MINNESOTA STATE BOARD OF INVESTMENT MEETING
March 2, 1994
&
INVESTMENT ADVISORY COUNCIL MEETING
March 1, 1994

AGENDA
STATE BOARD OF INVESTMENT
MEETING
Wednesday, March 2, 1994
8:30 A.M. - Room 125
State Capitol - Saint Paul

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1.	**Approval of Minutes of December 15, 1993**	
2.	**Report from the Executive Director (H. Bicker)**	
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	B. Portfolio Statistics (December 31, 1993)	B
	C. Administrative Report	C
	1. Budget Report	
	2. Travel Report	
3.	**Reports from the Investment Advisory Council (J. Yeomans)**	
	A. Asset Allocation Committee	D
	1. Discussion of Equity Management Structure in the Assigned Risk Plan	
	2. Approval of Position Paper on Post Retirement Fund	
	B. Stock and Bond Manager Committee	E
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	3. Recommendation to Establish a Passive Manager Review Committee	
	C. Alternative Investment Committee	F
	1. Results of Annual Review Session (Churchill Capital)	
	2. Commitment to New Real Estate Manager (TA Associates Realty Fund III)	
	3. Commitment to Existing Private Equity Manager (Coral Partners IV)	
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4.	**Report from the SBI Administrative Committee (M. McGrath)**	G
	1. Update on Police and Fire Pension Fund Activity	
	2. Review of Contract Negotiations for the Deferred Compensation Plan	

Minutes
State Board of Investment
December 15, 1993

The State Board of Investment (SBI) met at 8:30 A.M. on Wednesday, December 15, 1993 in Room 125, State Capitol, St. Paul, Minnesota. Governor Arne H. Carlson, Chair; State auditor Mark B. Dayton; State Treasurer Michael A. McGrath; Secretary of State Joan Anderson Growe and Attorney General Hubert H. Humphrey III were present.

Mr. Carlson called the meeting to order and the minutes of the September 16, 1993 and October 27, 1993 meetings 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, Basic and Post Funds had outperformed their respective return objectives over the period. In response to a request from Mr. Carlson, Mr. Bicker reviewed the returns against each objective, as stated in the meeting materials and clarified that the reported returns are net of all transaction costs. In response to questions from Mr. Carlson regarding performance since implementing the tilted index fund strategy, Mr. Bicker stated that the Basic Funds' have performed very well and are currently outperforming the Funds' objectives. He added that the Basic Funds had exceeded the Composite for the last year and 3 year periods (Basics 1 yr. 15.6% vs. Composite 1 yr. 14.4% and Basics 3 yrs. 16.9% vs. Composite 3 yr. 16.0%). Mr. Bicker stated that the Post Fund had exceeded its composite index for the quarter (Post Fund 3.6% vs. Composite 3.1%).

Mr. Bicker reported that the domestic stock manager group had outperformed the Wilshire 5000 for the quarter (Domestic Stocks 4.1% vs. Wilshire 5000 3.7%) and year (Domestic Stocks 18.0% vs. Wilshire 5000 16.6%). He stated that the international stock manager group had exceeded its target for the quarter (International Stocks 6.8% vs. EAFE 6.6%) but had trailed its target for the year due to the transition into the asset class (Int'l. Stocks 24.3% vs. EAFE 26.4%). Mr. Bicker stated that the domestic bond manager group had outperformed for both the quarter (Domestic Bonds 3.2% vs. Salomon BIG 2.6%) and year (Domestic Bonds 12.0% vs. Salomon BIG 10.2%). Mr. Carlson voiced his approval of the investment results. Mr. Bicker reported that the Assigned Risk Plan (ARP) had also exceeded its composite index for the quarter (ARP 1.8% vs. Composite 1.4%) and year (ARP 6.4% vs. Composite 5.9%). He said that as of September 30, 1993 the SBI was responsible for $22.6 billion in assets.

In response to a request from Mr. Carlson, Mr. Bicker compared the SBI's performance to the capital market indices returns included in Tab A of the meeting materials. He stated that the domestic equity management group outperformed the Wilshire 5000 for the year slightly underperformed the Wilshire index for the 3 yr. period and matched the 5 year performance of the Wilshire 5000, after adjusting the index return for the SBI's restrictions on liquor and tobacco stocks through 3/31/93. In response to a question from Mr. Dayton, Mr. Bicker clarified that the tilted index strategy has only been in place approximately 2 1/2 years.

Mr. Bicker reported that the Post Retirement Fund will provide a post retirement benefit increase of 6.017% for eligible retirees effective January 1, 1994

Executive Director's Administrative Report
Mr. Bicker referred the members to Tab C which contains the budget and travel reports.

Administrative Committee Report
Mr. McGrath noted that the 6.0% Post Retirement benefit increase is the first increase to be calculated under the new formula adopted by the Legislature during the 1992 session. In response to questions from Mr. Carlson, Mr. Bicker stated that the new formula worked well and he added that a sizable amount has already been set aside towards benefit increases for the next four years. He noted that since the new formula has a smoothing effect, benefit increases should be favorable during the foreseeable future.

Mr. McGrath reported that the SBI's 1993 Annual Report should be available for distribution by mid January 1994.

Mr. McGrath referred members to the meeting materials and reviewed the items included in the SBI's 1994 legislative package. Mr. McGrath moved approval of the Committee's recommendation to allow the Executive Director to seek legislative approval of all the statutory changes, as outlined in the Committee Report. In response to a question from Ms. Growe, Mr. Bicker confirmed that removing the statutory cap on international securities would leave the international allocation decision to the Board. In response to a question from Mr. Humphrey, Mr. Bicker confirmed that returns from the international portfolio would continue to be reported separately from the domestic portfolio. Ms. Growe seconded the motion. The motion passed.

Mr. McGrath referred members to a handout containing two additional legislative proposals (see Attachment A). He stated that the first proposal involves raising the asset based charge in the Supplemental Investment Fund (SIF) from 10 basis points to a maximum of 35 basis points and he described the negotiation process that the Minnesota State Retirement System (MSRS) and the SBI are involved in with the organizations that market the investment options for the SIF. In response to questions from Mr. Carlson, Mr. McGrath and Mr. Bicker stated that the change is an attempt to get the administrative and marketing costs of the investment options offered by the State and the insurance companies on an equal basis.

In response to a request from Mr. Dayton to provide some background information and to clarify related issues, Mr. Bergstrom, MSRS Executive Director, outlined the relationships between the insurance vendors, the marketing organizations and MSRS. In response to a question from Mr. Dayton, Mr. Bergstrom stated that it could be difficult to use a competitive bid process to select marketing vendors since there is no termination date included in the contracts with the current vendors. In response to a questions from Mr. Carlson, Mr. Bicker stated that if the change in the asset based charge is approved and the negotiations with the insurance companies and marketers are successful, it would bring down the costs associated with the entire Deferred Compensation Plan to the median cost incurred by other state entities offering such a plan, over a relatively short period of time. He added that it would be easier to re-evaluate the plan at that point in time. Mr. Bicker confirmed that approval of the change is critical to the negotiation process and would give the state a much stronger negotiating position. In response to a question from Mr. Humphrey, Mr. Bicker also clarified that the charge would only apply to contributions made after the front end charge was eliminated in July of 1992.

In response to questions from Mr. Dayton, Mr. Bergstrom described the current contractual relationship between MSRS, the marketers and the insurance companies. He pointed out that the separate agreements between the insurance companies and their respective marketer establish the compensation paid by the insurance companies to the marketing organization. Mr. Bergstrom also stated that these agreements currently have no termination date. Mr. Dayton expressed his strong objections to the current contract structure. Mr. Bergstrom said the intent of the renegotiation is to level marketing fees in the program by lowering the fees to the insurance companies and raising the fees on the Supplemental Fund to a comparable level. Mr. Carlson observed that the SBI wanted to encourage employee participation in the program when the contracts were originally put in place and that the marketing organizations have been very successful in accomplishing that goal.

Mr. Dayton asked that Mr. Bergstrom and Mr. Bicker continue to work on resolving this issue in a more equitable fashion, and then bring the proposal back before the Board at its March 1994 meeting. He added that he prefers to be able to vote on the whole proposal rather than just a portion of it and he stressed that adding a termination date to the contract is critical. Mr. Dayton stated that he intends to move to rebid the contract on a competitive basis at the March 1994 meeting if his concerns are not satisfactorily addressed. Mr. Bicker said that if successful negotiations could not be reached by March, that the contracts should be rebid in his opinion. In response to a question from Ms. Growe, Mr. Bicker stressed that both he and Mr. Bergstrom believe that having the Board's approval for the statutory change is critical to the success of the contract negotiations. Mr. McGrath moved approval of the proposal to increase the asset based charge, as stated in Attachment A. The motion passed. (After the meeting, Mr. Dayton asked to be recorded as a "no" vote).

Mr. Bicker explained that the other proposed legislative change involves changing the structure of the Fixed Interest Account to provide a managed pool of guaranteed investment contracts. He added that this statutory change would make the Account more flexible and allow participants to transfer in or out of the Account on a monthly basis. Mr. McGrath moved approval of the legislative change for the Fixed Interest Account, as stated in Attachment A. Ms. Growe seconded the motion. The motion passed.

Mr. McGrath referred members back to the meeting materials for the Administrative Committee's recommendation to retain Wyatt Asset Services as the deferred compensation consultant for a three year period ending December 1996. Mr. Bicker reminded members that legislative and budgetary authority had been previously granted for this process and that the SBI is now fulfilling those statutory requirements. In response to questions from Mr. Carlson, Mr. Bicker confirmed that no state wide pension funds are currently using Wyatt as a consultant, thereby eliminating any potential conflict of interest. Mr. McGrath moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Humphrey seconded the motion. The motion passed.

Mr. McGrath stated that the Administrative Committee is recommending that the SBI approve the dissolution of the joint product agreement between Northwestern National Life (NWNL) and Minnesota Mutual Life (MML) for the Deferred Compensation Plan. Mr. Bicker stated that NWNL had made a corporate decision not to continue offering this type of product. He reported that the situation had been reviewed by two outside consultants and that both were in agreement with this recommendation. Mr. McGrath moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Humphrey seconded the motion. The motion passed.

Manager Search Committee Report

Mr. Sausen reported that the Committe had conducted a search for emerging domestic stock managers during the quarter which resulted in 126 firms receiving a questionnaire, 54 firms responding and 16 managers being interviewed. In response to a question from Mr. Carlson, Mr. Bicker stated that this search included managers with between $100-300 million assets under management. In response to a question from Mr. Dayton, Mr. Bicker stated that the purpose of the program is to add value. He noted that over the years, staff have seen strong performance from some managers during their initial years and he said this program will provide an opportunity for the SBI to grow with the manager. He reminded members that the entire emerging manager program will equal the size of one domestic equity manager.

Mr. Dayton expressed his concern that there had not been participation from IAC members in the process and he stressed the importance of the IAC's role in all search processes. He asked Ms. Yeomans what level of support there was among the IAC for this type of program. Ms. Yeomans stated that the IAC had chosen not to take a position on this issue since the firms are relatively unknown by members of the IAC. Mr. Bicker reminded members of the IAC's active role in the seven manager searches completed during the last fiscal year and he added that it was unfortunate that members were not available to participate in this search.

Mr. Carlson stated his belief that the Board should not be dissatisfied with the SBI's investment returns if the Board is unwilling to accept some increased risk in order to improve investment performance. He agreed with Mr. Bicker's comments about the program and stated that he feels the SBI has already built a strong defensive investment strategy and that this program would be an opportunity to do a little more than match the market's return. He asked for Ms. Yeoman's opinion. Ms. Yeomans stated that a couple of IAC members had tried a similar program previously without success, however, she agreed that Mr. Carlson had a valid point regarding the need to increase risk in order to increase expected returns. In response to a question form Mr. McGrath, Mr. Sausen confirmed that the review process used for the emerging managers was the same as the process used by the SBI in prior manager searches. Mr. Humphrey observed that Kopp Investment had not been recommended despite its very successful recent history. Mr. Bicker clarified that Kopp Investment currently has nearly $1 billion of assets under management, making them too big a firm to be included in the emerging manager search. He added, however, that the firm could be included in future domestic equity searches.

In response to questions from Ms. Growe, Mr. Bicker explained that the intent behind the emerging manager program was to hire between 6-10 managers, giving them the same 3 year contract used by the SBI's other investment managers. He said that the firms will be evaluated on an on-going basis and that at the end of the 3 year period a manager could be terminated, renewed as an emerging manager, or retained as a regular domestic equity manager with a larger allocation. He added that it will be an on-going program that would provide opportunities for other firms to be retained over time. Mr. Dayton stated that while he supports the concept and purpose of the program, that he intends to vote against this motion and any future motions involving searches conducted without the IAC's involvement. Mr. McGrath moved approval of the Committee's recommendation to retain the domestic emerging stock managers, as stated in the Committee Report. Mr. Humphrey seconded the motion. The motion passed. (After the meeting, Mr. Dayton asked to be recorded as a "no" vote).

Stock and Bond Manager Committee Report

Ms. Yeomans reported that the SBI had entered into a new guaranteed investment contract for the Supplemental Investment Fund with two insurance companies. She stated that the contracts were with Principal Mutual Life Insurance Company and Hartford Life Insurance Company and the participants in the Fixed Interest Account would receive an annual effective rate of 4.625% for the following three years.

Ms. Yeomans referred members to Tab F and stated that the Committee is recommending that the Board approve the Manager Continuation Policy paper as presented in the meeting materials. Mr. Dayton moved approval of the Committee's recommendation, as stated in the Committee Report. Ms. Growe seconded the motion. The motion passed.

Alternative Investment Committee Report
Ms. Yeomans reviewed the two items needing action by the Board, which are to terminate an outstanding commitment to Great Northern Capital Partners and to approve the disposition of the British Petroleum Royalty Trust holding. She noted that the British Petroleum investment had been a strong performer in the past but that both staff and the IAC expect returns to be below the desired target return in the future. Mr. Humphrey moved approval of the Committee's recommendations, as stated in the Committee Report. Ms. Growe seconded the motion. The motion passed.

Mr. Carlson stated that he is impressed with the reports on investment results and he feels a great deal of progress has been made over the years. He said that he believes it is important to evaluate the SBI's investment results against significant policy changes that were made over time. He stated that even a small amount of value-added above the market return translates into a large sum of money when the asset base is $22 billion. He stated he was pleased with the 6% post retirement benefit increase figure and he commended staff for a job well done.

The meeting adjourned at 9:30 A.M.

Respectfully submitted,

Howard J. Bicker
Executive Director

ATTACHMENT A

MINNESOTA STATE BOARD OF INVESTMENT

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

DATE: December 13, 1993

TO: Members, State Board of Investment

FROM: Howard Bicker

SUBJECT: Additional Items for the Board's 1994 Legislative Package

This memo provides information about two additional items for the Board's 1994 legislative package. A description of each is followed by the proposed statutory language.

- Raise the asset based charge in the SIF from 10 basis points to a maximum 35 basis points. the asset based charge in the SIF would be raised from 10 basis points to a maximum of 35 basis points on an annual basis to accommodate changes in the Deferred Compensation Plan being negotiated by the director of the Minnesota State Retirement System. The change would provide additional resources to offset administrative expenses of the other retirement plans that participate in the SIF. All income generated for the Deferred Compensation Plan goes to MSRS for payment of marketing and administrative costs of the Plan. None of the income generated by these charges is retained by the SBI.

- Changing the structure of the Fixed Interest Account to provide a managed pool of guaranteed investment contracts. Currently, the Fixed Interest Account is invested in discrete, three year GIC's. The proposed change provides that the account will be managed as a pool of GIC's. Current GIC contracts will mature as scheduled and be invested in the new pool as they mature.

Sec. . Minnesota Statutes 1992, section 11A.17, subdivision 10a, is amended to read:

Subd. 10a. **Distribution of earnings**. Once each month the state board shall deduct from the investment earnings of each account an amount equal to one-twelfth of an annual charge equal to ~~one tenth~~ 35 one-hundredths of one percent of the assets in each account. Unless otherwise directed by the participating plan or fund, the state board shall distribute the deductions to participating plans or funds to pay administrative expenses. Any deductions not distributed must be used to purchase additional units in the accounts.

Sec. . Minnesota Statutes 1992, section 11A.17, subdivision 14, is amended to read:

Subd. 14. **Procedures for distribution of income for money market account, and fixed interest account.** At the end of each month, the state board shall determine the earnings of the money market account and the fixed interest account and deduct from the earnings an amount equal to one-twelfth of an annual charge equal to ~~one tenth~~ 35 one-hundredths of one percent of the assets in each account. Unless otherwise directed by the participating plan or fund, the state board shall distribute the deductions to participating plans or funds to pay administrative expenses. Any earnings not deducted and distributed must be used to purchase additional shares in the respective accounts on behalf of each participating retirement plan or fund.

Sec. . Minnesota Statutes 1993 Supplement, section 352D.04, subdivision 1, is amended to read:

Subdivision 1. (a) An employee exercising an option to participate in the retirement program provided by this chapter may elect to purchase shares in one or a combination of the income share account, the growth share account, the money market account, the bond market account, the fixed interest account, or the common stock index account established in section 11A.17. The employee may elect to participate in one or more of the investment accounts in the fund by specifying, on a form provided by the executive director, the percentage of the employee's contributions provided in subdivision 2 to be used to purchase shares in each of the accounts.

(b) A participant may indicate in writing on forms provided by the Minnesota state retirement system a choice of options for subsequent purchases of shares. Until a different written indication is made by the participant, the executive director shall purchase shares in the supplemental fund as selected by the participant. If no initial option is chosen, 100 percent income shares must be purchased for a participant. A change in choice of investment option is effective no later than the first pay date first occurring after 30 days following the receipt of the request for a change.

(c) ~~One month before the start of a new guaranteed investment contract, a participant or former participant may elect to transfer all or a portion of the participant's shares previously purchased in the income share, growth share, common stock index, bond market, or money market accounts to the new guaranteed investment contract in the fixed interest account. Upon expiration of a guaranteed investment contract, the participant's shares attributable to that contract must be transferred to a new guaranteed investment contract unless the executive director is otherwise directed by the participant.~~ Shares in the fixed interest account attributable to any guaranteed investment contract as of the effective date of this section may not be withdrawn from the fund or transferred to another account until the guaranteed investment contract has expired unless the participant qualifies for withdrawal under section 352D.05 or for benefit payments under sections 352D.06 to 352D.075.

(d) A participant or former participant may also change the investment options selected for all or a portion of the participant's shares previously purchased in accounts, <u>subject to the provisions of paragraph (c) concerning</u> ~~other than~~ the fixed interest account. Changes in investment options for the participant's shares must be effected as soon as cash flow to an account practically permits, but no later than six months after the requested change.

Sec. . Minnesota Statutes 1992, section 353D.05, subdivision 2, is amended to read:

Subd. 2. **Investment options.** (a) A participant may elect to purchase shares in the income share account, the growth share account, the money market account, the bond market account, the fixed interest account, or the common stock index account established by section 11A.17, or a combination of those accounts. The participant may elect to purchase shares in a combination of those accounts by specifying the percentage of the total contributions to be used to purchase shares in each of the accounts.

(b) A participant or a former participant may indicate in writing a choice of options for subsequent purchases of shares. After a choice is made, until the participant or former participant makes a different written indication, the executive director of the association shall purchase shares in the supplemental investment account or accounts specified by the participant. If no initial option is indicated by a participant or the specifications made by the participant exceeds 100 percent to be invested in more than one account, the executive director shall invest all contributions made by or on behalf of a participant in the income share account. If the specifications are less than 100 percent, the executive director shall invest the remaining percentage in the income share account. A choice of investment options is effective the first of the month following the date of receipt of the signed written choice of options.

(c) ~~One month before the start of a new guaranteed investment contract, a participant or former participant may elect to transfer all or a portion of the participant's or former participant's shares previously purchased in the income share, growth share, common stock index, bond market, or money market accounts to the new guaranteed investment contract in the fixed interest account. Upon expiration of a guaranteed investment contract, the participant's or former participant's shares attributable to that contract must be transferred to a new guaranteed investment contract unless the executive director is otherwise directed by the participant.~~ Shares in the fixed interest account <u>attributable to any guaranteed investment contract as of the effective date of this section</u> may not be withdrawn from the fund or transferred to another account until the guaranteed investment contract has expired, unless the participant qualified for a benefit payment under section 353D.07.

(d) A participant or former participant may also change the investment options selected for all or a portion of the individual's previously purchased shares in accounts ~~other than~~<u>, subject to the provisions of paragraph (c) concerning</u> the ~~guaranteed return~~ <u>fixed interest</u> account. A change under this paragraph is effective the first of the month following the date of receipt of a signed written choice of options.

(e) The change or selection of an investment option or the transfer of all or a portion of the deceased or former participant's shares in the income share, growth share, common stock index, bond market, money market, or ~~guaranteed investment~~ <u>fixed interest</u> accounts must not be made following death of the participant or former participant.

Sec. . Minnesota Statutes 1992, section 354B.05, subdivision 3, is amended to read:

Subd. 3. **Selection of financial institutions**. The supplemental investment fund administered by the state board of investment is one of the investment options for the plan. The state board of investment may select two other financial institutions to provide annuity products. In making their selections, the board shall consider at least these criteria:

(1) the experience and ability of the financial institution to provide retirement and death benefits suited to the needs of the covered employees;

(2) the relationship of the benefits to their cost; and

(3) the financial strength and stability of the institution.

The state board of investment must periodically review at least every three years each financial institution selected by the state board of investment. The state board of investment may retain consulting services to assist in the periodic review, may establish a budget for its costs in the periodic review process, and my charge a proportional share of those costs to each financial institution selected by the state board of investment. All contracts must be approved by the state board of investment before execution by the state university board and the community college board. The state board of investment shall also establish policies and procedures under section 11A.04, clause (2), to carry out this subdivision.

The chancellor of the state university system and the chancellor of the state community college system shall redeem all shares in the accounts of the Minnesota supplemental investment fund held on behalf of personnel in the supplemental plan who elect an investment option other than the supplemental investment fund, except that shares in the fixed interest account <u>attributable to any guaranteed investment contract as of the effective date of this section</u> must not be redeemed until the expiration dates for the guaranteed investment contracts. The chancellors shall transfer the cash realized to the financial institutions selected by the state university board and community college board under section 354B 05.

Sec. . Minnesota Statutes 1992, section 354B.07, subdivision 2, is amended to read:

Subd. 2 **Redemptions**. The chancellor of the state university system and the chancellor of the state community college system shall redeem all shares in the accounts of the Minnesota supplemental investment fund held on behalf of personnel in the supplemental plan who elect an investment option other than the supplemental investment fund, except that shares in the fixed interest account <u>attributable to any guaranteed investment contract as of the effective date of this section</u> may not be redeemed until the expiration dates for the guaranteed investment contracts. The chancellors shall transfer the cash realized to the financial institutions selected by the state university board and the community college board under section 354B.05.

AGENDA
INVESTMENT ADVISORY COUNCIL
MEETING
Tuesday, March 1, 1994
2:00 P.M. - SBI Conference Room
Room 105, MEA Building - Saint Paul

	TAB
1. Approval of Minutes of December 14, 1993	
2. Report from the Executive Director (H. Bicker)	
A. Quarterly Investment Review (October 1, 1993 - December 31, 1993)	A
B. Portfolio Statistics (December 31, 1993)	B
C. Administrative Report	C
1. Budget Report	
2. Travel Report	
3. Reports from the Investment Advisory Council	
A. Asset Allocation Committee (J. Yeomans)	D
1. Discussion of Equity Management Structure in the Assigned Risk Plan	
2. Approval of Position Paper on Post Retirement Fund	
B. Stock and Bond Manager Committee (J. Eckmann)	E
1. Review of Manager Performance	
2. Consideration of Semi-Passive Management for Domestic Stocks	
3. Recommendation to Establish a Passive Manager Review Committee	
C. Alternative Investment Committee (D. Veverka)	F
1. Results of Annual Review Session (Churchill Capital)	
2. Commitment to New Real Estate Manager (TA Associates Realty Fund III)	
3. Commitment to Existing Private Equity Manager (Coral Partners IV)	
4. Commitment to Existing Private Equity Manager (Summit Subordinated Debt Fund)	
4. Report from the SBI Administrative Committee	G
1. Update on Police and Fire Pension Fund Activity	
2. Review of Contract Negotiations for the Deferred Compensation Plan	

Minutes
Investment Advisory Council
December 14, 1993

The Investment Advisory Council met on Tuesday, December 14, 1993 at 2:00 P.M. in the State Board of Investment (SBI) Conference Room, 55 Sherburne Avenue, St. Paul.

MEMBERS PRESENT: Gary Austin; Dave Bergstrom; John Bohan; Jim Eckmann; Ken Gudorf; Laurie Hacking; Keith Johnson; Peter Kiedrowski; Gary Norstrem; Mike Troutman; Debbie Veverka; and Jan Yeomans.

MEMBERS ABSENT: John Gunyou; David Jeffery; Malcolm McDonald; Barbara Schnoor and Han Chin Liu.

SBI STAFF: Howard Bicker; Beth Lehman; Jim Heidelberg; Mike Menssen; Roger Henry; Dan Egeland; Charlene Olson; and Linda Nadeau.

OTHERS ATTENDING: Ann Posey, Richards & Tierney; John Hagman, REAM; Judy Strobel, Teachers Retirement Association; Ed Stuart, REAM; Christie Eller; John Manahan; Lisa Rotenberg; Peter Sausen; and Elaine Voss.

The minutes of the September 15, 1993 meeting were approved.

Executive Director's Report
Mr. Bicker, Executive Director, referred members to Tab A of the meeting materials and said that the Combined Funds, Basic and Post Funds had outperformed their return objectives over the period ending September 30, 1993. Mr. Bicker stated that the Basic Funds had increased in market value by 1.7% during the quarter due to positive investment returns and he added that the asset mix had remained essentially unchanged. He added that the Basic Fund's performance had exceeded the composite index for the quarter (Basics 3.6% vs. Composite 3.1%) and year (Basics 15.6% vs. Composite 14.4%).

Mr. Bicker reported that the Post Retirement Fund had increased in market value by 5.5% during the quarter ending September 30, 1993 due to both positive cash flow and investment returns. Mr. Bicker stated that the Post Fund had exceeded its composite index for the quarter (Post Fund 3.6% vs. Composite 3.1%).

Mr. Bicker reported that the domestic stock manager group had outperformed the Wilshire 5000 for the quarter (Domestic Stocks 4.1% vs. Wilshire 5000 3.7%) and year (Domestic Stocks 18.0% vs. Wilshire 5000 16.6%). He stated that the international stock manager group had exceeded its target for the quarter (International Stocks 6.8% vs. EAFE 6.6%) but had trailed its target for the year due to the transition into the asset class (International Stocks 24.3% vs. EAFE 26.4%). Mr. Bicker stated that the domestic bond manager group had outperformed for both the quarter (Domestic Bonds 3.2% vs. Salomon BIG 2.6%) and year (Domestic Bonds 12.0% vs. Salomon BIG 10.2%). He reported that the Assigned Risk Plan (ARP) had also exceeded its composite index for the quarter (ARP 1.8% vs. Composite 1.4%) and year (ARP 6.4% vs. Composite 5.9%). He said that as of September 30, 1993 the SBI was responsible for $22.6 billion in assets.

Administrative Committee Report

Mr. Bicker reported that the Post Retirement Fund will provide a 6% benefit increase for retirees, effective January 1, 1994. He also noted that the SBI's 1993 Annual Report will be available for distribution by mid-January 1994.

Mr. Bicker reviewed the SBI's 1994 legislative package, as outlined in the Committee Report. He distributed a handout to members (see Attachment A) and stated that there were two additional legislative items to add to the SBI's package. He stated that one proposal is to change the structure of the Fixed Interest Account to provide a managed pool of guaranteed investment contracts (GIC's). He explained that the change would allow the account to be managed as a pool of GIC's instead of separate, 3 year GIC's. He added that participants would gain additional investment flexibility and that they would receive a blended yield for all contracts within the Account. He stated that if the proposal is approved, an external manager would be hired to manage the account on an on-going basis.

Mr. Bicker reported that the second additional proposal is to raise the asset based charge in the Supplemental Investment Fund (SIF) from 10 basis points to a maximum of 35 basis points. He explained that the change is needed to pay the on-going marketing and administrative costs of the Deferred Compensation Plan. He added that the charge would only apply to contributions made to the Plan after July 1, 1992. In response to questions from Mr. Bohan, Mr. Bicker explained how the plan is currently marketed and how this change will help to reduce the overall costs for the plan over the long-term.

Mr. Bicker then reviewed the various types of deferred compensation plans for which the SBI is required to retain consulting services, as mandated by legislation passed in 1992 and 1993. He stated that the Committee is recommending that The Wyatt Company be retained as the SBI's deferred compensation consultant.

Mr. Bicker also reported that the Committee is recommending the approval of the dissolution of the joint product agreement between Northwestern National Life (NWNL) and Minnesota Mutual Life. He explained that NWNL no longer wishes to continue offering products in the 457 plan area and he outlined the proposal that would allow for the orderly withdrawal of participation. He added that the dissolution had been reviewed by The Wyatt Company and an actuarial firm and that both firms had concurred that the dissolution proposal would be advantageous to both the state and the plan participants. Mr. Bicker stated that the recommendations from the Administrative Committee do not require the IAC's formal approval, but that Ms. Yeomans could pass along any comments from the IAC to the Board.

Manager Search Committee Report
Ms. Yeomans stated that the emerging manager search process was sanctioned directly by the Board and that the recommendation from the Search Committee would not require formal IAC approval. She added, however, that any comments from the IAC could be passed along to the Board.

Mr. Sausen stated that the Committee was made up of a designee of each Board member. He reported that questionnaires had been sent to 126 firms and that 54 of those firms had responded. He said that 16 firms were interviewed and he referred members to Tab E for a listing of the ten emerging managers that the Committee is recommending.

Mr. Bohan stated that his firm had just completed a manager search and that he has some concerns regarding Kennedy Capital Management. He explained that they had found a number of disparities in portfolio returns and that Kennedy's execution was different than their stated strategy. Mr. Bicker noted that Mr. Bohan had evaluated the firm in the context of being a full manager while the SBI is looking at them as an emerging manager and he said that he felt that the two evaluations were therefore different. He stated that the SBI had received favorable information on the manager from a consulting firm who specializes in the emerging manager area, as well as the State of Virginia and NCR Corp. who currently retain Kennedy. Mr. Bicker thanked Mr. Bohan for sharing his research about the firm but said that staff's recommendation to retain Kennedy had not changed.

In response to questions from Mr. Troutman, Mr. Sausen said the Committee evaluated the firm's ability to articulate their investment process. In addition, he said they compared performance history against returns reported by other, similar firms. Mr. Bicker added that some firms were eliminated due to their limited asset growth capacity. He also said that each manager will be required to create a benchmark within 18-24 months and that at the end of the three year contract period a firm could remain in the emerging manager group, move up into the main active manager pool, or not have their contract renewed. In response to questions from Ms. Veverka, Mr. Bicker stated that the program would be successful if the aggregate managers' return had added value above the benchmark. He said that the program will be on-going, with new managers coming on board as other managers move up to full size managers or as others are terminated. In response to an additional question from Ms. Veverka, Mr. Bicker said he felt that the program should not be judged a success unless at least two of the emerging managers are able to graduate to full manager status. Ms. Veverka said she felt it was important to define how success or failure of the program would be measured.

In response to a question from Mr. Bohan, Mr. Bicker stated that due to the four day time commitment, no IAC members were available to serve on the search committee. He reminded members of how busy the last fiscal year had been with numerous searches in which the IAC had participated. Both Mr. Bicker and Mr. Sausen stressed the vital role the IAC plays in the SBI's decision-making processes. Ms. Yeomans said she felt the IAC is reluctant to endorse the Committee recommendation since no IAC members served on the search committee. In response to a question from Mr. Troutman, Ms. Yeomans and Mr. Bicker clarified that the IAC had previously endorsed the concept of an emerging manager program, although it had not been a unanimous endorsement.

Stock and Bond Manager Committee Report

Mr. Eckmann noted the strong performance by the stock and bond managers. He updated members on the global bond authorization approved by the Board at the September 1993 meeting, noting that four of the existing managers will begin investing up to 10% of their portfolio in non U.S. bonds, effective January 1, 1994. Mr. Eckmann reported that during the quarter the Committee had reviewed the results of the 1993-1996 guaranteed investment contract (GIC) bid process. He stated that the net effective annual rate to participants is 4.625%. He also noted that the Committee had discussed its role in the emerging manager search process and concluded that it would take no action on the report from the Manager Search Committee.

Mr. Eckmann reported that the Committee is recommending that the revised Manager Continuation Policy paper be approved as presented. Mr. Bergstrom moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Eckmann seconded the report. In response to a question and request from Mr. Bohan, Ms. Lehman clarified the confidence interval percentages used in the VAM graphs and said that the information would be noted on the VAM graph in the future. The motion passed. In conclusion, Mr. Eckmann referred members to Tab H for the manager commentaries which are a new addition to the quarterly meeting materials.

Alternative Investment Committee Report

Ms. Veverka stated that there is sizable amount of money that remains uncommitted in the Basic and Post Funds and that staff is looking at a number of alternatives including the real estate area. She stated that the Committee is recommending the termination of an outstanding commitment to Great Northern Capital Partners, L.P. since the partnership is being terminated. She also stated that the Committee is recommending that the SBI dispose of its holding in British Petroleum Royalty Trust. She noted that the investment had performed well in the past but that it is not expected to continue its strong performance. Mr. Gudorf moved approval of both of the Committee's recommendations, as stated in the Committee Report. Mr. Kiedrowski seconded the motion. The motion passed.

Mr. Bicker confirmed that the next meeting of the IAC is scheduled for March 1, 1994. The meeting adjourned at 3:00 P.M.

Respectfully submitted,

Howard Bicker

Howard J. Bicker
Executive Director

ATTACHMENT A

MINNESOTA STATE BOARD OF INVESTMENT

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

DATE: December 13, 1993

TO: Members, State Board of Investment

FROM: Howard Bicker

SUBJECT: Additional Items for the Board's 1994 Legislative Package

This memo provides information about two additional items for the Board's 1994 legislative package. A description of each is followed by the proposed statutory language.

- Raise the asset based charge in the SIF from 10 basis points to a maximum 35 basis points. the asset based charge in the SIF would be raised from 10 basis points to a maximum of 35 basis points on an annual basis to accommodate changes in the Deferred Compensation Plan being negotiated by the director of the Minnesota State Retirement System. The change would provide additional resources to offset administrative expenses of the other retirement plans that participate in the SIF. All income generated for the Deferred Compensation Plan goes to MSRS for payment of marketing and administrative costs of the Plan. None of the income generated by these charges is retained by the SBI.

- Changing the structure of the Fixed Interest Account to provide a managed pool of guaranteed investment contracts. Currently, the Fixed Interest Account is invested in discrete, three year GIC's. The proposed change provides that the account will be managed as a pool of GIC's. Current GIC contracts will mature as scheduled and be invested in the new pool as they mature.

Sec. . Minnesota Statutes 1992, section 11A.17, subdivision 10a, is amended to read:

Subd. 10a. **Distribution of earnings**. Once each month the state board shall deduct from the investment earnings of each account an amount equal to one-twelfth of an annual charge equal to ~~one-tenth~~ 35 one-hundredths of one percent of the assets in each account. Unless otherwise directed by the participating plan or fund, the state board shall distribute the deductions to participating plans or funds to pay administrative expenses. Any deductions not distributed must be used to purchase additional units in the accounts.

Sec. . Minnesota Statutes 1992, section 11A.17, subdivision 14, is amended to read:

Subd. 14. **Procedures for distribution of income for money market account, and fixed interest account.** At the end of each month, the state board shall determine the earnings of the money market account and the fixed interest account and deduct from the earnings an amount equal to one-twelfth of an annual charge equal to ~~one-tenth~~ 35 one-hundredths of one percent of the assets in each account. Unless otherwise directed by the participating plan or fund, the state board shall distribute the deductions to participating plans or funds to pay administrative expenses. Any earnings not deducted and distributed must be used to purchase additional shares in the respective accounts on behalf of each participating retirement plan or fund.

Sec. . Minnesota Statutes 1993 Supplement, section 352D.04, subdivision 1, is amended to read.

Subdivision 1. (a) An employee exercising an option to participate in the retirement program provided by this chapter may elect to purchase shares in one or a combination of the income share account, the growth share account, the money market account, the bond market account, the fixed interest account, or the common stock index account established in section 11A.17. The employee may elect to participate in one or more of the investment accounts in the fund by specifying, on a form provided by the executive director, the percentage of the employee's contributions provided in subdivision 2 to be used to purchase shares in each of the accounts.

(b) A participant may indicate in writing on forms provided by the Minnesota state retirement system a choice of options for subsequent purchases of shares. Until a different written indication is made by the participant, the executive director shall purchase shares in the supplemental fund as selected by the participant. If no initial option is chosen, 100 percent income shares must be purchased for a participant A change in choice of investment option is effective no later than the first pay date first occurring after 30 days following the receipt of the request for a change.

(c) ~~One month before the start of a new guaranteed investment contract, a participant or former participant may elect to transfer all or a portion of the participant's shares previously purchased in the income share, growth share, common stock index, bond market, or money market accounts to the new guaranteed investment contract in the fixed interest account. Upon expiration of a guaranteed investment contract, the participant's shares attributable to that contract must be transferred to a new guaranteed investment contract unless the executive director is otherwise directed by the participant.~~ Shares in the fixed interest account <u>attributable to any guaranteed investment contract as of the effective date of this section</u> may not be withdrawn from the fund or transferred to another account until the guaranteed investment contract has expired unless the participant qualifies for withdrawal under section 352D.05 or for benefit payments under sections 352D.06 to 352D.075.

(d) A participant or former participant may also change the investment options selected for all or a portion of the participant's shares previously purchased in accounts, subject to the provisions of paragraph (c) concerning ~~other than~~ the fixed interest account. Changes in investment options for the participant's shares must be effected as soon as cash flow to an account practically permits, but no later than six months after the requested change.

Sec. . Minnesota Statutes 1992, section 353D.05, subdivision 2, is amended to read:

Subd. 2. **Investment options.** (a) A participant may elect to purchase shares in the income share account, the growth share account, the money market account, the bond market account, the fixed interest account, or the common stock index account established by section 11A.17, or a combination of those accounts. The participant may elect to purchase shares in a combination of those accounts by specifying the percentage of the total contributions to be used to purchase shares in each of the accounts.

(b) A participant or a former participant may indicate in writing a choice of options for subsequent purchases of shares. After a choice is made, until the participant or former participant makes a different written indication, the executive director of the association shall purchase shares in the supplemental investment account or accounts specified by the participant. If no initial option is indicated by a participant or the specifications made by the participant exceeds 100 percent to be invested in more than one account, the executive director shall invest all contributions made by or on behalf of a participant in the income share account. If the specifications are less than 100 percent, the executive director shall invest the remaining percentage in the income share account. A choice of investment options is effective the first of the month following the date of receipt of the signed written choice of options.

(c) ~~One month before the start of a new guaranteed investment contract, a participant or former participant may elect to transfer all or a portion of the participant's or former participant's shares previously purchased in the income share, growth share, common stock index, bond market, or money market accounts to the new guaranteed investment contract in the fixed interest account. Upon expiration of a guaranteed investment contract, the participant's or former participant's shares attributable to that contract must be transferred to a new guaranteed investment contract unless the executive director is otherwise directed by the participant.~~ Shares in the fixed interest account attributable to any guaranteed investment contract as of the effective date of this section may not be withdrawn from the fund or transferred to another account until the guaranteed investment contract has expired, unless the participant qualified for a benefit payment under section 353D.07.

(d) A participant or former participant may also change the investment options selected for all or a portion of the individual's previously purchased shares in accounts ~~other than~~, subject to the provisions of paragraph (c) concerning the ~~guaranteed return~~ fixed interest account. A change under this paragraph is effective the first of the month following the date of receipt of a signed written choice of options.

(e) The change or selection of an investment option or the transfer of all or a portion of the deceased or former participant's shares in the income share, growth share, common stock index, bond market, money market, or ~~guaranteed investment~~ fixed interest accounts must not be made following death of the participant or former participant.

Sec . Minnesota Statutes 1992, section 354B.05, subdivision 3, is amended to read:

Subd. 3. **Selection of financial institutions.** The supplemental investment fund administered by the state board of investment is one of the investment options for the plan. The state board of investment may select two other financial institutions to provide annuity products. In making their selections, the board shall consider at least these criteria:

(1) the experience and ability of the financial institution to provide retirement and death benefits suited to the needs of the covered employees;

(2) the relationship of the benefits to their cost; and

(3) the financial strength and stability of the institution.

The state board of investment must periodically review at least every three years each financial institution selected by the state board of investment. The state board of investment may retain consulting services to assist in the periodic review, may establish a budget for its costs in the periodic review process, and my charge a proportional share of those costs to each financial institution selected by the state board of investment. All contracts must be approved by the state board of investment before execution by the state university board and the community college board. The state board of investment shall also establish policies and procedures under section 11A.04, clause (2), to carry out this subdivision.

The chancellor of the state university system and the chancellor of the state community college system shall redeem all shares in the accounts of the Minnesota supplemental investment fund held on behalf of personnel in the supplemental plan who elect an investment option other than the supplemental investment fund, except that shares in the fixed interest account <u>attributable to any guaranteed investment contract as of the effective date of this section</u> must not be redeemed until the expiration dates for the guaranteed investment contracts. The chancellors shall transfer the cash realized to the financial institutions selected by the state university board and community college board under section 354B.05.

Sec.   . Minnesota Statutes 1992, section 354B.07, subdivision 2, is amended to read:

Subd. 2 **Redemptions**. The chancellor of the state university system and the chancellor of the state community college system shall redeem all shares in the accounts of the Minnesota supplemental investment fund held on behalf of personnel in the supplemental plan who elect an investment option other than the supplemental investment fund, except that shares in the fixed interest account <u>attributable to any guaranteed investment contract as of the effective date of this section</u> may not be redeemed until the expiration dates for the guaranteed investment contracts. The chancellors shall transfer the cash realized to the financial institutions selected by the state university board and the community college board under section 354B.05.

Tab A

RETURN OBJECTIVES
Period Ending 12/31/93

COMBINED FUNDS: $18.9 Billion	Return (1)	Compared to Objective
Provide Real Return (10 yr.) Provide returns that are 3-5 percentage points greater than inflation over moving 10 year periods.	12.7%	9.0 percentage points above target
Exceed Median Fund (5 yr.) Outperform the median fund from a universe of public and corporate funds with a balanced asset mix over moving 5 year periods.	12.8%	0.2 percentage points above target Rank: 43rd percentile (2)
Exceed Composite Index (5 yr.) Outperform a composite market index weighted in a manner that reflects the actual asset mix of the Combined Funds over moving 5 year periods.	12.8%	0.7 percentage points above target

BASIC RETIREMENT FUNDS: $10.1 Billion	Return	Compared to Objective
Exceed Composite Index Outperform a composite index weighted in a manner that reflects the long-term asset allocation of the Basic Funds over moving 5 year periods.	12.8%	0.7 percentage points above target

POST RETIREMENT FUND: $8.8 Billion	Return(3)	Compared to Objective
Exceed Composite Index Outperform a composite index weighted in a manner that reflects the long-term asset allocation of the Post Fund over moving 5 year periods.	5.0%	0.4 percentage points above target

(1) Reflects performance of Basic Funds only through 6/30/93, Combined Funds thereafter.

(2) The SBI's stated performance 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).

(3) Since asset allocation transition was completed, 7/1/93.

ACTUARIAL VALUATIONS

MSRS, TRA, PERA General Plans
June 30, 1993

	Active (Basics)	Retired (Post)	Total (Basics & Post)
Liability Measures			
1. Current and Future Benefit Obligation	$15.8 billion	$6.4 billion	$22.2 billion
2. Accrued Liabilities	11.2	6.4	17.6
Asset Measures			
3. Current and Future Actuarial Value	$15.2 billion	$6.4 billion	$21.6 billion
4. Current Actuarial Value	7.9	6.4	14.3
Funding Ratios			
Future Obligations vs. Future Assets (3 ÷ 1)	96%	100%	97%
Accrued Liabilities vs. Current Actuarial Value (4 ÷ 2)	71%	100%	81%*

* 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 **78%** for the Basics, **100%** for the Post and **86%** for the Total, respectively.

Notes:

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

Actuarial Assumptions:

Salary Growth: 6.5%
Interest//Discount Rate: 8.5% Basics, 5.0% Post
Full Funding Target Date: 2020

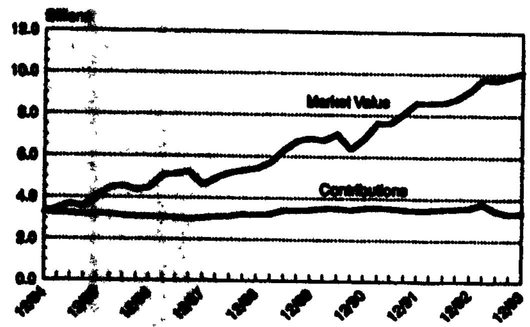
EXECUTIVE SUMMARY
Basic Retirement Funds

Asset Growth

The market value of the Basic Funds increased 2.0% during the fourth quarter of 1993. Positive investment returns and net contributions accounted for the increase during the period.

Asset Growth During Fourth Quarter 1993 (Millions)

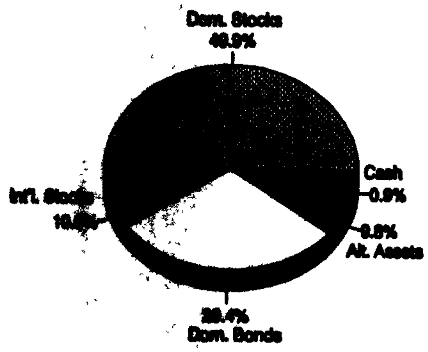
Beginning Value	$9,889
Net Contributions	57
Investment Return	140
Ending Value	$10,086



Asset Mix

The actual asset mix is in line with policy targets. Domestic bonds will exceed its target until alternative assets increase.

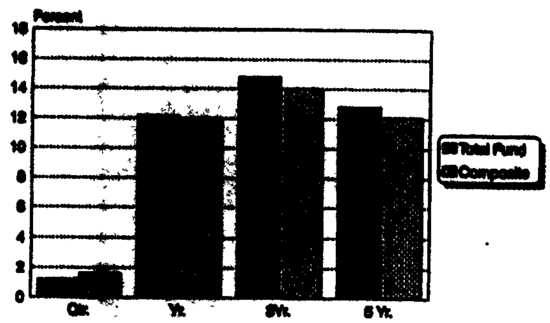
	Policy Asset Mix	Actual Mix 12/31/93	Actual Market Value (Millions)
Domestic Stocks	50.0%	49.9%	$5,035
Int'l. Stocks	10.0	10.0	1,008
Domestic Bonds	24.0	29.4	2,970
Alternative Assets	15.0	9.8	983
Unallocated Cash	1.0	0.9	90
	100.0%	100.0%	$10,086



Fund Performance

The Basic Funds trailed its composite market index for the quarter but exceeded it for the year.

	Qtr.	1 Yr.	3 Yr.	5 Yr.
Basics	1.2%	12.2%	14.8%	12.8%
Composite	1.6	12.0	14.0	12.1



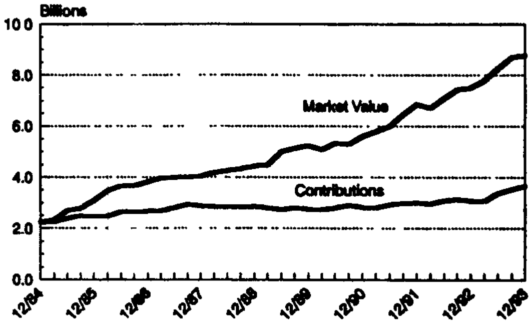
EXECUTIVE SUMMARY

Post Retirement Fund

Asset Growth

The market value of the Post Fund increased 0.7% during the fourth quarter of 1993. The increase resulted from positive investment returns.

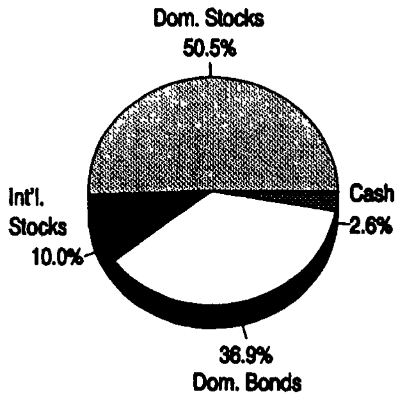
	Asset Growth During Fourth Quarter 1993 (Millions)
Beginning Value	$8,707
Net Contributions	-59
Investment Return	118
Ending Value	$8,766



Asset Mix

The international stock target was fully funded during the quarter with a commensurate decrease in the bond allocation.

	Policy Asset Mix	Actual Mix 12/31/93	Actual Market Value (Millions)
Domestic Stocks	50.0%	50.5%	$4,427
Int'l. Stocks	10.0	10.0	883
Domestic Bonds	32.0	36.9	3,231
Alternative Assets	5.0	0.0	0
Unallocated Cash	3.0	2.6	225
	100.0%	100.0%	$8,766

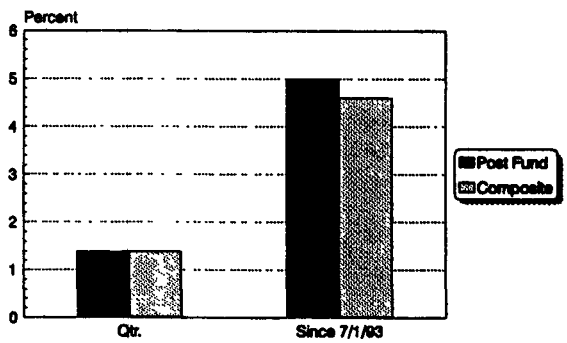


Fund Performance

The Post Fund matched its composite market index for the quarter and exceeded the composite since 7/1/93.

	Qtr.	Since 7/1/93*
Post Fund	**1.4%**	**5.0**
Composite	1.4	4.6

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



EXECUTIVE SUMMARY
Stock and Bond Manager Performance

Domestic Stocks

The domestic stock manager group (active and passive combined) trailed its target for the quarter and year.

	Qtr.	1 Yr.	3 Yr.	5 Yr.
Dom. Stocks	1.4%	10.9%	17.5%	14.1%
Wilshire 5000*	2.1	11.0	17.5	14.2

* Buy/hold index adjusted for liquor and tobacco restrictions through 3/31/93 and AHP restriction through 10/31/93.

International Stocks

The international stock manager group (active and passive combined) exceeded its target for the quarter and year.

	Qtr.	1 Yr.	Since Incept.
Int'l. Stocks	4.0%	34.3%	22.8%
EAFE	0.9	32.6	21.4

Domestic Bonds

The domestic bond manager group (active and semi-passive combined) exceeded its target for the quarter and year.

	Qtr.	1 Yr.	3 Yr.	5 Yr.
Bonds	0.1%	11.5%	12.0%	11.7%
Salomon BIG	0.0	9.9	11.1	11.3

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.

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

EAFE: The Morgan Stanley Capital International index of 18 stock markets in Europe, Australia and the Far East.

Salomon BIG: The Salomon Broad Investment Grade 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.

EXECUTIVE SUMMARY
Stock and Bond Manager Performance

Domestic Stocks

The domestic stock manager group (active and passive combined) trailed its target for the quarter and year.

	Qtr.	1 Yr.	3 Yr.	5 Yr.
Dom. Stocks	**1.4%**	**10.9%**	**17.5%**	**14.1%**
Wilshire 5000*	2.1	11.0	17.5	14.2

* Buy/hold index adjusted for liquor and tobacco restrictions through 3/31/93 and AHP restricition through 10/31/93.

International Stocks

The international stock manager group (active and passive combined) exceeded its target for the quarter and year.

	Qtr.	1 Yr.	Since Incept.
Int'l. Stocks	**4.0%**	**34.3%**	**20.4%**
EAFE	0.9	32.6	21.4

Domestic Bonds

The domestic bond manager group (active and semi-passive combined) exceeded its target for the quarter and year.

	Qtr.	1 Yr.	3 Yr.	5 Yr.
Bonds	**0.1%**	**11.5%**	**12.0%**	**11.7%**
Salomon BIG	0.0	9.9	11.1	11.3

EXECUTIVE SUMMARY
Assigned Risk Plan

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

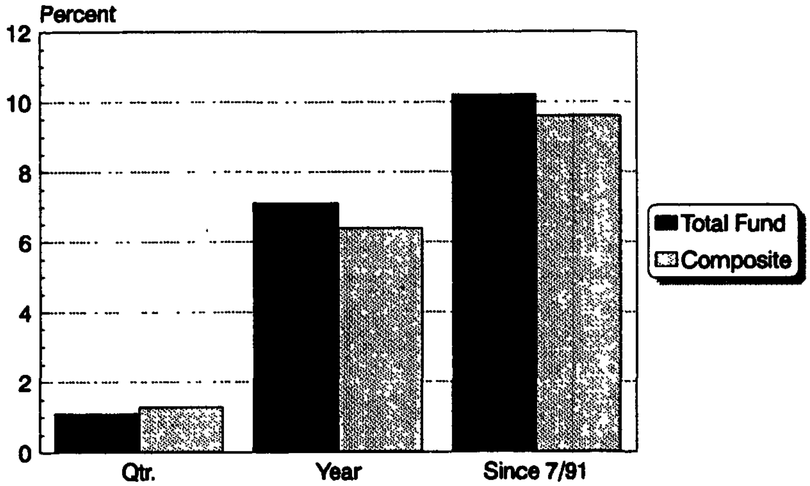
Asset Mix
The Assigned Risk Plan is invested in a balanced portfolio of common stocks and bonds. The actual asset mix will fluctuate in response to changes in the Plan's liability stream.

	12/31/93 Target	12/31/93 Actual
Stocks	20.0%	19.0%
Bonds	80.0	74.8
Unallocated Cash	0.0	6.2
Total	100.0%	100.0%

Investment Management
The entire fund is managed externally by Voyageur Asset Management. The portfolio was transferred from the Department of Commerce to the SBI on May 1, 1991.

