

**MINNESOTA STATE BOARD
OF INVESTMENT
MEETING
December 9, 1992
&
INVESTMENT ADVISORY
COUNCIL MEETING
December 8, 1992**

**AGENDA
STATE BOARD OF INVESTMENT
MEETING**

Wednesday, December 9, 1992

8:30 A.M. - Room 125

State Capitol

Saint Paul

TAB

- 1. Approval of Minutes of September 9, 1992**
- 2. Report from the Executive Director (H. Bicker)**
 - A. Quarterly Investment Review (July 1-September 30, 1992) **A**
 - B. Portfolio Statistics (September 30, 1992) **B**
 - C. Administrative Report **C**
 1. Budget and Travel Reports
 2. January 1993 Post Retirement Benefit Increase
 3. FY 1992 Annual Report Draft
 4. Deferred Compensation Plan Review
- 3. Report from the 403(b) Vendor Review Committee (P. Sausen) **D****
- 4. Report from the SBI Administrative Committee **E****
 - A. Review of FY94-95 Budget Request Documents
 - B. Report on Disaster Recovery Plan
 - C. Approval of Accounting System Vendor
 - D. Approval of SBI 1993 Legislative Proposal
 - E. Discussion of Executive Director's Evaluation Process
- 5. Reports from the Investment Advisory Council (J. Yeomans)**
 - A. Stock and Bond Manager Committee **F****
 1. Review of Manager Performance
 2. In-Depth Manager Reviews (Lincoln, Waddell, Wilshire)
 3. Position Paper on Internal Cash Account Investment Guidelines
 4. Results of 1992-95 GIC Bid
 5. Discussion of Emerging Manager Search Process
 6. Review of Candidates for the Bond Manager Monitoring Program
 - B. Alternative Investment Committee **G****
 1. Results of Annual Review Sessions
 2. Status of First Reserve
 3. Reconsideration of Commitment to New Venture Capital Manager (Great Northern Capital Partners)
 - C. Asset Allocation Committee **H****
 1. Revisions to Basic Funds Market Index Composite
 2. Update on International Index Manager Funding
 3. Update on Post Retirement Fund Transition
 4. Discussion of Report from the International Investing Guidelines Task Force
- 6. Report from the International Investing Guidelines Task Force (P. Sausen) **I****

STATE BOARD OF INVESTMENT

Minutes State Board of Investment September 9, 1992

The State Board of Investment (SBI) met at 10:20 A.M. on Wednesday, September 9, 1992 in Room 125, State Capitol, St. Paul, Minnesota. Governor Arne H. Carlson, Chair; Secretary of State Joan Anderson Growe; State Treasurer Michael A. McGrath; State Auditor Mark B. Dayton; and Attorney General Hubert H. Humphrey III were present.

Mr. Carlson called the meeting to order and the minutes of the June 3, 1992 meeting were approved.

Executive Director's Report

Mr. Bicker, Executive Director, referred Board members to Tab A of the meeting materials. He stated that the Basic Funds had exceeded the inflation rate over the last ten years (Basics Total Fund 14.3% vs. Inflation 3.8%) and outperformed the composite index over the five year period (Basics Total Fund 9.3% vs. Composite 9.0%). He added that the Basics had underperformed the median fund for the most recent five year period (Basics-Excluding Alternative Assets 9.5% vs. Median 10.0%).

Mr. Bicker stated that the Basic Funds' market value changed little for the quarter ending June 30, 1992. He reported that the Basic Funds had underperformed both the composite index and the median fund for the quarter (Basics Total Fund 0.4% vs. Composite 0.8%; Basics-Excluding Alternative Assets 0.9% vs. Median 1.8%) but outperformed both targets for the year (Basics Total Fund 14.5% vs. Composite 12.2%; Basics-Excluding Alternative Assets 14.6% vs. Median 13.4%). He stated that the stock segment trailed its target for the quarter (Basic stocks -0.6% vs. Wilshire 5000 Adjusted 0.0%), but had outperformed it for the year (Basic stocks 14.3% vs. Wilshire 5000 Adjusted 13.6%), while the bond segment had slightly underperformed its target for the quarter (Basic bonds 3.9% vs. Salomon Broad Index 4.1%), but had outperformed it for the year (Basic bonds 14.7% vs. Salomon BIG 14.2%).

Mr. Bicker directed members to the Post Retirement Fund summary. He stated that the fund had a relatively large cash flow at the end of the second quarter due to contributions generated from teachers retiring at the end of the school year. He added that this resulted in an increased cash position for the Post Fund at the end of the fiscal year, which was expected. He reported that the SBI is projecting a benefit increase of 4.4%, payable January 1, 1993. Mr. Bicker stated that the stock segment had underperformed for the quarter (Post stocks 0.5% vs. Benchmark 2.0%) but had outperformed its target by 2.5% for the year (Post stocks 19.8% vs. Benchmark 17.2%).

Mr. Bicker reported that the Assigned Risk Plan outperformed all its targets for the quarter (Total Fund 3.9% vs. Composite 3.3%; Equity segment 0.8% vs. Benchmark

0.1%; Bond segment 4.5% vs. Benchmark 3.9%); and year (Total Fund 13.6% vs. Composite 12.9%; Equity segment 11.9% vs. Benchmark 10.9%, Bond segment 14.2% vs Benchmark 12.8%). In conclusion, he stated that as of June 30, 1992, the SBI was responsible for \$19.7 billion in assets

Executive Director's Administrative Report

Mr. Bicker referred members to Tabs B and C of the meeting materials for updates on the budget and travel. Mr. Humphrey noted the performance results for the second quarter and inquired what the performance has been so far during the third quarter. Mr. Bicker stated that the markets have remained relatively unchanged since June 30th.

Mr. McGrath noted that SBI expenditures were \$8,600 less than the budgeted amount for fiscal year 1992.

International Investing

Mr. Carlson asked the international consultant to start the discussion on international investing. Mr. Emkin stated that he had reviewed the proposed position paper on international investing and that staff had incorporated some suggested changes into the paper. He added that other states with large portfolios have taken a similar approach to what the position paper proposes. In response to a question from Mr. Carlson, Mr. Bicker stated that the two issues being presented to the Board for its approval are the adoption of the position paper on international investing, which includes an implementation schedule, and the selection of a passive manager. Mr. Carlson verified that it is the concept of international investing that has received opposition and not anything specifically contained in the position paper. Mr. Carlson invited the groups who wanted to address the international issue to testify before the Board.

Eliot Seide, Legislative Director for AFSCME Council 6, stated that the position of his board is that international investing is not a wise decision at this time and he added that the reasons would be covered in other testimony. He stated he feels it is very important for the SBI to have investment guidelines concerning violations of human rights, labor standards, environmental, and work place standards should the SBI proceed in the international area. Mr. Seide said he hoped this process would bring the question of AFSCME's participation in the SBI's decision-making process to the forefront. In response to a question from Mr. Carlson, he added that AFSCME will pursue increased representation again during the next legislative session through legislation to create a separate pension investment board with employee representatives. He concluded by stating that the issue of foreign investment is a major issue with unions throughout the country.

Mr. Bernard Brommer, President of the Minnesota AFL-CIO stated that the AFL-CIO recognizes the existence of a global economy and is not opposed to the idea of foreign investment. He added, however, that the purchase of foreign securities should be postponed until there is at least a 3% annual growth in domestic product in the U.S. He agreed with Mr. Seide on the importance of establishing standards relating to human,

rights labor rights and the environment. He added that the AFL-CIO supports the legislation to include employee representation on the board that oversees the investment of public employee pension funds. He concluded his presentation by introducing Mr. Richard Grant, a Senior Policy Associate for the AFL-CIO Department of Employee Benefits in Washington, D.C.

Mr. Grant began by giving the Board background information on his department and he stated that his office has been involved in a review of international investing for the past year. He stated that he does not believe there is sufficient evidence that suggests international investing can provide enhanced returns and increased diversification. He proceeded by presenting several statistics that he felt reinforced his view. He said that over the last 10 years, the EAFE index has outperformed the S&P 500 by approximately 1.5% annualized and that he felt this margin was not significant given the greater volatility of EAFE returns. He suggested that there were other investment alternatives available that could result in additional return and diversification while also strengthening the economy of the nation. He suggested that the SBI is probably already adequately diversified.

Mr. Carlson asked where the line should be drawn, i.e. where a corporation registers or where a corporation creates jobs. Mr. Grant stated that the position of the AFL-CIO is not that international investments should be excluded but rather that now is not a good time to begin such a program. He said that if the SBI proceeds, the program should be implemented in such a way that no harm is done to the local economy, the plan participants, or the nation.

Mr. Grant suggested that one alternative to international investing might be investment in economically targeted investments (ETI's) that would increase tax revenues to the state. He added that the AFL-CIO would be interested in assisting the SBI in that area. Mr. Carlson asked Mr. Grant how the SBI should draw the line between investing in a company such as Ford Motor Company, which is registered in the United States but receives a great deal of its revenues from foreign markets, and Toyota, which is registered overseas but provides jobs in America. In response, Mr. Grant stated that since the U.S. is in the longest prolonged recession since the Great Depression, he felt now was not the time to invest approximately \$800 million directly into foreign securities. Mr. Carlson asked if the logical extension of the argument would be to invest only in Minnesota in order to create jobs here. Mr. Grant said that the Board needs to diversify across the nation because Minnesota's economy and the nation's economy are inter-related. Mr. Carlson commented that there are ramifications in the international economy as well.

In response to a question from Mr. Grant, Mr. Carlson said that the international issue has been discussed by the Board over the past four years and that the Board had already debated whether or not to invest internationally. He said that issue had been decided and that now the decision before the Board is how and when to invest internationally. In response to a question from Mr. Carlson, Mr. Grant reiterated that his concerns involved the timing of making international investments as well as the establishment of investment

standards to ensure the evaluation of investments in terms of their impact on domestic employment and environmental issues. Mr. Carlson stated that he felt these issues fall under the category of "social investment" and that the Board's decision-making process regarding investments could become paralyzed if too many restrictions are placed on the funds. Mr. Grant stated that he considers the process to be one of "responsible investing" which he regards as good business.

Mr. Humphrey thanked Mr. Grant for his presentation and noted that it is important to remember the Board's fiduciary responsibilities in the decision-making process. He said he hoped this debate would help focus and sharpen the Board's view and allow it to make better decisions. Mr. Grant said it was his opinion that fiduciary duty allows short term profits to be set aside in pursuit of a long term goal.

Ms. Growe said she appreciated hearing the studies and statistics Mr. Grant had presented. She commented that she believed it is possible to devise a set of statistics to prove either side of an issue. Ms. Growe stated that she agrees that responsible investing can occur without jeopardizing fiduciary responsibilities. She added that currently investment standards (e.g., South Africa restrictions) are applied to the actively managed portfolios but not in the passively managed index fund. She asked the AFL-CIO representatives if their organization had a specific list of issues that are of greatest concern that they would like the Board to consider regarding international investments. Mr. Brommer responded that the issues fell into the broad headings of labor rights, human rights and environmental standards and abuses or atrocities that are brought to the attention from time to time by the media world-wide.

Mr. Dayton thanked the presenters for their comments. He recommended the Board take Mr. Seide's suggestion that the SBI establish an international investment guidelines task force to develop a set of investment guidelines for international investments. He specified that the task force members should include representatives of the Minnesota AFL-CIO, AFSCME, the three retirement groups, two IAC members, deputies of the Board members, staff of the SBI and the Board's international consultant. Mr. McGrath stated that he supported the concept but that he felt the South Africa Task Force (also known as the Task Force on Divestment) would be the appropriate body to deal with these issues. Mr. Dayton agreed that he and Mr. McGrath were thinking along the same lines, however, he felt the task force should have broader representation. In response to a question from Ms. Growe, Mr. Bicker clarified that members of the Task Force on Divestment were one representative of each Board member, and one representative each from labor, the private sector and the retirement systems. Mr. Humphrey asked Mr. Dayton if his recommendation included environmental groups and Mr. Dayton stated he was open to modifications or additions to his recommendation.

Mr. Carlson asked the international consultant to comment on the discussion. Mr. Emkin stated that he felt the general industry would agree with very little of Mr. Grant's presentation. He said he believes the statistics are overwhelmingly clear on the benefits of international investing. He added that the pension plans of General Motors, Ford and

Chrysler, as well as the largest public pension plans, have all diversified through international investments. He explained that the purchase of a foreign stock on the secondary market does not create new capital for the foreign company. He stated that it is important to realize that if there was a 1.5% additional return generated from international investing over a 10-12 year period, as Mr. Grant had stated, that it would result in an additional \$20 million to the taxpayers for every \$100 million invested over that time period. He stressed that when dealing with billions of dollars, small percentage increases can result in significant dollars added. Mr. Emkin stated that the reason to invest overseas is to diversify risk and that there is overwhelming evidence that indicates that domestic multi-national companies do not provide nearly as much diversification as true non-dollar companies. He said that the largest and most sophisticated investors, public and private, would categorically disagree with the conclusions that had been presented.

Mr. Carlson asked Mr. Bicker to clarify the issue before the Board. Mr. Bicker stated that the first recommendation to the Board is the adoption of staff's position paper on international investing. Mr. Emkin and Ms. Yeomans, on behalf of the IAC, confirmed that the implementation plan contained in the paper had their support. Ms. Yeomans reviewed the major provisions of the policy paper.

Ms. Grove said that she sent a letter to MSRS, TRA and PERA asking for their thoughts on the international investing plan. She reported that all three agreed that the SBI should proceed, but that MSRS had recommended that the SBI form a committee, including labor representatives, to review labor issues during the implementation of the international program. Mr. Dayton moved that the SBI establish an International Investing Guidelines Task Force to recommend investment guidelines concerning the rights of working men and women worldwide and environmental issues. He specified that the members of the Task Force were to be: one representative of each Board member, one representative of each of the statewide retirement system boards (MSRS, TRA, PERA), one representative from the Minnesota AFL-CIO, one representative from AFSCME Council 6, two private sector representatives from the Investment Advisory Council (IAC), staff of the SBI, and the SBI's international consultant. He accepted Mr. Humphrey's amendment to include a representative of environmental groups.

Mr. Bicker and Ms. Eller asked for clarification regarding the appointing authority for each member. They suggested that each Board member appoint his or her respective designee, and that the respective presidents or chairs of the retirement systems and the labor organizations appoint those members. Board members suggested that the Governor appoint the environmental group representative. Mr. McGrath said that he felt another group, the Task Force on Divestment, which is already in place could address these issues. He said he would not support the Dayton motion because he felt a referral to the existing task force was a better idea. Mr. Dayton's motion, as amended and clarified, passed.

Mr. Carlson returned to consideration of the international policy paper. In response to a question from Mr. Humphrey, Mr. Bicker stated that the position paper decision would not result in the allocation of any dollars, but that there was a separate recommendation

regarding the funding of a passive manager. Mr. McGrath moved approval of the position paper for international investments. Mr. Humphrey seconded the motion. The motion passed.

International Index Manager Search Committee Report

Mr. Sausen reported that the Committee had interviewed five (5) firms and is recommending that State Street Asset Management be hired as the passive (index) international manager. In response to questions from Mr. Carlson, Mr. Bicker and Mr. Emkin stated that even though State Street Bank is the SBI's custodian, these assets would be segregated within State Street and that the asset management group is a separate entity which would be contracted with under a separate agreement. Mr. McGrath moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Humphrey seconded the motion.

Mr. Bicker clarified for Mr. Humphrey that approval of this motion would result in the allocation of money to the manager and investment in the international markets. Mr. Humphrey voiced his concern about proceeding before the Task Force responds, even though it may not affect the passively managed funds. Mr. Bicker stated that staff would like to proceed since the SBI could begin investing in the international markets which are currently at lower levels. He added that due to the transition taking place in the Post Retirement Fund, the SBI could also take advantage of transferring some domestic stocks to the Post, thereby saving rather significant transaction costs that would otherwise be incurred if the stocks had to be sold and purchased in the open market. In response to a question from Mr. Humphrey, Mr. Bicker stated that he anticipated the international funding to be approximately \$250 million by the next Board meeting.

Mr. Dayton stated that he would prefer to not commit any funds until the Task Force has presented its findings. Mr. McGrath asked whether the guidelines would apply to the passively managed funds and Mr. Dayton stated that he did not want to pre-judge that issue.

In response to a request from Mr. Carlson, Mr. Emkin explained that the more constraints that are put on a fund, the less diversification a fund can achieve. He stated that in his opinion, the Board should proceed with funding for international while the Task Force studies the issues. He expressed his doubts that the Task Force would be able to reach a consensus in the near future. In response to a question from Ms. Growe, both Mr. Bicker and Mr. Emkin stated that the international program could be unwound should the Board wish to at a later date.

Mr. Dayton restated his opposition to funding before the Task Force made its report back to the Board. Mr. McGrath restated his question about whether any proposed guidelines would apply to the passive portfolio. Mr. Humphrey stated that he would feel a greater degree of comfort if the Board proceeded with funding after the Task Force reported back to the Board. Ms. Growe stated that she was going to support the proposal to move forward with investing while studying the guidelines issues. She said she would rather

have all the labor issues resolved before investing any assets, but she said she did not think that was possible. She added that the opinion of MSRS, TRA, and PERA to move forward also influenced her decision.

Mr. Carlson called for a vote on the McGrath motion to accept the Search Committee's report and begin funding the index manager. The motion passed (Mr. Dayton and Mr. Humphrey asked to be recorded as "no" votes).

Proxy Voting Committee

Mr. Sausen reported that the Committee had taken a position on the issue of executive compensation and that a resolution was before the Board for its approval (see Attachment A). Mr. McGrath moved approval of the resolution, as stated in the Committee Report. The motion passed.

403(b) Vendor Committee Report

Mr. Sausen stated that the Committee is recommending that The Wyatt Company be hired as the consultant for the 403(b) vendor selection process. Mr. Carlson stated that he was familiar with the firm and that he recommended them highly. Mr. Humphrey moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Carlson seconded the motion. The motion passed.

Stock and Bond Manager Committee

Ms. Yeomans stated that the Committee's report contained information items only.

Alternative Investment Committee

Ms. Yeomans stated that the Committee Report contained descriptions and recommendations to invest in three private equity funds for \$20 million each. She added that two of the investments are follow-ons to previous investments with the third being a new fund. Mr. McGrath moved approval of the Committee's recommendation, as stated in the Committee Report, concerning Churchill Capital Partners II. Mr. Humphrey seconded. The motion passed.

Mr. Dayton moved approval of the Committee's stated recommendation concerning Great Northern Capital Partners. Mr. Carlson seconded the motion. In discussion, Mr. McGrath voiced his concern that Great Northern did not have any prior fund experience. The motion failed.

Ms. Yeomans described briefly the Midwest Bank Fund III. In response to concerns from Mr. Dayton and Mr. McGrath about small banks being acquired by larger out of state banks, she stated that the result of this type of investment would be the infusion of capital into banks that are profitable and that have expansion opportunities. She added that if

the bank continues to operate in the local community, the jobs and capital should still be available to the community. Mr. Dayton moved approval of the Committee's recommendation, as stated in the Committee Report Mr McGrath and Mr Humphrey seconded The motion passed.

The meeting was adjourned at 12:15 P.M

Respectfully submitted



Howard J Bicker
Executive Director

HJB cao

**RESOLUTION OF THE
MINNESOTA STATE BOARD OF INVESTMENT
RESOLUTION ON EXECUTIVE COMPENSATION**

WHEREAS, executive compensation is a significant financial concern of shareholders;


WHEREAS, executive bonuses or other incentives are frequently not tied to the long-term performance of a company;

WHEREAS, the State Board of Investment can, as a major institutional investor which is financed by Minnesota's taxpayers and public employees, promote policies which hold boards of directors and executives more accountable;

THEREFORE, BE IT RESOLVED THAT:

1. The State Board of Investment directs the Proxy Voting Committee to
 - Support efforts to have boards of directors comprised of a majority of independent directors,
 - Support efforts to have compensation committees made up entirely of independent directors;
 - Support efforts to have executive compensation linked to a company's long-term performance,
 - Encourage full disclosure of compensation package for principal executives
2. This resolution shall take effect immediately.

Adopted this 16th day
of September, 1992.


GOVERNOR ARNE CARLSON
Chair, Minnesota State Board
of Investment

**AGENDA
INVESTMENT ADVISORY COUNCIL
MEETING**

**Tuesday, December 8, 1992
2:00 P.M. - SBI Conference Room
Room 105, MEA Building
Saint Paul**

TAB

- 1. Approval of Minutes of September 8, 1992**
- 2. Report from the Executive Director (H. Bicker)**
 - A. Quarterly Investment Review (July 1-September 30, 1992)** **A**
 - B. Portfolio Statistics (September 30, 1992)** **B**
 - C. Administrative Report** **C**
 - 1. Budget and Travel Reports**
 - 2. January 1993 Post Retirement Benefit Increase**
 - 3. FY 1992 Annual Report Draft**
 - 4. Deferred Compensation Plan Review**
- 3. Report from the 403(b) Vendor Review Committee** **D**
- 4. Report from the SBI Administrative Committee** **E**
 - A. Review of FY94-95 Budget Request Documents**
 - B. Report on Disaster Recovery Plan**
 - C. Approval of Accounting System Vendor**
 - D. Approval of SBI 1993 Legislative Proposal**
 - E. Discussion of Executive Director's Evaluation Process**
- 5. Reports from the Investment Advisory Council**
 - A. Stock and Bond Manager Committee (J. Eckmann)** **F**
 - 1. Review of Manager Performance**
 - 2. In-Depth Manager Reviews (Lincoln, Waddell, Wilshire)**
 - 3. Position Paper on Internal Cash Account Investment Guidelines**
 - 4. Results of 1992-95 GIC Bid**
 - 5. Discussion of Emerging Manager Search Process**
 - 6. Review of Candidates for the Bond Manager Monitoring Program**
 - B. Alternative Investment Committee (D. Veverka)** **G**
 - 1. Results of Annual Review Sessions**
 - 2. Status of First Reserve**
 - 3. Reconsideration of Commitment to New Venture Capital Manager (Great Northern Capital Partners)**
 - C. Asset Allocation Committee (J. Bohan)** **H**
 - 1. Revisions to Basic Funds Market Index Composite**
 - 2. Update on International Index Manager Funding**
 - 3. Update on Post Retirement Fund Transition**
 - 4. Discussion of Report from the International Investing Guidelines Task Force**
- 6. Report from the International Investing Guidelines Task Force** **I**

STATE BOARD OF INVESTMENT

Minutes Investment Advisory Council Meeting September 8, 1992

The Investment Advisory Council met on Tuesday, September 8, 1992 at 2:00 P.M. in the State Board of Investment (SBI) Conference Room, 55 Sherburne Avenue, St. Paul, Minnesota.

MEMBERS PRESENT: David Bergstrom; John Bohan; Jim Eckmann; Elton Erdahl; Ken Gudorf; Laurie Fiori Hacking; Keith Johnson; Peter Kiedrowski; Han Chin Liu; Malcolm McDonald; Gary Norstrom; Barbara Schnoor; Michael Troutman; Deborah Veverka; and Jan Yeomans.

MEMBERS ABSENT: David Jeffery and John Gunyou.

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

OTHERS ATTENDING: Gary Austin; Maureen Culhane, Richards & Tierney; Allan Emkin, Pension Consulting Alliance; Secretary of State Joan Anderson Growe; John Hagman; John Manahan; O.M. (Mike) Ousdigian; Lisa Rotenberg; Peter Sausen; Ed Stuart, REAM; Elaine Voss and Robert Whitaker.

Minutes from June 2, 1992

Mr. Bicker pointed out a correction to the minutes in the fourth line from the bottom of page 1 where the word "passive" should be replaced with the word "active." The minutes of the June 2, 1992 meeting, as corrected, were approved.

Executive Director's Report

Mr. Bicker, Executive Director, distributed an information packet showing the investment results for fiscal year 1992 (see Attachment A). He reviewed the objectives for the Basic Retirement Funds which are: to provide real rates of return that are 3-5 percentage points greater than the rate of inflation over moving ten year period and to outperform the median fund and a composite index over a five year period. He reported that the Basics had exceeded the inflation rate by 11.4% on a one year basis; by 5.0% on a five year annualized basis and by 10.5% annualized over a 10 year period. Mr. Bicker continued by stating that the Basic Funds had outperformed the composite index for the last fiscal year (Basics 14.5% vs. Composite 12.2%) and for the last five year period (Basics 9.3% vs. Composite 9.0%). He reported that the Basic Funds had outperformed the median fund

for the last fiscal year (Basics 14.6% vs. Median 13.4%) and underperformed the median over the latest five year period (Basics 9.5% vs. 10.0%).

Mr. Bicker noted that the objectives for the Post Retirement Fund will change during fiscal year 1993 when the new benefit increase formula takes effect. He stated that the SBI is projecting a benefit increase of 4.4%, payable January 1, 1993. He added that the actual benefit increase will be known in December 1992.

Mr. Bicker referred members to Tab A of the meeting materials. He stated that the Basic Funds remained approximately the same size in market value for the quarter ending June 1992. He reported that the Basic Funds had slightly underperformed both the composite index and the median fund for the quarter (Basics Total Fund 0.4% vs. Composite 0.8%, Basics-excluding alternative assets 0.9% vs. Median -1.8%) but outperformed both targets for the year (Basics Total Fund 14.5% vs. Composite 12.2%; Basics-excluding alternative assets 14.6% vs. Median 13.4%). He stated that the stock segment trailed its target for the quarter (Basic stocks -0.6% vs. Wilshire 5000 Adjusted 0.0%), but outperformed it for the year (Basic stocks 14.3% vs. Wilshire Adjusted 13.6%), while the bond segment had outperformed its target for the year (Basic bonds 14.7% vs. Salomon BIG 14.2%).

Mr. Bicker directed members to the Post Retirement Fund summary. He stated that the fund had a relatively large cash flow at the end of the second quarter due to contributions generated from teachers retiring at the end of the school year. He added that this resulted in an increased cash position for the Post Fund at the end of the fiscal year, which was expected. He reported that the SBI is projecting a benefit increase of 4.4%, payable January 1, 1993. Mr. Bicker stated that the stock segment had underperformed for the quarter (Post stocks 0.5% vs. Benchmark 2.0%) but outperformed its target by over 2.5% for the year (Post stocks 19.8% vs. Benchmark 17.2%).

Mr. Bicker reported that the Assigned Risk Plan had outperformed its composite for the quarter (Total Fund 3.9% vs. Composite 3.3%); and year (Total Fund 13.6% vs. Composite 12.9%). In conclusion, he stated that as of June 30, 1992, the SBI was responsible for \$19.7 billion in assets.

Mr. Bicker introduced Mr. Allan Emkin of Pension Consulting Alliance (PCA), the SBI's new international consultant, to the IAC and in response to a suggestion from Ms. Growe, all people in attendance at the meeting introduced themselves to Mr. Emkin.

Ms. Yeomans noted a change in the order of the agenda for the meeting, stating that Item 6 would be discussed first and that the IAC would work its way back up to items 5, 4, and 3, in that order.

Asset Allocation Committee Report

Mr. Bohan stated that the task of the Committee since the previous quarter had been to work with the new international consultant, PCA, to incorporate any suggestions the consultant had into the position paper. Mr. Bohan added that the paper had also been

reviewed by Jim Waterman, a representative of InterSec, one of PCA's consulting allies. Mr. Bohan stated that suggestions from both PCA and InterSec were incorporated into the report and that the position paper had received very positive support from both firms. Mr. Bohan reviewed the history of the international equity implementation plan and summarized the strategies and reasoning behind the initial structure recommendation concerning passive management. He stated that the Committee's recommendation is that the IAC adopt the position paper as its implementation plan for international equity investing in the Basic Retirement Funds.

In response to a question from Ms. Veverka, Mr. Bohan stated that the Committee was recommending that hedging not be used as a strategy for the passive portfolio and that they had not studied the impact of the present "weak dollar" currency situation on the passive portfolio. In response to a question from Mr. Troutman, Mr. Bohan stated that he thinks that many of the management structure decisions will evolve as the SBI becomes more familiar with individual international managers. He stated that he thinks the majority of Committee members are interested in looking for managers with established track records of adding value through country allocations. He added that the Committee will update the IAC as the international program progresses.

Mr. Gudorf asked for an explanation of how the Committee decided on capitalization weighting vs. weighting by gross domestic product (GDP). Mr. Bohan stated that he is not aware of many funds being GDP weighted and he said that he feels that the issue Mr. Gudorf was raising really relates to the active vs. passive decision. After further discussion regarding the differences between the two weighting strategies, Ms. Yeomans asked Mr. Gudorf if he was comfortable with the Committee's position on the issue. Mr. Gudorf stated that if the SBI was going to continue to move toward active management he had less of a problem with it.

Mr. Bicker clarified the implementation schedule for international investing for Ms. Veverka, by stating that if the Board approved the international proposal, funding could begin on October 1, 1992 with \$50-100 million a month being invested in the passive portfolio, depending on the crossing opportunities. In response to questions from Mr. Gudorf and Ms. Veverka, Mr. Bicker explained that since the Post Fund needed to purchase domestic stocks and the Basics needed to sell domestic stocks, some stocks could be transferred from the Basics to the Post at no charge to the SBI.

In response to a question from Ms. Growe, Mr. Bohan recapped the discussion regarding capitalization weighting vs. GDP weighting. He stated that the Morgan Stanley's Europe, Australia, Far East (EAFE) index is based on capitalization weightings and thus results in a heavier weighting in Japan. He explained that capitalization weighting looks at the size of the country's stock market vs. GDP weighting which is determined by the size of a country's economy.

Mr. McDonald moved approval of the Committee's recommendation, as stated in the Committee Report, to adopt the position paper as its implementation plan for international

equity investing in the Basic Retirement Funds. Mr. Norstrom seconded the motion. The motion passed. Ms. Growe thanked the retirement system directors on the IAC for having their boards' respond to her letter regarding international investments.

International Index Manager Search Committee

Mr. Sausen referred members to Tab I of the meeting materials and reported that five firms had been interviewed by the Committee: Alliance Capital, Bankers Trust, Boston International, State Street Asset Management and Wells Fargo Nikko. He stated that the Committee is recommending that State Street Asset Management be hired as the manager for the passive international fund. Mr. Kiedrowski moved approval of the Committee's recommendation, as stated in the Committee Report. Mr. Gudorf seconded the motion. The motion passed

Alternative Investment Committee Report

Ms. Veverka referred members to the Tab G of the meeting materials and stated that the Committee dealt with four topics during the quarter. She stated that the Committee reviewed the current strategy for the alternative investment area and that after adjusting the figures for the Jacobs IMR Fund commitment, the SBI was approximately \$90 million under its 15% target. She reported that annual review sessions were conducted for the private equity managers of KKR, Brinson, Golder Thoma, Zell Chilmark and one real estate manager, Zell-Merrill Lynch. She added that there were no surprises in the information presented at any of these reviews.

Ms. Veverka summarized the status of a lawsuit against First Reserve, one of the SBI's oil and gas managers, by Houston Monarch regarding the purchase of McMurray Oil Tools. She explained that in a jury trial in Texas, the court ruled against First Reserve with a judgment for the plaintiff of \$150 million. She added that if this ruling is upheld, it would force the general partner into bankruptcy. She noted that no action is needed at this time and that the discussion was just for informational purposes only. Mr. Bicker and Ms. Eller both confirmed that the SBI's funds are not directly involved in the Texas judgment, however, Ms. Eller noted that another suit is in progress in Louisiana that could potentially effect the SBI's investments with First Reserve. Ms. Eller noted that it was important to monitor the situation closely but that the SBI needs to maintain a passive role in order to avoid the possibility of being considered a general partner rather than a limited partner. She pointed out limited partners have limited liability but general partners are exposed to greater liability. In response to a question from Mr. McDonald, Ms. Yeomans stated that the impact on the SBI's funds is that there could be new management of First Reserve. In response to a question from Mr. Bohan, Ms. Veverka stated that the market value of the SBI's participation in First Reserve/AMGO Funds I, II, IV and V is approximately \$40 million and that most of the lawsuit exposure is limited to AMGO IV.

Ms. Veverka described the three new private equity funds that staff and the Committee were recommending, which are Churchill Capital, Great Northern Capital Management and ChiCorp Management II, Inc. She summarized the investment strategy of each fund and said that the Committee's recommendation called for a \$20 million investment in each

of the three funds. Mr. Gudorf moved approval of all three of the Committee's recommendations, as stated in the Committee Report. Mr. McDonald seconded the motion. The motion passed.

As a result of a question from Mr. Eckmann, a discussion took place regarding how the allocation to the alternative area is calculated and whether or not new investments should continue to be considered if the SBI is above its allocation target. Mr. Bicker reminded members of the action that took place at the September 1991 Board meeting, when the SBI requested a 20% allocation to alternative investments and received approval for a 15% allocation, which was defined as market value of the fund plus any unfunded commitments. He added that until recently, the SBI was above the 15% level. However, he noted that even if the Board approved the three new investments this quarter, the SBI would still be below its target and could consider additional investments. In response to a question from Ms. Growe, Mr. Eckmann replied that the SBI should always be considering superior or outstanding opportunities, regardless of whether or not there are specific targets for real estate or venture categories within the alternative investment area. Mr. Troutman said it was hard to argue with being opportunistic within the alternative investment area but said that he feels that there are also benefits to setting targets for individual categories. He said sub-category targets force investors to look closely at assets that may be out of favor currently, e.g. real estate. Mr. Bicker stated that there is approximately \$65 million of unfunded commitments in the real estate area and that he feels real estate is a good buy over the long-term if the SBI feels comfortable with the possibility that the real estate market could remain depressed during the next 2-3 years.

Stock and Bond Manager Committee

Mr. Eckmann stated that the Committee reviewed all the stock and bond managers' performance and he summarized the performance data that Mr. Bicker had presented earlier in the meeting. He reported that in-depth reviews had been done on Franklin Portfolio Associates and Lehman Ark Management. He stated that Franklin's under performance was a result of poor stock selection decisions, however he noted that they have an experienced, stable staff that has been applying their investment approach consistently since inception. He added that staff and the Committee were in agreement that Franklin should continue to be retained by the SBI. Mr. Eckmann stated that Lehman Ark had also been following its investment philosophy but that the portfolio had underperformed due to poor sector and duration decisions. He said that staff had concluded that Lehman should continue to be retained as a manager at the present time. He noted, however, that staff had also recommended that the SBI should consider replacing Lehman if a higher value-added manager can be identified during the upcoming manager search.

Mr. Eckmann stated that the Committee had reviewed the Equity Manager Monitoring Program and he said the purpose of the program is to monitor those managers which are likely to be included in future active domestic equity manager searches. He referred members to the listings of potential managers included in the Committee Report and he explained the reasons behind the elimination of several candidates.

Ms. Yeomans polled the IAC members on whether or not they were comfortable recommending the retention of both Franklin Portfolio Associates and Lehman Ark Management. No opposition was voiced. She noted that a vote or motion was not needed. She also polled members on their acceptance of the ten managers being recommended for the equity monitoring program. No opposition was voiced. Mr. Bicker emphasized that the SBI would like to receive input from the IAC and others for potential managers. Mr. Bohan stated his approval of the approach but noted that there did not appear to be any candidates in the large capitalization value area. Mr. Bicker stated that there are not many firms that currently follow that philosophy or have an adequate track record. Mr. Gudorf suggested that a similar monitoring process be implemented for the international equity and alternative investment areas. Ms. Lehman reiterated that staff intend to replicate the solicitation process for domestic bonds and international active managers and encouraged members to suggest candidates in all asset classes.

403(b) Vendor Review Committee

Mr. Sausen explained the SBI's role in the selection of ten insurance companies to provide tax-sheltered annuities to school district employees statewide. He stated that the Committee had interviewed four firms that had responded to the RFP for consulting services. He listed the criteria used in the evaluation process and reported that the Committee was recommending The Wyatt Company be hired as the 403(b) consultant. In response to a question from Mr. Bohan, Mr. Bicker and Ms. Eller stated that only those districts providing matching funds must utilize the insurance companies that will be selected by the SBI. Mr. Bohan suggested that the 403(b) participants should be given the opportunity to invest in something other than an annuity. Mr. Bicker stated that the SBI could only follow what had been set up in statute which specifies insurance companies. He noted that the SBI did not seek the legislation. Mr. Kiedrowski moved approval of the Committee's recommendation to retain The Wyatt Company as the 403(b) consultant, as stated in the Committee Report. Mr. McDonald seconded the motion. The motion passed.

Proxy Voting Committee

Mr. Sausen stated that a proposed resolution regarding executive compensation was included in Tab D of the meeting materials. Ms. Yeomans noted that this was an information item only and that the Board would be considering the proposed resolution. In response to a question from Mr. Kiedrowski, Ms. Yeomans explained that the Proxy Committee is a separate entity from the IAC. Mr. Kiedrowski stated that he would like to see the IAC involved in all aspects of the SBI and moved that the IAC concur with the recommendation and resolution being proposed by the Proxy Committee. Mr. Gudorf seconded the motion. The motion passed.

Mr. Norstrem requested that the minutes reflect the excellent work done by the Committee and staff on the international investing position paper. Ms. Yeomans expressed thanks to the consultants as well. The meeting was adjourned at 3:20 P.M.

Respectfully submitted

A handwritten signature in black ink, appearing to read "Howard Bicker". The signature is written in a cursive, slightly slanted style.

Howard J. Bicker
Executive Director

HJB:cao

Fiscal Year 1992

**Investment Results
Compared to Fund Objectives**

Basic Retirement Funds

Post Retirement Fund

BASIC RETIREMENT FUNDS

OBJECTIVE # 1:

Provide Real Return

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

OBJECTIVE #2:

Exceed Median Fund

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

OBJECTIVE #3:

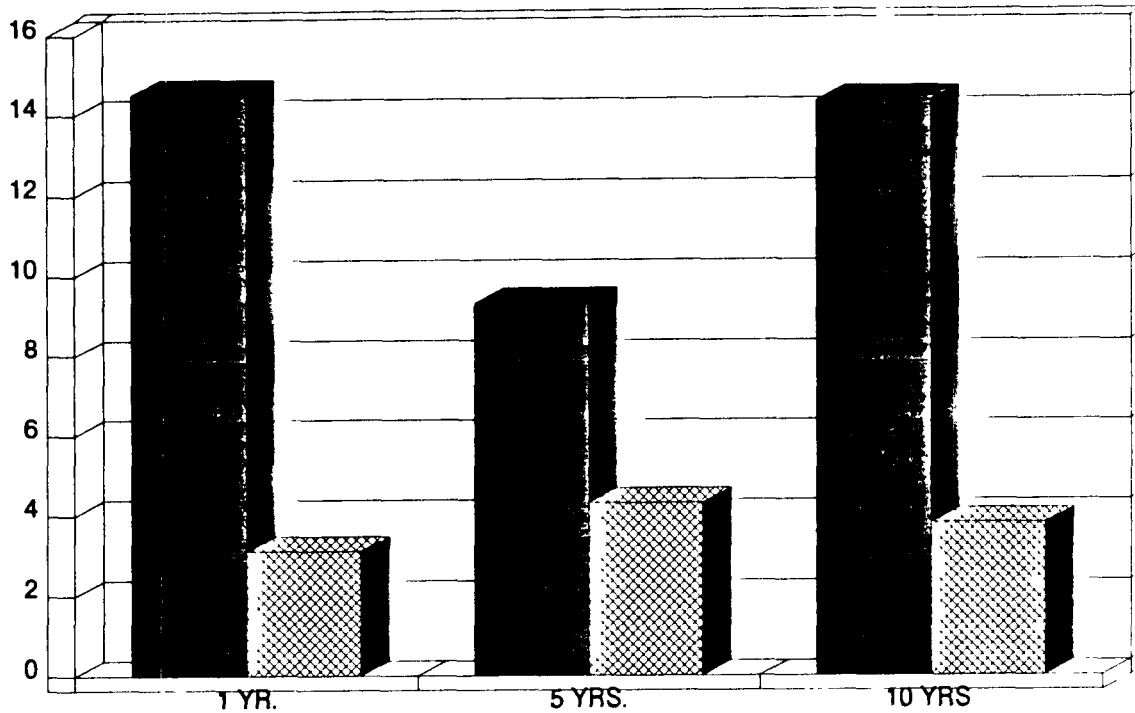
Exceed Composite Market Index

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

BASIC RETIREMENT FUNDS

**Total Fund
vs.
Inflation**

PERCENT



	1 Yr. FY 92	5 Yrs. FY 88-92 Annualized	10 Yrs. FY 83-92 Annualized
Basic Funds	14.5%	9.3%	14.3%
Inflation (CPI)	3.1	4.3	3.8
Real Return	11.4	5.0	10.5

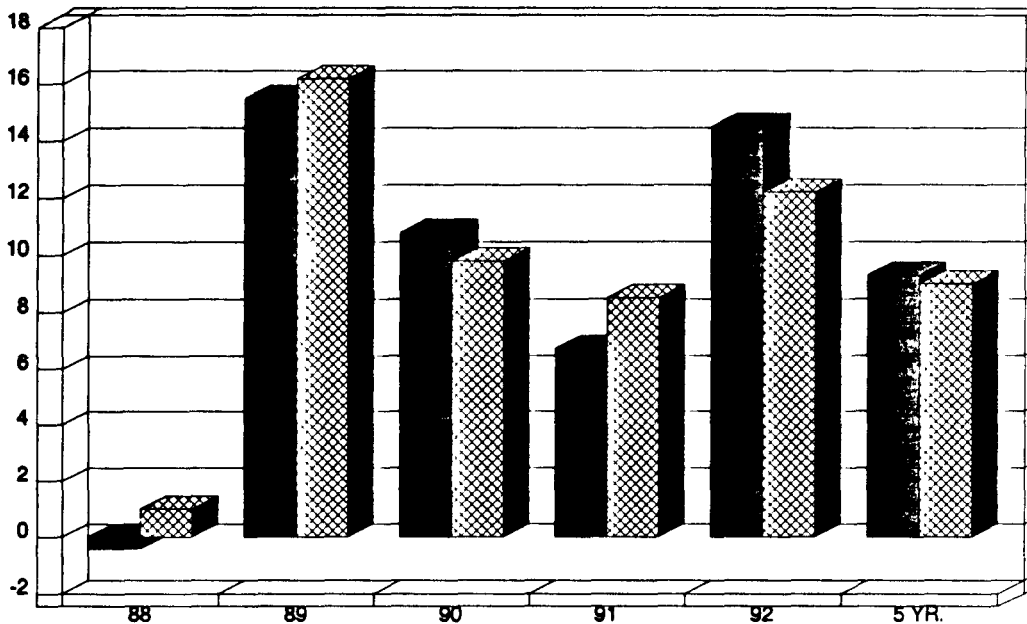
BASIC RETIREMENT FUNDS

Total Fund

vs.

Composite Index

PERCENT



 BASIC FUNDS

 COMPOSITE INDEX

	Fiscal Year					Annualized
	1988	1989	1990	1991	1992	5 Yr.
Basic Funds	-0.4%	15.5%	10.8%	6.7%	14.5%	9.3%
Composite	1.0	16.2	9.8	8.5	12.2	9.0

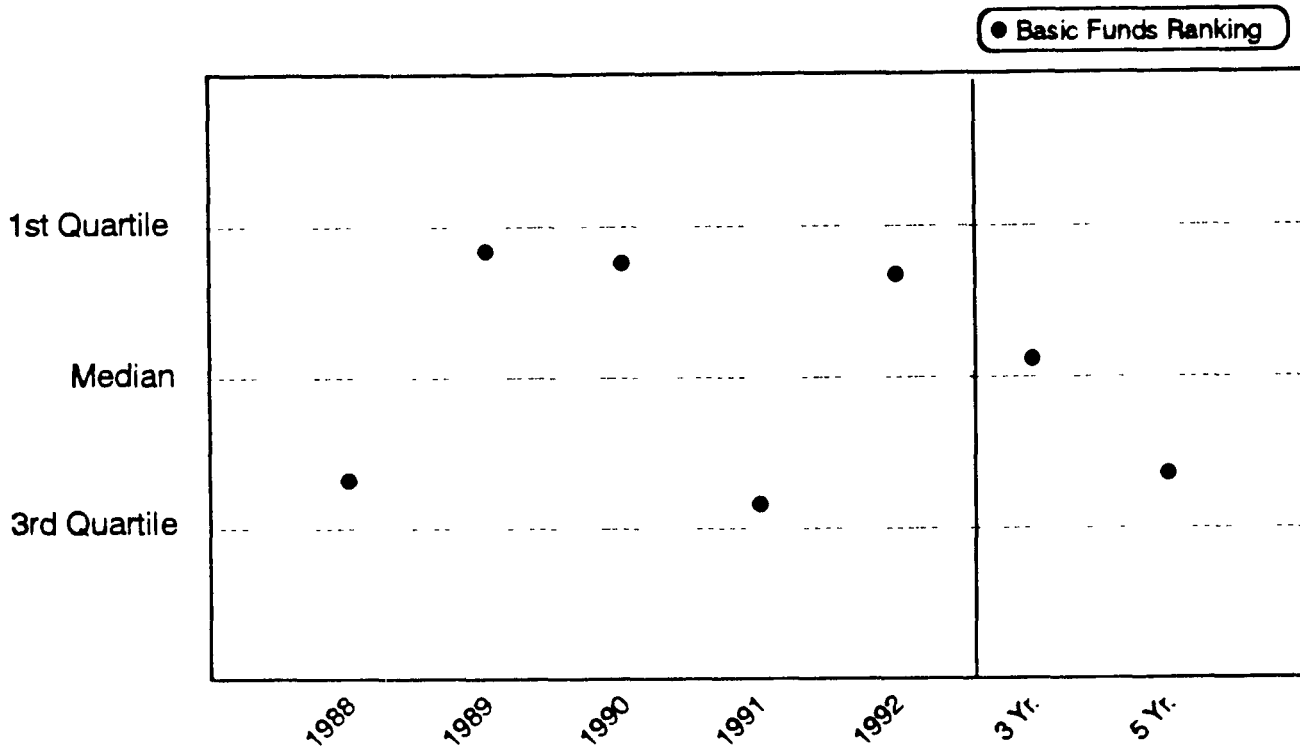
Composite Index as of 6/30/92:

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

100.0%

BASIC RETIREMENT FUNDS

Total Fund
vs.
Public and Private Funds



	Fiscal Year					Annualized	
	1988	1989	1990	1991	1992	3 Yr.	5 Yr.
Basic Funds*	-0.8%	15.9%	11.9%	6.8%	14.6%	11.0%	9.5%
TUCS Balanced Funds**							
1st Quartile	4.3	16.4	13.2	10.3	15.7	12.2	10.8
Median	1.1	14.3	10.0	8.6	13.4	11.0	10.0
3rd Quartile	-1.7	12.4	7.9	6.5	11.4	10.0	9.1

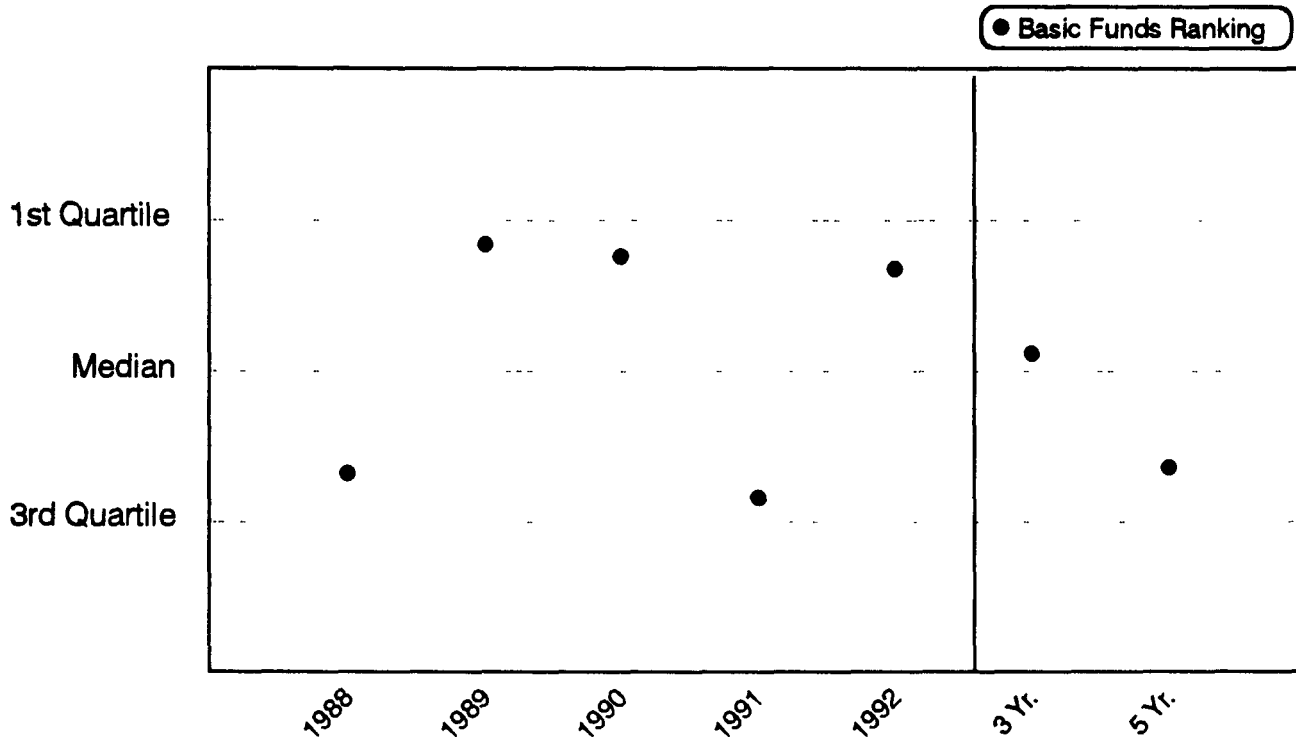
* Basic Funds returns without alternative investments

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

Source: Trust Universe Comparison Service

BASIC RETIREMENT FUNDS

Total Fund
vs.
Public and Private Funds



	Fiscal Year					Annualized	
	1988	1989	1990	1991	1992	3 Yr.	5 Yr.
Basic Funds*	-0.8%	15.9%	11.9%	6.8%	14.6%	11.0%	9.5%
TUCS Balanced Funds**							
1st Quartile	4.3	16.4	13.2	10.3	15.7	12.2	10.8
Median	1.1	14.3	10.0	8.6	13.4	11.0	10.0
3rd Quartile	-1.7	12.4	7.9	6.5	11.4	10.0	9.1

* Basic Funds returns without alternative investments

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

Source: Trust Universe Comparison Service

POST RETIREMENT FUND

OBJECTIVE #1:

Maintain Current Benefits

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

OBJECTIVE #2:

Provide Benefit Increases

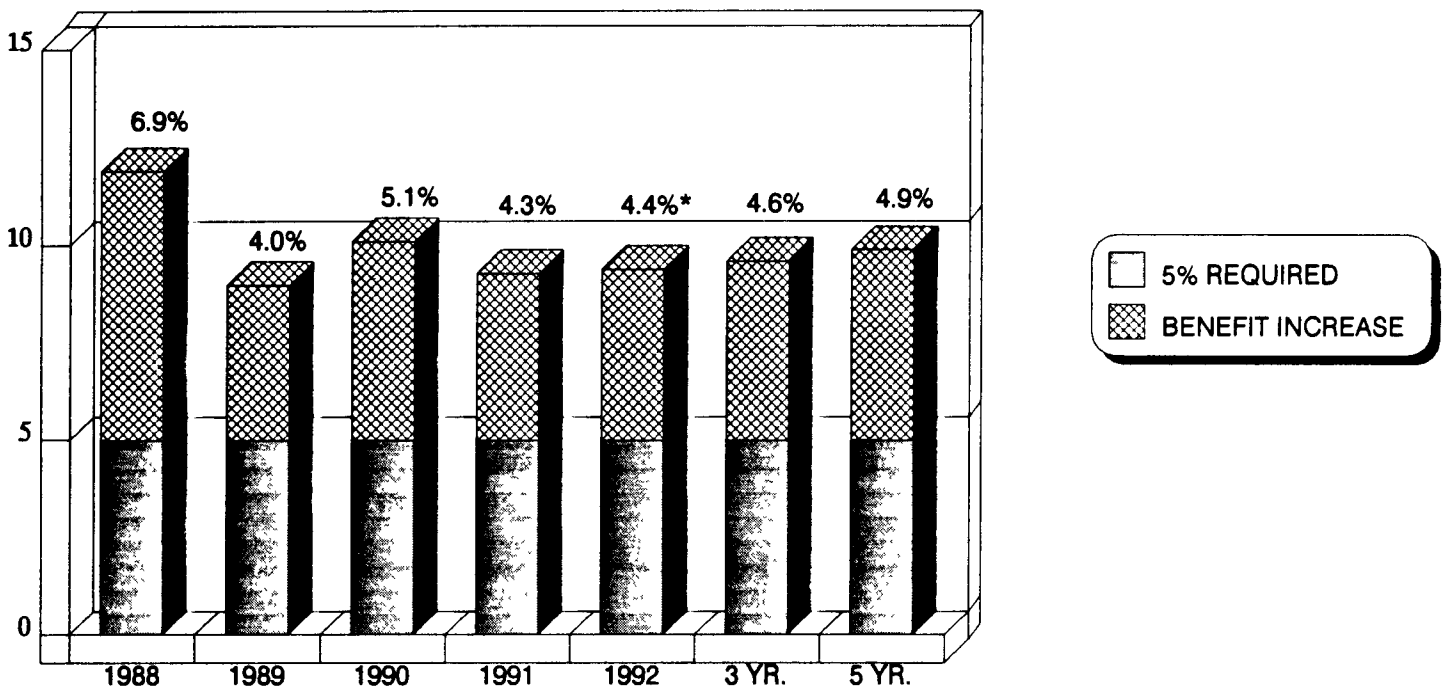
Generate at least 3% additional realized earnings to provide benefit increases.

POST RETIREMENT FUND

Realized Earnings

FY 1988 - FY 1992

PERCENT



	Fiscal Year					Annualized	
	1988	1989	1990	1991	1992	3 Yr.	5 Yr.
Earnings	11.9%	9.0%	10.0%	9.3	9.4%***	9.6%	9.9%
Benefit Increase**	6.9	4.0	5.1	4.3	4.4*	4.6	4.9
Inflation	3.9	5.2	4.7	4.7	3.1	4.2	4.3

* Estimate. Actual increase will not be calculated until actuarial data is received in late calendar year 1991.

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

*** Estimate. Full effect of amortization unavailable at this time.

Tab A

RETURN OBJECTIVES

Basic Retirement Funds

\$8.8 Billion Market Value

	Period Ending 9/30/92 Actual	Compared to Objective
Total Return		
Total Fund over 10 years	13.3%	9.6 percentage points above
<ul style="list-style-type: none"> ■ Exceed inflation by 3-5 percentage points 		
Total Fund over 5 years	9.0%	0.1 percentage points above
<ul style="list-style-type: none"> ■ Exceed composite market index 		
Stocks, Bonds, Cash over 5 years	9.3%	0.9 percentage points below
<ul style="list-style-type: none"> ■ Exceed median fund 		

Post Retirement Fund

\$7.4 Billion Market Value

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

ACTUARIAL VALUATIONS

MSRS, TRA, PERA General Plans

June 30, 1991

	Active (Basics)	Retired (Post)	Total (Basics & Post)
Liability Measures			
1) Current and Future Benefit Obligation	\$14.0 billion	\$5.1 billion	\$19.1 billion
2) Accrued Liabilities	10.0	5.1	15.1
Asset Measures			
3) Current and Future Actuarial Value	\$13.9 billion	\$5.1 billion	\$19.0 billion
4) Current Actuarial Value	6.4	5.1	11.5
Funding Ratios			
Future Obligations vs. Future Assets (3 ÷ 1)	99%	100%	99%
Accrued Liabilities vs. Current Actuarial Value (4 ÷ 2)*	64	100	76*

* 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 74% for the Basics, 100% for the Post and 84% 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

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

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

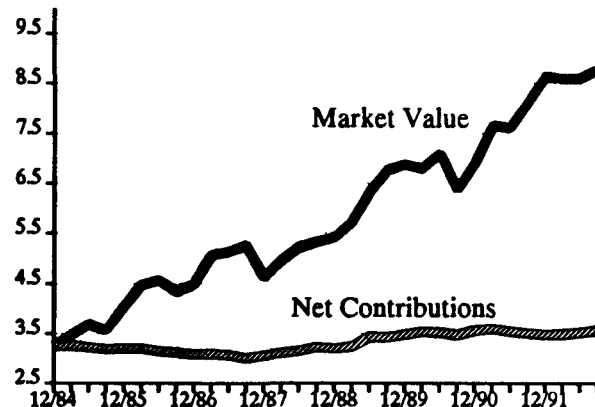
EXECUTIVE SUMMARY

Basic Retirement Funds

Asset Growth

The market value of the Basic Funds increased 2.0% during the third quarter of 1992. The increase resulted from positive returns from the bond and stock markets.

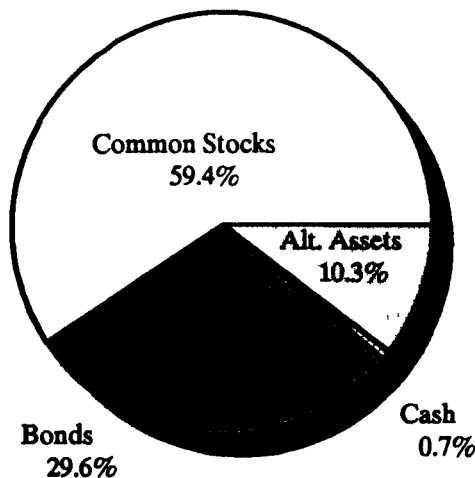
	Asset Growth During Third Quarter 1992 (Millions)
Beginning Value	\$8,608
Net Contributions	-42
Investment Return	215
Ending Value	\$8,781



Asset Mix

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

There were few changes to the actual asset mix during the quarter. The bond segment increased slightly due to falling interest rates which caused bond prices to rise.



**Actual Asset Mix
9/30/92**

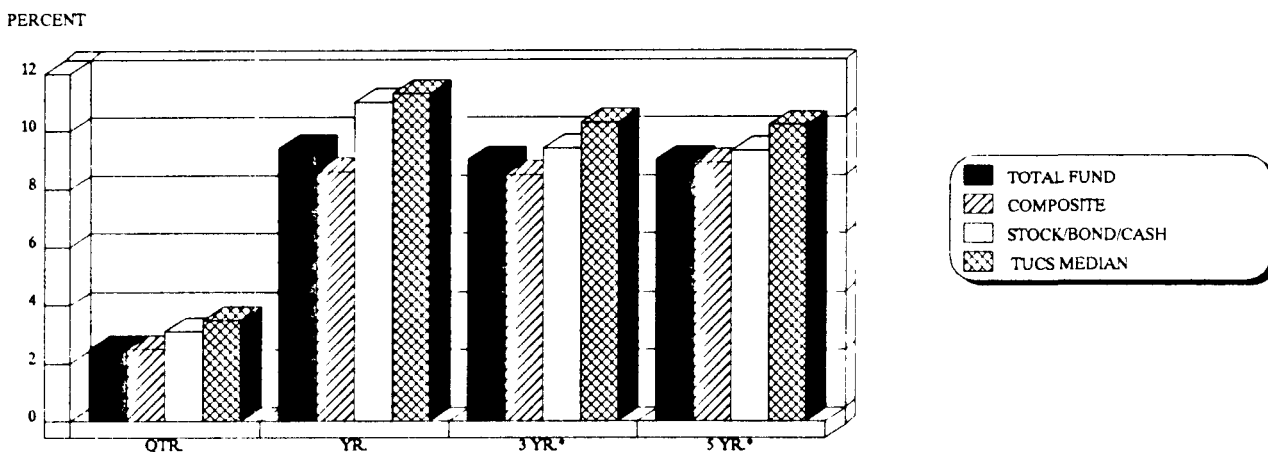
	Policy Asset Mix	Actual Mix 9/30/92	Actual Market Value (Millions)
Stocks	60.0%	59.4%	\$5,221
Bonds	24.0	29.6	2,599
Alternative Assets	15.0	10.3	902
Unallocated Cash	1.0	0.7	59
	100.0%	100.0%	\$8,781

Basic Funds (Con't.)

