paul to process the investment transaction. Once the short-term investments have cleared at First Trust, SBI enters the transactions directly into the accounting system at Financial Control Systems. SBI reconciles transactions and account balances with both First Trust and Financial Control Systems on a regular basis.

As part of our audit of the internal investment cycle, we focused on the following questions:

- Were the investment balances and associated investment income fairly presented on the financial statements?
- Did SBI design internal controls to provide reasonable assurance that investments were adequately safeguarded and that transactions were authorized and properly reported in the accounting records and financial statements?
- Did SBI comply with material financial legal provisions related to the investment of assets?

Our audit methodology included verifying investment balances recorded at First Trust Bank and Financial Control Systems. We gained an understanding of the investment process through interviews with SBI staff. We also discussed investment operations and responsibilities with officials from the Department of Finance, State Treasurer's Office, and First Trust Saint Paul. We verified the valuation of a sample of securities to an independent pricing source. We also reviewed an independent accounting firm's most current audit report on the policies and procedures of the Institutional Trust Group of First Trust Saint Paul.

We found that SBI fairly presented investments and investment income in the financial statements. We found that the State Board of Investment designed internal controls to provide reasonable assurance that investments were adequately safeguarded and that transactions were authorized and properly reported in the accounting records. For the items tested, we found that SBI complied with material financial legal provisions for investments.

Chapter 4. Administrative Expenditures

Chapter Conclusions

The State Board of Investment designed internal controls to provide reasonable assurance that administrative expenditures were authorized and properly recorded in the accounting records and financial statements. The State Board of Investment also complied with material financial legal provisions relating to payroll and other administrative expenses for those items tested.

SBI receives a General Fund appropriation to finance its administrative expenditures. SBI's administrative budget for fiscal year 1997 was approximately \$2.1 million. (SBI also incurs management investment fees that are charged back to the participating funds. Those expenditures are not addressed in this chapter.) SBI uses the budgetary and processing controls established by the Department of Finance through the MAPS and SEMA4 accounting systems for administrative expenditures. SBI's primary expenditure is for payroll, which totaled \$1.6 million during fiscal year 1997, or about 74 percent of the total expenditures. Table 4-1 summarizes SBI's fiscal year 1997 General Fund administrative expenditures by type.

Table 4-1 State Board of Investment General Fund Administrative Expenditures Fiscal Year 1997

<u>Type</u>	_Amount_	Percent of Total
Payroll	\$1,582,926	74%
General Operations	388,711	18%
Supplies and Equipment	103,502	5%
Travel	53,223	3%
Total Administrative Expenditures	<u>\$2.128.362</u>	<u>100%</u>

Source: FY97 SBI Administrative Expenditures per MAPS.

As part of our audit of administrative expenditures, we focused on the following questions:

- Did SBI design internal controls to provide reasonable assurance that transactions for administrative expenditures represented reasonable and valid obligations, were properly authorized and accurately recorded in the MAPS and SEMA4 accounting systems?
- Did SBI comply with material financial legal provisions related to administrative expenditures?

State Board of Investment

Our audit methodology included gaining an understanding of the administrative expenditure transaction process through interviews with SBI staff. We verified compliance with state statutes and Department of Finance operating procedures. We applied analytical procedures comparing administrative costs for fiscal years 1997 and 1996. We investigated any significant variances. We performed detailed tests of transactions for payroll and other administrative expenditures.

We found that the State Board of Investment designed controls to provide reasonable assurance that transactions for administrative expenditures were authorized and properly recorded in the accounting records and systems. For the items tested, we found that SBI complied with material financial legal provisions for administrative expenditures.

Status of Prior Audit Issues As of December 1, 1997

Most Recent Audits

The January 24, 1997, Legislative Audit Report 97-5 covered the fiscal year ended June 30, 1996, and had no reportable issues. The audit scope included the Investment Trust Funds and the related external and internal investment cycles. We audit the State Board of Investment on an annual basis. There have been no reportable issues in recent audits.

State of Minnesota Audit Follow-Up Process

The Department of Finance, on behalf of the Governor, maintains a quarterly process for following up issues cited in financial audit reports issued by the Legislative Auditor. The process consists of an exchange of written correspondence that documents the status of audit findings. The follow-up process continues until Finance is satisfied that the issues have been resolved. It covers entities headed by gubernatorial appointees, including most state agencies, boards, commissions, and Minnesota state colleges and universities. It is not applied to audits of the University of Minnesota, any quasi-state organizations, such as the Metropolitan agencies or the State Agricultural Society, the state constitutional officers, or the judicial branch.

ATTACHMENT D

Bills of Interest to the Minnesota State Board of Investment 1998 Legislative Session Includes Action Through 2/20/98

Description of Bill	HF/SF # and Author	Current Status
Abolish Office of State Treasurer	HF 2355 (Greiling)	House Gov't Op passed 1/29; referred to Rules
State Treasurer	SF 161 (Wiener)	Senate Gov't Op passed 1/29; referred to Rules
Omnibus Pension bill -Contains provision to eliminate the SIF asset base charge	HF (2970) Kahn SF (2555) Morse	Gov't. Op passed 2/20 Gov't Op passed 2/17
Changing Environmental Trust Fund and Permanent School Fund to endowment fund status -Constitutional amendment to allow percent of fund distributions	HF 1883 (Kahn) SF 1587 (Morse)	Environment and Natural Resources Committee laid over Passed Senate Environment and Natural Resources 2/10
Establish Children's Endowment Fund in Constitution -SBI would manage assets	HF 3167 (Slawik) SF 2775 (Hottinger)	In House Ways and Means In Senate Rules
SBI sell portion of tobacco stocks -assets must be invested in MN technology Equity Fund	HF 2453 (Trimble) SF 2706 (Bechmann)	House Gov't Op approved and referred to State Gov't Finance Division No Hearing in Senate
SBI may not purchase additional shares of stock in tobacco companies	HF (2924) Luther SF (2680) Hottinger	No hearing by 2/13 No hearing by 2/13

SBI Stock Holdings in Tobacco Companies Identified by the IRRC September 30, 1997

Company	Percent Revenue from Tobacco	SBI Shares 9/30/97	SBI Cost Value 9/30/97	SBI Market Value 9/30/97
• •	in 1995			
Amer Group	7.7%	9,900	\$ 202,242	\$ 215,363
American Maize	n/a	0	0	. 0
BAT	69.1	1,555,927	12,236,304	13,647,997
Brooke Group	98.8	10,200	67,138	59,925
Compagnie Fin	66.2	80,000	2,751,015	1,880,000
Culbro	n/a	0	0	0
Dimon	80.1	41,399	831,526	1,034,975
Empresas	55.6	94,500	438,914	519,562
Fortune Brands	n/a	0	0	0
Glatfelter	<25	151,000	2,855,431	3,350,313
Hanson PLC	31.9	0	0	0
Imasco Ltd.	16.3	0	0	0
Japan Tobacco	n/a	0	0	0
Loews	11.0	101,300	6,688,056	11,440,569
Philip Morris	48.9	5,894,880	147,262,671	245,005,950
Rembrandt	n/a	250,000	2,192,801	2,262,736
RJR Nabisco	48.2	594,298	18,049,504	20,428,994
Sara Lee	<2	336,605	9,583,099	17,335,158
Schweitzer-Maud.	94.0	21,410	603,771	909,925
SEITA	80.3	23,850	755,541	743,778
Standard Comm'l	62.3	6,356	70,397	107,258
Tabacalera SA	81.9	49,350	1,791,222	3,463,795
Universal Corp.	70.5	149,400	4,257,181	5,415,750
UST	86.9	106,600	3,171,350	3,257,963
Volvo AB	4.3	197,600	3,850,693	5,641,035
Total		9,674,575	\$217,658,856	\$336,721,046

Sources: List of companies is from "The Tobacco Industry, 1995 Edition," and percent of revenue is from "The Tobacco Industry, 1996 Edition," by the Investor Responsibility Research Center (IRRC), Washington D.C. SBI holdings data are from SBI bank records.

SBI Stock Holdings
Tobacco Companies Identified by the IRRC
December 31, 1997

Company	Percent Revenue from Tobacco in 1995	SBI Shares 12/31/97	SBI Cost Value 12/31/97	SBI Market Value 12/31/977
Amer Group	7.7%	9,900	\$ 202,242	\$ 189,983
American Maize	n/a	0	0	0
BAT	69.1	1,531,427	12,043,886	13,989,984
Brooke Group	98.8	10,200	67,138	87,975
Compagnie Fin	66.2	80,000	2,751,015	1,272,000
Culbro	56.4	0	0	0
Dimon	80.1	41,399	831,526	1,086724
Empresas	55.6	94,500	438,914	514,593
Fortune Brands	56.6	0	0	0
Glatfelter	<25	85,800	1,635,218	1,598,025
Hanson PLC	31.9	0	0	0
Imasco Ltd.	16.3	0	0	0
Japan Tobacco	n/a	0	0	0
Loews	11.0	101,500	6,727,666	10,771,688
Philip Morris	48.9	5,766,230	144,705,145	261,282,297
Rembrandt	n/a	250,000	2,192,801	1,823,747
RJR Nabisco	48.2	549,998	16,752,841	20,624,925
Sara Lee	<2	971,705	42,495,018	54,719,138
Schweitzer-Maud.	94.0	8,810	170,867	328,173
SEITA	80.3	23,850	755,541	856,336
Standard Comm'l	62.3	6,356	70,397	105,272
Tabacalera SA	81.9	18,050	667,067	1,462,565
Universal Corp.	70.5	149,400	4,257,181	6,144,075
UST	86.9	106,600	3,171,350	3,937,538
Volvo AB	4.3	216,400	4,376,578	5,801,928
Total		10,022,125	\$244,312,391	\$386,596,966

Sources: List of companies is from "The Tobacco Industry, 1995 Edition," and percent of revenue is from "The Tobacco Industry, 1996 Edition," by the Investor Responsibility Research Center (IRRC), Washington D.C. SBI holdings data are from SBI bank records.

J.P. Morgan Investment Management Inc.

J.P. Morgan Investment

To:

Lois Buermann

From:

Nanette Buziak

Date:

11/21/97

Subject:

Purchase of Philip Morris Stock

This is to reconfirm our conversation earlier today regarding the purchase of Philip Morris common stock in the Minnesota State Board of Investment portfolio. While Philip Morris is exempt from the IRRC's Tobacco Industry 1996 report, we felt it was our fiduciary responsibility to notify you of such purchase. Our initial purchase, for trade date 11/21/97 was for 3200 shares, which we expect to add to over the course of the next few weeks. We will notify you when the purchases are completed.

Please contact me at (212)837-5282 if you have any questions.

Tab C

COMMITTEE REPORT

DATE:

February 24, 1998

TO:

Members, State Board of Investment

Members, Investment Advisory Council

FROM:

Master Custody Review Committee

The SBI's contract with State Street Bank for master custody services expires on September 30, 1998. It is the SBI's practice to review the contract through a request for proposal (RFP) on at least a five-year basis.

At its September 3, 1997 meeting the State Board of Investment established a Master Custodian Review Committee and directed staff to send out Requests For Proposals (RFP's). The RFP was announced in the State Register on November 3, 1997. RFP's were sent to the eight leading master custody providers in the industry as well as one additional local bank. Responses were received from six vendors:

Bankers Trust

New York

Chase Manhattan

New York

Bank of New York Mellon

New York Boston

Norwest Bank

Minneapolis

State Street Bank and Trust

Boston

The responses were evaluated by the committee for the vendor's adherence to the RFP requirements, the perceived ability of the vendor to meet the needs of the SBI for these services over the next five years, and the cost of the services proposed by the vendor.

A summary of the review process and the individual reponses are attached.

CONCLUSION:

Based on its review of the RFP reponses, the Committee concluded that State Street Bank and Trust should remain the SBI's custodian.

• Services. The Committee believes that State Street will continue to provide "state of the art" custodial services. The quality of its product and services demonstrates client services that equal or exceeds that of all other respondents.

- Fees. On a gross bee basis, State Street's fee proposal was the second lowest for the services required by the SBI. On a net fee basis, State Street will guarantee the SBI a zero net fee. This means that the SBI will be credited with securities lending income at least sufficient to cover all gross fees for the five-year life of the contract. In addition, the proposed fee represents a lower fee schedule than that contained in the current contract.
- Securities Lending. State Street will provide the SBI with a higher level of indemnification on its securities lending program than all other respondents.

RECOMMENDATION:

Based on the results of the RFP, the Committee unanimously recommends that the Board authorize the Executive Director, with the assistance of SBI counsel, to negotiate and execute a contract with State Street Bank and Trust Company, Boston MA, for Master Custodial services for a five year period ending September 30, 2003.

Approval by the SBI of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and neither the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by State Street Bank and Trust Company upon this approval. Until a formal agreement is executed by the Executive Director on behalf of the SBI, further due diligence and negotiations may result in the imposition of additional terms and conditions on State Street Bank and Trust or reduction or termination of the commitment.

MASTER CUSTODY REVIEW COMMITTEE SUMMARY OF REVIEW PROCESS AND RESPONSES OCTOBER 1997 - JANUARY 1998

The members of the Master Custody Review Committee were:

Peter Sausen, Chair

Governor's Designee

Christie Eller

State Attorney General's Designee

Jake Manahan

State Treasurer's Designee

Carrie Moe Elaine Voss State Auditor's Designee Secretary of State's Designee

Mary Vanek

Public Employees Retirement System

Doug Gorence

Investment Advisory Committee

The request for proposals (RFP) for master custody services was announced in the State Register on November 3, 1997 with responses due by December 18, 1997. In addition, RFP's were solicited from nine organizations:

- * Bank of New York
- * Bankers Trust
- * Chase Manhattan

Citibank

First Trust National Association

- * Mellon
 - The Northern Trust Company
- * Norwest Bank
- * State Street Bank and Trust
- * Submitted response to the RFP.

The Committee met on January 21, 1998 to discuss the responses. Their evaluation was based on three broad criteria:

- Adherence to RFP requirements
- Ability to provide all the services delineated in the RFP
- Relative costs

The Committee compared the fee proposals from each responder by evaluating gross fees without securities lending income. The Committee felt that securities lending services could be separated from custody services.

Bankers Trust, Bank of New York and Norwest Bank were eliminated from consideration due to the high gross fees in their proposals and the lack of any net fee guarantee.

The committee then discussed the importance of daily distribution of income from cash management accounts. The 457 plans will need this capability in the near future.

The committee reviewed a survey of the SBI's investment managers regarding their experience with custodial banks. Based on this survey and the fact that Mellon did not offer daily distribution for cash management, the committee voted to remove Mellon from further consideration.

Chase Manhattan Bank, although lowest in terms of stated gross fees, was removed from consideration for the following reasons.

- The uncertainty of their pricing proposal.
- Their proposal for cash management did not provide for daily distribution of income.
- Their proposal only included five people assigned to our account.

Based on its review of the RFP responses, the Committee recommended that State Street Bank and Trust should remain the SBI's custodian:

- Services. The Committee believes that State Street will continue to provide "state of the art" custodial services. The quality of its product and services equals or exceeds that of all other respondents.
- Fees. On a gross fee basis, State Street's fee proposal was the second lowest for the services required by the SBI. On a net fee basis, State Street will guarantee the SBI a zero net fee. This means that the SBI will be credited with securities lending income at least sufficient to cover all gross fees for the five-year life of the contract. In addition, the proposed fee represents a reduction from the current contract.
- Securities Lending. State Street will provide the SBI with a higher level of indemnification on its securities lending program than all other respondents.

A summary of the major features of each responder's proposal follows.

STATE STREET

Industry presence:

domestic both and Major presence, international. Appears fully qualified to provide all requested services.

\$ 1.23 Trillion custody assets.

Accounting and reporting system:

Global and domestic under one system.

Accounting conventions:

Full accrual trade date accounting.

Service team:

An integrated domestic and global team of 13 people is dedicated to the SBI's account. In addition, a technical employee at State Street's office in the Twin Cities will be dedicated to the SBI's account to help with computer technical requirements.

Daily income accrual and distribution of STIF income:

Daily cash management income accrued and available for distribution by 9:00 am each day.

Indemnification on Securities Lending:

Highest level among responders. Covers broker default, and provides 100 million insurance to cover issuer default on cash collateral investment.

Securities lending estimate:

\$10.7 million.

Gross fee:

\$ 4.075 million.

\$ 6.625 million.

Gross fee ranking:

Second lowest among the proposals.

Estimated net income with securities lending

income:

Fee guarantee with securities lending:

Zero net fee guaranteed, regardless of actual

securities lending revenue.

Notes: State Street is the SBI's current custodian. Experience under the current contract has been favorable. Staff believes that State Street has been responsive to the SBI's needs and concerns.

Above fee schedule represents a reduction from the current contract.

BANKERS TRUST

Industry presence:

Major presence, both domestic and

international. Appears fully qualified to provide

all requested services.

\$ 482 billion custody assets.

Accounting and reporting system:

Global and domestic under one system.

Accounting conventions:

Full accrual trade date accounting.

Service team:

Integrated domestic and global team.

Dedicated group of 6 people.

Daily income accrual and distribution of STIF

income:

Daily cash management income accrued and available for distribution by 9:00 am each day.

Indemnification on Securities Lending:

Covers broker default only, no provision to

cover issuer default on cash collateral

investment.

Securities lending estimate:

No estimate provided.

Gross fee:

\$ 5.430 million.

Gross fee ranking:

Second Highest among the proposals.

Estimated net income with securities lending

income:

No estimate provided.

Fee guarantee with securities lending:

No guarantee.

BANK OF NEW YORK

Industry presence:

Major presence, both domestic and international. Appears fully qualified to provide all requested services.

\$ 649 billion custody assets.

Accounting and reporting system:

Global and domestic under one system.

Accounting conventions:

Full accrual trade date accounting.

Service team:

Integrated domestic and global team.

Dedicated group of 9 people.

Daily income accrual and distribution of STIF

income:

Daily cash management income accrued and available for distribution by 9:00 am each day.

Indemnification on Securities Lending:

Covers broker default only, no provision to cover issuer default on cash collateral

investment.

Securities lending estimate:

\$17.8 million.

Gross fee:

\$4.5 million.

Gross fee ranking:

Third highest among the proposals.

Estimated net income with securities lending

income:

\$ 13.3 million.

Fee guarantee with securities lending:

No guarantee

NORWEST

Industry presence: Major presence, both domestic and

international. Appears fully qualified to provide

all requested services.

\$ 200 billion custody assets.

Accounting and reporting system: Global and domestic under one system.

Accounting conventions: Full accrual trade date accounting.

Service team: Integrated domestic and global team.

Dedicated group of 6 people.

Daily income accrual and distribution of STIF

Daily cash management income accrued daily but not available for distribution until month

income: but no

Indemnification on Securities Lending: Covers broker default only, no provision to

cover issuer default on cash collateral

investment.

Securities lending estimate: \$22.9 million.

Gross fee: \$ 6.45 million.

Gross fee ranking: Highest among the proposals.

Estimated net income with securities lending \$ 16.45 million.

income:

Fee guarantee with securities lending:

No guarantee.

MELLON

Industry presence:

Major presence, both domestic and international. Appears fully qualified to provide all requested services.

\$ 906 billion custody assets.

Accounting and reporting system:

Global and domestic under one system.

Accounting conventions:

Full accrual trade date accounting.

Service team:

Integrated domestic and global team.

• Dedicated group of 8 people.

Daily income accrual and distribution of STIF

income:

Daily cash management income accrued daily but not available for distribution until month

end.

Indemnification on Securities Lending:

Covers broker default only, no provision to cover issuer default on cash collateral

investment.

Securities lending estimate:

\$10.0 million.

Gross fee:

\$ 3.675 million.

Gross fee ranking:

Third lowest among the proposals.

Estimated net income with securities lending

income:

\$ 6.325 million.

Fee guarantee with securities lending:

No Guarantee.

CHASE MANHATTAN

Industry presence: Major presence, both domestic and

international. Appears fully qualified to provide

all requested services.

\$ 4.0 trillion custody assets.

Accounting and reporting system: Global and domestic under one system.

Accounting conventions: Full accrual trade date accounting.

Service team: Integrated domestic and global team.

Dedicated group of 5 people.

Daily income accrual and distribution of STIF

income:

Daily cash management income accrued daily but not available for distribution until month

end.

Indemnification on Securities Lending: Covers broker default only, no provision to

cover issuer default on cash collateral

investment.

Securities lending estimate: No estimate given.

Gross fee: \$ 2.41 million.

Gross fee ranking: Lowest among the proposals.

Estimated net income with securities lending

income:

No estimate given.

Fee guarantee with securities lending:

No Guarantee.

Tab D

COMMITTEE REPORT

DATE:

February 24, 1998

TO:

Members, State Board of Investment

Members, Investment Advisory Council

FROM:

Accounting System Review Committee

The SBI's contract with Financial Control System for accounting services expires on June 30, 1998. It is the SBI's practice to review the contract through a request for proposal (RFP) on at least a five-year basis.

At its September 3, 1997 meeting the State Board of Investment established an Accounting System Review Committee and directed staff to send out Requests For Proposals (RFP's). The RFP was announced in the State Register on November 3, 1997. RFP's were sent to eight vendors. Responses were received from three vendors:

Financial Control System Princeton Financial Chadds Ford PA Princeton, NJ

O.E.D. Information Systems

Marlton, NJ

The three responses were evaluated by the committee for the vendor's adherence to the RFP requirements, the perceived ability of the vendor to meet the needs of the SBI for these services over the next five years, and the cost of the services proposed by the vendor.

A summary of the review process and the individual reponses are attached.

CONCLUSION:

Based on its review of the RFP reponses, the Committee concluded that Financial Controls System should continue to provide the SBI's accounting services.

- Services. The Committee believes that Financial Controls will continue to provide the best mix of technology and service to meet the SBI's current and future accounting requirements.
- Fees. Financial Control's fee proposal was the lowest for the services required by the SBI.

RECOMMENDATION:

Based on the results of the RFP, the Committee unanimously recommends that the Board authorize the Executive Director, with the assistance of SBI counsel, to negotiate and execute a contract with Financial Controls System, Chadds Ford PA, for Accounting services for a five-year period ending June 30, 2003.

Approval by the SBI of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and neither the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by Financial Controls System upon this approval. Until a formal agreement is executed by the Executive Director on behalf of the SBI, further due diligence and negotiations may result in the imposition of additional terms and conditions on Financial Controls System or reduction or termination of the commitment.

ACCOUNTING REVIEW COMMITTEE SUMMARY OF REVIEW PROCESS AND RESPONSES OCTOBER 1997 - JANUARY 1998

The members of the Master Custody Review Committee were:

Peter Sausen, Chair

Governor's Designee

Christie Eller

State Attorney General's Designee

Jake Manahan Carrie Moe State Treasurer's Designee State Auditor's Designee

Elaine Voss

Secretary of State's Designee

Mary Vanek

Public Employees Retirement System

Doug Gorence

Investment Advisory Committee

The request for proposals (RFP) for accounting services was announced in the State Register on November 3, 1997 with responses due by December 18, 1997. Ten RFP's were sent to potential responders:

Computer Pundits Corp

COR Lab

CSC Consulting

- * Financial Control System Free Lantz Solutions Pareo, Inc
- * Princeton Financial
- * Q.E.D. Information Systems
 Securities Software & Consulting
 Barry Smith
- * Submitted response to the RFP.

The Committee met on January 21, 1998 to discuss the responses. Their evaluation was based on three broad criteria:

- Adherence to RFP requirements
- Ability to provide all the services delineated in the RFP
- Relative costs

The Committee compared the fee proposals from each responder by evaluating gross fees over the life of a five-year contract.

Princeton Financial was eliminated from consideration due to the high gross fees in their proposal.

Q.E.D. Information Systems was removed from consideration for the following reasons.

- The software license agreement included in their proposal was unacceptable.
- Their proposal included the potential for large contingent costs for software maintenance.
- Their proposal did not provide for any report production support by their staff. All system operations would have to be completed by SBI staff. This would necessitate the SBI hiring additional staff to operate the proposed system.

Based on its review of the RFP responses, the Committee recommended that Financial Controls System should remain the SBI's accounting vendor:

- Services. The Committee believes that Financial Controls System will continue to provide quality accounting services that equals or exceeds that of all other respondents.
- Fees. On a gross fee basis calculated over a five-year contract period, Financial Controls System's fee proposal was the lowest for the services required by the SBI.

A summary of the major features of each responder's proposal follows.

Major Features Accounting/Investment Management Responses 1998

FINANCIAL CONTROLS SYSTEM

Industry presence:

Major presence in the investment accounting industry. Accounting related services for pension and investment organizations is only business. FCS is completely independent corporation and is wholly owned by its president, Roger Cerasoli. FCS appears fully qualified to provide all requested services.

Client base:

Account for \$ 207 Billion of investment assets.

Accounting and investment conventions:

Provides full range of facilities and calculations to account for the security types and income calculations used by the SBI.

Production support:

FCS provides production support for the preparation and delivery of monthly reconciliations and reports.

Daily income accrual and distribution of STIF income:

Provides necessary software and support to allow SBI to manage cash investments in a pooled environment with daily income accrual and distribution.

Computer equipment and software compatible with SBI's current hardware.

FCS's communications equipment will feed directly into the SBI's Novell network.

Gross fee over five year contract:

\$ 1.230 million spread over life of contract in monthly installments.

Gross fee ranking:

Lowest

Fee guarantee:

Fee guaranteed over five year life of contract. There are no contingent or hidden fees.

Notes: Financial Controls is the SBI's current vendor. Experience under the current contract has been favorable. Staff believes that Financial Controls has been responsive to the SBI's needs and concerns.

Major Features Accounting/Investment Management Responses 1998

PRINCETON FINANCIAL

Industry presence:	Major presence in the investment accounting industry. Accounting related services for pension and investment organizations for over 20 years. Princeton is wholly owned subsidiary of State Street Boston Corp. Princeton appears fully qualified to provide all requested services.
Client base:	Princeton has over 300 clients accounting for over \$1 trillion in assets.
Accounting and investment conventions:	Princeton does not have the functionality to support a security lending program.
Production support:	Princeton provides client/server software products but does not provide production support.
Daily income accrual and distribution of STIF income:	Provides necessary software and support to allow SBI to manage cash investments in a pooled environment with daily income accrual and distribution.
Computer equipment and software compatible with SBI's current hardware.	Princeton's system should operate on the SBI's network.
Gross fee over five year contract:	\$ 2.800 million spread over life of contract. Includes upfront fees of \$ 1.35 million.
Gross fee ranking:	Highest
Fee guarantee:	None stated.

