MINNESOTA STATE BOARD

OF INVESTMENT

INVESTMENT POLICIES

AND

MANAGEMENT PRACTICES

May 2013

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EXHIBITS

AUTHORITIES

Constitutional Authority

The Minnesota State Board of Investment (SBI) is established by Article XI, section 8 of the Minnesota Constitution.

> "A board of investment consisting of the governor, the state auditor, the secretary of state, and the attorney general is constituted for the purpose of administering and directing the investment of all state funds."

Statutory Authority

All activity of the SBI is governed by *Minnesota Statutes*, Chapters 11A and 356A. Copies of each are found in **Tab A**. Section 11A.01 sets forth a statement of purpose for the SBI:

> "to ensure that state and pension assets... will be responsibly invested to maximize the total rate of return without incurring undue risk."

The SBI's duties and powers are set forth in *M.S.* section 11A.04. The SBI is responsible for the formulation of policies and procedures it deems necessary and appropriate to carry out the functions of the SBI. The SBI retains an executive director whose duties and powers are set forth in section 11A.07. The SBI has the authority to undertake any other activity necessary to implement its duties and powers.

ORGANIZATION

Staff

Section 11A.07 sets forth that the SBI shall retain an executive director. The appointment of an executive director is subject to senate confirmation. The executive director shall be well-qualified by training to administer and invest the money available for investment and possess experience in the management of institutional investment portfolios. The director serves at the pleasure of the SBI.

The executive director shall plan, direct, coordinate, and execute administrative and investment functions in conformity with the policies and directives of the SBI and the requirements of Minnesota Statutes. The executive director shall employ professional and administrative personnel (who, together with the executive director, will be referred to as "Staff.")

Investment Advisory Council

M.S., section 11A.08 creates an Investment Advisory Council (IAC) consisting of 17 members.

- Ten of the members shall be experienced in general investment matters and be appointed by the SBI.
- Commissioner of Minnesota Management & Budget is an ex-officio member.
- The Executive Directors of Minnesota State Retirement System, Public Employees Retirement Association and Teachers Retirement Association are ex-officio members.
- Two active public employees are appointed by the Governor.
- One retired public employee is appointed by the Governor.

The duties of the IAC as set forth in section 11A.08 are:

- to advise the SBI and Staff on general policy matters relating to investments;
- to advise the SBI and Staff on methods to improve the rate of return on invested assets while insuring adequate security;
- to advise the SBI and Staff on the content of the SBI's annual report on investment activities;
- to perform other tasks of an advisory nature as requested by the SBI.

Each quarter, the IAC reviews investment subjects relevant to the SBI's decision-making and adopts recommendations for SBI consideration. The chair presents the report and recommendations of the Council to the quarterly meetings of the SBI.

Section 11A.08, Subdivision 5 states that each IAC member is indemnified and held harmless by the state for any litigation or administrative proceedings arising from the performance of the members duties. Section 11A.08, subdivision 6 requires each member to file an economic interest statement and prohibits a member from deliberating or voting on a matter that would personally benefit the member or the member's employer.

Standard of Care

Section 11A.09 (and section 356A.04) sets forth the prudent person rule as the SBI's fiduciary standard. This standard of conduct also applies to members of the Investment Advisory Council and Staff.

Consultants

The SBI employs consultants to assist the SBI and Staff in the formulation and implementation of its policies. Currently the SBI has two consultants under contract.

- Callan Associates Inc. (Chicago) is the SBI's general consultant. Their responsibility is to provide the SBI and Staff with advice and resources to enable the SBI to continue to develop and enhance its investment program. In addition, Callan is responsible for maintaining direct communication with the members of the Board, Staff, and the IAC.

- Pension Consulting Alliance (Los Angeles) is the SBI's special projects consultant.

SBI Committees

The Board meets quarterly with representatives from Staff, the IAC and the consultant to review short and long-term performance of the funds and the associated investment issues of the funds. In additions, the SBI has established committees to facilitate the implementation and development of SBI policies and to make recommendations to the SBI on various investment and administrative issues under its control.

- Administrative Committee

  The Administrative Committee is comprised of a designee of each Board member, the directors of each statewide retirement fund and the chair and vice chair of the IAC. The primary responsibility of the Committee is to review and make recommendations to the Board concerning Staff's annual management and budget plan. The Administrative Committee may be assigned other responsibilities at the direction of the Board.

- Proxy Voting Committee

  The SBI recognizes its fiduciary responsibility concerning proxy issues and delegates proxy voting responsibility to its Proxy Voting Committee. The Committee is comprised of a designee of each Board member. The Committee has formulated guidelines by which it votes on a wide range of corporate governance and social responsibility issues. Shares of the domestic equity holdings of the SBI are voted by Staff in accordance with the guidelines.

Given the logistical and administrative complexity of voting international proxies, the Proxy Committee has delegated voting responsibility for international equity holdings to the external international investment managers of the SBI. These managers are given the proxy voting guidelines of the SBI and use best efforts to vote consistently with the guidelines. Records of the external investment managers' votes are provided to the SBI each fiscal year.

Each year the Committee reviews existing guidelines and determines which issues need to be reviewed or added. See the Board approved Proxy Voting Guidelines in **Tab B**.

- Deferred Compensation Review Committee

  The Deferred Compensation Review Committee is comprised of a designee of each board member and the directors of each statewide retirement plan. The primary responsibility of the Committee is to review and make recommendations to the SBI related to the investment options and operations of the State's deferred compensation plan. A description of the current plan can be found in **Tab C**.

- Ad-Hoc Committees

  The SBI forms ad-hoc committees as necessary for various purposes. Membership on these committees has included a designee of each Board member and others as appropriate. Examples have been search committees for the purposes of retaining a general consultant and the retention of a custodian bank.

EDUCATION AND OVERSIGHT

Continuing Fiduciary Education Plan

As required by the provisions of M.S. section 356A.13, the SBI must develop and periodically revise a program for the continuing education for any Board members "who are not reasonably considered to be experts with respect to their activities as fiduciaries."

The SBI's continuing fiduciary education plan includes:

- Briefings for new Board and IAC members on SBI operations and policies.

- Manager roundtables at which the SBI convenes small groups of external investment managers to discuss issues related to investment management and the financial markets. Roundtables are held periodically for Board members, their designees and IAC members.

- Travel allocations for the Board or their designees for costs associated with attending investment related seminars and conferences.

The SBI's plan is reviewed annually and approved by the Administrative Committee and the Board. A copy of the plan is in **Tab D**.

External Supervision of SBI Activities

The SBI benefits from the supervision and oversight exercised by a number of external entities. These entities perform valuable oversight functions that serve as outside checks on the business operations of the SBI and lend a measure of risk control over the investment activities of the SBI.

- The Legislature

  The powers, duties, responsibilities and investment authority of the SBI are set forth in statute and may only be changed by legislative action. As stated previously, all activities of the SBI are governed by statute. When the Legislature makes changes in the governing statutes, the SBI must adapt its policies and practices to conform. Any modifications to the investment authority of the SBI must be approved by the legislature.

- Legislative Auditor

  The SBI is audited annually by the Office of the Legislative Auditor. The legislative auditor performs a financial audit of the SBI's books, records, accounts and accounting control systems.

- Attorney General

  The Office of the Attorney General serves as legal counsel to the SBI for review and negotiation of contracts and for any other matters that require counsel. The Attorney General's office may hire outside counsel as necessary.

- Custodian Banks

  In accordance with the provisions of *M.S.*, sections 11A.07 and 356A.06, the SBI retains two custodian banks as depository agents for securities owned by the SBI. External safekeeping of securities provides a necessary degree of control in the business operations of the SBI. The SBI retains State Street Bank and Trust as master custodian to provide settlement and custody services, income collection, reporting and performance measurement services for retirement and non-retirement assets. The SBI retains Wells Fargo as custodian to service the state's cash accounts.

- Outside Accounting Firm

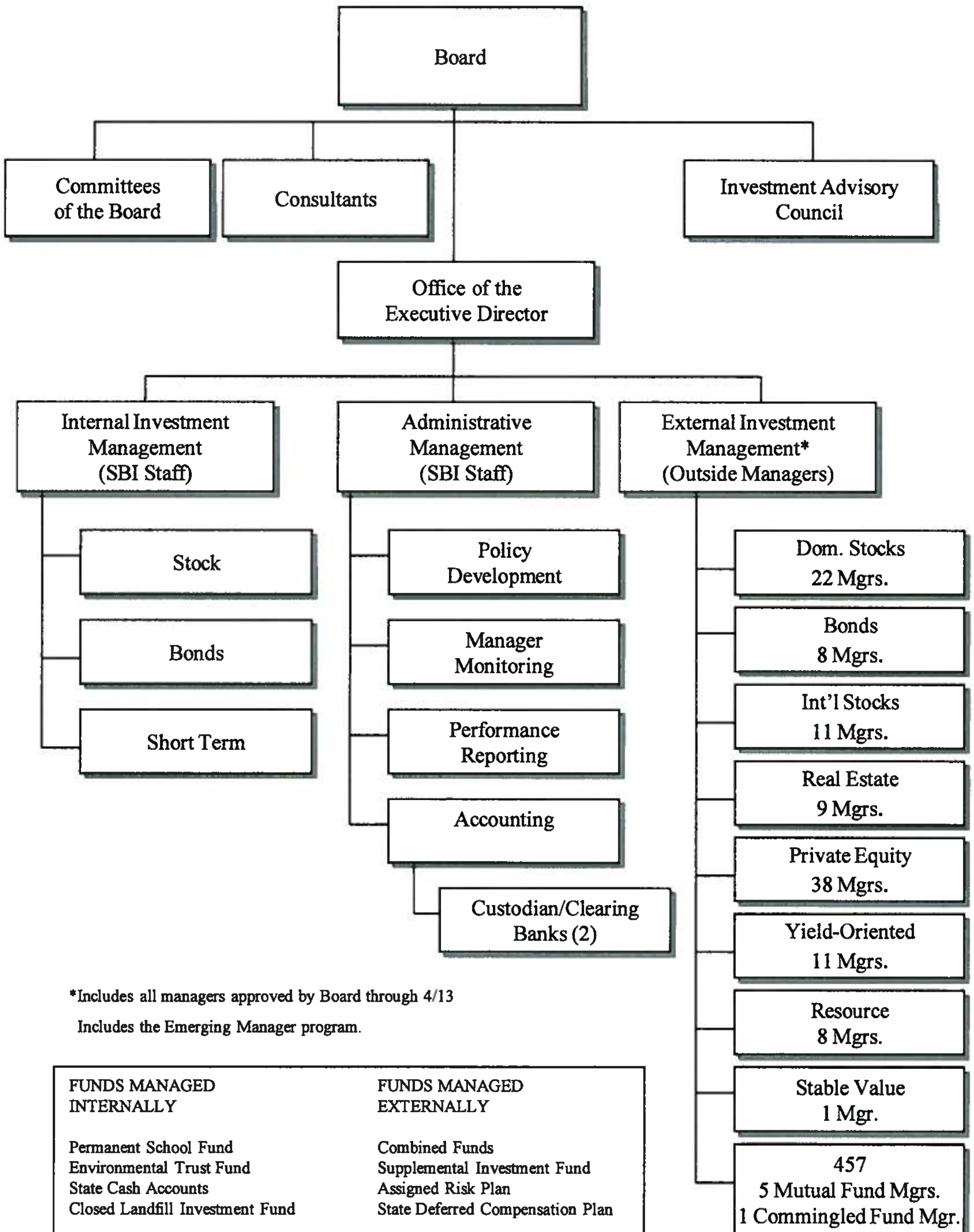
  The SBI retains QED, an external accounting firm. QED provides accounting services for cash accounts managed internally by Staff. In addition, the accounting firm receives from SBI's master custodian, data on all accounting transactions of the retirement and non-retirement assets and replicates totals. The accounting firm also performs an independent pricing of all assets held. In performing these tasks, the accounting firm provides a necessary independent verification that accounting transactions have been properly recorded and assets have been accurately priced.

Functional Organization Chart

The following chart displays the SBI's organization and investment management structure.

STATE BOARD OF INVESTMENT

Functional Organizational Structure



*Includes all managers approved by Board through 4/13

Includes the Emerging Manager program.

FUNDS MANAGED INTERNALLY	FUNDS MANAGED EXTERNALLY
Permanent School Fund	Combined Funds
Environmental Trust Fund	Supplemental Investment Fund
State Cash Accounts	Assigned Risk Plan
Closed Landfill Investment Fund	State Deferred Compensation Plan

FUNDS UNDER MANAGEMENT

Background

The SBI is responsible for investing the assets of a number of agencies and governmental bodies throughout state government and of many local units of government. Although the majority of the assets are retirement related, the SBI is also responsible for non-retirement assets which include the Permanent School Fund and the Environmental Trust Fund.

Investing involves managing a range of market and non-market risks. Market risk is inherent to investing. Managing this risk is central to SBI risk management efforts. The SBI invests in multiple asset classes through a disciplined approach to strategic asset allocation, investment management structuring and monitoring, and asset class rebalancing. Its investment practices are carried out in accordance with written investment policies and processes.

In addition to managing market risk, the SBI dedicates significant resources to managing non-market risks, which include governance, legal, accounting and operational risks. The SBI has a strong governance structure with a Board comprised of four of the State's constitutional officers; fiduciary responsibility and investment authorities prescribed in state law; and checks and balances provided through the advice and actions of the Investment Advisory Council, outside consultants and the Attorney General's office.

To manage accounting and operational risks, the SBI maintains robust internal controls which include a complete separation of the investment management and asset custody functions, the segregation of duties between asset management and accounting Staff, the timely reconciliation of account positions, and external audits by the legislative auditor.

A paper setting forth the SBI approach to managing risk is in **Tab L**.

Within the requirements established by state law, Staff, in conjunction with the IAC and the SBI, conducts a comprehensive analysis of the investment needs and objectives for each Fund under management. ("Fund" refers to the retirement plans' assets, trust funds, and general funds of the State, cash accounts and other accounts managed by the SBI.) This analysis is used to determine an appropriate asset mix for each fund. Once the asset mix is established an appropriate investment management structure is determined for each fund. The investment management structure may include the use of active and passive management and may be managed by external investment managers or by internal Staff.

Under the provisions of *M.S.* Section 11A.14, the SBI must invest separately retirement assets and non-retirement assets. In accordance with this provision and to gain operating efficiency, the SBI has created a series of Asset Class Pools for the retirement assets and a separate set of Asset Class Pools for the non-retirement assets. Any retirement plan or non-retirement fund authorized by law to have its assets managed by the SBI may participate in their respective Asset Class Pools. Funds may participate in one or more of the pools according to their asset allocation policies. The Funds participate by purchasing units in the pools much like investors buy shares in mutual funds. The Pools are priced daily to accommodate the liquidity needs of the Funds.

The following is a description of each of the Asset Class Pools and each Fund's asset mix policy and ownership of the appropriate Asset Class Pools.

Asset Class Pools for Retirement Assets

The SBI invests the majority of the retirement assets in five Asset Class Pools to provide diversification for the funds under its control. The SBI retains external managers to invest the assets of all five Pools. Each asset class and each investment manager within the asset class are evaluated relative to appropriate benchmarks.

- Domestic Stock Pools

  The objective of the Domestic Stock Pool is to provide diversified exposure to the broad US public stock market. Domestic stocks are expected to provide, over time, positive real rates of return and portfolio diversification. The benchmark for the Domestic Stock Pool is the Russell 3000.

  The Domestic Stock Pool is comprised of two sub-pools: the Active Domestic Stock Pool, and the Passive Domestic Stock Pool. The active domestic stock pool is a combination of active and semi-passive investment management strategies. The objective of the Active Pool is to outperform the benchmark net of fees over time. The Passive Domestic Stock Pool is passively managed and is expected to match or slightly underperform the Russell 3000 index due to fees and expenses. It is expected that the combination of the two Pools will outperform the Russell 3000 net of fees and expenses overtime.

  SBI position papers concerning the asset class target and the investment management structure of the Domestic Stock Pool can be found in **Tab M**. In 2010 Staff prepared a review of the semi-passive management strategy and presented the paper for IAC discussion and Board review. The paper, which appears in **Tab M**, reaffirmed the use of semi-passive management, but was not formally approved by the Board. Also in **Tab M** is a 2013 review by Staff of the use of exchange traded funds (ETFs).

- Bond Pool

  The Bond Pool is expected to provide portfolio diversification and deflationary protection. The investment management structure of the Bond Pool is a combination of active and semi-passive strategies. The objective of the Bond Pool is to outperform, net of costs, the Barclays Capital Aggregate index over time.

  SBI position papers discussing the asset class target and investment management structure for the Bond Pool can be found in **Tab N**. Included is a revised asset class target paper that was prepared in 2012 and reviewed with the IAC, but because there were no significant policy changes, the paper was not formally approved by the Board.

In 2010 Staff prepared a review of the semi-passive management strategy and presented the paper for IAC discussion and Board review. The paper, which appears in **Tab N**, reaffirmed the use of semi-passive management, but was not formally approved by the Board.

- International Stock Pool

  The International Stock Pool invests in publically traded stock of companies located outside the US in developed and emerging countries. International stocks are expected to provide positive real rates of return over time and portfolio diversification. The objective of the International Stock Pool is to, over time, outperform, net of costs, the asset class target, which is Morgan Stanley Capital International All Country World Index ex United States Index with dividends net of taxes, unhedged (MSCI ACWI ex U.S. index net, unhedged.) The investment management structure of the International Stock Pool is a combination of active, passive and semi-passive strategies.

  SBI position papers concerning the asset class target and investment management structure for the International Stock Pool can be found in **Tab O**. In 2010 Staff prepared a review of the semi-passive management strategy and presented the paper for IAC discussion and Board review. The paper, which appears in **Tab O**, reaffirmed the use of semi-passive management, but was not formally approved by the Board.

- Alternative Investments Pool

  The Alternative Investments Pool is comprised of investments in limited partnerships and other types of commingled funds with exposure to venture capital, private equity, real estate, resource funds, and debt financing. The objective of the Alternative Investments Pool is to provide portfolio diversification and, over time, a real rate of return greater than that of public market securities due to the liquidity premium associated with private investments.

  Position papers related to investments in alternatives, cash flows, commitment levels, and manager due diligence can be found in **Tab P**.

- Cash Pool

  The Cash Pool consists of the cash allocation of the Combined Funds and any cash held by the equity and bond managers due to the buying and selling of securities. The investment objective of the cash pool is to provide liquidity and current income with a goal of exceeding the iMoney Net All Taxable Money Fund Average. This Pool is managed by a combination of external management and Staff. The external manager invests in short-term, highly rated securities which include certain types of commercial paper, asset-backed securities, repurchase agreements, U.S. Treasury and agency securities, and corporate debt. The internally managed portion participates in the CD and the Securities Repurchase Programs that are discussed later in this chapter. The Pool is expected to exceed the return of the iMoneyNet All Taxable Money Fund Index by 10 basis points per annum.

Asset Class Pools for Non-Retirement Assets

The Asset Class Pools for non-retirement assets are managed internally by Staff. For non-retirement assets, the SBI maintains the following asset class pools:

- Passively Managed Domestic Equity Pool

  Staff invests the assets of the equity index pool with the objective to match the returns of the S&P 500 Index. Staff replicates the performance of the index by investing in all of the securities of the index at the weights in the index.

- Actively Managed Domestic Bond Pool

  Staff employs a semi-passive investment strategy to the management of assets of this Bond pool. Incremental value is added through sector, security and yield curve decisions. Investment management guidelines restrict the allowable amount of risk relative to the Index. The Pool is expected to generate a rate of return slightly greater than the Barclays Capital Aggregate Bond Index. The pool is invested entirely in fixed income securities.

- Cash Pool

  The investment objective of the cash pool is to provide liquidity and current income with a goal of exceeding the iMoney Net All Taxable Money Fund Average. The pool is invested in high quality, short-term fixed income securities which include certain types of commercial paper, asset-backed securities, repurchase agreements, U.S. Treasury and agency securities, and corporate debt.

  Note that Staff invests the State cash accounts separately from the non-retirement cash pool. The State cash accounts are discussed in later sections.

RETIREMENT FUNDS

The Combined Funds

Description
The Combined Funds represent the assets of the active and retired public employees who participate in ten defined benefit retirement plans administered by the three statewide retirement systems, Teachers Retirement Association (TRA), Public Employees Retirement Association (PERA) and Minnesota State Retirement System (MSRS). The Combined Funds invest the retirement contributions of employees and employers so that sufficient assets are available to pay promised pension benefits to public employees in retirement.

Objectives
The SBI has two long-term objectives for the Combined Funds.

1. Match or exceed a composite market index weighted in a manner that reflects the long-term asset allocation of the Funds.

2. Provide returns that exceed inflation by three to five percentage points over the latest twenty year period.

The actuarial assumed rate of return for the Combined Funds is 8.0% for fiscal years 2013 through 2017 and 8.5% thereafter under legislation adopted during the 2012 legislative session.

Asset Allocation
To match the long-term nature of the pension obligations, the SBI maintains a strategic asset allocation for the Combined Funds that includes allocations to domestic equity, international equity, bonds, alternative assets and cash equivalents. The long-term asset allocation is the following:

Domestic Equity	45%
International Equity	15%
Alternatives	20%
Fixed Income	18%
Cash	2%

The uncommitted allocation in Alternatives is invested in Fixed Income. When the actual asset allocation deviates beyond specified ranges, assets are redistributed to achieve the long-term allocation targets.

Management
The Combined Funds assets are invested in the retirement asset class pools based on the Funds' strategic asset allocation. The total Combined Funds are benchmarked to a weighted composite of benchmarks for each asset class.

A copy of the Combined Funds asset allocation study is in **Tab E**. Included in **Tab E** is an analysis of expected returns performed by Staff in 2011 to support testimony before the legislature concerning the retirement plans' long-term investment return assumption in state statutes. This analysis was not formally adopted by the Board.

Rebalancing Policy
The SBI follows a disciplined approach to rebalancing to maintain the Funds' target asset allocation and risk exposure over time. When actual asset allocation deviates 5% or more from the target allocation, Staff has discretion to redistribute assets to achieve the target allocation. If the actual allocation deviates 10% or more, assets must be redistributed among the asset classes to achieve the targeted allocation.

The SBI applies this discipline to each of the funds under management.

The process of moving assets among managers in a rebalancing requires two major management decisions concerning the handling of the assets in question: whether to use a transition manager and whether to use futures. Issues affecting these decisions include the asset classes involved and managers affected, the size and timeframe of the transition, market volatility and whether market exposure must be maintained.

A paper explaining the rebalancing policy that includes a discussion of the issues the SBI addresses to determine whether to use transition management and futures in a rebalancing is in **Tab F**.

Supplemental Investment Fund

The Supplemental Investment Fund (SIF) is a multi-purpose investment program that offers a range of investment options to state and local public employees. The participating groups use the SIF for a variety of purposes. See *M.S.* 11A.17.

The assets of the Unclassified Employees Retirement Plan, Health Care Savings Plan, Public Employees Defined Contribution Plan, and Hennepin County Supplemental Retirement Plan are invested with the SBI through the SIF. Two accounts, the Money Market Account and Fixed Interest Account, are also available to participants in the Deferred Compensation Plan. A portion of some local police and firefighter retirement plans are also invested with SBI via the SIF. One account, the Volunteer Firefighter Account, serves as the investment vehicle for the Voluntary Statewide Volunteer Firefighter Plan.

A wide diversity of investment goals exists among the SIF participants. In order to meet those needs, the SIF has been structured as a series of accounts similar to a family of mutual funds. Each SIF account has its own investment objectives and asset allocation. Participants may allocate investments among one or more of these accounts as appropriate, within the statutory requirements and rules established by the participating organizations. Participation in the SIF is accomplished through the purchase or sale of shares in each account.

The SIF Accounts are invested in the retirement Asset Class Pools, with two exceptions, as shown:

	SIF Account	Asset Class Pools
1.	International Share	International Stock Pool
2.	Growth Share	Active Domestic Stock Pool
3.	Common Stock Index	Passive Domestic Stock Pool
4.	Income Share Account	Passive Domestic Stock Pool Internally managed bond account (not a pool) Cash Pool
5.	Bond Market	Bond Pool
6.	Money Market	Cash Pool
7.	Fixed Interest	Stable value manager (not a pool)
8.	Volunteer Firefighter	Passive Domestic Stock Pool International Stock Pool Bond Pool Cash Pool

For a discussion of each Account's objectives and asset allocation see the SIF Prospectus and Volunteer Firefighter Account Prospectus in **Tab I**.

Voluntary Statewide Volunteer Firefighter Retirement Plan

The Voluntary Statewide Volunteer Firefighter Retirement Plan was established by the Legislature in 2008. See *M.S.* Chapter 353G. PERA serves as administrator and trustee for this plan. SBI invests the assets of this plan in the Supplemental Investment Fund Volunteer Firefighter Account which is available only to this plan. The plan is a retirement plan option for local volunteer firefighter organizations. Upon joining this plan, a local entity permanently turns over its retirement administration to PERA and transfers its assets to the SBI.

A description of the investment management of the Plan within the SIF Volunteer Firefighter Account can be found in the Supplemental Investment Fund discussion in **Tab I**.

Local Firefighter Plans Investment in the Supplemental Investment Fund

Local volunteer firefighter retirement plans not participating in the Voluntary Statewide Volunteer Firefighter Retirement Plan have statutory authority to invest pension assets with the SBI in the SIF. There are more than 700 local plans with this authority. Those plans that choose to exercise that authority retain the responsibility to direct the allocation of their assets. The SBI does not make asset allocation decisions for them. The SBI offers six investment options. The Fixed Interest Account and the Volunteer Firefighter Account are not available to these local plans. Materials provided to the local plans to inform them of this investment are the SIF Prospectus and administrative material, copies of which are available on the SBI website.

State Deferred Compensation Plan

The State Deferred Compensation Plan (DCP) is a tax-sheltered IRC 457(b) retirement savings plan available to all public employees in the state. It is a supplement to the primary defined benefit retirement plans of TRA, PERA and MSRS. MSRS is the Plan administrator. The SBI is responsible for selecting Plan investment options and investment managers. Unlike other retirement assets, the DCP is not invested in the asset class pools.

DCP Participants may invest from a list of mutual funds in well defined asset classes, a money market account, a stable value option, and a set of target date funds (beginning July 1, 2011), or from a mutual fund window that offers a selection of thousands of funds.

A further discussion of the investment management of the Deferred Compensation Plan is in **Tab C**.

NON-RETIREMENT FUNDS

Permanent School Fund

Description
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. Proceeds from land sales, mining royalties, timber sales, and lakeshore and other leases from trust fund lands are invested in the Permanent School Fund. Income generated by the Permanent School Fund's assets is appropriated directly to school districts. See *M.S.*, section 127A.31.

As prescribed in the Constitution, the Fund's principal must remain "perpetual and inviolate." None of the Fund's principal may be reduced to finance spending. In addition, the Fund has certain accounting restrictions that influence the Fund's investment objectives.

Objective
Given these considerations, the SBI has determined that the investment objective of the Permanent School Fund is to produce a growing level of spendable income within the constraints of maintaining adequate portfolio quality and liquidity.

Asset Allocation
To meet the investment objective, the SBI maintains an asset allocation that balances the needs for growth and income. The Fund's current long-term asset allocation is:

Domestic Equities	50%
Fixed Income	48%
Cash	2%

Management
Staff manages all the assets of the Permanent School Fund in the non-retirement Asset Class Pools. The total Fund benchmark is a combination of the Asset Class Pool benchmarks, weighted according to the asset allocation targets shown above.

A detailed description of the investment of the Permanent School Fund is in **Tab G**

Environmental Trust Fund

Description
The Environmental Trust Fund was established in 1988 by the Minnesota Legislature to provide a long-term, consistent and stable source of funding for activities that protect and enhance the environment. See *M.S.*, Chapter 116P. A constitutional amendment passed in November 1998

mandates that 40 percent of the net proceeds from the state lottery be credited to the fund through 2025. The amendment provides for spending 5.5 percent of the Fund's market value annually.

Objective
The Environmental Trust Fund's investment objective is to increase the market value of the Fund over time in order to increase the annual amount made available for spending, within the constraints of maintaining adequate portfolio quality and liquidity.

Asset Allocation
The SBI maintains a long-term asset allocation that is consistent with the spending goals of the Fund and with the investment objective to grow the value of the Fund. The allocation is the following:

Domestic Equities	70%
Fixed Income	28%
Cash Equivalents	2%

Management
Staff manages all the assets of the Environmental Trust Fund in the non-retirement Asset Class Pools. The total Fund benchmark is a combination of the Asset Class Pool benchmarks weighted according to the asset allocation targets of the Fund shown above.

A detailed discussion of the investment management of the Environmental Trust Fund is in **Tab G**.

Assigned Risk Plan

Description
The Minnesota Workers Compensation Assigned Risk Plan was established in 1983 to provide workers' compensation coverage to Minnesota employers rejected by a licensed insurance company. The Plan operates as a non-profit, tax exempt entity and is administered by the Department of Commerce. The Plan provides disability income, medical expenses, retraining expenses and death benefits, with payments being made either periodically or in lump sum.

Objective
The SBI recognizes that the Assigned Risk Plan has limited tolerance for risk due to erratic cash flows, no allowance for surplus, and generally short duration liabilities. The SBI believes that due to the uncertainty of premium and liability cash flows, the Plan should be invested conservatively.

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

Asset Allocation
The Plan is invested in a portfolio of common stocks and bonds. The Plan's current asset allocation target is:

Common Stocks	20%
Bonds	80%

The actual asset mix may fluctuate in response to changes in the Plan's liability stream. It is expected that this liability stream will require a higher allocation to bonds than to stocks for the foreseeable future.

Management
The Assigned Risk Plan is managed by two external investment managers. The bond segment manager has experience and expertise in managing portfolios with the objective of matching assets and liabilities. The stock segment manager's portfolio has broad market exposure.

A custom benchmark has been established for the bond portfolio. The benchmark reflects the duration of the liability stream and the long-term sector allocation of the manager. This benchmark may change over time to reflect changes in the liability stream. The stock segment is semi-passively managed to the S&P 500 Index. The total fund benchmark is a combination of the bond and stock benchmarks, weighted according to the asset allocation target.

A detailed discussion of the investment management of the Assigned Risk Plan is in **Tab H**.

Closed Landfill Investment Fund

Description
The Closed Landfill Investment Fund was established by the Minnesota Legislature in 1999. The Fund will be used by the Commissioner of the Pollution Control Agency to pay for the long-term costs of maintaining the integrity of landfills in Minnesota once they are closed.

Objective
The investment objective of the Closed Landfill Investment Fund is to generate high returns from capital appreciation. By statute, the assets of the Fund are unavailable for expenditure until after fiscal year 2020.

Asset Allocation
The Closed Landfill Investment Fund is invested entirely in common stock. Given the long time horizon of this Fund and the lack of any need for short or mid-term withdrawals, the all stock strategy will maximize the long-term gain of the Fund.

Management
Staff manages all assets of the Closed Landfill Investment Fund in the non-retirement Passively Managed Domestic Equities Pool. Legislation in the 2010 session required the withdrawal for budget purposes of $48 million, leaving the Fund with a balance of less than $1 million.

A discussion of the investment management of the Closed Landfill Investment Fund is in **Tab G**.

Other Post Employment Benefits (OPEB)

Minnesota Statutes, section 471.6175 authorizes local units of government, including school districts, cities and counties, to choose the Public Employees Retirement Association (PERA) to act as trustee to administer accounts for the purpose of paying post-retirement health benefits. If PERA is chosen by the local unit, assets of that unit's account are invested with the SBI. The local unit directs the investment into the three non-retirement investment pools. SBI does not determine the asset allocation policy for these assets.

A list of entities with OPEB accounts with the SBI is in **Tab K**.

Other Miscellaneous Non-Retirement Accounts

The SBI invests other non-retirement accounts for a range of sponsoring entities. By statute, the SBI is responsible for the asset allocation of some of these accounts. By statute, the sponsoring entity is responsible for maintaining an investment policy and asset allocation for the remaining accounts.

A list of non-retirement account entities is in **Tab K**.

STATE CASH ACCOUNTS

Invested Treasurer's Cash Pool

Description
State Cash Accounts represent the cash balances in more than 400 separate accounts that flow through the Minnesota State Treasury. These accounts vary significantly in size.

Most accounts are invested by Staff through a short-term pool referred to as the Treasurer's Cash Pool. The pool has an average daily balance of about $5.5 billion. It contains the cash balances of special or dedicated accounts necessary for the operation of certain State agencies and non-dedicated cash in the State Treasury.

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

Objectives
The objectives for the Cash Accounts are:

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

Asset Allocation
The SBI seeks to provide safety of principal 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.

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

A SBI position paper related to the investment management of State Cash Accounts can be found in **Tab J**.

Certificate of Deposit Program

The SBI manages a certificate of deposit (CD) program in which it purchases CD's from Minnesota financial institutions. The SBI receives a market rate of return on these investments, using the average secondary CD market rate quoted by the New York Federal Reserve Bank. The only assets used in the CD program are a portion of the cash of the Combined Funds. All investments are fully insured by the Federal Deposit Insurance Corporation.

The CD program provides a reliable source of capital to all Minnesota financial institutions, regardless of size, many of which do not have access to the national CD market.

The SBI designed the process so that no single institution is favored in the allocation of assets.

Securities Repurchase Program

The SBI manages a securities repurchase program (Repo Program) to supplement the CD program described above. The SBI receives a market rate of return on these investments using the average secondary CD market rate quoted by the New York Federal Reserve Bank.

The only assets used in the Repo Program are a portion of the cash of the Combined Funds. All investments are fully collateralized. The SBI has designed the program to give preference to institutions that have favorable rankings of community lending from the Small Business Administration.

More detailed descriptions of the CD Program and Repo Program are in **Tab J**.

State Bond Fund

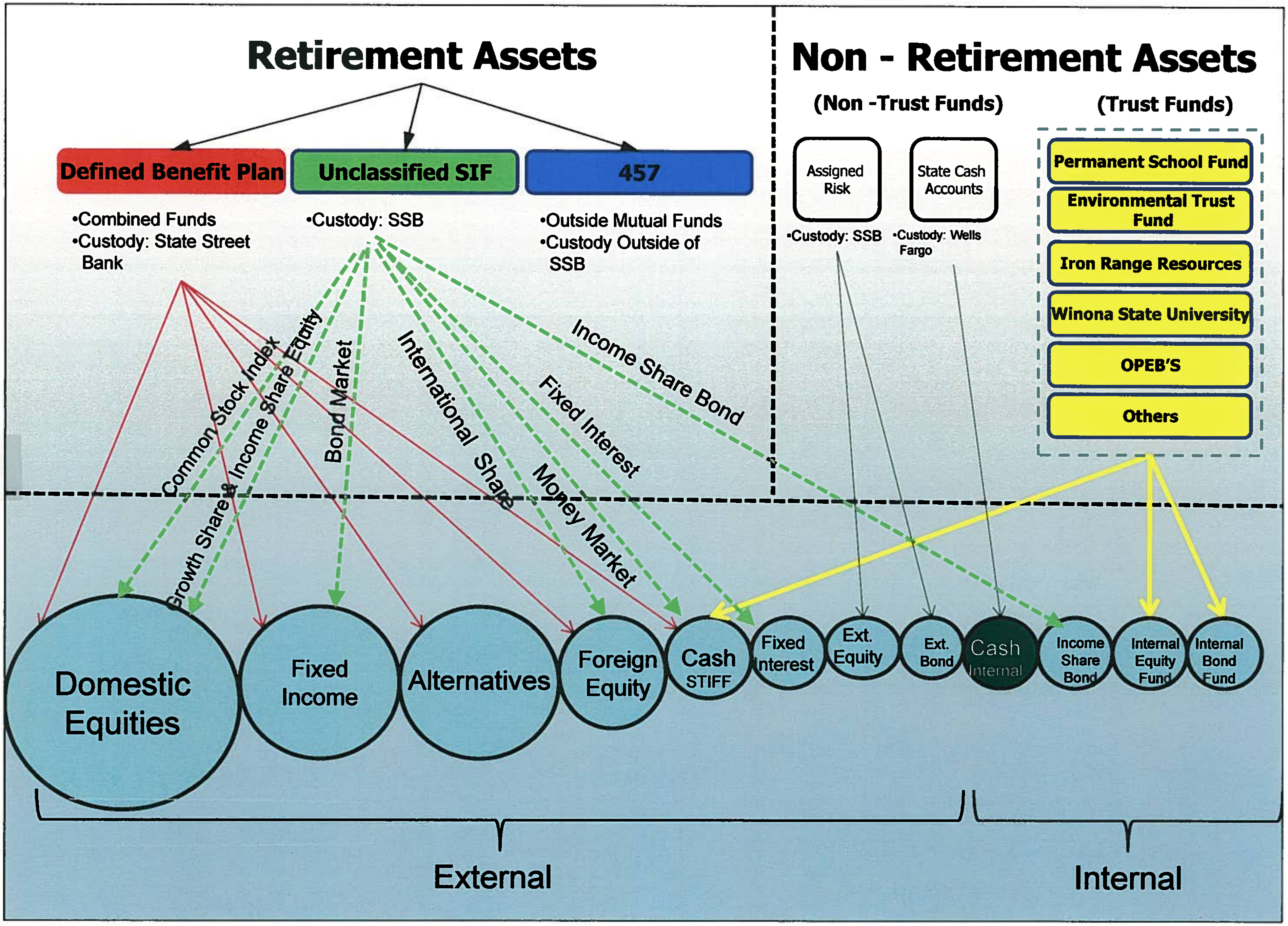
The State Bond Fund is comprised of the debt service funds used to pay down the general obligation bonds issued by the state. Staff manages the Fund in accordance with Federal regulations that govern investment earnings on debt service funds.

Staff invests the assets in the shorter portion of the Fund in the Invested Treasurer's Cash Pool and the assets in the longer term portion of the Fund in long-term, low risk securities such U.S. Treasury, Agency, or high quality, general obligation municipal bonds.

A paper discussing the investment management of the State Bond Fund is in **Tab J**.

Functional Asset Class Pools and Asset Class Owners Chart

The following chart displays the structure of the SBI's Asset Class Pools and owners of the pools.


Retirement Assets
Defined Benefit Plan
Unclassified SIF
457
•Combined Funds
•Custody: State Street Bank
•Custody: SSB
•Outside Mutual Funds
•Custody Outside of SSB
Common Stock Index
Growth Share & Income Share Equity
Bond Market
International Share
Money Market
Fixed Interest
Income Share Bond
Non - Retirement Assets
(Non -Trust Funds)
(Trust Funds)
Assigned Risk
State Cash Accounts
•Custody: SSB
•Custody: Wells Fargo
Permanent School Fund
Environmental Trust Fund
Iron Range Resources
Winona State University
OPEB'S
Others
Domestic Equities
Fixed Income
Alternatives
Foreign Equity
Cash STIFF
Fixed Interest
Ext. Equity
Ext. Bond
Cash Internal
Income Share Bond
Internal Equity Fund
Internal Bond Fund
External
Internal

INVESTMENT MANAGER SELECTION AND RETENTION

All Combined Funds assets and a portion of non-retirement assets are managed by external investment managers retained by the SBI. The SBI employs a rigorous process to monitor these managers and to evaluate potential new managers. The SBI's Manager Retention Policy is in **Tab Q**.

The SBI maintains a set of guidelines to assist in its decisions concerning the selection of new equity and bond managers and the evaluation and retention of all external managers. These guidelines offer several benefits to the SBI:

- Guidelines encourage a comprehensive and consistently applied analysis.
- Guidelines can be used to foster a long-term attitude toward performance evaluation.
- Guidelines communicate investment objectives among the Board, Staff and the managers.

The SBI must attempt to deduce the skills of external managers by searching for the presence or absence of basic building blocks of sound investment management within a given investment firm. The SBI includes both qualitative and quantitative criteria in its evaluations. Qualitative factors relate to aspects of an investment manager's operations that cannot be expressed as numerical decision rules. Quantitative factors are measurable and relate to the performance results and certain risk measures of the investment manager in the context of appropriate benchmark comparisons.

Qualitative factors include:
- Experienced and talented Staff
- Organizational stability and clear leadership
- Planned growth
- Proper accounting and trading operations
- Clearly specified investment style
- Well conceived decision-making process
- Capability to identify and rectify sources of problems

Quantitative factors include:
- Return expectations
- Relative returns compared to a benchmark over time
- Ratio of value added to the expected variability of returns
- Consistent portfolio characteristics over time

Staff meets regularly with each manager and reviews the sources of performance gains and losses in the manager's portfolio. Staff prepares quarterly reports on each manager for the IAC and Board meetings. These reports include performance information and pertinent updates about the managers. Each quarter, each manager prepares a commentary concerning its recent performance, future strategy and any organizational issues. Once a year, Staff has each manager provide current information about the firm, portfolio managers and analysts, product offerings, accounts gained and lost, performance and other relevant information. When appropriate, a given investment management firm will be interviewed at an IAC meeting.

A similar process of information flow and reporting is used to monitor internal investment Staff.

The SBI signs a contract with each investment manager it retains. The contract includes the required state contract features and a set of investment guidelines established by the SBI for that particular investment mandate. Staff uses these investment guidelines as part of its ongoing discussions and monitoring of a given manager. Investment guidelines are reviewed by Staff and reconfirmed with investment managers every year.

A sample investment manager contract and set of investment guidelines are in **Tab R**. A copy of the quarterly manager commentary form and a sample performance graph are also in **Tab R**.

Whereas the principles of evaluation are the same, the long-term illiquid nature of alternative investments requires a somewhat different process for selecting and evaluating alternative investment managers. This process is explained fully in **Tab P**.

Process for hiring and firing investment managers

When the SBI recognizes a need to hire a new investment manager, the following process is used. Staff, with ideas from IAC members and the SBI's general consultant, generates a short list of potential manager candidates and interviews these organizations. The general consultant provides research on the candidate firms. Staff brings the names of finalist candidates to the IAC for discussion. The IAC interviews the finalist firm and makes a recommendation to the Board. The Board acts on the recommendation, and with approval of the recommendation Staff enters into a contract with the approved firm.

The process for terminating a manager is similar. Staff brings a recommendation to the IAC for terminating an investment manager. In most instances the reasons for termination involve qualitative factors concerning the organization not performance of the manager. If it concurs, the IAC recommends approval to the Board who has the authority to terminate a contract. If the Board approves the recommendation, Staff terminates the contractual relationship with the manager. Staff has discretion to remove assets from a manager's portfolio. In the event Staff must remove all assets, the Board must approve the termination of the contract.

Using separate accounts rather than commingled funds.

The SBI strongly prefers to retain domestic equity, international equity and bond managers on a separate account basis not on a commingled fund basis. In a separate account the manager invests only the assets of the SBI. In a commingled fund the manager invests the assets of the SBI along with the assets of other entities. The preference for separate account relationships rests primarily on the following factors. In a separate account the SBI is better able to guide the investment manager's behavior, to control fees, to minimize the impact of cash levels on portfolio returns, to control custody of assets and to retain certain contract flexibility.

With a separate account the SBI is better able to guide investment behavior by specifying investment guidelines by which the manager will invest the portfolio. These guidelines include, for example, the universe of acceptable investments necessary for statutory and investment style considerations. When the SBI has questions about particular investments in the portfolio or the general direction of results relative to the agreed upon benchmark, we expect a high degree of responsiveness from the manager to our concerns. In a commingled fund the SBI is not the only investor and cannot establish investment objectives. The manager invests for other investors and may have less of a need to respond to the concerns of one shareholder. In a separate account the SBI can set the terms of the relationship, whereas in a commingled fund the SBI must accept the terms provided by the manager.

With a separate account the SBI may negotiate fees directly with the manager for the management of SBI dollars. In a commingled fund the SBI must accept the fee structure offered by the manager.

Cash levels may have an impact on portfolio returns. With a separate account the SBI expects the manager to hold minimal levels of cash, and flows into and out of the portfolio are controlled by SBI actions. In a commingled fund the actions of all shareholders affect cashflows. The manager faces a somewhat higher level of uncertainty concerning the cash it needs to have in the portfolio to address potential withdrawals and may hold a relatively larger portion in cash. Sizable inflows may affect at the margin the choice of stocks the manager selects for investment.

In a separate account the SBI maintains custody of assets. The SBI has ownership of the assets in the portfolio rather than owning shares in the commingled fund. Ownership provides the SBI with proxy voting rights of its equity portfolios and the benefits from a securities lending program, neither of which is available through a commingled fund.

Contract provisions differ between the two relationships. In general, in a separate account relationship the SBI retains flexibility in negotiating contract terms rather than being bound by commingled fund trust agreements. The commingled fund manager sets the rules for withdrawing funds from the portfolio. In a separate account the SBI controls the timing of contributions and withdrawals ensuring access to the assets. Compliance with state statutory provisions is easier and more direct in a separate account. In a separate account the SBI is able to reconcile holdings at various times and to audit the use of non-regulated derivatives or leverage in the portfolio. Separate accounts are not subject to the Investment Company Act of 1940, for example, and therefore are not required to comply with several portfolio limits and restrictions prescribed by the SEC as are mutual funds. Bank commingled funds are regulated through bank regulatory processes and have their own set of restrictions not faced by the SBI in a separate account. In separate account contracts, the SBI ensures that futures agreement language is appropriate for SBI purposes, whereas mutual funds and bank commingled funds may set different rules.

The SBI recognizes that some market conditions make it necessary to consider investing on a commingled basis. For example, in 2012 the SBI considered using commingled funds in international emerging markets, but chose to continue with separate accounts.

The SBI is not authorized to use the separate account structure with alternative investments managers. Investing in alternative investments by state law requires the SBI to participate in legal structures operated by general partners in which the SBI is one of many investors in an investment fund.

OTHER OPERATIONAL MATTERS

Investment Restrictions

The Board and the Legislature have enacted several restrictions affecting equity holdings in its portfolios.

The Board maintains a policy not to hold or purchase stocks from companies that derive at least 15 percent of its revenue from the sales of tobacco.

The Legislature enacted laws that restrict the SBI from purchasing or holding stocks and bonds of companies that meet specific criteria concerning doing business in the country of Iran (*M.S.*, section 11A.244).

The Legislature has enacted laws that restrict the SBI from purchasing or holding stocks of companies that meet specific criteria concerning doing business in the country of Sudan (*M.S.*, section 11A.243).

Securities Lending

The SBI participates in a securities lending program managed by the custodian bank. All securities in the accounts with the bank are eligible for the lending program. The program provides incremental returns for the funds. Cash collateral received for the loaned securities is invested by the custodian in a separate account on a fully indemnified basis subject to guidelines from the SBI. The SBI monitors this invested collateral with the same tools and procedures used to monitor other investment managers.

Performance Based Fees

The SBI has developed and implemented a performance based fee program for domestic equity managers with accounts in excess of $100 million to help align the interests of the managers and the SBI.

A SBI position paper concerning performance based fees can be found in **Tab S**.

Administrative Management

By law or good business practice, the SBI undertakes a host of tasks broadly defined as administrative management.

Each year Staff prepares an annual management and budget plan. The plan includes a proposed work plan that is a compilation of on-going responsibilities and new initiatives for the coming year. The proposed management and budget plans are reviewed and approved by the Administrative Committee and recommended to the Board for final approval. The IAC also reviews the plan and budget but takes no formal action on them. The results of Staff's implementation of the management plan form the basis of the Board's annual review of the Executive Director.

A copy of the Management and Budget Plan is available from Staff. An executive summary of the Plan can be found in **Tab T**.

For quarterly meetings of the IAC and the Board, Staff prepares a report which includes detailed reports on managers' short and long-term performance, any relevant organizational updates of the managers, market information, fund performance, and reports detailing current issues under review.

By law, the SBI is required to publish an annual report describing its operations and results for each fiscal year ending June 30. By law, the SBI is required to publish a prospectus describing the investment options available through the Supplemental Investment Fund. A copy of either is available from Staff or can be found on the SBI's website.

The SBI maintains a website (www.sbi.state.mn.us) to provide easy access to information about SBI activities. Information available includes the SBI's most recent annual reports, meeting notices, a summary of the most recent quarterly Board meeting minutes, and general information about the SBI.

The Staff maintains a record retention policy. In general, five years of history and current year records are retained, however, there are exceptions to this policy. For example, legal contracts and alternative investment partnership agreements are retained until Staff receives authorization from the attorney general's office to dispose of them. Copies of each annual report are also maintained.

The SBI maintains a disaster recovery plan to ensure operations and access to liquidity will continue in the event of disaster.

The SBI maintains an investment policy covering Staff purchases and sales of securities for their personal investments. Each Staff member must provide information about the purchase or sale of securities and receive signed authorization from the Executive Director or Assistant Executive Director prior to the transaction. Quarterly, each Staff member must provide a list of their holdings which is compiled into a report that is sent to each Board member.

TAB

A

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CHAPTER 11A

INVESTMENT OF STATE AND PENSION ASSETS

11A.01 STATEMENT OF PURPOSE.

The purpose of this chapter is to establish standards, in addition to the applicable standards of chapter 356A, to ensure that state and pension assets subject to this legislation will be responsibly invested to maximize the total rate of return without incurring undue risk.

History: *1980 c 607 art 14 s 1; 1989 c 319 art 8 s 2*

11A.02 DEFINITIONS.

Subdivision 1. **Applicability.** For the purposes of sections 11A.01 to 11A.25, the terms defined in this section shall have the meanings given them.

Subd. 2. **State board.** "State board" means the Minnesota State Board of Investment created by article XI, section 8 of the Constitution of the state of Minnesota for the purpose of administering and directing the investment of all state funds and pension funds.

Subd. 3. **Council.** "Council" means the Investment Advisory Council created by section 11A.08.

Subd. 4. **Fund.** "Fund" means any of the individual funds, including but not limited to the permanent school fund, general fund of the state, retirement funds and other funds and accounts for which the state board has responsibilities.

Subd. 5. **Director.** "Director" means the executive director of the state board.

Subd. 6. **Management.** "Management" means the performance or delegation of general management duties relating to any fund established pursuant to this chapter.

History: *1980 c 607 art 14 s 2*

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11A.03 STATE BOARD; MEMBERSHIP; ORGANIZATION.

Pursuant to article XI, section 8, of the Constitution of the state of Minnesota, the state board shall be composed of the governor, state auditor, secretary of state, and attorney general. The governor shall serve as ex officio chair of the state board.

History: *1980 c 607 art 14 s 3; 1986 c 444; 1998 c 387 art 2 s 3*

11A.04 DUTIES AND POWERS; APPROPRIATION.

The state board shall:

(1) Act as trustees for each fund for which it invests or manages money in accordance with the standard of care set forth in section 11A.09 if state assets are involved and in accordance with chapter 356A if pension assets are involved.

(2) Formulate policies and procedures deemed necessary and appropriate to carry out its functions. Procedures adopted by the board must allow fund beneficiaries and members of the public to become informed of proposed board actions. Procedures and policies of the board are not subject to the Administrative Procedure Act.

(3) Employ an executive director as provided in section 11A.07.

(4) Employ investment advisors and consultants as it deems necessary.

(5) Prescribe policies concerning personal investments of all employees of the board to prevent conflicts of interest.

(6) Maintain a record of its proceedings.

(7) As it deems necessary, establish advisory committees subject to section 15.059 to assist the board in carrying out its duties.

(8) Not permit state funds to be used for the underwriting or direct purchase of municipal securities from the issuer or the issuer's agent.

(9) Direct the commissioner of management and budget to sell property other than money that has escheated to the state when the board determines that sale of the property is in the best interest of the state. Escheated property must be sold to the highest bidder in the manner and upon terms and conditions prescribed by the board.

(10) Undertake any other activities necessary to implement the duties and powers set forth in this section.

(11) Establish a formula or formulas to measure management performance and return on investment. Public pension funds in the state shall utilize the formula or formulas developed by the state board.

(12) Except as otherwise provided in article XI, section 8, of the Constitution of the state of Minnesota, employ, at its discretion, qualified private firms to invest and manage the assets of funds over which the state board has investment management responsibility. There is annually appropriated to the state board, from the assets of the funds for which the state board utilizes a private investment manager, sums sufficient to pay the costs of employing private firms. Each year, by January 15, the board shall report to the governor and legislature on the cost and the investment performance of each investment manager employed by the board.