Total Fund Performance

The total fund including alternative assets matched the market composite for the quarter and exceeded it for the latest year. However, the total fund excluding alternative assets trailed the median fund for the quarter and year.

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



Period Ending 9/30/92

	Qtr.	Yr.	*(Annualized)	
			3 Yr.	5 Yr.
Total Fund	2.5%	9.4%	9.0%	9.0%
Composite Index **	2.5	8.6	8.5	8.9
Stocks, Bonds and Cash Only	3.1	11.0	9.4	9.3
TUCS Median Balanced Fund***	3.5	11.3	10.3	10.2

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

*** Trust Universe Comparison Service (TUCS) includes returns of over 800 public and private tax-exempt investors

Stock Segment Performance

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

Stock Segment	Qtr.	Yr.	(Annualized)	
			3 Yr.	5 Yr.
Wilshire 5000*	2.5%	9.8%	7.9%	7.8%
	2.5	10.0	8.3	8.0

* Adjusted for liquor and tobacco restrictions

Bond Segment Performance

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

Bond Segment	Qtr.	Yr.	(Annualized)	
			3 Yr.	5 Yr.
Salomon Broad Index	4.4%	13.0%	12.2%	12.1%
	4.3	12.7	12.1	12.2

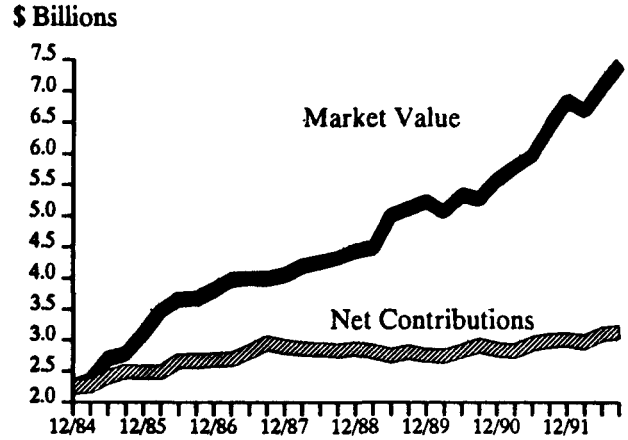
EXECUTIVE SUMMARY

Post Retirement Fund

Asset Growth

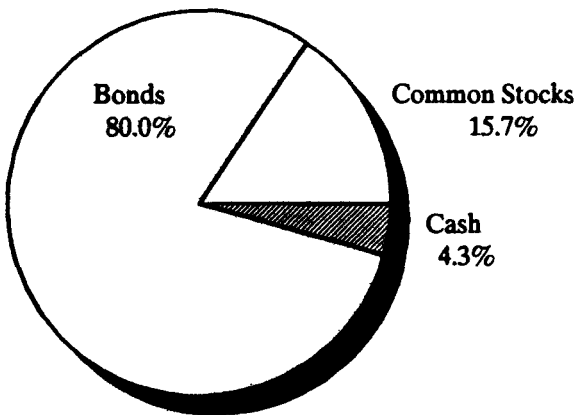
The market value of the Post Fund increased by 5.0% during the third quarter of 1992. Assets increased due to positive net contributions and bond performance.

	Asset Growth During Third Quarter 1992 (Millions)
Beginning Value	\$7,087
Net Contributions	38
Investment Return	317
Ending Value	\$7,442



Asset Mix

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



Actual Asset Mix
9/30/92

	Policy Asset Mix	Actual Mix 9/30/92	Actual Market Value (Millions)
Stocks	50.0%	15.7%	\$1,166
Bonds	47.0	80.0	5,959
Unallocated Cash	3.0	4.3	317
	100.0%	100.0%	\$7,442

Post Fund (Con't)

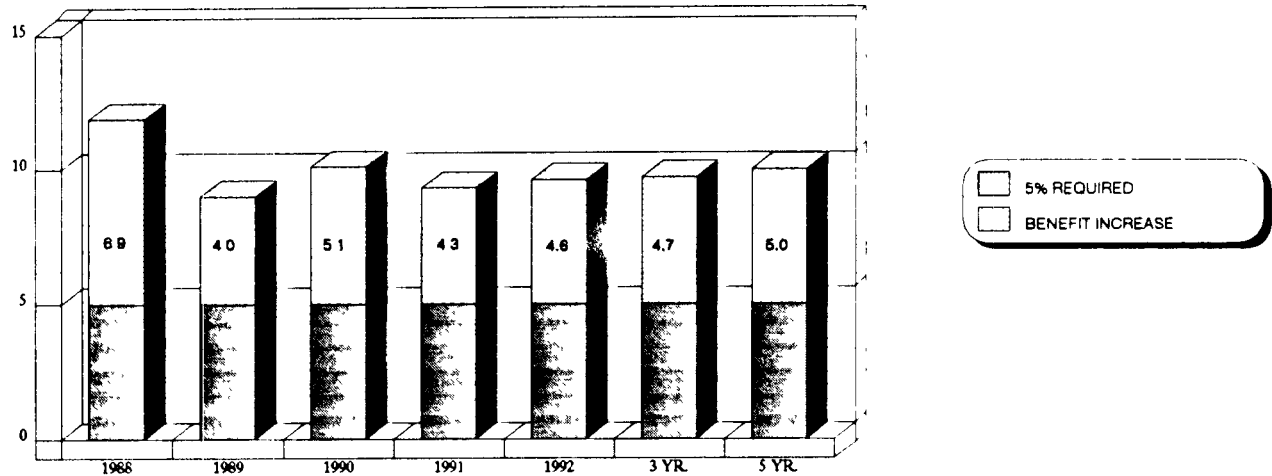
Total Fund Performance for Fiscal Years 1988 – 1992

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

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

**Realized Earnings
Fiscal Years 1988 - 1992**

PERCENT



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

* Interest, dividends and net realized capital gains.

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

Total Fund Performance Beginning Fiscal Year 1993

The total fund trailed its composite index for the quarter.

	Period Ending 9/30/92
	Qtr.
Total Fund	4.5%
Composite Index	4.6

Stock Segment Performance

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

	Period Ending 9/30/92
	Qtr.
Stock Segment	0.9%
Post Fund Benchmark	2.6
S&P 500	3.2

Bond Segment Performance

The bond segment of the Post Fund exceeded its benchmark for the latest quarter.

	Period Ending 9/30/92
	Qtr.
Bond Segment	5.2%
Shearson Index	4.9

Assigned Risk Plan

Investment Objective

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

Asset Mix

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

	9/30/92 Target	9/30/92 Actual
Stocks	15.0%	14.4%
Bonds	85.0	85.2
Unallocated Cash	0.0	0.4
Total	100.0%	100.0%

Investment Management

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

Performance Benchmarks

A custom benchmark has been established for the fixed income portfolio. It reflects the duration of the liability stream and the long-term sector allocation of Voyager Asset Management. The equity benchmark is a custom benchmark consisting of A or greater rated S&P500 stocks less utilities and restricted stocks. The total fund benchmark is a combination of the fixed income and equity benchmarks, weighted according to the asset allocation target.

Market Value

On September 30, 1992 the market value of the Assigned Risk Plan was \$365 million.

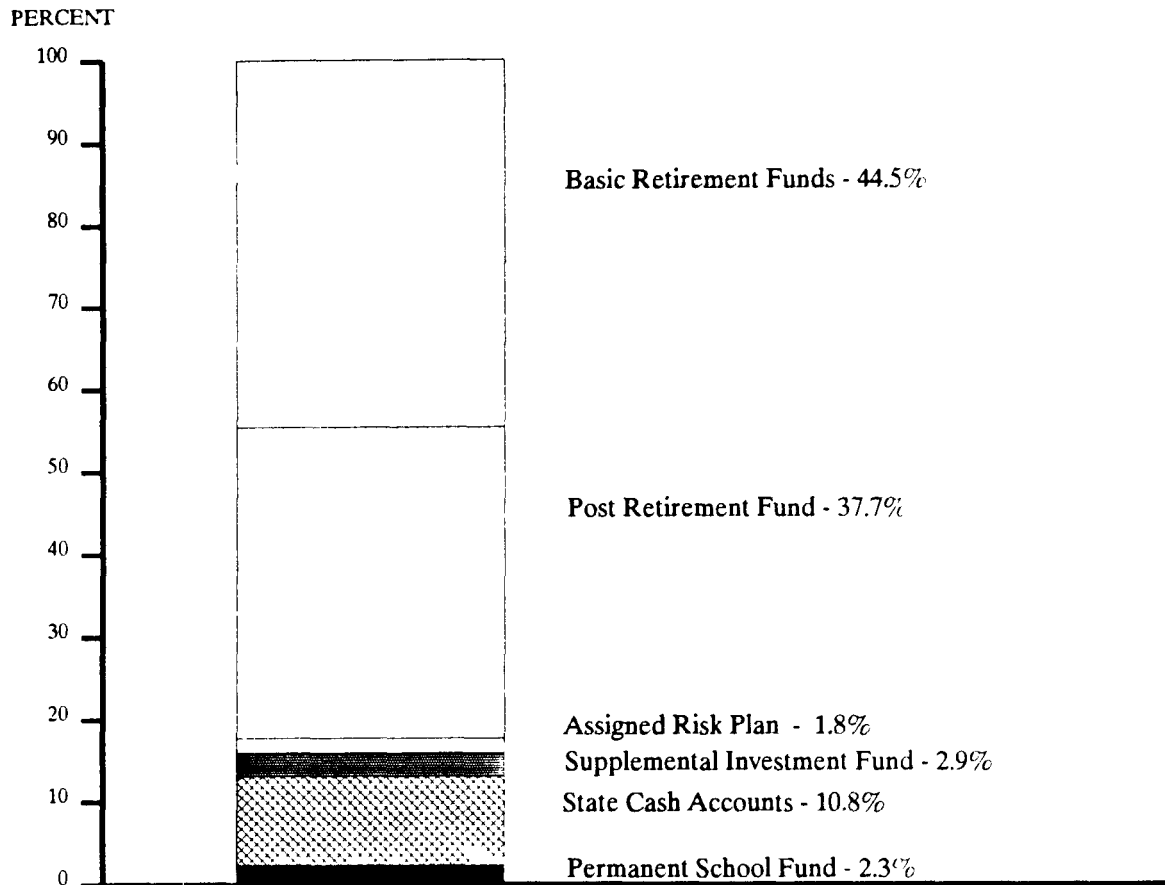


Period Ending 9/30/92

	Qtr.	Yr.	Since 7/1/91
Total Fund	4.3%	13.8%	14.5%
Composite Index	3.8	12.2	13.6
Equity Segment Benchmark	4.7	14.8	13.5
Benchmark	4.9	12.7	14.8
Bond Segment Benchmark	4.3	13.8	15.0
Benchmark	3.7	12.0	13.3

EXECUTIVE SUMMARY

Funds Under Management



	9/30/92 Market Value (Billions)
Basic Retirement Funds	\$8.8
Post Retirement Fund	7.4
Assigned Risk Plan	0.4
Supplemental Investment Fund	0.6
State Cash Accounts	2.1
Permanent School Fund	0.4
Total	\$19.7

MINNESOTA STATE BOARD OF INVESTMENT

QUARTERLY INVESTMENT REPORT

Third Quarter 1992

(July 1, 1992 – September 30, 1992)

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FINANCIAL MARKETS REVIEW

STOCK MARKET

During the quarter the domestic stock market increased 3.1%. For the quarter, the market experienced a fairly broad advance as shown below by the Wilshire style indexes. However, within certain industry sectors there was a higher level of divergence. The energy and utility sectors performed well while the consumer durable sector performed poorly. The quarterly result reflects the market's evaluation of economic news that reported the economy was holding its own and will not fall back into another recession. That news created a cautiously optimistic market with hopes that the economy will start to pick up during the next year.

The Wilshire 5000 provided a 3.1% return for the quarter. Performance among the different Wilshire Style Indexes for the quarter are shown below:

- Large Value 4.5%
- Small Value 4.0
- Large Growth 4.4
- Small Growth 5.5

The Wilshire 5000 increased 10.4% during the latest year.

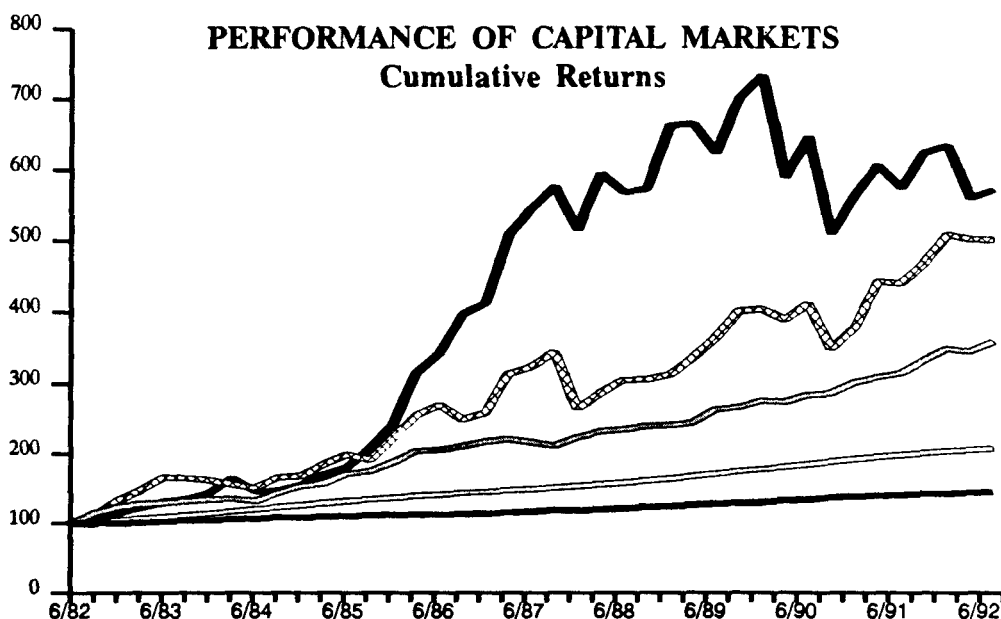
BOND MARKET

Bonds generated high returns this quarter as Treasury yields declined from an average of 0.65% to 0.70% during the quarter. The decline was not uniform across the yield curve with two year yields declining by 1.00% and long yields falling only 0.40%. Rates fell because economic reports reflected a weak recovery and subdued inflation. The falling interest rates increased mortgage refinancings which caused mortgages to perform poorly when compared to treasuries and corporates.

Overall, the Salomon Brothers Broad Investment Grade (BIG) Index increased 4.3% for the quarter. The Salomon BIG sector returns for the quarter were:

- Treasury/Agency 5.0%
- Corporates 4.6
- Mortgages 3.0

The Salomon BIG increased 12.7% for the latest year.



— INT'L STOCKS — U.S. BONDS — CONSUMER PRICE INDEX
 U.S. STOCKS - - - - CASH EQUIVALENTS

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

FINANCIAL MARKETS REVIEW**REAL ESTATE**

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

VENTURE CAPITAL

Calendar year 1991 was a stellar year for initial public offerings of venture-backed companies. Over one hundred venture-backed companies tapped the new issues market and raised a total of almost \$3.8 billion. The previous record for venture-backed initial public offerings was 1983, when a similar number of venture-backed companies raised approximately \$3.0 billion in the public equity markets.

RESOURCE FUNDS

Currently, spot prices of West Texas Intermediate oil are \$21.71 per barrel. This compares to \$22.61 a year ago and a recent low of \$15.06 in June 1990.

Natural gas prices have benefitted from the damage Hurricane Andrew caused in the Gulf of Mexico which initially impacted about 5% of U.S. production. Spot prices of natural gas are approximately 2.33 per MCF (thousand cubic feet) compared to 2.09 per MCF a year ago.

BASIC RETIREMENT FUNDS

Investment Objectives

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

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

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

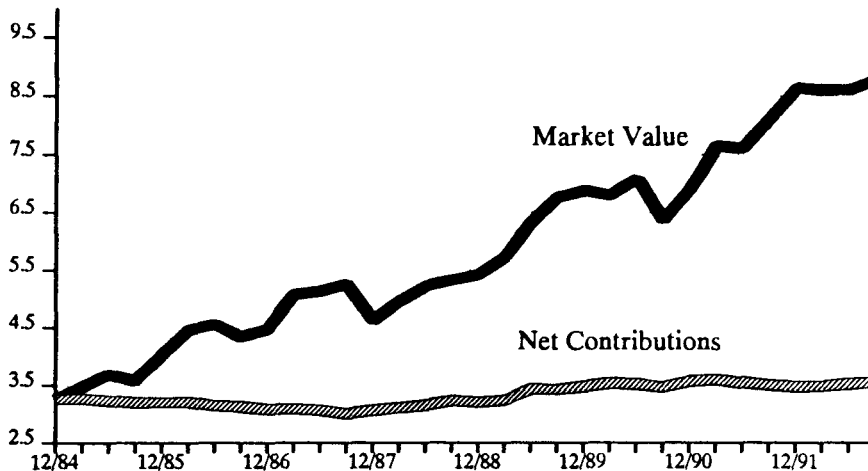
- The total fund should provide real rates of return that are 3-5 percentage points greater than the rate of inflation over moving 10 year periods.
- Stocks, bonds and cash should outperform the median fund from a universe of public and private funds with a balanced asset mix over moving 5 year periods.
- The total fund should outperform a composite index weighted in a manner that reflects the long term asset allocation of the Basic Funds over moving 5 year periods.

Asset Growth

The market value of the Basic Retirement Funds' assets increased 2.0% during the third quarter of 1992. The

increase resulted from positive returns from the bond and stock markets.

\$ Billions



In Millions

	12/87	12/88	12/89	12/90	12/91	3/92	6/92	9/92
Beginning Value	\$4,474	\$4,628	\$5,420	\$6,382	\$8,120	\$8,639	\$8,605	\$8,608
Net Contributions	-26	146	269	97	-32	9	-35	-42
Investment Return	180	646	1,186	440	551	-43	38	215
Ending Value	\$4,628	\$5,420	\$6,875	\$6,919	\$8,639	\$8,605	\$8,608	\$8,781

BASIC RETIREMENT FUNDS

Asset Mix

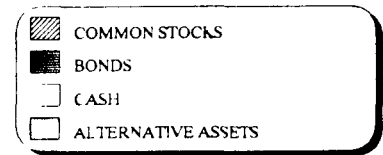
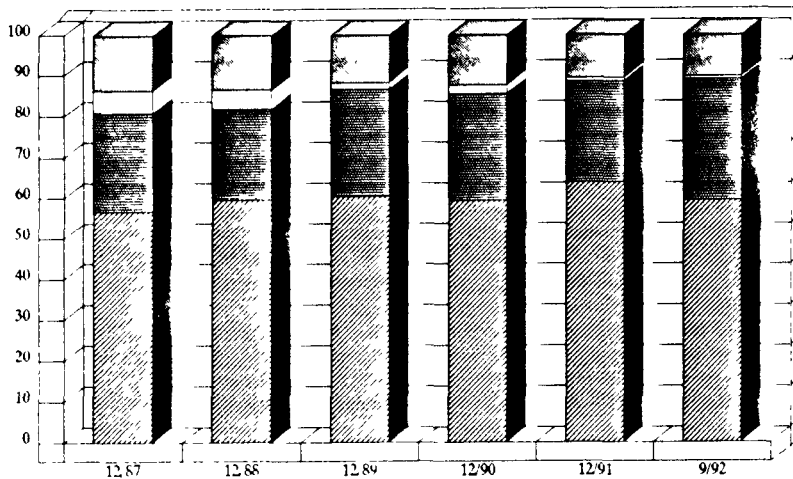
Based on the Basic Funds' investment objectives and the expected long run performance of the capital markets, the Board has adopted the following long-term policy asset allocation for the Basic Funds:

There were few changes to the actual asset mix during the quarter. The bond segment increased slightly due to falling interest rates which caused bond prices to rise.

Common Stocks	60.0%
Bonds	24.0
Alternative Assets*	15.0
Unallocated Cash	1.0

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

PERCENT



	Last Five Years					Latest Qtrs.		
	12/87	12/88	12/89	12/90	12/91	3/92	6/92	9/92
Stocks	56.7%	59.5%	60.2%	59.1%	63.9%	60.1%	59.7%	59.4%
Bonds	24.2	22.4	26.4	26.2	24.7	27.8	28.9	29.6
Real Estate	9.5	9.0	7.5	7.0	4.8	4.5	4.5	4.4
Venture Capital	2.8	3.1	2.8	4.2	4.7	5.4	5.1	4.7
Resource Funds	1.4	1.5	1.4	1.5	1.1	1.2	1.2	1.2
Unallocated Cash	5.4	4.5	1.7	2.0	0.8	1.0	0.6	0.7
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

BASIC RETIREMENT FUNDS

Total Fund Performance vs. Standards

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

the Wilshire Associates Trust Universe Comparison Service (TUCS).

- **Composite Index.** The returns provided by the total portfolio are expected to exceed those derived from a composite of market indices, weighted in the same proportion as the Basic Funds' policy asset allocation, except alternative assets and bonds which are reset each quarter to reflect the amount of unfunded commitments in the alternative asset classes. As of 7/1/92, the composite index is weighted: 60.0% Wilshire 5000 Stock Index, 28.5% Salomon Broad Bond Index, 4.5% Wilshire Real Estate Fund, 5.0% Venture Capital Funds, 1.0% Resource Funds, and 1.0% 91 Day T-Bills.
- **Median Tax-Exempt Fund.** Stock, bond and cash assets are expected to outperform the median return produced by a representative sample of other public and private tax-exempt balanced funds. The sample universe used by the Board is

The long term asset allocation of the Basic Funds is based on the superior performance of common stocks over the history of the capital markets. The asset mix is designed to add value to the Basic Funds' over their long-term investment time horizon. In the short run, the Basic Funds can be expected to outperform the median balanced portfolio during periods in which stocks outperform other asset classes and, conversely, to underperform the median fund when stocks underperform other assets.

The Basic Funds total portfolio matched its composite index for the latest quarter but exceeded it for the year. Excluding alternative assets, the Basic Funds ranked in the middle third (62nd percentile) of the TUCS universe for the quarter. In addition, it ranked in the middle third (54th percentile) for the latest year and the bottom third (72nd percentile) for the last five years.

PERCENT



TOTAL FUND
 COMPOSITE
 STOCK/BOND/CASH
 TUCS MEDIAN

	Period Ending 9/30/92			
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Fund	2.5%	9.4%	9.0%	9.0%
Composite Index**	2.5	8.6	8.5	8.9
Stocks, Bonds and Cash Only	3.1	11.0	9.4	9.3
TUCS Median Balanced Fund	3.5	11.3	10.3	10.2

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

BASIC RETIREMENT FUNDS

Segment Performance vs. Standards

Stock Segment

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

	Qtr.	Yr.	Annualized	
			3 Yrs.	5 Yrs.
Stock Segment	2.5%	9.8%	7.9%	7.8%
Wilshire 5000*	2.5	10.0	8.3	8.0

* Adjusted for liquor and tobacco restrictions.

Bond Segment

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

	Qtr.	Yr.	Annualized	
			3 Yrs.	5 Yrs.
Bond Segment	4.4%	13.0%	12.2%	12.1%
Salomon Bond Index	4.3	12.7	12.1	12.2

Real Estate Segment

The real estate segment of the Basic Funds trailed its target for the latest year.

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

	Qtr.	Yr.	Annualized	
			3 Yrs.	5 Yrs.
Real Estate Segment	-0.8%	-10.8%	-3.7%	0.7%
Real Estate Index	-0.8	-8.7	-5.0	-0.3
Inflation	0.8	3.0	4.2	4.2

Venture Capital and Resource Funds

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

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

	Qtr.	Yr.	Annualized	
			3 Yrs.	5 Yrs.
Venture Capital Segment	-5.3%	3.1%	20.2%	17.8%
Resource Fund Segment	2.7	8.2	6.9	7.2

POST RETIREMENT FUND

Investment Objectives

The Post Retirement Investment Fund contains the pension assets of retired public employees covered by statewide retirement plans.

Upon the employees' retirement, sums of money sufficient to finance fixed monthly annuities are transferred from accumulation pools in the Basic Funds to the Post Fund. In order to support promised benefits, the Post Fund must "earn" at least 5% on its invested assets each year. If the Post Fund exceeds this earnings rate, excess earnings are used to finance permanent benefit increases for eligible retirees.

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

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

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

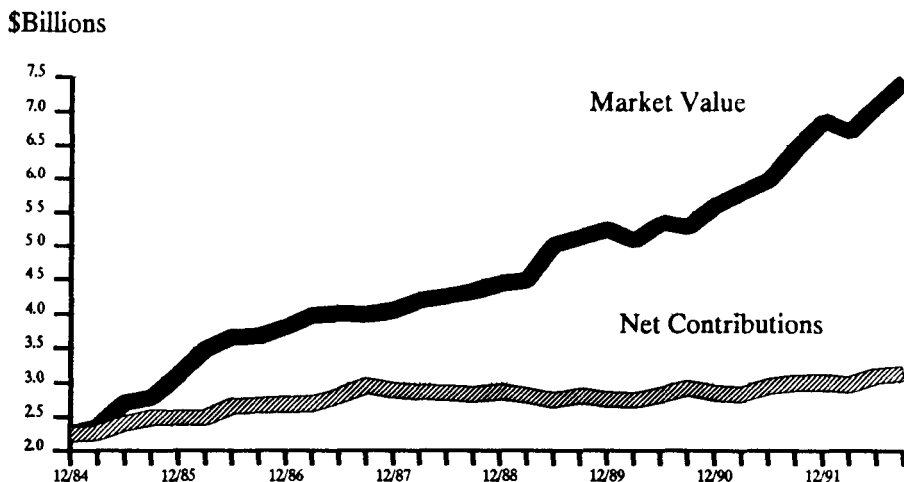
- generate 5% realized earnings to maintain current benefits.
- generate at least 3% additional realized earnings to provide benefit increases.

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

Asset Growth

The market value of the Post Retirement Fund increased by 5.0% during the third quarter of 1992. Assets increased

as a result of positive net contributions and bond performance.



	In Millions							
	12/87	12/88	12/89	12/90	12/91	3/92	6/92	9/92
Beginning Value	\$3,808	\$4,047	\$4,434	\$5,278	\$6,448	\$6,855	\$6,701	\$7,087
Net Contributions	207	-27	25	-72	9	-40	134	38
Investment Return	32	414	779	384	398	-114	252	317
Ending Value	\$4,047	\$4,434	\$5,238	\$5,590	\$6,855	\$6,701	\$7,087	\$7,442

POST RETIREMENT FUND

Asset Mix

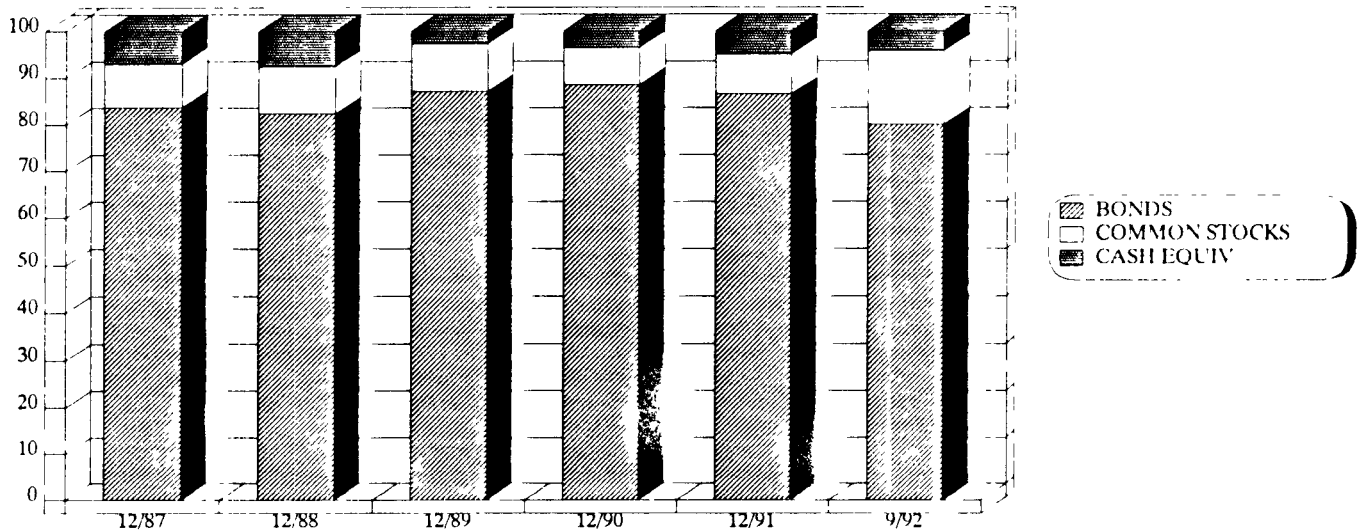
The Board adopted a new asset allocation strategy for the Post Fund effective for fiscal year 1993. The new policy targets reflect the new post retirement benefit increase formula recently enacted by the Legislature. Throughout fiscal year 1993, the actual asset mix of the Post Fund will move toward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

Stocks	50.0%
Bonds	47.0
Unallocated Cash	<u>3.0</u>
Total	100.0%

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

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

PERCENT



	Last Five Years					Latest Qtrs.		
	12/87	12/88	12/89	12/90	12/91	3/92	6/92	9/92
Bonds	83.7%	82.3%	87.1%	88.5%	86.5%	84.0%	80.5%	80.0%
Stocks	9.3	10.1	10.2	7.9	8.5	9.0	8.6	15.7
Unallocated Cash	7.0	7.6	2.7	3.6	5.0	7.0	10.9	4.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

POST RETIREMENT FUND

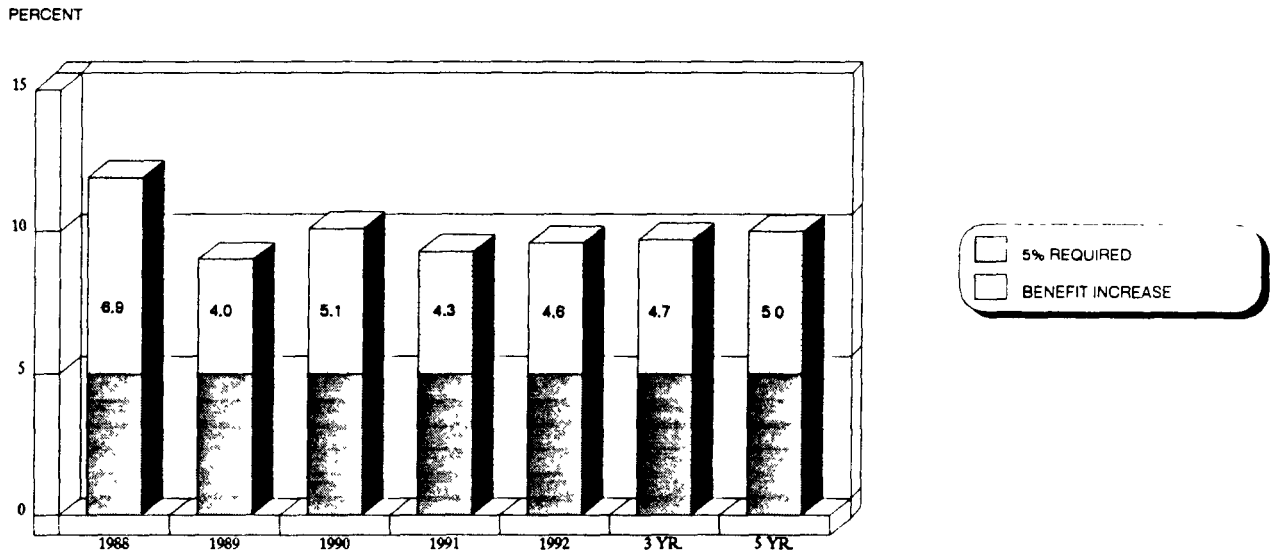
Fund Performance Through 6/30/92

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

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

Realized Earnings

Fiscal Years 1988 - 1992



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

* Interest, dividends and net realized capital gains.

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

POST RETIREMENT FUND

Fund Performance Since 7/1/92

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

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

Total Fund Performance

The total fund slightly trailed its composite index for the quarter. On 9/30/92 the composite was weighted:

Stocks	16%
Bonds	84

Period Ending 9/30/92	
	Qtr.
Total Fund	4.5%
Composite Index	4.6

This weighting reflects the actual asset mix of the total portfolio during the quarter.

Stock Segment Performance

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

Period Ending 9/30/92	
	Qtr.
Stock Segment	0.9%
Post Fund Benchmark	2.6
S&P 500	3.2

Bond Segment Performance

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

Period Ending 9/30/92	
	Qtr.
Bond Segment	5.2%
Shearson Index	4.9

ASSIGNED RISK PLAN

Investment Objective

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

Investment Management

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

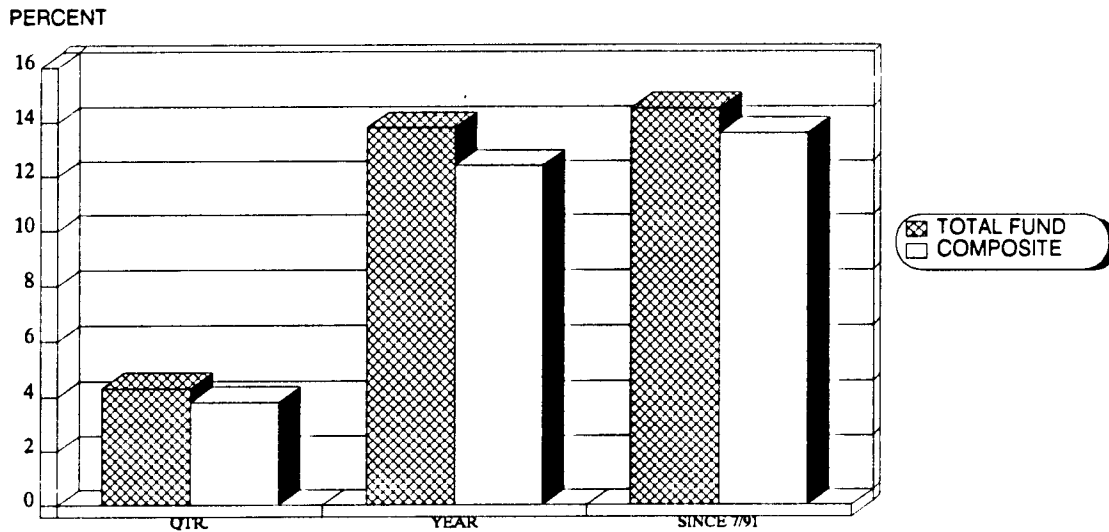
Asset Mix

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.

Market Value

On September 30, 1992 the market value of the Assigned Risk Plan was \$365 million.

	9/30/92 Target	9/30/92 Actual
Stocks	15.0%	14.4%
Bonds	85.0	85.2
Unallocated Cash	0.0	0.4
Total	100.0%	100.0%



Period Ending 9/30/92

	Qtr.	Yr.	Since 7/1/91
Total Account	4.3%	13.8%	14.5%
Composite	3.8	12.2	13.6
Equity Segment	4.7	14.8	13.5
Wilshire 5000	4.9	12.7	14.8
Bond Segment	4.3	13.8	15.0
Benchmark	3.7	12.0	13.3

SUPPLEMENTAL INVESTMENT FUND

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

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

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

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

On September 30, 1992 the market value of the entire fund was \$589 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.

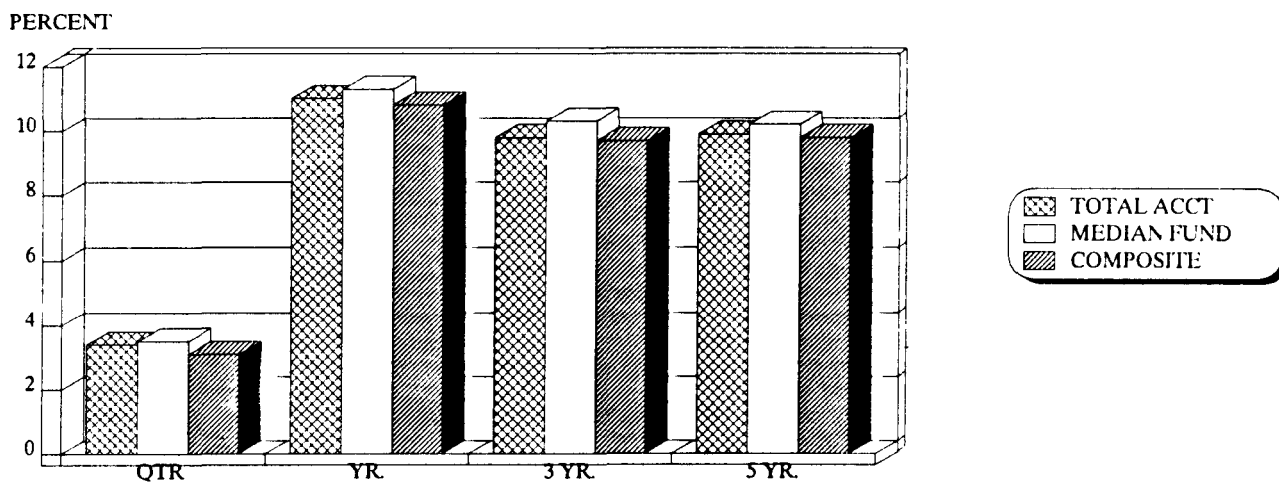
	Target	Actual
Stocks	60.0%	61.5%
Bonds	35.0	30.4
Unallocated Cash	5.0	8.1
	100.0%	100.0%

Investment Management

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

Market Value

On September 30, 1992 the market value of the Income Share Account was \$316 million.



Period Ending 9/30/92

	Annualized			
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	3.4%	11.0%	9.8%	9.9%
Median Fund*	3.5	11.3	10.3	10.2
Composite**	3.1	10.8	9.7	9.8
Equity Segment	3.0	10.7	8.6	8.5
Wilshire 5000**	2.5	10.0	8.3	8.0
Bond Segment	4.8	13.4	12.1	12.2
Salomon Bond Index	4.3	12.7	12.1	12.2

* TUCS Median Balanced Portfolio

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

SUPPLEMENTAL INVESTMENT FUND

Growth Share Account

Investment Objective

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

Asset Mix

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

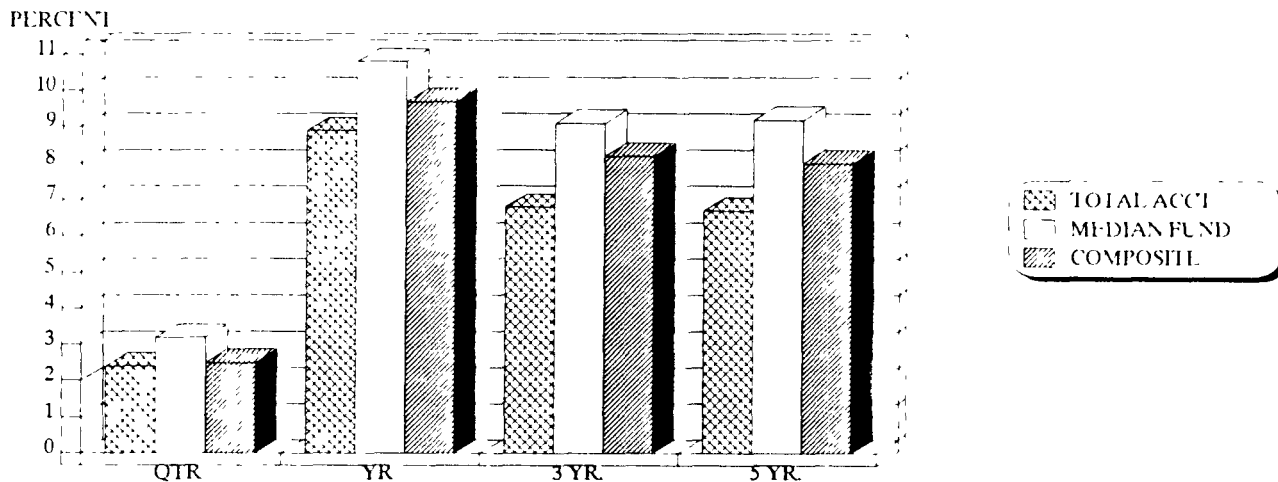
Investment Management

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

Market Value

On September 30, 1992 the market value of the Growth Share Account was \$83 million.

	Target	Actual
Stocks	95.0%	94.3%
Unallocated Cash	5.0	5.7
	100.0%	100.0%



Period Ending 9/30/92

	Annualized			
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	2.4%	8.9%	6.8%	6.7%
Median Fund*	3.2	10.8	9.1	9.2
Composite**	2.5	9.7	8.2	8.0
Equity Segment	2.5	8.8	7.1	7.0
Wilshire 5000**	2.5	10.0	8.3	8.0

* TUCS Median Managed Equity Portfolio

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

SUPPLEMENTAL INVESTMENT FUND

Common Stock Index Account

Investment Objective and Asset Mix

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

The Account is invested 100% in common stocks.

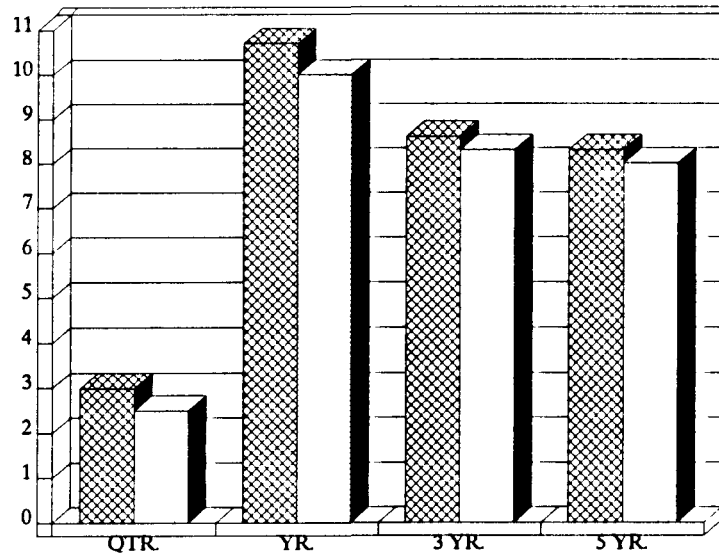
Investment Management

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

Market Value

On September 30, 1992 the market value of the Common Stock Index Account was \$27 million.

PERCENT



Period Ending 9/30/92

	Annualized			
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	3.0%	10.7%	8.6%	8.3%
Wilshire 5000*	2.5	10.0	8.3	8.0

* Adjusted for liquor and tobacco restrictions.

SUPPLEMENTAL INVESTMENT FUND

Bond Market Account

Investment Objective

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

Investment Management

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

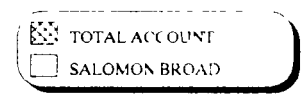
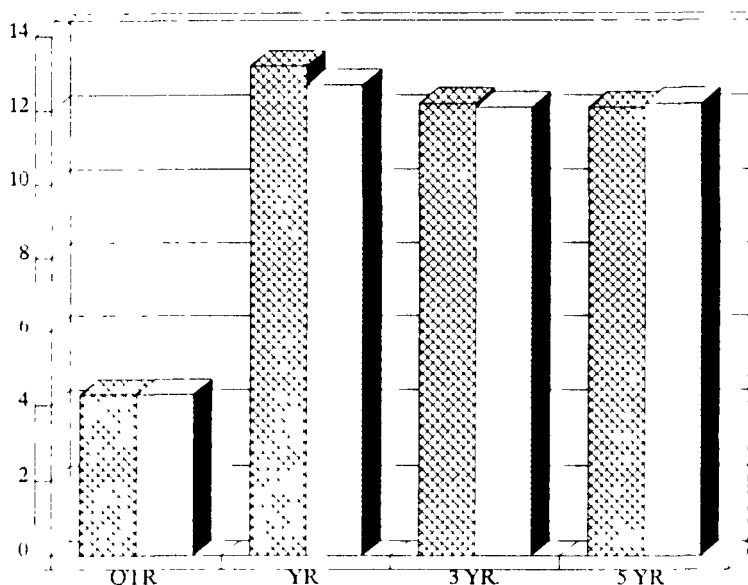
Asset Mix

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.

Market Value

On September 30, 1992 the market value of the Bond Market Account was \$14 million

PERCENT



Period Ending 9/30/92

	Qtr.	Yr.	Annualized	
			3 Yr.	5 Yr.
Total Account	4.3%	13.2%	12.2%	12.1%
Salomon Broad	4.3	12.7	12.1	12.2

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.

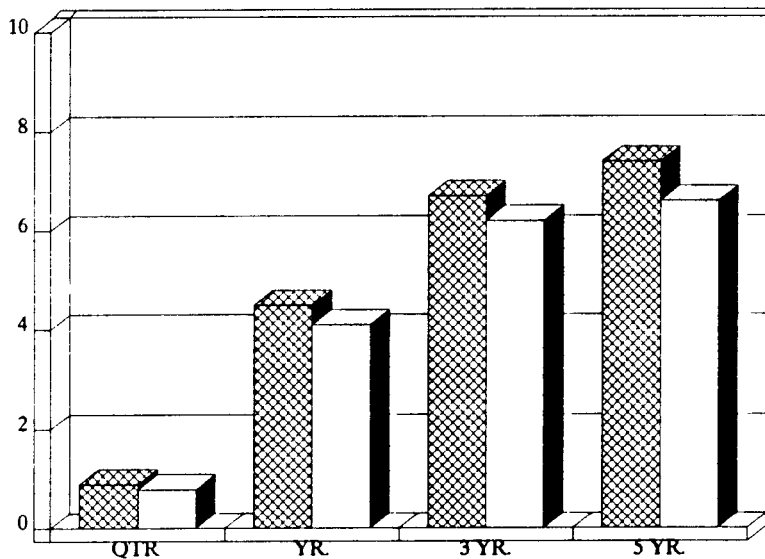
Investment Management

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 September 30, 1992 the market value of the Money Market Account was \$77 million.

PERCENT



TOTAL ACCOUNT
 T-BILLS

Period Ending 9/30/92

	Annualized			
	Qtr.	Yr.	3 Yr.	5 Yr.
Total Account	0.9%	4.5%	6.7%	7.4%
91 Day T-Bills	0.8	4.1	6.2	6.6

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 September 30, 1992 the market value of the Fixed Interest Account was \$70 million

Contract Period	Annual Effective Interest Rate	Manager
Nov. 1, 1989 - Oct. 31, 1992	8.400%	John Hancock
Nov. 1, 1990 - Oct. 31, 1993	8.765%	Mutual of America/ Provident National (blended rate)
Nov. 1, 1991 - Oct 31, 1994	6.634%	Continental Assurance/ Provident National (blended rate)

PERMANENT SCHOOL FUND

Investment Objectives

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

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

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

Asset Mix

The asset mix remained essentially unchanged for the quarter. The Permanent School fund continues to hold only fixed income securities.

	Target	Actual
Bonds	95.0%	93.4%
Unallocated Cash	5.0	6.6
Total	100.0%	100.0%

Investment Management

The entire fund is managed by the SBI investment staff.

Asset Growth

The market value of the Permanent School Fund's assets increased 6.2% during the third quarter. Both contributions and positive bond performance contributed to the increase.

**Asset Growth
During Third Quarter 1992
(Millions)**

Beginning Value	\$418.9
Net Contributions	2.9
Investment Return	23.2
Ending Value	\$445.0

Bond Segment Performance

The composition of the Permanent School Fund's bond portfolio was essentially unchanged during the quarter. The bond portfolio is structured with a laddered distribution of maturities to minimize the Fund's exposure to re-investment rate risk. At the quarter's-end, the portfolio had a current yield of 7.93%, an average life of 6.75 years, and a AAA quality rating. The portfolio remains concentrated in Treasury and Agency issues with the remainder primarily distributed among mortgages, industrials and utilities.

**Bond Portfolio Statistics
9/30/92**

Value at Market	\$407,844,850
Value at Cost	368,188,566
Average Coupon	8.88%
Current Yield	7.93
Yield to Maturity	7.20
Current Yield at Cost	9.05
Time to Maturity	14.72 Years
Average Duration	6.75 Years
Average Quality Rating	AAA
Number of Issues	127

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:

- **Trust Fund Pool** contains the cash balances of retirement-related accounts managed internally and cash balances in the Permanent School Fund.
- **Treasurer's Cash Pool** contains the cash balances of special or dedicated accounts necessary for the operation of certain State agencies and the balance of the Invested Treasurer's Cash.

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

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

Investment Objectives

- **Safety of Principal.** To preserve capital.
- **Competitive Rate of Return.** To provide a high level of current income.
- **Liquidity.** To meet cash needs without the forced sale of securities at a loss.

Asset Mix

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

Investment Management

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

Performance

Both the Trust Fund Pool and the Treasurer's Cash Pool exceeded their target for the latest quarter and year.

Period Ending 9/30/92

	Market Value (Millions)	Qtr.	Yr.	3 Yrs. Annualized
Treasurer's Cash Pool	\$1,701	1.3%	6.1%	7.8%
Trust Fund Cash Pool	51	1.4	5.2	7.1
91-Day T-Bills		0.8	4.1	6.2

Tab B

PORTFOLIO STATISTICS

	PAGE
I. Composition of State investment portfolios 9/30/92	1
II. Cash Flow Available for Investment 7/1/92 - 9/30/92	3
III. Monthly Transactions and Asset Summary - Retirement Funds	4

**STATE OF MINNESOTA
STATE BOARD OF INVESTMENT
Composition of State Investment Portfolios By Type of Investment
Market Value September 30, 1992
(in Millions)**

	Cash And		Bonds		Stocks		Alternative Assets	Total
	Short Term Securities	Internal	External	Internal	External			
BASIC RETIREMENT FUNDS:								
Teachers Retirement Fund	\$17,573 0.45%	\$0	\$1,167,454 29.66%	\$0	\$2,345,600 59.59%	\$405,362 10.30%	\$3,935,989 100%	
Public Employees Retirement Fund	\$16,174 0.82%	\$0	\$584,943 29.56%	\$0	\$1,174,838 59.36%	\$203,053 10.26%	\$1,979,008 100%	
State Employees Retirement Fund	\$14,208 0.82%	\$0	\$513,840 29.56%	\$0	\$1,032,031 59.36%	\$178,371 10.26%	\$1,738,450 100%	
Public Employees Police & Fire Fund	\$9,548 1.19%	\$0	\$236,788 29.45%	\$0	\$475,580 59.14%	\$82,197 10.22%	\$804,113 100%	
Highway Patrol Retirement Fund	\$1,001 0.78%	\$0	\$38,139 29.57%	\$0	\$76,600 59.39%	\$13,239 10.26%	\$128,979 100%	
Judges Retirement Fund	\$73 0.82%	\$0	\$2,631 29.55%	\$0	\$5,285 59.37%	\$913 10.26%	\$8,902 100%	
Public Employees P.F. Consolidated	\$192 0.20%	\$0	\$28,660 29.99%	\$0	\$56,756 59.40%	\$9,949 10.41%	\$95,557 100%	
Correctional Employees Retirement	\$60 0.07%	\$0	\$26,815 29.78%	\$0	\$53,858 59.81%	\$9,309 10.34%	\$90,042 100%	
POST RETIREMENT FUND	\$317,102 4.26%	\$5,958,477 80.07%	\$0	\$0	\$1,166,198 15.67%	\$0	\$7,441,777 100%	

	Cash And Short Term Securities		Bonds		Stocks		Alternative Assets	Total
	Internal	External	Internal	External	Internal	External		
MINNESOTA SUPPLEMENTAL FUNDS:								
Income Share Account	\$25,784 8.16%	\$0	\$96,021 30.38%	\$0	\$0	\$194,232 61.46%	\$0	\$316,037 100%
Growth Share Account	\$4,727 5.69%	\$0	\$0	\$0	\$0	\$78,409 94.31%	\$0	\$83,136 100%
Money Market Account	\$76,512 100%	\$0	\$0	\$0	\$0	\$0	\$0	\$76,512 100%
Common Stock Index Account	\$0	\$0	\$0	\$0	\$0	\$26,694 100%	\$0	\$26,694 100%
Bond Market Account	\$0	\$14,032 100%	\$0	\$0	\$0	\$0	\$0	\$14,032 100%
Fixed Interest Account	\$0	\$69,651 100%	\$0	\$0	\$0	\$0	\$0	\$69,651 100%
TOTAL RETIREMENT FUNDS	\$482,954 2.87%	\$6,054,498 36.02%	\$2,682,953 15.96%	\$0	\$6,686,081 39.78%	\$902,393 5.37%	\$16,808,879 100%	
ASSIGNED RISK PLAN	\$1,363 0.37%	\$310,632 85.19%	\$0	\$52,633 14.44%	\$0	\$364,628 100%	\$0	\$364,628 100%
PERMANENT SCHOOL FUND	\$29,209 6.56%	\$415,780 93.44%	\$0	\$0	\$0	\$444,989 100%	\$0	\$444,989 100%
TREASURERS CASH	\$1,700,717 100%	\$0	\$0	\$0	\$0	\$1,700,717 100%	\$0	\$1,700,717 100%
HOUSING FINANCE AGENCY	\$150,416 75.37%	\$49,162 24.63%	\$0	\$0	\$0	\$199,578 100%	\$0	\$199,578 100%
MINNESOTA DEBT SERVICE FUND	\$8,385 31.25%	\$18,448 68.75%	\$0	\$0	\$0	\$26,833 100%	\$0	\$26,833 100%
MISCELLANEOUS ACCOUNTS	\$60,767 29.91%	\$142,420 70.09%	\$0	\$0	\$0	\$203,187 100%	\$0	\$203,187 100%
GRAND TOTAL	\$2,433,811 12.32%	\$6,990,940 35.40%	\$2,682,953 13.58%	\$52,633 0.27%	\$6,686,081 33.86%	\$902,393 4.57%	\$19,748,811 100%	

**STATE OF MINNESOTA
STATE BOARD OF INVESTMENT**

**Net Cash Flow Available For Investment
July 1, 1992 - September 30, 1992**

Teachers Retirement Fund	(\$37,300,000.00)
Public Employees Retirement Fund	(10,000,000.00)
State Employees Retirement Fund	(954,000.00)
Public Employees Police & Fire	6,000,000.00
Highway Patrol Retirement Fund	644,000.00
Judges Retirement Fund	2,381,000.00
Public Employees P&F Consolidated	(1,900,000.00)
Correctional Employees Retirement Fund	53,000.00
Post Retirement Fund	38,451,285.24
Supplemental Retirement Fund - Income	1,492,723.88
Supplemental Retirement Fund - Growth	(368,940.43)
Supplemental Retirement Fund - Money Market	(2,494,216.87)
Supplemental Retirement Fund - Index	1,611,173.29
Supplemental Retirement Fund - Bond Market	1,140,745.63
Supplemental Retirement Fund - Fixed Interest	(161,194.12)
Total Retirement Funds Net Cash Flow	(\$1,404,423.38)
Assigned Risk Plan	\$1,327,670.07
Permanent School Fund	\$2,843,037.25
Total Net Cash Flow	\$2,766,283.94

**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 1989	\$88	-\$10	\$78	\$3	5.6%	47.7%	46.7%	\$10,760
February	60	18	78	38	5.3	47.9	46.8	10,760
March	150	5	155	12	3.9	48.8	47.3	10,760
April	-16	188	172	16	2.3	48.1	49.6	10,760
May	-2	4	2	43	2.6	47.6	49.8	10,760
June	119	10	129	119	2.5	49.2	48.3	10,760
July	121	-100	21	44	2.6	49.0	48.4	12,287
August	275	-205	70	51	2.4	49.8	47.8	12,311
September	47	11	58	32	2.2	50.2	47.6	12,344
October	113	-154	-41	8	2.6	52.5	44.9	12,342
November	45	0	45	78	2.8	52.1	45.1	12,494
December	14	6	20	24	2.8	51.8	45.4	12,581
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

Tab C

EXECUTIVE DIRECTOR'S ADMINISTRATIVE REPORT

DATE: December 1, 1992

TO: Members, State Board of Investment

FROM: Howard J Bicker

1) Budget and Travel Reports

A report on the SBI's FY93 administrative budget for the period ending October 31, 1992 is **Attachment A**.

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

2) January 1993 Post Retirement Fund Benefit Increase

Excess realized earnings on the Post Fund for fiscal year 1992 will allow a 4.553% benefit increase for eligible retirees effective January 1, 1993.

This will be the last increase computed under the old benefit increase formula. The new formula enacted during the 1992 Legislative Session will be effective for benefit increases granted on and after January 1, 1994.

3) FY 1992 Annual Report Draft

A draft of the SBI's FY 1992 annual report was sent to Board members, Board member designees and IAC members on November 23, 1992. Comments are due by December 7. We expect to send the final version to the printer the week of December 14 and to distribute copies by early January.

4) Deferred Compensation (457) Plan Review

A review of the State's Deferred Compensation Plan was part of the my work plan for fiscal year 1993. MSRS will conduct its own review of the administration and marketing of the plan. To facilitate this revision, MSRS Board has authorized the retention of a consultant. It is expected that the consultant's report will be presented to MSRS by June 1993.