Major Features Accounting/Investment Management Responses 1998

Q. E. D.

Industry presence: Founded in 1987 to develop and market investment management and accounting software to state organizations. Client base: Account for \$ 450 Billion of investment assets. Accounting and investment conventions: Provides full range of facilities and calculations to account for the security types and income calculations used by the SBI. Production support: QED provides client/server software products but does not provide production support. Daily income accrual and distribution of STIF Provides necessary software and support to income: allow SBI to manage cash investments in a pooled environment with daily income accrual and distribution. Computer equipment and software compatible QED will provide a Sun workstation to run the with SBI's current hardware. system. Gross fee over five year contract: \$ 1.292 million spread over life of contract. Includes upfront fees of \$ 368,400. Gross fee ranking: Middle Fee guarantee: Additional fees would be charged based on the amount of custom programming we required and for maintenance in excess of a stated maximum number of hours. The cost of

call.

maintenance could include the travel expenses of the technician if the SBI initiated the service

Tab E

COMMITTEE REPORT

DATE:

February 24, 1998

TO:

Members, State Board of Investment

Members, Investment Advisory Council

FROM:

Domestic Manager Committee

The Domestic Manager Committee met on February 18, 1998 to review the following agenda:

- Review of manager performance for the period ending December 31, 1997.
- Review of Weiss, Peck & Greer and Investment Advisers, Inc.
- Recommendation to terminate Independence Investment Associates to facilitate rebalancing needs.

Action is requested by the SBI/IAC on the last item.

INFORMATION ITEMS:

1. Review of manager performance

• Stock Managers

For the period ending December 31, 1997, the domestic stock manager program outperformed its aggregate benchmark and the Wilshire 5000 for the latest quarter, one-year, and three-year periods. The **current** managers outperformed the benchmark and the Wilshire 5000 for the quarter and for the latest one-year, three-year, and five-year periods.

Time	Total	Wilshire
period	Program	5000*
Quarter	2.4%	1.7%
1 Year	32.3	31.3
3 Years	29.6	29.5
5 Years	19.1	19.2

Current	Aggregate
Mgrs. Only	Benchmark
2.4%	1.8%
32.3	31.8
30.4	29.4
19.6	19.0

^{*} Adjusted for SBI's restrictions, as appropriate.

The performance evaluation reports for the stock managers start on the first "blue page of this Tab section.

Bond Managers

For the period ending December 31, 1997, the bond manager program and current managers underperformed the Lehman Aggregate and the aggregate benchmark for the quarter, and outperformed for the latest one-year, three-year, and five-year periods.

Time		Lehman
period	Actual	Aggregate*
Quarter	2.8%	2.9%
1 Year	10.2	9.7
3 Years	11.0	10.4
5 Years	8.1	7.5

Current Mgrs. Only	Aggregate Benchmark
2.8%	2.9%
10.2	9.7
11.0	10.4
8.1	7.5

^{*} Reflects Salomon BIG index prior to 7/94.

The performance evaluation reports for the bond managers start on the **third "blue** page of this Tab section.

2. Review of Weiss, Peck & Greer and Investment Advisers, Inc. (IAI)

During the quarter, the Committee reviewed information compiled by staff on two stock managers, Weiss, Peck & Greer (WPG) and Investment Advisers, Inc. (IAI). Staff's comments and an attribution analysis prepared by the SBI's consultant, Richards & Tierney, are provided on page 5 in this Tab section.

Weiss, Peck & Greer

The portfolio manager responsible for the SBI's small-capitalization growth portfolio at Weiss, Peck & Greer resigned during the fourth quarter of 1997. After the firm announced the replacement, staff met with the new portfolio manager. Staff's recommendations and the Committee discussion on the firm can be summarized as follows:

• Staff recommended that Weiss Peck & Greer (WPG) be retained as an active domestic equity manager to continue managing a small cap growth portfolio for the SBI. Mickey Straus, the SBI's portfolio manager, left WPG on December 31, 1997. He was replaced by Adam Starr, who had been with WPG for the past four years as a portfolio manager and analyst. Mr. Starr's portfolio management style will differ from Mr. Straus' momentum-based style in that he will employ a "growth at a reasonable price" strategy. Mr. Starr will use a more consistent, disciplined approach and will concentrate the portfolio in 70-80 names, down from the 150-180 names previously held. He will also use a more price-conscious buying strategy and will focus on bottom-up company research. Staff is comfortable with Mr. Starr and his portfolio management style, and will continue to meet with WPG quarterly to ensure that the transition is going smoothly and that Mr. Starr has implemented the strategy he has described.

Investment Advisers, Inc.

In August 1997, the Domestic Manager Committee re-interviewed IAI due to significant staff turnover and issues concerning their benchmark. At that time, the Committee concurred with staff's recommendation to retain IAI, but recommended that they be reviewed again at the February 1998 committee meeting. That review and the Committee discussion is summarized below:

• The Committee concurred with staff's recommendation that *Investment Advisers*, *Inc. (IAI)* continue as an active domestic equity manager for the SBI and that the firm be re-assessed at the August 1998 Committee meeting. Although performance has continued to lag expectations, IAI's organization has stabilized since the changes made last spring. New analysts are being added to the Growth Equity Team, which should substantially improve the coverage of their investment universe. IAI's regional product provides the SBI's domestic equity program with unique exposure in the small-to-mid cap area of our region, and staff advises taking a longer-term view when assessing performance.

ACTION ITEM:

3. Recommendation to terminate Independence Investment Associates to facilitate rebalancing needs.

The SBI has guidelines for rebalancing the Combined Funds to prevent each asset class from deviating too far from its target weight. Based on December 31, 1997 asset class weights, staff determined that it was necessary to make the following changes:

- Decrease the Domestic Equity Program by about \$1.3 billion,
- Increase the Fixed Income Program by \$600 million,
- Increase the International Program by \$400 million, and
- Increase cash by \$300+ million.

Staff has withdrawn \$770 million from three active stock managers and recommends that the remaining \$530 million should be generated by terminating the relationship with *Independence Investment Associates*, an active stock manager. Last quarter, the Board placed Independence on watch due to the resignation of a key member of the domestic equity team. Independence's performance has continued to lag expectations and staff is not confident that they will be able to recover in the near term. Additionally, Independence has lost 10 accounts in the last quarter for various reasons, including performance. The Committee concurs with staff's recommendation.

Specific details regarding the rebalancing in the domestic stock and bond programs are included on page 19, in this Tab section. Details relating to the International Program are included on page 11 in Tab F.

RECOMMENDATION:

The Domestic Manager Committee recommends that Independence Investment Associates be terminated and that the assets in the portfolio should be liquidated and used to complete the Combined Funds rebalancing.

MINNESOTA STATE BOARD OF INVESTMENT



Board Members:

Governor Arne H. Carlson

State Auditor Judi Dutcher

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

An Equal Opportunity **Employer**

DATE:

February 11, 1998

TO:

Members, Domestic Manager Committee

FROM:

Lois Buermann / Kris Hanson

SUBJECT:

Review of Investment Advisors, Inc.

and Weiss, Peck & Greer

Weiss, Peck & Greer (WPG)

During the fourth quarter of 1997, the WPG portfolio manager responsible for SBI's small capitalization growth portfolio resigned. After the firm announced his replacement, staff met with the new portfolio manager and prepared a summary of the meeting and a recommendation.

Investment Advisors, Inc. (IAI)

In August 1997, the Domestic Manager Committee re-interviewed IAI due to significant staff turnover and issues concerning their benchmark. the committee concurred with staff's recommendation to retain IAI, but recommended that they be reviewed again in six months. Staff has completed this latest review and the results are presented in the attached report.

The staff summary for each of these firms is attached. Also included are historical returns, cumulative VAM graphs, and 18-month rolling VAM graphs.

WEISS, PECK & GREER

Manager Change

Weiss, Peck & Greer (WPG) recently announced the selection of Mr. Adam Starr as the portfolio manager for their Small Cap Growth product, replacing Mickey Strauss who left WPG on December 31, 1997.

Mr. Starr has 20 years of investment experience. He has been with WPG for the past four years as a portfolio manager and analyst. He provided research for the Small Cap Growth and Large Cap Growth groups. He also managed an investment portfolio comprised of WPG partners' capital. Previously, he was an analyst and portfolio manager with Charter Oak Partners, and he was Managing Director/Associate Director of Research at First Manhattan Company. He began his career in security analysis at Warburg-Pincus.

Although Mr. Starr will manage the same segment of the market (small cap growth) his portfolio management style is very different from the previous portfolio manager's. Mickey Strauss was a momentum manager, while Mr. Starr's style is growth at a reasonable price. Mr. Starr described his investment strategy as emphasizing the purchase of financially sound, well managed, attractively valued companies.

Mr. Starr's portfolio management style will differ in the following ways:

- He will employ a more consistent, disciplined approach to company analysis across all industries.
- He will concentrate the portfolio in 70-80 names, down from the 150-180 names previously held.
- He will invest in established, successful companies they understand (no biotech, etc.).
- He will focus on doing the bottom-up company research necessary to avoid owning problem companies.
- He will closely monitor the portfolio holdings as he believes "preservation of capital is paramount."
- He will use a price-conscious buying strategy.

Transition Strategy

Mr. Starr has developed an implementation plan to execute his strategy and to move SBI's \$368 million portfolio from its current holdings to the desired portfolio. In order to move from the current to the desired portfolio, he will sell small positions and low conviction stocks, and will add to stocks of higher quality and superior earnings potential. He will identify candidates for opportunistic sale or purchase and the events that could precipitate such moves.

Mr. Starr has identified a team of four analysts, three of whom were previously on the Small Cap Growth team. The fourth will be a senior analyst Mr. Starr worked with at

WEISS, PECK & GREER (Continued)

another firm. Staff has met with the small cap analyst team in the past and has reviewed each analyst's performance relative to their industry benchmark, and is satisfied with the team that is being assembled.

Additional Comments

Staff believes it is important to maintain active management exposure in the small capitalization area. This area is an inefficient part of the market, and it offers a good opportunity to add substantial value through stock selection.

For the plan sponsor, hiring and firing managers in the small cap area is extremely expensive. It is more costly to terminate a small cap manager than a large cap manager because small caps trade with larger spreads and at lower volumes. Replacing a small cap manager would require the SBI to purchase a new portfolio of small cap stocks, thus incurring significant additional costs. Therefore, it is advantageous for SBI to maintain our current small cap relationships unless serious reasons for termination are uncovered.

Staff does not believe the change in managers at WPG warrants termination. Staff is comfortable with Mr. Starr's disciplined investment approach. Mr. Starr has strong opinions about stocks and confidently articulates them. He appears to have a good team-oriented approach and strong organizational skills. Staff will continue to meet with WPG quarterly to ensure that the transition is going smoothly and that Mr. Starr implements the strategy he has outlined.

Recommendation

Staff recommends that WPG be retained as an active domestic equity manager and continue managing a small cap growth portfolio.

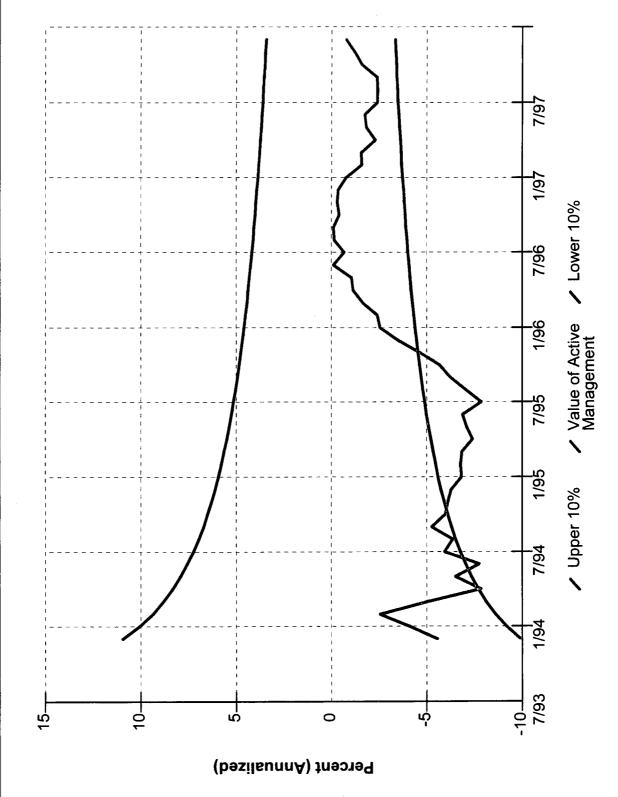
Investment Manager:	WEISS, PECK & GREER
Benchmark.	Custom

		PORTI	OLIO	BENCH	MARK	VAN	И
	i	Qrtly	Annual	Qrtly	Annual	Qrtly	Annual
		Return	Return	Return	Return	Return	Return
93	Q1						
	Q2						
	Q3	8.87		8.13		0.68	
	Q4	-1.83	6.88 *	1.71	9.98 *	-3.48	-2.82 *
94	Q1	-4.33		-3.34		-1.02	
	Q2	-10.85		-7.05		-4.08	
	Q3	12.08		10.62		1.32	
	Q4	-3.32	<i>-7.</i> 58	-0.38	-0.99	-2.95	-6.65
95	Q1	6.16		9.00	Ministry into hympur a ha	-2.60	AD CONTRACTOR
	Q2	9.71		11.75		-1.83	
	Q3	13.40		13.65		-0.22	
]	Q4	5.78	39.71	0.09	38.55	5.69	0.83
96	Q1	8.86		4.25		4.42	organis in the second
	Q2	8.63	•	4.08		4.37	
	Q3	0.82		0.79		0.03	
	Q4	-0.04	19.17	0.89	10.33	-0.93	8.00
97	Q1	-12.75		-8.60		-4.54	
	Q2	15.31		16.69		-1.18	
	Q3	16.09		19.82		-3.12	
	Q4	-4.80	11.19	-11.03	13.71	7.00	-2.22
Latest:							
1 yr			11.19		13.71		-2.22
3 yr			22.78		20.24		2.12
Cum 9307-9	9612		14.35		15.23	•	-0.76
Std Dev			17.75		16.53		5.62

^{*} Partial Period since 7/1/93

Value of Active Management - Cumulative Graph WEISS PECK & GREER

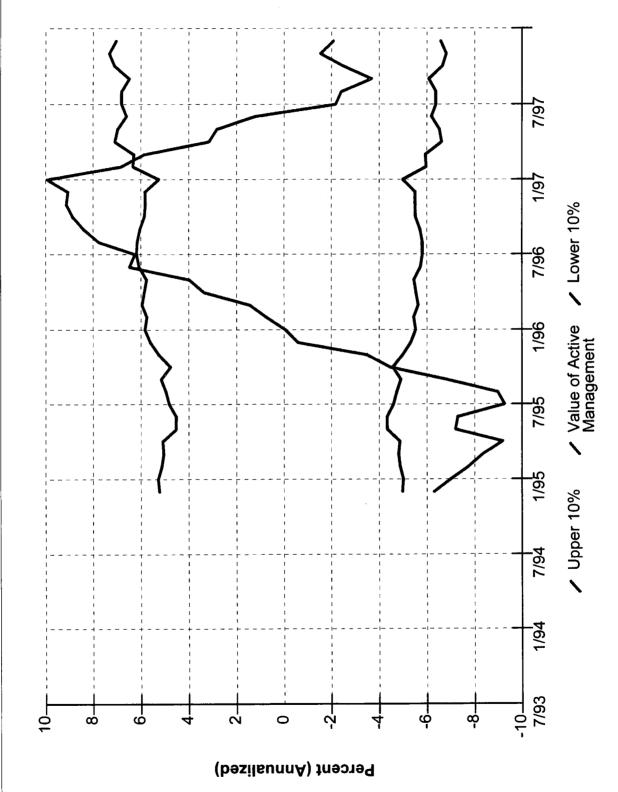
Monthly from period ending July, 1993 to period ending December, 1997 (54 periods)



Value of Active Management - Rolling 18 periods Graph

WEISS PECK & GREER

Monthly from period ending July, 1993 to period ending December, 1997 (54 periods)



INVESTMENT ADVISERS, INC.

Staff met with Investment Advisers Inc. (IAI) in their Minneapolis office on January 12, 1998 to discuss organizational changes, benchmark problems and performance relative to the benchmark.

Organization

In March 1997, Mark Hoonsbeen became the lead portfolio manager for a combined mid/large/regional investment team called the Growth Equity Team. This team currently manages about \$1.6 billion in three products:

Growth Equity	9 accounts	\$171 Million
Mid Cap Growth	33 accounts	\$613 Million
Regional	5 accounts	\$828 Million

The Growth Equity Team has been stable over the past six months. In addition to the team of two portfolio managers and six analysts, Mr. Hoonsbeen has added another analyst with six years of experience, and he is searching for one additional senior analyst with ten or more years of experience. The new team additions allow for better coverage of their research universe, addressing one of the concerns staff had six months ago.

Benchmark

IAI modified their benchmark construction process in July 1997 to address issues raised by staff such as low coverage, low positive positions, and a large cap bias relative to the actual portfolio. Construction of the benchmark going backward in time using the new benchmark construction process verified that the new benchmark did a better job of representing their investment style. No additional changes have been made to the benchmark in the past six months. A benchmark analysis will be part of the normal annual benchmark review to be completed in the second quarter of 1998.

Performance

For the quarter, the regional portfolio under-performed relative to the new regional benchmark by 5.3%. IAI attributed this under-performance to three factors:

- 1. They are underweight in financials; the strong performance in that sector during the quarter accounted for 1.8% of the under-performance.
- 2. A combination of earnings disappointments and the Asian problems had an impact on BMC, Bell and Howell, Atrium, and FSI, Inc., and since all were significant weights in the portfolio, the four names accounted for 3% of the under-performance.
- 3. Their small cap healthcare names, including Possis, Diametrics, Cima Labs and Northfield Labs, had a negative impact of 0.85%. These are long-term holdings that are expected to show quarterly volatility.

INVESTMENT ADVISORS, INC. (Continued)

For the past six months, IAI under-performed the new benchmark by 6.1%. Most of this was a result of the poor performance in the last 3 months discussed above. In addition, an underweight position in the finance sector detracted 2.6% from the six-month performance.

During September through December, IAI selectively positioned the portfolio into a more defensive posture. They have expanded the number of small cap names in the portfolio and are adding utility names. They continue to maintain their underweight in the financial sector based on the overall valuation of the finance group.

PERFORMANCE

	Current (Old Bnmk before 7/97)			New (Back-tested)			
	Actual	Bnmk	VAM	Actual	Bnmk	VAM	
1 Year	16.31%	30.09%	-10.59%	16.31%	25.38%	-7.23%	
2 Year	15.32	24.13	-7.10	15.32	19.37	-3.39	
3 Years	20.99	27.32	-4.97	20.99	22.28	-1.05	
4 Years	15.59	20.81	-4.32	15.59	16.60	-0.87	

Conclusions

IAI's organization has stabilized since the changes of last spring. The addition of a seventh, and possibly an eighth, analyst to the Growth Equity Team will substantially improve the coverage of their investment universe.

At this point, there are no issues with the benchmark. Although recent performance has deteriorated, particularly in the last quarter, staff advises taking a longer-term view. IAI's regional product gives SBI's domestic equity program unique exposure in the mid-to-small cap area of our region.

Recommendation

Staff recommends that IAI continue as an active domestic equity manager for the SBI and that the firm be reassessed again in six months.

ŀ	Investment Manager:		IAI Regional Fund				
		Ber	nchmark:	Revised Custo	om		
		PORTF	OLIO	BENCH	IMARK	VAN	И
		Qrtly	Annual	Qrtly	Annual	Qrtly	Annual
		Return	Return	Return	Return	Return	Return
9	3 Q1						·
	Q2						
	Q3	9.86 *					
	Q4	-0.19	9.65 *				
9	4 Q1	-2.00		-2.57	* 1 * V. * V. * V	0.58	
	Q2	-4.30		-1.34		-3.00	
	Q3	7.04		6.15		0.83	
	Q4	0.42	0.80	-0.92	1.11	1.35	-0.30
9:	5 Q1	7.09		7.14		-0.05	
	Q2	8.30		6.97		1.25	
	Q3	7.29		9.51		-2.02	
	Q4	7.02	33.17	2.24	28.31	4.68	3.79
90	Q1	4.25		4.14	An market state of	0.10	
[Q2	5.53		3.77		1.71	
	Q3	-1.83		0.87		-2.67	
	Q4	5.86	14.34	4.25	13.64	1.54	0.61
97	' Q1	-4.49		-2.79	a na aanna a sgr	-1.74	ii oo dhala aa iiladii
	Q2	15.98		15.58		0.34	
	Q3	12.01		12.73		-0.63	
	Q4	-6.26	16.31	-1.00	25.38	-5.31	-7.23
Latest:							
1 yr			16.31		25.38		-7.23
3 yr			20.99		22.28		-1.05
Cum 940	1-9712		15.59		16.60		-0.87

^{*}Partial Period: Since 8/1/93

Std Dev

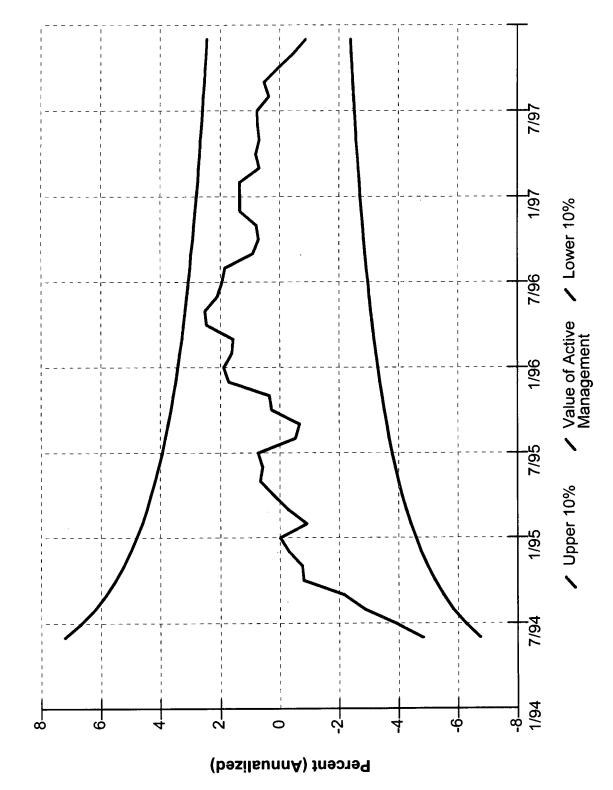
3.77

10.53

11.64

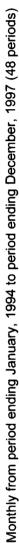
Value of Active Management - Cumulative Graph

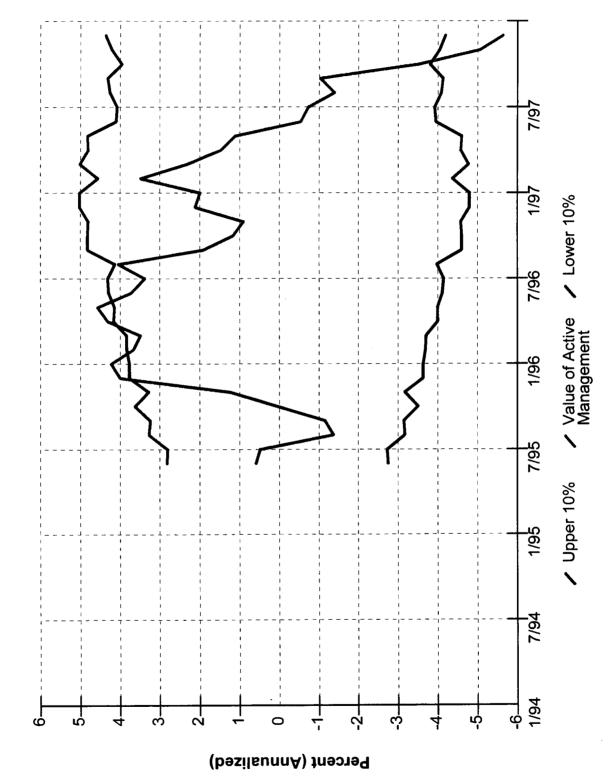
INV ADV REG FUND vs New Custom Benchmark Monthly from period ending January, 1994 to period ending December, 1997 (48 periods)



Value of Active Management - Rolling 18 periods Graph

INV ADV REG FUND vs New Custom Benchmark





MINNESOTA STATE BOARD OF INVESTMENT



Board Members:

Governor Arne H. Carlson

State Auditor Judi Dutcher

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

An Equal Opportunity
Employer

DATE:

February 11, 1998

TO:

Members, Domestic Manager Committee

FROM:

Lois Buermann / Kris Hanson

SUBJECT:

Rebalance to Asset Class Targets

The Minnesota State Board of Investment has guidelines in place for rebalancing the Combined Funds to prevent each asset class from deviating too far from its target weight. Based on December 31, 1997 asset class weights, staff determined that it was necessary to rebalance the Combined Funds.

In order to move the Combined Funds back to the target asset allocations, it was necessary for staff to make the following changes:

- Decrease the Domestic Equity Program by about \$1.3 billion,
- Increase the Fixed Income Program by \$600 million,
- Increase the International Program by \$400 million, and
- Increase cash by \$300+ million.

Domestic Equity Program

Within Domestic Equity, staff is making withdrawals from the following managers:

Date	<u>Manager</u>	Amount
2-1-98	American Express Asset Management	\$250 million
2-1-98	Forstmann-Leff Associates	\$170 million
2-1-98	Franklin Portfolio (active account)	\$350 million
4-1-98	Independence Investment Associates	\$530 million
	Total	\$1.3 billion

After the withdrawals, American Express Asset Management, Forstmann-Leff, and Franklin Portfolio Associates will each manage portfolios of about \$500 million.

Staff is recommending that the relationship with Independence Investment Associates be terminated to facilitate the rebalancing needs. The Board placed Independence on watch last quarter due to the resignation of a key member of the domestic equity team. In addition, their performance has continued to lag, and staff is not confident that they will be able to recover in the near term. Finally, Independence has lost 10 accounts in the last quarter for various reasons including performance.

Fixed Income

Fixed Income will receive a contribution of \$600 million to bring it back to its asset class target. In order to keep a 50% active / 50% semi-passive balance, staff directed \$255 million to active and \$345 million to semi-passive managers. The contribution will occur as follows:

<u>Date</u>	<u>Manager</u>	Amount
2-1-98	American Express Asset Management	\$175 million
2-1-98	BEA Associates	\$ 80 million
4-1-98	Semi-Passive Managers	\$345 million
	Total	\$600 million

The contribution to the semi-passive component will occur on April 1, 1998, and will be split about equally between each of the three managers.

Recommendation

Staff recommends that the SBI terminate its contractual relationship with Independence Investment Associates for active domestic stock management. The balance in the portfolio should be liquidated and used as a source of funds for asset allocation changes and rebalancing activity.