(13) Adopt an investment policy statement that includes investment objectives, asset allocation, and the investment management structure for the retirement fund assets under its control. The statement may be revised at the discretion of the state board. The state board

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shall seek the advice of the council regarding its investment policy statement. Adoption of the statement is not subject to chapter 14.

(14) Adopt a compensation plan setting the terms and conditions of employment for unclassified board employees who are not covered by a collective bargaining agreement.

(15) Contract, as necessary, with the board of trustees of the Minnesota State Universities and Colleges System for the provision of investment review and selection services under section 354B.25, subdivision 3, and arrange for the receipt of payment for those services.

There is annually appropriated to the state board, from the assets of the funds for which the state board provides investment services, sums sufficient to pay the costs of all necessary expenses for the administration of the board. These sums will be deposited in the State Board of Investment operating account, which must be established by the commissioner of management and budget.

History: *1980 c 607 art 14 s 4; 1982 c 587 s 1; 1986 c 444; 1987 c 372 art 8 s 1; 1989 c 319 art 8 s 3; 1993 c 244 art 2 s 1; 1998 c 254 art 1 s 2; 2003 c 112 art 2 s 50; 2005 c 55 s 1; 2006 c 277 art 4 s 2; 2009 c 101 art 2 s 109; 2010 c 359 art 8 s 1*

11A.041 [Repealed, 2009 c 169 art 1 s 77]

11A.07 EXECUTIVE DIRECTOR.

Subdivision 1. **Selection.** The state board shall select an executive director.

Subd. 2. **Qualifications.** The director of the state board shall be well qualified by training to administer and invest the money available for investment and possess experience in the management of institutional investment portfolios. The director shall be in the unclassified state service and serve at the pleasure of the state board.

Subd. 3. [Repealed, 1983 c 305 s 28]

Subd. 4. **Duties and powers.** The director, at the direction of the state board, shall:

(1) plan, direct, coordinate, and execute administrative and investment functions in conformity with the policies and directives of the state board and the requirements of this chapter and of chapter 356A;

(2) prepare and submit biennial and annual budgets to the board and with the approval of the board submit the budgets to the Department of Management and Budget;

(3) employ professional and clerical staff as necessary. Employees whose primary responsibility is to invest or manage money or employees who hold positions designated as unclassified under section 43A.08, subdivision 1a, are in the unclassified service of the state. Other employees are in the classified service. Unclassified employees who are not covered by a collective bargaining agreement are employed under the terms and conditions of the compensation plan approved under section 43A.18, subdivision 3b;

(4) report to the state board on all operations under the director's control and supervision;

(5) maintain accurate and complete records of securities transactions and official activities;

(6) establish a policy relating to the purchase and sale of securities on the basis of competitive offerings or bids. The policy is subject to board approval;

(7) cause securities acquired to be kept in the custody of the commissioner of management and budget or other depositories consistent with chapter 356A, as the state board deems appropriate;

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(8) prepare and file with the director of the Legislative Reference Library, by December 31 of each year, a report summarizing the activities of the state board, the council, and the director during the preceding fiscal year. The report must be prepared so as to provide the legislature and the people of the state with a clear, comprehensive summary of the portfolio composition, the transactions, the total annual rate of return, and the yield to the state treasury and to each of the funds whose assets are invested by the state board, and the recipients of business placed or commissions allocated among the various commercial banks, investment bankers, money managers, and brokerage organizations and the amount of these commissions or other fees. The report must include an executive summary;

(9) include on the state board's Web site its annual report and an executive summary of its quarterly reports;

(10) require state officials from any department or agency to produce and provide access to any financial documents the state board deems necessary in the conduct of its investment activities;

(11) receive and expend legislative appropriations; and

(12) undertake any other activities necessary to implement the duties and powers set forth in this subdivision consistent with chapter 356A.

Subd. 5. **Apportionment of expenses.** The annual expenses incurred by the State Board of Investment will be apportioned among the state general fund, the retirement funds administered by the Minnesota State Retirement System, Public Employees Retirement Association, and Teachers Retirement Association, and all other funds as follows:

(1) on a biennial basis, the State Board of Investment, in accordance with biennial budget procedures established by the commissioner of management and budget, may request a direct appropriation that represents the portion of the State Board of Investment expenses necessary to provide investment services to the state general fund. This appropriation must be deposited in the State Board of Investment operating account;

(2) the executive director shall apportion the actual expenses incurred by the State Board of Investment, less the charge to the state general fund, among the funds whose assets are invested by the State Board of Investment, with the exception of the state general fund, based on the weighted average assets under management during the fiscal year. The amounts necessary to pay these charges are apportioned from the investment earnings of each fund. Receipts must be credited to the State Board of Investment operating account;

(3) the actual expenses apportioned and charged to the funds, with the exception of the state general fund and the retirement funds administered by the Minnesota State Retirement System, Public Employees Retirement Association, and Teachers Retirement Association, must be calculated, billed, and paid on a quarterly basis in accordance with procedures for interdepartmental payments established by the commissioner of management and budget; and

(4) the annual estimated expenses to be incurred by the State Board of Investment that will be payable by the retirement funds administered by the Minnesota State Retirement System, Public Employees Retirement Association, and Teachers Retirement Association must be deposited in the State Board of Investment operating account on the first business day of each fiscal year. A reconciliation of the actual expenses compared to the estimated costs must occur at the end of each fiscal year with any surplus or deficit being credited or debited to each of the

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respective funds. The State Board of Investment must present a statement of accrued actual expenses to each fund at the end of each quarter during each fiscal year.

History: *1980 c 607 art 14 s 5; 1982 c 560 s 3; 1983 c 324 s 1; 1Sp1985 c 13 s 76; 1986 c 444; 1989 c 319 art 8 s 4; 1990 c 594 art 1 s 40; 2003 c 112 art 2 s 50; 2005 c 55 s 2; 2006 c 277 art 4 s 3,4; 2009 c 101 art 2 s 19,109; 2012 c 286 art 10 s 1*

11A.075 DISCLOSURE OF EXPENSE REIMBURSEMENT.

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

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

(c) The disclosure required by this section must be filed with the Campaign Finance and Public Disclosure Board by April 15 each year. Each disclosure report must cover the previous calendar year. The statement must be on a form provided by the Campaign Finance and Public Disclosure Board. An individual who fails to file the form required by this section or who files false information, is subject to penalties specified in sections 10A.09 and 10A.025, subdivision 2.

History: *1993 c 192 s 37; 1997 c 202 art 2 s 63; 1999 c 220 s 50*

11A.08 INVESTMENT ADVISORY COUNCIL.

Subdivision 1. **Membership.** There is created an Investment Advisory Council consisting of 17 members. Ten of these members must be experienced in general investment matters. The state board must appoint the ten members. The other seven members are: the commissioner of management and budget; the executive director of the Minnesota State Retirement System; the executive director of the Public Employees Retirement Association; the executive director of the Teachers Retirement Association; a retiree currently receiving benefits from a statewide retirement plan; and two public employees who are active members of funds whose assets are invested by the state board. The governor must appoint the retiree and the public employees for four-year terms.

Subd. 2. **Duties and powers.** The council shall:

(1) advise the state board and the director on general policy matters relating to investments;

(2) advise the state board and the director on methods to improve the rate of return on invested money while insuring adequate security for that money;

(3) advise the state board and the director on the form and content of the report required by section 11A.07, subdivision 4, clause (7), so that the report clearly and objectively discloses the investment activities of the state board and the director;

(4) perform other tasks of an advisory nature as requested by the state board.

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Subd. 3. **Officers; meetings.** The council shall annually elect a chair and vice-chair from among its members, and may elect other officers as necessary. The council shall meet upon the call of the chair of the council or the chair of the state board.

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 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.

Subd. 5. **Liability; indemnification.** A member of the council shall be indemnified and held harmless by the state for any reasonable costs or expenses incurred as a result of any actual or threatened litigation or administrative proceedings arising out of the performance of the member's duties, except an action brought by the state or agency thereof arising from the failure of a council member to perform duties in the manner prescribed in section 11A.09.

Subd. 6. **Conflict of interest; economic interest statement.** No member of the council may participate in deliberations or vote on any matter before the council which will or is likely to result in direct, measurable economic gain to the member. Additionally, no member of the council appointed by the state board may participate in deliberations or vote on any matter before the council which will or is likely to result in direct, measurable economic gain to that member's employer. Members of the council shall file with the Campaign Finance and Public Disclosure Board an economic interest statement in a manner as prescribed by section 10A.09, subdivisions 5 and 6.

History: *1980 c 607 art 14 s 6; 1981 c 298 s 3; 3Sp1982 c 1 art 2 s 3; 1983 c 260 s 4; 1983 c 324 s 2; 1984 c 654 art 2 s 38; 1986 c 444; 1993 c 300 s 1; 2009 c 169 art 1 s 6,109*

11A.09 STANDARD OF CARE.

In the discharge of their respective duties, the members of the state board, director, board staff, and members of the council and any other person charged with the responsibility of investing money pursuant to the standards set forth in sections 11A.01 to 11A.25 shall act in good faith and shall exercise that degree of judgment and care, under circumstances then prevailing, which persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived therefrom. In addition, for the investment of pension fund assets, the members and director of the state board and members of the Investment Advisory Council shall act in accordance with chapter 356A.

History: *1980 c 607 art 14 s 7; 1989 c 319 art 8 s 5*

11A.10 DUTIES OF OTHER OFFICIALS.

Subdivision 1. **Custody of securities.** The commissioner of management and budget and other custodians of securities belonging to the various funds shall provide in the appropriate cases the state board and its delegates with reasonable access thereto. Each security shall be held as an asset of the fund from which the investment expenditure was made.

Subd. 2. **Escheated property.** The commissioner of management and budget shall report immediately to the state board all personal property other than money received by the state of Minnesota as escheated property. If the state board elects to sell escheated property, all money received from the sale shall be credited to the general fund of the state.

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Subd. 3. **Audits.** State audits of the activities of the state board and its delegates shall be conducted by the legislative auditor.

Subd. 4. **Office space.** The commissioner of administration shall provide the director and staff with suitable office and storage space in the State Capitol complex as near as practicable to the office of the commissioner of management and budget.

History: *1980 c 607 art 14 s 8; 2003 c 112 art 2 s 50; 2009 c 101 art 2 s 109*

11A.11 INVESTMENT AND EXPENSE APPROPRIATION.

There is appropriated to the state board annually, and from time to time, the various moneys as are available for investment in the various funds subject to their supervision and control, for the purposes of the purchase, sale, exchange and lending of securities, reinvestment activities, payment of the execution expenses of securities transactions, amortization of premiums or accumulation of discounts, and contribution and redemption of participation in the funds.

History: *1980 c 607 art 14 s 9*

11A.12 GAINS AND LOSSES; DISPOSITION.

All interest and profit accruing from and all losses incurred by investment activity shall be credited to or borne by the fund from which the investment was made.

History: *1980 c 607 art 14 s 10*

11A.13 ASSETS AND DOCUMENTATION.

Subdivision 1. **Legal title to fund assets.** Legal title to the assets of state funds to be invested by the state board must be in the state of Minnesota, or its nominees. Legal title to pension funds to be invested by the state board must be as specified in section 356A.06.

Subd. 2. **Rights of employees; validity of documentation.** The rights of any public employee to any assets in the retirement funds shall be as fixed by the law or laws authorizing or requiring a retirement fund to purchase or order the redemption of investment participations or units on behalf of the public employee. The state board may rely on the documents, forms and applications of the various retirement funds which accompany money for investment or orders to redeem assets as being made in concert with the applicable law and with the rights of the public employees concerned. Accordingly, the state board need not inquire into the legality or validity of any documents, forms and applications.

History: *1980 c 607 art 14 s 11; 1989 c 319 art 8 s 6*

11A.14 MINNESOTA COMBINED INVESTMENT FUNDS.

Subdivision 1. **Establishment.** The Minnesota combined investment funds are established for the purpose of providing investment vehicles for assets of the participating public retirement plans and nonretirement funds. The assets of participating nonretirement funds may not be commingled with the assets of participating public retirement plans. The combined funds shall consist of the following investment accounts: cash management accounts, equity accounts, fixed income accounts, and any other accounts determined appropriate by the state board.

Subd. 2. **Assets.** The assets of the combined investment funds shall consist of the money certified to and received by the state board from participating retirement plans and nonretirement funds which shall be used to purchase investment shares in the appropriate investment accounts. Each participating plan or fund shall own an undivided participation in all the assets of the

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particular accounts of the combined funds in which it participates. As of any date, the total claim of a participating plan or fund on the assets in each account shall be equal to the ratio of units owned by a plan or fund in each account to the total issued units then outstanding.

Subd. 3. **Management.** The combined investment funds shall be managed by the state board.

Subd. 4. **Investments.** The assets of the combined investment funds shall be invested by the state board subject to the provisions of section 11A.24, except that any individual account may be completely invested in a single asset class or managed in a separate account by the state board at its discretion.

Subd. 5. **Participation in Minnesota combined investment funds.** Any public retirement plan or nonretirement fund authorized by law to have its assets managed by the state board may participate in the Minnesota combined investment funds.

Subd. 6. **Initial transfer of assets.** As of July 1, 1980, or a later date as determined by the state board, the participating funds shall transfer to the combined investment funds all appropriate securities then held together with cash necessary for the purchase of units in the combined fund accounts.

Subd. 7. **Initial valuation of assets and units.** All assets transferred to the Minnesota combined investment funds shall be valued at their current market value as determined by the state board, including accrued interest. The initial value of each account unit shall be $1,000 with each participating fund allocated units in the various accounts of the Minnesota combined investment funds in the same proportion as their assets are to the total assets in each account.

Subd. 8. **Realized appreciation or depreciation.** Any realized gains or losses in the value of investments incurred by a transferring fund pursuant to subdivision 7 shall be recognized on the date of the transfer.

Subd. 9. **Valuation of units.** (a) Valuation of units for the accounts in the Minnesota combined investment funds shall be performed as of the last business day of each month, or more frequently should the state board determine that additional valuation dates are necessary.

(b) The value of a unit for each account shall be determined by the following procedure:

(1) As of the close of business on the valuation date the state board shall determine the fair market value of each asset in each account, using the references, pricing services, consultants, or other methods as the state board deems appropriate.

(2) The sum total of the market value of all securities plus cash, less the value of undistributed income in each account, shall be divided by the number of units issued and outstanding for the account to determine the value per account unit.

Subd. 10. **Purchase and redemption of units.** Purchase and redemption of units shall be on the first business day following the valuation date. All transactions shall be at the unit value established on the immediately preceding valuation date. Except for the initial purchase of units by an authorized participant, all purchases and redemptions shall be made in cash unless the state board determines that an exception is necessary.

Subd. 11. **Earnings defined.** Investment earnings shall be the sum total of the following of each account:

(1) Dividends receivable on securities trading ex-dividend to and including the valuation date.

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(2) Cash dividends received to and including the valuation date that were not accounted for on a previous valuation date.

(3) Accrued interest to and including the valuation date.

(4) Interest received which had not been accrued and accounted for on a prior valuation date.

(5) Income from the sale of options, rights, warrants, or security lending.

(6) Other income received to and including the valuation date.

Subd. 12. **Distribution of earnings.** At least once each year the state board shall distribute to each participant net earnings determined proportionately in accordance with their average unit holdings in each account during the period. Unless otherwise directed by the participating fund, any distributions shall be used to purchase additional units in the accounts.

Subd. 13. **Records required.** The executive director of the state board shall keep accounting records. The records shall reflect the number of units in the Minnesota combined investment funds owned by each participating fund. No certificates or other evidence of ownership shall be required.

Subd. 14. **Reports required.** As of each valuation date, or as often as the state board determines, each participant shall be informed of the number of units owned and the current value of the units.

History: *1980 c 607 art 14 s 12; 1981 c 37 s 2; 1984 c 383 s 1; 1985 c 224 s 1; 1990 c 426 art 1 s 3; 1992 c 539 s 1; 1993 c 300 s 2-5; 2012 c 286 art 10 s 2*

11A.15 STATE BOND FUND.

Subdivision 1. **Establishment.** Pursuant to article XI, section 7, of the Constitution of the state of Minnesota, there is hereby established a state bond fund for the purpose of the timely payment of principal and interest on bonds for which the full faith and credit of the state has been pledged. The state bond fund shall be a continuation of the state bond fund in existence on January 1, 1980.

Subd. 2. **Assets.** Any money appropriated to the state bond fund, any income arising from the invested assets of the state bond fund which is not immediately required to pay the principal or interest on state bonds and any proceeds arising from the sale of any securities in the state bond fund shall constitute the assets of the state bond fund.

Subd. 3. **Management.** The state bond fund shall be managed by the commissioner of management and budget who shall, from time to time, certify to the state board those portions of the state bond fund which in the judgment of the commissioner of management and budget are not required for immediate use.

Subd. 4. **Investment.** The state board shall invest assets of the state bond fund subject to the provisions of section 11A.25.

Subd. 5. **Withdrawal of assets.** Securities sufficient to equal the amount of money certified by the commissioner of management and budget as necessary to pay the principal or interest due on state bonds in excess of any cash on hand shall be sold at the request of the commissioner of management and budget and the certified amount of money shall be transferred to the commissioner of management and budget.

Subd. 6. **Credit of income towards subsequent appropriations.** Notwithstanding provisions of section 11A.12, the net income of the state bond fund after the recovery of any losses

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from the sale of securities shall be deducted from the amount of any subsequent appropriations for the payment of principal and interest of state bonds.

History: *1980 c 607 art 14 s 13; 2003 c 112 art 2 s 50; 2009 c 101 art 2 s 109*

11A.16 PERMANENT SCHOOL FUND.

Subdivision 1. **Establishment.** Pursuant to article XI, section 8, of the Constitution of the state of Minnesota, there is hereby established a permanent school fund which shall be a continuation of the permanent school fund in existence on January 1, 1980.

Subd. 2. **Assets.** The permanent school fund shall consist of the proceeds derived from the school lands, the swamp lands and the internal improvement lands granted to the state and all cash and investments credited to the permanent school fund, to the swamp land fund and to the internal improvement land fund.

Subd. 3. **Management.** The permanent school fund shall be managed by the commissioner of management and budget.

Subd. 4. **Investment.** The permanent school fund shall be invested by the state board subject to the provisions of section 11A.24.

Subd. 5. **Calculation of income.** As of the end of each fiscal year, the state board shall calculate the investment income earned by the permanent school fund. The investment income earned by the fund shall equal the amount of interest on debt securities, dividends on equity securities, and interest earned on certified monthly earnings prior to the transfer to the Department of Education. Gains and losses arising from the sale of securities shall be apportioned as follows:

(a) 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.

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

Subd. 6. **Disposition of income.** Notwithstanding provisions of section 11A.12, the income of the permanent school fund as calculated pursuant to subdivision 5, shall be credited to the permanent school fund, and transferred to the school endowment fund as needed for payments made pursuant to section 127A.32.

History: *1980 c 607 art 14 s 14; 1984 c 482 s 3; 1992 c 539 s 2; 1999 c 86 art 1 s 3; 2009 c 101 art 2 s 109; 1Sp2011 c 11 art 1 s 1*

11A.17 MINNESOTA SUPPLEMENTAL INVESTMENT FUND.

Subdivision 1. **Purpose; accounts; continuation.** (a) The purpose of the supplemental investment fund is to provide an investment vehicle for the assets of various public retirement plans and funds.

(b) The fund consists of eight investment accounts: an income share account, a growth share account, an international share account, a money market account, a fixed interest account, a bond market account, a common stock index account, and a volunteer firefighter account.

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(c) The supplemental investment fund is a continuation of the supplemental retirement fund in existence on January 1, 1980.

Subd. 2. **Assets.** (a) The assets of the supplemental investment fund consist of the money certified and transmitted to the state board from the participating public retirement plans and funds and from the voluntary statewide lump-sum volunteer firefighter retirement plan under section 353G.08.

(b) With the exception of the assets of the voluntary statewide lump-sum volunteer firefighter retirement fund, the assets must be used to purchase investment shares in the investment accounts as specified by the plan or fund. The assets of the voluntary statewide lump-sum volunteer firefighter retirement fund must be invested in the volunteer firefighter account.

(c) These accounts must be valued at least on a monthly basis but may be valued more frequently as determined by the State Board of Investment.

Subd. 3. **Management.** The supplemental investment fund shall be managed by the state board.

Subd. 4. **Investment.** The assets of the supplemental investment fund must be invested by the state board subject to section 11A.24; provided, however, that:

(1) the bond market account and the money market account must be invested entirely in debt obligations;

(2) the growth share account and the common stock index account may be invested entirely in corporate stocks;

(3) the international share account may be invested entirely in international stocks; and

(4) the fixed interest account may be invested in guaranteed investment contracts and debt obligations.

Subd. 5. **Participating public retirement plans or funds.** Any public retirement plan or fund authorized or required by law to invest its assets in the supplemental investment fund may from time to time as provided by law certify moneys to the state board for the purchase of investment shares in the investment accounts of the supplemental investment account. The state board shall credit each purchase of investment shares to the appropriate participating public retirement plan or fund and shall confirm each purchase in writing to the appropriate plan or fund. Each participating public retirement plan or fund shall maintain adequate records to account for money certified to the supplemental investment fund.

Subd. 6. **Participation in fund.** Each public retirement plan or fund which has certified money to the state board for investment in the supplemental investment fund shall have a participation in each investment account of the fund in which it has money invested. The participation shall be determined by the ratio of the number of shares credited to the public retirement plan or fund to the total number of shares in that account.

Subd. 7. **Purchase of shares.** The state board shall allocate shares in the investment account or accounts at least monthly following the receipt of the funds for purchase of shares from the public retirement plan or fund as specified in the certification. The purchase price for shares shall be determined using the procedure specified in subdivision 9.

Subd. 8. **Redemption of shares.** The state board shall redeem shares in the investment account or accounts on the first business day after the valuation date next following the receipt of the request for redemption of shares from the public retirement plan or fund. The redemption

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value for shares shall be determined using the procedure specified in subdivision 9. Money representing the value of the redeemed shares shall be transmitted to the public retirement plan or fund making the request.

Subd. 9. **Valuation of investment shares.** The value of investment shares in the income share account, the growth share account, the international share account, the bond market account, and the common stock index account must be determined by dividing the total market value of the securities constituting the respective account by the total number of shares then outstanding in the investment account. The value of investment shares in the money market account and the fixed interest account is $1 a share. Terms as to withdrawal schedules will be agreed upon by the public retirement fund and the state board.

Subd. 10. **Certifications for investment and requests for redemption.** The state board may specify the required forms for certifications of money for investment and requests for redemption of investment shares and may require the filing of any other documents which it deems necessary.

Subd. 10a. [Repealed, 1998 c 390 art 2 s 21 para (a)]

Subd. 11. **Prospectus.** Annually, by July 2, the state board shall prepare and shall issue a prospectus for the supplemental investment fund with separate exhibits for each investment account. The exhibit for each account must include its investment objectives, asset allocation, and past investment performance. Upon request, the board shall provide a list of each security in the fund and show the following items, whichever are applicable:

(1) the purchase price of the security;

(2) the current market value of the security;

(3) the current dividend or interest rate of the security;

(4) the rating of a debt security issued by a nationally recognized rating agency if it is other than a security issued or guaranteed by the United States government.

The state board shall transmit sufficient copies of the prospectus to each public retirement plan or fund participating in the supplemental investment account to meet the plan or fund's distribution requirements. The prospectus must be filed with the director of the Legislative Reference Library as provided by section 3.195.

Subd. 12. [Repealed, 1988 c 453 s 12]

Subd. 13. [Repealed, 1988 c 453 s 12]

Subd. 14. [Repealed, 1998 c 390 art 2 s 21 para (a)]

History: *1980 c 607 art 14 s 15; 1981 c 208 s 1; 1981 c 224 s 14; 1983 c 324 s 3; 1985 c 224 s 2; 1986 c 356 s 1-5; 1988 c 453 s 1-5; 1992 c 539 s 3-7; 1994 c 604 art 1 s 1-5; 1998 c 390 art 2 s 2; 1Sp2003 c 12 art 2 s 1; 2009 c 32 s 5; 2009 c 169 art 9 s 1,2*

11A.18 [Repealed, 2009 c 169 art 1 s 77]

11A.181 [Repealed, 2009 c 169 art 1 s 77]

11A.19 Subdivision 1. [Repealed, 1990 c 426 art 1 s 1; 1990 c 570 art 12 s 64]

Subd. 2. [Repealed, 1990 c 426 art 1 s 1; 1990 c 570 art 12 s 64]

Subd. 3. [Repealed, 1990 c 426 art 1 s 1; 1990 c 570 art 12 s 64]

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Subd. 4. [Repealed, 1990 c 426 art 1 s 1; 1990 c 570 art 12 s 64]

Subd. 5. [Repealed, 1990 c 426 art 1 s 1; 1990 c 570 art 12 s 64]

Subd. 6. [Repealed, 1990 c 426 art 1 s 1; 1990 c 570 art 12 s 64]

Subd. 7. [Repealed, 1990 c 426 art 1 s 1; 1990 c 570 art 12 s 64]

Subd. 8. [Repealed, 1990 c 426 art 1 s 1; 1990 c 570 art 12 s 64]

Subd. 9. [Repealed, 1990 c 426 art 1 s 2; 1990 c 570 art 12 s 64]

11A.20 INVESTMENT OF STATE TREASURY FUNDS NOT CURRENTLY NEEDED.

Subdivision 1. **Certification.** When there are funds in the state treasury over and above the amount that the commissioner of management and budget has determined are currently needed, the commissioner shall certify to the state board the amount thereof.

Subd. 2. **Investment.** The certified amount of state treasury funds not currently needed shall be invested by the state board subject to the provisions of section 11A.25.

Subd. 3. **Crediting of investment income.** Notwithstanding provisions of section 11A.12, all investment income and all investment losses attributable to the investment of state treasury funds, other than the game and fish fund, not currently needed shall be credited to the general fund.

History: *1980 c 607 art 14 s 18; 1981 c 356 s 254; 1Sp1985 c 13 s 77; 2009 c 101 art 2 s 109*

11A.21 INVESTMENT OF HIGHWAY FUNDS.

Subdivision 1. **Certification.** The commissioner of transportation shall certify to the state board those portions of the highway user tax distribution fund established pursuant to article XIV, section 5 of the Constitution of the state of Minnesota; the trunk highway fund established pursuant to article XIV, section 6 of the Constitution of the state of Minnesota; the county state-aid highway fund established pursuant to article XIV, section 7 of the Constitution of the state of Minnesota; and the municipal state-aid street fund established pursuant to article XIV, section 8 of the Constitution of the state of Minnesota, which in the judgment of the commissioner are not required for immediate use.

Subd. 2. **Investment.** The certified amount of highway funds not currently needed shall be invested by the state board subject to the provisions of section 11A.25.

History: *1980 c 607 art 14 s 19; 1993 c 266 s 14*

11A.22 [Repealed, 1989 c 335 art 4 s 109]

11A.23 INVESTMENT OF RETIREMENT FUNDS AND PLANS.

Subdivision 1. **Certification of assets not needed for immediate use.** Each executive director administering a retirement fund or plan enumerated in subdivision 4 shall, from time to time, certify to the state board for investment those portions of the assets of the retirement fund or plan which in the judgment of the executive director are not required for immediate use.

Subd. 2. **Investment.** Retirement fund assets certified to the state board under subdivision 1 must be invested by the state board subject to the provisions of section 11A.24. Retirement fund assets transferred to the combined investment fund or the supplemental investment fund must be invested by the state board as part of those funds.

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Subd. 3. **Withdrawal of assets.** When an executive director administering a retirement fund or plan enumerated in subdivision 4, certifies to the state board that invested assets of the fund or plan are required for immediate use, the state board shall sell securities to equal the amount of assets certified as required and shall order the transfer of the assets to the appropriate executive director.

Subd. 4. **Covered retirement funds and plans.** The provisions of this section apply to the following retirement funds and plans:

(1) Board of Trustees of the Minnesota State Colleges and Universities supplemental retirement plan established under chapter 354C;

(2) state employees retirement fund established pursuant to chapter 352;

(3) correctional employees retirement plan established pursuant to chapter 352;

(4) State Patrol retirement fund established pursuant to chapter 352B;

(5) unclassified employees retirement plan established pursuant to chapter 352D;

(6) general employees retirement fund established pursuant to chapter 353;

(7) public employees police and fire fund established pursuant to chapter 353;

(8) teachers' retirement fund established pursuant to chapter 354;

(9) judges' retirement fund established pursuant to chapter 490; and

(10) any other funds required by law to be invested by the board.

History: *1980 c 607 art 14 s 21; 1981 c 37 s 2; 1981 c 208 s 10; 1981 c 224 s 15; 1992 c 464 art 1 s 2; art 2 s 1; 1993 c 13 art 1 s 8; 1995 c 141 art 4 s 1; 1995 c 212 art 4 s 64; 2009 c 169 art 1 s 7,8; 2010 c 359 art 12 s 2*

11A.235 ACCOUNT FOR INVESTMENT OF CERTAIN DULUTH FUNDS OR ASSETS.

Subdivision 1. **Establishment.** The State Board of Investment, when requested by the city of Duluth, may invest the funds or assets of the city's community investment trust fund in a special account for that purpose in the combined investment funds established in section 11A.14, subject to the policies and procedures established by the State Board of Investment. Use of the funds in the account is restricted to debt service payments for the city's street improvement program or to any other use approved in accordance with Section 54(E) of the home rule charter of the city of Duluth.

Subd. 2. **Account maintenance and investment.** The city may deposit money in the account and may withdraw money from the account for purposes approved by the Duluth City Council in accordance with Section 54(E) of the home rule charter of the city of Duluth. Such transactions must be at a time and in a manner required by the executive director of the State Board of Investment. Investment earnings must be credited to the account of the city. The account may be terminated by the city at any time.

History: *2007 c 14 s 1*

11A.24 AUTHORIZED INVESTMENTS.

Subdivision 1. **Securities generally.** (a) The state board is authorized to purchase, sell, lend, and exchange the securities specified in this section, for funds or accounts specifically made subject to this section, including puts and call options and future contracts traded on a contract market regulated by a governmental agency or by a financial institution regulated by a governmental agency. These securities may be owned directly or through shares in

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exchange-traded or mutual funds, or as units in commingled trusts, subject to any limitations as specified in this section.

(b) Any agreement to lend securities must be concurrently collateralized with cash or securities with a market value of not less than 100 percent of the market value of the loaned securities at the time of the agreement. Any agreement for put and call options and futures contracts may only be entered into with a fully offsetting amount of cash or securities. Only securities authorized by this section, excluding those under subdivision 6, paragraph (a), clauses (1) to (3), may be accepted as collateral or offsetting securities.

Subd. 2. **Government obligations.** The state board is authorized to invest funds in governmental bonds, notes, bills, mortgages, and other evidences of indebtedness if the issue is backed by the full faith and credit of the issuer or if the issue is rated among the top four quality rating categories by a nationally recognized rating agency. The obligations in which the board may invest under this subdivision are guaranteed or insured issues of:

(1) the United States, its agencies, its instrumentalities, or organizations created and regulated by an act of Congress;

(2) the Dominion of Canada or any of its provinces, provided the principal and interest are payable in United States dollars;

(3) any of the states or any of their municipalities, political subdivisions, agencies, or instrumentalities; and

(4) any United States government sponsored organization of which the United States is a member, if the principal and interest are payable in United States dollars.

Subd. 3. **Corporate obligations.** (a) The state board is authorized to invest funds in bonds, notes, debentures, transportation equipment obligations, and any other longer term evidences of indebtedness issued or guaranteed by a corporation organized under the laws of the United States or any state of the United States, or the Dominion of Canada or any Canadian province if:

(1) the principal and interest of obligations of corporations incorporated or organized under the laws of the Dominion of Canada or any Canadian province are payable in United States dollars; and

(2) the obligations are rated among the top four quality categories by a nationally recognized rating agency.

(b) The state board may invest in unrated corporate obligations or in corporate obligations that are not rated among the top four quality categories as provided in paragraph (a), clause (2), if:

(1) the aggregate value of these obligations does not exceed five percent of the market value of the fund for which the state board is investing;

(2) the state board's participation is limited to 50 percent of a single offering subject to this paragraph; and

(3) the state board's participation is limited to 25 percent of an issuer's obligations subject to this paragraph.

Subd. 4. **Other obligations.** (a) The state board is authorized to invest funds in:

(1) bankers acceptances and deposit notes if issued by a United States bank that is rated in the highest four quality categories by a nationally recognized rating agency;

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(2) certificates of deposit if issued by a United States bank or savings institution that is rated in the top four quality categories by a nationally recognized rating agency or whose certificates of deposit are fully insured by federal agencies, or certificates of deposits issued by a credit union in an amount within the limit of the insurance coverage provided by the National Credit Union Administration;

(3) commercial paper if issued by a United States corporation or its Canadian subsidiary and if rated in the highest two quality categories by a nationally recognized rating agency;

(4) mortgage securities and asset-backed securities if rated in the top four quality categories by a nationally recognized rating agency;

(5) repurchase agreements and reverse repurchase agreements if collateralized with letters of credit or securities authorized in this section;

(6) guaranteed investment contracts if issued by an insurance company or a bank that is rated in the top four quality categories by a nationally recognized rating agency or alternative guaranteed investment contracts if the underlying assets comply with the requirements of this section;

(7) savings accounts if fully insured by a federal agency; and

(8) guaranty fund certificates, surplus notes, or debentures if issued by a domestic mutual insurance company.

(b) Sections 16A.58, 16C.03, subdivision 4, and 16C.05 do not apply to certificates 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 is authorized to 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.

Subd. 5. **Corporate stocks.** The state board is authorized to invest funds in stocks or convertible issues of any corporation organized under the laws of the United States or any of its states, the Dominion of Canada or any of its provinces, or any corporation listed on an exchange that is regulated by an agency of the United States or of the Canadian national government.

An investment in any corporation must not exceed five percent of the total outstanding shares of that corporation, except that the state board may hold up to 20 percent of the shares of a real estate investment trust and up to 20 percent of the shares of a closed-end mutual fund.

Subd. 5a. **Asset mix limitations.** The aggregate value of investments under subdivision 5, plus the aggregate value of all investments under subdivision 6, must not exceed 85 percent of the market value of a fund.

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Subd. 6. **Other investments.** (a) In addition to the investments authorized in subdivisions 1 to 5, and subject to the provisions in paragraph (b), the state board is authorized to invest funds in:

(1) equity and debt investment businesses through participation in limited partnerships, trusts, private placements, limited liability corporations, limited liability companies, limited liability partnerships, and corporations;

(2) real estate ownership interests or loans secured by mortgages or deeds of trust or shares of real estate investment trusts through investment in limited partnerships, bank-sponsored collective funds, trusts, mortgage participation agreements, and insurance company commingled accounts, including separate accounts;

(3) resource investments through limited partnerships, trusts, private placements, limited liability corporations, limited liability companies, limited liability partnerships, and corporations; and

(4) international securities.

(b) The investments authorized in paragraph (a) must conform to the following provisions:

(1) the aggregate value of all investments made under paragraph (a), clauses (1) to (3), may not exceed 35 percent of the market value of the fund for which the state board is investing;

(2) there must be at least four unrelated owners of the investment other than the state board for investments made under paragraph (a), clause (1), (2), or (3);

(3) state board participation in an investment vehicle is limited to 20 percent thereof for investments made under paragraph (a), clause (1), (2), or (3); and

(4) state board participation in a limited partnership does not include a general partnership interest or other interest involving general liability. The state board may not engage in any activity as a limited partner which creates general liability.

(c) All financial, business, or proprietary data collected, created, received, or maintained by the state board in connection with investments authorized by paragraph (a), clause (1), (2), or (3), are nonpublic data under section 13.02, subdivision 9. As used in this paragraph, "financial, business, or proprietary data" means data, as determined by the responsible authority for the state board, that is of a financial, business, or proprietary nature, the release of which could cause competitive harm to the state board, the legal entity in which the state board has invested or has considered an investment, the managing entity of an investment, or a portfolio company in which the legal entity holds an interest. As used in this section, "business data" is data described in section 13.591, subdivision 1. Regardless of whether they could be considered financial, business, or proprietary data, the following data received, prepared, used, or retained by the state board in connection with investments authorized by paragraph (a), clause (1), (2), or (3), are public at all times:

(1) the name and industry group classification of the legal entity in which the state board has invested or in which the state board has considered an investment;

(2) the state board commitment amount, if any;

(3) the funded amount of the state board's commitment to date, if any;

(4) the market value of the investment by the state board;

(5) the state board's internal rate of return for the investment, including expenditures and receipts used in the calculation of the investment's internal rate of return; and

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(6) the age of the investment in years.

Subd. 7. **Appropriation.** There is annually appropriated to the state board, from the assets of the funds for which the state board invests relating to authorized investments under subdivision 6, paragraph (a), sums sufficient to pay the costs for the management of these assets by private management firms.

History: *1980 c 607 art 14 s 22; 1981 c 208 s 3-6,9; 1982 c 587 s 2; 1983 c 216 art 1 s 5; 1983 c 324 s 7-9; 1984 c 382 s 1; 1984 c 383 s 2,3; 1985 c 224 s 3-5; 1987 c 72 s 1; 1987 c 372 art 8 s 2-6; 1988 c 453 s 7,8; 1991 c 47 s 1; 1991 c 206 s 1; 1992 c 539 s 9; 1992 c 587 art 2 s 2; 1992 c 592 s 2; 1993 c 300 s 6,7; 1994 c 604 art 1 s 7-11; 1995 c 122 s 1; 1998 c 386 art 2 s 8; 2000 c 392 s 1,2; 2005 c 156 art 2 s 7; 2005 c 163 s 2; 2009 c 86 art 1 s 90; 2012 c 286 art 10 s 3*

11A.241 INVESTMENT IN NORTHERN IRELAND.

Subdivision 1. **List of investments.** (a) By January 1 of each year, the state board shall:

(1) compile a list of corporations that, directly or through a subsidiary, do business in Northern Ireland and in whose stocks or obligations the board has invested under section 11A.24, subdivision 3 or 5; and

(2) determine whether each corporation on the list has, during the preceding year, taken affirmative action to eliminate religious or ethnic discrimination in Northern Ireland.

(b) In making the determination required by paragraph (a), clause (2), the state board shall consider whether a corporation has, during the preceding year, taken substantial action designed to lead toward the achievement of the following goals:

(1) increasing representation of persons from underrepresented religious groups at all levels in its work force;

(2) providing adequate security for employees who are members of minority religious groups, both at the workplace and while traveling to and from work;

(3) creating a climate in the workplace free from religious or political provocation;

(4) publicly advertising all job openings and making special recruiting efforts to attract applicants from underrepresented religious groups;

(5) providing that layoff, recall, and termination procedures do not favor workers who are members of particular religious groups;

(6) abolishing job reservations, apprenticeship restrictions, and differential employment criteria that discriminate on the basis of religious or ethnic origin;

(7) developing new programs and expanding existing programs to prepare current employees who are members of minority religious groups for skilled jobs;

(8) establishing procedures to assess, identify, and recruit employees who are members of minority religious groups and who have potential for advancement; and

(9) appointing senior management employees to oversee affirmative action efforts and the setting of timetables for carrying out clauses (1) to (8).

Subd. 2. **Affirmative action policy.** Whenever feasible, the board shall sponsor, cosponsor, or support shareholder resolutions designed to encourage corporations in which the board has invested to pursue a policy of affirmative action in Northern Ireland.

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Subd. 3. **Divestment not required.** Nothing in this section may be construed to require the state board to dispose of existing investments or to make future investments that violate sound investment policy for public pensions.

History: *1988 c 687 s 1*

11A.243 INVESTMENT IN SUDAN.

Subdivision 1. **Definitions.** (a) For the purposes of this section, the following items have the meanings given them in this subdivision.

(b) "Active business operations" means all business operations that are not inactive business operations.

(c) "Business operations" means engaging in commerce in any form in Sudan, including by acquiring, developing, maintaining, owning, selling, possessing, leasing, or operating equipment, facilities, personnel, products, services, personal property, real property, or any other apparatus of business or commerce.

(d) "Company" means any sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, limited liability company, or other entity or business association, including all wholly owned subsidiaries, majority-owned subsidiaries, parent companies, or affiliates of such entities or business associations, that exists for profit-making purposes.

(e) "Complicit" means taking actions during any preceding 20-month period that have directly supported or promoted the genocidal campaign in Darfur, including, but not limited to, preventing Darfur's victimized population from communicating with each other, encouraging Sudanese citizens to speak out against an internationally approved security force for Darfur, actively working to deny, cover up, or alter the record on human rights abuses in Darfur, or other similar actions.

(f) "Direct holdings" in a company means all securities of that company held directly by the State Board of Investment or in an account or fund in which the State Board of Investment owns all shares or interests.

(g) "Government of Sudan" means the government in Khartoum, Sudan, which is led by the national congress party (formerly known as the national Islamic front) or any successor government formed on or after October 13, 2006, including the coalition national unity government agreed upon in the comprehensive peace agreement for Sudan, and does not include the regional government of southern Sudan.

(h) "Inactive business operations" means the mere continued holding or renewal of rights to property previously operated for the purpose of generating revenues but not presently deployed for such purpose.

(i) "Indirect holdings" in a company means all securities of that company held in an account or fund, such as a mutual fund, managed by one or more persons not employed by the State Board of Investment, in which the State Board of Investment owns shares or interests together with other investors not subject to the provisions of this section.

(j) "Marginalized populations of Sudan" include, but are not limited to, the portion of the population in the Darfur region that has been genocidally victimized; the portion of the population of southern Sudan victimized by Sudan's north-south civil war; the Beja, Rashidiya, and other similarly underserved groups of eastern Sudan; the Nubian and other similarly underserved groups

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in Sudan's Abyei, Southern Blue Nile, and Nuba Mountain regions; and the Amri, Hamadab, Manasir, and other similarly underserved groups of northern Sudan.

(k) "Military equipment" means weapons, arms, military supplies, and equipment that readily may be used for military purposes, including, but not limited to, radar systems or military-grade transport vehicles, or supplies or services sold or provided directly or indirectly to any force actively participating in armed conflict in Sudan.

(l) "Mineral extraction activities" include exploring, extracting, processing, transporting, or wholesale selling or trading of elemental minerals or associated metal alloys or oxides (ore), including gold, copper, chromium, chromite, diamonds, iron, iron ore, silver, tungsten, uranium, and zinc, as well as facilitating such activities, including the provision of supplies or services in support of such activities.

(m) "Oil-related activities" include, but are not limited to, owning rights to oil blocks; exporting, extracting, producing, refining, processing, exploring for, transporting, selling, or trading of oil; constructing, maintaining, or operating a pipeline, refinery, or other oil-field infrastructure; and facilitating such activities, including the provision of supplies or services in support of such activities, provided that the mere retail sale of gasoline and related consumer products shall not be considered oil-related activities.

(n) "Power production activities" means any business operation that involves a project commissioned by the National Electricity Corporation (NEC) of Sudan or other similar government of Sudan entity whose purpose is to facilitate power generation and delivery, including, but not limited to, establishing power-generating plants or hydroelectric dams, selling or installing components for the project, providing service contracts related to the installation or maintenance of the project, as well as facilitating such activities, including the provision of supplies or services in support of such activities.

(o) "Scrutinized company" means any company that meets the criteria in clause (1), (2), or (3):

(1) the company has business operations that involve contracts with or provision of supplies or services to:

(i) the government of Sudan;

(ii) companies in which the government of Sudan has any direct or indirect equity share;

(iii) government of Sudan-commissioned consortiums or projects; or

(iv) companies involved in government of Sudan-commissioned consortiums or projects; and

(A) more than ten percent of the company's revenues or assets linked to Sudan involve oil-related activities or mineral extraction activities; less than 75 percent of the company's revenues or assets linked to Sudan involve contracts with or provision of oil-related or mineral extracting products or services to the regional government of southern Sudan or a project or consortium created exclusively by that regional government; and the company has failed to take substantial action; or

(B) more than ten percent of the company's revenues or assets linked to Sudan involve power production activities; less than 75 percent of the company's power production activities include projects whose intent is to provide power or electricity to the marginalized populations of Sudan; and the company has failed to take substantial action;

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(2) the company is complicit in the Darfur genocide; or

(3) the company supplies military equipment within Sudan, unless it clearly shows that the military equipment cannot be used to facilitate offensive military actions in Sudan or the company implements rigorous and verifiable safeguards to prevent use of that equipment by forces actively participating in armed conflict, for example, through postsale tracking of such equipment by the company, certification from a reputable and objective third party that such equipment is not being used by a party participating in armed conflict in Sudan, or sale of such equipment solely to the regional government of southern Sudan or any internationally recognized peacekeeping force or humanitarian organization.

Notwithstanding any other provision to the contrary in this section, a social development company that is not complicit in the Darfur genocide shall not be considered a scrutinized company.

(p) "Social development company" means a company whose primary purpose in Sudan is to provide humanitarian goods or services, including medicine or medical equipment, agricultural supplies or infrastructure, educational opportunities, journalism-related activities, information or information materials, spiritual-related activities, services of a purely clerical or reporting nature, food, clothing, or general consumer goods that are unrelated to oil-related activities, mineral extraction activities, or power production activities.

(q) "Substantial action" means adopting, publicizing, and implementing a formal plan to cease scrutinized business operations within one year and to refrain from any such new business operations; undertaking significant humanitarian efforts in conjunction with an international organization, the government of Sudan, the regional government of southern Sudan, or a nonprofit entity that has been evaluated and certified by an independent third party to be in substantial relationship to the company's Sudan business operations and of benefit to one or more marginalized populations of Sudan; or through engagement with the government of Sudan, materially improving conditions for the genocidally victimized population in Darfur.

Subd. 2. **Identification of companies.** (a) Within 90 days following May 23, 2007, the State Board of Investment shall make its best efforts to identify all scrutinized companies in which the State Board of Investment has direct or indirect holdings or could possibly have such holdings in the future. Such efforts shall include, as appropriate:

(1) reviewing and relying, as appropriate in the State Board of Investment's judgment, on publicly available information regarding companies with business operations in Sudan, including information provided by nonprofit organizations, research firms, international organizations, and government entities;

(2) contacting asset managers contracting with the State Board of Investment who invest in companies with business operations in Sudan; or

(3) contacting other institutional investors that have divested from or engaged with companies that have business operations in Sudan.

(b) At the first meeting of the State Board of Investment after it has completed the requirements of paragraph (a), the State Board of Investment shall assemble a list of scrutinized companies.

(c) The State Board of Investment shall update the scrutinized companies list each quarter based on continuing information, including, but not limited to, information from sources identified in paragraph (a).

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Subd. 3. **Engagement of scrutinized companies.** The State Board of Investment shall use the following procedure for companies on the scrutinized companies list:

(a) After completing the list required under subdivision 2, paragraph (a), the State Board of Investment shall immediately identify the companies on the list in which the State Board of Investment owns direct or indirect holdings.

(b) For each company identified in paragraph (a) with only inactive business operations, the State Board of Investment shall send a written notice to the company with information about this section and encourage it to continue to refrain from initiating active business operations in Sudan until it is able to avoid scrutinized business operations. The State Board of Investment shall continue such correspondence on a semiannual basis.

(c) For each company newly identified in paragraph (a) with active business operations, the State Board of Investment shall send a written notice informing the company of its scrutinized company status and that it may become subject to divestment by the State Board of Investment. The notice shall offer the company the opportunity to clarify its Sudan-related activities and shall encourage the company, within 90 days, to either cease its scrutinized business operations or convert such operations to inactive business operations in order to avoid qualifying for divestment by the State Board of Investment.

(d) If, within 90 days following the State Board of Investment's first engagement with a company under paragraph (c), that company ceases scrutinized business operations, the company shall be removed from the scrutinized companies list and the provisions of this section shall cease to apply to it unless it resumes scrutinized business operations. If, within 90 days following the State Board of Investment's first engagement, the company converts its scrutinized active business operations to inactive business operations, the company shall be subject to all provisions of this section relating to inactive business operations.

Subd. 4. **Divestment.** (a) If, after 90 days following the State Board of Investment's first engagement with a company under subdivision 3, paragraph (c), the company continues to have scrutinized active business operations, and only while the company continues to have scrutinized active business operations, the State Board of Investment shall sell, redeem, divest, or withdraw all publicly traded securities of the company, except as provided in subdivisions 5 to 11, according to the following schedule:

(1) at least 50 percent of the assets in the company shall be removed from the State Board of Investment's assets under management by nine months after the company's most recent appearance on the scrutinized companies list; and

(2) 100 percent of the assets in the company shall be removed from the State Board of Investment's assets under management within 15 months after the company's most recent appearance on the scrutinized companies list.

(b) If a company that ceased scrutinized active business operations following engagement under subdivision 3, paragraph (c), resumes such operations, paragraph (a) shall immediately apply to the company and the State Board of Investment shall send a written notice to the company. The company shall also be immediately reintroduced onto the scrutinized companies list.

Subd. 5. **Prohibition on acquisition of certain securities.** At no time shall the State Board of Investment acquire securities of companies on the scrutinized companies list that have active business operations, except as provided in this section.

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Subd. 6. **Exemption.** If the federal government affirmatively excludes a company from its present or any future federal sanctions regime relating to Sudan, the company is exempt from the divestment and investment requirements of subdivisions 4 and 5.

Subd. 7. **Excluded securities.** Notwithstanding any other provision in this section to the contrary, subdivisions 4 and 5 do not apply to indirect holdings in actively managed investment funds. The State Board of Investment shall submit letters to the managers of investment funds containing companies with scrutinized active business operations requesting the managers to consider removing such companies from the fund or to create a similar actively managed fund with indirect holdings that do not include the companies. If a manager creates a similar fund, the State Board of Investment shall promptly replace all applicable investments with investments in the similar fund consistent with prudent investing standards. For the purposes of this section, "private equity" funds shall be deemed to be actively managed investment funds.

Subd. 8. **Reporting.** (a) Within 30 days after creating the scrutinized companies list, the State Board of Investment shall submit the list to the chairs of the legislative committees and divisions with jurisdiction over the State Board of Investment.

(b) By January 15, 2008, and on January 15 of each year thereafter, the State Board of Investment shall submit a report to the chairs of the legislative committees and divisions with jurisdiction over the State Board of Investment and send a copy of that report to the United States Presidential Special Envoy to Sudan or the appropriate designee or successor for the envoy. The report must include:

(1) a summary of correspondence with companies engaged by the State Board of Investment under subdivision 3, paragraphs (b) and (c);

(2) a list of all investments sold, redeemed, divested, or withdrawn in compliance with subdivision 4;

(3) a list of all prohibited investments under subdivision 5; and

(4) a description of any progress made under subdivision 7.

Subd. 9. **Expiration.** This section shall expire upon the occurrence of any of the following:

(1) the Congress or president of the United States declares that the Darfur genocide has been halted for at least 12 months;

(2) the United States revokes all sanctions imposed against the government of Sudan;

(3) the Congress or president of the United States declares that the government of Sudan has honored its commitments to cease attacks on civilians, demobilize and demilitarize the Janjaweed and associated militias, grant free and unfettered access for deliveries of humanitarian assistance, and allow for the safe and voluntary return of refugees and internally displaced persons; or

(4) the Congress or president of the United States, through legislation or executive order, declares that mandatory divestment of the type provided for in this section interferes with the conduct of United States foreign policy.

Subd. 10. **Other legal obligations.** The State Board of Investment is exempt from any statutory or common law obligations that conflict with actions taken in compliance with this section, including all good faith determinations regarding companies as required by this section, including any obligations regarding the choice of asset managers, investment funds, or investments for the State Board of Investment's securities portfolios.