ATTACHMENT A

**STATE BOARD OF INVESTMENT
FISCAL YEAR 1993 ADMINISTRATIVE BUDGET REPORT
GENERAL FUND APPROPRIATION
FISCAL YEAR TO DATE THROUGH OCTOBER 31,1992**

ITEM	FISCAL YEAR 1993 BUDGET	FISCAL YEAR 1993 EXPENDITURES
PERSONAL SERVICES		
CLASSIFIED EMPLOYEES	\$ 286,000	\$ 91,124
UNCLASSIFIED EMPLOYEES	1,206,000	342,807
SEVERENCE PAYOFF	3,000	0
WORKERS COMPENSATION INSURANCE	0	0
MISCELLANEOUS PAYROLL	0	1,563
SUBTOTAL	\$ 1,495,000	\$ 435,494
EXPENSES & CONTRACTUAL SERVICES		
RENTS & LEASES	96,000	26,424
REPAIRS/ALTERATIONS/MAINTENANCE	9,000	3,957
BONDS AND INSURANCE	0	117
PRINTING & BINDING	20,000	6,430
PROFESSIONAL/TECHNICAL SERVICES	15,000	2,112
DATA PROCESSING & SYSTEM SERVICES	162,000	40,500
PURCHASED SERVICES	30,000	12,220
SUBTOTAL	\$ 332,000	\$ 91,760
MISCELLANEOUS OPERATING EXPENSES		
COMMUNICATIONS	25,000	7,713
TRAVEL, IN-STATE	3,000	220
TRAVEL, OUT-STATE	40,000	11,794
FEES & OTHER FIXED CHARGES	9,000	2,102
SUBTOTAL	\$ 77,000	\$ 21,829
SUPPLIES/MATERIALS/PARTS	29,700	11,341
CAPITAL EQUIPMENT	34,300	3,166
TOTAL GENERAL FUND	\$ 1,968,000	\$ 563,590

ATTACHMENT B

STATE BOARD OF INVESTMENT

**Travel Summary by Date
August 16, 1992 - November 15, 1992**

<u>Purpose</u>	<u>Name(s)</u>	<u>Destination and Date</u>	<u>Total Cost</u>
Staff Conference National Assoc. of State Treasurers Midwest Conference	H. Bicker	Minneapolis 8/22-26	\$175.00
Manager Monitoring Equity Managers Independence, Franklin, Forstmann, Lieber, Lynch, GeoCapital New Manager Search Equity Managers Weiss Peck, Jennison, Oppenheimer, Balsch Hardy, Rampart	J. Guckeen M. Menssen	New York Boston 9/14-18	\$2,952.91
Miscellaneous Retired Educators of Minnesota (REAM)	H. Bicker	Willmar 9/14	\$44.52
Board Member Travel Council of Institutional Investors Annual Conference	M McGrath	San Francisco 9/23-25	\$748.00
Board Member Travel "Public Pension Funds at Risk" sponsored by the Office of the State Auditor	J. Manahan	Minneapolis 10/15-16	\$250.00
Staff Conference National Association of State Investment Officers Annual Meeting	H. Bicker B. Lehman	Albany, NY 10/24-28	\$2,030.54

Tab D

COMMITTEE REPORT

DATE: December 1, 1992

TO: Members, State Board of Investment

FROM: 403(b) Vendor Review Committee

Laws of Minnesota for 1992, Chapter 487, Section 4 mandates that the SBI select up to ten (10) insurance companies to provide 403(b) tax sheltered annuities to school district employees statewide.

At its June 1992 meeting, the SBI authorized a 403(b) Vendor Review Committee to prepare and distribute appropriate requests for proposal (RFP's) and make recommendations to the SBI concerning its responsibilities under the 1992 law. The Committee members are:

Peter Sausen, Chair	Governor's Designee
Christie Eller	Attorney General's Designee
Jake Manahan	Treasurer's Designees
Lisa Rotenberg	Auditor's Designee
Elaine Voss	Secretary of State's Designee
Gary Austin	IAC Representative, TRA
Dave Bergstrom	IAC Representative, MSRS
Laurie Fiori Hacking	IAC Representative, PERA

At its September 1992 meeting, the SBI adopted a recommendation from the Committee to retain The Wyatt Company as the SBI's 403(b) consultant. After conducting a request for proposal (RFP) for 403(b) vendors with the assistance of Wyatt, the Committee is now making recommendations to the SBI concerning the selection of insurance companies to provide 403(b) annuities to school district employees.

Insurance Company Selection Process

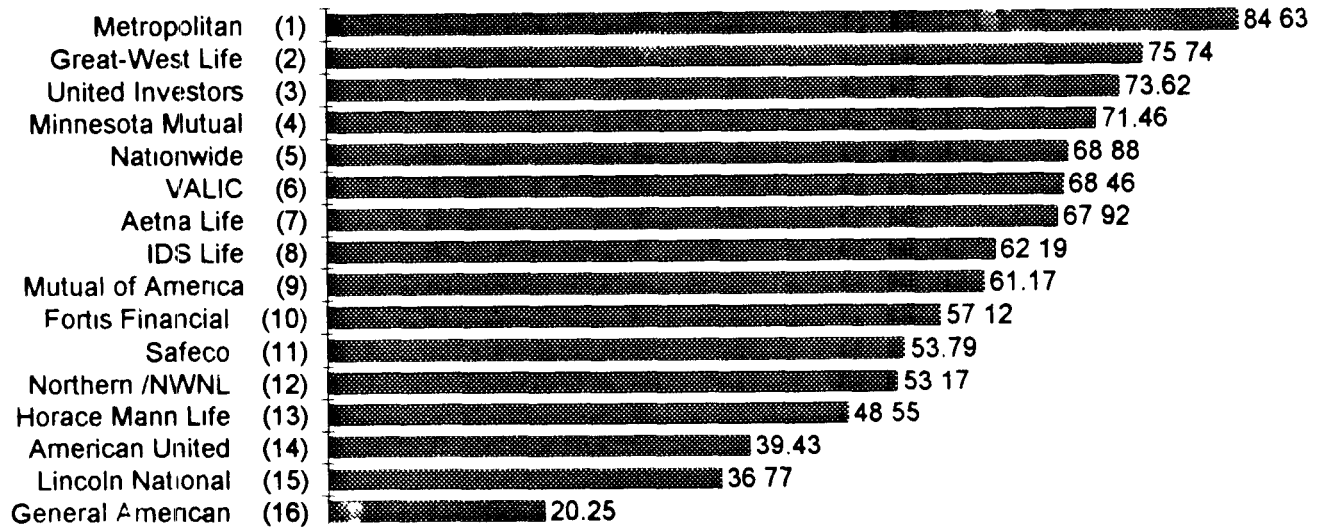
The Vendor Review Committee and Wyatt developed an insurance company RFP during September 1992. The RFP was formally announced in the State Register on September 21, 1992 and sent to approximately 300 companies nationwide. Responses were received from 18 companies by the October 19, 1992 deadline. Sixteen (16) companies qualified for consideration according to minimum credit rating and product offering standards outlined in the RFP. A copy of the RFP document begins on page 7 and a summary list of the 18 company responders is included on page 5.

Insurance company RFP responses were then ranked according to the following criteria:

Financial Strength		55%
Credit Analysis	55%	
Investment Products		35%
Range of Investment Choices	5%	
Fixed Annuities	10%	
Variable Funds	10%	
Retirement Annuities	5%	
Fees	5%	
Service		10%
Marketing/Enrollment	5%	
Administration	5%	

On November 6, 1992, The Wyatt Company and the Review Committee met to discuss the ranking of the 16 insurance companies who met the minimum requirements set forth in the RFP.

RANKING AND COMPOSITE SCORE
(100 points Maximum possible score)



Based upon the rankings and RFP responses, the Committee decided to recommend the first nine (9) carriers on the list above and interview Fortis, Safeco, and Northern Life/Northwestern National to evaluate a possible tenth insurance company vendor. The three interviews took place on November 16, 1992 and the Committee concluded that

none of the three candidates should be recommended as the tenth insurance company vendor.

RECOMMENDATION:

The Committee recommends that the SBI authorize the executive director, with assistance from the SBI's legal counsel, to negotiate and execute contracts with the following nine (9) insurance companies for 403(b) investment services:

**Aetna Life
Great-West Life
IDS Life
Metropolitan
Minnesota Mutual
Mutual of America
Nationwide
United Investors
VALIC**

Attachments: Summary list of RFP responses
RFP document

Summary List of RFP Responses

This is a list of insurance companies that submitted proposals in response to the SBI's RFP. The list of companies is divided into two parts: companies who meet minimum credit and product offering criteria as outlined in the RFP and those companies that do not meet the criteria.

Companies That Meet Minimum Credit & Product Offering Criteria

Aetna Life & Annuity
American United Life
Fortis Financial
General American Life
Great West Life
Horace Mann Life
IDS Life
Lincoln National Life
Metropolitan Life
Minnesota Mutual
Mutual of America
Nationwide
Northern Life/Northwestern National
SAFECO
United Investors Life
VALIC

Companies That Do Not Meet Minimum Credit & Product Offering Criteria

Jackson National Life*
Travelers**

- * Jackson National Life does not offer any variable annuities or variable funds, so they do not meet the requirement that the carrier offer an equity fund, a fixed fund, and a bond or balanced fund.
- ** Travelers' credit ratings do not meet the minimum requirement that carriers must have ratings in the AAA/AA, Aaa/Aa, or A++/A+ categories from at least two rating agencies.

REQUEST FOR PROPOSAL (RFP)

REGARDING THE SELECTION OF 403(b) TAX SHELTER ANNUITY VENDORS BY THE MINNESOTA STATE BOARD OF INVESTMENT (SBI).

This RFP does not obligate the SBI to complete the project and the SBI reserves the right to cancel the solicitation if the SBI considers it to be in its best interest.

I. INTRODUCTION

The Minnesota State Board of Investment (SBI) is charged with the investment of approximately \$19.1 billion for the State and related constituents. Of this amount, nearly \$16.1 billion represents retirement funds which the SBI invests on behalf of various State and local governmental employees.

The SBI is seeking insurance company vendors for investment of employee and employer match monies in 403(b) tax sheltered annuity products. Laws of Minnesota 1992, Chapter 487, section 4, mandates that the SBI select up to 10 insurance companies by January 1, 1993. A copy of the law is attached as **Exhibit A**.

The SBI has established a 403(b) Vendor Review Committee to prepare and distribute a formal RFP to evaluate insurance company vendors. The Review Committee is comprised of a designee of each of the five Board members and members of the Board's Investment Advisory Council. The Committee will review responses and will recommend candidates to the SBI for approval.

In carrying out its responsibilities, the SBI's 403(b) consultant, The Wyatt Company, will work closely with the Review Committee, SBI staff, and the SBI's Investment Advisory Council.

II. PURPOSE

The law (see **Exhibit A**) requires the SBI to select up to 10 qualified insurance companies as 403(b) vendors. Local school districts may provide matching funds up to \$2,000 per eligible employee to be invested in 403(b) annuities. Those districts and bargaining units that provide the employer matching funds for 403(b) annuities will be required to choose one or more vendors from the insurance companies selected by the SBI.

III. BACKGROUND REGARDING THE SBI

A. Legal Authorization

The SBI was created pursuant to Article XI, Section 8, of the Minnesota Constitution for the purpose of "administering and directing the investment of all state funds" Statutory provisions relating to fiduciary responsibility, portfolio composition, and the types of securities in which the SBI may legally invest are set forth in Minnesota Statutes Chapter 11A and 356A, copies of which are attached as **Exhibit B**

B. Composition

By constitutional requirement, the SBI is composed of five (5) elected officials: Governor, State Auditor, State Treasurer, Secretary of State, and State Attorney General

The Review Committee is composed of a designee of each member of the SBI and three (3) members of the SBI's Investment Advisory Council

C. Investments and Managers

Currently, the SBI invests in a variety of asset classes including stocks, bonds, real estate, venture capital, resource funds (oil and gas), guaranteed investment contracts and derivative securities

The SBI's responsibility for 403(b) programs is limited to the provisions of Laws 1992, Chapter 487 (see **Exhibit A**)

D. Staffing and Support Services

The SBI has a staff of twenty-five (25) persons supervised by an Executive Director This group manages the day-to-day investment responsibilities The Executive Director reports investment developments to the SBI at its quarterly and special meetings In order to carry out its duties effectively, the SBI staff maintains close contact with the Board members and their staffs, the State Legislature, the state-wide and local retirement systems with assets managed by the SBI, and the many firms providing various forms of investment services

The SBI also receives investment assistance from its 17-member Investment Advisory Council (IAC), whose duties are set forth in Minnesota Statutes 11A.08. The IAC is composed of the State Commissioner of Finance, the Executive Directors of the three statewide retirement systems whose funds are invested by the SBI, a retiree representative, two active employee representatives and ten persons knowledgeable in general investment matters The IAC's duties are to

advise the SBI on general investment policy matters and perform other advisory tasks as the SBI requests.

E. 403(b) Consultant

The SBI's 403(b) consultant, The Wyatt Company, will provide a variety of services related to the SBI's statutory mandate concerning 403(b) annuity vendors. These services include, but are not limited to analysis, advice and recommendations on:

- o Vendor identification
- o Vendor evaluation and selection
- o Program design and related administrative issues
- o Methodology for on-going monitoring and review

IV. BACKGROUND REGARDING MINNESOTA 403(b) PROGRAMS

Minnesota State law was recently amended to enable local school districts and other qualifying organizations to implement employer matching contributions to their 403(b) programs. Each district currently has its own 403(b) program for employee deferrals, and a few districts have employer matching contributions. Under the new legislation, local districts have the authority to collectively bargain for the introduction of an employee and employer matching contribution, which may be invested only with the ten insurance companies selected by the SBI. Each district may select one or more of the ten selected insurers to accept employer contributions, and each district will continue to have the right to select the 403(b) vendors that are permitted to accept employee contributions without employer match.

There are approximately 400 school districts throughout the state that are eligible to offer employer matching contributions. Background information on these plans is outlined below:

Eligible Employees	73,000
Projected Annual Earnings	\$2.3 billion
Average Annual Earnings	\$31,975
Average Age	42.9 years
Average Service	11.9 years

Based on a sampling of several school districts around the state, approximately 50% to 85% of eligible teachers contribute to a 403(b) program. An estimated 36% to 54% of all eligible employees contribute. Among the sample districts that currently offer an employer match, 90% to 100% of eligible employees contribute. Most employees are covered by a defined benefit retirement plan, and all are eligible to participate in Minnesota's statewide deferred compensation (457) plan.

V. DUTIES OF THE INSURANCE COMPANY VENDORS

Up to ten (10) insurance company vendors will be selected by the SBI to provide high quality and competitive 403(b) annuity products to eligible employees. It is anticipated that, if selected, an insurance company will enter into an agreement with the SBI that specifies the products and services that will be offered to employees.

If your firm is selected to offer a 403(b) product under the employer-matching program, the same product terms must be made available to all eligible employees throughout the State, whether or not their local district provides an employer matching contribution.

Administration

The administrative objectives of the program are to

- Keep the employers' work and expense to a minimum
- Keep the benefits of the program readily available to employees, and
- Ensure that the presentation of the plan to employees does not interfere with their work

The selected providers must be willing and able to assume considerable service work if the plan is to operate properly, including the burden and expense of explaining the plan to employees, answering questions, keeping records, calculating exclusion allowances, periodically reporting results, and providing information and assistance to employees.

Investment transmittals will be made by each employer in accordance with its normal payroll periods. Each employer will require receipt within five days of a printed confirmation statement confirming receipt of funds and including the amount of each deposit and an itemization of each participant's contribution.

Flexibility will be needed to accommodate the needs of program participants. For example, some employees are paid over the school year rather than over all 12 months. The selected providers must be able to accept an employee's payment schedule. In addition, the provider must permit increases, decreases, or suspension of contributions to accommodate changes in employees' salaries, exclusion allowances, and retirement needs.

Marketing/Enrollment Procedures

It is a requirement that contacts with employees must not interfere with the employee's work assignments. Some participating employers may require that employees be

contacted only after hours. All group meetings must be scheduled through the benefits manager at each participating district.

The SBI expects the marketing and enrollment procedures of each participating employer to be followed by the 403(b) providers selected. Abuse or failure to cooperate could result in revocation of the agreement with the company.

VI. INSURANCE COMPANY VENDORS ELIGIBLE TO BE CONSIDERED

Laws 1992, Chapter 487 authorizing employer contributions to 403(b) products specifies that eligible 403(b) providers must be:

- A qualified insurance company under Minnesota Statutes Section 60A.02, subdivision 4,
- Licensed to engage in life insurance or annuity business in the State of Minnesota,
- Determined by the Minnesota Commissioner of Commerce to have a rating within the top two rating categories by a recognized national rating agency or organization that regularly rates insurance companies, and
- Selected by the State Board of Investment as one of up to ten insurance companies with competitive options and investment returns on annuity products.

VII. MINIMUM REQUIREMENTS FOR PROPOSALS

The Review Committee has established the following minimum requirements:

1. Financial Strength

The vendors selected by the SBI must have a current rating from two (2) or more of the following rating agencies within the rating categories shown:

Rating Agency	Rating Categories
Moody's Investor Services	Aaa or Aa
Standard & Poor's	AAA or AA
Duff & Phelps	AAA or AA
A.M. Best	A++ or A+

Credit rating information and other sources of credit information may be utilized to evaluate the carrier's financial strength.

2. Investment Options

Each vendor must offer at least one (1) product in each of the following three (3) categories:

- o Equity Fund
- o Bond Fund or Balanced Fund
- o Guaranteed (Fixed) Fund or Money Market Fund

In addition, the SBI would prefer to select carriers that offer multiple investment choices covering a wide variety of fund types

VIII. PROPOSAL SELECTION

A. Nature of Procurement.

This procurement is undertaken by the SBI pursuant to the provisions of Minnesota Statutes 16B 17, a copy of which is attached as **Exhibit E**. As such, it is not governed by strict competitive bidding requirements frequently associated with the purchase of supplies and materials by the State and selection will not be based exclusively on the concept of lowest responsible bidder. The SBI reserves the right to waive minor informalities

Accordingly, the SBI shall select the vendors whose proposals and oral presentations, if requested, demonstrate, in SBI's sole opinion, clear capability to best fulfill the purposes of the RFP in a cost effective manner. The SBI reserves the right to accept or reject proposals, in whole or in part, and to negotiate separately as necessary to serve the best interest of the State of Minnesota

B. Selection Criteria.

The Review Committee's evaluation of proposals will be based on the following weighting of selection criteria:

Financial Strength		55%
Credit Analysis	55%	
Investment Products		35%
Range of Investment Choices	5%	
Fixed Annuities	10%	
Variable Funds	10%	
Retirement Annuities	5%	
Fees	5%	
Service		10%
Marketing/Enrollment	5%	
Administration	5%	

IX. CERTIFICATE OF COMPLIANCE

Each insurance company selected by the SBI will be required to provide a Certificate of Compliance from the State of Minnesota Department of Human Rights prior to the start date of the agreement between the SBI and the insurance company. The SBI anticipates that the agreements will commence on or about January 1, 1993.

A copy of an explanatory brochure is in **Exhibit D**.

Questions regarding the certification process should be addressed to:

Minnesota Department of Human Rights
 Contract Compliance
 500 Bremer Tower
 7th Place and Minnesota Street
 St Paul, MN 55101
 (612) 296-5663

X. PREPARATION OF PROPOSAL

A vendor's response to this RFP shall be organized in the following manner:

Section 1: A written response to the questionnaire in **Exhibit C**.

Section 2: Attachments

XI. SUBMISSION OF RESPONSE

The consultant shall submit its RFP response to the SBI and the Wyatt Company at the following addresses:

Two (2) copies to:

Kim McCarrel
Consultant
The Wyatt Company
Suite 2120
1211 S W. Fifth Avenue
Portland, OR 97204-3721

(503) 241-6515

Five (5) copies to:

John Griebenow
Manager, Alternative Investments
Minnesota State Board of Investment
Room 105, MEA Building
55 Sherburne Avenue
St Paul, MN 55155

(612) 296-3328

- o **No proposal received after 3:00 P.M. Central Time on October 19, 1992 will be considered.**
- o **One (1) copy of the response sent to John Griebenow at the SBI must be unbound and signed in ink by an authorized officer of the responding firm.**
- o **Each copy of the response must be sealed in a mailing envelope or package with the insurance company vendor's name and address clearly written on the outside. Please identify the unbound copy on the outside of its envelope as well.**
- o **Insurance companies may be required to provide additional copies of the responses during the evaluation process.**

XII. INFORMATION CONTACTS

The SBI's exclusive agents for purposes of responding to vendors' inquiries on RFP requirements are.

Kim McCarrel
Consultant

or

David Buck
Associate Consultant

The Wyatt Company
Suite 2120
1211 S W. Fifth Avenue
Portland, OR 97204-3721
Telephone (503) 241-6515

Other persons are not authorized to discuss RFP requirements with vendors before the proposal submission deadline.

The SBI shall not be bound by and vendors may not rely on information regarding RFP requirements obtained from non-authorized persons.

XIII. RFP TIMETABLE AND RELATED REQUIREMENTS

RFP Issued. 9/21/92

Vendors' proposals due. 10/19/92

NO PROPOSALS RECEIVED AFTER 3:00 P.M. CENTRAL TIME ON OCTOBER 19, 1992 WILL BE CONSIDERED.

Proposals evaluated by the Vendor Review Committee and the SBI consultant. Oct.-Nov. 1992*

Vendor interviews. Nov. 16,17,18, 1992

The Review Committee may require that a vendor submitting a proposal make an oral presentation to the Committee during the evaluation process. Individual vendors will be notified if a presentation is required on one of the dates shown.

Vendors selected by the SBI. Dec. 1992*

Contracts completed and executed. Dec. 1992*

* Projected dates, subject to change.

XIV. COST AND METHOD OF PAYMENT

- o All costs relating to the proposal shall be explained in detail as specified in **Exhibit C**. The SBI reserves the right to reject a proposal on the basis of cost.

- o Laws 1992, Chapter 487 mandates that the SBI "establish a budget for its costs in the determination process" and "charge a proportional share of that budget to each insurance company selected." Assuming ten (10) insurance companies are selected by the SBI, the cost to each insurance company is expected to be \$5,000-10,000.

XV. PERIOD OF CONTRACT

The contract shall be for the period commencing on or about January 1, 1993. The SBI presently anticipates that the contracts will contain a 30 day cancellation clause and will be reviewed on an annual basis with regards, primarily, to credit quality and range of products offered. The SBI reserves the right to solicit additional proposals from time to time and presently plans to comprehensively review the approved vendors in approximately five years.

XVI. PUBLIC STATUS OF PROPOSALS SUBMITTED

Pursuant to Minnesota law, all proposals submitted in response to this RFP shall become the property of the State of Minnesota. Such proposals shall also constitute public records and shall be available for viewing and reproduction by any person.

Issue Date September 21, 1992

Tab E



**STATE OF MINNESOTA
OFFICE OF THE STATE TREASURER
ST. PAUL 55155**

MICHAEL A. McGRATH
Treasurer

**303 State Administration Building
50 Sherburne Avenue
St. Paul, Minnesota 55155
(612) 296-7091**

DATE: December 1, 1992

TO: Members, State Board of Investment

FROM: Michael McGrath, Chair
SBI Administrative Committee

SUBJECT: Committee Report

The SBI Administrative Committee met on November 23, 1992 and discussed the following items

INFORMATION ITEMS:

1) Review of FY 94-95 Budget Documents

A copy of the FY 94-95 budget documents submitted to the Department of Finance (DOF) is included at **Attachment A**. The figures in the budget pages are the same as those presented in the Committee's report to the Board for the June 1992 SBI meeting. Additional narrative on each of the funds managed by the SBI was prepared by SBI staff at the request of the DOF. The entire document submitted to the DOF is now presented for your information.

2) Report on Disaster Recovery Plan

The Executive Director presented a disaster recovery plan for SBI operations developed by SBI staff. The Committee accepted the plan as presented.

Since some parts of the plan contain information that is considered private under state law, a copy of the document is not included part of this report. Each Board member has received a copy through his/her designee on the SBI Administrative Committee.

ACTION ITEMS:

1) Approval of Vendor for Internal Accounting System

Since 1981, the SBI has retained an outside vendor to provide a portfolio accounting and management reporting system. The system also provides an internal audit function for much of the SBI operations and consolidates the accounting data generated by the SBI's two custodian banks (currently Norwest Bank and State Street Bank and Trust).

The current contract expires June 30, 1993. In order to select the vendor for the new contract period, the Committee, with assistance from SBI staff, issued a request for proposal (RFP). The Committee is now recommending that one of the respondents, Financial Control Systems, be retained by the SBI.

The RFP was announced in the State Register and sent to nineteen (19) firms (see Attachment B). Two (2) responses were received.

- Financial Control Systems (the current vendor)
- SunGard Financial

The two responses were evaluated by staff for the vendors adherence to the RFP requirements, the perceived ability of the vendor to meet the needs of the SBI for these services over the next five (5) years, and the cost of the services proposed by the vendor. Both responses met the RFP requirements and demonstrated the technical capabilities required to provide the requested services.

The Financial Control Systems proposal would provide a higher level of production support for monthly reporting and would require less SBI staff time to complete month end processing. This proposal also provided a higher level of ongoing technical support for problem solving and system upgrades. Financial Control Systems is the current vendor, their retention would eliminate staff training and conversion costs that would be part of a change to SunGard Financial.

The SunGard Financial proposal would require that the SBI staff produce all monthly reports internally with no vendor production support. Their proposal would provide a limited amount of technical support to the system with all support time over a monthly maximum to be billed as additional fees.

Staff recommends that the proposal from Financial Controls be accepted over the proposal by SunGard for two reasons.

- The Financial Controls proposal provides a higher level of technical and production support and would require no additional support from SBI staff, above that which is required to interface with the current system.

- The Financial Controls cost proposal is significantly lower. The bid from Financial Controls was \$202,500/year while the bid from SunGard was \$360,000/year. Additional start-up and conversion costs would also be incurred if the SunGard proposal was accepted.

RECOMMENDATION:

The Committee recommends that the SBI authorize the Executive Director, with assistance from SBI legal Counsel, to negotiate and execute a contract for accounting and management reporting with Financial Control Systems for the period July 1, 1993 - June 30, 1998.

2) Approval of SBI Administrative Bill for 1993 Session

Mr. Bicker presented several items for the SBI's administrative bill for the 1993 session. Most of the changes are of a technical nature but all are important to the ongoing management of the fund's under the Board's control. After discussing each item, the Committee endorsed the package, as presented. A summary of the items is shown below:

- Add authority to bill 403(b) insurance company vendors for ongoing costs of program review. The SBI must bill the selected companies for its costs in the initial selection process. The SBI seeks clarification of its authority to bill its costs for the necessary ongoing monitoring.
- Add authority for the SBI to hire a consultant to review the state deferred compensation plan and to charge back the costs to the outside insurance companies. The SBI may need to hire a consultant to assist in the review of the state deferred compensation plan.
- Remove language concerning collateral requirements in the Board's certificate of deposit program. This change will remove unworkable requirements from the Board's certificate of deposit program.
- Correct language in 1992 legislation concerning the amortization period for gains and losses in the Environmental Trust Fund. This correction will make the language for the amortization period for gains and losses for the Environmental Trust Fund and Permanent School Fund the same, as was intended in last year's legislative package.
- Clarify the SBI's general investment authority. The clarification would state that the SBI may invest in certain authorized investments from contract markets or financial institutions regulated by governmental agencies.

- Exempt the Investment Advisory Council from the general statutory sunset provision covering advisory boards The provision would make the IAC a permanent advisory board not subject to the sunset provisions elsewhere in statute
- Add authority for the SBI to establish commingled pools to invest non-pension assets The new authority would allow the SBI to pool for investment purposes the assets of various non-pension entities in the same manner the SBI currently commingles pension assets
- Restrict participation of local police and fire funds in the Supplemental Investment Fund to pension fund assets not non-pension fund assets. Commingling non-pension fund moneys with pension assets in the SIF raises potentially troubling tax issues for the SBI

A more detailed explanation of these changes is in **Attachment C** along with a section by section summary and draft language

RECOMMENDATION:

The Committee recommends that the SBI authorize the executive director to seek legislative approval of all statutory changes described above.

3) Evaluation Process for the SBI Executive Director

As a result of questions posed by Auditor Dayton at the SBI meeting in June 1992 , the Committee reviewed the process currently used to evaluate the Executive Director.

After discussion, the Committee does not have a formal recommendation for change. Rather, the Committee requested that the Board review the evaluation procedure that has been used for several years and decide if they wish to make any adjustments

A summary of the process follows

- The evaluation is based on the results of the executive director's workplan for the preceding fiscal year. The workplan is reviewed by the SBI Administrative Committee and adopted by the Board, annually. The items in the workplan are organized around the same category headings as the executive director's position description
- Each Board member is asked to complete a written evaluation on a form developed jointly by the SBI designee/deputies. The form includes a written self-evaluation by the executive director. The written evaluations are to be completed before the September meeting of the SBI

- As chair of the SBI, the Governor (or his designee) coordinates the distribution and collection of the evaluation forms and is responsible for presenting the forms to the executive director. Each Board member may meet with the executive director to personally discuss his/her written review. These individual meetings are held at the discretion of each Board member.

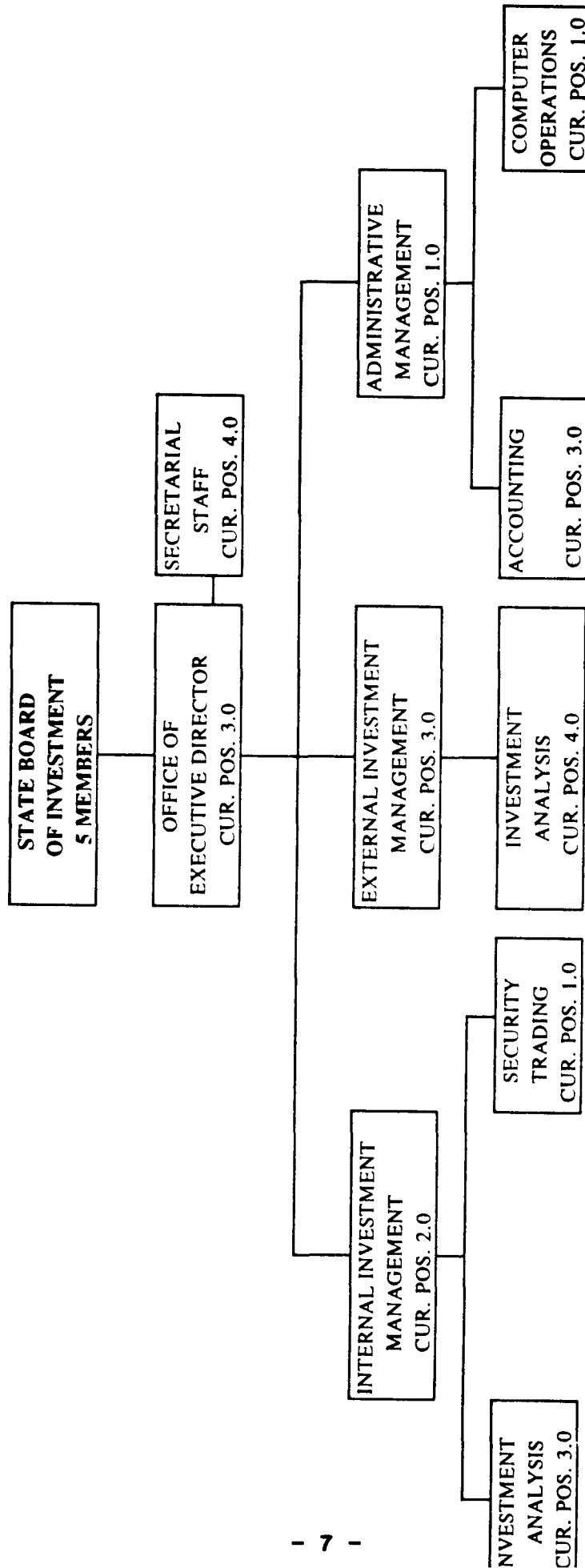
During discussion, Committee members noted that when this process was first instituted, it was anticipated that the SBI chair would compile the written reviews and discuss them with the executive director. In practice, either the written evaluations have been given to the director by the Governor's designee, or the Governor's designee has met with the director to summarize and discuss the written evaluations.

RECOMMENDATION:

The Committee recommends that the SBI discuss the evaluation process and determine if adjustments are necessary.

ATTACHMENT A

STATE BOARD OF INVESTMENT
ORGANIZATION CHART JULY 1, 1992



STATE BOARD OF INVESTMENT

POSITION AND EMPLOYEE STATUS INFORMATION

POSITION RECONCILIATION:

AUTHORITY:	CURRENT FY. 93	REQUESTED FOR 6/30/95
Legislative Complement General Fund	25	25
Total Permanent Positions	<u>25</u>	<u>25</u>
TOTAL POSITIONS	<u>25</u>	<u>25</u>
Employees on 6/30/92	24	

EMPLOYEES BY EMPLOYMENT STATUS:

	<u>6/30/92</u>
Full-Time Unlimited	24
TOTAL	<u>24</u>

AGENCY BUDGET BRIEF

AGENCY: STATE BOARD OF INVESTMENT

FUND: GENERAL

SUMMARY OF AGENCY ACTIONS

2 FINANCIAL IMPACT OF DECISION ON BASE FUNDING LEVELS

	<u>F Y 1994</u>	<u>F Y 1995</u>	<u>F Y 94 - 95</u>	<u>F.Y. 1994</u>	<u>F.Y. 1995</u>	<u>F.Y. 94 - 95</u>
AGENCY MANAGEMENT CHALLENGE						
PROJECTED INFLATION 3.5 %	66	134	200			
5 PERCENT BASE REDUCTION	99	99	198			
TOTAL AGENCY SHORTFALL	<u>165</u>	<u>233</u>	<u>398</u>	<u>(99)</u>	<u>(99)</u>	<u>(198)</u>
AGENCY OPERATIONS						
TOTAL AGENCY IMPACT				<u>(99)</u>	<u>(99)</u>	<u>(198)</u>
3 IMPACT ON STAFFING						
POSITIONS LEFT VACANT	(74)	(150)	(224)	1	2	
4. IMPACT ON REVENUE GENERATION						
REDUCE NON-DEDICATED RECEIPTS	(60)	(60)	(120)			
	(15)	(12)	(27)	(90)	(90)	(180)
5 AFFECTED STATUTES ARE						
	(4)	(3)	(7)			
	<u>(12)</u>	<u>(6)</u>	<u>(20)</u>			
	(165)	(233)	(398)			

Summary of Actions Taken:

The SBI cannot absorb projected salary increases nor the Base Level Reduction within its current structure and will reduce its staff by two (2) positions. The general fund dollars associated with the 2 positions will be used to fund base level reductions and FY 94-95 salary increases for the remaining 23 positions. The two positions cut would come from the SBI's internal management group. The SBI staff would recommend that the assets of the permanent School Fund and the Environmental Trust Fund be moved to external management. The increased cost of external management would be paid from these funds and would reduce the available spendable income. It is estimated that the additional cost of external management would be \$1.6 million during the biennium.

MISSION STATEMENT:

The State Board of Investment (SBI) develops and implements investment policies and strategies for the state's retirement funds, trust funds and cash accounts. The statutory goal of the SBI is "to establish standards which will insure that state and pension assets...will be responsibly invested to maximize the total rate of return without incurring undue risk." (Minnesota Statutes Section 11A.01).

The SBI, composed of 5 constitutional officers, provides investment management for the Basic Retirement Funds, the Post Retirement Fund, the Permanent School Fund, Environmental Trust Fund, Assigned Risk Plan, and the Supplemental Investment Fund. In addition, the SBI manages Invested Treasurer's Cash and approximately 50 other state cash accounts. On June 30, 1992, assets managed by the board totaled 19.8 billion.

The board retains an executive director, an internal investment management staff, and external investment managers to execute its policies. In performing its duties, the board is assisted by the Investment Advisory Council which is composed of 17 persons with investment and retirement fund expertise.

The SBI staff recommends strategic planning alternatives to the board and council and executes the board's decisions. The staff also provides internal management for the Permanent School Fund and the Environmental Trust Fund, closely monitors the performance of all external managers retained by the board, and reviews prospective investment vehicles for legislative consideration. The majority of the board's activity relates to investment of retirement funds (roughly 85%). Primary clients are the current and retired members of the three statewide retirement systems (PERA, TRA, MSRS). For cash accounts, the board's largest clients are the State Treasurer and the Department of Finance.

MAJOR POLICY DRIVERS:

All activities of the board are governed by M S Chapter 11A and Chapter 356A. To meet the goals established therein, the SBI must

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

Investment activity is divided into two major areas; externally managed and internally managed funds. Each concentration requires different strategies and investment vehicles.

External managed funds. Assets of the Basic Retirement Funds, Post Retirement Fund and the Supplemental Investment Fund (approximately 85% of the total) are under external management.

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

The Post Retirement Fund contains the assets of approximately 59,000 retired public employees covered by the nine statewide retirement plans. Upon retirement, money sufficient to finance fixed monthly annuities for the life of the retiree are transferred from the Basic Funds to the Post Fund. The Post Fund's main purpose is to ensure that each retiree's initially promised benefit is paid. The SBI must insure that assets transferred to the Post Retirement Fund generate sufficient returns to maintain promised benefits and to generate additional returns that will provide benefit increases to retired public employees.

For Fiscal Years 1980 to 1992 benefit increases were granted if investment realized earnings exceeded the statutory 5% required income. This formula, with its emphasis on current income, caused the asset allocation of the fund to be highly concentrated in fixed income securities. Starting with Fiscal Year 1993 benefit increases will be paid using a formula tied to the total rate of return of the fund. This change in formula will enable the asset allocation of the Post Retirement Fund to be more balanced and include a larger percentage of equities.

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

Internally managed funds. The SBI directly invests about 15% of the assets with which it is entrusted. This includes the assets of the Permanent School Fund, Environmental Trust Fund and all money in state cash accounts.

The Permanent School Fund is a trust fund created by the Minnesota State Constitution and designated as a long-term source of revenue for public schools. Income generated by the Permanent School Fund's assets is used to offset state school aid payments. The Fund's investment objectives have been influenced by the restrictive legal provisions under which its investments have been managed. Long run growth in Fund assets have been difficult to achieve without seriously reducing current spendable income and exposing the spendable income stream to unacceptable volatility. Currently the SBI maximizes current income by investing all the Fund's assets in fixed income securities. The buy and hold structure is not compatible with most active management styles. As a result, internal staff provide the most cost effective management of the fund.

The Environmental Trust Fund was designed to be a long-term source of revenue for funding environmental projects. The Fund's investment objectives are driven by the requirement that only fund income may be spent. Currently the Environmental Trust Fund maximizes current income by investing all the Fund's assets in fixed income securities. As a result, internal staff provide the most cost effective management of the fund.

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

AGENCY BUDGET PLAN:

In past biennium the SBI absorbed the inflation cost increases in all areas except salaries. By re-prioritizing expenditures, SBI should be able to absorb 1994-95 non-salary inflationary costs without impacting programs dramatically.

The SBI cannot absorb projected salary increases, nor the Base Level Reduction within its current structure and will reduce its staff by two (2) positions. The general fund dollars associated with the 2 positions would be used to fund the base level reduction and FY 94-95 salary increases for the remaining 23 positions. The two positions cut would come from the SBI's internal management group, necessitating moving the assets of the Permanent School Fund and the Environmental Trust Fund to external management. The increased cost of external management would be paid from these funds and would reduce the available spendable income.

By Statute, the SBI bills the statewide retirement funds and non-general fund cash accounts for approximately 90% of its General Fund appropriation. These receipts are deposited in the General Fund as non-dedicated revenue. The General Fund appropriation not recovered by the bill-back provision (approximately 10%) represents the portion of the SBI's budget that is associated with the investment of the General Fund portion of the Invested Treasurer's Cash Fund. Any reduction in spending will result in a matching reduction in revenue to the General Fund, and reduced billings to non-general fund accounts.

PERFORMANCE INDICATORS:

Statutes establish investment goals for the Basic and Post Retirement funds. In addition, the board has set more exacting standards for investment returns. The following pages demonstrate that short and long-term performance has generally exceeded both statutory requirements and the board's investment performance targets. Returns shown on the following pages are presented net of management fees and investment expenses.

SUMMARY OF INVESTMENT RESULTS

Period Ending 6/30/92

	6/30/92 Millions	1Year (%)	Annualized 3Years (%)	Annualized 5 Years (%)
Basic Funds:	\$8,608			
total fund		14.5	10.6	9.3
stocks/bonds only		14.6	11.0	9.5
market composite		12.2	9.8	9.0
median fund		13.4	11.0	10.0
inflation (CPI)		3.1	4.2	4.3
actuarial assumption		8.5	8.5	8.5
Post Fund:	\$7,087			
realized earnings		9.5	9.6	9.9
actuarial assumption		5.0	5.0	5.0
benefit increase		4.5	4.6	4.9
inflation (CPI)		3.1	4.2	4.3
Supplemental Fund:				
Income Share	\$304	13.1	10.9	9.8
median fund		13.4	11.0	10.0
Growth Share	\$82	14.7	9.9	7.5
median manager		13.8	11.5	9.8
Common Stock Index	\$24	13.8	10.9	8.9
Wilshire 5000		13.6	10.7	8.6
Bond Market	\$12	15.5	11.1	10.6
Salomon BIG		14.2	10.9	10.6
Money Market	\$78	5.1	7.2	7.6
91 Day T-Bills		4.6	6.7	6.8
Fixed Interest	\$69	6.6	NA	NA
contract period		91-94 GIC		
Assigned Risk Plan	\$348	13.6	NA	NA
market composite		12.9	NA	NA
State Cash Accounts:				
Treasurer's Pool	\$2,328	6.7	8.1	NA
Trust Pool	\$105	5.4	7.4	NA
91 day T-bill		4.6	6.7	NA
		FY 93	FY 92	FY 91
		Earnings Est.	Earnings	Earnings
Permanent School	\$419	NA	\$33.3 million	\$32.0 million
Environmental Trust	\$24	\$2.9 million	\$1.4 million	\$1.2 million

BASIC RETIREMENT FUNDS
Market Value 6/30/92: \$8.6 Billion

Period Ending 6/30/92

	1 Year	Annualized 3 Years	Annualized 5 Years
Total Fund	14.5%	10.6%	9.3%
Stocks, Bonds, Cash Only	14.6%	11.0%	9.5%
Comparisons:			
Market Composite	12.2%	9.8%	9.0%
TUCS Median Fund	13.4%	11.0%	10.0%
Inflation (CPI)	3.1%	4.2%	4.3%
Actuarial Assumption	8.5%	8.5%	8.5%

The Basic Retirement Funds contain the assets of active employees in the three statewide retirement systems MSRS, PERA, and TRA. The asset mix of the portfolio on 6/30/92 was 60% stocks, 29% bonds and 11% alternative assets (real estate, venture capital and resource funds).

For fiscal year 1992, the Basic Funds exceeded their market composite index by more than 2 percentage points and outperformed the median fund in the Trust Universe Comparison Service (TUCS) by more than 1 percentage point. Above market performance by both the stock and bond managers contributed to the favorable returns. The Basic Funds ranked in the top third (33rd percentile) of all pension funds for the year.

Generally, performance over the longer term has been favorable as well. Over the last 5 years, the Basic Funds have exceeded their market index composite by nearly one-half of one percent annualized. While the portfolio trailed the median fund over the last 5 years, the latest 1 and 3 year time periods show improved performance relative to other pension funds. The Basic Funds continue to keep well ahead of the inflation rate and have surpassed the actuarially assumed rate of return as well.

POST RETIREMENT INVESTMENT FUND
Market Value on 6/30/92: \$7.1 Billion

Period Ending 6/30/92

	1 Year	Annualized 3 Years	Annualized 5 Years
Realized Earnings	9.5%	9.6%	9.9%
Actuarial Assumption	5.0%	5.0%	5.0%
Benefit Increase Granted	4.5%	4.6%	4.9%
Inflation (CPI)	3.1%	4.2%	4.3%

The Post Retirement Investment Funds contains the assets of retired employees in the three statewide retirement plans MSRS, PERA, TRA. The asset mix of the portfolio on 6/30/92 was 9% stocks, 80% bonds and 11% cash.

Through fiscal year 1992, the statutory retirement benefit increase formula required the fund to generate realized earnings (dividends, interest, and net gain or loss from the sale of securities) in order to provide benefit increases to retirees. As shown above, realized income has been sufficient in recent years to provide benefit increases that were in excess of the inflation rate. In fact, the benefit increases granted were among the highest in the nation. However, as interest rates fell during the 1980's, the Fund was forced to invest an increasing percentage of the portfolio in fixed income securities in order to maintain high levels of realized income. This diminished the prospect for future benefit increases and reduced the long term earning power of the Fund.

Beginning in fiscal year 1993, the statutory formula will be based on total return and actual market value of the portfolio. The new formula has two components:

- An inflation adjustment which will provide 100% of the CPI, capped at 3.5%. This will be provided regardless of investment performance.
- An investment adjustment which will be based on Fund returns over a 5-year period. This will be provided only if the Fund generates returns above the actuarial assumed rate of 5% and the cumulative value of all inflation based adjustments previously granted.

The new formula, which was sought by the retirement systems and enacted by the 1992 Legislature, will allow the Post Fund to increase its exposure to stocks and will increase the long term growth of its assets. During fiscal year 1993, the asset mix of the Post Fund will move toward a revised asset mix of 50% stock, 47% bonds and 3% cash.

SUPPLEMENTAL INVESTMENT FUND

Period Ending 6/30/92

	Market Value 6/30/92	1 Year	Annualized 3 Years	Annualized 5 Years
Income Share Account	\$304 million	13.1%	10.9%	9.8%
TUCS Median Fund		13.4%	11.0%	10.0%
Growth Share Account	\$82 million	14.7%	9.9%	7.5%
TUCS Median Stock Mgr.		13.8%	11.5%	9.8%
Common Stock Index Account	\$24 million	13.8%	10.9%	8.9%
Wilshire 5000 Stock Index		13.6%	10.7%	8.6%
Bond Market Account	\$12 million	15.5%	11.1%	10.6%
Salomon Broad Bond Index		14.2%	10.9%	10.6%
Money Market Account	\$78 million	5.1%	7.2%	7.6%
91 Day Treasury Bills		4.6%	6.7%	6.8%
Fixed Interest Account	\$69 million	89-92 GIC	90-93 GIC	91-94 GIC
Interest Rate Obtained		8.400%	8.765%	6.634%

The Supplemental Investment Fund is an investment vehicle available to a wide range of state and local public employee groups for retirement related purposes. The largest participants in the Fund are the Deferred Compensation Plan and the Unclassified Employees Retirement Plan.

Overall, fiscal year 1992 was a strong year for the Fund. The Growth Share, Common Stock Index, Bond Market and Money Market Accounts all met or exceeded their performance targets for the year, while the Income Share Account slightly trailed its performance objective.

Over the last 3 and 5 year periods, the Common Stock Index, Bond Market and Money Market Accounts have met or exceeded their targets. The small to medium capitalization stock bias in the Growth Share Account hurt performance over the same periods relative to the median stock manager, but the same bias helped returns in the most recent year. The Income Share Account has a higher percentage of stocks (60%) than many other balanced funds in TUCS. This allocation caused returns to lag other funds by 0.1-0.2 percentage points because bonds outperformed stocks during the last five years.

The Fixed Interest Account provides a series of 3-year, fixed interest rate investments in guaranteed investment contracts (GIC's) available through insurance companies and banks. While the fixed rate has fallen over time along with the decline in overall interest rates, the Account has consistently obtained rates that surpass the yields on other 3-year instruments.

PERMANENT SCHOOL TRUST FUND
Market Value on 6/30/92: \$419 Million

The Permanent School Trust Fund is a trust established for the benefit of Minnesota public schools. Income from the Trust is used to offset state expenditures for school aid payments. Due to the State's need for a high, consistent level of current income as well as restrictive statutory accounting provisions, the Trust has been invested entirely in fixed income securities. While this investment strategy maximizes current income, it will reduce the long term growth of the Trust.

The 1992 Legislature approved statutory changes, suggested by the SBI, which make common stocks a more attractive investment vehicle for the Trust. Stocks will help the Trust grow over the long term because they are a higher returning asset class. Adding common stocks to the portfolio will, however, reduce spendable income over the short-run because stocks produce lower current income than bonds. Converting to an asset mix of 50% stock/50% bonds at this time would reduce spendable income fiscal years 1994-95.

Time Period	Income Generated
FY 1992	\$33.3 million
FY 1991	\$32.3 million
FY 1990	\$30.4 million
FY 1989	\$30.5 million
FY 1988	\$28.2 million

ENVIRONMENTAL TRUST FUND
Market Value on 6/30/92: \$24 Million

The Environmental Trust Fund is to be used to supplement traditional sources of funding for environmental and natural resource activity. The Trust will receive a portion of the net lottery proceeds until 2001.

Due to the relatively small balance in the principal of the Trust, the portfolio was invested in short term interest bearing securities throughout fiscal year 1992. Spending commitments made by the Legislature for fiscal years 1992-93 require the Trust to continue to focus on generating current income. As a result, the Trust will be invested entirely in fixed income securities for the throughout fiscal year 1993. The SBI plans to add stocks to the portfolio during fiscal year 1994. Over time, the asset mix of the Trust will be targeted at 50% stocks to provide for long term growth.

Time Period	Income Generated
FY 1993 Est	\$2.9 million
FY 1992	\$1.4 million
FY 1991	\$1.2 million

ASSIGNED RISK PLAN
Market Value on 6/30/92: \$348 Million

The Minnesota Assigned Risk Plan is the insurer of last resort for Minnesota companies seeking to obtain workers compensation insurance. The Plan is administered by the Dept. of Commerce. Investment management responsibility for the assets of the plan was transferred to the SBI by the Legislature in May 1991.

The investment goals of the Plan are to match the projected liability/payment stream as closely as possible and to provide sufficient liquidity/cash for payment of ongoing claims and operating expenses. Due to the relatively short duration of the liability stream, the asset mix of the plan was 15% stocks and 85% bonds during fiscal year 1992. This allocation is reviewed annually upon receipt of new actuarial valuations and will be changed to reflect changes in plan liabilities.

Period Ending 6/30/92

	1 Year
Actual Return	13.6%

Comparison:

Market Composite	12.9%
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STATE CASH ACCOUNTS

The SBI invests the cash balances in more than 400 separate accounts in the Minnesota State Treasury. These accounts range in size from \$5,000 to over \$400 million. Most of these accounts are invested through two pooled funds.

- Trust Fund Pool holds cash balances for retirement related accounts and trust funds that are not managed by external money managers
- Treasurer's Cash Pool holds the balances in the Invested Treasurer's Cash as well as special or dedicated accounts

Daily balances for the pools fluctuate widely due to changing cash needs throughout the year. During fiscal year 1992, the range was \$104 million to \$2.3 billion.

Period Ending 6/30/92

	Market Value 6/30/92	1 Year	Annualized 3 Years
Treasurer's Cash Pool	\$2,328 million	6.7%	8.1%
Trust Fund Cash Pool	105 million	5.4%	7.4%

Comparison:

3 Month T-Bill	4.6%	6.7%
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ATTACHMENT B

ACCOUNTING SYSTEM RFP VENDOR MAILINT LIST

Firm Name	Location
ADIA Information Technologies	Bloomington, MN
Analysts International	Minneapolis, MN
Arthur Anderson & Company	Minneapolis, MN
Beau, Inc.	Chanhassan, MN
Born Information Services	Wayzata, MN
Broadway Seymour	St. Paul, MN
CAP-Gimini America	Minneapolis, MN
Complete Business Solutions	Woodbury, MN
Computer Power Group	Minneapolis, MN
Financial Controls Systems	Chadds Ford, PA
NIDS, Inc.	Southampton, NY
Premier Solutions	Wayne, PA
Shaw Data Services	New York, NY
Software A.G.	Bloomington, MN
State Street Bank & Trust Company	North Quincy, MA
SunGard Financial Systems, Inc.	Canoga Park, CA
SunGard Asset Management Systems	Birmingham, AL
Unysis	Eagan, MN
Vestek Systems	San Francisco, CA

ATTACHMENT C

1993 SBI LEGISLATIVE PACKAGE NARRATIVE EXPLANATION OF PROPOSED CHANGES

403(b) Annuity Vendor Selection and Review: Authority to Apportion to Vendors Ongoing Program Review Costs

In Laws 1992, Chapter 487 the Legislature assigned the SBI the responsibility to select up to 10 insurance companies to provide 403(b) tax sheltered annuities to teachers in districts in which the employer chooses to match contributions into 403(b) annuities. Chapter 487 appears to provide for some ongoing review of the vendors by the SBI. The law requires the SBI to retain consulting services and to apportion its costs of the selection process to the selected vendors. The law, however, is not clear whether the SBI has the authority to bill its costs to the vendors for necessary ongoing monitoring.

Deferred Compensation Plan: Allow the SBI to Hire a Consultant to Assist Review of Plan.

The SBI has statutory responsibility to select vendors and investment options for the state deferred compensation plan. The SBI may need to hire a consultant to assist in the review of the plan. The language also gives the SBI the authority to bill the vendors for its costs for necessary ongoing review. This authority is similar to the authority the Legislature gave the SBI in 1992 for selection of 403(b) annuity vendors.

Certificate of Deposit Program Remove Language Concerning Collateral Requirements

In 1992 the Legislature made two changes to the language applicable to the SBI's Certificate of Deposit program. One of the changes added an unworkable collateral requirement. The SBI discarded the collateral arrangement soon after the program was initiated in 1980 because the administrative burden was too great. Reestablishing the collateral provision threatens the viability of the program.

Correction of Previous Legislative Error: Correct the Amortization Period for Gains and Losses in the Environmental Trust Fund

In Laws 1992, Chapter 539, the Legislature changed the procedure for calculating net interest and dividend income in the Permanent School Fund and Environmental Trust Fund. The change allows the SBI to recover investment losses over a 10 year period and to use realized gains to offset losses over the same 10 year period. However, the language of the Environmental Trust Fund contained one error and had one period set at 10 and the other at 5. This amendment would correct the error and make the periods the same for the Environmental Trust Fund as they are for the Permanent School Fund, as was intended in the 1992 legislation.

Clarify the SBI's General Investment Authority

The clarification would state that the SBI may invest in certain authorized investments from contract markets or financial institutions regulated by governmental agencies.

Investment Advisory Council. Exempt the IAC from Statutory Sunset Provision

The Investment Advisory Council is currently covered by the sunset provision concerning advisory boards. The State Board has continuously expressed the need for the work of the IAC as being useful and beneficial to the Board and to staff. The expertise of the outside pension investment professionals along with the valued perspectives of the pension fund directors and plan member representatives provide invaluable advice to the Board and staff. Exempting the IAC from the sunset provision reduces the risk that the value of the IAC will be lost sometime in the future.

Non-Pension Commingled Pools. Authorize the SBI to Establish Commingled Pools to Invest Non-Pension Assets

The SBI has been investing pension assets in commingled funds since 1980. The SBI also invests non-pension assets of various trust funds and other accounts. The proposed amendment would authorize the SBI to commingle these various non-pension assets or manage them on a separate account basis and pass along the benefits of investment efficiency and flexibility to the trust funds and accounts.

Supplemental Investment Fund. Excluding Local Police and Fire Plan Non-Pension Assets from Investment

Current statutory provisions allow local police and fire relief associations to invest pension assets and non-pension assets in the SBI's Supplemental Investment Fund (SIF). The attorney general's office has suggested that mixing non-pension assets with tax-exempt pension assets raises troubling tax issues. The suggested change would remove the local relief associations' authority to invest their non-pension assets from their "general funds" in the SIF while retaining their authority to invest their pension assets in the SIF. The change also specifies that the local relief associations may invest their general fund assets with the SBI in a new non-pension commingled fund or separate account basis.

Currently, there are only two relief associations with non-pension assets in the SIF.

**SECTION BY SECTION SUMMARY
OF DRAFT LEGISLATION**

Section(s)	Brief Description
1	Authorizes the SBI to charge the 403(b) annuity providers the costs of ongoing monitoring.
2	Authorizes the SBI to hire a consultant to assist it in the review of the state deferred compensation plan and allows the SBI to charge to the outside vendors the costs of ongoing monitoring.
3	Eliminates an unworkable collateral requirement from the SBI's certificate of deposit program
4	Corrects an error in 1992 legislation concerning the amortization period for gains and losses in the Environmental Trust Fund.
5	Clarifies the SBI's general investment authority.
6	Removes the SBI's Investment Advisory Council from statutory sunset provision.
7	Authorizes the SBI to establish commingled pools to invest non-pension assets.
8,9,10	Excludes non-pension assets of local police and fire plans from being invested with pension assets in the SBI's Supplemental Investment Fund.

Add Authority to Bill 403(b) Insurance Company Vendors

Sec _____. Minnesota Statutes 1992, section 356 24, subdivision 1 is amended to read.

Subdivision 1 **RESTRICTION; EXCEPTIONS.** (a) It is unlawful for a school district or other governmental subdivision or state agency to levy taxes for, or contribute public funds to a supplemental pension or deferred compensation plan that is established, maintained, and operated in addition to a primary pension program for the benefit of the governmental subdivision employees other than.

(1) to a supplemental pension plan that was established, maintained, and operated before May 6, 1971;

(2) to a plan that provides solely for group health, hospital, disability, or death benefits, to the individual retirement account plan established by sections 354B 01 to 354B 04,

(3) to a plan that provides solely for severance pay under section 465 72 to a retiring or terminating employee,

(4) for employees other than personnel employed by the state university board or the community college board and covered by section 136.80, subdivision 1, to:

(i) the state of Minnesota deferred compensation plan under section 352 96; or

(ii) payment of the applicable portion of the premium on a tax sheltered annuity contract qualified under section 403(b) of the federal Internal Revenue Code, purchased from a qualified insurance company, if provided for in a personnel policy or in the collective bargaining agreement of the public employer with the exclusive representative of public employees in an appropriate unit, in an amount matching employee contributions on a dollar for dollar basis, but not to exceed an employer contribution of \$2,000 a year per employee, or

(5) for personnel employed by the state university board or the community college board and covered by section 136 80, subdivision 1, to the supplemental retirement plan under sections 136 80 to 136 85, if provided for in a personnel policy or in the collective bargaining agreement of the public employer with the exclusive representative of the covered employees in an appropriate unit, in an amount matching employee contributions on a dollar for dollar basis, but not to exceed an employer contribution of \$2,000 a year for each employee

(b) A qualified insurance company is a company that

(1) meets the definition in section 60A 02, subdivision 4,

(2) is licensed to engage in life insurance or annuity business in the state;

(3) is determined by the commissioner of commerce to have a rating within the top two rating categories by a recognized national rating agency or organization that regularly rates insurance companies; and

(4) is determined by the state board of investment to be among the ten applicant insurance companies with competitive options and investment returns on annuity products. The state board of investment determination must be made on or before January 1, 1993, and must be reviewed periodically. The state board of investment shall retain actuarial services to assist it in this determination and in its periodic review. The state board of investment shall establish a budget for its costs in the determination process and in its periodic review and shall charge a proportional share of that budget to each insurance company selected by the state board of investment. All contracts must be approved before execution by the state board of investment. The state board of investment shall establish policies and procedures under section 11A.04, clause (2), to carry out this paragraph.

(c) A personnel policy for unrepresented employees or a collective bargaining agreement may establish limits on the number of vendors under paragraph (b), clause (4), that it will utilize and conditions under which the vendors may contact employees both during working hours and after working hours.

Add Authority for SBI to Hire a Consultant to Review State Deferred Compensation Plan

Sec. _____. Minnesota Statutes 1992, section 352 96 subdivision 3, is amended to read:

Subd. 3. **Executive director to administer section.** This section must be administered by the executive director of the system under subdivision 4. Fiduciary activities of the deferred compensation plan must be undertaken in a manner consistent with chapter 356A. If the state board of investment so elects, it may solicit bids for options under subdivision 2, clauses (2) and (3). 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 state board of investment may annually establish a budget for its costs in the soliciting, evaluating, and periodic review process and may charge a proportional share of that budget to each insurance company offering options under subdivision 2, clause (3). 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.