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

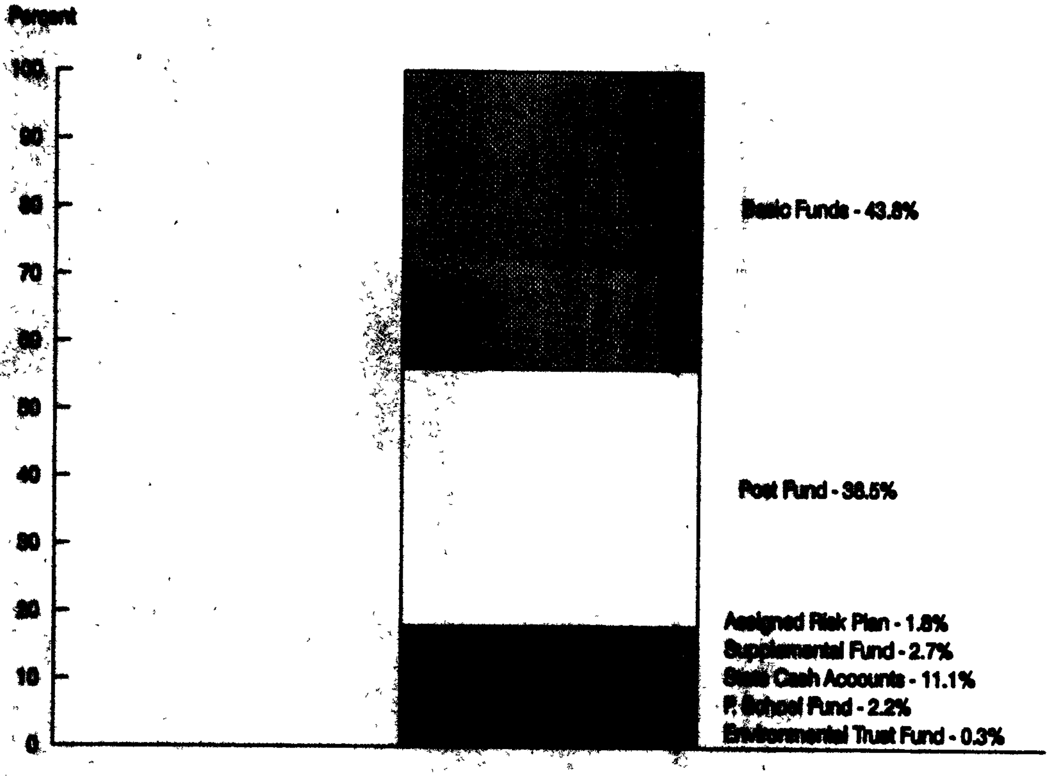
Market Value
On December 31, 1993 the market value of the Assigned Risk Plan was $419 million.



Period Ending 12/31/93

	Qtr.	Yr.	Since 7/1/91
Total Fund	**1.1%**	**7.1%**	**10.2%**
Composite Index	1.3	6.4	9.6
Equity Segment	**3.5**	**-1.8**	**8.9**
Benchmark	4.4	-0.3	9.5
Bond Segment	**0.6**	**8.7**	**10.5**
Benchmark	0.7	7.6	9.6

EXECUTIVE SUMMARY
Funds Under Management



12/31/93
Market Value
(Billions)

Basic Retirement Funds	$10.1
Post Retirement Fund	8.8
Assigned Risk Plan	0.4
Supplemental Investment Fund	0.6
State Cash Accounts	2.5
Permanent School Fund	0.5
Environmental Trust Fund	0.1
Total	$22.9

MINNESOTA STATE BOARD OF INVESTMENT

QUARTERLY INVESTMENT REPORT

Fourth Quarter 1993

(October 1, 1993 — December 31, 1993)

Table of Contents

VARIOUS CAPITAL MARKET INDICES

	Period Ending 12/31/93				
	Qtr.	Yr.	3 Yr.	5 Yr.	10 Yr.
Domestic Equity					
Wilshire 5000	1.8%	11.3%	17.6%	14.6%	14.2%
Dow Jones Industrials	6.3	17.0	16.0	15.4	15.9
S&P 500	2.4	10.1	15.7	14.5	14.9
Russell 2000	1.8	10.9	17.6	14.8	14.4
Domestic Fixed Income					
Salomon BIG*	0.0	9.9	11.1	11.3	11.9
Shearson Gov't./Corp.	-0.3	11.0	11.5	11.4	11.8
90 Day U.S. Treasury Bills	0.8	3.1	4.2	5.8	6.8
International					
EAFE**	0.9	32.6	9.3	2.0	17.5
Salomon Non U.S. Gov't. Bond	0.2	15.1	11.9	9.3	14.6
Inflation Measure					
Consumer Price Index***	0.5	2.7	2.9	3.9	3.7

* Salomon Broad Investment Grade bond index
** Morgan Stanley Capital International index of Europe, Australia and the Far East (EAFE)
*** Consumer Price Index (CPI) for all urban consumers, also known as CPI-U.

FINANCIAL MARKETS REVIEW

DOMESTIC STOCKS

Overall, the stock market generated positive returns for the quarter. Value stocks substantially underperformed growth stocks for the first time this calendar year due to poor performance in the finance and utility sectors. In general, the market posted positive rates of returns due to strong economic growth and a consensus in the market that future interest rates and inflation would not increase substantially.

The Wilshire 5000 provided a 2.0% return for the quarter. Performance among the different Wilshire Style Indexes for the quarter are shown below:

Large Value	-3.3%
Small Value	-1.6
Large Growth	4.2
Small Growth	2.8

The Wilshire 5000 increased 11.3% during the latest year.

DOMESTIC BONDS

Bond returns were poor as interest rates rose. As the economy strengthened, inflation fears rose and caused the increase in interest rates. Two year rates increased 0.37% while long rates increased 0.32%. Mortgage securities performed well this quarter as the rising interest rates slowed prepayments.

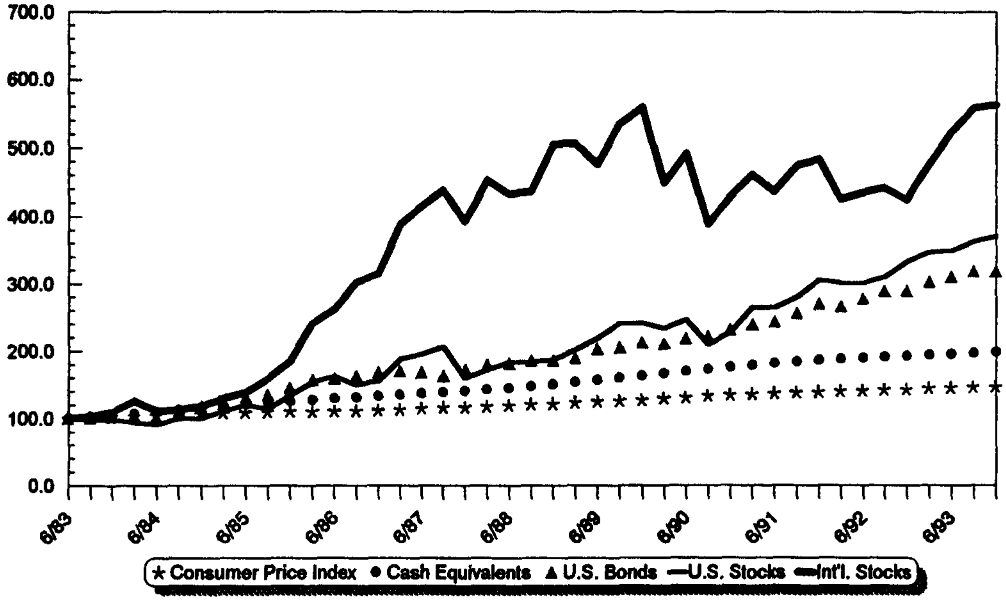
Overall, the Salomon Brothers Broad Investment Grade (BIG) Index increased 0.04% for the quarter. The Salomon BIG sector returns for the quarter were:

Treasury/Agency	-0.4%
Corporates	-0.1
Mortgages	0.9

The Salomon BIG increased 9.9% for the latest year.

PERFORMANCE OF CAPITAL MARKETS

Cumulative Returns



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

FINANCIAL MARKETS REVIEW

INTERNATIONAL STOCKS

In aggregate, the international stock markets (as measured by the EAFE index) provided a return of 0.9% for the quarter. As shown below, performance varied widely among the major markets.

Japan	-14.3%
United Kingdom	12.2
Germany	9.5
France	6.0

The EAFE index increased by 32.6% during the latest year. The index is compiled by Morgan Stanley Capital International. It is an index of 18 markets located in Europe, Australia and the Far East (EAFE). The major markets listed above comprise about 75% of the value of international markets.

REAL ESTATE

Many real estate portfolios have experienced significant writedowns over the last two years, reflecting the weak real estate markets. Income returns from properties valued at current market prices are becoming more competitive with those from other asset classes. Longer term, higher property income yields, low interest rates and a significant decline in construction activity are favorable developments for the real estate market.

PRIVATE EQUITY

According to the *Venture Capital Journal*, "venture capitalists took 165 companies public in 1993, breaking the record of 157 companies set the prior year. The capital raised in the 1993 initial public offering (IPO) market by venture-backed companies broke a record as well. A total of $4.86 billion was raised, compared with $4.57 billion the previous year."

RESOURCE FUNDS

Currently, spot prices of West Texas Intermediate oil are $14.05 per barrel This compares to $19.55 per barrel a year ago.

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.

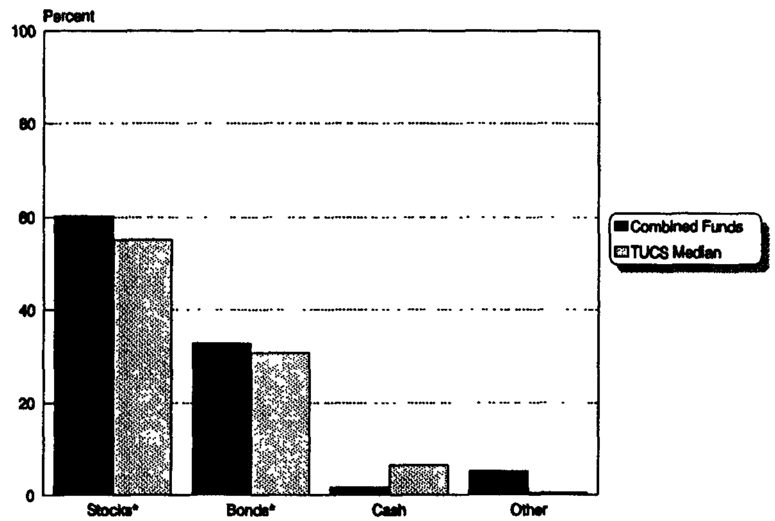
The comparison universe used by the SBI is the Master Trust portion of the Trust Universe Comparison Service (TUCS). This universe contains information on more than 200 public and corporate pension and trust funds with a balanced asset mix.

Asset Mix Compared to Other Pension Funds

On December 31, 1993, the actual asset mix of the Combined Funds was:

	$ Millions	%
Domestic Stocks	$9,462	50.2%
International Stocks	1,891	10.0
Bonds	6,200	32.9
Alternative Assets	984	5.2
Unallocated Cash	315	1.7
Total	$18,852	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 on December 31, 1993 are shown below:



	Stocks*	Bonds*	Cash	Other
Combined Funds	**60.2%**	**32.9%**	**1.7%**	**5.2%**
Median Allocation in TUCS	55.1	30.8	6.5	0.5

* Both domestic and international.

COMBINED FUNDS
Performance Compared to Other Pension Funds

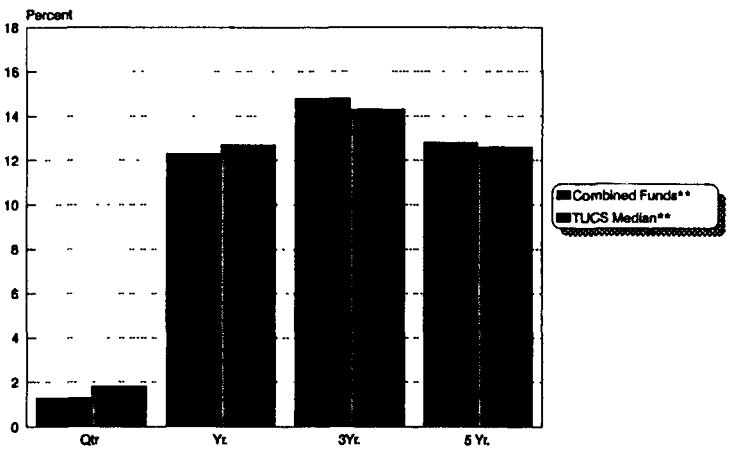
While the SBI is naturally concerned with how its returns compare to other pension investors, universe comparison data should be used with great care. There are several reasons why such comparisons will provide an "apples to oranges" look at performance:

— **Differing Treatment of Fees.** All SBI returns in this report are shown *after* all management fees while TUCS data is reported *before* fees. If the SBI reported returns before fees, its returns and rankings would be *higher* than those shown in this report.

— **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 TUCS are shown below:



Period Ending 12/31/93

	Qtr.	Yr.	3 Yr. (Annualized)	5 Yr. (Annualized)
TUCS Median Fund Return*	1.8%	12.7%	14.3%	12.6%
Combined Funds Return**	**1.3**	**12.3**	**14.8**	**12.8**
Percentile Rank in TUCS	67th	53rd	40th	43rd

* Before fees
** After fees. Includes Basic Funds only through 6/30/93, Basic and Post thereafter.

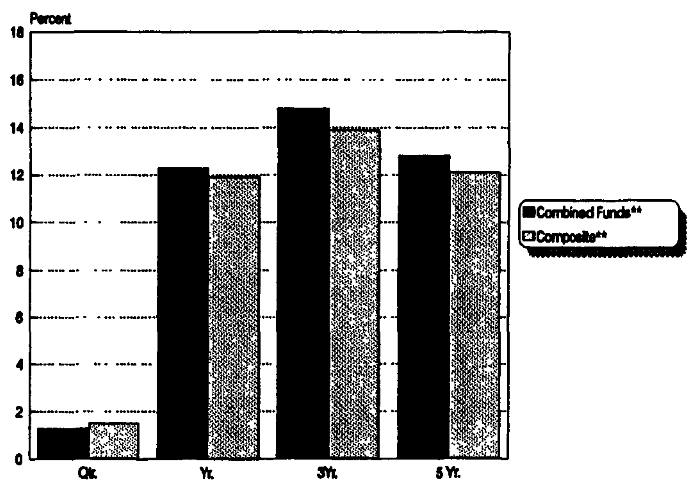
The SBI's stated performance objective is that the Combined Funds will rank in the top half of the universe (above the 50th percentile) over the most recent five year period. The SBI will strive to achieve performance which ranks in the top third (above the 33rd percentile).

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 10/1/93
Domestic Stocks	Wilshire 5000	50.0%
Int'l. Stocks	EAFE	5.3
Domestic Bonds	Salomon BIG	37.4*
Alternative Assets		
	Wilshire Real Estate	2.4*
	Venture Capital Funds	2.4*
	Resource Funds	0.5*
Unallocated Cash	91 Day T-Bills	2.0
		100.0%

* Alternative asset and bond weights are reset in the composite each quarter to reflect the amount of unfunded commitments in alternative asset classes.



Period Ending 12/31/93

	Qtr.	Yr.	Annualized 3 Yr.	Annualized 5 Yr.
Combined Funds**	**1.3%**	**12.3%**	**14.8%**	**12.8%**
Composite Index***	1.5	11.9	13.9	12.1

**Includes performance of Basic Funds through 6/30/93, Basic and Post Funds thereafter.

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

BASIC RETIREMENT FUNDS

Investment Objectives

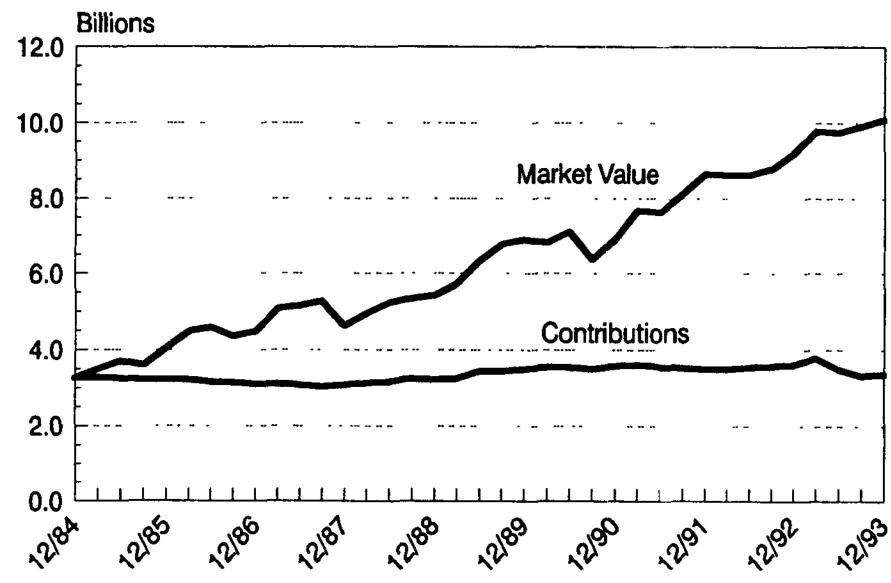
The Basic Retirement Funds are composed of the retirement assets for currently working participants in eight statewide retirement funds. The Funds serve as accumulation pools for the pension contributions of public employees and their employers during the employees' years of active service. Approximately 250,000 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 2.0% during the fourth quarter of 1993. Positive investment returns and net contributions accounted for the increase.



In Millions

	12/88	12/89	12/90	12/91	12/92	3/93	6/93	9/93	12/93
Beginning Value	$4,628	$5,420	$6,875	$6,919	$8,639	$9,191	$9,780	$9,723	$9,889
Net Contributions	146	269	91	-92	-34	172	-295	-173	57
Investment Return	646	1,186	-47	1,812	586	417	238	339	140
Ending Value	$5,420	$6,875	$6,919	$8,639	$9,191	$9,780	$9,723	$9,889	$10,086

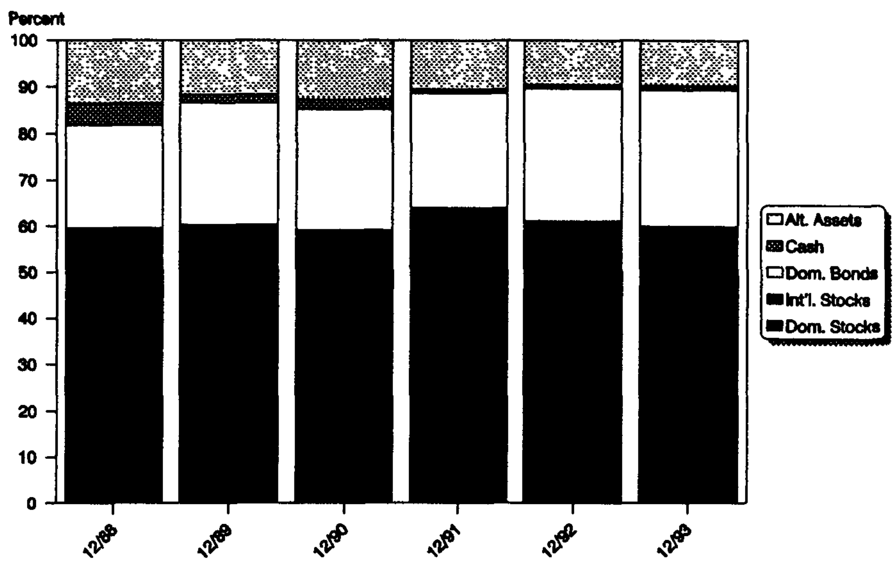
BASIC RETIREMENT FUNDS
Asset Mix

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 mix is designed to add value to the Basic Funds over their long-term investment time horizon.

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

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

The actual asset mix changed little from the prior quarter. The international stock allocation was rebalanced back to its target. This was accomplished through a sale/transfer of assets between the Basic and the Post Funds.



	Last Five Years								Latest Qtr.
	12/88	12/89	12/90	12/91	12/92	3/93	6/93	9/93	12/93
Domestic Stocks	59.5%	60.2%	59.1%	63.9%	57.9%	54.2%	49.4%	50.1%	49.9%
Int'l. Stocks	0.0	0.0	0.0	0.0	3.2	6.8	10.9	11.4	10.0
Domestic Bonds	22.4	26.4	26.2	24.7	28.5	28.5	27.8	27.9	29.4
Real Estate	9.0	7.5	7.0	4.8	4.2	3.9	4.0	4.1	4.1
Venture Capital	3.1	2.8	4.2	4.7	4.2	4.1	4.6	4.3	4.6
Resource Funds	1.5	1.4	1.5	1.1	1.2	1.1	1.1	1.2	1.1
Unallocated Cash	4.5	1.7	2.0	0.8	0.8	1.4	2.2	1.0	0.9
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

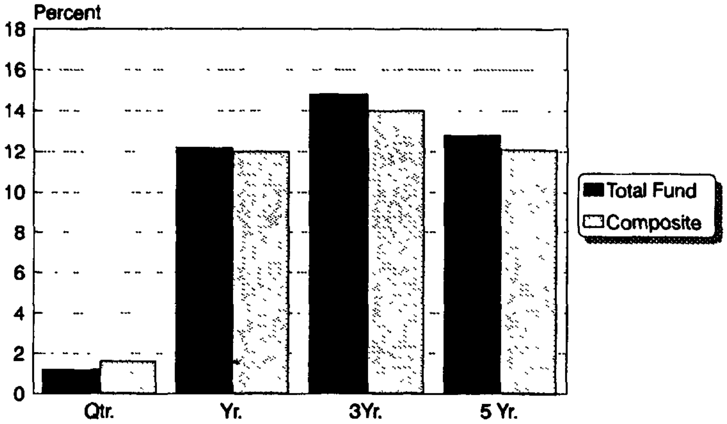
BASIC RETIREMENT FUNDS

Total Fund Performance

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 12/31/93
Domestic Stocks	50.0%	Wilshire 5000	50.0%
Int'l. Stocks	10.0	EAFE	10.0
Domestic Bonds	24.0	Salomon BIG	29.0*
Alternative Assets	15.0		
		Wilshire Real Estate	4.5*
		Venture Capital Funds	4.5*
		Resource Funds	1.0*
Unallocated Cash	1.0	91 Day T-Bills	1.0
	100.0%		100.0%

* Alternative asset and bond weights are reset in the composite each quarter to reflect the amount of unfunded commitments in alternative asset classes.



Period Ending 12/31/93

	Qtr.	Yr.	Annualized 3 Yr.	Annualized 5 Yr.
Basic Funds	**1.2%**	**12.2%**	**14.8%**	**12.8%**
Composite Index**	1.6	12.0	14.0	12.1

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

Effective July 1, 1993, the Basic and Post Funds share the same stock, domestic bond and international stock managers. See page14 for the performance of these asset pools. Performance of the Basic Funds' alternative assets is on page 15.

POST RETIREMENT FUND

The Post Retirement Investment Fund contains the pension assets of retired public employees covered by statewide retirement plans. Approximately 60,000 retirees receive monthly annuities from the assets of the Fund.

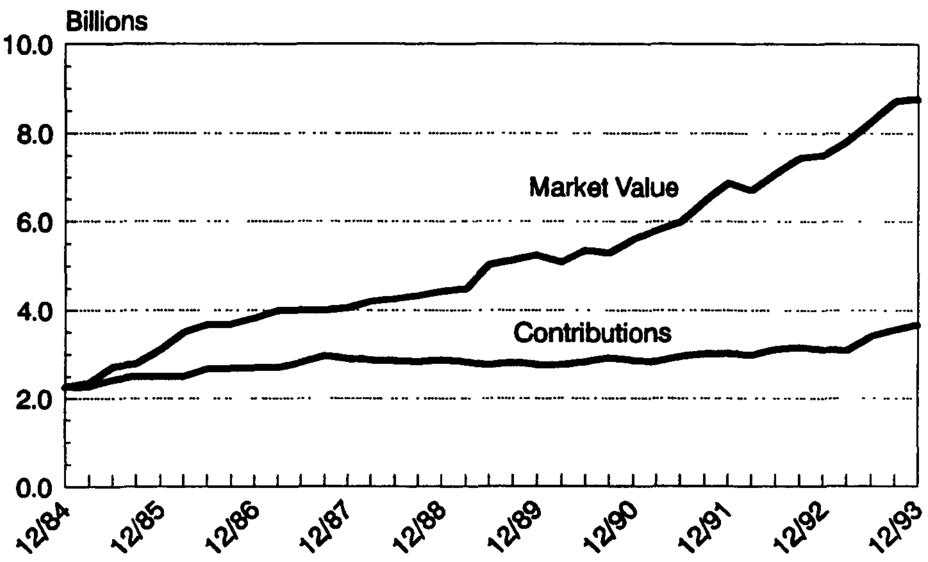
Upon an employee's retirement, a sum of money sufficient to finance the fixed monthly annuity is transferred from accumulation pools in the Basic Funds to the Post Fund. In order to support promised benefits, the Post Fund must "earn" at least 5% on its invested assets on an annualized basis. If the 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.

Beginning in fiscal year 1993, the post retirement benefit increase formula is based on total return rather than realized earnings. As a result, the Board has adopted a new long-term asset allocation strategy for the Post Fund which incorporates a substantial commitment to common stocks. The transition to the new asset allocation strategy was completed by the start of fiscal year 1994 (7/1/93).

Asset Growth

The market value of the Post Retirement Fund increased by 0.7% during the fourth quarter of 1993. The increase was due to positive investment performance despite net withdrawals.



In Millions

	12/88	12/89	12/90	12/91	12/92	3/93	6/93	9/93	12/93
Beginning Value	$4,047	$4,434	$5,238	$5,590	$6,855	$7,500	$7,804	$8,251	$8,707
Net Contributions	-27	25	88	162	95	-26	314	157	-59
Investment Return	414	779	264	1,103	550	330	133	299	118
Ending Value	$4,434	$5,238	$5,590	$6,855	$7,500	$7,804	$8,251	$8,707	$8,766

POST RETIREMENT FUND

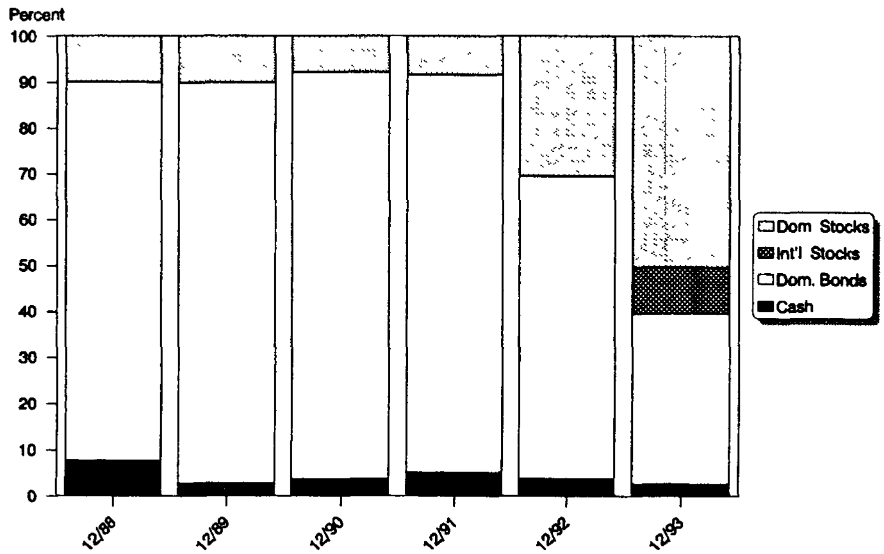
Asset Mix

The Board adopted a new asset allocation strategy for the Post Fund in fiscal year 1993 which reflects the new post retirement benefit increase formula recently enacted by the Legislature. Throughout fiscal year 1993, the actual asset mix of the Post Fund 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	10.0
Domestic Bonds	32.0
Alternative Assets	5.0
Unallocated Cash	3.0
Total	100.0%

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

The international stock target was fully funded during the quarter with a commensurate decrease in the bond allocation.



	Last Five years								Latest Qtr.
	12/88	**12/89**	**12/90**	**12/91**	**12/92**	**3/93**	**6/93**	**9/93**	**12/93**
Dom. Stocks	10.1%	10.2%	7.9%	8.5%	30.6%	40.3%	50.8%	50.1%	50.5%
Int'l. Stocks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
Dom. Bonds	82.3	87.1	88.5	80.0	65.6	56.8	46.6	45.9	36.9
Unallocated Cash	7.6	2.7	3.6	5.0	3.8	2.9	2.6	4.0	2.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

POST RETIREMENT FUND

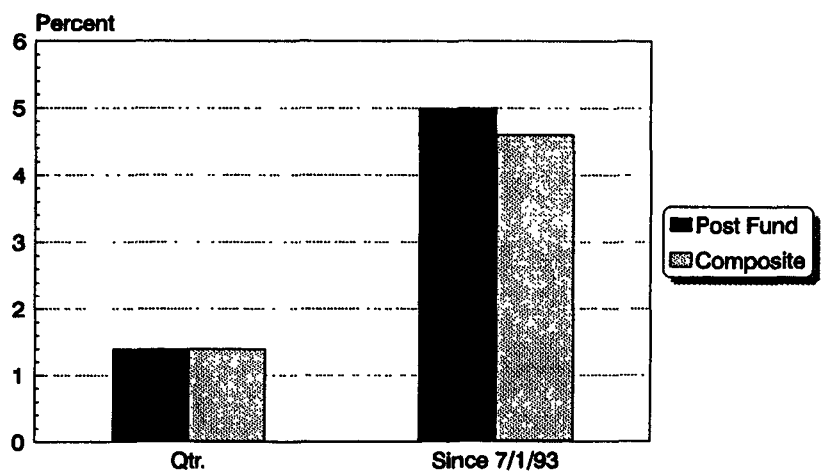
Total Fund Performance

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 12/31/93
Domestic Stocks	50%	Wilshire 5000	50.0%
Int'l. Stocks	10	EAFE	10.0
Domestic Bonds	32	Salomon BIG	37.0*
Alternative Assets	5	---	0.0*
Unallocated Cash	3	91 Day T-Bills	3.0
	100%		100.0%

* Until the alternative asset allocation is fully funded, the composite will be overweighted in bonds.

The asset mix of the Post Fund was moved toward a 50% stock allocation during fiscal year 1993. The performance of the fund since the transition was completed is shown below.



	Qtr.	Since 7/1/93
Post Fund	1.4%	5.0%
Composite Index	1.4	4.6

Effective July 1, 1993, the Basic and Post Funds share the same domestic stock, domestic bond and international stock managers. See page14 for the performance of these asset pools.

STOCK AND BOND MANAGERS

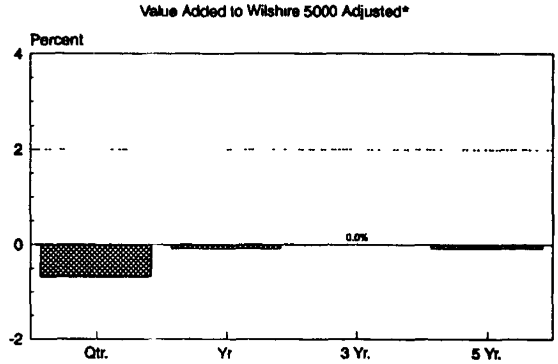
Performance of Asset Pools

Domestic Stock Pool

Target: Wilshire 5000 Adjusted*
Expectation: If half of the pool is actively managed and half is passively managed, the entire pool is expected to exceed the target by +.20-.45% annualized, over time.

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Stock Pool	**1.4%**	**10.9%**	**17.5%**	**14.1%**
Wilshire 5000*	2.1	11.0	17.5	14.2

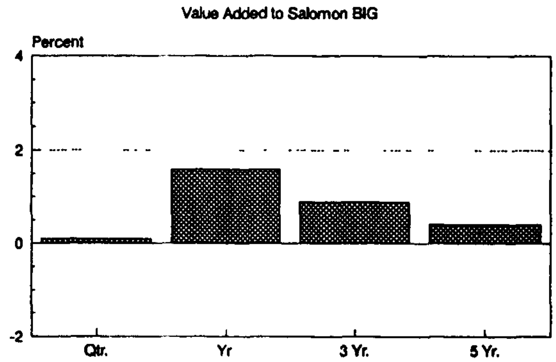
*Buy/hold index adjusted for liquor and tobacco restrictions through 3/31/93 and AHP restriction through 10/31/93.



Domestic Bond Pool

Target: Salomon Broad Investment Grade (BIG) 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.

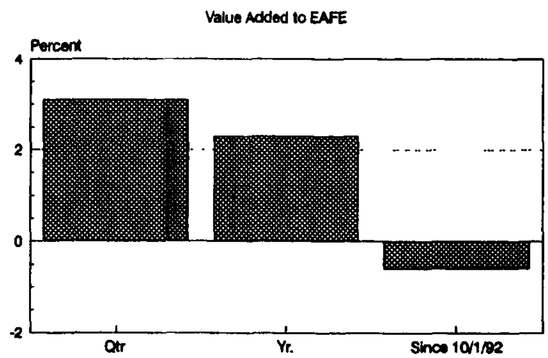
			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Bond Pool	**0.1%**	**11.5%**	**12.0%**	**11.7%**
Salomon BIG	0.0	9.9	11.1	11.3



International Stock Pool

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

	Qtr.	Yr.	Since 10/1/92
Int'l. Pool	**4.0%**	**34.3%**	**20.4%**
EAFE	0.9	32.6	21.4



STOCK AND BOND MANAGERS

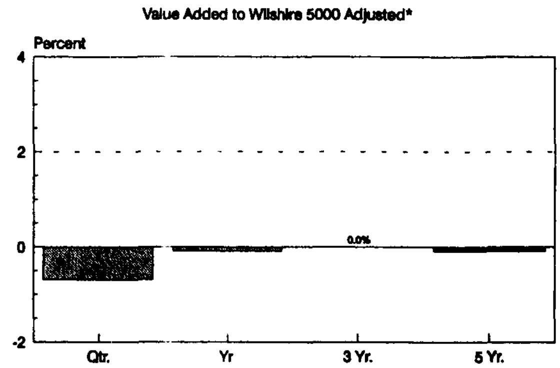
Performance of Asset Pools

Domestic Stock Pool

Target: Wilshire 5000 Adjusted*
Expectation: If half of the pool is actively managed and half is passively managed, the entire pool is expected to exceed the target by +.20-.45% annualized, over time.

			Annualized	
	Qtr.	**Yr.**	**3 Yrs.**	**5 Yrs.**
Stock Pool	**1.4%**	**10.9%**	**17.5%**	**14.1%**
Wilshire 5000*	2.1	11.0	17.5	14.2

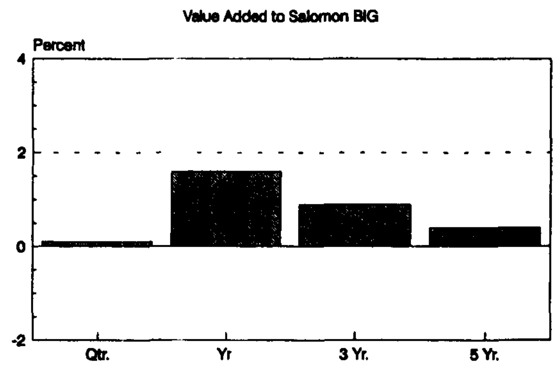
*Buy/hold index adjusted for liquor and tobacco restrictions through 3/31/93 and AHP restriction through 10/31/93.



Domestic Bond Pool

Target: Salomon Broad Investment Grade (BIG) 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.

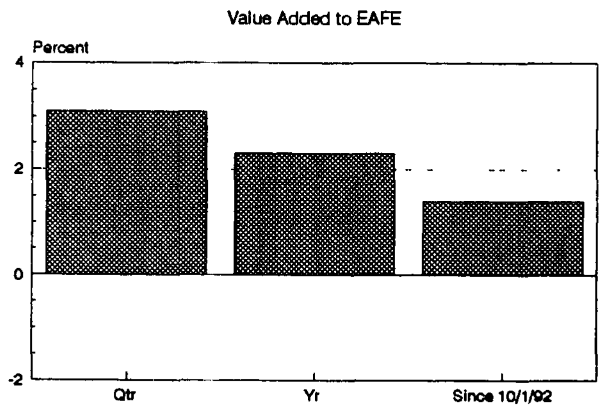
			Annualized	
	Qtr.	**Yr.**	**3 Yrs.**	**5 Yrs.**
Bond Pool	**0.1%**	**11.5%**	**12.0%**	**11.7%**
Salomon BIG	0.0	9.9	11.1	11.3



International Stock Pool

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

			Since
	Qtr.	**Yr.**	**10/1/92**
Int'l. Pool	**4.0%**	**34.3%**	**22.8%**
EAFE	0.9	32.6	21.4



ALTERNATIVE ASSET MANAGERS
Performance of Asset Pools

Real Estate Pool (Basic Funds only)

Expectation: Real estate investments are expected to exceed the rate of inflation by 3-5% annualized, over the life of the investment.

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

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Real Estate	**-0.4%**	**-2.5%**	**-6.2%**	**-2.4%**
Real Estate Index	-0.4	-1.5	-7.0	-3.7
Inflation	0.5	2.8	2.9	3.9

Private Equity Pool (Basic Funds only)

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

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

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Private Equity	**9.8%**	**19.6%**	**17.8%**	**15.1%**

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.

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

			Annualized	
	Qtr.	Yr.	3 Yrs.	5 Yrs.
Resource Funds	**-3.3%**	**5.3%**	**7.6%**	**5.8%**

ASSIGNED RISK PLAN

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

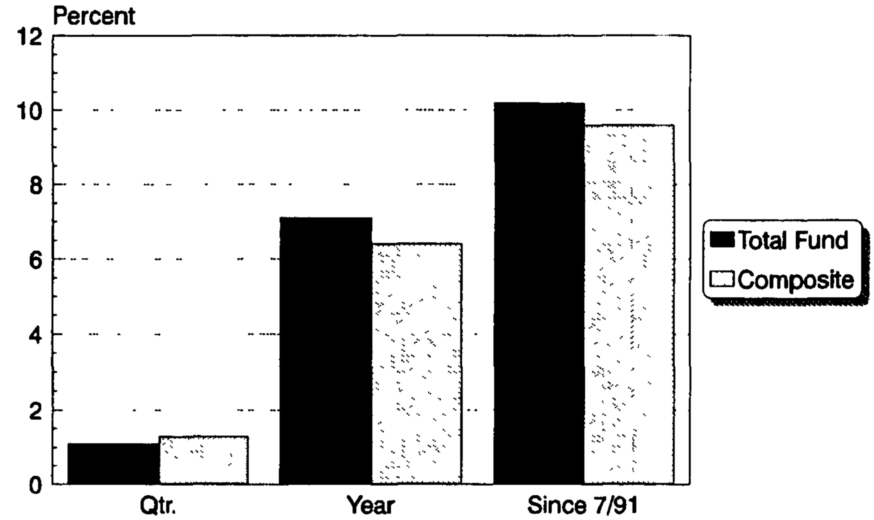
Asset Mix
The Assigned Risk Plan is invested in a balanced portfolio of common stocks and bonds. The actual asset mix will fluctuate in response to changes in the Plan's liability stream.

	12/31/93 Target	12/31/93 Actual
Stocks	20.0%	19.0%
Bonds	80.0	74.8
Unallocated Cash	0.0	6.2
Total	100.0%	100.0%

Investment Management
The entire fund is managed externally by Voyageur Asset Management. The portfolio was transferred from the Department of Commerce to the SBI on May 1, 1991.

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

Market Value
On December 31, 1993 the market value of the Assigned Risk Plan was $419 million.



Period Ending 12/31/93

	Qtr.	Yr.	Since 7/1/91
Total Account	**1.1%**	**7.1%**	**10.2%**
Composite	1.3	6.4	9.6
Equity Segment	**3.5**	**-1.8**	**8.9**
Benchmark	4.4	-0.3	9.5
Bond Segment	**0.6**	**8.7**	**10.5**
Benchmark	0.7	7.6	9.6

SUPPLEMENTAL INVESTMENT FUND

The Minnesota Supplemental Investment Fund is a multi-purpose investment program that offers a range of investment options to state and local public employees. The different participating groups use the Fund for a variety of purposes:

1. It functions as the investment manager for all assets of the Unclassified Employees Retirement Plan and the Public Employees Defined Contribution Plan.

2. It acts as an investment manager for most assets of the supplemental retirement programs for state university and community college teachers and for Hennepin County employees.

3. It is one investment vehicle offered to public employees as part of the state's Deferred Compensation Plan.

4. It serves as an external money manager for a portion of some local police and firefighter retirement plans.

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

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

On December 31, 1993 the market value of the entire fund was $634 million.

Investment Options

Income Share Account - a balanced portfolio utilizing both common stocks and bonds.

Growth Share Account - an actively managed, all common stock portfolio.

Common Stock Index Account - a passively managed, all common stock portfolio designed to track the performance of the entire stock market.

Bond Market Account - an actively managed, all bond portfolio.

Money Market Account - a portfolio utilizing short-term, liquid debt securities.

Fixed Interest Account - an option utilizing guaranteed investment contracts (GIC's), which offer a fixed rate of return for a specified period of time.

SUPPLEMENTAL INVESTMENT FUND
Income Share Account

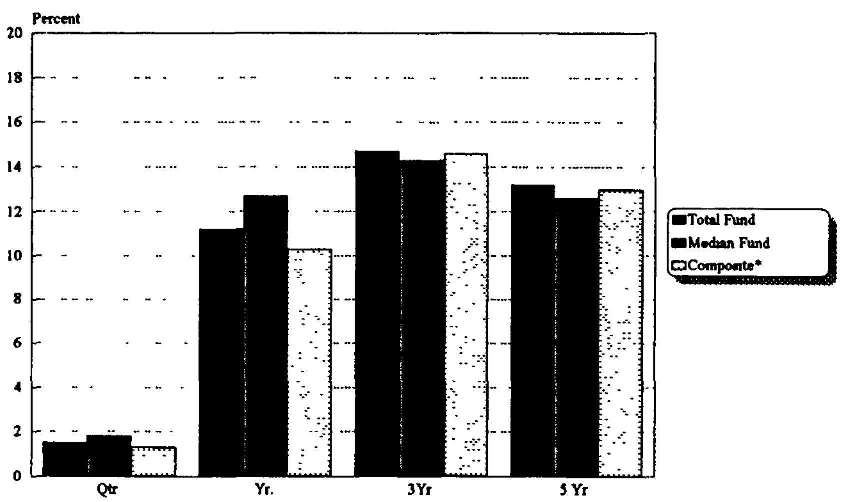
Investment Objective
The primary investment objective of the Income Share Account is similar to that of the Basic Retirement Funds. The Account seeks to maximize long-term real rates of return, while limiting short-run portfolio return volatility.

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

	Target	Actual
Stocks	60.0%	61.1%
Bonds	35.0	30.2
Unallocated Cash	5.0	8.7
	100.0%	100.0%

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

Market Value
On December 31, 1993 the market value of the Income Share Account was $332 million.



Period Ending 12/31/93

	Qtr.	Yr.	Annualized 3 Yr.	Annualized 5 Yr.
Total Account	**1.5%**	**11.2%**	**14.7%**	**13.2%**
Median Fund*	1.8	12.7	14.3	12.6
Composite**	1.3	10.3	14.6	13.0
Equity Segment	**2.4**	**11.9**	**17.8**	**14.5**
Wilshire 5000***	2.1	11.0	17.5	14.2
Bond Segment	**-0.2**	**11.5**	**11.5**	**11.6**
Salomon Bond Index	0.0	9.9	11.1	11.3

*TUCS Median Master Trust

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

*** Buy/hold index adjusted for liquor and tobacco restrictions through 3/31/93 and AHP restricition through 10/31/93.

SUPPLEMENTAL INVESTMENT FUND
Growth Share Account

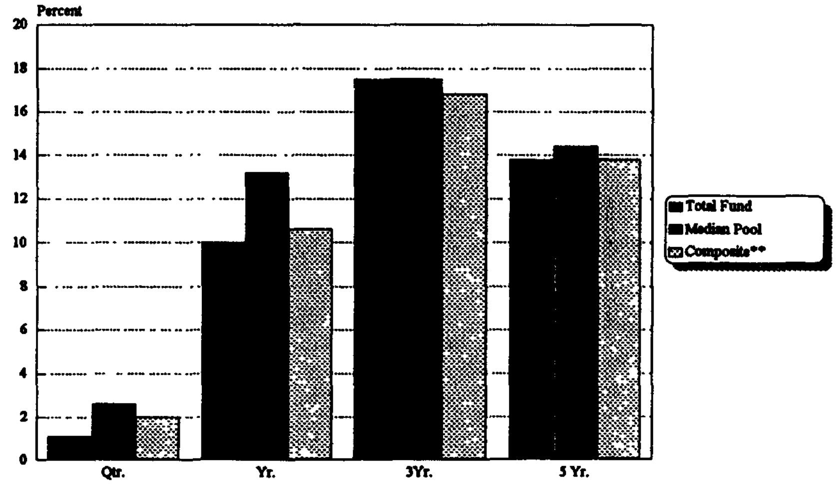
Investment Objective
The Growth Share Account's investment objective is to generate above-average returns from capital appreciation on common stocks.

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

	Target	Actual
Stocks	95.0%	90.9%
Unallocated Cash	5.0	9.1
	100.0%	100.0%

Investment Management
Throughout the period shown below, the entire Account has been managed by the same group of active external stock managers utilized by the Basic and Post Retirement Funds. Prior to April 1988, other active managers controlled a substantial portion of the account.

Market Value
On December 31, 1993 the market value of the Growth Share Account was $105 million.



Period Ending 12/31/93

			Annualized	
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	**1.1%**	**10.0%**	**17.5%**	**13.8%**
Median Pool*	2.6	13.2	17.5	14.4
Composite**	2.0	10.6	16.8	13.8

* TUCS Median Equity Pool

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

SUPPLEMENTAL INVESTMENT FUND

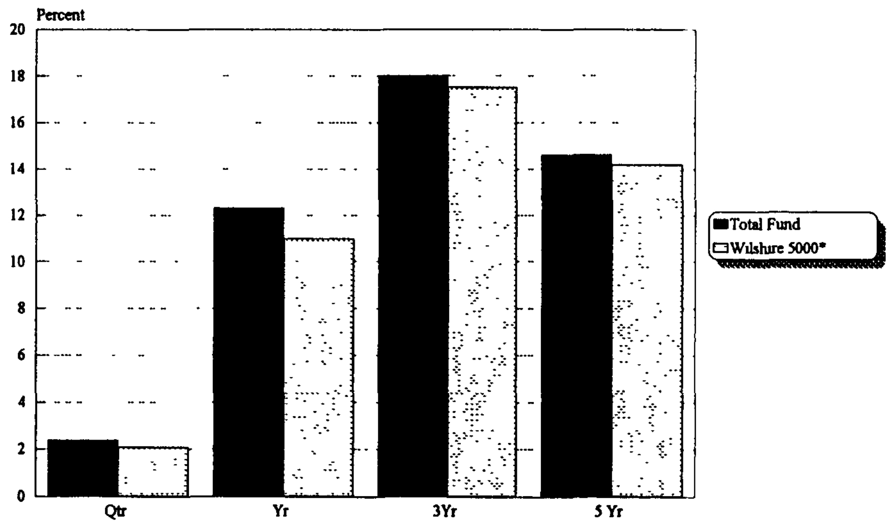
Common Stock Index Account

Investment Objective and Asset Mix
The investment objective of the Common Stock Index Account is to generate returns that match those of the common stock market. The Account is designed to track the performance of the Wilshire 5000, a broad-based equity market indicator.

The Account is invested 100% in common stock.

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

Market Value
On December 31, 1993 the market value of the Common Stock Index Account was $44 million.



	Period Ending 12/31/93			
		Annualized		
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	**2.4%**	**12.3%**	**18.0%**	**14.6%**
Wilshire 5000*	2.1	11.0	17.5	14.2

*Buy/hold index adjusted for liquor and tobacco restrictions through 3/31/93 and AHP restriction through 10/31/93.

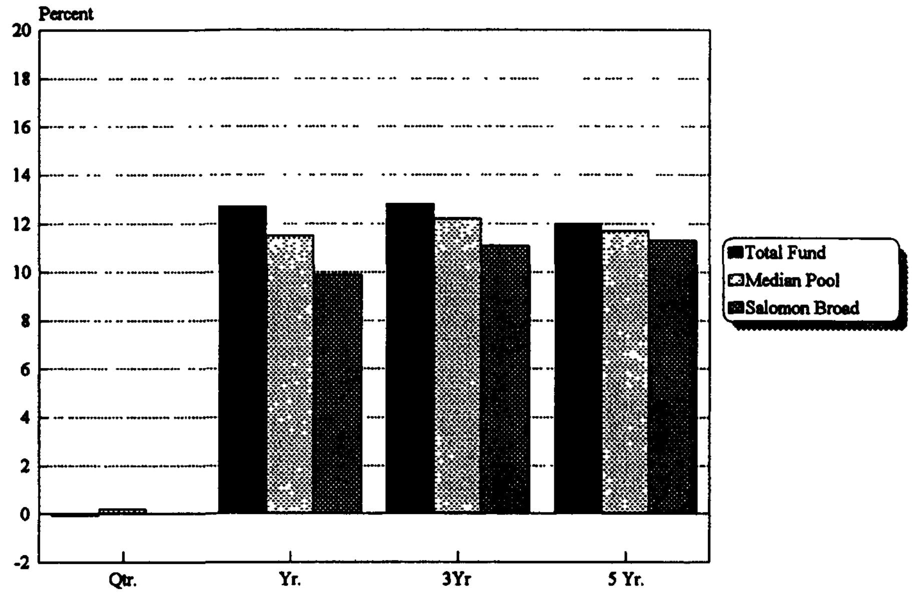
SUPPLEMENTAL FUND
Bond Market Account

Investment Objective
The investment objective of the Bond Market Account is to earn a high rate of return by investing in fixed income securities.

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

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

Market Value
On December 31, 1993 the market value of the Bond Market Account was $22 million.



	Period Ending 12/31/93			
		Annualized		
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	**-0.1%**	**12.7%**	**12.8%**	**12.0%**
Median Pool*	0.2	11.5	12.2	11.7
Salomon BIG**	0.0	9.9	11.1	11.3

* TUCS Median Fixed Income Pool
** Salomon Broad Investment Grade Index

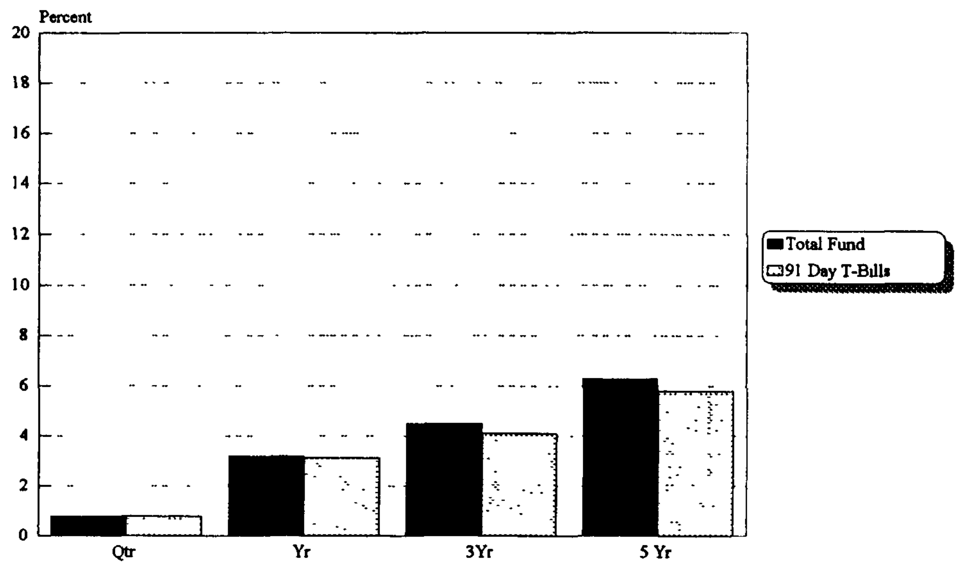
SUPPLEMENTAL INVESTMENT FUND
Money Market Account

Investment Objective
The investment objective of the Money Market Account is to purchase short-term, liquid fixed income investments that pay interest at rates competitive with those available in the money markets.

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

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

Market Value
On December 31, 1993 the market value of the Money Market Account was $62 million.



Period Ending 12/31/93

	Qtr.	Yr.	3 Yr.	5 Yr.
			Annualized	
Total Account	**0.8%**	**3.2%**	**4.5%**	**6.3%**
91 Day T-Bills	0.8	3.1	4.1	5.8

SUPPLEMENTAL INVESTMENT FUND

Fixed Interest Account

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

Asset Mix
The Fixed Interest Account is invested in guaranteed investment contracts (GIC's) offered by major U.S. insurance companies and banks.

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

Market Value
On December 31, 1993 the market value of the Fixed Interest Account was $68 million.

Contract Period	Annual Effective Interest Rate	Manager
Nov. 1, 1991-Oct. 31, 1994	6.634%	Continental Assurance/Provident National (blended rate)
Nov. 1, 1992-Oct. 31, 1995	5.280%	Norwest Bank Minnesota
Nov. 1, 1993-Oct. 31, 1996	4.625%	Principal Mutual/Hartford Life (blended rate)

PERMANENT SCHOOL FUND

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

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

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

Asset Mix
The fund's asset mix is again in line for the quarter after payment of the Fund's school aid distribution. The Permanent School Fund continues to hold only fixed income securities.

	Target	Actual
Bonds	95.0%	94.7%
Unallocated Cash	5.0	5.3
Total	100.0%	100.0%

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

Asset Growth
The market value of the Permanent School Fund's assets decreased 5.1% during the fourth quarter primarily due to a semi-annual withdrawal as a distribution to school aid payments.

Asset Growth
During Fourth Quarter 1993
(Millions)

Beginning Value	$476.7
Net Contributions	-20.5
Investment Return	-3.9
Ending Value	$452.3

Bond Segment Performance
The composition of the Permanent School Fund's bond portfolio was essentially unchanged during the quarter. The bond portfolio is structured with a laddered distribution of maturities to minimize the Fund's exposure to re-investment rate risk. At the quarter's-end, the portfolio had a current yield of 7.38%, an average life of 7.88 years, and a AAA quality rating. The portfolio remains concentrated in Treasury and Agency issues with the remainder primarily distributed among mortgages, industrials and utilities.

Bond Portfolio Statistics
12/31/93

Value at Market	$421,748,699
Value at Cost	364,358,532
Average Coupon	8.70%
Current Yield	7.38
Yield to Maturity	6.55
Current Yield at Cost	8.53
Time to Maturity	15.07 Years
Average Duration	7.88 Years
Average Quality Rating	AAA
Number of Issues	116

STATE CASH ACCOUNTS

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

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

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

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

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

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

Investment Objectives
Safety of Principal. To preserve capital.

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

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

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

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

Period Ending 12/31/93

	Market Value (Millions)	Qtr.	Yr.	3 Yrs. Annualized
Treasurer's Cash Pool	**$2,099**	**0.7%**	**4.0%**	**5.8%**
Trust Fund Cash Pool	**58**	**0.9**	**4.7**	**5.5**
Benchmark*		0.8	N.A.	N.A.
91-Day T-Bills		0.8	3.1	4.0

* 75% State Street Short Term Investment Fund/25% 1-3 Year Treasuries. This benchmark was established in April 1993. The Investment Advisory Council (IAC) intend to review the appropriateness of this benchmark in FY96. Until that time the IAC believe the pools should continue to be monitored against 91-Day T-Bills.