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Subd. 11. **Reinvestment in certain companies with scrutinized active business operations.** Notwithstanding any provision of this section to the contrary, the State Board of Investment shall be permitted to cease divesting from certain scrutinized companies under subdivision 4 or to reinvest in certain scrutinized companies from which it divested under subdivision 4 if clear and convincing evidence shows that the value for all assets under management by the State Board of Investment is equal to or less than 99.5 percent (50 basis points) of the hypothetical value of all assets under management by the State Board of Investment without any divestment for any company under subdivision 4. Cessation of divestment, reinvestment, or any subsequent ongoing investment authorized by this subdivision shall be strictly limited to the minimum steps necessary to avoid the contingency. For any cessation of divestment, reinvestment, or subsequent ongoing investment authorized by this subdivision, the State Board of Investment shall provide a written report to the chairs of the legislative committees and divisions with jurisdiction over the State Board of Investment in advance of initial reinvestment, updated semiannually thereafter as applicable, setting forth the reasons and justification, supported by clear and convincing evidence, for its decisions to cease divestment, reinvest, or remain invested in companies with scrutinized active business operations. This subdivision does not apply to reinvestment in companies because they have ceased scrutinized active business operations.

History: *2007 c 117 s 1*

11A.244 INVESTMENT IN IRAN.

Subdivision 1. **Definitions.** (a) For the purposes of this section, the following terms have the meanings given them in this subdivision.

(b) "Active business operations" means all business operations that are not inactive business operations.

(c) "Company" means any sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, limited liability company, or other entity or business association, including all wholly owned subsidiaries, majority-owned subsidiaries, parent companies, or affiliates of such entities or business associations, that exists for profit-making purposes.

(d) "Direct holdings" means all publicly traded debt and equity securities of a company that are held directly by the State Board of Investment or held in an account or fund in which the State Board of Investment owns all shares or interests.

(e) "Government of Iran" means the government of the Islamic Republic of Iran or its instrumentalities or political subdivisions and companies owned or controlled by the Islamic Republic of Iran.

(f) "Inactive business operations" means the continued holding or renewal of rights to property previously operated for the purpose of generating revenues but not presently deployed for such a purpose.

(g) "Indirect holdings" means all investments held in an account or fund, including a mutual fund, a real estate fund, a private equity fund, or a commingled fund, managed by one or more persons who are not employed by the State Board of Investment, in which the public funds own shares or interests together with other investors who are not subject to this section.

(h) "Scrutinized company" means any company engaging in scrutinized business operations.

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(i) "Scrutinized business operations" means any and all active business operations that are subject or liable to sanctions under Public Law 104-172, as amended, the Iran Sanctions Act of 1996, and that involve the maintenance of a company's existing assets or investments in Iran, or the deployment of new investments to Iran that meet or exceed the $20,000,000 threshold referred to in Public Law 104-172, as amended, the Iran Sanctions Act of 1996. "Scrutinized business operations" does not include the retail sale of gasoline and related products.

(j) "Substantial action specific to Iran" means adopting, publicizing, and implementing a formal plan to cease scrutinized business operations within one year and to refrain from any such new business operations.

Subd. 2. **Identification of scrutinized companies.** (a) Within 90 days following August 1, 2009, the State Board of Investment shall make its best efforts to identify all scrutinized companies in which it has direct holdings. These efforts shall include, as appropriate:

(1) reviewing and relying, as appropriate, on publicly available information regarding companies with business operations in Iran, including information provided by nonprofit organizations, research firms, international organizations, and government entities;

(2) contacting asset managers contracting with the State Board of Investment who invest in companies with business operations in Iran; and

(3) contacting other institutional investors that have divested from or engaged with companies with business operations in Iran.

(b) At the first meeting of the State Board of Investment after it has completed the requirements of paragraph (a), the State Board of Investment shall assemble a list of scrutinized companies in which it has direct holdings.

(c) The State Board of Investment shall update the scrutinized companies list each quarter based on continuing information, including but not limited to information from sources identified in paragraph (a).

Subd. 3. **Engagement of scrutinized companies.** The State Board of Investment shall use the following procedures with respect to companies on the scrutinized companies list:

(1) for each company newly identified in subdivision 2 with scrutinized business operations, the State Board of Investment shall, within 90 days following its assembly of the scrutinized companies list, send a written notice informing the company of its scrutinized company status and that it may become subject to divestment by the State Board of Investment. The notice shall offer the company the opportunity to clarify its scrutinized business operations and shall encourage the company to cease, within 90 days of the date of the notice, its scrutinized business operations, or to convert them to inactive business operations in order to avoid divestment by the State Board of Investment; and

(2) if, within 90 days following the State Board of Investment's first engagement with a company under clause (1), that company publicly announces its commitment to substantial action specific to Iran, that company shall be removed from the scrutinized companies list and the provisions of this section shall cease to apply to it unless it resumes active business operations in Iran.

Subd. 4. **Divestment.** (a) If, after 90 days following the State Board of Investment's first engagement with a company under subdivision 3, clause (1), the company continues to have scrutinized business operations, and only while the company continues to have scrutinized

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business operations, the State Board of Investment shall sell, redeem, divest, or withdraw all publicly traded securities of the company, according to the following schedule:

(1) at least 50 percent of the holdings in the company shall be removed from the State Board of Investment's assets under management by nine months after the company's initial appearance on the scrutinized companies list; and

(2) 100 percent of the holdings in the company shall be removed from the State Board of Investment's assets under management within 15 months after the company's initial appearance on the scrutinized companies list.

(b) If a company that ceased scrutinized business operations following engagement under subdivision 3, clause (1), resumes such operations, paragraph (a) immediately applies to the company and the State Board of Investment shall send a written notice to the company. The company shall also be immediately reintroduced onto the scrutinized companies list.

Subd. 5. **Prohibition on new acquisitions.** The State Board of Investment may not acquire securities of companies on the scrutinized companies list that have scrutinized business operations, except as provided in this section.

Subd. 6. **Relation to federal action.** If the federal government excludes a company from its present or any future federal sanctions relating to Iran, that company is exempt from the divestment requirements and the investment prohibitions in this section.

Subd. 7. **Exemptions.** Subdivisions 4 and 5 do not apply to any of the following:

(1) investments in a company that is primarily engaged in supplying goods or services intended to relieve human suffering in Iran;

(2) investments in a company that is primarily engaged in promoting health, education, or journalistic, religious, or welfare activities in Iran; and

(3) investments in a United States company that is authorized by the federal government to have active business operations in Iran.

Subd. 8. **Excluded securities.** Subdivisions 4 and 5 do not apply to indirect holdings in actively managed investment funds. The State Board of Investment shall submit letters to the managers of investment funds containing companies with scrutinized active business operations requesting the managers to consider removing such companies from the fund or to create a similar actively managed fund with indirect holdings that do not include the companies. If a manager creates a similar fund, the State Board of Investment shall promptly replace all applicable investments with investments in the similar fund consistent with prudent investing standards. For the purposes of this section, "private equity" funds shall be deemed to be actively managed investment funds.

Subd. 9. **Reporting.** By January 15 of each calendar year, the State Board of Investment shall submit a report to the chairs and ranking minority members of the legislative committees and divisions with jurisdiction over the State Board of Investment. The report must include:

(1) a copy of the most recent list of scrutinized companies;

(2) a summary of correspondence with companies engaged by the State Board of Investment under subdivision 3;

(3) a list of all investments sold, redeemed, divested, or withdrawn in compliance with subdivision 4;

(4) a list of all prohibited investments under subdivision 5; and

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(5) a description of any progress made under subdivision 8.

Subd. 10. **Expiration.** This section ceases to be operative if either of the following apply:

(1) Iran is removed from the United States Department of State's list of countries that have been determined to repeatedly provide support for acts of international terrorism; or

(2) the president of the United States determines and certifies that state legislation similar to this section interferes with the conduct of United States foreign policy.

Subd. 11. **Other legal obligations.** The State Board of Investment is exempt from any statutory or common law obligations that conflict with actions taken in compliance with this section, including all good faith determinations regarding companies as required by this section, including any obligations regarding the choice of asset managers, investment funds, or investments for the State Board of Investment's securities portfolios.

Subd. 12. **Severability.** The provisions of this section are severable. If any provision of this section or its application is held invalid, that invalidity does not affect other provisions or applications that can be given effect without the invalid provision or application.

History: *2009 c 90 s 1*

11A.25 ADDITIONAL INVESTMENT PROVISIONS.

When investing assets of any funds or accounts specifically made subject to this section or not otherwise referred to in sections 11A.01 to 11A.25, all securities shall be debt obligations and shall conform to the applicable provisions of section 11A.24.

History: *1980 c 607 art 14 s 23; 1987 c 372 art 8 s 7*

11A.27 REPORT ON INVESTMENT CONSULTANT ACTIVITIES AND DELIVERABLES.

(a) Annually, on or before November 1, the State Board of Investment shall file a report with the Legislative Reference Library on the activities and work product during that year of any investment consultants retained by the board.

(b) The report must include the following items:

(1) the total contract fee paid to each investment consultant;

(2) a listing of the projects in which the investment consultant was involved; and

(3) examples of the written work product provided by the investment consultant on those projects during the report coverage period.

History: *2007 c 148 art 2 s 7*

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CHAPTER 356A
PUBLIC PENSION FIDUCIARY RESPONSIBILITY

356A.01 DEFINITIONS.

Subdivision 1. **Scope.** For purposes of this chapter, the following terms have the meanings given them in this section.

Subd. 2. **Benefit.** "Benefit" means an amount, other than an administrative expense, paid or payable from a pension plan, including a retirement annuity, service pension, disability benefit, survivor benefit, death benefit, funeral benefit, or refund.

Subd. 3. **Benefit provisions.** "Benefit provisions" means the portion of a pension plan that deals specifically with the benefit coverage provided by the plan, including the kinds of coverage, the eligibility for and entitlement to benefits, and the amount of benefits.

Subd. 4. **Benefit recipient.** "Benefit recipient" means a person who has received a benefit from a pension plan or to whom a benefit is payable under the terms of the plan document of the pension plan.

Subd. 5. **Chief administrative officer.** "Chief administrative officer" means the person who has primary responsibility for the execution of the administrative or management affairs of a pension plan.

Subd. 6. **Cofiduciary.** "Cofiduciary" means a fiduciary of a pension plan, other than a fiduciary directly undertaking a fiduciary activity or directly and primarily responsible for a fiduciary activity.

Subd. 7. **Covered governmental entity.** "Covered governmental entity" means a governmental subdivision or other governmental entity that employs persons who are plan participants in a covered pension plan and who are eligible for that participation because of their employment.

Subd. 8. **Covered pension plan.** "Covered pension plan" means a pension plan or fund listed in section 356.20, subdivision 2, or section 356.30, subdivision 3, or a plan established under chapter 353D, 354B, 354C, or 354D.

Subd. 9. **Covered pension plan other than a statewide plan.** "Covered pension plan other than a statewide plan" means a pension plan not included in the definition of a statewide plan in subdivision 24.

Subd. 10. **Direct or indirect profit.** "Direct or indirect profit" means a payment of money, the provision of a service or an item of other than nominal value, an extension of credit, a loan,

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or any other special consideration to a fiduciary or a direct relative of a fiduciary on behalf of the fiduciary in consideration for the performance of a fiduciary activity or a failure to perform a fiduciary activity.

Subd. 11. **Direct relative.** "Direct relative" means any of the persons or spouses of persons related to one another within the third degree of kindred under civil law.

Subd. 12. **Fiduciary.** "Fiduciary" means a person identified in section 356A.02.

Subd. 13. **Fiduciary activity.** "Fiduciary activity" means an activity described in section 356A.02, subdivision 2.

Subd. 14. **Financial institution.** "Financial institution" means a bank, savings institution, or credit union organized under federal or state law.

Subd. 15. **Governing board of a pension plan.** "Governing board of a pension plan" means the body of a pension plan that is assigned or that undertakes the chief policy-making powers and management duties of the plan.

Subd. 16. **Investment Advisory Council.** "Investment Advisory Council" means the Investment Advisory Council established by section 11A.08.

Subd. 17. **Liability.** "Liability" means a secured or unsecured debt or an obligation for a future payment of money, including an actuarial accrued liability or an unfunded actuarial accrued liability, except where the context clearly indicates another meaning.

Subd. 18. **Office of the pension plan.** "Office of the pension plan" means an administrative facility or portion of a facility where the primary business or administrative affairs of a pension plan are conducted and the primary and permanent records and files of the plan are retained.

Subd. 19. **Pension fund.** "Pension fund" means the assets amassed and held in a pension plan, other than the general fund, as reserves for present and future payment of benefits and administrative expenses. For a retirement plan governed by section 69.77 or by chapter 424A, the term means the relief association special fund.

Subd. 20. **Pension plan.** "Pension plan" means all aspects of an arrangement between a public employer and its employees concerning the pension benefit coverage provided to the employees.

Subd. 21. **Plan document.** "Plan document" means a written document or series of documents containing the eligibility requirements and entitlement provisions constituting the benefit coverage of a pension plan, including any articles of incorporation, bylaws, governing body rules and policies, municipal charter provisions, municipal ordinance provisions, or general or special state law.

Subd. 22. **Plan participant.** "Plan participant" means a person who is an active member of a pension plan by virtue of the person's employment or who is making a pension plan member contribution.

Subd. 23. **State Board of Investment.** "State Board of Investment" means the Minnesota State Board of Investment created by the Minnesota Constitution, article XI, section 8.

Subd. 24. **Statewide plan.** "Statewide plan" means any of the following pension plans:

(1) the Minnesota State Retirement System or a pension plan administered by it;

(2) the Public Employees Retirement Association or a pension plan administered by it; and

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(3) the Teachers Retirement Association or a pension plan administered by it.

History: *1989 c 319 art 7 s 1; 2000 c 461 art 12 s 16; 2012 c 286 art 10 s 9*

356A.02 FIDUCIARY STATUS AND ACTIVITIES.

Subdivision 1. **Fiduciary status.** For purposes of this chapter, the following persons are fiduciaries:

(1) any member of the governing board of a covered pension plan;

(2) the chief administrative officer of a covered pension plan or of the State Board of Investment;

(3) any member of the State Board of Investment; and

(4) any member of the Investment Advisory Council.

Subd. 2. **Fiduciary activity.** The activities of a fiduciary identified in subdivision 1 that must be carried out in accordance with the requirements of section 356A.04 include, but are not limited to:

(1) the investment and reinvestment of plan assets;

(2) the determination of benefits;

(3) the determination of eligibility for membership or benefits;

(4) the determination of the amount or duration of benefits;

(5) the determination of funding requirements or the amounts of contributions;

(6) the maintenance of membership or financial records;

(7) the expenditure of plan assets; and

(8) the selection of financial institutions and investment products.

History: *1989 c 319 art 7 s 2; 2000 c 461 art 12 s 17; 2007 c 133 art 3 s 3*

356A.03 PROHIBITION OF CERTAIN PERSONS FROM FIDUCIARY STATUS.

Subdivision 1. **Individual prohibition.** For the prohibition period established by subdivision 2, a person, other than a constitutional officer of the state, who has been convicted of a violation listed in subdivision 3, may not serve in a fiduciary capacity identified in section 356A.02.

Subd. 2. **Prohibition period.** A prohibition under subdivision 1 is for a period of five years, beginning on the day following conviction for a violation listed in subdivision 3 or, if the person convicted is incarcerated, the day following unconditional release from incarceration.

Subd. 3. **Applicable violations.** A prohibition under subdivision 1 is imposed as a result of any of the following violations of law:

(1) a violation of federal law specified in United States Code, title 29, section 1111, as amended;

(2) a violation of Minnesota law that is a felony under Minnesota law; or

(3) a violation of the law of another state, United States territory or possession, or federally recognized Indian tribal government, or of the Uniform Code of Military Justice, that would be a felony under the offense definitions and sentences in Minnesota law.

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Subd. 4. **Documentation.** In determining the applicability of this section, the appropriate appointing authority, the State Board of Investment, or the covered pension plan, as the case may be, may rely on a disclosure form meeting the requirements of the federal Investment Advisers Act of 1940, as amended through June 2, 1989, and filed with the State Board of Investment or the pension plan.

History: *1989 c 319 art 7 s 3*

356A.04 GENERAL STANDARD OF FIDUCIARY CONDUCT.

Subdivision 1. **Duty.** A fiduciary of a covered pension plan owes a fiduciary duty to:

(1) the active, deferred, and retired members of the plan, who are its beneficiaries;

(2) the taxpayers of the state or political subdivision, who help to finance the plan; and

(3) the state of Minnesota, which established the plan.

Subd. 2. **Prudent person standard.** A fiduciary identified in section 356A.02 shall act in good faith and shall exercise that degree of judgment and care, under the circumstances then prevailing, that persons of prudence, discretion, and intelligence would exercise in the management of their own affairs, not for speculation, considering the probable safety of the plan capital as well as the probable investment return to be derived from the assets.

History: *1989 c 319 art 7 s 4*

356A.05 DUTIES APPLICABLE TO ALL ACTIVITIES.

(a) The activities of a fiduciary of a covered pension plan must be carried out solely for the following purposes:

(1) to provide authorized benefits to plan participants and beneficiaries;

(2) to incur and pay reasonable and necessary administrative expenses; or

(3) to manage a covered pension plan in accordance with the purposes and intent of the plan document.

(b) The activities of fiduciaries identified in section 356A.02 must be carried out faithfully, without prejudice, and in a manner consistent with law and the plan document.

History: *1989 c 319 art 7 s 5*

356A.06 INVESTMENTS; ADDITIONAL DUTIES.

Subdivision 1. **Authorized holder of assets; title to assets.** (a) Assets of a covered pension plan may be held only by:

(1) the plan treasurer;

(2) the State Board of Investment;

(3) the depository agent of the plan;

(4) a security broker or the broker's agent with, in either case, insurance equal to or greater than the plan assets held from the Securities Investor Protection Corporation or from excess insurance coverage; or

(5) the depository agent of the State Board of Investment.

(b) Legal title to plan assets must be vested in the plan, the State Board of Investment, the governmental entity that sponsors the plan, the nominee of the plan, or the depository agent. The

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holder of legal title shall function as a trustee for a person or entity with a beneficial interest in the assets of the plan.

Subd. 2. **Diversification.** The investment of plan assets must be diversified to minimize the risk of substantial investment losses unless the circumstances at the time an investment is made clearly indicate that diversification would not be prudent.

Subd. 3. **Absence of personal profit.** No fiduciary may personally profit, directly or indirectly, as a result of the investment or management of plan assets. This subdivision, however, does not preclude the receipt by a fiduciary of reasonable compensation, including membership in or the receipt of benefits from a pension plan, for the fiduciary's position with respect to the plan.

Subd. 4. **Economic interest statement.** (a) Each member of the governing board of a covered pension plan and the chief administrative officer of the plan shall file with the plan a statement of economic interest.

(b) For a covered pension plan other than a plan specified in paragraph (c), the statement must contain the information required by section 10A.09, subdivision 5, and any other information that the fiduciary or the governing board of the plan determines is necessary to disclose a reasonably foreseeable potential or actual conflict of interest.

(c) For a covered pension plan governed by sections 69.771 to 69.776 or a covered pension plan governed by section 69.77 with assets under $8,000,000, the statement must contain the following:

(1) the person's principal occupation and principal place of business;

(2) whether or not the person has an ownership of or interest of ten percent or greater in an investment security brokerage business, a real estate sales business, an insurance agency, a bank, a savings and loan, or another financial institution; and

(3) any relationship or financial arrangement that can reasonably be expected to give rise to a conflict of interest.

(d) The statement must be filed annually with the chief administrative officer of the plan and be available for public inspection during regular office hours at the office of the pension plan.

(e) A disclosure form meeting the requirements of the federal Investment Advisers Act of 1940, United States Code, title 15, sections 80b-1 to 80b-21 as amended, and filed with the State Board of Investment or the pension plan meets the requirements of this subdivision.

(f) The chief administrative officer of each covered pension plan, by January 15, annually, shall transmit a certified listing of all individuals who have filed statements of economic interest with the plan under this subdivision during the preceding 12 months and the address of the office referenced in paragraph (d) to the Campaign Finance and Public Disclosure Board.

Subd. 5. **Investment business recipient disclosure.** The chief administrative officer of a covered pension plan, with respect to investments made by the plan, and the executive director of the State Board of Investment, with respect to investments of plan assets made by the board, shall annually disclose in writing the recipients of investment business placed with or investment commissions allocated among commercial banks, investment bankers, brokerage organizations, or other investment managers. The disclosure document must be prepared within 60 days after the close of the fiscal year of the plan and must be available for public inspection during regular office hours at the office of the plan. The disclosure document must also be filed with the executive director of the Legislative Commission on Pensions and Retirement within 90 days

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after the close of the fiscal year of the plan. For the State Board of Investment and a first class city teacher retirement fund association, a disclosure document included as part of a regular annual report of the board or of the first class city teacher retirement fund association when filed with the executive director of the Legislative Commission on Pensions and Retirement is considered to have been filed on a timely basis.

Subd. 6. **Limited list of authorized investment securities.** (a) **Authority.** This subdivision specifies the investment authority for a limited list plan. A limited list plan is a covered pension plan that does not:

(1) have pension fund assets with a market value in excess of $1,000,000;

(2) use the services of an investment advisor registered with the Securities and Exchange Commission in accordance with the Investment Advisers Act of 1940, or registered as an investment advisor in accordance with sections 80A.58, and 80A.60, for the investment of at least 60 percent of its pension fund assets, calculated on market value;

(3) use the services of the State Board of Investment for the investment of at least 60 percent of its pension fund assets, calculated on market value; or

(4) use a combination of the services of an investment advisor meeting the requirements of clause (2) and the services of the State Board of Investment for the investment of at least 75 percent of its pension fund assets, calculated on market value.

(b) **Investment agency appointment authority.** The governing board of a covered pension plan may select and appoint investment agencies to act for or on its behalf.

(c) **Savings accounts; similar vehicles.** A limited list plan is authorized to invest in:

(1) certificates of deposit issued, to the extent of available insurance or collateralization, by a financial institution that is a member of the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation, that is insured by the National Credit Union Administration, or that is authorized to do business in this state and has deposited with the chief administrative officer of the plan a sufficient amount of marketable securities as collateral in accordance with section 118A.03;

(2) guaranteed investment contracts, limited to those issued by insurance companies or banks rated in the top four quality categories by a nationally recognized rating agency or to alternative guaranteed investment contracts where the underlying assets comply with the requirements of this paragraph; and

(3) savings accounts, limited to those fully insured by federal agencies.

(d) **Government-backed obligations.** A limited list plan is authorized to invest in governmental obligations as further specified in this paragraph, including bonds, notes, bills, mortgages, and other evidences of indebtedness, if the issue is backed by the full faith and credit of the issuer or if the issue is rated among the top four quality rating categories by a nationally recognized rating agency. The obligations in which plans are authorized to invest under this paragraph are guaranteed or insured issues of:

(1) the United States, one of its agencies, one of its instrumentalities, or an organization created and regulated by an act of Congress;

(2) the Dominion of Canada or one of its provinces if the principal and interest are payable in United States dollars;

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(3) a state or one of its municipalities, political subdivisions, agencies, or instrumentalities; or

(4) any United States government-sponsored organization of which the United States is a member if the principal and interest are payable in United States dollars.

(e) **Corporate obligations.** A limited list plan is authorized to invest in corporate obligations, including bonds, notes, debentures, transportation equipment obligations, or any other longer-term evidences of indebtedness issued or guaranteed by a corporation organized under the laws of the United States or any of its states, or the Dominion of Canada or any of its provinces if:

(1) the principal and interest are payable in United States dollars; and

(2) the obligations are rated among the top four quality categories by a nationally recognized rating agency.

(f) **Mutual fund authority, limited list authorized assets.** Securities authorized under paragraphs (c) to (e) may be owned directly or through shares in exchange-traded funds, or through open-end mutual funds, or as units of commingled trusts.

(g) **Extended mutual fund authority.** Notwithstanding restrictions in other paragraphs of this subdivision, a limited list plan is authorized to invest the assets of the special fund in exchange-traded funds and open-end mutual funds, if their portfolio investments comply with the type of securities authorized for investment under section 356A.06, subdivision 7, paragraphs (c) to (g). Investments under this paragraph must not exceed 75 percent of the assets of the special fund, not including any money market investments through mutual or exchange-traded funds.

(h) **Supplemental fund authority.** The governing body of a limited list plan may certify special fund assets to the State Board of Investment for investment under section 11A.17.

(i) **Assets mix restrictions.** A limited list plan must conform to the asset mix limitations specified in section 356A.06, subdivision 7.

Subd. 7. **Expanded list of authorized investment securities.** (a) **Authority.** A covered pension plan not described by subdivision 6, paragraph (a), is an expanded list plan and shall invest its assets as specified in this subdivision. The governing board of an expanded list plan may select and appoint investment agencies to act for or on its behalf.

(b) **Securities generally; investment forms.** An expanded list plan is authorized to purchase, sell, lend, and exchange the investment securities authorized under this subdivision, including puts and call options and future contracts traded on a contract market regulated by a governmental agency or by a financial institution regulated by a governmental agency. These securities may be owned directly or through shares in exchange-traded or mutual funds, or as units in commingled trusts, subject to any limitations specified in this subdivision.

(c) **Government obligations.** An expanded list plan is authorized to invest funds in governmental bonds, notes, bills, mortgages, and other evidences of indebtedness if the issue is backed by the full faith and credit of the issuer or the issue is rated among the top four quality rating categories by a nationally recognized rating agency. The obligations in which funds may be invested under this paragraph are guaranteed or insured issues of:

(1) the United States, one of its agencies, one of its instrumentalities, or an organization created and regulated by an act of Congress;

(2) the Dominion of Canada or one of its provinces if the principal and interest are payable in United States dollars;

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(3) a state or one of its municipalities, political subdivisions, agencies, or instrumentalities; and

(4) a United States government-sponsored organization of which the United States is a member if the principal and interest are payable in United States dollars.

(d) **Investment-grade corporate obligations.** An expanded list plan is authorized to invest funds in bonds, notes, debentures, transportation equipment obligations, or any other longer term evidences of indebtedness issued or guaranteed by a corporation organized under the laws of the United States or any of its states, or the Dominion of Canada or any of its provinces if:

(1) the principal and interest are payable in United States dollars; and

(2) the obligations are rated among the top four quality categories by a nationally recognized rating agency.

(e) **Below-investment-grade corporate obligations.** An expanded list plan is authorized to invest in unrated corporate obligations or in corporate obligations that are not rated among the top four quality categories by a nationally recognized rating agency if:

(1) the aggregate value of these obligations does not exceed five percent of the covered pension plan's market value;

(2) the covered pension plan's participation is limited to 50 percent of a single offering subject to this paragraph; and

(3) the covered pension plan's participation is limited to 25 percent of an issuer's obligations subject to this paragraph.

(f) **Other obligations.** (1) An expanded list plan is authorized to invest funds in:

(i) bankers acceptances and deposit notes if issued by a United States bank that is rated in the highest four quality categories by a nationally recognized rating agency;

(ii) certificates of deposit if issued by a United States bank or savings institution rated in the highest four quality categories by a nationally recognized rating agency or whose certificates of deposit are fully insured by federal agencies, or if issued by a credit union in an amount within the limit of the insurance coverage provided by the National Credit Union Administration;

(iii) commercial paper if issued by a United States corporation or its Canadian subsidiary and if rated in the highest two quality categories by a nationally recognized rating agency;

(iv) mortgage securities and asset-backed securities if rated in the top four quality categories by a nationally recognized rating agency;

(v) repurchase agreements and reverse repurchase agreements if collateralized with letters of credit or securities authorized in this section;

(vi) guaranteed investment contracts if issued by an insurance company or a bank that is rated in the top four quality categories by a nationally recognized rating agency or alternative guaranteed investment contracts if the underlying assets comply with the requirements of this subdivision;

(vii) savings accounts if fully insured by a federal agency; and

(viii) guaranty fund certificates, surplus notes, or debentures if issued by a domestic mutual insurance company.

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(2) Sections 16A.58, 16C.03, subdivision 4, and 16C.05 do not apply to certificates of deposit and collateralization agreements executed by the covered pension plan under clause (1), item (ii).

(3) In addition to investments authorized by clause (1), item (iv), an expanded list plan is authorized to 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 covered pension plan 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 covered pension plan 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 covered pension plan comparable, in its judgment, to the yield available on similar mortgage loans at the date of the bonds or notes. The covered pension plan 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.

(g) **Corporate stocks.** An expanded list plan is authorized to invest in stocks or convertible issues of any corporation organized under the laws of the United States or any of its states, any corporation organized under the laws of the Dominion of Canada or any of its provinces, or any corporation listed on an exchange that is regulated by an agency of the United States or of the Canadian national government.

An investment in any corporation must not exceed five percent of the total outstanding shares of that corporation, except that an expanded list plan may hold up to 20 percent of the shares of a real estate investment trust and up to 20 percent of the shares of a closed mutual fund.

(h) **Other investments.** (1) In addition to the investments authorized in paragraphs (b) to (g), and subject to the provisions in clause (2), an expanded list plan is authorized to invest funds in:

(i) equity and debt investment businesses through participation in limited partnerships, trusts, private placements, limited liability corporations, limited liability companies, limited liability partnerships, and corporations;

(ii) real estate ownership interests or loans secured by mortgages or deeds of trust or shares of real estate investment trusts, through investment in limited partnerships, bank-sponsored collective funds, trusts, mortgage participation agreements, and insurance company commingled accounts, including separate accounts;

(iii) resource investments through limited partnerships, trusts, private placements, limited liability corporations, limited liability companies, limited liability partnerships, and corporations; and

(iv) international securities.

(2) The investments authorized in clause (1) must conform to the following provisions:

(i) the aggregate value of all investments made under clause (1), items (i), (ii), and (iii), may not exceed 35 percent of the market value of the fund for which the expanded list plan is investing;

(ii) there must be at least four unrelated owners of the investment other than the expanded list plan for investments made under clause (1), item (i), (ii), or (iii);

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(iii) the expanded list plan's participation in an investment vehicle is limited to 20 percent thereof for investments made under clause (1), item (i), (ii), or (iii);

(iv) the expanded list plan's participation in a limited partnership does not include a general partnership interest or other interest involving general liability. The expanded list plan may not engage in any activity as a limited partner which creates general liability; and

(v) for volunteer firefighter relief associations, emerging market equity and international debt investments authorized under clause (1), item (iv), must not exceed 15 percent of the association's special fund market value.

(i) **Supplemental plan investments.** The governing body of an expanded list plan may certify assets to the State Board of Investment for investment under section 11A.17.

(j) **Asset mix limitations.** The aggregate value of an expanded list plan's investments under paragraphs (g) and (h) and equity investments under paragraph (i), regardless of the form in which these investments are held, must not exceed 85 percent of the covered plan's market value.

Subd. 7a. **Restrictions.** Any agreement to lend securities must be concurrently collateralized with cash or securities with a market value of not less than 100 percent of the market value of the loaned securities at the time of the agreement. For a covered pension authorized to purchase put and call options and futures contracts under subdivision 7, any agreement for put and call options and futures contracts may only be entered into with a fully offsetting amount of cash or securities. Only securities authorized by this section, excluding those under subdivision 7, paragraph (g), clause (1), items (i) to (iv), may be accepted as collateral or offsetting securities.

Subd. 8. **Minimum liquidity requirements.** A covered pension plan described by subdivision 6 or 7, in order to pay benefits as they come due, shall invest a portion of its assets in authorized short-term debt obligations that can be immediately liquidated without accrual of a substantial determinable penalty or loss and that have an average maturity of no more than 90 days. The chief administrative officer of the plan shall determine the minimum liquidity requirement of the plan and shall retain appropriate documentation of that determination for three years from the date of determination.

Subd. 8a. **Collateralization requirement.** (a) The governing board of a covered pension plan shall designate a national bank, an insured state bank, an insured credit union, or an insured thrift institution as the depository for the pension plan for assets not held by the pension plan's custodian bank.

(b) Unless collateralized as provided under paragraph (c), a covered pension plan may not deposit in a designated depository an amount in excess of the insurance held by the depository in the Federal Deposit Insurance Corporation, the Federal Savings and Loan Insurance Corporation, or the National Credit Union Administration, whichever applies.

(c) For an amount greater than the insurance under paragraph (b), the depository must provide collateral in compliance with section 118A.03 or with any comparable successor enactment relating to the collateralization of municipal deposits.

Subd. 8b. **Disclosure of investment authority; receipt of statement.** (a) For this subdivision, the term "broker" means a broker, broker-dealer, investment advisor, investment manager, or third-party agent who transfers, purchases, sells, or obtains investment securities for, or on behalf of, a covered pension plan.

(b) Before a covered pension plan may complete an investment transaction with or in accord with the advice of a broker, the covered pension plan shall provide annually to the broker a

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written statement of investment restrictions applicable under state law to the covered pension plan or applicable under the pension plan governing board investment policy.

(c) A broker must acknowledge in writing annually the receipt of the statement of investment restrictions and must agree to handle the covered pension plan's investments and assets in accord with the provided investment restrictions. A covered pension plan may not enter into or continue a business arrangement with a broker until the broker has provided this written acknowledgment to the chief administrative officer of the covered pension plan.

(d) If any portion of the plan's assets are held by a security broker or its agent, the security broker or its agent must acknowledge in writing annually that sufficient insurance has been obtained from the Securities Investor Protection Corporation, supplemented by additional insurance, if necessary, to cover the full amount of covered pension plan assets held by the security broker or its agent. Uniform acknowledgment forms prepared by the state auditor shall be used by covered pension plans and brokers to meet the requirements of this subdivision.

Subd. 9. **Prohibited transactions.** (a) No fiduciary of a covered pension plan may engage in a prohibited transaction or allow the plan to engage in a transaction that the fiduciary knows or should know is a prohibited transaction.

(b) A prohibited transaction is any of the following transactions, whether direct or indirect:

(1) the sale, exchange, or lease of real estate between the pension plan and a fiduciary of the plan;

(2) the lending of money or other extension of credit between the plan and a fiduciary of the plan;

(3) the furnishing to a plan by a fiduciary for compensation or remuneration, of goods, services other than those performed in the capacity of fiduciary, or facilities;

(4) the furnishing to a fiduciary by a plan of goods, services, or facilities other than office and related space, equipment and office supplies, and administrative services appropriate to the recipient's fiduciary position;

(5) the transfer of plan assets to a plan fiduciary for use by or for the benefit of the fiduciary, other than the payment of retirement plan benefits to which a fiduciary is entitled or the payment to a fiduciary of a reasonable salary and of necessary and reasonable expenses incurred by the fiduciary in the performance of the fiduciary's duties; and

(6) the sale, exchange, loan, or lease of any item of value between a plan and a fiduciary of the plan other than for a fair market value and as a result of an arm's-length transaction.

Subd. 10. **Defined contribution plans; application.** (a) To the extent that a plan governed by chapter 352D, 353D, 354B, 354C, or 354D permits a participant or beneficiary to select among investment products for the person's account and the participant or beneficiary exercises that investment self-direction, no fiduciary is liable for any loss which may result from the participant's or beneficiary's exercise of that investment self-direction.

(b) Subdivisions 1, 2, 6, 8, and 8a do not apply to plans governed by chapter 354B or 354C.

History: *1989 c 319 art 7 s 6; 1990 c 570 art 5 s 1; 1994 c 604 art 2 s 3; 1995 c 122 s 2; 1995 c 262 art 6 s 1,2; 1996 c 399 art 2 s 12; 1996 c 438 art 4 s 7; art 10 s 2; 1997 c 202 art 2 s 63; 1998 c 386 art 2 s 90; 2000 c 461 art 12 s 18; 1Sp2001 c 10 art 3 s 26; 2002 c 363 s 41; 1Sp2005 c 8 art 9 s 9; art 10 s 66; 2006 c 196 art 1 s 52; art 2 s 12; 2006 c 271 art 8 s 6; 2007 c 134 art 1 s 11; 2008 c 349 art 14 s 3-5; 2010 c 359 art 13 s 3; 2012 c 286 art 10 s 10,11*

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356A.07 BENEFIT SUMMARY; ANNUAL REPORTS; ADDITIONAL DUTIES.

Subdivision 1. **Benefit provisions summary.** The chief administrative officer of a covered pension plan shall prepare and provide each active plan participant with a summary of the benefit provisions of the plan document. The summary must be provided within 30 days of the start or resumption of a participant's membership in the plan, or within 30 days of the date on which the start or resumption of membership was reported to a covered pension plan by a covered governmental entity, whichever is later. The summary must contain a notice that it is a summary of the plan document but is not itself the plan document, and that in the event of a discrepancy between the summary and the plan document as amended, the plan document governs. A copy of the plan document as amended must be furnished to a plan participant or benefit recipient upon request. The chief administrative officer may utilize the services of the covered governmental entity in providing the summary. The summary must be in a form reasonably calculated to be understood by an average plan participant.

Subd. 2. **Annual financial report.** A covered pension plan shall provide each active plan participant and benefit recipient with a copy of the most recent annual financial report required by section 356.20 and a copy of the most recent actuarial evaluation, if any, required by section 69.77, 69.773, 356.215, or 356.216, or a summary of those reports.

Subd. 3. **Distribution.** A covered pension plan may distribute the summaries required by this section through covered governmental entities so long as the plan has made arrangements with the entities to assure, with reasonable certainty, that the summaries will be distributed, or made easily available, to active plan participants.

Subd. 4. **Review procedure.** If a review procedure is not specified by law for a covered pension plan, the chief administrative officer of the plan shall propose, and the governing board of the plan shall adopt and implement, a procedure for reviewing a determination of eligibility, benefits, or other rights under the plan that is adverse to a plan participant or benefit recipient. The review procedure must include provisions for timely notice to the plan participant or benefit recipient and reasonable opportunity to be heard in any review proceeding conducted and may, but need not be, a contested case under chapter 14.

History: *1989 c 319 art 7 s 7*

356A.08 PLAN ADMINISTRATION; ADDITIONAL DUTIES.

Subdivision 1. **Public meetings.** A meeting of the governing board of a covered pension plan or of a committee of the governing board of the covered pension plan is governed by chapter 13D.

Subd. 2. **Limit on compensation.** No fiduciary of a covered pension plan or a direct relative of a fiduciary may receive any direct or indirect compensation, fee, or other item of more than nominal value from a third party in consideration for a pension plan disbursement.

History: *1989 c 319 art 7 s 8; 1Sp2001 c 10 art 4 s 2*

356A.09 FIDUCIARY BREACH; REMEDIES.

Subdivision 1. **Occurrence of breach.** A fiduciary breach occurs if a fiduciary violates the general standard of fiduciary conduct as specified in section 356A.04 in carrying out the activities of a fiduciary. A fiduciary breach also occurs if a fiduciary of a covered pension plan violates the provisions of section 356A.06, subdivision 9.

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Subd. 2. **Remedies.** Remedies available for a fiduciary breach by a fiduciary are those specified by statute or available at common law.

History: *1989 c 319 art 7 s 9*

356A.10 COFIDUCIARY RESPONSIBILITY AND LIABILITY.

Subdivision 1. **Cofiduciary responsibility in general.** A cofiduciary has a general responsibility to oversee the fiduciary activities of all other fiduciaries unless the activity has been allocated or delegated in accordance with subdivision 3. A cofiduciary also has a general responsibility to correct or alleviate a fiduciary breach of which the cofiduciary had or ought to have had knowledge.

Subd. 2. **Cofiduciary liability.** A cofiduciary is liable for a fiduciary breach committed by another fiduciary when the cofiduciary has a responsibility to oversee the fiduciary activities of the other fiduciary or to correct or alleviate a breach by that fiduciary.

Subd. 3. **Limitation on cofiduciary responsibility.** A cofiduciary may limit cofiduciary responsibility and liability through the allocation or delegation of fiduciary activities if the allocation or delegation:

(1) follows appropriate procedures;

(2) is made to an appropriate person or persons; and

(3) is subject to continued monitoring of performance.

Subd. 4. **Bar to liability in certain instances.** A properly made delegation or allocation of a fiduciary activity is a bar to liability on the part of a fiduciary making the delegation or allocation unless the fiduciary has or ought to have knowledge of the breach and takes part in the breach, conceals it, or fails to take reasonable steps to remedy it.

Subd. 5. **Extent of cofiduciary liability.** Unless liability is barred under subdivision 4, cofiduciary liability is joint and several, but a cofiduciary has the right to recover from the responsible fiduciary for any damages paid by the cofiduciary.

History: *1989 c 319 art 7 s 10*

356A.11 FIDUCIARY INDEMNIFICATION.

Subdivision 1. **Indemnified fiduciaries.** A fiduciary who is a member of the governing board of a pension plan, the State Board of Investment or the Investment Advisory Council, or who is an employee of a covered pension plan or of the State Board of Investment may be indemnified from liability for fiduciary breach. Indemnification is at the discretion of the governing board of the plan or of the State Board of Investment in the case of members of the state board or of the Investment Advisory Council. A decision to indemnify a fiduciary must apply to all eligible fiduciaries of similar rank.

Subd. 2. **Allowable indemnification.** An indemnified fiduciary must be held harmless from reasonable costs or expenses incurred as a result of any actual or threatened litigation or other proceedings.

History: *1989 c 319 art 7 s 11*

356A.12 JURISDICTION; SERVICE OF PROCESS; AND STATUTE OF LIMITATIONS.

Subdivision 1. **Jurisdiction.** The district court has jurisdiction over a challenge of a fiduciary action or inaction.

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Subd. 2. **Service of process.** For a fiduciary or cofiduciary alleged in the complaint to be responsible for an alleged breach, personal service of process must be obtained.

Subd. 3. **Limitations on legal actions.** A legal action challenging a fiduciary action or inaction must be timely. Notwithstanding any limitation in chapter 541, an action is timely if it is brought within the earlier of the following periods:

(1) the period ending three years after the date of the last demonstrable act representing the alleged fiduciary breach or after the final date for performance of the act the failure to perform which constitutes the alleged breach; or

(2) the period ending one year after the date of the discovery of the alleged fiduciary breach.

History: *1989 c 319 art 7 s 12*

356A.13 CONTINUING FIDUCIARY EDUCATION.

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

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

History: *1989 c 319 art 7 s 13*

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PROXY VOTING GUIDELINES

March 2013

Proxy Voting Guidelines

The Minnesota State Board of Investment (SBI) has formulated proxy voting guidelines by which it casts votes on a wide range of corporate governance and social responsibility issues.

As a stockholder, the Board is entitled to participate in corporate annual meetings by casting its votes by proxy or through direct attendance at the meetings. The following guidelines constitute an effort by the SBI to manage and control its proxy voting.

Overview of the SBI

By the Minnesota Constitution, the Board is composed of the Governor, the State Auditor, the Secretary of State, and the Attorney General. The Board employs a professional staff to carry out its policies. The Board and staff are assisted by a seventeen member Investment Advisory Council.

The SBI invests the pension assets of the three statewide public employee retirement systems:

- Minnesota State Retirement System (MSRS)
- Public Employees Retirement Association (PERA)
- Teachers Retirement Association (TRA)

The SBI also invests the cash balances of state government funds and assets of several trust funds.

Statutory Purpose

According to statute, state assets are to be responsibly invested by the SBI to maximize the total rate of return without incurring undue risk.[1] Only a small portion of the SBI's equity holdings are in non-pension accounts. The focus, therefore, of the SBI's proxy voting activities is the extensive domestic and international equity holdings within the pension asset portfolios.

Fiduciary Responsibility

As fiduciaries of pension assets, members of the Board and the executive director owe a fiduciary duty to the members of the plans, to the taxpayers of the state and political subdivisions who help to finance the plans, and to the State of Minnesota.[2]

In addition to the general standard of fiduciary conduct, members of the Board, the executive director, the members of the Investment Advisory Council, staff, and members of Board committees must carry out their duties in accordance with the prudent person standard as articulated in statute.[3]

Voting Process

The Board recognizes its fiduciary responsibility to cast votes on proxy issues. The Board delegates proxy voting responsibilities to its Proxy Committee. Each Board member appoints one member to the Proxy Committee. The four member Committee meets only if it has a quorum and casts votes on proxy issues based on a majority vote of those present. In the unusual event that it reaches a tie vote or a quorum is not present, the Committee will cast a vote to abstain.

The Committee has formulated guidelines by which it casts votes on a wide range of corporate governance and social responsibility issues. These guidelines encompass both domestic and international proxy issues. Each year the Committee reviews existing guidelines and determines which issues it will review on a case-by-case basis. The Proxy Committee also may review certain corporate governance issues pertaining to companies headquartered in Minnesota.

Domestic voting: The SBI directly votes shares held in all domestic equity manager portfolios.

International voting: The SBI delegates to international equity managers the voting of shares held in the managers' portfolios following the Proxy Voting Guidelines, where feasible. The SBI believes that several factors affecting the voting of international proxies, including time constraints and lack of company specific information, support the conclusion that the SBI's international equity managers can more efficiently and effectively vote the proxies in their portfolios.

Corporate Governance Issues

Routine Matters

In general, the SBI **supports** management on routine matters of corporate governance. These issues include:

- uncontested election of directors.
- selection of auditors and approval of financial statements.
- management proposals on non-executive compensation issues including savings plans and stock options.
- limits on director and officer liability or increases in director and officer indemnification permitted under the laws of the state of incorporation.

The SBI directs the Proxy Committee, at its discretion, to review the positions taken by directors and withhold votes from or vote against some or all of the directors standing for election if they have taken positions on issues which are potentially not in the best interests of shareholders.

Shareholder Rights

In general, the SBI **opposes** proposals that would restrict shareholder ability to effect change. Such proposals include:

- instituting supermajority requirements to ratify certain events.
- creating classified boards.
- barring shareholders from participating in the determination of the rules governing the board's actions, such as quorum requirements and the duties of directors.
- prohibiting or limiting shareholder action by written consent.
- granting certain stockholders superior voting rights over other stockholders.

In general, the SBI **supports** proposals that preserve shareholder rights to effect change. Such proposals include:

- having boards of directors comprised of a majority of independent directors.
- having compensation committees comprised entirely of independent directors.
- requiring shareholder approval of poison pill plans.
- repealing classified boards.
- adopting secret ballot of proxy votes.
- reinstating cumulative voting.
- adopting anti-greenmail provisions.

Executive Compensation

In general, the SBI **supports** efforts to have executive compensation linked to a company's long-term performance and to encourage full disclosure of compensation packages for principal executives. Accordingly, the SBI evaluates compensation packages on a case-by-case basis, including compensation agreements that are contingent upon corporate change in control.

Buyouts

In general, the SBI **supports** friendly takeovers and management buyouts.

Special Cases

The SBI evaluates the following proposals on a case-by-case basis:

- hostile takeovers.
- recapitalization plans.
- contested election of directors.

Social Responsibility Issues

Tobacco

The SBI supports shareholder resolutions that call for a company to reduce its involvement in tobacco production, product marketing and other related lines of business in order to diversify its business in a manner that will reduce or eliminate potential liability to legal claims associated with tobacco that may negatively impact the value of the SBI's holdings.

In furtherance of this policy, the SBI has sponsored and co-sponsored shareholder resolutions to reduce youth access to tobacco products, to request companies to voluntarily comply with FDA regulations, to eliminate smoking in restaurants, and other tobacco related issues.

Northern Ireland

The SBI **supports** resolutions that call for the adoption of the MacBride Principles as a means to encourage equal employment opportunities in Northern Ireland.

The SBI **supports** resolutions that request companies to submit reports to shareholders concerning their labor practices or their sub-contractors' labor practices in Northern Ireland.

In addition to casting proxy votes, the SBI sponsors and cosponsors Northern Ireland resolutions as required by *Minnesota Statutes*, Section 11A.241.

Environmental Protection/Awareness

In general, the SBI **supports** resolutions that require a corporation to report or disclose to shareholders company efforts in the environmental arena. Resolutions that request the adoption of various environmental policies are evaluated on a case-by-case basis.

Sudan

Minnesota Statutes, Section 11A.243 requires the SBI to make its best efforts to identify all "scrutinized companies" with operations in Sudan in which the SBI has direct or indirect holdings or could possibly have holdings in the future. The SBI will engage each scrutinized company. The legislation calls for the SBI to: encourage companies with inactive business operations to continue to refrain from initiating active operations; and to notify companies with active business operations that it may be subject to divestment by the State Board of Investment. In general, the SBI **supports** resolutions consistent with this legislation.

Iran

Minnesota Statutes, Section 11A.244 requires the SBI to make its best efforts to identify all "scrutinized companies" with operations in Iran in which the SBI has direct or indirect holdings or could possibly have holdings in the future. The SBI will engage each scrutinized company. The legislation calls for the SBI to: encourage companies with inactive business operations to continue to refrain from initiating active operations; and to notify companies with active business operations that it may be subject to divestment by the State Board of Investment. In general, the SBI **supports** resolutions consistent with this legislation.

Other Issues

In general, the SBI **supports** proposals that require a company to report or disclose to shareholders company efforts concerning a variety of social responsibility issues. In the past, these reporting resolutions have included issues such as affirmative action programs, animal testing procedures, and nuclear plan safety procedures.

In general, the SBI **opposes** proposals that require a company to institute a specific business action in response to such issues. As an example, the SBI voted against a shareholder proposal which would have required a utility to phase out operations of a nuclear power plant.

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1 *Minnesota Statutes*, Section 11A.01.

2 *Minnesota Statutes*, Section 356A.04, subdivision 1.

3 *Minnesota Statutes*, Section 11A.09, and Section 356A.04, subdivision 2.

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STATE DEFERRED COMPENSATION PLAN

Staff Paper

September 2010

Plan Structure

The Minnesota Deferred Compensation Plan (Plan) is an Internal Revenue Code section 457(b) plan that offers public employees throughout the State a tax deferred savings vehicle. The Plan is a supplemental retirement plan to participants' primary plan. Most public employees are members of a defined benefit plan administered by the Minnesota State Retirement System, Public Employees Retirement Association or Teachers Retirement Association.

All public employees in Minnesota are eligible to participate. Participation is voluntary, and the employee must take action to have his or her employer deduct contributions from each paycheck. Some participants receive modest employer matches which are authorized in state law to be made by employing units. There is no statewide match. As with other defined contribution plans, individual participants choose how they wish to have their contributions invested in Plan investment options.

Tax deductibility, annual participant contribution limits and withdrawal options are governed by federal IRC provisions. *Minnesota Statutes*, section 352.965 governs eligibility, employer match provisions, assigns certain Plan administrative duties to employing units, MSRS and SBI, and authorizes certain investment vehicles for the Plan.

Plan Administration

Minnesota State Retirement System (MSRS) is the Plan administrator and is responsible for recordkeeping and communication activities. SBI is responsible for selecting and monitoring investment options.

MSRS retains a central recordkeeping firm that receives contributions from employing units; maintains individual participant account balances and investment selections, and directs contributions and asset transfer requests to proper investment options. MSRS prepares communication materials, directs group seminars for participants and operates a phone center that participants may call for assistance.

SBI retains investment managers for the Plan. SBI staff reviews these managers in the same manner staff reviews managers for the Combined Funds. Plan manager information is presented to the Investment Advisory Council and Board at the regular quarterly meetings.

Investment Options

In choosing investment options for the Plan, SBI seeks to offer a range of options that enables participants to choose a portfolio that satisfies their investment needs and objectives without offering too many options that would confuse them.

SBI first selects asset classes which are chosen to provide a range of market exposures necessary to construct a viable investment portfolio. SBI then chooses investment managers to provide investment products for these classes. SBI seeks lower cost options for which information is readily accessed by participants. In general, SBI seeks institutional class mutual funds or commingled funds.

Attachment A provides a list of current investment options in the Plan. In addition to those listed, a mutual fund window is available for which a participant pays an annual fee and may select from a very extensive list of mutual funds. SBI does not monitor mutual funds in the window.

ATTACHMENT A

Minnesota Deferred Compensation Plan
Investment Options

Effective July 1, 2011

Asset Class	**Option**
Large Cap Equity	1) Janus Twenty 2) Vanguard Institutional Index (S&P 500)
Mid Cap Equity	Vanguard Mid-Cap Index
Small Cap Equity	T. Rowe Price Small Cap Stock
Balanced	Vanguard Balanced Index
Bond	1) Dodge & Cox Income 2) Vanguard Total Bond Index
International	1) Vanguard Total International Stock Index 2) Fidelity Diversified International
Money Market	SIF Money Market
Stable Value	SIF Fixed Interest
Target Date Funds	SSgA

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CONTINUING FIDUCIARY EDUCATION PLAN

May 2013

CONTINUING FIDUCIARY EDUCATION PLAN

REQUIRED BY MS 356A.13

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

1. **Briefing for New Board/IAC Members**

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

2. **Development and Review of Investment Policies**

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

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

3. **Input from Board's Consultants**

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

4. Manager Roundtables

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

5. Travel Allocation

The SBI allocates $4,000 annually to each Board member (or their designee) for costs associated with attendance at investment-related seminars and conferences. This allocation is used at the discretion of each Board member.