STATE BOARD OF INVESTMENT

Stock
Manager
Evaluation
Reports

Fourth Quarter, 1997

COMBINED RETIREMENT FUNDS DOMESTIC STOCK MANAGERS Period Ending 12/31/97

									S	ince		
	-	arter		Year	3 Y	'ears	5 Y	ears	Incep	tion (1)	Market	
	Actual		Actual	Bmk	Actual	Bmk	Actual	Bmk	Actual	Bmk	Value	Pool
	%	%	%	%	%	%	%	%	%	%	(in millions)	%
Active Managers											,	
Alliance Capital	5.2	2.0	49.0	35.4	36.5	31.1	22.5	18.2	20.0	14.7	\$1,040.89	5.7%
American Express AMG	0.0	0.1	17.8	33.7	25.7	31.2	17.6	20.9	16.0	16.7	\$742.12	4.1%
Brinson Partners	-1.0	1.3	25.9	32.0	30.8	28.9			21.2	19.9	\$589.10	3.2%
Forstmann-Leff	-1.4	-5.8	37.9	23.7	32.8	25.5	19.3	16.7	15.4	13.8	\$667.29	3.6%
Franklin Portfolio	1.4	1.1	38.2	29.4	31.6	27.5	21.8	18.5	18.0	16.2	\$847.14	4.6%
GeoCapital	0.3	-7.0	18.8	14.6	22.4	21.7	15.2	17.9	16.7	17.3	\$466.91	2.6%
IAI	-6.3	-1.0	16.3	30.1	21.0	27.3			16.1	20.0	\$204.09	1.1%
Independence	2.3	2.8	32.3	33.7	29.8	31.5	19.3	20.5	18.4	19.2	\$538.36	2.9%
Lincoln	4.3	1.4	27.6	34.8	31.7	31.9			22.3	22.5	\$599.03	2.9%
Oppenheimer	1.9	3.6	31.9	32.1	34.0	29.7			23.1	20.3	\$630.81	3.4%
Weiss Peck & Greer	-4.8	-11.0	11.2	13.7	22.8	20.2			14.3	15.2	\$368.42	2.0%
Emerging Managers (2)	1.6	-1.0	29.9	28.5	26.8	27.7			22.1	23.1	\$568.22	3.1%
Semi-Passive Managers (3	3)											
Franklin Portfolio	4.4	5.4	37.2	35.4	31.2	30.9			31.2	30.9	\$1,753.17	9.6%
JP Morgan	4.8	5.4	34.5	35.4	30.9	30.9			30.9	30.9	\$1,781.63	9.7%
Barclays Global Investors	4.9	5.4	34.8	35.4	32.4	30.9			32.4	30.9	\$1,802.29	9.9%
Passive Manager (4)												
Barclays Global Investors	2.1	1.7	32.0	31.3					27.3	26.9	\$5,686.10	31.1%
									Since 1	/1/84		
Current Aggregate	2.4	1.8	32.3	31.8	30.4	29.4	19.6	19.0	17.6	15.4	\$18,285.56	100.0%
Historical Aggregate (5)	2.4	1.8	32.3	31.8	29.6	29.4	19.1	19.3	15.8	16.0	-10,200.00	-00.0/6
Wilshire Adjusted		1.7		31.3		29.5		19.2		15.9		•
Wilshire 5000		1.7		31.3		29.5		19.3		16.2		

⁽¹⁾ Since retention by the SBI. Time period varies for each manager.

⁽²⁾ Aggregate of emerging manager group. The benchmark reflects a composite of published indexes prior to implementation of custom benchmarks on 4/1/96.

⁽³⁾ Semi-passive managers retained 1/95. All use completeness fund benchmark.

⁽⁴⁾ Passive manager retained 7/95 to manage a Wilshire 5000 index fund.

⁽⁵⁾ Includes the performance of terminated managers.

ALLIANCE CAPITAL MANAGEMENT Periods Ending December, 1997

Portfolio Manager: Jack Koltes Assets Under Management: \$1,040,885,566

Investment Philosophy

Alliance searches for companies likely to experience high rates of earnings growth, on either a cyclical or secular basis. Alliance invests in a range of medium to large growth and 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.

Staff Comments

- Alliance continues to exceed performance expectations.
- Staff will visit their office during 1Q98 to perform an annual review.

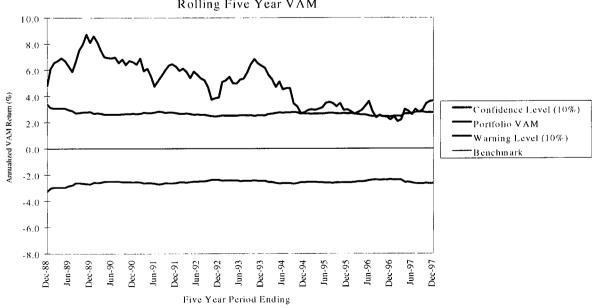
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	5.2%	2.0%
Last 1 year	49.0	35.4
Last 2 years	35.6	29.1
Last 3 years	36.5	31.1
Last 4 years	25.7	22.9
Last 5 years	22.5	18.2
Since Inception	20.0	14.7
(1/84)		

Recommendation

No action required.

ALLIANCE CAPITAL MANAGEMENT Rolling Five Year VAM



AMERICAN EXPRESS ASSET MANAGEMENT Periods Ending December, 1997

Assets Under Management: \$742,117,477 Portfolio Manager: Jim Johnson

Investment Philosophy

American Express Asset Management Group (AMG) employs a concentrated style of management. The methodology by which the portfolio is managed is based on a fundamentally driven and quantitatively managed process. Using 20 to 30 of the top-rated stocks by American Express Financial research analysts, the portfolio seeks to maximize the greatest level of riskadjusted return for a predetermined level of risk tolerance. Due to the level of concentration, the active risk versus the normal portfolio will be higher than that of the typical active manager. Trading within the portfolio is also analyst driven, which will lead to turnover between 80 and 120 percent per year. Because the focus of the methodology is concentrated stock selection, the portfolio will remain fully invested at all times.

Staff Comments

- Due to performance concerns, the Domestic Manager committee reviewed AMG for the December 1997 Board Meeting. They recommended that no action be taken at this time.
- · Staff will continue to review AMG on an on-going basis.

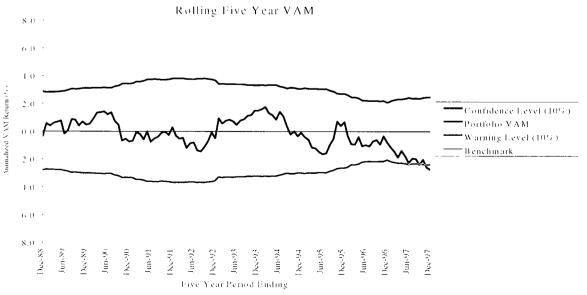
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	0.0%	0.1%
Last Lyear	17.8	33.7
Last 2 years	20.6	28.6
Last 3 years	25.7	31.2
Last 4 years	19.0	23.3
Last 5 years	17.6	20.9
Since Inception	16.0	16.7
(1/84)		

Recommendation

No action required.

AMERICAN EXPRESS ASSET MANAGEMENT



BRINSON PARTNERS Periods Ending December, 1997

Portfolio Manager: Jeff Diermeier

Assets Under Management: \$589,095,745

Investment Philosophy

Brinson Partners uses a relative value approach to equity investing. They believe that the market price will ultimately reflect the present value of the cash flows the security will generate for the investor. They also believe both a macroeconomic theme approach and a bottom-up stock selection process can provide insight into finding opportunistic investments. Brinson uses their own discounted free cash flow model as their primary analytical tool for estimating the intrinsic value of a company.

Staff Comments

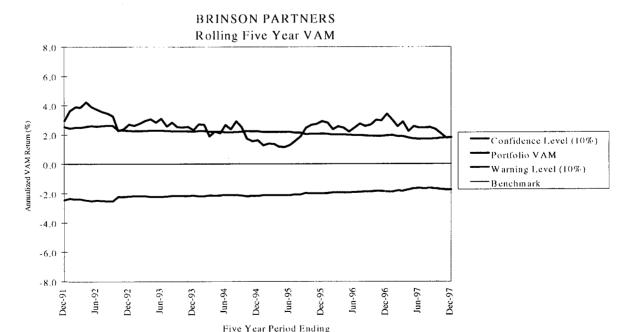
- In December 1997, Swiss Bank Corporation (SBC) and Union Bank of Switzerland announced their intention to merge into a single organization called United Bank of Switzerland (UBS). Upon completion of the merger, SBC Brinson and UBS Asset Management will become the Brinson division of UBS. This division will be headed by Gary Brinson and will be one of the largest money management firms in the world.
- Staff will continue to monitor Brinson Partners, particularly to ensure that the merger does not negatively impact the investment process.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-1.0%	1.3%
Last 1 year	25.9	32.0
Last 2 years	26.0	26.0
Last 3 years	30.8	28.9
Last 4 years	22.6	21.0
Last 5 years	N.A.	N.A.
Since Inception	21.2	19.9
(7/93)		

Recommendation

No action required.



FORSTMANN-LEFF ASSOCIATES Periods Ending December, 1997

Portfolio Manager: Joel Leff

Assets Under Management: \$667,291,874

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 equity sectors over the course of a market cycle. The firm tends to purchase liquid, medium to large capitalization stocks. In the past, Forstmann Leff has made sizable market timing moves at any point during a market cycle.

Staff Comments

• No comments at this time.

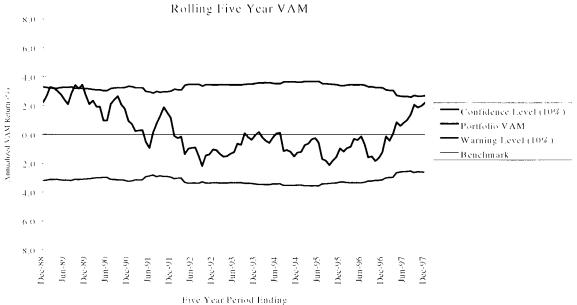
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-1.4%	-5.8%
Last 1 year	37.9	23.7
Last 2 years	33.1	22.2
Last 3 years	32.8	25.5
Last 4 years	21.7	18.8
Last 5 years	19.3	16.7
Since Inception	15.4	13.8
(1/84)		

Recommendation

No action required.

FORSTMANN-LEFF ASSOCIATES Rolling Five Year VAM



FRANKLIN PORTFOLIO ASSOCIATES Periods Ending December, 1997

Portfolio Manager: John Nagorniak

Assets Under Management: \$847,135,674

Investment Philosophy

Franklin believes that rigorous and consistent application of fundamentally based valuation criteria will produce value added investment returns. Franklin builds a portfolio by using a series of more than 30 integrated computer models that value a universe of 3500 stocks. Their models rank each security based on fundamental momentum, relative value, future cash flow, and supplementary models, then a composite ranking provides one ranked list of securities reflecting their relative attractiveness. Stocks that fall below the median ranking are sold and proceeds reinvested in stocks from the top deciles in the ranking system. Franklin uses the BARRA E3 risk model to monitor the portfolio's systematic risk and industry weightings, relative to the selected benchmark, to achieve a residual risk of 4.0 to 4.5 percent for the active portfolio.

Staff Comments

• No comments at this time.

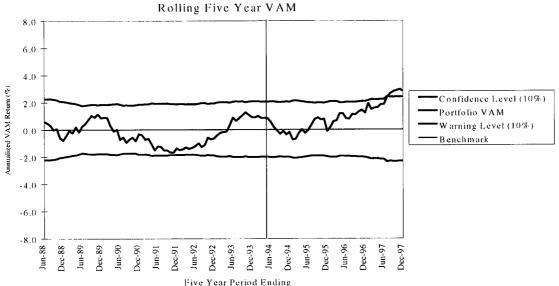
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	1.4%	1.1%
Last 1 year	38.2	29.4
Last 2 years	31.2	24.2
Last 3 years	31.6	27.5
Last 4 years	23.0	20.0
Last 5 years	21.8	18.5
Since Inception	18.0	16.2
(4/89)		

Recommendation

No action required.

FRANKLIN PORTFOLIO ASSOCIATES



Note: Area to the left of vertical line includes performance prior to retention by the SBL

Portfolio Manager: Barry Fingerhut

Assets Under Management: \$466,911,946

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 individual stock selection analysis to invest in the growth/technology and special situation areas of the market. In the growth/technology area, GeoCapital looks for companies that will have above average growth due to good product development and limited competition. In the special situation area, the key factors are corporate assets, free eash 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 a lack of attractive investment opportunities.

Staff Comments

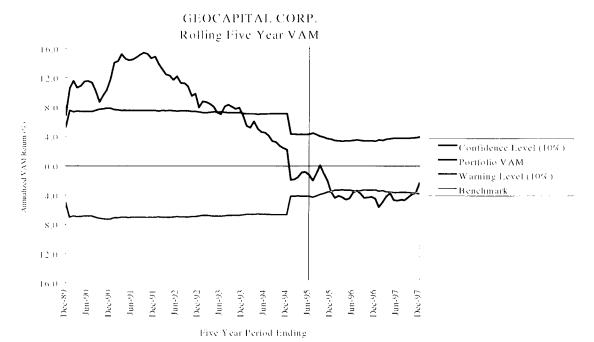
- GeoCapital was reinterviewed by the Domestic Manager committee and retained by the Board in March 1997.
- Affiliated Managers Group (AMG) has completed their investment in GeoCapital. They are helping Geo improve their back-office operations and client servicing. AMG has implemented long-term employment contracts and incentives for key investment people at GeoCapital. Staff believes this acquisition will have a positive impact on the firm.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	0.3%	-7.0%
Last 1 year	18.8	14.6
Last 2 years	19.0	12.0
Last 3 years	22.4	21.7
Last 4 years	15.1	17.1
Last 5 years	15.2	17.9
Since Inception	16.7	17.3
(4/9())		

Recommendation

No action required.



Scale differs from other VAM graphs.
 Area to the left of vertical line includes performance prior to retention by the SBI

Investment Philosophy

IAI's investment philosophy is to own the highest quality companies which demonstrate sustainable growth. IAI tries to achieve this objective by investing at least 80% of the portfolio in companies which have their headquarters in Minnesota, Wisconsin, Illinois, Iowa, Nebraska, Montana, North Dakota, or South Dakota. If IAI cannot find enough investment opportunities in the region, up to 20% of the portfolio can be used to purchase stocks that display the same quality and growth characteristics but have headquarters outside this region.

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		Hist.	New
	Actual	Bnmk	Bnmk
Last Qtr.	-6.3%	-1.0%	-1.0%
Last 1 Yr.	16.3	30.1	25.4
Last 2 Yrs.	15.3	24.1	19.4
Last 3 Yrs.	21.0	27.3	22.3
Last 4 Yrs.	15.6	20.8	16.6
Last 5 Yrs.	N.A.	N.A.	N.A.
Since Incep.	16.1	20.0	N.A.
(7/93)			

Staff Comments

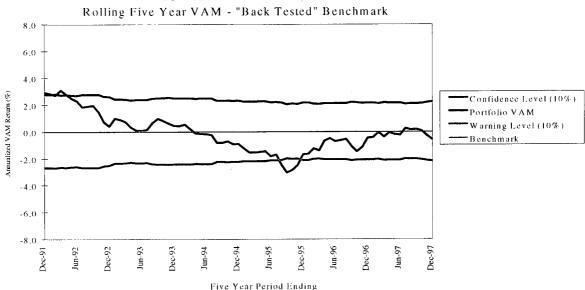
- Due to concerns about organizational changes and a poor benchmark, IAI was reinterviewed by the Domestic Manager Committee and retained by the Board in September 1997. Staff agreed to review the firm again in 1Q98 and did so in January. The results of the review are included in the Committee materials.
- A new Equity Analyst, Justin Kelly, was added to the Growth Equity Team in 4Q97. IAI is looking to add another analyst, further improving their coverage of their investment universe.

Note: The VAM graph below depicts IAI's historical performance from December 1991 through January 1994, backtested performance relative to the revised benchmark from January 1994 through September 1997, and actual performance relative to the revised benchmark from September 1997 forward.

Recommendation

Staff recommends that IAI be retained and reviewed again at the August 1998 Domestic Manager Committee meeting.

INVESTMENT ADVISERS, INC.



Note: Shaded area includes performance prior to retention by the SBI.

INDEPENDENCE INVESTMENT ASSOCIATES Periods Ending December, 1997

Portfolio Manager: Bill Fletcher Assets Under Management: \$538,363,475

Investment Philosophy

Independence believes that individual stocks which outperform the market always have two characteristics: they are intrinsically cheap and their business is in the process of improving. Independence ranks their universe using a multifactor model. Based on input primarily generated by their internal analysts, the model ranks each stock based on 10 discrete criteria. Independence restricts their portfolio to the top 60% of their ranked universe. The portfolio is optimized relative to the client's benchmark to minimize market and industry risks. Independence maintains a fully invested portfolio and rarely holds more than a 1% cash position.

Staff Comments

- Due to performance concerns and Mike Even's departure, the Domestic Manager Committee reviewed Independence for the December 1997 Board meeting and recommended that the firm be placed on watch.
- Performance continues to lag the benchmark for all time periods.
- Independence lost ten domestic accounts and gained two accounts during 4Q97.

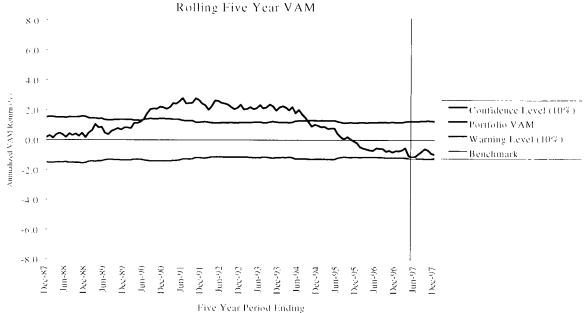
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.3%	2.8%
Last I year	32.3	33.7
Last 2 years	25.9	28.5
Last 3 years	29.8	31.5
Last 4 years	21.3	23.2
Last 5 years	19.3	20.5
Since Inception	18.4	19.2
(2/92)		

Recommendation

Staff recommends that Independence Investment Associates be terminated to facillitate rebalancing needs.

INDEPENDENCE INVESTMENT ASSOCIATES



LINCOLN CAPITAL MANAGEMENT Periods Ending December, 1997

Portfolio Manager: Parker Hall Assets Under Management: \$599,031,983

Investment Philosophy

Lincoln Capital concentrates on established medium to large capitalization companies that have demonstrated historically strong growth and will continue to grow. The firm uses traditional fundamental company analysis and relative price/earnings valuation disciplines in its stock selection process. In addition, companies held by Lincoln generally exhibit premium price/book ratios, high return on equity, strong balance sheets and moderate earnings variability.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	4.3%	1.4%
Last 1 year	27.6	34.8
Last 2 years	27.1	29.5
Last 3 years	31.7	31.9
Last 4 years	24.2	24.4
Last 5 years	N.A.	N.A.
Since Inception	22.3	22.5
(7/93)		

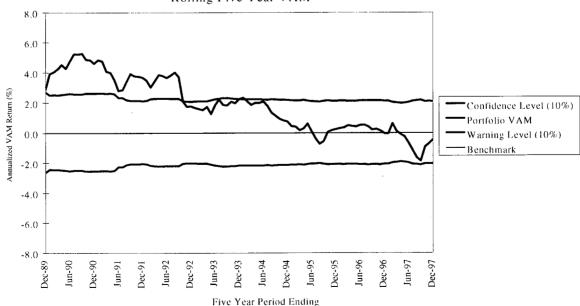
Staff Comments

- Lincoln Capital Management has defined the transition periods for two of their senior people.
 Tim Ubben will retire in two years and Parker Hall will remain actively involved for up to three years.
- Searches for a new financial services analyst and a fourth portfolio manager will take place in 1998.
- Staff plans to meet with Lincoln Capital during 1098 to discuss performance.

Recommendation

No action required.

LINCOLN CAPITAL MANAGEMENT Rolling Five Year VAM



Note: Shaded area includes performance prior to retention by the SBL

OPPENHEIMER CAPITAL Periods Ending December, 1997

Portfolio Manager: John Lindenthal Assets Under Management: \$630,805,863

Investment Philosophy

Oppenheimer's objectives are to: 1) preserve capital in falling markets; 2) manage risk in order to achieve less volatility than the market: and 3) produce returns greater than the market indices, the inflation rate and a universe of comparable portfolios with similar objectives. The firm achieves its objectives by purchasing securities considered to be undervalued on the basis of known data and strict financial standards and by making timely changes in the asset mix. Based on its outlook on the market and the economy. Oppenheimer will make moderate shifts between cash and equities. Oppenheimer focuses on five key variables when evaluating companies: management. financial strength, profitability, industry position, and valuation.

Staff Comments

- PIMCO Advisors acquired a 1/3 controlling interest in Oppenheimer Capital, effective November 1997.
 This change is not expected to impact Oppenheimer's investment process.
- Staff performed an annual review of Oppenheimer at their New York office in October 1997. The organization and investment process have remained stable and the visit uncovered no negative issues.

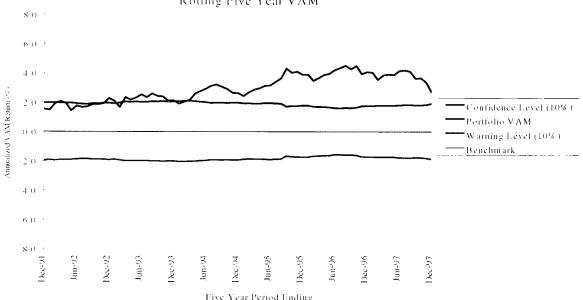
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	1.9%	3.6%
Last 1 year	31.9	32.1
Last 2 years	29.7	27.0
Last 3 years	34.0	29.7
Last 4 years	24.7	21.8
Last 5 years	N.A.	N.A.
Since Inception	23.1	20.3
(7/93)		

Recommendation

No action required.

OPPENHEIMER CAPITAL Rolling Five Year VAM



WEISS, PECK & GREER Periods Ending December, 1997

Portfolio Manager: Melville Straus

Assets Under Management: \$368,419,320

Investment Philosophy

Weiss, Peck & Greer's dynamic growth process concentrates on small to medium size growth companies that have demonstrated consistently superior earnings growth rates. The process emphasizes companies in new or dynamic, rapidly growing industries where there is a potential for a major acceleration in earnings growth. The firm also believes that superior stock selection can be achieved through in-depth fundamental company research.

Quantitative Evaluation

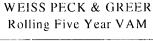
	Actual	Benchmark
Last Quarter	-4.8%	-11.0%
Last 1 year	11.2	13.7
Last 2 years	15.1	12.0
Last 3 years	22.8	20.2
Last 4 years	14.4	14.5
Last 5 years	N.A.	N.A.
Since Inception	14.3	15.2
(7/93)		

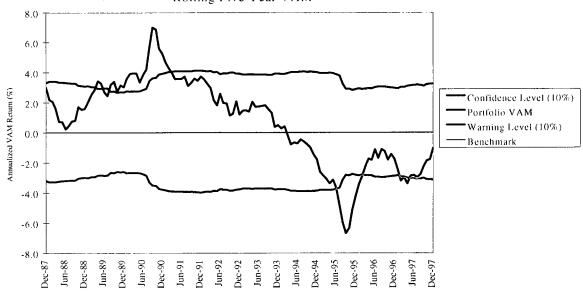
Staff Comments

- Mickey Strauss, Portfolio Manager, left Weiss, Peck & Greer at the end of December 1997. Management of the portfolio has been transitioned to Adam Starr, who will use a more disciplined and risk-controlled "Growth at a Reasonable Price" style.
- Staff is comfortable with Mr. Starr and has included the results of the review in the Committee materials.

Recommendation

Staff recommends that Weiss, Peck & Greer be retained to continue to manage a small-cap portfolio for the SBI.





Five Year Period Ending Note: Shaded area includes performance prior to retention by the SBI.

FRANKLIN PORTFOLIO ASSOCIATES

Periods Ending December, 1997

Portfolio Manager: John Nagorniak Assets Under Management: \$1,753,167,120

Investment Philosophy Semi-Passive

Franklin believes that rigorous and consistent application of fundamentally based valuation criteria will produce value added investment returns. Franklin builds a portfolio by using a series of more than 30 integrated computer models that value a universe of 3500 stocks. Their models rank each security based on fundamental momentum, relative value, future cash flow, and supplementary models. A composite ranking then provides one ranked list of securities reflecting their relative attractiveness. Stocks that fall below the median ranking are sold, and proceeds are reinvested in stocks from the top deciles in the ranking system. They use the BARRA risk model to monitor the portfolio's systematic risk and industry weightings relative to the selected benchmark. For this semi-passive mandate, they seek to achieve a residual risk of 1.5% or less. The firm remains fully invested at all times.

Staff Comments

· No comments at this time.

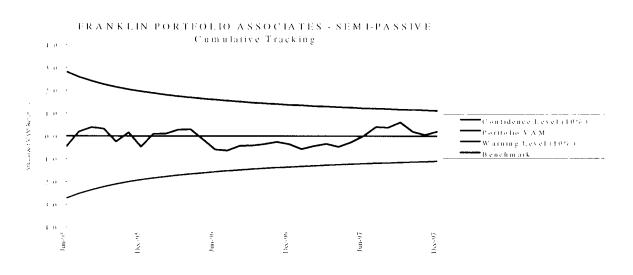
Quantitative Evaluation

	Actual	Benchmark*
Last Quarter	4.4%	5.4%
Last 1 year	37.2	35.4
Last 2 years	29.2	28.5
Last 3 years	31.2	30.9
Last 4 years	N.A.	N.A.
Last 5 years	N.A.	N.A.
Since Inception	31.2	30.9
(1/95)		

Recommendation

No action required.

* Completeness Fund



J.P. MORGAN INVESTMENT MANAGEMENT, INC. Periods Ending December, 1997

Portfolio Manager: Rick Nelson

Assets Under Management: \$1,781,629,687

Investment Philosophy Semi-Passive

J.P. Morgan believes that superior stock selection is necessary to achieve excellent investment results. To accomplish this objective, they use fundamental research and a systematic valuation model. Analysts forecast the earnings and dividends for the 650 stock universe and enter them into a stock valuation model that calculates an expected return for each security. The stocks are ranked according to their expected return within their economic sectors. The most undervalued stocks are placed in the first quintile. The portfolio includes stocks from the first four quintiles, always favoring the highest ranked stocks whenever possible. Stocks in the fifth quintile are sold. In addition, the portfolio closely approximates the sector, style, and security weightings of the index chosen by the plan sponsor. The firm remains fully invested at all times.

Quantitative Evaluation

	Actual	Benchmark*
Last Quarter	4.8%	5.4%
Last 1 year	34.5	35.4
Last 2 years	28.1	28.5
Last 3 years	30.9	30.9
Last 4 years	N.A.	N.A.
Last 5 years	N.A.	N.A.
Since Inception	30.9	30.9
(1/95)		

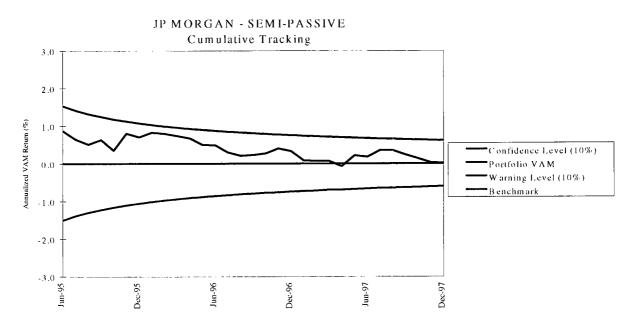
* Completeness Fund

Staff Comments

• Staff met with J.P. Morgan in January 1998 and has scheduled a manager review for February 1998.