Tab B

PORTFOLIO STATISTICS

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

	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	$34,332 0.79%	$0	$1,263,611 29.21%	$0	$2,168,472 50.14%	$434,475 10.05%	$424,448 9.81%	$4,325,338 100%
Public Employees Retirement Fund	$14,089 0.62%	$0	$668,165 29.25%	$0	$1,147,067 50.22%	$230,107 10.08%	$224,522 9.83%	$2,283,950 100%
State Employees Retirement Fund	$12,503 0.62%	$0	$593,056 29.26%	$0	$1,017,936 50.22%	$204,086 10.07%	$199,246 9.83%	$2,026,827 100%
Public Employees Police & Fire Fund	$18,881 1.95%	$0	$278,830 28.86%	$0	$478,647 49.55%	$95,999 9.94%	$93,689 9.70%	$966,046 100%
Highway Patrol Retirement Fund	$440 0.30%	$0	$43,667 29.35%	$0	$74,963 50.38%	$15,037 10.11%	$14,673 9.86%	$148,780 100%
Judges Retirement Fund	$55 0.62%	$0	$2,608 29.26%	$0	$4,477 50.22%	$898 10.07%	$876 9.83%	$8,914 100%
Public Employees P.F. Consolidated	$8,566 3.90%	$39,921 18.19%	$48,588 22.13%	$6,687 3.05%	$83,047 37.83%	$16,448 7.49%	$16,255 7.41%	$219,512 100%
Correctional Employees Retirement	$659 0.62%	$0	$31,241 29.26%	$0	$53,621 50.22%	$10,748 10.07%	$10,496 9.83%	$106,765 100%
POST RETIREMENT FUND	$225,543 2.57%	$0	$3,230,589 36.85%	$0	$4,426,770 50.50%	$883,481 10.08%	$0	$8,766,383 100%

	Cash And Short Term Securities	Bonds		Stocks		External Int'l	Alternative Assets	Total
		Internal	External	Internal	External			
MINNESOTA SUPPLEMENTAL FUNDS:								
Income Share Account	$28,860 8.69%	$100,369 30.20%	$0	$0	$203,090 61.11%	$0	$0	**$332,319 100%**
Growth Share Account	$9,590 9.10%	$0	$0	$0	$95,802 90.90%	$0	$0	**$105,392 100%**
Money Market Account	$61,815 100%	$0	$0	$0	$0	$0	$0	**$61,815 100%**
Common Stock Index Account	$0	$0	$0	$0	$44,206 100%	$0	$0	**$44,206 100%**
Bond Market Account	$0	$0	$22,372 100%	$0	$0	$0	$0	**$22,372 100%**
Fixed Interest Account	$0	$0	$67,917 100%	$0	$0	$0	$0	**$67,917 100%**
TOTAL RETIREMENT FUNDS	**$415,333 2.13%**	**$140,290 0.72%**	**$6,250,644 32.08%**	**$6,687 0.03%**	**$9,798,098 50.28%**	**$1,891,279 9.71%**	**$984,205 5.05%**	**$19,486,536 100%**
ASSIGNED RISK PLAN	$26,190 6.25%	$0	$313,310 74.79%	$0	$79,415 18.96%	$0	$0	**$418,915 100%**
ENVIRONMENTAL TRUST FUND	$0	$44,062 64.44%	$0	$24,315 35.56%	$0	$0	$0	**$68,377 100%**
PERMANENT SCHOOL FUND	$24,062 5 32%	$428,229 94 68%	$0	$0	$0	$0	$0	**$452,291 100%**
TREASURERS CASH	$2,098,846 100%	$0	$0	$0	$0	$0	$0	**$2,098,846 100%**
HOUSING FINANCE AGENCY	$31,606 16.59%	$158,943 83.41%	$0	$0	$0	$0	$0	**$190,549 100%**
MINNESOTA DEBT SERVICE FUND	$5,624 19.70%	$22,917 80.30%	$0	$0	$0	$0	$0	**$28,541 100%**
MISCELLANEOUS ACCOUNTS	$58,013 33.39%	$115,709 66.61%	$0	$0	$0	$0	$0	**$173,722 100%**
GRAND TOTAL	**$2,659,674 11.61%**	**$910,150 3.97%**	**$6,563,954 28.64%**	**$31,002 0.14%**	**$9,877,513 43.10%**	**$1,891,279 8.25%**	**$984,205 4.29%**	**$22,917,777 100%**

STATE OF MINNESOTA
STATE BOARD OF INVESTMENT

Net Cash Flow Available For Investment
September 30, 1993 - December 31, 1993

Teachers Retirement Fund	$29,200,000.00
Public Employees Retirement Fund	(15,000,000.00)
State Employees Retirement Fund	0.00
Public Employees Police & Fire	9,000,000.00
Highway Patrol Retirement Fund	(1,063,000.00)
Judges Retirement Fund	0.00
Public Employees P&F Consolidated	52,726,667.21
Correctional Employees Retirement Fund	0.00
Post Retirement Fund	(57,550,440.46)
Supplemental Retirement Fund - Income	8,299,732.39
Supplemental Retirement Fund - Growth	2,153,180.26
Supplemental Retirement Fund - Money Market	(4,840,725.14)
Supplemental Retirement Fund - Index	4,007,008.25
Supplemental Retirement Fund - Bond Market	1,715,044.89
Supplemental Retirement Fund - Fixed Interest	(5,141,927.75)
Total Retirement Funds Net Cash Flow	**$23,505,539.65**
Assigned Risk Plan	$10,122,309.85
Permanent School Fund	(20,507,411.44
Total Net Cash Flow	**$13,120,438.06**

STATE OF MINNESOTA

STATE BOARD OF INVESTMENT

Transaction and Asset Summary

Retirement Funds

	Net Transactions			Asset Summary (at Market Value)				
	Bonds (Millions)	Stocks (Millions)	Total (Millions)	Cash Flow (Millions)	Short-Term % of Fund	Bonds % of Fund	Equity % of Fund	Total Mkt. Value (Millions)
January 1990	-$37	$6	-$31	$85	3.9%	52.0%	44.1%	$12,126
February	-12	115	103	48	3.4	51.1	45.5	12,232
March	-3	7	4	8	3.4	50.5	46.1	12,334
April	105	3	108	8	2.7	51.4	45.9	12,070
May	-6	27	21	52	2.8	50.0	47.2	12,721
June	23	-22	1	122	3.7	50.3	46.0	12,916
July	130	3	133	65	3.1	51.6	45.3	12,962
August	98	-38	60	53	3.2	53.3	43.5	12,293
September	61	-42	19	13	3.2	55.1	41.7	12,098
October	35	8	43	11	3.0	56.0	41.0	12,103
November	-58	61	3	106	3.7	54.2	42.1	12,652
December	-59	115	56	33	3.4	53.3	43.3	12,967
January 1991	6	-2	4	47	3.6	52.3	44.1	13,356
February	-6	11	5	60	3.9	50.6	45.5	13,790
March	82	1	83	6	3.3	50.8	45.9	13,961
April	-24	-9	-33	9	3.6	50.9	45.5	14,045
May	33	1	34	66	3.8	49.8	46.4	14,308
June	25	2	27	115	4.4	50.5	45.1	14,106
July	124	0	124	48	3.8	50.4	45.8	14,527
August	85	21	106	55	3.3	50.8	45.9	14,891
September	22	1	23	5	3.1	51.4	45.5	15,105
October	21	1	22	14	3.1	51.2	45.7	15,285
November	81	-48	33	64	3.3	52.3	44.3	15,083
December	-4	9	5	25	3.2	51.2	45.6	16,065
January 1992	-42	-3	-45	11	3.6	50.3	46.1	15,878
February	-19	0	-19	57	4.1	49.4	46.5	16,086
March	292	-300	-8	2	4.2	51.6	44.2	15,870
April	-6	2	-4	4	4.2	51.5	44.3	15,905
May	-13	5	-8	72	4.7	51.3	44.0	16,127
June	-22	0	-22	150	5.7	51.5	42.8	16,264
July	389	152	541	123	3.0	53.3	43.7	16,726
August	-149	151	2	-11	3.0	53.1	43.9	16,627
September	-200	200	0	-10	2.9	52.0	45.1	16,809
October	-282	282	0	10	2.9	49.8	47.3	16,771
November	-248	270	22	-9	2.7	47.5	49.8	17,057
December	-500	518	18	4	2.6	44.7	52.7	17,305
January 1993	-138	158	20	40	2.6	44.0	53.4	17,617
February	-253	266	13	2	2.6	42.9	54.5	17,811
March	-272	335	63	70	2.6	40.7	56.7	18,180
April	-412	423	11	8	2.6	38.9	58.5	18,101
May	-206	200	-6	1	2.5	37.2	60.3	18,387
June	-250	210	-40	15	2.8	36.3	60.9	18,573
July	-17	-26	-43	20	3.1	36.4	60.5	18,649
August	0	10	10	-12	3.0	36.0	61.0	19,183
September	6	1	7	-15	2.8	36.2	61.0	19,216
October	-23	101	78	-21	2.3	35.8	61.9	19,433
November	-426	460	34	-22	2.0	34.0	64.0	19,032
December	-113	158	45	73	2.1	32.8	65.1	19,486

Tab C

EXECUTIVE DIRECTOR'S ADMINISTRATIVE REPORT

DATE: February 22, 1994

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

FROM: Howard Bicker

1. Budget Report

A report on the SBI's administrative budget for the period ending January 31, 1994 is in **Attachment A**.

2. Travel Report

A travel report for the period from November 16, 1993-February 15, 1994 is included as **Attachment B**.

3. Review of vendors for the Retirement Plans Administered by the State University and Community College Systems.

In 1993, the Legislature gave the SBI new responsibilities with respect to certain retirement plans administered by the State University and Community College System. I am recommending that SBI direct the Deferred Compensation Review Committee to review statutory requirements and recommend appropriate action to the SBI.

Legislative History:

In 1988, the Legislature created a defined contribution plan for new faculty and certain administrators of the State University and Community College systems that replaced the Teachers Retirement Association (TRA) plan as the primary retirement vehicle for those eligible to participate. The 1988 legislation transferred responsibility for administration of the of the new plan as well as the College Supplemental Retirement Plan to the State University System and to the Community College System. Each system is responsible for the plans as they apply to their respective employees. The legislation also gave each system the responsibility to select two outside vendors to provide annuity products to their respective participants.

In 1989 legislation, the Supplemental Investment Fund (SIF) was added as a third vendor option for the College Plans. In 1993, Minnesota Statutes section 354B.05

was amended to make the SBI responsible for selection and periodic review of the college system vendors. In addition, the statutes now state that the SBI must approve all contracts prior to their execution by the two college systems.

This issue is further complicated by the merger of the State University System, Community College System and Technical Colleges Boards which is to be effective July 1, 1995. Therefore, any decision regarding the vendors should be coordinated with the State University System, the Community College System and the Higher Education Board.

RECOMMENDATION:

I recommend that the SBI direct the Deferred Compensation Review Committee to review the SBI's responsibilities under the MS 354B.05 and recommend an appropriate course of action at the June 1994 meeting of the SBI. This direction should include authorization to initiate a request for proposal (RFP) for insurance annuity products prior to June 1994 if the Committee believes such action is in the best interests of the SBI.

ATTACHMENT A

STATE BOARD OF INVESTMENT
FISCAL YEAR 1994 ADMINISTRATIVE BUDGET REPORT
GENERAL FUND APPROPRIATION
FISCAL YEAR TO DATE THROUGH JANUARY 31,1994

ITEM	FISCAL YEAR 1994 BUDGET	FISCAL YEAR 1994 EXPENDITURES
PERSONAL SERVICES		
CLASSIFIED EMPLOYEES	$ 323,000	$ 172,766
UNCLASSIFIED EMPLOYEES	1,127,000	573,740
SEVERENCE PAYOFF	0	5,167
WORKERS COMPENSATION INSURANCE	0	0
MISCELLANEOUS PAYROLL	7,000	2,738
SUBTOTAL	**$ 1,457,000**	**$ 754,411**
EXPENSES & CONTRACTUAL SERVICES		
RENTS & LEASES	85,000	47,804
REPAIRS/ALTERATIONS/MAINTENANCE	9,000	6,669
BONDS AND INSURANCE	1,000	959
PRINTING & BINDING	18,000	12,640
PROFESSIONAL/TECHNICAL SERVICES	54,000	1,163
DATA PROCESSING & SYSTEM SERVICES	202,500	101,250
PURCHASED SERVICES	35,000	15,748
SUBTOTAL	**$ 404,500**	**$ 186,233**
MISCELLANEOUS OPERATING EXPENSES		
COMMUNICATIONS	27,000	12,085
TRAVEL, IN-STATE	2,000	729
TRAVEL, OUT-STATE	40,000	13,656
FEES & OTHER FIXED CHARGES	8,000	6,771
SUBTOTAL	**$ 77,000**	**$ 33,241**
SUPPLIES/MATERIALS/PARTS	**39,500**	**10,995**
CAPITAL EQUIPMENT	**35,000**	**2,041**
TOTAL GENERAL FUND	**$ 2,013,000**	**$ 986,921**

ATTACHMENT B

STATE BOARD OF INVESTMENT

Travel Summary by Date
November 16, 1993 - February 15, 1994

Purpose	Name(s)	Destination and Date	Total Cost
Staff Education "Fixed Income Research Seminar" sponsored by BARRA **Manager Monitoring** **Active Bond Managers** TCW, Western	J. Lukens	10/24-11/1 * Monterey CA Los Angeles CA	$1,367.14
Manager Monitoring **Domestic Stocks** Weiss Peck, Oppenheimer, Forstmann, GeoCapital, Lynch & Mayer **Manager Search** **Passive/Semi Passive Stocks** Alliance, Bankers Trust, J.P. Morgan, Goldman Sachs, T. Rowe Price	M. Menssen	12/3-10 Baltimore MA New York NY	$924.21
Manager Monitoring **Domestic Bonds** Fidelity, Standish, BEA, Goldman	J. Lukens	12/14-17 Boston MA New York NY	$1,591.98
Miscellaneous **Deferred Compensation** Meeting with Great West Life	J. Heidelberg	12/21 Denver CO	$732.00
Board Member Travel "Public Funds Conference" sponsored by Institute for Fiduciary Education	L. Rotenberg	1/7-12 Palm Springs CA	$359.00

* Omitted from the report in the December, 1993 meeting materials.

Travel Summary by Date (con't)

Purpose	Name(s)	Destination and Date	Total Cost
Manager Search **Alternative Investments** TA Associates Realty, Summit Partners **Manager Monitoring** **Alternative Investments** AEW, State Street	D. Egeland J. Griebenow	1/16-18 Boston MA	$457.00
Manager Monitoring **Domestic Stocks** Wilshire Asset Management, Zevenbergen **Manger Search** **Domestic Stocks** Wells Fargo, Parametric	L. Buermann M. Menssen	1/30-2/2 Los Angeles CA San Francisco CA Seattle WA	$3,065.92

Tab D

COMMITTEE REPORT

DATE: February 22, 1994

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

FROM: **Asset Allocation Committee Report**

The Asset Allocation Committee met on February 16, 1994 to consider the following items:

- Discussion on the management structure of the equity segment of the Assigned Risk Plan
- Consideration of the position paper on the Post Retirement Investment Fund

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

INFORMATION ITEM:

1. Management Structure of the Stock Segment of the Assigned Risk Plan

The Assigned Risk Plan (ARP) provides worker's compensation insurance for Minnesota employers who are unable to obtain insurance in the private market. The Plan has a low risk tolerance and, due to the relatively short term of most of the liabilities, the portfolio must be quite liquid. Amounts representing liabilities of less than 10 years are invested in bonds, while amounts for liabilities greater than 10 years are invested in stocks.

Currently, the asset allocation of the ARP is 80% bonds ($320 million) and 20% stocks ($80 million). The high fixed income allocation minimizes the chance of a future fund deficit while the equity exposure should provide higher expected returns and hedge some of the inflation risk associated with the longer term liabilities. The Plan has a single manager, Voyageur Asset Management, who actively manages both the stock and bond segments of the ARP.

The SBI's position paper for the ARP stated that the stock segment of the Plan should have broad market coverage. Such a strategy reduces the risk that the portfolio will be invested in an under performing sector which could, in turn, require an increase in employer premium payments to cover the shortfall. This is a particular concern when only one manager is retained since the diversification benefit of multiple styles is not available.

After Voyageur was retained, staff worked with the manager to develop a benchmark which reflects the manager's investment style. This benchmark mirrors Voyageur's stock selection universe which is stocks that are ranked "A" or better by Standard & Poors. While staff originally thought that this investment approach would be fairly representative of the broad market, experience over the last 2.5 years has indicated otherwise. As shown below, the manager's actual portfolio and its benchmark have under performed broad market indices since July 1991 when the SBI approved a new contract with Voyageur:

Annualized Return
July 1991-December 1993

Assigned Risk Plan	
Actual stock return	8.9%
Benchmark return	9.5
Market Indices	
S&P 500	12.7%
Wilshire 5000	14.5

Staff has concluded that the active management approach used by the ARP does not provide broad market coverage and therefore exposes the Plan to inappropriate levels of active risk. Statistical analysis of the manager's returns and benchmark suggest the Voyageur's active management approach will produce returns that will be ± 5 or more percentage points around the S&P 500.

Staff has suggested that the stock segment of the ARP be moved from active to passive management. This change would eliminate the style bias risk in the current management structure and assure market exposure for the Plan's small stock portfolio. Specifically, staff proposed that the stock segment of the ARP be managed by SBI staff as part of an internally managed index pool that is designed to track the S&P 500. For more information on the rationale for this proposal, please refer to the memo from SBI staff beginning on **page 5**.

The Committee would like additional time to consider this proposal before making a recommendation to the SBI/IAC. Members are not opposed to the passive management approach suggested by staff, but they believe that other management structures may be applicable as well. The Committee intends to report its findings to the SBI/IAC at a future meeting.

ACTION ITEM:

1. Approval of the Position Paper on the Post Retirement Investment Fund

The SBI has approved and implemented significant policy changes in the asset allocation and management structure of the Post Retirement Fund over the last two years. Staff has prepared a new position paper which summarizes the history of the Post Fund, reviews the impact of the old and new benefit increase formulas and discusses the rationale for the old and new asset allocation policies for the Fund. A copy of the paper begins on **page 9.**

RECOMMENDATION:

The Committee recommends that the SBI adopt position paper entitled "Post Retirement Fund: New Benefit Increase Formula and Revised Asset Allocation Policy" as its written policy statement on the asset allocation and management structure of the Post Fund.

MINNESOTA STATE BOARD OF INVESTMENT

DATE: February 7, 1994

TO: Members, Asset Allocation Committee

FROM: Mansco Perry, Investment Analyst

SUBJECT: Assigned Risk Plan Stock Management

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

The pronounced under performance stock segment of the Assigned Risk Plan (ARP) versus broad market indices over the last 2.5 years has prompted SBI staff to review the management structure of the equity portfolio. Staff has concluded that the current style bias in the stock segment exposes the Plan to inappropriate levels of active risk. Staff is recommending that the stock segment of the ARP be moved from active to passive management to eliminate the style bias and assure market exposure for the Plan's small stock portfolio.

BACKGROUND

The Assigned Risk Plan provides workers' compensation and employers' liability coverage to Minnesota employers unable to obtain insurance in the private market. The main objective of the Plan is to provide for the fund liabilities/payments on the required dates. The characteristics of the Plan make predicting liability cash flows for the fund difficult. Since the ARP covers companies that have been rejected by private insurers, the underwriting losses may be greater for the ARP than other providers of workers compensation insurance.

The rate of return for the ARP should be considered only when compared to an appropriate benchmark that represents the liability stream. The Plan has a low risk tolerance and, due to the relatively short term of most of the liabilities, the portfolio must be quite liquid. Amounts representing liabilities of less than 10 years are invested in bonds, while amounts for liabilities greater than 10 years are invested in equities. A high fixed income allocation minimizes the chance of a future fund deficit while the equity exposure will provide higher expected returns and hedge some of the inflation risk associated with the liabilities. Currently, the asset allocation for the ARP is 80% bonds and 20% equities. (Total Plan $400 million; Bonds $320 million; Stocks $80 million.)

In May 1989, Voyageur Asset Management was retained by the Department of Commerce to manage the ARP. The SBI became responsible for the portfolio in

May 1991 and entered a new contract with Voyageur effective July 1991. Currently, Voyageur manages both the bond and equity segments of the fund. In addition, they work with the SBI staff to analyze the changing liability stream and recommend an appropriate asset mix for the Plan.

The position paper for the ARP outlined the need for broad market coverage for the equity portfolio. Such a strategy reduces the risk that the portfolio will be invested in an underperforming sector which could, in turn, require an increase in premium payments to cover the shortfall. This is a particular concern when only one manager is retained since the diversification benefit of multiple styles is not available.

CURRENT EQUITY STRUCTURE AND PERFORMANCE

The equity portfolio manager's current style is to select stocks rated "A" or better by Standard & Poors. It does not include utility stocks or stocks that are restricted by the SBI's guidelines. From July 1, 1991, through December 31, 1993, the equity portfolio experienced an annualized rate of return of 8.88%. The portfolio's benchmark return for the same period was 9.45%. While the performance of the equity portfolio during this period was below its benchmark, it is difficult to draw any firm conclusions regarding the portfolio manager's performance. If the investment style remains the same, the manager's modest underperformance relative to the benchmark does not warrant replacement at this time. However, the performance of the equity portfolio has lagged broader market indices significantly. The S&P 500 and the Wilshire 5000 indices for the same period were 12.74 % and 14.47 %, respectively.

Following is a comparison of the mean monthly returns from July '91 - December '93. Additional detail is in **Attachment A**.

	Actual	**Benchmark**	**S& P 500**	**Wilshire 5000**
Monthly Return	**.76**	**.81**	**1.04**	**1.17**
Actual Better/(Poorer)		**(.04)**	**(.28)**	**(.41)**

While the recent under performance of the ARP's equity style could easily reverse itself in future periods, as with any active management approach, there is no guarantee this will occur. As a point of reference, the current active style would need to outperform a broad index by 3 to 4 percentage points on an annualized basis for the next 2.5 years to "break even" with the performance of either the S&P 500 or the Wilshire 5000 over a 5 year time frame.

ALTERNATIVE STRUCTURES

The above data suggest that the ARP is exposed to significant style bias. It is possible to reduce style bias risk by using a diversified group of managers or by implementing risk control measures such as the tilted index fund mechanism. The SBI takes this risk reduction/control approach with its stock program for the retirement assets under its control (currently $9 billion allocated to 15 stock managers).

This approach is not feasible for the ARP for two reasons. First, retirement and non-retirement assets should not be commingled due to differing tax considerations and such commingling is now prohibited under state statute. This precludes the ARP from using the same managers and asset pools as the retirement funds for its stock investments. Second, due to the small size of its stock portfolio (approximately $80 million), it is not cost effective to employ multiple active stock managers only for the ARP.

Since a multiple active manager configuration is not feasible, staff recommends that the SBI index the equity segment of Plan. This approach will eliminate style bias risk and assure broad market exposure in a very cost effective manner. It also is consistent with the asset allocation strategy outlined in the original position paper on the Assigned Risk Plan.

Voyageur Asset Management, the ARP's current manager, does not have an index strategy available. However, SBI staff manage an S&P 500 index pool to invest other non-retirement stock assets under the SBI's control. Staff recommends that this pool be used as the investment vehicle for the stock segment of the ARP.

This change would have little impact on the administrative aspects of the ARP. Voyageur would continue to actively manage the bond segment of the Plan which comprises the large majority of the assets. Since both stock and bond assets for the ARP would continue to be custodied at the same bank (currently Norwest), consolidated accounting statements would continue to be available for the fund as a whole. As the primary manager for the ARP, Voyageur would continue to monitor and analyze the match between assets and liabilities for the entire Plan.

RECOMMENDATION:

Staff recommends that the stock segment of the Assigned Risk Plan be allocated to passive management rather than active management to eliminate style bias risk and assure market exposure for the Plan's small stock portfolio. Specifically, staff recommends that the ARP stock segment be invested through an internally managed index pool designed to track the performance of the S&P 500. This change should be effective April 1, 1994.

ATTACHMENT A

Assigned Risk Plan Equity Portfolio Comparison

Month	Actual Monthly Return	Benchmark Monthly Return	Actual B / (P) * Benchmark	S&P 500 Monthly Return	Actual B / (P) * Benchmark	Wilshire 5000 Monthly Return	Actual B / (P) * Benchmark
Jul-91	2.74	4.45	-1.71	4.68	-1.93	4.70	-1.95
Aug-91	1.81	2.88	-1.07	2.35	-0.54	2.76	-0.95
Sep-91	-2.39	-1.89	-0.50	-1.64	-0.75	-1.15	-1.24
Oct-91	-0.22	-0.04	-0.18	1.34	-1.56	1.84	-2.06
Nov-91	-2.69	-1.93	-0.76	-4.03	1.34	-3.82	1.13
Dec-91	13.42	13.24	0.18	11.42	2.00	10.98	2.44
Jan-92	-1.02	-2.05	1.03	-1.85	0.83	-0.20	-0.82
Feb-92	1.02	0.64	0.38	1.29	-0.27	1.38	-0.36
Mar-92	-1.21	-1.95	0.74	-1.95	0.74	-2.48	1.27
Apr-92	1.66	0.82	0.85	2.92	-1.26	1.34	0.33
May-92	0.68	1.06	-0.38	0.53	0.14	0.61	0.07
Jun-92	-1.53	-1.70	0.17	-1.45	-0.08	-2.04	0.51
Jul-92	3.43	3.86	-0.43	4.04	-0.62	4.05	-0.63
Aug-92	-1.46	-1.11	-0.35	-2.02	0.56	-2.11	0.66
Sep-92	2.69	2.14	0.54	1.15	1.54	1.19	1.50
Oct-92	1.01	0.59	0.42	0.35	0.65	1.21	-0.21
Nov-92	5.58	4.30	1.28	3.37	2.21	4.15	1.43
Dec-92	0.82	0.78	0.04	1.03	-0.22	1.78	-0.96
Jan-93	-0.64	-0.89	0.25	0.73	-1.37	1.23	-1.87
Feb-93	-0.69	-1.10	0.41	1.35	-2.04	0.41	-1.10
Mar-93	0.83	1.38	-0.55	2.16	-1.34	2.57	-1.74
Apr-93	-5.90	-5.64	-0.26	-2.45	-3.44	-2.76	-3.14
May-93	3.80	3.09	0.72	2.68	1.12	3.13	0.67
Jun-93	-3.12	-1.24	-1.88	0.33	-3.44	0.46	-3.58
Jul-93	-0.97	-1.31	0.34	-0.47	-0.50	-0.01	-0.96
Aug-93	3.57	3.01	0.56	3.80	-0.23	3.86	-0.29
Sep-93	-1.75	-1.54	-0.21	-0.74	-1.01	0.20	-1.95
Oct-93	1.63	2.76	-1.13	2.05	-0.42	1.67	-0.04
Nov-93	1.55	0.06	1.49	-0.91	2.46	-1.62	3.17
Dec-93	0.28	1.51	-1.23	1.24	-0.96	1.80	-1.52
std dev	3.33	3.24	-0.09	2.84	-0.48	2.81	-0.52
mean	0.76	0.81	-0.04	1.04	-0.28	1.17	-0.41
variance	11.06	10.48	-0.58	8.07	-2.99	7.88	-3.18
maximum	13.42	13.24	0.18	11.42	2.00	10.98	2.44
minimum	-5.90	-5.64	-0.26	-4.03	-1.86	-3.82	-2.08

* B / (P) = Better / (Poorer)

POST RETIREMENT INVESTMENT FUND:
New Benefit Increase Formula
And Revised Asset Allocation Policy

Position Paper
January, 1994

Table of Contents

INTRODUCTION

The Post Retirement Investment Fund (Post Fund) contains the pension assets of retirees in the statewide retirement plans from three (3) retirement systems: Teachers Retirement Association (TRA), Public Employees Retirement Association (PERA), Minnesota State Retirement System (MSRS). This paper reviews the history of the Post Fund, describes the past and present benefit increase formulas and discusses the rationale for the asset allocation strategy and management structure currently in place.

HISTORY

Minnesota's statewide pension plans use a relatively unique investment structure. Most private and public pension plans commingle the retirement assets of all their participants, whether they are currently employed or retired. Minnesota, on the other hand, completely separates active and retired employee' pension assets. The Basic Retirement Funds (Basic Funds) invest the active employee' pension assets, while the Post Fund invests the retired employee's pension assets. [The Post Fund was established by the Legislature in 1979. This is the successor fund to the Minnesota Adjustable Fixed Benefit Fund (MFAB) which was established in 1969.]

Upon retirement, a fully vested public employee receives a life-time annuity with monthly benefits based on the employee' "high-five" average salaries and years of service. Upon the employee's retirement, the Basic Funds transfer a dollar amount to the Post Fund sufficient to fund the initially promised benefit for the employee's expected lifetime.

The transfers from the Basic Funds remain invested in the Post Fund while they are gradually paid out to the retiree. The initial transfer assumes that the Post Fund's invested assets will earn at least 5% per year. Therefore, the amount transferred from the Basic Funds equals the projected annuity payments to the retiree over his/her actuarially expected life span discounted at the 5% assumed rate of return In addition, each year the actuary calculates a mortality adjustment based on revised expected life or mortality projections. Depending on whether the retiree's expected life has increased or decreased, a cash flow will take place between the Basic Funds and Post Fund to maintain the funding level of the Post Fund equal to present value of the projected annuity payments.

One particular aspect of the financing mechanism is that if Post Fund's investments earn the assumed 5% rate of return (a relatively conservative investment assumption), the Fund is, by definition, fully funded. Therefore, the initially promised benefits to retirees are at virtually no risk and no additional charges on employers likely will occur to support the initially promised benefits.

OLD BENEFIT INCREASE FORMULA (1980 - 1993)

When the Post Fund was established in 1979, the legislature enacted a post retirement benefit increase formula that was based on the realized earnings of the Fund. This formula was used for benefit increases granted on January 1, 1980 through January 1, 1993. During that period, state statutes defined "realized earnings" as interest, dividends and the net realized capital gains or losses on the assets of the Post Fund. If the Fund generated a realized return greater than 5% on its invested assets, the excess earnings were used to finance permanent lifetime benefit increases to eligible retirees.

Unrealized capital gains (or losses) had no direct impact on the additional benefits paid by the Post Fund under the previous benefit calculation. The purpose behind excluding unrealized capital gains (or losses) from the earnings computation was to make the calculation, which was based on a one year time frame, largely insensitive to short run fluctuations in the capital markets.

The benefit increase calculation under this formula was fairly simple. An amount sufficient to satisfy the actuarially required 5% rate of return was subtracted from the fiscal year realized earnings. The remaining realized earnings were then stated as a percentage of the present value of the current liabilities to the retirees. This percentage represented the benefit increase that the Post Fund granted to eligible retirees. (See **Exhibit A.**)

Asset Mix Under the Old Formula

In order to assure that realized earnings were sufficient to support promised benefits under the old formula, a portion of the Post Fund was invested in a "cash matched dedicated bond portfolio." A dedicated bond portfolio is a collection of bonds whose principle and interest payments will match a specified stream of liabilities (in this case, the known benefit payments to retirees). By investing in high quality bonds, the exact principal and interest cash flow of the portfolio could be calculated with a high degree of certainty. Further, because the dates and amounts of the cash flows were known, the amount of assets necessary for the dedicated bond portfolio could be computed readily.

The objective of the Post's dedicated bond portfolio was to support the promised benefits (i.e., to assure 5% realized earnings) and to generate excess earnings for additional benefit increases. Accordingly, the dedicated bond portfolio was structured to produce realized income of 8% annually for the entire Fund. This income stream would cover the 5% assumed rate of return and provide sufficient excess earnings to fund a 3% annual benefit increase goal. Assets not needed to support the 8% earnings goal of the dedicated bond portfolio were invested in common stocks.

The domestic stock investment process divided the assets approximately 50/50 between a one year and a three year investment strategy which would stagger the realized capital gains from the portfolio. Because the investment process assured a substantial portion of the stock portfolio would be sold each year, the Post realized a material amount of the capital gains due to the strong stock market throughout the 1980's. These realized gains were included in the benefit increase and distributed to eligible retirees. Once granted, sums sufficient to support those benefit increases were included in the dedicated bond portfolio, thereby decreasing the stock segment of the Fund and increasing the bond segment.

Results of Investment Strategy during 1980's

Under the old formula, Post Fund benefit increases in the 1980's were generally above 6% per year, well in excess of inflation. These high benefit increases were possible due to a combination of several events:

- high interest rates at the start of the 1980's
- strong stock gains throughout the 1980's
- an early retirement incentive ("Rule of 85") which was implemented for a three year period in the mid 1980's
- growth in new retirees

Interest rates were at historic highs in the early 1980's. These high coupon rates were the major source of realized income for the Post Fund when the dedicated bond portfolio was first put into place. As interest rates declined during the mid to late 1980's, new cash flow had to be invested at less attractive yields. Over time, this would reduce the level of realized income available from the bond portfolio.

As interest rates fell, the **stock market** rose substantially (e.g., the Wilshire 5000 stock index from generated a 15.5% annualized rate of return from 1980-1992). Since dividends historically have accounted for about a 3% return each year, most of these gains were due to an increase in the price of the stock (i.e., capital gains). Eventually, a large portion of these stock market gains became realized capital gains because of the Post's domestic stock portfolio management process (see previous section of this paper for more information). Once realized, these capital gains were distributed to retirees in the form of benefit increases.

Also during the mid 1980's, the legislature enacted the **"Rule of 85."** The Rule of 85 remained in place from the middle of 1984 through 1986 and allowed employees to take early retirement (before age 65) with full benefits if the combination of their age and years of service were equal to or greater than 85. (Previously, employees could take early retirement and receive full benefits only if they had 30 years of service and were at least 62 years old.) The Rule of 85 caused a significant increase in retirements resulting in disproportionally large transfers from the Basic Funds to the Post Fund for a period of time. These transfers resulted in large purchases of bonds that had relatively high interest rates. This surge of higher yielding bonds provided the Post Fund with a significant increase in realized earnings for a period of time.

After the implementation of the Rule of 85, retirements increased substantially (2,491 retirements in 1980 vs. 3,677 in 1985). This **growth in new retirees** also enhanced the benefit increases to existing retirees. Until 1989, an individual had to be retired for at least 12 months before a benefit increase was granted. Since they were ineligible to receive a benefit increase during their first year of retirement, the excess earnings on the assets of new retirees for that time period were distributed to other eligible retirees. In 1989, the Legislature changed the eligibility requirements. Since that time, retirees have received a pro rata share of the benefit increase based upon the number of months they have been retired since the end of the previous fiscal year (e.g., a person who had been retired for six months would receive one-half of the benefit increase).

Over time, these events caused the stock segment to decrease and the bond allocation to increase. In 1980, only 54% of the total Post assets had to be allocated to the dedicated bond portfolio to accomplish the 8% earnings objective. By 1992, the bond allocation grew to 90%. This was due, in large part, to the lower levels of realized income from bonds due to falling interest rates. In addition, the need to fund the additional promised benefits made every year since 1980 and the compounding effect of these additional benefits drew more assets into the dedicated bond portfolio. For example, if a 3% benefit increase was distributed each year for ten years, the initial 3% benefit increase would have grown to 3.89% after ten years. Each year, additional funds had to be placed in the dedicated bond portfolio to cover the compounding portion related to previous years benefit increases.

Benefit Increases Under the Previous Formula

This asset mix strategy was very successful in producing a high level of realized earnings throughout the 1980's. This, in turn, provided substantial lifetime benefit increases to retirees during the same period:

Fiscal Year	Total Realized Earnings*	Benefit Increases	Inflation
1980	8.2%	3.2%	14.6%
1981	12.4	7.4	9.6
1982	11.9	6.9	7.1
1983	12.5	7.5	2.6
1984	11.9	6.9	4.2
1985	12.9	7.9	3.7
1986	14.8	9.8	1.7
1987	13.1	8.1	3.7
1988	11.9	6.9	3.9
1989	9.0	4.0	5.2
1990	9.7	4.7	4.7
1991	9.3	4.3	4.7
1992	9.6	4.6	3.1

* Total realized earnings equal the benefit increase plus the 5% required rate of return

Despite the high benefit increases it generated, the old formula had two important disadvantages:

- **Inadequate Inflation Sensitivity**. The old formula was not tied to inflation. In fact, since the investments tend to perform well during periods of low inflation and, conversely, to perform poorly during periods of high inflation, the formula had an inverse relationship to inflation. While retirees benefited from this relationship in the 1980's it was not likely that this phenomenon would continue in the 1990's.

- **Inability to Maximize Earning Power**. With an ever increasing portion of its assets allocated to bonds, the Post Fund was unable to benefit from the higher total rates of return available from stock investments. This situation would persist as long as the

Fund focused on generating high levels of realized income as required under the old formula.

As interest rates continued to fall during the late 1980's and early 1990's, the ability of the Post Fund to generate high levels of realized earnings in the future was severely reduced. With the old formula and asset allocation strategy, benefit increases were projected to be 2.5%-4.0% by the mid 1990's.

NEW BENEFIT INCREASE FORMULA (1993-present)

During 1990-92 SBI staff worked with the staff of Minnesota State Retirement System, Teachers Retirement Association, Public Employees Retirement Association and retiree representatives to develop a new benefit increase formula that would address the above disadvantages and provide the opportunity for higher benefit increases. The formula described below was enacted by the 1992 Legislature and is effective beginning FY93 (more detail is in Exhibit B).

The new benefit increase formula has of three components:

- inflation component
- investment component
- transaction adjustment

Inflation Component

Each year, retirees will receive an inflation-based adjustment equal to the **lesser** of the inflation rate for the fiscal year or the difference between the Basic Funds and Post Fund interest rate assumptions with a maximum capped at 3.5%. Currently, the interest rate assumptions for the Basic Retirement Fund and the Post are 8.5% and 5.0% respectively, producing a difference equal to 3.5%. Tying the maximum inflation adjustment to the spread between the interest assumptions of the two funds maintains the actuarial soundness of the plans. The discount rate represents the long term expected rate of return for that pool of pension assets. As a result, if legislative action causes the interest rate assumption spread between the Basic Funds and the Post Fund to increase beyond 3.5%, the maximum inflation adjustment would remain at 3.5%. If legislation action reduced the spread below 3.5%, the maximum inflation adjustment would be capped by the lower spread.

As noted above, the current spread between the interest rate assumptions of the Basic and Post Funds produces a maximum inflation adjustment of 3.5%. For example, if inflation is 3.0%, a 3.0% inflation adjustment would be given; if inflation is 4.0%, the maximum of 3.5% would be granted.

Investment Component

Annually, in addition to the inflation adjustment, an investment-based adjustment will be paid to retirees depending upon the investment performance of the Post Fund. Investment performance will be measured by the increase/decrease in market value of all assets in the Post Fund and will therefore include all realized *and* unrealized capital gains or losses. (The previous formula included only realized gains and losses.)

On June 30 of each year, the market value of the Post Fund will be compared to the reserves required to pay existing benefits. The reserves will include the additional funds needed to support all inflation and investment adjustments already granted as well as the 5% assumed rate of return. If the result of this comparison is positive, one-fifth of the difference will be distributed to the retirees in the form of an investment adjustment for each of the next five years. If the result is negative, no investment-based adjustment will be made. Any negative balance will be carried forward to ensuing years until the combination of past and current results becomes positive. However, under no circumstances will the inflation adjustment be reduced because of investment performance. The investment gains (or losses) will be spread over five years to smooth the market value fluctuations that will undoubtedly occur due to the volatility of the financial markets.

An illustration of the investment-based adjustment is shown below:

Excess Market Value	**$100 Yr. 1**	**$(50) Yr. 2**	**$150 Yr. 3**	**$75 Yr. 4**	**$(50) Yr. 5**	**Total Available for Investment Based Increase**
Yr. 1	$20					$20
2	20	$(10)				10
3	20	(10)	$30			40
4	20	(10)	30	$15		55
5	20	(10)	30	15	$(10)	45
6		(10)	30	15	(10)	*
7			30	15	(10)	*
8				15	(10)	*
9					(10)	*
	$100	$(50)	$150	$75	$(50)	*

* Total available would depend, in part, on excess market value in years 6-9

Transition Component

Because the investment-based component of the new benefit formula will not be fully implemented for five years, a provision for a temporary transition adjustment was enacted. If the investment-based component provides a lower benefit increase than the stated transition amount for that year, the transition adjustment will be paid rather than the investment-based adjustment. The transition adjustment is 1.0% for FY93; 0.75% for FY94; 0.50% for FY95; and 0.25% for FY96.

The total annual benefit increase paid to retirees for the first four years will be the sum of: (1) the inflation component plus (2) the investment *or* transition component, whichever is greater. The inflation and transition components will be paid regardless of investment performance. Beginning in the fifth year (FY97), the increase will be the sum of (1) the inflation component and (2) the investment component. The investment based component will be paid *only* if there is excess market value after deducting the 5% actuarial requirement, the inflation adjustment, and any negative investment-based adjustment carry forward.

ADVANTAGES OF THE NEW FORMULA

The new formula has three primary advantages:

- increased sensitivity to inflation
- increased earning power
- lower volatility of benefit increase

Increased Sensitivity to Inflation

The previous formula was not sensitive to inflation. In fact, as noted earlier, the previous benefit formula tended to provide large benefit increases during periods of low inflation and low or no benefit increases during periods of high inflation. The new formula mitigates the inflation lag by providing an inflation based adjustment each year.

By providing a direct relationship between inflation and benefit increases, the new benefit formula will help maintain a retiree's purchasing power to some degree. The previous formula did not have this feature and Table 1 shows that there were a number of years when no benefit increase was granted. This time frame during the mid to late 1970's was a period where inflation rose to very high levels and returns from most financial assets were poor.

Higher Potential Rate of Return

The new formula will allow the Post Fund to increase the earnings power of its assets. Since the previous formula focused on realized earnings, the asset allocation emphasized fixed income investments which provide a higher annual yield and de-emphasized stock investments provide which, over time, provide higher total rates of return through capital gains. The new formula allows the Post to adopt a more balanced asset mix of stocks and bonds to be consistent with the total rate of return orientation of the new benefit formula. A higher stock allocation will allow the Post to have a more diversified, higher expected return portfolio. This in turn offers the potential for higher benefit increases over the long run than the previous portfolio asset mix could provide.

Table 1 compares the actual benefit increases granted from 1971-1992 to those that would have been granted with the new benefit formula. As shown, the new benefit calculation outperformed the previous benefit formula and is more inflation sensitive. (The projected increases were calculated using the actual rates of return of the Basic Funds during the time periods shown. During the 1970's the Basic Funds had a stock exposure of 50% or less. In 1983, the stock allocation was increased to 60%.)

Table 1
Percent Benefit Adjustment Comparison
FY 1971 - FY 1992

FY	CPI	Actual Increases	Projected Increases Under New Method
1971*	4.5	2.5	4.5
1972*	2.9	4.5	3.6
1973*	5.9	0.0**	6.0
1974*	11.0	0.0	4.2
1975*	9.3	0.0	5.2
1976*	5.9	0.0	5.1
1977*	6.9	4.0***	3.5
1978*	7.4	0.0	3.5
1979*	10.7	0.0	3.5
1980	14.6	3.2	3.5
1981	9.6	7.4	3.5
1982	7.1	6.9	3.5
1983	2.6	7.5	2.6
1984	4.2	6.9	3.5
1985	3.7	7.9	3.5
1986	1.7	9.8	6.8
1987	3.7	8.1	11.3
1988	3.9	6.9	6.3
1989	5.2	4.0	8.6
1990	4.7	4.7	7.1
1991	4.7	4.3	4.4
1992	3.1	4.6	5.5
Annualized Adjustment	6.0%	4.1%	4.9%

* Increases granted through the Minnesota Adjustable Fixed Benefit Fund.

** Pre-FY73 retirees received a 25% increase to reflect the change from career average to high five average to calculate pension benefits of Post FY73 retirees.

*** Legislative increase, not performance based.

Lower Potential Volatility of Benefit Increases

In addition to the higher potential benefit increases over the long run, the new benefit increase formula should be less volatile than the previous formula. Using the benefit increases calculated in Table 1 above, the annual standard deviation for the old and new benefit formulas are 3.2% and 2.1% respectively. Therefore, over a long time period, retirees have the opportunity to receive higher benefit increases and at the same time experience lower fluctuations in their benefit increases from year to year. The primary reason for the reduced volatility is the inflation adjustment that provides some benefit increase during any year with positive inflation.

REVISED ASSET ALLOCATION POLICY

The total rate of return orientation of the new benefit formula makes the investment objectives of the Post Fund more similar to those of the Basic Funds. Therefore, the Post asset allocation policy should more closely resemble the Basic Funds' asset allocation policy as well. Both Funds should have large allocations to common stock to reflect the higher long term rates of return offered by the stock markets relative to other asset classes.

The Post Fund also needs to maintain enough cash/liquidity to finance the near term payment obligations to the retirees. An appropriate cash level needs to be maintained so that other investments do not need to be liquidated at potentially inappropriate times to meet the monthly payments to the retirees.

To accomplish the objectives of total return and short term liquidity, the Board adopted a new asset allocation strategy for the Post Fund. During FY93, the stock exposure of the Post Fund was increased from 10% to 50%. During FY94, the Board chose to further diversify the portfolio by adding a 10% allocation to international stocks and a 5%

allocation to yield oriented alternative investments. A comparison of past and present allocation targets is shown below:

	6/30/92	FY93	FY94*
Domestic Stocks	10%	50.0%	50.0%
International Stocks	--	--	10.0
Domestic Bonds	90	47.0	32.0
Alternative Yield Oriented	--	--	5.0
Cash	--	3.0	3.0
	100%	100.0%	100.0%

* Represents the SBI's current long term asset allocation policy for the Post Fund

Stock Rationale

Historically, common stocks have provided the highest long term rates of return. Therefore, the large allocation to stocks, both domestic and international, is appropriate for the total rate of return orientation of the new benefit formula. Investing a portion of the stock segment in international stocks provides increased diversification and potential for higher returns. Despite growing global integration, each stock market will be affected by the economic and political make-up of its own country. Also, international stocks provide the opportunity to invest in economies that may be growing faster than the U.S. economy on either a cyclical or secular basis. In summary, by investing across world markets the Post Fund can potentially enhance returns while reducing the volatility of the stock segment. (For more information, please refer to the position paper entitled "International Equity Investing for the Basic Retirement Funds," September 1992.)

Bond Rationale

The bond allocation provides diversification and reduces the overall volatility of the total portfolio. Since bond returns do not move in perfect synchronization with returns of domestic and international stocks, the inclusion of bonds in the total asset mix will reduce the year-to-year variability of the Post Fund's total return. The Post Fund's allocation to bonds (currently 32%) is somewhat higher than the bond allocation in the Basic Funds (currently 24%). The higher bond allocation reflects the Post Fund's lower tolerance for return volatility due to the benefit increase formula as well as its somewhat shorter time horizon.

Yield Oriented Alternative Investment Rationale

The allocation to yield oriented alternative investments (e.g. business loan participations, mortgage loan participations, private placements) provides an additional vehicle to obtain higher current yields and provide long term appreciation. These investments are typically structured like fixed income securities with an opportunity to participate in the appreciation of the underlying asset. Even though these investments may have an equity component to them, they display a return pattern more similar to a bond. Therefore, they also provide good diversification relative to domestic and international stocks, and to some degree, to domestic bonds. This will help to reduce the volatility of the total portfolio but at the same time will provide the opportunity to generate higher returns relative to domestic bonds.

Cash Rationale

Since cash equivalents have lower returns than longer term assets, the Post Fund's cash allocation should be sufficient only to cover short term liquidity needs. Insufficient cash would force the Post Fund to liquidate other investments at a potentially inappropriate time or over a very short time frame.

The analysis below shows that only a 0.5% probability exists that the maximum cash draw down for any time period would be greater than $266 million. Even though the time period analyzed is relatively short from a statistical standpoint, a 3% cash allocation ($255 million) incurs only a very small probability of not meeting the short term cash needs of the Post Fund.

Post Retirement Fund
Cash Flow Needed to Fund Monthly Annuity Payments
June 87 - February 1992

	12 Month Rolling	6 Month Rolling	3 Month Rolling	Monthly
Average	$80,133,586	$54,920,223	$28,957,699	$11,547,932
Maximum	409,262,067	446,358,144	529,657,871	371,675,652
Minimum	(125,739,857)	(106,156,127)	(83,299,727)	(32,534,868)
Std. Dev.	96,785,269	118,717,961	114,283,679	60,194,685
Max. Draw Down Level*	(169,572,241)	(251,372,116)	(265,894,192)	(143,754,355)

* With 99.5% level of confidence

QUANTITATIVE ANALYSIS OF ASSET ALLOCATION STRATEGY

In order to assist the Board in selecting an appropriate asset mix for the Post Fund, staff prepared simulations of various asset allocation policies:

- current asset allocation policy (the asset allocation policy adopted in FY94)
- a more aggressive strategy (75% stocks/25% bonds)
- a more conservative strategy (10% stocks/90% bonds) similar to the asset mix employed under the old benefit increase formula

Tables 2 and 3 below show the assumptions used in the analysis

Table 2
Return and Standard Deviation Assumption

	Real Return	Expected Return	Risk*
Domestic Stocks	5.5%	11.0%	±18.0%
International Stocks	6.0	11.5	±20.0
Domestic Bonds	2.5	8.0	±8.0
Alternative Yield Oriented	4.0	9.5	±12.0
Cash	0.5	6.0	±3.0

* one standard deviation

Table 3
Correlation Assumptions

	U.S Stocks	Non U.S. Stocks	U.S. Bonds	Alternative Yield Oriented	Cash
Domestic Stocks	1.00				
International Stocks	0.60	1.00			
Domestic Bonds	0.35	0.20	1.00		
Yield Oriented	0.45	0.30	0.50	1.00	
Cash	-0.10	0.00	0.10	0 20	1.00

Expected Return and Risk

Using the above assumptions, staff ran a computer simulation developed by Wilshire Associates. Table 4 below shows the results of that analysis.

Table 4
Expected Return and Risk

	More Aggressive 75/25 Stock/Bond	Current Asset Allocation Policy	More Conservative* 10/90 Stock/Bond
Mean Return	10.25%	9.87%	8.30%
Risk**	±14.32	±11.78	±8.01

* Similar to previous asset mix under old benefit increase formula

** One standard deviation

The analysis shows that more risk (higher standard deviation) provides a higher mean return. In addition, the analysis shows the benefit of adopting a diversified asset allocation policy. Relative to the more conservative strategy, the current policy increases the expected rate of return by 1.57% with a corresponding increase in risk of 3.71. While the more aggressive portfolio provides an even higher increase expected rate of return, the increase in risk is unacceptably high as well.

Sensitivity Analysis

Table 5 below provides the potential rates of returns for the three asset allocation alternatives assuming a 90% confidence interval.

Table 5
Range of Expected Returns

	More Aggressive 75/25 Stock/Bond		Current Asset Allocation Policy		More Conservative* 10/90 Stock/Bond	
	High	**Low**	**High**	**Low**	**High**	**Low**
1 Yr.	35.78%	-11.10%	30.44%	-8.17%	21.79%	-4.52%
5 Yr.	20.53	-0.03	18.10	1.31	12.74	3.09
10 Yr.	17.19	2.81	15.36	3.70	10.67	5.01
15 Yr.	15.75	4.08	14.18	4.77	9.84	5.80
20 Yr.	14.90	4.84	13.49	5.40	9.39	6.24

* Similar to previous asset mix of the Post Fund

Source: Wilshire Associates

Not surprisingly, the analysis shows that the current asset allocation policy and the more aggressive portfolio have a broader range of expected returns than the previous asset mix due to their higher volatility.

Another type of sensitivity analysis looks at the probability of not achieving a certain annual rate of return over a given time period. Since the Post requires a 5% rate of return to meet current promised benefit payments and the proposal provides for an inflation based adjustment capped at 3.5%, the analysis below used a 8.5% annual rate of return for the threshold level.

Table 6
Probability of Not Achieving 8.5% Return

	More Aggressive 75/25 Stock/Bond	Current Asset Allocation Policy	More Conservative* 10/90 Stock/Bond
1 Yr.	46.45%	47.03%	53.49%
5 Yr.	42.01	43.23	59.40
10 Yr.	38.67	40.31	65.75
15 Yr.	36.14	38.06	71.55
20 Yr.	34.04	36.19	76.67

* Similar to previous asset mix of the Post Fund

Source: Wilshire Associates

The analysis shows that both the adopted asset allocation policy and the more aggressive portfolio provide a much higher probability that they will exceed the 8.5% threshold level than the previous Post asset mix.

MANAGEMENT STRUCTURE

Stocks and Bonds

The domestic stock, international stock and bonds segments of the Post Fund will be invested in the same asset pools and will use the same management structure currently in place for the Basic Funds. The current investment pools can absorb the increase in assets and offer appropriate investment vehicles to accomplish the total rate of return objective of the Post Fund. Like the Basic Funds, the Post Fund will manage approximately 50% of its stock and bond assets passively or semi-passively. Due to the size of the Basic and Post Funds, allocating a portion of the assets to passive or semi-passive investment provides broad exposure in an efficient and cost effective manner. Conversely, allocating up to half of the assets to an actively managed program will offer the potential for value added.

Yield Oriented Alternative Investments

The Post Fund assets that are allocated to high yield investments will be invested separately from the Basic Funds' alternative investments to assure returns attributable to these new investment vehicles are accounted for appropriately. These investments will be made through limited partnerships and private placements appropriate to the specific deal structure of the investments.

Cash Equivalents

The Post's cash assets will be managed in the short term investment fund (STIF) currently managed by the SBI's custodial bank (State Street). This is the same investment vehicle used for the cash held in the Basic Funds.

SUMMARY AND CONCLUSION

The new benefit increase formula provides retirees with annual adjustments that will be more sensitive to inflation. In addition, because the Post Fund will be oriented toward maximizing total return rather than current yield, the earning power of the Post Fund's assets can be enhanced. This, in turn, offers the potential for higher benefit increases, over time, than would be likely under the old formula.

The current allocation policy of the Post Fund provides a favorable trade off between risk and return and meets the requirements set by the new retirement benefit increase:

- The current asset allocation policy provides a 1.57% higher expected annualized rate of return than the previous asset mix.

- The adopted asset mix provides a higher probability of exceeding the 8.5% threshold return than the previous asset mix (i.e., 5% assumed rate of return plus the maximum inflation adjustment of 3.5%).

- The current asset allocation policy assures adequate short term liquidity to pay monthly benefits through its 3% allocation to cash.

- Given the five year time frame for calculation of the investment-based adjustment portion of the new benefit increase formula, the adopted asset allocation policy provides an appropriate balance between returns and risk/volatility.