Remove Language Concerning Collateral Requirements in the Board's Certificate of Deposit Program

Sec. _____. Minnesota Statutes 1992, section 11A 24, subdivision 4, is amended to read:

Subd 4 **OTHER OBLIGATIONS.** (a) The state board may invest funds in bankers acceptances, certificates of deposit, commercial paper, mortgage participation certificates and pools, repurchase agreements and reverse repurchase agreements, guaranteed investment contracts, savings accounts, and guaranty fund certificates, surplus notes, or debentures of domestic mutual insurance companies if they conform to the following provisions:

(1) bankers acceptances of United States banks are limited to those issued by banks rated in the highest four quality categories by a nationally recognized rating agency,

(2) certificates of deposit are limited to those issued by (i) United States banks and savings institutions that are rated in the highest four quality categories by a nationally recognized rating agency, ~~that meet the collateral requirements established in section 9-031,~~ or whose certificates of deposit are fully insured by federal agencies, or (ii) credit unions in amounts up to the limit of insurance coverage provided by the National Credit Union Administration,

(3) commercial paper is limited to those issued by United States corporations or their Canadian subsidiaries and rated in the highest two quality categories by a nationally recognized rating agency,

(4) mortgage participation or pass through certificates evidencing interests in pools of first mortgages or trust deeds on improved real estate located in the United State where the loan to value ratio for each loan as calculated in accordance with section 61A 28, subdivision 3, does not exceed 80 percent for fully amortizable residential properties and in all other respects meets the requirements of section 61A 28, subdivision 3,

(5) collateral for repurchase agreements and reverse repurchase agreements is limited to letters of credit and securities authorized in this section,

(6) guaranteed investment contracts are limited to those issued by insurance companies or banks rated in the top four categories by a nationally recognized rating agency,

(7) savings accounts are limited to those fully insured by federal agencies.

(b) Sections 16A.58 and 16B.06 do not apply to certifications of deposit and collateralization agreements executed by the state board under paragraph (a), clause (2).

(c) In addition to investments authorized by paragraph (a), clause (4), the state board may purchase from the Minnesota housing finance agency all or any part of a pool of residential mortgages, not in default, that has previously been financed by the issuance of bonds or notes of the agency. The state board may also enter into a commitment with the agency, at the time of any issue of bonds or notes, to purchase at a specified future date, not exceeding 12 years from the date of the issue, the amount of mortgage loans then outstanding and not in default that have been made or purchased from the proceeds of the bonds or notes. The state board may charge reasonable fees for any such commitment and may agree to purchase the mortgage loans at a price sufficient to produce a yield to the state board comparable, in its judgment, to the yield available on similar mortgage loans at the date of the bonds or notes. The state board may also enter into agreements with the agency for the investment of any portion of the funds of the agency. The agreement must cover the period of the investment, withdrawal privileges, and any guaranteed rate of return.

Correct Language from 1992 Concerning Amortization Period

Sec. _____. Minnesota Statutes 1992, section 116P.11, is amended to read:

11P.11 AVAILABILITY OF FUNDS FOR DISBURSEMENT.

(a) The amount biennially available from the trust fund for the budget plan developed by the commission consists of the interest earnings generated from the trust fund. Interest earnings generated from the trust fund shall equal the amount of interest on debt securities and dividends on equity securities. Gains and losses arising from the sale of securities shall be apportioned as follows:

(1) if the sale of securities results in a net gain during a fiscal year, the gain shall be apportioned in equal installments over the next ten fiscal years to offset net losses in those years. If any portion of an installment is not needed to recover subsequent losses identified in paragraph (b), it shall be added to the principal of the fund; and

(2) if the sale of securities results in a net loss during a fiscal year, the net loss shall be recovered from the gains in paragraph (a) apportioned to that fiscal year. If such gains are insufficient, any remaining net loss shall be recovered from interest and dividend income in equal installments over the following ~~five~~ ten fiscal years.

(b) For funding projects through fiscal year 1997, the following additional amounts are available from the trust fund for the budget plans developed by the commission:

(1) for the 1991-1993 biennium, up to 25 percent of the revenue deposited in the trust fund in fiscal years 1990 and 1991;

(2) for the 1993-1995 biennium, up to 20 percent of the revenue deposited in the trust fund in fiscal year 1992 and up to 15 percent of the revenue deposited in the fund in fiscal year 1993, and

(3) for the 1995-1997 biennium, up to ten percent of the revenue deposited in the fund in fiscal year 1994 and up to five percent of the revenue deposited in the fund in fiscal year 1995

(c) Any appropriated funds not encumbered in the biennium in which may be appropriated cancel and must be credited to the principal of the trust fund

Clarify SBI's General Investment Authority

Sec ____ Minnesota Statutes 1992, section 11A 24, subdivision 1, is amended to read:

11A.24 AUTHORIZED INVESTMENTS.

Subdivision 1. **Securities generally** The state board shall have the authority to purchase, sell, lend or exchange the following securities for funds or accounts specifically made subject to this section including puts and call options and future contracts traded on a contract market ~~designated and~~ regulated by a federal governmental agency or by a financial institution regulated by a governmental agency. These securities may be owned as units in commingled trusts that own the securities described in subdivisions 2 to 5

Exempt IAC from Statutory Sunset Provision

Sec ____ Minnesota Statutes 1992, section 11A 08, subdivision 4, is amended to read

Subd 4 **Terms; compensation; removal; vacancies; expiration.** The membership terms, compensation, removal of members appointed by the state board, and filling of vacancies of members, ~~and expiration of the council~~ shall be as provided in section 15 059 except that council members shall not receive a per diem. The council is not subject to the expiration date provisions of section 15 059

Authority for SBI to Establish Pools for Non-Pension Assets

Sec ____ Minnesota Statutes 1992, section 11A 14, is amended, by adding a subdivision, to read

Subd. 15. Non-pension assets.

The state board is authorized to invest non-pension assets as may be required by law in combined fixed income funds or in separately managed accounts at its discretion. Each participating entity shall own an undivided, participation in the pools in which it participates. As of any date, the total claim of a participating entity on the assets in each pool shall be equal to the ratio of units owned by an entity in each account to the total issued units then outstanding. The assets of the combined fixed income funds and in separately managed accounts must be invested subject to the provisions of section 11A.24.

Restrict Participation in SIF of Local Police and Fire Non-Pension Assets

Sec. ____ Minnesota Statutes 1992, section 69.775, is amended to read:

69.775 INVESTMENTS.

The special fund assets of the relief associations governed by sections 69.771 to 69.776 must be invested in securities that are authorized investments under section 356A.06, subdivision 6 or 7. Notwithstanding the foregoing, up to 75 percent of the market value of the assets of the fund may be invested in open-end investment companies registered under the federal Investment Company Act of 1940, if the portfolio investments of the investment companies comply with the type of securities authorized for investment by section 11A.24, subdivisions 2 to 5. Securities held by the associations before June 2, 1989, that do not meet the requirements of this section may be retained after that date if they were proper investments for the association on that date. The governing board of the association may select and appoint investment agencies to act for and in its behalf or may certify funds special fund assets for investment by the state board of investment under section 11A.17. The governing board of the association may certify general fund assets of the relief association for investment by the state board of investment in fixed income pools or in a separately managed account at the discretion of the state board of investment as provided in section 11A.14, subdivision 15. The governing board of the association may select and appoint a qualified private firm to measure management performance and return on investment, and the firm shall use the formula or formulas developed by the state board under section 11A.04, clause (11).

Restrict Participation in SIF of Local Police and Fire Non-Pension Assets

Sec. ____ Minnesota Statutes 1992, section 69.77, subdivision 29, is amended to read:

Subd. 2g. The funds of the association must be invested in securities that are authorized investments under section 356A.06, subdivision 6 or 7. Notwithstanding the foregoing, up to 75 percent of the market value of the assets of the fund may be invested in open-end investment companies registered under the federal Investment Company Act

of 1940, if the portfolio investments of the investment companies comply with the type of securities authorized for investment by section 11A.24, subdivision 2 to 5. Securities held by the association before June 2, 1989, that do not meet the requirements of this subdivision may be retained after that date if they were proper investments for the association on that date.

The governing board of the association may select and appoint investment agencies to act for and in its behalf or may certify ~~funds~~ special fund assets for investment by state board of investment under section 11A.17. The governing board of the association may certify general fund assets of the relief association for investment by the state board of investment in fixed income pools or in a separately managed account at the discretion of the state board of investment as provided in section 11A.14, subdivision 15. The governing board of the association may select and appoint a qualified private firm to measure management performance and return on investment, and the firm shall use the formula or formulas developed by the state board under section 11A.04, clause (11)

Restrict Participation in SIF of Local Police and Fire Non-Pension Assets

Sec ____ Minnesota Statutes 1992, section 424A.06, subdivision 4, is amended to read:

Subd 4 Investment of assets of the general fund. The assets of the general fund may be invested in any securities authorized by the bylaws of the relief association and may be certified for investment by the state board of investment in fixed income pools or in a separately managed account at the discretion of the state board of investment as provided in section 11A.14, subdivision 15.

Tab F

COMMITTEE REPORT

DATE: December 1, 1992

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

FROM: **Stock and Bond Manager Committee**

The Stock and Bond Manager Committee met on November 24, 1992 to consider the following agenda items:

- Review of manager performance
- In-depth review of Lincoln Capital
- In-depth review of Waddell & Reed Asset Management
- In-depth review of Wilshire Associates
- Review of staff paper on internal short term cash account investment guidelines.
- Report on results of 1992-1995 GIC bid
- Discussion of emerging manager search process
- Selection of candidates for Bond Manager Monitoring Program

INFORMATION ITEMS:

1) Review of Manager Performance

- **Stock Managers**

For the quarter ended September 30, 1992, the Basic Funds' domestic equity program underperformed its aggregate benchmark but matched the Wilshire 5000 Adjusted (Equity Program 2.5%; Aggregate Benchmark 2.9%; vs. Wilshire 5000 Adjusted 2.5%). The current equity managers in the Basic Funds underperformed their aggregate benchmark but outperformed the Wilshire 5000 Adjusted for the latest year (Equity Program 10.3%; Aggregate Benchmark 10.5%; vs. Wilshire 5000 Adjusted 10.0%). For the latest five year period, the current equity

managers outperformed their aggregate benchmark and the Wilshire 5000 Adjusted (8.4% actual vs. 8.0% benchmark vs. 8.0% Wilshire 5000 Adjusted).

- **Bond Managers**

For the quarter ending September 30, 1992, the Basic Funds' domestic bond program outperformed the Salomon BIG 4.4% vs. 4.3%. The current bond managers also outperformed their benchmark for the last year (Bond Program 13.0%, Salomon BIG 12.7%) and the last five years (12.3% vs. 12.1%)

The stock manager evaluation reports and investment commentaries start on page 103. The bond manager reports and commentaries start on page 121.

2) In-depth review of Lincoln Capital

The SBI's Manager Continuation Policy requires that an in-depth review be conducted every three years for each active manager. This quarter staff prepared an in-depth review of Lincoln Capital. A copy of staff's full report is attached starting on page 9. A summary of staff's findings follows:

- **Qualitative**

Lincoln is an index manager that constructs a portfolio by examining 54 variables of the Salomon BIG Index. After evaluating the 54 variables for a number of liquid securities, Lincoln uses linear programming to create the most undervalued portfolio. Lincoln adds value to the portfolio through sector and security selection.

- **Quantitative**

Since the inception of the account in June 1988, Lincoln has matched the return of the Salomon BIG (11.6% annualized). Lincoln lost value by underweighting mortgage and corporate securities but added value through correct security selection. Going forward, Lincoln does not plan to underweight the mortgage or corporate sectors.

Staff concludes that Lincoln be retained as a manager. Upon review, the Committee concurs with the staff's conclusions regarding Lincoln Capital.

3) In-depth Review of Waddell & Reed Asset Management

As noted above, the SBI's Manager Continuation Policy requires that an in-depth review be conducted every three years for each active manager. This quarter, staff

prepared an in-depth review of Waddell & Reed Asset Management. The manager was last reviewed in 1989. A copy of the staff's full report is attached starting on page 23. A summary of staff's findings follows.

- **Qualitative**

Waddell & Reed has a stable and experienced investment staff. The firm's investment approach has been consistently applied since the inception of the account.

Staff has some concerns regarding the firm's customized benchmark. There are modifications which need to be done to the construction process in order for the benchmark to meet standards which would constitute a good benchmark.

- **Quantitative**

Since the inception of the account, Waddell & Reed has provided annualized value added of 0.8% (11.7% actual versus 10.5% benchmark.)

Staff concludes that Waddell & Reed Asset Management should continue to be retained as an active equity manager for the SBI. Upon review, the Committee concurs with the staff's conclusions regarding Waddell & Reed

4) In-depth Review of Wilshire Associates

Staff also completed an in-depth review of Wilshire Asset Management (WAM), the SBI's passive domestic equity manager. A full copy of the report can be found on page 45. A summary of the report follows.

- **Quantitative**

Wilshire's tracking error remains within the SBI's expectations, both on an annual and cumulative basis. This was accomplished even though the index fund was used periodically to fund domestic active equity managers and to rebalance between stocks and bonds.

Expectations are that annual tracking error will be within ± 50 -60 basis points of the benchmark within a year. WAM's maximum actual tracking error was 48 basis points in any calendar year. On a cumulative basis, WAM's actual tracking error has been lower i.e. negative 10 basis points annualized relative to the Wilshire 5000 and positive 18 basis points relative to the Wilshire Adjusted.

- **Qualitative**

Wilshire's manager account load and assets under management have remained manageable since the inception of the account. Although WAM experienced significant turnover in 1986, they have maintained an experienced staff to manage the SBI account. However, staff is concerned that if key personnel left, the SBI account could be adversely affected

Staff recommends that WAM continue to be retained as the SBI's passive equity manager. After review, the Committee agrees with staff's conclusions.

5) **Review of Internal Short Term Cash Account Investment Guidelines**

SBI staff manage the cash balances of nearly 400 state agency accounts in pooled or separate accounts. On June 30, 1992 the total market value of all internally managed cash accounts was \$2.7 billion. This quarter, staff reviewed the internal cash management practices and the guidelines used to invest these accounts. In addition, the benchmark by which staff measures its performance was also examined. A copy of this paper can be found on page 59.

Staff invests the majority of accounts through a single pooled vehicle called the Treasurer's Cash Pool. In meeting the investment objectives of preservation of capital and maximization of liquidity and returns, several money market instruments are used. A detailed description of these instruments and their use in the portfolio is included in the appendix of the paper. A summary of the quality guidelines used by staff is shown below.

Investment	Statutory Limitations	Internal Limitations
Commercial Paper	A-2/P-2 or higher	A-1/P-1
Asset Backed C P	A-2/P-2 or higher	A-1/P-1/D-1
Medium Term Notes	BAA or higher	A or higher
Bankers' Acceptances	BAA or higher	A or higher
Repurchase Agreements	Collateral Restrictions	Primary Dealers Only
U S Government Securities	None	None
U S Gov't Agency Securities	None	None

Staff proposed a new benchmark for the Treasurer's Cash Pool that is intended to provide enough flexibility to manage volatile cash needs, but also more appropriately measure the yield advantage present from maturity structure typically employed for the pooled fund. Staff recommended a benchmark in which 75% of the return is tied to the SBI's custodian bank's Short Term Investment Fund and 25% is tied to the return of the Merrill Lynch 1 to 3 year index.

Upon review, the Committee approved this benchmark but voiced some reservations. Since the maturity of the fund fluctuates with the cash flow needs projected by the Department of Finance, it may be significantly different from the maturity of the benchmark at times. This may cause the fund to over- or underperform the benchmark during various periods. Also, measuring the cash portion of the fund against the custodian bank's actively managed Short Term Investment Fund makes the benchmark a more difficult bogey than a passively managed index. The Committee felt the blended benchmark recommended by staff was very aggressive, but represented a better alternative than the 91 day Treasury bill currently being used.

RECOMMENDATION:

The Committee recommends that the SBI adopt the staff paper on internal cash management as presented. The Committee recommends that the decision to measure the performance of the Treasurer's Cash Pool against the new benchmark be reviewed within two years. Performance relative to 91 Day T-Bills should continue to be reported as an alternative benchmark.

6) Report on Results of 1992-1995 GIC bid

On October 29, 1992, the SBI bid its seventh 3-year guaranteed investment contract (GIC) for the Fixed Interest Account in the Supplemental Investment Fund. For the first time, the SBI accepted a bid for a synthetic GIC.

Contract Period:	November 1, 1992 - October 31, 1995 (3 years)
Contribution Period:	November 1, 1992 - October 31, 1993 (1 year)
Estimated Lump Sum:	\$12.8 million
Estimated Flow	<u>\$ 3.8 million</u>
Estimated Total:	\$16.6 million

Bid Award to: Norwest Bank Minnesota, Minneapolis

Net Effective Annual
Rate to Participants: 5.28%, 53 basis points over 3-year Treasuries

Norwest Bank will segregate the GIC assets in a separate account and the SBI will retain ownership. Norwest will invest in Treasuries and mortgage-backed securities and other issues backed by the federal government, and will compare market value to book value of the securities on a monthly basis. Caisse des Depots et Consignations (CDC), an AAA rated French bank owned by the French government, guarantees preservation of book value plus accrued interest.

Norwest Bank Minnesota, with \$11 billion in assets, is the flagship bank of Norwest Corporation. Norwest Corporation is a diversified financial services corporation with \$41 billion of assets and is the sixteenth largest bank holding company in the U.S. Norwest Bank Minnesota is rated AA by Standard & Poor's and Aa3 by Moody's.

The structure of the new synthetic GIC requires a different contractual agreement than previous GIC's used by the SBI. The form of the agreement is similar to that used in hiring external stock and bond managers.

RECOMMENDATION:

The Committee recommends that the SBI authorize the executive director, with assistance from SBI legal counsel, to negotiate and execute the necessary contractual agreements with Norwest Bank for the 1992-95 GIC in the Fixed Interest Account of the Supplemental Investment Fund.

7) Discussion of Emerging Manager Search Process

The Committee discussed the implementation of an emerging manager program for domestic equities. In reviewing potential managers over the past ten years, staff has observed that many active domestic equity managers achieve significant value added during the early years of their firm's histories, when they have fewer assets under management. Staff suggests implementing an emerging manager program in order to capture this potential enhanced performance. In addition, an emerging manager program would provide a group of managers which could eventually manage larger assets for the SBI, on the same scale as the current domestic equity managers.

Staff recommends the following preliminary screens be applied to identify potential emerging active domestic equity firms: 1) total assets under management of \$50 million to \$250 million, 2) at least three years of performance data; and 3) the firm must be an SEC registered investment advisor.

Staff recommends the following program structure for an emerging manager program:

- Total assets allocated to the program will be equal to the size of an average SBI domestic equity manager account (\$300 million). Each emerging manager would receive \$30-\$50 million, which would require hiring 6-10 managers.
- Each manager would initially be evaluated against the most appropriate published index and would be required to construct a customized benchmark within two years.

- Each manager will receive a three year contract. At the end of the three years, the emerging managers will either receive assets equal to the larger equity managers, be retained as an emerging manager or be dismissed.

After discussion of the Emerging Manager Program, the Committee recommended implementation of the process.

RECOMMENDATION:

The Committee recommends that the SBI proceed with a search for emerging managers using the general guidelines described above.

8) Selection of Candidates for Bond Manager Monitoring Program

The Committee discussed potential candidates for the Bond Manager Monitoring Program. The purpose of the program is to monitor those managers which are likely to be included in future active bond manager searches.

The Committee reviewed the qualitative and quantitative data on all the candidates and evaluated their suitability for the SBI's program. The Committee recommends the following managers to be in the program:

BEA Associates	IDS Advisory Group
Blackrock Financial Management	J P. Morgan Investment Management
Brinson Partners, Inc	Piper Capital Management
Criterion Investment Management	Standish, Ayer & Wood
Goldman Sachs Asset Management	Trust Company of the West

Descriptions and return history of these managers are found starting on page 81. The diversity of styles of the above managers is expected to complement existing bond managers. Staff expects the bond search committee will be convened in the first half of calendar 1993.

RECOMMENDATION:

The Committee recommends that the SBI include the ten (10) managers listed above in the Bond Manager Monitoring Program.

**DETAILED REVIEW OF
LINCOLN CAPITAL
September 1992**

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I. ORGANIZATION

A. Ownership

Lincoln was founded in 1967 and is 100% employee owned

B. Professional Staff

Brian Johnson is the SBI's portfolio manager. Biographies of Mr. Johnson and other fixed income staff are included in Exhibit 1.

C. Fixed Income Assets Under Management

The following table (assets are in millions) shows how Lincoln's assets have grown. To accommodate this growth, Lincoln increased fixed income management personnel from four to eight. Lincoln is limiting active management account growth to two or three accounts a year.

	12/88	12/89	12/90	12/91	9/92
Index					
Market Value (\$Millions)	2,817	3,933	6,135	8,119	9,881
Number of Accounts	12	13	15	19	22
Active					
Market Value (\$Millions)	4,361	5,497	6,208	6,813	6,932
Number of Accounts	29	32	34	33	34
Total					
Market Value (\$Millions)	7,178	9,430	12,343	14,932	16,813
Number of Accounts	41	43	47	50	54

D. Personnel Turnover

Lincoln's fixed income group has lost no personnel since hired by the SBI.

II. INDEXATION PROCESS AND RETURN ENHANCEMENT

Section A describes how Lincoln optimizes the portfolio using linear programming and section B describes how Lincoln adds value.

A. Indexation Strategy

Before constructing the portfolio, Lincoln calculates the Salomon BIG's expected return for changes in 54 variables. These variables include the level of interest rates, the shape of the yield curve, call features/option values, sector spreads and coupon spreads. They then create a portfolio that matches the returns of the Salomon BIG for a change in these variables. Return tolerances are relaxed for enhanced index portfolios like the SBI's.

To construct the portfolio, Lincoln chooses bonds from a universe of liquid issues. Lincoln's **proprietary** risk/valuation model determines the degree of undervaluation for all issues and calculates the expected returns to a change in the 54 variables described above. A linear program then constructs the most undervalued portfolio that still matches the characteristics of the index. The portfolio manager, Brian Johnson, then reviews each of the suggested transactions and determines if the transactions are consistent with current market levels and makes any necessary substitutions. All programs used to do the analysis were developed internally.

B. Return Enhancement

Lincoln expects to add 15 to 25 basis points net of fees above the Salomon BIG index. Lincoln does not add value through duration or yield curve decisions. Lincoln primarily adds value through issue and sector selection.

Issue Selection

Lincoln adds value by:

- identifying undervalued Treasury securities.
- selecting mortgage and corporate securities with incorrectly valued embedded options.
- pursuing a deferred settlement strategy with mortgage securities.

Lincoln expects to add 10 to 15 basis points per year through security selection.

Sector Selection

Lincoln weights sectors based on unusual sector and quality spreads. For instance, when the economy is strong, yield spreads between high quality and low quality issues are historically at their lowest levels. The high quality issues are more attractive when this happens and Lincoln would probably overweight government and high quality corporate issues.

To provide some protection from specific issuer risk in the corporate sector, Lincoln limits a single corporate issue to 0.5% of the portfolio

Lincoln expects to add 5 to 10 basis points per year through security selection.

III. INVESTMENT GUIDELINES

Lincoln's guidelines were set to allow them to enhance returns but still track the index. Lincoln's guidelines from 7/01/88 to 6/30/92 are shown in Exhibit 2. These guidelines were expressed as potential deviations in return from an index. Each risk exposure or expected deviation in return is calculated for a 100 basis point change in each variable, holding all other variables constant. For example, if the risk tolerance was 0.05%, and the yield curve or spread changed by 100 basis points (1%), the deviation of the portfolio return relative to the index would be five basis points (0.05%).

New guidelines have now been established for the enhanced index managers. Both Lincoln and Fidelity said they could not continue adding 10 to 25 basis points with their old guidelines primarily because of low bond market volatility. With lower volatility, there are fewer chances to add value since there are fewer mispricings within the bond market. The new guidelines allow the manager to add value in a less volatile market by making larger allocations within both sectors and subsectors of the market. The main risk, duration, is still limited by the guidelines.

The change also allowed staff to establish the same guidelines for both managers. The new guidelines are based on "contribution to duration." Contribution to duration represents the duration of the sector times the percentage of the portfolio in the sector. For instance, if fifty percent of the portfolio was in government securities with a duration of four, the contribution to duration would be two (4×0.5). The difference between the portfolio contribution to duration and the benchmark contribution to duration are Lincoln's risk factors. These new guidelines follow

Sector Weighting Guidelines

Governments	± 75% of the Salomon BIG Treasury/Agency contribution to duration
Mortgages	± 75% of the Salomon BIG Treasury/Agency contribution to duration
Corporates	± 75% of the Salomon BIG Treasury/Agency contribution to duration
Issues Outside Index	Maximum 10% of the Salomon BIG contribution to duration

Credit Guidelines

AAA	± 75% of the Salomon BIG AAA contribution to duration
AA	± 75% of the Salomon BIG AAA contribution to duration
A	± 75% of the Salomon BIG AAA contribution to duration
BBB	± 75% of the Salomon BIG AAA contribution to duration

Duration Guidelines

± 0.2 years of the Salomon BIG contribution to duration

Since inception, Lincoln has remained within their guidelines.

IV. PERFORMANCE ANALYSIS

A. Performance Relative to the Salomon BIG

Lincoln's returns are slightly below expectations. They have underperformed the index by three basis points on an annualized basis (11.59% vs 11.62%). Exhibit 3 shows the returns on a quarterly basis.

Lincoln's returns have been affected by bond pricing. The issue of bond pricing with all bond managers continues to be reviewed by staff. For instance, Lincoln's pricing services show they have outperformed the index by three basis points net of fees. Because of this, staff continues to work with Lincoln and all managers on pricing differences. However, whatever pricing is used to calculate returns, Lincoln has not achieved their promised results.

Even though Lincoln has not performed as well as hoped, the volatility and therefore the risk of their portfolio has been less than the active managers. The following table of monthly returns and risk (standard deviation) from 6/30/88 through 8/31/92 illustrates this.

	Return	Risk	Return/ Risk	Tracking Error
Lincoln	0.92	1.13	0.81	0.20
IAI	0.96	1.70	0.56	0.50
Lehman	0.89	1.13	0.79	0.21
Miller	0.91	1.42	0.65	0.69
Western	0.99	1.34	0.74	0.45
Salomon BIG	0.92	1.21	0.76	

The table shows that Lincoln's overall volatility and tracking error (volatility around the benchmark) has been less than the active managers and therefore less risky than the active managers. This is consistent with a semi-passive investment approach

B. Portfolio Performance Attribution

Lincoln's quarterly performance attribution is shown in exhibit 4. It shows that Lincoln added value primarily through issue selection but lost value because they were underweighted in mortgages and corporates while mortgages and corporates outperformed the government sector. Exhibits 5 and 6 illustrate their underweighting in these sectors. The Salomon BIG sector returns were 11.92%, 12.10% and 11.32% for mortgages, corporates and governments respectively from 6/88 through 9/92.

Going forward, Lincoln plans not to underweight the mortgage and corporate sectors. If they have a poor opinion on these sectors of the market, they will market weight the portfolio in mortgages and corporates. Staff expects that this will improve Lincoln's long-term returns.

V. HISTORY OF SBI ACTION

- In July, 1988, Lincoln received \$292 million
- In July, 1989, Lincoln received \$50 million due to rebalancing activity in the Basic Retirement Funds
- In August, 1989, Lincoln received \$100 million due to rebalancing activity.
- In November, 1990, \$20 million was taken from Lincoln as part of rebalancing activity.
- In December, 1990, \$25 million was taken from Lincoln as part of rebalancing activity
- In March, 1992, Lincoln received \$85 million as part of rebalancing activity

VI. CONCLUSION

Staff recommends that Lincoln be retained as a manager. Although they have not performed as well as expected, they have matched the returns of the index. Going forward, staff hopes the new guidelines and Lincoln's new policy of not underweighting mortgages and corporates will increase returns.

LINCOLN CAPITAL MANAGEMENT COMPANY

FIXED INCOME MANAGEMENT

Terrence J. Glomski

- Vice President
- Mortgage Derivatives Analyst
- Joined Lincoln in 1992
- BS, University of Illinois
- MA, Quantitative Economics University of Illinois
- Co-founder of Banking Decision Systems

Lorraine L. Holland

- Vice President
- 11 years with Lincoln
- BS, DePaul University
- MBA, University of Chicago

Andrew A. Johnson

- Assistant Vice President
- 3 years with Lincoln
- BS/MS, IIT
- MBA, University of Chicago
- Jobs for Youth

Brian D. Johnson

- Vice President - Index Products
- 9 years investment experience
- 6 years with Lincoln
- BS, University of Illinois
- MBA, University of Chicago

Richard W. Knece

- Vice President
- 12 years investment experience
- 8 years with Lincoln
- BBA, Notre Dame
- MBA, University of California

Alexander B. Knowles

- Vice President
- 2 years with Lincoln
- BA, University of Virginia
- MBA, Columbia University
- Chairman, IASC Industry Groups

Kenneth R. Meyer

- Executive Vice President
- 24 years investment experience
- 11 years with Lincoln
- BA, Notre Dame
- MBA, Wharton School
- Director, Interstate Assurance (Irish Life)
- Director, LINK Unlimited
- Investment Committee-International Foundation
- Advisory Council - University of Notre Dame

Ray B. Zemon

- Vice President
- 16 years investment experience
- 11 years with Lincoln
- BS, Rensselaer Polytechnic
- MBA, University of Wisconsin

EXHIBIT 2

INVESTMENT GUIDELINES

7/1/88 - 6/30/92

The investment guidelines were expressed as "risk exposures." A risk exposure is the expected return differential between our portfolio and the index resulting from a 100 basis point change in any one of 54 variables. These variables include yield curve segments, total portfolio duration, quality spreads, sector spreads, coupon spreads, and mortgage issuer spreads. The guidelines were:

Risk Exposure

<u>Description of Risk Variable</u>	<u>Sectors</u>	<u>Variables</u>	<u>Exposure</u>
Individual Yield Curve Segment	Govt/Corp	20	.05
Group Yield Curve Segment	Govt/Corp	4	.03
Level of Yields	Govt/Corp/Mtg	1	.03
Coupon Spreads	Govt/Corp	2	.15
Individual Agency Spreads	Government	4	.15
Individual Corporate Quality Spreads	Corporate	4	.15
Individual Corporate Sector Spreads	Corporate	9	.15
Aggregate Corporate Spread Risk	Corporate	1	.30
Mortgage Coupon Sectors	Mortgage	3	.30
Mortgage Issuer Sectors	Mortgage	2	.30
Mortgage Maturity Sectors	Mortgage	<u>3</u>	30
		54	

Index Duration

Salomon Broad Investment Grade Duration \pm .10 year

EXHIBIT 3

PERFORMANCE RESULTS

		Portfolio	Salomon BIG	Difference
1988	3Q	1.87%	1.95%	-0.08%
	4Q	1.16	0.76	0.40
1989	1Q	1.22	1.20	0.02
	2Q	7.54	7.93	-0.39
	3Q	1.27	1.03	0.24
	4Q	3.45	3.69	-0.24
1990	1Q	-0.71	-0.76	0.05
	2Q	3.48	3.62	-0.14
	3Q	0.88	0.97	-0.09
	4Q	5.34	5.07	0.27
1991	1Q	2.57	2.63	-0.06
	2Q	1.62	1.80	-0.18
	3Q	5.59	5.69	-0.10
	4Q	5.25	5.02	0.23
1992	1Q	-1.22	-1.16	-0.06
	2Q	3.88	4.06	-0.18
	3Q	4.49	4.32	0.17
Cumulative		59.36%	59.54%	-0.18%
Annualized		11.59	11.62	

EXHIBIT 4

INCREMENTAL RETURN OVER INDEX

in Percentages

QUARTER ENDING	MORTGAGE	CORPORATE	SECURITY SELECTION	OTHER	TOTAL
9/88	0.00	-0.02	0.23	-0.01	+0.20
12/88	0.01	0.02	-0.03	0.00	0.00
3/89	-0.01	0.01	0.01	0.00	0.01
6/89	0.00	0.02	0.04	-0.05	0.01
9/89	-0.02	-0.01	0.05	-0.01	0.01
12/89	0.00	0.03	0.00	0.00	0.03
3/90	-0.01	-0.01	0.02	-0.02	-0.02
6/90	-0.01	-0.01	0.02	-0.02	-0.02
9/90	-0.02	0.03	0.03	-0.05	-0.01
12/90	0.03	0.09	0.07	-0.02	+0.17
3/91	-0.01	-0.11	0.06	-0.04	-0.10
6/91	-0.03	-0.01	0.03	-0.03	-0.04
9/91	0.01	0.00	0.07	-0.01	0.07
12/91	0.02	-0.02	0.00	0.00	0.00
3/92	-0.01	-0.01	0.01	-0.04	-0.05
6/92	0.00	0.00	0.05	-0.01	0.04
9/92	0.00	0.00	0.03	-0.01	0.02

EXHIBIT 5

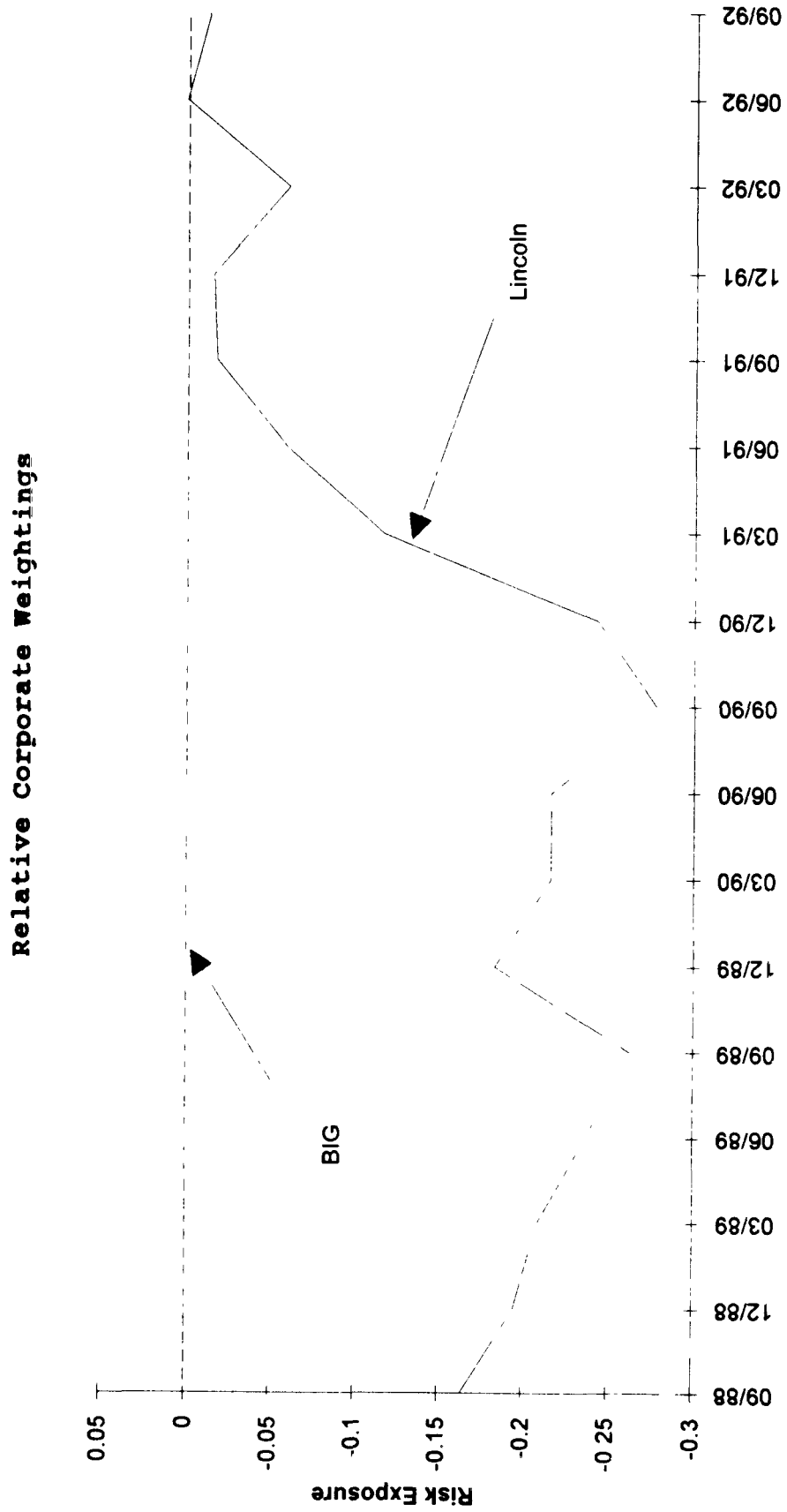
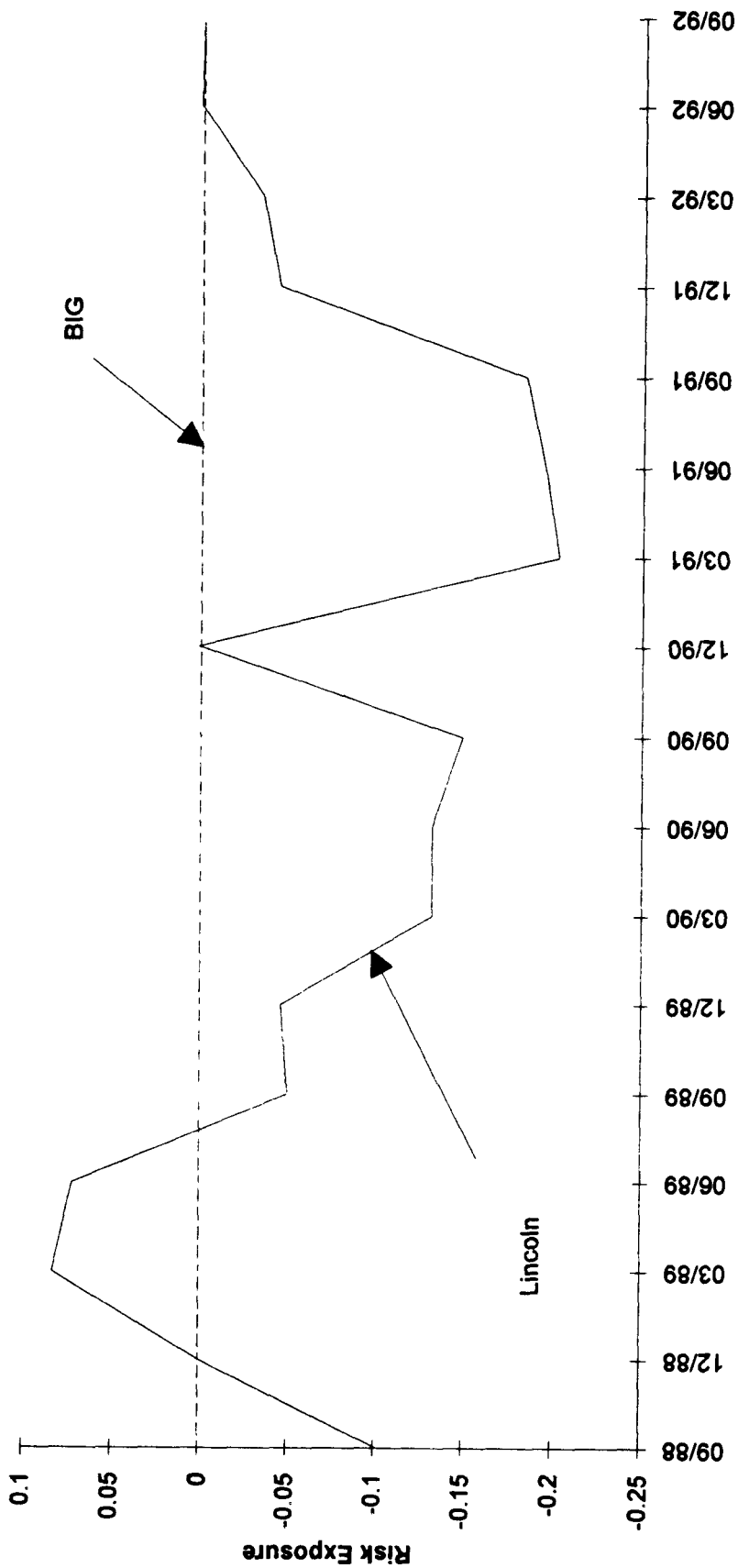


EXHIBIT 6

Relative Mortgage Holdings



**Detailed Review of
Waddell & Reed Asset Management
November 1992**

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I. Organizational Detail

A. Ownership

Waddell & Reed (W&R) is a wholly-owned subsidiary of Torchmark Corporation. Torchmark is a Birmingham, Alabama based diversified insurance and financial services company.

B. Professional Staff

Henry (Hank) Herrmann has been portfolio manager of the SBI's aggressive equity account since its inception in March 1983. Besides being portfolio manager for the aggressive equity discipline, his responsibilities at W&R include being President and Chief Investment Officer of the firm which manages over \$13 billion in total assets.

C. Assets Under Management

As seen in Table I, W&R had approximately \$292.6 million in assets under management for the aggressive equity product as of September 30, 1992.

Table I

**Waddell & Reed Asset Management
Aggressive Equity
Historical Assets
(\$ in millions)**

<u>Year End</u>	<u># Accounts</u>	<u>Market Value</u>
1984	9	\$ 605
1985	10	748
1986	7	903
1987	6	435
1988	6	496
1989	4	297
1990	4	272
1991	3	280
1992 -- Q3	3	293

The above table includes all accounts managed by Hank Herrmann. After he became CIO in 1986, he delegated the management of smaller accounts to others and has not been actively seeking new accounts. The above

accounts include two mutual funds managed by Herrmann until June 1989 which were also delegated to other W&R personnel.

D. Personnel Turnover

W&R has not experienced significant personnel turnover since the inception of the account. The firm has experienced turnover among the junior personnel, primarily research analysts. This has been the result of higher compensation levels offered by East Coast money managers. While turnover is never good for an organization, this concern is relatively minor at this point. Herrmann does much of his own research and is responsible for the management of the portfolio.

Mr. Herrmann has a new associate portfolio manager as of the second quarter of 1992. Eric Fuchs ran the Ultra Fund at 20th Century and he now will be assisting Herrmann in picking stocks.

II. Investment Approach

A. Investment Philosophy

Market timing is a key element of W&R's investment approach. The firm believes that the market reacts to near-term earnings expectations and interest rates. These factors cause stock prices to cyclically fluctuate around equilibrium values determined by long-run earnings power. The key to W&R market timing decisions is based on its view of the long-run earnings power of corporations as measured by a proprietary tool called the Central Value Index. The index is basically the S&P 400 book value forecasted out four quarters. Operating book value is used, ignoring write-offs. The index is a valuation tool to keep W&R aware of where the market is on a value basis. The market should trade in a band between 10% above the central value and 20% below. When stock prices are believed to be above their "central value", equity exposure is reduced. Positions are reestablished as prices decline below their "central value". Decisions based on the market's "central value" are tempered by the firm's near term interest rate and earnings outlook. Exhibit 1 is an example of the firm's Central Value Index.

B. Investment Process

Sector and Stock Selection

W&R emphasizes ownership of emerging, high-growth companies. The firm uses a quality/growth matrix to classify its universe of available candidates. Exhibit 2 is a model of the firm's matrix.

The growth component of the matrix is ranked 1 through 3 high (1), moderate (2) and stable (3) Cyclical growth companies are denoted in the matrix with an * The firm finds attractive those growth companies that exhibit either consistently high earnings growth or cyclical earnings with some secular positive growth trend

The other component of the matrix is quality Earnings quality is a function of company size, maturity, return on equity, leverage and acquisition activity There are four quality categories, A through D The firm seeks stocks that exhibit low quality earnings (C and D) W&R focuses on these lower quality companies because of research they have done The firm found that the companies classified in the matrix as C1, D1 and D2* will outperform during a full market cycle

In addition to these criteria, W&R looks for companies with unique characteristics such as strong management or a profitable proprietary product

The stock selection process is bottom-up Sector positions are largely a fall-out of the stock selection process Generally there are 3-4 themes or industries in the portfolio at one time which can account for up to 80% of the portfolio Current themes in the portfolio are health-care companies (cost containment firms rather than drug companies) and transportation The firm will also take big company bets, where approximately 10-12 names can account for 50% of the portfolio The firm is an active market timer and will raise cash to extreme levels at various points in the market cycle (See Exhibit 3)

Sell Criteria

W&R does not set specific sell targets for securities, but rather relies on judgment when making sell decisions As a general rule, if the fundamentals of a company change, they will be aggressive sellers As the price of a stock increases, they will gradually reduce holdings as the stock becomes exploited Generally, securities remain in the portfolio until they are replaced by better ideas

Research

W&R has 11 research analysts Nine of the analysts are industry specialists and two are generalists Hank Herrmann uses both the resources of the analytical staff and his own research when managing the portfolio

C. Prominent Characteristics

Since the inception of the account, W&R has held an average of 52 securities in the portfolio. In keeping with its market timing philosophy, cash levels have fluctuated over the years as well. The historical average cash level has been 32.4%, with a maximum cash position of 87.7% and a minimum of 9.6%. Exhibit 3 shows the monthly cash position since inception of the account.

Quality/Growth Highlights

Consistent with their stated growth/quality philosophy, W&R's portfolios tend to be highly concentrated in the lower earnings quality and higher growth companies. As seen in Table II, the SBI portfolio had an average concentration of 85% in C and D quality companies and 65% in the high growth companies. Exhibit 2 provides a more detailed breakdown of the historical averages in the matrix. Relative to the S&P 500, the portfolio is heavily overweighted in the D1 and D1* companies and heavily underweighted in the A1 and B1 companies.

<i>Table II</i>				
<i>Waddell & Reed Asset Management</i>				
<i>Quality/Growth Breakdown</i>				
<i>Actual Portfolio</i>				
<i>1/1/1987 through 9/30/1992</i>				
	Quality			
	A	B	C	D
Average	4.50	5.50	19.20	66.00
Maximum	14.00	21.00	33.00	82.00
Minimum	0.00	0.00	8.00	35.00
S&P 500 Average	15.40	21.50	26.00	37.50
	Growth			
	1	2	3	
Average	64.70	18.30	12.20	
Maximum	79.00	30.00	24.00	
Minimum	47.00	4.00	2.00	
S&P 500 Average	54.40	28.10	17.90	

Risk Exposure Highlights

Relative to the BARRA Hicap Universe, W&R's portfolios tend to have a consistently higher exposure to trading, variability in markets and the growth factors (Exhibit 4). The portfolios also have a consistently negative exposure to size and yield. The risk exposures experienced are to be expected given W&R's strategy of investing in immature, high growth companies.

Sector Exposure Highlights

W&R's portfolios tend to be overweighted in the technology and basic materials sectors relative to the S&P 500 and underweighted in the energy and consumer non-durables sectors (see Exhibit 5).

III. Benchmark Analysis

A. Benchmark Construction Process

The semi-annual benchmark construction process starts with the Compustat universe of over 5,500 companies. This universe is initially screened for domestic companies with market values greater than \$50 million.

W&R screens the resulting universe to produce a benchmark reflecting the firm's quality and growth criteria.

Quality - consistent with W&R's philosophy of investing in companies that exhibit low quality earnings, a stock is deemed to satisfy the quality criteria if it meets at least one of the following:

- 1 Current level of net income (before extraordinary items) is less than \$10 million
- 2 Level of net income ten years ago was less than \$1 million or not available
- 3 Minimum number of years dividends paid consistently is less than two years
- 4 Debt as a percent of total capitalization is greater than 40%
- 5 Maximum percent drop in earnings year-to-year over the last ten years was greater than 40% (earnings volatility)
- 6 Return on equity (3 year average) is less than 13%

Growth -- consistent with the firm's desire to invest in high growth companies, a stock is deemed to meet the growth criteria if it meets either of the following:

1. Zacks EPS future growth estimate is greater than 10% (high growth)
2. There were two or more years of down earnings in the last ten years (cyclicality)

The final screen is to remove the SBI South Africa and liquor/tobacco restricted stocks

W&R has revised the construction process recently. After performing the above steps, W&R manually reviews the resulting benchmark to determine if the screens failed for some reason. Items which typically cause revisions are:

- A specific SIC code that has traditionally been excluded/included is determined to belong in/out of the benchmark
- A company which otherwise would pass the screen is excluded due to the unavailability of the Zacks EPS future growth estimate. W&R may decide to include this company in the benchmark
- A stock which has been owned in the Minnesota account during the past three years was not picked up by the screening process for some reason. Herrmann decides whether to include such a company in the benchmark based on whether he believes the company fundamentally meets the quality/growth criteria for inclusion

The benchmark weighting scheme is designed to approximate the impact of liquidity on W&R's ability to hold certain securities. The capitalization tiers and weights that follow were based on the firm's historical market capitalization data. Stocks falling within a particular tier are equal-weighted.

Capitalization		Weight
<u>(\$ in millions)</u>		
50 - 499		20%
500 - 999		25
1000 - 1,999		25
2000 - 4,999		20
5000 and over		<u>10</u>
		100%

Since Waddell & Reed is an aggressive market timer, cash has always been held at relatively high levels in the portfolio (see Exhibit 3) Based on this factor, a 20% weighting in cash is included in the manager's benchmark portfolio

B. Benchmark Explanatory Power

Benchmark Risk Factor and Sector Exposure Profile

A valid benchmark should exhibit risk factor and sector exposures similar in direction and magnitude to historical actual portfolio exposures.

Exhibit 4 shows that the means of the actual portfolio risk factors are generally similar to those of the benchmark This indicates that the risk factor exposures for the benchmark are essentially the same as those of the actual historical portfolios The only exception is the size risk factor The benchmark historically has had a much smaller exposure to size than have the actual portfolios Exhibit 5 shows that the W&R actual portfolio sector exposures vary from the benchmark sector exposures The actual portfolio weight less the benchmark weight should be minimal, but at times it has been relatively large The sector exposures is an area in which the benchmark could be improved

Benchmark Coverage, Active Positions and Turnover

Waddell & Reed's benchmark coverage, turnover and active position statistics are as follows

<i>Waddell & Reed Asset Management Benchmark Statistics</i>			
	<i>Benchmark Coverage</i>	<i>Positive Active Positions</i>	<i>Semi-Annual Benchmark Turnover</i>
<i>12 83-9 92</i>			
Average	69 7	100 0	20 2
Minimum	45 8	99 8	13 3
Maximum	94 5	100 0	28 6
<i>3 88 - 9/92</i>			
Average	76 6	100 0	19 8
Minimum	55 2	99 8	14 7
Maximum	94 2	100 0	24 4

Benchmark coverage measures the percentage of securities held in the actual portfolio which also are contained in the benchmark portfolio. If a benchmark truly captures the securities on which the manager has an opinion, it will have a high coverage ratio. Coverage ratios vary according to the level of discipline exhibited in a manager's definition and implementation of its investment process. A valid benchmark should produce a coverage ratio of 80-90%. As seen in Table II, W&R's average benchmark coverage ratio is 69.7%, since inception. Since 1988, when the benchmark construction process was put in place, the coverage ratio has been 76.6%. This average is a somewhat low, and while it is not cause for great concern at this time, it needs to be improved.

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

Benchmark turnover measures the proportion of the benchmark's market value allocated to purchases and reinvestment of income during a periodic rebalancing. A valid and investable benchmark should experience reasonable levels of turnover. Semi-annual turnover in the 30%-40% range is consistent with a passive investment in the benchmark. The W&R benchmark experiences semi-annual turnover of 20%, which is fairly low.

The turnover and active position data on W&R are within the acceptable guidelines for benchmarks, indicating that from this standpoint, the W&R benchmark represents a valid and investable benchmark. However, coverage is below the standard that Staff expects and needs to be improved.

Benchmark Explanatory Power

Active risk is a useful measure in determining explanatory power of a customized benchmark. It is the variability (standard deviation) of the manager's active return (active portfolio return less benchmark return). Since a customized benchmark is constructed to capture a manager's investment style, a good benchmark should produce lower active risk than using a market index as the benchmark, all else equal. This indicates that the benchmark more effectively screens out random noise associated with

factors unrelated to a manager's investment style. This lower active risk will produce a higher information ratio (IR) than a market index. An IR is calculated by dividing the Value of Active Management (VAM or active return) by the active risk. Table IV summarizes the active risk analysis of W&R's actual returns relative to their benchmark and the Wilshire 5000.

Table IV

***Waddell & Reed Asset Management
Active Risk Analysis
1/84 to 9/92***

	Actual vs <u>Benchmark</u>	Actual vs <u>W5000</u>
Cumulative Annualized VAM	0.69	-2.50
Annualized Standard Deviation of VAM (Active Risk)	5.83	6.13
Information Ratio	0.12	-0.41
Information Ratio T-statistic	0.35	-1.22
Percentage of months VAM > 0	57.84	45.10

The W&R customized benchmark exhibits somewhat lower active risk than does using the Wilshire 5000 as a benchmark (5.83 versus 6.13). Although the active risk is lower, the analysis still does not produce a statistically significant t-statistic for the IR (0.35). This indicates that the analysis cannot confirm at a reasonable confidence level whether or not the manager can add value relative to its benchmark. However, the lower active risk does indicate that W&R's benchmark is a better benchmark than the Wilshire 5000. Staff feels that improvement also can be made in this area.

The explanatory power of a manager's benchmark can also be evaluated by looking at the correlation between three residual return series: the manager's actual returns versus those of the market (EXM), the benchmark

returns versus those of the market (MFT) and the actual portfolio returns versus those of the benchmark (VAM).

A good benchmark should exhibit significantly positive correlation between EXM and MFT because when the manager's benchmark, or investment style, performs well relative to the market, the actual portfolio should also do well relative to the market.

If a manager's investment style is accurately reflected in the benchmark, the manager's ability to add value relative to the benchmark should not be affected by the performance of its investment style relative to the market. Therefore, the correlation between MFT and VAM should be essentially zero over time. Table V contains the correlation analysis for W&R's benchmark.

Table V

***W&R Portfolio Associates
Residual Correlation Matrix
1/84 to 9/92***

	<u>EXM</u>	<u>MFT</u>	<u>VAM</u>
Portfolio vs Market (EXM)	1.00		
Benchmark vs Market (MFT)	0.42	1.00	
Portfolio vs Benchmark (VAM)	0.75	-0.29	1.00

The W&R customized benchmark exhibits some correlation between the EXM and MFT residual data series (0.42). The correlation between MFT and VAM is -0.29. Both correlations exhibit evidence that the W&R benchmark is a better benchmark than the market. However, Staff feels that a good benchmark will have a positive EXM/MFT of 0.60 or higher and an MFT/VAM correlation closer to zero.

The above characteristics of the historical W&R benchmark indicate that there is information obtained from the benchmark but this is also an area where improvements should be made.

IV. Performance Analysis

The following conclusions can be made regarding Waddell & Reed's performance

- 1 The W&R benchmark provides a better basis from which to evaluate performance than does a broad market average. Therefore, conclusions drawn from analysis using the benchmark as a base are more reliable than those drawn from a broad market average.
- 2 As seen in Exhibit 6, W&R has provided total fund cumulative returns of 154.6% versus 140.3% for the benchmark. The actual portfolio has outperformed the benchmark 61 out of 105 months. The VAM graph in Exhibit 7 shows that W&R has provided value added of 0.8% annualized (actual return of 11.3% versus benchmark return of 10.5%) since the inception of the account.
- 3 The equity-only performance of W&R's actual portfolio has lagged that of the equity-only customized benchmark since the inception of the account (131.2% actual versus 146.2% for the benchmark).
- 4 Performance attribution indicates that for the year ended June 30, 1992, sector allocation provided value added of -0.55, stock selection provided value added of 0.63 and trading/other contributed 1.04, for a total value added of 1.09% (Exhibit 8).

As seen in Exhibit 6, W&R's actual equity-only annualized return since inception is 10.1% versus 10.9% annualized for the equity-only benchmark. This indicates that over the period analyzed, the manager has done a poor job of selecting stocks and sectors within his area of expertise or universe. If the first year, 1984, is removed from the cumulative performance, the equity-only actual portfolio outperformed the equity-only benchmark on a cumulative basis (13.7% annualized actual versus 12.1% annualized benchmark).

Examining the total portfolio, (i.e. all portfolio investments including cash holdings) W&R has cumulatively outperformed its customized benchmark portfolio -- 154.6% actual versus 140.3% for the benchmark (11.3% annualized actual versus 10.5% annualized benchmark). This indicates that while the manager's stock and sector selection decisions have hurt the total portfolio performance, the manager's market timing decisions have added value.

Detailed performance attribution analysis for Waddell & Reed is available for the twelve months ended June 30, 1992 only (Exhibit 8). Sector allocation contributed -0.55% for the year, stock selection added 0.63%, and trading and other added 1.04% for a total value added of 1.09% for 1992. Most of the value

added was experienced in the capital goods and basic materials sectors and the least value added occurred in the technology and energy sectors.

V. Summary of Board/IAC Actions to Date

The Board approved a recommendation to hire Waddell & Reed Asset Management on January 14, 1983. On March 1, 1983, the SBI funded W&R with \$10 million of assets from the Supplemental Investment Fund.

W&R served as a manager for the Growth Share Account in the Supplemental Investment Fund from March 1983 through August 1985. Since September 1985, the firm has managed assets in the Supplemental Investment Fund and the Basic Retirement Fund. Between March 1983 and August 1985, W&R received additional funding of \$110 million total

The Board placed W&R on probation on November 25, 1987 due to the difficulty of designing an appropriate benchmark portfolio for the firm's investment style. The Board removed W&R from probation at its March 2, 1988 meeting since the firm had satisfactorily resolved this issue at that time.

An in-depth review of W&R was conducted at the request of the Board at its June 2, 1989 meeting because the Board was concerned about the firm's cumulative performance versus the broad market

VI. Conclusion

Comparing the performance of W&R against the guidelines set forth in the Board's Manager Continuation Policy, it can be concluded that W&R meets the expectations of an SBI manager, both qualitatively and quantitatively

Qualitative

- The W&R investment staff is experienced and stable. Henry Herrmann has managed the SBI account since its inception.
- The firm's investment approach has been consistently applied since the inception of the account.
- The manager's account load and assets under management have remained manageable since the inception of the account.
- Staff has concerns regarding W&R's customized benchmark. Correlation, active risk reduction and coverage ratio analysis indicate that there are modifications which need to be done to the construction process. While W&R

has made minor attempts to improve the benchmark process, the benchmark is not at a level that Staff would consider to constitute a good benchmark.

Quantitative

- W&R has added value since the inception of the account as seen in the VAM graph in Exhibit 7. On a cumulative basis, W&R has provided annualized value added for the total portfolio of 11.3% versus 10.5% for the customized benchmark.

At this time, Staff recommends that Waddell & Reed continue to be retained as an equity manager for the SBI. However, Staff still has concerns regarding the firm's customized benchmark. Although the benchmark process continues to be improved, there are still deficiencies in it. Staff will continue to work with W&R to improve the process, but if no progress is made within a reasonable amount of time, Staff may recommend that W&R be placed on probation due to a lack of a valid benchmark.