2012 Minnesota Statutes

356A.13. CONTINUING FIDUCIARY EDUCATION.

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

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

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COMBINED FUNDS

ASSET ALLOCATION REVIEW

Staff Paper

December 2008

INVESTMENT ADVISORY COUNCIL REPORT

DATE: December 3, 2008

TO: Members, State Board of Investment

FROM: Members, Investment Advisory Council

SUBJECT: Asset Allocation Recommendation for the Combined Funds

Legislation was enacted during the 2008 Legislative session that will merge the Basic Retirement Funds and the Post Retirement Fund into one combined fund as of June 30, 2009. The merger of the two plans will require a new asset allocation to be established for the combined plans.

The Investment Advisory Council (IAC) started reviewing this issue at its August 2008 meeting. A number of issues were discussed and additional information requested. At the IAC's November 2008 meeting the attached report, which includes asset allocation alternatives and liability information, was presented. The IAC discussed the report and is making the following recommendation to the SBI related to the asset allocation for the Combined Funds.

RECOMMENDATION:

The IAC recommends that the State Board of Investment adopt the following asset allocation policy for the Combined Funds:

U.S. Equity	**45%**
International Equity	**15**
Alternative Investments	**20**
Fixed Income	**18**
Cash	**2**
Total	**100%**

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Presentation to

Minnesota State Board of Investment

Investment Advisory Council

November 21, 2008

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MNSBI Asset Liability Study
Background

Policies That Determine The Financial Health of Retirement Funds

- **Funding Policy – Cash flow into the Fund**
  - Specification of how and when contributions are made to the fund
  - Specification of amount and timing of contributions
- **Benefit Policy – Cash flow out of the Fund**
  - Specification of plan benefits
  - Specification of eligibility requirements
- **Investment Policy – Level and type of investment risk**
  - Financial status of the plan
  - Financial strength of the plan sponsor
  - Risk tolerance/preferences of the plan fiduciaries

MNSBI Asset Liability Study
Background

- **Objective**
  - To observe a range of future financial outcomes, in context of economic and investment uncertainty
    - At current investment policy
    - At alternative investment policies
  - To affirm or revise investment policy

- **Examine the Financial Health of MN Retirement Plans in Aggregate**
  - Within the context of Investment Policy decisions
  - Within the context of **existing** Funding Policy
  - Within the context of **existing** Benefit Policy

- **Conduct the Analysis on a Consolidated Basis**
  - Used largest 4 plans (Teachers Retirement Fund, Public Employees Retirement Fund, State Employees Retirement Fund, Public Employees Police & Fire)
    - These four plans accounted for approximately 98% of total SBI retirement assets at June 30, 2008
  - Combined the Basics and the Post

- **Focus on Funded Ratio**
  - Actuarial Liabilities / Market Value of Assets
  - 20 and 25 year projections
    - Years 2028 and 2033

MNSBI Asset Liability Study
Analytical Process

- **Create actuarial model of MN Retirement Plans that is consistent with the valuations by plan actuary (Segal)**
  - Load July 2007 census data, program plan provisions and enter actuarial assumptions
    - Utilize all available financial information
    - Run replication valuation to ensure results within 0-5% tolerance
    - Scale results so starting values exactly match actuary's figures
  - Reflect all new actuarial assumptions effective for July 2008 valuations
  - Reflect merging of Post plan with respective active plans
- **Create new entrant profiles**
  - Use an open group concept, where departing employees are replaced by presumed new hires
  - Set experience assumptions equal to valuation assumptions (no built-in gains or losses)
  - Achieve overall demographic stability in member counts, average ages, average service, etc.
  - Establish separate profile for each of the four plans modeled
- **Create a consolidated liability model**
  - Aggregate the four (4) plans
  - Maintain each plan's respective assumptions
- **Run 30-year core projection of liabilities**
- **Run Deterministic and Stochastic Forecasts**

MNSBI Asset Liability Study
Deterministic versus Stochastic

- **Deterministic forecasts**
  - Set of financial outcomes over projection period, based on the premise that a set of assumptions will be realized
  - Set of assumptions could be variety of scenarios

- **Stochastic forecasts**
  - Set of several thousand deterministic forecasts chosen randomly based on the risk and return characteristics of the investment policy asset classes
  - Distribution of financial outcomes over the projection period, based on the premise that assumptions will rarely, if ever, be fully realized
  - Measures the range or volatility of selected financial factors over the projection periods
  - Measures the probability of a variety of financial outcomes

Deterministic Forecast

Assume 8.5% Annual Investment Return starting July 2008

Year	Actuarial Value of Assets (AVA)	Market Value of Assets (MVA)	Actuarial Liability	Funded Ratio (Beg yr)	Employer Contributions (% of payroll)	Expected Employee Contributions (% of payroll)	Funding Expected Bft Pymts
2007	46,113,586,941	48,694,008,834	53,810,046,281	0.90	6.30	5.63	2,867,447,173
2008	48,389,334,858	44,778,736,618	56,806,475,924	*0.79	6.35	5.65	3,043,635,083
2009	49,933,604,802	**46,924,757,387	59,412,133,897	**0.79	6.45	5.71	3,229,549,232
2010	51,344,829,890	49,124,724,630	62,061,532,369	0.79	6.55	5.74	3,423,867,842
2011	52,670,463,929	51,374,018,287	64,752,561,165	0.79	6.55	5.74	3,623,351,786
2012	53,654,617,588	53,654,617,588	67,487,005,452	0.80	6.55	5.74	3,832,657,349
2013	55,961,615,892	55,961,615,892	70,259,815,347	0.80	6.55	5.74	4,050,353,022
2014	58,290,518,387	58,290,518,387	73,067,676,716	0.80	6.55	5.74	4,274,917,162
2015	60,638,137,822	60,638,137,822	75,907,648,238	0.80	6.55	5.75	4,505,476,814
2016	63,002,577,616	63,002,577,616	78,778,200,211	0.80	6.55	5.75	4,747,863,077
2017	65,374,779,456	65,374,779,456	81,666,445,605	0.80	6.55	5.75	4,980,771,415
2018	67,766,896,248	67,766,896,248	84,597,180,954	0.80	6.55	5.75	5,222,609,853
2019	70,173,624,077	70,173,624,077	87,566,773,464	0.80	6.55	5.75	5,479,380,684
2020	72,582,664,423	72,582,664,423	90,556,630,690	0.80	6.55	5.75	5,719,934,929
2028	92,811,153,957	92,811,153,957	116,210,113,051	0.80	6.55	5.77	7,721,618,708
2033	107,162,690,052	107,162,690,052	134,688,791,665	0.80	6.55	5.79	8,915,311,886

* Preliminary 2008 (MVA) Funded Ratios: MSRS 88%, TRS 82%, PERA 72%, PERA P&F 86%

** Values do not reflect the significant decline of the market value of assets experienced since July 2008.

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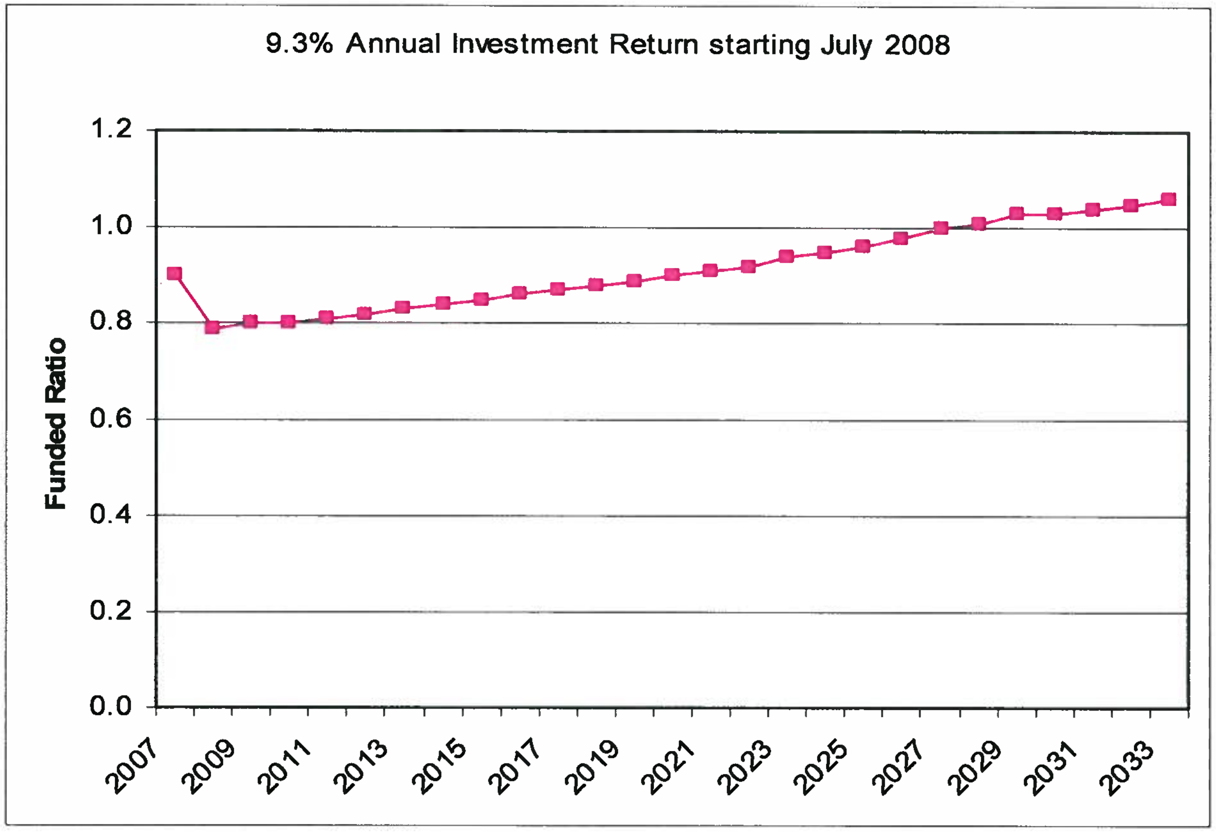
Deterministic Forecasts – Funded Status

Investment Return needed for Full Funded Status at Years 2028/2033

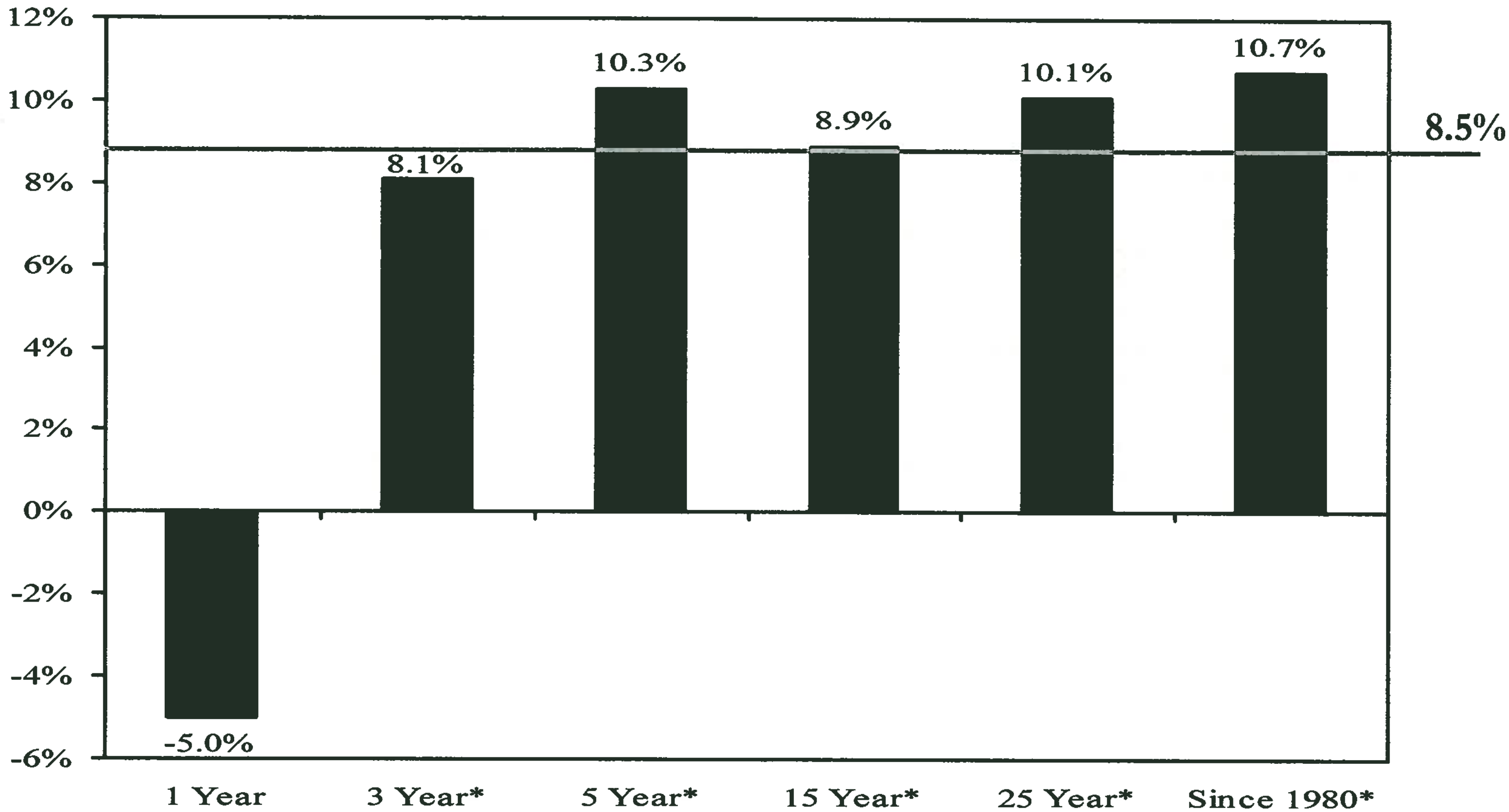


Values do not reflect the significant decline of the market value of assets experienced since July 2008.

MNSBI Asset Liability Study
MN SBI Historical Actual Returns

SBI Returns – Active/Post Funds Combined

(for periods ending 6/30/2008)



*Annualized rate of return net of fees and expenses

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MNSBI Asset Liability Study
Capital Market Assumptions

Asset Classes	Real Return (%)	Nominal Return (%)	Risk (Std Dev)
Domestic Equity	6.0	9.0	17.0
International Equity	6.0	9.0	18.0
Emerging Markets	8.0	11.0	25.0
Alternative Assets	8.5	11.5	20.0
Domestic Bonds	3.0	6.0	7.0
Cash Equivalents	1.0	4.0	2.0
Inflation	3.0		1.0

MNSBI Asset Liability Study
Capital Market Assumptions

Correlation Matrix

	1	2	3	4	5	6	7
Domestic Equity	1.00						
International Equity	.70	1.00					
Emerging Markets	.65	.65	1.00				
Alternative Assets	.55	.45	.40	1.00			
Domestic Bonds	.20	.10	-.05	.20	1.00		
Cash Equivalents	.00	-.05	-.05	.00	.00	1.00	
Surprise Inflation	-.28	-.09	.25	.19	-.48	.02	1.00

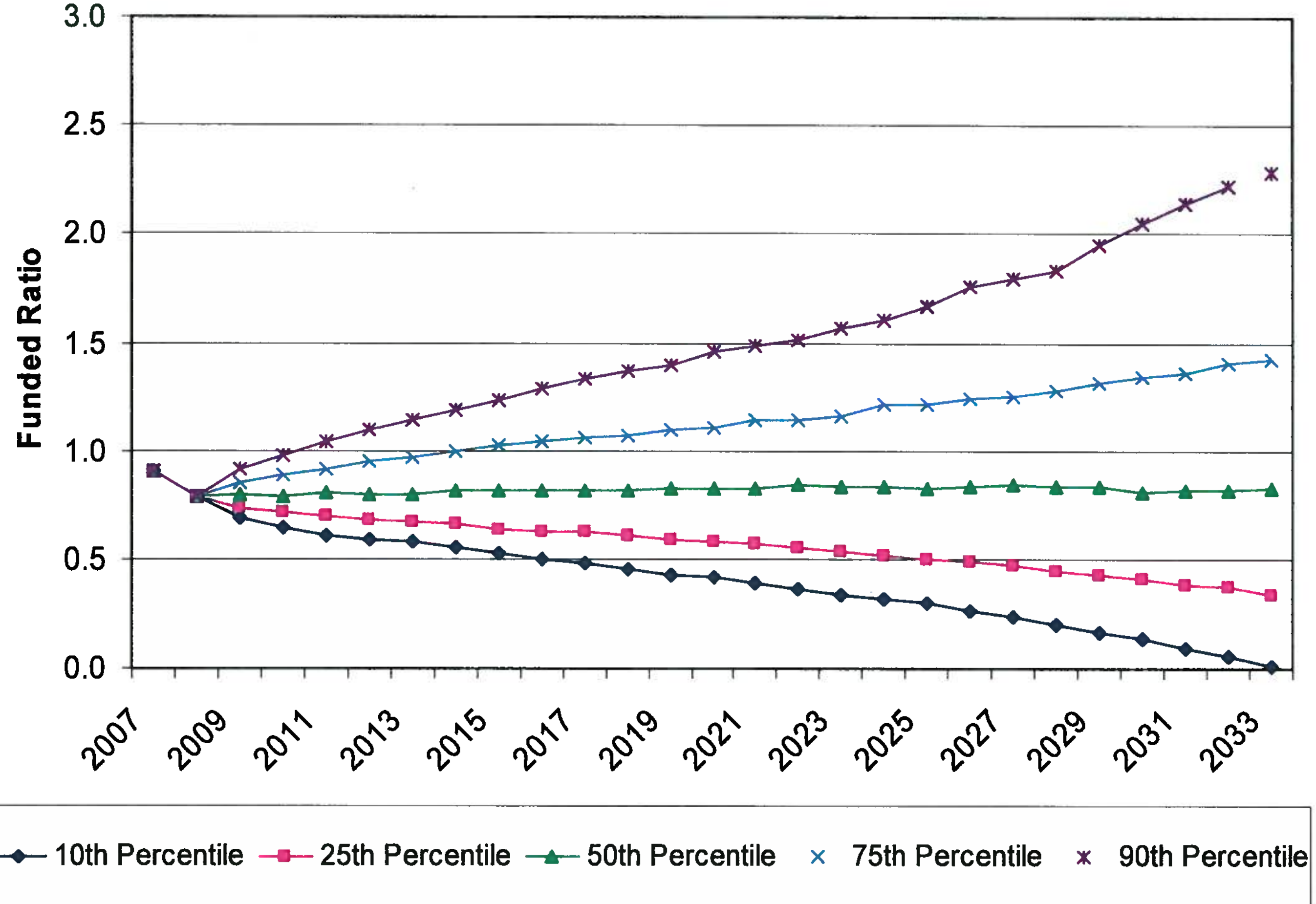
MNSBI Asset Liability Study
Investment Options

Asset Class	Current Policy	Option 1	Option 2	Option 3
US Stocks	45.0%	45.0%	40.0%	40.0%
International	12.0	12.0	16.0	16.0
Emerging Markets	3.0	3.0	4.0	4.0
Alternatives	16.0	20.0	18.0	20.0
US Bonds	22.0	18.0	20.0	18.0
Cash	2.0	2.0	2.0	2.0
Total	100.0%	100.0%	100.0%	100.0%

Annual Exp Return (%)	8.70	8.92	8.91	8.94
Annual Exp Risk (Std Dev)	12.30	12.81	12.79	12.75

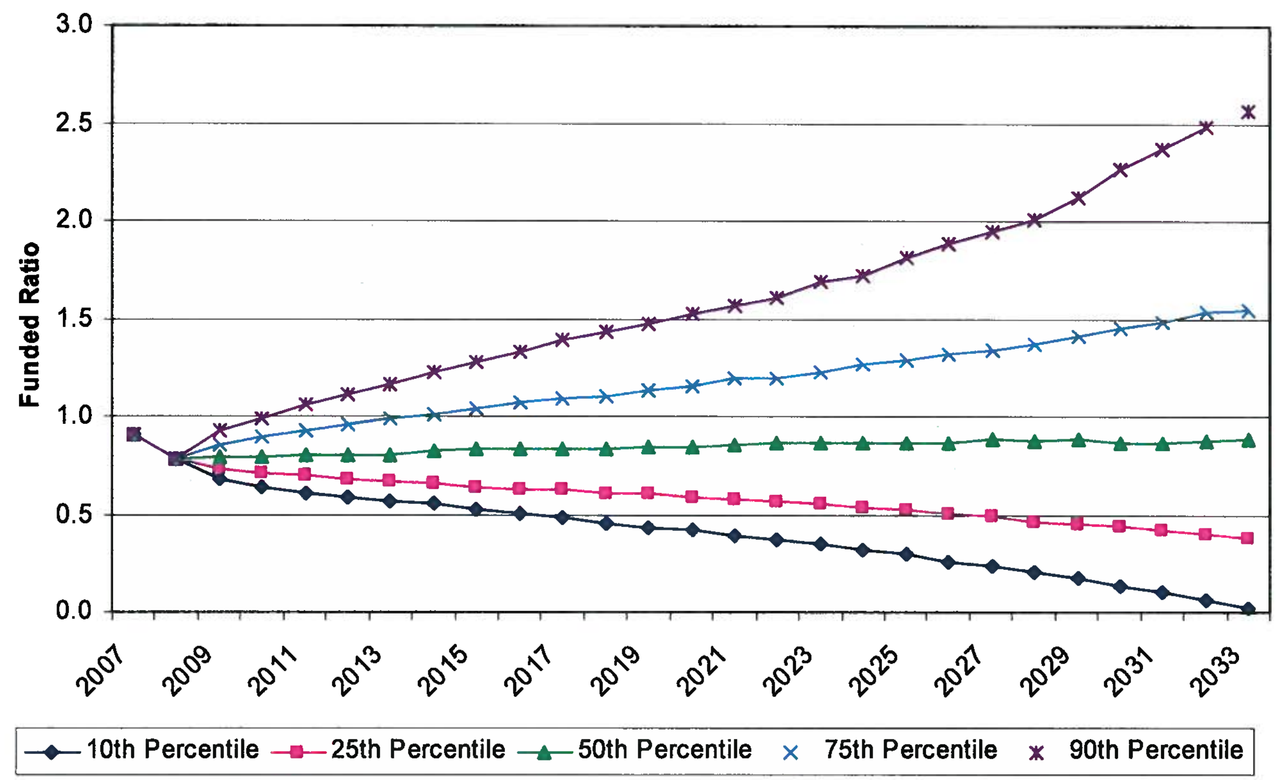
Stochastic Forecast – Funded Ratio

Current Investment Policy: Projected Outcomes from 7/1/08



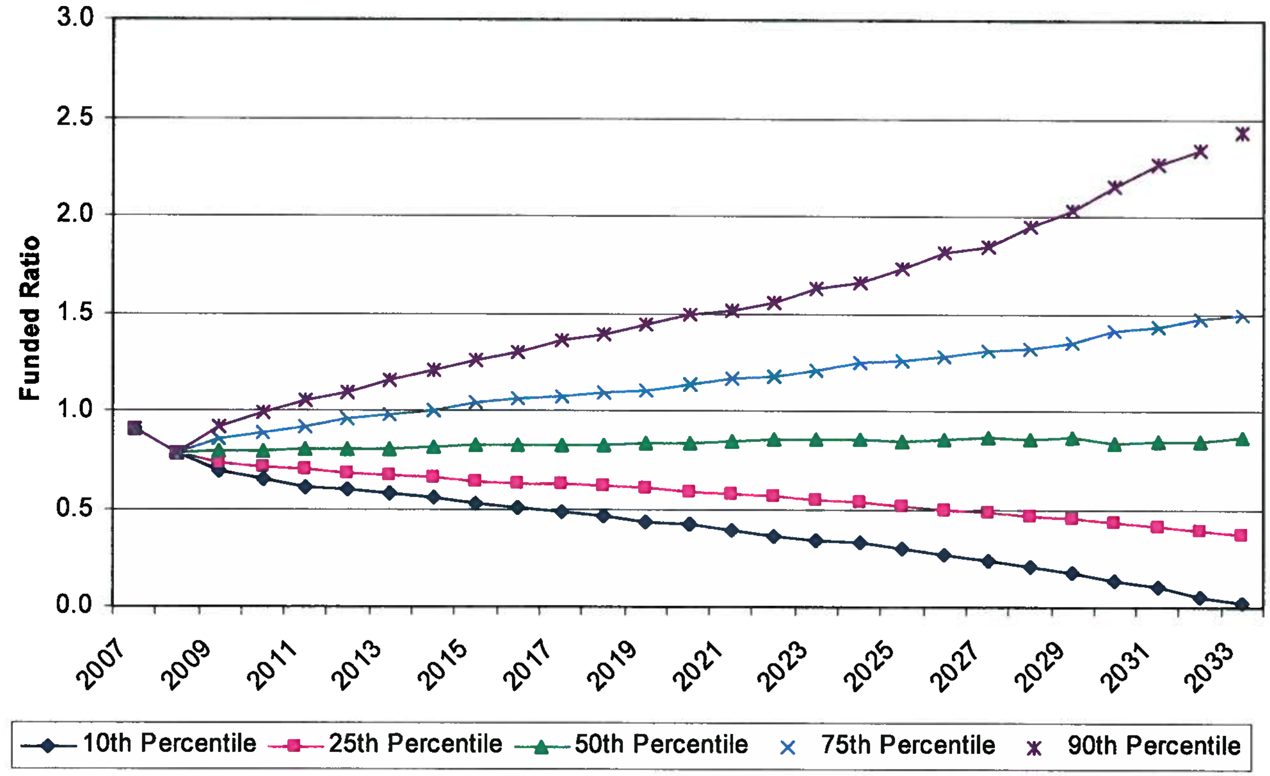
Stochastic Forecast – Funded Ratio

Investment Option 1: Projected Outcomes from 7/1/08



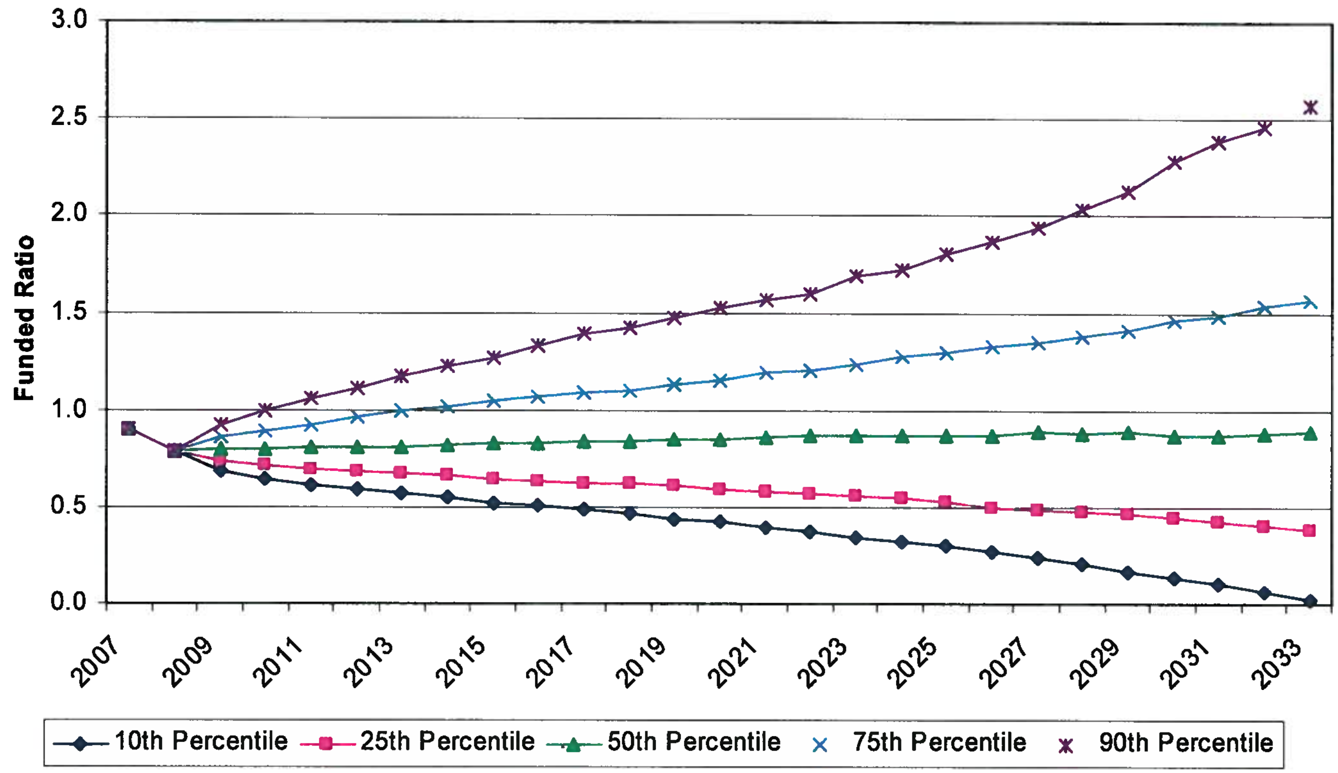
Stochastic Forecast – Funded Ratio

Investment Option 2: Projected Outcomes from 7/1/08

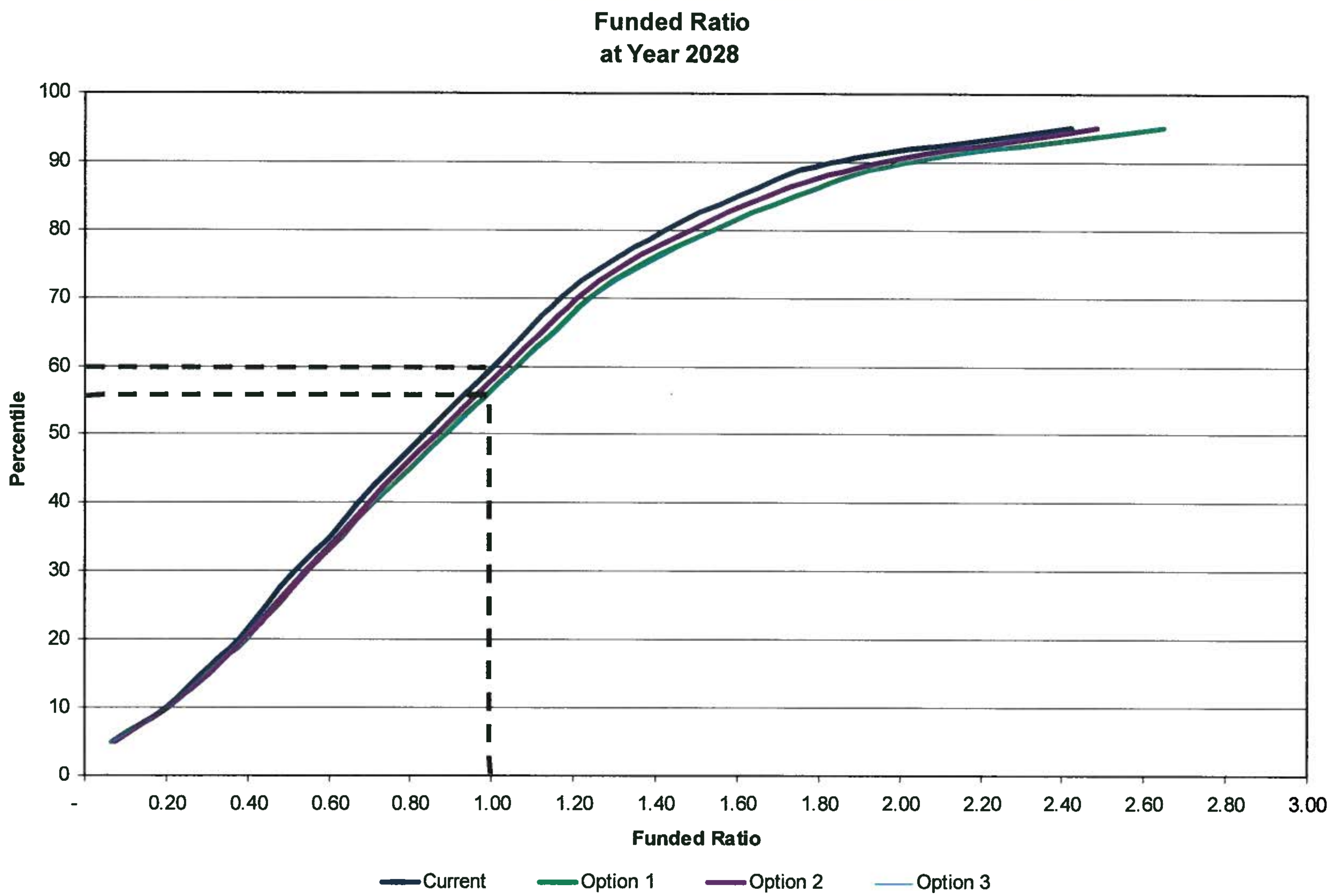


Stochastic Forecast – Funded Ratio

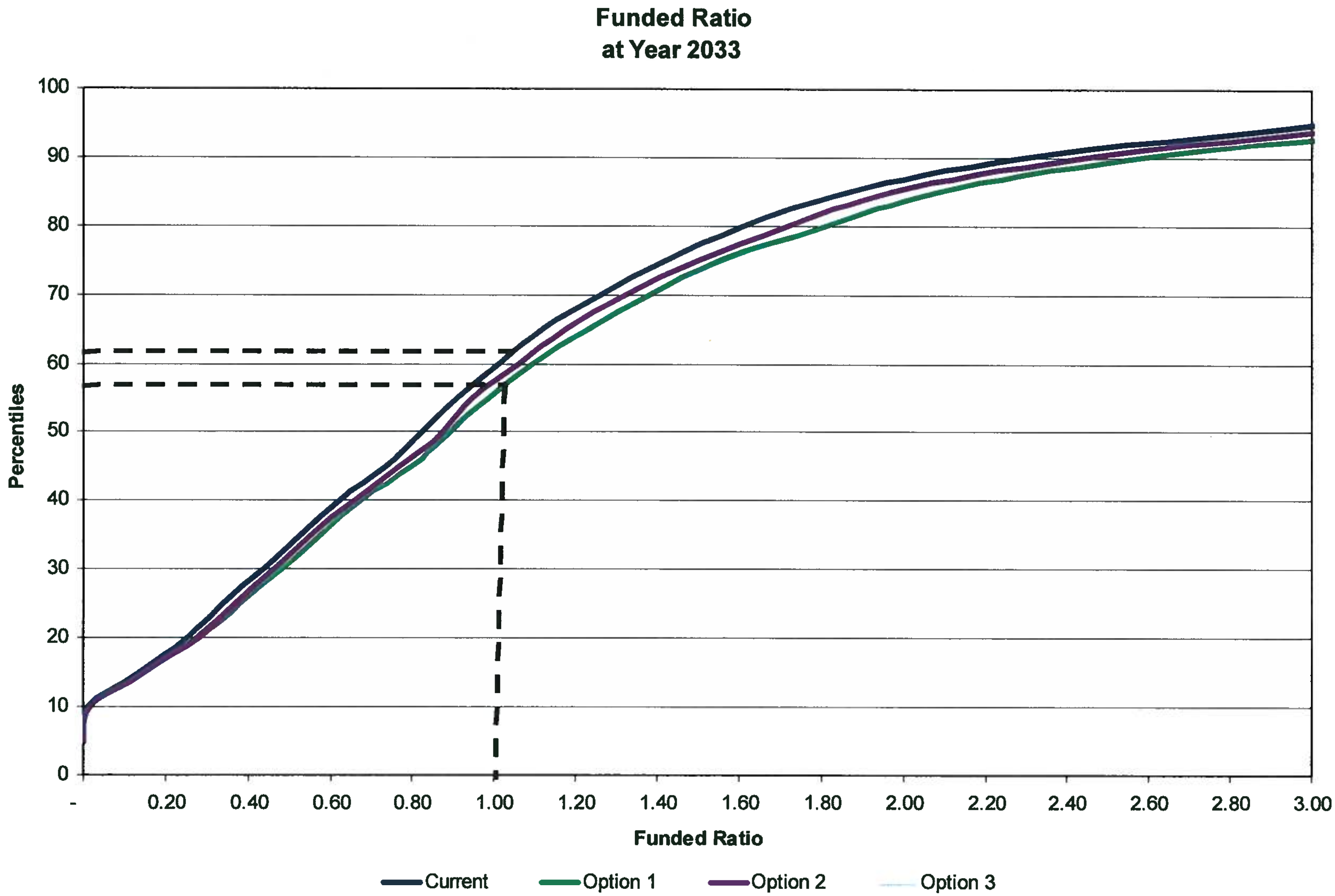
Investment Option 3: Projected Outcomes from 7/1/08



Stochastic Forecast – Funded Ratio
Investment Options: Projected Outcomes from 7/1/08



Stochastic Forecast – Funded Ratio
Investment Options: Projected Outcomes from 7/1/08



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MNSBI Asset Liability Study
Discussion Points

- **Investment Policy**
  - The projected funded status does not significantly change based on the investment options studied
  - The investment policy will not likely solve potential future unfunded issues
- **Funding Policy**
  - Statutory language exists that grants the PERA and MSRS Boards authority to increase contribution rates should a contribution deficiency materialize.
  - TRA will likely seek similar authority in the coming session
- **Benefit Policy**
  - Legislative action has been taken to combine the Basics and Post when(if) the funded ratio of the Post becomes less than 80% funded or two consecutive years of less than 85% funded.
  - Benefit increases for Post have also been modified
- **Extraordinary market action since July 2008**
  - The analysis was conducted based on June 30, 2008 market values, thus does not reflect the significant decline of the market value of assets experienced since June month-end. Future outcomes could be severely impacted by recent capital market action
  - Consider revisiting the Asset Liability Analysis when 2009 data becomes available.

COMBINED FUNDS

ASSET ALLOCATION REVIEW

INPUT UPDATES

September 2011

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Total Portfolio
3% Inflation Rate

	Real Rate of Return	Nominal Return	Volatility
2008 Asset Allocation Study	6.36%	9.36%	13.41%
Current Study Average	5.36	8.36	13.43
BlackRock	5.56	8.56	14.35
PCA	5.59	8.59	13.16
Wilshire	4.27	7.27	12.84
Credit Suisse	6.49	9.49	14.19
Goldman	5.12	8.12	14.05
JP Morgan	4.34	7.34	13.02
UBS	6.32	9.32	11.78
State Street	4.03	7.03	13.26
Inflation		3.00	

Real Rate

	Credit Suisse	Nuveen	Blackrock	Fidelity	Goldman	Mellon	PCA	Wilshire	JP Morgan	UBS	State Street	Vanguard
U.S. Equity	7.10	5.74	5.50	3.20	5.05	8.05	6.00	4.00	4.75	6.15	4.25	6.40
U.S. Small Cap	–	7.74	6.25	1.60	5.35	8.70	–	–	5.25	–	4.65	–
Developed International	7.10	6.44	5.50	5.00	4.75	8.70	6.25	4.00	4.25	6.05	4.25	6.60
Emerging International	9.50	–	7.00	6.20	6.25	10.70	–	4.00	6.00	7.60	5.75	–
U.S. Fixed Income	–	3.24	1.75	0.70	1.75	2.05	0.55	1.50	0.75	2.75	0.75	1.80
Real Estate	4.80	7.44	4.50	1.00	4.75	–	4.25	4.05	4.00	4.45	1.35	4.70
Private Equity	9.70	–	8.50	–	7.65	–	9.25	7.45	5.25	9.75	5.75	–
Commodities	5.80	6.24	1.00	3.20	4.25	–	–	2.00	4.00	–	2.55	–
U.S. Cash	0.00	1.04	0.50	0.70	–	0.30	0.25	0.25	-0.50	2.45	0.25	0.50
Inflation	2.20	1.26	2.00	2.10	2.25	2.20	2.75	2.25	3.00	2.25	2.75	3.00
Time Frame	–	10 yr	10 yr	10 yr	10 yr	10yr	10 yr	10 yr	10-15 yr	20-30 yr	30 yr	30 yr

Risk

	Domestic Equity	International Equity	Alternatives	Fixed Income	Cash
2008 Study	17.00	19.75	20.00	7.00	2.00
Current Average	16.90	19.40	21.30	5.20	1.40
BlackRock	16.90	19.60	27.00	4.50	1.50
PCA	17.00	20.00	19.00	4.50	2.00
Wilshire	16.00	18.70	20.60	5.00	1.25
Credit Suisse	17.50	22.00	22.30	5.20	1.60
Goldman	18.60	19.80	20.60	3.90	1.40
JP Morgan	17.00	20.10	18.20	3.75	0.50
UBS	14.60	16.90	19.30	4.70	0.50
State Street	16.40	18.90	21.70	6.00	2.00

Volatility
Standard Deviation

	Credit Suisse	Nuveen	Blackrock	Goldman	Mellon	PCA	Wilshire	JP Morgan	UBS	State Street	Vanguard
U.S. Equity	17.5	14.5	16.5	18.1	16.0	17.0	16.0	16.5	14.6	16.0	18.5
U.S. Small Cap	–	24.4	20.5	23.5	20.0	–	–	21.5	–	20.0	–
Developed International	19.8	19.3	17.5	17.3	17.0	20.0	17.0	18.5	15.1	17.5	21.5
Emerging International	28.7	–	26.0	27.2	21.0	–	24.0	25.0	18.7	23.0	–
U.S. Fixed Income	–	8.2	4.5	3.9	7.0	4.5	5.0	3.75	–	6.0	6.9
Real Estate	13.9	30.4	16.5	12.0	–	10.0	12.25	8.75	10.1	14.0	15.7
Private Equity	27.3	–	33.0	24.0	–	25.0	26.0	24.75	25.5	26.0	–
Commodities	17.7	65.7	23.0	26.1	–	–	13.0	7.0	–	18.5	–
U.S. Cash	1.6	0.9	1.5	–	1.0	2.0	1.25	0.5	0.5	2.0	2.0

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REBALANCING AND TRANSITION MANAGEMENT

Staff Paper

September 2013

Rebalancing and Transition Management

Rebalancing Policy
The SBI follows a disciplined approach to rebalancing to maintain the target policy asset mix of a fund over time. Under the policy, when an asset class' allocation deviates more than 5 percent but less than 10 percent from its target allocation, staff has discretion to redistribute assets to achieve the target allocation. If the actual allocation deviates 10 percent or more, assets must be redistributed among asset classes to achieve the targeted allocation.

Through rebalancing, the SBI maintains a fund's desired systematic risk exposures and expected total return. The allocation of an asset class is allowed to drift because frequent rebalancing is costly. Narrow bands around the target asset allocation result in unacceptably high transaction costs. Wider bands tolerate expected volatility in market returns and reduce the frequency of rebalancing. The SBI established its policy bands with these considerations in mind. In effect, this rebalancing policy imposes a "buy low, sell high" discipline relative to a fund's long-term asset mix policy. Alternative assets, because of the illiquid nature of its investments, are excluded from these rebalancing rules.

The following table illustrates the application of the policy to the Combined Funds.

Rebalancing Ranges
Combined Funds Allocations

	10% Decrease	5% Decrease	Target Allocation	5% Increase	10% Increase
Domestic Equity	40.5%	42.75%	45%	47.25%	49.5%
International Equity	13.5	14.25	15	15.75	16.5

For example, if the Domestic Equity allocation exceeds 47.25 percent but is less than 49.5 percent, then staff has the discretion to rebalance. If the International Equity allocation increases to 16.5 percent or more, then assets must be rebalanced back to the policy weight. Bonds, which has a strategic allocation of 18 percent in the Combined Funds, displays an actual allocation greater than 18 percent. The amount committed to Alternatives but not yet invested is allocated to Bonds, and the rebalancing rules are applied to the adjusted allocation.

The SBI maintains adherence to its rebalancing approach and does not use tactical asset allocation (TAA) as an investment strategy. Tactical asset allocation (market timing) involves making projections concerning the performance of markets and adjusting fund allocations accordingly. The SBI has a long-standing policy of not using TAA strategies.

Implementing Rebalancings
The process of moving assets among managers requires two major management decisions concerning the handling of the assets in question: whether to use a transition manager and whether to use futures. Issues affecting these decisions include the asset classes involved and managers affected, the size and timeframe of the transition, market volatility and whether market exposure must be maintained.

Using Current Managers or Transition Manager
The SBI may choose to use the investment managers who are affected by the rebalancing to perform the transition or use a transition manager retained for this special purpose. Whether the SBI is liquidating the entire portfolio of a terminated manager or withdrawing a portion of a portfolio as part of a rebalancing influences the decision.

The SBI generally does not use transition managers for withdrawing assets from a bond manager or for transferring portfolios of terminated bond managers. The SBI's bond managers have a keen understanding of the securities in their portfolios and have the capabilities to efficiently sell or buy securities. The SBI transfers in-kind the securities of a terminated bond manager to a new manager, so a transition manager skilled in selling and buying securities is not needed.

The SBI generally uses a transition manager to liquidate a terminated equity manager or to withdraw assets from an active equity manager, and may use a transition manager when multiple equity managers are involved. A transition manager is employed to sell a terminated equity manager's portfolio holdings because a terminated manager has less of an incentive to liquidate with the SBI's interests in mind. A transition manager is employed to withdraw assets from an active equity manager because a transition manager, using crossing opportunities and specialized trading algorithms, may liquidate large blocks of stocks in a more cost effective manner than an active equity manager whose portfolio is smaller and more concentrated.. For passive or semi-passive equity manager withdrawals, staff determines whether a manager will liquidate the portfolio based on the manager's capability and willingness to fulfill SBI requirements. Factors used in the determination include the use of crossing opportunities and the cost of the transition, the capacity of the manager to perform the transition and complete the transition within the timeframe required, the impact on tracking error of the portfolio in question and the manager's ability to use futures to maintain market exposure.

Using futures
The SBI recognizes that each rebalancing may present a unique set of circumstances that requires an examination of a host of factors to determine whether futures will be used.

The size of the rebalancing, the timeframe needed to complete the rebalancing and the volatility of the markets at the time of rebalancing are critical factors in determining whether to use futures. Larger rebalancings, longer transition periods and greater market volatility at the time of the rebalancing generally will increase the likelihood of using futures to achieve the desired asset allocation. In contrast, raising cash and liquidating small percentages of portfolios in short timeframes with low market volatility generally will decrease the likelihood of using futures.

Conclusion
The SBI follows a disciplined approach to rebalance back to target asset allocations. Implementing a rebalancing involves making decisions on a host of factors to determine the appropriate course of action. The SBI recognizes that prescribing an approach for each type of rebalancing ahead of time is not appropriate given different circumstances faced in each transition. Rather, the SBI sets forth a general approach with general considerations useful in making the most informed decision for a given transition when it occurs.

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STATE TRUST FUNDS
INVESTMENT MANAGEMENT

Staff Paper

February 2010

The State Board of Investment (SBI) is responsible for the investment management of several trust funds. These trust funds have differing accounting requirements and spending targets that derive from differing constitutional and statutory provisions. As a result of these differing legal bases, the trust funds have differing investment objectives and asset allocations. These trust funds are:

- Permanent School Fund (PSF)
- Environment and Natural Resources Trust Fund (Environmental Trust Fund or ETF)
- Closed Landfill Investment Fund

Each of the trust funds is a nonretirement account that, by state law, must be invested separately from the retirement assets managed by the SBI.

This paper sets forth the constitutional and statutory basis for each trust fund, discusses the unique accounting requirements and spending targets for each and presents the investment objectives and rationale for the asset allocation for each.

Endowment Fund Investment Objectives

To the extent possible, the SBI treats these trust funds as endowment funds with the overriding goal to balance a short-term need for income with the long term need for growth in principal. Any endowment fund encounters certain short-term versus long-term investment trade-offs. In the short-term, there is a demand for maximum current spendable income. This short-term objective usually can be met best by holding investments in lower risk, fixed income securities. Conversely, in the long-term, there is a demand for a growing stream of real, that is inflation adjusted, spendable income. This long-term objective usually can be met best by holding investments in higher-risk equity securities. Unfortunately, the two investment objectives tend to be incompatible. Maximum current spendable income achieved through fixed income investments will sharply limit long-term growth in a fund's principal and, hence, the spendable income that the fund could generate in the future. On the other hand, a growing stream of real spendable income achieved through equity investment usually results in a volatile stream of current spendable income.

An endowment fund's tolerance for risk is determined largely by the trade-off between short-term and long-term objectives. In turn, the emphasis on short-term or long-term objectives is primarily a function of the importance of the endowment fund's spendable income stream to the sponsor's total revenue. When the spendable income stream is a relatively small percentage of total revenues, the risk tolerance of the sponsor will tend to be higher than in a situation in which the fund's spendable income stream is a large percentage of the sponsor's total revenue. In the latter case, the sponsor is likely to be more cautious since a protracted period of poor investment results could have a serious impact on the various projects that the endowment fund is expected to finance.

Permanent School Fund
The Permanent School Fund (PSF) was created in 1858 under Article XI, Section 8 of the Minnesota State Constitution. The PSF was designed to serve as a long-term source of revenue for public schools. Technically, the PSF is composed of two parts:

- Lands: As part of the process of Minnesota becoming a state, the federal government granted to Minnesota two sections of each township for the support of schools. The most productive and valuable land was sold in the nineteenth and early part of the twentieth century and proceeds put into the Fund. Other lands were added to the remaining tracts which are primarily in the northern part of the state. The Department of Natural Resources (DNR) currently manages about 2.5 million acres of land and retains the mineral rights on another 1 million acres for the Fund. Most of the land is part of state forests, wildlife management areas, scientific and natural areas, state parks, riverways, and water access sites.

- Principal: The lands generate income in the form of land sales, mining royalties, timber sales and lakeshore and other leases. The income from these sources, net of DNR costs, is used to purchase financial securities which make up the second part of the Permanent School Fund. It is this second part of the PSF, the principal as represented by the PSF's financial investments, that is managed by the SBI.

In conjunction with the PSF is the School Endowment Fund. Income generated by the financial investments in the PSF principal is transferred to the School Endowment Fund and is then available for educational spending. Because of the short-term nature of this account, the School Endowment Fund is invested in short-term cash equivalents.

Historically, the spendable income from the Fund was used to offset school aid payments in the state budget. In 2008 legislation, the offset to aid payments was repealed, and, beginning in fiscal year 2010, the spendable income is appropriated directly to school districts.

Current Accounting Restrictions

As prescribed by the State Constitution, the principal of the PSF must remain "perpetual and inviolate". Educational spending can be financed only from the PSF's dividend and interest income. None of the PSF's principal may be reduced to finance the spending.

Any realized losses on fixed income and equity securities are first subtracted from any realized gains. Net realized gains are apportioned in equal installments over the next ten years to offset net losses in those years. Any portion of an installment not needed to recover subsequent losses shall be added to the principal of the PSF. Net losses in any fiscal year will be reduced by any net gains apportioned to that fiscal year and any remaining loss, if any, will be recovered from interest and dividend income in equal installments over the following ten fiscal years.

Investment Objective

As a result of these restrictive accounting requirements, the impact of investment strategies for the PSF on current spendable income is of primary concern. Investing in equities may generate significant realized losses in any given year, and equities typically generate a lower income stream than fixed income.

Accordingly, prior to fiscal year 1998, the PSF was invested entirely in fixed income securities for more than a decade. While this asset allocation maximized current income, it limited the long-term growth of the Fund and caused the income stream to lose value in inflation adjusted terms. A more appropriate investment objective for the Fund is to produce a growing level of spendable income within the constraints of maintaining adequate portfolio quality and liquidity needed to finance the periodic withdrawals for educational spending.