EXHIBIT A

Old Benefit Increase Formula

FY1980 - 1992

In order to support currently promised benefits, the Post Retirement Investment Fund must generate 5% realized earnings on its invested assets each year. All realized earnings in excess of 5% are used to finance permanent lifetime benefit increases for current retirees. The benefit increase calculation is specified in *Minnesota Statutes* Chapter 11A.18, subdivision 9. A summary of the methodology is shown below:

Investment Earnings (1) – Required Return of 5% (2) = Income Available for Benefit Increase

Income Available for Benefit Increase ÷ Required Reserves(3) = Benefit Increase (4)

(1) Investment earnings are defined as dividends, interest, accruals and realized capital gains or losses applicable to the most recent fiscal year ending June 30.

(2) Each cash flow in or out of the Post Fund is adjusted by 5% multiplied by the fraction of a year from the date of the cash flow to the end of the fiscal year on June 30.

(3) Total required reserves are calculated by the State's actuary retained by the Legislative Commission on Pensions and Retirement.

(4) A retiree who has been receiving an annuity or benefit for at least one year as of the end of the fiscal year will receive the full benefit increase. A retiree who has been receiving an annuity or benefit for less than one year will receive one twelfth of the full increase for each month the person was retired during the fiscal year. Full or partial increases are effective beginning January 1 of the following calendar year.

EXHIBIT B

New Benefit Increase FY93 - Present

Calculation of January 1, 1994 Benefit Increase

Actuarily valued required reserves at Jan. 1, 1994	$ 6,875,719,000
Less: Reserves not eligible for increase	415,549,000
Actuarily determined eligible reserves at Jan. 1, 1994	6,460,170,000
FY93 CPI inflation rate capped At 3.5%	2.800%
Dollar cost of inflationary increase	180,884,760
June 30, 1993 total required reserves	7,049,322,000
June 30, 1993 total required reserves adjusted for inflationary increase	7,230,206,760
Market value of aAssets June 30, 1993	8,269,233,081
Less: Inflation adjusted required reserves	7,230,206,760
Current year excess market value	1,039,026,321
Negative balance carryforward	0
Excess market value available for investment based benefit increase	1,039,026,321
Divided by 5 year pay out period	5
Current year portion of excess market value	207,805,264
Second year portion	0
Third year portion	0
Fourth year portion	0
Fifth year portion	0
Total five year excess market value	207,805,264
Cost of transition adjustment	64,601,700
Greater of current year excess market value or cost of transition adjustment	207,805,264
Divided by eligible required reserves Jan. 1, 1994	$ 6,460,170,000
Investment based increase for FY93	3.217%

Summary:

Investment Based Benefit Increase	**3.217%**
Inflation Based Benefit Increase	**2.800%**
Total Benefit Increase	**6.017%**
Total Dollar Value of January 1, 1994 Benefit Increase	**$ 388,690,024**

Tab E

COMMITTEE REPORT

DATE: February 22, 1994

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

FROM: **Stock and Bond Manager Committee**

The Stock and Bond Manager Committee met on February 10, 1994 to consider the following agenda:

- Review of manager performance for the period ending 12/31/93
- Consideration of semi-passive management for the domestic stock program
- Recommendation to establish a Passive Manager Review Committee

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

INFORMATION ITEMS:

1. **Review of Manager Performance**

- Domestic Stock Managers

For the quarter ended December 31, 1993, the Basic Fund's domestic stock management group underperformed its aggregate benchmark and the Wilshire 5000 Adjusted (Managers 1.4%; Aggregate Benchmark 2.3%; Wilshire 5000 Adjusted 2.1%). For the latest year, the current management group outperformed (Managers 11.3%; Aggregate Benchmark 11.1%; Wilshire 5000 Adjusted 11.0%). For the latest five years, they have also outperformed (Managers 14.9%; Aggregate Benchmark 14.2%; Wilshire 5000 Adjusted 14.2%).

The performance evaluation reports for the domestic stock managers start on **page 53**. Manager Commentaries are under **Tab H**.

- Domestic Bond Managers

For the quarter ended September 30, 1993, the domestic bond manager group outperformed the Salomon Broad Investment Grade (BIG) index (Managers 0.1%;

Salomon BIG 0.0%). The current manager group also outperformed for the latest year (Managers 11.6%; Salomon BIG 9.9%) and latest five years (Managers 11.8%; Salomon BIG 11.3%).

The performance evaluation reports for the domestic bond managers start on **page 71**. Manager Commentaries are under **Tab H**.

- International Stock Managers

For the quarter ended December 31, 1993, the international stock manager group outperformed the Morgan Stanley Capital International Index of Europe, Australia and the Far East (EAFE) by 3.1% (Managers 4.0%; EAFE 0.9%). For the latest year, the managers outperformed EAFE by 1.7% (Managers 34.2%; EAFE 32.6%). Since inception of the program in October 1992, the international program has under performed EAFE by 1.0% (Managers 20.4%; EAFE 21.4%).

Staff noted that the four newest active managers (Marathon, Rowe Price-Fleming, Scudder and Templeton) were funded with $150 million each in November and December and therefore show only two months of performance.

The performance evaluation reports for the international stock managers start on **page 85** of this Tab. Manager Commentaries are under **Tab H**.

2. Consideration of Semi-Passive Management for the Domestic Stock Program

The Committee discussed a proposal from SBI staff to add a semi-passive management component to the domestic stock program. Background information and discussion of staff's rationale is contained in a draft position paper starting on **page 5.**

The Committee believes that semi-passive management is an interesting concept that should receive further consideration. The Committee asked staff to collect and analyze additional information on semi-passive management approaches and available managers. The Committee expects to make a recommendation on the proposal after it has had the opportunity to discuss the issue further both with staff and Richards & Tierney, the SBI's general consultant.

ACTION ITEM:

1. Recommendation to Establish a Passive Manager Review Committee.

Wilshire Asset Management (WAM) was retained as the SBI's passive manager in November 1983. Staff presented an in-depth written review of Wilshire's performance in December 1992 which concluded that Wilshire should continue to be retained since its tracking error was within acceptable ranges at the time. The Committee and full IAC concurred with this finding and forwarded that information to the Board.

Staff presented the Committee with an update on Wilshire's performance (see **page 15**) which notes that the firm's tracking error has increased recently and raises concerns about WAM's future capabilities. As a result, staff proposed that the SBI conduct a passive manager search to evaluate available investment managers and re-affirm Wilshire Asset Management as the SBI's manager or retain a new firm.

Since a passive manager's tracking error may be impacted by the market index that is used as the SBI's asset class target, staff suggested that the SBI consider the Russell 3000 as a potential replacement for the Wilshire 5000 in conjunction with the passive manager search process. The Russell 3000 and Wilshire 5000 are both "extended" market indices and have very similar characteristics. Staff believes that Russell 3000 more accurately reflects the universe of stocks in which the SBI invests. The additional names in the Wilshire 5000 comprise a relatively illiquid portion of the market and will therefore be more costly for a passive manager to track over time. These potential costs savings would have to be compared to the one time transaction costs that would be incurred to convert from the Wilshire 5000 to the Russell 3000. For more information, please refer to staff's draft position paper beginning on **page 17.**

The Committee spent considerable time discussing the above staff proposals. In theory, the Committee believes that the selection of an asset class target should precede the selection of a passive manager. On that basis, several members expressed support for the Russell 3000 since it is a more investable index. However, since there may be only marginal differences between the two targets, the Committee concurs that a passive manager's ability to track one index versus another may influence the decision. Committee members feel that the costs of converting to a new target must be considered carefully as well.

The Committee was not prepared to proceed with a passive manager search immediately. Rather, the Committee discussed the need to more completely quantify and understand the tracking error of the current passive manager. As part of the information gathering effort, they suggested that the experience and capabilities other large passive managers should be assessed. (For more information on available passive managers, see the material prepared by staff beginning on **page 29**.)

RECOMMENDATION:

The Committee recommends that the SBI establish a Passive Manager Review Committee to consider which combination of passive manager and asset class target can be implemented most efficiently and effectively. The Review Committee should make recommendations to the Stock and Bond Manager Committee on both issues before the June 1994 meetings of the SBI/IAC.

As part of its formal review the Review Committee should:

- **Evaluate the Wilshire 5000 and the Russell 3000 as the asset class target for the domestic equity program. The Review Committee should also consider adjustments to either index that will best serve the long term interests of the SBI's stock program.**

- **Quantify existing and potential tracking error of the SBI's passive portfolio. This should include analysis by Wilshire Asset Management and by Richards & Tierney.**

- **Consider the abilities of the SBI's current passive manager and other alternative candidates to manage portfolios based on either the Wilshire 5000 or the Russell 3000. This portion of the review could result in the reaffirmation of Wilshire Asset Management as the SBI's passive manager or in a recommendation to retain an alternative firm.**

If the Review Committee chooses to interview passive managers as part of its deliberations, the following firms should be included:

- **Bankers Trust Company**
- **Wells Fargo Nikko Investment Advisers**
- **Wilshire Asset Management**

Membership of the Passive Manager Review Committee should include at least two members of the IAC as well as a designee of each Board member.

ACTIVE, PASSIVE AND SEMI-PASSIVE MANAGEMENT IN THE DOMESTIC STOCK PROGRAM

Position Paper
January 1994

DRAFT

ACTIVE, PASSIVE AND SEMI-PASSIVE MANAGEMENT IN THE DOMESTIC STOCK PROGRAM

Table of Contents

INTRODUCTION

This paper presents a discussion of active, passive and semi-passive management structures. Currently, approximately 50% of the SBI's domestic stock program is actively managed and 50% is passively managed. Based on the potential for enhanced returns, staff recommends that the SBI introduce semi-passive management for a portion of its domestic stock program.

DEFINITIONS AND BACKGROUND

Since 1984, the SBI's domestic stock management structure has had two components: passive management and active management.

Passive management involves buying and holding securities that will closely follow the returns of a specified benchmark. A passive approach does not try to add value relative to its assigned benchmark. In theory, a passive strategy should neither outperform nor underperform its specified benchmark, over time. Typically, however, passive management will slightly under perform over the long term due to management fees and transaction costs. Since the passive benchmark is a hypothetical portfolio, any trading and transactions costs to maintain the index (e.g., dividend reinvestment, additions or deletions of stocks) are ignored. On the otherhand, an actual portfolio will incur transaction costs to buy and sell the securities that are needed to properly track the selected index. In addition, someone must be paid for their management services. These costs will act as a permanent "drag" to the actual return that the plan sponsor will obtain relative to the benchmark rate of return.

Active management entails buying and selling securities in a asset class with the intention of outperforming a specified benchmark. To outperform the benchmark, the securities held in an active portfolio will differ substantially from the composition of its benchmark. The differences occur because active managers generally try to invest in stocks that they perceive to be undervalued and to avoid overvalued stocks. Active management offers the potential to outperform the specified benchmark but the plan sponsor also assumes the risk that an active manager may under perform the benchmark. This risk of underperformance is considerably greater for active portfolios than passive portfolios.

Traditionally, active management was the only investment management structure typically used by plan sponsors. Passive management was not widely employed until the early to mid 1980's. Today, with the advent of more sophisticated risk control methodologies, semi-passive management is gaining greater consideration as a feasible management option plan sponsors.

Semi-passive management is a hybrid approach that incorporates characteristics from both the passive and active strategies. A semi-passive approach will make active bets relative to a specified benchmark but will constrain those bets so that the risk assumed by the plan sponsor is considerably less than under an active strategy. A semi-passive approach provides some potential to outperform the benchmark, but also incorporates procedures that constrain the level of risk, or volatility of returns, relative to the benchmark.

CURRENT STRUCTURE

Since 1984, the SBI's domestic equity program has used both active and passive management. The program structure incorporates a flexible approach where the active portion will comprise no more than 50% of the total domestic equity assets. Conversely, the passive component will be at least 50% of the total.

At the present time, the SBI has retained fourteen active domestic equity managers. In addition, the SBI is currently in the process of hiring a group of ten managers for its new Emerging Manager Program. The active manager group includes a wide array of specialized managers, each with its own unique investment style and benchmark. Currently, the active manager group comprises 47% of the domestic stock program ($4.5 billion).

The SBI has allocated all passively managed domestic stock assets to a single manager. This passive manager is responsible for implementing the tilted index fund. The benchmark for the tilted index fund is specifically designed to offset any biases that the aggregate active manager benchmark has relative to the domestic equity asset class target. Therefore, the combination of the tilted index fund benchmark and the combined benchmarks of all the active managers should track the asset class target quite closely. This structure allows the SBI to retain active managers who it believes will generate the most value added to their individual benchmarks without particular concern for the mix of investment styles those benchmarks represent.

HISTORICAL PERFORMANCE

A summary of the value added by SBI's domestic equity program is shown below:

Value Added to Benchmarks	9.75 Years 1/1/84*-9/30/93	3.0 Years 10/1/90**-9/30/93
Active managers	+$52,712,247	+$30,927,743
Passive manager	-38,848,860	-24,076,085
Total	+$13,863,387	+$6,851,658

* Start of external manager program
** Start of the tilted index fund

These data highlight the following conclusions:

- The active manager program has provided positive dollar value added since the inception of the program and since the implementation of the tilted index fund relative to the aggregate benchmark of the active managers. While this is one measure of success for the active manager program, the SBI continually seeks to improve program results. As part of this effort, the Manager Continuation Policy, a set of qualitative and quantitative evaluation guidelines, has been developed and is reviewed on a regular basis. These guidelines are designed to enhance the results generated by the active manager program.

- The passive manager has generated negative dollar value added since inception and throughout the implementation of the tilted index fund. Some loss should be expected since a passive account will always slightly under perform its benchmark due to management fees and transaction costs. However, the extent of the underperformance by the SBI's current passive manager should bear careful scrutiny. Staff is particularly concerned that negative tracking error has increased since the tilted index fund was implemented Over the last few years new trading techniques and portfolio management strategies have been developed and should be investigated to evaluate whether they can improve the implementation of the SBI's passive strategy.

ALLOCATION TO ACTIVE MANAGEMENT

A plan sponsor's allocation to active management will depend on several factors:

- **Confidence that value added returns are attainable.** The more confidence a plan sponsor has that active management can provide excess returns, the larger the allocation to active management should be.

- **Ability to identify successful active managers.** The more confidence a plan sponsor has in its manager selection and retention policies, the larger the allocation to active management should be.

- **Tolerance for volatility of returns.** Active management will produce wider variation in returns, both positive and negative, relative to the asset class target than passive management. The greater the plan sponsor's tolerance for this volatility, the larger the active management allocation should be.

- **Size of assets under management.** There are practical limitations on how many successful managers the plan sponsor can identify and the amount of assets that can be allocated to each. In general, the larger the total assets, the greater the allocation to passive management. For example, a 1992 survey by Greenwich Associates shows that 70% of the corporate funds over a billion dollars had some portion of their domestic stocks passively managed. On the other hand, no more than 35% of the corporate funds below $250 million had a portion of their domestic stocks passively managed.

As noted earlier, it is the SBI's policy to allocate no more than 50% of the domestic stock program to active management. Given the above factors, staff believes that this policy represents a reasonable balance between the potential rewards of active management, the risk inherent in the volatility of active manager returns and the size of the SBI's domestic stock program.

ALLOCATIONS TO PASSIVE AND SEMI-PASSIVE MANAGEMENT

In order to increase the potential for value added from the domestic equity program, staff believes it is appropriate to consider adding a semi-passive management component with a commensurate reduction in passive management. Specifically, staff recommends an allocation of up to 50% active management, up to 25% semi-passive management and the balance (at least 25%) in passive management.

The return expectations for the current and proposed management structure are shown below.

Expectations with Current Structure

Structure	*Allocation*	*Long Term Return Expectation**	*Year-to-Year Likely Range of Returns***
Active	Maximum 50%	**+0.50 to +1.00%**	± 3.0%
Passive	Minimum 50%	**-0.10%**	± 0.5%
Total Program		**+0.20 to +0.45%**	± 1.1%

* annualized over time, relative to benchmark, net of fees
** relative to benchmark

Expectations with Proposed Structure

Structure	*Allocation*	*Long Term Return Expectation**	*Year-to-Year Likely Range of Returns***
Active	Maximum 50%	**+0.50 to +1.00%**	± 3.0%
Semi-passive	Maximum 25%	**+0.15 to +0.30%**	± 1.5%
Passive	Minimum 25%	**-0.10%**	± 0.5%
Total Program		**+0.25 to +0.55%**	± 1.4%

* annualized over time, relative to benchmark, net of fees
** relative to benchmark

As referenced above, the primary reason for initiating a semi-passive strategy is that the expected return generated by the entire domestic stock program will increase. The potential for increased expected returns is created by reducing the passive strategy (which is expected to slightly under perform its benchmark, over time) with a semi-passive strategy (which is expected to provide modest value added, over time).

In order to achieve this increase in expected returns, the SBI must recognize that it would assume a higher level of risk. "Higher risk" means greater volatility of returns on a year-to-year basis. With the current 50% active/50% passive mix, returns can be expected to fluctuate above and below the asset class target by 1.1 percentage points or more on a year-to-year basis. With a 50% active/25% semi-passive/25% passive mix, the range widens to ±1.4 percentage points or more on a year-to-year basis.

RECOMMENDED STRUCTURE FOR SEMI-PASSIVE MANAGEMENT

Staff recommends that the SBI retain 2-3 semi-passive managers with initial allocations of $500 - 600 million each. This would represent approximately 15-20% of the stock program. As the SBI gains more experience with the capabilities of semi-passive managers, staff believes the allocation could be increased up to $1 billion per manager. This funding level should be sufficient to reach the 25% semi-passive management target.

Staff recommends that each semi-passive manager use the same benchmark employed by the passive manager for the tilted index fund. A semi-passive manager should be expected to add 0.15-0.30% annualized to its benchmark, net of fees, over time. On a year-to-year basis, returns should be expected to range ±1.5% around the benchmark.

If this proposal is adopted by the Board, staff would expect to conduct a formal semi-passive manager search as part of the FY95 (7/94 - 6/95) work plan.

WILSHIRE ASSET MANAGEMENT
PERFORMANCE REVIEW

History

Wilshire Asset Management (WAM) was retained as the SBI's passive stock manager in November, 1983. Initially, the portfolio objective was to track the Wilshire 5000, less the restricted liquor and tobacco stocks, and the acceptable tracking error range was ±0.5% on a year-to-year basis.

On October 1, 1990 the passive benchmark was changed from the Wilshire 5000 to the tilted index fund benchmark. The tilted index fund has a specifically designed benchmark that offsets any biases that the aggregate active equity manager's benchmarks have relative to the domestic equity asset class target (Wilshire 5000). Therefore, the combination of the tilted index fund benchmark and the benchmarks of all the active managers should track the asset class target closely.

WAM's Performance

WAM's performance should be examined over two time periods:

- From the inception of the domestic passive stock account (Jan. 1, 1984) to the start of the tilted index fund (Sep. 30, 1990).
- From the start of the tilted index fund phase-in (Oct. 1, 1990) to the most recent period (Dec. 31, 1993)

Performance and tracking error for both periods are shown below:

Time Period 1/1/84 to 9/30/90

Year	Actual Return	Benchmark Return	Tracking Error
1984	3.25%	3.13%	0.12%
1985	32.50	32.61	-0.11
1986	15.63	16.01	-0.33
1987	1.93	2.37	-0.38
1988	18.46	17.84	+0.53
1990 (9 mo.)	-13.75	-13.52	-0.27
1/84 - 9/90	11.76%	11.89%	-0.12%

Time Period 10/01/90 to 12/31/93

Year	Actual Return	Benchmark Return	Tracking Error
1990 (3 mo.)	8.40%	8.65%	-0.23%
1991	32.33	32.39	-0.02
1992	8.62	9.13	-0.48
1993	10.98	11.70	-0.64
10/90 - 12/93	18.36%	18.86%	-0.42%

The data show the following:

- Prior to implementation of the tilted index fund, WAM's tracking error was acceptable. The annualized tracking error of negative 0.12% is reasonable given the "drag" due to management fees and transaction costs incurred in implementing a broad based stock index fund. Year-to-year tracking error was also close to or within the stated goal of ±0 5%.

- Since the tilted index fund was initiated, Wilshire Asset Management's negative tracking error increased significantly, from -0.12% to -0.42%. Since WAM's management fee was essentially the same in both time periods, the increase in tracking error appears to be due primarily to trading costs.

- Tracking error in last two years (calendar 1992-93) has been close to or above the ±0.5% range.

Conclusion

Recent increases in WAM's tracking error are cause for concern. However, it is difficult to determine whether the high negative tracking error in 1992 and 1993 is an anomaly or is indicative of WAM's future capabilities. Staff's on-going review of alternative passive managers indicates that new investment strategies and more efficient trading techniques have been developed by other passive managers in recent years. The SBI needs to be assured that its passive manager is taking full advantage of these strategies for the SBI account.

Staff recommends that the SBI conduct a passive manager search to evaluate available investment managers and trading techniques. The search could result in the re-affirmation of Wilshire Asset Management as the SBI's manager or in retention of a new firm.

Date: January 1994

CONSIDERATION OF ALTERNATIVE ASSET CLASS TARGETS FOR THE DOMESTIC EQUITY PROGRAM

Position Paper
January 1994

DRAFT

CONSIDERATION OF ALTERNATIVE ASSET CLASS TARGETS FOR THE DOMESTIC EQUITY PROGRAM

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INTRODUCTION

In 1983, the State Board of Investment (SBI) selected the Wilshire 5000 as its asset class target for domestic common stocks. The purpose of this paper is to review the current policy and determine whether the Wilshire 5000 or another stock market index represents the most appropriate asset class target for the SBI's domestic equity program.

BACKGROUND

Objectives

An asset class target is a diversified collection of securities within a particular asset class. An appropriate asset class target should fulfill the following two objectives:

- It should embody the plan's return objectives and risk tolerance for a particular asset class. By defining the range of available investments, the selection of an appropriate asset class target assures that implementation is consistent with the stated policy.

- It should provide a measurable performance standard with which to evaluate the results of the plan's total investment program for that asset class.

SBI Requirements

When selecting an asset class target, any unique requirements or restrictions imposed by the plan sponsor must be considered. As such, the asset class target needs to address three separate issues: limitations introduced by total asset size, restrictions imposed by law or regulation, and considerations due to the nature of the plan sponsor's business activity.

- **Total asset size.** The current SBI domestic stock program has an asset value of over $9 billion. To maximize the total return on this large pool of assets, the investment opportunities of the entire stock market need to be considered.

However, it becomes impractical for the SBI to invest in some stocks because of the small dollar value of their outstanding shares and relative illiquidity of those issues. If it is to be representative of the SBI's investable universe, the SBI's asset class target should exclude these issues.

- **Legal restrictions.** By statute, the SBI may not hold more than 5% of the total outstanding shares of any one corporation. Because the SBI's active domestic equity program uses multiple managers with different investment styles, the probability of a group of managers in aggregate holding more than 5% of a company's outstanding shares is remote. (In fact, since the inception of the SBI's external equity manager program in 1984, this limitation has impacted only one stock that was held both by an active manager and the passive manager. The passive holding was liquidated at the SBI's direction when the situation arose.) As a result, there are no significant statutory restrictions that need to be considered in the SBI's selection of an asset class target.

- **Plan sponsor's business activity.** A plan sponsor may wish to avoid certain securities that produce returns that are highly correlated with the plan sponsor's economic prospects. For example, corporations typically do not own large positions of their own stock for their employees' pension plans. In periods where the corporation incurs poor profit performance, its stock will also perform poorly, detracting from pension performance at a financially inopportune time. Given Minnesota's broad economy, there is no one sector of the stock market that dominates Minnesota's tax revenue base. Therefore, this is not an important consideration for the SBI's investment program.

Extended Versus Narrow Indices

A market index can be broadly categorized as either "extended" or "narrow." Extended indices (e.g., Wilshire 5000 or Russell 3000) provide broad coverage of the domestic stock market. Conversely, narrow indices (e.g., Dow Jones or S&P 500) represent a smaller sub-set of the market.

Extended and narrow indices will differ in the amount coverage they provide relative to the stock investments held by a plan sponsor's active domestic equity managers. For example, the Wilshire 5000 and Russell 3000, both extended indices, contain at least 96% of all the investments made by the SBI's domestic active equity managers. By comparison, the S&P 500 covers approximately 64% and the Dow Jones only about 8%. By choosing a narrow index as its asset class target, a plan sponsor implicitly or explicitly targets investments in a certain part of the available market. On the other hand, if a plan sponsor wishes to target a broader set of investment opportunities it should designate an extended index as its target.

The SBI's domestic equity asset class target should be a market index that represents the broadest and most feasible set of investment opportunities that are available. As a result, staff recommends that the SBI continue to use an extended stock market index as its asset class target for the domestic stock program.

EXTENDED INDEX ALTERNATIVES

The Wilshire 5000 and the Russell 3000 are the two most widely accepted and published extended market indices for domestic stocks. Descriptive data on the two indices are provided below to highlight their small differences.

Wilshire 5000

The Wilshire 5000 is constructed by Wilshire Associates and includes the common stock of all U.S.-domiciled companies that are publicly traded and for which daily prices are obtainable. This definition now includes real estate investment trusts (REIT's) and master limited partnerships (MLP's). The actual number of issues contained in the Wilshire 5000 varies over time, depending on how many publicly held companies come into and go out of existence. Companies are added and deleted by Wilshire Associates on a continual basis. Currently, the Wilshire 5000 contains approximately 6200 issues.

The Wilshire 5000 is a capitalization weighted index. ("Capitalization weighted" means that an issue receives a weight based upon the capitalization, or market value, of its total shares outstanding.) No adjustments are made to reflect non-public ownership of large blocks of shares. The total rate of return calculation for the index includes both the change in total market value of the index and dividends. Historical return data goes back to 1971.

Russell 3000

The Russell 3000 is constructed by The Frank Russell Company and is a composite of the stocks of the largest 3000 U.S.-domiciled companies that are publicly traded. This index also includes REIT's and MLP's. The Russell Company determines the issues included in the index once a year on July 1. During the year, the index potentially can lose issues due to bankruptcies, mergers, or acquisitions. When eliminations of this sort occur, the weightings are distributed across the remaining issues in the index.

Like the Wilshire 5000, the Russell 3000 is a capitalization weighted stock index. However, in assigning a weight to a particular issue based on its market value, total shares outstanding are adjusted downward to reflect non-public ownership due to large holdings by corporate owners or affiliated companies. This adjustment is intended to produce an index that is more representative of the stock issues available to the institutional investor. The total rate of return calculation for the index includes both the change in total market value of the index and dividends. Historical return data for the Russell 3000 goes back to 1979.

Statistical Data as of June 1993

	Wilshire 5000	Russell 3000
Largest Company	AT&T	AT&T
Market Value	$84 billion	$84 billion
Index Weight	1.86%	2.10%
Smallest Company	Electronic Tech. Grp.	Cycare
Market Value	$890 thousand	$38.9 million
Index Weight	0.00001%	0.01%

Sector Weights	**Wilshire 5000**	**Russell 3000**
Basic Materials	6.78%	6.62%
Energy	7.64	7.74
Consumer Staples	8.74	8.90
Capital Goods	7.05	7.09
Consumer Cyclicals	4.21	4 14
Technology	12.16	11.64
Consumer Growth Staples	19.82	19.23
Transportation	1.89	1.85
Utilities	14.19	15.68
Credit Cyclicals	0.65	0.61
Financial	16.35	16.17
Miscellaneous	0.52	0.33

BARRA Risk Factors	**Wilshire 5000**	**Russell 3000**
Variability in Markets	0.08	0.04
Success	0.03	0.03
Size	-0.30	-0.17
Trading Activity	0.04	0.05
Growth	0.11	0.04
Earnings/Price	-0.02	0.00
Books/Price	0.01	0.01
Earnings Variation	0.07	0.04
Financial Leverage	0.00	0.01
Foreign Income	-0.13	-0.10
Labor Intensity	0.07	0.01
Yield	-0.10	-0.03

Source: Merrill Lynch & Co.

Annualized Returns	**1YR**	**3YR**	**5YR**	**10YR**
Wilshire 5000	16.15%	12.30%	13.79%	13.32%
Russell 3000	16.04	12.60	14.17	13.52

Source: Richards & Tierney

The above data show that only minor differences exist between the Wilshire 5000 and the Russell 3000. By excluding very small stocks, the Russell 3000 has a somewhat larger capitalization relative to the Wilshire 5000 as indicated by a higher size risk factor (-0.17 vs. -0.30) and a slightly lower growth orientation as indicated by the growth (0.04 vs. 0.11) and yield (-0.03 vs. -0.10) risk factors. Another indication of the slightly larger capitalization orientation of the Russell 3000 is that the smallest company in the Russell 3000 has a market capitalization of $38.9 million where as the smallest company in the Wilshire 5000 has a market capitalization of less than $1 million.

A comparison of returns shows that, even over shorter periods of time, the two indices do not deviate significantly from each other. This should be expected since the Russell 3000 includes approximately 97% of the market value of the issues in the Wilshire 5000. The additional stocks (currently 3200+ names) in the Wilshire 5000 comprise only 3% of total capitalization of the index.

PROS AND CONS OF THE RUSSELL 3000

The Russell 3000 has several advantages and disadvantages as a potential asset class target for the SBI:

- The Russell 3000 more accurately reflects the universe of stocks in which the SBI can invest considering the $9 billion asset value of the domestic stock program. Assuming that the SBI invested the maximum allowed by state statute (5% of total outstanding shares), the SBI could invest approximately $2 million in the smallest stock in the Russell 3000 vs. $45,000 in the smallest issue in the Wilshire 5000. Given the very small capitalization and illiquidity of the stocks outside the Russell 3000 and the total dollar size of the SBI domestic equity portfolio, it becomes impractical for the SBI to invest in stocks with market capitalization below the Russell 3000. (As a point of reference, as of June 30, 1993, the SBI's active and passive managers in aggregate held only 40 issues with total market capitalizations below that of the smallest stock in the Russell 3000.)

- The slightly larger capitalization orientation of the Russell 3000 should lower transaction costs in the on-going operation of the SBI's passive portfolio since it would reduce the number of stocks held and traded in the very small capitalization, illiquid portion of the market.

- The main disadvantage of switching to the Russell 3000 is that one-time transaction costs would be incurred to convert the passively managed portfolio to reflect a new asset class target. Staff projects that the turnover due to the conversion would be approximately 5 to 10%. However, the long term benefit of changing to an asset class target that more accurately reflects the SBI's investable universe and that eliminates more illiquid issues should outweigh the one-time cost to convert to the Russell 3000.

PASSIVE MANAGEMENT OPTIONS

Another important factor that needs to be addressed in choosing an asset class target is the day-to-day management of the SBI's passive portfolio. Consideration must be given to an asset class target that can be implemented efficiently and effectively by available passive managers. As a result, staff recommends that the selection of a passive manager be considered in conjunction with selection of the SBI's asset class target.

SUMMARY AND CONCLUSION

Staff believes that either the Wilshire 5000 or the Russell 3000 can function adequately as the SBI's asset class target for domestic equities. Both indices are consistent with the objectives for an asset class target stated earlier in the paper:

- Both the Wilshire 5000 and Russell 3000 provide the type of broad market coverage that is consistent with the SBI's return objectives and risk tolerance for the domestic stock program.

- Both indices provide a measurable standard for the SBI's domestic stock program in aggregate.

After considering their characteristics in greater detail, staff has a slight preference for the Russell 3000 at this time. With the growth in assets in the domestic stock program from $5 billion to $9 billion, staff believes that the Russell 3000 more accurately reflects the universe of domestic stocks in which SBI invests. Also, the additional names in the Wilshire 5000 comprise a relatively Illiquid portion of the market and will therefore be more costly for a passive manager to track.

Staff recommends that the SBI consider which combination of passive manager and asset class target can be implemented most efficiently and effectively. This is best accomplished by considering the capabilities of available passive managers through a manager search process that explores the abilities of various candidates to manage portfolios against benchmarks based on either the Wilshire 5000 or Russell 3000. Staff recommends that the Board direct the Manager Search Committee to complete the search process prior to the June 1994 meeting of the SBI.

MINNESOTA STATE BOARD OF INVESTMENT

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(612)296-3328
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DATE: February 4, 1994

TO: Members, Stock and Bond Manager Committee

FROM: Mike Menssen, Manager Domestic Equities
Lois Buermann, Investment Analyst, External Equities

SUBJECT: **Passive Manager Search for Domestic Equities**

Staff is recommending that the SBI review available passive managers for domestic equities by conducting a formal manager search during the next quarter. The rationale for this search is discussed in the position paper on asset class targets and the performance review of Wilshire Asset Management (the SBI's current passive domestic equity manager).

As noted in those documents, staff believes that the choice of an asset class target (Wilshire 5000 or Russell 3000) and the selection of a passive manager (whose tilted index fund benchmark will be based on that target) should be considered jointly.

There are a limited number of passive managers that have a track record managing large passive portfolios against some version of an extended stock market index. Staff requested detailed information from twenty six (26) firms that were identified as the largest domestic passive managers by various directories and consultants. Thirteen (13) firms responded:

Firm Name	Total Domestic Passive Equity Assets Under Management (billions)
Wells Fargo Nikko	$87.0
Bankers Trust Company	63.4
State Street Global Advisors	24.4
ANB Investment Management	13.5
Vanguard	13.5
Alliance Capital	9.5
PanAgora	8.3
Wilshire Asset Management	6.4
Woodbridge	5.8
Prudential	2.1
Metropolitan Life	1.4
T. Rowe Price	1.3
Rhumbline	0.9

Based on the responses and staff's understanding of the capabilities of the firms, staff recommends the following as finalists for the search:

- Wells Fargo Nikko Investment Advisors
- Bankers Trust
- Wilshire Asset Management

If the Committee wishes to recommend more than three finalist firms, staff would suggest that State Street Global Advisors or ANB be considered.

Manager Fact Sheets and returns for Wells, Bankers, Wilshire, State Street and ANB are attached for your review.

Staff recommends that the Manager Search Committee interview the finalists during the next quarter and recommend the one firm to the SBI at the June 1994 meeting The recommendation could result in the re-affirmation of Wilshire Asset Management or in retention of a new firm as the SBI's passive manager.

MANAGER FACT SHEET

Manager: Wells Fargo Nikko Investment Advisors (WFNIA)

Index Construction Process

WFNIA's US equity market universe of approximately 5,500 issues consists of eight modular equity funds, each representing a specific segment of the US equity market. For large capitalization indexes, such as the S&P 500, WFNIA employs full replication. Optimization and sampling techniques are used where full replication is impossible or impractical, such as small stock strategies that attempt to track a benchmark which includes securities that are too illiquid to be purchased by an institutional investor. In constructing an index portfolio for the Minnesota State Board of Investment completeness fund, Wells Fargo would fully replicate almost the entire index and would optimize only the smallest capitalization stocks. They feel that given their large universe of stocks, only the smallest capitalization stocks will pose a liquidity problem in managing a separate account for the SBI.

Trading

WFNIA believes their volume of trading and experience make them uniquely qualified to handle even the most challenging trading demands. WFNIA focuses their trading methodology to achieve the client's investment objectives in an effective and timely execution while minimizing transaction costs as much as possible. WFNIA trading strategies rely primarily on crossing between their customers and on competitive package trading techniques executed with major brokerage firms.

Initially, WFNIA looks for crossing opportunities. They start by looking for internal crosses between their commingled and separate accounts. Then they look for external crossing opportunities using public and private venues. Private crossing occurs when they match trades with a variety of institutional investors. They also participate in public crossing networks such as POSIT and Instinet. The internal crosses do not incur commission or market impact costs while the external crosses avoid market impact costs and only a nominal commission charge is paid to a broker to process the trade.

For the residual trading activity that will be traded on the open market, WFNIA prefers to use negotiated agency package trades rather than guaranteed or principal package trading. They believe that negotiated trades will reduce the spread, market impact, and opportunity cost components and keep total transaction costs lower than the cost of a guaranteed or principal package trade.

WFNIA's trading staff monitors execution by external brokers on both an individual stock basis and across entire trade programs. They compare target prices to actual prices and any trades that appear to have incurred anomalous prices must be substantiated by the broker. Also, they monitor all trades to verify compliance with the time frame and other parameters set by the initial trade agreement.

Ownership

Wells Fargo Nikko Investment Advisors (WFNIA) is a global joint venture partnership owned by Wells Fargo & Company and The Nikko Securities Co., Ltd. Prior to the formation of the joint venture in April of 1990, Wells Fargo Investment Advisors (WFIA) was a wholly-owned subsidiary of Wells Fargo & Company. WFIA became a subsidiary in January, 1985 Previously WFIA was a division of Wells Fargo Bank, N.A.

Wells Fargo Institutional Trust Company, N.A. (WFITC) was formed in April, 1990 and is a limited purpose national bank which is the primary fiduciary and contracting party to clients' accounts. WFITC engages WFNIA to act as investment advisor. WFITC is 99.9% owned by WFNIA and 0.1% owned by Wells Fargo & Company. Prior to April, 1990 WFITC was a division of Wells Fargo Bank, N.A. and operated as the Advisors Trust Division of the Bank.

Total Number of Passive Equity Portfolio Managers / Analysts: 30

Total Number of Passive Equity Traders: 15

Total Tax-exempt Equity Assets Managed: $145,854 MM

Total tax-exempt Domestic Passive Equity Assets Managed. $87,064 MM

Total number of tax-exempt Domestic Passive Equity Accounts 634

Three Largest Tax-exempt Passive Domestic Equity Accounts:
(No account values provided)
California State Teachers Retirement System
Washington State Board of Investment
Arizona State Teachers Retirement System

Investment Manager: Wells Fargo Nikko*
Benchmark: U. S. Equity Index**

		----PORTFOLIO----		---BENCHMARK---		-TRACKING ERROR-	
		Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
89	Q1						
	Q2						
	Q3	10.07%		10.05%		0.02%	
	Q4	0.83%	10.99%	0.89%	11.03%	-0.05%	-0.03%
90	Q1	-3.31%		-3.44%		0.13%	
	Q2	5.43%		5.37%		0.06%	
	Q3	-15.01%		-14.83%		-0.22%	
	Q4	8.89%	-5.66%	8.52%	-5.96%	0.34%	0.31%
91	Q1	16.34%		16.03%		0.27%	
	Q2	-0.23%		-0.31%		0.08%	
	Q3	6.17%		6.20%		-0.02%	
	Q4	8.64%	33.88%	8.69%	33.51%	-0.05%	0.28%
92	Q1	-1.35%		-1.49%		0.14%	
	Q2	0.52%		0.31%		0.21%	
	Q3	3.16%		3.18%		-0.02%	
	Q4	6.86%	9.32%	6.89%	8.98%	-0.03%	0.30%
93	Q1	4.40%		4.32%		0.08%	
	Q2	0.55%		0.67%		-0.12%	
	Q3	3.91%		4.00%		-0.09%	
Latest:							
1 Yr		16.56%		16.75%		-0.16%	
3 Yrs		20.24%		19.92%		0.27%	
Since Inception		12.85%		12.66%		0.17%	

* Actual portfolio performance is from a commingled fund.

** The Wells Fargo Nikko U.S. Equity Index is very similar to the Wilshire 5000.

MANAGER FACT SHEET

Manager: Bankers Trust Company

Index Construction Process

Bankers Trust uses a stratified optimization technique to construct and maintain a passive portfolio. The firm's objective is to hold the most liquid basket of securities that most accurately replicates the plan sponsor's benchmark.

The stratified optimization has two stages. In the first phase, they weight by capitalization all large capitalization securities (any security representing more than 10 basis points of the benchmark) in their exact index weights. In the second phase, Bankers Trust optimizes the remaining stocks in the universe such that the stocks selected will maximize portfolio liquidity while matching the beta, risk, and industry profile of the index. They believe their approach is cheaper to transact than a "full replication" portfolio because it does not require rigid positions and is able to select the least expensively traded stocks which meet the portfolio's need.

Trading

Bankers Trust uses the following trading techniques to provide effective, timely executions and to control transaction costs.

Internal Cross Trading - Bankers Trust matches required sales of passive portfolios with purchases of its other index management clients. These trades incur no dealer spread or market impact cost and they are executed at a minimal penny per share. Bankers Trust believes their link with Bankers Trust's Custodial Operation provides them with the industry's largest base of cross trading opportunities.

External Cross Trading - Bankers Trust participates in four institutional crossing networks: POSIT, Instinet, AZX, and MatchPlus which are executed at minimal commissions and do not bear dealer spread or market impact costs.

Open Market Trading - Bankers Trust primarily uses automatic order routing systems to quickly transact security baskets with minimal dealer spread and market impact costs on securities that could not be cross traded. The securities are prescreened for liquidity.

Liquidity Based Trading - Bankers Trust uses this strategy to acquire a portion of the thinly traded stocks included in an extended index. The strategy allows them to purchase relatively illiquid securities from distressed sellers. They believe this technique reduces the cost of acquiring such securities and thereby reduces performance tracing error.

Bankers Trust generally executes large cash contributions through futures contracts to establish equity positions without incurring large trading costs. The futures are later swapped for the underlying security when conditions for minimizing transaction costs exist They also use package trading on both a guaranteed and an agency (best efforts) basis. Both time-blind and name-blind systems are used for guaranteed bids.

Ownership

Bankers Trust Company is a primary subsidiary of the publicly held Bankers Trust New York Corporation. Wholly owned affiliates of Bankers Trust Company are Bankers Trust Investment Management, Ltd. in London and Japan Bankers Trust Other international subsidiaries include: Bankers Trust Asset Management Limited (Sydney), and Bankers Trust A.G. (Zurich). In addition, BT Brokerage, a member of the New York Stock Exchange, is a subsidiary of Bankers Trust New York Corporation, a publicly traded company.

Total Number of Passive Equity Portfolio Managers / Analysts: 7

Total Number of Passive Equity Traders: 3

Total Tax-exempt Equity Assets Managed: $137,089 MM

Total tax-exempt Domestic Passive Equity Assets Managed: $63,386 MM

Total number of tax-exempt Domestic Passive Equity Accounts 80

Three Largest Tax-exempt Passive Domestic Equity Accounts:

Public	$11,389 MM
Public	$ 6,490 MM
Public	$ 3,077 MM

Investment Manager: Bankers Trust*
Benchmark: Frank Russell 3000

		----PORTFOLIO----		---BENCHMARK---		-TRACKING ERROR-	
		Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
89	Q1	7.19%		7.25%		-0.06%	
	Q2	8.70%		8.76%		-0.05%	
	Q3	10.14%		10.07%		0.06%	
	Q4	0.77%	29.32%	0.73%	29.32%	0.05%	-0.00%
90	Q1	-3.51%		-3.22%		-0.30%	
	Q2	6.08%		5.80%		0.27%	
	Q3	-15.27%		-15.16%		-0.12%	
	Q4	9.21%	-5.28%	9.30%	-5.06%	-0.08%	-0.24%
91	Q1	16.22%		16.23%		-0.01%	
	Q2	-0.86%		-0.51%		-0.35%	
	Q3	6.20%		6.30%		-0.09%	
	Q4	8.77%	33.09%	8.75%	33.67%	0.02%	-0.43%
92	Q1	-1.67%		-1.58%		-0.09%	
	Q2	0.88%		0.85%		0.03%	
	Q3	3.40%		3.25%		0.15%	
	Q4	6.90%	9.64%	7.03%	9.69%	-0.13%	-0.04%
93	Q1	4.14%		4.17%		-0.03%	
	Q2	0.59%		0.80%		-0.21%	
	Q3	3.25%		3.70%		-0.43%	
Latest:							
1 Yr		15.62%		16.55%		-0.80%	
3 Yrs		19.90%		20.39%		-0.41%	
Since Inception		14.89%		15.22%		-0.29%	

* Actual portfolio performance is from a commingled account.

MANAGER FACT SHEET

Manager: Wilshire Asset Management

Index Construction Process

Wilshire Asset Management uses a stratified sampling technique to implement a broad based index fund. They believe that this approach takes advantage of the fact that size and industry representation are the major factors in indexing a well-diversified index.

The strategy starts by holding all stocks in the index that have an index weight above a threshold determined by Wilshire. For example, a threshold level of 0.03% means that any stock in the index above a 0.03% weight will be held at its index weight in the portfolio. For a broad based index, this procedure produces approximately 700 stocks holdings.

The second phase of the portfolio construction process involves matching the industry and capitalization profiles of the portfolio to the index. For industries underrepresented in the portfolio, the most liquid stocks in the industry, not already included in the portfolio, are purchased. All the stocks purchased to fill out capitalization/industry deficiencies are purchased in an amount equal to the threshold level used in the first step. This process is repeated until the fund is fully invested. Typically this stratified sampling strategy creates a portfolio of approximately 1,250 stocks when implemented for a broad based index.

Wilshire feels that the stratified sampling approach provides more flexibility than other strategies. They feel that the sampling portion of the construction process allows them to select the more liquid stocks to fill in the capitalization/industry deficiencies thereby reducing transactions and transaction costs.

Trading

Wilshire uses a computer algorithm to minimize the number of trades necessary to rebalance a portfolio. They also use bid-asked spreads, repeat trading volumes, and price momentum to determine which securities are placed on a trade list. The Chief Investment Officer, the Director of Research, and the head of Trading review the portfolio's trade list to determine how to trade considering the client's expectation for tracking error, trade cost tolerance, and desired time period for trading.

In regard to large transactions, Wilshire has performed a number of large trade programs. The trading tactics used include principal bids packages, agency-incentive (or risk-sharing) packages, agency packages, and individual security trading on principal or agency basis. For trading individual securities, their trading desk has direct electronic access to the New York Stock Exchange and the American Stock Exchange floors with two independent

DOT order management systems. In addition, Wilshire frequently uses the INSTINET trading system.

Wilshire crosses transactions between accounts they manage and encourages clients to cross other trading activity with Wilshire's trading activity. They treat all accounts equally for trading purposes. All trades for all accounts with similar trading goals at any given time are aggregated and executed together. Actual trade executions are then allocated to individual accounts on the basis of that account's fraction of the total trade for that stock.

Wilshire monitors execution by calculating opportunity cost and execution cost daily. During the trading period, they discuss trading issues with employed brokers constantly and review previous day's results to learn what tactics are working or need revision They focus their trading activity on ten or fewer brokers which provides a strong incentive for the selected brokers to commit resources to servicing Wilshire's clients.

Ownership

Wilshire Asset Management is a division of Wilshire Associates Incorporated which is 100% employee owned with Dennis Tito holding majority ownership in the firm. During the past three years, five principals have departed while nine were added. They expect that ownership will continue to expand to a larger group of individuals within the firm.

Total Number of Passive Equity Portfolio Managers/Analysts: 3

Total Number of Passive Equity Traders: 2

Total Tax-exempt Equity Assets Managed: $8,825 MM

Total tax-exempt Domestic Passive Equity Assets Managed: $6,384 MM

Total number of tax-exempt Domestic Passive Equity Accounts 3

Three Largest Tax-exempt Passive Domestic Equity Accounts:

SBI - Tilted Index	$4,804 MM
PanAgora	$1,342 MM
SBI - Supplemental Fund	$238 MM

Investment Manager: Wilshire Asset Management
Benchmark: SBI Tilted Index Fund Benchmark*

		----PORTFOLIO----		---BENCHMARK---		-TRACKING ERROR-	
		Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
84	Q1	-4.70%		-4.13%		-0.59%	
	Q2	-2.53%		-2.71%		0.19%	
	Q3	9.33%		9.13%		0.18%	
	Q4	1.66%	3.25%	1.32%	3.13%	0.33%	0.11%
85	Q1	9.94%		10.27%		-0.30%	
	Q2	7.70%		7.42%		0.26%	
	Q3	-4.46%		-4.21%		-0.26%	
	Q4	17.13%	32.50%	16.61%	32.31%	0.44%	0.15%
86	Q1	13.99%		14.25%		-0.23%	
	Q2	5.39%		5.76%		-0.35%	
	Q3	-7.37%		-7.63%		0.29%	
	Q4	3.91%	15.63%	3.95%	16.01%	-0.04%	-0.32%
87	Q1	20.56%		20.96%		-0.33%	
	Q2	3.60%		3.26%		0.32%	
	Q3	5.97%		6.17%		-0.19%	
	Q4	-22.99%	1.93%	-22.81%	2.37%	-0.23%	-0.43%
88	Q1	8.39%		7.95%		0.41%	
	Q2	6.60%		6.50%		0.09%	
	Q3	0.22%		0.18%		0.03%	
	Q4	2.30%	18.46%	2.31%	17.84%	-0.01%	0.53%
89	Q1	7.39%		7.37%		0.03%	
	Q2	8.44%		8.48%		-0.04%	
	Q3	9.68%		10.05%		-0.34%	
	Q4	0.63%	28.55%	0.60%	28.96%	0.03%	-0.32%
90	Q1	-3.47%		-3.46%		-0.01%	
	Q2	5.42%		5.45%		-0.02%	
	Q3	-15.24%		-15.05%		-0.22%	
	Q4	8.40%	-6.49%	8.66%	-6.04%	-0.24%	-0.48%
91	Q1	15.55%		15.63%		-0.07%	
	Q2	0.16%		0.19%		-0.03%	
	Q3	5.65%		5.83%		-0.17%	
	Q4	8.21%	32.30%	7.98%	32.39%	0.21%	-0.06%

* The Wilshire 5000 ex liquor and tobacco restrictions were used from 1/84 to 9/90 and the tilted index fund benchmark from there on.

Investment Manager: Wilshire Asset Management
Benchmark: SBI Tilted Index Fund Benchmark*

	----PORTFOLIO----		---BENCHMARK---		-TRACKING ERROR-	
	Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
92 Q1	-1.08%		-0.87%		-0.21%	
Q2	0.85%		1.01%		-0.16%	
Q3	2.52%		2.54%		-0.02%	
Q4	6.21%	8.62%	6.28%	9.12%	-0.07%	-0.46%
93 Q1	5.09%		5.12%		-0.03%	
Q2	0.74%		1.00%		-0.26%	
Q3	3.12%		2.96%		0.16%	
Latest:						
1 Yr	15.95%		16.19%		-0.20%	
3 Yrs	19.36%		19.72%		-0.30%	
5 Yrs	14.05%		14.38%		-0.29%	
Since Inception	14.05%		14.21%		-0.15%	

* The Wilshire 5000 ex liquor and tobacco restrictions were used from 1/84 to 9/90 and the tilted index fund benchmark from there on.

Investment Manager: Wilshire Asset Management*
Benchmark: Wilshire 5000 (ex liquor and tobacco)

		----PORTFOLIO----		---BENCHMARK---		-TRACKING ERROR-	
		Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
86	Q1						
	Q2						
	Q3						
	Q4	4.03%		3.72%		0.30%	
87	Q1	20.67%		21.16%		-0.41%	
	Q2	3.64%		3.30%		0.33%	
	Q3	5.99%		5.92%		0.07%	
	Q4	-23.08%	1.96%	-23.11%	1.93%	0.04%	0.03%
88	Q1	8.24%		8.11%		0.12%	
	Q2	6.61%		6.74%		-0.13%	
	Q3	0.22%		-0.13%		0.33%	
	Q4	2.30%	18.31%	1.98%	17.53%	0.32%	0.64%
89	Q1	7.39%		7.18%		0.19%	
	Q2	8.46%		8.48%		-0.02%	
	Q3	9.70%		9.97%		-0.24%	
	Q4	0.73%	28.71%	0.56%	28.59%	0.17%	0.10%
90	Q1	-3.39%		-3.40%		0.01%	
	Q2	5.42%		5.29%		0.12%	
	Q3	-15.44%		-15.51%		0.08%	
	Q4	8.33%	-6.70%	8.59%	-6.68%	-0.24%	-0.03%
91	Q1	16.42%		16.29%		0.11%	
	Q2	-0.13%		-0.26%		0.13%	
	Q3	5.94%		6.17%		-0.22%	
	Q4	8.74%	33.94%	8.48%	33.59%	0.24%	0.26%
92	Q1	-1.41%		-1.09%		-0.33%	
	Q2	0.29%		-0.03%		0.32%	
	Q3	2.98%		3.13%		-0.15%	
	Q4	7.35%	9.31%	7.23%	9.34%	0.12%	-0.04%
93	Q1	4.67%		4.13%		0.52%	
	Q2	1.01%		0.71%		0.29%	
	Q3	3.75%		3.71%		0.04%	
Latest:							
1 Yr		17.75%		16.62%		0.97%	
3 Yrs		20.27%		19.93%		0.28%	
5 Yrs		14.55%		14.22%		0.29%	
Since Inception		13.46%		13.11%		0.30%	

* Actual portfolio performance is from the account managed for the SBI Supplemental Investment Funds.

MANAGER FACT SHEET

Manager: State Street Global Advisors

Index Construction Process

In constructing extended market portfolios, State Street Global Advisors utilize a sampling technique to construct a portfolio with fundamental characteristics and industry weights that closely match those of the benchmark index. Their construction process starts by establishing an eligible list of securities From this universe of securities, they use BARRA's optimization software to establish the portfolio which would likely own 500 to 1000 securities. The portfolios are rebalanced as needed, at least monthly, to reinvest dividend income or adjust holdings due to changes in the benchmark index.

Trading

State Street Global Advisors trading strategy uses a hierarchy of trading options that starts at no-cost alternatives and ends at their trading desk, using brokers on Wall Street. They first look for crossing opportunities. Crossing opportunities occur both in-house and with outside firms. They prefer in-house trades because they eliminate both market impact and broker fees.

They next try to use low-cost trading systems that trade at the mid-point of the current market's bid/ask spread and at a very low commission rate. These trading systems also eliminate any market impact that the trade could have.

Lastly, once they have exhausted all of the low cost trading alternatives, they do agency trades, handled by their trading desk.

State Street has developed their own system to monitor trades. They monitor execution prices and compare different brokers executing in the same market with similar trading lists. In addition, they employ the consulting firm Plexus to monitor trading costs.

Ownership

State Street Bank and Trust Company's institutional investment group, State Street Asset Management, was established in 1978. As part of State Street's overall global expansion, State Street Global Advisors, Inc. was established in 1990. This wholly-owned subsidiary of State Street Boston Corporation was formed to offer State Street Asset Management's investment strategies worldwide.

In January 1993, State Street Asset Management's name was changed to State Street Global Advisors. They remain 100% owned by State Street Bank. Operationally, State

Street Global Advisors oversees and manages all of the activities of State Street Global Advisors, Inc. and its various global subsidiaries.