Recommendation

No action required.



BARCLAYS GLOBAL INVESTORS

Periods Ending December, 1997

Portfolio Manager: Nancy Feldkircher

Assets Under Management: \$1,802,290,458

Investment Philosophy Semi-Passive

The Core Alpha Model desegregates individual equity returns for each of the 3500 stocks in their universe into fundamental, expectational, and technical components. The fundamental factors look at measures of underlying company value including earnings, book value, cash flow, and sales. These factors help identify securities that trade at prices below their true economic value. The expectational factors incorporate future earnings and growth rate forecasts made by over 2500 security analysts. The technical factors provide a measure of recent changes in company fundamentals, consensus expectations, and performance. Estimated alphas are then calculated and are used in a portfolio optimization algorithm to identify the optimal portfolio.

Staff Comments

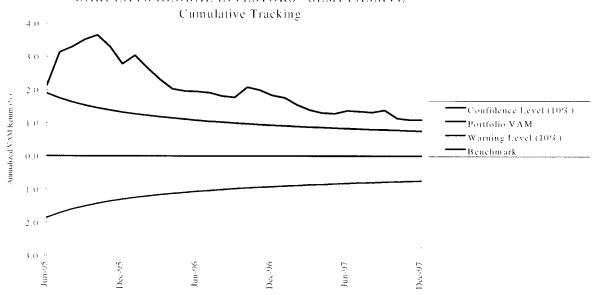
 Staff will conduct an annual review of BGI in San Francisco during 1Q98.

Quantitative Evaluation

	Actual	Benchmark*
Last Quarter	4.9%	5.4%
Last Lyear	34.8	35.4
Last 2 years	28.8	28.5
Last 3 years	32.4	30.9
Last 4 years	N.A.	N.A.
Last 5 years	N.A.	N.A.
Since Inception	32.4	30.9
(1/95)		

No action required.

BARCLAYS GLOBAL INVESTORS - SEMI-PASSIVE



Recommendation

^{*} Completeness Fund

BARCLAYS GLOBAL INVESTORS Periods Ending December, 1997

Portfolio Manager: Tom Seto

Assets Under Management: \$5,686,102,967

Investment Philosophy Passive

Barclays Global Investors passively manages the portfolio against the Wilshire 5000 by minimizing tracking error and trading costs, and maximizing control over all investment and operational risks. Their strategy is to fully replicate the larger capitalization segments of the market and to use an optimization approach for the smaller capitalization segments. The optimizer weighs the cost of a trade against its contribution to expected tracking error to determine which trades should be executed.

Staff Comments

• Staff will conduct an annual review of BGI in San Francisco during 1Q98.

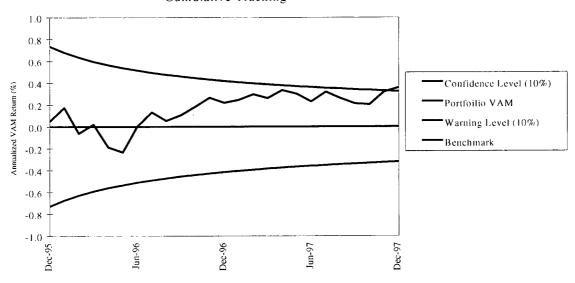
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.1%	1.7%
Last 1 year	32.0	31.3
Last 2 years	26.7	26.2
Last 3 years	N.A.	N.A.
Last 4 years	N.A.	N.A.
Last 5 years	N.A.	N.A.
Since Inception	27.3	26.9
(7/95)		

Recommendation

No action required.

BARCLAYS GLOBAL INVESTORS - PASSIVE Cumulative Tracking



GE INVESTMENT MANAGEMENT - Assigned Risk Plan Periods Ending December, 1997

Portfolio Manager: Gene Bolton Assets Under Management: \$160,422,205

Investment Philosophy Assigned Risk Plan

GE Investment's Multi-Style Equity program attempts to outperform the S&P 500 consistently while controlling overall portfolio risk through a multiple manager approach. Four portfolio managers with different styles ranging from growth to value are supported by industry analysts and research assistants. The four portfolios are combined to create a well diversified equity portfolio while maintaining low relative volatility and a style-neutral position between growth and value. All GE managers focus on stock selection from a bottom-up prospective.

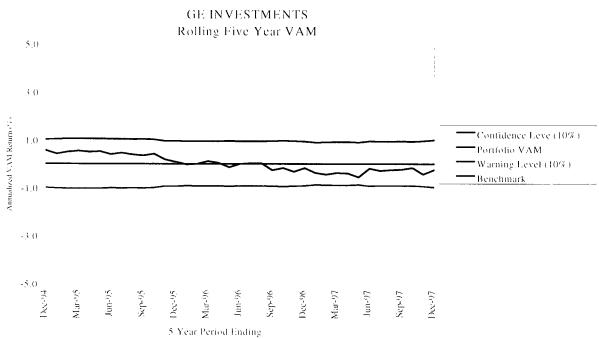
Staff Comments

No comments at this time.

Quantitative Evaluation

Recommendation

	Actual	Benchmark	No action required.
Last Quarter	3.0%	2.9%	·
Last I year	35.0	33.3	
Last 2 years	28.8	28.2	
Last 3 years	31.2	31.2	
Last 4 years	N.A.	N.A.	
Last 5 years	N.A.	N.A.	
Since Inception	31.2	31.2	
(1/95)			



INTERNAL STOCK POOL - Trust/Non-Retirement Assets Periods Ending December, 1997

Portfolio Manager: Lois Buermann Assets Under Management: \$336,659,415

Investment Philosophy Environmental Trust Fund Permanent School Fund

The current manager assumed responsibility for the account in December 1996. The Internal Equity Pool is managed to closely track the S&P 500 Index. The strategy replicates the S&P 500 by owning all of the names in the index at weightings similar to those of the index. The optimization model's estimate of tracking error with this strategy is approximately 10 basis points per year.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.9%	2.9%
Last 1 year	33.7	33.3
Last 2 years	28.2	28.2
Last 3 years	31.2	31.2
Last 4 years	23.1	23.0
Last 5 years	N.A.	N.A.
Since Inception	21.6	21.5
(7/93)		

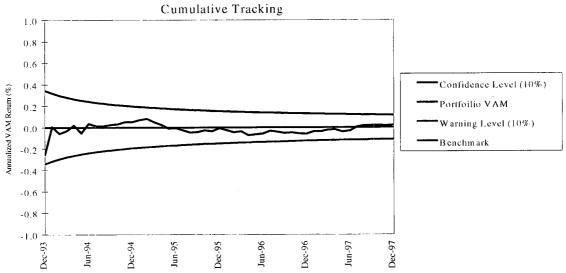
Staff Comments

 Positive tracking error for the year can be attributed to weighting differences, primarily due to a large contribution to the portfolio in July 1997. The contribution was the result of a shift in the Permanent School Fund's asset allocation from 100% bonds to 50% stocks and 50% bonds.

Recommendation

No action required.

INTERNAL STOCK POOL Trust/Non-Retirement Assets



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STATE BOARD OF INVESTMENT

Emerging
Stock
Manager
Evaluation
Reports

Fourth Quarter, 1997

COMBINED RETIREMENT FUNDS EMERGING EQUITY MANAGERS Periods Ending December, 1997

									Sinc	:e		
	Qua	arter	1 Y	ear	3 ye	ears	5 Ye	ears	Incep	tion	Market	
	Actual %	Bmk %	Value (in millions)	Pool								
Active Managers											(,,
CIC Assets	1.6	4.8	33.6	34.0	30.9	30.9			24.4	25.6	\$68.07	12.0%
Cohen, Klingenstein, & Marks	-1.2	-1.6	30.1	30.0	29.1	28.3			26.0	23.1	127.46	22.4%
Compass Capital	6.5	1.9	34.3	33.6	28.8	29.7			24.2	24.1	67.57	11.9%
New Amsterdam	0.9	-1.3	36.1	29.6	30.0	26.0			22.6	21.7	64.46	11.3%
Valenzuela Capital	2.4	-1.4	38.9	29.4	33.3	26.9			26.3	21.7	72.07	12.7%
Wilke/Thompson	-4.5	-8.0	7.5	17.8	11.2	19.9			11.4	16.3	44.99	7.9%
Winslow Capital	4.6	-2.3	28.8	27.8	23.1	26.8			20.7	22.2	60.63	10.7%
Zevenbergen Capital	3.7	-1.5	29.5	28.0	26.7	27.0			21.9	22.6	62.96	11.1%
											\$568.22	100.0%
									Since	4/1/94		
Current Aggregate	1.6	-1.2 *	30.1	28.8 *	27.1	27.1 *			22.7	22.3 *		
Historical Aggregate	1.6	-1.2 *	29.9	28.3 *	26.8	26.6 *			22.1	21.8 *	,	

Note:

Inception date for all managers is 4/1/94.

^{*} The current and historical aggregates reflect the weighted average of the individual manager customized benchmarks since inception of the program on 4/1/94.

Portfolio Manager: Jorge Castro Assets Under Management: \$68,073,825

Investment Philosophy

CIC Asset Management (CIC) uses a disciplined relative value approach to manage equities. CIC believes that purchasing companies at attractive prices provides superior long-term performance with lower volatility. This investment process is designed for clients who desire equity market exposure with both incremental value added and downside protection due to reasonable dividend yields, moderate price to book values and low normalized price to earnings ratios. Finally, the process provides a synergy between quantitative valuation techniques and "Graham & Dodd" fundamental analysis.

Quantitative Evaluation

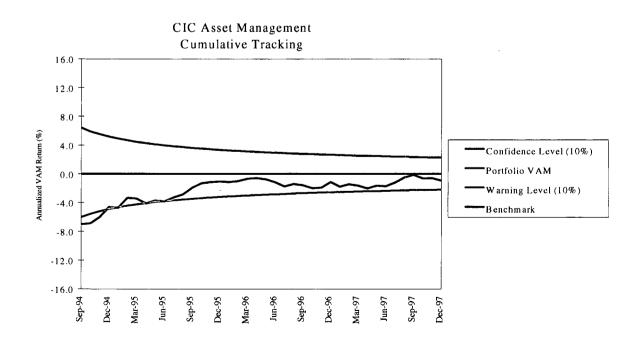
	Actual	Benchmark*
Last Quarter	1.6%	4.8%
Last 1 Year	33.6	34.0
Last 2 Years	27.6	28.7
Last 3 Years	30.9	30.9
Since Inception	24.4	25.6
(4/94)		

^{*} Custom benchmark since inception date.

Staff Comments

No comments at this time.

Recommendation



COHEN KLINGENSTEIN & MARKS INCORPORATED Periods Ending December, 1997

Portfolio Manager: George Cohen Assets Under Management: \$127,458,782

Investment Philosophy

Cohen Klingenstein & Marks Inc. (CKM) seeks to outperform the market by focusing on two variables: 1) economic cycles; and 2) security valuation. Within economic cycles, they believe that stocks exhibit predictable patterns that reflect changing expectations on corporate profits and interest rates. Similarly, they believe that stock prices normally reflect earnings expectations. CKM exploits short run inefficiencies through an unbiased process that relates the price of a stock to the consensus earnings expectations.

Quantitative Evaluation

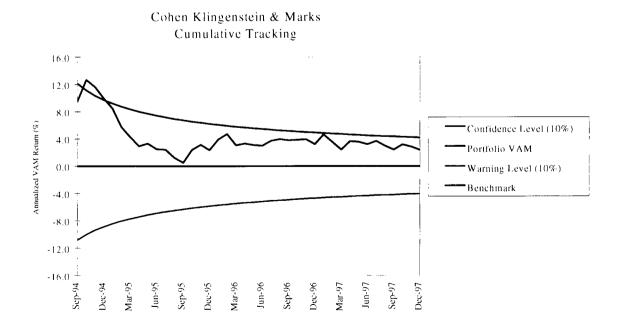
	Actual	Benchmark*
Last Quarter	-1.2%	-1.6%
Last 1 Year	30.1	30.0
Last 2 Years	28.9	25.9
Last 3 Years	29.1	28.3
Since Inception.	26.0	23.1
(4/94)		

^{*} Custom benchmark since inception date.

Staff Comments

No comments at this time.

Recommendation



COMPASS CAPITAL MANAGEMENT Periods Ending December, 1997

Portfolio Manager: Charles Kelley

Assets Under Management: \$67,572,438

Investment Philosophy

Compass Capital Management (CCM) combines aspects of growth and value investing to achieve the proper blend of return (growth) and risk (value). They use a computer based data network to screen for large, well established companies whose earnings grow in spite of a weak economy and over long time periods, but which may experience earnings pressure with downturns in the economy. Particular focus is given to growth in sales, earnings, dividends, book value and the underlying industry. Due to their "growing company" orientation, their portfolios generally do not hold utility, bank, deep cyclical (auto companies for example), or oil and gas stocks.

Staff Comments

No comments at this time.

Quantitative Evaluation

	Actual	Benchmark*
Last Quarter	6.5%	1.9%
Last 1 Year	34.3	33.6
Last 2 Years	26.8	29.1
Last 3 Years	28.8	29.7
Since Inception	24.2	24.1
(4/94)		

No action required.

-16.0

Mar-95

Jun-95

Cumulative Tracking 16.0 12.0 8.0 4.0 Portfolio VAM Warning Level (10%) Benchmark

Compass Capital Management

Mar-96 Jun-96

Recommendation

^{*} Custom benchmark since inception date.

NEW AMSTERDAM PARTNERS Periods Ending December, 1997

Portfolio Manager: Michelle Clayman Assets Under Management: \$64,463,665

Investment Philosophy

New Amsterdam Partners believes that investment results are evaluated by actual return, and therefore, investment opportunities should be evaluated by expected return. They believe that all valid techniques depend on forecasts of the amounts and timing of future cash flows. Thus, the firm focuses on forecasted earnings growth, yield, price-to-book ratio, and forecasted return on equity. They believe that the disciplined application of their valuation techniques, in conjunction with sound financial analysis of companies, is the key to understanding and maximizing investment returns.

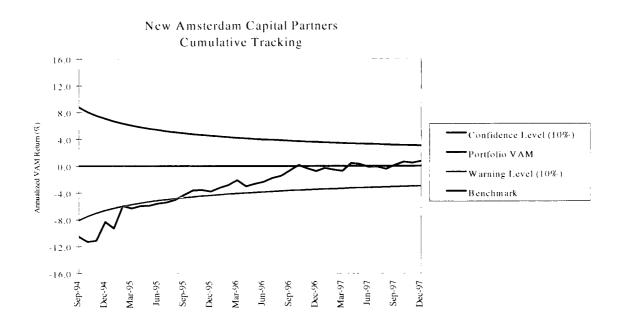
Staff Comments

No comments at this time.

Quantitative Evaluation

	Actual	Benchmark*
Last Quarter	0.9%	-1.3%
Last 1 Year	36.1	29.6
Last 2 Years	29.8	23.8
Last 3 Years	30.0	26.0
Since Inception	22.6	21.7
(4/94)		

Recommendation



^{*} Custom benchmark since inception date.

VALENZUELA CAPITAL MANAGEMENT Periods Ending December, 1997

Portfolio Manager: Tom Valenzuela

Assets Under Management: \$72,071,401

Investment Philosophy

Valenzuela Capital Management (VCM) believes that stock selection and adherence to valuation analysis are the backbone of superior performance. Their investment philosophy is one of risk averse growth. VCM seeks companies undergoing strong rates of change in earnings, cash flow and returns. These companies are experiencing positive changes in revenues, gross and operating margins and financial structure. To be considered for investment, these stocks must sell at or below market valuations. VCM believes that below-market valuations provide downside protection during weak market periods. In strong markets, the portfolios will be driven by both earnings growth and multiple expansion.

Quantitative Evaluation

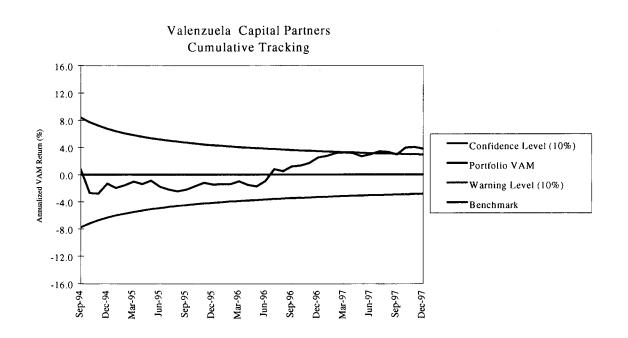
	Actual	Benchmark*
Last Quarter	2.4%	-1.4%
Last 1 Year	38.9	29.4
Last 2 Years	35.4	24.7
Last 3 Years	33.3	26.9
Since Inception	26.3	21.7
(4/94)		

^{*} Custom benchmark since inception date.

Staff Comments

No comments at this time.

Recommendation



WILKE/THOMPSON CAPITAL MANAGEMENT INC. Periods Ending December, 1997

Portfolio Manager: Mark Thompson Assets Under Management: \$44,991,448

Investment Philosophy

The investment philosophy of Wilke/Thompson (W/T) is to invest in high quality growth companies that demonstrate the ability to sustain strong secular earnings growth, notwithstanding overall economic conditions. W/T's investment approach involves a bottom-up fundamental process. The stock selection process favors companies with strong earnings, high unit growth, a proprietary market niche, minimum debt, conservative accounting and strong management practices. They formulate investment ideas by networking with the corporate managers of their current and prospective holdings, as well as with regional brokers, venture capitalists, and other buyside portfolio managers.

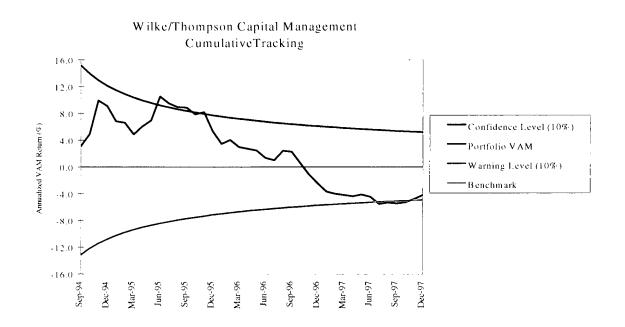
Staff Comments

No comments at this time.

Quantitative Evaluation

	Actual	Benchmark*
Last Quarter	-4.5%	-8.0%
Last 1 Year	7.5	17.8
Last 2 Years	2.0	15.6
Last 3 Years	11.2	19.9
Since Inception	11.4	16.3
(4/94)		

^{*} Custom benchmark since inception date.



Recommendation

WINSLOW CAPITAL MANAGEMENT Periods Ending December, 1997

Portfolio Manager: Clark Winslow Assets Under Management: \$60,628,341

Investment Philosophy

Winslow Capital Management (WCM) believes that investing in companies with above average earnings growth provides the best opportunities for superior portfolio returns over time. WCM believes that a high rate of earnings growth is often found in medium capitalization growth companies of \$1 to \$10 billion market capitalization. Thus, to seek superior portfolio returns while maintaining good liquidity, Winslow Capital emphasizes a growth strategy buying securities of both medium and large cap companies. The objective is to achieve a weighted average annual earnings growth rate of 15-20% over a 2-3 year time horizon.

Staff Comments

- Gail Knappenberger, one of the five portfolio managers involved with the SBI account, has decided to leave Winslow Capital at the end of the first quarter. Staff believes his departure will have no adverse impact on the SBI portfolio.
- Winslow Capital has retained Richards & Tierney to restructure and maintain its customized benchmark.

Quantitative Evaluation

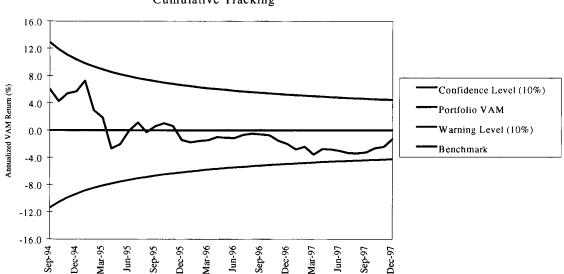
	Actual	Benchmark*
Last Quarter	4.6%	-2.3%
Last 1 Year	28.8	27.8
Last 2 Years	23.2	24.6
Last 3 Years	23.1	26.8
Since Inception	20.7	22.2
(4/94)		

^{*} Custom benchmark since inception date.

Recommendation

No action required.

Winslow Capital Management Cumulative Tracking



ZEVENBERGEN CAPITAL INC Periods Ending December, 1997

Portfolio Manager: Nancy Zevenbergen Assets Under Management: \$62,960,453

Investment Philosophy

Zevenbergen is an equity growth manager. The investment philosophy is based on the belief that earnings drive stock prices while quality provides capital protection. Hence, portfolios are constructed with companies showing above-average earnings growth prospects and strong financial characteristics. They consider diversification for company size, expected growth rates and industry weightings to be important risk control factors. Zevenbergen uses a bottom-up fundamental approach to security analysis. Research efforts focus on finding companies with superior products or services showing consistent profitability. Attractive buy candidates are reviewed for sufficient liquidity and potential diversification. The firm emphasizes that they are not market timers.

Staff Comments

No comments at this time.

Quantitative Evaluation

	Actual	Benchmark*
Last Quarter	3.7%	-1.5%
Last 1 Year	29.5	28.0
Last 2 Years	25.6	25.2
Last 3 Years	26.7	27.0
Since Inception	21.9	22.6
(4/94)		

No action required.

Cumulative Tracking 16.0 12.0 8.0 *Confidence Level (10%) Annualized VAM Return (%) 4.0 Portfoilio VAM Warning Level (10%) 0.0Benchmark -4.0-8.0 -12.0 -16.0 Mar-96 96-unf Sep-94

Zevenbergen Capital Management

Recommendation

^{*} Custom benchmark since inception date.



STATE BOARD OF INVESTMENT

Bond Manager Evaluation Reports

Fourth Quarter, 1997

COMBINED RETIREMENT FUNDS BOND MANAGERS Periods Ending December, 1997

	On	arter	1 Ye	aar	3 v	ears	5 V	ears		ce (1) eption	Market	
	Actual %		Actual %		Actual %		Actual %		Actual %	-	Value (in millions)	Pool %
Active Managers											, , , ,	
American Express (AMG)	3.2	2.9	10.1	9.7	10.6	10.6			6.9	6.9	\$377.71	4.6%
BEA	2.0	2.9	10.8	9.7	11.5	10.4			7.4	6.8	496.41	6.0%
IAI	2.4	2.9	9.0	9.7	9.3	10.4	7.3	7.5	11.0	11.0	602.00	7.3%
Miller	2.0	2.9	9.8	9.7	11.8	10.4	8.4	7.5	11.4	11.0	811.33	9.8%
Standish	2.4	2.9	9.7	9.7	10.9	10.4			6.9	6.8	676.37	8.2%
Western	3.7	2.9	12.3	9.7	12.8	10.4	9.4	7.5	12.4	10.9	1,217.00	14.7%
Semi-Passive Managers												
BlackRock	3.0	2.9	9.9	9.7		•			9.0	8.7	1,375.69	16.6%
Goldman	2.8	2.9	9.9	9.7	10.7	10.4			7.2	6.8	1,372.62	16.6%
Lincoln	3.0	2.9	9.8	9.7	10.5	10.4	7.6	7.5	9.2	9.2	1,344.62	16.3%
					•						\$8,273.74	100.0%
									Since	e 7/1/84		
Current Aggregate	2.8	2.9	10.2	9.7	11.0	10.4	8.1	7.5	11.5	11.0		
Historical Aggregate (2)	2.8	2.9	10.2	9.7	11.0	10.4	8.1	7.5	10.7	10.8		
Lehman Aggregate (3)		2.9		9.7		10.4		7.5		10.4		

⁽¹⁾ Since retention by the SBI. Time period varies for each manager.

⁽²⁾ Includes performance of terminated managers.

⁽³⁾ Prior to July 1994, this index reflects the Salomon BIG.

AMERCIAN EXPRESS ASSET MANAGEMENT Periods Ending December, 1997

Portfolio Manager:

Ed Labenski

Assets Under Management: \$377,706,038

Investment Philosophy

IDS uses duration management combined with in-depth fundamental analysis of the corporate sector to add value to the portfolio. Active duration management begins with an economic overview and interest rate outlook. These factors help IDS determine the direction of both short and long-term interest rates which leads to the portfolio duration decisions. After IDS determines duration, they use their extensive corporate research capabilities to determine corporate sector allocation and to select individual issues.

Staff Comments

Staff met with American Express Asset Management in their offices in January. The portfolio manager discussed the investment process and current strategy. Staff also met with those responsible for Emerging Markets and International to better understand the firm's capabilities.

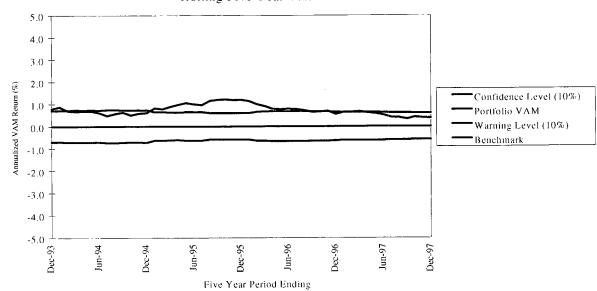
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	3.2%	2.9%
Last I year	10.1	9.7
Last 2 years	5.9	6.6
Last 3 years	10.6	10.6
Last 4 years	6.9	6.9
Last 5 years	N/A	N/A
Since Inception	6.9	6.9
(7/93)		

Recommendations

No action required.

AMERICAN EXPRESS ASSET MANAGEMENT - Fixed Income Rolling Five Year VAM



Note: Shaded area includes performance prior to managing the SB1 account.

BEA ASSOCIATES Periods Ending December, 1997

Portfolio Manager: Bob Moore Assets Under Management: \$496,407,862

Investment Philosophy

BEA's investment approach focuses on individual bond selection and on sector selection rather than short term interest rate forecasting. BEA keeps the duration close to the benchmark but may be slightly longer or shorter depending on their long-term economic outlook. BEA's approach is distinguished by 1) a quantitative approach which avoids market timing: 2) contrarian weightings of bond sectors: and 3) rigorous call and credit analysis rather than yield driven management.

Staff Comments

No comments at this time.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.0%	2.9%
Last I year	10.8	9.7
Last 2 years	8.4	6.6
Last 3 years	11.5	10.4
Last 4 years	7.6	7.0
Last 5 years	N/A	N/A
Since Inception (7/93)	7.4	6.8

Recommendations

No action required.

Note. Shaded area includes performance prior to managing the SBI account.

INVESTMENT ADVISERS Periods Ending December, 1997

Portfolio Manager: Larry Hill

Assets Under Management: \$602,000,369

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 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.

Staff Comments

Staff met with Investment Advisers in our offices in January to discuss their investment process and current strategy. They plan to keep duration in a tighter range going forward. The corporate sector is underweighted and the mortgage sector is neutral with an emphasis on discounts. The strategy for the near term is to add incremental return through small, diversified bets.