To meet this objective, a proposal to introduce equities to the Fund's asset mix was discussed by staff with affected parties. Since this modification would reduce short-term income and have budgetary implications for the State, the consent of the executive and legislative branches was necessary. After a number of unsuccessful attempts, the proposal was favorably received by the Legislature and the administration and incorporated into the K-12 education finance bill during the 1997 session. As a result, the Fund allocation was shifted to a 50% stock/48% fixed income/2% cash allocation during July 1997.

The change in fiscal 2010 to appropriate Fund spendable income directly to school districts does not change the appropriateness of the objective to produce a growing level of spendable income. In the future, it is anticipated that school districts will pay close attention to the level of spendable income generated each year from the Fund, a development that reinforces the continuation of a moderately balanced asset allocation for the Fund.

Management Structure

The stock segment of the Fund is invested in the internally managed index fund designed to match the performance of the S&P 500. The bond segment is invested in the internally managed bond fund that is actively managed to add incremental value through sector, security and yield curve decisions. The bond segment uses the Barclays Capital Aggregate Index as its performance target. These investment vehicles offer low costs while providing market returns.

Environmental Trust Fund
The Environmental Trust Fund was established by a constitutional amendment adopted in 1988 to provide a long-term, consistent and stable source of funding for activities that protect and enhance the environment. In 1990, a constitutional amendment to Article XI, Section 14 was approved that mandates that 40 percent of the net proceeds from the state lottery be credited to the Fund until the year 2001. This mandate was extended through the year 2025 following the approval of another constitutional amendment in 1998. Effective July 1999, the 1998 constitutional amendment also eliminated certain accounting restrictions on capital gains and losses and established an endowment policy which sets annual spending up to 5.5% of the Fund's total market value. By statute, the State Board of Investment invests the assets of the Fund.

Investment Objective

The Environmental Trust Fund's investment objective is to produce a growing level of income within the constraints of maintaining adequate portfolio quality and liquidity. Annual spending from the Fund, set by the Legislature, may total up to 5.5% of the Fund's total market value.

Asset Allocation

Before fiscal year 1994, the Fund was invested entirely in short-term instruments as part of the Invested Treasurer's Cash pool. By fiscal year 1995 the Fund had received sufficient contributions to warrant an investment policy that incorporated allocations to longer-term assets such as stocks and bonds.

For fiscal years 1995 through 1999, the SBI maintained a targeted allocation of 50% domestic common stocks and 50% fixed income.

After the 1998 constitutional amendment was adopted, SBI staff worked with the Legislative Commission on Minnesota Resources to establish an asset allocation policy that is consistent with the Commission's goals for spending and growth of the Fund.

The SBI approved a 70% stock and 30% fixed income asset allocation which was implemented July 1, 1999. The allocation positions the Fund for the best long-term growth potential while meeting the objective of the Fund to produce a growing level of spending.

There have been no changes in the Fund structure or spending needs to suggest a change in allocation targets or management of the Fund. Therefore, the Fund will continue to be invested in a 70% stock/30% fixed income allocation through the internally managed stock and bond pools.

Management Structure

The stock segment of the Fund is invested in the internally managed index fund designed to match the performance of the S&P 500. The bond segment is invested in the internally managed bond fund that is actively managed to add incremental value through sector, security and yield curve decision. The bond segment uses the Barclays Capital Aggregate Index as its performance target.

Closed Landfill Investment Fund

The Closed Landfill Investment Fund is a trust fund created by the Legislature to invest moneys to pay for the long-term costs of maintaining the integrity of landfills in Minnesota once they are closed.

Investment Objective

The investment objective of the Closed Landfill Investment Fund is to generate high returns from capital appreciation. The Fund will be used by the Commissioner of the Pollution Control Agency to pay for the long-term costs of maintaining the integrity of landfills in Minnesota once they are closed. By statute, the fund received an appropriation of $5.1 million at the beginning of fiscal years 2000, 2001, 2002 and 2003. By statute, the assets of the Fund are unavailable for expenditure until after fiscal year 2020.

Asset Allocation

Since July 1999, the Closed Landfill Investment Fund has been invested entirely in common stock. Given the long time horizon of this Fund and the lack of need for any short or mid-term withdrawals, this strategy is expected to maximize the long-term gain of the Fund.

In late 2009 the Pollution Control Agency, which administers the Fund, indicated a preference for introducing bonds into the Fund portfolio and establishing a balanced allocation. As the time horizon to 2020 shortens, rebalancing the portfolio by moving each year a portion of equities into bonds is appropriate. A balanced portfolio would position the Fund for long-term growth potential while dampening the volatility associated with an all equities allocation. However, as part of a budget balancing measure, legislation required the withdrawal of $48 million from the Fund, which was made at the end of fiscal year 2010, leaving a balance in the Fund of less than one million dollars. The legislation also specifies contributions of $12 million be made into the Fund in fiscal years 2014 through 2017. Because of the large withdrawal and the several year wait before new contributions flow into the Fund, it is appropriate to place any plan to introduce bonds on hold.

Investment Management

SBI staff manages all assets of the Fund in the internally managed index pool designed to match the performance of the S&P 500 index. Any future investment in bonds will be invested in the internally managed bond fund that uses the Barclays Capital Aggregate Index as its performance target.

Recommendation

As the time horizon to 2020 shortens, the Fund's level of risk from equities goes down. Introduction of bonds, therefore, is appropriate at some future date. Given the current small balance in the Fund and the prospect of significant new contributions in a few years, staff recommends that the Fund continue to be managed in equities in the internally managed S&P 500 index pool and that the SBI revisit the allocation question when new contributions are appropriated by the Legislature.

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ASSIGNED RISK PLAN

Staff Paper

September 2010

Plan Administration
The Minnesota Workers' Compensation Assigned Risk Plan (Plan) is a non-profit, tax-exempt entity administered by the Department of Commerce. The Plan provides disability income, medical expenses, retraining expenses and death benefits to high risk entities, with payments being made either periodically or in lump sum.

Affinity Insurance Services, Inc, Bloomington, Minnesota, a division of AON Insurance, is the Plan administrator retained by Commerce. Affinity handles the daily activities of the Plan, receiving premium payments from participating organizations, paying benefits and determining Plan liabilities through the preparation of annual actuarial reports.

By statute, the SBI invests the assets of the Plan. The SBI reviews the annual actuarial liability study which displays the payments that are estimated to be made from Plan assets over time. The SBI seeks to match Plan investment strategy with the estimated stream of liabilities. The SBI maintains an asset allocation for the Plan and periodically updates that allocation.

Investment Objectives
The SBI recognizes that the Assigned Risk Plan has limited tolerance for risk due to erratic cash flows, no allowance for surplus, and, generally, short duration liabilities. The portfolio must be very liquid to generate sufficient cash to pay expected and unexpected obligations. Cash withdrawals from the portfolio occur frequently to meet obligations. Therefore, it is appropriate to establish two investment objectives for the Plan:

- To minimize mismatch between assets and liabilities;
- To provide sufficient liquidity (cash) for payment of on-going claims and operating expenses.

Asset Allocation
The SBI believes that due to the uncertainty of premium and liability cash flows, the Plan should be invested very conservatively.

The ***fixed income*** segment is invested to fund the shorter-term liabilities (less than 10 years), and the common stock segment is invested to fund the longer-term liabilities. This structure creates a high fixed income allocation which minimizes the possibility of a future fund deficit. The smaller ***equities*** exposure provides higher expected returns and hedges some of the inflation risk associated with the liability stream.

The current long term asset allocation targets for the Plan are as follows:

Domestic Equities	20%
Domestic Fixed Income	80%

The attached table from the Plan actuary displays the year-by-year liabilities estimated for the Plan. The liability payments continue to be heavily weighted in the first several years with a modest portion of estimated claims to be paid in later years. Due to changes in the workers compensation marketplace, the Plan administrator recently was forced to adopt a higher retention rate for considering liabilities. While there was a business change in the functioning of the Plan, there was no change in the investment constraints the Plan faces. Therefore, there is no compelling reason to change the investment objectives of the Plan. Further, the portion of liabilities in the first fifteen years has remained at about 80 percent. Given these considerations, staff concludes that the current allocation of 20 percent equities and 80 percent bonds be continued.

Management Structure
Since the primary purpose of the portfolio is to pay expected and unexpected liabilities, it is appropriate to use a manager with expertise in matching assets with liabilities to invest the fixed income portion of the portfolio. The equity portion of the portfolio should provide broad market coverage to reduce the risk of the equity portfolio being invested in an underperforming sector and increasing the risk of the Plan needing higher premium payments. Therefore, it is appropriate to use a manager with a broad market mandate such as the S&P 500 or Russell 3000. A semi-passive or passive approach may also be considered.

Benchmarks
The fixed income benchmark should reflect the liability stream. A benchmark consisting of published indices combined to reflect the duration of the liability stream and the strategic sector allocations of the manager would be appropriate. The equity benchmark should reflect the expertise of a manager investing for broad market coverage. A total portfolio benchmark should be weighted in the same proportions as the recommended asset allocation.

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Minnesota Supplemental Investment Fund

Investment Options Prospectus

July 1, 2012

Minnesota State Board of Investment
60 Empire Drive
Suite 355
St. Paul, MN 55103

Phone: 651-296-3328
Fax: 651-296-9572
E-mail: minn.sbi@state.mn.us
Website: www.sbi.state.mn.us

Managed by the Minnesota State Board of Investment

Participating Retirement Plans

Unclassified Employees Retirement Plan
Health Care Savings Plan
Deferred Compensation Plan
Minnesota State Retirement System (MSRS)
60 Empire Drive, Suite 300
St. Paul, MN 55103-3000
(651) 296-2761
1-800-657-5757

Hennepin County Supplemental Retirement Plan
Hennepin Co. Human Resources Dept., Benefits Unit
A-400 Government Center
300 South Sixth Street
Minneapolis, MN 55487-0070
(612) 348-3530

Public Employees Defined Contribution Plan
Voluntary Statewide Volunteer Firefighter Plan
Public Employees Retirement Association (PERA)
60 Empire Drive, Suite 200
St. Paul, MN 55103-1855
(651) 296-7460

Local Volunteer Firefighter Relief Associations Not Participating in the Voluntary Statewide Volunteer Firefighter Plan
Minnesota State Board of Investment
60 Empire Drive, Suite 355
St. Paul, MN 55103
(651) 296-3328

Risk Spectrum

Higher Risk	Assets	Management Approach
International Share Account	non U.S. stocks	-at least one-third active management -no more than one third semi-passive management and -at least one quarter passive management
Growth Share Account	U.S. stocks	active management
Common Stock Index Account	U.S. stocks (reflects broad U.S. market)	passive management
Income Share Account	U.S. stocks/bonds	balanced asset mix
Bond Market Account	bonds	active management
Fixed Interest Account	stable value instruments	3 yr. to 5 yr. maturities
Money Market Account	short-term securities	30 to 60 day average maturity

Lower Risk

Over time, higher-risk assets should provide higher investment returns than lower-risk assets.

Note: The Volunteer Firefighter Account is available <u>only</u> to local firefighter entities that participate in the Voluntary Statewide Volunteer Firefighter Plan and is described in a separate Prospectus. Local firefighter entities should contact the Public Employees Retirement Association for more information.

Letter to Participants

July 1, 2012

This prospectus outlines the investment options available to participants in the Minnesota Supplemental Investment Fund and provides some basic information to assist you in making your investment decisions.

Each Account in the Minnesota Supplemental Investment Fund **has share values that are determined on a daily basis.** You may transfer assets among Accounts **on any business day during the month.**

Remember that general economic and market conditions have a dominant influence on the returns available to any investor. As an investor in the Minnesota Supplemental Investment Fund, or any other investment program, you should be prepared for periods in which the returns on financial investments may be low, or even negative. You should be aware that this possibility is much greater for accounts that emphasize relatively risky, higher return assets such as common stocks, than it is for more conservative investments such as money market-type accounts.

With these considerations in mind, the State Board of Investment is confident that the Supplemental Investment Fund will provide competitive long term returns. I encourage you to carefully review each of the accounts available to you and to choose those options that meet your own investment needs and objectives.

Any questions about your account should be directed to your retirement organization or program at the office shown on the inside cover. Your retirement organization handles all changes in the way you invest your contributions and maintains records on the status of your account. Your retirement organization has the authority to deduct a fee for administrative expenses after account share values have been calculated. Participants in all plans should contact their retirement organization for more information regarding plan administrative expenses.

Please note that the Volunteer Firefighter Account is available **only** to local firefighter entities that participate in the Voluntary Statewide Volunteer Firefighter Plan. This Account is described in a separate Prospectus due to the limited number of participants in the Account. If you are a fire department or relief association seeking information about the Voluntary Statewide Volunteer Firefighter Plan, please contact the office of the Public Employees Retirement Association at 60 Empire Drive, Suite 200, St. Paul, MN 55103-1855, (651) 296-7460.

Historical share values are available from the Minnesota State Board of Investment upon request and can be accessed on the website at www.sbi.state.mn.us in the "Publications" section. Listings of securities held in the various accounts are also available upon request and can be accessed on the website. If you have any questions regarding the Board's investment policies and procedures, please contact the Minnesota State Board of Investment at 60 Empire Drive, Suite 355, St. Paul, MN 55103-3555, (651) 296-3328, or via e-mail at minn.sbi@state.mn.us. We welcome your inquiries.

Respectfully submitted,

Howard J. Bicker
Executive Director
State Board of Investment

General Information

What Is The Minnesota Supplemental Investment Fund?
The Minnesota Supplemental Investment Fund is a multi-purpose investment program that offers a range of investment options to state and other public employee groups. The participating groups use the Fund for a variety of retirement-related purposes. Six plans and numerous local relief associations currently participate in the Fund. As of June 30, 2012, the market value of the Fund was approximately $2.5 billion.

What Investment Options Does The Fund Offer?
The Fund has eight accounts, or investment options:

International Share	international stocks
Growth Share	actively managed stocks
Common Stock Index	passively managed stocks
Income Share	stocks and bonds
Bond Market	actively managed bonds
Fixed Interest	stable value investments
Money Market	short-term debt securities

The eighth account or investment option is the Volunteer Firefighter Account which is only available to participants in the Voluntary Statewide Volunteer Firefighter Plan. This Account is described in a separate Prospectus.

Each account has different investment objectives and uses different types of assets and investment management styles. These accounts are described in greater detail on the following pages.

Are All These Options Available To Me?
The choices you have depend on the retirement plan in which you participate.

The **Unclassified Employees Retirement Plan,** the **Health Care Savings Plan** and the **Public Employees Defined Contribution Plan** may choose from the following Accounts:

International Share	Bond Market
Growth Share	Fixed Interest
Common Stock Index	Money Market
Income Share	

The accounts listed above, **except** the Fixed Interest Account, are currently available to participants in the **Hennepin County Supplemental Retirement Plan** and to **local volunteer firefighter plans** which are not participating in the Voluntary Statewide Volunteer Firefighter Plan.

The **Minnesota Deferred Compensation Plan** (MNDCP) uses the Money Market and Fixed Interest Accounts. Information about available investment options in the MNDCP can be obtained by contacting the Minnesota State Retirement System.

What Options Are Available To The Voluntary Statewide Volunteer Firefighter Plan?
The Volunteer Firefighter Account is the **only** option available to participants in the Voluntary Statewide Volunteer Firefighter Plan. Please contact the Public Employees Retirement Association for information about how your fire department or relief association may become a member of this Plan.

Which Options Are Best For Me?
Only you can answer that question. The variety of options has been designed to give you flexibility to use one or more accounts in designing a portfolio that reflects your personal investment needs and objectives. The material on the following pages should assist you in making your decision.

Each of the accounts has separate advantages and risks, and the performance of each will differ according to business and economic conditions.

It is not the intent of the State Board of Investment to advise participants regarding their choice among accounts. This information is provided solely as an aid to participants in selecting the most appropriate types of investments for their particular circumstances.

May I Change The Way I Invest My Contributions?
Yes, but the guidelines vary among plans. You should contact your retirement organization for more specific information. *Please note that special restrictions apply to transfers out of the Fixed Interest Account (see page 11).*

What Securities Are Owned By The Fund?
Due to the large number of stocks, bonds and cash equivalents owned by the Fund, the holdings are not listed in this Prospectus. If you would like a complete list of all securities in the Fund, please contact the office of the State Board of Investment. A list will be sent to you, at your request, or you can access the list on our website at www.sbi.state.mn.us, in the "Publications" section.

General Information

Investment Managers for the Fund*

Income Share Account:

- BlackRock Institutional Trust Co., San Francisco, CA (stocks)
- Investment Board Staff (bonds)
- State Street Global Advisors, Boston, MA (cash)

Growth Share Account:

- BlackRock Institutional Trust Co., San Francisco, CA
- Barrow, Hanley, Mewhinney & Strauss, Inc. Dallas, TX
- Earnest Partners, LLC, Atlanta, GA
- Goldman Sachs Asset Management, LP, New York, NY
- Hotchkis and Wiley Capital Mgmt., LLC, Los Angeles, CA
- INTECH Investment Management, LLC, Princeton, NJ
- J.P. Morgan Asset Management Inc., New York, NY
- Jacobs Levy Equity Management, Inc., Florham Park, NJ
- Knelman Asset Management Group, LLC, Minneapolis, MN
- LSV Asset Management, Chicago, IL
- Martingale Asset Management LP, Boston, MA
- McKinley Capital Management, Inc., Anchorage, AK
- Mellon Capital Management Corp., Boston, MA
- New Amsterdam Partners, LLC, New York, NY
- Next Century Growth Investors, LLC, Minneapolis, MN
- Peregrine Capital Management, Minneapolis, MN
- Sands Capital Management, LLC, Arlington, VA
- Systematic Financial Management, LP, Teaneck, NJ
- Turner Investment Partners, Inc., Berwyn, PA
- UBS Global Asset Management (Americas) Inc., Chicago, IL
- Winslow Capital Management, Inc., Minneapolis, MN
- Zevenbergen Capital Investments, LLC, Seattle, WA

Common Stock Index Account:

- BlackRock Institutional Trust Co., San Francisco, CA

International Share Account:

- AQR Capital Management, LLC, Greenwich, CT
- Acadian Asset Management, LLC, Boston, MA
- Capital International, Inc., Los Angeles, CA
- Columbia Mgmt. Investment Advisors, LLC, Minneapolis, MN
- INVESCO Global Asset Management, Atlanta, GA
- J.P. Morgan Investment Management, Inc., London, England
- Marathon Asset Management, London, England
- McKinley Capital Management, Inc., Anchorage, AK
- Morgan Stanley Investment Management, New York, NY
- Pyramis Global Advisors Trust Company, Boston, MA
- State Street Global Advisors, Boston, MA

Bond Market Account:

- Aberdeen Asset Management, Inc., Philadelphia, PA
- BlackRock Financial Management, New York, NY
- Columbia Mgmt. Investment Advisors, LLC, Minneapolis, MN
- Dodge & Cox, San Francisco, CA
- Goldman Sachs Asset Management, New York, NY
- Neuberger Berman Fixed Income, LLC, Chicago, IL
- Pacific Investment Mgmt. Co., (PIMCO), Newport Beach, CA
- Western Asset Management Co., Pasadena, CA

Money Market Account:

- State Street Global Advisors, Boston, MA

Fixed Interest Account:

- Galliard Capital Management, Minneapolis, MN

*The Minnesota State Board of Investment may add or delete managers from this list at its discretion.

Investment Board Personnel

Howard J. Bicker	Executive Director
James E. Heidelberg	Assistant Executive Director

Investment Management Staff

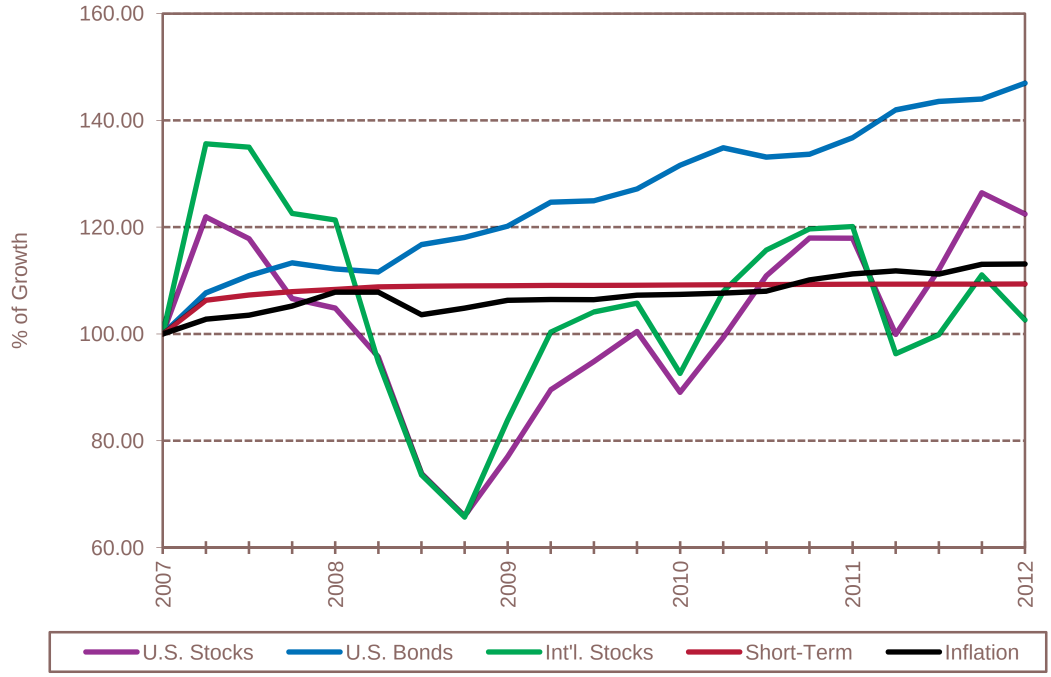
John N. Griebenow	Manager, Alternative Investments
Steven P. Kuettel	Manager, Short-Term Debt
Michael J. Menssen	Manager, Long-Term Debt
Stephanie Gleeson	Manager, International Equity
Tammy Brusehaver	Manager, Domestic Equity
John J. Kirby	Portfolio Mgr., Alternative Investments
Patricia Ammann	Portfolio Manager, Domestic Equity
Ryan O. Hill	Portfolio Manager, Long-Term Debt
Aaron D. Griga	Portfolio Manager, Short-Term Debt
Deborah Griebenow	Analyst, Shareholder Services

Administrative Staff

Paul T. Anderson	Administrative Director
William J. Nicol	Accounting Director
Kathy Leisz	Information Technology Specialist 2
Wendy Murphy	Accounting Officer, Senior
Shirley Baribeau	Accounting Officer, Intermediate
Julie Grill	Accounting Officer, Intermediate
Charlene Olson	Admin. Ass't. to the Executive Director
Melissa Mader	Office Admin. Specialist, Intermediate
Kailee Kemp	Office Administrative Specialist

The Year in Review

Cumulative Growth of Capital Markets
Fiscal Years 2008 - 2012



	Year Ending June 30, 2008	2009	2010	2011	2012	Annualized (1) 2008 - 20112
U.S. Stocks Russell 3000	-12.7%	-26.6%	15.7%	32.4%	3.8%	0.4%
U.S. Bonds Barclays Capital Aggregate Bond Index	7.1%	6.0%	9.5%	3.9%	7.5%	6.8%
International Stocks MSCI All Country World Index Ex. USA (MSCI ACWI ex USA Net)	-6.4%	-30.9%	10.4%	29.7%	-14.6%	-4.6%
Short-Term Investments 90 Day U.S. Treasury Bills	3.1%	0.6%	0.1%	0.1%	0.0%*	0.8%
Inflation Rate Change in Consumer Price Index (CPI)	5.0%	-1.4%	1.1%	3.6%	1.7%	2.0%

(1) Annualized return is the annual compounded rate of return.

*Actual return is 0.04%

The Year in Review

How Have Stocks, Bonds And Other Investments Performed?

The U.S. stock market, as measured by the Russell 3000 index, increased 3.8% for the year ending June 30, 2012. Within the Russell 3000, larger stocks outpaced smaller ones and growth companies outperformed value companies. Consumer Staples and Utilities were the best performing sectors in the Russell 3000 with returns of 12.1% and 12.0%, respectively, while the Energy sector was the worst performing sector with a -10.2% return.

The U.S. bond market, as measured by the Barclays Capital U.S. Aggregate Bond Index, returned 7.5% for the twelve months ending June 30, 2012. Within the bond market, U.S. Treasuries returned 9.0%, corporate bonds returned 9.7%, agency mortgage-backed securities returned 5.0%, commercial mortgage-backed securities returned 6.7%, asset-backed securities returned 4.9% and agency bonds returned 4.6%.

International equity markets returned -14.6% for the year in U.S. dollar terms, as measured by the Morgan Stanley Capital International All Country World Index excluding the United States net of taxes on dividends (MSCI ACWI Ex. USA Net), which represents the developed and emerging international markets outside the U.S. The MSCI World Ex. USA Index Net, which represents developed international markets, returned -14.1% for the year. The United Kingdom, Japan and Canada, which together comprise over 50% of the index, had returns of -4.6%, -7.2% and -16.5%, respectively. The emerging markets, as measured by the MSCI Emerging Markets Free Index Net, returned -16.0% for the year in U.S. dollar terms. China, Brazil, and Korea are the largest countries in the index with a combined weight of 46% of the index. They had returns of -16.0%, -26.7%, and -14.5%, respectively.

How Did Returns In The Minnesota Supplemental Investment Fund Compare For Fiscal Year 2012?

- The **International Share Account** provided a return of -14.7% for the fiscal year, underperforming the international composite index. The composite index, is comprised of approximately 76% developed markets and 24% emerging markets. Overall, the developed markets managers added value, while the emerging markets managers underperformed their respective index.
- The **Growth Share Account** increased 2.7% during the fiscal year, underperforming the Russell 3000 index. Overall stock selection detracted from performance.
- The **Common Stock Index Account** was up 3.8% during the year, which matched its benchmark, the Russell 3000.
- The mix of stocks, bonds and cash in the **Income Share Account** provided a return of 5.3% and underperformed its composite index by 0.1%. The composite index consists of 60% stocks, 35% bonds and 5% cash.
- The **Bond Market Account** posted a return of 7.7% for the year ended June 30, 2012 and outperformed its benchmark, the Barclays Capital U.S. Aggregate Bond Index, by 0.2%. An overweight position in corporate bonds and security selection contributed to the outperformance.
- The **Fixed Interest Account** provided a return of 3.1% during the fiscal year.
- The **Money Market Account** earned 0.3% for the year. This gain is similar to the returns for money market accounts offered by mutual funds and banks.

Your retirement organization accumulates your contributions and transfers these contributions to various accounts in the Fund. The actual performance of your investments in the Supplemental Investment Fund Accounts may be somewhat higher or lower than these figures due to the timing of those transfers.

International Share Account

The International Share Account has a market value of approximately $74 million. The objective of this Account is to earn a high rate of return by investing in the **stock of companies outside the U.S.**

Typically, a majority of the Account is invested in the largest international stock markets (United Kingdom, Japan, Canada, France, Australia and Switzerland). Most of the remainder is invested in other well established markets in Europe and the Pacific region. Approximately twenty-three percent of the Account is invested in developing countries, or "emerging markets", around the world including those in Asia, Latin America, Eastern Europe, the Middle East and Africa.

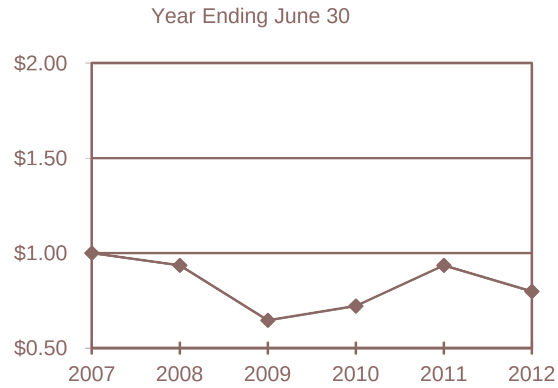
Why Would I Choose This Account?
This option will be attractive if you believe that, over time, international stocks will provide higher returns than other types of investments. Approximately half of the Account is actively managed by several international stock managers that use a variety of investment styles and approaches. These managers buy and sell stocks in an attempt to maximize market value. The remainder of the Account is passively managed to closely approximate the returns of the international markets and semi-passively managed to add incremental value over the index return by investing in broadly diversified portfolios of stocks in the developed and emerging markets.

The returns from the Account will rise and fall with movements in the international stock markets. As with all options that use common stocks, you must be willing to accept returns that vary widely in the short term. While this investment strategy has the potential to produce returns that exceed those of a combined index comprised of both the developed markets and emerging markets, there also may be periods when the returns fall below the index return.

Who Manages The Account?
The International Share Account uses a group of international stock investment managers retained by the State Board of Investment. (See page 3 for a listing of these managers).

How Is The Value Of This Account Determined?
You own shares in the Account, much like you would in a mutual fund. The share value is determined daily and is based on the market value of the entire Account. Any dividend income is reinvested in the Account at the time it is earned. Your investment returns are measured by changes in the share value and reflect all realized and unrealized gains (or losses) generated by the Account.

What Is The Past Investment Performance Of This Account?
The graph shows how $1.00 invested in the Account on June 30, 2007 has grown.



The table displays the Account's actual share values and returns for the last five years. The annualized (annual compounded) return during this period was -4.4%.

Year Ending June 30,	Share Value	Rate of Return
2008	$6.95	-6.5%
2009	4.80	-30.9
2010	5.36	11.7
2011	6.95	29.7
2012	5.93	-14.7

Note: Investment management fees are deducted before share values and rates of return are calculated.

For the 12 month period ending March 31, 2012 the investment management fees were approximately $0.35 per $100 invested.

Growth Share Account

The Growth Share Account has approximately $131 million in assets. The primary objective is to generate high returns from capital appreciation (increases in the market value of the assets it owns) as measured by the Russell 3000 Index. This Account differs from the Common Stock Index Account because the Account is actively managed to buy and sell stocks that in total may do better than the broad stock market.

The Account is composed **almost exclusively of stocks of U.S. companies.** The small amount of cash in the Account represents the new contributions prior to investment in the market as well as any cash held by the individual managers within the Account.

The Account is managed by a group of investment managers retained by the State Board of Investment to manage other retirement assets. As a result, the Account encompasses a range of investment styles and approaches. One set of managers actively manages portfolios in specific segments of the U.S. stock market. Another set of managers attempts to add incremental value by investing in a broadly diversified portfolio of stocks across a wide range of industries. This structure assures that the Account covers all areas of the broad stock market.

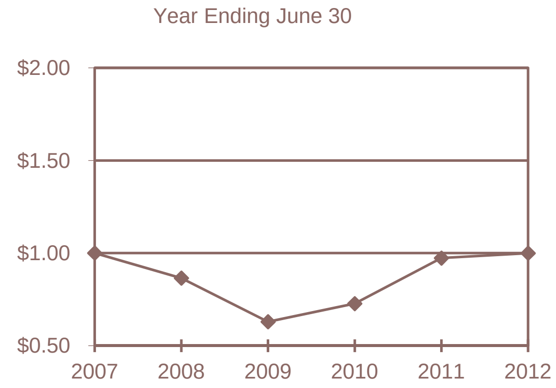
Why Would I Choose This Account?
The Growth Share Account is an actively managed aggressive investment program focused on U.S. stocks. You would choose this Account if you believe that, over time, the stock market will provide higher returns than other types of investments.

The returns from the Account will rise and fall with movement in the stock market. As with all options that use common stocks, you must be willing to accept returns that vary widely in the short term. The returns from the Account are likely to fluctuate more widely than returns from the Common Stock Index Account, Income Share Account or Bond Market Account. The potential for higher gains over the long run is expected to compensate for the short term volatility of returns.

Who Manages The Account?
Assets in the Growth Share Account are managed by a group of investment managers retained by the State Board of Investment (see page 3 for a listing of these managers).

How Is The Value Of This Account Determined?
You own shares in the Account, much like you would in a mutual fund. The share value is determined daily and is based on the market value of the entire Account. Any dividend income is reinvested in the Account at the time it is earned. Your investment returns are measured by changes in the share value and reflect all realized and unrealized gains (or losses) generated by the Account.

What Is The Past Investment Performance Of This Account?
The graph shows how $1.00 invested in the Growth Share Account on June 30, 2007 has grown.



The table displays the Account's actual share values and returns for the last five years. The annualized (annual compounded) return during this period was 0.0%* per year.

Year Ending June 30,	Share Value	Rate of Return
2008	$26.56	-13.5%
2009	19.32	-27.3
2010	22.33	15.6
2011	29.88	33.8
2012	30.69	2.7

*Actual return is -0.01%

Note: Investment management fees are deducted before share values and rates of return are calculated.

For the 12 month period ending March 31, 2012 the investment management fees were approximately $0.23 per $100 invested.

Common Stock Index Account

The Common Stock Index Account has a market value of approximately $165 million. The objective of the Account is to generate high returns that closely approximate the returns of the U.S. stock market as a whole. The Account is **invested primarily in U.S. stocks**.

The Account invests in over 2,000 domestic stocks and is designed to replicate the returns produced by the Russell 3000. The Russell 3000 is a stock market index like the Dow Jones Industrial Average. In effect, the diversity of stock holdings in the Common Stock Index Account represents the broad domestic stock market.

Why Would I Choose This Account?
This option will be attractive to you if you believe that, over time, stocks will provide higher returns than other investments. You should note, however, that the Common Stock Index Account is passively managed. This means that no attempt is made to identify specific stocks that will perform better than others. Instead, the Account is designed to perform in line with the broad stock market.

In actively managed accounts such as the Growth Share Account, stocks are bought and sold in an attempt to maximize market value. While it has the potential to produce returns that exceed those of the broad stock market, an active investment strategy may also experience periods when its returns fall below the market. By contrast, the passive approach used in the Common Stock Index Account should provide returns that consistently and inexpensively replicate the market.

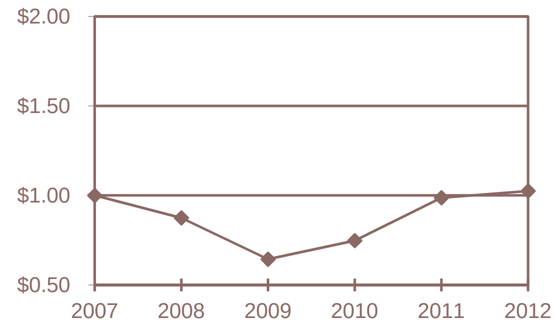
The returns from the Account will rise and fall directly with movement in the stock market. As with all options that use common stocks, you must be willing to accept returns that vary widely in the short term. In the long term, the Account should average higher returns than you could obtain by placing your contributions in a fixed income or money market-type account.

Who Manages The Account?
The Common Stock Index Account is managed by BlackRock Institutional Trust Co.

How Is The Value Of This Account Determined?
You own shares in the Account, much like you would in a mutual fund. The share value is determined daily and is based on the market value of the entire Account. Any dividend income is reinvested in the Account at the time it is earned. Your investment returns are measured by changes in the share value and reflect all realized and unrealized gains (or losses) generated by the Account.

What Is The Past Investment Performance Of This Account?
The graph shows how $1.00 invested in the Account on June 30, 2007 has grown.

Year Ending June 30



The table displays the Account's actual share values and returns for the last five years. The annualized (annual compounded) return during this period was 0.5% per year.

Year Ending June 30,	Share Value	Rate of Return
2008	$20.92	-12.5%
2009	15.39	-26.4
2010	17.88	16.2
2011	23.61	32.0
2012	24.51	3.8

Note: Investment management fees are deducted before share values and rates of return are calculated.

For the 12 month period ending March 31, 2012, the investment management fees were approximately $0.02 per $100 invested.

Income Share Account

The Income Share Account has a market value of approximately $260 million in assets. The objective of this Account is to earn a return from both capital appreciation (increases in market value) and current yield (dividends from stock and interest on bonds). To attain that goal, the Account uses a **mix of stocks and bonds**. While holdings may vary on a day-to-day basis, the following is the targeted asset mix:

- 60% common stocks
- 35% bonds
- 5% cash

The stock segment of the Account is indexed to the Russell 3000, a market index that reflects the broad U.S. stock market. The bond segment is actively managed and includes high-quality corporate bonds and mortgage securities as well as U.S. Government issues.

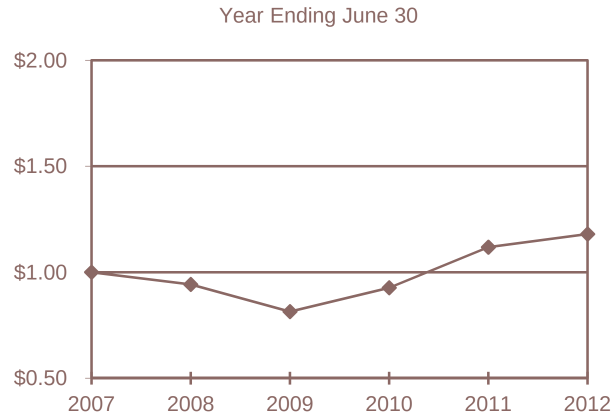
Why Would I Choose This Account?
You would choose the Income Share Account if you want a balanced or diversified investment program in one account. You must be willing to assume some risk with your investment, since returns will vary with changes in market conditions. Over time, the Account should average higher returns than you could obtain by placing your contributions in a fixed income or money market-type account.

Market value growth and dividend income from the stock holdings can give you higher returns than are usually available from bonds and short-term (cash) investments. Conversely, while returns on bonds are often lower than returns on stocks, the bond holdings in the Account add stability and offer you some protection against wide swings in the general stock market.

Who Manages The Account?
The Income Share Account uses both Investment Board staff and investment managers. Investment Board staff manages the bond holdings in the Account. The stock holdings are invested through the same stock index fund used for the Common Stock Index Account (see page 8 for a description of this passively managed index fund).

How Is The Value Of This Account Determined?
You own shares in the Account, much like you would in a mutual fund. The share value is determined daily and is based on the market value of the entire Account. Any interest and dividend income is reinvested in the Account at the time it is earned. Your investment returns are measured by changes in the share value and reflect all realized and unrealized gains (or losses) generated by the Account.

What Is The Past Investment Performance of This Account?
The graph shows how $1.00 invested in the Income Share Account on June 30, 2007 has grown.



The table displays the Account's actual share values and returns for the last five years. The annualized (annual compounded) return during this period was 3.3% per year.

Year Ending June 30,	Share Value	Rate of Return
2008	$37.94	-5.8%
2009	32.78	-13.6
2010	37.31	13.8
2011	45.01	20.6
2012	47.40	5.3

Note: Investment management fees are deducted before share values and rates of return are calculated.

For the 12 month period ending March 31, 2012, the investment management fees were approximately $0.01 per $100 invested.

Bond Market Account

The Bond Market Account has a market value of approximately $133 million. The objective of this Account is to earn returns by investing in **fixed income securities** (bonds).

Interest income and capital appreciation (increases in the market value of the assets) are the sources of returns for the Account. The Account invests the large majority of its assets in high quality government and corporate bonds and mortgage securities that have intermediate to long-term maturities, usually 3 to 20 years. The managers of the Account also may attempt to earn returns by anticipating changes in interest rates and adjusting bond holdings accordingly. While the managers invest primarily in the U.S. bond market, some are authorized to invest a small portion of their portfolios in non-U.S. bonds. Similarly, while the large majority of holdings in the Account will be top rated investment grade issues, some managers are authorized to hold a small portion in higher yielding, or below investment grade, debt issues. The aggregate holdings in non-U.S. and below investment grade debt are limited to no more than ten percent of the Account at any time.

The Account is invested entirely in fixed income securities. No stocks are held in the Account. At times, cash reserves may be raised if the investment managers forecast an increase in interest rates.

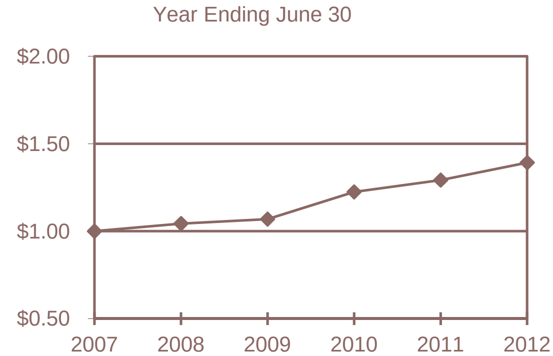
Why Would I Choose This Account?
The Bond Market Account is a moderately conservative investment option. It will be attractive if you want an investment option that avoids common stocks, but you also want the potential for greater returns than you can obtain from money market-type accounts.

The returns from the Account generally will move in the opposite direction of interest rate changes. You must be willing to assume some risk with your investment, because the Account could register losses in periods when interest rates are rising.

Who Manages The Account?
The Bond Market Account is invested by a group of bond managers retained by the State Board of Investment (see page 3 for a listing of these managers).

How Is The Value Of This Account Determined?
You own shares in the Account, much like you would in a mutual fund. The share value is determined daily and is based on the market value of the entire Account. Any interest earnings are reinvested at the time they are received. Your investment returns are measured by changes in the share value and reflect all realized and unrealized gains (or losses) generated by the Account.

What Is The Past Investment Performance Of This Account?
The graph shows how $1.00 invested in the Account on June 30, 2007 has grown.



The table displays the Account's actual share values and returns for the last five years. The annualized (annual compounded) return over this period was 6.8% per year.

Year Ending June 30,	Share Value	Rate of Return
2008	$12.21	4.4%
2009	12.51	2.5
2010	14.33	14.5
2011	15.12	5.5
2012	16.29	7.7

Note: Investment management fees are deducted before share values and rates of return are calculated.

For the 12 month period ending March 31, 2012, the investment management fees were approximately $0.11 per $100 invested.

Fixed Interest Account

The Fixed Interest Account is designed to maintain the value of your original investment and to provide competitive returns using somewhat longer-term investments than typically found in a money market-type account. The market value of the Account is approximately $1.5 billion.

The Account is invested in a well-diversified portfolio of high quality fixed income securities with strong credit ratings. The Account also invests in contracts issued by highly rated insurance companies and banks which are structured to provide principal protection for the Account's diversified bond portfolios, regardless of daily market changes.

Why Would I Choose This Account?
The Fixed Interest Account is a conservative investment option. This type of investment option may be attractive to you because the possibility of incurring a loss on your original investment is very low. However, you should be aware that the Account is unable to offer the potential for more substantial returns that might result from other investments such as common stock. You should also understand that the returns of the Account may not change as quickly as the credited interest rates associated with a money market-type account. This lag will tend to work to your advantage when overall interest rates are falling and will tend to work to your disadvantage when overall rates are rising.

Who Manages The Account?
The Account is managed by Galliard Capital Management, an independently operated subsidiary of Wells Fargo Bank.

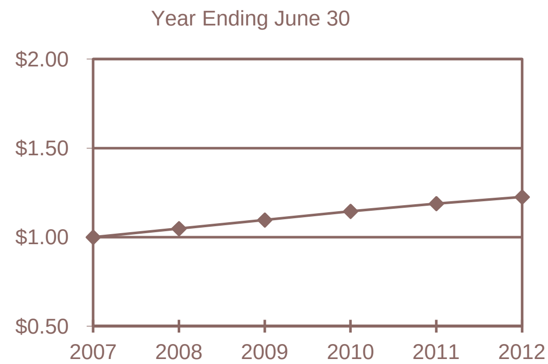
How Is The Value Of This Account Determined?
You own shares in the Account, much like you would in a mutual fund. The share value is determined on a daily basis and reflects the blended crediting rate available from all investments in the Account. Due to the nature of the Account's investments, returns change only modestly from period to period.

May I Transfer Money Into This Account?
Yes. The Account will accept transfers from other investment options in your plan, provided you follow the guidelines established by your retirement organization.

May I Transfer Money Out Of This Account?
Yes, but there are special **withdrawal restrictions** that apply only to the Fixed Interest Account. **All or a portion of the amounts deposited in the Account** may be transferred to the Income Share, Growth Share, Common Stock Index, Bond Market or International Share Accounts within the Supplemental Investment Fund. **You may not re-transfer** these amounts to the Money Market Account for at least three months.

Why Are These Restrictions Necessary?
When short-term interest rates rise above the rates available in the Fixed Interest Account, transfers from the Fixed Interest Account to the Money Market Account adversely affect the investments in the Fixed Interest Account. More flexible withdrawal procedures tend to reduce the interest rates that financial institutions would be willing to offer for investments in this Account.

What Is The Past Investment Performance Of This Account?
The graph shows how $1.00 invested in the Account on June 30, 2007 has grown.



The table displays the investment returns that were generated over the last five years. The annualized (annual compounded) return during this period was 4.2% per year.

Year Ending June 30, Rate of Return

2008	4.7%
2009	4.8
2010	4.4
2011	3.8
2012	3.1

Note: Investment management fees are deducted before share values and rates of return are calculated.

For the 12 month period ending March 31, 2012, the investment management fees were approximately $0.19 per $100 invested.

Money Market Account

The return in the Money Market Account is based on the interest income produced by the Account's investments. The objective of the Account is to provide safety of principal by investing in high-quality, short-term instruments. The value of the Account is approximately $271 million.

Unlike the accounts described earlier, the Money Market Account does not own stocks or long-term bonds. The Account is invested in short-term, high-quality money market instruments.

Why Would I Choose This Account?

The Money Market Account is a conservative investment option. You would choose this Account if you want to maintain the value of your original investment while earning competitive short-term interest rates.

The returns from the Account will vary much less than investments that include stocks or bonds and should closely follow the rise and fall in short-term interest rates.

Who Manages The Account?

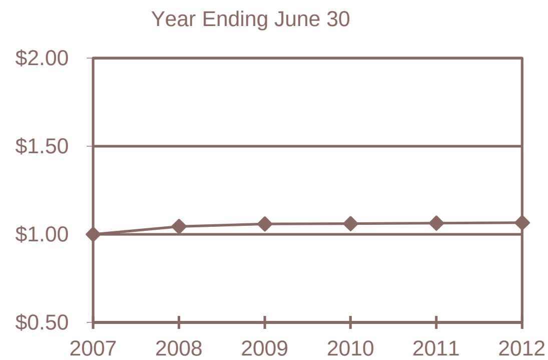
The Money Market Account is managed by State Street Global Advisors, the organization that provides short-term investment management for a substantial portion of the Board's cash reserves.

How Is The Value Of This Account Determined?

The share value for the Money Market Account is uniformly priced at $1.00 per share. Interest earnings are credited on a daily basis by purchasing additional shares on your behalf. The credited interest rate changes only modestly from day to day and reflects the yield available for all investments in the Account.

What Is The Past Investment Performance Of This Account?

The graph shows how $1.00 invested in the Account on June 30, 2007 has grown.



The table displays the investment returns that were generated over the last five years. The annualized (annual compounded) return during this period was 1.3% per year.

Year Ending June 30, Rate of Return

2008	4.5%
2009	1.3
2010	0.2
2011	0.3
2012	0.3

Note: Investment management fees are deducted before share values and rates of return are calculated.

For the 12 month period ending March 31, 2012, the investment management fees were approximately $0.01 per $100 invested.

State Board of Investment

Who Serves On The State Board of Investment?

The Board's membership is specified in the Minnesota Constitution and is composed of the Governor, the State Auditor, the Secretary of State and the Attorney General. The Board's duties, powers, and investment authority are contained in *Minnesota Statutes,* Chapter 11A.

What Is The Board's Relationship To The Retirement Plans?

In broad terms, the Board acts as an investment manager for each retirement organization while the retirement organization provides a variety of administrative functions with respect to your individual account.

Your retirement organization forwards your contributions to the Board and the Board reports investment returns back to the system. The retirement organization keeps a record of your individual account status and receives and processes all your requests for changes in the way your contributions are invested.

Who Advises The Board On Its Investment Decisions?

The Legislature has established a 17-member Investment Advisory Council to advise the Board and its staff on investment-related matters.

- The Board appoints ten members experienced in finance and investment. These members traditionally have come from the Minneapolis and St. Paul investment community.
- The Commissioner of Minnesota Management & Budget and the Executive Directors of the three statewide retirement organizations are permanent members of the Council.
- Two active employee representatives and one retiree representative are appointed to the Council by the Governor.

Members of the Board

Governor Mark Dayton
State Auditor Rebecca Otto
Secretary of State Mark Ritchie
Attorney General Lori Swanson

Investment Advisory Council

Jeffery Bailey, Chair	Director, Benefits Finance	Target Corporation
Malcolm W. McDonald, Vice Chair	Director and Corporate Secretary, Retired	Space Center, Inc.
Denise Anderson	Governor's Appointee	Active Employee Representative
David Bergstrom	Executive Director	Minnesota State Retirement System
John E. Bohan	Vice Pres., Pension Investments, Retired	Grand Metropolitan – Pillsbury
Kerry Brick	Manager, Pension Investments	Cargill, Inc.
Dennis Duerst	Director, Benefit Funds Investment	3M Company
Kim Faust	Director, Treasury & Fin'l. Reporting	Allina Health
Douglas Gorence	Chief Investment Officer	U of M Foundation Investment Advisors
Laurie Fiori Hacking	Executive Director	Teachers Retirement Association
P. Jay Kiedrowski	Senior Fellow	Humphrey Institute University of MN
Judith W. Mares Lazar	Chief Investment Officer	ATK
Gary Martin	Vice Pres., Pension Investments	Supervalu, Inc.
Jim Schowalter	Commissioner	Minnesota Management & Budget
LeaAnn Stagg	Governor's Appointee	Active Employee Representative
Mary Vanek	Executive Director	Public Employees Retirement Association
Elaine Voss	Governor's Appointee	Retired Employee Representative

The Minnesota Supplemental Investment Fund
is managed by the Minnesota State Board of Investment

Board Members:

Governor Mark Dayton
State Auditor Rebecca Otto
Secretary of State Mark Ritchie
Attorney General Lori Swanson

Executive Director:

Howard Bicker

Minnesota State Board of Investment
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INTERNAL CASH MANAGEMENT

Staff Paper

December 2010

CASH MANAGEMENT

INTRODUCTION

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

SBI staff invests the majority of accounts through the Invested Treasurer's Cash Pool ("ITC"). By far, ITC is the largest pool of money managed by staff. Cash expenditure projections for ITC are provided by the Department of Finance. Using these projections, staff invests ITC in a wide range of money market instruments including U.S. Treasury and Agency issues, repurchase agreements, commercial paper, bankers acceptances and short term notes. Strict quality guidelines are in place to ensure the investment objectives are accomplished.

The ending daily balance of ITC fluctuates daily due to economic conditions within the state and the state's approved budget. Because of the volatility of cash flows, asset allocation among the various authorized investments and the average maturity of the portfolio can change throughout the year. Although liquidity is needed to manage the daily cash needs of the pool, maturity extension is possible for a portion of the pool's assets due to the highly predictable nature of the cash flows. Because maturity extension is possible, performance for the pools is measured against a blended benchmark consisting of the iMoneyNet All Taxable Index and the Barclays 1-3 Year Government Bond Index.

INVESTMENT OBJECTIVES

The primary investment objectives of the cash pool are to ***preserve capital*** and ***maintain a high degree of liquidity*** and within these objectives to ***provide a level of current income that is appropriate to the level of risk in the portfolio***. The diversity of cash needs and predictability of cash flows among participants in the Treasurers Cash Pool allows maturities to be extended without sacrificing required liquidity.

STATE CASH ACCOUNTS

The State Board of Investment manages the cash balances of more than 400 state agency accounts and the temporary cash balances of the three retirement systems. Because most of the state agencies maintain relatively small cash balances, their funds are invested in the Invested Treasurer's Cash ("ITC").

Investing in a cash pool is similar to investing in a money market mutual fund. By combining the cash balances of several small accounts into a larger pool, these agencies obtain greater diversification, better pricing, better liquidity and better yields than they could if their funds were separately managed.

A few agencies, such as the Housing Finance Agency and Public Facilities Authority as well as the state's Bond Fund have portions of their assets invested outside ITC. While these agencies may keep their short term *cash* needs invested in ITC, they typically decide to invest a portion of their assets longer term due to the longer investment horizon of their funds. SBI maintains separate accounts for these agencies and consults with the agencies' representatives prior to making an investment on their behalf.