Total Number of Passive Equity Portfolio Managers / Analysts: 4

Total Number of Passive Equity Traders: 4

Total Tax-exempt Equity Assets Managed: $114,139 MM

Total tax-exempt Domestic Passive Equity Assets Managed. $24,368 MM

Total number of tax-exempt Domestic Passive Equity Accounts 38

<u>Three Largest Tax-exempt Passive Domestic Equity Accounts:</u>

Corporation	$8,125 MM
Public	$2,488 MM
Corporation	$ 794 MM

Investment Manager: State Street Bank*
Benchmark: FRMSU/FR3000**

		----PORTFOLIO----		---BENCHMARK---		-TRACKING ERROR-	
		Qrtly Return	Annual Return	Qrtly Return	Annual Return	Qrtly Return	Annual Return
84	Q1	-3.01%		-2.62%		-0.41%	
	Q2	-3.52%		-3.91%		0.40%	
	Q3	9.20%		8.42%		0.73%	
	Q4	0.77%	2.96%	0.79%	2.24%	-0.02%	0.70%
85	Q1	10.12%		10.59%		-0.42%	
	Q2	6.80%		6.33%		0.44%	
	Q3	-3.71%		-3.92%		0.22%	
	Q4	16.45%	31.87%	16.76%	31.92%	-0.27%	-0.04%
86	Q1	14.04%		14.73%		-0.60%	
	Q2	5.81%		6.42%		-0.58%	
	Q3	-6.29%		-6.49%		0.21%	
	Q4	4.52%	18.18%	3.94%	18.67%	0.56%	-0.42%
87	Q1	20.30%		20.39%		-0.07%	
	Q2	5.13%		5.38%		-0.24%	
	Q3	6.85%		6.43%		0.40%	
	Q4	-22.33%	4.96%	-22.10%	5.18%	-0.30%	-0.21%
88	Q1	8.20%		8.59%		-0.36%	
	Q2	4.98%		4.27%		0.68%	
	Q3	-0.02%		0.27%		-0.29%	
	Q4	3.35%	17.36%	3.34%	17.32%	0.00%	0.03%
89	Q1	6.00%		6.36%		-0.34%	
	Q2	7.50%		6.30%		1.12%	
	Q3	9.64%		10.17%		-0.48%	
	Q4	1.00%	26.18%	2.02%	27.07%	-1.00%	-0.70%
90	Q1	-4.61%		-4.48%		-0.14%	
	Q2	6.06%		5.99%		0.06%	
	Q3	-14.48%		-14.59%		0.13%	
	Q4	7.55%	-6.95%	7.76%	-6.82%	-0.20%	-0.15%
91	Q1	15.05%		14.40%		0.57%	
	Q2	-0.06%		-1.00%		0.95%	
	Q3	6.23%		6.84%		-0.57%	
	Q4	8.52%	32.53%	8.75%	31.57%	-0.21%	0.73%
92	Q1	-1.33%		-1.57%		0.25%	
	Q2	1.05%		0.85%		0.20%	
	Q3	3.12%		3.25%		-0.12%	
	Q4	6.21%	9.21%	7.03%	9.70%	-0.76%	-0.44%
93	Q1	4.23%		4.18%		0.05%	
	Q2	0.08%		0.79%		-0.71%	
	Q3	3.36%		3.70%		-0.33%	
Latest:							
1 Yr		14.52%		16.55%		-1.74%	
3 Yrs		18.84%		19.20%		-0.30%	
5 Yrs		13.62%		13.97%		-0.31%	
Since Inception		14.11%		14.28%		-0.15%	

* Actual portfolio performance is from a seperately managed account with a current value of approximately $115 million.

** The FRMSU universe was used from 1/84 to 9/91 and the Russell 3000 from there on. The FRMSU index is an extended market index containing 5062 stocks (as of 9/30/93) and is maintained by BARRA.

MANAGER FACT SHEET

Manager: ANB Investment Management and Trust Company

Index Construction Process

For an extended index such as the Wilshire 5000, ANB incorporates both full replication and stratified sampling techniques. For the large capitalization portion (top 1250 shares) of the Wilshire 5000, ANB would fully replicate. They feel that because of the good liquidity in this part of the market, this represents the most effective way to achieve proper tracking for this capitalization range. However, due to the relative illiquidity and high trading costs, ANB uses a stratified sampling technique for small capitalization stocks.

Trading

Following a hierarchy of trades, ANB first seeks to cross trades in-house with other accounts that they manage. Any trades not completed in this manner are then placed on various crossing networks. ANB currently makes extensive use of the POSIT and Instinet. They also seek liquidity on alternate systems such as Morgan Stanley's MatchPlus and First Boston's Lattice Trading Network

Any residuals or trades with tight time constraints are then transacted in the open market using a variety of techniques, including exchange for physical trades (EFP's), package or program trades, ratio trades, limit trades, contingent trades, and DOT trades.

ANB's experience is that regular use of package trading techniques is sometimes effective for the initial construction of a portfolio. However, for the ongoing management of the portfolio, the use of electronic crossing networks and patient/passive trading techniques on the open market are more effective.

ANB believes that the variety of trading methods and liquidity sources at their disposal allow them to tailor their trading methods to fit the needs of the trade or the client, and to balance trading costs and tracking error in a way most beneficial to their client.

Ownership

ANB Investment Management Company is a wholly owned subsidiary of American National Bank and Trust Company of Chicago, a wholly owned subsidiary of American National Corporation. American National Corporation is a wholly owned subsidiary of the First Chicago Corporation, a publicly traded company.

Total Number of Passive Equity Portfolio Managers / Analysts: 6

Total Number of Passive Equity Traders: 3

Total Tax-exempt Equity Assets Managed: $17,566 MM

Total tax-exempt Domestic Passive Equity Assets Managed: $13,500 MM

Total number of tax-exempt Domestic Passive Equity Accounts 346

Three Largest Tax-exempt Passive Domestic Equity Accounts:

Alphabetical list of names provided of all clients without account values.

Investment Manager: American National Bank*

Benchmark: Wilshire 5000

		----PORTFOLIO----		---BENCHMARK---		-TRACKING ERROR-	
		Qrtly	Annual	Qrtly	Annual	Qrtly	Annual
80	Q1	-5.69%		-5.63%		-0.06%	
	Q2	14.99%		15.02%		-0.03%	
	Q3	12.05%		12.83%		-0.69%	
	Q4	8.88%	32.30%	9.15%	33.67%	-0.24%	-1.02%
81	Q1	1.85%		1.82%		0.03%	
	Q2	-1.09%		-0.19%		-0.91%	
	Q3	-11.29%		-12.13%		0.97%	
	Q4	7.65%	-3.79%	7.79%	-3.75%	-0.12%	-0.04%
82	Q1	-8.20%		-9.19%		1.08%	
	Q2	-0.97%		-1.13%		0.16%	
	Q3	11.44%		11.33%		0.10%	
	Q4	18.65%	20.20%	18.76%	18.71%	-0.09%	1.26%
83	Q1	11.02%		11.43%		-0.37%	
	Q2	12.65%		13.03%		-0.34%	
	Q3	-0.72%		-0.94%		0.22%	
	Q4	-0.68%	23.32%	-1.04%	23.47%	0.37%	-0.12%
84	Q1	-3.57%		-4.20%		0.65%	
	Q2	-2.64%		-2.77%		0.13%	
	Q3	9.14%		9.19%		-0.05%	
	Q4	1.34%	3.84%	1.32%	3.05%	0.03%	0.77%
85	Q1	10.17%		10.35%		-0.16%	
	Q2	7.07%		7.47%		-0.38%	
	Q3	-4.17%		-4.27%		0.10%	
	Q4	16.48%	31.65%	16.77%	32.56%	-0.25%	-0.69%
86	Q1	14.25%		14.38%		-0.11%	
	Q2	5.84%		5.80%		0.04%	
	Q3	-7.33%		-7.73%		0.43%	
	Q4	3.97%	16.51%	3.97%	16.09%	0.00%	0.36%
87	Q1	20.86%		21.17%		-0.25%	
	Q2	3.58%		3.28%		0.29%	
	Q3	6.19%		6.22%		-0.03%	
	Q4	-22.90%	2.49%	-23.05%	2.27%	0.20%	0.21%
88	Q1	7.93%		8.01%		-0.07%	
	Q2	6.44%		6.55%		-0.11%	
	Q3	0.15%		0.16%		-0.01%	
	Q4	2.42%	17.84%	2.31%	17.94%	0.11%	-0.09%

* Actual portfolio performance is from a commingled fund

Investment Manager: American National Bank*

Benchmark: Wilshire 5000

		----PORTFOLIO----		---BENCHMARK---		-TRACKING ERROR-	
		Qrtly	Annual	Qrtly	Annual	Qrtly	Annual
89	Q1	7.32%		7.42%		-0.09%	
	Q2	8.59%		8.55%		0.04%	
	Q3	10.08%		10.14%		-0.05%	
	Q4	0.91%	29.46%	0.59%	29.17%	0.32%	0.22%
90	Q1	-3.38%		-3.52%		0.14%	
	Q2	5.62%		5.48%		0.14%	
	Q3	-14.85%		-15.21%		0.43%	
	Q4	8.65%	-5.58%	8.73%	-6.18%	-0.07%	0.64%
91	Q1	16.07%		16.46%		-0.33%	
	Q2	-0.25%		-0.32%		0.07%	
	Q3	6.22%		6.35%		-0.13%	
	Q4	8.48%	33.39%	8.70%	34.20%	-0.21%	-0.60%
92	Q1	-1.53%		-1.33%		-0.20%	
	Q2	0.60%		-0.12%		0.72%	
	Q3	3.15%		3.07%		0.08%	
	Q4	6.63%	8.96%	7.28%	8.97%	-0.61%	-0.01%
93	Q1	4.30%		4.26%		0.04%	
	Q2	0.64%		0.75%		-0.11%	
	Q3	3.58%		4.05%		-0.45%	
Latest:							
1 Yr		15.93%		17.25%		-1.13%	
3 Yrs		19.74%		20.23%		-0.40%	
5 Yrs		14.62%		14.66%		-0.03%	
10 Yrs		13.95%		13.88%		0.07%	
Since Inception		15.22%		15.19%		0.03%	

* Actual portfolio performance is from a commingled fund

STATE BOARD OF INVESTMENT

Stock Manager Evaluation Reports

Fourth Quarter, 1993

DOMESTIC STOCK MANAGERS
Period Ending 12/31/93

Current Managers	Quarter Actual %	Quarter Bmk %	1 Year Actual %	1 Year Bmk %	3 years Actual %	3 years Bmk %	5 Years Actual %	5 Years Bmk %	Since (1) 1/1/92 Actual %	Since (1) 1/1/92 Bmk %	Since (2) Inception Actual %	Since (2) Inception Bmk %	Market Value (in millions)	Pool %
Alliance	2.2	3.4	10.8	1.5	20.5	14.5	19.5	12.4	11.0	4.9	17.8	11.6	$716.64	7.5%
Brinson	2.2	1.7									4.9	5.8	260.44	2.7%
Forstmann-Leff	3.0	2.7	10.2	8.7	16.9	15.8	12.3	12.3	7.0	9.7	13.1	11.8	362.56	3.8%
Franklin Portfolio	-1.2	1.8	17.1	12.3	20.1	19.8			14.5	12.8	13.9	13.1	370.20	3.9%
GeoCapital	4.5	3.5	15.7	21.6	26.6	26.1			8.5	15.3	18.5	17.5	266.44	2.8%
IAI	-0.2	0.9									9.5	6.6	114.32	1.2%
IDS	2.9	1.8	12.1	11.9	20.0	18.1	16.1	14.3	11.8	13.2	14.8	14.2	369.99	3.9%
Independence	1.4	1.9	12.0	10.2							12.7	11.4	367.85	3.9%
Jundt Associates	1.1	3.0									3.8	7.4	211.63	2.2%
Lincoln	3.3	3.3									4.0	3.8	251.68	2.6%
Lynch & Mayer	-2.4	1.8	5.9	12.9							8.3	11.5	316.85	3.3%
Oppenheimer	0.7	0.8									5.2	4.3	260.87	2.7%
Waddell & Reed	-0.8	4.5	13.9	17.3	18.2	20.3	14.1	13.6	14.3	14.9	12.2	12.0	383.81	4.0%
Weiss Peck & Greer	-1.8	1.7									6.7	10.0	215.35	2.3%
Emerging Managers (3)														
Wilshire Associates (4)	1.7	2.2	11.0	11.7	16.8	17.3	13.9	14.4	9.8	10.4	13.9	14.1	5,082.17	53.2%
													$9,550.80	100.0%
											Since 1/1/84			
Current Aggregate	**1.4**	**2.3**	**11.3**	**11.1**	**18.0**	**17.5**	**14.9**	**14.2**	**10.2**	**10.4**	**14.4**	**13.9**		
Historical Aggregate (5)	1.4	2.3	10.9	11.0	17.5	17.6	14.1	14.1	9.9	10.5	13.7	13.8		
Wilshire Adjusted (6)		2.1		11.0		17.5		14.2		10.2		13.9		
Wilshire 5000		2.0		11.5		17.7		14.6		10.2		14.2		

(1) Since tilted index fund was fully implemented.
(2) Since retention by the SBI. Time period varies for each manager.
(3) Aggregate of emerging manager group.
(4) Passive manager. Tilted index fund began 10/90. Fully implemented 1/92.
(5) Includes performance of terminated managers.
(6) Buy hold index adjusted for liquor and tobacco restrictions through 3/31/93 and AHP restriction through 10/31/93.

ALLIANCE CAPITAL MANAGEMENT
Period Ending 12/31/93

Portfolio Manager: Jack Koltes — **Assets Under Management: $716,642,889**

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

Qualitative Evaluation
(reported by exception)

Exceptional strengths are:

—Highly successful and experienced professionals.

—Organizational continuity and strong leadership.

—Well-acquainted with needs of large clients.

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

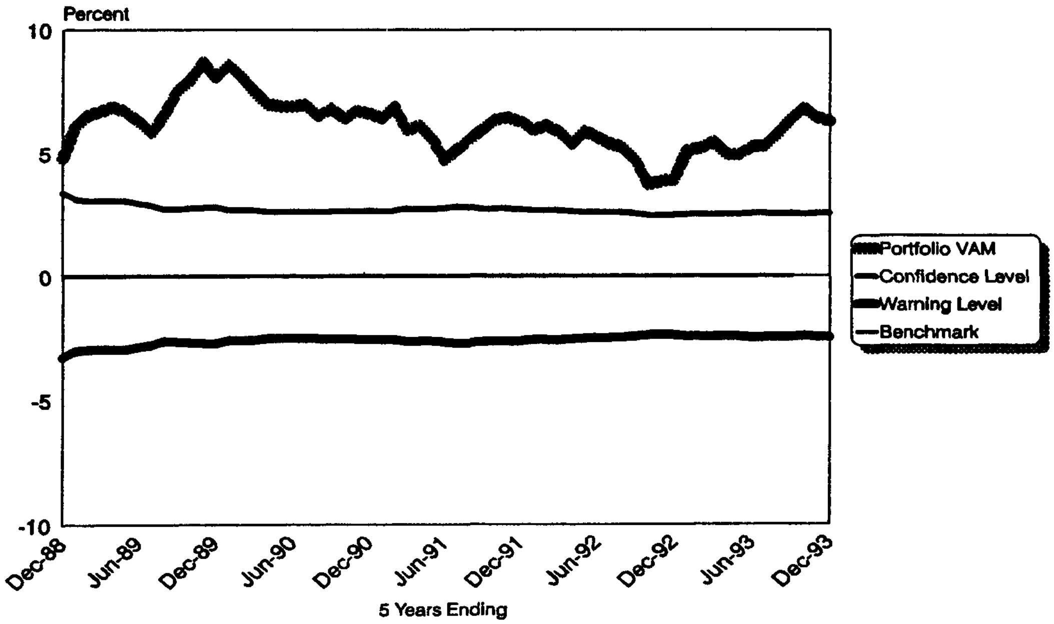
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.2%	3.4%
Last 1 year	10.8	1.5
Last 2 years	11.0	4.9
Last 3 years	20.5	14.5
Last 4 years	14.5	9.8
Last 5 years	19.5	12.4
Since Inception (1/84)	17.8	11.6

Recommendations

No action recommended.

Alliance Capital Management
Rolling Five Year Time Periods



Note: Graph uses 80/20 confidence interval.

BRINSON PARTNERS
Period Ending 12/31/93

Portfolio Manager: Jeff Diermeier **Assets Under Management: $260,435,433**

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 that 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.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Familiar with the needs of large institutional clients.

—Highly successful and experienced professionals.

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

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.2%	1.7%
Last 1 year	N/A	N/A
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 (7/93)	4.9	5.8

Recommendations

No action recommended.

VAM graph will be created for period ending 9/30/95.

FORSTMANN LEFF ASSOCIATES
Period Ending 12/31/93

Portfolio Manager: Joel Leff | **Assets Under Management: $362,564,534**

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, large capitalization stocks. In the past, Forstmann Leff has made sizable market timing moves at any point during a market cycle.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	3.0%	2.7%
Last 1 year	10.2	8.7
Last 2 years	7.0	9.7
Last 3 years	16.9	15.8
Last 4 years	10.7	10.4
Last 5 years	12.3	12.3
Since Inception (1/84)	13.1	11.8

Qualitative Evaluation (reported by exception)

Current Concerns are:

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

—Their investment style is aggressive, which creates volatile returns. This needs to be taken into account when evaluating returns over shorter time frames.

Exceptional strengths are:

—Highly successful and experienced leadership.

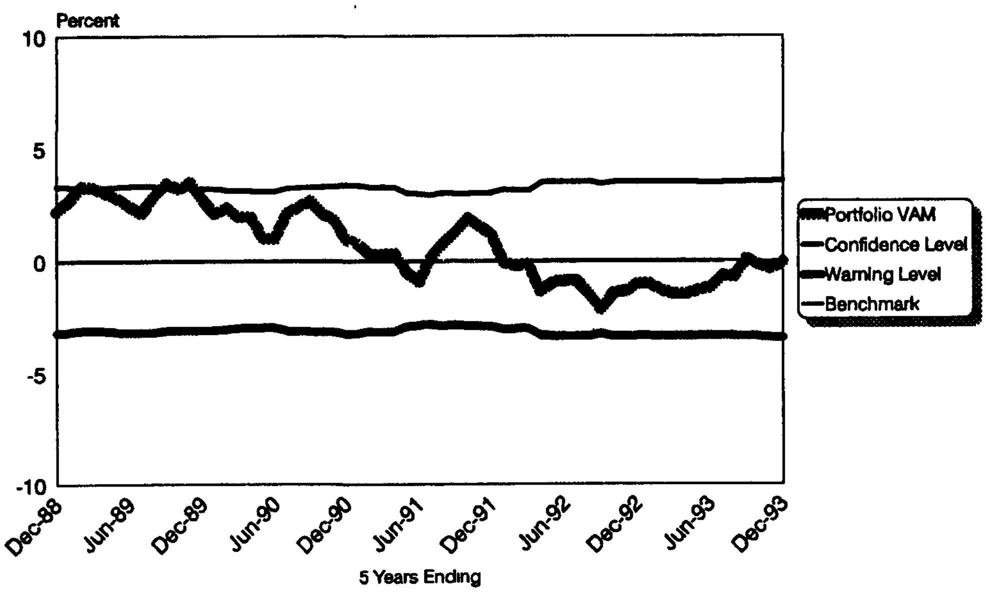
—Investment style consistently and successfully applied over a variety of market environments.

—Well acquainted with needs of large clients.

Recommendations

No action recommended.

FORSTMANN-LEFF ASSOCIATES
Rolling Five Year Time Periods



Note: Graph uses 80/20 confidence interval.

FRANKLIN PORTFOLIO ASSOCIATES
Period Ending 12/31/93

Portfolio Manager: John Nagorniak · **Assets Under Management: $370,200,538**

Investment Philosophy

Franklin's investment decisions are quantitatively driven and controlled. The firm's stock selection model uses 30 valuation measures covering the following factors: fundamental momentum, relative value, future cash flow, and economic cycle analysis. The firm believes that a multi-dimensional approach to stock selection provides greater consistency than reliance on a limited number of valuation criteria. Franklin's portfolio management process focuses on buying and selling the right stock rather than attempting to time the market or to pick the right sector or industry groups. The firm remains fully invested at all times.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Familiar with the needs of large institutional clients.

—Firm's investment approach has been consistently applied over a number of market cycles.

Quantitative Evaluation

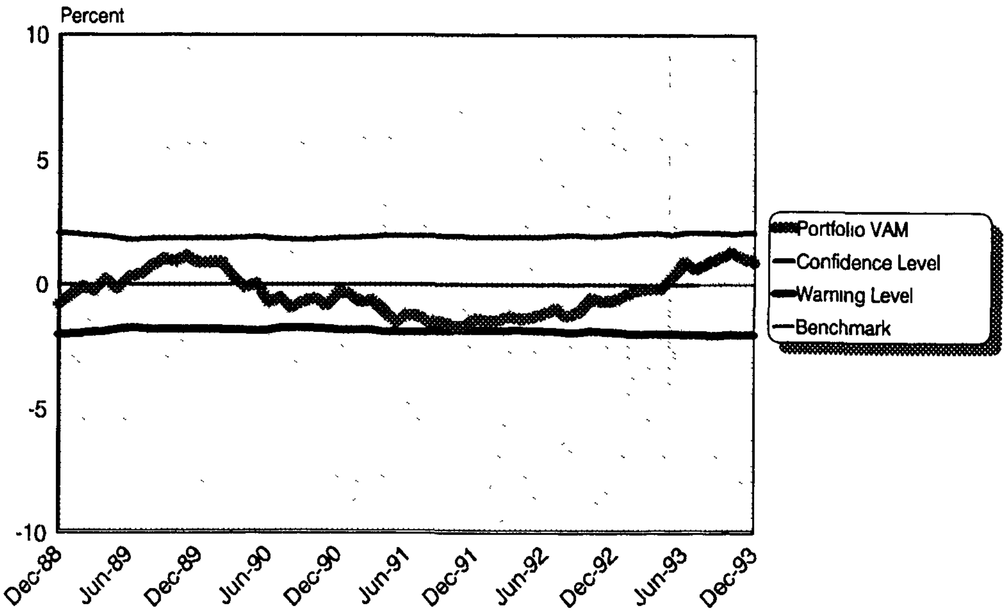
	Actual	Benchmark
Last Quarter	-1.2%	1.8%
Last 1 year	17.1	12.3
Last 2 years	14.5	12.8
Last 3 years	20.1	19.8
Last 4 years	11.7	12.1
Last 5 years	N/A	N/A
Since Inception (4/89)	13.9	13.1

Recommendations

No action recommended.

FRANKLIN PORTFOLIO

Rolling Five Year Time Periods



Note: Shaded area includes performance prior to managing SBI account. Graph uses 80/20 confidence interval

GEOCAPITAL CORP.
Period Ending 12/31/93

Portfolio Manager: Barry Fingerhut | **Assets Under Management: $266,438,525**

Investment Philosophy

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

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

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

—Attractive, unique investment approach.

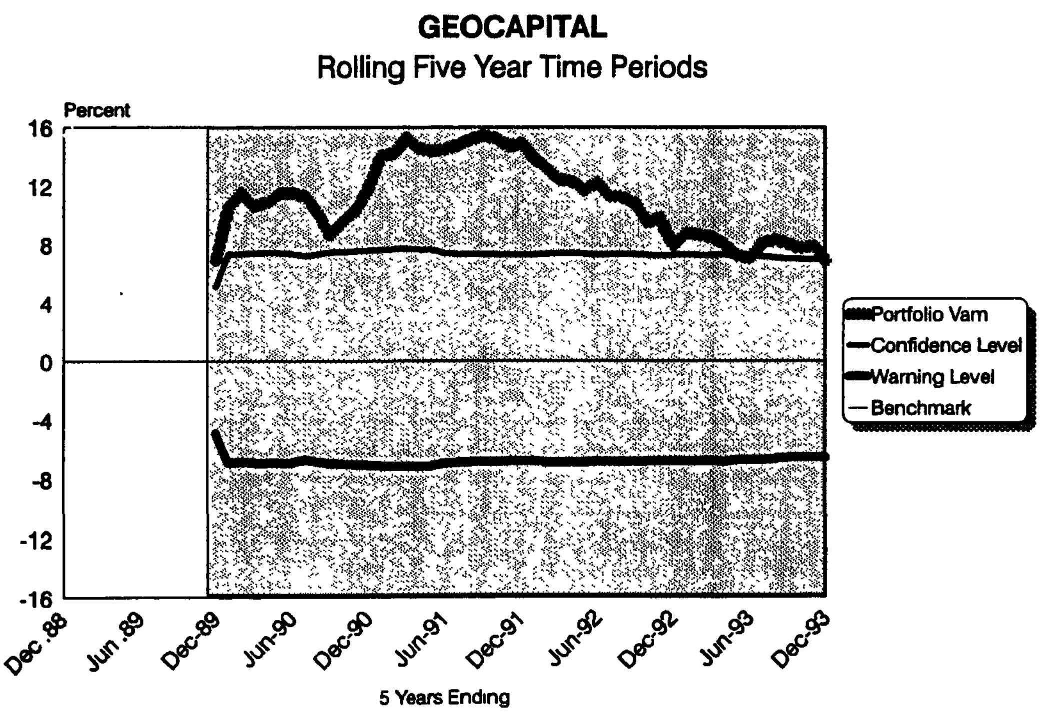
—Highly successful and experienced professionals.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	4.5%	3.5%
Last 1 year	15.7	21.6
Last 2 years	8.5	15.3
Last 3 years	26.6	26.1
Last 4 years	N/A	N/A
Last 5 years	N/A	N/A
Since Inception (4/90)	18.5	17.5

Recommendations

No action recommended.



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

INVESTMENT ADVISERS
Period Ending 12/31/93

Portfolio Manager: Julian (Bing) Carlin | **Assets Under Management: $114,317,237**

Investment Philosophy

IAI's investment philosophy is to own the highest quality companies which demonstrate sustainable growth and the objective of this discipline is capital appreciation. 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 and South Dakota. Twenty percent of the portfolio can be used to purchase large capitalization stocks that display the same quality and growth characteristics but have headquarters outside this region.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Attractive, unique investment approach.

—Investment style successfully applied over a number of market cycles.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-0.2%	0.9%
Last 1 year	N/A	N/A
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 (7/93)	9.5	6.6

Recommendations

No action recommended.

VAM graph will be created for period ending 9/30/95.

IDS ADVISORY
Period Ending 12/31/93

Portfolio Manager: Pete Anderson — **Assets Under Management: $369,993,801**

Investment Philosophy

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

Qualitative Evaluation
(reported by exception)

Exceptional strengths are:

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

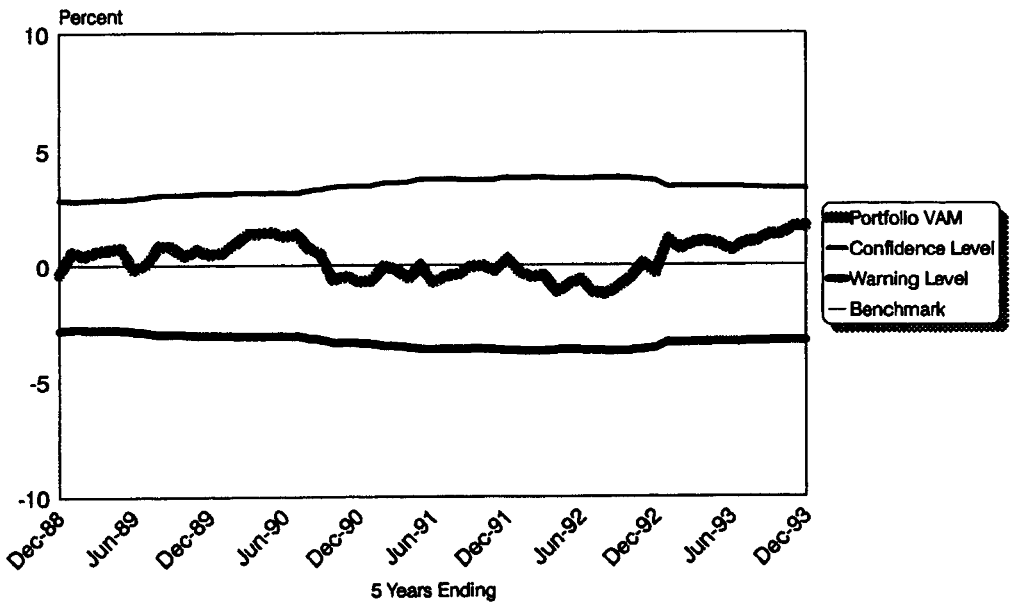
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.9%	1.8%
Last 1 year	12.1	11.9
Last 2 years	11.8	13.2
Last 3 years	20.0	18.1
Last 4 years	12.0	11.7
Last 5 years	16.1	14.3
Since Inception (1/84)	14.8	14.2

Recommendations

No action recommended.

IDS ADVISORY
Rolling Five Year Time Periods



Note: Graph uses 80/20 confidence interval.

INDEPENDENCE INVESTMENT ASSOCIATES
Period Ending 12/31/93

Portfolio Manager: Bill Fletcher — **Assets Under Management: $367,849,050**

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 discreet criteria. Independence constricts their portfolio to the top 60% of their ranked universe. The portfolio is optimized relative to the benchmark selected by the client to minimize the market and industry risks. Independence maintains a fully invested portfolio and rarely holds more than a 1% cash position.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

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

—Attractive, unique investment approach.

—Highly successful and experienced professionals.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	1.4%	1.9%
Last 1 year	12.0	10.2
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 (2/92)	12.7	11.4

Recommendations

No action recommended.

VAM graph will be created for period ending 6/30/94.

JUNDT ASSOCIATES
Period Ending 12/31/93

Portfolio Manager: James Jundt — **Assets Under Management: $211,628,150**

Investment Philosophy

Jundt Associates' investment philosophy is growth oriented with a focus on companies generating significant revenue increases. They concentrate on larger-capitalization companies, with at least half the equity securities consisting of companies with annual revenues over $750 million. Within these parameters, the firm's mission is to establish equity positions in 30 to 50 of the fastest growing corporations in America. Particular emphasis is placed on companies the firm believes will achieve annual revenue growth of 15% or greater. Jundt utilizes a bottom-up stock selection process combined with a top-down theme overlay. The firm attempts to identify five to seven investment themes and typically invests three to five stocks in each theme.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Attractive, unique investment approach.

—Investment style has been consistently applied over a number of market cycles.

Current concerns are:

—One of the firm's four partners resigned last quarter. While a replacement has been hired, this transition should be monitored going forward.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	1.1%	3.0%
Last 1 year	N/A	N/A
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 (7/93)	3.8	7.4

Recommendations

No action recommended.

VAM graph will be created for period ending 9/30/95.

LINCOLN CAPITAL MANAGEMENT
Period Ending 12/31/93

Portfolio Manager: Parker Hall — **Assets Under Management: $251,679,293**

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.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Organizational continuity and strong leadership.

—Familiar with the needs of large clients.

—Investment style has been consistently applied over a number of market cycles.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	3.3%	3.3%
Last 1 year	N/A	N/A
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 (7/93)	4.0	3.8

Recommendations

No action recommended.

VAM graph will be created for period ending 9/30/95.

LYNCH & MAYER
Period Ending 12/31/93

Portfolio Manager: Eldon Mayer | **Assets Under Management: $316,854,069**

Investment Philosophy

Lynch & Mayer invest primarily in high-quality, large capitalization growth stocks. They believe that outstanding investments are a function of corporate earnings growth that is considerably above historical trends or consensus expectations. Lynch & Mayer are bottom up stock pickers and rely on very little economic analysis in their selection process. The firm screens out stocks below a certain market capitalization and liquidity level and then eliminates additional stocks based on various fundamental criteria. After the screening process they look for at least one of the following four factors: 1) acceleration of growth; 2) improving industry environment; 3) corporate restructuring; or 4) turnaround. The firm generally stays fully invested, with any cash due to lack of attractive investment opportunities.

Qualitative Evaluation
(reported by exception)

Exceptional strengths are:

—Organizational continuity and strong leadership.

—Highly successful and experienced professionals.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-2.4%	1.8%
Last 1 year	5.9	12.9
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 (2/92)	8.3	11.5

Recommendations

No action recommended.

VAM graph will be created for period ending 6/30/94.

OPPENHEIMER CAPITAL
Period Ending 12/31/93

Portfolio Manager: John Lindenthal | **Assets Under Management: $260,873,095**

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, industrial position and valuation.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Highly successful and experienced professionals.

—Familiar with the needs of large institutional clients.

—Investment style has been consistently applied over a number of market cycles.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	0.7%	0.8%
Last 1 year	N/A	N/A
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 (7/93)	5.2	4.3

Recommendations

No action recommended.

VAM graph will be created for period ending 9/30/95.

WADDELL & REED ASSET MANAGEMENT
Period Ending 12/31/93

Portfolio Manager: Henry Herrmann | **Assets Under Management: $383,807,870**

Investment Philosophy

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

Qualitative Evaluation
(reported by exception)

Exceptional strengths are:

—Highly successful and experienced professionals.

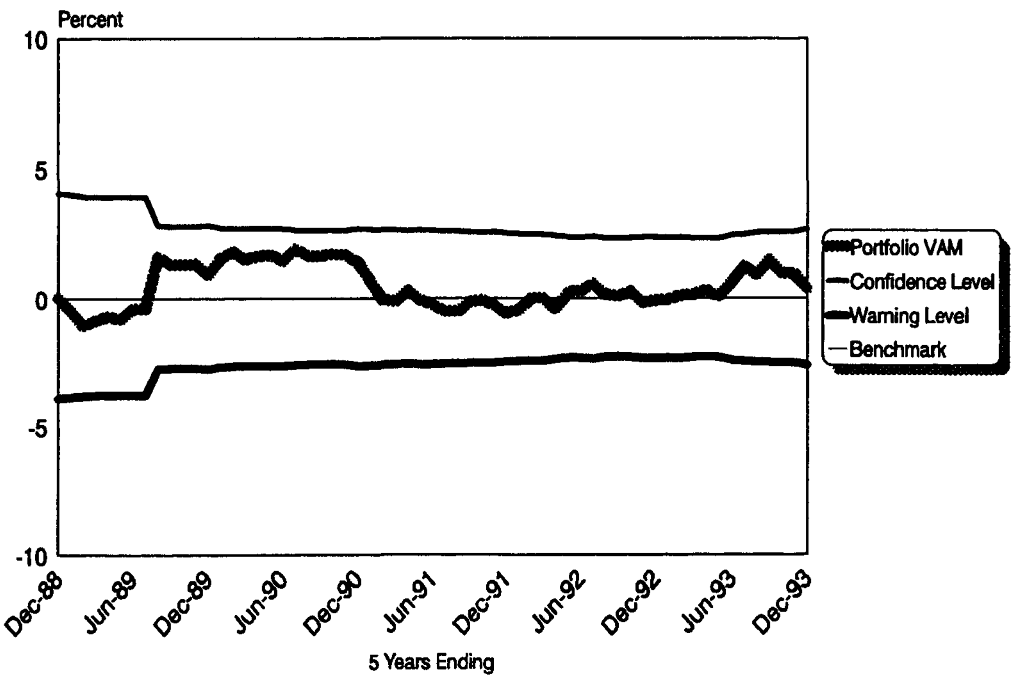
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-0.8%	4.5%
Last 1 year	13.9	17.3
Last 2 years	14.3	14.9
Last 3 years	18.2	20.3
Last 4 years	11.1	12.4
Last 5 years	14.1	13.6
Since Inception (1/84)	12.2	12.0

Recommendations

No action recommended.

WADDELL & REED
Rolling Five Year Time Periods



Note: Graph uses 80/20 confidence interval.

WEISS, PECK & GREER
Period Ending 12/31/93

Portfolio Manager: Melville Straus **Assets Under Management: $215,346,784**

Investment Philosophy

Weiss, Peck & Greer's dynamic growth process concentrates on small to medium size growth companies that have demonstrated consistent 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.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Highly successful and experienced professionals.

—Investment style has been consistently applied over a number of market cycles.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-1.8%	1.7%
Last 1 year	N/A	N/A
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 (7/93)	6.7	10.0

Recommendations

No action recommended.

VAM graph will be created for period ending 9/30/95.

STATE BOARD OF INVESTMENT

Bond Manager Evaluation Reports

Fourth Quarter, 1993

DOMESTIC BOND MANAGERS
Period Ending 12/31/93

Current Managers	Quarter Actual %	Quarter Bmk %	1 Year Actual %	1 Year Bmk %	3 years Actual %	3 years Bmk %	5 Years Actual %	5 Years Bmk %	Since (1) Inception Actual %	Since (1) Inception Bmk %	Market Value (in millions)	Pool %
BEA	0.2	0.0							3.2	2.7	$288.03	4.7%
IAI	-0.6	0.0	12.7	9.9	12.6	11.0	12.3	11.4	13.2	12.7	478.94	7.7%
Miller	-0.3	0.0	12.0	9.9	13.2	11.1	11.6	11.4	13.0	12.8	479.71	7.8%
Standish	0.1	0.0							3.1	2.7	473.90	7.7%
Western	0.4	0.0	14.2	9.9	13.4	11.3	12.8	11.4	14.1	12.7	884.78	14.3%
IDS (2)	-0.9	-0.3							3.4	3.0	246.67	4.0%
TCW (3)	0.1	0.9							3.0	1.8	245.49	4.0%
Goldman (4)	0.3	0.0							3.1	2.7	1,033.47	16.7%
Fidelity (4)	0.3	0.0	10.9	9.9	11.7	11.1	11.7	11.4	11.1	10.8	1,028.19	16.6%
Lincoln (4)	0.1	0.0	10.0	9.9	11.1	11.1	11.3	11.4	10.8	10.8	1,023.55	16.6%
											$6,182.73	100.0%
									Since 7/1/84			
Current Aggregate	**0.1**	**0.1**	**11.6**	**9.9**	**12.1**	**11.1**	**11.8**	**11.4**	**13.3**	**12.7**		
Historical Aggregate (5)	0.1	0.1	11.5	9.9	12.0	11.1	11.7	11.3	12.6	12.5		
Salomon BIG		0.0		9.9		11.1		11.3		12.8		

(1) Since retention by the SBI. Time period varies for each manager.
(2) Govt./Corp. only.
(3) Mortgages only.
(4) Semi- passive manager.
(5) Includes performance of terminated managers.

BEA ASSOCIATES
Period Ending 12/31/93

Portfolio Manager: Bob Moore **Assets Under Management: $288,027,924**

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.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Highly successful and experienced professionals.

—Extensive option analysis capabilities.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	0.2%	0.0%
Last 1 year	N/A	N/A
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 (7/93)	3.2	2.7

Recommendations

No action recommended.

VAM graph will be drawn for period ending 9/30/95.

IDS ADVISORY GROUP
Period Ending 12/31/93

Portfolio Manager: Ed Labenski | **Assets Under Management: $246,667,546**

Investment Philosophy

IDS manages a corporate and treasury portfolio for the SBI. The firm 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.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Highly successful and experienced professionals.

—Extensive corporate research capabilities.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-0.9%	-0.3%
Last 1 year	N/A	N/A
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 (7/93)	3.4	3.0

Recommendations

No action recommended.

VAM graph will be drawn for period ending 9/30/95.

INVESTMENT ADVISERS
Period Ending 12/31/93

Portfolio Manager: Larry Hill **Assets Under Management: $478,936,591**

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.

Qualitative Evaluation (reported by exception)

The current evaluation notes the following:

— The manager's duration decisions have added value recently.

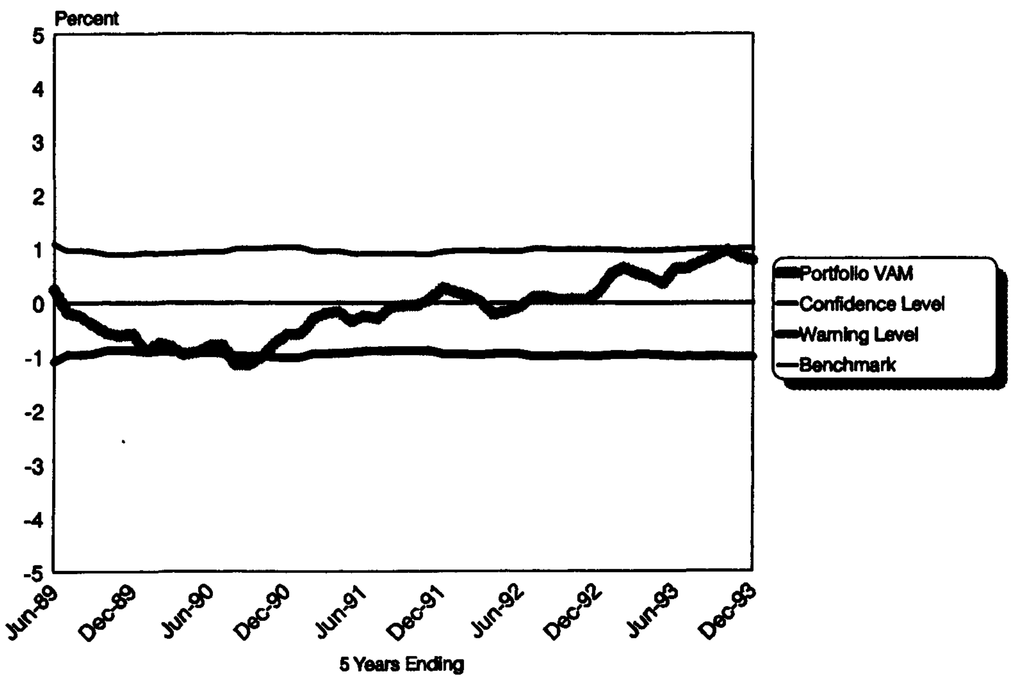
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-0.6%	0.0%
Last 1 year	12.7	9.9
Last 2 years	10.2	8.7
Last 3 years	12.6	11.0
Last 4 years	11.3	10.5
Last 5 years	12.3	11.3
Since Inception (7/84)	13.2	12.7

Recommendations

No action recommended.

Investment Advisers
Rolling Five Year Time Periods



MILLER ANDERSON & SHERRERD
Period Ending 12/31/93

Portfolio Manager: Tom Bennett | **Assets Under Management: $479,713,544**

Investment Philosophy

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

Qualitative Evaluation (reported by exception)

The firms strengths continue to be:

—Highly successful and experienced professionals.

—Extensive securities research process.

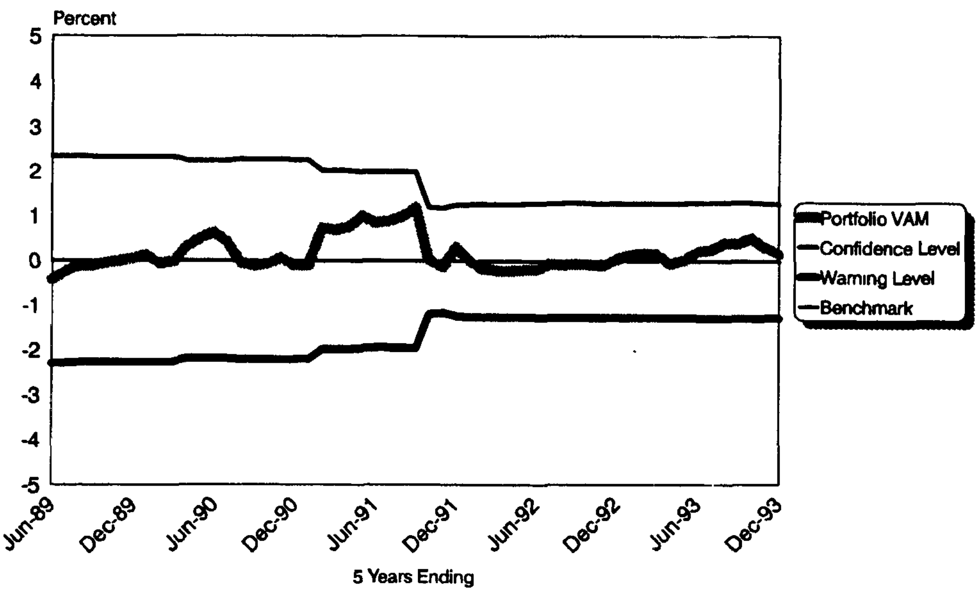
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	-0.3%	0.0%
Last 1 year	12.0	9.9
Last 2 years	9.6	8.7
Last 3 years	13.2	11.1
Last 4 years	12.1	10.6
Last 5 years	11.6	11.3
Since Inception (7/84)	13.0	12.8

Recommendations

No action recommended.

MILLER ANDERSON
Rolling Five Year Time Periods



STANDISH, AYER & WOOD
Period Ending 12/31/93

Portfolio Manager: Austin Smith | **Assets Under Management: $473,898,639**

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.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Highly successful and experienced professionals

—Extensive corporate research capabilities.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	0.1%	0.0%
Last 1 year	N/A	N/A
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 (7/93)	3.1	2.7

Recommendations

No action recommended.

VAM graph will be drawn for period ending 9/30/95

TCW
Period Ending 12/31/93

Portfolio Manager: Philip Barach — **Assets Under Management: $245,490,068**

Investment Philosophy

TCW manages a mortgage only portfolio for the SBI. TCW is a mortgage manager that emphasizes security selection. TCW invests a significant portion of the portfolio in collateralized mortgage obligations (CMO's). The staff analyzes various Wall Street models used to evaluate CMO's and determines the validity of their underlying assumptions. They have added significant value by understanding the strengths and weaknesses of these models. This helps them purchase undervalued securities and avoid those that are overpriced.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Highly successful and experienced professionals.

—Extensive CMO investment experience.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	0.1%	0.9 %
Last 1 year	N/A	N/A
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 (7/93)	3.0	1.8

Recommendations

No action recommended.

VAM graph will be drawn for period ending 9/30/95.

WESTERN ASSET MANAGEMENT
Period Ending 12/31/93

Portfolio Manager: Kent Engel **Assets Under Management: $884,782,076**

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.

Qualitative Evaluation
(reported by exception)

The firm's exceptional strengths continue to be:

—Highly successful and experienced professionals.

—Extensive securities research process.

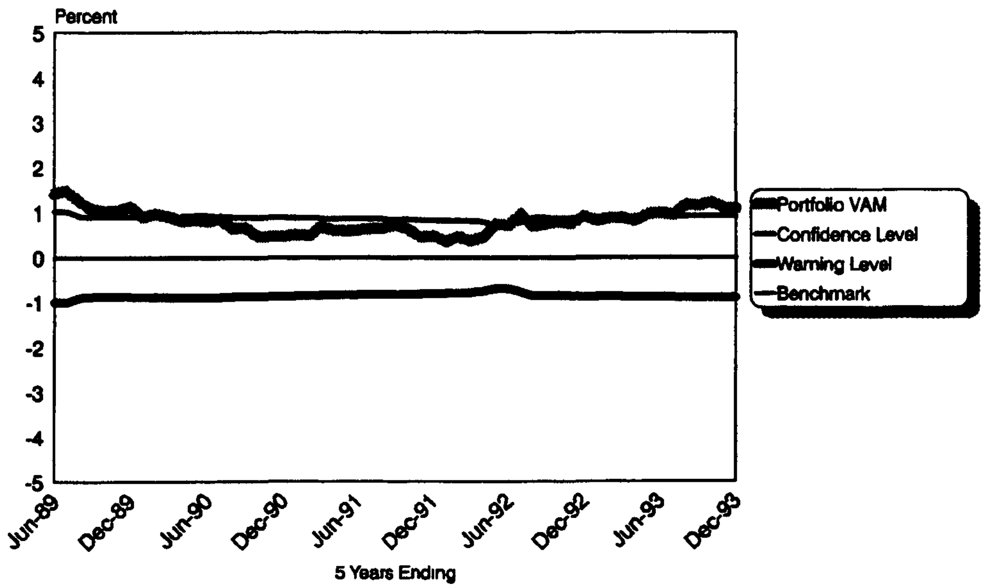
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	0.4%	0.0%
Last 1 year	14.2	9.9
Last 2 years	11.2	8.7
Last 3 years	13.4	11.3
Last 4 years	12.0	10.8
Last 5 years	12.8	11.3
Since Inception (7/84)	14.1	12.7

Recommendations

No action recommended.

Western Asset Management
Rolling Five Year Time Periods



FIDELITY MANAGEMENT TRUST
Period Ending 12/31/93

Portfolio Manager: Tom Steffanci | **Assets Under Management: $1,028,187,278**

Investment Philosophy

Fidelity is an enhanced index manager who builds an index portfolio using stratified sampling and a risk factor model. Using stratified sampling, Fidelity divides the Salomon BIG into subsectors based on characteristics like maturity, coupon, sector and quality and chooses securities to represent each cell. The portfolio is then compared to the Salomon BIG using a risk factor model. Fidelity adds value to the portfolio through sector selection, issue selection, credit research and yield curve strategies. Fidelity weights sectors based on their relative value and attempts to buy stable credits or credits likely to be upgraded. Finally, Fidelity changes the maturity distribution of the portfolio securities to take advantage of non-parallel shifts in the yield curve.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Highly successful and experienced professionals.

—Extensive securities research process.

—Quantitative capabilities.

Current concerns are:

—New portfolio manager as of March 1993. (Former portfolio manager, Sharmin Massavar-Rahmani left to join Goldman Sachs.)

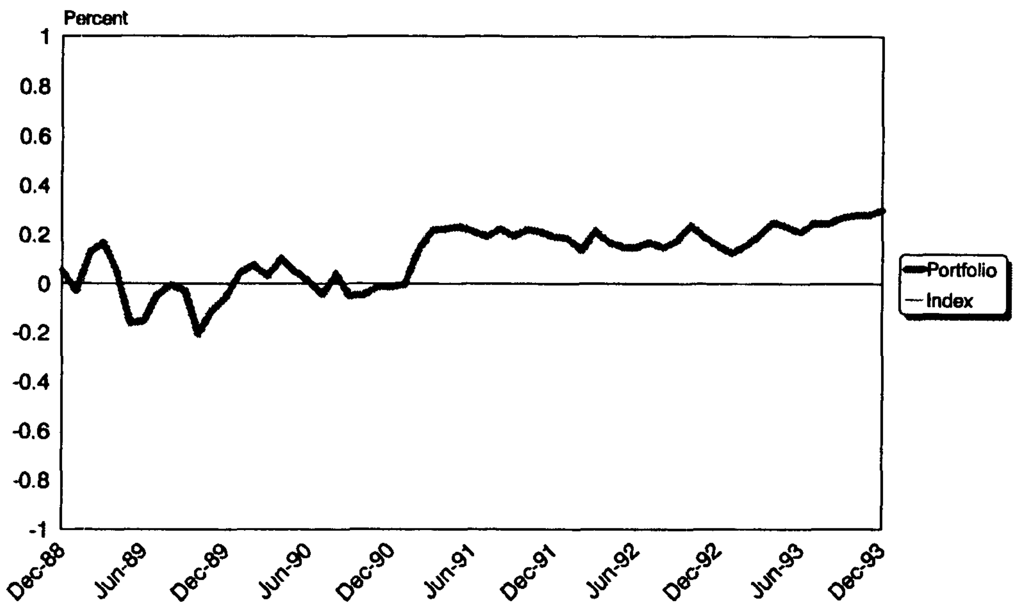
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	0.3%	0.0%
Last 1 year	10.9	9.9
Last 2 years	9.3	8.7
Last 3 years	11.7	11.1
Last 4 years	11.1	10.6
Last 5 years	11.7	11.3
Since Inception (7/88)	11.1	10.8

Recommendations

No action recommended.

Fidelity Management Trust
Cumulative Tracking Report



GOLDMAN SACHS
Period Ending 12/31/93

Portfolio Manager: Sharmin Mossavar Rahmani **Assets Under Management: $1,033,472,863**

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.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Highly successful and experienced professionals.

—Quantitative capabilities.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	0.3%	0.0%
Last 1 year	N/A	N/A
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	3.1	2.7

Recommendations

No action recommended.

VAM graph will be drawn for the period ending 9/30/95.

LINCOLN CAPITAL MANAGEMENT
Period Ending 12/31/93

Portfolio Manager: Brian Johnson | **Assets Under Management: $1,023,549,201**

Investment Philosophy

Lincoln is an enhanced index manager that uses a quantitative approach to managing the portfolio. Lincoln calculates the index's expected return for changes in 54 variables. These variables include interest rates, yield curve shape, call features and sector spreads. Lincoln then constructs a portfolio to match the expected returns for a given change in any of the variables. Lincoln relaxes the return tolerances, defined as the difference between the portfolio's expected returns and that for the index, for an enhanced index fund. The portfolio's securities are selected from a universe of 250 liquid issues using a proprietary risk-valuation model. A linear program or portfolio optimizer then constructs the most undervalued portfolio that still matches the return characteristics of the index.

Qualitative Evaluation (reported by exception)

The firm's strengths are:

—Highly successful and experienced professionals.

—Extensive quantitative capabilities.

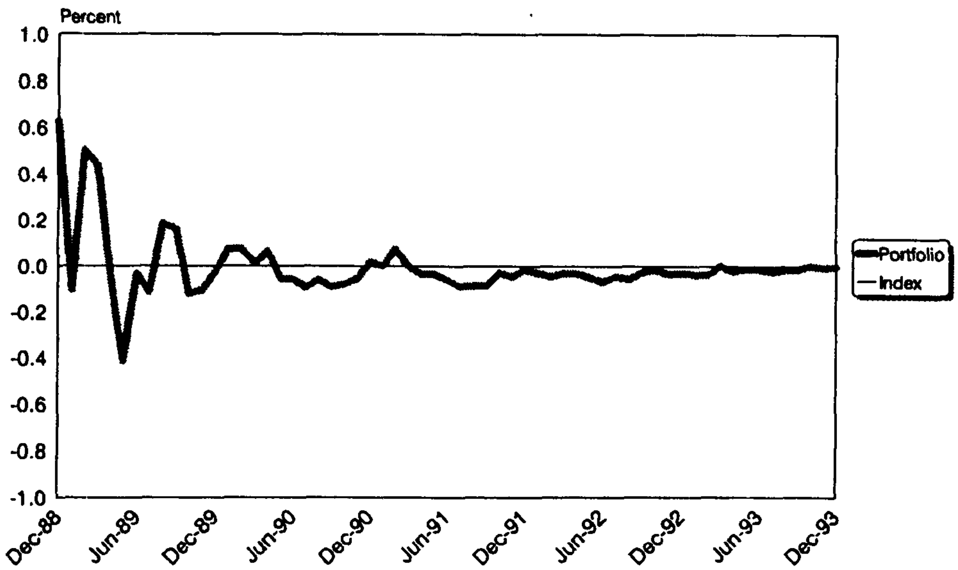
Quantitative Evaluation

	Actual	Benchmark
Last Quarter	0.1%	0.0%
Last 1 year	10.0	9.9
Last 2 years	8.8	8.7
Last 3 years	11.1	11.1
Last 4 years	10.6	10.6
Last 5 years	11.3	11.3
Since Inception (7/88)	10.8	10.8

Recommendations

No action recommended.