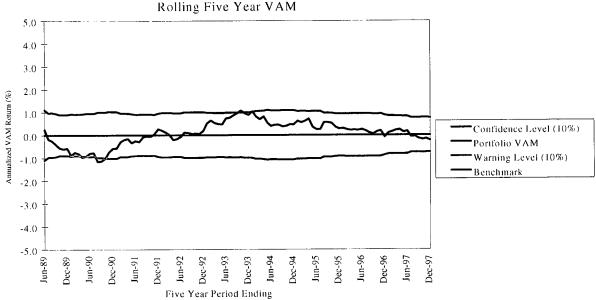
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.4%	2.9%
Last 1 year	9.0	9.7
Last 2 years	6.1	6.6
Last 3 years	9.3	10.4
Last 4 years	6.0	7.0
Last 5 years	7.3	7.5
Since Inception	11.0	11.0
(7/84)		

Recommendations

No action required.

INVESTMENT ADVISERS - Fixed Income



MILLER ANDERSON & SHERRERD Periods Ending December, 1997

Portfolio Manager: Tom Bennett Assets Under Management: \$811,328,702

Investment Philosophy

Miller Anderson focuses its investments in misunderstood or under-researched classes 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.

Staff Comments

No comments at this time.

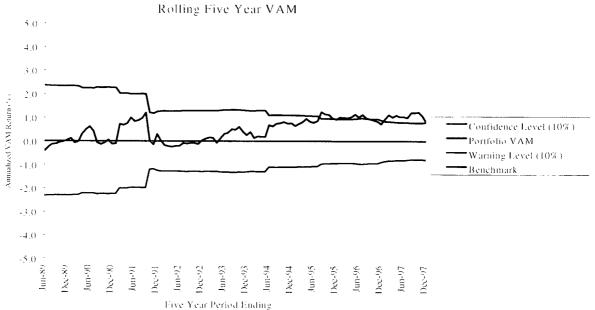
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.0%	2.9%
Last Lyear	9.8	9.7
Last 2 years	8.3	6.6
Last 3 years	11.8	10.4
Last 4 years	7.5	7.0
Last 5 years	8.4	7.5
Since Inception	11.4	11.0
(7/84)		

Recommendations

No action required.

MILLER ANDERSON & SHERRERD



STANDISH, AYER & WOOD Periods Ending December, 1997

Portfolio Manager: Austin Smith

Assets Under Management: \$676,373,664

Investment Philosophy

Standish adds value by capitalizing on market inefficiencies and trading actively through intra and inter-sector swapping. The firm does not forecast interest rates but adds value to the portfolio by buying non-Treasury issues. Key to the approach is active sector trading and relative spread analysis of both sectors and individual issues. In addition to sector spreads, the firm also analyzes how secular trends affect bond pricing. The firm believes that 65% of its value added comes from inter-sector swapping in non-government sectors.

Staff Comments

No comments at this time.

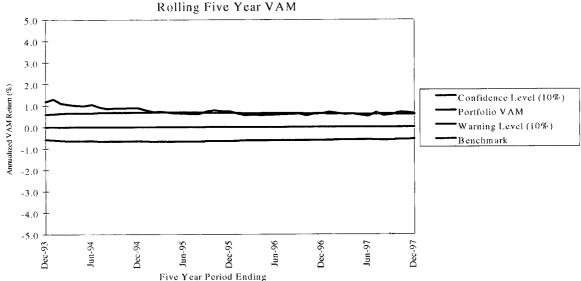
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.4%	2.9%
Last 1 year	9.7	9.7
Last 2 years	7.6	6.6
Last 3 years	10.9	10.4
Last 4 years	7.0	7.0
Last 5 years	N/A	N/A
Since Inception	6.9	6.8
(7/93)		

Recommendations

No action required.

STANDISH, AYER & WOOD



WESTERN ASSET MANAGEMENT Periods Ending December, 1997

Portfolio Manager: Kent Engel Assets Under Management: \$1,217,002,409

Investment Philosophy

Western recognizes the importance of interest rate 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.

Staff Comments

Staff met with Western Asset Management in our offices in January. They are becoming more cautious on the near term market. They remain slightly long duration but the emphasis is on discounts in the mortgage sector and high quality notes in the corporate sector. After the Asian crisis. Western took advantage of wider spreads in yankee bonds to add to their exposure in the segments.

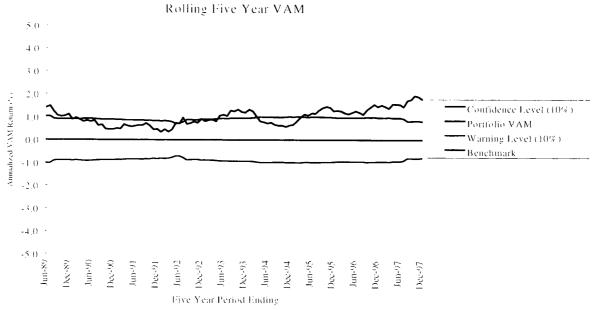
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	3.7%	2.9%
Last 1 year	12.3	9.7
Last 2 years	8.9	6.6
Last 3 years	12.8	10.4
Last 4 years	8.3	7.0
Last 5 years	9.4	7.5
Since Inception	12.4	10.9
(7/84)		

Recommendations

No action required.

WESTERN ASSET MANAGEMENT



BLACKROCK FINANCIAL MANAGEMENT Periods Ending December, 1997

Portfolio Manager: Keith Anderson Assets Under Management: \$1,375,687,819

Investment Philosophy

BlackRock uses a controlled-duration style. BlackRock's enhanced index strategy can be described as active management with tighter duration and sector constraints to ensure that the portfolio's aggregate risk characteristics and tracking error never significantly differ from the desired index. BlackRock's value added is derived primarily from sector and security selection driven by relative value analysis while applying disciplined risk control techniques.

Staff Comments

No comments at this time.

Quantitative Evaluation

Benchmark Actual Last Quarter 3.0% 2.9% Last 1 year 9.9 9.7 Last 2 years N/A N/A Last 3 years N/A N/A Last 4 years N/A N/A Last 5 years N/A N/A Since Inception 9.0 8.7 (4/96)

Recommendation

No action required.

Tracking graph will be created for period ending 6/30/99.

GOLDMAN SACHS Periods Ending December, 1997

Portfolio Manager: Sharmin Mossavar Rahmani

Assets Under Management: \$1,372,618,288

Investment Philosophy

Goldman is an enhanced index manager who focuses on security selection. When analyzing treasuries, the firm models Treasury coupons with an arbitrage based pricing model. This model determines the spread between actual and intrinsic market yields and determines whether the security is rich or cheap. Goldman takes a highly quantitative and analytical approach to value mortgage securities as well. Goldman uncovers undervalued securities using proprietary research and internally developed models. In the corporate sector, Goldman performs its own credit review of each issue. Goldman adds value to the corporate sector with extensive research, market knowledge, and trading skill.

Staff Comments

No comments at this time.

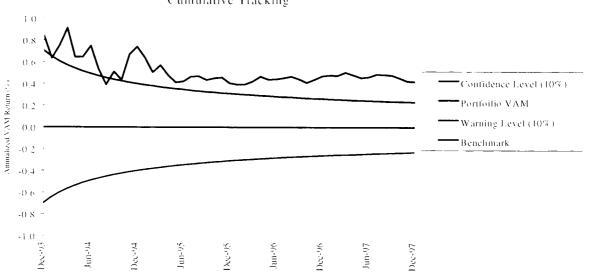
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.8%	2.9%
Last 1 year	9.9	9.7
Last 2 years	7.1	6.6
Last 3 years	10.7	10.4
Last 4 years	7.4	7.0
Last 5 years	N\Λ	N∖A
Since Inception	7.2	6.8
(7/93)		

Recommendations

No action required.

GOLDMAN SACHS Cumulative Tracking



LINCOLN CAPITAL MANAGEMENT Periods Ending December, 1997

Portfolio Manager: Andrew Johnson

Assets Under Management: \$1,344,616,901

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 riskvaluation model. A linear program or portfolio optimizer then constructs the most undervalued portfolio that still matches the return characteristics of the index.

Staff Comments

No comments at this time.

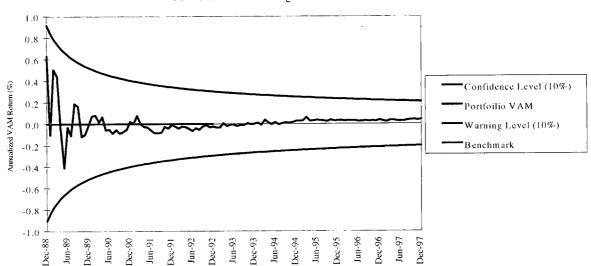
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	3.0%	2.9%
Last 1 year	9.8	9.7
Last 2 years	6.7	6.6
Last 3 years	10.5	10.4
Last 4 years	7.1	7.0
Last 5 years	7.6	7.5
Since Inception	9.2	9.2
(7/88)		

Recommendations

No action required.

LINCOLN CAPITAL MANAGEMENT - Fixed income Cumulative Tracking



VOYAGEUR ASSET MANAGEMENT - Assigned Risk Plan Periods Ending December, 1997

Portfolio Manager: Melissa A. Uppgren Assets Under Management: \$484,978,280

Investment Philosophy Assigned Risk Plan

Voyageur uses a top-down approach to fixed income investing. Their objective is to obtain superior long-term investment returns over a pre-determined benchmark that reflects the quality constraints and risk tolerance of the Assigned Risk Plan. Due to the specific liability requirement of the plan, return enhancement will focus on sector analysis and security selection. Yield curve and duration analysis are secondary considerations.

Staff Comments

Staff met with Voyageur Asset Management in our offices in January. They reviewed their investment style and process. Edward Kohler, President and CEO, has been replaced by Frank Tonnemaker who will serve as Chairman, President and CEO.

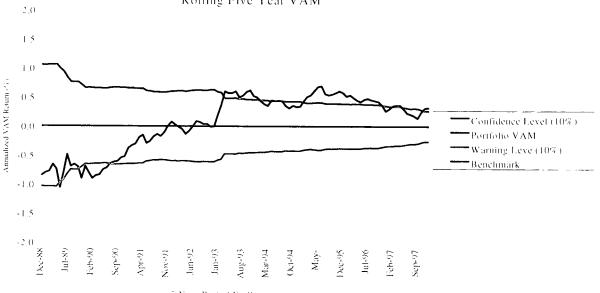
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.0%	1.9%
Last 1 year	8.1	7.9
Last 2 years	6.4	6.5
Last 3 years	9.4	9.0
Last 4 years	6.7	6.6
Last 5 years	7.1	6.8
Since Inception	8.2	7.7
(7/91)		

Recommendation

Firm was placed on probation in December 1997 due to Jane Wyatt's departure. Staff will make a recommendation on this matter for the June meeting.

VOYAGEUR ASSET MANAGEMENT Rolling Five Year VAM



5 Year Period Ending Note: Shaded area includes performance prior to managing SB1 account.

INTERNAL BOND POOL - Income Share Account Periods Ending December, 1997

Portfolio Manager: Mike Menssen

Assets Under Management: \$158,477,883

Investment Philosophy Income Share Account

The current manager assumed responsibility for this portfolio in December 1996. The investment approach emphasizes sector and security selection. The approach utilizes sector trading and relative spread analysis of both sectors and individual issues. The portfolio weightings in mortgage and corporate securities are consistently equal to or greater than the market weightings. The portfolio duration remains close to the benchmark duration but may be shortened or lengthened depending on changes in the economic outlook.

Staff Comments

No comments at this time.

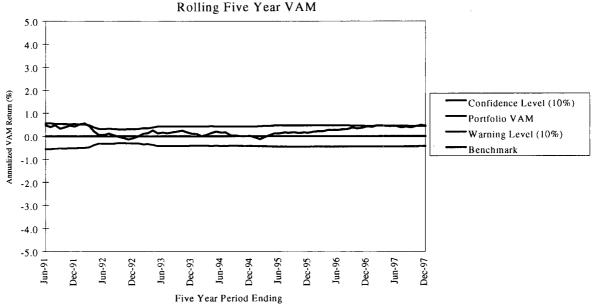
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	3.0%	2.9%
Last 1 year	10.4	9.7
Last 2 years	7.2	6.6
Last 3 years	11.2	10.4
Last 4 years	7.3	7.0
Last 5 years	8.1	7.7

Recommendation

No action required.

INTERNAL BOND POOL - INCOME SHARE ACCOUNT Rolling Five Year VAM



INTERNAL BOND POOL - Trust/Non-Retirement Assets Periods Ending December, 1997

Portfolio Manager: Mike Menssen Assets Under Management: \$314,806,353

Investment Philosophy Environmental Trust Fund and Permanent School Trust Fund

Staff CommentsNo comments at this time.

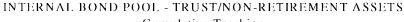
The current manager assumed responsibility for the portfolio in December 1996. The internal bond portfolio's investment approach emphasizes sector and security selection. The approach utilizes sector trading and relative spread analysis of both sectors and individual issues. The portfolio weightings in mortgage and corporate securities are consistently equal to or greater than the market weightings. The portfolio duration remains close to the benchmark duration but may be shortened or lengthened depending on changes in the economic outlook.

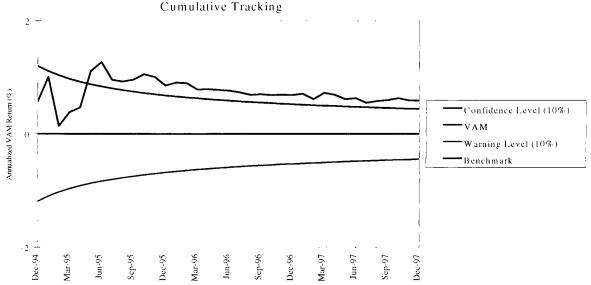
Quantitative Evaluation

Recommendation

	Actual	Benchmark	No action required.
Last Quarter	3.1%	2.9%	
Last I year	10.0	9.7	
Last 2 years	7.0	6.6	
Last 3 years	11.1	10.4	
Last 4 years	N/A	N/A	
Last 5 years	N/A	N/A	
Since Inception	9.8	9.2	
(7/94)*			

^{*} Date started managing the Permanent School Fund against the Lehman Aggregate.





Tab F

COMMITTEE REPORT

DATE:

February 24, 1998

TO:

Members, State Board of Investment

Members, Investment Advisory Council

FROM:

International Manager Committee

The International Manager Committee met on February 12, 1998 to review the following agenda items:

- Review of manager performance for the period ending December 31, 1997.
- Review of Marathon performance.
- Review of the rebalancing of the international program.
- Recommendation to remove Scudder from the watch list.
- Recommendation to revise the statement of philosophy on currency management.

Board action is requested on the last two (2) items.

INFORMATION ITEM:

1. Review of manager performance

The international stock program outperformed its composite index by 0.2 percentage point for the quarter ending December 31, 1997. The program outperformed by 4.4 percentage points over the last year, by 3.5 percentage points annualized for the last three years, by 2.1 percentage points annualized for the last five years, and by 2.0 percentage points since inception (5.25 years). Performance of the equity managers (without the currency overlay) slightly underperformed the target for the quarter, but was higher than the target for all other periods:

Time Period	Total Program	Composite Index*
Quarter	-8.9%	-9.1%
1 Year	4.3	-0.1
3 Year	9.0	5.5
5 Year	13.0	10.9
Since Incept. 10/92	11.5	9.5

Equity Managers
Only
-9.3%
1.8
7.7
12.2
10.8

^{*} The composite index has been weighted 87% EAFE Free/13% Emerging Markets Free since 12/1/96. 100% EAFE Free prior to 5/1/96.

Two of the active EAFE managers outperformed the EAFE-Free index during the quarter and two underperformed. For the latest year, three managers exceeded the index and one lagged. As in past quarters, the dominant factor in the returns was a manager's decision regarding the Japanese market, which again significantly underperformed in the latest quarter and year. Since inception, each of the managers has surpassed the index.

One of the **emerging markets specialists** outperformed the Emerging Markets Free index for the quarter and two managers underperformed. Two managers have been with the SBI over a year and both outperformed for the one year period. All three managers have outperformed the index since inception.

The **passive manager** had negative tracking error against the EAFE index for the latest quarter and positive tracking error for the latest year.

The **currency overlay** program added value over the last quarter and year. The currency overlay program with the EAFE-Free index fund is measured against the index fund's returns excluding the overlay program. Since inception, the currency overlay program has added 3.5 percentage points to the return of the index fund.

Performance evaluation (VAM) reports are behind the "blue page" in this Tab section.

2. Review of Marathon performance

Staff requested that Marathon address their recent underperformance. Following is a summary of Marathon's explanation of their disappointing performance versus an EAFE-Free benchmark.

- The Marathon portfolio has a mid cap value bias that has been out of favor over the last few years.
- The markets have extrapolated growth investing while failing to reward value investing.
- The number of stocks in each market that have outperformed their respective benchmarks has declined dramatically.
- Marathon's limited emerging markets bets have worked against them.

Richards & Tierney developed a composite benchmark for Marathon to aid in evaluating their performance. This new benchmark includes a significant small cap exposure and a small weight in emerging markets. Staff will continue to analyze this new, composite benchmark over several months to see how well it measures Marathon's style and performance.

A copy of Marathon's response and Richards & Tierney's composite benchmark begins on page 5 in this. Tab.

3. Review of rebalancing to asset class targets as of December 31, 1997

The SBI's guidelines require rebalancing when asset classes deviate significantly from their targets. In order to move the Combined Funds back to their target asset allocations, it was necessary for staff to make the following changes:

- Decrease the Domestic Equity Program by about \$1.3 billion,
- Increase the Fixed Income Program by \$600 million,
- Increase the International Program by \$400 million, and
- Increase cash by about \$300 million.

The international program received a portion of its \$400 million in February and will receive the remaining funds in March and April. These assets will be distributed to the managers to maintain the desired allocations to emerging markets, and active and passive EAFE managers. Staff's memo outlining the specific allocations by manager is attached beginning on **page 11** in this Tab.

ACTION ITEMS:

4. Recommendation to remove Scudder from the watch list

Scudder's sale to the Zurich Group was completed on December 31, 1997. Under the terms of the agreement, Zurich's subsidiary, Zurich Kemper Investments, was combined with Scudder to form Scudder Kemper Investments. The sale has gone as planned and Kemper is being merged with Scudder. Kemper's operations were chiefly fixed-income oriented, so the international equity area felt little or no impact

as operations were merged. Staff will continue to monitor Scudder to ensure there are no adverse impacts from the sale to Zurich Group.

RECOMMENDATION:

In accordance with the SBI Manager Continuation policy, the Committee recommends that the SBI remove Scudder from the watch list.

5. Approval of revised statement of existing philosophy on currency management

At their meetings in June 1997, the SBI and IAC endorsed a "Statement of Existing Philosophy on Currency Management." This quarter, the Committee approved revisions to the statement. The revisions include changes in format to describe currency management for the total international program as well as for the active and passive components.

In addition, the revisions reduce currency management in the international program from 100% to a target of 75% of the international program. While the active managers would continue to be responsible for all currency exposure in their portfolios, either implicitly or explicitly, the SBI would reduce the size of the currency overlay program on the EAFE-Free Index Fund. This reduced currency overlay program would still be employed to add value to the international program, but would decrease the volatility of returns relative to the unhedged EAFE-Free benchmark.

The statement with the revisions is included begins on page 13 in this Tab. Deletions from the existing text are noted with strike through. Additions are indicated by underline.

RECOMMENDATION:

The Committee recommends that the SBI adopt the revised "Statement of Existing Philosophy on Currency Management."

MINNESOTA STATE BOARD OF INVESTMENT



Board Members:

Governor Arne H. Carlson

State Auditor Judi Dutcher

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

An Equal Opportunity
Employer

DATE:

February 5, 1998

TO:

Members, International Manager Committee

FROM:

Karen Vnuk Ky

Lois Buermann

B

SUBJECT: Marathon Performance and Custom Benchmark

Staff requested that Marathon address their recent underperformance in writing. Their response is attached. The charts they refer to have not been included.

Richards & Tierney has developed a customized benchmark for Marathon with Marathon's help. The custom benchmark consists of 50% Salomon Brothers Small Capitalization Asia + Europe, 45% Salomon Brothers Large Capitalization Asia + Europe, and 5% MSCI Emerging Markets Free. This benchmark more appropriately reflects Marathon's capitalization bias towards mid and small cap companies. Summary data has been compiled from the Richards & Tierney report (using their actuals for Marathon, not the SBI's actuals), comparing value added and standard deviations for both the custom benchmark and the EAFE (not EAFE-Free) index. In addition, staff has included a return comparison against both benchmarks, for annualized periods, using SBI return numbers for the period ending December 31, 1997.

Finally, VAM graphs using SBI returns have been included (these graphs were made from the Richards & Tierney toolbox). The graphs to the left are for the custom benchmark. The graphs to the right are for the EAFE-Free index.

Both staff and Richards & Tierney spoke with Marathon. Marathon agrees that the custom benchmark more closely reflects their investment style. The custom benchmark will not replace the EAFE-Free benchmark, but will be used in conjunction with EAFE-Free to evaluate Marathon's performance.



Orion House 5 Upper St. Martin's Lane London WC2H 9EA Telephone: 0171-497 2211 Fax: 0171-497 2399

8th January 1998

Ms Karen Vnuk
International Analyst
Minnesota State Board of Investment
Suite 105, MEA Building
55 Sherburne Avenue
St.Paul
MN 55155
USA

Dear Karen

Please find attached a presentation addressing the issue of Marathon's disappointing returns over the last three years. Some of the charts are self explanatory, others are I am afraid more complicated. The key points they try and address are as follows:

- (1) Marathon has a value (and hence mid cap) bias. This bias has been out of favour to an unprecedented degree over the last few years.
- (2) There are several possible causes of the above but critical amongst them is the growing adoption of new investment methodologies (focusing on free cash flow and economic value added). Whilst the fundamental assumptions of these approaches is valid (and indeed is the basis for Marathon's own investment philosophy) the markets have extrapolated the 'good' (growth investing) whilst refusing to consider the possibility of change amongst the 'bad' (value investing). This is where the 'bubble' in current markets resides.
- (3) These factors have been true in all markets and have rendered adding value in diversified portfolio extremely difficult: in all markets the number of shares that have outperformed their respective benchmarks has declined dramatically. The investment universe has hence been forced to focus ever more on a limited number of 'safe' shares irrespective of relative value, or to seek to add value via country allocation.
- (4) Marathon is not an emerging market manager nor do we take aggressive positions versus regional benchmark weightings. Much of the outperformance of the peer group has been due to an aggressive weighting in emerging markets versus Japan. It is hence interesting to note that Marathon's returns by main regions versus the peer group (Europe, Japan, Asia and Japan) are roughly median: our value subtracted has hence been disproportionally driven by country/emerging market allocation.

Marathon portfolios have had a bias towards economic sensitives, particularly in (5) Europe. This has not been driven by a belief that economic growth will accelerate but by our investment approach: because we do not believe that one can add value over time on a top down macro-economic basis, we assume that demand remains flat and focus on other drivers of returns (ROE). Against the recent deflationary slowdown this bias has been wrong.

With regards to the benchmark, one issue you may like to consider is the emerging market area. As you know our philosophy specifically targets the mature markets, and our returns in the developing world are disappointing (hardly suprising as half our exposure is in South Africa).

I apologise that there is no simple, short summary to your very valid query: if you would like to discuss anything further either on the phone or in person please let me know. In the meantime I wish you a Happy New Year.

Best regards.

Marathon Composite Benchmark Comparison

From December 1993 through October 1997

		Returns			Returns	·
		Composite	Value			Value
Period	Actual	Bnmk *	Added	Actual	EAFE	Added
					-	
3 months	-8.12	-8.54	0.46	-8.12	-9.80	1.86
Annualized Std Dev	19.95	19.69	1.06	19.95	26.66	6.78
						-
6 months	1.65	1.30	0.34	1.65	3.01	-1.32
Annualized Std Dev	18.46	18.69	1.42	18.46	23.17	5.46
9 months	3.36	2.44	0.90	3.36	5.63	-2.15
Annualized Std Dev	14.97	14.96	1.55	14.97	18.36	4.81
12 months	2.00	4.00	0.70	0.00	4.00	
	3.80	1.00	2.78	3.80	4.63	-0.79
Annualized Std Dev	13.65	13.45	1.96	13.65	16.71	4.42
2 years	7.98	6.26	1.62	7.98	7.51	0.44
Annualized Std Dev	10.98	10.66	1.91	10.98	12.63	3.82
3 years	3.78	3.15	0.61	3.78	4.82	-0.99
Annualized Std Dev	11.35	11.16	2.91	11.35	12.65	4.40
Since Incention (44/02)	0.00	7 70	0.00		<u> </u>	
Since Inception (11/93)	9.98	7.72	2.09	9.98	8.76	1.12
Annualized Std Dev	12.15	11.58	3.02	12.15	12.82	4.35
Beta			1.0181			0.8943

^{*} Custom Benchmark is made up of 50% Salomon Brothers Small Capitalization Asia + Europe, 45% Salomon Brothers Large Capitalization Asia + Europe, and 5% MSCI Emerging Markets Free.

Source: Richards and Tierney

Period Ending December 31, 1997

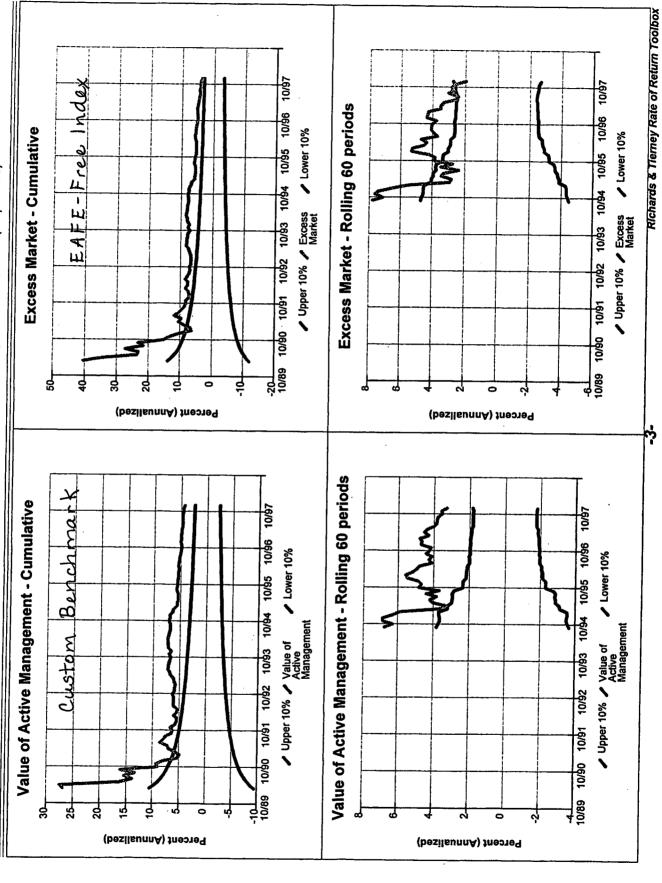
QUANTITATIVE EVALUATION

	Actual	Comp Bnmk	Actual	EAFE-Free
Last Quarter	-10.4	-9.0	-10.4	-7.9
Last 1 year	-4.1	-3.5	-4.1	1.5
Last 2 years	2.5	1.7	2.5	3.8
Last 3 years	3.8	3.8	3.8	6.2
Last 4 years	6.9	4.9	6.9	6.6
Last 5 years Since Inception	N/A	N/A	N/A	N/A
(11/93)	6.5	4.3	6.5	5.8

Source: SBI

VAM Graphs - MINNESOTA STATE BOARD OF INVESTMENT

FE_MAR_A - MARATHON ASSET MANAGEMENT vs MAR_CUS_ - Marathon Custom Bnmk 50small/45large/5EM Monthly from period ending October, 1989 to period ending December, 1997 (99 periods)



MINNESOTA STATE BOARD OF INVESTMENT



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

An Equal Opportunity
Employer

DATE:

February 5, 1998

TO:

Members, International Manager Committee

FROM:

Karen Vnuk

KV

Lois Buermann

1B

SUBJECT: Rebalance to Asset Class Targets

The Minnesota State Board of Investment has guidelines in place for rebalancing the Combined Funds to prevent each asset class from deviating too far from their target weight. Based on December 31, 1997 asset class weights, staff determined that it was necessary to rebalance the Combined Funds.