Table 1 shows the assets managed by SBI as of June 30, 2010. Because ITC comprises the majority of assets under management, the balance of this paper focuses on ITC.

Table 1 **State Accounts, End of FY 2010**

Account	Amount (in millions)
ITC	$5,357
Housing Finance Agency Accounts	116
State General Obligation Bond Related Accounts	61
Public Facilities Authority Accounts	110
State Employee Group Insurance Program	21
Total	$5,665

ITC

The ITC is the largest component of assets internally managed by the SBI. State agencies use ITC for the short term investment of their operating funds. Among the larger accounts in ITC are the Trunk Highway Fund, the County State Aid Highway Fund, the Municipal State Aid Street Fund, the Housing Finance Agency, the State's General Fund and the Debt Service Account. This pool is widely diversified by security type and maturity.

Cash Flow Projections for the ITC

The ITC is invested using information provided by the Department of Finance. At the beginning of each fiscal year expenditure forecasts are prepared by the various state agencies in the pool. These projections, along with revenue forecasts provided by the Department of Finance, constitute the net cash flow projections SBI uses to make investment decisions. As an additional check, SBI receives on a monthly basis the actual daily revenue receipt data from the Department of Revenue, which staff uses to compare against projections.

Volatility of Cash Flows

Table 2 shows the ending daily balance of the ITC pool for fiscal years 2008 through 2010. As the chart shows, the balance of the pool fluctuates dramatically over the course of a fiscal year. The chart also shows that although the balance changes from day to day throughout the year, the *pattern* stays the same year over year. This pattern occurs because most of the large expenditures of the state, such as school aid payments and local government aid payments are set by statute and thus occur at the same time each year. In addition, receipt of the state's major revenue sources are also set by statute and are received at the same times throughout the year. In short, the timing of the cash flows stays the same but the amounts change due to economic factors and the state's budget decisions. This predictability is what allows staff to extend the maturities of a portion of ITC's assets while maintaining sufficient liquidity for daily operating needs.

Table 2

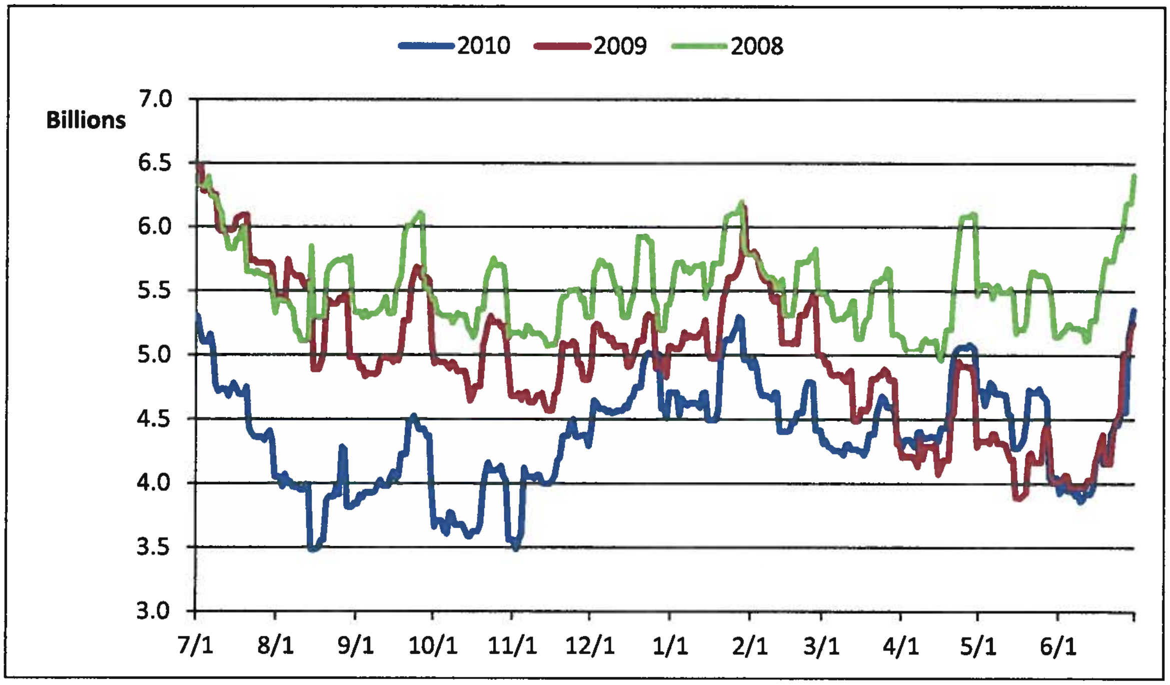

Table 3 shows the maximum and minimum balances of ITC over the last 10 years. Despite two recessions and general fund budget shortfalls during this period, the balance of ITC never fell below $2.8 billion. It is important to remember that ITC consists of the cash balances of numerous state agency accounts including those not included as part of the state's general fund. This stability of ITC also allows for maturity extension.

Table 3

Year Ending 6/30	Maximum	Minimum
2010	5,356,909,244	3,480,878,700
2009	6,485,338,525	3,885,785,721
2008	6,408,957,911	4,960,531,266
2007	6,329,584,626	4,148,191,794
2006	5,529,929,308	3,053,339,259
2005	4,843,966,020	2,904,272,382
2004	5,233,031,108	3,283,250,700
2003	5,371,692,480	**2,849,128,173**
2002	6,552,227,509	4,422,859,723
2001	**6,797,029,940**	5,142,730,227

Maturity and Asset Allocation of the ITC

Prior to making any investment, staff considers several factors such as, what are the near term cash needs of ITC? What are the upcoming revenues and existing maturities that could be used to offset these cash needs? General economic conditions also influence staff decisions: are interest rates expected to rise or fall? Are tax revenues increasing or decreasing? Finally, relative value among the available assets on any given day plays a part in how ITC is invested. There are periods when some securities become extremely expensive relative to other instruments. For example, in the weeks leading up to a calendar quarter or year end, treasury bills often become expensive relative to other securities and in some recent, extreme cases, have had negative returns. At these times, staff avoids the relatively expensive sector and waits for prices to return to normal before reinvesting in that sector.

Staff must balance all of these factors prior to making an investment decision. Once upcoming payments are funded, any remaining daily cash 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.

Asset Allocation Over Time

Over time, changes in cash flows have a dramatic effect on the investment of ITC. Staff attempts to manage the fund such that maturities and cash inflows are sufficient to cover approximately three months of payments. Specific payment dates are targeted and most often funded with high quality commercial paper.

Because of the wide fluctuations in the fund's balance over time, the asset breakdown and weighted average maturity of ITC varies significantly. Table 4 shows how the pool was invested as of June 30, 2010. 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. For example, in September, 2010, nearly half of the portfolio was invested in instruments that matured in less than one month because several large expenditures (school aid, health care and local government aid) were set to be paid during the last week of the month. The majority of ITC was invested in commercial paper, certificates of deposit and repurchase agreements. Despite holding securities with maturities of up to three years, the weighted average maturity of the entire fund was just under four months.

Table 4	ITC Asset Composition	
	June 30, 2010	Range Over Time
Commercial Paper	56.7 %	0 to 90 %
Repurchase Agreements	9.9	0 to 30 %
U.S. Treasury Securities	6.1	0 to 50 %
U.S. Gov't Agency Securities	8.1	0 to 50 %
Medium Term Notes	19.2	0 to 30 %
Total	100.0 %	
Average Maturity	151 days	37 days – 300 days*

*ITC's guidelines specify that the weighted average maturity of the pool may not exceed 300 days.

Quality Guidelines

Because preservation of capital is extremely important in managing the pools, SBI established strict quality guidelines. Table 5 summarizes the quality guidelines for the assets the SBI purchases.

Table 5	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
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

PERFORMANCE MEASUREMENT

Historically SBI measured ITC's performance against the 91 day Treasury bill. This benchmark was chosen because: 1) among pension funds nationwide, it was 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

In April 1991 Legislative Auditor released a report entitled "State Investment Performance", which criticized the 91 day Treasury bill as a benchmark because 1) most of the shorter maturity assets were invested in securities other than Treasuries and 2) after short term needs are funded, a portion of the fund was invested in longer maturity instruments. In most environments, these factors create a yield advantage versus the 91 day Treasury bill.

Because the majority of ITC's assets are invested in money market instruments, with a portion invested in short, high quality debt securities, ITC's performance is measured against a blended benchmark consisting of the iMoneyNet All Taxable Money Market Index and the Barclays 1-3 Year Government Bond Index.

CONCLUSION

The SBI manages the majority of the State's cash accounts through the ITC. In doing so, staff balances the competing objectives of preserving capital and liquidity while providing competitive returns. To achieve these goals, staff invests in a variety of money market and high quality short term debt instruments.

ITC's pool size and composition vary over time due to legislative actions and the State's overall economic climate. While variations in ITC's balance occur, the pattern of cash receipts and expenditures are predictable allowing for maturity extension for a portion of the pools assets. Staff ensures upcoming payments are financed through existing maturities and cash flows. After these needs have been met staff uses discretion to invest

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CERTIFICATE OF DEPOSIT/SECURITIES REPURCHASE PROGRAM

Staff Paper

December 2012

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Certificate of Deposit

Program Description & Background

In July 1980, the State Board of Investment (SBI) established a statewide program to purchase CDs from all interested banks and savings institutions in Minnesota on a fair and equitable basis. This is an on-going program, offered quarterly, with the amount of funds committed depending upon the State's cash position and the relative attractiveness of CDs to other investment alternatives. A unique feature of the program is the use of clearinghouse banks in Minnesota which are the focal point for financial institutions who subscribe to the program.

Program Eligibility & Fundamentals

Any financial institution which is chartered in the State of Minnesota and covered by FDIC insurance is eligible. The SBI purchases CDs with 3 and/or 6 month maturities at each quarterly offering. The maturity date will be the 18th day of each January, April, July and October (all days will be moved forward, for example, from the 18th to the 19th, for weekends and holidays). The yield will be set by the SBI using the average secondary CD rate quoted by the New York Federal Reserve Bank on the morning of the subscription date. Interest at maturity is computed on an actual/360 day basis.

The FDIC will insure up to $250,000 in each financial institution for each participant's share of the Teachers Retirement Association Plan (TRA). The minimum subscription amount is $100,000. The maximum amount any financial institution may have outstanding at any given time is $1.5 million. Based on historical participation levels, the SBI expects to be able to fill subscriptions up to the maximum $1.5 million limit per institution on an on-going basis. The SBI **cannot** guarantee that the financial institution will be able to roll CDs at maturity. However, as noted above, the SBI expects to be able to fill all subscriptions up to the maximum.

Subscription dates are the fifth day of each January, April, July and October (all days will be moved forward, for example, from the fifth to the sixth for weekends and holidays). The settlement date is the 18th of each January, April, July and October (settlement dates will also be moved forward for weekends and holidays). Financial institutions must contact one of the clearinghouse banks on the subscription date to receive rate quotes and to place the order. Subscriptions are only available on the specified subscription dates. Orders must be placed through the clearinghouse bank between the hours of 9:00 a.m. and 2:00 p.m. on each subscription date. Subscriptions must be received by SBI by 2:00 p.m. on the subscription date. It is not the clearinghouse bank's responsibility to contact financial institutions.

Minnesota credit unions are also eligible to participate in the SBI's CD program. The National Credit Union Administration will insure up to $250,000 in each financial institution for each participant's share of TRA. The maximum amount any credit union may have outstanding at any given time is $1.5 million, similar to banks.

Clearinghouse Banks

- United Bankers Bank, Bloomington
- U. S. Bank, Milwaukee
- Wells Fargo Bank, Minneapolis
- Alloya Corporate Credit Union, Chicago

(The clearinghouse banks have correspondent relationships with the financial institutions. Clearinghouse banks may charge the financial institution a transaction fee.)

The clearinghouse bank will deposit funds in the financial institution's account at the clearinghouse bank on settlement date for purchases and charge the financial institution's account for the proceeds at maturity date. The financial institution issuing the CD will hold the certificate in safekeeping for the SBI. The SBI will send all required paperwork to each financial institution along with a letter of instruction.

Securities Repurchase Program

Purpose
The Securities Repurchase Program is designed to help meet the liquidity needs of Minnesota financial institutions. Under the program, the State Board of Investment (SBI) will buy securities from banks under a repurchase agreement. At the end of the contract period, securities will be returned to the selling bank against payment of principal and interest.

Program Eligibility & Fundamentals
The SBI's Securities Repurchase Program will be similar to the Certificate of Deposit Program. Subscriptions periods will occur quarterly, coinciding with the expiration of previous security repurchase agreements. The pricing rate, subscription, settlement and repurchase dates will be the same as the Certificate of Deposit Program for ease of administration. A financial institution must be well-capitalized and hold on deposit the maximum of $1.5 million in SBI certificate of deposit funds in order to be eligible to participate in the Securities Repurchase Program. After maximum deposit levels have been reached, the bank may enter into a securities repurchase transaction in an amount ranging from $100,000 to $2,000,000, depending upon available funds. The SBI cannot guarantee that a bank will be able to roll over repurchase transactions at maturity.

Before a clearinghouse bank may offer the Securities Repurchase Program to its client banks, the clearinghouse bank must sign a triparty Custodial Undertaking / Master Repurchase Agreement. The individual banks must sign an additional Master Repurchase Agreement between the bank and the SBI. An agreement to enter into a transaction will be made orally between the SBI and the financial institution with the clearinghouse bank acting as agent for the financial institutions. A formal written Repurchase Agreement between the SBI and the financial institution will be executed before the transaction will settle. Upon agreeing to enter into the repurchase transaction, the clearinghouse bank will deliver a written confirmation to the financial institution and the SBI. The confirmation will describe the purchased securities (including the CUSIP numbers), identification of the buyer and seller, and set forth purchase price, repurchase price, and repurchase price. The confirmation, together with the repurchase agreement, will constitute evidence of the terms of the agreement. In the event of any conflict between the terms stated on the confirmation and the repurchase agreement, the agreement will prevail. On the expiration date, termination of the transaction will occur by transferring to the financial institution's agent, which is the clearinghouse bank, purchased securities against the transfer of the repurchase price to the account of the SBI. At settlement date, the market value of the purchased securities will equal 110% of the purchase price of the transaction.

Payment, Transfer, and Eligibility
All transfers of funds will be in immediately available funds. All securities delivered will be in book entry form for the delivery at the Federal Reserve. A list of Securities eligible for sale under agreement to repurchase are listed below:

- Direct obligations of the United States: government securities including Treasury Bills, Treasury Notes, and Treasury Bonds.
- Federal agency obligations: agency securities issued by the Federal National Mortgage Association, the Federal Home Loan Bank, the Federal Farm Credit Bank, and the Federal Home Loan Mortgage Corporation.
- Other government or agency obligations that may be delivered in book entry form at the Federal Reserve Bank.

Segregation of Purchased Securities
All securities sold under agreement to repurchase will be segregated from the financial institution's safekeeping account at the clearinghouse bank and placed in a separate Federal Reserve account for the benefit of the SBI. Title to all purchased securities will pass to the State Board of Investment.

Defaults
A default will occur if: 1) the financial institution fails to repurchase securities or the SBI fails to transfer purchased securities at the repurchase date; 2) additional collateral is demanded to meet the margin requirement and the bank fails to deliver; / or 3) the bank is no longer considered well-capitalized. If the defaulting party is the financial institution, the SBI may sell all purchased securities immediately and apply the proceeds to the aggregate unpaid purchase price. If the defaulting party is the SBI, the financial institution may require the SBI to provide the bank with replacement securities of the same class and amount as any of the purchased securities that are not delivered.

Custody
A clearinghouse bank that has completed the necessary contracts will act as the third party custodian for the purchased securities under the SBI's Securities Repurchase Program. Purchased securities will be held in safekeeping at the Minneapolis Federal Reserve Bank. The SBI will be provided with a monthly accounting of securities held in the account. The identified clearinghouse bank will provide safekeeping verification upon request between monthly reporting cycles.

Securities Pricing and Reporting

A clearinghouse bank will price the purchased securities portfolio daily by 12:00 Central Standard Time. A listing and pricing of securities in each bank account name held by the clearinghouse bank will be transmitted to the SBI through the Bloomberg Financial Network or by facsimile. The source for pricing will be provided through Bloomberg Financial Systems. Other sources will be used if necessary to determine portfolio pricing.

Security substitution will not be permitted.

STATE BOND FUND

Staff Paper

December 2010

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INTRODUCTION

The state of Minnesota issues bonds for capital improvement projects that have been authorized by the state legislature. Depending on the project, interest on the bonds can either be taxable or tax-exempt. The debt service for the bonds can be secured either through an annual appropriation, revenues generated from the underlying project or in most cases, the state can pledge its full faith, credit and taxing powers, known as a general obligation ("G.O.") bond. This paper focuses on the State Board of Investment's ("SBI") investment strategy related to the state's tax-exempt, G.O. bonds.

The commissioner of the Department of Management and Budget ("Finance") decides when to sell bonds based on the funding needs of the capital projects supported by the bonds, general market conditions and cash flow requirements for debt service. The commissioner is responsible to structure, issue and sell bonds on behalf of the state and administer the proceeds to include the debt service fund for each issue. SBI assists Finance by directing the investment of the debt service funds.

Article XI, section 7 of the state's Constitution and Minnesota Statutes 16A.641 Subdivision 10 requires the state to appropriate by December 1 of each year, a sufficient amount to pay the debt service on all state G.O. bonds due through July 1 of the second ensuing year. If by December 1, the amount on hand is less than the required amount, the state auditor is required to levy a tax on all taxable property within the state to fund the difference. In practice, the state always appropriates the required amount making a statewide property tax levy unnecessary. Because of the annual appropriation, the state has 19 months of principal and interest payments in the Bond Fund ready to pay the debt service on all state G.O. debt by December 1 of each year.

The Tax Reform Act of 1986 (the "1986 Act") and the 1986 Internal Revenue Code (the "1986 Code") significantly changed how municipal bonds were issued. These federal regulations restricted the types of municipal bonds that could be issued and still maintain their tax-exempt status. With some exceptions, these restrictions also precluded investing the proceeds from municipal bonds in higher yielding securities, a practice known as arbitrage. As a broad yet imprecise rule of thumb, any interest earned in excess of the bond rate has to be paid to the federal government, (the "rebate requirement".) There are some exceptions to this rule that allow for some arbitrage to still occur. These exceptions form the basis of SBI's investment strategy for the Bond Fund.

MUNICIPAL DEBT

States and other local units of government (counties, cities and school districts) issue bonds to finance approved projects or to refund or refinance their existing debt. While not exhaustive, municipal bonds can be broadly categorized by the source of revenues pledged to pay their future principal and interest payments: general obligation bonds, revenue bonds and hybrids.

A general obligation bond is a bond for which the full faith, credit and taxing powers of the issuer are irrevocably pledged for the prompt and full payment of principal and interest. General obligation debt can be issued by any unit of government which has the ability to levy taxes. General obligation bonds are secured by the issuer's covenant to levy enough taxes to pay all future debt service. Because defaults on G.O. debt are extremely rare general obligation bonds are considered second to U.S. government securities in terms of safety. In fact, Moody's Investor's Service issued a report on the number of municipal bond defaults between 1970 – 2009. Of the 54 defaults that occurred, only three were G.O. debt. Bondholders of two of these three defaulted G.O. issues have been paid in full. The third issue, which occurred in 2008 is still in litigation[1].

Revenue bonds, however, are a different story. Revenue bonds are secured by the revenues generated by the underlying project. For example, a city could issue a hospital revenue bond to build a new hospital. In this case, the future debt service on the bonds would be paid from the hospital's revenues. Should the revenues be insufficient to pay the debt service, the city would be under no obligation to levy taxes or to use existing tax receipts to pay off the debt. Revenue bonds tend to be viewed more like corporate debt. There have been instances where municipalities have defaulted on their revenue bonds. Finally, there are hybrid types of bonds where the debt service is paid by any combination of special revenues (e.g. assessments,) revenues, or tax levies.

Most, but not all, municipal debt is tax-exempt, meaning that interest earned by an investor is exempt from federal taxes. Some states, Minnesota included, exempt municipal bond interest income from state and local income taxes for any tax-exempt bonds issued within their boundaries. This dual tax exemption makes these bonds highly desirable for high net-worth individuals, banks and corporations. This is reflected in the market by municipal bonds having yields below corporate and even US Treasury bonds of similar maturity. Since the majority of the debt issued by the state is general obligation tax-exempt debt, the remainder of this paper will focus on that type of debt and related issues.

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[1] Jennifer Tennant and Kenneth Emery, *U.S. Municipal Bond Defaults and Recoveries, 1970 – 2009* (New York: Moody's Investors Service, February 2010).

State of Minnesota Debt Issuance

By statute, the commissioner of the Department of Management and Budget is responsible to structure, issue and sell the state's bonds. Generally, bonds are issued in the summer, after the legislative session is complete and any laws containing authorization for projects supported by debt have been passed. While the majority of the state's bonds are general obligation, tax exempt debt, the state also issues taxable and revenue bonds for some projects. Once the state issues debt, several legal requirements are triggered to ensure the prompt and timely payment of principal and interest on the bonds.

Constitutional and Statutory Requirements

The Constitution of the State of Minnesota (Art. XI, sec. 7), and Minnesota Statutes, section 11A.15 establishes the creation of a State Bond Fund, "...for the purpose of the timely payment of principal and interest on bonds for which the full faith and credit of the state has been pledged." The Statute also requires the SBI to invest the moneys in the Bond Fund and limits the authorized investments to those listed in M. S., 11A.24.

The state Constitution requires the state to have in the State Bond Fund, moneys, "... sufficient with the balance then on hand in the fund to pay all principal and interest on [the] bonds ... due and to become due within the ensuing year to and including July 1 in the second ensuing year." If sufficient moneys are not in the fund, the state auditor is required to levy a property tax on all taxable property within the state. Essentially the Constitution requires the state to have on hand by December 1, 19 months of debt service in the State Bond Fund. For reasons that will be discussed later, these moneys are divided into two components: a "bona fide debt service fund" into which the current 13 months of debt service are held, and an "excess debt service reserve" portion into which the subsequent six months of debt service is deposited.

When the State issues a 20-year bond, there is 20 years worth of this excess debt service reserve set aside. As the State pays down its debt, the excess reserve is reduced as well. Since funds in the bona-fide debt service fund are short term in nature (i.e. used to pay debt service of the state within the next 13 months,) they are invested in SBI's short term Invested Treasurer's Cash pool. Amounts in the excess debt service reserve fund have a longer term nature and are invested in longer term bonds.

To understand SBI's strategy regarding the excess reserve within the State Bond Fund, it is first necessary to understand some of the federal regulations affecting municipal debt, the concept of arbitrage, how arbitrage is possible with municipal bonds and some of the restrictions surrounding it.

FEDERAL REGULATIONS AFFECTING MUNICIPAL DEBT

The municipal securities market was relatively free of federal restrictions up through the early 1970s. Thereafter, federal involvement in the municipal securities markets steadily increased. In 1986, the Tax Reform Act of 1986 (the "1986 Act") and the 1986 Internal Revenue Code (the "1986 Code") significantly changed how municipal bonds were issued and cleaned up abuses that had occurred in the past. While a full discussion of these changes is beyond the scope of this paper, some provisions of the 1986 reforms are necessary to highlight.

One of the most egregious abuses of municipal debt issuance were so called, "arbitrage bonds" – bonds issued for the sole purpose of investing the proceeds in higher yielding securities, such as U.S. Treasury securities. Because of the tax-exempt nature of most municipal bonds, municipalities could issue bonds at a low rate, invest the proceeds in "risk-free" U.S. Treasury securities and keep the excess earnings or spread to augment their annual budgets. These bonds were called arbitrage bonds because of the risk-free nature of the transaction to the municipal issuer – the municipality was guaranteed to receive principal and interest payments from the U.S. Treasury, then could use the receipts to make the [lower] principal and interest payment on their municipal debt, keeping the balance.

The 1986 regulations eliminated arbitrage bonds by requiring all debt to have a stated "public purpose" in order to retain the federal tax-exempt status. That is, a state or local unit of government could no longer issue debt just to earn the arbitrage spread. The rules also required issuers to calculate a payout yield based on the total costs of issuance. This yield, called the "restricted yield" or the "arbitrage yield," is the net rate of interest an issuer pays on its debt. More importantly, the 1986 rules required, with limited exceptions, that *all* earnings on bond proceeds in excess of the arbitrage yield paid on the municipal debt be subject to the new arbitrage/rebate requirements - any arbitrage profits, with limited exceptions, would need to be paid or rebated to the federal government.

The rules further required a municipality to hold only enough monies to pay the next 13 months of debt service in what was defined as a "bona-fide debt service fund." Since such monies are short term in nature, the debt service fund was thought to provide a limited, if any, arbitrage opportunity. Thus funds held in a bona-fide debt service fund are exempt from the arbitrage/rebate requirements and can earn an unrestricted yield. Any monies set aside for debt service *above* this 13 month amount had to be held in a separate debt service reserve account, subject to yield restriction and the rebate requirements.

These changes in the regulations effectively eliminated the ability as well as the advantages of issuing arbitrage bonds. However, as stated previously, there are some exceptions. As described earlier, the Constitution requires the state to have on hand 19 months of debt service by December 1 of each year, yet the IRS allows only 13 months of debt service funds to earn an unrestricted yield. Despite the restriction, there is still an opportunity to legally arbitrage the state's excess debt service reserve.

State of Minnesota Investment Objectives and Arbitrage Strategy

Generally speaking, if the state earns the same yield on its debt service funds as it pays out on its debt, there is no cost to the state – the state breaks even. If the state earns a yield above this arbitrage yield, it must rebate the excess. If, however, the higher yield was earned by investing in another issuer's municipal bond, the state would not have to rebate the excess **because interest earned on tax-exempt municipal debt is not payable to the federal government**. This exception forms the basis for SBI's strategy regarding the state's excess debt service reserve: maximize arbitrage profits using high quality municipal bonds and if that is not possible, at least break even by investing in U.S. Treasury or Agency securities.

Because the state has high bond ratings from Moody's, Standard and Poor's and Fitch (Aa1/AAA/AAA) and because of the dual tax-exempt nature of its debt, the state can take advantage of the mismatch between its lower cost of issuance and the higher yields available from other municipal investments. If SBI can find a high quality tax-exempt investment with a yield greater than the arbitrage yield on the state's bond issue, SBI will invest in that security and achieve legal arbitrage profits. If, however, yields on tax-exempt investment are lower than the restricted yield on the state's bond, SBI will invest in US Treasury or Agency securities and if necessary, rebate the excess. In this latter case, the state earns no arbitrage, but it at least breaks even. While this kind of arbitrage is not completely "riskless", (only U.S. Treasury securities carry no risk of default), it is extremely rare for a municipal issuer to default on their general obligation bonds. SBI further mitigates the risk to the State by buying only high quality municipal securities in the top three ratings categories and diversifying by issuer.

Quality Guidelines

Because preservation of capital is extremely important in managing the state's funds, strict quality guidelines are in place. Table 1 summarizes the eligible investments and their quality guidelines for assets in the excess debt service reserve.

Table 1 **Quality Guidelines**

Investment	Term Limitations	Minimum Credit Rating
State's ITC Pool	n/a	n/a
U.S. Treasuries	20 years	n/a
U.S. Gov't Agency Securities	20 years	n/a
General Obligation Municipal Bonds	20 years	"A"

CONCLUSION

SBI is statutorily required to invest all monies in the state's Bond Fund. Because of the longer term nature of the excess debt service reserve, those funds can be invested in long term, low risk securities such as U.S. Treasury, Agency or municipal bonds. This strategy offers a low risk method to arbitrage the excess debt service reserve of the state's Bond Fund reducing the state's overall cost of issuing municipal debt.

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OTHER POST EMPLOYMENT BENEFITS ACCOUNTS

AND

OTHER NON-RETIREMENT ACCOUNTS

May 2013

Other Post Employment Benefits (OPEB)

Minnesota Statutes, section 471.6175 authorizes local units of government, including school districts, cities and counties, to choose the Public Employees Retirement Association (PERA) to act as trustee to administer accounts for the purpose of paying post-retirement health benefits. If PERA is chosen by the local unit, assets of that unit's account are invested with the SBI. The local unit directs the investment into the three non-retirement investment pools. SBI does not determine the asset allocation policy for these assets.

Anoka County
Anoka County (Irrevocable)
Carver County
City of Eagan
City of Virginia
Crosby-Ironton #182
Duluth Post Empl. Benefit
Elk River District #728
Fillmore Central Schools #2198
Hastings ISD#200
Kingsland ISD#2137
Mendota Hgts Eg WSP#197
Metro Mosquito Control Dist.
MTC OPEB
Mounds View ISD #621
Mt. Iron-Buhl District #712
Ogilvie ISD#333
Roseville District#623
Staples Motley #2170
Scott County
Washington County
Winona Public Schools ISD861
Yellow Medicine ISD#2190

Other Miscellaneous Non-Retirement Accounts

The SBI invests other non-retirement accounts for a range of sponsoring entities. By statute, the SBI is responsible for the asset allocation of some of these accounts. By statute, the sponsoring entity is responsible for maintaining an investment policy and asset allocation for the remaining accounts.

Closed Landfill
Emergency Med SVC
Environmental
Ethel Currey
Iron Range Res
Life Time F&W
Perm School
Ramsey County
Saint Louis CntyEnv
Winona State

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RISK

MANAGEMENT

Staff Paper

April 2013

Risk Management

The SBI invests the Combined Funds in various asset classes in order to pay future promised pension benefits. Investing involves market and non-market risks. Market risk involves asset class returns, volatility and correlations that vary over time. Market risk also includes interest rate risk and credit risk among others. Interest rates and credit spreads, for example, vary with unpredictable economic events and business cycles. Because market risk is inherent to investing and cannot be avoided, managing this risk is central to all of the SBI's risk management efforts documented in this policy.

The SBI manages market risk by investing in multiple assets classes that historically have performed differently under varying market conditions. This approach provides diversification and minimizes short-term volatility. Given the statutorily prescribed return of 8.0 percent required to meet the expected pension liabilities and the long-term performance expectations of the capital markets, the SBI must invest a high proportion of its assets in equity-like investments. Within the context of this high required allocation to equities, the SBI diversifies its investment portfolio by allocating to bonds and alternative investments which lower the year-to-year return volatility.

In addition to managing market risk, the SBI dedicates significant resources to managing non-market risks, which include governance, legal, accounting and operational risks. A policy making board comprised of four of the state's constitutional officers, along with fiduciary responsibility and investment authority prescribed in state law, form the foundation for a strong governance and risk control system at the SBI. In executing its investment strategy, the SBI has implemented robust internal controls which include a complete separation of the investment management and asset custody functions; the segregation of duties between asset management and accounting staff; the timely reconciliation of account positions; external audits by the legislative auditors; and checks and balances by outside consultants, the Investment Advisory Council and the Attorney General's office.

As discussed in this paper, a strong governance structure with a fiduciary emphasis, documented investment policies and processes, a disciplined approach to strategic asset allocation and asset class rebalancing and robust internal controls reinforce each other and support the management of market and non-market investment risks. This approach enhances the probability that the prescribed return is met over the long run and that sufficient funds are available to finance future promised pension benefits. This comprehensive risk management approach is applied to the non-retirement funds managed by the SBI as well.

Because it forms the framework for the SBI's overall risk management approach, the legal and governance structure is discussed first. The paper then details critical components of the SBI's risk management approach in its investment process. Finally, this paper sets forth the key elements of accounting and operational internal controls at the SBI.

Constitutional and Legal Authority and Fiduciary Education

A. Constitutional and Legal Authority

The Minnesota State Board of Investment (SBI) is established by Article XI, section 8 of the Minnesota Constitution.

All activity of the SBI is governed by *Minnesota Statutes (M.S.)*, Chapters 11A and 356A. Section 11A.01 sets forth a statement of purpose for the SBI:

> "to ensure that state and pension assets… will be responsibly invested to maximize the total rate of return without incurring undue risk."

The SBI's duties and powers are set forth in *M.S.* section 11A.04. The SBI is responsible for the formulation of policies and procedures it deems necessary and appropriate to carry out the functions of the SBI. The SBI retains an executive director whose duties and powers are set forth in section 11A.07. The SBI has the authority to undertake any other activity necessary to implement its duties and powers.

Section 11A.09 (and section 356A.04) sets forth the prudent person rule as the SBI's fiduciary standard.

B. Fiduciary Education

In compliance with 356A.13, the SBI has developed and periodically revises a program for the continuing education of Board members and any of their chief administrative officers with respect to their activities as fiduciaries. The program has been designed to provide those persons with knowledge and skills sufficient to enable them to perform their fiduciary activities adequately.

Governance Structure

The SBI benefits from the supervision and oversight exercised by a number of entities. These entities perform valuable oversight functions that serve as outside checks on the business operations of the SBI and provide strong governance and risk control over the investment activities of the SBI.

A. Board

The State Board of Investment consists of the governor, the state auditor, the secretary of state, and the attorney general. Its purpose is to administer and direct the investment of all state funds.

B. Legislature

The powers, duties, responsibilities and investment authority of the SBI are set forth in statute and may only be changed by legislative action. As stated previously, all activities of the SBI are governed by statute. When the Legislature makes changes in the governing statutes, the SBI adapts its policies and practices to conform. Any modifications to the investment authority of the SBI must be approved by the Legislature.

C. Attorney General

The Office of the Attorney General serves as legal counsel to the SBI for review and negotiation of contracts, and for any other matters that require legal counsel.

D. Investment Advisory Council

M.S., section 11A.08 creates an Investment Advisory Council (IAC) consisting of 17 members. Ten of the IAC members, appointed by the SBI, are experienced in general investment matters. The Commissioner of Minnesota Management & Budget as well as the Executive Directors of MSRS, PERA and TRA are ex-officio members. Two active employee representatives as well as one retired employee are appointed by the Governor.

Each quarter, the IAC reviews investment subjects relevant to the SBI's decision-making and adopts recommendations for SBI consideration. The chair presents the report and recommendations of the Council at the quarterly meetings of the Board.

E. Consultants

The SBI employs consultants to assist the Board, the IAC and Staff in the formulation and implementation of its policies. Currently the SBI has two consultants under contract.

- Callan Associates is the SBI's general consultant. Callan's responsibility is to provide the SBI and Staff with advice and resources to enable the SBI to continue to develop and enhance its investment program. In addition, Callan is responsible for attending IAC and Board meetings as well as maintaining direct communication with Board members, Staff and the IAC.

- Pension Consulting Alliance is the SBI's special projects consultant. PCA's responsibility is to assist with advice and resources as needed for ad hoc topics.

F. SBI Committees

The Board meets quarterly with representatives from Staff, the IAC and the Consultant to review performance and associated investment issues of the funds. In addition, the SBI has established committees to facilitate the implementation and development of its policies and to make recommendations to the Board on various investment and administrative issues under its control.

- Administrative Committee

  The Administrative Committee is comprised of a designee of each Board member, the directors of each statewide retirement system and the chair and vice chair of the IAC. The primary responsibility of the Committee is to review and make recommendations to the Board concerning Staff's annual Management and Budget Plan.

- Proxy Voting Committee

  The SBI recognizes its fiduciary responsibility concerning proxy issues and delegates proxy voting responsibility to its Proxy Voting Committee. The Committee is comprised of a designee of each Board member. The Committee has formulated guidelines by which it votes on a wide range of corporate governance and social responsibility issues.

- Deferred Compensation Review Committee

  The Deferred Compensation Review Committee is comprised of a designee of each Board member and the directors of each statewide retirement plan. The primary responsibility of the Committee is to review and make recommendations to the SBI related to the investment options and operations of the State's deferred compensation plan.

- Ad-Hoc Committees

  The SBI has formed ad-hoc committees as necessary for various purposes. Membership on these committees has included a designee of each Board member and others as appropriate. Examples have been search committees for the purposes of retaining a general consultant and the retention of a custodian bank.

Investment Process

A. Investment Objectives

Combined Funds
Investment objectives provide a set of long-term goals for managing the assets of the Combined Funds. The SBI has two long-term objectives for the Combined Funds.

1. Match or exceed over a ten year period a composite market index weighted in a manner that reflects the long-term asset allocation of the Combined Funds.

2. Provide returns that are three to five percentage points greater than inflation over the latest twenty year period.

Non-Retirement Funds
The investment objective for each of the non-retirement funds varies depending on the risk and return expectations for each fund.

B. Policy Papers

Over the years the SBI has published position papers documenting various investment policies. The purpose of these papers is to provide background information and define investment processes and administrative procedures for various assets that the SBI manages. The papers cover subjects such as asset allocation, asset class target and structure, internal cash management, alternative assets, and non-retirement funds.

C. Asset Allocation Policy

The SBI determines the overall investment strategy for the Combined Funds and each of the non-retirement funds that it is responsible for through a strategic asset allocation policy. The asset allocation for each fund will reflect the risk and return expectations for that fund and may include allocations to domestic equity, international equity, fixed income, alternative assets, and cash equivalents.

D. Manager Structure

The risk level of the Domestic Equity, International Equity, and Fixed Income programs is managed by using a multi-manager approach and setting an allocation among active, semi-passive, and passive management styles. The objective of each management structure is to balance the goal of adding value to the asset class target relative to the risk incurred with the structure implemented.

E. Benchmarks

The SBI assigns benchmarks for each of its public security asset classes and each manager within those asset classes. A benchmark for each asset class will reflect the fund's return objectives and risk tolerance for that asset class by incorporating the appropriate range of investment opportunities and any constraints of the SBI. Benchmarks are assigned to each manager in the public security asset classes that represent the potential investments and risk arising from the manager's specific investment strategy.

The SBI monitors the actual portfolios relative to the appropriate benchmarks to make sure that the portfolios stay within appropriate risk tolerances.

F. Investment Guidelines

In addition to assigning each manager a benchmark, the SBI also gives each individual asset manager a specific set of investment guidelines. These guidelines provide a set of parameters that the manager must follow in managing the SBI portfolio. The guidelines provide a level of risk control by defining limitations such as allowable investments, concentration limits, and ratings restrictions to which the manager must adhere.

To monitor the guidelines, Staff has implemented a guideline compliance system that produces a monthly report for each manager. Staff reviews each report and investigates and takes any corrective action needed for any violation cited in the report.

G. Rebalancing

The SBI follows a disciplined approach to rebalancing to maintain the asset allocation policy of the Combined Funds and each non-retirement fund under SBI's control. When actual asset allocation deviates 5 percent or more from the target allocation, Staff may redistribute assets to achieve the target allocation. If the actual asset allocation deviates 10 percent or more, assets must be redistributed among the asset classes to achieve the target allocation.

H. Manager Retention Policy

In order to make informed judgments regarding the current capabilities of the Board's managers, the SBI has developed a set of specific evaluation guidelines which assists the Board in its decisions concerning retention and termination of asset managers. The Manager Retention Policy includes both qualitative and quantitative evaluation criteria that provide several benefits to the process:

- It encourages a comprehensive and consistent applied analysis.
- It creates a long-term outlook toward performance evaluation.
- It communicates investment objectives between the Board, its investment managers and Staff.

In addition, Staff uses the same criteria when evaluating prospective managers that the Board could hire in the future.

I. Performance

To ensure accurate performance, three separate organizations calculate performance on a monthly basis. Performance calculations are audited to ensure that there are no discrepancies between the calculations. Staff audits the benchmark returns to the source provider to verify accuracy. After all the performance numbers have been verified they are finalized in the performance database to be used for reporting purposes.

J. Quarterly/Annual Reports

Staff produces quarterly reports of manager performance relative to applicable benchmarks that are reviewed with the Board. The reports also include information on various administration issues and any proposed changes to the investment policy requiring Board approval.

Staff also produces an annual report that provides performance, an update of various events that took place during the year, and general descriptions of the various funds and asset managers.

Operations and Accounting

A. Safekeeping/ Custody Services

In accordance with the provisions of *M.S.*, sections 11A.07 and 356A.06, the SBI retains two custodian banks as depository agents for securities owned by the SBI. External safekeeping of securities provides a necessary degree of control in the business operations of the SBI. The SBI retains State Street Bank and Trust as master custodian to provide settlement and custody services, income collection, reporting and performance measurement services for retirement and non-retirement assets. The SBI retains Wells Fargo as custodian to service the state's cash accounts.

B. Separation of Investment Authority from Asset Custody/Recordkeeping

In order to provide for the appropriate separation of investment management from asset custody, securities are held at the custodial bank in the custodian's name on behalf of the SBI. Investment managers do not have direct control over the assets. When securities are purchased or sold, the custodian receives instruction from a manager to receive or deliver the securities on a delivery versus payment basis.

For internally managed assets, the SBI segregates the duties of the management of the investment portfolio from the accounting and recordkeeping function of the portfolio. Investment decisions for the state's cash accounts are made by SBI investment staff with trades entered into SBI's accounting system by SBI accounting personnel. Internally managed fixed income and passive equity investment decisions are made by SBI investment staff, while trades are recorded and cleared by the custodian.

C. Accounting

The SBI retains an external accounting firm to provide accounting services for cash accounts managed internally by Staff. In addition, the accounting firm receives data on all accounting transactions of the retirement and non-retirement assets from SBI's master custodian and replicates totals. In performing these tasks, the accounting firm provides a necessary independent verification that accounting transactions have been properly recorded.

Internally, SBI accounting staff compare a sampling of custodian prices with Bloomberg prices to ensure pricing accuracy.

D. Audits

The SBI is audited annually by the Office of the Legislative Auditor. The Legislative Auditor performs a financial audit of the SBI's books, records, accounts and accounting control systems.

The Legislative Auditor also utilizes the custodial internal control, SAS 70 reports to ensure the control objectives are effective.

E. Reconciliation

Throughout the month, investment managers review account positions and report and resolve discrepancies with the custodian in a timely manner. The SBI accounting staff complete reconciliations of the internal accounting system to the custodial system and resolve discrepancies on a timely basis.

SBI's independent accounting service provider also reconciles the manager account positions to the custodial records on a monthly basis. This additional check ensures that a breakdown does not occur in the custodial system.

Finally, SBI accounting staff reconciles the assets to plan level data and verifies daily plan pricing to ensure accuracy in the aggregate plan values.

F. Wire Processing and Signature Authority

All wire processing is carried out at the custodian level. A request for a wire transfer by the custodian must be received by an authorized staff member and must also be approved through a call-back process by a second individual authorized on the account.

SBI account signature authority is reviewed and updated with every change in SBI personnel.

G. Disaster Recovery

The SBI has developed and documented a disaster recovery plan meeting the requirements of Executive Order No. 90-2. This plan provides SBI employees with emergency plans and procedures for protecting personnel, equipment, supplies and public records as well as for carrying on normal services in the event of a disaster. Normal services include continuing to maximize return of the pension funds given the appropriate risk level and ensuring that funds are available to finance benefits to plan participants. Normal operations also include meeting all of the liquidity needs of the State of Minnesota. All service providers hired by the SBI are, in turn, required to have robust, documented disaster recovery plans that allow the entities to continue normal operations in the event of a disaster.

The SBI disaster recovery plan has been designed to address 1) a total disruption of operations, 2) a loss of data processing functions, 3) a partial loss of operations in a functional area and 4) the total loss of SBI facilities. Alternate site and resource designation, a risk assessment, training of personnel and testing of the disaster recovery plan are critical components of the disaster recovery plan.

H. Monitoring of Staff investments

The SBI maintains an investment policy covering staff purchases and sales of securities for their personal investments. Each staff member must provide information about the purchase or sale of securities and receive signed authorization from the Executive Director or Assistant Executive Director prior to the transaction. Quarterly, each staff member must provide a list of their holdings which is compiled into a report that is sent to each Board member.

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DOMESTIC EQUITY

ASSET CLASS TARGET

Staff Paper

November 2011

Introduction

The objective of the Domestic Equity Program is to match or exceed the return of the asset class target net of fees and expenses. The program currently uses the Russell 3000 (R3000) as the asset class target. In general, an appropriate asset class target should be investable, measurable, and maintainable. The R3000 covers 98% of the equity market, holdings are easily incorporated into investment monitoring databases, and performance is measured by a third party on a timely basis. The Russell style benchmarks help control style bias and monitor active risk within the multi manager structure. This paper will review the Domestic Equity asset class target and recommend changes, if any, for the Domestic Equity Program.

Background

The first asset class target for the Domestic Equity Program was the Wilshire 5000 (W5000) from 1984 through June 1999. At that time, the S&P 500 and the W5000 were the only feasible options for an established, widely used benchmark. Given the SBI's desire to have broad exposure to publicly traded domestic equities, the W5000 was the appropriate choice since it contained at least 93% of the market value of all investments made by the SBI's active domestic equity managers. By comparison, the S&P 500 covers approximately 77%. In 1999, the Domestic Equity Program experienced unacceptable tracking error relative to their composite indices and brought into question the soundness of using the W5000 as the Domestic Equity asset class target. The tracking error differences were caused by a mismatch between planning and reporting with the SBI's buy/hold methodology versus the W5000 which changed daily, the timing of index changes, and the illiquid nature of many small capitalization names in the W5000. Consequently, in 2000 a custom asset class target was built called the W5000 Investable to address some of the restrictions and constraints of the Domestic Equity Program.

In late 2003, the Domestic Equity Program transitioned from the W5000 Investable to the R3000 as the asset class target following a recommendation of the 2003 Asset Allocation Asset Class Target and Asset Class Structure Review.

At the manager level, custom benchmarks were created in the late 1980's for all active managers to reflect their areas of expertise, research universe and investment style. In 1990 the "tilted index fund benchmark" was created for the passive manager to manage dispersion and offset any biases that the aggregate active equity benchmarks had relative to the asset class target. In 1995 the Dynamic Completeness Fund (DCF) was created when the semi-passive management group was added to the program. The DCF benchmark was constructed by comparing the weight of each stock in the combined custom benchmark for all active managers to the weight of that stock in the asset class target to minimize any unintended size or style bias in the program. In October of 2003 the active management group transitioned from custom benchmarks to Russell style benchmarks, depending on the mandate. In January 2004 the semi-passive manager group transitioned from the DCF to the Russell 1000 Index. All managers now utilize published benchmarks.

The Russell style benchmarks that are currently used within the Domestic Equity Program include the following:

1. Passive portfolio is measured relative to the R3000;
2. Semi-Passive manager group is measured relative to the Russell 1000;
3. Active manager group, depending on mandate, is measured relative to one of five Russell style benchmarks: Russell 1000, Russell 1000 Growth, Russell 1000 Value, Russell 2000 Growth and Russell 2000 Value.

Requirements of an Asset Class Target

An asset class target is a diversified collection of investable securities within a particular asset class. It represents the set of feasible investment opportunities that best achieves the purposes for which the asset class is included in the policy asset mix. Staff reviews benchmark quality on an annual basis to determine whether the assigned Russell benchmark adequately reflects the managers' investment style. A listing of past asset class targets for the Domestic Equity Program is provided in attachment A.

Russell Benchmarks

The R3000 is created and published by an independent third party and is used by large institutional investors. It is composed of the largest 3,000 U.S. companies representing approximately 98% of the investable U.S. equity market. The index is float-weighted, whereas the weight of a security in the benchmark is adjusted based on shares that are tradable in the open market. Russell Indexes are rebalanced annually to accurately represent investment opportunities in the market. Eligible securities in the R3000 are ranked by total market capitalization as of the last trading day in May for reconstitution on the last Friday in June after the close. Adjustments are made daily for stock splits, dividends, and de-listings and made monthly for stock buybacks and equity offerings. Spin-offs and initial public offerings (IPOs) are the only additions to the Russell indices between reconstitution dates. The R3000 is constrained from investing in companies that trade below $1.00, pink sheet and bulletin board stocks, closed-end mutual funds, limited partnerships, royalty trusts, foreign stocks and American Depositary Receipts (ADRs) are excluded from Russell indexes.

The Russell 1000 is made up of the largest 1,000 securities in the R3000, while the Russell 2000 is made up of the remaining 2,000 securities in the R3000. To determine the style index membership, each stock in the Russell 1000 and Russell 2000 is divided into a growth index and a value index, and these are reconstituted at the same time as the composite indices. A composite value score is created by ranking each stock within the Russell 1000 and Russell 2000 by two variables: book-to-price ratio and the I/B/E/S forecast long-term growth mean. Each of the SBI's domestic equity portfolios are measured and monitored relative to their appropriate style benchmark. The use of style benchmarks help control style bias and monitor the manager's active risk relative to the asset class target.

Restrictions

None of the published Russell indices are adjusted for restrictions the SBI is required to implement. The Domestic Equity Program is restricted from investing in the following:

1. Tobacco. All actively managed accounts are prohibited from purchasing a company which obtains more than 15 percent of its revenues from tobacco products. This Board policy was adopted in June of 1998.
2. Sudan. All equity portfolios are prohibited from purchasing companies engaged in scrutinized active business operations in Sudan and also require divestment of those companies. This Minnesota law, *MN Statute 11A.243*, was passed in 2007.
3. Iran. All portfolios are prohibited from purchasing companies engaged in scrutinized active business operations in Iran and also require divestment of those companies. This Minnesota law, *MN Statute 11A.244*, was passed in 2009.

In 2010, staff reviewed what impact these restricted companies had on the Domestic Equity Program relative to the asset class target. The Sudan and Iran restricted holdings had little to no exposure and the restricted tobacco holdings had a 1.3% allocation in the asset class target. The Domestic Equity Program had the same correlation of return (0.999) between both the R3000 and the R3000 ex-tobacco benchmarks. The impact was not significant enough to warrant a custom benchmark.

Conclusion

The R3000 represents a broad range of investment opportunities in the domestic equity market which reflect the constraints of the SBI and represents the SBI's return objectives and risk tolerances. The R3000 provides a measurable performance standard that is transparent, readily available, and can be linked into the SBI's portfolio monitoring systems. Through the use of Russell style benchmarks, the Domestic Equity Program is structured to neutralize style bias with minimal active risk. The R3000 captures the securities and investment style of the SBI's Domestic Equity Program, therefore, no changes are recommended to the asset class target at this time.

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Attachment A

Historical Asset Class Targets

Domestic Equity Program

Time Period	Notes
Oct 2003 to Present	Russell 3000 is the Asset Class Target replacing the Wilshire 5000 Investable
July 1999 to Sept 2003	Wilshire 5000 Investable is the Asset Class Target replacing the Wilshire 5000
Nov 1993 to June 1999	Wilshire 5000 (with no adjustments)
Prior to Nov 1993	Wilshire 5000 (adjusted for liquor and tobacco, American Home Products and South Africa)

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Attachment B

Russell 3000 Ex-Tobacco Benchmark

Ex-Tobacco Benchmark

Nuveen created and has maintained a Russell 3000 ex-Tobacco benchmark since February of 2001. The tobacco companies excluded from the Russell 3000 are from the SBI's restricted tobacco list. Performance and a correlation matrix for the Domestic Equity Portfolio, the Russell 3000, and the Russell 3000 ex-Tobacco are below.

Performance as of December 31, 2009	Qtr	One Year	Three years	Five Years
Total Domestic Equity Aggregate	6.0	29.6	(5.6)	0.5
Russell 30000	5.9	28.3	(5.4)	0.8
Russell 3000 ex Tobacco	5.9	28.5	(5.5)	0.6

Performance Calendar Year Ending

Name	2002	2003	2004	2005	2006	2007	2008	2009
Total DE Aggregate	-22.4	31.0	12.2	6.4	14.5	4.9	-38.1	29.6
Russell 3000	-21.5	31.1	11.9	6.1	15.7	5.1	-37.3	28.3
Russell 3000 ex TOB	-21.7	31.0	11.9	5.9	15.6	5.0	-37.5	28.5

Correlation Matrix *From February 2001 to December 2009*	Russell 3000	Russell 3000 ex TOB	Total Domestic Equity
Russell 3000	1.000		
Russell 3000 ex Tobacco	1.000	1.000	
Total Domestic Equity Aggregate	0.999	0.999	1.000
Annualized Standard Deviation	16.863	16.945	17.121

Russell 3000 as of 12/31/2009

Below is the list of companies on the restricted tobacco list and their exposure within the Russell 3000 benchmark.