Exhibit 1

CENTRAL VALUE INDEX

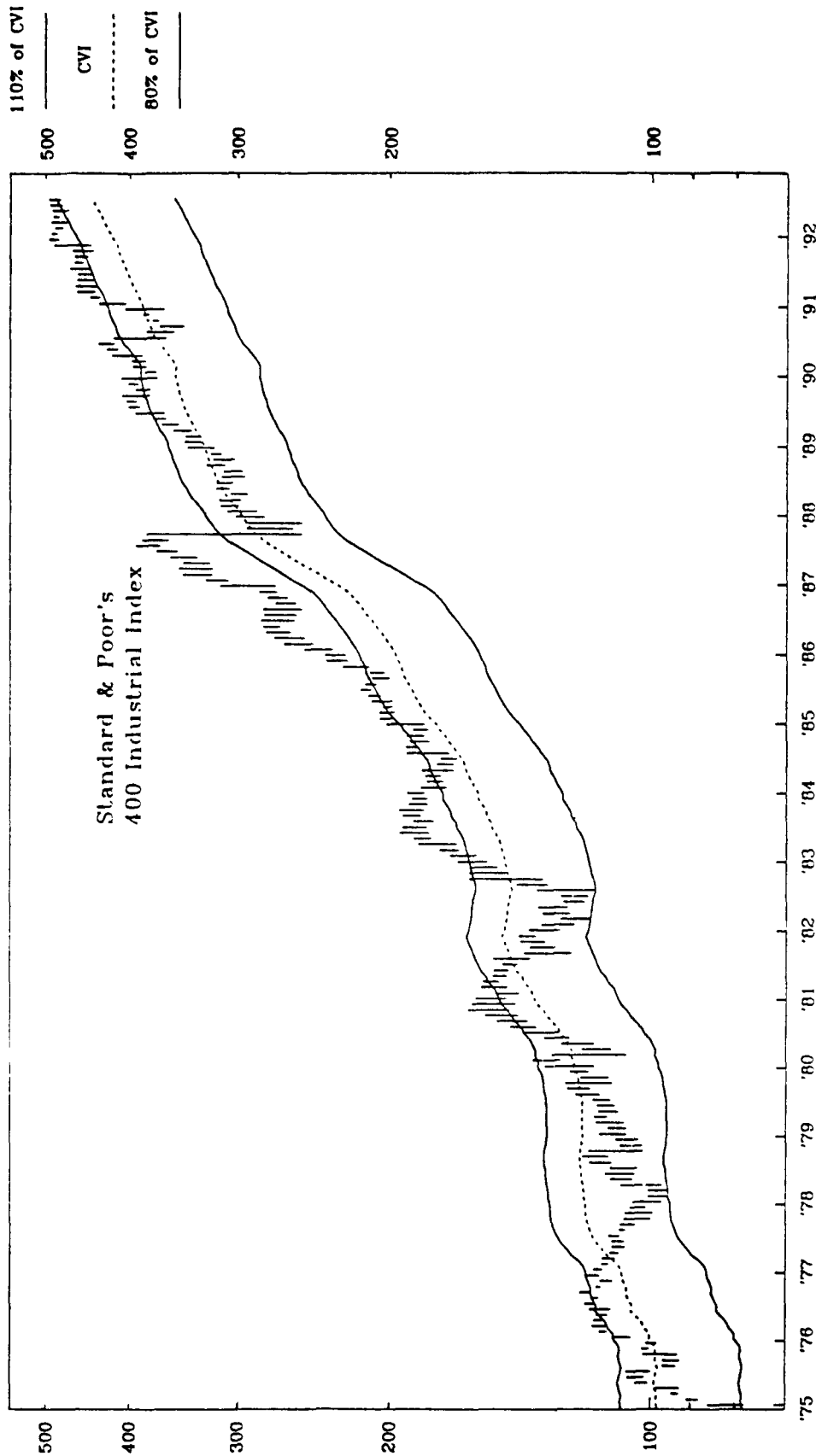


Exhibit 2

Quality/Growth Matrix Summary
Actual Portfolio Average
1/1/87 through 9/30/92

	A	B	C	D
1	3.0%	1.9%	4.3%	10.5%
1*	0.5%	1.7%	8.8%	34.0%
2	0.1%	0.3%	0.0%	1.3%
2*	0.0%	0.5%	4.7%	11.4%
3	0.3%	0.0%	0.1%	0.2%
3*	0.7%	1.0%	1.3%	8.5%

* - cyclical

Quality/Growth Matrix Summary
Average of
Actual Portfolio Weight Less S&P 500 Weight
1/1/87 through 9/30/92

	A	B	C	D
1	-6.4%	-5.1%	-4.3%	5.9%
1*	-1.1%	-3.5%	1.1%	23.7%
2	-1.9%	-2.8%	-1.1%	-1.0%
2*	-0.7%	-2.6%	-0.6%	1.0%
3	-0.1%	-0.6%	0.1%	-1.1%
3*	-0.6%	-1.4%	-1.9%	-0.1%

* = cyclical

Exhibit 3

Waddell & Reed Historical Cash Allocation

January 1984 to September 1992

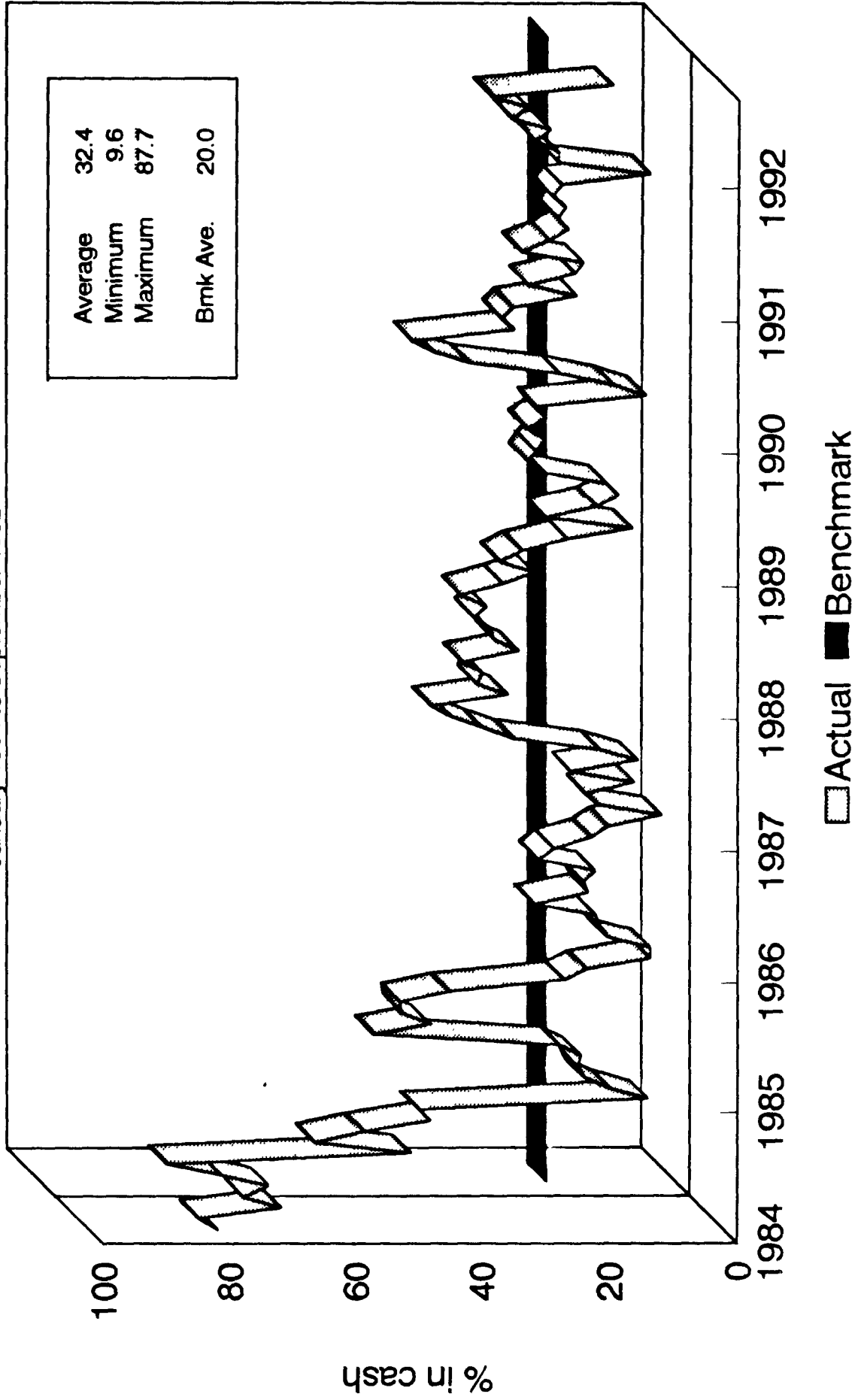


Exhibit 4
Risk Analysis Summary
Waddell & Reed Asset Management

		Var.						Earn.	Fin	For.	Labor		
		Mkts	Scs	Size	Trade	Gro.	E/P	B/P	Var.	Lev	Inc.	Int.	Yield
		0.98	0.77	-1.20	0.91	0.94	-0.29	-0.36	0.65	0.16	-0.34	0.21	-0.72
1984	Q1	0.42	0.02	-0.45	0.50	0.66	0.11	-0.26	0.68	0.19	0.49	0.46	-0.50
	Q2	1.12	-0.65	-0.53	1.74	1.31	0.82	-0.09	1.96	0.11	0.31	0.28	-0.78
	Q3	0.58	-0.22	-0.31	1.09	0.51	0.11	-0.05	0.53	-0.11	-0.02	0.28	-0.43
	Q4	0.52	0.05	-0.41	0.92	0.51	0.03	0.07	0.58	0.01	-0.15	0.21	-0.38
1985	Q1	0.42	0.16	-0.39	0.81	0.32	0.16	0.20	0.57	0.14	-0.05	0.05	-0.11
	Q2	0.43	0.29	-0.32	0.67	0.20	0.24	0.16	0.46	0.10	-0.11	0.07	-0.05
	Q3	0.41	0.21	-0.39	0.53	0.33	0.08	0.07	0.41	0.25	0.01	0.22	-0.27
	Q4	0.60	0.26	-0.46	0.59	0.38	0.02	-0.02	0.39	0.14	0.06	0.28	-0.43
1986	Q1	0.62	0.24	-0.34	0.53	0.34	-0.13	0.18	0.40	0.17	0.16	0.29	-0.42
	Q2	0.65	0.28	-0.39	0.49	0.37	-0.03	-0.13	0.20	0.04	0.15	0.37	-0.51
	Q3	0.29	0.15	-0.16	0.40	0.23	0.03	0.02	0.16	-0.02	0.23	0.28	-0.24
	Q4	0.28	0.14	-0.33	0.49	0.17	-0.07	0.14	0.32	0.00	0.39	0.25	-0.18
1987	Q1	0.55	0.11	-0.63	0.69	0.35	-0.14	0.09	0.44	0.08	0.36	0.26	-0.38
	Q2	0.58	0.13	-0.53	0.81	0.57	-0.18	-0.02	0.40	-0.03	0.41	0.49	-0.55
	Q3	0.64	0.22	-0.87	0.92	0.50	-0.34	-0.04	0.55	0.03	0.13	0.28	-0.38
	Q4	0.86	0.24	-1.28	1.20	0.79	-0.36	-0.05	0.72	0.00	-0.18	0.50	-0.63
1988	Q1	0.75	0.17	-1.18	1.06	0.72	-0.35	-0.01	0.69	-0.04	-0.35	0.47	-0.64
	Q2	0.74	0.32	-1.00	0.97	0.69	-0.23	-0.08	0.59	-0.21	-0.11	0.53	-0.71
	Q3	0.87	0.06	-1.24	1.07	0.72	-0.32	-0.04	0.70	-0.16	-0.20	0.54	-0.76
	Q4	0.75	0.14	-0.82	0.90	0.61	-0.11	0.12	0.66	0.06	-0.27	0.49	-0.58
1989	Q1	0.51	0.02	-0.67	0.76	0.61	-0.21	-0.01	0.61	0.05	-0.25	0.37	-0.58
	Q2	0.75	0.13	-0.80	0.95	0.58	-0.27	-0.20	0.46	0.11	-0.24	0.36	-0.78
	Q3	0.66	0.28	-0.71	0.81	0.53	-0.33	-0.15	0.41	0.12	-0.08	0.47	-0.66
	Q4	0.34	-0.01	-0.64	0.63	0.32	-0.15	-0.07	0.23	-0.15	-0.05	0.19	-0.32
1990	Q1	0.40	-0.01	-0.82	0.43	0.38	-0.15	-0.01	0.20	-0.24	-0.04	0.19	-0.36
	Q2	0.46	0.04	-0.80	0.52	0.42	-0.15	0.03	0.31	-0.14	-0.12	0.16	-0.37
	Q3	0.83	-0.30	-1.22	0.70	0.70	-0.22	0.10	0.52	0.19	-0.26	0.31	-0.63
	Q4	0.78	-0.07	-1.08	0.94	0.70	-0.24	0.18	0.57	0.09	-0.11	0.27	-0.50
1991	Q1	0.75	0.02	-0.99	0.75	0.55	-0.12	0.05	0.51	0.16	-0.13	0.26	-0.45
	Q2	0.86	0.29	-1.05	0.56	0.71	-0.15	-0.05	0.55	0.30	-0.24	0.27	-0.60
	Q3	1.11	0.77	-1.07	0.71	0.79	-0.15	-0.06	0.65	0.12	-0.33	0.32	-0.71
	Q4	1.18	0.71	-1.09	0.71	0.97	-0.23	-0.14	0.55	0.08	-0.35	0.35	-0.82
1992	Q1	1.06	0.46	-1.09	0.72	0.90	-0.27	-0.16	0.50	0.10	-0.26	0.32	-0.81
	Q2	0.90	0.16	-1.22	0.82	0.97	-0.31	-0.05	0.62	0.28	-0.25	0.40	-0.86
Mean		0.68	0.16	-0.76	0.78	0.58	-0.11	-0.02	0.54	0.06	-0.05	0.32	-0.52
Maximum		1.18	0.77	-0.16	1.74	1.31	0.82	0.20	1.96	0.30	0.49	0.54	-0.05
Minimum		0.28	-0.65	-1.28	0.40	0.17	-0.36	-0.36	0.16	-0.24	-0.35	0.05	-0.86
Std Deviation		0.24	0.27	0.34	0.26	0.25	0.23	0.13	0.29	0.13	0.24	0.12	0.21
Brk Mean		0.59	-0.10	-1.22	0.41	0.55	-0.20	0.05	0.38	0.28	-0.16	0.36	-0.53

Exhibit 5

**Waddell & Reed Asset Management
Sector Weights
January 1984 to June 1992**

Actual Less Benchmark

	Cons. Non-Dur	Cons. Dur.	Basic Materials	Capital Goods	Energy	Tech	Trans.	Util.	Finan.
Minimum Portfolio	-18.77	-6.45	-21.46	-10.21	-12.36	-6.40	-4.20	-2.34	-0.60
Portfolio Average	-7.20	0.93	-4.24	-1.32	-2.95	1.94	0.35	3.89	8.59
Maximum Portfolio	7.92	21.33	5.41	11.31	7.17	15.15	6.55	18.80	21.35
Benchmark Average	-6.76	-1.09	-3.14	-0.87	-0.68	1.38	0.96	5.05	7.17

Actual Portfolio Weight Less S&P 500

Minimum Portfolio	-15.38	-2.42	-9.51	-6.71	-19.23	-5.32	-0.84	-13.60	-8.38
Portfolio Average	-3.28	3.51	4.34	1.36	-6.89	4.37	3.76	-8.78	1.61
Maximum Portfolio	11.22	22.84	14.16	14.91	5.33	16.02	9.99	4.82	15.96
Market Average (S&P 500)	32.26	4.84	9.95	7.36	13.02	8.89	2.15	13.23	8.30

Exhibit 6

***Waddell & Reed Asset Management
Comparison of Customized Benchmark Portfolio Performance
With Wilshire 5000***

	Equity-only		Total Fund		Wilshire
	Actual	Benchmark	Actual	Benchmark	5000
1984	-23.5	-6.2	-0.7	-2.8	3.0
1985	32.2	27.5	22.1	23.6	32.6
1986	19.4	11.0	16.8	10.4	16.1
1987	5.4	4.0	5.5	5.9	2.3
1988	12.4	18.6	10.4	16.4	17.9
1989	33.7	21.1	26.6	21.1	29.2
1990	-15.5	-12.7	-7.8	-12.7	-6.2
1991	36.7	38.9	26.5	38.9	34.2
1992 (Q1-Q3)	3.3	4.3	3.4	4.3	-1.3
Cumulative	131.2	146.2	154.6	140.3	204.5
Annualized	10.1	10.9	11.3	10.5	13.6

VALUE OF ACTIVE MANAGEMENT REPORT

WADDELL & REED

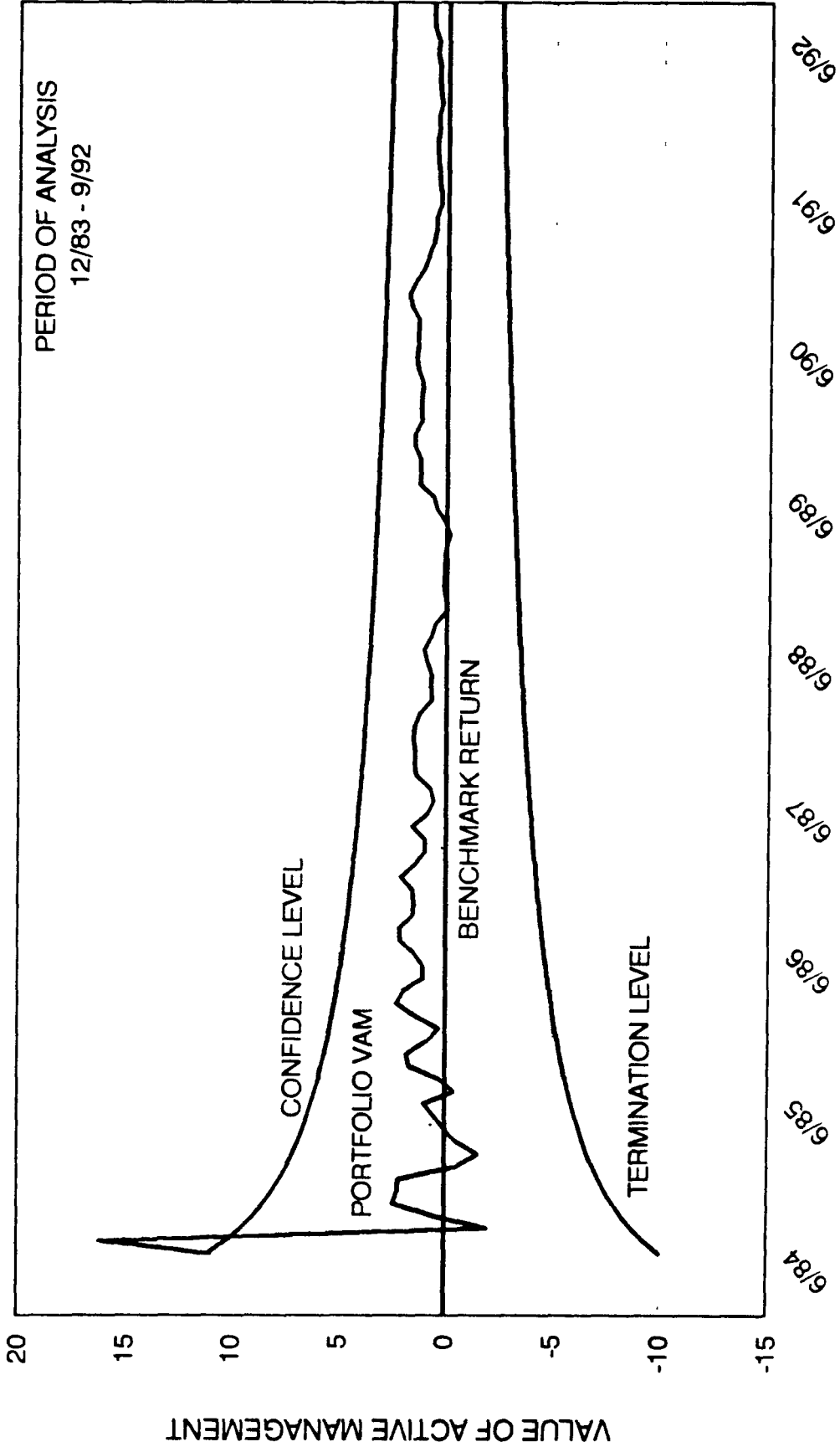


Exhibit 8

**Waddell & Reed Asset Management
Performance Attribution Analysis
Twelve Months Ending 6/30/92**

	<i>Sector Allocation</i>	<i>Stock Selection</i>	<i>Value Added</i>
Cash & Equivalents	-0.29		-0.29
Consumer Non-Durables	-0.15	0.63	0.47
Consumer Durables	0.12	-0.28	-0.17
Basic Materials	-0.02	1.21	1.19
Capital Goods	0.12	1.65	1.74
Energy	-0.35	-1.14	-1.49
Technology	0.01	-1.92	-1.95
Transportation	0.03	0.88	0.91
Utilities	0.03		0.03
Financial	0.03	-0.28	-0.25
Miscellaneous	-0.07		-0.07
Trading & Other			1.04
Total	-0.55	0.63	1.09

**Detailed Review of
Wilshire Asset Management
September 1992**

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I. ORGANIZATIONAL DETAIL

A. Ownership

Wilshire Associates was founded in 1972. Wilshire Asset Management (WAM), a division of Wilshire Associates, was started in 1983. Wilshire Associates is a private corporation wholly owned by its working principals.

B. Professional Staff

Wayne Wagner and Larry Cuneo managed the SBI account from 1983 - 1986. In 1986 they left with another WAM employee to start their own firm. Since their departure, Tom Stevens has been responsible for the SBI account.

C. Assets Under Management

Table 1 shows that WAM managed approximately \$5.7 billion under management at 1991 year end. Of the \$5.7 billion, approximately \$3.5 billion (61%) are SBI assets. Over their eight year history, WAM experienced modest growth in accounts and assets. Staff feels that their growth remains well within reasonable limits given their passive style of investing.

Table 1

**Wilshire Asset Management
Historical Assets
(\$ in millions)**

Year End	# Accts	Total Assets
1983	1	\$1,360.0
1984	2	1,399.0
1985	3	2,024.1
1986	4	2,399.8
1987	4	2,252.5
1988	9	3,303.5
1989	11	3,795.0
1990	13	3,983.8
1991	12	5,739.7

D. Personnel Turnover

Personnel turnover in WAM has been relatively low except in 1986 when three of the four key investment professionals left WAM to start their own consulting firm. Staff reviewed WAM and concluded that Tom Stevens and the other new investment professionals were fully capable of managing and servicing the SBI account. The rest of the turnover has been relatively low and primarily in the junior professional level and clerical staff.

Since the inception of the account, WAM has been able to fill open positions with qualified people to maintain quality servicing of the SBI account. Staff's main concern is that if WAM lost key personnel, Wilshire may have difficulty in quickly replacing the position(s) to maintain quality servicing of the SBI account. Given the size of the SBI account and the importance of the completeness fund, the potential mismanagement of the account for even a month or two could have negative financial implications.

II. INVESTMENT APPROACH

A. Investment Philosophy

In managing the SBI passive portfolio, WAM's goal is to match as closely as possible over a long period of time the return of a specified benchmark. To manage a passive index account based on a broad market benchmark, WAM's investment process uses a stratified sampling approach to reduce the number of holdings and transaction costs. Because WAM does not fully replicate the benchmark, the actual returns will incur some deviation relative to the benchmark return. The SBI expects that WAM's actual performance will not incur a deviation greater than plus or minus 60 basis points from the benchmark return on an annual basis.

B. Investment Process

WAM manages the entire passive portion of the SBI domestic equity program. Initially, WAM's benchmark was the Wilshire 5000. Since October 1990, WAM's benchmark has been the completeness fund benchmark constructed quarterly by the Board's lead consultant Richards & Tierney. In October 1990, the SBI implemented the completeness fund concept to reduce the style misfit of the aggregate domestic active equity manager group. In general, the aggregate of the active managers and completeness fund benchmarks will be similar to the SBI's domestic equity asset class target which is the Wilshire 5000 less the liquor and tobacco restrictions (Wilshire Sin-Free).

To invest the SBI's passive domestic equity allocation, WAM uses a stratified sampling approach to replicate the benchmark return. Stratified sampling is an index fund management technique used to create a portfolio that, while a subset of the relevant benchmark, will track the benchmark well over time. Stratified sampling provides an effective portfolio management technique where fully replicating the benchmark would incur high transaction costs or difficulty from a management standpoint.

In using the stratified sampling process to build a passive portfolio, WAM divides the portfolio into two subsets. The first subset includes the stocks with the largest market capitalization which WAM calls their market capitalization portion. The second subset contains all of the remaining smaller capitalization stocks which WAM calls their sector balancing portion.

The weightings assigned to the securities in the market capitalization subset match the same weightings assigned to them in the benchmark. For example, if IBM represented 2.8% of the total market value of the benchmark, then the index fund would invest 2.8% of its portfolio dollar value in IBM. Approximately 70% to 80% of the total dollar value of an index fund using the stratified sampling technique will be held in the market capitalization portion.

In the sector balancing portion of the portfolio WAM selects stocks that will balance out the differences in the industry and market capitalization decile weightings between the portfolio's market capitalization subset and the benchmark. After Wilshire creates the market capitalization segment of the portfolio, the industry and market capitalization decile weightings are compared. WAM then minimizes the deviations by selecting stocks in the sector balancing portion of the index portfolio. To reduce the deviations in the most efficient manner, WAM developed a matrix that shows all the industry and market capitalization deviations and then runs an optimizer to calculate the optimal portfolio. The sector balancing portion will represent 20% to 30% of the total market value of the portfolio.

Wilshire uses a concept called position size to determine how many stocks will be held in the market capitalization subset and the weighting of the individual issues in the sector balancing portion. For example, if Wilshire sets the position size at 15%, the market capitalization portion will be made up of all stocks that have a weighting in the benchmark of 15% or greater. In addition, each holding in the sector balancing portion of the portfolio will initially start with a 15% weighting in the portfolio. Wilshire determines the appropriate position size by compiling different portfolios based on different position size assumptions and then running simulations, which include trading costs assumptions, to determine which one will produce the smallest tracking error.

In constructing the sector balancing portion of the passive portfolio, the liquidity of the smaller capitalization stocks must be taken into account. If sufficient liquidity exists, a full position size weighting in the stock will be obtained. However, obtaining a full position size weighting in a low liquidity stock could require paying a higher price to get enough sellers to enter the market. If liquidity problems arise, one of two actions will take place: 1) A slightly smaller position can be purchased that does not cause excess trading costs to be incurred; or 2) If liquidity constraints limit the actual position size to be too small for practical purposes, a substitute stock will be found. The substitute will have industry and market capitalization characteristics similar to the stock initially selected.

C. Prominent Characteristics

Exhibits 1 through 4 provide detailed information regarding risk and sector exposures. Both show that the actual account closely followed the assigned benchmark for all the risk characteristics and sector exposures. This is consistent with the objective of an extended passive index portfolio, which is to track as closely as possible the long run rate of return of a assigned benchmark while minimizing short term fluctuations.

III. BENCHMARK DESCRIPTION

For a passive investment process the benchmark will always be the target portfolio assigned to the investment manager by the plan sponsor. From inception to September 1990, the SBI used the Wilshire 5000 as WAM's benchmark. Since October 1990, WAM's benchmark has been constructed by Richards and Tierney to implement the SBI's completeness fund.

IV. PERFORMANCE ANALYSIS

WAM's actual results will be evaluated based on their ability to maintain an annual tracking error relative to their benchmark of $\pm 0.60\%$ or less. In addition, on a long term cumulative basis WAM's actual performance should not be significantly different than the benchmark total return. On a long term basis, an index fund should slightly under perform a benchmark because of transaction costs incurred in managing the actual portfolio. Exhibit 5 shows Wilshire's actual return relative to the Wilshire 5000 and the Wilshire 5000 Sin-Free for the time period January 1984 - September 1990 and the completeness fund benchmark since then. Relative to the Wilshire 5000, Wilshire's maximum annual tracking error was 0.48% for any calendar year. In addition, on a cumulative basis, Wilshire under performed by only 0.10%. These results are within expectations.

Relative to the Wilshire 5000 Sin-Free returns, the index actually outperformed its benchmark by 0.18%. This analysis shows that the restricted stocks that Wilshire could not purchase increase the total return of the benchmark by 0.28% between January 1984 and September 1990. Wilshire's ability to outperform the Wilshire Sin-Free index is primarily due to their portfolio construction process. By using their risk models they could find stocks in other industries that exhibit some of the same risk characteristics of the restricted stocks. WAM can then overweight their purchases in those particular stocks to partially offset their inability to invest in the Sin-Free stocks. Over time the SBI account will capture the market impact of the risk characteristics, which in the case of the Sin-Free stocks during this time period was positive. The primary return impact that Wilshire can not capture is the rate of return effect that is specific to an individual company.

WAM produced good tracking error performance even though the SBI used the index fund many times as a transition manager. The SBI used the index fund as a source to fund new active domestic equity managers or a depository for terminated manager's funds. Also, the SBI used the index fund to accomplish rebalancing between stocks and bonds when dictated by the policy rebalancing guidelines. The SBI used the index fund to transact the required cash flows because it represented the lowest cost option available. The above performance results provide evidence that WAM handled the additional needs of the SBI and still provided performance results within expectations.

V. SUMMARY OF BROAD/IAC ACTIONS TO DATE

In October 1983, the Board approved the hiring of WAM to manage the passive component of the Board's domestic equity program. In November 1983, WAM received initial funding of \$1.35 billion. Since the inception of the account there has been numerous contributions and withdrawals from the account due to active manager hirings and terminations and asset class rebalancing.

VI. CONCLUSION

Both quantitatively and qualitatively WAM has met the expectations of the SBI. Quantitatively WAM's tracking error remains within the SBI expectations on both an annual and cumulative basis. They accomplished this even though the index fund was used as a source of funds for the domestic active equity managers and to rebalance between stocks and bonds based on the SBI's rebalancing guidelines.

Qualitatively, WAM's manager account load and assets under management have remained manageable since the inception of the account. In addition, even though WAM experienced significant turnover in 1986, they have maintained an experienced investment staff to manage the SBI account. However, staff is concerned, as it is

with other investment organizations, that if key personnel were to leave, our account could be adversely affected.

Staff recommends that WAM continue to be retained as the SBI passive equity manager. However, staff does recommend that communication continue to be maintained with Wilshire regarding the management of the SBI account if one or more of WAM's top people leave.

EXHIBIT 1

WILSHIRE ACTUAL
RISK CHARACTERISTICS

DATE	BETA	VAR. MKTS SUCCESS	SIZE TRADING	GROWTH	E/P	B/P	EARN VAR.	FIN. LEV.	FOR. INC.	LABOR EXP.	YIELD
8606	1.02	0.06	0.04	0.05	-0.01	-0.02	0.03	0.01	-0.03	0.09	-0.05
8609	1.02	0.03	0.02	0.04	-0.01	0.00	0.02	0.01	-0.03	0.07	-0.05
8612	1.02	0.06	0.03	0.06	-0.02	0.02	0.03	0.01	-0.04	0.08	-0.07
8703	1.01	0.05	0.04	0.07	-0.02	0.01	0.04	0.01	-0.02	0.07	-0.08
8706	1.02	0.07	0.03	0.07	-0.01	0.03	0.05	0.02	-0.02	0.08	-0.07
8709	1.01	0.06	0.02	0.06	-0.02	0.03	0.06	0.02	-0.02	0.07	-0.07
8712	1.00	0.08	0.03	0.07	-0.01	0.04	0.06	0.02	-0.01	0.07	-0.08
8803	1.00	0.09	0.03	0.08	-0.02	0.03	0.06	0.01	-0.02	0.08	-0.09
8806	1.00	0.09	0.04	0.08	-0.02	0.03	0.06	0.02	-0.02	0.08	-0.09
8809	1.01	0.09	0.04	0.08	-0.03	0.04	0.05	0.02	-0.01	0.08	-0.10
8812	1.01	0.08	0.04	0.08	-0.02	0.04	0.04	0.03	0.02	0.07	-0.08
8903	1.02	0.07	0.03	0.07	-0.02	0.06	0.06	0.02	-0.02	0.03	-0.06
8906	1.01	0.07	0.02	0.07	-0.03	0.03	0.05	0.01	0.00	0.05	-0.08
8909	1.01	0.05	0.02	0.07	-0.03	0.02	0.04	0.01	-0.01	0.06	-0.08
8912	1.01	0.05	0.05	0.08	-0.02	0.02	0.06	0.01	-0.01	0.06	-0.08
9003	1.02	0.07	0.04	0.08	-0.02	0.03	0.06	0.00	-0.02	0.06	-0.07
9006	1.02	0.07	0.04	0.06	-0.01	0.04	0.05	-0.01	-0.03	0.05	-0.06
9009	1.01	0.07	0.04	0.06	0.00	0.05	0.05	-0.01	-0.02	0.05	-0.05
9012	1.01	0.04	0.01	0.02	0.01	0.05	0.03	-0.02	0.00	0.02	-0.01
9103	1.01	0.03	0.00	0.02	0.00	0.06	0.04	-0.01	-0.05	0.02	-0.01
9106	1.01	0.06	0.00	0.02	0.01	0.08	0.07	0.01	-0.08	0.01	-0.01
9109	1.01	0.04	-0.01	0.00	0.01	0.09	0.06	0.01	-0.07	0.00	0.01
9112	1.01	0.03	-0.02	-0.01	0.01	0.09	0.07	0.00	-0.06	0.00	0.01
9203	1.01	0.05	-0.01	-0.01	-0.01	0.10	0.08	0.01	-0.05	0.01	0.01
9206	1.00	0.03	-0.02	-0.03	-0.01	0.10	0.09	0.02	-0.03	-0.01	0.04
9209	1.00	0.02	-0.04	-0.05	0.00	0.11	0.08	0.03	-0.02	-0.03	0.07
MINIMUM	1.00	0.02	-0.04	-0.05	-0.03	-0.02	0.02	-0.02	-0.08	-0.03	-0.10
AVERAGE	1.01	0.06	0.02	0.05	-0.01	0.05	0.05	0.01	-0.02	0.05	-0.05
MAXIMUM	1.02	0.09	0.05	0.08	0.01	0.11	0.09	0.03	0.02	0.09	0.07

EXHIBIT 2

WILSHIRE BENCHMARK
RISK CHARACTERISTICS

DATE	BETA	VAR. MKTS SUCCESS	SIZE TRADING	GROWTH	E/P	B/P	EARN VAR.	FIN. LEV.	FOR. INC.	LABOR EXP.	YIELD
8606	1.02	0.09	0.01	-0.28	0.02	0.10	-0.02	0.03	-0.03	0.09	-0.09
8609	1.02	0.06	-0.01	-0.27	0.00	0.10	-0.01	0.03	-0.03	0.07	-0.08
8612	1.02	0.06	-0.03	-0.27	0.01	0.10	0.00	0.03	-0.03	0.06	-0.08
8703	1.01	0.06	-0.01	-0.28	0.01	0.10	0.00	0.02	-0.01	0.06	-0.08
8706	1.02	0.07	-0.03	-0.29	0.01	0.09	0.01	0.02	0.00	0.07	-0.07
8709	1.01	0.06	-0.01	-0.28	0.01	0.08	0.01	0.02	-0.01	0.06	-0.07
8712	1.00	0.08	-0.01	-0.26	0.01	0.09	0.01	0.02	0.00	0.06	-0.08
8803	1.00	0.08	-0.01	-0.27	0.01	0.10	0.00	0.01	0.00	0.07	-0.09
8806	1.00	0.08	0.00	-0.27	0.02	0.10	0.00	0.02	-0.01	0.08	-0.10
8809	1.00	0.08	0.00	-0.27	0.02	0.10	0.01	0.01	0.00	0.07	-0.11
8812	1.01	0.07	0.00	-0.25	0.00	0.09	0.02	0.03	0.02	0.06	-0.09
8903	1.02	0.07	-0.01	-0.24	0.01	0.09	0.02	0.01	-0.01	0.03	-0.08
8906	1.01	0.07	0.00	-0.23	0.00	0.08	0.02	0.01	-0.02	0.04	-0.07
8909	1.01	0.07	0.00	-0.26	0.02	0.10	0.01	0.03	-0.01	0.07	-0.10
8912	1.01	0.06	-0.01	-0.25	0.03	0.09	0.01	0.02	0.00	0.06	-0.08
9003	1.03	0.09	0.08	-0.27	0.06	0.16	-0.08	0.03	0.07	0.14	-0.16
9006	1.03	0.11	0.09	-0.29	0.06	0.17	-0.06	0.05	0.02	0.13	-0.17
9009	1.01	0.08	-0.05	-0.27	0.03	0.09	0.02	0.01	-0.02	0.07	-0.07
9012	1.02	0.08	-0.04	-0.25	0.02	0.09	0.03	0.02	-0.02	0.06	-0.07
9103	1.02	0.08	-0.03	-0.26	0.02	0.09	0.03	0.02	-0.06	0.06	-0.08
9106	1.02	0.09	-0.02	-0.26	0.02	0.09	0.02	0.02	-0.06	0.06	-0.08
9109	1.03	0.10	0.02	-0.27	0.03	0.10	0.02	0.02	-0.08	0.07	-0.09
9112	1.02	0.10	0.01	-0.27	0.04	0.10	0.01	0.01	-0.08	0.08	-0.09
9203	1.02	0.11	0.01	-0.30	0.04	0.11	0.01	0.02	-0.08	0.08	-0.10
9206	1.02	0.10	0.00	-0.29	0.05	0.11	0.02	0.02	-0.08	0.08	-0.10
9209	1.02	0.10	-0.02	-0.29	0.04	0.11	0.02	0.02	-0.07	0.07	-0.11
MINIMUM	1.00	0.06	-0.05	-0.30	0.00	0.08	-0.06	0.01	-0.08	0.03	-0.17
AVERAGE	1.02	0.08	0.00	-0.27	0.02	0.10	0.00	0.02	-0.02	0.07	-0.09
MAXIMUM	1.03	0.11	0.09	-0.23	0.06	0.17	0.03	0.05	0.07	0.14	-0.07

EXHIBIT 3

WILSHIRE ACTUAL
SECTOR WEIGHTS

DATE	CONS.		CONS. DUR.	BASIC MAT.	CAPITAL		ENERGY	TECH.	TRANS.	UTIL.	FIN.
	NON-DUR	DUR.			GOODS	ENERGY					
8606	30.75	5.19	9.63	7.54	8.46	8.92	2.42	13.78	13.33		
8609	29.12	4.76	9.83	7.93	9.52	8.48	2.57	14.72	13.08		
8612	29.70	5.05	10.08	7.97	9.71	8.14	2.48	14.20	12.67		
8703	30.29	5.23	10.36	7.92	10.22	9.03	2.37	12.20	12.38		
8706	30.84	5.20	10.43	7.77	10.17	9.20	2.47	11.96	11.96		
8709	30.59	5.08	11.04	8.11	9.69	9.27	2.58	11.86	11.79		
8712	30.42	4.81	11.36	7.68	9.63	8.86	2.37	13.41	11.46		
8803	30.80	5.09	11.18	7.91	9.78	8.13	2.32	12.99	11.81		
8806	29.61	5.09	11.48	8.02	9.56	8.49	2.28	13.26	12.22		
8809	30.39	4.94	11.15	7.70	9.52	7.60	2.40	13.62	12.68		
8812	30.42	5.26	11.12	7.47	9.72	7.79	2.11	14.01	12.10		
8903	30.00	4.96	11.11	7.26	10.40	6.93	2.22	14.29	12.84		
8906	31.15	4.73	10.52	7.43	9.25	6.60	2.33	15.08	12.92		
8909	31.02	4.48	10.56	6.75	9.21	7.21	2.15	14.89	13.72		
8912	31.64	3.93	10.61	6.59	9.94	6.73	1.88	15.69	13.00		
9003	30.45	4.30	10.70	6.92	10.32	7.45	1.99	15.38	12.48		
9006	32.77	4.18	10.58	6.99	9.79	7.31	1.85	14.51	12.02		
9009	32.83	3.70	10.32	6.53	11.90	6.74	1.74	15.66	10.59		
9012	33.82	3.33	10.57	6.35	10.50	6.28	1.75	16.13	11.28		
9103	34.94	3.43	10.33	6.45	9.68	6.21	1.78	14.68	12.49		
9106	34.01	3.59	11.57	6.46	9.45	5.48	2.17	14.35	12.92		
9109	33.90	3.51	11.06	6.01	9.57	5.23	2.12	14.58	14.02		
9112	35.72	3.41	10.77	6.04	8.29	4.84	2.09	14.73	14.13		
9203	34.45	4.13	11.39	6.40	7.56	5.22	2.09	13.79	14.97		
9206	32.39	4.20	11.53	6.36	8.03	5.27	2.04	14.78	15.42		
9209	32.12	3.94	10.90	6.47	8.55	4.86	1.72	15.80	15.66		
MINIMUM	29.12	3.33	9.63	6.01	7.56	4.84	1.72	11.86	10.59		
AVERAGE	31.70	4.44	10.77	7.12	9.55	7.16	2.16	14.24	12.84		
MAXIMUM	35.72	5.26	11.57	8.11	11.90	9.27	2.58	16.13	15.66		

EXHIBIT 4

WILSHIRE BENCHMARK
SECTOR WEIGHTS

DATE	CONS. NON-DUR	CONS. DUR.	BASIC MAT.	CAPITAL GOODS	ENERGY	TECH.	TRANS.	UTIL.	FIN.
8606	31.32	5.25	9.24	7.51	8.65	8.67	2.46	13.53	13.38
8609	29.45	4.80	9.56	7.75	9.75	8.34	2.52	14.49	13.34
8612	29.79	4.97	9.87	7.93	9.75	7.95	2.37	14.36	13.01
8703	30.55	5.12	10.34	7.71	10.27	8.78	2.31	12.42	12.50
8706	30.90	5.31	10.43	7.67	10.06	9.08	2.46	12.10	11.99
8709	30.92	5.06	11.09	7.95	9.72	9.02	2.55	11.89	11.80
8712	30.53	4.68	11.40	7.52	9.68	8.77	2.32	13.50	11.60
8803	30.74	5.11	11.30	7.79	9.92	7.99	2.24	13.17	11.74
8806	29.78	5.09	11.73	7.76	9.59	8.40	2.21	13.21	12.22
8809	30.69	4.96	11.32	7.62	9.50	7.44	2.33	13.62	12.53
8812	31.04	4.88	11.20	7.34	9.61	7.53	2.33	13.99	12.09
8903	31.05	4.94	10.91	7.19	9.87	6.73	2.30	14.13	12.87
8906	31.40	4.68	10.68	7.05	10.13	6.31	2.25	14.74	12.77
8909	31.19	4.45	10.68	6.94	9.33	6.74	2.19	14.51	13.98
8912	31.48	4.14	10.72	6.71	10.09	6.29	1.96	15.67	12.94
9003	39.84	3.91	9.58	6.28	8.08	5.92	1.83	13.60	10.98
9006	41.11	3.99	9.59	6.02	8.09	6.18	1.70	12.31	11.01
9009	33.77	3.69	10.06	6.40	12.00	6.48	1.71	15.52	10.38
9012	35.31	3.37	10.51	6.20	10.17	6.47	1.72	15.34	10.90
9103	36.81	3.55	9.94	6.24	9.32	6.66	1.72	13.93	11.84
9106	36.96	3.72	10.26	6.25	9.24	6.11	1.80	13.63	12.03
9109	37.78	3.60	9.69	5.93	9.13	5.89	1.82	13.60	12.55
9112	40.11	3.56	9.27	5.81	7.89	5.47	1.85	13.51	12.54
9203	39.28	4.07	9.59	5.96	7.36	5.85	1.94	12.73	13.24
9206	37.68	4.17	9.71	5.78	7.90	5.69	1.91	13.19	13.96
9209	38.17	3.97	9.05	5.77	8.19	5.46	1.83	13.58	13.98
MINIMUM	29.45	3.37	9.05	5.77	7.36	5.46	1.70	11.89	10.38
AVERAGE	33.76	4.42	10.30	6.89	9.36	7.09	2.10	13.70	12.39
MAXIMUM	41.11	5.31	11.73	7.95	12.00	9.08	2.55	15.67	13.98

EXHIBIT 5

WILSHIRE ASSOCIATES
 COMPARISON OF ACTUAL PORTFOLIO
 PERFORMANCE RELATIVE TO VARIOUS BENCHMARKS

	ACTUAL	ACTUAL LESS		WILSHIRE 5000	ACTUAL LESS
		W5000	EX-SIN		
1984					
1Q	-4.70%	-3.80%	-0.94%	-4.20%	-0.52%
2Q	-2.53	-2.84	0.32	-2.77	0.25
3Q	9.33	9.09	0.22	9.19	0.13
4Q	<u>1.66</u>	<u>1.20</u>	<u>0.45</u>	<u>1.32</u>	<u>0.34</u>
	3.25%	3.19%	0.06%	3.05%	0.19%
1985					
1Q	9.94%	10.21%	-0.24%	10.35%	-0.37%
2Q	7.70	7.32	0.35	7.47	0.21
3Q	-4.46	-4.31	-0.16	-4.27	-0.20
4Q	<u>17.13</u>	<u>16.78</u>	<u>0.30</u>	<u>16.76</u>	<u>0.32</u>
	32.50%	32.17%	0.25%	32.56%	-0.05%
1986					
1Q	13.99%	14.02%	-0.03%	14.38%	-0.34%
2Q	5.39	5.49	-0.09	5.80	-0.39
3Q	-7.37	-7.70	0.36	-7.73	0.39
4Q	<u>3.97</u>	<u>3.72</u>	<u>0.18</u>	<u>3.97</u>	<u>-0.06</u>
	15.63%	15.15%	0.42%	16.10%	-0.40%
1987					
1Q	20.56%	21.16%	-0.50%	21.17%	-0.50%
2Q	3.60	3.30	0.29	3.28	0.31
3Q	5.97	5.92	0.05	6.22	-0.24
4Q	<u>-22.99</u>	<u>-23.11</u>	<u>0.14</u>	<u>-23.05</u>	<u>0.08</u>
	1.93%	1.93%	0.00%	2.27%	-0.33%
1988					
1Q	8.39%	8.11%	0.26%	8.01%	0.35%
2Q	6.60	6.74	-0.13	6.55	0.05
3Q	0.22	-0.11	0.33	0.16	0.06
4Q	<u>2.30</u>	<u>1.96</u>	<u>0.33</u>	<u>2.31</u>	<u>-0.01</u>
	18.46%	17.53%	0.79%	17.94%	0.44%

EXHIBIT 5 (con't)

		ACTUAL	W5000 EX-SIN	ACTUAL LESS W5000 EX-SIN	WILSHIRE 5000	ACTUAL LESS W5000
1989	1Q	7.39%	7.18%	0.20%	7.42%	-0.03%
	2Q	8.44	8.48	-0.04	8.55	-0.10
	3Q	9.68	9.97	-0.26	10.14	-0.42
	4Q	<u>0.63</u>	<u>0.56</u>	<u>0.07</u>	<u>0.59</u>	<u>0.04</u>
		28.55%	28.59%	-0.04%	29.17%	-0.48%
1990	1Q	-3.47%	-3.40%	-0.07%	-3.52%	0.05%
	2Q	5.42	5.29	0.12	5.48	-0.06
	3Q	-15.24	-15.51	0.32	-15.66	0.50
	(A) 4Q	<u>8.40</u>	<u>8.66</u>	<u>-0.24</u>	<u>8.66</u>	<u>-0.24</u>
		-6.49%	-6.62%	0.24%	-6.74%	0.27%
1991	1Q	15.55%	15.63%	-0.07%	15.63%	-0.07%
	2Q	0.18	0.19	-0.01	0.19	-0.01
	3Q	5.65	5.83	-0.17	5.83	-0.17
	4Q	<u>8.21</u>	<u>7.98</u>	<u>0.21</u>	<u>7.98</u>	<u>0.21</u>
		32.33%	32.39%	-0.06%	32.39%	-0.06%
1992	1Q	-1.08%	-0.87%	-0.21%	-0.87%	-0.21%
	2Q	0.85	1.01	-0.16	1.01	-0.16
Cumulative		203.09%	199.45%	1.22%	205.48%	-0.78%
Annualized		13.93%	13.77%	0.18%	14.04%	-0.10%

A) Since the 4Q 1990, the index fund's benchmark is a customized benchmark built by Richards & Tierney to implement the domestic equity completeness fund program.

INTERNAL CASH MANAGEMENT

INTRODUCTION

The State Board of Investment (SBI) manages the cash balances of more than 400 state agency accounts (Exhibit 1) along with the cash balances of internally managed accounts. The funds are managed with the objectives of preserving capital and liquidity, while providing competitive money market returns. To this end, the SBI invests these cash accounts in short-term, liquid, high quality debt securities.

SBI staff invest the majority of accounts through two pooled investment vehicles, the Treasurer's Cash Pool and the Trust Fund Pool. By far, the largest pool of money managed by Staff is the Treasurer's Cash Pool. Cash flow projections for this pool are provided by the Department of Finance. Using these projections, staff invests the fund in a wide range of money market instruments including U.S. Treasury and Agency issues, repurchase agreements, commercial paper, bankers acceptances and medium term notes. Strict quality guidelines are in place to insure the investment objectives are accomplished.

The State's economic climate decisions, administrative changes and other factors create differences between Department of Finance projections and the actual cash flows for the Treasurer's Cash Pool. The pool fluctuates from year to year, month to month and day to day. Because of the high volatility of cash flows, asset allocation among various instruments changes dramatically over time. Although a large degree of liquidity is needed to manage the pool due to the cash balance changes, maturity extension is usually possible for a portion of it.

In the past, performance of both the Treasurer's Cash Pool and the Trust Fund Pool has been measured against the 91 day Treasury bill. This is because a large percentage of assets are normally held in instruments that mature in less than 91 days and it is a readily available index. Because very little of either pool is actually invested in T-bills and a portion of the assets are usually invested in higher yielding, longer term maturities, the 91 day T-bill has been criticized as an inappropriate benchmark. Staff is proposing a new benchmark that blends the liquidity needs of the fund with the advantage that maturity extension provides for the portfolio.

INVESTMENT OBJECTIVES

The primary investment objectives of the funds are to *preserve capital* and *maintain a high degree of liquidity* and within these objectives to *maximize returns*. Because of the liquidity needs and size of the Trust Fund pool, its average maturity is typically very short. However, the diversity of cash needs among participants in the Treasurers Cash Pool allows maturities to be extended without sacrificing liquidity.

INVESTMENT ACCOUNTS

As of June 30, 1992, state funds invested by the SBI short term department staff totaled nearly \$2.7 billion. Table 1 shows that most of these funds are included in the Treasurer's Cash Pool. This pool and the Trust Fund Pool combine several smaller accounts and operate much like a money market mutual fund. Special legal restrictions on the other accounts listed in Table 1, however, do not allow them to be commingled, and so they are managed separately.

<u>Account</u>	<u>Amount (in millions)</u>
Treasurer's Cash Pool	\$2,239
Trust Fund Pool	105
Housing Finance Agency Accounts	186
State General Obligation Bond Related Accounts	35
Public Facilities Authority Accounts	131
Total	\$ 2,696

State Cash Accounts

The Trust fund pool contains the cash balances of the Permanent School Fund and contributions from payroll deductions of the Public Employees Retirement Association (PERA), the Teachers Retirement Association (TRA), and the Minnesota State Retirement System (MSRS). These assets are invested in highly liquid, short term assets. On a monthly basis, a portion of the fund is certified for permanent investment and deployed into other asset classes.

Due to changes in the management and asset composition of the Post Fund in the beginning of fiscal year 1993, the size of the Trust Fund Pool has declined considerably. Staff is predicting that over the next fiscal year, the size of the fund will average about \$25 million, which is down from an average size of approximately \$200 million in past years.

Other investment accounts, such as the Housing Finance Agency Accounts, State General Obligation Bond Related Accounts and the Public Facilities Authority Accounts are managed separately. This is primarily due to restrictive bond indentures and/or arbitrage restrictions in place. Arbitrage restrictions make it illegal for an entity to issue tax-exempt bonds and invest the proceeds from the bond issuance at a profit.

Where possible, accounts are pooled to take advantage of differing cash timing needs and typically higher returns from diversification and extension of maturity. By far, the largest pool of money managed by the SBI is the Treasurer's Cash Pool. The balance of this paper will focus on the management of the Treasurer's Cash Pool.

Treasurer's Cash Pool

The Treasurer's Cash Pool is the largest component of assets managed by the SBI. This pool contains the cash balances from the State's Statutory General Fund and other accounts necessary for the operation of state agencies.

Among the larger accounts in the Treasurer's Cash pool during fiscal year 1992 were the State's General Fund, the Trunk Highway Fund, the County State Aid Highway Fund, the Municipal State Aid Street Fund, the Debt Service Account, the Environmental Trust Fund and the Northeast Minnesota Economic Protection Fund. This pool is widely diversified in several assets across a large maturity spectrum.

Cash Flow Projections for the Treasurer's Cash Pool

The Treasurer's Cash Pool is invested using the information provided by the Department of Finance. Cash flow projections for the pool for the upcoming two years are given to the SBI by the Department of Finance at the beginning of each biennium. Revenue forecasts are prepared using information provided by Data Resources, Inc, an econometrics firm. Expenditure forecasts are prepared based on projections from the various state agencies in the pool. Formal revisions are made to the initial projections by the Department of Finance twice a year and these revisions are reviewed monthly.

Although the SBI receives projections out two years, staff relies most heavily on the outlook for the upcoming six to twelve months. Staff then gears its investment strategy towards these expectations. When revisions are made to the projections, adjustments to the portfolio are made.

Volatility of Cash Flows

The cash flows of this pool change dramatically from year to year, over the course of a year and throughout the month. The attached chart shows the historical monthly high and low points of the fund since July 1989. The figures for October 1992 through June 1993 are the most recent Department of Finance projections.

As the chart shows, the pool changes in size from year to year, depending on the state's economic climate. For example, in fiscal 1990, the fund reached a high of nearly \$2.8 billion. For the upcoming fiscal year, it is projected to reach a high of only \$2.3 billion. This decline stems from the economic recession over the past two years and the subsequent decline in sales and income tax revenues.

In addition to these changes, the difference over a year's time between the highest and lowest point of the fund is large. For example, in fiscal 1992, the chart shows the difference between the high (in July) and the low (in December) was \$848 million. In past years, this difference has been as high as \$1 billion.

Also evident from the chart is the cash flow volatility that is present during the month. The spread between the monthly maximum balance and the monthly minimum balance can vary widely. On average, the minimum balance during a month is 86% of that month's maximum balance. However, in July 1992, the actual monthly low fell to 67% of the monthly high. To manage this volatility, a large percentage of the pool must be kept in very liquid, short term assets.

With these types of fluctuations, staff relies heavily on Department of Finance projections. These projections are subject to changes due to a variety of reasons. Frequently, legislative changes and adjustments to administrative policies cause payments to be increased or decreased and their timing to be accelerated or decelerated. Many times, information reflecting the impact of these changes on the Treasurer's Cash Pool reaches the SBI after investment decisions have been made.

To illustrate the impact of changes in projections on the investment of the fund, consider the following example. Prior to August 1992, staff was working with projections that showed the low in December 1992 at approximately 50% of the high for that month. Because of this large projected drop in the fund's balance by December, investments were made in commercial paper and other short instruments that matured prior to December. The legislature, by taking a sizeable payment that was to be made on one day in December, and spreading it over four days, caused the projected low as a percentage of the high for December to climb to 87%. New projections, reflecting these legislative changes, were given to staff at the end of August 1992. At this point, the fund's maturity was too short and an opportunity to profit from the decline in yields over the previous six months had been lost. Staff revised its funding targets and began investing the projected excess in longer maturity instruments to take advantage of the steepness in the yield curve.

Staff is also working with volatile daily cash projections. Each morning, staff discusses with the Treasurer's office what actual cash inflows and outflows will be for that day. Staff is given an "early" number about 8:10 a.m. and a "late" number about 11:30 a.m. The goal is to invest most of the excess cash for the day in the early round as this allows for the best choices of investments. At times, the Treasurer's daily projections have been revised after 12:00 p.m., leaving the SBI with large amounts of cash to invest late, or a short fall that must be covered. By this time of day, many traders' cash needs have been met, and prices may not be as favorable as they had been early in the day.

Maturity and Sector Breakdown of the Treasurer's Cash Pool

Because of the wide fluctuations in the fund's balance over time, the asset breakdown and duration varies significantly. Duration is the weighted average term-to-maturity of the security's cash flows. Table 2 shows how the fund was invested as of June 30, 1992. In addition, it shows that depending on cash needs, the allocation to each asset class and the average maturity of the pool may change significantly over time.

	June 30, 1992	Range Over Time
Commercial Paper	51.4 %	0 to 70 %
Repurchase Agreements	16.8	0 to 60 %
U.S. Government Securities	10.2	0 to 70 %
U.S. Gov't Agency Securities	18.0	0 to 40 %
Medium Term Notes	0.0	0 to 10 %
Bankers' Acceptances	1.8	0 to 10 %
U.S. Govt Strips	1.8	0 to 5 %
Total	100 0 %	
Average Maturity	108 days	30 days - 1 yr

For example, on June 30, 1992, nearly half of the portfolio was invested in instruments that mature in less than two months. The majority of this was commercial paper and repurchase agreements. Despite holding instruments with maturities of up to three years, the weighted average duration of the entire fund was just under four months.

The decision to keep most of the fund invested in relatively short maturity instruments was based on projections provided by the Department of Finance for fiscal years 1992 and 1993. These forecasts showed a steep decline in revenues starting in July 1991 and well into 1993 due to the current recession.

A detailed description of how the assets listed in Table 2 are used in the portfolio is included in the Appendix.

Asset Allocation Over Time

Over time, changes in cash flows have a dramatic effect on the investment of the fund. Staff's internal guidelines are to manage the fund to have short term maturities sufficient to cover approximately three months of payments. Specific payment dates are targeted and most often funded with high quality commercial paper. The allocation to the commercial paper market can range from zero to seventy percent of the portfolio, depending on cash needs and spreads relative to other short term assets.

Bankers' acceptances are used as substitutes when commercial paper yields are relatively low or additional diversification is sought. The SBI currently has a very small portion of the pool invested in bankers' acceptances as the market has declined in size since the mid-80's and relative yields are currently unattractive. This will not preclude staff, however, from adding more bankers acceptances to the portfolio should spreads merit it. However, the total size of the bankers' acceptance portfolio is not likely to exceed ten percent of the assets managed in the Treasurer's Cash Pool.

Shorter needs, i.e., less than three weeks, are invested in the repo market. Normally ten to twenty percent of the portfolio is invested in this market as it provides high liquidity and good yields compared with other instruments. Depending on cash needs, however, up to sixty percent of the portfolio may be invested in short term repo.

After the known payments are funded, the remaining portion of the portfolio (if any) may be invested with discretion by staff. This portion of the portfolio is invested in medium term notes, U S Treasury debt and Agency securities with a maximum maturity of three years.

Quality Guidelines

Because preservation of capital is extremely important in the management of the funds, strict quality guidelines are in place. Table 3 summarizes the quality guidelines for the assets the SBI purchases. The appendix discusses each of these instruments and their use in the portfolio.

Table 3			Quality Guidelines		
Investment	Statutory Limitations		Internal Limitations		
Commercial Paper	A-2/P-2 or higher		A-1/P-1		
Asset Backed C P	A-2/P-2 or higher		A-1/P-1/D-1		
Medium Term Notes	BAA or higher		A or higher		
Bankers' Acceptances	BAA or higher		A or higher		
Repurchase Agreements	Collateral Restrictions		Primary Dealers Only		
U S Government Securities	None		None		
U S Gov't Agency Securities	None		None		

SECURITIES LENDING PROGRAM

A way the short term department enhances the yield on the funds is by lending securities in the portfolio to primary U S Government security dealers. Dealers borrow securities for a variety of reasons. For example, they may need the securities to make delivery on a previous sale, use the securities to facilitate financing of their own portfolio, or may have an opinion that the supply of a particular issue will become tight. Lending of securities provides additional income, without sacrificing liquidity or increasing the risk of the underlying portfolio. Loan fees are negotiated between staff and the dealer and are calculated on the market value of the security.