In order to move the Combined Funds back to their target asset allocations, it was necessary for staff to make the following changes:

- Decrease the Domestic Equity Program by about \$1.3 billion,
- Increase the Fixed Income Program by \$600 million,
- Increase the International Program by \$400 million, and
- Increase cash by about \$300 million.

On February 2, 1998, \$175 million was available to the international program:

- \$140 million to Rowe Price-Fleming (EAFE manager)
- \$35 million to Montgomery (Emerging Markets manager)

On March 2, 1998, \$35 million will be available to the international program:

• \$35 million to Genesis (Emerging Markets manager)

On April 1 or May 1, 1998, another \$190 million will be available to the international program:

- \$30 million each to Montgomery and Genesis (Emerging Markets managers)
- \$80 million to Scudder (EAFE manager)
- \$50 million to Brinson (EAFE manager)

Rowe Price-Fleming is an EAFE manager with a stable organization and no outstanding organizational or performance issues. In addition, they offer a fee break for assets over \$500 million. Unlike other managers, this fee break applies to <u>all</u> of the client's assets under management, not just the assets above \$500

million, resulting in substantial savings on fees paid to this manager. The SBI will benefit from this fee break by giving Rowe Price the additional \$140 million.

Emerging markets are below their target weight of 13% of the international program, so this area received funds. Montgomery has had very good performance relative to the benchmark with no outstanding organizational issues. Genesis Asset Managers also has had very good performance relative to the benchmark and has a stable organization.

Scudder has been in the midst of change with the sale to Zurich and the merging of operations between Scudder and Zurich Kemper. The sale was completed in December along with the merging of operations. Scudder's international area was mostly unaffected, since Zurich Kemper did not have an international presence. A new portfolio manager, Marc Joseph, who came in June from Templeton with senior portfolio manager experience, has taken over responsibility for the institutional portfolios. The majority of changes are now behind Scudder. They have been our best performing manager over the one and three year annualized periods, as well as since inception. During the last two rebalancings, Scudder did not receive any funds the first time and only \$40 million the second time. With the additional \$80 million, Scudder will have roughly the same amount under management as Marathon.

Brinson's international team has been very stable and their returns have improved significantly. Although it was recently announced that Swiss Bank, Brinson's parent company, and UBS are going to merge, it is expected that the international team will remain stable.

For the Committee's information, staff requested client account size information from the SBI's four EAFE managers. The results are attached.

Statement of Existing Philosophy on Currency Management

The SBI's approach to currency management addresses several inter-related policy issues or questions:

Issue #1 Use of a Constant Hedge.

Should the SBI attempt to reduce the volatility associated with currency exposure by using a passive/constant hedge?

Decision and Rationale: No, not at this time. Research suggests that if a plan sponsor's allocation to international assets is less than 20%, constant hedging does not generate significant risk reduction benefits for the total fund. Consequently, the SBI has rejected constant hedging as long as the SBI's allocation to international stocks remains below 20%. (Currently, the SBI's long term target for international stocks is 15% of the Combined Funds. Two percentage points of this allocation is directed toward the emerging markets.)

From this decision, it follows that the SBI's policy benchmark for international assets should be unhedged and the performance of the program should be measured against an unhedged standard. Currently, the asset class target/policy benchmark for the international stock program is a blended index of 87% EAFE-Free and 13% Emerging Markets-Free. Both components are measured on an unhedged basis to reflect the SBI's decision to reject constant/passive hedging.

Issue #2 Role of Currency Management within the International Program.

Should the SBI attempt to add value through active currency management within the international stock program?

Decision and Rationale: Yes. Given the large impact that currency can have on returns, the SBI believes that currency exposure management should be explicitly managed targeted to 75% of within the international stock program in order to maximize returns. The goal of currency management at this level is to add value (or avoid loss) relative to the unhedged policy benchmark for the international program.

Risk reduction is not a goal per se, except to the extent that explicitly managing currency exposure mitigates the possibility of currency losses and would therefore reduce the larger risk that the SBI may abandon its entire international investing program due to disappointing currency returns over the short run.

A. Issue #3 Actively Managed Segment.

How should currency management be addressed within the actively managed portion of the international stock program?

Policy Decision and Rationale: Currency management is one component of active international stock management. A manager's currency views may be imbedded in country or stock selection decisions or may result in an explicit decision to increase/decrease exposure to a particular currency through hedging activity. Since currency management is already being addressed by active managers, no further action by the SBI is required to assure that the currency exposure of this segment of the portfolio is being managed.

B. Issue #4 Passively Managed/Index Segment.

How should currency management be addressed within the passively managed (indexed) portion of the international stock program?

Decision and Rationale. The SBI has allocated up to 50% of the international program to an unhedged EAFE Free index fund. The SBI has chosen to manage a portion of the currency exposure of the EAFE-Free index fund by employing a currency overlay program. This is done within the context of the international program as a whole, recognizing that currency is already managed in some form by the SBI's active managers.

The goal of the currency overlay is to add value (or avoid loss) relative to the unhedged policy benchmark for the EAFE-Free index fund.

There are two basic approaches to currency overlay: forecasting/market timing approaches which attempt to anticipate the direction or level of exchange rates, and systematic/structured approaches which move in and out of currencies in reaction to observable currency trends or fluctuations. Systematic approaches to currency overlay have return patterns that are more predictable and can be constrained with respect to their level of expected volatility. Therefore, a systematic approach to currency overlay is deemed to be more consistent with the SBI's tolerance for active management risk.

While systematic approaches to currency overlay are expected to add value, the SBI recognizes that there is an element of "insurance" (i.e., protection against the negative effects of a rising dollar) associated with this form of management. There will be times when the SBI will pay an "insurance premium" in terms of management fees and transactions costs without observable return to the portfolio because the negative event of a currency loss does not occur within the measurement period. The specific methodology selected should seek to minimize implementation costs in order to minimize this "insurance premium" factor.

Issue #5 Operating Constraints.

What operating constraints should be imposed on the SBI's currency overlay program for the EAFE-Free index fund?

Decision and Rationale: In order to simplify the program, the SBI has established the following operating constraints for its currency overlay program.

- Currencies Included. The program is limited to currencies that comprise 5% or more of the EAFE-Free index. At the close of calendar 1996 1997 this included: Japanese Yen (32.3%) (25.2%), British Pound Sterling (19.2%) (21.6%), German Mark (8.2%) (9.8%), French Franc (6.9%) (8.0%), and Swiss Franc (5.6%) (7.8%), and Dutch Guilder (5.7%). Together, these five six currencies comprise over 70% 75% of the EAFE-Free index. They are also the most liquid currencies in world markets and can be hedged directly.
- Benchmarks. The benchmark for the program is the actual unhedged return of the SBI's EAFE-Free index fund. Value added/lost against this benchmark will measure the impact of the SBI's decision to employ an overlay program, over time. Additional standards will be developed by staff and the SBI's consultants to assist in evaluating the cost effectiveness of the specific investment approach/methodology that is selected.
- **Hedging Limits.** Hedging the above exposures back to the US dollar is the only type of hedge that is authorized. Cross hedging and proxy hedging are not allowed. Net long or short currency positions are prohibited.
- Authorized Instruments. Currency positions may be implemented using currency forwards, options or futures. The manager has the flexibility to use over-the-counter as well as listed/exchange-traded currency instruments.

Revised 2/98



STATE BOARD OF INVESTMENT

International Manager Evaluation Reports

Fourth Quarter, 1997

COMBINED RETIREMENT FUNDS INTERNATIONAL STOCK MANAGERS Periods Ending December, 1997

	0	ıarter	4	Year	2		= 3 /		Sin			-
	Actual		Actual		3 y Actual	ears Bmk	o r Actual	ears Bmk	Incep Actual		Market Value	Equity Pool
	%	%	%	%	%	%	%	%	%	%	(in millions)	%
Active EAFE												
Brinson (1)	-7.2	-7.9	4.8	1.5	11.1	6.2			9.9	9.4	\$385.89	8.8%
Marathon (2)	-10.4	-7.9	-4.1	1.5	3.8	6.2			6.5	5.8	337.19	7.7%
Rowe Price (2)	-7.4	-7.9	3.4	1.5	10.3	6.2			9.1	5.8	373.26	8.5%
Scudder (2)	-8.0	-7.9	7.4	1.5	13.6	6.2			10.3	5.8	272.73	6.2%
Active Emerging Markets												
City of London (3)	-18.3	-17.5							1.5	-8.4	101.04	2.3%
Genesis (4)	-19.4	-17.5	-3.0	-11.6					-0.9	-9.4	196.90	4.5%
Montgomery (4)	-16.4	-17.5	-2.1	-11.6					-0.1	-9.4	199.36	4.5%
Passive EAFE												
State Street (5)	-8.0	-7.9	1.8	1.5	6.5	6.2	11.6	11.4	10.2	10.0	2,524.42	57.5%
									Since	e 10/1/92	2	
Equity Only*	-9.3	-9.1	1.8	-0.1	7.7	5.5	12.2	10.9	10.8	9.5	4,390.79	100.0%
Total Program**	-8.9	-9.1	4.3	-0.1	9.0	5.5	13.0	10.9	11.5	9.5	\$4,422.48	

^{*} Equity managers only. Includes impact of terminated managers. Aggregate benchmark weighted 87% EAFE Free/13% Emerging Markets Free as of 12/30/96. 100% EAFE Free prior to 5/1/96.

Impact of Currency Overlay Program

	Qtr.	Yr.	Since Dec. 95
Index Fund*	-8.0	1.8	5.9
Index + Overlay**	-7.3	6.5	9.4

^{*} EAFE-Free index fund managed by State Street Global Advisers.

^{**} Includes impact of currency overlay unrealized gain/loss. Aggregate benchmark weighted 87% EAFE Free/13% Emerging Markets Free as of 12/30/96. 100% EAFE Free prior to 5/1/96.

⁽¹⁾ Active country/passive stock. Retained April 1, 1993.

⁽²⁾ Fully active. Retained November 1, 1993.

⁽³⁾ Retained November 1, 1996.

⁽⁴⁾ Retained May 1, 1996.

⁽⁵⁾ Retained October 1, 1992.

^{**} Index fund with currency overlay program implemented by Record Treasury Management. Program was phased-in from Dec. 95 - Nov. 96.

BRINSON PARTNERS Periods Ending December, 1997

Portfolio Manager: Richard Carr

Assets Under Management: \$385,892,877

Investment Philosophy

Brinson manages an active country/passive stock portfolio for the SBI. The firm uses a proprietary valuation model to rank the relative attractiveness of based on fundamental individual markets considerations. Inputs include forecasts for growth, inflation, risk premiums and foreign exchange movements. Quantitative tools are used to monitor and control portfolio risk, while qualitative judgments from the firm's professionals are used to determine country allocations. Brinson establishes an allocation range around the target index to define the limits of their exposure to individual countries and to assure diversification. Brinson constructs its country index funds using a proprietary optimization system.

Brinson utilizes currency equilibrium bands to determine which currencies are over or under valued. The firm will hedge to control the potential risk for real losses from currency depreciation.

Staff Comments

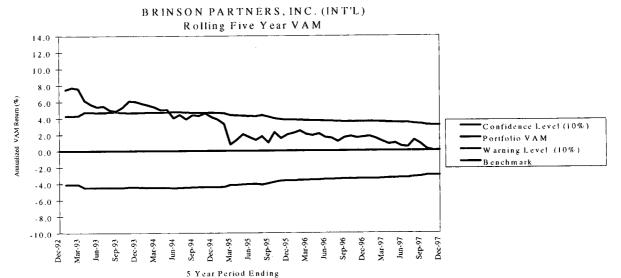
In December, Brinson announced that Swiss Bank Corp., Brinson's parent company, and UBS Union Bank of Switzerland intended to merge. UBS Asset Management will be combined into the Brinson Division after a detailed evaluation of both businesses is completed. Staff will monitor this merger to ensure there are no adverse impacts on the SBI's portfolio.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-7.2%	-7.9%
Last 1 year	4.8	1.5
Last 2 years	8.2	3.8
Last 3 years	11.1	6.2
Last 4 years	9.2	6.6
Last 5 years	N/A	N/A
Since Inception		
(4/93)	9.9%	9.4%

Recommendations

No action required.



Note: Shaded area includes perofrmance prior to managing SBI account.

MARATHON ASSET MANAGEMENT Periods Ending December, 1997

Portfolio Manager: William Arah Assets Under Management: \$337,186,805

Investment Philosophy

Marathon uses a blend of flexible, qualitative disciplines to construct portfolios which exhibit a value bias. Style and emphasis will vary over time and by market, depending on Marathon's perception of lowest risk opportunity. Since they believe that competition determines profitability, Marathon is 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. At the stock level, Marathon tracks a company's competitive position versus the attractiveness of their products or services and attempts to determine whether the company is following an appropriate reinvestment strategy for their current competitive position.

Staff Comments

No comments at this time.

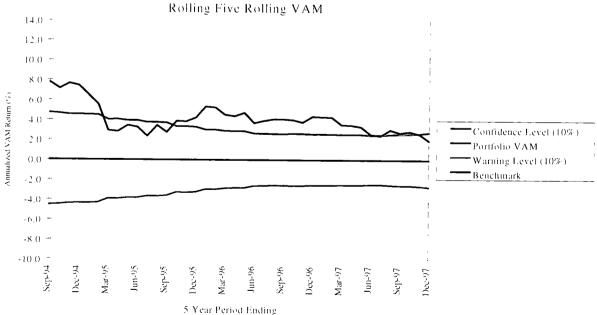
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-10.4%	-7.9%
Last 1 year	-4.1	1.5
Last 2 years	2.5	3.8
Last 3 years	3.8	6.2
Last 4 years	6.9	6.6
Last 5 years	N/A	N/A
Since Inception		
(11/93)	6.5%	5.8%

Recommendations

No action required.

MARATHON ASSET MANAGEMENT



ROWE PRICE-FLEMING INTERNATIONAL, INC. Periods Ending December, 1997

Portfolio Manager: Martin Wade

Assets Under Management: \$373,260,776

Investment Philosophy

Rowe Price-Fleming (RPF) believes that world stock markets are segmented. The firm attempts to add value by identifying and exploiting the resulting pricing inefficiencies. In addition, they believe that growth is frequently under priced in the world markets. RPF establishes its economic outlook based largely on interest rate trends and earnings momentum. The portfolio management team then assesses the country, industry and currency profile for the portfolio. Within this framework, stock selection is the responsibility of regional portfolio managers. Stocks are selected using fundamental analysis that emphasizes companies with above-market earnings growth at reasonable valuations. Information derived from the stock selection process is a key factor in country allocation as well.

Staff Comments

No comments at this time.

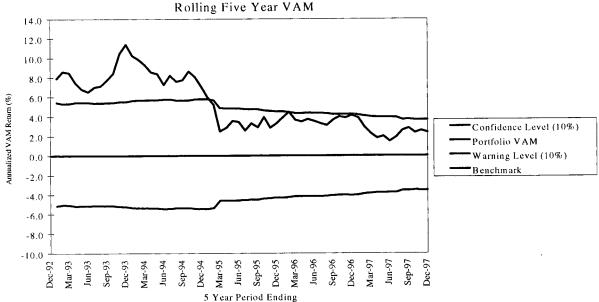
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-7.4%	-7.9%
Last 1 year	3.4	1.5
Last 2 years	9.2	3.8
Last 3 years	10.3	6.2
Last 4 years	7.5	6.6
Last 5 years	N/A	N/A
Since Inception		
(11/93)	9.1%	5.8%

Recommendations

No action required.

ROWE PRICE-FLEMING



Note: Shaded area includes performance prior to managing SBI account.

SCUDDER, STEVENS & CLARK Periods Ending December, 1997

Portfolio Manager: Marc Joseph Assets Under Management: \$272,728,278

Investment Philosophy

Scudder believes that successful international investing requires knowledge of each country's economy, political environment and financial market obtained through continuous and thorough research of individual markets and securities. The investment process focuses on three areas: country analysis, global themes and unique situations. Ideas from all three areas are integrated into Scudder's research universe. Using their own internal research, the firm seeks companies with potential for earnings and dividend growth, strong or improving balance sheets, superior management, conservative accounting practices and dominant position in growing industries.

Quantitative Evaluation

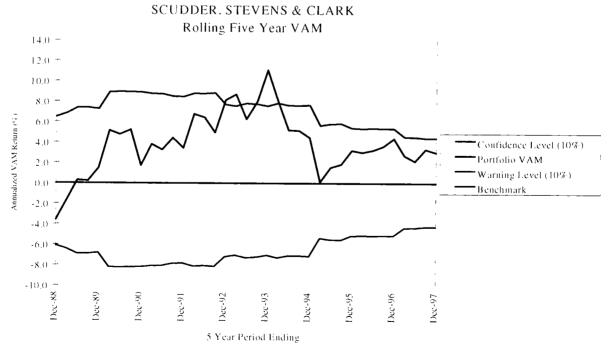
	Actual	Benchmark
Last Quarter	-8.0%	-7.9%
Last 1 year	7.4	1.5
Last 2 years	11.9	3.8
Last 3 years	13.6	6.2
Last 4 years	9.4	6.6
Last 5 years	N/A	N/A
Since Inception		
(11/93)	10.3%	5.8%

Staff Comments

Scudder's sale to Zurich and operations merger with Zurich Kemper was completed in December. Scudder's international area was mostly unaffected by the merger, since Zurich Kemper did not have an international presence. A new portfolio manager, Marc Joseph, who came in June from Templeton, has taken over responsibility for the institutional portfolios. Staff met with Marc in November. He has senior portfolio management experience and is a capable, qualified manager. The majority of changes are now behind Scudder and the organization should be more stable going forward.

Recommendations

Staff recommends that Scudder be removed from watch list status.



Note: Shaded area includes performance prior to managing SBI account. Uses quarterly returns,

CITY OF LONDON Periods Ending December, 1997

Portfolio Manager: Barry Olliff

Assets Under Management: \$101,040,910

Investment Philosophy

City of London is an emerging markets specialist. The firm invests in closed-end country and regional funds to enhance performance when discounts to net asset value (NAV) narrow and to assure broad diversification within markets. They perform two levels of analysis. The first level is to compile macro-economic data for each country in their universe. Countries are ranked nominally according to the relative strength of their fundamentals and the expected upward potential of their stock markets. The second level is research on closed-end country and regional funds which use analyzed funds for corporate activity, liquidation dates, liquidity and discounts to NAV. They also analyze the quality and expertise of the closed-end fund managers. Countries are then re-ranked according to the relative pricing and discounts to NAV of country specific funds.

Staff Comments

No comments at this time.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-18.3%	-17.5%
Last 1 year	-1.8	-11.6
Last 2 years	N/A	N/A
Last 3 years	N/A	N/A
Last 4 years	N/A	N/A
Last 5 years	N/A	N/A
Since Inception		
(11/96)	1.5%	-8.4%

Recommendations

No action required.

VAM Graph will be drawn for period ending 6/30/98.

GENESIS ASSET MANAGERS, LTD. Periods Ending December, 1997

Portfolio Manager: Paul Greatbatch Assets Under Management: \$196,904,423

Investment Philosophy

Genesis is an emerging markets specialist. The firm believes that the critical factor for successful investment performance in emerging markets is stock selection. They also believe that structural changes in emerging markets will continue to create both winners and losers in the corporate sector. Finally, they believe that following index stocks will not necessarily expose an investor to the highest returns since those stocks are typically concentrated in large capitalization companies that have already attained a certain level of recognition. They identify those countries in which structural change will most likely generate growth opportunities for business and/or where the environment is supportive of a flourishing private sector. Stock selection is based on Genesis' estimate of the value of the company's future real earnings stream over five years relative to its current price. The portfolio consists of the most undervalued stocks across all markets with emphasis on growth with value.

Staff Comments

No comments at this time.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-19.4%	-17.5%
Last 1 year	-3.0	-11.6
Last 2 years	N/A	N/A
Last 3 years	N/A	N/A
Last 4 years	N/A	N/A
Last 5 years	N/A	N/A
Since Inception		
(5/96)	-0.9%	-9.4%

Recommendations

No action required.

VAM Graph will be drawn for period ending 6/30/98.

MONTGOMERY ASSET MANAGEMENT Periods Ending December, 1997

Portfolio Manager: Josephine Jimenez Assets Under Management: \$199,359,410

Investment Philosophy

Montgomery is an emerging markets specialist. The firm combines quantitative investment techniques and fundamental stock selection to take advantage of market inefficiencies and low correlations within the emerging markets. Their top-down analysis begins with a quantitative approach which evaluates historical volatility and correlations between markets. The model identifies attractive countries which are then qualitatively analyzed for "event risk" which the model cannot take into account. Fundamental analysis is used to evaluate the financial condition, quality of management, and competitive position of each stock. Stocks will come from two tiers. Tier 1 will be 60-100 blue chip stocks. Tier 2 will be 100-150 smaller cap stocks with substantial growth potential. Characteristics of selected stocks may include low PE's to internal growth rates, above average earnings growth potential or undervalued/hidden assets.

Staff Comments

No comments at this time.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-16.4%	-17.5%
Last 1 year	-2.1	-11.6
Last 2 years	N/A	N/A
Last 3 years	N/A	N/A
Last 4 years	N/A	N/A
Last 5 years	N/A	N/A
Since Inception		
(5/96)	-0.1%	-9.4%

Recommendations

No action required.

VAM Graph will be drawn for period ending 6/30/98.

STATE STREET GLOBAL ADVISORS Periods Ending December, 1997

Portfolio Manager: Lynn Blake Assets Under Management: \$2,524,419,652

Investment Philosophy

State Street Global Advisors passively manages the portfolio against the Morgan Stanley Capital International (MSCI) index of 20 markets located in Europe. Australia and the Far East (EAFE). They buy only securities which are eligible for purchase by foreign investors, therefore they are benchmarked against the MSCI EAFE-Free index. SSgA fully replicates the index whenever possible because it results in lower turnover, higher tracking accuracy and lower market impact costs. The MSCI EAFE-Free reinvests dividends at the Belgian tax rate. The portfolio reinvests dividends at the lower U.S. tax rate, which should result in modest positive tracking error, over time.

Staff Comments

No comments at this time.

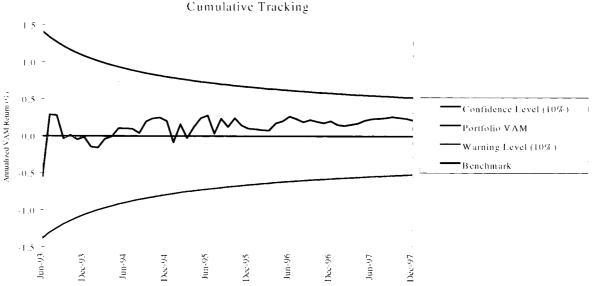
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-8.0%	-7.9%
Last 1 year	1.8	1.5
Last 2 years	4.2	3.8
Last 3 years	6.5	6.2
Last 4 years	6.9	6.6
Last 5 years	11.6	11.4
Since Inception		
(10/92)	10.2	10.0

Recommendation

No action required.

STATE STREET GLOBAL ADVISORS Cumulative Tracking



RECORD TREASURY MANAGEMENT Periods Ending December, 1997

Portfolio Manager: Les Halpin Exposure Included in Overlay:\$1,805,400,000

Investment Philosophy

Record Treasury avoids all forms of forecasting in its approach to currency overlay. Rather, the firm employs a systematic model which uses a form of dynamic hedging. The firm creates a portfolio of synthetic currency options using forward contracts. Like traditional options, Record's "in-house options" allow the client to participate in gains associated with foreign currency appreciation and avoid losses associated with foreign currency depreciation. As with all dynamic hedging programs, Record will tend to sell foreign currency as it weakens and buy as it strengthens.

The SBI has chosen to limit the overlay program to currencies that comprise 5% or more of the EAFE index: Japanese Yen, British Pound Sterling, German Mark, French Franc, Swiss Franc. One twelfth of the exposures in the SBI's EAFE index fund were added to the overlay program each month from December 1995 to November 1996. Each currency is split into equal tranches that are monitored and managed independently. The strike rate for each tranche is set at 2% out-of-the money at the start date of each tranche. This requires a 2% strengthening of the US dollar to trigger a hedge for that tranche.

Staff Comments

The Committee recommended renewal of Record's contract, while discussions on the currency overlay program continue. Record's contract was renewed as of January 1, 1998 with the standard five year expiration and immediate termination clause.

Quantitative Evaluation

	Index Fund + Record	Index Fund(1
Last Quarter	-7.3%	-8.0%
Last 1 Year	6.5	1.8
Last 2 Years	7.8	4.1
Last 3 Years	N/A	N/A
Last 4 Years	N/A	N/A
Last 5 Years	N/A	N/A
Since Inception	า	
(12/95)	9.4%	5.9%

Recommendations

The Committee will make a recommendation concerning the currency overlay program this quarter.

⁽¹⁾ Actual unhedged return of the entire EAFE-Free index fund managed by State Street Global Advisers. Includes return of underlying stock exposure. (As reported by State Street Bank)

Tab G

COMMITTEE REPORT

DATE:

February 19, 1998

TO:

Members, State Board of Investment Members, Investment Advisory Council

FROM:

Alternative Investment Committee

The Alternative Investment Committee met on February 19, 1998 to review the following information and action items:

- Review of current strategy.
- Investments for the Basic Retirement Fund with four existing private equity managers (Coral Partners, Warburg Pincus, Thoma Cressey and Golder Rauner), a potential new private equity manager (Fox Paine) and an existing resource manager (First Reserve).

The Board/IAC action is required on the last item.

INFORMATION ITEMS:

1) Review of Current Strategy.