Company	Ticker	Industry	Market Value	Shares	% Weight
Alliance One Intl	AOI	Tobacco	434,193	88,974	0.0036
Altria Group	MO	Tobacco	40,587,891	2,067,646	0.3388
Lorillard Inc	LO	Tobacco	13,492,199	168,169	0.1126
Philip Morris Intl Inc	PM	Tobacco	94,528,396	1,961,577	0.7891
Reynolds American Inc	RAI	Tobacco	8,934,874	168,678	0.0746
Schweitzer-Mauduit Intl	SWM	Paper	1,244,843	17,695	0.0104
Star Scientific Inc	CIGX	Tobacco	56,207	80,295	0.0005
Universal Corp	UVV	Tobacco	1,140,204	24,999	0.0095
Vector Group Ltd	VGR	Tobacco	543,634	38,831	0.0045
Total			$ 160,962,440		1.3436
Russell 3000			$ 11,979,853,896		100.0

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DOMESTIC EQUITY

ASSET CLASS STRUCTURE

Staff Paper

May 2011

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Introduction

The pension funds are invested in four asset classes: domestic equity, international equity, fixed income and alternative assets. When the current structure of the pension assets originated in 1984, domestic equity and fixed income were the only two asset classes that were utilized. Domestic equity continues to have the largest allocation of pension assets as the plan has evolved over time and is currently at 45%.

The SBI instituted its external domestic equity manager program in March 1983 when eleven active managers were each funded with $50M. Wilshire Asset Management (WAM) was retained as the SBI's passive stock manager in November 1983 to track the Wilshire 5000, less the restricted stocks. In 1990, the passive benchmark was changed from the Wilshire 5000 to a "tilted index fund benchmark" and was phased in over a two-year period. The tilted index fund benchmark was designed to offset any biases that the aggregate active equity managers' benchmarks had relative to the domestic equity class target, Wilshire 5000. The intent was the combination of the tilted index fund benchmark and the benchmarks of all the active managers would track the asset class target closely. After experiencing some challenges with the tilted index fund benchmark for a passive manager, a change was made to have those assets managed semi-passively. In January 1995 three firms were hired and the assets were transitioned to a semi-passive allocation. Those managers managed assets for the Dynamic Completeness Fund, which replaced the tilted index fund benchmark. Over time, there have been changes to the program, including its Asset Class Target and its overall Asset Class Structure. Today, the program continues to have allocations to active, passive and semi-passive management. This paper will review the domestic equity asset class structure and recommend changes, if any, for the domestic equity program.

Domestic Equity Portfolio

When the domestic equity program was implemented in 1984, the only viable options were passive management and active management. Rather than managing to add value relative to a benchmark, passive management involves buying and holding securities that will closely follow the returns of a specified benchmark. The passive manager's primary job is to manage the tradeoff between transaction costs, tracking error and management fees. Active management entails buying and selling securities in an asset class with the intention of outperforming a specified benchmark. The SBI expects to earn incremental return from active management as it offers the potential to outperform the asset class target at a higher level of risk. To outperform the benchmark, the securities held in an active portfolio may differ substantially from the composition of the benchmark. Active management offers the potential to outperform the specified benchmark, but the plan sponsor also assumes the risk that an active manager may underperform the benchmark.

Semi-passive management strategies, also referred to as enhanced indexing, involve tracking a benchmark index closely and using risk-controlled strategies to add modest value to the index. They do not attempt to achieve excess return levels as high as those in traditional active strategies, and they are generally more consistent at generating modest excess returns.

The SBI incorporated the active/semi-passive/passive strategy in 1995 taking into consideration the amount of assets in the domestic equity portfolio, return objectives, risk tolerance, and cost of active management and expense of trading. The total domestic equity program is expected to match or exceed the return of the asset class target net of fees and expenses.

Asset Class Target

From 1984 through June 1999, the program was benchmarked to the Wilshire 5000. In 1990, the tilted index fund benchmark was used and then transitioned to the Dynamic Completeness Fund (DCF) in 1995. This approach was incorporated into the domestic equity program to manage dispersion between the active manager portfolios and the asset class target. The DCF benchmark was constructed by comparing the weight of each stock in the combined custom benchmark of all active managers to the weight of that stock in the asset class target. The process was designed to minimize any unintended size or style bets in the program. The tilted index fund was originally implemented passively from 1990 through 1994. In 1995, the passive manager, Wilshire Asset Management, was terminated and Barclay's was hired to manage the passive account and a phase-in benchmark was in effect for the first four months as it transitioned to the Wilshire 5000. The Semi-passive management allocation was added to the Domestic Equity Program in 1995 to manage assets against the DCF benchmark. Each quarter, the semi-passive managers would be given a list of stocks to "complete" the Wilshire 5000 benchmark to help control misfit risk.

In late 2003, the Domestic Equity Program transitioned from the Wilshire 5000 benchmark to the Russell 3000 benchmark and discontinued the DCF benchmark approach. The ability of a DCF benchmark to correct misfit risk is undermined when the benchmarks it is designed around are not built properly. The domestic equity managers used custom benchmarks to reflect their areas of expertise, research universe and investment style. Some of the practical problems the custom benchmarks experienced included a lack of investment manager ownership, understanding, and acceptance. Published indices had improved during this time and had become more accepted by pension plans. To reduce the reliance on the DCF, misfit risk or style bias was controlled by allocating assets across active managers. Since January 2004, the semi-passive managers have been benchmarked against the Russell 1000 Index. The active managers, depending on their mandate, are measured against one of five Russell style benchmarks: Russell 1000, Russell 1000 Growth, Russell 1000 Value, Russell 2000 Growth and Russell 2000 Value. The passive manager is monitored against the Russell 3000.

Asset Class Structure

The allocation to active, semi-passive and passive has evolved over time as additions and enhancements were made to the program. The program started with an allocation of no more than 50% to active management and no less than 50% to passive management. When semi-passive management was added in 1995, the allocation shifted to at least 25% passive, no more than 50% active and no more than 25% semi-passive. The policy allocation changed again in the second quarter of 1998 to 1/3 active, 1/3 semi-passive and 1/3 passive. Setting a specific target was too restrictive and required more rebalancing. Flexibility was needed in the allocation target, without changing the expected return or tracking error of the asset class. In 2003, the program underwent significant changes and the ranges were changed to 25% to 40% for all three mandates. After experiencing market challenges in 2006, the program sought additional flexibility to increase or decrease the risk level of the total domestic equity portfolio by expanding the allocation ranges. The desire to achieve excess returns in the asset class is secondary to gaining exposure to the asset class. The high passive allocation range recognizes and allows for the flexibility to be completely passive in the event that active or semi-passive managers are not the best fit. The current allocation ranges were established in September 2007 and are:

Active	0-50%
Semi-passive	0-50%
Passive	25-100%

No more than 75% of the domestic equity program will be managed on a combined active and semi-passive basis. The active, semi-passive, and passive strategies are expected to provide diversification so that one manager segment does not determine the performance of the whole program.

The risk level of the domestic equity program is managed by setting an allocation among the management styles (value, growth, fundamental, quantitative, etc.) and by controlling the degree of active risk in the managers' portfolios through the use of investment guidelines.

Restrictions

There are several investment restrictions in place for the SBI. Over-the-counter derivative instruments are not permitted. All option and futures transactions must be entered into with a fully offsetting amount of cash or cash equivalents. Active and semi-passive managers were required to sell all tobacco-related stocks that obtain more than 15 percent of revenues from tobacco products starting in October 1998 over a three year divestment period and the restriction remains in effect. In 2007, Minnesota law was passed that prohibited equity portfolios from purchasing companies engaged in scrutinized active business operations in Sudan and also required scheduled divestment of those companies. A similar law was passed in 2009 that prohibited equity portfolios from purchasing companies engaged in scrutinized active business operations in Iran and also required scheduled divestment of those companies.

Program Results

Table 1. Total Domestic Equity Relative Return Net of Fees and Portfolio Risk as of June 30, 2010

Manager Segment	3 Yr Relative Return	3Yr Tracking Error	5 Yr Relative Return	5 Year Tracking Error	Since Inception Relative Return	Since Inception Tracking Error	Inception Dates
Active	-0.6	2.2	-0.9	1.9	-0.7	1.7	10/2003
Semi-Passive	-0.5	0.7	-0.4	0.7	0.0	1.1	1/1995
Passive	0.2	0.2	0.1	0.1	0.1	0.3	7/1995
Total DE Portfolio	**-0.2**	**0.7**	**-0.3**	**0.6**	**-0.3**	**0.9**	**1/1984**

As shown in Table 2 below, the semi passive segment has shown lower risk than active management, 0.67 versus 1.77, yet higher risk than passive management with a 0.09 standard deviation. This is to be expected as semi-passive management is a hybrid approach that incorporates characteristics from both passive and active management. In addition, there is low correlation between the semi-passive excess returns and active (0.08) and passive (0.03) excess returns.

Table 2. Total Domestic Equity Portfolio Correlation Matrix of Monthly Excess Returns for the Period October 2003-March 2010

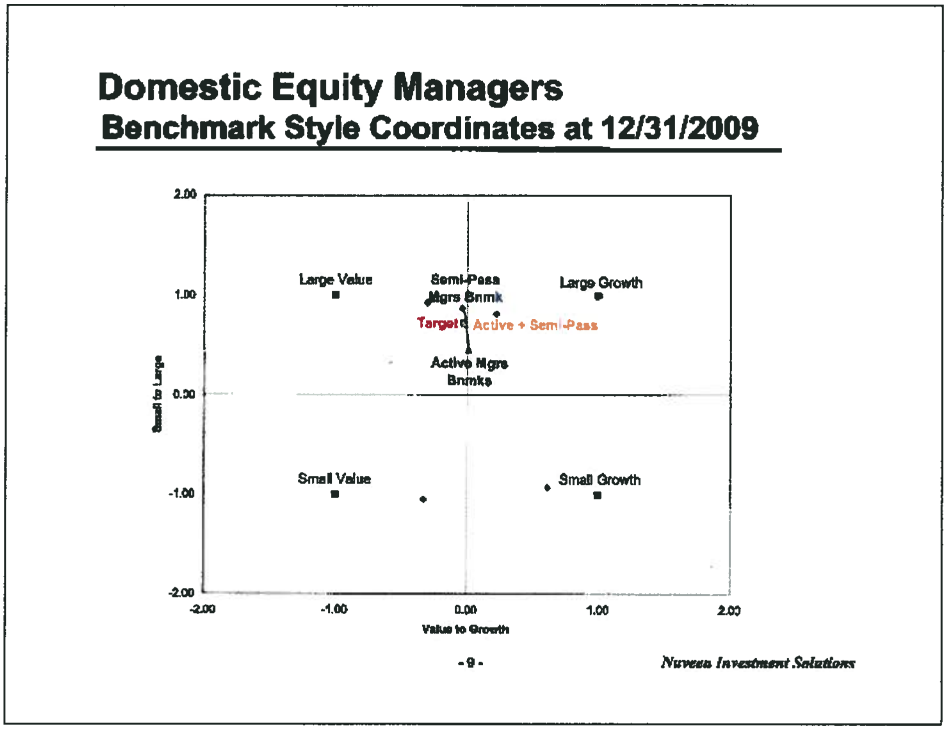
	Active Aggregate	Semi-Passive Aggregate	Passive Aggregate	Domestic Equity Portfolio
Active	1.00			
Semi-Passive	0.08	1.00		
Passive	-0.13	0.03	1.00	
Total Domestic Equity Portfolio	0.91	0.47	-0.06	
Annualized Standard Deviation	**1.77**	**0.67**	**0.09**	**0.57**

Table 3. Total Domestic Equity Portfolio Calendar Returns Net of Fees

Portfolio	Calendar Year 2004	2005	2006	2007	2008	2009
Active Manager Aggregate	12.5	6.5	11.5	6.3	-40.5	32.3
Active Manager Benchmark	12.3	6.0	15.8	4.2	-36.9	27.9
Semi Passive Manager Aggregate	11.7	6.2	16.1	3.2	-37.2	28.5
Semi Passive Manager Benchmark	11.4	6.3	15.5	5.8	-37.6	28.4
Passive Aggregate	12.0	6.2	15.8	5.1	-37.1	28.2
Passive Manager Benchmark	11.9	6.1	15.7	5.1	-37.3	28.3
Total Domestic Equity Portfolio	**12.2**	**6.4**	**14.5**	**4.9**	**-38.1**	**29.6**
Total Domestic Equity Portfolio Benchmark	**11.9**	**6.1**	**15.7**	**5.1**	**-37.3**	**28.3**

Style Bias

The active and semi-passive benchmarks are plotted on the style graph below. Combined, the style coordinate of the active and semi-passive segment match up with the style coordinate of the asset class target. This would be expected as the domestic equity portfolio is structured to minimize unwanted style bias (misfit risk) relative to its asset class target and maintain overall return potential.



Conclusion

The asset class target for domestic equity, Russell 3000, provides an investable universe that allows a broad exposure to the domestic equity market. The current allocation range allows sufficient flexibility during market fluctuations and also enables the program to meet its return objectives, risk tolerances and cost of active management. The active, semi-passive, and passive strategies have provided diversification, minimized unwanted misfit risk and maintained the program's overall return potential

Recommendation

Staff recommends to continue with the current domestic equity structure at this time.

DOMESTIC EQUITY

SEMI-PASSIVE MANAGEMENT REVIEW

Staff Paper

May 2010

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Introduction

The Domestic Equity Program began in 1984 with an allocation to active management. Allocations to passive and semi-passive management were added to the Domestic Equity Program in 1995. Over time, there have been changes to the program, including its Asset Class Target and its overall range allocations for the three mandates. Today, the program continues to have allocations to active, passive and semi-passive management. This paper will review the role and purpose of semi-passive management and recommend changes, if any, for the domestic equity program.

Domestic Equity Portfolio

When the program was implemented in 1984, the only viable options were passive management and active management. Rather than managing to add value relative to a benchmark, passive management involves buying and holding securities that will closely follow the returns of a specified benchmark. The passive manager's primary job is to manage the tradeoff between transaction costs, tracking error and management fees. Active management entails buying and selling securities in an asset class with the intention of outperforming a specified benchmark. The State Board of Investment (SBI) expects to earn incremental return from active management as it offers the potential to outperform the asset class target at a higher level of risk. To outperform the benchmark, the securities held in an active portfolio may differ substantially from the composition of the benchmark. Active management offers the potential to outperform the specified benchmark, but the plan sponsor also assumes the risk that an active manager may underperform the benchmark. The program was 100% active in 1984.

From 1984 through June 1999, the program was benchmarked to the Wilshire 5000. In 1990, the Dynamic Completeness Fund (DCF) benchmark approach was incorporated into the domestic equity program to manage dispersion between the active manager portfolios and the asset class target. Each manager had a custom benchmark based on their investment style. The Semi-passive management allocation was added to the Domestic Equity Program in 1995 to manage assets to the DCF benchmark. Each quarter, the semi-passive managers would be given a list of stocks to "complete" the Wilshire 5000 benchmark to help control misfit risk. In late 2003, the Domestic Equity Program transitioned from the Wilshire 5000 benchmark to the Russell 3000 benchmark and discontinued the DCF benchmark approach. Since January 2004, the semi-passive managers have been benchmarked against the Russell 1000 Index.

Semi-Passive management overview

Semi-passive management strategies, also referred to as enhanced indexing, are designed to consistently achieve modest levels of excess return, by specifically addressing the risk of that excess return. They do not attempt to achieve excess return levels as high as those in traditional active strategies, but they are generally more consistent at generating modest excess returns.

The State Board of Investment (SBI) incorporated the active/semi-passive/passive strategy in 1995 taking into consideration the amount of assets in the domestic equity portfolio, return objectives, risk tolerance, and cost of active management and expense of trading. The total domestic equity program is expected to earn the market return.

Role/Expectations of Semi Passive Strategy

The active, semi-passive, and passive strategies are expected to provide diversification so that one manager segment does not determine the performance of the whole program. Currently, the program is structured with the following allocation and expectations:

Table 1. Total Domestic Equity Policy Allocation, Return and Risk Expectations as of March 31, 2010.

Mandate	Policy Range Allocation	3/31/10 Actual Allocation	Long Term Return Expectation[1]	5 Year Target Tracking Error Ranges[2]
Active	0-50%	25%	+0.50 to 1.0%	2-13%
Semi-Passive	0-50%	33%	+0.15 to 0.30%	1-3%
Passive	25-100%	42%	-0.10%	0.1%
Total DE Portfolio		**100%**	**+0.16 to 0.46%**	

[1]Nuveen analysis. Annualized over time, relative to benchmark, net of fees

[2] Tracking Error is the annualized standard deviation of excess return. Tracking error ranges vary by manager and depend on the manager's investment process and published Russell style mandate.

The current policy range allocation for the Domestic Equity Program is wide to allow for long-term flexibility. At one time, the policy was one-third active, one-third semi-passive, one-third passive, and it was difficult to keep policy weights within a tight range. The current semi-passive allocation is approximately 33% of the overall program. The target excess return for the semi-passive managers is in between active and passive management. The top of its target excess return range is below the start of the range for the active managers.

The SBI's semi-passive aggregate matched the performance of its asset class target since inception of the strategy, and slightly underperformed the asset class target for five years ending March 31, 2010. From 1995-2004 a custom benchmark was used as the asset class target for each manager due to the role semi-passive managers had in the DCF program to control misfit risk. Since January 2004, the Russell 1000 has been the semi-passive aggregate's asset class target. The tracking error for the semi-passive management group since inception is in line with the target range of 1-3%, but is slightly under the range for five years ending March 31, 2010. A low tracking error range reflects the goal to moderately outperform the Russell 1000 net of fees and expenses over long time periods.

Table 2. Total Domestic Equity Relative Return Net of Fees and Portfolio Risk as of March 31, 2010

Manager Segment	3 Yr Relative Return	3Yr Tracking Error	5 Yr Relative Return	5 Year Tracking Error	Since Inception Relative Return	Since Inception Tracking Error	Inception Dates
Active	-0.3	2.2	-0.7	1.9	-0.7	1.8	10/2003
Semi-Passive	-0.6	0.8	-0.3	0.7	0.0	1.1	1/1995
Passive	0.1	0.1	0.1	0.1	0.2	0.3	7/1995
Total DE Portfolio	**-0.2**	**0.7**	**-0.3**	**0.6**	**-0.3**	**0.9**	**1/1984**

As shown in Table 3 below, the semi passive segment has shown lower risk than active management, 0.67 versus 1.77, yet higher risk than passive management with a 0.09 standard deviation. This is to be expected as semi-passive management is a hybrid approach that incorporates characteristics from both passive and active management. In addition, there is low correlation between the semi-passive excess returns and active (0.08) and passive (0.03) excess returns.

Table 3. Total Domestic Equity Portfolio Correlation Matrix of Monthly Excess Returns for the Period October 2003-March 2010

	Active Aggregate	Semi-Passive Aggregate	Passive Aggregate	Domestic Equity Portfolio
Active	1.00			
Semi-Passive	0.08	1.00		
Passive	-0.13	0.03	1.00	
Total Domestic Equity Portfolio	0.91	0.47	-0.06	
Annualized Standard Deviation	**1.77**	**0.67**	**0.09**	**0.57**

Performance has been in line with expectations. Recent markets have been challenging for all managers across all mandates. Calendar 2007 performance was an exceptionally poor year for the SBI's semi-passive managers, which underperformed the Russell 1000 by 2.6%. Quantitative fund managers, who use computer models to pick stocks, found the economic environment extremely difficult. There was massive de-leveraging of risk by investors which forced hedge funds and quantitative managers to sell their long positions to cover their short positions. Portfolios with investment themes such as value and quality, which have a record of paying off over the long term, suffered losses as investors liquidated similar portfolios.

Table 4. Semi-Passive Managers Calendar and Since Inception Returns Net of Fees

	Calendar Year						Since
Portfolio	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Inception[1]**
BlackRock	11.7	7.6	15.6	2.2	-37.1	27.6	8.0
JPMorgan	11.7	4.7	16.5	5.1	-37.1	32.1	7.9
Mellon	11.7	6.1	16.5	2.5	-37.6	25.6	7.1
Semi Passive Aggregate	**11.7**	**6.2**	**16.1**	**3.2**	**-37.2**	**28.5**	**7.7**
Semi-Passive Benchmark	**11.4**	**6.3**	**15.5**	**5.8**	**-37.6**	**28.4**	**7.7**

[1] Inception date: January 1, 1995

Table 5. Total Domestic Equity Portfolio Calendar Returns Net of Fees

	Calendar Year					
Portfolio	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Active Manager Aggregate	12.5	6.5	11.5	6.3	-40.5	32.3
Active Manager Benchmark	12.3	6.0	15.8	4.2	-36.9	27.9
Semi Passive Manager Aggregate	11.7	6.2	16.1	3.2	-37.2	28.5
Semi Passive Manager Benchmark	11.4	6.3	15.5	5.8	-37.6	28.4
Passive Aggregate	12.0	6.2	15.8	5.1	-37.1	28.2
Passive Manager Benchmark	11.9	6.1	15.7	5.1	-37.3	28.3
Total Domestic Equity Portfolio	**12.2**	**6.4**	**14.5**	**4.9**	**-38.1**	**29.6**
Total Domestic Equity Portfolio Benchmark	**11.9**	**6.1**	**15.7**	**5.1**	**-37.3**	**28.3**

Style Bias

The active and semi-passive benchmarks are plotted on the style graph, Attachment A. Combined, the style coordinate of the active and semi-passive segment match up with the style coordinate of the asset class target. This would be expected as the domestic equity portfolio is structured to minimize unwanted style bias (misfit risk) relative to its asset class target and maintain overall return potential.

Current Semi-Passive Program

When the semi-passive mandate was funded in 1995, three managers were hired. They were BlackRock Institutional Trust Co., N.A. (formerly Barclay's Global Investors), J. P. Morgan Investment Management, and Mellon Capital Management (formerly Franklin Portfolio Associates). All three managers remain in the semi-passive program. As the assets under management increased and two managers experienced organizational changes, staff reviewed the opportunities to add diversification, capacity, and flexibility to the program. As a result of the evaluation, staff recommended hiring a fourth manager for the program. The recommendation was approved and INTECH Investment Management was added to the program on April 1, 2010.

The inclusion of a semi-passive strategy in the domestic equity portfolio has successfully provided asset class return net of fees to the domestic equity portfolio since inception with low tracking error. The allocation to this strategy continues to be within its policy range and has been successful in managing and controlling style bias or misfit risk.

Recommendation

Staff recommends to continue with the current semi-passive management strategy and structure at this time.

REVIEW OF

EXCHANGE TRADED FUNDS

Staff Paper

March 2013

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ETFs

An ETF is a collective investment vehicle in which each share represents a fractional ownership interest in a portfolio of securities that is prepackaged in a way to follow a certain market, industry, or commodity. For example, a gold ETF moves with the price of gold, a bond ETF moves with the price of certain types of bonds, and a stock market ETF moves with the segment of the stock market it is replicating. All funds trade daily on an exchange and are highly liquid with pricing that stays close to net asset value. ETFs are investment companies that are registered with the SEC under the 1940 Act as an open-end management company or as a unit investment trust. This review considers the opportunities to utilize ETFs by the SBI.

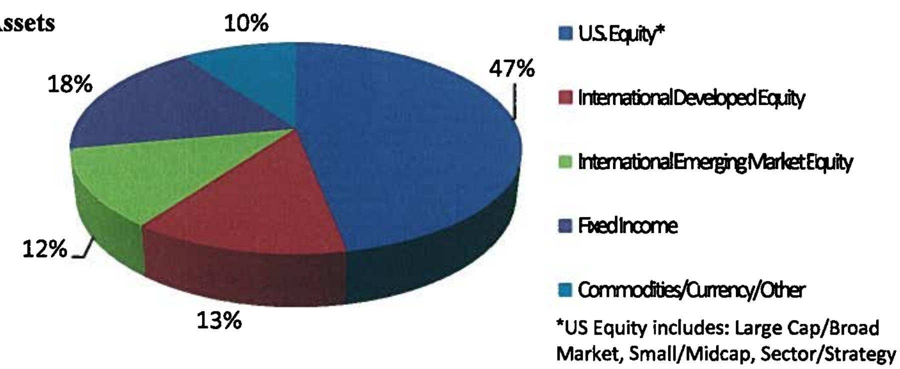
ETF funds, which are currently used by a small number of institutional investors, are growing in popularity due to their low trading costs, portfolio diversification benefits, and transparency. Investors utilization of Exchange Traded Funds (ETFs) to facilitate fund management practices including liquidity management, cash equitization, transition management and portfolio rebalancing continues to grow.

Types of ETFs

While the majority of ETF assets still reside in equity products, the exposure to other asset classes (international, fixed income, and commodities) has expanded considerably in the past ten years. State Street Global Advisors' SPDR S&P500 ETF continues to be the largest and most traded ETF today.

Figure 1: Allocation of ETF Assets as of December 2012

In % of Total US ETF Assets



Source: BlackRock Investment Institute, Bloomberg, BlackRock, ICI *Recording Breaking ETP flows*, March 2013

ETF Providers

Over 80% of US ETF assets are managed by three firms: BlackRock, State Street Global Advisors, and Vanguard. BlackRock's iShares is the most widely-used ETF provider and, as of October 2012, managed over 40% of the ETF assets.

Figure 2: Largest ETF Providers as of 10/31/12

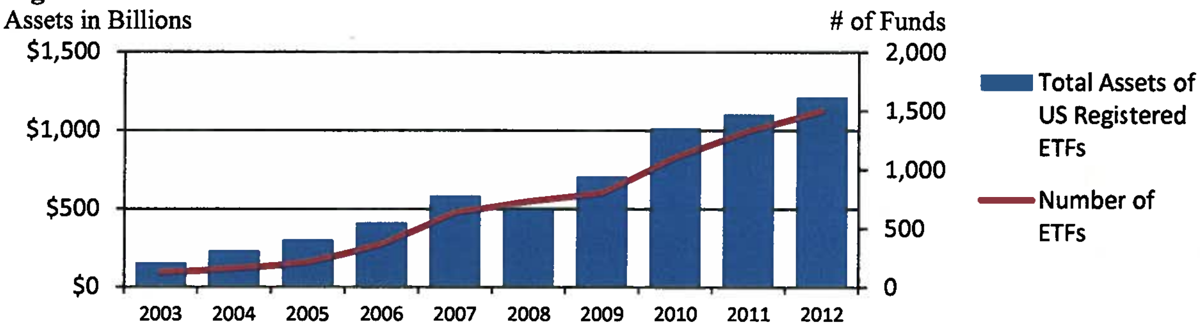
ETF Provider	Assets (In Billions)	Market Share
BlackRock (iShares)	$529.8	41.1%
State Street Global Advisors (SPDRs)	$302.9	23.5%
Vanguard	$231.9	18.0%

Source: BlackRock Investment Institute, *ETP Landscape Industry Highlights October 31, 2012*

Growth of ETFs

In 2012 there were over 1,400 ETFs and related exchange traded products (ETPs[1]) with over $1.2 trillion in assets. According to BlackRock, the notional trading volume in US listed ETPs in 2012 was $14.1 trillion. Assets continue to flow into the ETF marketplace and have been growing in popularity with investors.

Figure 3: US ETF Growth in Assets and Funds



Source: Index Universe ETF Briefing Book (2011) and JPMorgan ETF Market Overview (2013)

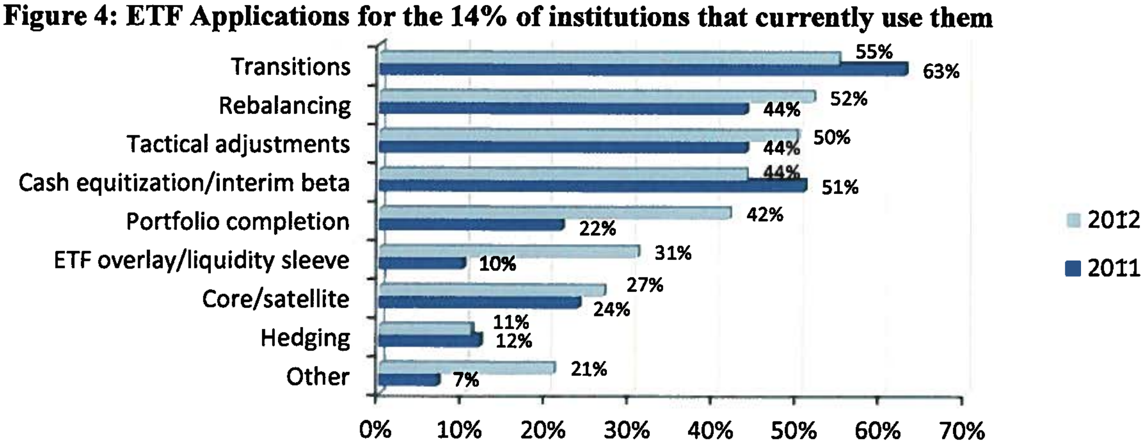
Retail Investor Use of ETFs

Retail investors use ETFs for their inexpensive access to broad market returns, liquidity, advantageous tax structure and lower management fees compared to mutual funds. ETFs are intended to be more tax efficient than mutual funds. Capital gain taxes on ETFs are realized only when an investor sells its own shares, whereas a mutual fund will incur capital gains taxes each time an asset is sold in the mutual fund.

Institutional Investors Use of ETFs

According to Greenwich Associates, approximately 14% of US institutional investors[2] currently use ETFs in their portfolios for transitions, rebalancing, tactical portfolio solutions, and other applications, as outlined in Figure 4. The low cost of trading and increased liquidity of ETFs have made ETFs more popular among institutions looking for short term exposure into index-like strategies. Note that of the 62 institutions that responded to the 2012 survey below, 14 were public funds and 42 of the respondents had assets $5 billion or less. Only 8 of the respondents had assets over $20 billion.

Figure 4: ETF Applications for the 14% of institutions that currently use them



Source: 2012 Greenwich Associates U.S. ETF Study; Based on responses from 62 and 41 institutional funds in 2012 and 2011, respectively.

[1]Approximately 99% of ETPs are ETFs. A glossary of terms is included at the end of this paper.

[2]Greenwich's core research group consist of 970 Corporate Funds, Public Funds, and Endowments & Foundations with assets that range from $250 million to over $20 billion.

SBI's Use of ETFs
The SBI has authority to invest in ETFs in Minnesota Statutes, Section 11A.24 subdivision 1. In 2011 ETFs were utilized in the Russell 3000 passive portfolio to equitize the cash exposure during a transition when futures were more expensive. The active managers in the domestic equity program generally do not use ETFs because they have separately managed portfolios with the goal of exceeding the index with a select portfolio of stocks, rather than trying to replicate an index.

The utilization of ETFs by institutional investors outlined in figure 4 and explained below may or may not be beneficial to the SBI.

- Transitioning a terminated portfolio into an ETF while going through a manager hiring process. In a transition the SBI generally can use futures at a lower cost. The SBI also has access to SSgA's index funds for all domestic equity asset style groups at a lower cost.
- Rebalancing a portion of a portfolio to match the institution's policy weights. The SBI has a passive component in each asset class with lower management fees.
- Tactical adjustments have become popular as many specialized ETFs offer exposure to various stock sectors and other markets (gold, treasury bonds, and international emerging markets). The SBI does not make tactical adjustments or use specialized investments.
- Liquidity pools may be used by institutional investors to replicate an asset class through an ETF and trade out of that ETF to meet cash needs. Replicating the Russell 3000 portfolio for a liquidity pool is not cost effective for the SBI because the SBI raises cash infrequently during the year. The management fee for the SBI's passive R3000 portfolio is 0.01% and is significantly lower than the Russell 3000 iShares ETF at 0.20%.
- ETFs can be used to hedge against catastrophic or unanticipated events. The SBI stays fully invested to the Russell 3000 benchmark.
- While smaller institutions use ETFs to gain broad market exposure, the SBI given its large asset base, has broad market exposure to domestic equity through the Russell 3000 index at a lower cost than by using an ETF.

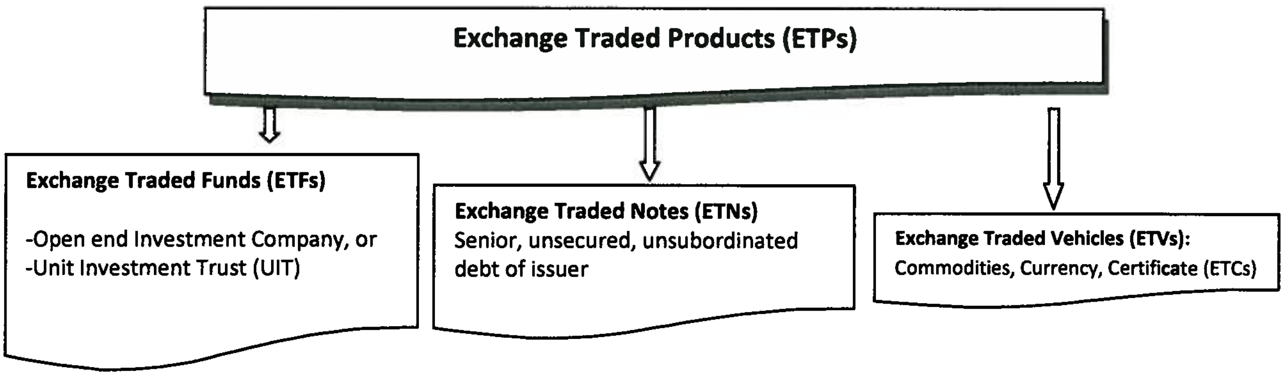
Summary
The three main uses for ETFs by institutional investors outlined by Greenwich Associates are the following:

- Transitions – investors use ETFs during transitions while they search for an appropriate long-term replacement;
- Rebalancing – can quickly and inexpensively provide exposure to any segment of the market, both domestic and internationally;
- Tactical Portfolio Solution – short term exposure to specific sectors, industries or commodities.

The SBI's domestic equity allocation has full replication to the asset class target, Russell 3000, with active, semi-passive, and passive management. Creating a liquidity pool through ETFs for rebalancing is not cost effective, and the SBI does not make tactical management decisions within the portfolio. The SBI's allocation to the Russell 3000, long-term investment horizon, and long-only investment process minimizes the benefits of ETFs. The SBI currently has no exposure to ETFs but would consider them as an investment tool when prudent and cost effective to do so.

Glossary

Exchange Traded Products
Exchange traded products, or ETPs, are investment products that trade on a stock exchange and are known for their ability to provide cost efficient and liquid access to a diverse set of asset classes and investment strategies. ETPs include exchange traded funds (ETFs), exchange traded notes (ETNs), and exchange traded vehicles (ETVs).[1]



Exchange Traded Notes
ETN's are a variation of ETFs and are traded on the exchange. When an investor purchases an ETN, he or she is purchasing a debt product similar to a bond. The terms of the debt contract are determined by the structure of the ETN. Because ETNs are backed by a bank with a high credit rating, they are considered pretty secure products. However the notes are not without credit risk, just a lower level. There are four major types of ETNs: commodity, currency, emerging market and strategy ETNs.[1] ETN volume was only 1.1% of total ETP volume in 2012.[2]

Exchange Traded Commodities/Currencies
ETCs are similar to ETFs; however they track the performance of commodities markets, either using a physical/spot approach or futures contracts in order to achieve their objectives. ETCs are fully collateralized, meaning that counterparty risk is hedged out. The main difference between ETFs and ETCs is that the latter are debt securities instead of funds. Like exchange traded commodities, exchange traded currencies are secured debt securities.[3]

While ETNs and ETCs may trade and settle like an ETF, they are effectively unregulated vehicles and none of the protections inherent and implicit in a fund structure such as independent custody of assets, segregation of liability, and some independent oversight may be assumed.[4]

Active ETFs
In 2008 the SEC authorized the creation of actively managed ETFs. Active ETFs typically combine the security selection of a fund manager with the intra-day trading and cost-saving characteristics of ETFs. SEC requires daily disclosure of ETF holdings which have discouraged providers from opening products, especially those focused on equities. Active ETFs in the U.S. hold $12.3 billion, less than 1 percent of the $1.4 trillion in assets.[5]

Regulation of ETFs
The vast majority of assets in ETFs are in funds registered with and regulated by the SEC under the Investment Company Act of 1940. Non–1940 Act ETFs that invest in commodity or currency futures are regulated by the Commodity Futures Trading Commission (CFTC) under the Commodity Exchange Act and the SEC under the Securities Act of 1933.[6]

[1] Investopedia, http://www.investopedia.com/terms/e/exchange-traded-products-etp.asp
[2] Exchange Traded Funds, ETF Basics, by Mark Kennedy, etf.about.com
[3] BlackRock correspondence, March 2013
[4] BlackRock Investment Institute—ETF Research, *ETP Due Diligence*
[5] Bloomberg Business, *Eaton Vance Files to Start Active ETFs Using New Model,* March 28, 2013
[6] Investment Company Institute (ICI) 2012 Investment Company Factbook, http://www.icifactbook.org/fb_ch3.html

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FIXED INCOME ASSET CLASS
AND
ASSET CLASS TARGET

Staff Paper

February 2011

Objectives of the Fixed Income Asset Class

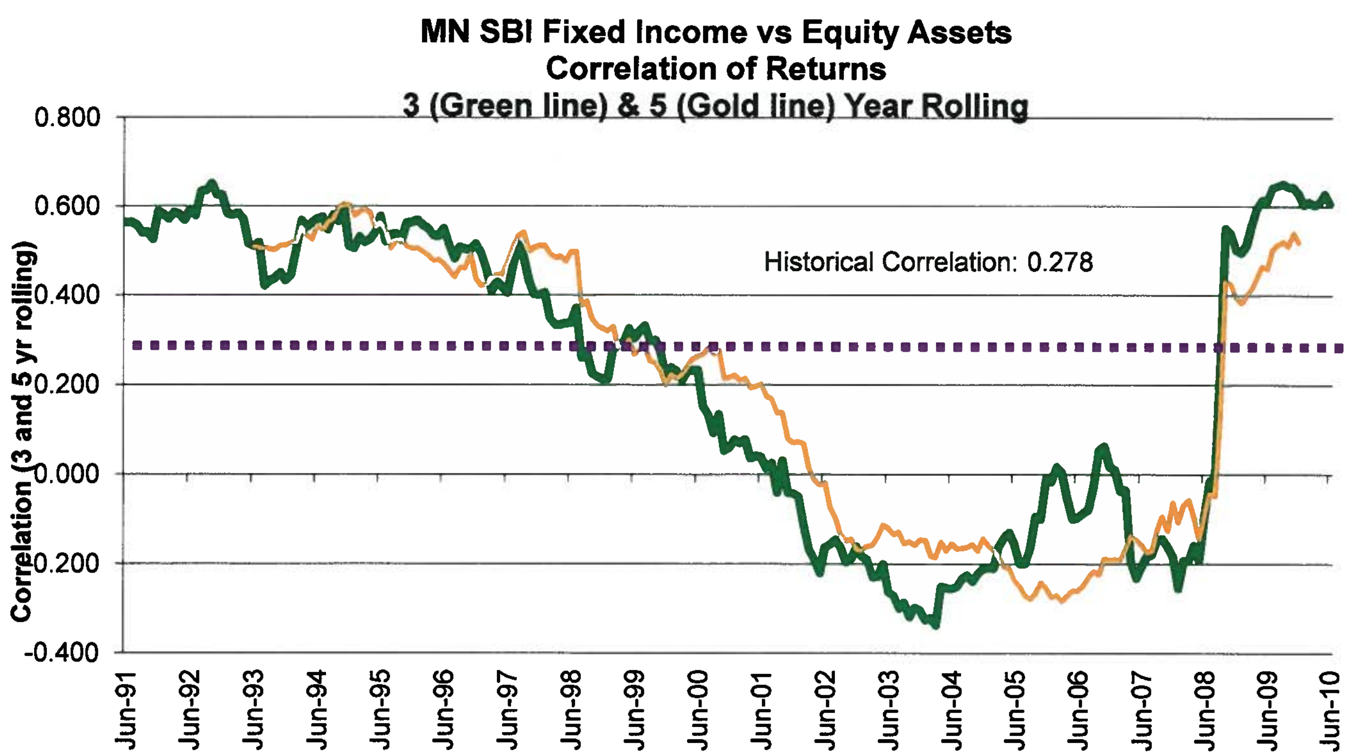
The SBI utilizes a bond component in the Combined Funds asset mix for several reasons:

- Diversification
- Deflation Hedge
- Risk-adjusted Return

Diversification

Because bonds tend to perform differently than stocks, the addition of bonds to an all-equity portfolio should, in theory, reduce the year-to-year variability of the total portfolio's returns. A rolling correlation chart is used to quantify the effectiveness of the Fixed Income Program's diversification. Chart 1 shows the 3 and 5-year rolling correlation of returns of the Fixed Income Program compared to the non-fixed income assets (domestic and international equities and alternatives).

Chart 1.



As Chart 1 shows, the correlation between fixed income and equity assets can vary over time. However, the long-term average correlation (coefficient of 0.278) between the SBI's fixed income and equity assets is low.

Deflation Hedge

Within the SBI's policy asset mix, bonds are also expected to serve as a deflation hedge in the event of a severe economic recession or depression. In a downturn, interest rates are likely to decline as the Federal Reserve seeks to stimulate economic growth. In the event of a decline in interest rates, long-term, high-quality bonds can be expected to appreciate in value due to bonds' inverse relationship between interest rates and price. When interest rates fall, bond prices appreciate which is the primary principle behind using fixed income as a deflation hedge. This price appreciation in times of falling interest rates can be expected to cushion the impact of falling equity and real estate prices during economic contractions.

When evaluating asset class targets as a deflation hedge, the duration of the benchmark becomes an important consideration. Duration is a measure of a bond's interest rate sensitivity. For each year of duration, one can expect approximately 1% price appreciation (depreciation) in the event of a 100 basis point drop (rise) in interest rates. For example, a 10-year, low coupon bond may have a duration of 8 years. If prevailing market interest rates fall from 5% to 4%, this bond will experience an 8% price increase. While the BC Aggregate's duration of slightly more than four years is shorter than that of some of the other indexes, it still provides a more than adequate deflation hedge for the total portfolio.

Risk-adjusted Return

The third objective of the asset class is to attain an appropriate risk-adjusted return over the long-term. The asset class target serves as the benchmark by which to measure each investment manager in the asset class. Since total returns in excess of the benchmark are to be expected, it is appropriate to measure excess returns against how much risk is generated to attain them. The SBI uses information ratios to determine the risk-appropriateness of excess returns generated by the bond managers. The information ratio is defined as the ratio of excess returns (total return – benchmark return) to the standard deviation of those excess returns (also called tracking error).

$$IR = \frac{\text{Excess Returns}}{\text{Tracking Error}}$$

The SBI Fixed Income Program seeks an information ratio o 0.2 or greater and limits the amount of tracking error based on investment style—active or semi-passive.

Chart 2 shows the performance of the Fixed Income Program since its current form was established in July 1988. Chart 3 shows the Program's performance just prior to the onset of the financial crisis in July 2007. Clearly, the financial crisis had a meaningful effect on long-term results and Staff fully expects that the program will meet or exceed its 0.20 information ratio target going forward.

Chart 2. Fixed Income Program Performance from 7/1/1988 to 9/30/2010.

	Actual Excess Return	**Actual Tracking Error**	**Information Ratio**
Total Program*	23 bps	124 bps	0.185

Includes the performance of terminated managers

Chart 3. Fixed Income Program Performance from 7/1/1988 to 6/30/2007.

	Actual Excess Return	Actual Tracking Error	Information Ratio
Total Program*	34 bps	58 bps	0.586

****Includes the performance of terminated managers***

Fixed Income Asset Class Target

An appropriate asset class target should fulfill the following objectives:

- It should represent a broad range of investment opportunities available to institutional investors
- It should reflect the constraints an institutional investor experiences in the market place.
- It should provide a measurable performance standard by which to evaluate the results of that asset class
- It should embody the plan's return objectives and risk tolerance for a particular asset class.

The asset class target for the Fixed Income Program is the Barclays Capital Aggregate Bond Index ("BC Aggregate"). The BC Aggregate is a broad market index comprised of bonds representing all major sectors of the public domestic investment grade fixed income market weighted by market capitalization of total eligible issuance. The BC Aggregate includes U.S. Treasury, agency, corporate, mortgage, asset-backed, commercial mortgage-backed and taxable municipal securities, as well as a limited amount of dollar-denominated debt of foreign entities. For a full history of the Fixed Income Program's asset class targets, see Appendix A.

The BC Aggregate is part of the Barclays Capital family of fixed income indices that was purchased by Barclay's from Lehman Brothers in 2008. It is widely used by market participants as a benchmark for domestic core fixed income management. Other index families available include Citigroup (formerly Salomon), Merrill Lynch/Bank of America and J.P. Morgan. While these index families have similar construction rules and sector compositions, they are less widely used by market participants. Staff reviewed a range of possible alternative benchmarks within the BC index family for use as the Program's asset class target:

- Government Index
- Government/Credit Index
- U.S. Universal Index
- Global Aggregate

The following is a sampling of information about the general characteristics of each BC benchmark that was considered. Key statistics of the benchmarks are contained in Chart 4.

General Benchmark Characteristics

BC Aggregate – a broad market index comprised of all major sectors of the domestic investment grade fixed income market weighted by market capitalization of total eligible issuance. Includes U.S. Treasuries and agencies, corporates, mortgages, asset-backed and commercial mortgage-backed and a limited amount of dollar-denominated debt of foreign entities.

BC Government/Credit Index – a subset of the BC Aggregate index that includes only U.S. Treasuries and Agencies, investment grade corporates and some dollar-denominated debt of foreign entities.

BC Government Index – a further subset of the BC Aggregate index that contains only U.S. Treasuries and agencies.

BC U.S. Universal Index – a broad market index that includes all the sectors of the BC Aggregate plus a market-capitalization weighted representation of domestic high yield and dollar-denominated emerging market debt (EMD).

BC Global Index – a broad worldwide index comprised of investment grade sovereign and corporate securities from primarily developed market countries (though there is a relatively small allocation to emerging market economies).

Chart 4. Key Index Statistics

Selected Data as Of 8/31/10	BC Aggregate	BC Gov/Credit	BC Government	BC US Universal	BC Global Aggregate
Sector Weights (% $MV):					
Treasury	33.0	51.9	81.4	28.9	48.1
Agency	8.7	13.7	18.6	7.6	10.2
Mortgage	33.1			27.1	
IG Credit	20.7	29.0		22.4	41.7
ABS/CMBS	3.3			3.3	
HY Credit				4.9	
EMD	1.2			1.5	
144A				4.3	
Duration	4.12	5.60	5.06	4.19	5.42
Convexity	-.30	.64	.52	-.23	0.35
OAS	56 bps	64 bps	4 bps	100 bps	59 bps
10YR Return	6.47	8.34	6.21	6.60	7.06
10YR Std Deviation	3.79	9.53	4.61	3.81	6.18
10YR Sharpe Ratio	1.04	.60	.80	1.06	.73
10YR Correlation w/Russell 3000 (thru June 2010)	-.06	.04	-.30	.10	.11
10 YR Correlation w/SBI Non-Fixed Assets (thru June 2010)	-.07	.02	-.32	.08	.12

One of the reasons the Fixed Income Program has been able to produce appropriate risk-adjusted returns is the opportunity set the asset class target presents. The BC Aggregate consists of corporate, mortgage-backed, asset-backed, and emerging market bonds in addition to U.S. Treasury and Agency debt (see Chart 1). This "spread sector" concentration provides opportunities to earn higher total returns using the BC Aggregate as compared to the U.S.

Government Index. As shown in Chart 1, the BC Aggregate has produced a higher total return and lower volatility than the Government Index due mostly to the higher degree of diversification in the BC Aggregate produced by the concentration of higher-yielding securities contained in the index. However, while the Government/Credit and Global indexes produced higher total returns, these returns were more volatile, and were slightly more correlated with equities when compared to the BC Aggregate. The Universal Index exhibits almost identical risk-return characteristics to the BC Aggregate. However, the existence of high yield credit in the Universal Index makes it less desirable for the SBI. Additionally, the Universal Index is more highly correlated with equities than the BC Aggregate, Therefore, while the BC Aggregate does not produce the highest total return of the indexes under consideration, it is the most appropriate target for the SBI fixed income allocation based on risk-adjusted return and diversification expectations for the program.

Since bonds are included in the Combined Funds asset mix primarily for diversification and deflation purposes rather than total return maximization, the asset class target selected should display these same characteristics. Therefore, Staff believes that the ideal asset class target should provide diversification (exhibit low correlation with equity returns), provide some level of deflation protection, and also provide less volatile returns. Based on these criteria, Staff concluded that the BC Aggregate compares favorably to the alternatives for the following reasons:

- Its sector diversification and spread sector exposure provide an opportunity to add alpha as indicated by the indexes history of favorable risk-adjusted returns;
- It provides satisfactory total return with the least amount of volatility, making it the most appropriate of the targets considered for the SBI fixed income program;

- Its overall high credit quality provides good equity diversification characteristics. As shown in Chart 4, the BC Aggregate exhibited virtually no correlation (-.06) to the Russell 3000 index or to the SBI's non-fixed income assets (-.07) over the last 10 years.
- It provides a more than adequate deflationary hedge, and should provide returns that are less volatile than the longer-duration indexes. The BC Aggregate has the lowest standard deviation of the asset class targets under consideration

APPENDIX A

External Fixed Income Program Asset Class Target History

Dates	Index
7/1/1984 – 6/30/1994	Salomon Brothers Broad Investment Grade Index
7/1/1994 – Present	Barclays Capital Aggregate Bond Index*

* From 7/1/1994 – 9/18/2008 this index was called the Lehman Brothers Aggregate Bond Index. Barclays Capital purchased the Lehman Brothers family of indexes after Lehman filed for bankruptcy in September 2008.

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FIXED INCOME

ASSET CLASS STRUCTURE

Staff Paper

February 2011

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I. Introduction

The SBI instituted the Fixed Income Program in July 1984. At the time, the entire allocation went to Active managers. In July 1988, the SBI approved the use of semi-passive bond management. The current policy is to maintain a balanced allocation between active and semi-passive management. *At least* half of the assets in the Fixed Income Program must be managed semi-passively at all times. Based on the analysis that follows, Staff has concluded that this 50/50 active/semi-passive split is optimal.

II. Description of the Fixed Income Program

Background

The risk level of the Fixed Income Program is managed by setting an allocation among the active and semi-passive management styles, and by controlling the degree of active risk in the managers' portfolios through the use of investment guidelines. Passive management is not currently employed in the program because it is reasonable to expect that the bond market's structural inefficiencies will persist and provide opportunity for the continued relative outperformance due to active and semi-passive management. Staff continues to favor these strategies over passive management given the long-term success of the non-passive styles in adding value to the asset class target.

The asset class target is the Barclays Capital Aggregate Bond Index (BC Agg). This index is a broad representation of the U.S. investment grade, dollar-denominated fixed income market and is widely accepted by market participants and Plan Sponsors. For further discussion on the asset class target, see paper titled Fixed Income Benchmark Review.

Active Management

The SBI's group of ***active*** bond managers is retained for its blend of investment styles. There are structural inefficiencies within the bond market that can be exploited by active managers. These inefficiencies include the lack of transparency, a diversity of investment objectives among market participants, and the vast number of unique investable securities available. Each active manager has the goal of adding value relative to the Program's benchmark, the Barclays Capital Aggregate Bond Index (BC Agg), by focusing on high quality fixed income securities across all sectors of the market. The managers vary, however, on the emphasis they place on interest rate anticipation and in the manner in which they make security selection and sector weighting decisions. The active bond managers focus on high quality (rated BBB or better) U.S. Dollar denominated bonds.

Semi-Passive Management

Semi-passive management, or Enhanced Indexing, has many of the same aspects as a passive management (or indexing) strategy. In a passive strategy, the portfolio manager tries to match the return of the index by either fully replicating it or by using a stratified sampling process. A semi-passive strategy adds an incremental amount of risk by allowing the portfolio manager to overweight or underweight securities and sectors in the portfolio in order to add value relative to the index.