LINCOLN CAPITAL MANAGEMENT
Cumulative Tracking Report



STATE BOARD OF INVESTMENT

International Manager Evaluation Reports

Fourth Quarter, 1993

INTERNATIONAL STOCK MANAGERS
PERIOD ENDING 12/31/93

Current Managers	Quarter Actual	Bmk	1 Year Actual	Bmk	Since Inception Actual	Bmk	% of Pool	Mkt Value (millions)
Baring(1)	13.6%	0.9%	--	--	27.2%	18.4%	9.7%	$184.0
Brinson(1)	2.8	0.9	--	--	10.4	18.4	8.6	161.8
Marathon(2)	-0.3*	-2.2*	--	--	-0.3	-2.2	7.9	149.5
Rowe Price(2)	7.5*	-2.2*	--	--	7.5	-2.2	8.5	161.2
Scudder(2)	4.9*	-2.2*	--	--	4.9	-2.2	8.5	160.7
Templeton	1.6*	-2.2*	--	--	1.6	-2.2	8.2	155.4
State Street(3)	0.9	0.9	32.3	32.6	21.4	21.4	48.6	918.7
Current Aggregate	**4.0**	**0.9**	**34.3**	**32.6**	**22.8**	**21.4**	**100.0%**	**$1,891.3**

(1) Active country/passive stock. Retained April 1, 1993
(2) Fully active. Retained November 1, 1993
(3) Index. Retained October 1, 1992

* November-December only

INTERNATIONAL STOCK MANAGERS
PERIOD ENDING 12/31/93

	Quarter		1 Year		Since Inception		% of	Mkt Value
Current Managers	**Actual**	**Bmk**	**Actual**	**Bmk**	**Actual**	**Bmk**	**Pool**	**(millions)**
Baring(1)	13.6%	0.9%	--	--	27.2%	18.4%	9.7%	$184.0
Brinson(1)	2.8	0.9	--	--	10.4	18.4	8.6	161.8
Marathon(2)	-0.3*	-2.2*	--	--	-0.3	-2.2	7.9	149.5
Rowe Price(2)	7.5*	-2.2*	--	--	7.5	-2.2	8.5	161.2
Scudder(2)	4.9*	-2.2*	--	--	4.9	-2.2	8.5	160.7
Templeton	1.6*	-2.2*	--	--	1.6	-2.2	8.2	155.4
State Street(3)	0.9	0.9	32.3	32.6	21.4	21.4	48.6	918.7
Current Aggregate	**4.0**	**0.9**	**34.3**	**32.6**	**20.4**	**21.4**	**100.0%**	**$1,891.3**

(1) Active country/passive stock. Retained April 1, 1993
(2) Fully active. Retained November 1, 1993
(3) Index. Retained October 1, 1992

* November-December only

BARING INTERNATIONAL INVESTMENT LTD.
Period Ending 12/31/93

Portfolio Manager: Philip Bullen | **Assets Under Management: $184,035,260**

Investment Philosophy

Barings manages an active country/passive stock portfolio for the SBI. Barings' strategic policy team is responsible for the country and currency decisions. Country allocation decisions are made using a macroeconomic framework which seeks to identify growing economies as evidenced by positive changes in GDP and interest rates. The team uses multiple inputs including regional specialists, local market valuations and a computer model that functions as an audit of the qualitative valuation process. Currency specialists within Barings provide assessments on flow of funds, currency rates, monetary policy, inflation and interest rates. Barings uses country index funds managed by State Street Global Advisors to implement their country allocations. At Barings' direction, State Street also implements currency/hedging strategies for the portfolio.

Qualitative Evaluation
(reported by exception)

Exceptional strengths are:

—Highly successful and experienced professionals.

—Familiar with the needs of large institutional clients.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	13.6%	0.9%
Last 1 year	N/A	N/A
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 (4/93)	27.2	18.4

Recommendations

No action recommended.

VAM graph will be drawn for period ending 6/30/95.

BRINSON PARTNERS
Period Ending 12/31/93

Portfolio Manager: Richard Carr **Assets Under Management: $161,837,467**

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 individual markets based on fundamental 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.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

- Highly successful and experienced professionals.
- Familiar with the needs of large institutional clients.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	2.8%	0.9%
Last 1 year	N/A	N/A
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 (4/93)	10.4%	18.4%

Recommendations

No action recommended.

VAM graph will be created for period ending 6/30/95.

MARATHON ASSET MANAGEMENT
Period Ending 12/31/93

Portfolio Manager: **William Arah** **Assets Under Management: $149,477,425**

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.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Attractive, unique investment approach.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	N/A	N/A
Last 1 year	N/A	N/A
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 (11/93)	-0.3%	-2.2%

Recommendations

No action recommended.

VAM graph will be drawn for period ending 3/31/96.

ROWE PRICE-FLEMING INTERNATIONAL, INC.
Period Ending 12/31/93

Portfolio Manager: Martin Wade | **Assets Under Management: $161,182,252**

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.

Qualitative Evaluation (reported by exception)

The firms strengths continue to be:

- Extensive securities research process.
- Successful investment approach which has been consistently applied over a number of market cycles.
- Familiarity with the needs of large institutional clients.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	N/A	N/A
Last 1 year	N/A	N/A
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 (11/93)	7.5%	-2.2%

Recommendations

No action recommended.

VAM graph will be created for period ending 3/31/96.

SCUDDER, STEVEN & CLARK
Period Ending 12/31/93

Portfolio Manager: Nicholas Bratt **Assets Under Management: $160,712,216**

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.

Qualitative Evaluation
(reported by exception)

Exceptional strengths are:

—Strong leadership.

—Extensive securities research capabilities.

—Successful investment approach which has been consistently applied over a number of market cycles.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	N/A	N/A
Last 1 year	N/A	N/A
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 (11/93)	4.9%	-2.2%

Recommendations

No action recommended.

VAM graph will be drawn for period ending 3/31/96.

TEMPLETON INVESTMENT COUNSEL, INC.
Period Ending 12/31/93

Portfolio Manager: Harry Erlich **Assets Under Management: $155,441,404**

Investment Philosophy

Templeton's goal is to identify those companies selling at the greatest discount to future intrinsic value. The firm takes a long-term approach to investing and believes that, over time, markets are efficient and patience will reward those who have identified undervalued stocks. Stock selection dominates Templeton's investment approach; country, sector and industry weightings are a residual of the stock selection process. Stock ideas are obtained from a worldwide network of research sources and screens of their own global database. From this preliminary list, analysts conduct fundamental analysis to distinguish a "cheap' stock from a "bargain." Templeton seeks stocks that are cheap relative to their own price history, their global industry and their domestic market. Each stock on the resulting "bargain list" has established buy and sell price targets and is purchased and sold accordingly.

Qualitative Evaluation (reported by exception)

Exceptional strengths are:

—Extensive securities research process.

—Successful investment approach which has been consistently applied over a number of market cycles.

Quantitative Evaluation

	Actual	Benchmark
Last Quarter	N/A	N/A
Last 1 year	N/A	N/A
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 (11/93)	1.6%	-2.2%

Recommendations

No action recommended.

VAM graph will be drawn for period ending 3/31/96.

Tab F

COMMITTEE REPORT

DATE: February 22, 1994

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

FROM: **Alternative Investment Committee**

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

- Review of current strategy.
- Results of annual review session with an existing private equity manager, Churchill Capital.
- Investment with a new real estate manager, TA Associates Realty.
- Additional investment with an existing private equity manager, the Coral Group (formerly IAI Venture Capital Group).
- Additional investment with an existing private equity manager, Summit Partners.

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 is 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 pooled vehicles. A chart summarizing the Board's current commitments is attached (see **Attachment A**).

The real estate investment strategy calls for the establishment and maintenance of a broadly diversified real estate portfolio comprised of investments that provide overall diversification by property type and location. The main component of this portfolio consists of investments in diversified open-end and closed-end commingled funds. The remaining portion of the portfolio can include investments in less diversified, more focused (specialty) commingled funds. Currently, the SBI has committed $495 million to nineteen (19) commingled real estate funds.

The private equity 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. To date, the SBI has committed to twenty-six (26) commingled private equity funds for a total commitment of $689 million.

The strategy for resource investment requires that investment be made in resource investment vehicles that are specifically designed for institutional investors to provide an inflation hedge and additional diversification. Individual resource investments will include proved producing oil and gas properties, royalties and other investments that are diversified geographically and by type. Currently, the SBI has committed $138 million to eight (8) commingled oil and gas funds.

2) **Results of Annual Review Sessions with Existing Managers.**

During the quarter, the Alternative Investment Committee and staff attended an annual review session with one of the SBI's private equity managers, Churchill Capital. Overall, the meeting went well and produced no major surprises.

A summary of the review session is included as **Attachment B** of this Committee Report.

ACTION ITEMS:

1) **Investment with a new real estate manager, TA Associates Realty in The Realty Associates III.**

TA Associates Realty is seeking investors in a new $350 million real estate fund, The Realty Associates Fund III. The fund will be a follow-on-fund to Advent Realty Funds I and II. Fund I was formed in 1987 with $163 million of investor commitments. Fund II was formed in 1990 with $332 million in investor commitments. Like Funds I and II, Fund III will invest in small to medium sized properties generally diversified by location and type.

More information on The Realty Associates Fund III 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 $40 million or 20%, whichever is less, in The Realty Associates Fund III. This investment will be allocated to the Basic Retirement Funds.

2) **Additional investment with an existing private equity manager, the Coral Group (formerly IAI Venture Capital Group) in Coral Partners IV.**

The Coral Group is seeking investors in a new $60-100 million private equity fund, Coral Partners IV. The Fund will be a follow-on Fund to IAI Venture Partners and Coral Partners I and II. IAI Venture Partners was formed in 1983 with $50 million in investor commitments including the SBI's investment of $500,000. Coral Partners I (previously Superior Ventures) was formed in 1986 with total investor capital commitments of $36 million including the SBI's commitment of $6.6 million. Coral Partners II (formerly IAI Ventures II) was formed in 1990 with $63 million of committed capital including the SBI's commitment of $10 million. Like Funds I and II, Coral Partners IV will invest in technology and health care companies with a significant number of investments in companies with a substantial presence in Minnesota.

More information on Coral Partners IV 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 $20 million or 20%, whichever is less, in Coral Partners IV. This investment will be allocated to the Basic Retirement Funds.

3) **Additional investment with an existing private equity manager, Summit Partners in Summit Subordinated Debt Fund Limited Partnership.**

Summit Partners is seeking investors in a new $100-125 million private equity fund, Summit Subordinated Debt Fund L.P. Summit has raised three previous venture funds, Summit Ventures I, II, and III with total investor capital commitments of $93 million, $230 million and $279 million, respectively. The SBI invested $10 million in Summit I and $30 million in Summit II. Summit Subordinated Debt Fund L.P. will primarily coinvest with Summit Fund III in investments principally in the form of subordinated debt with equity features.

More information on the Summit Subordinated Debt Fund L.P. 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 $20 million or 20%, whichever is less, in Summit Subordinated Debt Fund L.P. This investment will be allocated to the Post Retirement Fund.

ATTACHMENT A

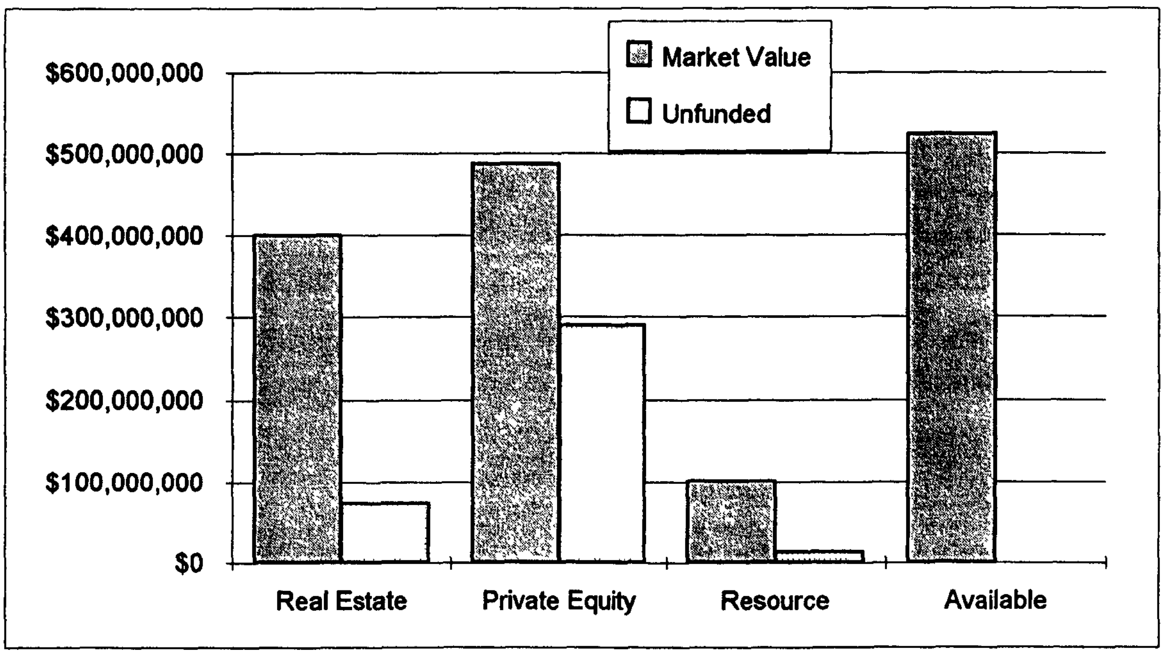
Minnesota State Board of Investment

Alternative Investments Basic Retirement Fund
December 31, 1993

Market Value of Basic Retirement Fund (Basic)	$10,086,131,435
Amount Available For Investment	$524,156,380

	Current Level	*Target Level*	*Difference*
Market Value	$988,763,335	$1,512,919,715	$524,156,380
Market Value + Uncommited Funds	$1,365,693,536	$2,017,226,287	$651,532,751

Asset Class	Market Value	Unfunded Commitment	Total
Real estate	$399,989,314 *4.0%*	$73,897,646 *0.7%*	$473,886,960 *4.7%*
Private Equity	$487,243,306 *4.8%*	$289,618,430 *2.9%*	$776,861,736 *7.7%*
Resource	$101,530,715 *1.0%*	$13,414,125 *0.1%*	$114,944,840 *1.1%*
Total	$988,763,335 *9.8%*	$376,930,201 *3.7%*	$1,365,693,536 *13.5%*



ATTACHMENT A (con't)

Minnesota State Board of Investment

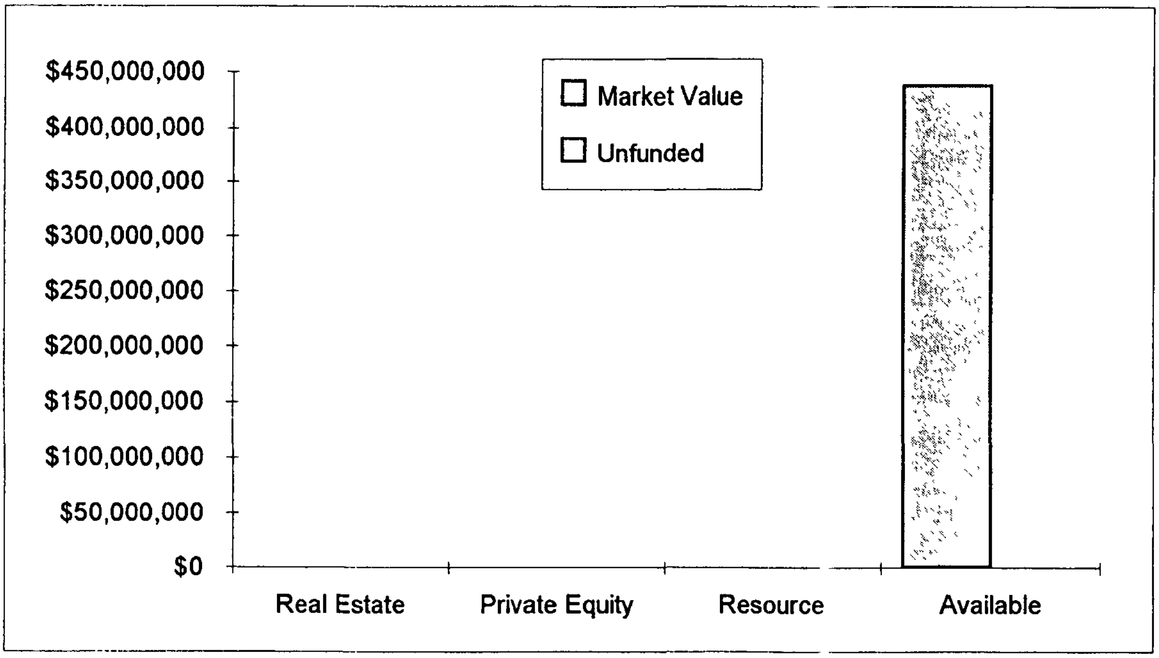
Alternative Investments Post Retirement Fund

December 31, 1993

Market Value of Post Retirement Fund (Post)	$8,766,382,523
Amount Available For Investment	$438,319,126

	Current Level	*Target Level*	*Difference*
Market Value	$0	$438,319,126	$438,319,126

Asset Class	Market Value	Unfunded Commitment	Total
Real estate	$0 *0 0%*	$0 *0 0%*	$0 *0.0%*
Private Equity	$0 *0.0%*	$0 *0.0%*	$0 *0.0%*
Resource	$0 *0.0%*	$0 *0.0%*	$0 *0.0%*
Total	$0 *0.0%*	$0 *0 0%*	$0 *0.0%*



ATTACHMENT A (con't)

STATE OF MINNESOTA
ALTERNATIVE EQUITY INVESTMENTS
31-Dec-93

	INCEPTION DATE	TOTAL COMMITMENT	FUNDED COMMITMENT	MARKET VALUE	DISTRIBUTIONS	UNFUNDED COMMITMENT	IRR (%)	PERIOD (YEARS)
REAL ESTATE								
AETNA 13354 *	Jun-93	2,376,529	2,376,529	2,384,217	0	0	0.64	0.6
AETNA	Apr-82	40,000,000	40,000,000	53,621,176	0	0	2.83	11.8
AEW III	Sep-85	20,000,000	20,000,000	18,998,821	981,438	0	-0.01	8.3
AEW IV	Sep-86	17,400,000	15,000,000	4,238,008	829	2,400,000	-16.40	7.3
AEW V	Dec-87	15,000,000	15,000,000	10,352,711	65,593	0	-6.21	6.1
AMERICAN REPUBLIC *	Jan-90	1	1	1	0	0	0.00	4.0
ARCH STREET CORP. **	Jul-93	10,000,000	10,000,000	10,000,000	0	0	0.00	0.5
EQUITABLE	Oct-81	40,000,000	40,000,000	68,128,221	0	0	4.90	12.3
HEITMAN I	Aug-84	20,000,000	20,000,000	11,787,980	11,842,633	0	2.85	9.4
HEITMAN II	Nov-85	30,000,000	30,000,000	24,953,819	11,875,142	0	3.33	8.2
HEITMAN III	Feb-87	20,000,000	20,000,000	13,358,865	5,660,507	0	-0.95	6.9
HEITMAN V	Dec-91	20,000,000	20,000,000	21,384,119	901,424	0	7.83	2.1
LASALLE	Sep-91	15,000,000	6,019,808	6,292,291	227,228	8,980,192	4.79	2.3
PAINE WEBBER *	Feb-90	500,000	500,000	338,810	85,202	0	-4.43	3.9
RREEF	May-84	75,000,000	75,000,000	67,266,469	21,306,787	0	2.41	9.7
TCW III	Aug-85	40,000,000	40,000,000	27,165,145	10,900,073	0	-0.74	8.4
TCW IV	Nov-86	30,000,000	30,000,000	21,691,578	2,399,405	0	-3.66	7.2
ZELL/MERRILL LYNCH II	Nov-91	50,000,000	37,482,546	38,027,083	120,651	12,517,454	2.11	2.2
ZELL/MERRILL LYNCH III***	Jan-94	50,000,000	0	0	0	50,000,000	0.00	0.0
TOTAL REAL ESTATE		*495,276,530*	*421,378,884*	*399,989,314*	*66,366,912*	*73,897,646*		
PRIVATE EQUITY								
ALLIED	Sep-85	5,000,000	5,000,000	2,957,715	3,544,838	0	5.28	8.3
BANK FUND III	Oct-92	20,000,000	8,000,000	8,138,015	8,372	12,000,000	0.86	1.2
BLACKSTONE II	Nov-93	50,000,000	2,816,447	2,816,447	0	47,183,553	-40.28	0.2
BRINSON	May-88	5,000,000	5,000,000	3,485,161	3,360,233	0	9.23	5.7
BRINSON II	Nov-90	20,000,000	14,000,000	11,700,149	8,248,330	6,000,000	25.80	3.2
CHURHILL II	Oct-92	20,000,000	7,000,000	6,850,350	340,413	13,000,000	1.86	1.2
DSV	Apr-85	10,000,000	10,000,000	10,556,641	2,022,464	0	2.95	8.8
FIRST CENTURY	Dec-84	10,000,000	9,700,000	7,968,323	5,420,664	300,000	8.26	9.1
GOLDER THOMA III	Oct-87	14,000,000	11,905,000	11,653,154	7,956,491	2,095,000	16.64	6.3
GOLDER THOMA IV	Apr-93	20,000,000	0	0	0	20,000,000	0.00	0.8
IAI I *	Mar-91	500,000	500,000	458,759	254,928	0	15.27	2.8
CORAL II (FORMERLY IAI II)	Jul-90	10,000,000	6,888,846	7,411,574	1,443,401	3,111,154	13.80	3.5
IMR PARTNERSHIP	Aug-92	30,000,000	248,000	248,000	0	29,752,000	-62.73	1.4
INMAN BOWMAN	Jun-85	7,500,000	7,500,000	6,354,186	0	0	-2.99	8.6
KKR I	Jun-84	25,000,000	25,000,000	49,920,000	70,776,657	0	30.81	9.6
KKR II	Apr-86	18,365,339	18,365,339	40,520,000	44,259,293	0	23.38	7.8
KKR III	Nov-87	145,950,000	145,950,000	225,650,000	103,670,111	0	12.96	6.2
KKR IV	May-91	150,000,000	2,534,000	2,534,000	0	147,466,000	0.00	2.7
MATRIX II	Aug-85	10,000,000	10,000,000	6,368,941	12,050,777	0	12.48	8.4
MATRIX III	May-90	10,000,000	8,000,000	8,487,861	497,220	2,000,000	7.90	3.7
NORTHWEST	Jan-84	10,000,000	10,000,000	4,972,685	8,043,416	0	3.85	10.0
SUMMIT I	Dec-84	10,000,000	10,000,000	3,055,234	13,662,838	0	10.68	9.1
SUMMIT II	May-88	30,000,000	27,000,000	21,628,265	26,926,539	3,000,000	24.69	5.7
CORAL I (FORMERLY SUPERIOR)	Jun-86	6,645,000	6,312,750	9,531,927	2,411,892	332,250	14.05	7.6
T.ROWE PRICE	Nov-87	21,716,595	21,716,595	4,752,775	19,637,561	0	32.05	6.2
ZELL/CHILMARK	Jul-90	30,000,000	26,621,527	29,223,144	2,726,766	3,378,473	14.26	3.5
TOTAL VENTURE CAPITAL		*689,676,934*	*400,058,504*	*487,243,306*	*337,263,204*	*289,618,430*		
RESOURCES								
AMGO I	Sep-81	15,000,000	15,000,000	6,523,199	3,614,536	0	-4.06	12.3
AMGO II	Feb-83	7,000,000	7,000,000	7,219,976	2,325,453	0	3.84	10.9
AMGO IV	May-88	12,300,000	12,300,000	13,954,782	1,508,552	0	5.50	5.7
AMGO V	May-90	16,800,000	14,535,147	15,584,580	3,403,869	2,264,853	9.98	3.7
APACHE III	Dec-86	30,000,000	30,000,000	7,401,717	34,783,189	0	10.42	7.1
B.P.ROYALTY	Feb-89	25,000,000	25,000,000	24,375,000	14,932,848	0	12.85	4.9
MORGAN OIL&GAS	Aug-88	15,000,000	13,799,697	18,111,461	1,108,717	1,200,303	9.01	5.4
SIMMONS OFS	Aug-91	17,000,000	7,051,031	8,360,000	10,000	9,948,969	13.01	2.4
TOTAL RESOURCES		*138,100,000*	*124,685,875*	*101,530,715*	*61,687,164*	*13,414,125*		
TOTAL PORTFOLIO		1,323,053,464	946,123,263	988,763,335	465,317,280	376,930,201		

** - Acquired in local police and fire fund consolidation with PERA*
*** - Acquired from Post Retirement Fund as part of asset allocation transition during FY93*
**** - Closed January 24, 1994*

ATTACHMENT B

ANNUAL REVIEW SUMMARY
CHURCHILL II
February 1, 1994

MANAGER REPRESENTATIVES: Michael Hahn, Barry Lindquist, Tom Kreimer

SBI ASSETS UNDER MANAGEMENT: $6,766,104

BACKGROUND AND DESCRIPTION:

Churchill II, incepted in October 1992, is managed by Churchill Capital Incorporated. The SBI has committed $20 million to the fund. As of December 31, 1993, $7 million of the SBI's total commitment had been funded. The investment partnership has an approximate twelve year term. The investment focus will be on providing subordinated debt capital to manufacturing and service businesses. Churchill operates out of offices in Minneapolis.

QUALITATIVE EVALUATION:

Churchill Capital Partners II (CCP II), incepted in October 1992, is a $155 million fund to which the SBI has committed $20 million. The fund has made 8 investments and drawn down 35%, or $7 million, of the committed capital. The SBI has realized $0.55 million in cash distributions and have experienced a 1.86% net internal rate of return (IRR) since inception. CCP II invests in subordinated debt and classifies all investments thus far as current. The average investment in the portfolio is $6.5 million and has been priced to date to contractually yield approximately 22% gross. Additionally the General Partners indicates with the equity interest incorporated into the debt, a net IRR to investors in the upper teens seems likely.

In November 1993, four of twelve professionals left the organization without notice. They included two investment professionals and two administrators. Following the sudden departure, Price Waterhouse was retained to examine bank statements and other pertinent partnership information. In that review no improprieties were found. Churchill is currently seeking replacements for the departed staff members. To date, one administration person and two secretaries have been hired. Additionally, two offers have been made to investment professionals and the General Partners indicated that staffing should be back to normal by the end of February 1994. In an effort to avoid future problems, Hay Management Services, a human resource consultant, was hired to study the organization and make recommendations regarding compensation and other management issues.

QUANTITATIVE EVALUATION:

CCP II

Commitment	20,000,000
Funded Commitment	7,000,000
Market Value of Funded Commitment	6,850,350
Cash Distributions	340,413
Inception Date	October 1992
Annualized IRR since inception	1.86%

DIVERSIFICATION PROFILE
INVESTMENT CURRENTLY HELD

BORROWER	*BUSINESS*	*LOCATION*	*AMOUNT (millions)*
Advanced Assembly	Electronics	Ohio	$5.00
Magnet	Customized Magnets	Missouri	$6.50
CCP - WCC	Investments	Minnesota	$8.60
ESP Corporation	Locks & Keys	Massachusetts	$5.00
Sentage Corporation	Dental Labs	Minnesota	$5.65
LSJ Sportswear, Inc.	Apparel	Wisconsin	$2.50
Crane Cams, Inc.	Automotive	Florida	$8.50
Richard Young Journal	Catalog	Florida	$10.00
Total			***$51.75***

ATTACHMENT C

REAL ESTATE MANAGER PROFILE

I. BACKGROUND DATA

NAME OF FUND:	The Realty Associates Fund III
FUND MANAGER:	TA Associates Realty
TYPE OF FUND:	Real Estate Limited Partnership and Investment Trust
TOTAL FUND SIZE:	\$250 million - \$350 million
MANAGER CONTACT:	Michael A. Ruane Arthur I. Segel
ADDRESS:	45 Milk Street Boston, Massachusetts 02109
TELEPHONE:	Phone (617) 338-4300 Fax (617) 338-5054

II. ORGANIZATION AND STAFF

TA Associates Realty (TA) was formed in 1982 when it spun off from TA Associates, a $3 billion risk management company, to counsel institutional investors acquiring real estate. It is a privately held limited partnership with two managing partners: Michael Ruane and Arthur Segel. Including Ruane and Segel, TA currently has eight real estate professionals. Four are involved with acquisitions/divestitures, two with the asset management group, one in administration, and one who divides time between acquisitions/divestitures and administration. The experience of TA's key professionals average 12.9 years in real estate and 6.9 years with TA.

Property management at the local level is administered through third party contractors. These contractors are responsible for all aspects of the day to day operations and are overseen by the asset management group at TA. All financial records for each property, including financial statements and budgeting, are linked by a computer network for immediate retrieval and timely information. TA's asset management group approves all significant capital expenditures and selects the third party property managers.

Mr. Ruane graduated with an MBA from the Wharton school at the University of Pennsylvania in 1973. Between 1973 and 1981 he held an accounting/consulting position with Arthur Young & Company where he was responsible for major real estate clients. He joined TA in 1981.

Mr. Segel moved to TA in 1983 from Boston Properties, a large commercial real estate development firm with investment holdings on the east and west coasts, where he was VP of finance. Mr. Segel received an MBA from Stanford in 1975 and occasionally lectures and teaches at Harvard Business School.

The Realty Associates Fund III is the third commingled, closed-end fund for TA. In addition to these commingled funds, TA has separate account commitments from Los Angeles County Employee's Retirement Associations and Virginia Retirement Systems. Total real estate assets under management, including both commingled and separate accounts, exceeds $650 million.

III. INVESTMENT STRATEGY

The investment strategy of The Realty Associates Fund III is consistent with the strategies of the previous two funds. The fund will make equity investments in small to medium sized niche properties ($12 to $15 million average). Niche properties include specific types of assets (warehouse, industrial, office, etc.) in specific locations (northwest Houston, southeast Washington DC, west LA., etc.). When possible, the fund will use modest leverage. Under no circumstances will leverage exceed 50%.

IV. INVESTMENT PERFORMANCE

Advent Realty Fund I closed in 1987 with $163 million in equity capital commitments. Today the portfolio is fully invested with a carrying value of $124.7 million and has distributed $20.2 million of capital back to investors. This has corresponded to a -0.15% net IRR to investors. The Wilshire Real Estate Fund Index for approximately the same time period produced a -0.93% IRR.

Advent Realty Fund II closed in 1990 with a total of $332.5 million. As of December 31, 1993 $311.7 million has been invested and the portfolio carries a value of $310.7 million while $34.0 million has been distributed back to investors This corresponds to a 7.9% net IRR to investors. The Wilshire Real Estate Fund Index for approximately the same time period produced a -6.36% IRR.

V. GENERAL PARTNERS INVESTMENT

The General Partner will make capital contributions equal to approximately 0.3% of the total capital invested.

VI. TAKEDOWN SCHEDULE

Capital will be called as needed.

VII. MANAGEMENT FEE

Year	*Fee*	*Basis*
1	.500%	Committed Capital
2	.800%	Committed Capital
3	1.100%	Committed Capital
4	1.200%	Committed Capital
5	.875%	Aggregate Invested Equity
6	.850%	Aggregate Invested Equity
7	.800%	Aggregate Invested Equity
8 and thereafter	.600%	Aggregate Invested Equity

VIII. TERM

The acquisition period will last between two and four years depending on the ultimate size of the fund and the state of the real estate markets during the acquisition phase. Liquidation is expected within ten years from being fully invested.

IX. DISTRIBUTIONS

Distributions are made quarterly at the discretion of the advisor, after appropriate reserves are established. The advisor may reinvest proceeds from sales or debt financing.

Distributions are allocated 100% to the investors until they have received a return of capital and an annual compound preference return equal to inflation (CPI-U). Thereafter, distributions will be shared 95% to investors and 5% to the advisor.

At 1% real, all income is divided 94.0% to the investor and 6.0% to the advisor;
at 2% real, all income is divided 92.5% to the investors and 7.5% to the advisor;
at 3% real, all income is divided 90.5% to the investors and 9.5% to the advisor;
at 4% real, all income is divided 88.5% to the investors and 11.5% to the advisor;
at 5% real, all income is divided 86.5% to the investors and 13.5% to the advisor;
at 6% real, all income is divided 84.5% to the investors and 15.5% to the advisor;
at 7% real, all income is divided 82.5% to the investors and 17.5% to the advisor;
at 8% real and thereafter, all income is divided 80% to the investors and 20% to the advisor.

ATTACHMENT D

PRIVATE EQUITY MANAGER PROFILE

I. BACKGROUND DATA

NAME OF FUND:	Coral Partners IV
FUND MANAGER:	Coral Group
TYPE OF FUND:	Venture Capital Limited Partnership
TOTAL FUND SIZE:	$100 Million
MANAGER CONTACT:	Yuval Amog
ADDRESS:	3800 First Bank Place Minneapolis Minnesota
TELEPHONE:	(612) 376-2825

II. ORGANIZATION AND STAFF

Coral Partners IV, L.P. ("Partnership") is a limited partnership formed for the purpose of making venture capital investments. The General Partner of Coral Partners IV will be Coral Management Partners IV ("General Partner") formed by Yuval Amog and Peter McNerney as General Partners ("Partners"), each of whom was a partner in IAI Venture Capital Group (in business since 1983), Donald Lucas as a Special Limited Partner, and Linda Watchmaker as Partner and Chief Financial Officer. The Partners will be supported by a research and administrative staff.

The General Partner's investment professionals comprised the professional staff of IAI Venture Capital Group prior to a spinout of that group from Investment Advisers, Inc ("IAI") in Fall 1993. Coral Group, Inc. ("Coral Group"), a management company formed by the Partners to provide management services to the existing partnerships following the spinout from IAI, will manage the Partnership as well.

III. INVESTMENT STRATEGY

Coral Partners IV anticipates that its portfolio will consist of fifteen to eighteen companies focused in the information services and electronic publishing, information and communication technology and health care sectors. In addition, a significant number of Coral Partners IV investments will be in companies with a substantial presence in Minnesota.

IV. INVESTMENT PERFORMANCE

Formerly the Partners were with IAI Venture capital Group, which was affiliated with Investment Advisers, Inc. IAI Venture Capital Group started in 1983 and has organized and managed three venture capital partnerships: IAI Venture Partners, Coral Partners I-Superior (formerly Superior Ventures), and Coral Partners II (formerly IAI Venture Partners II). These partnerships are now managed by Coral Group, Inc.

IAI Venture Partners was established in September 1983 with a strategy of investing 60% of its capital in other venture capital partnerships ("fund of funds") and 40% of its capital directly in portfolio companies. Total capital invested was $50.2 million, with investments in seven partnerships and twenty-seven companies in the technology, healthcare, and consumer/other sectors

IAI Venture Partners is now in the liquidation stage. Remaining in the portfolio are four public companies and several other companies, which, in the judgment of the Partners, will likely be sold or complete initial public offerings ("IPO's") within the next two to three years. The Fund has distributed $50 million and has a net asset value of $46 million as of December 31, 1993, or a combined value, including distributions to-date, of $96 million. The portfolio includes $21 million of public securities as of December 31. At the end of Calendar 1993, the internal rate of return to the Limited Partners since inception on the direct portfolio company investments was 15%, and 6% on the partnership investments; the combined internal rate of return to the Limited Partners is 10%.

Coral Partners I-Superior was established in June 1986, and has capital commitments of $36 million. Its mission is to make investments in companies operating in Minnesota or in companies whose operations may have a positive impact on the State. The Fund made investments in eighteen companies, with an average ownership per company of 15%. The remaining portfolio includes investments in three public companies and several other companies, which in the judgment of the Partners, will likely complete IPO's within several years.

Distributions to date are $13 million. The net asset value at December 31, 1993 was $60 million, with investments in seven companies and one partnership investment remaining in the portfolio. The combined value of distributions to date and remaining net assets is $73 million. The portfolio includes $49 million of public securities as of December 31. The internal rate of return to the Limited Partners since inception through December 31 is 14%.

Formed in July 1990, Coral Partners II has drawn down $38 million of its $63 million of committed capital and has made investments in nineteen companies. Coral Partners II focused on Minnesota companies in various stages of development that were market leaders. Of the nineteen portfolio company investments, four of those companies are now publicly held. The net asset value of the Fund plus distributions to date aggregated $59 million at December 31, 1993. The portfolio includes $25 million of public securities as of December 31. While it is early to accurately forecast Coral Partners II's ultimate rate of return, after three years of investment, its internal rate of return to Limited Partners is 13%, and liquidity has been achieved relatively quickly. The Partners anticipate that this Fund will be fully invested by the end of 1994.

V. GENERAL PARTNERS INVESTMENT

The General Partner will make capital contributions equal to 1% of the total capital invested in Coral Partners IV.

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 thirty days notice by the General Partner to make investments and meet anticipated Partnership expenses.

VII MANAGEMENT FEE

The Partnership 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 1	2.00%	Year 3	2.25%
Year 2	2.00%	Years 4 through 7	2.50%

Thereafter, the annual management fee will equal 2.5% of capital commitments less the cost basis of investments that have been sold, written off nominally or completely, or distributed.

Partners admitted to the Partnership after the initial closing will be required to pay the Manager (at time of admission) an amount equal to the management fee which would have accrued on such partner's capital commitment during the period from the initial closing to the date of admission, together with interest on such amount at the prime rate.

The management fee will be reduced by all fees received by the General Partner from portfolio companies (including directors' fees, management fees and investment banking fees).

The Partnership will reimburse the General Partner up to $200,000 for expenses in connection with organizing and raising capital for the Partnership. Organization expenses in excess of this amount will be borne by the General Partner.

The Manager will pay all ordinary administrative and overhead expenses in managing the Partnership including salaries, rent, equipment, travel and administrative expenses incurred by the General Partner. The Partnership will pay all other expenses attributable to the Partnership's activities.

VIII. TERM

The Partnership'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 to permit orderly dissolution.

IX. DISTRIBUTIONS

Distributions of cash and securities will be made at the discretion of the General Partner.

Cash distributions will be made: first, to all Partners in proportion to capital 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 related to portfolio companies which has not previously been distributed to the General Partners; and third, to all Partners in proportion to their capital accounts.

In-kind distributions of securities of portfolio companies that are either freely tradable or eligible for sale under Rule 144 will be distributed to the Partners in proportion to capital commitments up to the cost basis of such securities. Securities in excess of cost basis will be distributed 80% to all Partners in proportion to capital commitments and 20% to the General Partner, except that the General Partner with respect to its 20% carried interest will not be entitled to receive any such distributions unless and until the Limited Partners have received aggregate cash and in-kind distributions at least equal to their capital contributions.

The General Partner in its sole discretion may, with respect to each fiscal year, make cash distributions to the Partners in an amount sufficient to pay taxes on Partnership income assuming the highest marginal tax rates.

ATTACHMENT E

PRIVATE EQUITY MANAGER PROFILE

I. BACKGROUND DATA

NAME OF FUND:	Summit Subordinated Debt Fund Limited Partnership
FUND MANAGER:	Summit Partners
TYPE OF FUND:	Private Subordinated Debt Limited Partnership
TOTAL FUND SIZE:	$100 million - $125 million
MANAGER CONTACT:	Stephen G. Woodsum E. Roe Stamps, IV
ADDRESS:	One Boston Place Boston, Massachusetts 02108
TELEPHONE:	Phone (617) 742-5500

II. ORGANIZATION AND STAFF

The general partner of the partnership is Summit Partners SD, L.P. (the "General Partner"), a Delaware limited partnership. The managing general partners of the General Partner are E. Roe Stamps, Stephen Woodsum, and Gregory M. Avis; and the other general partners of the General Partner are Martin J. Mannion, Ernest K. Jacquet, Bruce R. Evans Walter G. Kortschak, Thomas S. Roberts, and John A. Genest. Summit Partners (Summit) has offices in Boston, Massachusetts and Palo Alto, California, to provide national coverage. Totally, Summit employs 25 investment professionals.

III. INVESTMENT STRATEGY

Summit, founded in 1984, invests equity capital primarily in emerging growth and middle market companies. Investments by this partnership will principally take the form of subordinated debt with equity features. The General Partner will target companies that have an equity partnership with an affiliate of the General Partner. The debt generally will: (i) be subordinated to bank and institutional indebtedness, (ii) have maturities up to ten years, and (iii) bear interest at a rate equal to at least 150 percent of the seven year Treasury Note rate.

It is Summit's belief that the availability of a subordinate debt fund to co-invest with Summit's equity funds will: (i) enhance the firms' ability to capture more investment opportunities and (ii) allow Summit more flexibility in structuring transactions to achieve optimum risk/reward profiles for its funds.

IV. INVESTMENT PERFORMANCE

Summit has raised three previous venture funds, Summit Ventures I, II, & III, with a total capital base of approximately $700 million. The Minnesota Board of Investment (MSBI) is an investor in funds I and II with commitment's of $10 million and $30 million respectively.

Summit Partners I was raised in 1984 with total investor equity of $93 million. MSBI committed $10 million which has been completely drawn down As of September 30, 1993, MSBI's has received over $13 million in distributions with $3.4 million remaining in market value. The net internal rate of return (IRR) through September 30, 1993 was 10.93% for Fund I

Summit Partners II was raised in 1988 with total investor equity of $230 million. MSBI committed $30 million which has been 90% drawn down. As of September 30, 1993, MSBI has received $22.6 million in distributions with $23.7 million remaining in market value. The net IRR through September 30, 1993 was 23.9% for Fund II.

V. GENERAL PARTNERS INVESTMENT

The General Partner will make a capital committment of at least $1 million.

VI. TAKEDOWN SCHEDULE

Ten percent of each Limited Partner's commitment to the partnership will be payable at the time of the initial investment Investors will make their remaining capital contributions in 18 installments of 5 percent of their aggregate capital commitment's on not less than 20 days notice Capital calls will be timed to coincide as closely as possible with investments by the partnership. A limited partner's failure to pay the full amount of any call may result in such limited partner's interest being purchased in exchange for a non-interest bearing note in an amount equal to the value of such limited partner's capital account and a forfeiture of any unrealized gains on portfolio investments.

VII. MANAGEMENT FEE

SW Management Corp. (the "management company"), or its designee, will provide management and administrative services to the partnership. For its services to the partnership, the management company will be paid an annual management fee equal to 0.5 percent of the aggregate committed capital of the partnership plus 1 percent of the aggregate capital contributed to the partnership. In years 8, 9, and 10, the annual management fee will be reduced by 10 percent in each year.

VIII. TERM

The fund will have a term of ten years with an option to extend for up to four one-year periods.

IX. DISTRIBUTION OF PROFITS

The partnership intends to distribute all current net income on a quarterly basis and the proceeds of all dispositions of securities as soon as practicable following receipt thereof. The partnership may, at General Partners discretion, distribute marketable securities. All distributions will be made in cash or marketable securities.

Generally, in any year in which net income is allocated to the partners, distributions ("tax distributions") will be made to the partners in an amount intended to satisfy federal and state tax liabilities, if applicable.

All distributions, other than tax distributions will be made to the partners on a cumulative basis as follows:

- (i) 100 percent to all partners in proportion to their 8 percent annual preferential returns until they have received aggregate distributions (including tax distributions) equal to their 8 percent annual preferential return; then
- (ii) 100 percent to all partners in proportion to their capital contributions until they have received additional distributions (including tax distributions) equal to their aggregate paid-in capital contributions (subject to the proviso below); and, finally,
- (iii) 100 percent to all partners in proportion to their capital accounts

Provided that each partner has received distributions (including tax distributions) equal to its 8 percent annual preferential returns, distributions may be made 20 percent to the general partner and 80 percent to the limited partners if the fair value capital accounts of the limited partners plus all amounts previously distributed to the limited partners equal at least 125 percent of their capital contributions.

Tab G

STATE OF MINNESOTA
OFFICE OF THE STATE TREASURER

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

MICHAEL A. McGRATH
Treasurer

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

DATE: February 22, 1994

TO: Members, State Board Investment

FROM: McGrath, Chair
SBI Administrative Committee

SUBJECT: **Committee Report**

The SBI Administrative Committee met on February 18, 1994 to discuss the following items:

- Update on police and fire pension fund activity

- Review of contract negotiations with vendors in the Deferred Compensation Plan

1. Update on Police and Fire Pension Fund Activity

Salaried police and fire pension funds may elect to consolidate with the Public Employees Retirement Association (PERA) under legislation that was passed in 1987. Since that time, 32 of the 47 plans eligible to merge with PERA have chosen to do so. This has added approximately $362 million to the assets in the Basic and Post Retirement Funds.

Salaried police and fire funds that have not merged with PERA and local volunteer firefighter associations may use the investment options available through the Supplemental Investment Fund (SIF) to invest all or a part of their assets. Participating funds use the SIF like a "family of mutual funds" and contribute and withdraw their assets on a monthly basis at their own discretion. At the present time, 66 associations use the SIF for a portion of their pension investments.

For more information, please refer to the memo from SBI staff which begins on **page 3**.

2. Review of contract negotiations with vendors in the Deferred Compensation Plan

At the State Board of Investment meeting on December 15, 1993, Board members encouraged Howard Bicker, Executive Director of the SBI, and Dave Bergstrom, Executive Director of the Minnesota State Retirement System (MSRS), to continue their efforts to re-negotiate contract terms and conditions with the insurance companies and marketing organizations involved with the State's Deferred Compensation Plan. SBI members asked that a proposal be brought to the Board at its March 1994 meeting.

Mr. Bicker presented the Committee with letters of intent between the SBI and the insurance company vendors, Great West Life & Annuity Insurance Company (GW) and Minnesota Mutual Life Insurance Company (MM). (See material beginning on **page 9**.) Mr. Bergstrom presented letters of intent between MSRS and the current marketers for the plan, National Benefits Inc. and Ochs Services Agency. (See material beginning on **page 31.**)

Both Mr. Bicker and Mr. Bergstrom stated that they believe that proposed contract terms represent an improvement over the provisions of the current contract and said that they would recommend that the SBI authorize the negotiation of formal agreements with each party that contain the terms and conditions set forth in the respective letters of intent. As noted in the letters of intent, the formal agreements must be contingent upon the enactment of necessary legislation.

The MSRS Board will consider the proposed terms with National Benefits and Ochs Services at its next meeting on February 25, 1994. If the MSRS Board takes positive action on the proposal, MSRS will request the approval of the SBI at the SBI's meeting on March 2, 1994. This request would be consistent with the provisions of Minnesota Statutes section 352.96, subdivision 3 which state that the SBI must approve all contracts related to the Deferred Compensation Plan

If the MSRS Board and the SBI approve the proposed terms with National Benefits and Ochs Services, Mr. Bicker will ask that the SBI also approve the proposed terms with Great-West and Minnesota Mutual and authorize him to negotiate a formal written agreement with each insurance company.

MINNESOTA STATE BOARD OF INVESTMENT

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

DATE: February 7, 1994

TO: Members, SBI Administrative Committee

FROM: L. Michael Schmitt, Administrative Director

SUBJECT: Police and Fire Pension Fund Activity

1. Consolidation with PERA

All local pension associations for salaried police and firefighters are eligible to consolidate with the Public Employees Retirement Association (PERA). The decision to consolidate must be approved by the affected employees and retirees as well as the employing unit of government. After consolidation, the plan is administered by PERA and the assets are invested by the SBI as part of the Basic and Post Retirement Funds.

Assets consolidated to date total $361.9 million. This has represented substantial positive cash flow to the retirement funds under the SBI's control.

When the enabling legislation was enacted in 1987, there were forty seven (47) salaried plans across the state that were eligible for consolidation. The consolidation status of those plans as of January 31, 1994 is shown below:

Number eligible to consolidate	47
Consolidations completed	32
Consolidations pending	3
Remaining associations	12

For your information, a more detailed list is in **Attachment A**.

2. Investment through the Supplemental Investment Fund

Local volunteer firefighter associations, as well as associations of salaried police and firefighters who are not consolidated with PERA, may use the investment options available through the Supplemental Investment Fund (SIF) to invest all or a part of their assets. Participating funds use the SIF like a "family of mutual funds" and contribute and withdraw their assets on a monthly basis at their own discretion.

Participation in the SIF has increased substantially over the last few years. There are approximately 800 associations that are eligible to invest through the SIF. In 1990, only 14 chose to do so. At present, that number stands at 66 funds. Staff expects that the number of participating funds will grow in future years since the SIF provides a low cost and flexible investment vehicle for many plans with limited assets.

As list of the current participants is in **Attachment B.**

As summary of the funds entering and exiting the SIF during FY91, FY92, FY93 and FY94 to date is in **Attachment C.** Please note that five of the seven funds who withdrew their assets did so when they consolidated with PERA.

ATTACHMENT A

MINNESOTA STATE BOARD OF INVESTMENT
POLICE AND FIRE FUND CONSOLIDATION
JANUARY 31, 1994

	CURRENT STATUS	EFFECTIVE DATE TRANSFER	NET ASSETS TRANSFERRED
ALBERT LEA FIRE	COMPLETED	12/31/93	5,890,000
ALBERT LEA POLICE	COMPLETED	12/31/91	7,250,000
ANOKA POLICE	COMPLETED	12/31/89	2,150,000
AUSTIN FIRE			
AUSTIN POLICE	COMPLETED	12/31/93	7,832,000
BLOOMINGTON POLICE	COMPLETED	12/31/93	33,761,000
BRAINERD POLICE			
BUHL POLICE	COMPLETED	12/31/87	565,000
CHISHOLM FIRE	COMPLETED	09/30/90	546,000
CHISHOLM POLICE	COMPLETED	09/30/90	909,000
COLUMBIA HEIGHTS FIRE	COMPLETED	12/31/93	1,730,000
COLUMBIA HEIGHTS POLICE	PENDING		
CROOKSTON FIRE	COMPLETED	12/31/90	640,000
CRYSTAL POLICE	COMPLETED	09/30/92	7,200,000
DULUTH FIRE	COMPLETED	01/29/93	23,900,000
DULUTH POLICE	COMPLETED	12/31/87	19,906,000
FAIRMONT POLICE			
FARIBAULT FIRE	COMPLETED	12/31/90	3,502,000
FARIBAULT POLICE			
FRIDLEY POLICE	COMPLETED	11/30/93	7,053,000
HIBBING FIRE	COMPLETED	12/31/89	3,189,000
HIBBING POLICE	COMPLETED	12/31/89	2,135,000
MANKATO FIRE	COMPLETED	09/30/90	2,702,000
MINNEAPOLIS FIRE			
MINNEAPOLIS POLICE			
NEW ULM POLICE	PENDING		
RED WING FIRE	COMPLETED	12/31/89	4,263,000
RED WING POLICE	COMPLETED	03/31/90	5,122,000
RICHFIELD FIRE			
RICHFIELD POLICE	COMPLETED	12/31/91	9,890,000
ROCHESTER FIRE	COMPLETED	12/31/90	16,192,000
ROCHESTER POLICE	COMPLETED	12/31/89	15,799,000
SO. ST. PAUL FIRE	COMPLETED	01/31/94	5,000,000
SOUTH ST. PAUL POLICE			
ST. CLOUD FIRE	COMPLETED	12/31/89	5,783,000
ST. CLOUD POLICE			
ST. LOUIS PARK FIRE	COMPLETED	12/31/89	6,359,000
ST. LOUIS PARK POLICE	COMPLETED	12/31/90	13,369,000
ST. PAUL FIRE	COMPLETED	01/31/93	128,800,000
ST. PAUL POLICE	PENDING	04/30/94	
THIEF RIVER FALLS POLICE			
VIRGINIA FIRE			
VIRGINIA POLICE			
WEST ST. PAUL POLICE	COMPLETED	12/31/93	5,549,000
WEST ST. PAUL FIRE	COMPLETED	12/31/88	3,233,000
WINONA FIRE	COMPLETED	12/31/89	6,197,000
WINONA POLICE	COMPLETED	12/31/90	5,456,000
	TOTAL VALUE CONSOLIDATIONS		361,872,000

ATTACHMENT B

Fire Organizations in the Minnesota Supplemental Investment Fund

1. Adrian Fire
2. Alborn Fire
3. Almelund Fire
4. Audubon Fire
5. Austin Fire
6. Bagley Fire
7. Balsam Fire
8. Belle Plaine Fire
9. Benson Fire
10. Bloomington Fire
11. Canby Fire
12. Center City Fire
13. Chaska Fire
14. Chisago City Fire
15. Chokio Fire
16. Clear Lake Fire
17. Crane Lake Fire
18. Dawson Fire
19. Elbow Lake Fire
20. Excelsior Fire
21. Forest Lake Fire
22. Good Thunder Fire
23. Greenwood Fire
24. Grey Eagle Fire
25. Hackensack Fire
26. Hamel Fire
27. Hayward Fire
28. Hector Fire
29. Houston Fire
30. Industrial Fire
31. Jackson Fire
32. Jordan Fire
33. Kabetogama Fire
34. Kandiyohi Fire
35. Lafayette Fire
36. Lake City Fire
37. Lewiston Fire
38. Mapleview Fire
39. Marine St Croix Fire
40. Mayer Fire
41. Maynard Fire
42. McDavitt Fire
43. Medicine Lake Fire
44. Menahga Fire
45. Minneota Fire
46. Minnetonka Fire
47. Morristown Fire
48. Nodine Fire
49. Norwood Fire
50. Osseo Fire
51. Plato Fire
52. Redwood Falls Fire
53. Renville Fire
54. Roseville
55. Rush City Fire
56. Sandstone Fire
57. Scandia Valley Fire
58. Sherburn Fire
59. Silver Bay Fire
60. Stillwater Fire
61. St. Paul Police
62. Vermillion Lake
63. Willmar Fire
64. Woodbury Fire
65. Wykoff Fire
66. Zumbro Falls Fire

ATTACHMENT C

MINNESOTA SUPPLEMENTAL INVESTEMNT FUND
POLICE AND FIRE RELIEF ASSOCIATION
NEW PARTICIPATION

Fiscal Year 1991

	Funds Gained	Amount
1.	Bagley Fire	37,000
2.	Crane Lake Fire	8,000
3.	Forest Lake Fire	17,000
4.	Grey Eagle Fire	6,000
5.	Hackensack Fire	9,000
6.	Lafayette Fire	15,000
7.	Mayer Fire	30,000
8.	Menahga Fire	5,000
9.	Nodine Fire	7,652
10.	Plato Fire	25,689
11.	Willmar Fire	20,000
11.	Net Funds Gained	180,341

Fiscal Year 1992

	Funds Gained	Amount
1.	Balsam Fire	14,000
2.	Belle Plaine Fire	12,500
3.	Canby Fire	22,000
4.	Chaska Fire	36,000
5.	Good Thunder Fire	30,000
6.	Jackson Fire	50,000
7.	Lake City Fire	50,000
8.	Mapleview Fire	36,000
9.	Medicine Lake Fire	15,695
10.	Zumbro Falls Fire	26,000
		292,195
10.	Net Funds Gained	292,195

Fiscal Year 1993

	Funds Gained	Amount
1.	Alborn Fire	30,000
2.	Almelund Fire	6,000
3.	Center City Fire	26,000
4.	Chisago City Fire	160,000
5.	Chokio Fire	40,000
6.	Greenwood Fire	15,000
7.	Hamel Fire	30,000
8.	Hayward Fire	12,000
9.	Houston Fire	19,000
10.	Industrial Fire	10,000
11.	Jordan Fire	45,000
12.	Kabetogama Fire	2,500
13.	Kandiyohi Fire	8,000
14.	Marine on St. Croix Fire	78,000
15.	Maynard Fire	8,700
16.	Minnetonka Fire	1,000,000
17.	Morristown Fire	45,000
18.	Redwood Falls Fire	25,786
19.	Renville Fire	12,000
20.	Sandstone Fire	38,000
21.	Vermillion Lake FIre	20,089
		1,631,075
	Funds Lost	
1.	St. Paul Fire	(51,026,533)
2.	South St. Paul Police	(221,295)
3.	Clearbrook Fire	(5,785)
		(51,253,613)
18.	Net Funds Gained	(49,622,538)

Fiscal Year 1994 (through 2/1/94)

	Funds Gained	Amount
1.	Adrian Fire	40,000
2.	Audubon Fire	30,000
3.	Benson Fire	12,000
4.	Dawson Fire	110,000
5.	Elbow Lake Fire	50,000
6.	Excelsior Fire	290,000
7.	Hector Fire	30,000
8.	Lewiston Fire	20,000
9.	Mc Davitt Fire	25,000
10.	Minneota Fire	15,000
11.	Norwood Fire	10,000
12.	Roseville Fire	250,000
13.	Sherburne Fire	25,000
14.	Silver Bay Fire	26,000
15.	West St. Paul Police	1,000,000
16.	Woodbury Fire	892,000
17.	Wykoff Fire	25,000
		2,850,000
	Funds Lost	
1.	Albert Lea Fire	(4,690,062)
2.	Austin Police	(1,291,508)
3.	Bloomington Police	(5,474,142)
4.	West St. Paul Police	(1,000,369)
		(12,456,081)
13.	Net Funds Gained	(9,606,081)

MINNESOTA
STATE
BOARD OF
INVESTMENT

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

DATE: February 18, 1994

TO: Members, SBI Administrative Committee

FROM: Howard Bicker

SUBJECT: Deferred Compensation Plan Contract Negotiations

At the State Board of Investment (SBI) meeting on December 15, 1993, Board members encouraged me and Dave Bergstrom, Executive Director of the Minnesota State Retirement System (MSRS), to continue our contract re-negotiation efforts with the insurance companies and marketing organizations involved with the State's Deferred Compensation Plan. SBI members asked that a proposal be brought to the Board at its March 1994 meeting.