To increase overall portfolio diversification, 15% of the Basic Retirement Funds and 5% of the Post Retirement Fund are allocated to alternative investments. Alternative investments include real estate, private equity and resource investments where Minnesota State Board of Investment (SBI) participation is limited to commingled funds or other are pooled vehicles. Charts summarizing the Board's current commitments are attached (see Attachments A and B).

Basic Funds

The <u>real estate</u> 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 \$754 million to twenty (20) commingled real estate funds.

- The <u>private equity</u> investment strategy is to establish and maintain a broadly diversified private equity portfolio comprised of investments that provide diversification by industry type, stage of corporate development and location. Currently, the SBI has committed \$1.2 billion to thirty-five (35) commingled private equity funds.
- The strategy for <u>resource</u> 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 \$228 million to ten (10) commingled oil and gas funds.

Post Fund

• The Post Fund assets allocated to alternative investments will be invested separately from the Basic Funds' alternative investments to assure that returns are accounted for appropriately. Because the Post Fund invests the retired employees' pension assets, an allocation to yield oriented alternative investments will be emphasized. The Basic Retirement Funds' invest the active employees' pension assets and have less concern regarding the current yield for their alternative investments. Since 1994, the SBI has committed \$284 million to eleven (11) yield oriented funds for the Post Fund: Four (4) are in real estate, six (6) are in private equity and one (1) is in resource.

ACTION ITEMS:

1) Investment for the Basic Retirement Fund with an existing private equity manager, Coral Group, in Coral Partners Fund V.

Coral Partners is seeking investors for a new \$100 million private equity fund, Coral Partners Fund V. This Fund is the fifth private equity fund managed by Coral Partners. Coral Partners Fund V will focus, like prior funds, on assembling a diverse portfolio of venture capital investments in the technology and healthcare sectors.

More information on Coral Partners Fund V is included as Attachment C.

RECOMMENDATION:

The Committee recommends that the SBI authorize 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 Coral Partners Fund V. This commitment will be allocated to the Basic Retirement Fund.

Approval by the SBI of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and neither the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by Coral Partners upon this approval. Until a formal agreement is executed by the Executive Director on behalf of the SBI, further due diligence and negotiations may result in the imposition of additional terms and conditions on Coral Partners or reduction or termination of the commitment.

2) Investment for the Basic Retirement Fund with an existing private equity manager, Warburg Pincus, in Warburg Pincus Equity Partners

Warburg Pincus is seeking investors for a new \$3.0 billion private equity fund, Warburg Pincus Equity Partners. This Fund is the seventh private equity fund managed by Warburg Pincus. Warburg Pincus Equity Partners will focus, like prior funds, on assembling a diverse portfolio of private equity investments.

More information on Warburg Pincus Equity Partners is included as Attachment D.

RECOMMENDATION:

The Committee recommends that the SBI authorize the Executive Director, with assistance from the SBI's legal counsel, to negotiate and execute a commitment of up to \$100 million or 20%, whichever is less, in Warburg Pincus Equity Partners. This commitment will be allocated to the Basic Retirement Fund.

Approval by the SBI of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and neither the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by Warburg Pincus upon this approval. Until a formal agreement is executed by the Executive Director on behalf of the SBI, further due diligence and negotiations may result in the imposition of additional terms and conditions on Warburg Pincus or reduction or termination of the commitment.

3) Investment for the Basic Retirement Fund with an existing private equity manager, Thoma Cressey, in Thoma Cressey Fund VI

Thoma Cressey is seeking investors for a new \$400 million private equity fund, Thoma Cressey Fund VI. Thoma Cressey, formed in early 1998, is one of two successors to Golder, Thoma, Cressey, Rauner, Inc. From 1980-1996, Golder, Thoma, Cressey, Rauner, Inc. raised in excess of \$1.2 billion in equity capital for five investment funds. In late 1997, the principals of Golder, Thoma, Cressey, Rauner, Inc. began to consider the timing, size, management and ownership of a new Fund VI. After extensive discussion, it was decided that they would raise two separate new funds through two separate new firms. Thoma Cressey is one of those new firms. Thoma Cressey Fund VI will focus, like prior funds, on assembling a diverse portfolio of private equity investments.

More information on Thoma Cressey Fund VI is included as Attachment E.

RECOMMENDATION:

The Committee recommends that the SBI authorize the Executive Director, with assistance from the SBI's legal counsel, to negotiate and execute a commitment of up to \$40 million or 20%, whichever is less, in Thoma Cressey Fund VI. This commitment will be allocated to the Basic Retirement Fund.

Approval by the SBI of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and neither the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by Thoma Cressey upon this approval. Until a formal agreement is executed by the Executive Director on behalf of the SBI, further due diligence and negotiations may result in the imposition of additional terms and conditions on Thoma Cressey or reduction or termination of the commitment.

4) Investment for the Basic Retirement Fund with an existing private equity manager, Golder Rauner, in GTCR Golder Rauner Fund VI

Golder Rauner is seeking investors for a new \$800 million private equity fund, GTCR Golder Rauner Fund VI. Golder Rauner, formed in early 1998, is one of two successors to Golder, Thoma, Cressey, Rauner, Inc. From 1980-1996, Golder, Thoma, Cressey, Rauner, Inc. raised in excess of \$1.2 billion in equity capital for five investment funds. In late 1997, the principals of Golder, Thoma, Cressey, Rauner, Inc. began to consider the timing, size, management and ownership of a new Fund VI. After extensive discussion, it was decided that they would raise two separate new funds through two separate new firms. Golder Rauner is one of those

new firms. GTCR Golder Rauner Fund VI will focus, like prior funds, on assembling a diverse portfolio of private equity investments.

More information on GTCR Golder Rauner Fund VI is included as Attachment F.

RECOMMENDATION:

The Committee recommends that the SBI authorize the Executive Director, with assistance from the SBI's legal counsel, to negotiate and execute a commitment of up to \$100 million or 20%, whichever is less, in GTCR Golder Rauner Fund VI. This commitment will be allocated to the Basic Retirement Fund.

Approval by the SBI of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and neither the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by Golder Rauner upon this approval. Until a formal agreement is executed by the Executive Director on behalf of the SBI, further due diligence and negotiations may result in the imposition of additional terms and conditions on Golder Rauner or reduction or termination of the commitment.

5) Investment for the Basic Retirement Fund with an new private equity manager, Fox Paine, in Fox Paine Capital Fund

Fox Paine is seeking investors for a new \$400 million private equity fund, Fox Paine Capital Fund. Although this Fund is the first private equity fund managed by Fox Paine, the principals of this fund have extensive private equity investing experience. Fox Paine Capital Fund will focus, on assembling a diverse portfolio of private equity investments.

More information on Fox Paine Capital Fund is included as Attachment G.

RECOMMENDATION:

The Committee recommends that the SBI authorize the Executive Director, with assistance from the SBI's legal counsel, to negotiate and execute a commitment of up to \$40 million or 20%, whichever is less, in Fox Paine Capital Fund. This commitment will be allocated to the Basic Retirement Fund.

Approval by the SBI of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and neither the State of Minnesota,

the State Board of Investment or its Executive Director have any liability for reliance by Fox Paine upon this approval. Until a formal agreement is executed by the Executive Director on behalf of the SBI, further due diligence and negotiations may result in the imposition of additional terms and conditions on Fox Paine or reduction or termination of the commitment.

6) Investment for the Basic Retirement Fund with an existing resource manager, First Reserve, in First Reserve Fund VIII

First Reserve is seeking investors for a new \$750 million resource fund, First Reserve Fund VIII. This Fund is the ninth resource fund managed by First Reserve. First Reserve Fund VIII will focus, like prior funds, on assembling a diverse portfolio of oil and gas related resource investments.

More information on First Reserve Fund VIII is included as Attachment H.

RECOMMENDATION:

The Committee recommends that the SBI authorize the Executive Director, with assistance from the SBI's legal counsel, to negotiate and execute a commitment of up to \$100 million or 20%, whichever is less, in First Reserve Fund VIII. This commitment will be allocated to the Basic Retirement Fund.

Approval by the SBI of this potential commitment is not intended to be, and does not constitute in any way, a binding or legal agreement or impose any legal obligations on the State Board of Investment and neither the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by First Reserve upon this approval. Until a formal agreement is executed by the Executive Director on behalf of the SBI, further due diligence and negotiations may result in the imposition of additional terms and conditions on First Reserve or reduction or termination of the commitment.

ATTACHMENT A

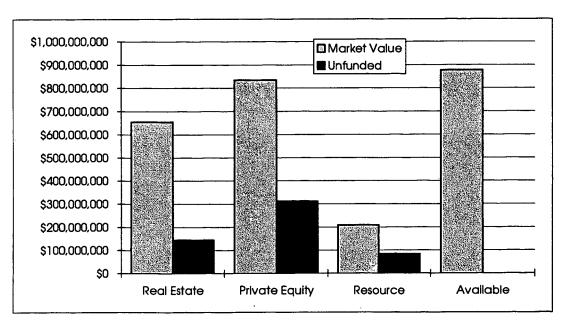
Minnesota State Board of Investment

Alternative Investments Basic Retirement Funds December 31, 1997

Market Value of Basic Retirement Funds Amount Available For Investment \$17,145,573,860 \$875,726,850

	Current Level	Target Level	Difference
Market Value	\$1,696,109,229	\$2,571,836,079	\$875,726,850
MV + Unfunded	\$2,235,044,607	\$3,429,114,772	\$1,194,070,165

Asset Class	Market Value	Unfunded Commitment	Total
Real Estate	\$653,526,751	\$144,174,891	\$797,701,642
	3.8%	0.8%	4.7%
Private Equity	\$834,638,724	\$311,296,323	\$1,145,935,047
,	4.9%	1.8%	6.7%
Resource	\$207.943.754	\$83,464,164	\$291,407,918
	1.2%	0.5%	1.7%
Total	\$1,696,109,229	\$538,935,378	\$2,235,044,607
	9.9%	3.1%	13.0%



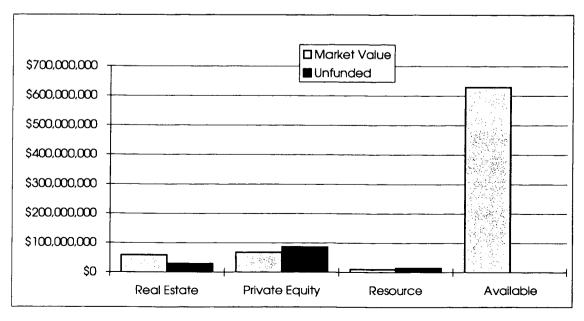
Minnesota State Board of Investment

Alternative Investments Post Retirement Fund December 31, 1997

Market Value of Post Retirement Fund Amount Available For Investment \$15,273,150,786 \$628,312,909

	Current Level	Target Level	Difference
Market Value	\$135,344,630	\$763,657,539	\$628,312,909
MV + Unfunded	\$263,210,733	\$1,527,315,079	\$1,264,104,346

Asset Class	Market Value	Unfunded Commitment	Total
Real Estate	\$58,534,735	\$28,209,148	\$86,743,883
	0.4%	0.2%	0.6%
Private Equity	\$66,611,291	\$85,929,803	\$152,541,094
	0.4%	0.6%	1.0%
Resource	\$10,198,604	\$13,727,152	\$23,925,756
	0.1%	0.1%	0.2%
Total	\$135,344,630	\$127,866,103	\$263,210,733
	0.9%	0.8%	1.7%



ATTACHMENT B

STATE OF MINNESOTA ALTERNATIVE INVESTMENTS - PRIVATE EQUITY December 31, 1997

	TOTAL	FUNDED	MARKET	英學院計畫	UNFUNDED	IRR	PERIOD
BASIC FUNDS	COMMITMENT	COMMITMENT	VALUE D	ISTRIBUTIONS	COMMITMENT	(%)	(YEARS
ALLIED	5,000,000	5,000,000	478,329	5,284,237	0	2.38	12.
BANK FUND							
Fund III	20,000,000	20,000,000	33,311,320	4,969,077	0	20.82	5.2
Fund IV	25,000,000	17,500,000	19,574,398	10,691	7,500,000	12.59	1.8
BLACKSTONE CAPITAL PARTNERS I	50,000,000	36,534,829	25,971,306	40,817,499	13,465,171	57.80	4.
BRINSON PARTNERS							
VPAF I	5,000,000	5,000,000	1,129,716	7,223,361	0	9.53	9.6
VPAF II	20,000,000	18,579,998	6,256,891	25,754,189	1,420,002	23.84	7.
CHURCHILL CAPITAL PARTNERS II	20,000,000	20,000,000	11,574,327	13,831,812		11.50	5.2
CONTRARIAN CAPITAL FUND II	37,000,000	14,837,070	14,914,180	12,446	22,162,930	1.71	0.0
CORAL PARTNERS	0.,000,000	,	,,	,_,,,,	,,,,,	****	•
IAI Ventures I	1,146,890	1,146,890	70,565	1,536,770	0	16.25	6.4
Fund I (Superior)	7,011,923	7,011,923	1,738,088	4,845,028	ő	-1.15	11.
Fund II	10,000,000	9,571,306	18,202,020	17,418,071	428,694	29.00	7.
Fund IV	15,000,000	9,000,000	10,475,469	867,187	6,000,000	12.60	3.4
DSV	10,000,000	10,000,000	5,947,966	17,706,594	0,000,000	8.34	12.
FIRST CENTURY	10,000,000	10,000,000	2,485,032	13,636,954	0	8.70	13.
GOLDER THOMA CRESSEY RAUNER	10,000,000	10,000,000	2,403,032	13,030,334	U	0.70	13.
	44.000.000	44,000,000	0.444.005	F0 700 440	0	04.00	10.
Fund III	14,000,000	14,000,000	8,114,895	50,783,418	-	31.22	
Fund IV	20,000,000	19,000,000	17,279,324	13,930,313	1,000,000	25.20	3.5
Fund V	30,000,000	14,700,000	14,541,152	0	15,300,000	-1.88	1.
HELLMAN & FRIEDMAN III	40,000,000	21,675,913	16,119,294	12,347,236	18,324,087	21.14	3.
AI U.S. VENTURE FUND II	15,000,000	6,369,773	5,876,094	343,980	8,630,227	-3.98	1.5
MR PARTNERSHIP	15,000,000	1,524,900	310,628	1,148,997	13,475,100	-1.54	5.
NMAN BOWMAN	7,500,000	7,500,000	1,700,217	8,074,382	0	3.54	12.
KOHLBERG KRAVIS ROBERTS							
1984 Fund	25,000,000	25,000,000	11,292,579	115,040,310	0	28.57	13.
1986 Fund	18,365,339	18,365,339	69,353,779	130,248,307	0	28.41	11.
1987 Fund	145,950,000	145,950,000	215,792,026	220,627,669	0	12.56	10.
1993 Fund	150,000,000	150,000,000	176,671,357	53,633,792	0	12.66	4.
1996 Fund	200,000,000	42,209,888	38,525,154	1,555,151	157,790,112	-14.26	1.3
MATRIX							
Fund II	10,000,000	10,000,000	1,146,774	19,868,174	0	13.46	12.4
Fund III	10,000,000	10,000,000	1,449,576	70,242,885	0	74.81	7.3
NORWEST VENTURE CAPITAL	10,000,000	10,000,000	128,682	15,368,680	0	5.70	14.
PIPER JAFFRAY HEALTHCARE FUNC	10,000,000	3,200,000	2,971,710	415,800	6,800,000	19.78	0.0
SUMMIT PARTNERS	,	-,		•			
Fund I	10.000.000	10,000,000	187,598	20.106.935	0	13.14	13.0
Fund II	30,000,000	28,500,000	3.754,991	65,325,350	1,500,000	28.66	9.0
Fund V	25,000,000	20,500,000	0,754,551	0	25,000,000	0.00	0.0
T. ROWE PRICE	151,197,095	151,197,095	20,978,432	181,074,720	0	17.36	10.
WARBURG PINCUS	50,000,000	37,500,000	61,101,000	3,461,450	12,500,000	38.88	3.
ZELL/CHILMARK	30,000,000	30,000,000	15,213,852	43,675,676	0	13.02	7.
LLLUINLMATIK	30,000,000	30,000,000	عددردا عردا	40,070,070	v	10.02	,,
TOTAL PRIVATE EQUITY (BASICS)	1,252,171,247	940,874,924	834,638,724	1,181,187,142	311,296,323		

COMMITMENT	COMMITMENT	VALUE D	STRIBUTIONS	COMMITMENT	(%)	WEARC
			in the Name of the	Action of the party of the part	100	(YEARS
40,000,000	16,232,396	12,970,207	6,469,324	23,767,605	11.11	3.6
25,000,000	12,724,499	12,493,808	312,989	12,275,501	0.85	2.
20,000,000	18,000,000	6,851,880	17,374,094	2,000,000	23.16	3.6
45,000,000	9,000,000	9,000,000	0	36,000,000	0.00	0.5
40,000,000	28,113,303	24,619,049	4,395,689	11,886,697	4.63	1.7
1,432,432	1,432,432	676,348	724,043	0	-12.79	0.9
		· ·				
	25,000,000 20,000,000 45,000,000 40,000,000	25,000,000 12,724,499 20,000,000 18,000,000 45,000,000 9,000,000 40,000,000 28,113,303 1,432,432 1,432,432	25,000,000 12,724,499 12,493,808 20,000,000 18,000,000 6,851,880 45,000,000 9,000,000 9,000,000 40,000,000 28,113,303 24,619,049 1,432,432 1,432,432 676,348	25,000,000 12,724,499 12,493,808 312,989 20,000,000 18,000,000 6,851,880 17,374,094 45,000,000 9,000,000 9,000,000 0 40,000,000 28,113,303 24,619,049 4,395,689 1,432,432 1,432,432 676,348 724,043	25,000,000 12,724,499 12,493,808 312,989 12,275,501 20,000,000 18,000,000 6,851,880 17,374,094 2,000,000 45,000,000 9,000,000 0 36,000,000 40,000,000 28,113,303 24,619,049 4,395,689 11,886,697 1,432,432 1,432,432 676,348 724,043 0	25,000,000 12,724,499 12,493,808 312,989 12,275,501 0.85 20,000,000 18,000,000 6,851,880 17,374,094 2,000,000 23.16 45,000,000 9,000,000 0 36,000,000 0.00 40,000,000 28,113,303 24,619,049 4,395,689 11,886,697 4.63 1,432,432 1,432,432 676,348 724,043 0 -12.79

TOTAL PRIVATE EQUITY 1,423,603,679 1,026,377,553 901,250,015 1,210,463,280 397,226,126

STATE OF MINNESOTA ALTERNATIVE INVESTMENTS - REAL ESTATE December 31, 1997

	TOTAL	FUNDED	MARKET		UNFUNDED	IRR	PERIOD
BASIC FUNDS	COMMITMENT	COMMITMENT	VALUE	DISTRIBUTIONS	COMMITMENT	(%)	(YEARS)
AETNA	42,376,529	42,376,529	95,312,274	0	0	5.92	15.8
AEW							
Fund III	20,000,000	20,000,000	2,099,421	19,199,052	0	0.59	12.3
Fund IV	15,000,000	15,000,000	173,134	4,230,309	0	-10.91	11.3
Fund V	15,000,000	15,000,000	6,409,095	5,627,134	0	-2.41	10.1
AMERICAN REPUBLIC	1	1	1	0	0	0.00	7.9
COLONY CAPITAL							
Colony Investors II	40,000,000	30,480,708	28,141,613	6,273,588	9,519,292	6.98	2.8
Colony Investors III	100,000,000	0	0	0	100,000,000	0.00	0.0
EQUITABLE	40,000,000	40,000,000	86,464,407	0	0	5.22	16.2
EQUITY OFFICE PROPERTIES TRUST	140,388,854	140,388,854	234,355,728	25,928,699	0	24.62	6.1
FIRST ASSET REALTY	916,185	916,185	363,307	668,870	0	4.41	3.7
HEITMAN	•	•	·	,			
Fund I	20.000,000	20,000,000	6,783,734	14,363,283	0	0.77	13.4
Fund II	30,000,000	30,000,000	20,136,164		0	2.99	12.1
Fund III	20,000,000	20,000,000	10,899,062	, ,	0	0.64	11.0
Fund V	20,000,000	20,000,000	19,709,368		0	6.85	6.1
LASALLE INCOME PARKING FUND	15,000,000	14,644,401	14,942,195	3,333,111	355,599	6.42	6.3
T.A. ASSOCIATES REALTY	. ,	, .	, ,	, ,	,		
Realty Associates III	40.000.000	39,200,000	42,428,826	14,667,816	800,000	10.45	3.6
Realty Associates IV	50,000,000	16,500,000	31,590,110		33,500,000	5.05	1.1
RREEF USA FUND III	75,000,000	75,000,000	42,084,043	•	0	3.99	
TCW	, , , , , , , , , , , ,		,,				
Fund III	40,000,000	40,000,000	7,648,929	40,248,449	0	1.90	12.4
Fund IV	30,000,000	30,000,000	3,985,341	23,425,133	0	-0.99	
TOTAL REAL ESTATE (BASICS)	753,681,569	609,506,678	653,526,751	262,885,239	144,174,891		

POST FUND	TOTAL COMMITMENT	FUNDED COMMITMENT	MARKET VALUE	DISTRIBUTIONS	UNFUNDED COMMITMENT	IRR (%)	PERIOD (YEARS)
COLONY INVESTORS II	40,000,000	30,480,708	28,141,613	6,273,588	9,519,292	6.98	2.8
WESTMARK REALTY ADVISORS		•					
Westmark Comm. Mtg. Fund II	13,500,000	13,397,500	13,107,343	2,329,297	102,500	9.36	2.5
Westmark Comm. Mtg. Fund III	21,500,000	15,531,000	15,604,134	554,774	5,969,000	10.21	1.1
Westmark Comm. Mtg. Fund IV	14,300,000	1,681,644	1,681,644	0	12,618,356	0.00	0.1
TOTAL REAL ESTATE (POST)	89,300,000	61,090,852	58,534,735	9,157,658	28,209,148		

TOTAL REAL ESTATE	842,981,569	670,597,530	712,061,485	272,042,898	172,384,039
**					

STATE OF MINNESOTA ALTERNATIVE INVESTMENTS - RESOURCE December 31; 1997

The second secon	TOTAL	FUNDED	MARKET		UNFUNDED	Mark Street	PERIOD
BASIC FUNDS	COMMITMENT	COMMITMENT	VALUE	DISTRIBUTIONS	COMMITMENT	(%) (YEARS)
FIRST RESERVE CORP.							
AMGO I	15,000,000	15,000,000	11,773,455	6,341,232	0	1.42	16.3
AMGO II	7,000,000	7,000,000	15,053,830	4,135,479	0	8.74	14.9
First Reserve SEA	12,300,000	12,300,000	13,946,914	24,035,594	0	16.01	9.6
First Reserve Fund V	16,800,000	16,800,000	40,696,974	19,152,370	0	22.42	7.7
First Reserve Fund VII	40,000,000	17,412,631	26,910,279	2,981,814	22,587,369	95.33	1.5
APACHE III	30,000,000	30,000,000	4,000,000	41,398,891	0	10.84	11.0
MORGAN OIL & GAS	15,000,000	15,000,000	10,765,435	9,835,702	0	4.72	9.4
SIMMONS							
SCF Fund II	17,000,000	14.847.529	45,111,114	6,148,819	2,152,471	31.41	6.4
SCF Fund III	25,000,000	16,275,676	39,685,752	7,616,804	8,724,324	93.60	2.5
SCF Fund IV	50,000,000	0	0		50,000,000	0.00	0.1

POST FUND	TOTAL COMMITMENT :: C	FUNDED COMMITMENT	MARKET VALUE DIS	Street Street Street Street	UNFUNDED OMMITMENT	经 库证证证据	ERIOD EARS)
MERIT ENERGY PARTNERS B	24,000,000	10,272,848	10,198,604	307,302	13,727,152	3.16	1.5
TOTAL RESOURCE (POST)	24,000,000	10,272,848	10,198,604	307,302	13,727,152		

TOTAL RESOURCE 252,100,000 154,908,684 218,142,358 121,954,006 97,	

ATTACHMENT C

PRIVATE EQUITY MANAGER SUMMARY PROFILE

I. Background

Name of Fund:

Coral Partners V

Type of Fund:

Private Equity Limited Partnership

Total Fund Size:

\$100 million

Fund Manager:

Coral Ventures

60 South Sixth Street

Suite 3510

Minneapolis, MN 55402 Phone: (612) 335-8666 Fax: (612) 335-8668

Manager Contact:

Yuval Almog

Linda L. Watchmaker

II. Organization & Staff

Coral Partners V, L.P. is a limited partnership formed for the purpose of making venture capital investments in the technology and healthcare industries. The Principals of the General Partner are Yuval Almog and Peter McNerney, each of whom was previously a partner in the IAI Venture Capital Group.

Coral Ventures has offices in Minneapolis and California, and employs nine individuals (six professionals and three administrative staff). The firm also anticipates hiring two additional investment professionals in the near future.

Coral Partners V, L.P. (the "Fund") is the third fund raised by Coral Ventures.

III. Investment Strategy

The Fund will focus on multi-stage venture capital investments in the technology and healthcare sectors. The Principals anticipate that the Fund portfolio will consist of 18-20 portfolio

companies. A number of Coral Partners IV investments will be in companies with a substantial presence in Minnesota.

The Fund will not invest more than:

- 10% of aggregate commitments in any single investment,
- 20% of aggregate commitments in the securities of portfolio companies of Coral Partners II or Coral Partners IV.

IV. Investment Performance

Previous fund performance as of December 31, 1997 is shown below. An asterisk (*) indicates a fund in which the SBI has invested.

Fund Name	Inception Date	Total Equity Commitments	Net IRR from Inception
*Coral Partners Fund I (Superior) (1)	1986	\$35.9 million	(2.1%)
*IAI Ventures Fund I (1) (2)	1991 ⁽³⁾	\$50.2 million	14.7%
*Coral Partners Fund II	1990	\$63.2 million	26.5%
*Coral Partners Fund IV	1994	\$78.3 million	12.8%

⁽¹⁾ IAI Ventures Fund I and Coral Partners Fund I were primarily raised and invested by members of the original IAI Ventures team.

V. General Partner's Investment

The General Partner will make capital contributions equal to 1% of the Fund's aggregate capital.

VI. Takedown Schedule

A takedown of 5% of capital commitments will be due upon first closing. Thereafter, each Limited Partner's commitment will be payable when called upon 15 days' notice.

⁽²⁾ IAI Ventures Fund I was liquidated in December 1997.

⁽³⁾ SBI inherited IAI Venture Fund I from police and fire consolidations in 1991 and 1994. IRR reflects performance since these consolidation dates.

VII. Fees

The Fund will pay the Manager an annual management fee equal to a percentage of capital commitments, payable in advance on a quarterly basis, as defined below:

Year	Rate
Year 1	2.00%
Year 2	2.00%
Year 3	2.25%
Years 4 - 7	2.50%
	2.5% of capital commitments less
Thereafter	the cost basis of realized investments
	and writedowns.