Any U S Government or Agency security owned by the SBI that is wireable through the Federal Reserve System may be loaned. Staff avoids loaning securities that are being held for small accounts that do not have predictable cash needs. Staff also avoids loaning securities that are invested for restricted yield accounts or other accounts that legally cannot benefit from incremental yield due to arbitrage restrictions.

When a security is loaned, collateral equal to at least 102% of the security being loaned is held at the SBI's custodian bank. The market value of the combined loans for each dealer is checked twice a month by staff. If a dealer's total collateral has fallen below 100% of the total value of the securities loaned, the dealer may be asked to add or substitute collateral. If the value of the collateral exceeds 102% the borrower may request return of the excess.

The borrower is obligated to remit all interest payments or other distributions made on the borrowed securities. These payments must be made on the due date in immediately available funds. The SBI will pay to the dealer any of these types of payments on the collateral held. Payments to and from dealers on the underlying loan collateral are monitored by the SBI's custodian bank.

The securities lending program has provided a good source of incremental income since its inception in April of 1977. The following table lists the loan income earned over the last five years.

Table 4
Securities Lending Income

Fiscal Year	('000's)
1988	\$ 3,300
1989	3,100
1990	3,300
1991	3,000
1992	2,500

In the future, staff expects loan income to decline. The primary reasons for this are a smaller portfolio of loanable securities and lower loan fees stemming from increased competition. Although the SBI still has a portfolio of loanable bonds held in various state cash accounts, changes in the asset composition and management of the \$6.8 billion Post fund this year have dramatically decreased the supply of loanable bonds. In addition, loan fees have declined due to increased competition from other institutional investors that hold large bond portfolios.

PERFORMANCE MEASUREMENT

Currently, the SBI measures its performance against the 91 day Treasury bill. This was chosen as the benchmark because 1) among pension funds nation wide, it is the most widely used short term benchmark 2) a large portion of the fund is normally invested in assets that mature in three months or less and 3) it meets several criteria for a quality benchmark. Below is a brief description of desirable benchmark characteristics:

- Investable:*** The option is available to forego active management and simply hold the benchmark portfolio
- Measurable:*** It is possible to calculate the benchmark's return on a monthly basis
- Specified in Advance:*** It is constructed prior to the start of an evaluation period
- Appropriate:*** It is consistent with the manager's investment style or biases

The April 1991 Legislative Auditor's report entitled "State Investment Performance", criticized the benchmark as being inappropriate because 1) most of the shorter maturity assets are invested in securities other than Treasuries and 2) after short term needs are funded, a portion of the fund may be invested in longer maturity instruments. In most environments, these factors create a yield advantage versus the three month T-bill.

An alternative benchmark, however, is difficult to develop for the short term department due to the high degree of volatility of the fund's cash flows and the subsequent changes in the fund's asset allocation and maturity structure.

In developing a new benchmark, staff has tried to blend the management of volatile cash needs with the fact that a yield advantage is usually available if a portion of the fund is invested in longer term instruments.

Proposed Benchmark

Staff recommends using a weighted benchmark in which 75% of the return is tied to a short term cash index and 25% is tied to a longer maturity index. The SBI custodian bank's Short Term Investment Fund (STIF) return would provide a good proxy for the short term portion of the benchmark and the Merrill Lynch 1 to 3 year Government index should be used to incorporate longer maturities in the portfolio. Staff expects added value of approximately 10 basis points to this benchmark on an annualized basis.

A large percentage of the pool should be tied to a cash index due to the high volatility of cash flows discussed earlier and the potentially large changes possible in projections from the Department of Finance. Because of these changes, a high degree of liquidity is necessary for the management of the fund.

The STIF is appropriate as a benchmark for the cash portion of the fund because it is managed using the same investment guidelines that are used by the short term department. The STIF is normally invested in repurchase agreements and high quality commercial paper, as is the short term portion of the Treasurer's Cash Pool.

The balance of the pool should be measured against a longer term index. Staff recommends the Merrill Lynch 1 to 3 year Government Index. This index is readily available. It currently includes 54 Treasury issues that range from 1 to 2.99 years in maturity. The securities that comprise the index will change as new 1 to 3 year issues are auctioned by the Treasury and as longer maturity issues eventually become 1 to 3 year securities. The index's modified duration is approximately 1.7 years. Exhibit 2 provides a summary of the characteristics of this index.

By measuring 25% of the portfolio's return against this longer term index, the benchmark will incorporate the yield advantage present by investing further along the yield curve, but also maintain adequate liquidity to manage extremely volatile cash flows.

CONCLUSION

The SBI manages the majority of the State's cash accounts through the Treasurer's Cash Pool. In doing so, staff balances the competing objectives of preservation of capital, maximization of liquidity and maximization of returns. To this end, several money market instruments with maturities less than three years are used by staff. In many cases, more strict internal guidelines are imposed on the portfolio than are allowed by the statutes to accomplish the investment objectives.

Wide variation in pool sizes over time are likely due to legislative actions, administrative changes, and the State's overall economic climate. Variations occur yearly, monthly and daily. Although the Department of Finance projects the cash flows for the fund, they are subject to frequent and sometimes large changes. These factors make cash flows of the fund extremely volatile and require a high degree of liquidity in its management.

Staff first adequately funds the upcoming three months of payments. After these needs have been met, extension of maturity and yield enhancement are possible. Because maturity extension normally increases yield, staff recommends adjusting the benchmark to incorporate this yield advantage. By using a weighted benchmark in which 75% is tied to the custodian bank's Short Term Investment Fund and 25% is tied to the Merrill Lynch 1 to 3 year index, the benchmark will more appropriately measure this yield advantage, but also leave staff enough flexibility to manage volatile cash needs.

Future Considerations

Staff is constantly seeking alternative instruments that provide appropriate liquidity, capital preservation, and compensation for incremental risk. For example, staff is considering the inclusion of futures and options strategies for cash enhancement purposes. This would add incremental value to the portfolio without a substantial increase in risk. New cash enhancement strategies are continually analyzed to determine how they can be used in the SBI's investment program.

APPENDIX --- AUTHORIZED INVESTMENTS

Authorized investments are governed by Minnesota Statutes 11A 24. Briefly, these statutes state the following instruments may be purchased

- I
 - a) Debt instruments of the U S Government, its Agencies and sponsored organizations of the U S government
 - b) Debt instruments of the Canadian government, its Agencies and provinces provided the principal and interest is payable in U.S dollars
 - c) The states and their municipalities, political subdivisions, agencies or instrumentalities
 - d) The International Bank for Reconstruction and Development, the Inter-American Development Bank, the Asian Development Bank, the African development Bank, or any other U S government sponsored organization of which the U S is a member Principal and interest must be payable in U S dollars
- II Corporate obligations of domestic firms or of Canadian firms if payable in U S dollars All such obligations must have a rating among the top four quality ratings by a nationally recognized rating agency or meet other criteria as specified
- III Bankers acceptances and certificates of deposit of U S banks rated in the top four quality categories by a nationally recognized credit rating agency
- IV Commercial paper of U S corporations or their Canadian subsidiaries rated in the two highest quality categories by a nationally recognized credit rating agency
- V Mortgage participation of pass through certificates
- VI Repurchase agreements backed by authorized securities or letters of credit

Staff of the short-term department utilize several of these fixed income investment vehicles in daily operations, depending on the relative attractiveness of each vehicle within the investment objectives

Below is a description of the most commonly used investment vehicles in the short term department and the limitations on the purchase of these securities These statutory guidelines allow for a wide range of investments In some cases, however, staff uses more strict internal guidelines to insure the accomplishment of the previously stated investment objectives

U.S. GOVERNMENT SECURITIES: TREASURY BILLS, NOTES AND BONDS

The U.S. Treasury is the largest single issuer of debt in the world. This large volume of total debt and large size of any single issue makes the U.S. Treasury market the most active and hence the most liquid market in the world. U.S. Treasury securities are backed by the full faith and credit of the U.S. government and thus are considered by market participants to have no credit risk and therefore to be AAA quality.

Statutory Limitations

Because of the lack of credit risk with these securities there are no statutory limitations in purchasing U.S. Government debt.

Internal Investment Guidelines

The SBI invests in these securities to extend duration by moving a portion of the fund further along the yield curve. Treasuries provide an excellent way to extend maturities and enhance yields, while protecting principal. Because of their high quality, there are no internal limits to the purchase of Treasury securities.

STRIPPED U.S. TREASURY SECURITIES

U.S. Treasury securities are sold to the market with semi-annual coupons and principal to be paid at maturity. The Treasury allows all new Treasury bonds and notes with maturities of 10 years and longer to be eligible for stripping through the Separate Trading of Registered Interest and Principal of Securities (STRIPS) program. Government dealers may "strip" the coupon and principal payments from the bond and sell them individually in the marketplace. These individual pieces then become zero coupon bonds. Therefore, the Treasury does not directly issue zero coupon bonds, but the securities created under the STRIPS program are direct obligations of the U.S. government.

There is a slight difference in the credit guarantee between principal strips and coupon strips, however. In the highly unlikely event that the U.S. government were to default on its massive debt, it will default first on the coupons (the interest on the debt). Although the risk of default is remote, the coupon strip holders have a slightly greater risk compared to the owners of principal strips. Investors are compensated for this risk by receiving a slightly higher yield on the coupon strips. Despite this, market participants consider strips to be AAA in quality.

Statutory Limitations

As these securities are obligations of the U.S. government, there are no statutory limitations.

Internal Investment Guidelines

Strips are also used in the portfolio to extend duration, with virtually no credit risk. The strip market, however, is less liquid than the U.S. Treasury bond market. The market compensates for this lack of liquidity by offering slightly higher yields on strips relative to U.S. Treasuries. There are no limitations on the purchase of U.S. government strips.

U.S. GOVERNMENT AGENCIES AND SPONSORED ORGANIZATIONS

Federal government agencies and sponsored organizations offer credit to certain constituencies at a lower cost than would otherwise be available. The groups that benefit from this low cost financing in most cases are homeowners, farmers and students. Examples of federal agencies are the Government National Mortgage Association (GNMA) and the Commodity Credit Corporation (CCC). Primary examples of federally sponsored agencies are

Federal National Mortgage Association (FNMA or Fannie Mae)
Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac)
Resolution Funding Corporation (Refcorp)
Student Loan Marketing Association (SLMA or Sallie Mae)
Federal Farm Credit Bank System (FFCBS)

These sponsored agencies are privately owned, publicly chartered entities that raise funds in the marketplace. Agencies issue securities in large blocks in the open market, and lend the proceeds to intermediaries who distribute the funds to targeted borrowers.

In contrast with Federal agencies, which are backed by the full faith and credit of the U.S. Government, there are no explicit federal guarantees of most of the securities issued by federally sponsored agencies. The general market perception, however, is that the federal government would cover any sponsored agency defaults. Agency debt is therefore considered extremely high in quality.

Statutory Limitations

There are no limitations on the purchase of either U.S. Agency or sponsored organization securities in the portfolio.

Internal Investment Guidelines

The SBI normally has a sizeable portion of the portfolio in agency securities because the credit risk is small and they offer an incremental yield advantage over Treasuries. There are no internal restrictions on their purchase.

REPURCHASE AGREEMENTS

Repurchase agreements (repos) are entered into by market participants that have cash and want a short term, highly liquid investment and by market participants who have securities and want to borrow short term funds. From an economic standpoint, the transaction resembles a collateralized loan.

The dealer with securities who needs cash transfers the securities as collateral to the investor (the SBI) and in return receives cash. At a pre-specified later date, the collateral is transferred back to the dealer in return for the original cash plus interest. In essence, the dealer has borrowed short term funds for less than the cost of bank financing and the customer has locked up an attractive yield on a short-term secured transaction.

Two variations of the repo commonly used by the SBI in trading the short term cash accounts are the Tri-Party Repo and the Flex-Repo.

o *Tri-Party Repo*

The collateral involved in the Tri-Party transaction is deposited in a mutually agreed upon third party bank. Funds are not released unless it is determined by the bank that the value of the collateral is 102 percent of the face value of the repo

Using the Tri-party agreement reduces, but does not eliminate, the SBI's risk should the dealer default prior to maturity of the repo. The custodian bank is responsible for insuring that the underlying collateral for the repo is secured should a problem occur. In previous cases, the Tri-party agreement has allowed for an orderly liquidation of the obligation, and the SBI has not suffered losses.

o *Flex Repo*

Another variation of the repo agreement used by the SBI is called a *flex repo*. The flex repo is an ongoing tri-party repurchase agreement that provides for principal drawdown prior to final maturity. These funds are available should cash be unexpectedly needed late in the day. 100% of the funds can be drawn on the repo prior to 10:00 a.m., 75% prior to 12:30 p.m. and 25% prior to 1:30 p.m., if necessary.

The flex repo is used as an "insurance policy". Without this alternative, distressed sales of securities may be necessary to cover unexpected cash needs. The SBI currently has one flex repo agreement for \$50 million, which is rolled over each day at the Fed funds opening rate. This rate has historically been about 1/8 of one percent less than the normal tri-party repo rate.

One alternative to maintaining a flex agreement is holding a large U.S. Treasury bill portfolio. The T-bill market is extremely liquid and it is possible to sell securities for same day settlement to cover cash needs. However, the spread between the Fed funds rate and

the T-bill has averaged 64 basis points over the last five years. This spread has narrowed recently, but since January of 1992 has still averaged 15 basis points. Therefore, by maintaining a flex agreement, the SBI gains cheaper liquidity than by holding a Treasury bill portfolio.

Another way to meet cash needs is through a reverse repurchase agreement. As the name suggests, this is the exact opposite of the repo transaction described above. Since the SBI holds a sizeable portfolio of securities, a portion of them could be used as collateral to obtain cash for unexpected outflows. Depending on the particular day and the size of the cash need, this alternative could be more or less advantageous than the flex agreement.

Statutory Limitations

Collateral for repurchase agreements is limited to letters of credit and securities authorized in the statutes.

Internal Investment Guidelines

Although tri-party repurchase agreements are considered very safe investments, the SBI limits its trades to those dealers recognized as primary government security dealers by the Federal Reserve Bank. The general market perception is that the Federal Reserve Bank will act as lender of last resort and assist in the orderly liquidation of a primary dealer should they fail. The reasoning behind this is a primary dealer's actions have far reaching ramifications for many entities in the economy and the result may be catastrophic if the bankruptcy is not handled correctly. Because the liquidation is orderly and there is a perception that the Fed will act as the lender of last resort, investors do not panic and add to the problem. In addition to dealing only with primary dealers, the SBI limits outstanding repo per dealer to the lesser of \$200 million or fifty percent of their regulatory capital.

Statutory guidelines allow a wide range of collateral to be accepted in repo agreements, however, the SBI currently accepts only U.S. Treasury and Agency securities as the incremental yield for accepting other instruments is not adequate.

Repos usually comprise approximately ten percent of the portfolio as they provide a highly liquid, low risk, short term investment.

COMMERCIAL PAPER

Commercial paper is an unsecured promissory note most commonly issued by companies that need short term financing. The maturity of commercial paper is typically less than 270 days. Credit quality is a primary concern when purchasing commercial paper. Issuers generally roll commercial paper over and use the proceeds to pay off holders of the maturing paper. The risk that the investor faces is that the issuer will be unable to issue

new paper at maturity. In many cases, commercial paper is backed by unused bank credit lines.

Although commercial paper may be written for up to 270 days, the most liquid issues are for maturities of 6 months or less. Most commercial paper purchased by the SBI matures in one to three months. Depending on yield spreads relative to other instruments, the SBI will invest in commercial paper up to 270 days out.

In addition to the standard type of commercial paper described above, the SBI also purchases asset-backed paper and private-placement paper for the portfolio.

Asset Backed Commercial Paper

Asset-backed commercial paper is a term that describes an issuing entity which does not have a corporate purpose other than that of financing a specific asset or pool of assets with some common characteristics. The types of accounts receivable most commonly used as collateral are retail and trade receivables purchased from U.S. based investment grade corporations.

Because asset-backed paper is slightly less liquid than standard commercial paper, the market yield is usually higher on these issues versus other commercial paper issues.

Private Placement Commercial Paper

Private placement commercial paper has gained popularity over the last decade primarily because proceeds from its sale may be used for any purpose in contrast to standard commercial paper which must be used to finance "current" transactions.

SBI staff have recently added private placement paper issues to the portfolio as the credit risk, price and liquidity are on par with traditional commercial paper.

Statutory Limitations

The SBI may only invest in commercial paper that is issued by U.S. corporations or their Canadian subsidiaries and is payable in U.S. dollars. In addition, the paper must be rated in the highest two quality categories by a nationally recognized statistical rating organization as defined by the Securities and Exchange Commission.

Internal Investment Guidelines

Although lower quality commercial paper is legally allowed, the SBI has only invested in domestic issues that carry the rating of A-1 by Standard & Poors rating agency, and P-1 by Moody's Investor Service.

Currently, A-2/P-2 is not purchased for the portfolio. The amount of A-2/P-2 and lower rated issues has been shrinking as these companies are finding alternative means of short term borrowing. In addition, the yield spreads between A-1/P-1 and A-2/P-2 paper have narrowed making it unattractive to invest in these lower grade issues. If spreads widen in the future, A-2/P-2 paper will be considered for the portfolio.

The SBI limits its exposure to ten percent of any one issuer's average outstanding commercial paper issuance over a year's time. In addition, the amount of one issuer's commercial paper may not exceed five percent of the assets managed by the short term department. This allows for more prudent investing and a greater diversification of the portfolio.

Additional restrictions are placed on asset-backed commercial paper. The SBI normally purchases paper from companies that have issued commercial paper for at least one year. Also, the issuer must be a "special purpose corporation" and not a subsidiary of the asset seller. A special purpose corporation purchases receivables from a holder and finances these assets with commercial paper. Finally, any asset-backed paper the SBI purchases must have a Duff and Phelps of D-1 along with a Moodys rating of A-1 or an S&P rating of P-1. A Duff & Phelps rating is required because this firm provides excellent research in the asset-backed area.

Because many issuers write commercial paper to specific dates and it offers an attractive, low risk alternative to competing assets, it fits well into the SBI's investment program.

MEDIUM TERM NOTES

Medium term notes are corporate debt instruments, initially created to provide a funding gap between short term instruments and long term bonds. The system used by recognized rating companies to rate medium term notes is the same as the rating of the long-term debt of the corporate issuer.

Maturities on most of these instruments range from 9 months to 7 years, however they can be written for over 7 years. Many programs are continuously available to investors. The yield quoted on the notes is a function of the maturity desired, the shape of the yield curve at that point, and credit-risk premium demanded by the market. As an example, if the SBI were obtaining a quote on a 5 year note from a specific issuer, the issuer will quote the 5 year Treasury yield + a specified number of basis points.

Statutory Limitations

Corporate debt obligations purchased must be payable in U.S. dollars and rated in the top four quality categories by a nationally recognized statistical rating organization. These quality categories are AAA, AA, A, and BAA.

Internal Investment Guidelines

The SBI limits its purchase of medium term notes to the top three categories by a nationally recognized rating agency. Medium term notes are used to enhance yields over comparable Treasuries, while taking only small incremental risk. Staff feels that given the objectives of this portfolio, spreads are too narrow to justify the incremental credit risk of a lower rated security.

A maximum of ten percent of the portfolio is invested in MTN's due to their liquidity limitations.

BANKERS' ACCEPTANCES

A bankers' acceptance is a vehicle created to finance commercial trade transactions. Transactions that bring about the creation of a banker's acceptance include importing goods to and exporting goods from the United States and the storing and shipping of goods between two foreign (non-U.S.) countries. Once created, a bankers' acceptance may be traded in the secondary market to dealers or directly to investors.

Bankers' acceptances are considered to be very safe investments with the major risk being the bank's credit standing. Since the mid-80's, the development of alternative means of financing transactions have caused the banker's acceptance market to decline in size. The SBI rarely has more than one to two percent of its portfolio invested in these assets, as other instruments often provide more favorable yield differentials.

Statutory Limitations

The issuing bank must rate in the highest four quality categories by a nationally recognized rating agency.

Internal Guidelines

The SBI purchases bankers' acceptances from domestic issuing banks, and rated in the highest three categories by a nationally recognized statistical rating organization.

Exhibit 1 — Treasurer's Cash Pool Accounts

2nd Begin Farm Rt	Adolescent Pregnancy	Challenge Grants-W Central
2nd Begin Farm Rt	Adventures In Achievement	Chem Dep Initiative - AN
89A Arbitrage	Aeronautics Fund	Chem Dep Initiative - FF
89A Costs of Issuance	Ag Chem Superfund Admin	Chem Dep Initiative - WI
89A Debt Service Reserve	Ag Chemical Response-Remb	Chem Dep Initiative -AGC
89A Loan	Ag Energy	Chem Dep Initiative -BR
89A Operating Reserve	Ag Energy Audit	Chem Dep Initiative - ML
89A Principal & Interest	Ag Util Research Inst	Chemical Dependency Initiative - SP
89A Redemption	Amoco II	Children's Trust Fund
89A Revenue	Amoco Overcharge Settle	Children's Trust Reserve
90-DNR Wolf Center	Amusement Fund Soc-Welfare	Citizens Council on Aging
90A Arbitrage	Anoka Bequest-Lundgren	Clare H Olcott Bequest
90A Costs of Issuance	Arbitrage Account 7-89	Client Security Board
90A Debt Service Reserve	Arbitrage Account 90A	Client Security Fund Gft
90A Loan	Arts Access Inc	Co Foundation Gifts
90A Operating Revenue	BE Escrow Fed Commission	Co State Grants
90A Principal & Interest	BE Escrow MDSE	Cobra Insurance Trust
90A Redemption	BE General Support	Communication-Impaired
90A Revenue	Begin Farm Loan Rt	Conference Center
90A State Match	Begin Farm Loan Rt	Contingency P & I
91A Arbitrage	Belridge Oil Company	Corporate Reserve Fund
91A Capitalized Interest	Bem Private Grants	Cost of Issuance 90A
91A Capitalized Interest	Benefits Administration	Cost Recovery System
91A Costs Of Issuance	Blue/Cross -Blue/Shield	County State Aid Highway
91A Debt Service Reserve	Bona Fide-7/21/87 Bond Sale	Cp Private Grants
91A Loan	Bona Fide-7/7/88 Bond Sale	Critical Hab Cash Gifts
91A Operating Reserve	Bona Fide-8/13/91 Bond Sale	Debt Service Loan 224 Sch X
91A Principal & Interest	Bona Fide-89 Bond Sale	Debt Service Reserve 7-89
91A Redemption	Bona Fide-90 Bond Sale	Debt Service Reserve 90A
91A Revenue	BSU Peat Grant-LCMR	Delta-Dental Trust
91A Revenue Account	Business Innovation Ctr	Designated Contributions
91A State Match	Canteen Accounts	Designated Contributions
91B Arbitrage Account	Canteen Accounts	Designated Contributions-LVRN
91B Capitalized Interest	Capital Loan	Designated Contributions-SB
91B Cost of Issuance	Carlton Co Loan Program	Developmental Programs
91B Debt Service Reserve	Carner Accounts Trust	Diamond Shamrock Overcharge
91B Loan Account	Cellulose Rayon Pkg-Doa	Dislocated Wkrs Spec Reserve
91B Operating Reserve	Ceremonial House Gift	Edwin C Sponberg Trust
91B Pncipal & Interest	Chal Grants Southeast	Elmer Schoberg-Bequest
91B Redemption Account	Chal Grants-Central	Endow Invest Income Brai
91B Revenue Account	Chal Grants-Northeast	Endow Invest Income Deaf
Abatement Control	Chal Grants-Northwest	Energy & Conserv Account
Abatement Receipt Refund	Chal Grants-Southwest	Enterpns -Operations
Ace Craffair	Chal-Grants-West Central	Environment Resp/Compensation
Activities Donations	Challenge Grants - S West	Environmental Proj Lottery Proc
Activities Donations	Challenge Grants - Central	Environmental Transfer
Activities Donations	Challenge Grants - N East	Environmental Trust
Addie L Beran Trust	Challenge Grants - N West	Environmental Trust Corpus
Admin Sprfund/Envir Fd	Challenge Grants - S East	Equipment Loan Fy92

Exhibit 1 --- Treasurer's Cash Pool Accounts

Escrow Account R	IRRRB Ne Mn 2nd Bond Res	Met Private Grants
Escrow Account Q	Japan Tuition Clearing	Metro Landfill Abate Acct
Escrow Club Contracts	Koochiching Co Loan Program	Metro Landfill Abatement
Executive Cert Program	Laboratory Services	Mhrd West Cent Mn Bic
Export Finance Auth Wkg	Lakeville Hershey Soc De	Minnetrista Escrow Acct
Exxon Farm Energy Audit	Limited Remedial Invtgn	Miscellaneous Fees
Exxon Housing Finance	Lit Settle Hr Sports & HI	Mn Ag & Econ Dvlp
Exxon Overcharge	Lit Settlements Bidmon	Mn Ag & Econ Dvlp Account
Exxon Public Bldgs	Loan Account 7-89	Mn Mutual Insurance
Exxon U of M EES	Loan Account 90A	Mn Resources
Exxon U of M Secp	Loan Capital Fund	Mnsat
Family Farm Bonds	Loan Repayment-210	Moose Lake Soc Funded
Family Farm Bonds Interest	Local/Alexandria TC	MPCA Dedicated Recs
Family Farm Bonds-Amt to 91-20	Local/Duluth TC	Mrhd J Cupler Mem Sch
Family Farm Bonds-Interest	Local/Willmar TC	Mrhd Private Grants
Faribault Bequest-Barker	Local/Winona	Municipal Exxon Loans
Faribault Libr-Gen Bequest	Lottery Operations	Municipal State Aid Street
Fed Exxon Oil Overcharge	Lyndale Olympia Gym	MVVM Private Donations
Feed Inspection	MAMTC	MVVM Private Donations
Fertilizer Inspection	Man Private Grants	Natural Area Endowment Interest
FFRTC-Canteen-Amusement	Master Lease	Natural Area Endowment Princ
Fiscal Guardianship	Master Lease	Natural Res Inst
Fleet Management Acct	Master Lease 3 Repayments	NE Mn Environmental
Forest Mgmt Fd Nurseries	Master Lease Proceed & Exp	Nongame Wildlife Receipts
Fruit & Vegetables Insp	Master Lease Proceed & Exp	Nongame Wildlife X-Off
Gen Bequests Cambridge	Master Lease Repayments	NW Area Foundation
Gen Support Petrolenvir	Master Lease Reserve	Operating Reserve 7-89
General Bequests	MCC Student Assn	Operating Reserve 90A
General Fund	MCF-SCL Industry	Patient Volunteer Account
Gifts Grants Donations	MCF-SCL Social Welfare	PCA Admin Petro Tanks
Glen Lake-Begurst-Schobe	MCF-LL Industry	PEIP Administration
GMC Trust Account	MCF-LL Social Welfare	Pennzoil Company
GMC/SRI	MCF-OPH Industry	Petro TRC Reimbursement
Grant Programs	MCF-OPH Social Welfare	Pesticide Regulatory Acct
Greater Mn Corp	MCF-RW Social Welfare	Petro Board Funding
Grip Bad Debt Reserve	MCF-SCR Social Welfare	Petro Control
Guardianship Accounts	MCF-SHK Social Welfare	Petro Invest Corrt Atn
Harmful Substance Board	MCF-STW Industries	Petro Tank RI Cleanup
Haz Sub Control	MCF-STW Social Welfare	Petro TRC Earnings
Hazard Waste Recpt-Refund	MCF-WR/ML Social Welfare	Petro TRCPCA
Higher Education Lottery Proceeds	MCF-SHK Industry	Petro-Release Cleanup
I/M Agency & Statewide	MCF-FRB Industry	Petroleum Violation Escrow
I/M Contractor Open	McKnight Family Preserve	Pine City Society Funded Dep
IBU Clearing Ins Trust	McKnight Funds	Prior Year Certified Enc
Income Contingent Loan	Medexpo	Privatization Study
Ind Retire Acct Plan	Medexpo Matching	Property Trans Law of 92
Indochinese Gift DPW	Medibus-Helpmobile	Public Insurance Trust
Insurance Trust 4 WK Grp	Medicaid Fraud Recovery	Real Estate Educ Res Rec
Investors Escrow Account	Membership	Red Lake Nh Rent Receipt
Iron Range Resources Rehab	Merla Control	Redwood Falls Soc Funded De

Exhibit 1 --- Treasurer's Cash Pool Accounts

Refunding 4/7/88	Sprfnd/Env Spic Project	Warner Overcharge Settle
Reg Support Envrm	SR Property Transfer	Watson-& Hughey 5 Yr Annual
Reg Support Petro	St Peter- Gluek Bequest	Wepza Intl Conv-91
Rem Land Exchange Escrow	St Res Sch Genl Beq-Brai	Win Private Grants
Reserve -7/21/87 Bond Sale	Standard Oil Company	WTC Operations
Reserve -8/13/91 Bond Sale	State History Ctr Escrow	Zoo Gift Stores
Reserve-7/7/88 Bond Sale	State History Ctr Nonstate	Zoo Monorail
Reserve-89 Bond Sale	State Payroll Clearing	Zoo Revenue Tropical Exh
Reserve-90 Bond Sale	State Res Sch Genl	
Resident Bank Cambridge	STC Private Grants	
Resident Personal Accounts	Stripper Overcharge	
Resident Personal Accts	Stripper Well Exempt Lit	
Revenue Account 7-89	Stud Org-PS Bpa	
Revenue Account 90A	Stud Org-PS Deca	
Revenue Bond Appl Deposits	Stud Org-PS Earth	
Revenue Refund Econ Dev	Stud Org-PS Vica	
Risk Management Fund	Stud Org-Sec Deca	
Rochester Soc Funded	Stud Org-Sec FFA	
RTC_CD Contingent Account	Stud Org-Sec FHA	
RTN DAM Repair Loans	Stud Org-Sec Heart	
RTN Dist Health Loans	Stud Org-Sec Hosa	
Rural Finance Loan Rtn	Stud Org-Sec Vica	
Rural Rehabilitation	Stud-Org FHA Regional	
Rural Rehabilitation	Student Loans	
School Dist Judgements	Supplemental Loan Prog	
School Store	Supplemental Revenue Account	
Secunty/Medical Deposit	Sustainable Agric Loans	
Seed Capital Fund	SW Private Grants	
Seed Inspection-Ded	Sweatshop /3000130050	
Seed Potato Insp Fund	TACIP Board-Comm Impair	
Self II Bad Debt Reserve	Taconite Area Environmental Project	
Seller Spon Rt	Telephone Assistance	
Silver Bay Resident Acct	Telephone Assistance Pin	
Snowmobile Trails	Temp Transfer Gen Fund	
Snowmobile Trails Receip	Texaco Stripper Well	
Social Welfare Ah-Gwah-C	THC Social Welfare	
Social Welfare Anoka	Tracy Smith Holding	
Social Welfare Brainerd	Traffic Signal Retiming	
Social Welfare Cambridge	Tree/Shrub Plant-Energy	
Social Welfare Faribault	Tropical Coral Reef Exh	
Social Welfare Fergus Falls	Trunk Highway	
Social Welfare Glen Lake	Twin City Fitness Inc	
Social Welfare Moose Lake	US/Mexico Free Trade CNF	
Social Welfare St Peter	Vehicle Emission Inspeclion	
Social Welfare Willmar	Vehicle Emmissions	
Space Rent	Veteran Contributions	
Special Advance Royalty	Vets Home Luverne	
Special Projects	Vets Home-Luverne/Match	
Special Projects	Vickers Energy Corp	
Sprfnd/Env Fd Admin Costs	Vickers-Penzoil-Belridge	

Exhibit 2 — Merrill Lynch 1 - 3 yr U.S Gov't Index Data

12

Index T B I 9

MERRILL LYNCH BOND INDICES
HISTORICAL CHARACTERISTICS

10/ 7/92

Data Available

Monthly: 12/31/75

Daily: 10/31/86

G102 GOVERNMENTS, U.S. TREASURY, SHORT-TERM
(1-2.99 YEARS) ABOVE 4.25% COUPON

Quality Range: TSY - TSY

Number of Issues: 54

Inception Date: 12/31/1975

Weighted Ave. Price: 105.774

Market Value (MM) 568619.654

Par Value (MM) 537578.000

% of GOAO index 27.51

% of GOAO index 28.79

WEIGHTED AVERAGE CHARACTERISTICS

	<u>MARKET</u>	<u>PAR</u>
Coupon	7.260	7.181
Yield to Mty	3.797	3.792
Bnd-Eq Yield	3.799	
Years to Mty	1.797	1.788
Quality	TSY	TSY
Duration	1.682	
Mod. Duration	1.650	

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Sydney:2-241-1133 Tokyo:3-3578-1625 Washington DC:202-393-1024 M056-124-1-0 08-Oct-92 11:32:33

Treasurer's Cash Pool Monthly Maximum and Minimum Balances

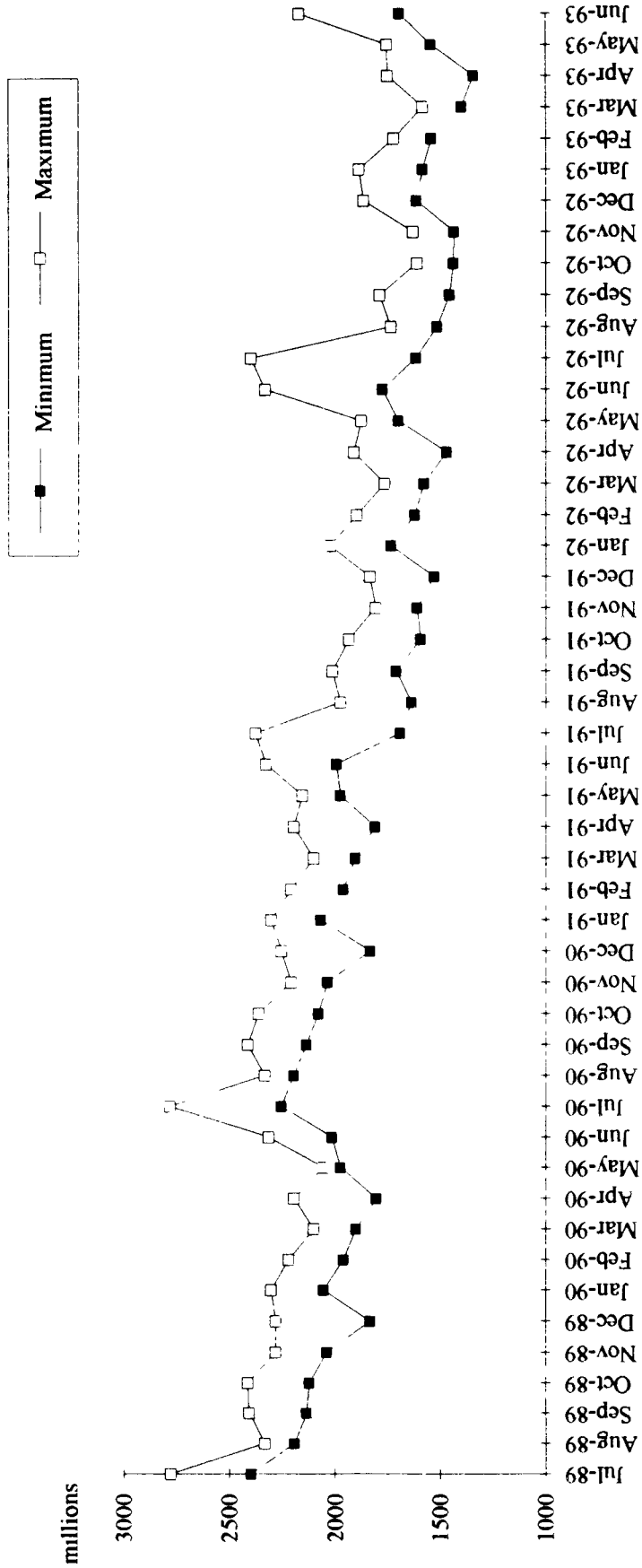


Chart 1

**MINNESOTA
STATE
BOARD OF
INVESTMENT**



Board Members:

Governor
Arne H Carlson

State Auditor
Mark B Dayton

State Treasurer
Michael A McGrath

Secretary of State
Joan Anderson Growe

Attorney General
Hubert H Humphrey III

Executive Director:

Howard J. Bicker

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DATE: November 12, 1992

TO: Members, Stock and Bond Manager Committee

FROM: Andrea Thomas

SUBJECT: Candidates for Bond Manager Monitoring Program

Attached is a set of data for each manager recommended to be included in the Fixed Income Manager Monitoring Program. The data includes a qualitative description of each manager and performance history.

Please review the attached materials since the committee will be voting on which managers to include in the program.

The recommended managers are:

- | | |
|---------------------|--------------------------|
| 1) BEA | 6) IDS |
| 2) Blackrock | 7) J P. Morgan |
| 3) Brinson Partners | 8) Piper Capital |
| 4) Criterion | 9) Standish, Ayer & Wood |
| 5) Goldman Sachs | 10) TCW |

MANAGER FACT SHEET

Manager *BEA Associates*

Investment Approach

BEA's investment approach focuses on individual bond selection and on sector selection rather than on short term interest rate forecasting. Duration is maintained close to the client specified benchmark, but depending on the long term economic outlook it may be modestly longer or shorter. Over time, BEA's duration has been between 5 and 5 3 years. BEA adds value through individual issue and sector selection and through opportunistic trading.

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.

The portfolio is initially structured so its option-adjusted duration is close to the benchmark duration. Usually, the structuring process is started with securities which have the greatest liquidity. Then, as opportunities arise, BEA swaps into corporate and mortgage securities, while keeping duration constant. BEA uses proprietary quantitative models to control risk along the yield curve and limit interest rate timing.

Volatility analysis, credit/yield spread appraisals and convexity management contribute to BEA's sector weighting. Historically, the corporate sector has been overweighted because they believe this sector provides the greatest inefficiencies and opportunities. The firm also enhances portfolio returns by using foreign bonds in cases where clients have given them approval. BEA normally has less than a ten percent allocation to mortgage securities.

Employing a vast network of Wall Street sources and their own option pricing models on call analysis, BEA looks for supply-demand imbalances and inappropriate credit ratings. These situations generate pricing inefficiencies on which BEA capitalizes. Financial futures are sometimes used in place of Treasuries when mispricings occur or they offer a more efficient portfolio structure. BEA also uses futures and options volatility trading strategies to enhance the cash portion of its portfolios.

Ownership

BEA Associates is a general partnership organized under the laws of the State of New York. Credit Suisse Capital Corporation is an 80% partner and Basic Appraisals, Inc is a 20% partner in BEA Associates.

Assets Under Management

Total fixed income assets managed \$5,862 million

Total fixed income assets managed in the core style \$2,360 million

Total fixed income accounts managed in the core style 39

Three largest tax-exempt accounts	<u>Account Type</u>	<u>Market Value</u>
	Public	\$793 million
	Corporate	\$602 million
	Corporate	\$531 million

MANAGER FACT SHEET

Manager: *Blackrock Financial Management (BFM)*

Investment Approach

Blackrock is a relatively new firm formed in 1988 with several experienced Wall Street professionals. The firm has had rapid growth, now managing over \$12 billion in fixed income assets. BFM's investment philosophy is centered around four fundamental principles. They are 1) duration targeting, 2) relative value sector and security selection, 3) rigorous quantitative evaluation of securities and portfolios, and 4) strong credit quality bias to portfolio structure.

The portfolios managed against a broad investment grade index are managed by examining macroeconomic trends, supply/demand analysis, yield curve structure and trends, volatility and convexity analyses, and security specific option adjusted spread analysis. The target duration is normally equal to the benchmark duration. Portfolio duration is then kept within a narrow band, usually +/-20% of the target benchmark.

BFM's primary focus for adding value is sector and individual security selection. Sector allocation decisions are made using analysis of both fundamental and technical factors affecting relative value among sectors. Using these analyses, the firm may aggressively over or underweight particular sectors. Over time, BFM has been overweighted in the mortgage sector and underweighted in the corporate sector of the market.

Security selection decisions are generally made by the portfolio management team based upon internally generated research. The primary focus of this research is option adjusted spread analysis, utilizing proprietary software and analytics. BFM's analytic systems are an integral part of the decision-making process, as the portfolio managers use proprietary state-of-the-art technology to compare securities and to understand the impact of buy/sell decisions to the overall portfolio. The firm continually monitors option adjusted spread and effective duration on the securities it owns as mortgage securities and callable corporate securities are subject to value changes due to frequent fluctuations in interest rates. BFM also adds value in security selection by utilizing securities such as CMO's and other structured mortgage securities and mortgage derivatives that have favorable risk/reward characteristics.

Ownership

BFM is a limited partnership which is 65% owned by the firm's 12 partners, all of whom are employees of the firm. The Blackstone Group, a private investment bank, owns the remaining 35%. Blackstone Group plays no role in the management of BFM or its daily operations.

Assets Under Management

Total fixed income assets managed \$ 12,964 million

Total fixed income assets managed in the high grade fixed income style \$ 2,461 million

Total number of fixed income accounts managed for this style 14

Three largest tax-exempt accounts managed in this style	<u>Account Type</u>	<u>Market Value</u>
	General Electric	\$ 171 million
	Unisys	\$ 150 million
	North American Philips	\$ 83 million

MANAGER FACT SHEET

Manager: *Brinson Partners, Inc.*

Investment Approach

Brinson uses a highly quantitative, disciplined process, with an emphasis on risk management. They add value by actively managing interest rate sensitivity, yield curve positioning, sector exposure and individual security selection. Each of these four factors is weighted equally in the construction of the optimal client portfolio. In addition to managing U.S. portfolios, Brinson has international portfolio construction expertise.

Brinson adds value first by actively managing interest rate risk. The process begins with determining an equilibrium asset return. This is the long-term normal market return required of an asset to compensate the investor for its risk. The factors that go into determining this return are the real risk free rate, the inflation premium and the risk premium for a particular asset. Once the equilibrium asset return, or required rate is calculated, it is compared to current market yields. This drives the duration decision. The firm does not take large bets, but will adjust the portfolio for perceived differences in required returns and those observed in the market. Portfolio duration averages 4.5 years.

Next, the firm adds value by incorporating expected changes in the shape of the yield curve. In their analysis, the "normal" yield curve is plotted against the current yield curve. This helps uncover relative over/under valuations along sections of the curve.

Sector strategies are implemented based on a comparison of current market yield spreads with estimates of equilibrium yield spreads for particular segments of the U.S. bond market. Equilibrium yield spreads take into account credit risks, the value of imbedded options, mortgage prepayments, etc. Over the past five years, Brinson has remained within 5 percent of the index in each of the various sectors.

Having established the overall maturity, yield curve and sector exposures, the portfolio manager searches for individual bonds which will give these macro-characteristics at the lowest cost. In-house credit research is an important element within the corporate bond sector, and analysis of pre-payments and option adjusted spreads are crucial to the mortgage security selection.

Ownership

Over one-half of the employees own 63% of the firm. In addition to the majority ownership by the firm's investment professionals, minority interests are held by First Chicago Corporation, Chase Manhattan Investment Holdings, Hellman & Friedman Capital Partners and Yasuda Fire and Marine Insurance Co., Ltd.

Assets Under Management

Total fixed income assets managed \$7,723 million

Total fixed income assets managed in the high grade fixed income style \$ 2,720 million

Total number of fixed income accounts managed for this style 65

Three largest tax-exempt accounts managed in this style	<u>Account Type</u>	<u>Market Value</u>
	Corporate	\$ 479 million
	Union	\$ 300 million
	Public	\$ 255 million

MANAGER FACT SHEET

Manager: *Criterion Investment Management Company*

Investment Approach

Criterion's investment philosophy emphasizes interest rate decisions, selection of the appropriate part(s) of the yield curve, shifts among sectors of the bond market and the selection of individual issues. The investment process is highly quantitative and focuses on research and analysis of monetary, economic, technical, social, political and international conditions and their effect on the markets. Although the firm invests in all sectors of the market, it specializes in mortgage securities.

Within the client guidelines and the firm's interest rate forecast, portfolio structure is controlled by volatility. Volatility is defined as the numerical measure of the future change in total return of a bond or a portfolio of bonds for a change in the level of interest rates over a specific time period. The firm feels that volatility is a superior measure to duration for measuring the risk/return characteristics.

An internally developed, proprietary computerized management system is used to optimize portfolio structure decisions for maturity, sectors, coupon and quality to maximize return/risk for a desired level of interest rate exposure, as measured by volatility. Portfolio volatility is adjusted to reflect the interest rate outlook and is set relative to the portfolio benchmark. A portfolio volatility target greater than the benchmark volatility indicates they expect interest rates to decline, while a forecast for rising interest rates would result in a portfolio volatility lower than the benchmark volatility.

To determine the optimal positioning of the portfolio along the yield curve, the firm divides the yield curve into three maturity segments. Each of these segments exists around a group of natural investors who help establish a unique supply and demand situation for that maturity range. Criterion's system measures the portfolio's exposure to a change in the shape of any or all of these three segments.

The decision to move from one sector to another is a function of relative values and future expected changes in relative values between sectors. Relative value is determined by the level of yield spreads between sectors, the cash flow or repayment features of sectors, and the supply/demand and quality attributes of sectors. The firm's internally developed analytical system enables them to measure the relative amount of widening and narrowing of spreads between sectors.

Ownership

Criterion Investment Management Company is owned by Transamerica Corporation

Assets Under Management

Total fixed income assets managed \$ 10,000 million

Total fixed income assets managed in the high grade fixed income style \$ 7,700 million

Total number of fixed income accounts managed for this style . 70

Three largest tax-exempt accounts managed in this style

<u>Account</u>	<u>Market Value</u>
LA County Employees	\$ 845 million
Ill Municipal Retirement Fund	\$ 638 million
Mississippi Public Employee Retirement Fund	\$ 629 million

MANAGER FACT SHEET

Manager: *Goldman Sachs Asset Management*

Investment Approach

The primary focus of GSAM's portfolio strategy is security selection, followed by sector allocation and duration/yield curve positioning. The approach is bottom-up, and the firm does not make significant duration bets. GSAM will manage to any fixed income benchmark the client chooses.

GSAM does not expect to derive significant performance enhancement from speculating on the future direction of interest rates. Rather, they use economic analysis to anticipate changes in the shape, not level, of the yield curve. The duration of the portfolio is then typically kept within .5 years of the benchmark. This economic environment analysis, however, also plays an important role in the assessment of credit direction of corporate issuers.

Sector allocation decisions are made based on two factors. First, internal statistical models relate spreads across sectors as functions of the level and shape of the yield curve, volatility, economic activity and other factors. Second, technical factors are assessed by traders to determine supply and demand imbalances which may create opportunities. The firm is normally overweighted in mortgage and corporate securities and underweighted in the Treasury sector versus the aggregate market. The firm purchases international bonds for those clients that allow them in their portfolio.

Security selection is the primary focus of GSAM's portfolio management. When analyzing Treasuries, the firm models Treasury coupons with an arbitrage-based pricing model. This model determines the spread between actual market yields and what they determine is the intrinsic value. This helps determine the relative richness or cheapness of securities.

In their analysis of mortgage securities, GSAM takes a highly quantitative and analytical approach. Using proprietary research and internally developed models, extremely complex mortgage securities are analyzed and undervalued securities are uncovered.

In the corporate sector, GSAM performs its own credit review of each issuer in which portfolios may invest. Credit analysts and portfolio managers endeavor to meet with or interview the management of companies in which it invests. Significant time is spent analyzing industrial and financial institutions. Extensive credit research tempered with market knowledge and trading skill allows GSAM to maximize returns.

Ownership

Goldman Sachs is a private partnership.

Assets Under Management

Total fixed income assets managed \$14,162 million

Total fixed income assets managed
in the core style \$4,482 million

Total number of fixed income accounts
managed in this style 40

Three largest tax-exempt accounts	<u>Account</u>	<u>Market Value</u>
	Ameritech	\$1,590 million
	American Airlines	\$ 406 million
	McDonnell Douglas	\$ 252 million

MANAGER FACT SHEET

Manager: *IDS Advisory Group*

Investment Approach

IDS Advisory uses two investment approaches 1) **active duration management** and 2) **quantitative portfolio optimization**. The active duration approach is typically compared to the Shearson Lehman Government Corporate Index and the quantitative portfolio optimization is compared to the Merrill Lynch 1 to 5 year index. Of the two approaches, the best fit for the SBI's bond program is the active duration approach.

Active Duration Management

Active duration management focuses primarily on duration, but also analyzes sector concentration, industry concentration and security selection. Superior returns are achieved by actively managing each of these components. It is based on the philosophy that changing economic and business conditions create investment opportunities and macroeconomic and financial analysis identifies the shorter term and longer term factors shaping the investment environment and the direction of interest rates.

Active duration management begins with an economic overview and interest rate outlook. These factors help determine both the short and long term interest rate forecast and leads to duration positioning. Historically, the duration of the firm's portfolios has ranged from 4.8 to 8 years.

From here, sector allocation is determined. IDS relies greatly on its research capabilities and has devoted considerable resources to the development and operation of its research department. Over time, IDS portfolios have been heavily overweighted in the investment grade corporate sector and underweighted in the mortgage sector.

With the emphasis on corporates, analysis of this sector is critical. Industries are rated as improving, stable, or deteriorating. Only the stable and improving industries are candidates for investment. Not more than 20% of the portfolio is invested in any single industry group, and below investment grade securities are not purchased.

Once the sector and industry allocation has been determined, security selection takes place. The coupon, call provisions and quality of each security is analyzed before investing. Proper security selection contributes significantly to total returns.

Ownership

IDS Advisory Group is owned by IDS Financial Corporation, an American Express Company.

Assets Under Management

Total fixed income assets managed \$3,848 million

Total fixed income assets managed in the active duration style \$1,020 million

Total number of fixed income accounts managed in this style 14

Three largest tax-exempt accounts	<u>Account #</u>	<u>Market Value</u>
	344	\$261 million
	404	\$140 million
	305	\$101 million

* IDS will not release information about the market value of their clients' accounts

MANAGER FACT SHEET

Manager: *J.P. Morgan Investment Management, Inc.*

Investment Approach

J.P. Morgan's active fixed income investment style seeks to maximize yield as a reliable source of excess return, and add only moderate additional value from inherently riskier duration decisions. The firm makes only modest duration bets, emphasizes rigorous credit analysis, quantitative research, active sector and security selection and well-executed trading as consistent sources of value

In order to make the duration decision, several factors that affect interest rates are analyzed. On a monthly basis, interest rate and volatility forecasts are developed for optimistic, pessimistic and most likely economic scenarios. In addition, the likelihood of non-parallel shifts in the yield curve are incorporated in the analysis. Having assessed these factors, the firm positions the maturity and structure of the portfolio. Portfolio duration is rarely greater than +/- one year of the client benchmark portfolio.

Sector allocation and security selection are also important aspects of the investment process. Morgan analyzes the current spreads versus historical norms as well as utilizes market and credit research to assess fair value and the likelihood of sector spreads widening or narrowing. Securities are selected by the portfolio managers with substantial input coming from the trading desk and fixed income research area.

To achieve outperformance and diversify risk in the actively managed fixed income accounts, Morgan participates in the entire fixed income market. They complement the use of traditional instruments by investing in corporate private placements, directly placed mortgages, non-dollar securities, financial futures, and bond options. The firm's research shows that using these extended markets in conjunction with the traditional securities provides higher returns, improves creditworthiness, and reduces risk in actively managed portfolios. In general, they have been overweighted in corporates and mortgages versus the aggregate benchmark over time.

Ownership

J.P. Morgan Investment Management is a wholly-owned subsidiary of J.P. Morgan & Company Inc, a bank holding company which also owns Morgan Guaranty Trust Company, J.P. Morgan Securities Inc and J.P. Morgan Futures.

Assets Under Management

Total fixed income assets managed \$46,780 billion

Total fixed income assets managed in the core style \$15,150 billion

Total number of fixed income accounts managed in this style 150

Three largest tax-exempt accounts	<u>Client Type</u>	<u>Market Value</u>
	Corporate Pension	\$1,660 million
	Sovereign	\$ 720 million
	Religious Pension	\$ 690 million

MANAGER FACT SHEET

Manager: *Piper Capital Management*

Investment Approach

Piper is a risk averse, opportunity-oriented fixed income manager who attempts to capitalize on inefficiencies that exist in the fixed income markets. The firm specializes in the mortgage-backed securities sector. Most of the fixed income assets under management are for retail customers rather than institutional investors. Our focus is on the firm's High Quality Core Fixed Income product, which utilizes all sectors of the market.

In the management of their high quality core fixed income accounts, 40% of the investment decision process is driven by an interest rate forecast. Several macroeconomic variables are analyzed to create the economic outlook over the upcoming twelve months. This forecast helps determine the duration and convexity of the client's portfolio. Duration is usually kept within +/-25% of the specified benchmark. Over the past five years, duration has ranged between 4 and 6.25 years, and has averaged roughly 5 years

Next, sector and security analysis drive 50% of the process. Relative value is analyzed using historical yield premium relationships. In addition, various yield curve and interest rate scenarios are incorporated to analyze prospective relationships between sectors. Over time in the high quality core fixed income portfolios, Piper has been slightly overweighted in the mortgage sector and significantly underweighted in the corporate sector.

Security analysis in the mortgage sector is extremely important. Pre-payment assumptions are challenged, inter-coupon spreads option-adjusted spreads are analyzed and vector analysis is used to uncover potential mispricings in this market. The firm looks for opportunities to exploit market inefficiencies in both generic and derivative products. Mortgage rolls constitute a large portion of Piper's mortgage portfolio.

10% of the portfolio investment process is driven by technical analysis. The technical analysis is used to complement what has been determined by fundamental analysis. Analysis includes charting of bond futures, trends and formations and momentum indicators.

Ownership

Piper Capital Management is a wholly-owned subsidiary of Piper Jaffray Companies. Piper Capital has developed a phantom stock program which allows key employees ownership in the firm up to 30%.

Assets Under Management

Total fixed income assets managed \$ 8,091 million

Total fixed income assets managed
in the core style \$ 5,282 million

Total number of fixed income accounts
managed in the core style 215

Three largest tax-exempt accounts	<u>Account</u>	<u>Size</u>
	Alliant Tech Systems	\$38 million
	Piper Jaffray ESOP	\$34 million
	University of Mn	\$28 million

MANAGER FACT SHEET

Manager: *Standish, Ayer & Wood*

Investment Approach

Standish, Ayer & Wood attempts to add value by capitalizing on market inefficiencies and trading actively through intra and inter-sector swapping. The firm does not employ interest rate guessing, but focuses on the use of non-Treasury issues as these are normally less efficient than Treasury issues. In particular, the firm uses new, innovative types of securities as these tend to be overlooked or improperly analyzed by fixed income managers. These securities are often mispriced and provide an excellent source of value added for bond portfolios.

Although the firm primarily uses fundamental analysis, the firm also uses quantitative analysis as a filtering process to arrive at final decision making. Quantitative research is employed first in overall determination of the relative attractiveness of the bond market and then brought down to the level of sectors and individual issues.

Key to the approach is active sector trading and relative spread analysis of both sectors and individual issues. In addition to historical spreads, evolving secular trends and how they may affect relationships are analyzed. The firm believes that 65% of its value added comes from inter-sector swapping in the non-government sectors of the bond market. Every purchase decision has an implied sell decision based on the spread relationship. Sell decisions based purely on fundamental considerations are rare, but the firm will liquidate an issue when they felt there was a chance of adverse event risk.

Since the firm does not bet on the direction of interest rates, the duration of the portfolio is kept within +/- 15 percent of the portfolio.

Portfolios are constructed according to the sector weightings established by the firm's bond policy committee. The maximum exposure to corporates is 20%, but generally the firm's exposure is close to zero. The portfolio universe includes corporates with a minimum rating of BB, securitized instruments, short zeros such as FICO's and non-dollar bonds. Cash generally ranges from zero to five percent and is used to shade duration rather than as a timing mechanism.

Ownership

Standish, Ayer & Wood is independently owned by operating management.

Assets Under Management

Total fixed income assets managed \$ 17,300 million

Total fixed income assets managed in the high grade fixed income style \$ 6,900 million

Total number of fixed income accounts managed for this style 69

Three largest tax-exempt accounts managed in this style

<u>Account</u>	<u>Market Value</u>
AT& T	\$ 504 million
Public Utility in Midwest	\$ 496 million
NYNEX	\$ 380 million

MANAGER FACT SHEET

Manager: *Trust Company of the West (TCW)*

Investment Approach

TCW manages across all sectors of the market, but specializes in the mortgage sector. Its assets are broken down into four primary products. They are a broad market high grade fixed income product, a mortgage securities product, a high grade short-intermediate maturity product and a mortgage-backed short-intermediate product.

TCW uses a disciplined approach for all its investment approaches which is based on the determination and control of the many risk components of the markets. The most significant of these are fluctuations in the overall level of interest rates, the shape of the yield curve, relative performance of the various sectors and security selection within a given sector. The firm adds values by tilting the structure of the portfolios to take maximum advantage of the future movements in the shape of the yield curve, market volatility and the overall level of interest rates.

In the management of the high grade fixed income portfolios, the primary objective is to maximize total realized return while preserving capital and controlling interest rate risk. This is accomplished through prudent investment in large capitalization, high-quality, liquid securities. The TCW investment process can best be described as top-down, beginning with an analysis of several macroeconomic variables. The fixed income research staff collects and tracks detailed economic data and attempts to uncover trends that may affect interest rates. This leads to the development of an interest rate forecast. These forecasts are used to select a targeted average duration for the portfolio. Duration normally ranges between three and six years.

TCW moves in and out of sectors after an analysis of historical yield spreads and call options have been done. Using a sophisticated computer system, call provisions and pre-payment speeds are calculated for corporate and mortgage securities. The yield and duration of callable securities are adjusted to reflect the risk of having the securities redeemed prior to maturity.

Individual security selection is based on credit and liquidity factors, and value relative to other securities of the same type. Both internal and external sources are used to perform credit analysis prior to the purchase of any security.

Ownership

The ownership of TCW lies 88% with management and 12% with outside directors.

Assets Under Management

Total fixed income assets managed \$9,934 million

Total fixed income assets managed in the high grade fixed income style \$1,436 million

Total number of fixed income accounts managed in this style 17

Three largest tax-exempt accounts managed in this style	<u>Client Type</u>	<u>Market Value</u>
	Public	\$ 873 million
	Corporate	\$ 159 million
	Corporate	\$ 74 million

**STATE BOARD
OF INVESTMENT**

**Stock
Manager
Evaluation
Reports**

Third Quarter, 1992

STOCK MANAGERS

Third Quarter 1992

Common stock manager returns are evaluated against the performance of customized indices constructed to represent the managers' specific investment approaches. These custom indices are commonly referred to as "benchmark portfolios." The benchmark portfolios take into account the equity market forces that at times favorably or unfavorably impact certain investment styles. Thus, benchmark portfolios are the appropriate standards against which to judge the managers' performance.

Manager performance relative to benchmarks is evaluated on a quarterly basis by the Stock and Bond Manager Committee of the Investment Advisory Council.

Staff Recommendations:

Staff recommends the following actions concerning manager status:

- Conduct an in-depth review of GeoCapital.