SBI staff has been negotiating potential new contract terms with the current insurance company vendors, Great-West Life & Annuity Insurance Company (GW) and Minnesota Mutual Life Insurance Company (MM). MSRS staff has been negotiating potential new contract terms with the current marketers, National Benefits and Ochs Services. By statute, the SBI must approve all contracts for the Plan (see MS 352.96, subdivision 3, attached).

This memo outlines my objectives for the re-negotiation with the insurance companies and summarizes the proposed contract terms as contained in letters of intent between the SBI and MM and the SBI and GW. Copies of the letters of intent are attached.

Objectives of the Re-negotiation with Insurance Companies

- Portability (i.e., allowing participants to move money from one vendor to another).

- Similar range of investment options across vendors.

- Marketers work for MSRS and are not tied to the insurance companies.

- Equal marketing compensation across vendors with rates set by the State (SBI and MSRS), not the insurance companies.

- Specific termination dates and conditions in contracts.

A summary of current and proposed contract terms compared to these objectives is attached.

I believe that these terms and conditions represent an improvement over the provisions of the current contracts with the insurance companies for the State's Deferred Compensation Plan. Therefore, I am recommending to the Administrative Committee that the SBI authorize me to negotiate a formal written agreement with each insurance company that contains the terms and conditions set forth in the respective letters of intent. This recommendation is contingent upon receipt of corresponding letters of intent between MSRS and the marketing organizations and upon enactment of necessary legislation.

Attachments

COMPARISON OF CURRENT AND PROPOSED TERMS

OBJECTIVE	CURRENT TERMS	PROPOSED TERMS
Portability	None.	100% for variable options. 10% or $1000, whichever is greater, each year for fixed options.
Investment Options	Differing mix across vendors.	Similar mix of options: -2 fixed options -7 variable options
	Generally, in-house vendor options.	Name-brand mutual funds available.
Termination Dates	None.	5 years.
Termination for Cause	Criteria unclear.	Criteria delineated.
Marketing Relationships	Marketers tied to insurance companies.	Marketers work for MSRS.
Marketing Costs	Unequal compensation rates paid for marketing.	Equal rates across vendors.
	Vendors set rates paid to marketers.	Rates set by State (SBI, MSRS).
	Commission-based compensation.	Asset-based compensation.

352.96 DEFERRED COMPENSATION.

Subdivision 1. **Entitlement to defer compensation.** At the request of an officer or employee of the state, an officer or employee of a political subdivision, or an employee covered by a retirement fund in section 356.20, subdivision 2, the appointing authority shall by payroll deduction defer the payment of part of the compensation of the officer or employee. The amount to be deferred must be as provided in a written agreement between the officer or employee and the employing unit. The agreement must be in a form specified by the executive director of the Minnesota state retirement system in such a manner as will qualify the deferred amount for benefits under federal and state tax laws, rules, and rulings.

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

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

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

(2) saving accounts in federally insured financial institutions;

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

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

The shares accounts or contracts purchased shall stand in the name of the state or other employing unit, for the officer or employee whose deferred compensation purchased the shares, until distributed to the officer or employee in a manner agreed upon by the employee and the executive director of the Minnesota state retirement system, acting for the employer. This subdivision does not authorize an employer contribution, except as authorized in section 356.24, paragraph (a), clause (4). The state, political subdivision, or other employing unit is not responsible for any loss that may result from investment of the deferred compensation.

Subd. 3. **Executive director to administer section.** This section must be administered by the executive director of the system with the advice and consent of the board of directors under subdivision 4. Fiduciary activities of the deferred compensation plan must be undertaken in a manner consistent with chapter 356A. If the state board of investment so elects, it may solicit bids for options under subdivision 2, clauses (2) and (3). The state board of investment may retain consulting services to assist it in soliciting and evaluating bids and in the periodic review of companies offering options under subdivision 2, clause (3). The periodic review must occur at least every two years. The state board of investment may annually establish a budget for its costs in the soliciting, evaluating, and periodic review processes. The state board of investment may charge a proportional share of all costs related to the periodic review to each company currently under contract and may charge a proportional share of all costs related to soliciting and evaluating bids to each company selected by the state board. All contracts must be approved before execution by the state board of investment. Contracts must provide that all options in subdivision 2 must: be presented in an unbiased manner and in a manner that conforms to rules adopted by the executive director, be reported on a periodic basis to all employees participating in the deferred compensation program, and not be the subject of unreasonable solicitation of state employees to participate in the program. The contract may not call for any person to jeopardize the tax-deferred status of money invested by state employees under this section. All costs or fees in relation to the options provided under subdivision 2, clause (3), must be paid by the underwriting companies ultimately selected by the state board of investment.

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

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

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

MINNESOTA STATE BOARD OF INVESTMENT

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St. Paul, MN 55155
(612)296-3328
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February 16, 1994

Mr. Robert K. Shaw, F.S.A.
Vice President
Marketing and Product Development
Financial Services
Great-West Life Assurance Company
8515 East Orchard Road
Englewood, CO 80111

RE: Letter of Intent for Amendment to Great-West Life Assurance Company Group Deferred Compensation Annuity Policy and Companion Contract No. 71744GP and Great-West Life Assurance Company Group Deferred Compensation Annuity Policy No. 13988GP between Great-West Life Assurance Company and the State of Minnesota.

Dear Mr. Shaw:

The purpose of this Letter of Intent is to summarize our discussions to date and to confirm the respective intentions and understanding of the undersigned with respect to the proposed revision of the Great-West Life Assurance Company Group Deferred Compensation Annuity Policy and Companion Contract No. 71744GP and Great-West Life Assurance Company Group Deferred Compensation Annuity Policy No. 13988GP between Great-West Life Assurance Company and the State of Minnesota effective as of January 1, 1982 and October 1, 1980, respectively, and as amended from time to time. As you have been informed, any final contract is subject to review and approval by members of the State Board of Investment and enactment of any necessary legislation. It is understood that this Letter of Intent is intended as, and shall be construed only as, a Letter of Intent summarizing and evidencing the discussions between the undersigned to the date hereof and not as an agreement with respect thereto, and that the respective rights and obligations of Great-West Life & Annuity Insurance Company (Great-West) and the State of Minnesota remain to be defined in the definitive written agreement into which this Letter of Intent and all prior discussions shall merge.

Provided Great-West Life & Annuity Insurance Company and Minnesota Mutual Life Insurance Company execute letters of intent prior to the meeting of the

Administrative Committee of the State Board of Investment on February 18, 1994, I, as Executive Director of the State Board of Investment, intend to recommend to the Administrative Committee of the State Board of Investment that the State Board of Investment authorize me as the Executive Director to further negotiate a formal written agreement between Great-West Life & Annuity Insurance Company and the State of Minnesota and its State Board of Investment containing the terms and conditions set forth below. In the event the Administrative Committee of the State Board of Investment authorizes the Executive Director to proceed with negotiation of the terms of the formal written agreement between Great-West Life & Annuity Insurance Company and the State Board of Investment, the undersigned contemplate that the proposed formal written agreement be presented to the State Board of Investment at a meeting on or before June 15, 1994. Such negotiations may be terminated at any time by the action of the State Board of Investment. The Minnesota State Retirement System is currently engaged in negotiations with its marketers for deferred compensation products. Execution of any formal written agreement betweeen Great-West Life & Annuity Insurance Company, the State of Minnesota and its State Board of Investment is conditioned upon execution of a formal written agreement between the Minnesota State Retirement System, the insurance companies and the marketers.

The proposed terms and conditions are as follows:

Implementation Date

The contract implementation date will be July 1, 1994.

Investment Options

Great-West will offer its Guaranteed Certificate Fund with two sub-funds.

- 84 Month Certificate
- 36 Month Certificate

Great-West will offer seven variable funds:

- Money Market Fund
- Balanced Fund
- International Equity Fund
- Bond Fund
- 3 Equity Funds

Great-West may propose changes to this group of funds from time to time, and the SBI has the right to refuse to accept a proposed fund.

It is the intent of all parties that Great-West will offer three equity funds and one of each of the other types of variable funds listed above.

When the new funds are introduced and the old funds are eliminated, those participants who do not submit a new investment election will have their fund balances default to the following funds:

Old	**New**
DIG Fund	Fidelity Advisor Income and Growth Fund
GWL Bond	Voyageur U.S. Govt. Securities Fund
Stock Index	Janus Growth Fund
60 Month GCF	84 Month GCF

Variable Fund Portability

Transfers between Great-West's variable funds and transfers to the Fixed Annuity Certificates will be permitted at any time, with no limits and no charges.

Transfers from Great-West's variable funds to the investment options offered by other approved vendors will be permitted at any time, with no limits and no charges.

Fixed Annuity Portability

Once a year, participants may transfer up to the greater of $1,000 or 10 percent of their Fixed Certificate account balances as of the date of the transfer, to any Great-West variable fund or to the funds offered by any other vendor, with no transfer fee. Amounts transferred to other funds will come from the Certificate then closest to maturity. The provision permitting the withdrawal of 10 percent of the participant's balance will be effective on the effective date of the contract. The provision permitting the withdrawal of the greater of $1,000 or 10 percent will be effective January 1, 1995.

At the maturity of each Fixed Certificate, participants will not have the option of transferring the maturing amount to a variable fund. Maturing amounts may be rolled over to a new 36 Month or 84 Month Certificate only. If the employee does not make an election, his balance will automatically be reinvested in a new Certificate with the same term to maturity as the old Certificate, subject to the default provisions set forth above.

Fixed Annuity Minimum Guaranteed Rate

The guaranteed minimum interest rate on the Fixed Certificates is 3.00%.

Fees

The contract will have the following charges to participants:

- No front end loads.
- No deferred sales charges
- No surrender charges.
- No charges for transfers among Great-West's variable investment options.
- No charges for transfers from Great-West's variable funds to the investment options of other approved vendors.
- All other asset management, mortality, and other expense charges are to be set by Great-West and fully disclosed to participants and to the SBI.
- All fixed product interest rates are net of all expense charges.

Reimbursements for Marketing and Administrative Services

At the end of each month, Great-West will remit a payment to the Minnesota State Retirement System (MSRS) for marketing and administrative services. This payment will be based upon the average non-annuitized balance that plan participants had on deposit in Great-West funds during the month, and will be the monthly equivalent of 0.40% annually. Systematic withdrawals are not deemed to be annuitized balances.

The amount of the payment is to be determined by the SBI and may be changed from time to time. Great-West may, at its option, change its administration charges or its mortality and expense risk charges on variable funds and its interest credited on existing Fixed Certificates to offset any changes in the payment made to MSRS.

Great-West will remit a one-time 1.5% payment to MSRS upon the purchase of an annuity by a participant, subject to resolution of NASD/SEC regulations on broker/dealer requirements. Annuities include both life-contingent and term-certain annuities, but do not include systematic withdrawals.

Marketing

MSRS will contract with the marketing organizations that will enroll and provide information to participants in the 457 plan, and will be responsible for hiring, firing, directing, and compensating these firms. The insurance companies will no longer have responsibility for, nor the ability to, compensate the marketing organizations for Deferred Compensation Plan activity.

Each marketing organization must make presentations throughout the state in the manner and frequency determined by MSRS. Each marketing organization will provide equal representation to all of the approved products under the plan.

Great-West expects to receive annual written verification that presentations by each marketing organization provided equal representation to all approved products and that the compensation paid to MSRS represents the entire compensation paid by any insurance company to any marketing organization with regard to this Deferred Compensation Plan.

Great-West expects that all requirements and specifications of the agreement are and will be consistently applied to all approved vendors of the plan.

Any disputes between the insurance companies and/or the Minnesota State Retirement System over rates of return or presentation of products in any marketing material will be resolved by the Deferred Compensation Plan consultant retained by the State Board of Investment.

Contract Termination

The contract between the SBI and Great-West will expire on June 30, 1999.

SBI may terminate the contract for cause with 30 days written notice. "For cause" includes:

- Malfeasance
- Misfeasance
- Fraud
- Failure to perform any provision of the contract, subject to Great-West having 90 days to cure any failure of contract performance.
- Failure to maintain a crediting rate on new Fixed Certificates that is the greater of (1) 3% or (2) the yield on comparable maturity U.S. Treasury notes as of the date of the initial rate declaration, less 2.5%.

- A material change in Great-West's financial position, defined as the occurrence of two or more of the following:

  - Great-West's Standard & Poor's rating falls to A+ or lower.
  - Great-West's Moody's rating falls to A3 or lower.
  - Great-West's Duff & Phelps rating falls to A+ or lower.
  - Great-West's A.M. Best rating falls A- or lower.

- However, any drop in ratings that is a result of a re-calibration of the life insurance industry by any of the aforementioned rating agencies will cause this provision to be amended accordingly.

Exit Options

In the event that the contract is terminated, either on the contract expiration date or before, the contract will include several exit options:

- A market value adjustment formula that will apply to Fixed Certificate balances only, and will not apply to variable fund balances. The formula is as follows:

  - Applicable to the Guaranteed Certificate Fund, a Market Value Adjustment will be calculated based on the account value of the Guaranteed Certificate Funds multiplied by the Market Value Adjustment Factor. The Market Value Adjustment Factor is calculated for the entire Group Policyholder account. The same factor will be applied to each individual account.

  - The Market Value Adjustment Factor will be determined by taking the sum of the discounted maturity values of each certificate within the Guaranteed Certificate Fund as of the Date of Cessation of Deposits, then dividing by the value of all individual participant accounts in the Guaranteed Certificate Fund on the Premium Cessation Date. The Market Value Adjustment Factor will not exceed 1.00.

  - Discounting is calculated by using an interest rate equal to the larger of the 1) Moody's Baa Corporate Bond Yield Average for the middle month of the calendar quarter in which the certificate was established, or 2) Moody's Baa Corporate Bond Yield Average 60 days prior to the Premium Cessation Date.

  - Great-West will pay the sum of the market value adjusted certificates in respect of participants to a person designated in writing by the group policyholder as the successor insurer of the Plan or to the Group

Policyholder within one hundred and eighty (180) days after the Date of Cessation of Deposits.

- Great-West will pay the sum of the Variable Contract Values in respect of participants to a person designated in writing by the Group Policyholder as the successor insurer of the Plan or to the Group Policyholder within seven (7) days after the Date of Cessation of Deposits.

- If the Date of Cessation of Deposits occurs within eighteen (18) months of the commencement date of the contract, a transfer fee of one half of one percent (.5%) will be deducted from the distribution of any Guaranteed Contract Values and Variable Contract Values. The Transfer Fee is applied after the calculation of the Market Value Adjustment.

- Twenty quarterly installment payments of Fixed Certificate balances. The minimum payment will be $514.80 per $10,000 of Fixed Certificate balances. Variable Fund balances will be paid out immediately.

- No new contributions will be accepted to the Great-West program, but participants will continue to direct the investment of their existing balances under the program and receive benefit payments under the program.

Audit Clause

In accordance with Minnesota law, the contract will include a clause that allows the books, records, documents, and accounting procedures and practices of Great-West that are relevant to this contract to be examined by the SBI and the legislative auditor.

Reimbursement for Monitoring Costs

To the extent permitted by law, Great-West will reimburse the SBI for up to 50 percent of the total cost of monitoring the Deferred Compensation Program, up to a maximum $50,000 for the life of the contract.

This document is intended as a letter of intent only. It is not intended to be, and shall not constitute in any way, a binding or legal agreement or impose any legal obligations on either of the undersigned or the State Board of Investment or the State of Minnesota. In the event necessary legislation is not enacted or a contract amendment is not executed by both parties on or before June 15, 1994 for any reason whatsoever, the undersigned shall each have the right to terminate the negotiations without liability. Neither Great-West Life & Annuity Insurance Company nor the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by the other party upon terms of the proposed written contract amendment.

If the foregoing reflects our mutual statement of intention, please sign and return the enclosed copy of this Letter of Intent.

Sincerely,

Howard J. Bicker
Executive Director

HJB:cao

Agreed: ______________________

Great-West Life & Annuity Insurance Company

Title: Vice-President, Marketing + Product Development.

Date: February 17, 1994.

MINNESOTA
STATE
BOARD OF
INVESTMENT

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

February 16, 1994

Mr. Gary Frisch, FSA, MAAA
Associate Actuary
The Minnesota Mutual Life Insurance Company
400 North Robert Street
St. Paul, MN 55101

RE: Letter of Intent for Amendment to Minnesota Mutual Life Insurance Company Group Accumulation Annuity Contract No. 088048 and Minnesota Mutual Life Insurance Company and Northwestern National Life Insurance Company Group Deferred Annuity Contract No. 844047.

Dear Mr. Frisch:

The purpose of this Letter of Intent is to summarize our discussions to date and to confirm the respective intentions and understanding of the undersigned with respect to the proposed revision of the Minnesota Mutual Life Insurance Company Group Accumulation Annuity Contract No. 088048 and Minnesota Mutual Life Insurance Company and Northwestern National Life Insurance Company Group Deferred Annuity Contract No. 844047 between Minnesota Mutual Life Insurance Company, Northwestern National Life Insurance Company and the State of Minnesota effective as of January 1, 1981 and October 1, 1980, respectively, and as amended from time to time. As you have been informed, any final contract is subject to review and approval by members of the State Board of Investment and enactment of any necessary legislation. It is understood that this Letter of Intent is intended as, and shall be construed only as, a Letter of Intent summarizing and evidencing the discussions between the undersigned to the date hereof and not as an agreement with respect thereto, and that the respective rights and obligations of Minnesota Mutual Life Insurance Company and the State of Minnesota remain to be defined in the definitive written agreement into which this Letter of Intent and all prior discussions shall merge.

Provided Minnesota Mutual Life Insurance Company and Great-West Life Assurance Company execute letters of intent prior to the meeting of the Administrative Committee of the State Board of Investment on February 18, 1994, I, as Executive Director of the State Board of Investment, intend to recommend to the Administrative Committee of the State Board of Investment that the State

Board of Investment authorize me as the Executive Director to further negotiate a formal written agreement between Minnesota Mutual Life Insurance Company and the State of Minnesota and its State Board of Investment containing the terms and conditions set forth below. In the event the Administrative Committee of the State Board of Investment authorizes the Executive Director to proceed with negotiation of the terms of the formal written agreement between Minnesota Mutual Life Insurance Company and the State Board of Investment, the undersigned contemplate that the proposed formal written agreement be presented to the State Board of Investment at a meeting on or before June 15, 1994. Such negotiations may be terminated at any time by action of the State Board of Investment. The Minnesota State Retirement System is currently engaged in negotiations with its marketers for deferred compensation products. Execution of any formal written agreement between Minnesota Mutual Life Insurance Company, the State of Minnesota and its State Board of Investment is conditioned upon execution of a formal written agreement between the Minnesota State Retirement System, the insurance companies and the marketers.

The proposed terms and conditions are as follows:

Implementation Date

The contract implementation date will be July 1, 1994

Investment Options

Minnesota Mutual will offer two Fixed Annuity Funds (General Account).

Minnesota Mutual will offer seven variable funds:

- Money Market Fund
- Balanced Fund
- International Equity Fund
- Bond Fund
- 3 Equity Funds

Minnesota Mutual may propose changes to this group of funds from time to time, and the SBI has the right to refuse to accept a proposed fund.

It is the intent of all parties that Minnesota Mutual will offer three equity funds and one of each of the other types of variable funds listed above.

Variable Fund Portability

Transfers between Minnesota Mutual's variable funds and transfers to the Fixed Annuity Funds will be permitted at any time, with no limits and no charges.

Transfers from Minnesota Mutual's variable funds to the investment options offered by other approved vendors will be permitted at any time, with no limits and no charges.

Fixed Annuity Portability

Participants may transfer the greater of $1,000 or 10% of their Fixed Annuity balances per year to any Minnesota Mutual variable fund or to the funds offered by any other vendor, with no transfer fee or other charge. The transfer may take place either once a year or in 12 monthly installments, allowing participants to dollar cost average into the funds selected.

Fixed Annuity Minimum Guaranteed Rate

The guaranteed minimum interest rate on the Fixed Annuity is 3.00%.

Fees

The contract will have the following charges to participants:

- No front end loads.
- No deferred sales charges
- No surrender charges.
- No charges for transfers among Minnesota Mutual's variable investment options.
- No charges for transfers from Minnesota Mutual's variable funds to the investment options of other approved vendors.
- All other asset management, mortality, and other expense charges are to be set by Minnesota Mutual and fully disclosed to participants and to the SBI.
- All fixed product interest rates are net of all expense charges.

Reimbursements for Marketing and Administrative Services

At the end of each month, Minnesota Mutual will remit a payment to the Minnesota State Retirement System (MSRS) for marketing and administrative services. This payment will be based upon the average non-annuitized balance that plan participants had on deposit in Minnesota Mutual funds during the month, and will be the monthly equivalent of 0.40% annually. Systematic withdrawals are not deemed to be annuitized balances.

The amount of the payment is to be determined by the SBI and may be changed from time to time. Minnesota Mutual may, at its option, change its administration charges or its mortality and expense risk charges on variable funds and its interest credited on existing Fixed Annuities to offset any changes in the payment made to MSRS.

Minnesota Mutual will remit a one-time 1.5% payment to MSRS upon the purchase of an annuity by a participant, subject to resolution of NASD/SEC regulations on broker/dealer requirements. Annuities include both life-contingent and term-certain annuities, but do not include systematic withdrawals.

Marketing

MSRS will contract with the marketing organizations that will enroll and provide information to participants in the 457 plan, and will be responsible for hiring, firing, directing, and compensating these firms. The insurance companies will no longer have responsibility for, nor the ability to, compensate the marketing organizations for Deferred Compensation Plan activity.

Each marketing organization must make presentations throughout the state in the manner and frequency determined by MSRS. Each marketing organization will provide equal representation to all of the approved products under the plan.

Minnesota Mutual expects to receive annual written verification that presentations by each marketing organization provided equal representation to all approved products and that the compensation paid to MSRS represents the entire compensation paid by any insurance company to any marketing organization with regard to this Deferred Compensation Plan.

Minnesota Mutual expects that all requirements and specifications of the agreement are and will be consistently applied to all approved vendors of the plan.

Any disputes between the insurance companies and/or the Minnesota State Retirement System over rates of return or presentation of products in any marketers material will be resolved by the Deferred Compensation Plan consultant retained by the State Board of Investment.

Contract Termination

The contract between the SBI and Minnesota Mutual will expire on June 30, 1999.

SBI may terminate the contract for cause with 30 days written notice. "For cause" includes:

- Malfeasance
- Misfeasance
- Fraud
- Failure to perform any provision of the contract, subject to Minnesota Mutual having 90 days to cure any failure of contract performance.
- A material change in Minnesota Mutual's financial position, defined as the occurrence of two or more of the following:
    - Minnesota Mutual's Standard & Poor's rating falls to A+ or lower.
    - Minnesota Mutual's Moody's rating falls to A3 or lower.
    - Minnesota Mutual's Duff & Phelps rating falls to A+ or lower.
    - Minnesota Mutual's A.M. Best rating falls A- or lower.
- However, any drop in ratings that is a result of a re-calibration of the life insurance industry by any of the aforementioned rating agencies will cause this provision to be amended accordingly.

Exit Options

In the event that the contract is terminated, either on the contract expiration date or before, the contract will include several exit options:

- A market value adjustment formula based upon an industry standard bond index. The market value adjustment will apply to Fixed Annuity balances only, and will not apply to variable fund balances.
- Annual or quarterly installment payments of Fixed Annuity balances over a five year period. Participant balances will receive at least a specified reduced interest rate during the payout period. Variable Fund balances will be paid out immediately.

- No new contributions will be accepted to the Minnesota Mutual program, but participants will continue to direct the investment of their existing balances under the program and receive benefit payments under the program.

Audit Clause

In accordance with Minnesota law, the contract will include a clause that allows the books, records, documents, and accounting procedures and practices of Minnesota Mutual Life that are relevant to this contract to be examined by the SBI and the legislative auditor.

Reimbursement for Monitoring Costs

To the extent permitted by law, Minnesota Mutual Life will reimburse the SBI for 50% of the cost of monitoring the Deferred Compensation Program, up to a maximum $50,000 for the life of the contract.

This document is intended as a letter of intent only. It is not intended to be, and shall not constitute in any way, a binding or legal agreement or impose any legal obligations on either of the undersigned or the State Board of Investment or the State of Minnesota. In the event necessary legislation is not enacted or a contract amendment is not executed by both parties on or before June 15, 1994 for any reason whatsoever, the undersigned shall each have the right to terminate the negotiations without liability. Neither Minnesota Mutual Life Insurance Company nor the State of Minnesota, the State Board of Investment or its Executive Director have any liability for reliance by the other party upon terms of the proposed written contract amendment.

If the foregoing reflects our mutual statement of intention, please sign and return the enclosed copy of this Letter of Intent.

Sincerely,

Howard J. Bicker

Howard J. Bicker
Executive Director

HJB:cao

Agreed: Gary Frisch

Minnesota Mutual Life Insurance Company

Title: Associate Actuary

Date: 2 · 17 · 94

MINNESOTA STATE RETIREMENT SYSTEM
Suite 300 • Minnesota State Bank Building
175 West Lafayette Frontage Road
Saint Paul, Minnesota 55107-1425

Phone: (612) 296-2761
Toll Free: 1-800-657-5757
Fax: (612) 297-5238

February 18, 1994

Mr. James Bye, President
National Benefits, Inc.
P O BOX 444029
EDEN PRAIRIE MN 55344

Dear Mr. Bye:

Re: Letter of Intent for Amendment to the Administrative Agreement between National Benefits and the State of Minnesota.

The purpose of this Letter of Intent is to summarize our discussions to date and to confirm the respective intentions and understanding of the undersigned with respect to the proposed revision of the Administrative Agreement between National Benefits and the State of Minnesota dated as of April 15, 1982, and as amended from time to time. As you have been informed, any final contract is subject to review and approval by members of the Minnesota State Retirement System Board of Directors, the State Board of Investment, and enactment of any necessary legislation to implement the terms of this proposed agreement. It is understood that this Letter of Intent is intended as, and shall be construed only as a Letter of Intent summarizing and evidencing the discussions between the undersigned to the date hereof and not as an agreement with respect thereto, and that the respective rights and obligations of National Benefits and the State of Minnesota remain to be defined in the definitive written agreement into which this Letter of Intent and all prior discussions shall merge.

Provided National Benefits executes this Letter of Intent prior to the 8:30 a.m., February 18, 1994, I as Executive Director of the Minnesota State Retirement System, intend to recommend to the Board of Directors that the Board of Directors authorize me as the Executive Director to further negotiate a formal written agreement between National Benefits, the State of Minnesota and the Minnesota State Retirement System containing the terms and conditions set forth below. In the event the Board of Directors authorizes the Executive Director to proceed with negotiation of the terms of the formal written agreement between National Benefits and the Minnesota State Retirement System, the undersigned contemplate such negotiations to occur after that date, with the proposed formal written agreement to be presented to the State Board of Investment and the Minnesota State Retirement System Board of Directors on or before June 15, 1994. The State Board of Investment is currently engaged in negotiations with the insurance companies for deferred compensation products. Execution of any formal written agreement is conditioned upon execution of a formal written agreement between the State Board of Investment and the insurance companies and approval by the State Board of Investment of the Administrative Agreement.

The proposed contract terms are as follows:

Contract Length: 5 years

Product Representation: All investment products offered under the Deferred Compensation Plan will be equally represented.

Compensation Formula:

Period	Annual Basis Points (paid on total non-annuitized assets in MSRS assigned marketing territory)
July 1, 1994 to June 30, 1995	33
July 1, 1995 to June 30, 1996	31
July 1, 1996 to June 30, 1997	30
July 1, 1997 to June 30, 1998	29
July 1, 1998 to June 30, 1999	28

In addition, a 1½% commission will be paid on assets annuitized as defined in the agreement reached between the State Board of Investment and the insurance companies.

Vested Commission: None

Territory Designation: The Executive Director, with the approval of the Minnesota State Retirement System Board of Directors, shall designate territories assigned to each marketer.

Review Process: Detailed, measurable performance indicators will be established by the Minnesota State Retirement System. Semi-annual reviews will be conducted by the staff of the Minnesota State Retirement System to ensure compliance with the set standards. The insurance companies will be invited to participate in the review.

Product Communication: Any disputes between the insurance companies and/or the Minnesota State Retirement System over rates of return or presentation of products in any marketing material will be resolved by the Deferred Compensation Plan consultant hired by the State Board of Investment.

This document is intended as a Letter of Intent only. It is not intended to be, and shall not constitute in any way, a binding or legal agreement or impose any legal obligations on either of the undersigned, the Minnesota State Retirement System, the State Board of Investment, or the State of Minnesota. In the event any necessary legislation to implement the terms of this proposed agreement is not enacted or a contract amendment is not executed by both parties on or before June 15, 1994, for any reason whatsoever, the undersigned shall each have the right to terminate the negotiations without liability. Neither National Benefits nor the State of Minnesota, the State Board of Investment, the Minnesota State Retirement System or its Executive Director have any liability for reliance by the other party upon terms of the proposed written contract amendment.

If the foregoing reflects our mutual statement of intention, please sign and return the enclosed copy of this Letter of Intent.

Agreed:

NATIONAL BENEFITS, INC.	MN STATE RETIREMENT SYSTEM
James M. Bye	David Bergstrom
James Bye President	David Bergstrom Executive Director
Date: 2/18/94	Date: 2/18/94

MINNESOTA STATE RETIREMENT SYSTEM

Suite 300 • Minnesota State Bank Building
175 West Lafayette Frontage Road
Saint Paul, Minnesota 55107-1425

Phone: (612) 296-2761
Toll Free: 1-800-657-5757
Fax: (612) 297-5238

February 18, 1994

Mr. William Ochs, President
Ochs Services
250 Skyway
400 N ROBERT ST
ST PAUL MN 55101

Dear Mr. Ochs:

Re: Letter of Intent for Amendment to the Administrative Agreement between Ochs Services and the State of Minnesota.

The purpose of this Letter of Intent is to summarize our discussions to date and to confirm the respective intentions and understanding of the undersigned with respect to the proposed revision of the Administrative Agreement between Ochs Services and the State of Minnesota dated as of April 15, 1982, and as amended from time to time. As you have been informed, any final contract is subject to review and approval by members of the Minnesota State Retirement System Board of Directors, the State Board of Investment, and enactment of any necessary legislation to implement the terms of this proposed agreement. It is understood that this Letter of Intent is intended as, and shall be construed only as a Letter of Intent summarizing and evidencing the discussions between the undersigned to the date hereof and not as an agreement with respect thereto, and that the respective rights and obligations of Ochs Services and the State of Minnesota remain to be defined in the definitive written agreement into which this Letter of Intent and all prior discussions shall merge.

Provided Ochs Services executes this Letter of Intent prior to the 8:30 a.m., February 18, 1994, I as Executive Director of the Minnesota State Retirement System, intend to recommend to the Board of Directors that the Board of Directors authorize me as the Executive Director to further negotiate a formal written agreement between Ochs Services, the State of Minnesota and the Minnesota State Retirement System containing the terms and conditions set forth below. In the event the Board of Directors authorizes the Executive Director to proceed with negotiation of the terms of the formal written agreement between Ochs Services and the Minnesota State Retirement System, the undersigned contemplate such negotiations to occur after that date, with the proposed formal written agreement to be presented to the State

Board of Investment and the Minnesota State Retirement System Board of Directors on or before June 15, 1994. The State Board of Investment is currently engaged in negotiations with the insurance companies for deferred compensation products. Execution of any formal written agreement is conditioned upon execution of a formal written agreement between the State Board of Investment and the insurance companies and approval by the State Board of Investment of the Administrative Agreement.

The proposed contract terms are as follows:

Contract Length: 5 years

Product Representation: All investment products offered under the Deferred Compensation Plan will be equally represented.

Compensation Formula:

Period	Annual Basis Points (paid on total non-annuitized assets in MSRS assigned marketing territory)
July 1, 1994 to June 30, 1995	33
July 1, 1995 to June 30, 1996	31
July 1, 1996 to June 30, 1997	30
July 1, 1997 to June 30, 1998	29
July 1, 1998 to June 30, 1999	28

In addition, a 1½% commission will be paid on assets annuitized as defined in the agreement reached between the State Board of Investment and the insurance companies.

Vested Commission: None

Territory Designation: The Executive Director, with the approval of the Minnesota State Retirement System Board of Directors, SHALL designate territories assigned to each marketer.

Review Process: Detailed, measurable performance indicators will be established by the Minnesota State Retirement System. Semi-annual reviews will be conducted by the staff of the Minnesota State Retirement System to ensure compliance with the set standards. The insurance companies will be invited to participate in the review.

Product Communication: Any disputes between the insurance companies and/or the Minnesota State Retirement System over rates of return or presentation of products in any marketing material will be resolved by the Deferred Compensation Plan consultant hired by the State Board of Investment.

This document is intended as a Letter of Intent only. It is not intended to be, and shall not constitute in any way, a binding or legal agreement or impose any legal obligations on either of the undersigned, the Minnesota State Retirement System, the State Board of Investment, or the State of Minnesota. In the event any necessary legislation to implement the terms of this proposed agreement is not enacted or a contract amendment is not executed by both parties on or before June 15, 1994, for any reason whatsoever, the undersigned shall each have the right to terminate the negotiations without liability. Neither Ochs Services nor the State of Minnesota, the State Board of Investment, the Minnesota State Retirement System or its Executive Director have any liability for reliance by the other party upon terms of the proposed written contract amendment.

If the foregoing reflects our mutual statement of intention, please sign and return the enclosed copy of this Letter of Intent.

Agreed:

OCHS SERVICES	MN STATE RETIREMENT SYSTEM
William H Ochs	David Bergstrom
William Ochs President	David Bergstrom Executive Director
Date: 2/18/94	Date: 2/18/94

Tab H

STATE BOARD OF INVESTMENT

Manager Commentaries

Period Ending December 31, 1993

Manager Commentary
Alliance Capital Management L.P.

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$110 billion	Actual	2.2%	10.8%
Total Firm Assets Managed in this Discipline	$ 8 billion	Benchmark	3.4%	1.5%

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   During the fourth quarter our large financial weighting versus the benchmark was a negative as the stocks declined with signs of a stronger economy which caused short term interest rates to rise. For the year overall the financial overweighting contributed very positively to the investment performance of the portfolio. Our overweighting in broadcasting/cable and entertainment was positive during the fourth quarter in that all of the stocks reacted favorably to the increased acquisition activity in that sector, i.e., Paramount. Our underweighting in the consumer staple area was negative in that many of these stocks performed well in the fourth quarter after several quarters of under-performance.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   We believe that many stocks that are considered to be "economically sensitive" have been bid up to prices that leave little room for error while the broad consumer area of the market does not look as extended and financial stocks appear to be undervalued. Our overweighting in the financial area remains as many companies that have a dominant franchise in that particular area (Fannie Mae, Merrill Lynch and strong regional banks) are trading at P/E multiples well below their growth rates. We continue to believe that the most attractive part of the consumer sector remains the media area in that there will be a number of alliances formed in 1994. Our overweighting in semiconductors, which contributed very positively to last year's performance, continues as Intel, a franchise company, sells at a 10 P/E with very strong earnings and Motorola is a prime beneficiary in the growth of the wireless communication industry. Our underweighting in the consumer staple area will continue as many companies in the food, tobacco, and household product area are struggling with intensified competition from private label which in turn has affected the pricing structure and earnings of many companies. We will continue to maintain a modest underweighting in the basic industry sector as pricing power for many industries is not apparent except for special situations, i.e. wood products and housing related.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

Accounts Gained:	Mercy Hospital
	Rahr Malting Co.
Accounts Lost:	Amway

Alliance (Con't)

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   None

Staff Comments

Staff met with Alliance Capital in late November at their office. Staff discussed a number of topics with them including organizational issues, economic outlook, and portfolio strategy.

Organizations Issues

Alliance has completed the merger with Equitable Asset Management group. Since most of the Equitable analysts were let go in the merger, the Equitable portfolio managers must rely on Alliance's staff for any research not done by themselves. Alliance claims that this will not affect the implementation of their style since the Equitable portfolio managers did most of their own research work.

In addition, Alliance recently purchased Shields Asset Management. Shields Asset Management is an $8-9 billion firm with a majority of its accounts in Taft-Hartley and public funds areas.

Staff is concerned about the disruption that Alliance's merger and acquisition activity could have on the organization and investment process. Despite these changes, however, staff has been comfortable with the management of the Minneapolis office. Staff will continue to monitor the actions of the corporate office to make sure there are no detrimental effects to the Minneapolis office and the management of our account.

Economic Views

Alliance Capital remains very positive on the U.S. economy and corporations. They feel that U.S. companies are in a better competitive position than their international competitors and that the U.S. market is cheap in comparison to the international markets. Therefore, they feel that the U.S. market will do relatively well going forward, but will experience some short term volatility in achieving those long term gains.

Portfolio Strategy

Information staff gathered at the meeting coincides with their commentary above. They plan to continue to emphasize the financial, media, and certain technology areas and underweight the consumer non-durable and basic industry sectors.

Manager Commentary
Brinson Partners, Inc.

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$33.2 billion	Actual	2.2%	N/A
Total Firm Assets Managed in this Discipline	$ 4.5 billion	Benchmark	1.7%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   During the first three quarters of the year, performance was dominated by an environment of declining interest rates and low volatility, with economic expectations and a federal funds rate that varied within a relatively narrow range. The portfolio was positioned to take advantage of this environment with an overweight in stocks with the common characteristics of being economically sensitive and more financially levered than the market. During the fourth quarter of 1993, stocks with a high degree of economic sensitivity detracted modestly from portfolio performance, despite signs of increasing economic activity.

   Industry weightings helped portfolio performance modestly during both the fourth quarter and for the full year. An overweight in transportation along with an underweight in consumer nondurables and retail/apparel stocks added to performance for both the quarter and the year. An overweight in interest sensitive financial stocks detracted from the total return of the portfolio during the fourth quarter and for the year.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   Given our belief that the U.S. economy will continue to grow at a rate slightly above the long-term trend, we remain overweighted in stocks that possess a high degree of economic sensitivity. These companies should benefit from strengthening economic activity and the improvement in corporate cash profits and cash flow that are the result of restructuring activities and productivity.

   We remain overweighted in financial/interest sensitive stocks. These companies continue to benefit from strengthening of the overall economy and improvements in credit quality. We are underweighted in the consumer sector including nondurables, retail/apparel and discretionary spending stocks. The demographic profile of U.S. consumers and the pressures from sustained reduction in labor content in many major corporations suggest that growth in this area will be below that of the economy overall. We are underweighted in utilities, including both electric utilities and the traditional telephones. We believe that deregulation of electric utilities and the advent of retail wheeling of power will accelerate competitive pressure from non-utility generators and increase the purchasing power of larger power users. Competition will also intensify in the telecommunications industry as regulatory protection diminishes for the traditional regional telephone companies. The portfolio remains overweighted in health care and drug stocks. Finally, we are overweighted in capital investment and some basic industries. This position reflects both the depressed prices at which these companies may currently be

Brinson (con't)

purchased and our belief that the manufacturing and industrial process industries will continue to be among the strongest sectors of the economy

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   No significant ownership or personal changes occurred in the fourth quarter. Client assignments changed as follows:

Gained:	4 accounts	$152 million
Lost:	0 accounts	0

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   None of significance this quarter.

Staff Comments

Staff will be meeting with Brinson during the next quarter.

Manager Commentary
Forstmann-Leff Associates Inc.

Period Ending:	12/31/93	Returns	Qtr.	Year
Total Firm Assets Under Management	$3,111 million	Actual	3.0%	10.2%
Total Firm Assets Managed in this Discipline	$1,239 million	Benchmark	2.7%	8.7%

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   Fourth quarter performance was helped by a modest overweight in the recovering medical sector, as well as underweights in the unattractive interest sensitive and utility groups. However, it was in stock picking that most of the period's premium to the benchmark was generated. Stock selection within the consumer durables provided a 15.03% return, versus a -5.65% return in the benchmark. The portfolio's significant overweight to these issues including Ford Motor Co., General Motors Corp. and Chrysler Corp. helped to maximize the benefit from these gains. Similarly, security selection in the consumer services, notably Marriott International Inc. and Host Marriott Corp., resulted in a gain of 18.65% versus only 2.08% in the benchmark. The technology overweight, though proving to be a good sector bet, did not provide a lift to performance, as our selections within the sector declined 2.21% compared to the benchmark's gain of 8.11%.

   For the year, the portfolio's premium to the benchmark was due in part from very productive sector overweights in the consumer durable, technology and energy areas, all of which generated premium sector returns. However, once again, it was in stock picking that the portfolio's real value added was produced. The selections within the consumer durable, most notably the autos, rose 45% for the year, versus a still respectable 16.03% rise in the benchmark. Stock picking in the consumer services produced a 62.43% return, compared to 26.48% in the benchmark, though a slight sector underweight to the benchmark somewhat constrained the final effect on value added. Likewise, cyclical stock picking provided a boost to performance. It was in the medical area that the full year's slightly worse than benchmark returns pared back our premium to the benchmark.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   Currently, the portfolio contains a significant overweight to the benchmark in the consumer durables sector, particularly among the autos which we believe will continue to outperform for the near term. The consumer non-durables we have underweighted, while we maintain a market level exposure within the consumer services. We are also overweighted in the technology sector, as the economy's productivity led recovery is providing a boon to computer based technologies. We continue to be focused upon software and networking plays, as well as General Motors Hughes Corp., representing a broadly based technology play with exposure to the auto, entertainment and satellite industries. As we have discussed in previous quarterly strategy letters, we have moved to reduce the interest sensitive component of the portfolio. This move is consistent with our view that the bond market and interest rates have already seen much of their run, and though substantial gains have been attained in the portfolio in this area over the past two years, more attractive opportunities can now be found elsewhere in the market. This move out of the interest sensitive area helped us to avoid the erosion of return experienced in this sector at the year end. Predictably, our exposure to the utility stocks is also minimal at this time.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

Personnel Lost:	W. Anthony Forstmann - Research Analyst; left firm to join a Hedge Fund.
Account Lost:	Anonymous account - moved to international equity management.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   Though they would not properly appear under accounts gained and lost in this discipline, the year saw the addition of several eleemosynary and private clients to the firm's account base. Additionally, new assets were gained in the firm's limited partnership and hedged portfolios.

Staff Comments

Staff met with Forstmann-Leff in early December at their office. Staff discussed a number of topics with them including economic outlook and portfolio strategy.

Economic Outlook

They predict that for 1994 there will be reasonable economic growth (2-3%) and relatively low inflation (2.5-3.5%). They believe that the market is currently slightly under valued and will produce reasonable positive returns for the year due to increases in corporate profits (10-15%). Lastly, they believe that interest rates will fluctuate within a relatively small range during 1994.

Portfolio Strategy

Information that staff gathered at the meeting coincides with Forstmann-Leff's commentary above. They have been decreasing their exposure to the financial and interest sensitive areas and overweighting the technology and cyclical areas.

Manager Commentary
Franklin Portfolio Associates Trust

Period Ending:	12/31/93	Returns	Qtr.	Year
Total Firm Assets Under Management	$5.1 billion	Actual	-1.2%	17.1%
Total Firm Assets Managed in this Discipline	$370 million	Benchmark	1.8%	12.3%

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

Fourth Quarter Performance:
The account lagged its benchmark in the fourth quarter, but was ahead over the past twelve months and since inception. The performance lag was attributable to both factor and industry exposure difference from the benchmark as well as to stock specific returns. Stock specific returns is the active return contribution of an issue after removing the effect of factor and industry returns.

The five stocks which had the most negative impact on returns during the quarter were Enron Oil & Gas, Williams Co., International Game Technology, Enron Corp., and Texas Instruments. Three of the five issues are in energy related businesses, an area of poor performance during the quarter when energy prices experienced downward pressures.

The most positive factor bets were Variability-in-Markets and Growth which contributed an estimated 18 basis points to performance. Positive industry bets in Business Machines, Railroads, and Consumer Non-Durables contributed an estimated 51 basis points in the quarter.

Factor bets that detracted from performance were a positive bet on Success and a negative bet on Leverage with an estimated negative impact of 64 basis points. Industry bets which hurt performance included negative bets in Chemicals and Publishing and a positive bet in Banks. These bets accounted for an estimated 57 basis points of negative performance. The total negative contribution from factor and industry exposure differences was 139 basis points.

Full Year 1993 Performance:
For the year as a whole, account performance was significantly better than the account's benchmark. Positive contributions to active returns were produced from stock selection as well as factor and industry bets.

The five stocks in the account which provided the greatest investment gain over the full year were Santa Fe/Southern Pacific, Loral, Advanced Micro Devices, Litton Industries, and Computer Associates. In general, stocks that were sensitive to the economy and technology performed well for us.

The factor which contributed most to return for the full year was the positive bet on Earnings-to-price ratio, contributing an estimated 56 basis points to performance. Electronics, Gas Utilities, Forest Products, and Business Machines were the industry sectors with the greatest positive contributions to return - an estimated 189 basis points.

Franklin (con't)

A negative bet on Leverage resulted in a -16 basis points impact on performance. Negative industry bets in Chemicals, Telephones and Producer Goods and a positive bet on Food contributed an estimated negative 195 basis points impact.

Overall, during the year factor and industry exposure differences were estimated to have contributed a total positive 118 basis points to performance.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

As of 12/31/93 the following active bets existed in the account relative to the benchmark:

A. Factor bets (bets stated as a standard deviation from benchmark):

Earnings/Price	0.37%
Book/Price	0.19

B. Industry bets (bets stated as percentage deviation from benchmark weight):

Banks	3.07%	Producer Goods	-3.81%
Consumer Durables	2.55	Drugs	-2.46
Gas Utilities	2.75	Food	-2.41

C. Issue bets (bets stated as percentage deviation from benchmark weight):

Wheelabrator Tech	2.31%	Compaq Computer	2.17%
Baxter International	2.27	Unisys Corp.	2.11
Mobile Corp.	2.19	Federal Express	2.03

All active bets in the portfolio are a function of two factors. These are the rank of individual issues and the overall tracking error or risk of the portfolio relative to the benchmark. The portfolio construction objective is to obtain as high a rank as possible consistent with the tracking objective. We seek to maintain a total tracking error of approximately 3% relative to the benchmark with approximately 70% to 80% of the tracking error resulting from stock bets.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

There have been no significant ownership or personnel changes at our firm since the last quarter. We were pleased to have been appointed a manager for Honeywell Inc. in December. The account will be managed against a specially designed completeness fund benchmark.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

None

Staff Comments

Staff will be meeting with Franklin Portfolio Associates during the next quarter.

Manager Commentary
GeoCapital Corporation

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$1.9 billion	Actual	4.5%	15.7%
Total Firm Assets Managed in this Discipline	$1.8 billion	Benchmark	3.5%	21.6%

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   Performance in the last quarter dramatically outperformed the benchmark portfolio, although year-to-date numbers trailed the index. Our continuing active bets in consumer non-durables and technology added value in the three months ending November 30th. Financial stocks did not add value in the last period.

   We have recently taken the first steps towards restructuring the universe of our benchmark portfolio and will continue to fine tune this index over time. The new benchmark performance numbers impact the full 4th quarter of 1993.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   Our active bets in the 4th quarter continue the same trend as stated in September. In that regard, we would continue to state the following rationale:

   A. The improving yield curve and asset growth (with improved profitability) combined with industry consolidation in the financial areas.

   B. The unfolding improvement in business and stock market valuations of small growth issues in both technology and medical service as overall macro strength remains weak and industry selection becomes paramount. With the new proposed health care legislation finally promulgated, medical service companies should have significant potential to grow independently of the overall economy.

GeoCapital (con't)

3. ***Organizational Issues.** Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   No changes.

4. ***Other Comments.** Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   N/A

Staff Comments

Staff met with GeoCapital in early December at their office. Staff discussed a number of topics with them including benchmark construction and portfolio strategy.

Benchmark Construction

After several previous discussions with staff, GeoCapital agreed that they should do a comprehensive review of their benchmark. The primary result of that review was the elimination of a large group of stocks because they were stocks that GeoCapital would not consider for investment. The reduction in stocks did not cause any material change in the industry or sector weights. However, the change should reduce the random noise in the benchmark allowing it to be more closely aligned with GeoCapital's investment style.

Portfolio Strategy

GeoCapital's current strategy concentrates the portfolio in the medical, financial, and technology areas. In the medical area they have concentrated in firms that will do well in a managed care environment. They feel that the medical industry will continue to consolidate with their firms benefiting from this market action. Once the consolidation phase comes to an end they will have very few stocks left in this investment theme because the market will be dominated by larger firms that do not fit their investment style.

In the financial area they have concentrated their investments in the brokerage and asset management area. They are very positive about this area and expect to maintain an overweighting for a long period of time.

Lastly, their technology investments are concentrated in companies that design software for personal computers rather than mainframes. Their investments include companies that design educational and network software.

Manager Commentary
IDS Advisory Group, Inc.

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$18.8 billion	Actual	2.9%	12.1%
Total Firm Assets Managed in this Discipline	$ 4.9 billion	Benchmark	1.8%	11.9%

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

During the latest three months, the State of Minnesota portfolio advanced 3.0 percent versus an increase in the S&P 500 of 2.3 percent and an increase in the normal portfolio of 1.8 percent.

During the latest 12 months ended 12/31/93, the State of Minnesota portfolio advanced 12.4 percent while the S&P 500 was up 10.1 percent and the normal portfolio advanced 11.9 percent.

Our sector weights have evolved as follows:

	12/31/92	**12/31/93**	**S&P 500 12/31/93**
Technology	14.5	8.2	6
Consumer Stable	8.0	3.2	20
Consumer Cyclical	23.5	24.2	17
Utilities (non Electric)	1.7	6.8	15
Financial Services	12.2	18.8	13
Energy	1.9	5.6	11
Industrial Basic	16.5	11.5	5
Industrial Growth	6.9	6.5	6
Industrial Cyclical	10.3	13.5	7
Equity Cash	4.5	1.7	0
	100.0	100.0	

As you will note, we have been significantly overweighted in the consumer cyclical, industrial basic, industrial intermediate cyclical, and financial sectors. In addition, we have from time to time also overweighted the technology sector. We have been underweighted in the utility, energy and consumer stable areas. For the most part, these sector weights have helped. In the consumer cyclical area, our heavy weighting in autos, tires, and airlines generated incremental performance. Our retail exposure in this sector provided disappointing rates of return. The industrial intermediate cyclical area, which largely consists of chicken cyclicals, also generated superior returns. The basic industrial and financial sectors were a mixed bag. The forest products oriented stocks were excellent performers while some of the metals and chemicals lagged. As for financials, performance was uneven. Our underweighting of energy and most especially the consumer stable area was a major positive. Consumer stable with its heavy

IDS (con't)

weighting in drugs, tobaccos, beverages, and branded products generated truly miserable performance. One the other hand, our less than market weighting in electric utilities was a mistake. Electric utility stocks significantly outperformed the market reflecting investor thirst for yield.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

At the moment, we are reasonably sanguine regarding the structure of the portfolio. We continue to believe that economic growth is more likely to exceed than lag general expectations. We are also optimistic about inflation, interest rates, and corporate profit growth. Therefore, we intend to maintain a relatively modest cash position. We are convinced that the cyclical side of the market will generate superior performance as earnings come in above expectations. Given our already heavy weighting in the economically sensitive issues, maintaining the current structure of the portfolio makes sense. We continue to believe that the consumer stable, energy, and electric utilities will underperform reflecting their lack of earnings momentum and their relative high valuation.

If there is risk to our relatively optimistic outlook, it resides in the area of interest rates. Should the economy grow significantly more rapidly than we anticipate, inflationary pressures could emerge. Such pressures would eventually lead to the tightening by the Fed resulting in sharply higher interest rates. Rising interest rates would lead to sharply lower price earnings multiples which in turn would result in a significant market decline. We think the likelihood of this occurring in 1994 is relatively low.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

Over the last quarter there have been two personnel changes. Dan Donovan, Senior Portfolio Manager, moved over to the IDS Research Department as a Senior Equity Analyst and Tom Brakke, formerly Director of Research, moved to the IDS Equity Advisors investment team as a Senior Portfolio Manager.

IDS ADVISORY GROUP

	Gains		Losses	
Product	**# of Accounts**	**Assets ($MM)**	**# of Accounts**	**Assets ($MM)**
Large Cap Equities	2	75.0	1	47.7
Fixed Income	0	0	0	0
Balanced	6	114.5	0	0
International	0	0	0	0
Small Cap Equities	0	0	0	0
Research Core	0	0	0	0
Research Aggressive	0	0	0	0

IDS (con't)

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   None at this time.

Staff Comments

Staff met with IDS in late November at their office. Staff discussed a number of topics with them including organizational issues, economic outlook, and portfolio strategy.