All fees received by the General Partner from portfolio companies (including directors' fees, management fees and investment banking fees) will reduce the management fee.

VIII. Term

The Fund's term will be ten years from the initial closing date, subject to extension, with the approval of a majority interest of Limited Partners, for up to three additional one-year terms.

IX. Distributions

Distribution of cash and securities will be made at the discretion of the General Partner.

- First, to all Partners in proportion to their commitments until the Limited Partners have received aggregate cash and in-kind distributions equal to their capital contributions;
- Second, to the General Partner in an amount equal to 20% of the net realized income from portfolio companies; and
- Third, to all Partners in proportion to their capital accounts.

After the final distribution of the assets of the Fund, if the General Partner has received cumulative distributions in excess of its 20% carried interest, it will contribute to the Fund an amount equal to such excess, provided that such contribution will not exceed 100% of the amount distributed to the General Partner (net of amounts distributed to pay taxes).

ATTACHMENT D

PRIVATE EQUITY MANAGER SUMMARY PROFILE

I. Background

Name of Fund: Warburg Pincus Equity Partners

Type of Fund: Private Equity Limited Partnership

Total Fund Size: \$3 billion

Fund Manager: E.M. Warburg, Pincus & Co., LLC

466 Lexington Avenue New York, NY 10017 Phone: (212) 878-0600 Fax: (212) 878-9351

Manager Contact: Daphne Philipson

II. Organization & Staff

The Warburg, Pincus limited partnerships are managed by 38 managing directors of E.M. Warburg, Pincus & Co., LLC (the "Manager") who are partners of Warburg, Pincus & Co. (the "General Partner"), under the leadership of a 10-person operating committee. Warburg, Pincus' private equity group consists of 132 people, 62 of whom are investment professionals. Of the 62 professionals, 10 are located in London and 10 are located in Hong Kong.

Warburg, Pincus is the successor to E.M. Warburg & Co., Inc., which was founded in 1939 by the late Eric M. Warburg. After World War II, Mr. Warburg increasingly became involved in the management of M.M. Warburg & Co. in Hamburg, the center of the Warburg family banking interests since the late eighteenth century. In 1966, Lionel I. Pincus became the firm's Chief Executive Officer and redirected its activities to emphasize private equity investing. Today, Warburg, Pincus is owned by its partners, all of whom are directly involved in the firm's businesses and a significant majority of whom are directly involved in its private equity investment business.

III. Investment Strategy

The firm has the capability to invest at all stages of a business's life cycle – from venture capital start-ups to developing companies to buyouts and recapitalizations.

Warburg, Pincus also has developed expertise in certain industries including communications, consumer products and services, financial services, healthcare, media, natural resources, and technology. By building excellence across all stages of private equity investing, as well as in sizeable industry sectors, both domestically and internationally, Warburg, Pincus has been able to increase its exposure to attractive investment opportunities and reduce its exposure to underperforming sectors or industries.

IV. Investment Performance

Previous fund performance as of December 31, 1997 is shown below. An asterisk (*) indicates a fund in which the SBI has committed capital.

Fund Name	Inception Date	Total Equity Commitments	Net IRR from Inception
EMW Ventures, Inc.	1971	\$ 41 million	19%
Warburg Pincus Associates, L.P.	1980	\$ 101 million	19%
Warburg Pincus Capital Partner, L.P.	1983	\$ 341 million	15%
Warburg Pincus Capital Company, L.P.	1986	\$1,175 million	19%
Warburg Pincus Investors, L.P.	1989	\$1,775 million	16%
* Warburg Pincus Ventures, L.P.	1994	\$2,022 million	37%

V. General Partner's Investment

Warburg, Pincus has committed to subscribe for \$100 million on the same terms as the other Limited Partners.

VI. Takedown Schedule

Capital calls will be payable upon 15 days' written notice to the Limited Partners.

VII. Fees

An annual management fee (deducted in computing profits) equal to 1.5% of commitments will be paid to the Manager during the Investment Period (six years from the initial closing). After the Investment Period, a fee of 1.5% based on remaining cost of investments will be paid.

Warburg, Pincus will not charge fees for investment banking or financial advisory services rendered to the Partnership, and any fees received from portfolio companies will be applied to reduce the management fee.

The Partnership will pay up to \$1,000,000 of expenses in connection with organizing the Partnership.

IX. Term

The Partnership's term will be twelve years from the initial closing date, subject to extension by the General Partner (with Advisory Committee approval) for up to two years to permit orderly dissolution.

X. Distributions

80% of profits to the Limited Partners and 20% to the General Partner, except for income derived from cash and cash equivalents (all of which will accrue to the Limited Partners).

Distributions prior to the termination of the Partnership will be in cash whenever possible. The General Partner will have the discretion to make distributions in kind of marketable securities, which will be valued at the average closing price over the 20 subsequent trading days. No distribution of profits will be made unless the value of the remaining portfolio exceeds 110% of its remaining cost.

Upon the final distribution of proceeds, the General Partner will be obligated to return to the Limited Partners any amount previously distributed to the General Partner as its carried interest to the extent such amount exceeds 20% of aggregate net profits.

X. Reinvestment of Capital

Reinvestment of up to 10% (25% with Advisory Committee approval) of total commitments for follow-on investments will be permitted after the Investment Period. Reinvestment of proceeds from investments held for less than one year is permitted.

ATTACHMENT E

PRIVATE EQUITY MANAGER SUMMARY PROFILE

I. Background

Name of Fund:

Thoma Cressey Equity Partners

Type of Fund:

Private Equity Limited Partnership

Total Fund Size:

\$400 million

Fund Manager:

Thoma Cressey Equity Partners

6100 Sears Tower Chicago, IL 60606 Phone: (312) 382-2200 Fax: (312) 382-2201

Manager Contact:

Carl Thoma

II. Organization & Staff

Thoma Cressy Equity Partners ("TC/EP"), formed in early 1998, is one of two successors to Golder, Thoma, Cressey, Rauner, Inc., the current name of the firm originally established in 1980 by Bryan Cressey, Stanley Golder and Carl Thoma when they left First Chicago Corporation's venture capital group. Bruce Rauner, joined the firm in 1981. Stanley Golder reduced his involvement with the firm starting with Fund III in 1987.

From 1980-1996, Golder, Thoma, Cressey, Rauner, Inc. raised in excess of \$1.2 billion in equity capital for five investment funds. In late 1997, the principals of Golder, Thoma, Cressey, Rauner, Inc. began to consider the timing, size, management and ownership of a new Fund VI. After extensive discussion, it was decided that they would raise two separate new funds through two separate new firms.

TC/EP, formed by Golder, Thoma, Cressey, Rauner, Inc. principals Carl Thoma, Bryan Cressey and Lee M. Mitchell, is one of these two new firms. They have been joined by four other professionals, William W. Liebeck, Robert L. Manning, Jr., David J. Mayer and Robert S. Levin. In the past, each of these professionals has previously worked with Thoma and Cressey and some were associated with Golder, Thoma, Cressey, Rauner, Inc.

Carl Thoma is president and chief investment officer of TC/EP and Lee Mitchell is the operating officer. The partners will be supported by seven associates and analysts, an information technology specialist and five administrative assistants. All of the accounting and reporting functions of Fund VI initially will be performed by the existing accounting staff of Golder, Thoma, Cressey, Rauner, Inc..

TC/EP maintains offices in Chicago, Denver (headed by Robert Manning) and San Francisco (headed by William Liebeck).

All of the partners of TC/EP other than Bryan Cressey will devote their full business time and efforts to Fund VI (subject only to their usual personal, civic and charitable activities and, in the case of Thoma, Cressey and Mitchell, their continuing obligations to Golder, Thoma, Cressey, Rauner, Inc. portfolio companies). Since TC/EP is smaller than Golder, Thoma, Cressey, Rauner, Inc. and has no present intention to develop as a substantially larger firm, Carl Thoma will spend less time than he has in the recent past on industry relations and firm leadership and more time on investment activities. Bryan Cressey intends to continue his current practice of spending a substantial amount of his time, but not full-time, on Fund VI.

III. Investment Strategy

TC/EP will invest primarily in consolidating fragmented industries in partnership with experienced CEOs to build leading companies through acquisition and internal growth.

The industry consolidation strategy is both an investment process and a means to create additional value. As applied by TC/EP, it first involves identifying undervalued and fragmented industry sectors, experienced CEO partners from these sectors, and less competitive transactions. This leads to the acquisition of strong "platform" companies, to be managed by the CEO partners, from which additional acquisitions can be made and the benefits of business combinations can be captured. The result should be larger, more profitable companies that are leaders in their industries and, consequently, valued highly in the public or private market.

IV. Investment Performance

Previous fund performance as of December 31, 1997 is shown on the next page. An asterisk (*) indicates a fund in which the SBI has committed capital.

Fund Name	Inception Date	Total Equity Commitments	Net IRR from Inception
Golder Thoma Fund I	1980	\$ 60 million	. 31%
Golder Thoma Fund II	1984	\$100 million	19%
* Golder Thoma Fund III	1987	\$235 million	31%
* Golder Thoma Cressey Fund IV	1994	\$312 million	34%
* GTCR Fund V	1996	\$521 million	NM

V. General Partner's Investment

The partners of TC/EP will invest approximately \$20 million in Fund VI.

VI. Takedown Schedule

Capital contributions by the Limited Partners will be payable when called by TC/EP.

VII. Fees

Fund VI will pay to TC/EP, in advance on a quarterly basis, an annual management fee equal to 1.5% of committed capital in year one, 1.75% in year two, 2% in year three and 2.25% in years four through seven. During years eight through ten, the management fee will decrease 10% per year from the prior year's level.

Fund VI will pay organizational expenses of up to \$400,000.

IX. Term

Fund VI will have a ten-year initial term. The General Partner will have the option to extend the Fund for up to three additional one-year terms to permit orderly dissolution, subject to veto by a vote of a majority of the Limited Partners.

X. Distributions

Income, gains, losses and expenses will generally be allocated 80% to the accounts of all partners in proportion to their capital contributions and 20% to the account of the General Partner, except that short term interest will be allocated according to capital accounts.

Distributions of cash or securities will be at the discretion of the General Partner. It is anticipated, however, that net ordinary income will be distributed at least annually, that net investment gains realized in cash during the first six years will be distributed periodically and that the full net cash proceeds from dispositions of investments after the first six years will be distributed periodically.

Ordinary income (net of Fund VI expenses) will be distributed in proportion to the allocations set forth above. Proceeds from the sale of securities will be distributed:

- (a) prior to the time that the Limited Partners have received distributions equal to their capital contributions, in proportion to the allocations set forth above, except that the General Partner will not be entitled to receive any such distribution (other than to pay taxes) unless the Limited Partners' fair value capital accounts (plus amounts previously distributed to Limited Partners) are at least 120% of the Limited Partners' capital contributions, and
- (b) after the Limited Partners have received distributions equal to their capital contributions, or if the Limited Partners' fair market capital accounts are at least 120% of the Limited Partners' capital contributions, in proportion to capital accounts.

XI. Reinvestment of Capital

The General Partner reserves the right during the first six years of Fund VI to call back from each Limited Partner, in proportion to such Limited Partner's interest in Fund VI, not more than \$50 million of previously distributed principal to be used to fulfill commitments to portfolio companies.

ATTACHMENT F

PRIVATE EQUITY MANAGER SUMMARY PROFILE

I. Background

Name of Fund:

GTCR Golder Rauner, L.P.

Type of Fund:

Private Equity Limited Partnership

Total Fund Size:

\$750 million

Fund Manager:

GTCR Golder Rauner, L.L.C.

6100 Sears Tower Chicago, IL 60606 Phone: (312) 382-2200 Fax: (312) 382-2201

Manager Contact:

Bruce Rauner

II. Organization & Staff

GTCR Golder Rauner, L.L.C., formed in early 1998, is one of two successors to Golder, Thoma, Cressey, Rauner, Inc., the current name of the firm originally established in 1980 by Bryan Cressey, Stanley Golder and Carl Thoma when they left First Chicago Corporation's venture capital group. Bruce Rauner joined the firm in 1981. Stanley Golder reduced his involvement with the firm starting with Fund III in 1987.

From 1980-1996, Golder, Thoma, Cressey, Rauner, Inc. raised in excess of \$1.2 million in equity capital for five investment funds. In late 1997, the principals of Golder, Thoma, Cressey, Rauner, Inc. began to consider the timing, size, management and ownership of a new Fund VI. After extensive discussion, it was decided that they would raise two separate new funds through two separate new firms.

Bruce Rauner, the present co-head of the GTCR Companies, is leading six of the current nine Principals and all of the Associates, Analysts, and support personnel in forming a new GTCR firm, GTCR Golder Rauner.

GTCR Golder Rauner's staff of six Principals, four Associates, four Analysts, a Chief Financial officer and fifteen support personnel conduct a nationwide investment program from an office located in Chicago.

III. Investment Strategy

GTCR Golder Rauner invests in consolidating, fragmented industries by teaming with top executives to build companies through acquisition and internal growth. The Principals proactively pursue consolidation investments in those industries where the firm's market knowledge, deal contacts and management relationships make it a leading private equity investor.

GTCR Golder Rauner initiates industry consolidation investments either by funding seed capital to form a new company with management or by teaming with the existing management of a platform company. In both situations, the firm provides significant additional equity capital for management to build a market leading company by acquiring other companies in the industry and by growing internally.

IV. Investment Performance

Previous fund performance as of December 31, 1997 is shown below. An asterisk (*) indicates a fund in which the SBI has committed capital.

Fund Name	Inception Date	Total Equity Commitments	Net IRR from Inception
Golder Thoma Fund I	1980	\$ 60 million	31%
Golder Thoma Fund II	1984	\$100 million	19%
* Golder Thoma Fund III	1987	\$235 million	31%
* Golder Thoma Cressey Fund IV	1994	\$312 million	34%
* GTCR Fund V	1996	\$521 million	NM

V. General Partner's Investment

The Principals will make a cash contribution of at least \$20 million.

VI. Takedown Schedule

Capital contributions will be drawn down as needed, with not less than 10 days' prior written notice.

VII. Fees

The Partnership will, commencing on the first drawdown of capital, pay the General Partner an annual management fee, payable quarterly in advance, equal to:

Year(s)	(s) Management Fee		
1	1.5% of commitments		
2	1.75% of commitments		
3	2.0% of commitments		
4-7	2.25% of commitments		
8	1.91% of commitments		
9	1.63% of commitments		
10	1.38% of commitments		
Thereafter	2.0% of invested capital, not to exceed		
	the amount payable in year ten		

The management fee will be reduced by (i) all of any director's fees, financial consulting fees or advisory fees earned by the General Partner from Portfolio Companies and (ii) any transaction fees and break-up fees from transactions not completed which are paid to the General Partner or the Partnership.

The Partnership will reimburse the General Partner for up to \$750,000 of the partnership's organizational and startup expenses.

IX Term

The term of the Partnership will be ten years, but may be extended for up to a maximum of three consecutive one-year periods at the discretion of the General Partner if the Partnership holds non-marketable securities, so long as Limited Partners holding at least a majority of interests do not oppose any such extension.

X. Distributions

Net proceeds attributable to the disposition of investments in portfolio companies, as well as distributions of securities in kind, together with any dividends or interest income received with respect to investments in portfolio companies that are not reinvested in portfolio companies, will be distributed in the following order of priority:

- (a) first, 100% to all Partners in proportion to funded commitments until the cumulative amount distributed in respect of investments then and previously disposed of equals the aggregate of the following:
 - (i) the funded commitments attributable to all realized investments plus the amount of write-down, if any, with respect to each unrealized investment written down as of that time; and
 - (ii) the funded commitments attributable to all organizational expenses, management fees and other expenses paid to date and allocated to realized investments and unrealized investments written down as of that time; and
- (b) thereafter, 80% to all Partners in proportion to funded commitments and 20% to the General Partner.

All short-term interest income, other than short-term interest income received from portfolio companies, including interest income earned on bridge financings during the first year, will be distributed 100% to the Partners in proportion to funded commitments; provided that any short-term investment income on the undistributed net profits from the disposition of, or otherwise with respect to, a portfolio company will be distributed to the Partners pro rata according to their respective shares of such undistributed net profits.

The General Partner may in its sole discretion (but is not required to) make distributions of cash or securities at any time and from time to time. The General partner presently anticipates distributing dividends, interest and other income received with respect to portfolio company investments at least annually, in each case net of amounts held in reserve to meet Partnership obligations and liabilities.

Prior to the termination of the Partnership, distributions will be in cash or marketable securities. Upon termination of the Partnership, distributions may also include restricted securities or other assets of the Partnership.

After termination of the Partnership, the General Partner will be required to restore funds to the Partnership to the extent that it may have received cumulative distributions in excess of amounts otherwise distributable to the General Partner pursuant to the distribution formula set forth above, but in no event more than the cumulative distributions received by the General Partner with respect to its 20% carried interest, less income taxes thereon.

XI. Limited Partner Giveback

If the Partnership incurs any liability which it has insufficient funds to pay, (1) it may (notwithstanding the six year expiration of the Partners' Commitments) call such previously uncalled Commitments and (ii) after all Commitments have been called or terminated, it may call for such additional amount as is necessary to satisfy

such liability, in which case each Partner shall contribute to the Partnership its pro rata share of the amount called by the General Partner based on Commitments, but in no event shall any Partner be required to contribute amounts pursuant to this clause (ii) which in the aggregate exceeds the aggregate amount of distributions received by such Partner from the Partnership on account of such Commitment, less income taxes thereon; provided that in no event shall any Partner be required to contribute amounts pursuant to clause (ii)above after the third anniversary of the Partnership's final distribution of assets except to fund a liability or liabilities that the General Partner or the Partnership is in the process of litigating, arbitrating or otherwise settling as of such third anniversary date.

ATTACHMENT G

PRIVATE EQUITY MANAGER SUMMARY PROFILE

I. Background

Name of Fund:

Fox Paine Capital Fund

Type of Fund:

Private Equity Limited Partnership

Total Fund Size:

\$400 million

Fund Manager:

Fox Paine and Company, L.P.

950 Tower Lane, Suite 1950

Foster City, CA 94404 Phone: (650) 525-1300 Fax: (650) 525-1396

Manager Contact:

Saul A. Fox

W. Dexter Paine, III

II. Organization & Staff

Fox Paine and Company, L.P. is a privately held investment firm co-founded in 1997 by Saul Fox and Dexter Paine. Messrs. Fox and Paine have over 24 years of investing experience, as well as prior careers in law and commercial banking. Mr. Fox was previously a general partner at Kohlberg Kravis Roberts & Co. Prior thereto, he was associated with the law firm of Latham & Watkins. Mr. Paine was previously a general partner at Kohlberg & Co. Prior thereto, he was a general partner at Robertson Stephens & Co. and a vice president in the structured finance group at Bankers Trust Company.

The firm has ten employees (five investment professionals and five administrative staff), with plans to add four additional investment professionals in the near future.

Fox Paine Capital Fund (the "Fund") is the first fund raised by the firm.

III. Investment Strategy

The purpose of the Fund is to acquire, on a conservative price-to-value basis, middle market operating businesses and significantly enhance the total return on investment through a combination of extensive hands-on participation and the prudent use of financial leverage.

Fox Paine's value creation strategy is based on three tenets: (i) acquire businesses on a conservative price-to-value basis; (ii) provide extensive hands-on participation by the Principals to grow revenues and cash flow; and (iii) produce successful exit strategies built on generating significant industry interest and selling to strategic buyers rather than making stock distributions.

Over the years, Messrs. Fox and Paine have employed their value creation strategy through investments targeting (a) out-of-favor industries and companies; (b) complex transactions requiring careful due diligence and innovative structuring; and (c) management partners with the ability and insight to substantially enhance the value of their respective company.

The Fund will not invest more than:

- 25% of aggregate commitments in any single investment (33-1/3% with advisory board approval),
- 25% of aggregate commitments in investments outside North America,
- 15% of aggregate commitments in non-control, public or private, debt or equity securities where the Fund is not a lead or an organizing investor.

IV. Investment Performance

Since 1985, Messrs. Fox and Paine have had responsibility for 17 transactions totaling \$3.4 billion in aggregate purchase price, in which \$711 million of equity capital was invested. These transactions have generated a net IRR of 33.5% ¹ and a return on investment of 4.1 times invested equity.

V. General Partner's Investment

The General Partner and affiliates will commit \$7.5 million.

VI. Takedown Schedule

Commitments will be drawn down on an as-needed basis, with a minimum of ten business days' prior notice to the limited partners.

VII. Fees

The Fund will pay the General Partner an annual management fee, payable semiannually in advance, of two percent (2.0%) of aggregate capital commitments for the first six years (the

The net IRR is derived by overlying Fund terms and conditions on cashflows associated with the 17 transactions.

commitment period). Thereafter, the management fee will equal two percent (2.0%) of funded commitments less the cost basis of realized investments.

The management fee will be reduced by 50% of all (a) monitoring fees, consulting fees, investment banking fees, advisory fees and directors' fees paid by portfolio companies, and (b) transaction fees and breakup fees paid by portfolio companies, net of expenses.

The Fund will pay organizational expenses, not to exceed 0.75% of total commitments.

VIII. Term

Following the end of the commitment period, the Fund will terminate on the sooner of (a) the distribution of sales proceeds or securities attributable to all remaining Fund investments, or (b) seven years after the purchase of the last acquired portfolio company. The Fund may be extended by the general partner for up to two additional one-year periods (with majority approval of investors required for the second extension).

IX. Distributions

All dividends, interest and other income (other than net proceeds from the sale or other disposition of investments) received in cash by the Fund, net of expenses and appropriate reserves, will be distributed quarterly. Net proceeds from the sale or other disposition of an investment, net of expenses and appropriate reserves, will be distributed as soon as practicable after receipt.

All distributions will be made as follows:

- First, to all Fund investors in proportion to funded commitments until Fund investors receive distributions equal to the Fund's aggregate investments in all realized and unrealized investments, all organizational and offering expenses, all net management fees, plus all other costs and expenses of the Fund; and
- Second, (a) 80% to all Fund investors in proportion to funded commitments and (b) 20% to the General Partner.

All distributions will be made in cash or marketable securities. Upon termination of the Fund, distributions may also included restricted securities or other assets of the Fund.

X. Reinvestment of Capital

During the commitment period, the General Partner may retain or, to the extent returned to investors, recall for investment the cost basis of any investments held less than twelve months.

ATTACHMENT H

RESOURCE MANAGER SUMMARY PROFILE

I. Background

Name of Fund:

First Reserve Fund VIII

Type of Fund:

Resource Limited Partnership

Total Fund Size:

\$600 million

Fund Manager:

First Reserve Corporation

475 Steamboat Road Greenwich, CT 06830 Phone: (203) 661-6601 Fax: (203) 661-6729

Manager Contact:

John A. Hill

Cathleen M. Ellsworth

II. Organization & Staff

First Reserve is managed by William E. Macauley, John A. Hill and David H. Kennedy. This team, which owns the majority of First Reserve's stock, has worked together since the firm was established in 1983. The firm has 17 employees (12 professionals and five support staff. Principals of the employee-owned firm have owned, created and financed a number of successful energy and non-energy companies, developed or adapted a variety of financing techniques for the energy industry, and have been responsible for large asset management operations.

First Reserve Fund VIII (the "Fund") is the ninth energy fund raised and managed by First Reserve Corporation.

III. Investment Strategy

First Reserve intends to apply the same strategy in Fund VIII that the Principals have pursued in prior buyout/equity funds managed by First Reserve, namely, long term capital appreciation from control investments in established companies engaged in various energy or energy-related activities that have (i) strong management, (ii) favorable internal growth prospects and (iii) excellent opportunities for follow-on acquisitions.

First Reserve generally does not rely on high levels of debt to achieve its base case returns. The firm's investments in core vehicles are initially structured with significant equity to provide adequate capital to finance early acquisitions, expand distribution systems or develop new products and services. The firm is also prepared to invest additional equity in core holdings to finance acquisitions or other growth opportunities which cannot be prudently financed by the company without additional equity.

The Fund will not invest more than 20% of aggregate commitments in any single portfolio company (up to 35% with a bridge financing).

IV. Investment Performance

Previous fund performance as of December 31, 1997 is shown below. An asterisk (*) indicates a fund in which the SBI has committed capital.

Fund Name	Inception Date	Total Equity Commitments	Net IRR from Inception
*AmGO I	6/81	\$144.3 million	0.5%
*AmGO II	1/83	\$36.4 million	7.6%
AmGO III (1)	7/86	\$16.7 million	7.6%
*First Reserve SEA Fund	5/88	\$62.6 million	13.4%
*First Reserve Fund V	5/90	\$84.2 million	20.6%
First Reserve Fund V-2	10/90	\$33.7 million	22.6%
First Reserve Fund VI	1/92	\$184.2 million	46.3%
*First Reserve Fund VII	8/96	\$243.9 million	70.4%

⁽¹⁾ AmGO III was liquidated in December 1996.

V. General Partner's Investment

The General Partner and its affiliates will make a cash contribution equal to 2% of total commitments, up to \$12 million.

VI. Takedown Schedule

Commitments are expected to be drawn down as needed, generally with not less than ten business days' prior written notice.

VII. Fees

During the commitment period (five years from the final closing), the Fund will pay First Reserve an annual management fee, quarterly in advance, equal to the sum of (a) 2% of aggregate commitments up to \$500 million; and (b) 1% of aggregate commitments in excess of \$500 million.

Following the commitment period, the annual management fee will be reduced to an amount equal to the product of (a) the actual blended management fee percentage during the commitment period times (b) funded commitments.

The management fee will be reduced by (a) 100% of the Fund's allocable share of any directors' fees, financial consulting fees and advisory fees; and (b) 50% of transaction fees and net breakup fees.

The Fund will bear organizational expenses up to \$1 million.

VIII. Term

The Fund terminates ten years from the initial closing date. The General Partner may extend the term of the Partnership for up to two one-year periods at its discretion.

IX. Distributions

Income from cash equivalents and similar temporary investments will be distributed 100% among all Partners in proportion to their respective funded commitments.

In general, investors will receive distributions in proportion to funded commitments in the following order of priority:

- a return of all investment costs, net management fees and other expenses attributable to realized investments and writedowns; plus
- an 8% preferred return on the above amounts; then
- 80% to the General Partner and 20% to the Limited Partners as a catch-up until the General Partnerhas received its 20% carried interest; and
- 80% to the Limited Partner and 20% to the General Partner.

Upon termination of the Fund, the General Partner will be required to restore funds to the Partnership to the extent that it may have received cumulative distributions in excess of amounts otherwise distributable to the General Partner pursuant to the distribution scheme outlined above.

Distributions prior to the termination of the Fund may only take the form of cash or marketable securities. In connection with the termination of the Fund (or the withdrawal of a Limited Partner), distributions may also include restricted securities or other assets of the Fund.

X. Reinvestment of Capital

A permanent investment in a portfolio company which is refinanced or otherwise repaid and which is returned to the Partners, in whole or in part, within two years following the date of closing of such investment may be added, at the election of the General Partner, to unfunded commitments and if so added, will be treated as such thereafter.