Current Managers	Total Market Value 9/30/92 (Millions)	Quarter Ending 9/30/92		Year Ending 9/30/92		Annualized Five Years Ending 9/30/92		Annualized Since Inception***		% of Stock Segment 9/30/92 Basic Funds
		Actual	Bmrk	Actual	Bmrk	Actual	Bmrk	Actual	Bmrk	
Alliance	\$590	4.4%	3.6%	16.7%	9.2%	11.8%	6.8%	18.0%	12.0%	11.0%
Forstmann	293	-0.4	2.1	-1.3	9.1	5.6	7.9	12.3	11.6	5.5
Franklin	173	3.9	3.9	11.7	12.2			11.1	11.6	3.2
GeoCapital	185	-0.4	3.8	2.3	4.0			14.7	10.3	3.5
IDS	230	2.1	3.2	12.4	14.6	7.4	8.6	14.4	13.9	4.3
Independence	195	2.4	3.5					4.8	5.5	3.6
Lieber & Co.	163	0.2	2.4	0.6	10.0	4.9	5.9	10.4	10.4	3.0
Lynch & Mayer	189	3.0	4.6					1.3	0.5	3.5
Waddell & Reed	220	4.7	2.5	10.4	8.1	6.3	6.2	11.3	10.5	4.1
Wilshire Assoc.	3,111	2.5	2.5	10.7	10.9	8.2	8.4	13.8	14.0	58.3
Current Aggregate*		2.5	2.9	10.3	10.5	8.4	8.0	14.1	13.6	100.0
Historical Aggregate**		2.5	2.9	9.8	10.3	7.8	8.0	13.4	13.6	
Wilshire 5000 Adjusted****		2.5		10.0		8.0		13.6		
Wilshire 5000		3.1		10.4		8.4		14.1		

* Includes performance of current managers only.

** Includes performance of terminated managers.

*** Time periods vary for each manager depending on date of retention.

**** Adjusted for liquor and tobacco restriction.

Notes: GeoCapital retained 4/90; Franklin, Rosenberg retained 4/89; Lynch & Mayer, Independence retained 2/92
Wilshire Assoc. began custom tilt phase-in in October 1990.

ALLIANCE CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Jack Koltes

ASSETS UNDER MANAGEMENT: \$590,067,564

INVESTMENT PHILOSOPHY

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

**QUALITATIVE EVALUATION
(Reported By Exception)**

Exceptional strengths are:

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

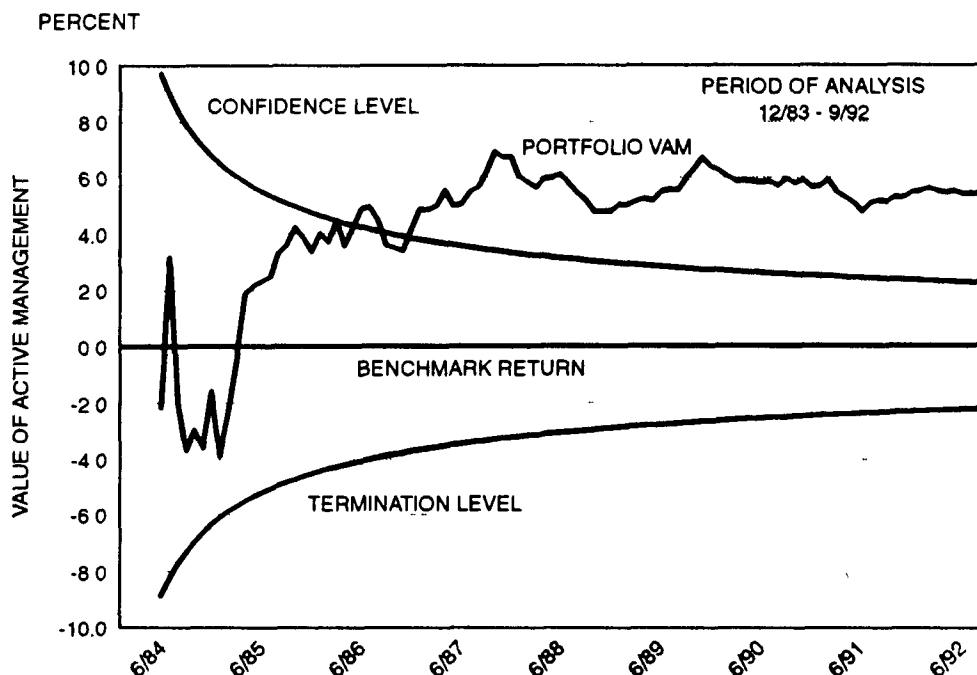
QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	4.4%	16.7%	11.8%	18.0%
Benchmark	3.6	9.2	6.8	12.0

STAFF RECOMMENDATIONS

No action required.

**VALUE OF ACTIVE MANAGEMENT REPORT
ALLIANCE CAPITAL MANAGEMENT**



FORSTMANN LEFF ASSOCIATES

PORTFOLIO MANAGER: Joel Leff

ASSETS UNDER MANAGEMENT: \$293,005,047

INVESTMENT PHILOSOPHY

Forstmann Leff is a classic example of a "rotational" manager. The firm focuses almost exclusively on asset mix and sector weighting decisions. Based upon its macroeconomic outlook, the firm will move aggressively into and out of asset classes and equity sectors over the course of a market cycle. The firm tends to purchase liquid, large capitalization stocks. Forstmann Leff will make sizable market timing moves at any point during a market cycle.

QUALITATIVE EVALUATION
(Reported By Exception)

Current concerns are:

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

Exceptional strengths are:

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

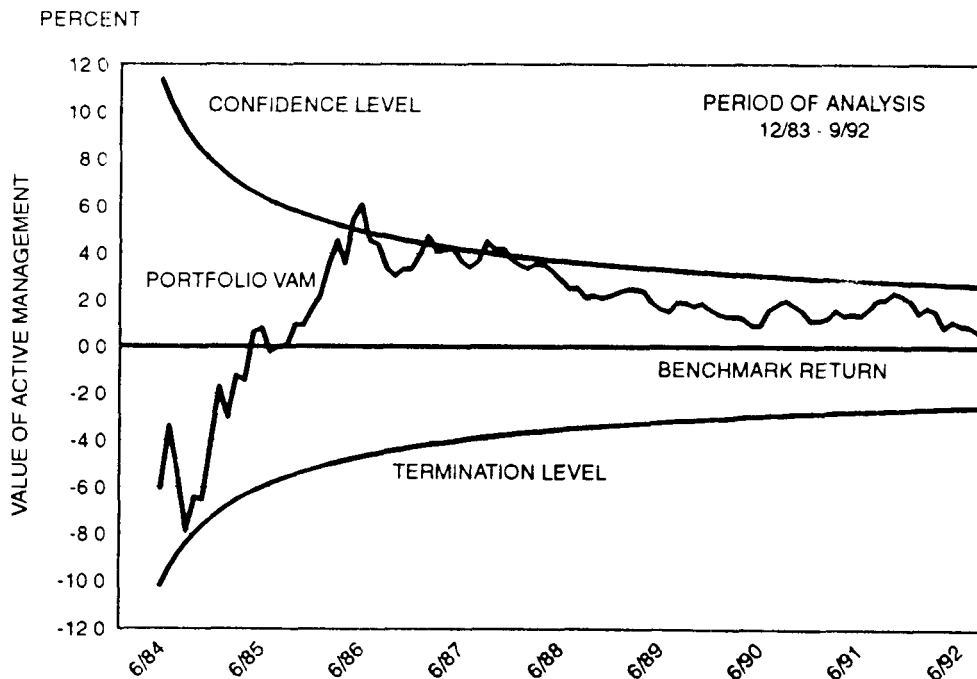
QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	-0.4%	-1.3%	5.6%	12.3%
Benchmark	2.1	9.1	7.9	11.6

STAFF RECOMMENDATIONS

Latest five year returns are below benchmark. Last in-depth review completed in December 1990.

VALUE OF ACTIVE MANAGEMENT REPORT
FORSTMANN LEFF



FRANKLIN PORTFOLIO ASSOCIATES

PORTFOLIO MANAGER: John Nagorniak

ASSETS UNDER MANAGEMENT: \$173,083,964

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION

(Reported by Exception)

Exceptional strengths are:

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

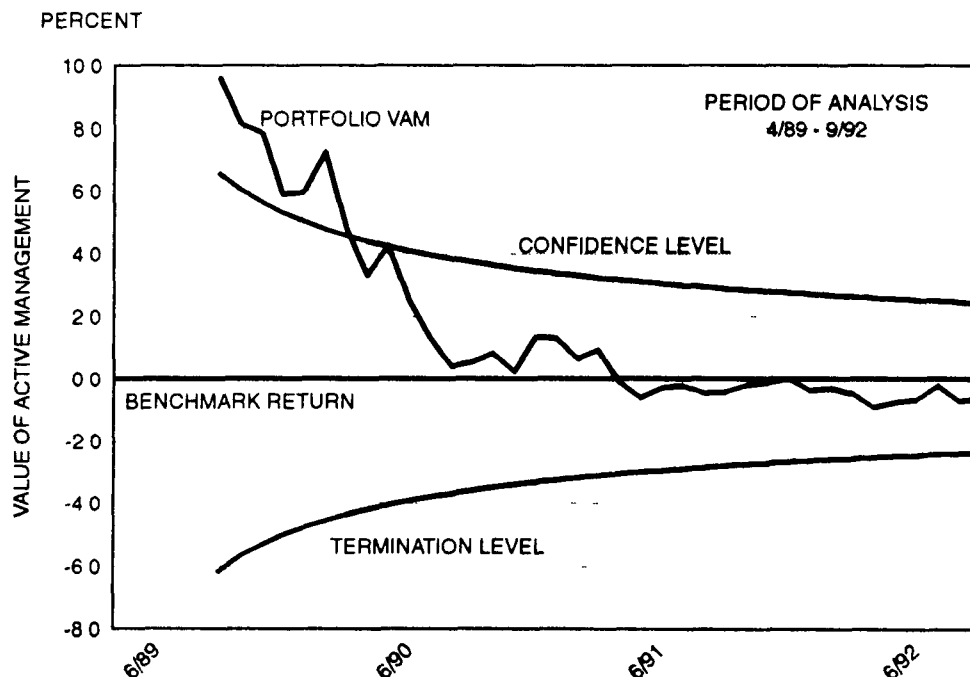
QUANTITATIVE EVALUATION

STAFF RECOMMENDATIONS

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 4/1/89	No action required.
Actual Return	3.9%	11.7%	N.A.	11.1%	
Benchmark	3.9	12.2	N A	11.6	

VALUE OF ACTIVE MANAGEMENT REPORT

FRANKLIN PORTFOLIO ASSOCIATES



GEOCAPITAL CORP.

PORTFOLIO MANAGER: Barry Fingerhut

ASSETS UNDER MANAGEMENT: \$185,191,302

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION
(Reported by Exception)

Exceptional strengths are:

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

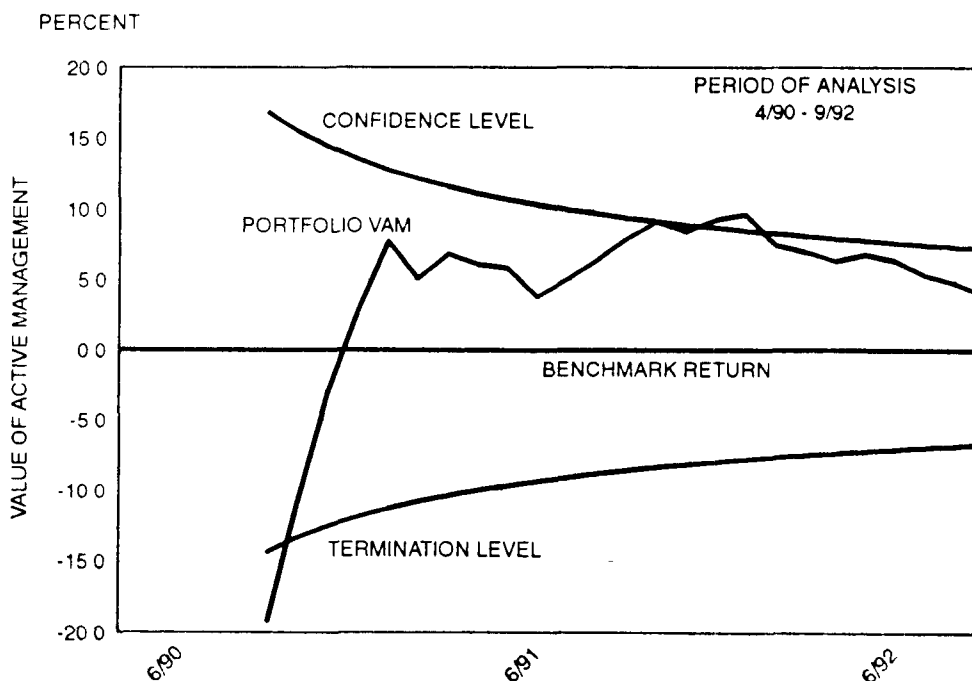
QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 4/1/90
Actual Return	-0.4%	2.3%	N/A	14.7%
Benchmark	3.8	4.0	N/A	10.5

STAFF RECOMMENDATIONS

Conduct an in-depth review of GeoCapital for the March 1993 Board meeting

VALUE OF ACTIVE MANAGEMENT REPORT
GEOCAPITAL CORP.



IDS ADVISORY

PORTFOLIO MANAGER: Pete Anderson

ASSETS UNDER MANAGEMENT: \$229,905,052

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION
(Reported By Exception)

Current concerns are:

- Manager is currently addressing specific benchmark issues.

Exceptional strengths are:

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

QUANTITATIVE EVALUATION

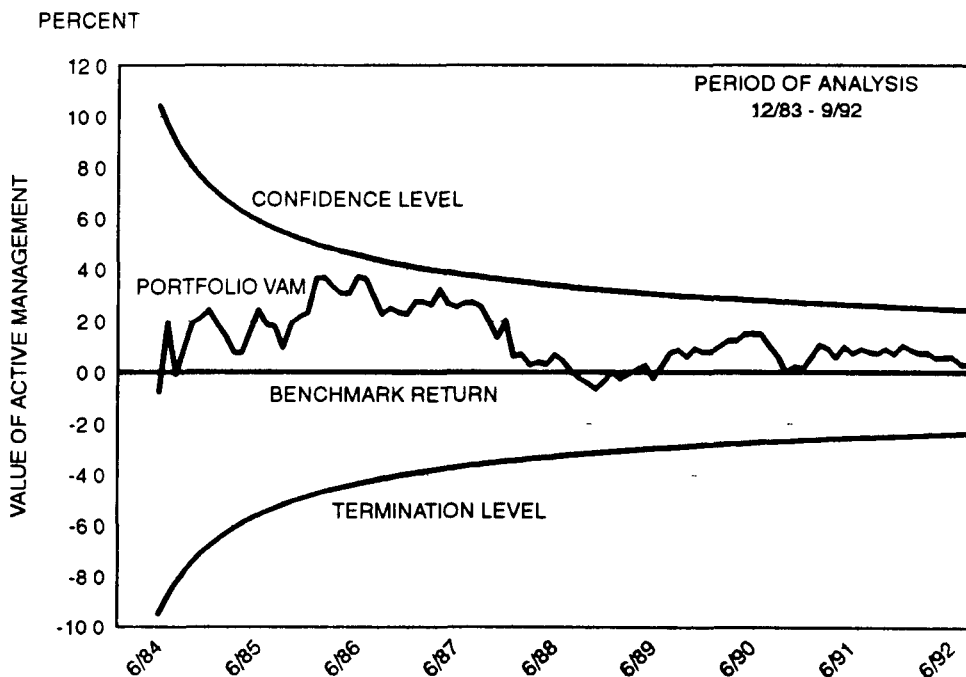
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	2.1%	12.4%	7.4%	14.4%
Benchmark	3.2	14.6	8.6	13.9

STAFF RECOMMENDATIONS

Latest five year returns are below benchmark. Last in-depth review completed in March 1991.

VALUE OF ACTIVE MANAGEMENT REPORT

IDS ADVISORY



INDEPENDENCE ASSOCIATES

PORTFOLIO MANAGER: Bill Fletcher

ASSETS UNDER MANAGEMENT: \$195,345,141

INVESTMENT PHILOSOPHY

Independence believes that individual stocks which outperform the market always have two characteristics: 1) they are intrinsically cheap, and 2) their business is in the process of improving. Independence ranks their universe by using a multifactor model. Using input primarily generated by their internal analysts, the model ranks each stock based on 10 discreet criteria. Independence constricts their portfolio by using the top 60% of their ranked universe and optimizing it relative to the benchmark selected by the client to minimize the market and industry risks. Independence maintains a fully invested portfolio and rarely holds more than a 1% cash position.

QUALITATIVE EVALUATION

(Reported By Exception)

Exceptional strengths are:

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

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 2/1/92
Actual Return	2.4%	N A	N A	4.8%
Benchmark	3.5	N A	N A	5.5

STAFF RECOMMENDATIONS

No action required

Vam graph will be created for period ending 9/30/93.

LIEBER & COMPANY

PORTFOLIO MANAGER: Stephen Lieber, Nola Falcone

ASSETS UNDER MANAGEMENT: \$163,041,379

INVESTMENT PHILOSOPHY

Lieber and Co. seeks to identify investment concepts that are either currently profitable, or likely to become so in the near future, yet whose prospects are not reflected in the stock prices of the companies associated with the concepts. The firm focuses on macroeconomic trends and specific product developments within particular industries or companies. Stock selection concentrates on well-managed, small-to-medium sized companies with high growth and high return on equity. Particularly attractive to Lieber are takeover candidates or successful turn around situations. The firm generally is fully invested, with any cash positions the result of a lack of attractive investment concepts.

QUALITATIVE EVALUATION
(Reported by Exception)

Exceptional strengths are:

- Organizational continuity and strong leadership.
- Attractive, unique investment approach.
- Extensive securities research process.

Current concerns are:

- Recent performance has lagged due to poor stock selection.

QUANTITATIVE EVALUATION

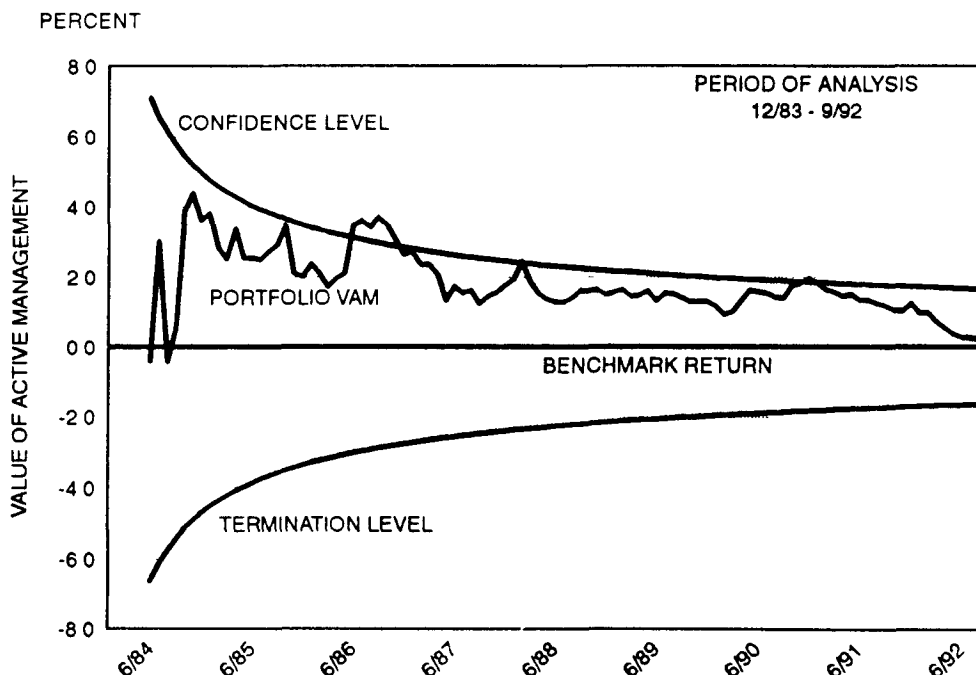
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	0.2%	0.6%	4.9%	10.4%
Benchmark	2.4	10.0	5.9	10.4

STAFF RECOMMENDATIONS

Latest five year returns are below benchmark In-depth review completed in June 1992.

VALUE OF ACTIVE MANAGEMENT REPORT

LIEBER & CO.



LYNCH & MAYER

PORTFOLIO MANAGER: Eldon Mayer

ASSETS UNDER MANAGEMENT: \$188,904,911

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION

(Reported by Exception)

Exceptional strengths are:

- Organizational continuity and strong leadership.
- Highly successful and experienced professionals.

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 2:1/92
Actual Return	3.0%	N A	N A	1.3%
Benchmark	4.6	N A	N A	0.5

STAFF RECOMMENDATIONS

No action required

Vam will be created for period ending 9/30/93.

WADDELL & REED

PORTFOLIO MANAGER: Henry Herrman

ASSETS UNDER MANAGEMENT: \$220,260,348

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION
(Reported By Exception)

Exceptional strengths are:

- Highly successful and experienced professionals.

QUANTITATIVE EVALUATION

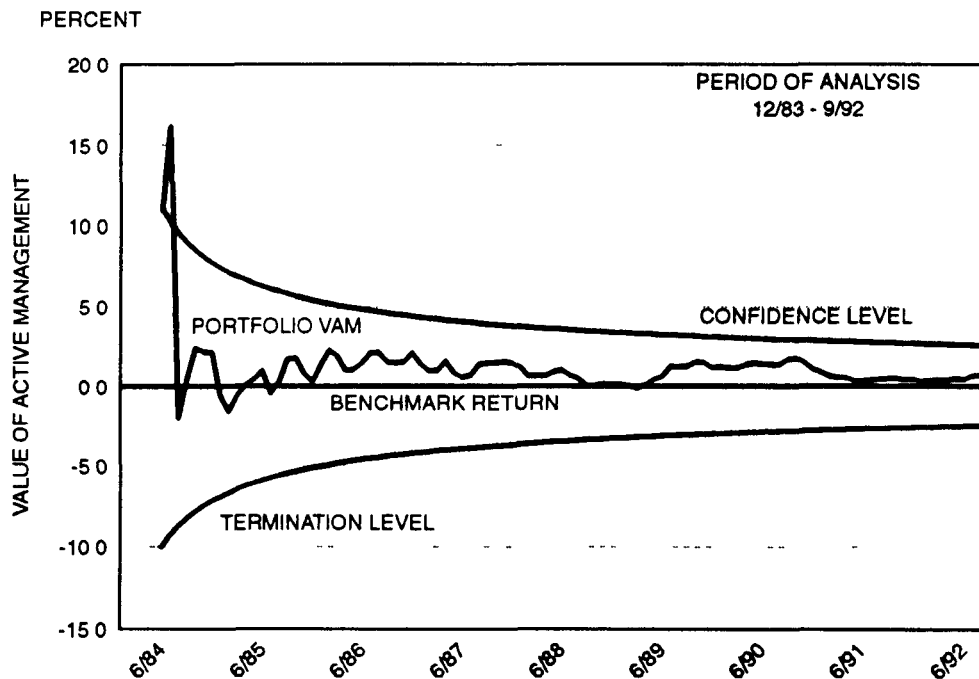
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 1/1/84
Actual Return	4.7%	10.4%	6.3%	11.3%
Benchmark	2.5	8.1	6.2	10.5

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT

WADDELL & REED



ALLIANCE CAPITAL MANAGEMENT
Investment Commentary
9/30/92

As of 9/30/92, Alliance's portfolio represented 11.3% of the total stock portfolio and 26.4% of the active stock portfolio. For the most recent quarter and year, Alliance Capital outperformed its benchmark by 0.8% and 7.0% respectively. For the latest quarter and year, Alliance Capital generated positive value added through stock selection and trading/other and negative value added through sector allocation. The breakdown of Alliance Capital's value added for the latest quarter and year are shown below:

	Qtr.	Year
Stock Selection	1.2%	6.9%
Sector Allocation	-0.7	-0.2
Trading/Other	0.3	0.3

SECTOR ALLOCATION

The following table highlights Alliance's largest sector deviations relative to their benchmark of 9/30/92:

	9/91	Actual portfolio		Benchmark
		3/92	9/92	
Consumer				
Non-Durable	61.1%	65.0%	65.4%	58.7%
Financial	15.9	18.3	18.6	11.8
Transport	5.6	3.6	1.8	4.0
Technology	6.2	3.2	3.1	7.5
Basic Material	3.1	3.3	3.3	8.7

For the quarter and latest year, Alliance Capital's sector allocation negative value added was primarily due to the basic material sector. For the year, the negative value added was partially offset by the financial and transportation sectors.

STOCK SELECTION

For the latest quarter, the basic materials and the technology sectors were the major contributors to the positive stock selection performance. For the year, the consumer non-durable, basic material, and technology sectors were the largest contributors to the positive value added.

FORSTMANN LEFF ASSOCIATES
Investment Commentary
9/30/92

As of 9/30/92, Forstmann-Leff's portfolio represented 5.6% of the total stock portfolio and 13.1% of the active stock portfolio. For the most recent quarter and year, Forstmann-Leff underperformed its benchmark by 2.4% and 9.7% respectively. For the quarter, Forstmann-Leff generated negative value added through sector allocation and trading/other and a small positive value for stock selection. For the year, Forstmann Leff generated negative value added in all three areas. The breakdown of Forstmann-Leff's value added for the latest quarter and year are shown below:

	Qtr.	Year
Stock Selection	0.3%	-1.3%
Sector Allocation	-0.4	-6.2
Trading/Other	-2.3	-2.2

SECTOR ALLOCATION

The following table highlights Forstmann Leff's largest sector deviations relative to their benchmark of 9/30/92.

	9/91	3/92	Actual portfolio 9/92	Benchmark
Consumer				
Non-Durable	54.4%	52.2%	38.0%	40.3%
Energy	12.5	6.1	11.2	7.0
Financial	21.3	22.2	21.8	17.5
Utilities	3.4	6.7	9.3	4.0
Capital Goods	1.8	1.7	2.6	5.2
Technology	1.8	2.4	4.7	8.0
Basic Material	3.1	3.7	4.1	9.7

For the quarter, the primary cause for Forstmann-Leff's sector allocation underperformance was in the technology sector. For the year, the energy, consumer non-durable, and technology sectors generated the majority of the negative value added. In addition, their positive bet on small cap growth companies relative to the benchmark produced negative value added for the year.

STOCK SELECTION

For the latest quarter, the basic materials and technology sectors generated the majority of the positive value added. This was mostly offset by poor stock selection in the consumer durable and capital good sectors. For the year, consumer non-durables contributed the majority of the negative value added. The poor performance in consumer non-durables was partially offset by good stock selection in the technology sector.

FRANKLIN PORTFOLIO ASSOCIATES TRUST
Investment Commentary
9/30/92

As of 9/30/92, Franklin's portfolio represented 3.3% of the total stock portfolio and 7.7% of the active stock portfolio. For the most recent quarter, Franklin underperformed by 0.1%. For the year, Franklin underperformed by 0.5%. For the latest quarter and year, Franklin generated a positive value added in stock selection and a negative value added for sector allocation and trading/other. The breakdown of Franklin's value added for the latest quarter and year are shown below:

	Qtr	Year
Stock Selection	1.2%	2.6%
Sector Allocation	-0.9	-2.3
Trading/Other	-0.4	-0.8

SECTOR ALLOCATION

The following table highlights Franklin's largest sector deviations relative to their benchmark of 9/30/92

	Actual portfolio			
	9/91	3/92	9/92	Benchmark
Consumer				
Non-Durable	35.2%	38.5%	27.3%	33.4%
Financial	19.3	19.8	19.5	16.9
Utilities	16.7	17.9	13.2	11.7
Transport	0.3	0.3	3.0	2.4
Consumer Durable	2.4	4.7	9.0	4.9
Basic Material	8.0	3.8	6.7	11.3

For the quarter, none of the sectors showed a materially large positive or negative value added. However, overweighting low P/E stocks added value for the quarter. For the year, the basic material sector was the largest contributor to their negative value added performance. In addition, overweighting low P/E stocks contributed to their negative performance.

STOCK SELECTION

For the quarter, the technology sector contributed the majority of the positive value added. For the year, the basic material and technology sectors generated the positive value added. This was partially offset by poor stock selection in the financial sector.

GEOCAPITAL CORPORATION
Investment Commentary
9/30/92

As of 9/30/92, GeoCapital's portfolio represented 3.5% of the total stock portfolio and 8.3% of the active stock portfolio. For the most recent quarter, GeoCapital underperformed its benchmark by 4.0% and for the latest year by 1.7%. For the quarter and latest year, GeoCapital generated a negative value added through stock selection and trading/other, but a positive value added with their sector allocation. The breakdown of GeoCapital's value added for the latest quarter and year are shown below:

	Qtr.	Year
Stock Selection	-4.1%	-4.6%
Sector Allocation	1.3	4.2
Trading/Other	-1.2	-1.3

SECTOR ALLOCATION

The following table highlights GeoCapital's largest sector deviations relative to their benchmark of 9/30/92

	9/91	Actual portfolio		Benchmark
		3/92	9/92	
Consumer				
Non-Durable	66.5%	67.1%	62.2%	59.0%
Energy	0.0	0.0	0.0	3.2
Financial	19.0	22.8	27.4	6.3
Utilities	6.6	3.2	2.9	5.7
Capital Goods	0.1	0.3	0.2	5.3
Technology	4.2	3.4	3.5	13.4

For the quarter, the majority of GeoCapital's sector allocation positive value added was due to the energy sector. For the year, the financial and energy sectors generated the majority of the positive value added

STOCK SELECTION

For the latest quarter, the negative value added came from the technology, energy and consumer non-durable sectors. For the year, the same consumer non-durable, technology and energy sectors provided the majority of the negative value added.

IDS ADVISORY
Investment Commentary
9/30/92

As of 9/30/92, IDS's portfolio represented 4.4% of the total stock portfolio and 10.3% of the active stock portfolio. For the most recent quarter and year, IDS underperformed its benchmark by 1.1% and 1.9% respectively. For the quarter, IDS generated negative value added through stock selection and trading/other. For the year, IDS generated a positive value added through sector allocation and negative value added through stock selection and trading/other. The breakdown of IDS's value added for the latest quarter and year are shown below.

	Qtr.	Year
Stock Selection	0.0%	-4.2%
Sector Allocation	-0.9	2.9
Trading/Other	-0.2	-0.6

SECTOR ALLOCATION

The following table highlights IDS's largest sector deviations relative to their benchmark of 9/30/92.

	Actual portfolio			Benchmark
	9/91	3/92	9/92	
Energy	3.5%	9.1%	7.8%	4.6%
Financial	16.3	16.0	13.1	14.0
Utilities	1.9	0.0	1.4	12.6
Consumer Durable	3.9	8.2	11.0	4.7
Basic Material	18.9	17.1	18.2	9.3
Consumer Non-Durable	35.9	27.8	28.4	39.2

For the quarter, the majority of IDS's sector allocation negative value added was due to the consumer durable and basic material sectors. For the year, the utility and financial sectors generated the positive value added. In addition, their bet on higher growth companies relative to their benchmark produce negative value added partially offsetting the strong positive results of their industry sector bets.

STOCK SELECTION

For the latest quarter, good stock selection in the consumer non-durable was offset by poor performance in the consumer durable and utility sectors. For the year, the utility and financial sectors generated the negative value added. This was partially offset by good stock selection in the technology sector.

LIEBER & COMPANY
Investment Commentary
9/30/92

PERFORMANCE RESULTS

As of 9/30/92, Lieber's portfolio represented 3.1% of the total stock portfolio and 7.3% of the active stock portfolio. For the most recent quarter and latest year Lieber underperformed its benchmark by 2.1% and 8.5% respectively. For the quarter and latest year Lieber generated negative value added through stock selection, sector allocation and trading/other. The breakdown of Lieber's value added for the latest quarter and year are shown below:

	Qtr.	Year
Stock Selection	-0.3%	-6.9%
Sector Allocation	-1.4	-0.2
Trading/Other	-0.4	-1.4

SECTOR ALLOCATION

The following table highlights Lieber's largest sector deviations relative to their benchmark of 9/30/92

	9/91	Actual portfolio		Benchmark
		3/92	9/92	
Consumer				
Non-Durable	40.6%	42.7%	39.9%	38.2%
Energy	3.2	1.5	0.2	3.5
Financial	19.6	22.2	28.6	21.8
Utilities	1.5	0.2	0.1	4.8
Technology	7.0	7.5	4.5	6.7

For the quarter the majority of Lieber's sector allocation negative value added was due to the energy sector. For the year, the technology sector performed poorly but was offset by good performance in the utility sector. In addition, their bet on higher growth companies relative to their benchmark produced negative value added

STOCK SELECTION

For the latest quarter the consumer non-durable, capital goods, technology, and financial sectors were the main contributors to the negative performance. This was partially offset by a strong performance in the energy sector. Most of the sectors for the year were negative with the capital goods, technology, utility, and financial sectors contributing the majority of the poor performance.

WADDELL & REED
Investment Commentary
6/30/92

As of 9/30/92, Waddell & Reed's portfolio represented 4.1% of the total stock portfolio and 9.8% of the active stock portfolio. For the most recent quarter and year, Waddell & Reed outperformed its benchmark by 2.2% and 2.1% respectively. For the latest quarter and year Waddell & Reed generated positive value added through stock selection and negative value added for sector allocation. Trading/other had no impact on the quarterly performance but was positive for the latest year. The breakdown of Waddell & Reed's value added for the latest quarter and year are shown below.

	Qtr.	Year
Stock Selection	4.1%	4.0%
Sector Allocation	-1.9	-2.3
Trading/Other	0.0	0.4

SECTOR ALLOCATION

The following table highlights Waddell & Reed's largest sector deviations relative to their benchmark of 9/30/92.

	9/91	Actual portfolio		Benchmark
		3/91	9/92	
Consumer				
Non-Durable	33.2%	37.3%	33.7%	42.5%
Energy	9.8	7.1	14.2	7.7
Financial	13.0	13.1	16.1	3.0
Consumer Durable	4.2	9.5	10.9	7.1
Capital Goods	9.0	3.6	4.5	8.8
Technology	9.7	7.7	3.8	10.7

For the quarter, the majority of Waddell & Reed's sector allocation negative value added was due to the technology sector. For the year, the financial and capital goods sectors provided the majority of the negative value added. Also for the year, their bet on higher growth companies relative to their benchmark generated negative value added.

STOCK SELECTION

For the latest quarter, most sectors produced positive results with technology providing the largest contribution. For the year, the majority of the positive value added came from the consumer non-durable, basic material, capital goods, and transportation sectors.

**STATE BOARD
OF INVESTMENT**

**Bond
Manager
Evaluation
Reports**

Third Quarter, 1992

BOND MANAGERS

Third Quarter 1992

Fixed income manager returns are evaluated against the performance of the Salomon Brothers Broad Investment Grade Index (BIG). The Salomon BIG represents most investment grade bonds (BBB or better). The bond managers initially had customized indices. However, since all the managers add value to their portfolio by using the entire bond market, their benchmarks were changed to the Salomon BIG on 10/1/91.

Staff Recommendations:

Staff recommends the following actions concerning manager status:

- No action required.

Manager performance relative to the Salomon BIG is evaluated on a quarterly basis by the Stock and Bond Manager Committee of the Investment Advisory Council.

Current Managers	Total Market Value 9/30/92 (Millions)	Quarter Ending 9/30/92		Year Ending 9/30/92		Annualized Five Years Ending 9/30/92		Annualized Since Inception		% of Bond Segment 9/30/92 Basic Funds
		Actual	Bmrk	Actual	Bmrk	Actual	Bmrk	Actual	Bmrk	
IAI	\$184	5.9%	4.3%	13.9%	12.7%	12.2%	12.1%	13.7%	13.5%	7.0%
Ark Asset	132	4.2	4.3	11.9	12.7	11.4	11.5	12.5	12.6	5.1
Miller Anderson	289	4.1	4.3	13.6	12.7	12.1	12.2	13.4	13.5	11.1
Western Asset	536	4.0	4.3	13.1	12.7	13.2	12.4	14.4	13.4	20.5
Fidelity*	760	4.5	4.3	12.8	12.7	N.A.	N.A.	11.8	11.6	29.1
Lincoln*	712	4.5	4.3	12.9	12.7	N.A.	N.A.	11.6	11.6	27.2
Current Aggregate **		4.4	4.3	13.0	12.7	12.3	12.1	13.5	13.2	100.0
Historical Aggregate***				13.0	12.7	12.1	12.0	13.1	13.2	
Salomon Broad Investment Grade Index		4.3		12.7		12.2		13.5		

* Semi-passive manager

** Includes performance of current managers only.

*** Includes performance of terminated managers.

INVESTMENT ADVISERS

PORTFOLIO MANAGER: Larry Hill

ASSETS UNDER MANAGEMENT: \$184,392,780

INVESTMENT PHILOSOPHY

Investment Advisers is a traditional top down bond manager. The firm's approach is oriented toward correct identification of the economy's position in the credit cycle. This analysis leads the firm to its interest rate forecast and maturity decisions, from which the firm derives most of its value-added. Investment Advisers is an active asset allocator, willing to make rapid, significant moves between cash and long maturity investments over the course of an interest rate cycle. Quality, sector and issue selection are secondary decisions. Quality and sector choices are made through yield spread analyses consistent with the interest rate forecasts. Individual security selection receives very limited emphasis and focuses largely on specific bond characteristics such as call provisions.

QUALITATIVE EVALUATION
(Reported By Exception)

The current evaluation notes the following:

- The manager's duration decisions have not added significant value.

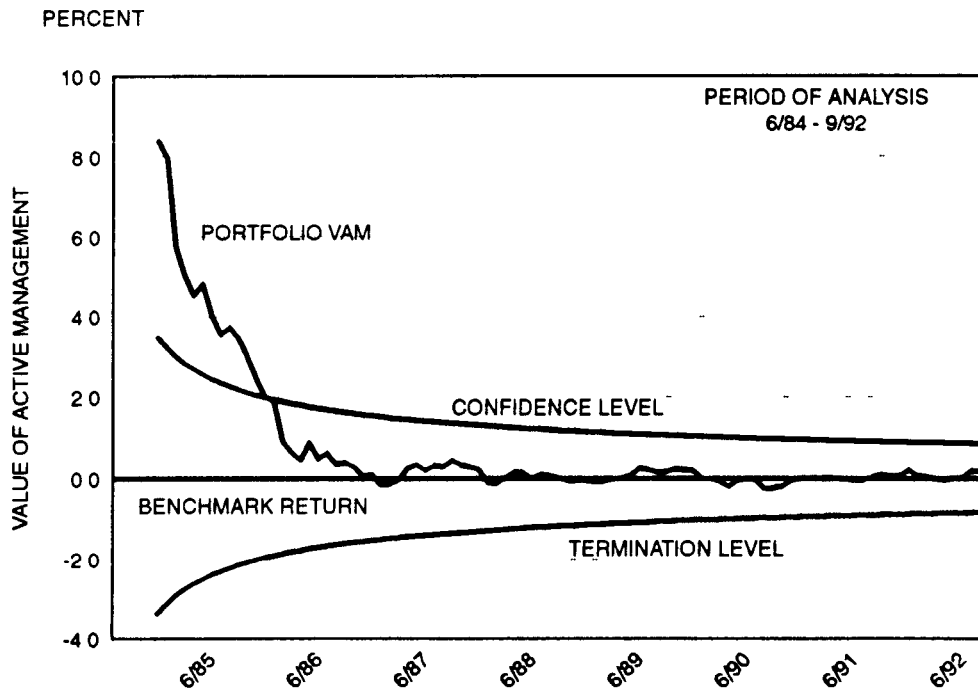
QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return	5.9%	13.9%	12.2%	13.7%
Benchmark	4.3	12.7	12.1	13.5

STAFF RECOMMENDATIONS

No action required.

VALUE OF ACTIVE MANAGEMENT REPORT
INVESTMENT ADVISERS



ARK ASSET MANAGEMENT

PORTFOLIO MANAGER: Kevin Hurley

ASSETS UNDER MANAGEMENT: \$132,134,023

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION
(Reported By Exception)

The current evaluation notes the following:

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

QUANTITATIVE EVALUATION

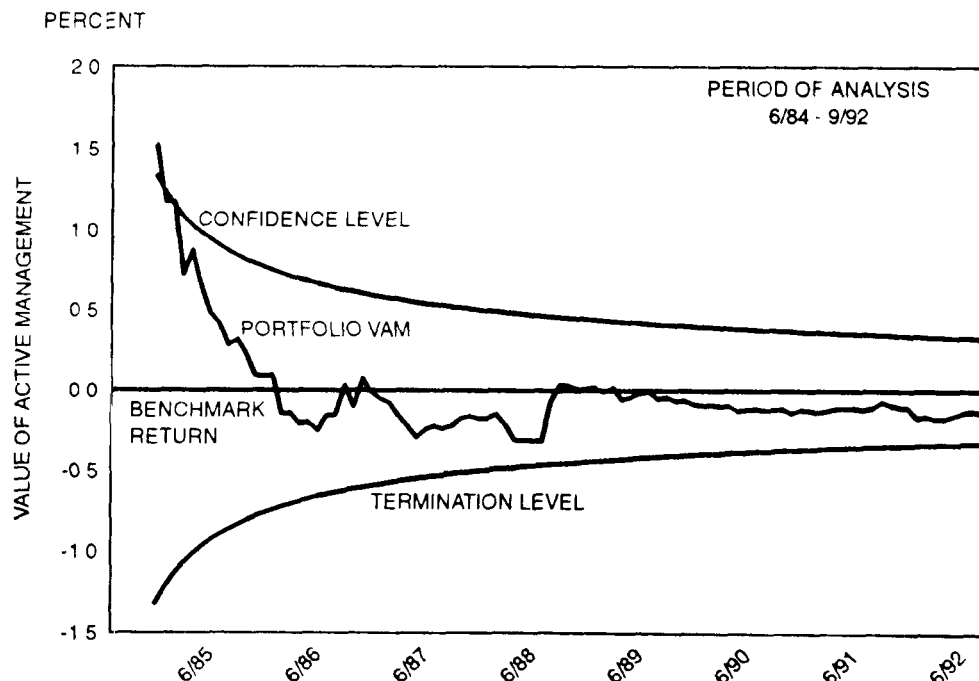
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return	4.2%	11.9%	11.4%	12.5%
Benchmark	4.3	12.7	11.5	12.6

STAFF RECOMMENDATIONS

Latest five year period is below benchmark. An in-depth review was conducted for the September 1992 Board meeting.

VALUE OF ACTIVE MANAGEMENT REPORT

ARK ASSET MANAGEMENT



MILLER ANDERSON

PORTFOLIO MANAGER: Tom Bennet

ASSETS UNDER MANAGEMENT: \$289,134,370

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION
(Reported By Exception)

The firm's strengths continue to be:

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

The current evaluation notes the following:

- Miller has underperformed for the last five years primarily due to downgrades in major corporate holdings.

QUANTITATIVE EVALUATION

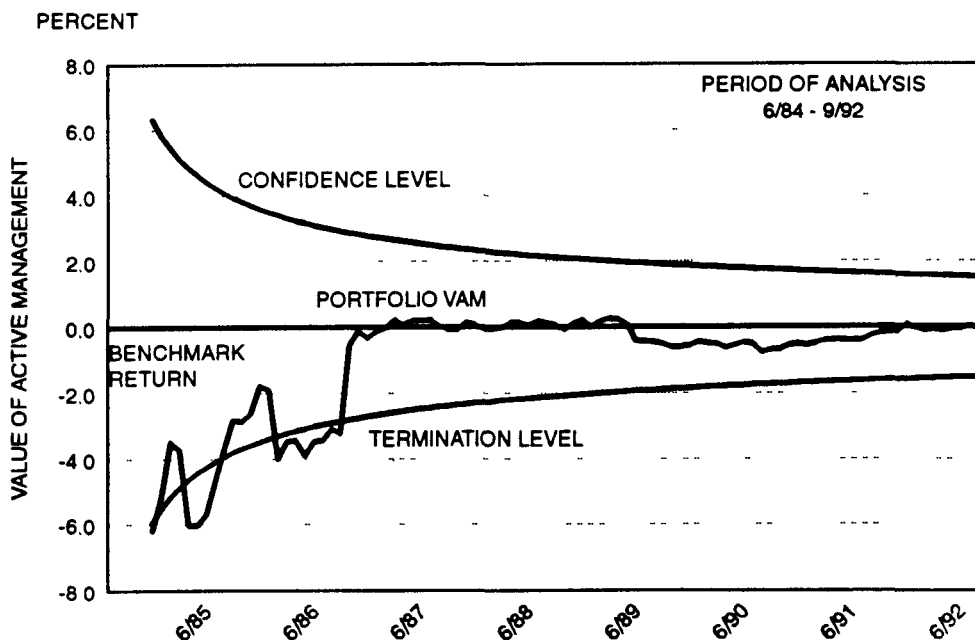
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return	4.1%	13.6%	12.1%	13.4%
Benchmark	4.3	12.7	12.2	13.5

STAFF RECOMMENDATIONS

Latest five year period is below benchmark. An in-depth review was conducted for June 1991 Board meeting.

VALUE OF ACTIVE MANAGEMENT REPORT

MILLER ANDERSON



WESTERN ASSET MANAGEMENT

PORTFOLIO MANAGER: Kent Engel

ASSETS UNDER MANAGEMENT: \$536,367,257

INVESTMENT PHILOSOPHY

Western recognizes the importance of interest rates changes on fixed income portfolio returns. However, the firm believes that successful interest rate forecasting, particularly short-run forecasting, is extremely difficult to accomplish consistently. Thus, the firm attempts to keep portfolio maturity in a narrow band near that of the market, making only relatively small, gradual shifts over an interest rate cycle. It prefers to add value primarily through appropriate sector decisions. Based on its economic analysis, Western will significantly overweight particular sectors, shifting these weights as economic expectations warrant. Issue selection, like maturity decisions, are of secondary importance to the firm.

QUALITATIVE EVALUATION
(Reported By Exception)

The firm's exceptional strengths continue to be:

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

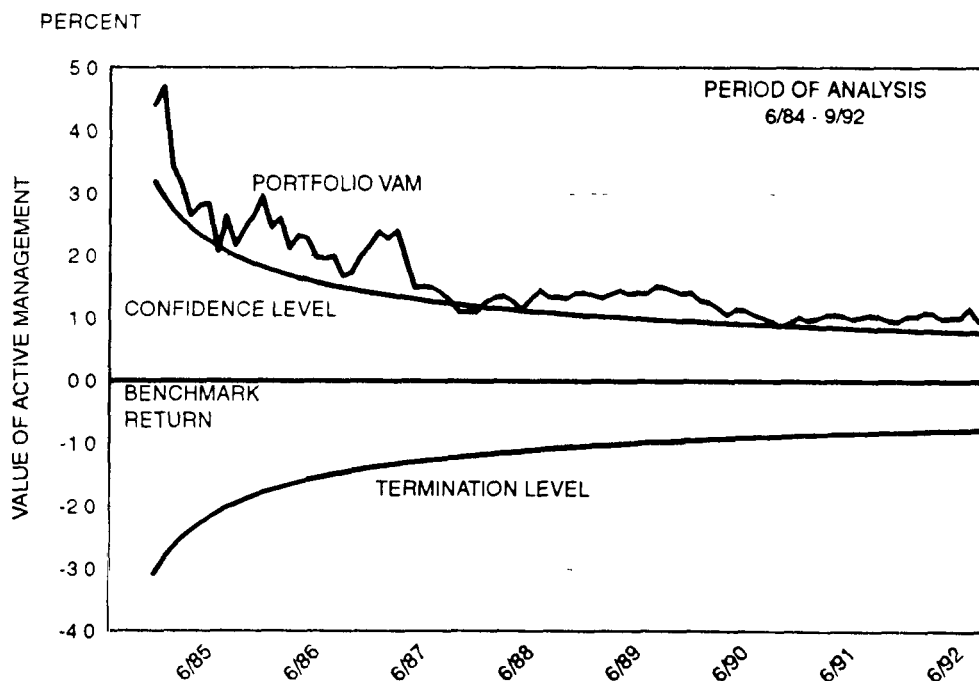
QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/84
Actual Return	4.0%	13.1%	13.2%	14.4%
Benchmark	4.3	12.7	12.4	13.4

STAFF RECOMMENDATIONS

No action required

VALUE OF ACTIVE MANAGEMENT REPORT
WESTERN ASSET MANAGEMENT



FIDELITY MANAGEMENT TRUST

PORTFOLIO MANAGER: Sharmin Mossavar-Rahmani

ASSETS UNDER MANAGEMENT: \$759,629,012

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION
(Reported By Exception)

The firm's strengths are:

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

QUANTITATIVE EVALUATION

	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/88
Actual Return	4.5%	12.8%	N.A.	11.8%
Benchmark	4.3	12.7	N.A.	11.6

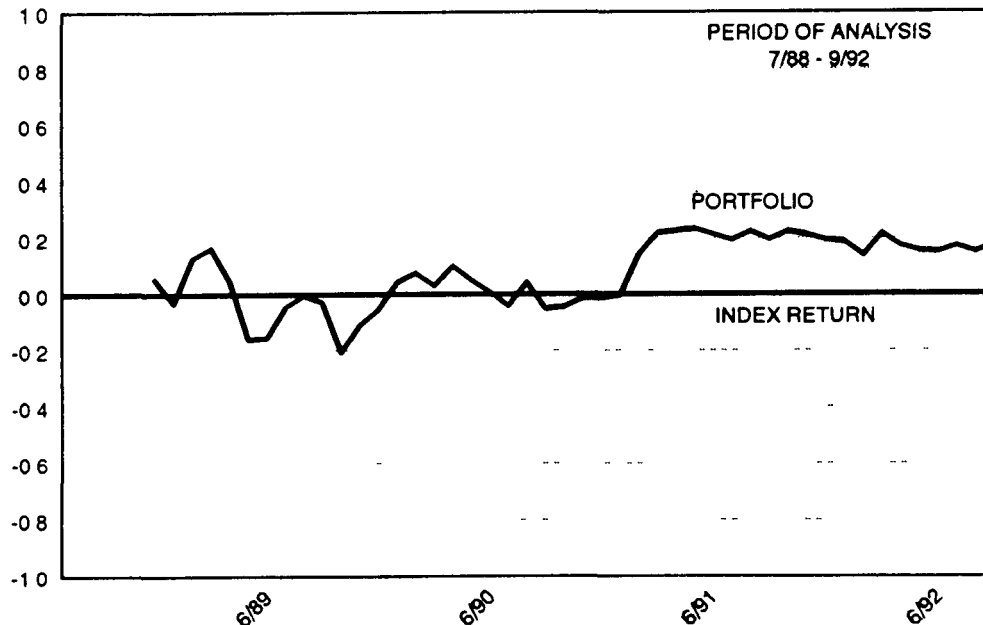
STAFF RECOMMENDATIONS

No action required.

CUMULATIVE TRACKING REPORT

FIDELITY

PERCENT



LINCOLN CAPITAL MANAGEMENT

PORTFOLIO MANAGER: Brian Johnson

ASSETS UNDER MANAGEMENT: \$711,645,021

INVESTMENT PHILOSOPHY

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

QUALITATIVE EVALUATION
(Reported By Exception)

The firm's strengths are:

- Highly successful and experienced professionals
- Extensive quantitative capabilities.

QUANTITATIVE EVALUATION

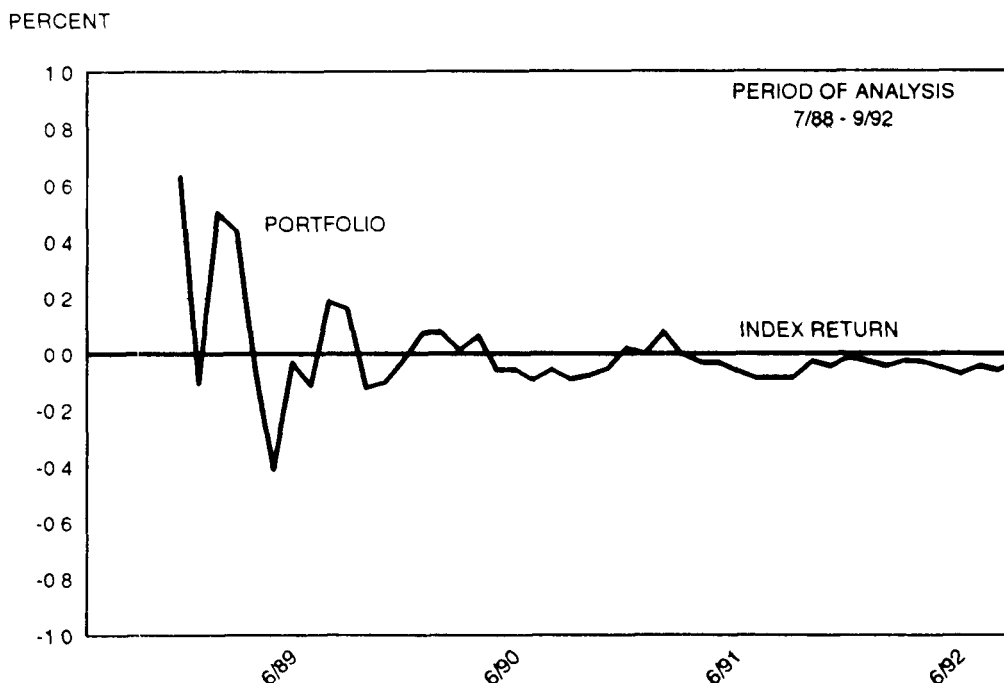
	Latest Qtr.	Latest 1 Yr.	Latest 5 Yrs.	Since 7/1/88
Actual Return	4.5%	12.9%	N.A.	11.6%
Benchmark	4.3	12.7	N.A.	11.6

STAFF RECOMMENDATIONS

An in-depth review was conducted for the December 1992 Board meeting.

CUMULATIVE TRACKING REPORT

LINCOLN



INVESTMENT ADVISERS, INC.

Investment Commentary

9/30/92

As of 9/30/92, Investment Adviser's portfolio represented 7% of the SBI's fixed income portfolio. Over the past year, IAI outperformed the benchmark by 126 basis points, and this quarter they outperformed by 153 basis points. This was primarily due to maintaining a duration longer than the benchmark while interest rates decreased.

IAI believes that the economic data still point to a sluggish recovery. Despite the Federal Reserve's easing of monetary policy, consumers and businesses are paying off debt rather than borrowing to spend. This, in combination with corporate downsizing and slow job growth has created excess supply of labor, and has contributed to positive inflation fundamentals. They believe inflation is in a secular decline which will not be interrupted this year. With this, long term bond yields are expected to decline further.

Despite the recent widening of corporate spreads, IAI continues to underweight this sector. Over the past year, IAI has also underweighted the mortgage sector in favor of Treasury notes of comparable maturity.

DURATION AND YIELD CURVE POSITIONING

As of 9/30/92, the duration of the portfolio was 6.9 years versus the benchmark duration 4.4 years. During the quarter, long term interest rates declined which helped IAI's performance since they had maintained a duration longer than the benchmark.

Detracting from performance was IAI's yield curve strategy. The portfolio was positioned for a flatter yield curve, with long term rates expected to decline relative to intermediate and short term rates. The yield curve actually became more steep during the quarter which hurt performance.

SECTOR ALLOCATION

Below is a breakdown of IAI's sector allocation versus the benchmark which is the Salomon Broad Investment Grade Index.

	September 30, 1991		September 30, 1992	
	IAI	Benchmark	IAI	Benchmark
Treasury/Agency	76%	53%	79%	53%
Mortgages	18	29	15	29
Corporates	3	18	4	18
Other	0	0	0	0
Cash	3	0	2	0

IAI remained overweighted in the Treasury/Agency sector, underweighted in the mortgage sector, and significantly underweighted in corporate securities relative to the benchmark. Overweighting the Treasury sector helped performance this quarter since governments outperformed both the corporate and mortgage sector.

ARK ASSET MANAGEMENT COMPANY, INC.
Investment Commentary
9/30/92

As of 9/30/92, Ark's portfolio represented 5% of the SBI's fixed income portfolio. Over the past year, they underperformed the benchmark by 80 basis points, and this quarter underperformed by 10 basis points. This quarter's underperformance was primarily due to positioning the portfolio for a flatter yield curve. Ark had a duration slightly longer than the benchmark for most of the quarter, which helped the portfolio.

Ark still believes that although the economy is poised for continued slow growth, interest rates will not decline until after the election. Eventually, however, they feel that the lackluster recovery will eventually lead to lower long term interest rates. When opportunities arise, they will begin to move portfolio duration to roughly 20% longer than the benchmark. They have matched the benchmark weighting in the mortgage sector and overweighted asset-backed securities for their yield advantage, and concentrated their ownership of corporate debt in the intermediate maturity range.

DURATION AND YIELD CURVE POSITIONING

During the quarter, Ark decreased portfolio duration from 5.5 years to 4.4 years, in essence, selling into the July and August market rally. Portfolio duration is now roughly equal to the benchmark duration. Political uncertainty is expected to keep long rates from declining, although the slow economy is expected to keep them from increasing a great deal. Thus the portfolio does not currently have a duration bet. Ark's barbelled portfolio detracted from performance this quarter as the yield curve became more steep.

SECTOR ALLOCATION

Below is a breakdown of Ark's sector allocation versus the benchmark which is the Salomon Broad Investment Grade Index.

	September 30, 1991		September 30, 1992	
	Ark	Benchmark	Ark	Benchmark
Treasury/Agency	58%	53%	34%	53%
Mortgages	21	29	31	29
Corporates	15	18	19	18
Other	4	0	13	0
Cash	2	0	3	0

Ark continued to hold two primary sector bets this quarter. They underweighted the Treasury/Agency sector, and overweighted asset backed securities relative to the benchmark. No significant active bets were made in the mortgage or corporate sector.

MILLER, ANDERSON & SHERRERD
Investment Commentary
9/30/92

As of 9/30/92, Miller, Anderson & Sherrerd's portfolio represented 11% of the SBI's fixed income portfolio. Over the past year, Miller has outperformed the benchmark by 89 basis points, and this quarter underperformed the benchmark by 18 basis points. Although Miller maintained a significantly longer duration than the benchmark, yield curve positioning and overweighting of the mortgage sector detracted from performance this quarter.

Miller believes that the slow growth, low inflation environment will continue. This is expected to eventually lead to lower long term interest rates. Thus, Miller is maintaining a duration significantly longer than the benchmark. Additionally, they believe the long end of the yield curve will decline more than the intermediate or short portions, and are therefore positioning for a flattening of the curve. They have added to their large holdings in the mortgage sector as they believe many of these securities are currently undervalued. They are matching the benchmark in their exposure to corporates, but have moved some holdings from the 7 year to the 10 year maturity range to increase yields. They perceive high quality corporates to be fully valued, and are holding medium quality issues.

DURATION AND YIELD CURVE POSITIONING

Miller's duration as of 9/30/92 was 7.0 years, versus the benchmark of 4.4 years. Despite portfolio duration being substantially longer than the benchmark, Miller's yield curve positioning negated these gains. Miller was positioned for a flatter yield curve, but long rates did not decline as much as shorter rates this quarter.

SECTOR ALLOCATION

Below is a breakdown of Miller's sector allocation versus the benchmark which is Salomon Broad Investment Grade Index.

	September 30, 1991		September 30, 1992	
	Miller	Benchmark	Miller	Benchmark
Treasury/Agency	44%	53%	21%	53%
Mortgages	36	29	58	29
Corporates	16	18	19	18
Other	0	0	0	0
Cash	4	0	2	0

Miller underweighted the Treasury/Agency sector, and overweighted the mortgage sector this quarter relative to the benchmark. Since the Treasury sector was the best performing this quarter, underweighting this sector hurt performance. Lower interest rates caused prepayments to increase and mortgage spreads to widen significantly. Therefore, the overweighting of mortgages was also a large detriment to performance.