Organizational Issues

The personnel changes in #3 have impacted the SBI's account indirectly. Pete Anderson (SBI's portfolio manager) has taken on three additional accounts for a total of 15. Staff will monitor the situation to make sure that the higher account load does not affect the management of our portfolio.

Economic Views

IDS feels that the market is reasonably priced and will increase 7-12% in 1994 due to relatively good overall economic and corporate profit growth and no strong increase in interest rates or inflation. However, the market in the short term will be quite volatile while continuing its longer term upward trend.

Portfolio Strategy

Information staff gathered at the meeting coincides with their commentary above. They continue to favor cyclical, financial, and to some degree, technology stocks and continue to underweight consumer non-durable, energy and electric utilities.

Manager Commentary
Independence Investment Associates

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$13.7 billion	Actual	1.4%	12.0%
Total Firm Assets Managed in this Discipline	$10.3 billion	Benchmark	1.9%	10.2%

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   The portfolio we manage for you is well diversified, holds 115 stocks and has a market-like beta. As stock pickers, we look for stocks which are priced lower than their intrinsic value while also exhibiting favorable trends in earnings momentum. We then create a portfolio which has value characteristics, as measured by a P/E lower than the market's as well as growth characteristics as measured by short and long term growth rates being higher than the market's.

   Your portfolio does not have any style bias and in fact shows characteristics of both value and growth as measured by a low P/E and high earnings growth. The P/E of your portfolio is 13.4x versus the S&P 500 P/E of 18.3x. The long term growth of your portfolio is 9.1% compared to the S&P 500 long term growth of 7.0%. the dividend yield of 2.74% of your portfolio is in line with that of the S&P 500. Major purchases during the quarter included Johnson & Johnson, Chevron and CBS, Inc., while issues such as Capital Cities and Hewlett Packard were eliminated. In each case the transactions were driven by our stock valuation discipline. The best performing of these stocks during the quarter included General Motors, Louisiana Pacific and Hercules. Performance during the quarter also benefited from a rebound in healthcare holdings such as Merck and Health Management, consumer stocks such as Proctor & Gamble and our continued holding of Philip Morris, all of which outperformed significantly after lagging earlier in the year. The worst performing stocks for the quarter included Phillips Petroleum, Texas Instruments and American Express.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   Independence will continue its investment philosophy of "any stock which combines cheapness & improving fundamentals is attractive" and its very disciplined investment process in which each stock in an unbiased universe is evaluated to determine the stocks with the best combination of cheapness and improving fundamentals. Your portfolio is then created using the best stocks in a combination designed to match the risk characteristics of the S&P 500 with an approximate 2% tracking error.

Independence (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   None.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   Toward year end the initial step was taken in converting to the standard S&P 500 as the normal portfolio. This will be completed in early January.

Staff Comments

Independence Associates benchmark through the fourth quarter 1993 was the S&P 500 less the South Africa stocks. Due to the Board's decision to reverse the South Africa policy, Independence has decided to switch their benchmark to the S&P 500 as of the first quarter 1994. Staff concurs with this change.

Staff will be meeting with Independence Investment Associates during the next quarter.

Manager Commentary
Investment Advisers, Inc.

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$ billion	Actual	-0.2%	N/A
Total Firm Assets Managed in this Discipline	$ billion	Benchmark	0.9%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   The portfolio has performed favorably for the last six (6) months of the year (since inception of the account) as indicated below:

MN SBI	9.5%
MN SBI (equity only)	10.4%
IAI Regional Fund	5.7%
S&P 500	5.0%

   Emphasis continued to be in a bottom-up stock picking approach with a certain amount of concentration in the capital goods, technology and finance areas.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   Strategy continues to favor the industrial cyclical vs. consumption. Smaller to middle capitalized companies continue to look attractive relative to larger stocks.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   Steve Markusen left the firm at year end. He was an equity manager that ran large cap stocks. We have not lost or gained any accounts in this discipline this past quarter.

4. *Other Comments. Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

N/A

Staff Comments

Staff has asked IAI to provide a better summary of their rationale for their strategy (see #1 and #2) in future commentaries.

Staff met with IAI in late November at their office. Staff discussed a number of topics with them including organizational issues, economic outlook, and portfolio strategy.

Organizational Issues

IAI's Chief Equity Officer, John Phillips, decided to leave the firm in October 1993. His departure is due to a reorganization of the equity staff where the various products became autonomous units rather than one large equity investment group. This change appears to have had minimal impact on the SBI account, since the new structure is similar to the management structure that was in place at the time the SBI retained the regional fund.

Portfolio Strategy

The most significant change is that the regional fund will now invest in Illinois based companies as well as companies in the Minneapolis federal reserve district. The portfolio currently has 13% of the assets in Illinois based companies. Currently the Illinois stocks consist mostly of larger capitalization companies. The allocation to Illinois companies could increase as they established a larger database of small to medium capitalization companies.

In the overall portfolio, IAI is tilting towards small to medium capitalization companies with a global and industrial bias. They also like the technology area especially companies that will benefit from the information highway concept.

Right now they have underweighted the portfolio in the consumer non-durable and the financial sectors. IAI feels that there will be little growth in the consumer non-durable sector and that the yield curve play by the financial institutions is over.

Benchmarks

Staff is not satisfied with the current benchmark. IAI has given up trying to build a custom benchmark themselves and is in the process of hiring an outside firm to build it for them. Staff expects that an acceptable benchmark will be in place by the start of third quarter of 1994.

Manager Commentary
Jundt Associates, Inc.

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$3,182 billion	Actual	1.1%	N/A
Total Firm Assets Managed in this Discipline	$2,196 billion	Benchmark	3.0%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   Fourth quarter underperformance versus the benchmark of 1.54% was a result of primarily stock selection (-1.00) and cash (-.30) and trading (-.39). Overall stock and sector allocations yielded a positive (.41).

   Active "bets" in the portfolio versus the benchmark were higher cash and equivalents (21.2 vs. 8.0), lower consumer non-durables (30.2 vs. 45.0) and higher technology (35.2 vs. 23.0). Cash and consumer stocks had a negative impact while the technology exposure was positive.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   Cash reserves have been reduced to near benchmark levels of 8%. The high cash levels earlier reflected the sells of most ethical drug companies earlier in the year and the redeployment of these funds in a cautious manner during 1993. We continue to invest on a bottom-up approach, but would note that continued strong investment themes include wireless communication; computer technology and software; multimedia and interactive T.V.; and specialty retailing. Thus, we continue to have a higher weighting in technology and are underweighted in consumer durable and non-durable stocks versus the benchmark.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   None to report.

Jundt (con't)

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   1993 was a watershed year in which the former areas of growth such as tobacco, food, and drugs began to underperform the broad market. Each has lost pricing flexibility and thus, future growth looks much less robust. Cyclicals did well reflecting strong near-term earnings trends as well as value stocks. We feel that the market will eventually return to growth stocks as a class as the cyclicals will return to their long term growth rates of 4-6%. The portfolio we have created for the State of Minnesota is showing strong long term growth in excess of 20-25% in sales and even higher in earnings per share. We feel that ultimately these rates of growth will be reflected in the market place.

Staff Comments

Staff met with Jundt Associates in late November at their office. Staff discussion centered mostly around portfolio strategy.

Portfolio Strategy

Information gathered at the meeting coincided with their commentary above. They liked the wireless communication area and the information highway theme (multimedia and interactive TV). Within the information highway theme they are looking for good growth companies who already are generating revenue in this area rather than just the potential to do well.

They also like specialty retailing. They are looking for companies that operate large wholesale type superstores and are the low cost producer in their specialty. They feel that the consumer is and will continue to be price sensitive and that the retailer with the lowest cost and largest selection of products will realize good growth rates.

Manager Commentary
Lincoln Capital Management Company

Period Ending:	12/31/93	Returns	Qtr.	Year
Total Firm Assets Under Management	$27.0 billion	Actual	3.3%	N/A
Total Firm Assets Managed in this Discipline	$ 8.0 billion	Benchmark	3.3%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   Within an industry context, there were two material changes: 1) Technology/Communication was increased 5.7% (semis, software, and telecommunications) and 2) reserves were reduced 8.1% to eliminate a modest timing bet. Among the ten or so largest commitments Toys "R" Us, McDonald's, Pfizer, Automatic Data and GE each rose 10%, AIG and Chemical lagged a similar percentage.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   We are quite long Financial, short Technology/Communications, Health and Media. The extent of these bets may slimmed back in the months ahead.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   There were no changes in people or ownership and no accounts gained or lost.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   Things are fine. We wish the seasoned Growth sector would do better.

Staff Comments

Staff will be meeting with Lincoln Capital Management during the next quarter.

Staff has asked Lincoln to provide a better summary of the rationale for their strategy (see #1 and #2) in future commentaries.

Manager Commentary
Lynch & Mayer, Inc.

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$5,109 million	Actual	-2.4%	5.9%
Total Firm Assets Managed in this Discipline	$4,527 million	Benchmark	1.8%	12.9%

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

Performance is summarized above. Significant over and underweighting sector results are:

Sector		**Portfolio Weighting**	**Portfolio Results**	**Benchmark Weighting**	**Benchmark Results**
Technology	3Q	32.4%	-0.3%	24.3%	2.0%
	YTD	29.9%	23.0%	21.0%	36.5%
Consumer Non Durables	3Q	25.1%	3.6%	31.2%	4.8%
	YTD	24.8%	4.2%	31.2%	1.2%
Financial	3Q	17.6%	-4.7%	15.7%	-8.6%
	YTD	19.4%	15.5%	15.9%	9.3%
Total	3Q		-2.3%	3Q	1.8%
	YTD		6.2%	YTD	13.0%

Based on the above, it appears that the portfolio, relative to the benchmark, was weighted favorably in the appropriate sectors. However, while stock selection in the technology sector produced positive results relative to market indices, we did not produce results better than the benchmark. This was mainly due to the benchmark containing several highly weighted issues that produced a high one year total return. Examples of such are Computer Associates (.73% weight, 98.35% return), Micron Technology (.60% weight, 146.63% return) and General Instrument (.79% weight, 121.57% return). We question the weighting of these securities as well as others within the benchmark and as further discussed in question four, we are evaluating whether to change the benchmark methodology.

Lynch & Mayer (con't)

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

We continue to be significantly overweighted in technology, which includes a concentration in telecommunications and office equipment companies. Our three largest holdings in the portfolio are in the technology sector and they are:

Holding	Rational for Investment	Portfolio Weight	Benchmark Weight
DSC Comm Corp	Acceleration of Growth	3.6	0.74
Compaq Computer Corp	Acceleration of Growth	3.5	1.05
Silicon Graphics Inc	Acceleration of Growth	3.4	0.68

Additionally, we have a significant weighting in consumer cyclicals where we have invested in companies which met our growth criteria as well as have the advantage of an improved industry environment due to the ongoing U.S. economic recover. Lynch & Mayer is not a "top down", "sector rotation" or "macro" manager. Our investment philosophy hinges on the premise that earnings growth significantly above historical trend or consensus expectation invariably is preceded by a critical positive fundamental change We search intensively for early indications of such change and group purchase candidates into four categories by source of earnings increase. The categories are: acceleration of growth; improved industry environment; corporate restructuring; and "turnaround" situations.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

No significant personnel or ownership changes occurred.

Accounts gained (tax-exempt):
Johns Hopkins University
Mack Trucks, Inc.
NVR Limited Partnership
St. Andrew's School
Valspar Corp.

Accounts lost (tax-exempt):
None

Lynch & Mayer (con't)

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   During the last quarter, we met with our consultant to review the composition and methodology used in preparing our benchmark. We will continue to evaluate the criteria and appropriateness of the benchmark relative to our investment style and universe of investable stocks. Currently, Richards & Tierney uses their bias to weight the stocks in the benchmark. Given the weighting of the stocks discussed in question one as well as others, we are discussing whether the benchmark should be cap weighted. We wish to discuss this change in methodology with you in greater detail.

Staff Comments

Staff met with Lynch & Mayer in early December at their office. Staff discussed a number of topics with them including organizational issues, benchmark methodology, and portfolio strategy.

Organizational Issues

They have added another client servicing person to their staff for a total of three. They currently have 95 accounts among the three of them. Staff has noticed a better response from the firm since the new additions.

Benchmark Methodology

Given the data available when the benchmark was constructed, all parties (Lynch & Mayer, Richards & Tierney, and staff) agreed that it had the qualifications of a good benchmark, including the weighting methodology. As with any benchmark, staff will request or consider refinements as more data is collected and a better understanding of the benchmark characteristics becomes available. Staff will evaluate any proposals made by Lynch & Mayer very carefully and incorporate changes only if we can be assured that the modifications more accurately reflect the firm's investment style. Staff expects the analysis to be completed during the next quarter.

Portfolio Strategy

Information that staff gathered at the meeting coincides with Lynch & Mayer's commentary above. They plan to continue to overweight the technology sector and underweight the consumer non-durable sector. They also said that they have become more negative on financial stocks because interest rates will not drop below their current rates. Therefore, the allocation to financial stocks will most likely decrease going forward.

Manager Commentary
Oppenheimer Capital

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$22.8 Billion	Actual	0.7%	N/A
Total Firm Assets Managed in this Discipline	$12.8 Billion	Benchmark	0.8%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

QUARTER ENDED DECEMBER 31, 1993

The key factors contributing to performance during the quarter were security selection within the following economic sectors: basic industry, conglomerates and banks.

Significant weighting variations in the basic industry, consumer cyclical, energy and utilities sectors were rewarded. However, overweighting in the financial services and insurance industries negatively impacted performance. The top contributing stocks for the quarter are as follows:

Hercules	25.2%	Pfizer	16.7%
Temple Inland	24 1	Freeport McMoRan	14.9
Philip Morris	22.7	Monsanto	13.0
Tyco Lab	19.6	GE	10.1

SIX MONTHS ENDED DECEMBER 31, 1993 (Inception 7/1/93)

The key factors contributing to performance were security selection within basic industry, capital goods, conglomerates, financial services and insurance sectors. Higher exposure to basic industry, capital goods, and consumer cyclicals and lower exposure to energy and utilities were rewarded. The top contributors within each economic sector that significantly affected performance are as follows:

Basic industry:	Hercules, Monsanto
Capital goods:	Tyco Labs, Martin Marietta, GE
Conglomerates:	AlliedSignal
Financial Services:	Salomon
Insurance:	Progressive

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bet.s*

Oppenheimer (con't)

We take positions based on fundamental, bottom up analysis, selecting stocks that represent attractive business at reasonable prices. This analysis has led us to maintain an overweighted position in financial stocks. If we thought a sharp increase in interest rates was imminent, it might not affect our opinion on the outlook for these companies, but it would affect their valuations, and we would probably elect not to buck such a headwind.

We find many of the financial stocks compelling opportunities. Numerous companies in the industry, notably insurance and financial services companies, have the growth and high return characteristics we look for, while selling at attractive valuations. For example, an index of the financial stocks we own sells at 11.5 times the 1993 earnings - a 35% discount to the S&P 500 - yet has a return on equity of 18.3% - 25% higher. Add to this the fact that these companies' earnings have grown at twice the rate of the S&P since 1987 (14.5% compound annual growth versus 6.4%), and you have stocks that are not merely statistically inexpensive, but are dynamic, profitable enterprises currently mispriced and misanalyzed by today's market.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

PERSONNEL CHANGES

Virginia Sirusas has joined Oppenheimer Capital as a Managing Director, Director of Marketing. Prior to joining us, Virginia had been Director of Marketing for Frank Russell Trust Company, and head of Russell's New York office for most of her eleven-year tenure. Earlier she held positions as Director of Sales and Marketing at Bankers Trust and headed the Group Pension Department at Equitable Life.

Pierre Daviron has joined the firm as Chief Investment Officer of Oppenheimer Capital International. He returns to New York from Paris where he was Chairman and Chief Executive Officer of Indosuez Gartmore Asset Management, a subsidiary of Banque Indosuez. Prior to this he was with J.P. Morgan as a managing director in mergers and acquisitions, as head of research in Europe, Asia, and the United States, and as a member of the management committee of J.P. Morgan's investment division.

Paul Doane joined the Oppenheimer Capital team as Vice President and Client Executive. Paul joins us from Boston where he served as the Executive Director of the PRIM Board. Prior to this assignment, Paul held key positions at A.G. Edwards and State Street Bank. Paul is a former Massachusetts State Senator.

Larry Lynch has left Oppenheimer Capital to join Pilgrim Baxter to head their business development effort.

ACCOUNTS GAINED/LOST

Gained:	6 accounts with $95.7 million in assets
Lost:	None

Oppenheimer (con't)

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   The new year marks our entry into international money management with the introduction of Oppenheimer Capital International. This team is currently managing two of our mutual funds, with combined assets of $165 billion. In addition to providing separate account management, we look forward to using this intellectual base to provide ideas for our existing accounts. Our focused global perspective will greatly expand our search for undervalued securities wherever they may exist. We recognize your portfolio is restricted from holding non-U.S. securities but we wanted to inform you of this development.

Staff Comments

Staff met with Oppenheimer Capital in early December at their office. Staff discussed a number of topics with them including organizational issues and portfolio strategy.

Organizational Issues

In addition to the personnel changes mentioned above, there have been some additional changes that directly or indirectly affect our account. Mary Ann Schrieber has taken over the client servicing of our account. This should be a positive because she has a lower account load than our previous contact. In addition, they have hired John Imbriale to do performance analysis and benchmark monitoring. Staff also sees this as a positive because previously no one was dedicated to performing these activities. All in all, staff views the personnel changes to be positive.

Portfolio Strategies

Information that staff gathered at the meeting coincides with Oppenheimer's commentary above. They are primarily a bottom-up stock picker but within that style they have found what they feel are a lot of good opportunities in the financial sector.

Manager Commentary
Waddell & Reed

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$2,684.7 billion	Actual	-0.8%	13.9%
Total Firm Assets Managed in this Discipline	$469.0 million	Benchmark	4.5%	17.3%

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   For the entire year, we benefited from our sizable bets on Southwest Airlines, Blockbuster Entertainment, CBS and Harcourt General as all four companies significantly beat the market and were together roughly 20% of portfolio assets. Moreover, we were rewarded for our active bet on American Barrick (gold mining) as gold moved from a six-year low in early 1993 to over $400 an ounce during the summer. We took our profits at that point, since we felt the stock price sufficiently discounted the company's improved earnings and cash flow prospects.

   Our relatively heavy investments in entertainment and media were somewhat out of favor during the latter part of the fourth quarter and short-term portfolio performance therefore, suffered relative to the benchmark. We see no deterioration in the fundamental attractiveness of this sector (Blockbuster, CBS, Harcourt General) however, and therefore increased holdings during the pull-back.

   In other areas of significant overweighting the following is also noteworthy. As mortgage rates declined throughout the summer, a surge in pre-payments caused Countrywide Credit's servicing portfolio to grow less than anticipated. The stock price declined on the revised short-term outlook. On a positive note, strong demand for computers and software propelled Compaq Computer and Computer Associates to excellent relative gains in the fourth quarter.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   Our view is that the current stronger consumer spending pattern will abate because it is not being driven by proportionate gains in disposable personal income. Consequently, as activity slows, markets should adjust and therefore, interest rates likely will remain at present levels or possibly decline some. We believe financial service companies in the brokerage industry will perform relatively well (e.g. Merrill Lynch, Salomon Brothers) as will technology companies with strong unit volume growth (e.g. Compaq Computer, Intel and Micron Technology). In healthcare, we see United Healthcare continuing to enjoy strong market share gains, given its role as an important cost containment enabler. In basic industries, we think successful cost cutting efforts and strong unit volume gains on a cyclical basis will help drive steel stocks higher (U.S. Steel and Bethlehem Steel).

Waddell (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   There were no ownership or personnel changes at our firm over the last quarter, nor were any accounts gained or lost in this discipline.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   None.

Staff Comments

No additional comments.

Manager Commentary
Weiss Peck and Greer

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$13.4 billion	Actual	-1.8%	N/A
Total Firm Assets Managed in this Discipline	$ 1.7 billion	Benchmark	1.7%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   During the 4th quarter we reduced the consumer non-durable sector ending the quarter at 35.3%, slightly underweighted to our benchmark. At the same time we continued to build our exposure to Capital Goods, principally in technology, so that we ended the quarter at 32.4%. We are now 20% overweighted to the benchmark in Capital Goods. We began the quarter overweighted in energy. At the end of the quarter our weighting equaled the benchmark. This occurred by the sale of some securities as well as poor performance in the sector.

   Stock selection was negative approximately 200 basis points in the quarter for the entire portfolio. Most of that occurred in the capital goods sector.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   The strategy remains the same. Overweight the capital goods sector and underweight consumer non-durable. Our focus remains on stock selection. We have organized our total holdings into a comprehensive model. The effort should help us concentrate holdings in those companies where the fundamentals are most compelling. Similarly it should allow us to identify quicker those companies where the fundamentals are deteriorating.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   For Weiss Peck and Greer as a total entity, there were no significant changes in our professional staff. That statement also applies to this discipline. We are not open for more customized relationships in Dynamic Growth.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   The Firm completed its financial year in December. The operating earnings increased modestly over 1992. We believe that we begin 1994 with business momentum.

Staff Comments

Staff met with Weiss Peck and Greer in early December at their office. Staff discussed a number of topics with them including organizational issues, economic outlook, and portfolio strategy.

Organizational Issues

They have hired another small cap. portfolio manager to run some of their small accounts. Our portfolio manager will continue to be Mickey Straus. Staff does not expect this to affect the management of our account but will monitor the situation to make sure. In regard to asset growth of their small cap. product, they have stopped taking separate accounts and will stop taking new contributions in their mutual fund if it grows much larger.

Economic Outlook

They are fairly bullish. They expect moderate economic and corporate profit growth along with fairly stable interest and inflation rates. They also expect individuals to continue to increase their stock exposure contributing additional cash flow into the stock market.

Portfolio Strategy

Information that staff gathered at the meeting coincides with their commentary above. Going forward they like certain areas of the technology sector. They like the cable, wireless, and cellular companies and software companies that concentrate on personal computer network systems.

Manager Commentary
BEA Associates

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$20.3 billion	Actual	0.2%	N/A
Total Firm Assets Managed in this Discipline	$ 3.5 billion	Benchmark	0.0%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   Performance for the period was enhanced primarily by the manner in which we structured our mortgage exposure. During the period 10/01/93 to 12/31/93 the portfolio was overweighted in mortgages by approximately 6.5%. The mortgage portion of the Salomon Broad Index registered a return of 0.91% for the period versus a return of 0.04% for the Salomon Broad Index. Therefore, BEA's decision to overweight in this sector positively affected returns. Secondarily, our decision to overweight in triple BBB corporate bonds modestly enhanced returns.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   As of 1/1/94 the portfolio continues to be overweighted in mortgages. It is our expectation that investors will increase their exposure to mortgages in 1994 and we will sell into the strength as those decisions are implemented. BEA also believes that there will be a pronounced narrowing of triple BBB corporate bond spreads and the decision to overweight in the sector should prove beneficial in the first quarter of 1994. A modest economic recovery and a low level of interest rate volatility are ideal environments for lower rated corporate bonds.

BEA (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   No personnel changes. No new accounts over $50 million.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   Consistent with our belief that market volatility will decline in Japan we have also put on a derivatives trade that will benefit as the levels of expected volatility decline on the Nikkei Index

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Staff Comments

BEA was given authority to trade non-U.S. bonds as of January, 1994.

Manager Commentary
Investment Advisers, Inc.

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$13.2 billion	Actual	-0.6%	12.7%
Total Firm Assets Managed in this Discipline	$ 4.5 billion	Benchmark	0.0%	9.9%

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   We added value with our overweighting in 10-30 maturities for the first three quarters of the year. This strategy detracted from performance in the fourth quarter due to a back-up in rates. The corporate/asset-backed sector was overweighted in the fourth quarter, which helped returns as credit spreads narrowed. The portfolio has been slightly underweighted in mortgages all year. This helped performance in the first three quarters, but hurt performance in the final quarter as mortgages outperformed governments and corporates for the quarter.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   We see excellent value in 10-30 year maturities because of the yield curve slope and the potential for capital gains as rates decline. Mortgages were reduced from 26% to 15% in January because they become overvalued due to overly optimistic prepayment assumptions. We will reverse this trade by mid-year.

IAI (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   Steve Markusen left the firm at year-end. He was an equity portfolio manager who ran large cap stocks. We did not gain or lose any accounts in this discipline during the quarter.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   None

Staff Comments

No comments at this time.

Manager Commentary
IDS Advisory

Period Ending:	12/31/93	Returns	Qtr.	Year
Total Firm Assets Under Management	$18.8 billion	Actual	-0.9%	N/A
Total Firm Assets Managed in this Discipline	$ 5.0 billion	Benchmark	-0.3%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   The most significant decision IDS made in the quarter and six months was to maintain portfolio duration near the high end permitted by investment guideline. Unlike the prior quarter, investment performance did not benefit from this duration decision because of an increase in interest rates during the period. The withdrawal of $15 million during the quarter was largely met through the sale of Ralston Purina debentures. Your account underperformed the benchmark during the quarter but outperformed the index during the six months we have managed these assets.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   With inflation measured by the CPI of under 3% in 1993, we continue to believe that interest rates are too high. This is especially true when inflation in 1994 is expected to be similar to last years. The skepticism of the market about the level of fixed income rates is not warranted in our opinion but is consistent with prior investor expectations. Over most of the past decade, the beginning of each year found investors predicting economic expansion, leading to a rise in inflation, ending in higher rates. While we disagree with this general consensus, we will remain vigilant to signs which might indicate an increase in inflationary pressure.

IDS (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   There have been no significant ownership or personnel changes for IDS Fixed-Income Advisors over the last quarter.

	Gains		Losses	
Product	# of Accts	Assets ($MM)	# of Accts	Assets ($MM)
Large Cap Equities	2	75.0	1	47.7
Fixed Income	0	0	0	0
Balanced	6	114.5	0	0
International	0	0	0	0
Small Cap Equities	0	0	0	0
Mid Cap Equities	0	0	0	0
Research Core	0	0	0	0
Research Aggressive	0	0	0	0

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   None at this time.

Staff Comments

No comments at this time.

Manager Commentary
Miller, Anderson & Sherrerd

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$31.1 billion	Actual	-0.3%	12.0%
Total Firm Assets Managed in this Discipline	$18.1 billion	Benchmark	0.0%	9.9%

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   The total return of your portfolio for the fourth quarter of 1993 was (.20%) and for the last twelve months was 11.5% versus 0.0% for the Salomon Broad Index for the fourth quarter and 9.9% for the last twelve months.

   The active bets in your portfolio in the last quarter and for most of the trailing twelve months were a duration that was greater than your benchmark, an overweighting mortgage-backed and corporate securities, and underweighting of U.S. Treasury securities, and a barbell strategy that used long maturity zero coupon Treasuries and higher coupon mortgage-backed securities as a package in an attempt to capitalize on the steepness of the yield curve.

   Throughout the year, the duration of your portfolio had been at the higher end of its permitted range. However, in the last few months we have begun to reduce the interest rate sensitivity of the portfolio. At year-end, the duration of your portfolio stood at 5.4 years.

   For the year, the overweighting of corporate securities, the above market duration, and the barbell strategy added to investment results, while the focus on mortgage-backed securities detracted from investment returns. For the quarter, your portfolio was helped by yield curve strategy and corporate holdings. It was held back by the interest rate risk decision and mortgage holdings.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   The active bets within your portfolio are an above benchmark exposure to mortgage securities and a continuation of the barbell strategy that was in place for most of last year. Currently, the portfolio is approximately market weight with regard to corporate securities and the interest rate risk of the portfolio has been reduced to that of your benchmark.

   Since we anticipate some firming in the economy and some upward pressure on short to intermediate interest rates, we would anticipate a flattening of the yield curve. The current barbell strategy that is represented by high coupon mortgages, the short portion of the barbell, and long zero coupon Treasuries, the long portion of the barbell, is expected to outperform you benchmark in this environment.

Miller (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   At the end of 1993, there were 9 new partners and 2 retirements within the partnership.

   During the last quarter, we gained 7 new accounts. We did not lose any accounts during the quarter.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   Based on your recent authorization, we have begun to include non-dollar fixed income securities within your portfolio. We anticipate these investments will reduce the overall volatility of the investment results of your portfolio and will add to the return over time.

Staff Comments

Miller was given authority to trade non-U.S. bonds as of January, 1994.

Manager Commentary
Standish, Ayer & Wood

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$22.3 billion	Actual	0.1%	N/A
Total Firm Assets Managed in this Discipline	$11.3 billion	Benchmark	0.0%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   For the year, the bond market outperformed our initial expectation; lower quality corporate, lower coupon mortgage, and zero coupons outperformed everything except non-dollar. Minnesota was penalized by BBB/rated guideline minimum.

   For the quarter, the major impacts on the portfolio were provided by the largest sectors. Underweighting in Treasuries added 16 basis points. The industrials in the Minnesota account also did considerably better than those in the index. (+.87% vs. +.04%). The mortgages provided a drag of 18 basis points verses the index as the higher coupons in the index outperformed Standish's lower coupons (+.91% vs. .38%). The account was also slightly underweight this strong sector. Smaller sectors aided account performance by .02%.

   Had below investment grade bonds been in the portfolio, an increment of 60 basis points would have been added while an increment of 50 basis points would have been added by non-dollar had the current guidelines been in place.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   The index yields 5.5%, Minnesota portfolio provides a starting yield of approximately 6.5% and with active management we believe performance in the range of 7% will be realizable within the year. We do not believe the duration bet be as important as the yield curve management. Spreads should continue to tighten to unrealistic levels on corporates. We will target an increase in mortgages due to undervaluation.

Standish (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   There have been no changes in ownership. We will continue to add to personnel as demanded by client need in research, technology, staff, administration or portfolio management.

   Active Core Accounts Gained

   Massachusetts State Teachers
   State Universities Retirement Plan (Illinois)

   Active Core Accounts Lost

   None

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   The corporation manages to a high ethical standard and we doubt you will find our name in the paper along with INVESCO or Fidelity for trading transgressions or other matters.

Staff Comments

Standish Ayers was given authority to trade non-U.S. bonds as of January 1994.

Manager Commentary
TCW Asset Management

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$46.0 billion	Actual	0.1%	N/A
Total Firm Assets Managed in this Discipline	$ 8.6 billion	Benchmark	0.9%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   For the 4th quarter of 1993, the Minnesota State Board Mortgage-Backed portfolio earned .61%. This is slightly under the Salomon Mortgage Index which returned .91% but substantially above the Lehman Government/Corporate Index which returned .29%. The portfolio is structured such that it owns substantially more CMOs than generic pass-throughs. The reason for this is that CMOs provide substantially more call protection plus incremental yield. For the fourth quarter, this strategy suffered slightly in as much as CMOs are priced off of the UST curve. Since Treasuries dropped in price this negatively impacted the CMOs. Mortgages trade much more independently than CMOs and consequently were not as impacted from rising rates.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   We will continue to emphasize call protected CMOs versus generic pass throughs. The reason for this is that we believe that under the current environment call protection is of paramount importance.

TCW (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   There were no ownership or personnel changes in the 4th Quarter. There were 5 accounts gained and no accounts lost in the 4th Quarter 1993.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   On September 30, 1993 the effective duration of the Salomon Mortgage Index was 2.69. Per TCW's investment guidelines of the State of Minnesota, the minimum duration of the account is 3.0. Therefore we were required to have a duration longer than that of the index. In a rising rate environment this could cause the account to underperform. Perhaps Staff should consider a review of the guidelines to give the manager more duration latitude.

Staff Comments

Staff concurs with the need to review the duration guidelines for TCW (see #4 above). The guideline will be changed to reference a range above and below the duration of the mortgage sector of the Salomon BIG.

Manager Commentary
Western Asset Management

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$11.2 billion	Actual	0.4%	N/A
Total Firm Assets Managed in this Discipline	$ 6.4 billion	Benchmark	0.0%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

The portfolio registered strong performance for the year, both nominally and relative to its benchmark, while fourth quarter performance was only slightly above its benchmark. This record was achieved by having a variety of strategies in place in the portfolio, with virtually every one working as planned. Our long duration posture and barbell maturity structure were a major plus, as we held them throughout the first 9 months of the year as intermediate and long-term rates fell and the yield curve flattened, and defensive strategies employed in the fourth quarter mitigated losses as interest rates rose in the fourth quarter. The portfolio also benefited from its over-exposure to investment grade corporate bonds, which were the top performing sector for the year, and to its underweighting to mortgage-backed issues, which trailed other sectors by a substantial margin. A modest position in municipal bonds also helped, as muni bonds outperformed treasuries in the fourth quarter.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

Our investment outlook is based on the view that the stronger economic growth we have seen of late is largely a by-product of low inflation, as such, it is unlikely to lead to higher inflation. Low inflation fundamentals and a natural tendency to expand are driving the economy along a natural growth path of 2-3% per annum.

Lower interest rates sparked a surge in the interest-sensitive areas of the economy (construction, autos and durable goods) in the second half of last year. Going forward, however, we are likely to see a moderation in the pace of overall economic activity, and a continued reduction in inflation pressures. The recent backup in interest rates has already caused a slowdown in home purchases and refinancing activity, and higher taxes and modest income growth are likely to take some of the wind out of consumer spending in coming months. Meanwhile, job creation, driven primarily by demand for services, which has been relatively flat, remains modest.

We expect long-term interest rates to trend irregularly downward, helped by continued good news on the inflation front, but subject to bouts of nervousness as evidence of growth persists. Short-term rates are unlikely to rise much, if any, particularly should the pace of growth moderate and inflation pressures continue to ease as we think.

Western (con't)

Therefore, we continue to hold an above-average duration, while emphasizing long-term government bonds, and balancing their interest rate risk with diversified holdings of short-term corporate bonds. A healthy economy and low nominal treasury yields should provide good support for corporate issues, so we continue to maintain an overweighting to the corporate sector. With interest rates unlikely to drop dramatically, and with mortgage spreads having widened to more attractive levels, we are holding a neutral exposure to the mortgage sector.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

Ownership/personnel changes:	none
Accounts gained:	Pet Inc.
Account lost:	none

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

None.

Staff Comments

No comments at this time.

Manager Commentary
Fidelity Management Trust Company

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$20.8 billion	Actual	0.3%	10.9%
Total Firm Assets Managed in this Discipline	$ 5.8 billion	Benchmark	0.0%	9.9%

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

The portfolio exceeded the Salomon Broad Investment-Grade Index by 32 basis points during the quarter. Sector allocations and the portfolio's lower quality emphasis were major contributors to the portfolio's strong performance.

The portfolio's corporate dollar duration overweighting during November and December added to relative returns. The corporate sector continues to benefit from improving fundamentals.

Allocation to municipal securities out of taxable securities, known as a "crossover" trace, also helped performance. Municipal securities benefited from an improved supply outlook and greater retail demand as a result of recent tax law changes.

Recent improvements in the economy benefited lower quality corporate issues more than higher quality issues. The portfolio's lower quality emphasis, therefore, added to relative portfolio performance.

An increased allocation to the mortgage sector also benefited the portfolio. The mortgage sector experienced the strongest performance during the quarter.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

Corporates
Continue market value and dollar duration overweighting in corporates, with focus on lower quality issuers. Very strong technicals, and improving fundamentals warrant overweighting. As spreads continue to tighten, we will move to a more neutral position relative to the benchmark.

Mortgages
Recently reduced the 8% mortgage overweighting to neutral. Mortgages are still attractive for a 12 month time horizon and we will look to increase our pass-through position if mortgage spreads widen as expected.

Municipals
Continue maintaining exposure to high quality municipals. As the yield pick-up and better "roll-down." Recently purchased 17 year Treasury STRIPS to take advantage of a slowly flattening yield curve.

Fidelity (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   Theodore C. Laskaris

   Ted is a Quantitative Portfolio Analyst in the Fixed Income Group. Prior to joining the Fixed Income Group in 1993, he was a Business Analyst for Fidelity Management & Research Co.

   We did not lose or gain any accounts during this time period.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   None

Staff Comments

No comments at this time.

Manager Commentary
Goldman Sachs Asset Management

Period Ending:	12/31/93	Returns	Qtr.	Year
Total Firm Assets Under Management	$48.0 billion	Actual	0.3%	N/A
Total Firm Assets Managed in this Discipline	$15.4 billion	Benchmark	0.0%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   The portfolio outperformed the Salomon BIG by 19 basis points in October, 0 basis points in November and 10 basis points in December.

   Total outperformance was 29 basis points for the entire quarter.

   Over the quarter, corporates contributed the largest portion of the outperformance, 12 basis points, in part because the portfolio overweighted corporates but, more important, the corporates that we owned tightened more than those in the index. Strong performers included Time Warner, Telecommunications Inc., GMAC and Tenneco.

   Another strong contributor to the overall performance was the municipal cross-over trade, that we mentioned in the last quarterly report and executed in December. We purchased a 2.5% position in long municipal bonds that tightened 20 basis points over the remaining part of the month to add 6 basis points to the overall performance.

   The remaining outperformance came from a variety of sources. The barbell yield curve structure added roughly 3 basis points as the curve flattened over the period and we continued to add value through relative value swaps in the mortgage sector.

   The only factor that subtracted modestly from the performance was our underweighting of the agency debenture sector. This cost the portfolio 1 basis point in performance as agency spreads narrowed modestly over the period.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   In the middle of the 4th quarter we shortened the portfolio slightly so that we exactly matched the interest rate sensitivity of the benchmark and we also changed our barbelled yield curve exposure to a neutral stance. While we still expect inflation and economic growth to be low and therefore, long-term interest rates to be lower by year-end, the strength of the consumer led recovery and the uncertainty of the timing of these developments cause us to expect a choppy market in the near-term. Therefore we remain neutral to the benchmark duration and yield curve exposure.

Goldman (con't)

Among the market sectors, our largest market overweighting is in the corporate sector (37% vs. 18%) which provides a large yield advantage vs. the index. However, because our corporates are shorter (maturity and duration) than those in the index, our sensitivity to a change in corporate spreads is only modestly greater (13 basis points ROR effect for a 10 basis points narrowing of corporate spreads vs. 10 basis points ROR effect for the index). Sub-sector exposure within the corporates continues to emphasize companies in the banking, automobile and cable/media industries.

In mortgages we remain 5% overweighted on a market value basis versus the index. Our outlook for mortgage spreads is neutral, but we continue to see many relative value trading opportunities in the market.

Our municipal exposure remains at 2.5% of the portfolio and we may increase our exposure. This strategy gives up yield but we think the opportunity for capital appreciation is high given higher marginal tax rates and lower projected supply in 1994.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

During 4th Quarter 1993:

- There were no changes in the ownership of Goldman Sachs Asset Management.
- GSAM had no changes in our U.S. Fixed Income portfolio management staff.
- GSAM had no professional staff losses.
- One new U.S. taxable fixed income separate account opened: DSC Communications.
- Two new non-U.S. client fixed income separate accounts opened: Finnish Export Credit and Global Capital Reinsurance.
- One U.S. tax-exempt fixed income separate account closed: IBM

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

None

Staff Comments

No comments at this time.

Manager Commentary
Lincoln Capital Management Company

Period Ending:	12/31/93	Returns	Qtr.	Year
Total Firm Assets Under Management	$26.3 billion	Actual	0.1%	10.0%
Total Firm Assets Managed in this Discipline	$ 9.7 billion	Benchmark	0.0%	9.9%

1. ***Past Performance.** Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

	4th Quarter 1993		12 Months Ended 12/31/93	
	Active Strategy	Value Added	Active Strategy	Value Added
Mortgages	Overweighted	+0.03%	Overweighted	0.00%
Corporates	Underweighted	0.00	Underweighted	-0.01
BBBs	Underweighted	0.00	Underweighted	-0.03
Asset-Backed	Overweighted	+0.01	Overweighted	+0.03
Miscellaneous				
Rebalancing Transaction Cost	N/A	-0.01%	N/A	-0.05%
Contribution Transaction Cost	N/A	0.00	N/A	-0.07
Security Selection	N/A	+0.05	N/A	+0.25
Total		+0.08%		+0.12%

Security selection was the largest source of value added in the fourth quarter and in 1993. The mortgage sector performed well last quarter as prepayment forecasts slowed in response to higher rates. Asset-backed issues also performed well compared to other corporates. For the year, the largest drag on returns was due to the one time transaction costs associated with the 7/01/93 contribution of $330 million.

2. ***Future Strategy.** What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

Future Strategy	Strategy	Rationale
Government Trust Certificates	Overweighted vs. Treasuries	1. Government Guarantee 2. Attractive Yield 3. Certain Cash Flow
Asset-Backed	Overweighted vs. Treasuries and Corporates	1. High Quality 2. Attractive Yield 3. Low Event Risk 4. Low Prepayment Risk

Lincoln (con't)

Current Coupon Mortgages	Overweighted vs. Treasuries	1. Agency Quality 2. Low Prepayment Risk 3. Wide Nominal Spreads 4. Deferred Settlement
High Coupon Moderately Seasoned GNMA Mortgages	Overweighted vs. Conventionals	1. Lower Prepayment Risk 2. Much Higher Yield

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

	Number	Market Value ($ millions)
Accounts Gained	1	$132
Accounts Lost	0	

There have been no ownership or personnel changes.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

There are no issues or developments that would impact the SBI account.

Staff Comments

No comments at this time.

Manager Commentary
Baring Investment Services

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$9.80 billion	Actual	13.6%	N/A
Total Firm Assets Managed in this Discipline	$0.99 billion	Benchmark	0.9%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

The following figures show a break down of the performance of your portfolio for the quarter ended December 31, 1993:

	Total Return	**Currency**	**Market Weighting**	**Tracking Error**
Minnesota State of Administration	13.6	-3.3	18.9	-1.2
MSCI EAFE Free Index (Net of Dividends)	0.9	-4.0	5.1	-
Relative Return	12.6	0.7	13.1	-1.2

The relative contributions during the quarter to return from currency and market weighting were positive during the quarter. Index tracking error was negative.

Within the currency component of your portfolio, the weighting in the US Dollar and related currencies, and the underweight position in the Yen, were the major contributors to return.

The most significant contribution to performance during the quarter came from our market weightings which produced a relative gain of 13.1%. This was mainly due to the underweighting in Japan and the overweighting in the remainder of Asia.

Tracking error contributed -1.2% to the relative return. This occurred primarily in Thailand and Korea where full index replication is not practical and premiums are paid by foreign investors. In the major markets tracking error was neutral.

Since inception on April 2, 1993 your portfolio has appreciated 27.2% compared to 13.8% and 15.6% for the benchmark and the S&P 500 respectively.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

The main features of your portfolio are:

Substantial exposure to South East Asia;
Underweight in Japan;
Underweight in Europe, but overweight in France;
16.5% of your portfolio hedged back into the US Dollar from the French Franc, Swiss Franc and Yen;
Minimal cash reserves

Baring (con't)

In most major markets, 1993 was again the year of the bond with returns higher than those of domestic equities. In 1994 we believe that the risk/reward trade-off has shifted in favor of equities on a global basis. We do not share the view of many strategies who are calling the end to the bull market in global equities because they perceive an upturn in the interest rate cycle. Our twelve month interest rate for forecasts imply a tightening of monetary policy in the United States by this time next year, but only bringing interest rates back to a range which once would have been regarded as inconceivable three years into an economic recovery.

We are continuing to remain underweight in Japan. Although we are nearer to the bottom of the economic cycle in Japan, we are only forecasting a subdued economic recovery as both consumption and investment will remain weak. This will result in another year of poor corporate profits.

The other Asian markets continue to be underpinned by strong earnings momentum and vibrant liquidity. However, these markets have performed so well that they are now valued at the upper end of their historic valuation range and are ripe for a correction. The long term case for this region remains intact.

The improved growth forecast by the consensus for the European economies in 1994 may not live up to expectations after the first quarter of 1994. Our major position in Europe remains France which we believe is best positioned to benefit from any further falls in interest rates due to the potential of a shift in domestic savings from money market funds to the equity market.

We are forecasting the US Dollar to appreciate in 1994, particularly against the Yen where we see further deterioration in the Japanese trade balance. We are maintaining our currency hedges from the core European currencies and Yen back into the US Dollar and it is likely that any further increase in the Japanese weighting will be hedged.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

Clients Gain	None
Clients Lost	None
Changes in Key Personnel	None

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

None

Staff Comments

None at this time.

Manager Commentary
Brinson Partners, Inc.

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$33.2 billion	Actual	2.8%	N/A
Total Firm Assets Managed in this Discipline	$ 5.6 billion	Benchmark	0.9%	N/A

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

The SBI portfolio is underweighted in Japan by 10%, which contributed favorably to performance. Despite efforts by the government to provide several stimulus packages earlier in the year, the economy continued to weaken and consumer confidence declined further. All other non-U.S. equity markets produced positive returns. As a result, the 10% cash position detracted from performance in both the quarter and full year. Currency strategies proved favorable during the quarter as nearly all currencies declined in value against the U.S. dollar. Negative currency performance for the year is attributable to the overweight position in the Canadian dollar as well as the underweight position in the yen. The yen experienced phenomenal gains during the year. The Canadian dollar declined in value relative to the dollar during this period as the Bank of Canada allowed short rates to decline.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

At the end of December, the allocation to Japan was 29.3%, compared with a benchmark weight of 39.3%. While the valuations for Japan have improved, the market is still trading above fair value and is overvalued relative to other equity markets. Our economic outlook for Japan remains negative.

Within the All Other Markets segment, the portfolio has been overweighted in Australia, Canada and the Netherlands. We continue to believe they display more attractive price/value relationships than other equity markets. We also continue to overweight Belgium, Spain and New Zealand. We are carrying a moderate overweight in the U.K., where relative valuations are becoming more attractive. The most significant underweights are in place in Germany and Italy. The German equity market performed well in 1993, despite a deepening recession, with a bleak outlook for corporate earnings. Many German companies are struggling with a loss of competitiveness, particularly against some of their European competitors.

The strategic cash position of the portfolio is 10%, which represents the maximum of our normal range of 0-10%. The maximum allocation to cash reflects our view that non-U.S. equity markets are overvalued, albeit by varying degrees. The strong rise in prices in 1993 was worrisome since it was generally not accompanied by a fundamental improvement in earnings.

Brinson (con't)

The portfolio maintains a significant underweight in the yen (-32%). The portfolio maintains minimal exposure to the overvalued core ERM currencies. The portfolio currently maintains a 21% allocation to the Canadian dollar and a 28% allocation to the U.S. dollar. The Canadian currency is trading below fair value and short term interest rates in Canada remain above those in the U.S. In our judgment, the Canadian dollar cash return remains attractive as compared to the U.S. dollar and other currencies.

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   No significant ownership or personal changes occurred in the fourth quarter. Client assignments changed as follows:

Gained:	7 accounts	$141 million
Lost:	0 accounts	

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   None of significance in this quarter.

Staff Comments

None at this time.

Manager Commentary
Marathon Asset Management

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management		Actual	-0.3*	N/A
Total Firm Assets Managed in this Discipline	$491.7 million	Benchmark	-2.2*	N/A

* November-December only

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

The portfolio was funded in October and hence performance data for the quarter and year are not available. Over the measured two month period the Fund fell 0.35% versus a 2.20% decline in the benchmark MSCI EAFE Index. Weightings in Japan were raised gradually over the period as the market fell sharply as the severity of the current economic slowdown became clearer. Cash, which stood at 10.7% at year end, will be reduced towards the minimal level required for operating the account. The two major biases within the Fund are growth-oriented Europe (particularly Scandinavian and UK recovery) and laggard Asian markets (Japan and Australia). Both blocs offer attractive valuation criteria and the likelihood of improving corporate earnings momentum.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

Aggressive overseas buying coupled with improving domestic economies and a new found confidence in the region as a whole produced explosive moves within Asia during 1993. The quality of buying in many cases has however been abysmal and with Malaysian turnover on a good day exceeding that of Wall Street, country fund premia bid up to record levels and Hong Kong and Shanghai(!) land prices exceeding those of Tokyo, signs of overheating have not been too hard to find. Marathon's bias hence remains focused on three areas which have remained relatively immune from this growth frenzy: resources; monopolistic/utility large capitalization growth defensives; and Japan. Exposure to resources appears the most obvious defensive play on "emerging market" growth, reflected in higher weightings in Australia and Indonesia. Whilst high (over 20%) growth rates have been priced out of sight, lower but still highly attractive levels (8-12%) which are in many cases more sustainable have been sidelined. And Japan is the great laggard (particularly on a local currency basis) where stock selection should allow attractive returns from a gradual resolution of political stasis and signs of a clear (if unspectacular) rebound in corporate earnings. Marathon's stock returns in Europe during 1993 were excellent reflecting the two-horse nature of these markets. Whilst the hard currency DM-bloc remained mired in economic stagnation with Germany facing the real threat of a further dip, those countries that abandoned the bureaucratic dream of forced convergence and integration saw major re-ratings, particularly of medium capitalization "value" companies. Given the base from which many of these stocks are moving (one times historic peak earnings or less in some cases) Marathon believes further outperformance is likely, with portfolios remaining heavily concentrated in Scandinavia, Southern Europe and the UK.

Marathon (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   No changes in ownership or personnel.
   No accounts lost or gained in international equity over quarter.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   Trying to get a Korean investment number to allow direct investments into South Korea.

   Custodian bank relationship is working well.

Staff Comments

Marathon was funded in November with $150 million. On 12/31/93, $13.7 million was uninvested.

Manager Commentary
Rowe Price-Fleming International

Period Ending:	12/31/93	Returns	Qtr.	Year
Total Firm Assets Under Management	$15.4 billion	Actual	7.5*	N/A
Total Firm Assets Managed in this Discipline	$10.3 billion	Benchmark	-2.2*	N/A

* November-December only

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   Fourth Quarter

   Country allocation accounted for the bulk of the outperformance relative to EAFE during the quarter. The most important features were:

   - Overweighting Pacific ex-Japan which accounted for half of the country positive.
   - Underweighting Japan which accounted for around a third of the country positive.
   - Overweighting Mexico and Argentina which accounted for the bulk of the balance.

   Stock Selection was a useful positive, with good contributions from Europe and Japan.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   Current Position and Outlook

   Countries - We remain fully invested with an overweighting in Continental Europe (cheap, scope for interest rate falls) and relatively aggressive positions in South East Asia/Latin America where there is greatest potential for economic growth and values are still acceptable. We continue to underweight Japan. Valuations in parts of Southeast Asia are beginning to look extended and we would expect to gradually trim back exposure, with Japan and Latin America likely beneficiaries.

   Stocks - Our focus remains on undervalued growth stocks but we have continued to edge up exposure to more cyclical stocks and smaller companies.

Rowe Price (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   There have been no changes in ownership or personnel in the last quarter.

   RPFI gained 2 new accounts in the fourth quarter, both of which were fully international appointments.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   None

Staff Comments

Rowe Price-Fleming was funded in November with $150 million. On 12/31/93, $8.5 million was uninvested.

Manager Commentary
Scudder, Stevens and Clark

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$80.0 billion	Actual	4.9*	N/A
Total Firm Assets Managed in this Discipline	$ 2.6 billion	Benchmark	-2.2*	N/A

* November-December only

1. ***Past Performance.*** *Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

   The Minnesota State Board of Investment portfolio returned 3.04% since inception while the comparable return for the benchmark EAFE index was a negative 2.15%. The portfolio benefited strongly during the quarter from its continued underexposure to Japan, overexposure to Europe and increased participation in emerging markets. Most markets gained ground during the quarter with the exception of Japan. Conversely, most foreign currencies including the yen were weaker against the US dollar. While the result for dollar investors in Japan was double digit declines, strong local gains across most European markets easily offset their currency depreciation. Exposure to emerging markets also added directly portfolio performance. Many of these markets witnessed spectacular returns over the quarter as investors continued to focus on these high growth countries as their investment of choice.

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

   As global stagnation is prolonged, our continued European overexposure to interest-sensitive stocks remains the near term strategy of choice. However, we are cautiously increasing the portfolio's exposure to new themes such as selective cyclical industries and base commodities.

   The portfolio has maintained its underweight position in Japan, which so far has proved to be prudent in light of the ongoing political turmoil there. The volatility that has characterized the stock market during the past year could easily persist in 1994. Our stock selection continues to emphasize companies that will benefit from the restructuring of the old Japan to a new consumer-oriented economy.

   We are maintaining a cautious stance on our emerging markets investments, including Hong Kong to the extent it is a proxy for investment in China's growth story. The impressive gains by these markets in 1993 are unlikely to be repeated this year. Performance in these markets is extremely dependent on a continuation of liquidity flows, particularly from the US. Any slowdown in these flows could result in less attractive returns despite the powerful, long-term secular growth story.

Scudder (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   There have been no significant ownership or personnel changes at the firm over the last quarter.

   Our list of accounts gained and lost in this discipline over the same time period are unavailable at the present time. We will forward them to you as soon as possible.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   None

Staff Comments

Scudder was funded with $75 million in November and $75 million in December. On 12/31/93, $7.7 million was uninvested.

Manager Commentary
Templeton Investment Counsel, Inc.

Period Ending:	**12/31/93**	**Returns**	**Qtr.**	**Year**
Total Firm Assets Under Management	$34.0 billion	Actual	1.6*	N/A
Total Firm Assets Managed in this Discipline	$ 8.0 billion	Benchmark	-2.2*	N/A

* November-December only

1. ***Past Performance.** Summarize your performance over the last quarter and year. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

The Templeton organization does not make pre determined active bets vs a benchmark index. We search for undervalued stocks from a bottom up basis with the portfolio being a residual of that process. With that said, our portfolio deviated from the EAFE index in several important ways. We are significantly over weighted in Europe and Hong Kong. Additionally we have exposure to Mexico, Canada and portions of the emerging markets which are not captured by the EAFE index at all. On the other hand, we are extremely under weighted in Japan, as we continue to find little value relative to other opportunities throughout the world. From an industry perspective a general theme, again a residual, are interest rate sensitive sectors and those which will recover from an expanding economic environment.

2. ***Future Strategy.** What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

With this being a relatively new portfolio, and given that our portfolio turnover averages only some 18-20% annum, much of what has been noted above will apply here as well.

Templeton (con't)

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List accounts gained and lost in this discipline over the same time period.*

   No ownership changes in the last quarter. Thomas Hansberger, CEO of Templeton Investment Counsel, Inc. retired as of November 1993. Don Reed, Executive Vice President and Managing Director, succeeded Tom as President of Templeton Investment Counsel, Inc.

   We gained 7 non-US Equity separate accounts totaling $300.00 MM in the 4th quarter of 1993. They are as follows:

Public	$150.0 MM
Corporation	$ 20.0 MM
Corporation	$ 10.0 MM
Foundation	$ 7.0 MM
Public	$ 60.0 MM
Corporation	$ 50.0 MM

   We have gained 50 commingled participants totaling $443.3 MM.

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

   None

Staff Comments

Templeton was funded with $75 million in November and $75 million in December. On 12/31/93, $23.2 million was uninvested.