WESTERN ASSET MANAGEMENT
Investment Commentary
9/30/92

As of 9/30/92, Western Asset Management's portfolio represented 21% of the SBI's fixed income portfolio. Over the past year, Western outperformed the benchmark by 45 basis points. For the quarter, however, Western underperformed the market by 34 basis points. The primary reasons for outperformance over the past year were a substantial exposure to corporate securities and maintaining a duration longer than the benchmark in a declining interest rate environment. This quarter, the barbell maturity exposure in anticipation of a flattening yield curve and an underweighting of Treasury securities detracted from performance.

Western believes the economy is likely to grow at only a modest rate for the balance of the year and that inflation is under control. Therefore, they are maintaining a duration longer than the benchmark. They continue to hold a barbelled maturity structure, as they expect short rates to stabilize and long rates to decline further. Although corporate securities are still overweighted, they have decreased their exposure slightly in favor of government securities. They remain underweighted in mortgages because they believe declining interest rates and accelerated mortgage prepayments will allow the corporate and government sector to outperform the mortgage-backed sector.

DURATION AND YIELD CURVE POSITIONING

Interest rates declined during the quarter as the market perceived the economic recovery was faltering. Thus, maintaining a portfolio duration longer than the benchmark added to Western's performance. On 9/30/92, Western's portfolio duration was 5.4 years versus the benchmark of 4.4 years. Maintaining a barbelled maturity structure was the principal drag on performance since the yield curve became more steep.

SECTOR ALLOCATION

Western remained overweighted in the corporate sector this quarter. This quarter governments outperformed corporates, but over the past year, corporates have been the best performing sector. Below is a breakdown of Western's allocation to each sector versus the benchmark which is the Salomon Broad Investment Grade Index.

	September 30, 1991		September 30, 1992	
	Western	Benchmark	Western	Benchmark
Treasury/Agency	20%	53%	32%	53%
Mortgages	22	29	19	29
Corporates	40	18	35	18
Other	11	0	5	0
Cash	7	0	9	0

This quarter, Western underweighted Treasury and mortgage securities and overweighted corporate securities. This corporate exposure, especially in finance and industrial issues, contributed positively to performance. Underweighting the mortgage sector proved to be the correct decision as this sector performed the worst this quarter.

FIDELITY MANAGEMENT TRUST
Investment Commentary
9/30/92

Fidelity's portfolio represents 29 % of the SBI's portfolio. For the year, Fidelity's portfolio returned 12.80 % versus 12.67 % for the Salomon BIG. Fidelity also outperformed the BIG for the quarter, 4.47 % versus 4.32 %. Fidelity outperformed the market for the past year primarily because they overweighted corporate securities and underweighted Treasury securities. Additionally, value was added by emphasizing bank and asset-backed securities within the corporate sector and issue selection.

DURATION

Since Fidelity is an index manager, they do not add value through duration decisions. The portfolio is consistently within 0.2 year of the Salomon BIG duration.

SECTOR ALLOCATION

The following table compares Fidelity's June sector allocations for 1991 and 1992 to the Salomon BIG.

	September 91		September 92	
	Fidelity %	SAL BIG %	Fidelity %	SAL BIG %
Treasury/Govt Spon.	42	52	44	53
Mortgages	30	29	27	29
Corporates	28	19	28	18
Cash	0	0	1	0

The above shows that for the quarter and year, Fidelity overweighted corporate securities. Fidelity was overweighted in mortgages the first three quarters and underweighted the last quarter. These weightings helped performance since corporates performed well for both the quarter and the year while mortgages performed well except for the last quarter. Quarterly mortgage and corporate returns were 2.95% and 4.59% while the government sector returned 4.96%. Yearly returns for mortgages and corporates were 11.25% and 14.29% while governments returned 12.91%. Mortgages outperformed government securities for the first nine months of the year.

Within the sectors, the majority of the government assets were invested in long duration securities while the corporate securities had a shorter duration. For the quarter, Fidelity added value within the corporate sector through strong issuer selection. In the mortgage sector, Fidelity's overweighting in PAC's hurt performance.

LINCOLN ASSET MANAGEMENT
Investment Commentary
9/30/92

Lincoln's portfolio represents 27.2 % of the SBI's portfolio. For the year, Lincoln's portfolio returned 12.85 % versus 12.67 % for the Salomon BIG. Lincoln also outperformed the BIG for the quarter, 4.49 % versus 4.32%. Lincoln added value primarily through security selection.

DURATION

Since Lincoln is an index manager, they do not add value through duration decisions. The portfolio is consistently within 0.1 year of the Salomon BIG duration.

SECTOR ALLOCATION

The following table compares September sector allocations to the Salomon BIG.

	September 91		September 92	
	Lincoln %	SAL BIG %	Lincoln %	SAL BIG %
Treasury/Govt Spon	55	52	51	53
Mortgages	23	29	26	29
Corporates	15	18	15	18
Other	3	0	2	0
Cash	4	0	6	0

The above shows that Lincoln's portfolio mirrored the market. Lincoln was slightly underweighted in both corporates and mortgages for the year and the quarter. This lowered returns since mortgage and corporate returns were higher than Treasury returns for most of the year. Quarterly mortgage and corporate returns were 2.95% and 4.59% while the government sector returned 4.96%. Yearly returns for mortgages and corporates were 11.25% and 14.29% while governments returned 12.91%.

Within the corporate sector, Lincoln underweighted utilities for the quarter and year because they thought option adjusted spreads were narrow. To offset the yield disadvantage of this underweighting, Government Trust Certificates were and continue to be overweighted versus other agency securities in the government sector. These certificates have had wider spreads than other agency securities. Lincoln continues to add value by overweighting asset-backed securities.

Lincoln maintained a neutral position in mortgages because the market was volatile. Lincoln believes this volatility will continue and will maintain a neutral position. Lincoln added value through mortgage deferred settlements during the quarter.

Tab G

COMMITTEE REPORT

DATE: December 1, 1992

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

FROM: **Alternative Investment Committee**

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

- Review of current strategy.
- Results of annual review sessions with existing managers.
- Possible actions with regards to First Reserve Partnership Agreements.
- Reconsideration of Commitment to Great Northern Capital Partners, L.P.

INFORMATION ITEMS:

1) Review of Current Strategy.

To increase overall portfolio diversification, 15% of the Basic Retirement Funds is allocated to alternative investments. Alternative investments include real estate, venture capital and resource investments where Minnesota State Board of Investment (SBI) participation is limited to commingled funds or other pooled vehicles. A chart summarizing the Board's current commitments is attached (see Attachment A).

The real estate investment strategy calls for the establishment and maintenance of a broadly diversified real estate portfolio comprised of investments that provide overall diversification by property type and location. The main component of this portfolio consists of investments in diversified open-end and closed-end commingled funds. The remaining portion of the portfolio can include investments in less diversified, more focused (specialty) commingled funds. Currently, the SBI has committed \$430 million to fifteen (15) commingled real estate funds.

The venture capital investment strategy is to establish and maintain a broadly diversified venture capital portfolio comprised of investments that provide diversification by industry type, stage of corporate development and location. To

date, the SBI has committed to twenty-two (22) commingled venture capital funds for a total commitment of \$570 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 \$141 million to eight (8) commingled oil and gas funds.

2) Results of Annual Review Sessions with Existing Managers.

During September and October, the Alternative Investment Committee and staff attended annual review sessions with three of the SBI's private equity managers (Matrix, DSV and Inman/Bowman), one of the SBI's real estate managers (LaSalle) and three of the SBI's resource managers (Apache, Morgan and Simmons). Overall, the meetings went well and produced no major surprises

Summaries of the review sessions are included as **Attachment B through H** of this Committee Report.

ACTION ITEMS:

1) Possible Actions Regarding First Reserve Partnership Agreements

First Reserve is involved in litigation which potentially could force them into Chapter 11 bankruptcy.

In July, a jury in Houston, Texas found that First Reserve's acquisition of the McMurry division of Baker Hughes on behalf of First Reserve Secured Energy Assets Fund interfered with Houston Monarch Inc.'s (HMI) attempt to acquire the same entity. The jury awarded HMI a sum in excess of \$150 million from First Reserve, McMurry Oil Tools and other named defendants. Final judgment has not yet been entered. Once judgment has been entered, additional post trial motions are likely to be filed. An appeal is likely.

HMI has also filed suit against certain First Reserve Partnerships in Louisiana. A trial date of April 26, 1993 has been set. It is likely motions will be filed before that date.

Given the uncertainty of the ultimate outcome of both the Texas and Louisiana litigation, limited partners of the First Reserve Funds need to be in a position to promptly act in order to provide for the best management of fund assets. Limited partners may not need to take any action or may need to take action to approve or

disapprove of items such as continuation of drawdowns and/or distributions, partnership dissolution and replacement or reconfiguration of the general partner.

RECOMMENDATION:

The Committee recommends that the SBI authorize the executive director, with assistance from the SBI's legal counsel and concurrence of the IAC Alternative Investment Committee, to approve or disapprove of partnership changes and to negotiate and execute any amendments that are necessary and appropriate to provide the best management of fund assets of affected partnerships managed by First Reserve.

2) Investment in Great Northern Capital Partners, L.P.

At the last SBI meeting, the IAC and the Alternative Investment Committee recommended an investment in Great Northern Capital Partners, a new venture capital partnership. However, at the September 1992 SBI meeting, an investment in Great Northern was not approved by the SBI. Auditor Dayton has requested that the SBI reconsider the Great Northern investment at its December 1992 meeting.

Great Northern Capital Management is seeking investors in a new \$100 million private equity fund, Great Northern Capital Partners, L.P. This will be Great Northern's first limited partnership fund. However, as senior managers of IAI Capital Group, the merger and merchant banking arm of Investment Advisors, Inc., the partners of the General Partner have worked on a number of transactions that represent excellent investment opportunities of the type the Partnership intends to pursue. Strategically, the Fund will invest in middle market companies located primarily in the Midwest and Minnesota which are facing strategic, financial or ownership change and have international business potential.

More information on the Great Northern Fund is included as **Attachment I**.

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 Great Northern Capital Partners, L.P.

ATTACHMENT A

SUMMARY OF ALTERNATIVE INVESTMENTS AS OF 9/30/92

	<u>MARKET VALUE</u>	<u>UNFUNDED COMMITMENT</u>	<u>TOTALS</u>
REAL ESTATE \$ % OF BASIC RET FUND	\$368,938,989 4.20%	\$62,134,776 0.71%	\$431,073,765 4.91%
VENTURE CAPITAL \$ % OF BASIC RET FUND	\$377,645,947 4.30%	\$236,657,371 2.70%	\$614,303,318 7.00%
RESOURCE \$ % OF BASIC RET FUND	\$100,444,443 1.14%	\$16,848,361 0.19%	\$117,292,804 1.34%
TOTALS % OF BASIC RET FUND	\$847,029,379 9.65%	\$315,640,508 3.59%	\$1,162,669,887 13.24%
	15 %	ALLOCATION TARGET	\$1,317,156,045
		AMOUNT AVAILABLE FOR INVESTMENT	\$154,486,158

* Market Value of Basic Retirement Fund at 9/30/92: \$8,781,040,299

See next page for additional detail

The market value information for alternative investments in this Attachment has been revised based on updated information during October and November 1992.

ATTACHMENT A (con't)

ALTERNATIVE EQUITY INVESTMENTS

	INCEPT DATE	COMMIT	FUNDED COMMIT	MKT VALUE OF FUNDED COMMIT	CASH DISTRIBUTIONS	UNFUNDED COMMIT	IRR	MEASUREMENT PERIOD
REAL ESTATE								
AETNA	4/82	\$40,000,000	\$40,000,000	\$55,262,185	\$0	\$0	3.5%	10.4
EQUITABLE	10/81	\$40,000,000	\$40,000,000	\$69,362,893	\$0	\$0	5.7%	10.9
HEITMAN I	8/84	\$20,000,000	\$20,000,000	\$16,531,977	\$11,842,636	\$0	6.4%	8.1
HEITMAN II	11/85	\$30,000,000	\$30,000,000	\$31,189,433	\$10,624,053	\$0	6.2%	6.9
HEITMAN III	1/87	\$20,000,000	\$20,000,000	\$17,032,044	\$5,012,903	\$0	2.2%	5.7
HEITMAN V	7/91	\$20,000,000	\$10,000,000	\$10,138,671	\$123,956	\$10,000,000	4.4%	1.2
LASALLE	9/91	\$15,000,000	\$4,732,678	\$4,764,430	\$0	\$10,267,322	1.0%	1.0
PAINE WEBBER *	2/90	\$500,000	\$500,000	\$377,650	\$38,944	\$0	-6.8%	2.7
RREEF	5/84	\$75,000,000	\$75,000,000	\$64,755,365	\$20,362,836	\$0	2.1%	8.4
AEW III	9/85	\$20,000,000	\$20,000,000	\$19,769,584	\$0	\$0	-0.2%	7.1
AEW IV	9/86	\$15,000,000	\$15,000,000	\$4,741,813	\$829	\$0	-18.0%	6.0
AEW V	12/87	\$15,000,000	\$15,000,000	\$11,476,411	\$65,593	\$0	-5.7%	4.8
TCW III	8/85	\$40,000,000	\$40,000,000	\$29,167,821	\$10,900,071	\$0	0.0%	7.2
TCW IV	11/86	\$30,000,000	\$30,000,000	\$26,293,712	\$2,399,403	\$0	-0.9%	5.9
ZELL	7/91	\$50,000,000	\$8,132,546	\$8,075,000	\$0	\$41,867,454	-1.2%	1.3
TOTAL R.E. PORTFOLIO		\$430,500,000	\$368,365,224	\$368,938,989	\$61,371,223	\$62,134,776		
VENTURE CAPITAL								
ALLIED	9/85	\$5,000,000	\$5,000,000	\$3,941,532	\$2,263,456	\$0	5.0%	7.0
DSV	4/85	\$10,000,000	\$10,000,000	\$11,688,623	\$0	\$0	2.3%	7.5
FIRST CENTURY	12/84	\$10,000,000	\$9,000,000	\$7,603,031	\$3,757,398	\$1,000,000	7.0%	7.8
BRINSON	5/88	\$5,000,000	\$4,988,566	\$4,123,006	\$1,903,532	\$11,434	8.0%	4.4
BRINSON II	7/90	\$20,000,000	\$10,000,000	\$9,260,805	\$3,713,296	\$10,000,000	27.1%	2.2
GOLDER THOMA	10/87	\$14,000,000	\$8,405,000	\$12,402,462	\$1,160,678	\$5,595,000	16.6%	4.9
IAI VENTURES I *	3/91	\$500,038	\$500,038	\$447,652	\$124,474	\$0	10.1%	1.6
IAI VENTURES II	7/90	\$10,000,000	\$5,624,928	\$5,702,372	\$304	\$4,375,072	1.3%	2.2
INMAN/BOWMAN	6/85	\$7,500,000	\$7,500,000	\$5,719,169	\$0	\$0	-6.4%	7.3
IMR / JACOBS	7/92	\$30,000,000	\$450,000	\$450,000	\$0	\$29,550,000	0.0%	0.2
KKR I	3/84	\$25,000,000	\$25,000,000	\$41,500,000	\$58,318,345	\$0	30.6%	8.6
KKR II	12/85	\$18,365,339	\$18,365,339	\$20,530,000	\$23,314,630	\$0	18.8%	6.8
KKR III	10/87	\$146,634,660	\$140,217,377	\$184,260,000	\$20,521,756	\$6,417,283	11.7%	5.0
KKR IV	5/91	\$150,000,000	\$0	\$0	\$0	\$150,000,000	0.0%	1.4
MATRIX	8/85	\$10,000,000	\$10,000,000	\$5,849,359	\$10,363,240	\$0	10.9%	7.1
MATRIX II	5/90	\$10,000,000	\$4,250,000	\$4,159,237	\$1,052	\$5,750,000	-1.9%	2.4
NORWEST	1/84	\$10,000,000	\$10,000,000	\$6,185,897	\$4,646,430	\$0	1.3%	8.7
SUMMIT I	12/84	\$10,000,000	\$10,000,000	\$5,321,625	\$11,206,083	\$0	11.0%	7.8
SUMMIT II	5/88	\$30,000,000	\$25,500,000	\$27,941,044	\$8,956,531	\$4,500,000	20.5%	4.4
SUPERIOR	6/86	\$6,645,000	\$5,648,250	\$6,536,678	\$0	\$996,750	3.8%	6.3
T ROWE PRICE	11/87	\$11,451,187	\$11,451,187	\$4,745,332	\$8,778,888	\$0	36.0%	4.9
ZELL/CHILMARK	7/90	\$30,000,000	\$11,538,168	\$9,278,123	\$1,187,438	\$18,461,832	-11.3%	2.2
TOTAL V.C. PORTFOLIO		\$570,096,224	\$333,438,854	\$377,645,947	\$160,217,529	\$236,657,371		
RESOURCES								
AMGO I	9/81	\$15,000,000	\$15,000,000	\$4,791,846	\$3,614,536	\$0	-6.8%	11.0
AMGO II	2/83	\$7,000,000	\$7,000,000	\$5,921,195	\$2,325,453	\$0	2.3%	9.7
AMGO IV	7/88	\$12,300,000	\$12,300,000	\$14,899,166	\$1,508,552	\$0	9.5%	4.2
AMGO V	5/90	\$16,800,000	\$14,535,147	\$13,942,801	\$3,403,869	\$2,264,853	10.4%	2.4
APACHE III	12/86	\$30,000,000	\$30,000,000	\$10,287,851	\$31,582,150	\$0	10.9%	5.8
MORGAN O&G	8/88	\$15,000,000	\$11,400,000	\$13,226,584	\$0	\$3,600,000	4.7%	4.1
B P ROYALTY	2/89	\$25,000,000	\$25,000,000	\$31,875,000	\$11,766,107	\$0	20.1%	3.6
SIMMONS OFS	7/91	\$17,000,000	\$6,016,492	\$5,500,000	\$10,000	\$10,983,508	-32.2%	1.2
TOTAL RES PORTFOLIO		\$138,100,000	\$121,251,639	\$100,444,443	\$54,210,667	\$16,848,361		
TOTAL ALT INV PORTFOLIO		\$1,138,696,224	\$823,055,717	\$847,029,379	\$275,799,419	\$315,640,508		

* RECEIVED FROM POLICE & FIRE CONSOLIDATIONS

ATTACHMENT B

ANNUAL REVIEW SUMMARY MATRIX II AND III September 29, 1992

MANAGER REPRESENTATIVES: Mike Humphreys, Paul Ferri
Rick Fluegel

SBI ASSETS UNDER MANAGEMENT:

Matrix II	\$5,849,359
Matrix III	\$4,159,237
Total	\$10,008,596

BACKGROUND AND DESCRIPTION:

Matrix Partners II and III were formed in August 1985 and March 1990, respectively. Each fund has a term of ten years. The Funds' investment emphasis is on high-technology firms in the early and expansion stages of corporate development. However, for diversification, the Fund's portfolio includes a sizable component of non-technology firms. The portfolio may include several small leveraged buyout investments as well. The partners have offices in Boston, and Menlo Park, CA.

QUALITATIVE EVALUATION:

Matrix II is fully invested with 24 companies remaining in the portfolio. Currently, the portfolio has a cost of \$36.6 million and a market value of \$47.1 million.

During the past year, Matrix II has brought several of its investments to the initial public offering market. Over the past year, Matrix II has distributed in excess of \$3 million to the SBI. Since inception, Matrix II has returned more than its original commitment back to its limited partners. On Matrix II, the SBI has achieved a net internal rate of return to date of 10.9%.

Matrix III has investments in thirteen portfolio companies. To date, the partnership has drawn down 42.5% of the SBI's original commitment. The partnership has made four additional new investments in the past year, as well as making additional commitments to existing portfolio companies.

The Matrix III portfolio has a cost of \$17.7 million with a market value of \$26.5 million. The major focus of the portfolio is on high-technology (software, data communication, semi-conductor) start-up and early-stage firms.

Ultimately, the general partners are anticipating that the return to Matrix II and Matrix III Limited Partners will be 20% annually.

ATTACHMENT B (con't)

MATRIX QUANTITATIVE EVALUATION

	Matrix II	Matrix III
COMMITMENT:	\$10,000,000	\$10,000,000
FUNDED COMMITMENT:	\$10,000,000	\$4,250,000
MARKET VALUE OF FUNDED COMMITMENT:	\$5,849,359	\$4,159,237
CASH DISTRIBUTIONS:	\$10,363,240	\$1,052
INCEPTION DATE(S):	August 1985	May 1990
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	10.9%	-1.9%

**MATRIX II
DIVERSIFICATION PROFILE**

LOCATION		INVESTMENT STAGE		INDUSTRY	
West	62%	Start-up	29%	Computer/Electronics	40%
East	30%	Early	27%	Healthcare	21%
South	6%	Mid	5%	Consumer	5%
Midwest	<u>2%</u>	Late	27%	Communications	8%
	100%	Buyout	3%	Distribution	10%
		Public	<u>9%</u>	Other	<u>15%</u>
			100%		100%

**MATRIX III
DIVERSIFICATION PROFILE**

LOCATION		INVESTMENT STAGE		INDUSTRY	
West	49%	Start-up	50%	Software	46%
East	43%	Early	24%	Data Communciations	15%
South	<u>8%</u>	Late	<u>26%</u>	Consumer	18%
	100%		100%	Semiconductors	14%
				Healthcare	<u>7%</u>
					100%

ATTACHMENT C

ANNUAL REVIEW SUMMARY DATA SCIENCE VENTURES (DSV) IV September 29, 1992

MANAGER REPRESENTATIVES: Jim Bergman

SBI ASSETS UNDER MANAGEMENT: \$11,688,623

BACKGROUND AND DESCRIPTION:

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

QUALITATIVE EVALUATION:

DSV has invested approximately half of the \$60 million original commitment which is fully drawn down. During the past year, the investment pace has stepped up. The general partner expects to invest \$8 - \$10 million in each of the next several years. They anticipate that the fund will be fully invested and liquidated in the next five years of the partnership's life.

The fund continues to focus on biotechnology, environmental, and computer/information related businesses. While the fund has made some expansion stage investments, more than half of the portfolio is invested in start-up portfolio companies.

The fund has made 28 investments with 21 companies remaining in the portfolio, six having been sold and one company closed. The general partners have sat on the board of directors of 23 of the 28 portfolio company investments.

The general partner believes the fund's holdings are progressing favorably. They anticipate that ultimately the return to the limited partners will be approximately 12% per year.

One member of the general partner, Rob Hillas, has been devoting half of his time to a venture which may result in his departure from DSV.

ATTACHMENT C (con't)

DSV QUANTITATIVE EVALUATION

COMMITMENT:	\$10,000,000
FUNDED COMMITMENT	\$10,000,000
MARKET VALUE OF FUNDED COMMITMENT:	\$11,688,623
CASH DISTRIBUTIONS.	\$0
INCEPTION DATE(S):	April, 1985
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR) (annualized, since inception)	2.3%

DIVERSIFICATION PROFILE

LOCATION		INVESTMENT STAGE		INDUSTRY	
West	29%	Start-up	59%	Environmental	10%
East	68%	Expansion	35%	Software/Inform Svcs /	29%
Central	<u>3%</u>	Restart	<u>6%</u>	Computer Equip	
	100%		100%	Communications	6%
				Medical/Biotechnology	37%
				Other	<u>18%</u>
					100%

ATTACHMENT D

ANNUAL REVIEW SUMMARY INMAN AND BOWMAN October 8, 1992

MANAGER REPRESENTATIVES: Kirk Bowman, Bill Elmore

SBI ASSETS UNDER MANAGEMENT: \$5,719,169

BACKGROUND AND DESCRIPTION:

Inman and Bowman was formed in June 1985. Its investment focus is early-stage, high-technology firms. The fund emphasizes investments in California, where the general partner, Inman and Bowman Management, is based. The fund has considered investments in the Pacific Northwest, as well. The partnership has a ten year term.

QUALITATIVE EVALUATION:

Inman and Bowman now holds a position in 15 portfolio companies. The portfolio continues to have a strong emphasis on computer software, network computing, and healthcare and service industries.

The fund is now fully invested and the general partner anticipates no additional investments will be made for the partnership. Funds have been reserved for follow-on investments to existing portfolio companies.

To date, the SBI has experienced a net loss on investments (realized and unrealized) of \$0.8 million, in the partnership. Despite the current unfavorable position, the general partner anticipates that the ultimate return to the limited partners should be 1.5 to 2.5 times the original investment to the fund which translates to a 10% annualized internal rate of return.

Over 90% of the investments in the partnership were originally startups on early stage investments. Most of the investments have completed product development and are generating revenues. Several are profitable. The general partner is very optimistic about several of the portfolio companies which it believes have significant revenue potential.

ATTACHMENT D (con't)

INMAN/BOWMAN QUANTITATIVE EVALUATION

COMMITMENT:	\$7,500,000
FUNDED COMMITMENT	\$7,500,000
MARKET VALUE OF FUNDED COMMITMENT:	\$5,719,169
CASH DISTRIBUTIONS:	\$0
INCEPTION DATE(S):	June 1985
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR) (annualized, since inception)	-6.4%

DIVERSIFICATION PROFILE

LOCATION	INVESTMENT STAGE	INDUSTRY
West 100%	Early 92%	Computer/Electronic 57%
	Expansion 4%	Medical 32%
	Public <u>4%</u>	Other <u>6%</u>
	100%	100%

ATTACHMENT E

ANNUAL REVIEW SUMMARY

LASALLE

September 29, 1992

MANAGER REPRESENTATIVES: Chris Burke, Matthew Reed,
Marshall Peck

SBI ASSETS UNDER MANAGEMENT: \$4,764,340

BACKGROUND AND DESCRIPTION:

The LaSalle Income Parking Fund was established in September 1991. The General Partner is LaSalle Advisors which has been in the real estate investment management business since 1971 and exclusively for tax-exempt clients for the past eleven years. The firm is headquartered in Chicago and operates on a national basis. It provides investment management, development, finance, acquisition, disposition, property management and leasing services to major corporations and institutions. The general partner's strategy is to identify parking garage investment opportunities in selective markets throughout the U.S. The Fund's goal is to acquire parking facilities on an all-cash basis to maximize current return to the investors. In special situations, the Fund may develop new parking facilities.

QUALITATIVE EVALUATION:

To date, the LaSalle Income Parking Fund has made three parking facility investments. These investments have been made during the prior year and no performance history is yet available. Following are summarized descriptions of each investment.

The first investment is a premier parking location adjacent to Seattle's two largest office developments. Construction on the site commenced in August, 1992 and is scheduled to be completed in May, 1993. The project has an estimated cost of \$18 million. The manager believes that this location in Seattle has strong parking market fundamentals (i.e., automobiles are the preferred means of transport, there are positive supply/demand characteristics, and significant barriers to new garage construction)

The second site is a relatively new garage in downtown San Diego. The property was acquired for 58% of the garage's development costs. It is in a prime location with excellent access to major traffic arteries, and has a competitive price/cost advantage versus adjacent parking alternatives.

The third property is located in downtown Houston and is connected to the pedestrian tunnel system within close proximity of several major office properties. The garage was acquired for 55% of replacement cost. The general partner believes that the facility was an undermanaged operating situation due to a distressed seller and that the garage has excellent going-in economics with upside potential.

The general partner is investigating potential opportunities in other metropolitan areas and believes that there will be another 4-5 properties to acquire for the portfolio.

ATTACHMENT E (con't)

LASALLE QUANTITATIVE EVALUATION

COMMITMENT:	\$15,000,000
FUNDED COMMITMENT:	\$4,732,678
MARKET VALUE OF FUNDED COMMITMENT:	\$4,764,340
CASH DISTRIBUTIONS:	\$0
INCEPTION DATE(S):	September 1991
INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	1 0%

DIVERSIFICATION PROFILE

Sixth & Cherry (Seattle)	39.8%
Parking Palace (San Diego)	31.5
777 Clay Garage (Houston)	<u>28.7</u>
	100.0%

ATTACHMENT F

ANNUAL REVIEW SUMMARY APACHE CORPORATION September 30, 1992

MANAGER REPRESENTATIVES: Dan Hawk

SBI ASSETS UNDER MANAGEMENT: \$10,287,851

BACKGROUND AND DESCRIPTION:

The Apache 1986 Acquisition net profits Interest, began in December 1986. The SBI committed and funded \$30 million of the \$190 million private placement. The money was used to acquire interests in oil and gas properties from Occidental Petroleum. Investors receive up to ninety percent of the net profits from the properties. Apache Corporation maintains its headquarters to Houston, TX.

QUALITATIVE EVALUATION:

The 1986 Acquisition Net Profits Interest is proceeding as expected. Through July 31, 1992, the fully drawn \$30 million commitment has generated \$31.5 million in cash distributions. An additional \$22 million is expected to be paid out over the next 15 years.

Approximately 62% of revenues since inception have been derived from the sale of gas, the remainder from oil and condensate sales. In addition to production revenues, the net profits interests have benefited from the manager's efforts to obtain settlements of take-or-pay issues and from marginal property sales. These activities have netted the SBI approximately \$5.8 million since inception.

During the year, over 38% of the reserves produced were replaced through drilling. Also, Apache relocated its headquarters to Houston, Texas from Denver, Colorado.

ATTACHMENT F (con't)

APACHE QUANTITATIVE EVALUATION

COMMITMENT:	\$30,000,000
FUNDED COMMITMENT:	\$30,000,000
MARKET VALUE OF FUNDED COMMITMENT:	\$10,287,851
CASH DISTRIBUTIONS:	\$31,582,150
INCEPTION DATE(S):	December 86
INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	10.9%

DIVERSIFICATION PROFILE

Gas	62%
Oil	<u>38%</u>
	100%

ATTACHMENT G

ANNUAL REVIEW SUMMARY J.P. MORGAN, PETROLEUM FUND II September 30, 1992

MANAGER REPRESENTATIVES: Bill Walker

SBI ASSETS UNDER MANAGEMENT: \$13,226,584

BACKGROUND AND DESCRIPTION:

Petroleum Fund II is managed by the Morgan Petroleum Group, a division of Morgan Guaranty Trust Company and headquartered in Houston, Texas. Three professional staff members manage the investment activities of the petroleum group.

The Fund's strategy is to have a diversified portfolio with investments ranging in size from \$5 million to \$20 million. The fund will invest in producing properties, development and exploration of gas gathering systems and natural gas liquid plants, and royalty or mineral interests. Most investments will be structured as overriding royalty interests.

QUALITATIVE EVALUATION:

Since inception, the Morgan Petroleum Fund II has provided the SBI with a 4.7% annualized internal rate of return. The Fund's net return for the year was 2.2%.

Price projection's for oil and gas were reduced from the prior year. Although price projections were reduced drastically, the Fund's reserves were revised upward on two of its large gas properties. The net increase in return attributable to these reserve revisions were approximately 21%. With this reserve increase, if the properties had been valued using last year's price projections, the Fund's return would have been 29% for the year.

Going forward, the manager expects fund investors to ultimately earn 10% per year over the life of the investment.

ATTACHMENT G (con't)

J.P. MORGAN QUANTITATIVE EVALUATION

COMMITMENT.	\$15,000,000
FUNDED COMMITMENT	\$11,400,000
MARKET VALUE OF FUNDED COMMITMENT:	\$13,226,584
CASH DISTRIBUTIONS	\$0
INCEPTION DATE(S)	August, 1988
WEIGHTED AVERAGE INTERNAL RATE OF RETURN (IRR) (annualized, since inception)	4.7%

DIVERSIFICATION PROFILE

	INVESTMENT	TYPE	
1	Austin Properties	Gas	2.0%
2.	British Petroleum - Prudhoe Bay	Oil	14.0%
3	Laredo Rance Royalties	Gas	7.0%
4	Swan Field - Wyoming	Gas	1.0%
5	Petrocorp - TMC Properties	Gas	3.0%
6	Conley Field	Oil	9.0%
7.	Phibro Energy - Option Series I	Oil	20.0%
8.	Gilmer Field - N E. Texas	Gas	<u>43.0%</u>
			100.0%

ATTACHMENT H

ANNUAL REVIEW SUMMARY SIMMONS/OFS INVESTMENTS September 30, 1992

MANAGER REPRESENTATIVES: Patti Melcher, L.E. Simmons

SBI ASSETS UNDER MANAGEMENT: \$5,500,000

BACKGROUND AND DESCRIPTION:

The OFS Investments, L.P., was formed in July 1991. It has a ten year term. OFS is the second resource investment fund managed by L.E. Simmons and other professional members of the General Partner. Simmons & Company, a Houston-based oilfield services investment banking firm will be retained when needed. Also, Fayez Sarofim and Company, a large Houston-based money management firm, is a Limited Partner of the General Partner, will invest \$7.5 million, and will assist the General Partner in reviewing investment transactions. The OFS Investments, L.P. was formed to serve as a vehicle for investment in the oilfield service (OFS) and equipment industry.

QUALITATIVE EVALUATION:

To date, OFS Investments has made three oilfield services related investments. These investments have been made during the prior year and no performance history is yet available. Following are summary descriptions of each investment.

The first investment was in the Drexel Oilfield Services Group. Drexel is a manufacturer of capital equipment for the oilfield services industry. Simmons invested \$15 million for approximately 31 percent of the common stock of the company. 65 percent of Drexel's sales come from outside of the U.S. The manager believes the company has excellent potential for synergistic acquisitions, has strong international distribution channels, and has good characteristics for a potential initial public offering.

The second investment is Grupo EPN, a publicly traded Mexican company in the energy service and equipment industry. Its primary customers are Mexican state-owned electrical distribution and oil and gas production companies. Simmons purchased 28 percent of the common stock for \$12.5 million. The management has a significant shareholder stake in the company. The general partner believes the company has potential for profitable growth and projected growth in Mexico's energy industry.

The final investment was not closed as of the annual review. Simmons is proposing to make a sizable investment in a Canadian oilfield services company. The company primarily serves the Canadian and U.S. markets and selected international markets. The company has an excellent Canadian franchise and has the potential for synergistic acquisition and joint ventures.

The general partner plans to continue to take an opportunistic approach towards new investments, to build upon existing investments, and to posture operating companies for liquidity in 3-5 years.

ATTACHMENT H (con't)

SIMMONS/OFS QUANTITATIVE EVALUATION

COMMITMENT:	\$17,000,000
FUNDED COMMITMENT:	\$6,016,492
MARKET VALUE OF FUNDED COMMITMENT:	\$5,500,000
CASH DISTRIBUTIONS:	\$10,000
INCEPTION DATE(S):	July 1991
INTERNAL RATE OF RETURN (IRR): (annualized, since inception)	(32.2%)

DIVERSIFICATION PROFILE

Drexel Oilfield Services Group	42.9%
Grupo EPN	35.7
Computalog Ltd	<u>21.4</u>
	100.0%

ATTACHMENT I

PRIVATE EQUITY MANAGER PROFILE

I. BACKGROUND DATA

NAME OF FUND: Great Northern Capital Partners, L.P.

FUND MANAGER: Great Northern Capital Management

TYPE OF FUND: Midwestern United States Middle-Market Private Equity Limited Partnership

TOTAL FUND SIZE: \$100 Million

INTERVIEW DATE: August 17, 1992

MANAGER CONTACT: Steven G. Rothmeier

ADDRESS: 3800 First Bank Place
P.O. Box 357
Minneapolis, MN 55440

TELEPHONE: 612-376-2800

II. ORGANIZATION AND STAFF

The fund will be managed by the General Partner which include investment Advisors, Inc., the senior professionals of IAI Capital Group, the merger and merchant banking arm of IAI Steven GT Rothmeier, R David Spreng and Ian D. Pacher, and Allan K. Pray, a Minnesota business executive.

The Partnership is the first fund of the IAI Capital Group.

Mr. Rothmeier is the managing general partner and is the former Chairman and Chief Executive Officer of NWA, Inc., and its subsidiary, Northwest Airlines, Inc.

The Partnership is emphasizing Mr. Rothmeier's significant operation experience, versus a strictly financial perspective, as being a particularly unique factor. His experience and international contacts are considered to be major strength that the G.P. can employ in developing portfolio companies.

The General Partner will appoint and receive advice from time to time from an advisory board of experienced business executives.

ATTACHMENT I (con't)

III. INVESTMENT STRATEGY

Great Northern Capital Partners, L.P. is being formed to realize superior returns on long-term investments in established, middle market companies located primarily in the Midwestern United States which are facing strategic, financial or ownership change, have international business potential, and are in a position to benefit significantly from access to long-term capital and sound, objective advice and expertise

The G.P. intends to seek those investment opportunities involving attractive price multiples that are tied to cash flow, debt coverage, and the risks and rewards of meeting operating goals. Although the Partnership will invest in leveraged situations, the General Partner intends to utilize conservative financial structures which will enable portfolio companies to grow and prosper

The Partnership anticipates that it will invest capital in companies solely on a negotiated basis. The General Partner typically will seek board representation in connection with the partnership's investments and would expect to review and contribute to long-term business plans to build value. As a large investor and through its representation on the boards of portfolio companies, the Partnership will support measures which seek to ensure that management of portfolio companies will have sufficient equity-based incentives to encourage congruence of objectives between management and investors, including the Partnership. In connection with its investments, the Partnership may enter into stockholder agreements if such agreements are sought by the portfolio company and deemed appropriate by the General Partner.

IV. INVESTMENT PERFORMANCE

This is the first fund of the General Partner. However, as the senior professionals of IAI Capital Group, their merger and merchant banking arm of IAI, the general partners of the General Partner have worked on a number of transactions that represent excellent investment opportunities of the type the Partnership intends to pursue

The General Partner anticipates that its affiliation with the IAI organization, IAI's senior management personnel, its reputation in the investment and business communities and international contacts and alliances IAI has developed over the years will provide the Partnership with access to investment opportunities of superior quality.

ATTACHMENT I (con't)

V. GENERAL PARTNER'S COMMITMENT

The General Partner will contribute a minimum of 1% of committed capital.

VI. TAKEDOWN SCHEDULE

The General Partner will make capital calls as needed to invest in portfolio companies upon five business days' written notice.

VII. DISTRIBUTIONS

A summary of distributions is as follows:

- (1) The Partners will share 80% of net realized gains and losses in proportion to their capital contributions, and 20% of such net realized gains and loss will be allocated to the General Partner, to the extent the Partnership has a net gain on a cumulative basis; and
- (2) all other income, losses and expenses will be allocated among all Partners in proportion to their capital contributions.

VIII. TERM

Ten years, subject to an extension of up to two years and a further extension of up to two additional years, in the discretion of the General Partner.

IX. MANAGEMENT FEES

Annual management fees of 2% of committed capital, payable quarterly, in advance.

Tab H

COMMITTEE REPORT

DATE: December 1, 1992

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

FROM: **Asset Allocation Committee**

The Asset Allocation Committee met on November 18, 1992 to discuss the following agenda items:

- Revisions to the weightings in the Basic Funds market index composite
- Update on international equity index manager funding process
- Update on Post Retirement Fund asset allocation transition
- Report from the International Investing Guidelines Task Force

1. Revisions to the Basic Funds Market Index Composite

The performance of the Basic Funds is compared to a composite index weighted according to the long-term asset allocation policy of the Funds. In September 1991, the Board made two changes to its asset allocation strategy that must be reflected in the composite:

- a 10% allocation to international stocks was added and the domestic stock allocation was reduced to 50%.
- alternative assets received a combined allocation of 15% and the individual targets for real estate (10%), venture capital (2.5%) and resource funds (2.5%) were eliminated.

The resulting long-term policy asset allocation for the Basic Funds is:

Domestic Stock	50%
International Stock	10
Alternative Assets	15
Domestic Bonds	24
Cash Equivalent	<u>1</u>
	100%

When the international stock segment is fully funded, staff proposes that the composite index be weighted at the start of each quarter as follows.

Domestic Stocks	50%
International Stocks	10%
Cash Equivalents	1%
Alternative Assets	Each of the respective alternative asset classes (private equity, real estate and resources) will be set at the preceding quarter's ending actual percentage of the total portfolio (these figures will be rounded to the nearest one-half percentile)
Domestic Bonds	The remaining allocation

During implementation of the international stock program, the stock component of the composite will be weighted as follows:

- a) International Stocks Set at the preceding quarter's ending actual percentage of the total portfolio
- b) Domestic Stocks 60% minus the figure in (a), above

After discussion, the Committee endorsed the staff proposal, as presented above

2. Update on International Index Manager Funding

State Street Asset Management, the SBI international equity index manager, received an initial contribution of \$130 million on October 1 and an additional \$70 million on November 1, 1992. The monthly investment activity in the international passive account was completed as follows:

Month	Crossed Trades	Market Trades	Total	% Crossed
October	\$113,473.10	\$10,943.35	\$124,416.45	91.2%
November	<u>61,200.00</u>	<u>14,500.00</u>	<u>75,700.00</u>	<u>80.9%</u>
Total	\$174,673.10	\$25,443.35	\$200,116.45	87.3%

A "crossed trade" is accomplished by matching up a buyer and seller among State Street's clients. In so doing, both clients save transactions costs. A "market trade" is a transaction made in the open market.

Of the \$130 million funded in October, \$5.6 million was not invested until November. The percentage of trades crossed at little or no transaction costs (87%) is significantly higher than the 20-40% initially anticipated.

The SBI will make an additional contribution of approximately \$100 million in December.

3. Update on Post Retirement Fund Transition

At its meeting in June 1992, the Board established new long term asset allocation targets for the Post Retirement Fund and directed staff to proceed with the transition during fiscal year 1993. Staff reported that the transition is moving forward as anticipated and should be completed by June 30, 1993.

	June 30, 1992	Nov. 1, 1992	Long Term Targets
Stocks	9%	20%	50%
Bonds	80%	76%	47%
Cash	11%	4%	3%

4. Report from the International Investing Guidelines Task Force

The Committee reviewed and discussed the report from the International Investing Guidelines Task Force contained in Tab I.

The Committee noted that the Board had given the Task Force a very difficult and complex assignment. While Committee members had varying opinions on the conclusions outlined in the report, they felt that the research conducted by the Task Force and SBI staff was thorough and the resulting report was well done.

Committee members felt that the full IAC should be included in the discussion on the findings of the Task Force and therefore took no action on the report at the Asset Allocation Committee meeting. The Committee recommends that the full IAC discuss the Task Force report at its meeting on December 8, 1992.

Tab I

TASK FORCE REPORT

DATE: December 1, 1992

TO: Members, State Board of Investment

FROM: International Investing Guidelines Task Force

At its meeting on September 9, 1992, the SBI established an International Investing Guidelines Task Force to recommend guidelines concerning the SBI's international investment program. The broad charge to the Task Force is to make recommendations concerning worker rights, human rights and environmental concerns.

The membership of the Task Force includes a representative of each Board member, a representative of each statewide retirement system, two private sector representatives from the Investment Advisory Council, two representatives from organized labor and one representative from environmental groups. The SBI executive director and the SBI's international consultant are also members of the Task Force. A complete membership list is attached.

In addition, at its September 1992 meeting, the SBI adopted a position paper regarding international investing. The paper stated that the case for international investing lies in three areas: increased investment opportunity, greater diversification and potential for higher return. Nearly two-thirds of the world's market now lie outside the U.S. By diversifying across world markets, the Board can reduce risk/volatility of the total portfolio and increase the potential for higher returns.

The paper went on to say that Japan, U.K., Germany and France comprise about three quarters of the value of the international markets. Fourteen (14) other countries in Europe and the Pacific Basin make up the remainder of the more well established stock markets. Emerging markets in Central and South America, Eastern Europe and Asia are growing rapidly and pose special investment considerations and limitations.

With regard to these limitations and other concerns that have been presented to the SBI, a review of worker and human rights was completed relating to goals established by the Board.

Worker Rights Issues

The Task Force focused its review on the internationally recognized worker rights defined by the Trade Act of 1974 and the Generalized System of Preferences Renewal Act of

1984. These rights are also embodied in the International Labour Office (ILO) Conventions:

- Right of association, including the right to strike.
- Right to organize and bargain collectively, including prohibition of anti-union discrimination and provisions for dispute resolution
- Prohibition of forced or compulsory labor.
- Minimum age for the employment of children
- Acceptable conditions of work, including standards for minimum wage, maximum workweek, and occupational safety and health.

A summary of the laws and practices of countries with public stock markets is attached. The information was compiled from *Country Reports on Economic Policy and Trade Practices* (dated March 1992) and *Country Reports on Human Rights for 1991* (dated February 1992). Both documents are prepared by the US State Department on an annual basis.

Human Rights Issues

The Task Force focused on the following human rights. All are included in the United Nations Universal Declaration of Human Rights:

- Freedom from political killing or disappearance
- Freedom from torture
- Right to a fair public trial/due process
- Right to vote/affect governmental change
- Freedom from discrimination based on race, religion, sex or social status.

A summary of the laws and practices of countries with public stock markets is attached. The information was compiled from *Country Reports on Human Rights for 1991* (dated February 1992). As noted above, this document is prepared by the US State Department on an annual basis.

Environmental Concerns

The Task Force is not aware of a universally accepted set of standards regarding the environment but intends to continue research in this area.

The Task Force acknowledges that the SBI has addressed a wide range of environmental issues through its proxy voting practices. Environmental issues appear on corporate proxy ballots and cover a growing range of concerns. The SBI has recognized the need for case-by-case review of these complex issues and carries out its responsibility as a shareholder through the proxy voting process. Action to date has focused on domestic holdings but

the Task Force anticipates that the Proxy Voting Committee will use the same review process for the SBI's international portfolios.

Conclusions on Worker and Human Rights Issues

The Task Force determined that any criteria or decision guidelines must be clear, understandable, and consistently applied across all international markets. Further, in order to be monitored over time, information relating to the guidelines must be available from a credible third party source.

The SBI's international consultant made the following observations that served as a reference point or context for the Task Force's recommendations:

- For the most part, public markets and democratic political structures exist in tandem. Virtually all of the markets in the EAFE index (an index of markets in Europe, Australia and the Far East which is used for the SBI's international passive portfolio) are in industrialized nations with western style democracies. There is also a strong correlation between well established democratic political structures and respect for human rights and worker rights. It is not surprising, therefore, that EAFE countries have legal structures or practices that recognize and protect these rights.
- Similarly, the list of countries with "emerging markets" and "emerging democracies" are highly correlated. As they take their place in the international community, new democracies typically adopt internationally accepted human and worker rights within their legal structures. Respect for and protection of human rights and worker rights is a laudable outgrowth of the emerging democracy/emerging market phenomenon and should be encouraged and supported.

With these considerations in mind and based on the background material compiled from the State Department reports, the Task Force grouped countries into three broad categories:

- **Group I, Acceptable.** These countries have legal protections or practices that generally respect worker and human rights. Because these countries have strong worker and human rights protections, there is little concern that economic and social disruptions may occur, having an adverse effect on financial markets.
- **Group II, Questionable.** These countries have legal protections for worker and human rights but violations of these rights have been cited in the State Department reports. Generally, these are emerging markets/emerging democracies. Because violations of legally protected worker and human rights continue to occur in these countries, there is some concern that economic and social disruptions may occur, having an adverse effect on their financial markets.

- **Group III, Unacceptable.** These countries lack basic protections for worker and human rights and do not appear to be making adequate progress in establishing an appropriate legal structure to address these issues. Because of this basic lack of human and worker rights, the potential exists for economic, political and social unrest that could adversely affect the stability of the financial markets within these countries.

A list of the countries in each group is shown below.

Group I Acceptable	Group II Questionable	Group III Unacceptable
Australia	Argentina	China
Austria	Brazil	Indonesia
Belgium	Chile	Kuwait
Canada	Colombia	Nigeria
Czechoslovakia	Egypt	Pakistan
Denmark	India	South Africa
Finland	Israel	USSR/former
France	Jamaica	Soviet Union
Germany	Korea, Rep of	Yugoslavia
Greece	Malaysia	
Hong Kong	Mexico	
Hungary	Philippines	
Italy	Taiwan	
Ireland	Thailand	
Japan	Trinidad & Tobago	
Luxembourg	Turkey	
Netherlands	Venezuela	
New Zealand		
Norway		
Poland		
Portugal		
Singapore		
Spain		
Sweden		
Switzerland		
United Kingdom		
Uruguay		

Recommendation on Worker and Human Rights Issues

The Task Force recommends that the SBI adopt the following investment guidelines for its international investing program:

- The SBI may invest in the markets of countries that legally protect internationally recognized worker and human rights; or respect these rights in practice even if specific legal protections do not exist; or are moving toward establishing comprehensive protection for these rights in law or practice. Strong protection of worker and human rights in these countries reduces concerns that economic and social disruptions may occur, having an adverse effect on their financial markets.
- The SBI's active managers should not be restricted regarding the countries included in "Group I, Acceptable," since these countries have strong worker and human rights protections and there is little concern that economic and social disruptions may occur which would have an adverse effect on their financial markets.
- The SBI's active managers may invest in the markets of countries shown under "Group II, Questionable" if the manager believes that it would be a breach of fiduciary responsibility not to do so. Since violations of legally protected worker and human rights continue to occur in these countries, there is some concern that economic and social disruptions may occur, having an adverse effect on the financial markets. If a manager chooses to invest in one or more of these markets, the manager must notify the SBI in writing.
- The SBI's active managers may invest in the markets of countries shown under "Group III, Unacceptable" if the manager believes that it would be a breach of fiduciary responsibility not to do so. Since these countries lack basic human and worker rights, the potential exists for economic, political and social unrest that could adversely affect the stability of the financial markets within these countries. If a manager chooses to invest in one or more of these markets, the manager must appear at a meeting of the SBI to present its reasons for the decision to do so.
- The Task Force will review the lists of countries periodically and recommend appropriate additions or deletions. Generally, this would require the Task Force to reconvene after new annual reports from the US State Department are made available.

Recommendation on Environmental Concerns

At this time, the Task Force recommends that the SBI vote its international proxies on environmental issues consistent with its current proxy voting policies. The Task Force will continue to explore information sources in this area and plans to make a more detailed report to the Board.

**Summary of Worker Rights Laws
EAFE Countries**

	Right to Associate	Right to Strike	Right to Organize/Bargain	Dispute Resolution	Prohibition of Forced Labor	Minimum Age for Work	Minimum Wage Law/Reg	Standard Workweek Law/Reg	Minimum Health/Safety Law/Reg
Australia	L	P	L	L	L	L	X	L	L
Austria	L	L	L	L	L	L	X	L	L
Belgium	L	L	L	L	L	L	L	L	L
Denmark	L	L	L	L	L	L	X	L	L
Finland	L	L	L	L	L	L	X	L	L
France	L	L	L	L	L	L	L	L	L
Germany	L	L	L	L	L	L	X	L	L
Hong Kong	L	L	L	L	L	L	X	X	L
Italy	L	L	L	L	L	L	X	L	L
Japan	L	L	L	L	L	L	L	L	L
Malaysia	L	L/V	L	L/V	P	L	L	L	L
Netherlands	L	L	L	L	L	L	L	X	L
New Zealand	L	L	L	L	L	L	L	L	L
Norway	L	L	L	L	L	L	X	L	L
Singapore	L	L	L	L	L	L	X	L	L
Spain	L	L	L	L	L	L	L	L	L
Sweden	L	L	L	L	L	L	X	L	L
Switzerland	L	L	L	L	P	L	X	L	L
U K	L	P	L	L	L	L	X	X	L

Notes

- L = *Legally protected*
- P = *Protected in practice*
- V = *Violations have been alleged Full report provided clarification*
- E = *Weak or inadequate enforcement is cited Full report provided clarification*
- X = *Not legally protected Full report provided clarification*
- * = *Full report provided clarification*
- na = *Not addressed in source documents*

**Summary of Worker Rights Laws
Non-EAFE Countries**

	Right to Associate	Right to Strike	Right to Organize/ Bargain	Dispute Resolution	Prohibition of Forced Labor	Minimum Age for Work	Minimum Wage Law/Reg	Standard Workweek Law/Reg	Minimum Health/Safety Law/Reg
Argentina	L	L	L	L	L	L/V	L	L	L
Brazil	L/V	L	L	L	L/V	L/V	L	L	L/E
Canada	L	L	L	L	L	L	L	L	L
Chile	L/V	L	L	X	L	L/V	L/E	L/E	L
China	L/V	X	X	L	X	L/V	L	L	X
Columbia	L/V	L	L	L	L	L/V	L/E	L	L/E
Czech.	L	L	L	L	L	L	L	L	L/E
Egypt	L	X	L	L	L	L/V	L/E	L/E	L/E
Greece	L	L	L	L	L	L	X	L	L/E
Hungary	L	L	L	L	L	L	L	L	L/E
India	L/V	L	L	L	L/V	L/V	L	L	L/E
Indonesia	L	L	L	L/V	L	L/V	L/E	L/E	L/E
Ireland	L	L	L	L	L	L	X	L	L
Israel	L/V	L	L	L	L	L/V	L*/E	L*/E	L*/E
Jamaica	L	P	L	L	P	L/V	L	L	L/E
Korea	L/V	L	L	X	X	L	L	L	L/E
Kuwait	L	L*	L	L	L*	L	X	L	L
Luxembourg	L	L	L	L	L	L	L	L	L
Mexico	L	L	L	L	L	L/V	L	L	L/E
Nigeria	L	L	L	L	L	L	L	L	L/E
Pakistan	L/V	L*	L*	L	L/V	L/V	L*/E	L*/E	L*/E
Philippines	L/V	L	L	L	L	L/V	L/E	L	L
Poland	L	L	L	L	L	L/V	L	L	L/E
Portugal	L	L	L	L	L	L/V	L	L	L/E
So. Africa	L/V	L	L	L	L/V	L	L*	L*	L*
Taiwan	L*	L	L	L/V	L	L	L/E	L/E	L/E
Thailand	L/V	L	L	L	L*	L/V	L/E	L	L/E
Trin & Tob	L	L	L	L	P	L	L	L	L
Turkey	L	L	L	L	L	L/V	L	L	L/E
Uruguay	L	L	L	L	L	L	L	L	L
USA	na	na	na	na	na	na	na	na	na
USSR	L	L*	L*	na	X	L/V	X	L	L/E
Venezuela	L	L	L	L	L	L	L	L	L/E
Yugoslavia	L*	L	L	L/V	L	L	L	L	L/E

See opposite page for key to notes.

**Summary of Human Rights Policies
EAFE Countries**

	Freedom from Pol Killings or Disappearances	Freedom from Torture	Right to a Fair Public Trial & Due Process	Freedom of Speech & Press	Right to Vote and Affect Govt Change	Freedom From Discrimination
Australia	P	L/V	L	P	L	L/V
Austria	P	L	L	L	L	L
Belguim	P	P	L	L	L	L
Denmark	P	L	L	L	L	L
Finland	P	L	L	L	L	L
France	P	P	L	L	L	L
Germany	P	P	L	L	L	L/V
Hong Kong	P	L	L/V	L	X	V
Italy	P	L	L	L	L	L/V
Japan	P	L*	L	L	L	L/V
Malaysia	P	V	L*	L*	L*	X
Netherlands	P	L	L	L	L	L/V
New Zealand	P	L	L	L	L	L
Norway	P	P	L	L	L	L
Singapore	P	L/V	L*	X	L/V	L/V
Spain	P	V	L	L	L	L/V
Sweden	P	L	L	L	L	L/V
Switzerland	P	L	L	L/P*	L	L/V
U.K.	P*	L*	L*	L	L	L/V

L = *Legally protected right*

P = *Rights exist in practice*

V = *Violations of these rights have been alleged Full report provided clarifications*

X = *Rights are legally denied to some individuals Full report provided clarifications*

* = *Full report provided clarifications*

**Summary of Human Rights Policies
Non-EAFE Countries**

	Freedom from Pol. Killings or Disappearances	Freedom from Torture	Right to a Fair Public Trial & Due Process	Freedom of Speech & Press	Right to Vote and Affect Govt Change	Freedom From Discrimination
Argentina	V	L/V	L/V	L	L	L/V
Brazil	V	L/V	L/V	L	L	L/V
Canada	P	L	L	L	L	L/V
Chile	V	V	L*/V	L	L	L/V
China	P*	L/V	L*/V	X	X	L/V
Columbia	V	L/V	L/V	L	L	L/V
Czechoslovakia	P	P	L	L	L	L/V
Egypt	V	L/V	L*/V	L*/V	L/V	L/V
Greece	P	L*	L	L	L	L/V
Hungary	P	P	L	L	L	L/V
India	V	L/V	L/V	L/V	L/V	L*/V
Indonesia	V	L/V	L/V	X	X	X
Ireland	P	L	L	L	L	L
Israel	V	L/V	L/V	L/V	L/V	L/V
Jamaica	V	L/V	L/V	L	L	L/V
Korea, Rep. of	P*	V	L*	L*	L	L/V
Kuwait	V	L/V	L/V	L*	X	X
Luxembourg	P	L	L	L	L	L
Mexico	V	L/V	L/V	L/V	L/V	L/V
Nigeria	V	L/V	L/V	L/V	X	L/V
Pakistan	V	V	L/V	X	L	V
Philippines	V	L/V	L/V	L	L	L*/V
Poland	P	P*	L/V	L	L	L
Portugal	P	L*	L	L	L	L
South Africa	V	V	V	L/V	X	X
Taiwan	P	L/V	L/V	L*	L*	L/V
Thailand	V	L/V	L*	L*	L/V	X
Trin. & Tob	V	L/V	L*	L*	L	L
Turkey	P*	L/V	L*	L*	L*	L/V
United States	na	na	na	na	na	na
Uruguay	P*	L/V	L	L	L	L/V
USSR	V	V	V	V	P*	V
Venezuela	V	L/V	L*/V	L	L	L/V
Yugoslavia	V	L/V	X	L*	L/V	L/V

L = *Legally protected right*

P = *Rights exist in practice.*

V = *Violations of these rights have been alleged. Full report provided clarifications.*

X = *Rights are legally denied to some individuals. Full report provided clarifications.*

* = *Full report provided clarifications.*

na = *Not addressed in source document.*

INTERNATIONAL INVESTING GUIDELINES TASK FORCE

Name	Title	Representing
Peter Sausen	Assistant Commissioner, Dept. of Finance	Governor Carlson
Lisa Rotenberg	Deputy State Auditor	State Auditor Dayton
Jake Manahan	Deputy State Treasurer	State Treasurer McGrath
Elaine Voss	Deputy Secretary of State	Secretary of State Growe
Christie Eller	Assistant Attorney General	Attorney General Humphrey
Dave Bergstrom	Executive Director, MSRS	MN State Retirement System
Laurie Fiori Hacking	Executive Director, PERA	Public Employees Retirement Assoc.
Gary Austin	Executive Director, TRA	Teachers Retirement Assoc.
Bernie Brommer*	President, Minnesota AFL-CIO	Minnesota AFL-CIO
Eliot Seide	Legislative Director AFSCME Council 6	AFSCME Council 6
Jan Yeomans	Director, Benefit Funds and Financial Markets, 3M Company	Investment Advisory Council
Jay Kiedrowski	Executive Vice President, Norwest Bank	Investment Advisory Council
Diane Jensen	Co-Director Clean Water Action Alliance	Environmental groups
Howard Bicker	Executive Director, State Board of Investment	SBI staff
Allan Emkin	Managing Director, Pension Consulting Alliance	SBI international consultant

* Ron Cohen has been designated as an alternate

10/30/92