Like the Active managers, the SBI's ***semi-passive*** managers attempt add incremental value to the BC Agg through superior bond selection and sector allocation. Relative to the Active managers, they are tightly constrained in their ability to add value with interest rate forecasts and the semi-passive managers' are more constrained in their sector bets relative to the benchmark. The following are the constraints for the Semi-Passive managers:

- Maintain portfolio duration within +/- 0.20 years of the benchmark's total duration

- Remain within +/- 50% of the benchmark's contribution to duration in the Treasury/Agency, Mortgage, and Corporate bond sectors
- Remain within +/- 75% of the benchmark's AAA/AA credit quality spread (on a contribution to duration basis)
- Remain within +/- 50% of the benchmark's A/BBB credit quality spread (on a contribution to duration basis).

These restrictions are to ensure that the semi-passive managers do not deviate excessively from the benchmark's sector and credit quality weightings.

Manager Benchmarks and Specialty Assignments

Currently, all managers in the Fixed Income Program have the same benchmark, the Barclays Capital Aggregate Bond Index. The Program has no "specialty" mandates, such as mortgage-only, or government/credit only. Investment managers in the Program have been selected for their capabilities as domestic core bond managers.

An alternative approach would be to incorporate a range of specialty assignments within the Fixed Income Program. Collectively, the individual specialty mandates would approximate the program's asset class target. The main argument in favor of this approach is the idea that hiring the best managers in each sector could improve overall returns. Staff would not recommend the specialist approach in favor of the current core approach for three key reasons:

- The Sector Decision
- Industry Standard
- Risk Control

The Sector Decision

Investment grade fixed income assets across sectors have fundamentally similar investment characteristics. Sector rotation, a strategy whereby investment decisions are based purely on the appraisal of sectors relative to one another, is a major source of excess returns for active bond managers. If specialty mandates were used, the SBI would, through the course of allocating assets among specialty managers, effectively assume responsibility for the sector decision. This would reduce or eliminate the managers' ability to use sector rotation as a tool to generate excess returns. In contrast, the current approach insures that managers have the full ability to use sector rotation against a broad, multi-sector benchmark.

Industry Standard

A Core bond strategy is typically considered to be a strategy that invests primarily in the "core" domestic bond market. This consists of investment grade corporate bonds as well as U.S. Treasury, Agency, and Agency-backed mortgage-backed securities (as well as commercial mortgage-backed securities). It also allows manager discretion regarding security selection. Core-plus strategies build upon the "core" bond market by adding the "plus sectors"—high yield, non-dollar denominated debt, and emerging market debt. Core and core-plus styles of active management are the most common investment approaches amongst plan sponsors, and the most prevalent style of management offered by the investment management community. While there are managers who offer specialty products, the majority of fixed income investment managers offer competitive products in the core and core-plus categories that essentially bring together a team of specialist sector teams under one strategy.

Risk Control

Under the current structure, each manager's benchmark is, by definition, the same as the Asset Class Target. Therefore, there is no misfit risk from the combined manager benchmarks relative to the asset class target. Any risk is a function purely of each manager's active bets, i.e. active risk. In contrast, under a system of specialty mandates, misfit risk would need to be explicitly controlled though active monitoring and periodic rebalancing. The time and expense of such a system would be a material drawback to the specialty approach.

Use of the Plus Sectors of the Market

As previously mentioned, the "Plus Sectors" of the market mainly consist of high yield (or non-investment grade) bonds, non-dollar denominated bonds, and emerging market debt. The SBI Fixed Income Program utilizes the Plus sectors for the following reasons:

- U.S. High Yield, Non-dollar investment grade and Emerging Markets Debt (EMD) have sufficient size, liquidity and differentiation;
- The Asset Class Target includes an allocation to certain EMD securities;
- Non-dollar investment grade bonds offer some degree of diversification and uncorrelated return opportunities relative to the U.S. market, but no sustained return advantage is seen;
- Although volatile, the U.S. high yield market is increasingly differentiated in terms of credit and market risk;
- Attractive high yield investment opportunities do exist on an issue-by-issue basis and can represent an attractive opportunity for core managers with strong credit capabilities.

The Fixed Income Program uses an opportunistic approach to the Plus sectors of the fixed income market. Some active managers have been granted authority to invest up to 15% of their portfolios in BB and B rated dollar denominated corporate bond issues, as well as up to 15% in non-dollar denominated, investment-grade issues. The total exposure to these sectors is limited to 20% of the portfolio. Additionally, one semi-passive manager has been granted authority to invest up to 5% of their portfolio in BB and B rated dollar denominated debt and up to 5% of the portfolio in non-dollar denominated, investment grade issues. The total exposure to these sectors for this manager is limited to 10% of the portfolio. The managers use this additional authority opportunistically.

The Fixed Income Program has granted its managers authority to invest up to 5% of the portfolio in dollar-denominated, investment grade, index-eligible emerging markets debt. Staff granted this authority after a review of the EMD market and determined that certain EMD bonds should be eligible for inclusion into SBI portfolios since the asset class target includes an allocation to some EMD bonds. Along with the 5% of the portfolio limitation, no single EMD bond may exceed 2% of the market value of the portfolio.

III. Analysis of Fixed Income Program Results

The SBI Fixed Income Program has employed active and semi-passive management strategies in order to diversify the management style and risk generated in a fixed income portfolio. Over time, this mix of styles has produced excess returns over the Program's benchmark. The results are shown below in Figure 1.

Figure 1. SBI Fixed Income Program results 7/1/88 – 9/30/10

Style	Excess Return Objective	Maximum Tracking Error	Actual Excess Return	Actual Tracking Error
Active	25 bps	250 bps	33 bps	171 bps
Semi-Passive	10 bps	50 bps	17 bps	92 bps
Total Program*			23 bps	124 bps

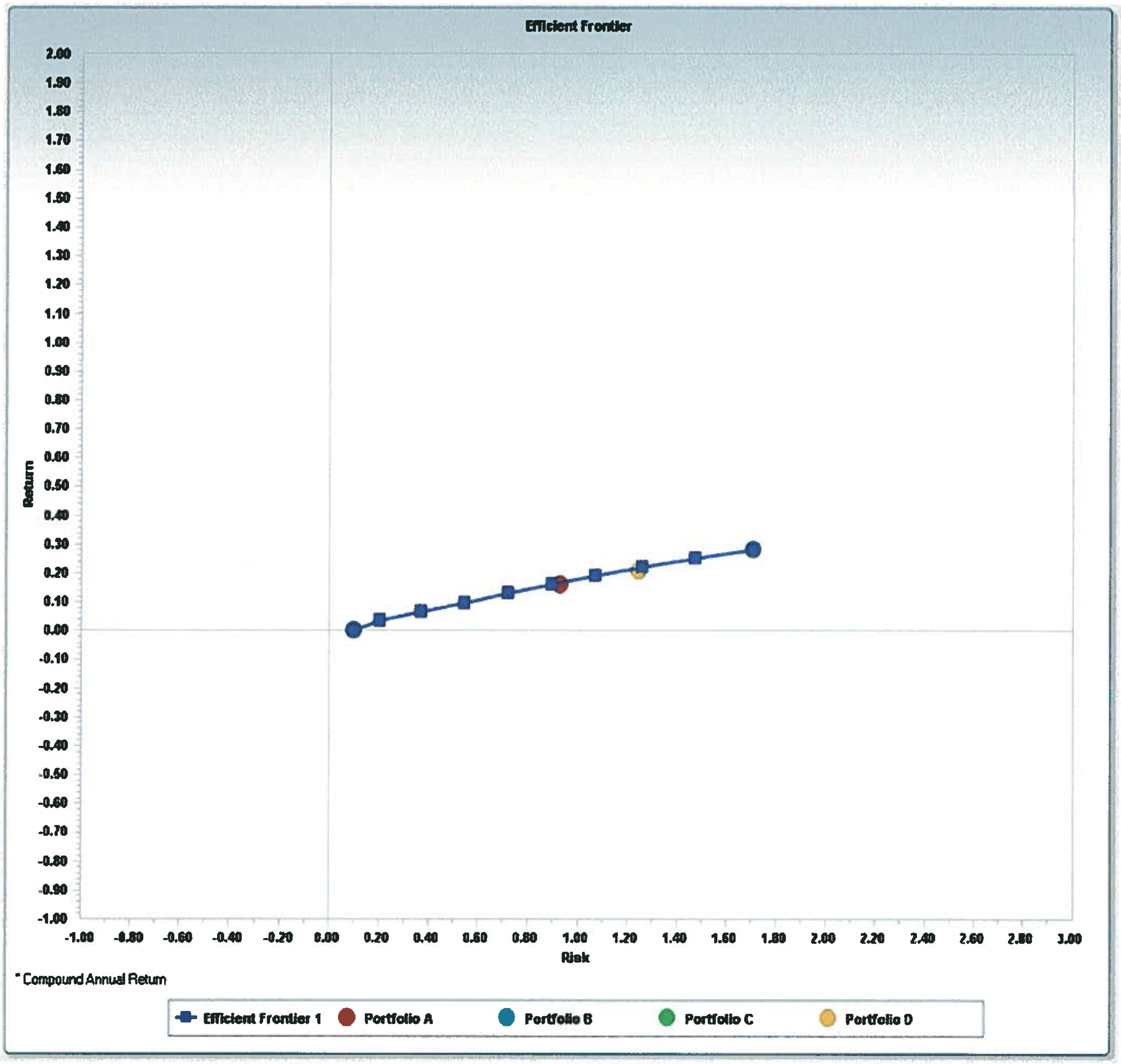
Includes the performance of terminated managers

Excess Returns and Tracking Error

For the purposes of our analysis, we used July 1988 as the inception of the Current Fixed Income Program. The Program's aggregate return series, which includes current and terminated bond managers, has outperformed the benchmark by 23 basis points per year with 124 basis points of tracking error. The actively managed portion added 33 bps of alpha while generating 171 bps of tracking error. The semi-passive portion added 17 bps of alpha since inception while generating 92 bps of tracking error.

To formally evaluate the current allocation against a range of alternatives, an efficient frontier of possible allocations among active, semi-passive and passive investment styles was developed based on actual program return data and staff's model of the risk-reward profile of passive management (Blackrock's Passive Index Fund A used in this simulation). The range of possible allocations is represented graphically in Figure 2a. Figure 2b displays the historical risk, return, and correlation figures that were used to generate the efficient frontier in Figure 2a.

Figure 2a. Analysis of possible allocations among investment styles: Efficient Frontier



Portfolio A = 100% Semi-Passive
Portfolio B = 100% Passive
Portfolio C = 100% Active
Portfolio D = 50% Active, 50% Semi-Passive (Current Program)

2b: Return, Risk and Correlation Inputs

Style	Expected Excess Return	Expected Tracking Error	Correlation w/ Active	Correlation w/ Semi-Passive	Correlation w/ Passive	Correlation w/Current Program
Active	28 bps	171 bps	1.00	N/A	N/A	N/A
Semi-Passive	16 bps	93 bps	.81	1.00	N/A	N/A
Passive	0 bps	10 bps	-.10	.00	1.00	N/A
Current Program	21 bps	125 bps	.97	.90	-.07	1.00

The Program's current allocation lies along the efficient frontier of available allocation options, meaning the 50%-50% allocation is risk efficient. Program risk can be increased (decreased) by allocating more (less) to active management; however, any changes will come with an offsetting change in return. Staff believes the current allocation provides an efficient return profile with an appropriate risk level.

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FIXED INCOME

BENCHMARK REVIEW

Staff Paper

May 2012

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Table of Contents

Executive Summary

The asset class target for the MSBI Fixed Income Program is the Barclays Capital U.S. Aggregate Bond Index ("Barclays Agg"). The asset class target history of the Fixed Income Program is provided in Appendix A. Given the increase in market volatility in recent years; the relatively large exposure to equity asset classes in the total MSBI portfolio; and the changing composition of the Barclays Agg, staff conducted an analysis to determine whether the Barclays Agg or an alternative fixed income index is best suited to reflect the Fixed Income Program's objectives going forward. As part of the analysis, staff reviewed various fixed income asset class targets (i.e. "indices" or "benchmarks") relative to the Fixed Income Program's stated objectives. To determine whether the current fixed income benchmark is best positioned to meet the Program objectives relative to alternative fixed income indices; staff analyzed the following data during periods of varying equity market returns:

(1) historical portfolio return and risk, including the current fixed income portfolio and prospective portfolios using substitute benchmarks (diversification);

(2) historical return correlations between the fixed income indices reviewed and the total MSBI portfolio and each individual asset class within the MSBI portfolio (diversification);

(3) probability of a 5% loss in the current total MSBI portfolio and in the MSBI portfolio with an alternative fixed income benchmark (diversification); and

(4) excess returns generated by the current Fixed Income Program (returns).

Staff concludes the current benchmark, the Barclays Capital U.S. Aggregate Bond Index, most accurately reflects the MSBI's objectives for the Fixed Income Program. Consequently, staff believes that no modifications to the Fixed Income Program are necessary at this time. The basis for staff's recommendation is discussed in subsequent sections.

Staff utilized historical return and standard deviation information for the actual MSBI portfolio and fixed income benchmarks under review. Results were based on returns during the time period covering July 1988 to March 2012 to determine model portfolio returns, risk, loss probabilities, and correlations with the individual domestic equity, international equity, and alternatives asset classes. (The SBI introduced the semi-passive strategy into the fixed income portfolio in July 1988.) Model portfolios utilized in this analysis are further described below. Staff used the policy weights assigned to each asset class over the July 1988 through March 2012 time period. The policy weights and timeframes are shown in Tables 1 through 4 below.

Table 1 – MSBI Portfolio, July 1988 – September 1992

Asset Class			Weight
MSBI Equity			**75%**
	Domestic Equity	*60%*	
	International Equity	*0%*	
	Alternatives	*15%*	
Active Fixed Income			**12.5%**
Semi-Passive Fixed Income			**12.5%**
			100%

Table 2 – MSBI Portfolio, October 1992 – March 1996

Asset Class			Weight
MSBI Equity			**75%**
	Domestic Equity	*50%*	
	International Equity	*10%*	
	Alternatives	*15%*	
Active Fixed Income			**12.5%**
Semi-Passive Fixed Income			**12.5%**
			100%

Table 3 – MSBI Portfolio, April 1996 – June 2008

Asset Class			Weight
MSBI Equity			**75%**
	Domestic Equity	*45%*	
	International Equity	*15%*	
	Alternatives	*15%*	
Active Fixed Income			**12.5%**
Semi-Passive Fixed Income			**12.5%**
			100%

Table 4 – MSBI Portfolio, July 2008 – Present

Asset Class			Weight
MSBI Equity			**80%**
	Domestic Equity	*45%*	
	International Equity	*15%*	
	Alternatives	*20%*	
Active Fixed Income			**10%**
Semi-Passive Fixed Income			**10%**
			100%

Fixed Income Program Objectives

The Fixed Income Program's primary objectives are to provide diversification to MSBI's equity (i.e. domestic, international, and alternative investments) exposure; realize appropriate risk-adjusted returns over the long-term; and serve as a deflation hedge.

Fixed Income Asset Class Target

The asset class target for the MSBI Fixed Income Program should meet the following criteria:

- Represent a broad range of investment opportunities available to institutional investors in the fixed income marketplace.
- Reflect the constraints an institutional investor experiences in the marketplace.
- Embody the fixed income program's return objectives and risk tolerance.
- Provide a passive representation of the investment process or style of the fixed income manager(s).
- Be unambiguous and transparent regarding inclusion criteria and methodology for security-weighting.
- Provide a measurable performance standard which can be used to evaluate both the investment results and risk characteristics of the program.
- Be investable by allowing investors to replicate the benchmark using constituent securities that are liquid, suffer a low level of turnover, and benefit from low transaction costs.

Fixed Income Asset Class Targets and Characteristics

As part of the analysis, staff reviewed several fixed income asset class targets. Each of the benchmarks has varying attributes, such as sector weightings, average maturity, and interest rate and spread risks. A list of those indices, including the general characteristics of each, is as follows:

- **Barclays Capital U.S. Aggregate:** A benchmark that measures the investment grade, USD-denominated, fixed-rate taxable bond market, including Treasuries, government-related, and corporate securities, mortgage-backed securities ("MBS"), asset-backed securities ("ABS"), and commercial mortgage-backed securities ("CMBS").
- **Barclays Capital U.S. Long Credit:** A benchmark that measures the investment grade, USD-denominated corporate bond market and a non-corporate component that includes foreign agencies, sovereigns, supranationals, and local authorities. The benchmark is limited to securities with maturities of ten years or greater.
- **Barclays Capital U.S. Corporate Investment Grade:** A benchmark that measures the investment grade, fixed-rate, taxable corporate bond market, including USD-denominated securities publicly issued by U.S. industrial, utility, and financial issuers that meet specified maturity, liquidity, and quality requirements.
- **Bank of America Merrill Lynch 3-Month T-Bill:** A benchmark that measures the Treasury bond market, limited to maturities of 90 days or less.
- **Barclays Capital U.S. Long Government:** A benchmark that measures the Treasury, agency , and quasi-federal corporate bond market, limited to maturities of ten years or greater.
- **Barclays Capital U.S. Intermediate Government:** A benchmark that measures the Treasury, agency, and quasi-federal corporate bond market, limited to maturities of 1-10 years.

- **Barclays Capital Global Aggregate:** A benchmark that measures the global investment grade fixed-rate debt market, including Treasuries, government-related, corporate securities, MBS, ABS, and CMBS.
- **Barclays Capital U.S. Long Government / Credit:** A benchmark that measures the investment grade, USD-denominated Treasury, government-related and corporate bond market, limited to maturities of ten years or greater.

The above indices meet each of the criteria for an acceptable fixed income asset class target. The next step in the analysis was to determine whether and to what extent these indices could meet the objectives of the MSBI Fixed Income Program.

Model Portfolio Return and Risk

The model portfolios used in the analysis are comprised of the policy weights assigned to each asset class in the MSBI portfolio during the time period of July 1988 through March 2012, using a fixed income index as a proxy for the fixed income allocation. Staff divided the historical sample period into three periods: low equity markets, mid equity markets, and high equity markets. Periods of low equity markets are defined as the months during which the investment return of MSBI's domestic equity program benchmark was negative. Periods of mid equity markets are defined as the months during which the investment return of MSBI's domestic equity program benchmark was equal to zero or greater, but less than three percent. Periods of high equity markets are defined as the months during which the investment return of MSBI's domestic equity program benchmark was greater than or equal to three percent. Table 5 provides the average annualized return and standard deviations of each model portfolio during the review period.

Table 5 – Total Portfolio Return and Risk During Periods of Low, Mid, and High Equity Markets

	Low Equity (n = 104)		Mid Equity (n = 95)		High Equity (n = 86)		Full Sample (n = 285)	
	Avg. Ann. Returns	Std. Dev.	Avg. Ann. Returns	Std. Dev.	Avg. Ann. Returns	Std. Dev.	Avg. Ann. Returns	Std. Dev.
U.S. Aggregate	-20.49%	5.94%	16.84%	3.20%	49.84%	5.65%	9.75%	10.03%
U.S. Long Gov't	-19.55%	6.11%	17.16%	3.58%	49.74%	5.82%	10.29%	10.04%
U.S. Interm. Gov't	-20.17%	5.81%	16.46%	3.17%	48.80%	5.53%	9.55%	9.82%
U.S. Long Gov/Credit	-20.44%	6.25%	17.46%	3.55%	51.00%	5.98%	10.24%	10.33%
U.S. Long Credit	-21.37%	6.45%	17.81%	3.55%	52.31%	6.26%	10.18%	10.68%
U.S. Corp. Inv. Grade	-21.10%	6.19%	17.22%	3.25%	51.21%	5.99%	9.89%	10.37%
Global Agg.	-21.20%	6.26%	16.46%	3.65%	50.49%	6.33%	9.68%	10.40%
BofA 3Mo. T-Bill	-20.72%	5.85%	16.12%	3.17%	47.81%	5.54%	8.95%	9.82%

Staff observed that standard deviation is generally lower for all indices in which exposure to treasury and other government-related securities exists. Moreover, average annual returns for indices carrying exposure to treasury and government-related securities outperform indices with spread exposure during low equity periods and underperform during mid and high equity periods. Over the full sample period, long duration indices outperformed shorter duration indices to some degree. However this took place during a time period that experienced an unprecedented secular decline in interest rates.

Return Correlations

To observe whether the fixed income portfolio provided diversification to the MSBI's equity portfolios, staff measured historical correlations of investment returns between each fixed income benchmark and the equity portfolios. Tables 6 through 9 illustrate the correlation of investment returns between each fixed income benchmark analyzed and the MSBI Domestic Equity, International Equity, Alternatives, and Total Equity Programs during each return period and during the full review period (July 1988 – March 2012).

Table 6 – Low Equity

	Domestic Equity	International Equity	Alternatives	MSBI Total Equity
U.S. Aggregate	0.03	0.14	0.05	0.07
U.S. Long Gov't	-0.09	-0.05	0.07	-0.06
U.S. Interm. Gov't	-0.18	-0.09	0.04	-0.14
U.S. Long Gov/Credit	0.07	0.17	0.06	0.11
U.S. Long Credit	0.28	0.41	0.02	0.32
U.S. Corp. Inv. Grade	0.25	0.41	-0.02	0.29
Global Agg.	0.13	0.35	0.12	0.21
BofA 3Mo. T-Bill	0.12	0.07	0.10	0.15

Table 7 – Mid Equity

	Domestic Equity	International Equity	Alternatives	MSBI Total Equity
U.S. Aggregate	-0.10	-0.02	-0.10	-0.14
U.S. Long Gov't	-0.14	-0.06	-0.11	-0.18
U.S. Interm. Gov't	-0.10	-0.02	-0.06	-0.12
U.S. Long Gov/Credit	-0.11	-0.04	-0.16	-0.19
U.S. Long Credit	-0.08	-0.02	-0.20	-0.18
U.S. Corp. Inv. Grade	-0.08	-0.01	-0.15	-0.16
Global Agg.	0.04	0.32	-0.07	0.09
BofA 3Mo. T-Bill	0.10	0.02	0.07	0.08

Table 8 – High Equity

	Domestic Equity	International Equity	Alternatives	MSBI Total Equity
U.S. Aggregate	0.02	-0.28	0.00	-0.10
U.S. Long Gov't	-0.11	-0.40	0.06	-0.22
U.S. Interm. Gov't	-0.02	-0.39	-0.01	-0.17
U.S. Long Gov/Credit	-0.03	-0.25	0.04	-0.11
U.S. Long Credit	0.07	-0.01	0.01	0.04
U.S. Corp. Inv. Grade	0.11	0.01	-0.02	0.06
Global Agg.	0.22	0.27	-0.19	0.20
BofA 3Mo. T-Bill	-0.06	-0.47	0.10	-0.15

Table 9 – Full Sample

	Domestic Equity	International Equity	Alternatives	MSBI Total Equity
U.S. Aggregate	0.12	0.03	-0.03	0.11
U.S. Long Gov't	-0.07	-0.18	0.00	-0.08
U.S. Interm. Gov't	-0.08	-0.18	-0.02	-0.09
U.S. Long Gov/Credit	0.10	0.04	-0.04	0.09
U.S. Long Credit	0.28	0.27	-0.08	0.28
U.S. Corp. Inv. Grade	0.31	0.30	-0.08	0.30
Global Agg.	0.17	0.31	-0.05	0.20
BofA 3-Mo. T-Bill	0.03	-0.06	0.09	0.03

Staff observed that negative correlation with equity asset classes generally exists only with the U.S. Long Government and U.S. Intermediate Government indices. Over the full sample period, the U.S. Aggregate, 3-Month T-Bill, and U.S. Long Government/Credit indices exhibit weak correlation with equity asset classes, whereas fixed income indices with high credit and international exposure showed somewhat stronger correlation. Overall, the correlation of the current asset class target is not materially different from the alternative fixed income benchmarks.

Loss Probabilities

To observe whether the fixed income portfolio realizes appropriate risk-adjusted returns over the long-term, staff examined the probability of loss in the actual MSBI total portfolio and each of the model portfolios during the full review period. The analysis included each one-year period of twelve continuous months. The probability of loss is calculated by dividing the number of one-year periods in which the portfolio fell below the 5% threshold level by the total number of periods reviewed. Probability of loss at the end of the time horizon measures only the likelihood that an investment will depreciate to a particular level from inception to the end of the horizon. Probability of loss within the time horizon measures the likelihood that an investment will depreciate to a particular level from inception to any point during the specified horizon. Table 10 provides the probability of a 5% loss for the MSBI portfolio and each model portfolio during a one-year time horizon. Table 11 provides the probability of a 5% loss for the MSBI portfolio and each model portfolio during a one-year time horizon during a turbulent period. For purposes of this analysis, turbulent periods comprise the 20% most volatile months based on the current MSBI total portfolio over the July 1988 to March 2012 time period.

Table 10 – Probability of a 5% Loss, 1-Year Time Horizon

	MSBI Actual Total Portfolio	U.S. Agg	U.S. Long Gov't	U.S. Interm. Gov't	U.S. Long Gov/Credit	U.S. Long Credit	U.S. Corp. Inv. Grade	Global Agg	BofA 3-Mo. T-Bill
End of Horizon	13.1%	12.8%	13.1%	12.8%	13.1%	12.8%	13.5%	13.1%	13.5%
Within Horizon	23.0%	22.6%	21.9%	22.6%	21.9%	23.0%	23.4%	21.5%	22.6%

Table 11 – Probability of a 5% Loss, 1-Year Time Horizon, Turbulent Period

	MSBI Actual Total Portfolio	U.S. Agg	U.S. Long Gov't	U.S. Interm. Gov't	U.S. Long Gov/Credit	U.S. Long Credit	U.S. Corp. Inv. Grade	Global Agg	BofA 3-Mo. T-Bill
End of Horizon	45.7%	45.7%	45.7%	43.5%	45.7%	45.7%	45.7%	41.3%	45.7%
Within Horizon	50.0%	50.0%	47.8%	50.0%	47.8%	50.0%	50.0%	50.0%	50.0%

Staff concludes that the current Fixed Income Program benchmark is generally equal or superior to other potential fixed income indices in both sample types.

Excess Returns of the MSBI Fixed Income Portfolio

To observe whether the fixed income portfolio realizes appropriate risk-adjusted returns over the long-term, staff examined the excess returns of the fixed income portfolio during the review period. Table 12 provides the annualized excess return, or alpha, standard deviation, batting average, and win/loss ratio during the review period for the MSBI fixed income portfolio. Batting average is calculated by dividing the number of months with positive excess return by the total number of months in the review period. The win/loss ratio is calculated by dividing the average amount of positive excess returns by the average amount of negative excess returns.

Table 12 – Excess Returns, Fixed Income Portfolio

	Low Equity	Mid Equity	High Equity	Full Sample
Annualized Excess Return	-1.60%	0.73%	1.99%	0.25%
Standard Deviation of Excess Return	1.59%	0.57%	1.06%	1.25%
Batting Average	39.42%	72.63%	73.26%	60.70%
Win/Loss Ratio	0.45	1.06	2.88	0.80
Avg. Annualized Return	3.80%	7.65%	12.32%	7.60%
Standard Deviation	4.28%	3.81%	4.13%	4.20%

The MSBI's Fixed Income Program generates excess returns over the long term. However, because the majority of the active bets are made in the credit portion of the portfolio, the correlation of the excess returns to the economic cycle is very high. Negative alpha was realized during the low equity period only, and both batting average and the win/loss ratio were quite low during this period. The fixed income portfolio experienced positive alpha and a high batting average during the mid and high equity periods. As evidenced by the win/loss ratio, positive excess returns were larger than negative excess returns during the high equity periods and about equal during the mid equity periods.

Summary and Recommendation

Staff concludes the current benchmark, the Barclays Capital U.S. Aggregate Bond Index, most accurately reflects the MSBI's objectives for the Fixed Income Program. Consequently, staff believes that no modifications to the Fixed Income Program asset class target are necessary at this time.

The Barclays Agg consists of approximately 7,800 constituent securities and represents a broad range of investment opportunities available to institutional investors in the fixed income marketplace. The index is measurable, has clear inclusion criteria and methodology for security-weighting, is investable, and is representative of the MSBI's asset allocation strategy and risk tolerance.

The Fixed Income Program acts primarily as diversification to the total MSBI equity exposure, which is 80% of the total portfolio on a target basis. Historical correlation of returns between the Barclays Agg and the MSBI equity portfolios over the full sample period is modestly positive, but is only slightly better or worse than various alternative fixed income benchmarks. With an historical correlation of 0.11, the Barclays Agg has exhibited weak correlation with MSBI's equity portfolio and therefore offers diversification to MSBI's total equity portfolio.

In addition to providing diversification, the Fixed Income Program attempts to realize an appropriate risk-adjusted rate of return over the long-term. Despite having significant exposure to spread sectors, the average annualized returns and standard deviation of the Barclays Agg compare favorably to other benchmarks.

Furthermore, staff believes the diversification of sectors[1] within the Barclays Agg provides opportunities to add alpha to the fixed income portfolio over time, and such opportunities may be limited in benchmarks and portfolios that are proxied to an index that is more concentrated in only certain parts of the fixed income market. Some long duration benchmarks provided somewhat better absolute returns (approximately 40-50 basis points); however these returns occurred during a time of prolonged secular declines in interest rates that benefited a long duration benchmark over a medium duration benchmark such as the Barclays Aggregate.

This paper is intended to analyze and review published fixed income benchmarks and their use within the SBI total portfolio. Analysis of the use of TIPS, gold, emerging market debt, high-yield debt, distressed debt, or other alternative fixed income assets could be issues that the IAC and SBI staff may review in the future.

[1] As of 12/31/2011, the sectors and float-adjusted weights of the Barclays Capital U.S. Aggregate Bond Index are U.S. Treasury (37.4%), Government-Related (11.0%), Investment Grade Corporates (21.2%), U.S. Mortgage-Backed Securities (27.9%), Asset-Backed Securities (0.2%), and Commercial Mortgage-Backed Securities (2.2%).

Appendix A

Fixed Income Program Asset Class Target History

7/1/1984 – 6/30/1994	Solomon Brothers Broad Investment Grade Index
7/1/1994 – Present	Barclays Capital U.S. Aggregate Bond Index[2]

[2] From 7/1/1994 – 9/18/2008, index was the Lehman Brothers Aggregate Bond Index. Barclays Capital purchased the Lehman Brothers family of indices after Lehman Brothers filed for bankruptcy protection in September 2008.

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FIXED INCOME

SEMI-PASSIVE MANAGEMENT REVIEW

Staff Paper

May 2010

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I. Introduction

Since July 1988, the SBI's Fixed Income Program has employed the use of semi-passive management to compliment the actively managed portion of the program. The current policy is to maintain a balanced allocation between active and semi-passive management. *At least* half of the assets in the Fixed Income Program must be managed semi-passively at all times. This paper includes a review of the features, benefits, and goals of semi-passive management, along with an analysis of the effectiveness of semi-passive management in the SBI's Fixed Income Program since its inception in July 1988, and recommended changes, if any, to the Fixed Income Program.

II. Description of the Current Program

Background

There are two primary goals of the SBI's Fixed Income Program:

1) Serve as a diversifier to offset the volatility generated by the equity programs

2) Serve as a deflation hedge in times of falling asset prices within the constraints of the asset class target

The risk level of the Fixed Income Program is managed by setting an allocation among the active and semi-passive management styles, and by controlling the degree of active risk in the managers' portfolios through the use of investment guidelines. Passive management is not currently employed in the program because it is reasonable to expect that the bond market's structural inefficiencies will persist and provide opportunity for the continued relative outperformance of the semi-passive management style compared to a passive approach. Staff continues to favor these strategies over passive management given the long-term success of more active, risk-controlled styles in adding value to the asset class target with low tracking error.

Active Management

The SBI's group of ***active*** bond managers is retained for its blend of investment styles. There are structural inefficiencies within the bond market that can be exploited by active managers. These inefficiencies include the lack of transparency, a diversity of investment objectives among market participants, and the vast number of unique investable securities available. Each active manager has the goal of adding value relative to the Program's benchmark, the Barclays Capital Aggregate Bond Index (BC Agg), by focusing on high quality fixed income securities across all sectors of the market. The managers vary, however, on the emphasis they place on interest rate anticipation and in the manner in which they make security selection and sector weighting decisions. The active bond managers focus on high quality (rated BBB or better) U.S. Dollar denominated bonds. Some managers have been granted authority to invest up to 15% of their portfolios in BB and B rated dollar denominated corporate bond issues, as well as up to 15% in non-dollar denominated, investment-grade issues. The total exposure to these sectors is limited to 20% of the portfolio. The managers use this authority on a tactical basis.

Semi-Passive Management

Semi-passive management, or Enhanced Indexing, has many of the same aspects as a passive management (or indexing) strategy. In a passive strategy, the portfolio manager tries to match the return of the index by either fully replicating it or by using a stratified sampling process. A semi-passive strategy adds an incremental amount of risk by allowing the portfolio manager to overweight or underweight securities and sectors in the portfolio in order to add value relative to the index.

Like the Active managers, the SBI's ***semi-passive*** managers attempt add incremental value to the BC Agg through superior bond selection and sector allocation. Unlike the Active managers, they do not seek to add value with interest rate forecasts and the semi-passive managers' are constrained to limit risk relative to the benchmark. The following are the constraints for the Semi-Passive managers:

- Maintain portfolio duration within +/- 0.20 years of the benchmark's total duration
- Remain within +/- 50% of the benchmark's contribution to duration in the Treasury/Agency, Mortgage, and Corporate bond sectors
- Remain within +/- 75% of the benchmark's AAA/AA credit quality spread (on a contribution to duration basis)
- Remain within +/- 50% of the benchmark's A/BBB credit quality spread (on a contribution to duration basis).

These restrictions are to ensure that the semi-passive managers do not deviate excessively from the benchmark's sector and credit quality weightings. One manager has been granted authority to invest up to 5% of their portfolio in BB and B rated dollar denominated debt and up to 5% of the portfolio in non-dollar denominated, investment grade issues. The total exposure to these sectors is limited to 10% of the portfolio. The manager uses this additional authority on a tactical basis.

Another aspect of semi-passive management is the fee structure. Semi-passive managers charge lower fees than active managers because the alpha targets are lower (corresponding with a lower risk budget). While this is a secondary feature of semi-passive management, it should be recognized when considering passive, semi-passive, and active management strategies.

III. Analysis of Fixed Income Program Results

The goals of semi-passive management are to diversify the management style and risk generated in a fixed income portfolio and to add value to an asset class target. The following is an evaluation the effectiveness of the SBI's Semi-Passive Fixed Income Program in achieving the strategy's stated objectives. This will be done by providing a statistical analysis of the Fixed Income Program's Active and Semi-Passive component's risk-adjusted returns and correlations in relation to the asset class target.

Excess Returns and Tracking Error

For the purposes of our analysis, we will use July 1988 as the inception of the Current Fixed Income Program. The Program's aggregate return series, which includes current and terminated bond managers, has outperformed the benchmark by 13 basis points per year with 125 basis points of tracking error. The actively managed portion added 20 bps of alpha while generating 173 bps of tracking error. The semi-passive portion added 11 bps of alpha since inception while generating 93 bps of tracking error. The results of each style are presented in Figure 1a.

Figure 1a. SBI bond program results 7/1/88 - 12/31/09.

Style	**Excess Return Objective**	**Maximum Tracking Error**	**Actual Excess Return**	**Actual Tracking Error**
Active	25 bps	250 bps	20 bps	173 bps
Semi-Passive	10 bps	50 bps	11 bps	93 bps
Total Program*			13 bps	125 bps

Includes the performance of terminated managers

Figure 1b. SBI bond program 19-year results 7/1/88 – 6/30/07.

Style	**Excess Return Objective**	**Maximum Tracking Error**	**Actual Excess Return**	**Actual Tracking Error**
Active	25 bps	250 bps	46 bps	106 bps
Semi-Passive	10 bps	50 bps	18 bps	36 bps
Total Program*			30 bps	60 bps

Includes the performance of terminated managers

Figure 1b shows the Fixed Income Program's 19-year performance through June 2007, which was just prior to the sub-prime crisis that began in July 2007. This data, when compared to Figure 1b, highlights the material impact of the sub-prime crisis of 2007 (and impending financial crisis of 2008) on the Fixed Income Program's long-term results, particularly in terms of tracking error. From 1988 to 2007, the Total Program generated 30 bps of excess return and 60 bps of tracking error. The Actively managed portion generated 46 bps of excess return and 106 bps of tracking error. The Semi-Passively managed portion generated 18 bps of excess return and 36 bps of tracking error. As Figure 1b also shows, the Fixed Income Program's 19-year results were well within its tracking error targets and achieved the excess return goals.

As figures 1a and 1b show, even with the 2008 financial crisis, the active program almost met the excess return objective while maintaining tracking error within expectations. The semi-passive program also met its excess return expectations, but with tracking error that exceeded expectations.

Effectiveness of the Program as a Diversifier

The primary goal of the Fixed Income Program is to diversify the mix of Total Plan Assets. In order to quantify the Fixed Income Program's diversification, a correlation matrix has been produced. The various correlations will show the effectiveness of the following three alternative fixed income options to accomplish the goals set for the Fixed Income asset class target.

1) 100% of the Fixed Income Program weighted to Passive management—for the purposes of this analysis, the Blackrock Fixed Income Index Fund A will be used as a proxy, since SBI has never used Passive management.
2) 100% of the Fixed Income Program weighted to Semi-Passive management—in our analysis, we will use the returns (starting in July 1988) of the SBI's Semi-Passive fixed income manager aggregate. Currently, this includes three (3) semi-passive managers.
3) 100% of the Fixed Income Program weighted to Active management—in our analysis, we will use the returns (starting in July 1988) of the SBI's Active fixed income manager aggregate. Currently, this includes five (5) active managers.

Figure 2. Correlations to the Asset Class Target

Correlation Coefficients to the Asset Class Target July 1988 to December 2009	
	Fixed Income Asset Class Target
100% Passive Fixed Income*	1.000
100% Semi-Passive Fixed Income	0.972
Current Fixed Income Program	0.950
100% Active Fixed Income	0.914

***Blackrock's Fixed Income Index Fund A used as a proxy for Passive Fixed Income**

The three scenarios show that as active risk increases, the correlation with the asset class target decreases. The next step is to determine if the increase in active risk and lower correlation to the asset class target adds value relative to the Program's benchmark.

Figure 3. Return and Risk-adjusted return information (July 1988 – December 2009)

	Return (%)	Excess Return (%)	Annualized Tracking Error (%)	Information Ratio
100% Active	7.55	0.20	1.73	0.116
100% Semi-Passive	7.45	0.10	0.93	0.108
Current Fixed Income Program	7.48	0.14	1.25	0.112
100% Passive*	7.36	0.02	0.12	0.167

***Blackrock's Fixed Income Index Fund A used as a proxy for a Passive Fund**

On a risk-adjusted basis, the performance of the current Fixed Income Program is comparable to the alternative scenarios. This can be determined by comparing the Information Ratio of the various options to that of the Current Program. The Information Ratio is the Excess Return divided by the Annualized Standard Deviation of the excess returns (tracking error). This ratio illustrates the risk-adjusted return profile of each option. Figure 3 shows that the three options generate nearly identical risk-adjusted returns to that of the current Fixed Income Program. Therefore, a shift in strategy to any one of the three alternatives would yield no material improvement in risk-adjusted returns.

IV. Conclusions

The current Program relative to the three alternative options presented in this paper show that there is minimal difference between them on a correlation and risk-adjusted return basis. One must also consider the survivorship bias that is inherent in these figures. The Current Fixed Income Program's return history includes that of terminated managers, while the three hypothetical scenarios do not. They are the aggregates of the Current Program's Active and Semi-Passive managers and the Passive scenario is a third-party index fund. This skews the Current Program's return figures downward, while having no effect on the three hypothetical scenarios.

Based on this information, Staff concludes that the current Fixed Income Program reflects the Fixed Income Asset Class Target, while providing an acceptable risk-adjusted return profile when compared to the hypothetical scenarios. Staff further concludes that because of the reduced tracking error and comparable risk-adjusted return profile, the Semi-passive portion of the Fixed Income Program is operating efficiently and meeting the goals of reducing the volatility of the Fixed Income Program while providing risk-adjusted returns comparable to those of the Active manager aggregate. Additionally, Staff maintains its preference of risk-controlled, actively managed styles to passive styles based on the belief that structural inefficiencies will continue to exist in the bond market which should allow these styles to outperform passive styles.

Recommendation:

Given the information presented and the stated goals of the Fixed Income Program, Staff concludes that the Program is operating efficiently and recommends no changes at this time.

TAB

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INTERNATIONAL EQUITY

ASSET CLASS TARGET

Staff Paper

October 2010

Since inception of the SBI's International Equity Program in October 1992, the SBI has used the Morgan Stanley Capital International (MSCI) indexes both as manager benchmarks and as the asset class target for the entire program. MSCI is the dominant index provider in the global equity space in the United States. MSCI was the first to market global equity indexes back in the 1970's. In the 1980's and 1990's, they remained the only recognized international equity index provider. Other index providers now exist and the SBI has periodically reviewed these options, but has reaffirmed its use of the MSCI global equity indexes.

The asset class target for the SBI's International Equity Program is the Morgan Stanley Capital International All Country World Index ex United States net of taxes on dividends unhedged (MSCI ACWI ex U.S. net unhedged). This index includes all developed and emerging markets outside of the United States. Canada is included as a developed market. The Program's prior asset class target, the MSCI EAFE (Europe, Australia, and the Far East) + Emerging Markets index, did not include Canada. It is an index which includes all developed markets outside the U.S., with the exception of Canada. A history of the asset class target for the International Equity Program may be found at the end of this paper.

Historical Enhancements to MSCI Indexes

If you review the list of MSCI international equity asset class targets that have been used by the SBI over time, the words "free", "provisional", "gross", and "net" appear. By way of explanation, historically MSCI offered "free" versions of its indices which did not include the stock of companies that foreign investors specifically were restricted from owning. In 2001, MSCI made improvements by float adjusting constituent companies of its then Standard indices (non-Free) such that there is no longer a difference between MSCI's Free and Standard indices. MSCI also broadened its definition of free float of a security to be the proportion of shares outstanding that are deemed to be available for purchase in the public equity markets by international investors. Whereas, in its Standard indexes, MSCI previously included a company at its full market capitalization, the weight is now adjusted to reflect actual restrictions on foreign ownership, as well as the holdings of strategic investors such as governments, corporations, controlling shareholders and management. At this time, MSCI also increased the coverage of each industry group within a country from 60% of total market capitalization to 85% of free float adjusted market capitalization. As a result, MSCI indices represent the actual constraints that an institutional investor experiences in the market place and also have broader representation of the range of non-U.S. equity investment opportunities available to an institutional investor. Since the prior return history of the Standard and Free indexes has been different over certain time periods, MSCI continues to maintain both the Free and Standard indices.

In 2007, MSCI further enhanced its indexes to provide even broader coverage of international equity markets and improve size segmentation of the global investable universe. MSCI's revised methodology for the new Standard Indexes aims to represent the top 85% of the capitalization in each market (rather than in each industry in each market) in the Standard Index which is comprised of a Large and a Mid Cap index. The Standard Index is now fully compatible with the Small Cap indexes which target all companies with a market capitalization below that of the companies in the new Standard indexes. Previously, there was an overlap of stocks that appeared in both indexes due to the different methods used to determine constituent membership. The Standard and Small Cap indexes together now offer up to 99% coverage of the free-float adjusted investable universe in both the developed and emerging markets.

Since the MSCI indexes are used by the majority of U.S. investors and investment firms, major changes to the index construction methodology and the associated portfolio turnover could result in significant market volatility if all index changes were effected on a single day. In the two index enhancements mentioned above (float-weighting, and size segmentation/market cap representation), MSCI effected the resulting index changes in two segments at six-month intervals. The first half of the changes were officially incorporated into the index six-months after announcement of the changes, and the second half of the changes were incorporated six-months later. Additionally, over this twelve-month time period, MSCI released the constituents of and calculated the performance for the indexes with all changes already incorporated. Since these were not yet the official version of the MSCI indexes, they were referred to as "provisional" indexes. This allowed investors to transition portfolios to the provisional indexes at any time over the twelve-month period, minimizing market impact on any single day. In both instances of MSCI index methodology changes outlined above, the SBI adopted the Provisional version of the MSCI indexes ahead of the official index change dates.

Foreign investors must pay withholding taxes on dividend income imposed by other governments. Certain amounts of the withheld taxes are refundable upon application. The exact amounts withheld (and refunded) depend on the different bilateral tax treaties between the U.S. and each country. MSCI calculates two returns for each index series. The "gross" version of any MSCI index's total return approximates the maximum possible dividend reinvestment. The amount reinvested is the dividend distributed to individuals resident in the country of the company, but does not include tax credits. The "net" version of any MSCI index's total return approximates the minimum possible dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates. MSCI began calculating a net total return for the MSCI Emerging Markets index in January 2001. Prior to that date, only a gross total return was available for that index.

Alternative Index Providers

In addition to MSCI, there are other international equity index providers. The primary alternatives include:

Standard & Poor's (S&P) Global BMI Index series (originally Salomon Brothers indexes)

Financial Times Stock Exchange (FTSE) Global Equity Indices

Dow Jones Global Equity Indices

In 1992, at inception of the SBI's International Equity Program, and again in 1999 and 2003, when periodic program reviews were conducted, SBI staff reviewed in detail the advantages and disadvantages of each index provider. In each instance, the various benefits offered by the other indexes with respect to transparency of construction rules, coverage, investability, and availability of data, were not sufficient to overtake the fact that MSCI is the most widely recognized and accepted index source among U.S. investors. In addition, the vast majority of international equity products marketed to U.S. investors are benchmarked to MSCI indexes. They are the best known and the most widely used indexes by investment managers.

In addition to market recognition, the strongest advantage of MSCI indices remains their length of performance history and historical valuations data. MSCI has the longest history in P/E's, dividend yields, Price/Book Value, Price/Sales and Price/Cash Earnings, all at country, regional and sector levels. The developed market's history is from 1970, and the emerging markets history is from 1988. This amount of valuation data offers managers and plan sponsors significant advantages for portfolio and market analysis.

With the significant enhancements over time to MSCI's index construction methodology in terms of float weighting, and size segmentation/market cap representation, MSCI has minimized the benefits previously offered by other index providers, in particular the S&P Global BMI Index series (originally Salomon Brothers indexes) which were often thought by investment managers to be better constructed indexes than MSCI. The only remaining criticism of MSCI indexes is that while construction rules for MSCI indices are printed, constituent companies are still subjectively selected by Committee. In contrast, S&P Global BMI Indexes have a purely objective and rules-based construction methodology, making it easier for investors to predict index changes.

While the SBI does not use growth/value style indexes in the International Equity Program, in May 2003 MSCI began using an enhanced methodology to construct their style indices. While S&P Global BMI style indexes have four variables to measure value, and three for growth, MSCI previously used one variable (Price/Book Value) to construct value and growth indexes. MSCI now uses three variables for value and five for growth, resulting in more robust style indexes.

Finally, it should be noted that the indexes that the SBI has historically considered have been market cap weighted indexes. The capitalization weighting of an international index gives greater importance to countries with large public markets. While there are advantages to these indexes in terms of liquidity, investability and number of issues, they can be somewhat unstable over time. For example, the Japanese market grew from 15% of the MSCI EAFE index in 1970 to 70% by 1989 and dropped to 50% in 1990. It is 20% of that index today in 2010.

Alternatively weighted indexes are talked about by investors. A GDP (Gross Domestic Product) weighted index reflects the size of a country's economy rather than the country's equity market capitalization. It will mitigate the effect of a country that is overweight in the index due to its company's high valuations, and will tend to provide higher exposure to countries with above average economic growth. GDP weighted indexes were considered at inception of the SBI's International Equity Program, but were deemed to have issues including the inappropriate weights of some countries with large economies, but small public equity markets. Other alternative index weighting strategies are based on valuation ("fundamental indexing"), volatility ("managed volatility"), size or momentum. The risks and rewards of these indexes may be considered by the SBI in the future, after a longer performance history is established.

Hedged vs. Un-Hedged Indexes

Since inception, the International Equity Program's asset class target has been 100% un-hedged, which means that none of the underlying currency exposure in the index has been hedged back to the U.S. dollar. While this allows the Program to enjoy the full diversification benefits of investing in international equities over the long term, it may also contribute to greater return volatility due to fluctuating currency exchange rates in the short term.

At inception of the SBI's International Equity Program, it was felt that the currency effect was one of three sources of returns in international equity investing in addition to country selection and stock selection and should be managed separately. The SBI felt that currency risk is an active decision that should be explicitly controlled via either a systematic approach (hedging all currency exposure, or a constant proportion of the currency exposure, at all times for risk reduction) or an opportunistic approach (selective hedging based upon a currency forecast with the goal of enhancing return). The SBI initially recommended that the asset class target be unhedged, and that the Program, given its long term time horizon and relatively high risk tolerance, should be designed around an opportunistic approach to currency hedging. From 12/1/95 through 10/31/00, the SBI had a currency overlay on the passive developed markets (MSCI EAFE) portfolio. Managers are permitted to use currency management as part of their portfolio management process.

In 2003, an analysis was done comparing different levels of possible hedging of the asset class target for the SBI's International Equity Program. The asset allocation of the SBI's Combined Funds (as of 6/30/01) and 2002 capital market assumptions provided by J. P. Morgan were used for the asset class's volatility, correlation, and return assumptions. Eleven distinct portfolios ranging from 0% EAFE hedged to 100% EAFE hedged were evaluated. For each of these eleven portfolios, the current allocations for all other asset classes remained unchanged. The portfolio with the highest Sharpe Ratio allocated 100% of the total international equity allocation to an un-hedged EAFE benchmark. (The Sharpe Ratio measures return per unit of risk, calculated as the return of an asset in excess of that of the riskless asset divided by the standard deviation of the returns of the asset.) This result confirmed the continued use of the unhedged benchmark.

<u>History of SBI Asset Class Target Changes</u>

October 1, 1992 – April 30, 1996

MSCI EAFE Free (net)

The SBI's initial international equity investments in 1992 were via a passive developed markets portfolio. Approximately one year later active developed markets portfolios were added. This two phase approach was recommended at the time. It was felt that passive management was an appropriate investment strategy, particularly during the start up phase of the SBI's International Equity Program. It would provide immediate diversification benefits through exposure across international markets and large sums of money could be deployed relatively quickly at a lower administrative cost. In addition, it afforded the SBI time to become familiar with the administrative issues involved in international investing (global custody and settlement, multi-currency accounting and performance reporting) without the added complexity of a multiple manager structure. Over the long term, it was felt however, that the SBI should seek incremental value added through a variety of active (developed markets) strategies. The Program's asset class target for approximately the first four years (10/1/1992 – 4/30/1996) was the MSCI EAFE Free index net of taxes on dividends.

May 1, 1996 – June 30, 1999

Fixed Weight:

87% MSCI EAFE Free (net) / 13% MSCI Emerging Markets Free (gross)

In October 1995 following an asset allocation review, the Board increased its long term international equity allocation from 10% to 15% of the Combined Funds. As part of this increase, the Board approved an allocation of up to 2% of the Combined Fund's international equity allocation of 15% to the stocks of emerging markets (the existing active developed markets managers were permitted to continue to invest in emerging markets opportunistically, but their exposure was limited to 15% of their portfolio's value to avoid overexposure). The 2% allocation was deemed to be appropriate given liquidity constraints within emerging markets, yet sufficient to provide higher returns to the Combined Funds without increasing total portfolio risk over the long term. At the 2% level, emerging markets equities represented approximately 13% of the SBI's International Equity Program.

At that time, the SBI reviewed MSCI, the International Finance Corporation (IFC), and Barings as emerging markets equity index providers. The SBI chose the MSCI Emerging Markets Free index gross of taxes on dividends (the "net" version of this index was not available from MSCI until January 2001) as the benchmark for its emerging markets equity investments over the IFC Investable Index (the Barings index, composed of fewer and more liquid stocks in larger capitalization markets, was eliminated on the basis that it was the least diversified published index) because of its superior risk/return characteristics, its investability, and its less concentrated country weights.

Given the fixed 2% emerging markets target (representing 13% of the International Equity Program) it was decide that the SBI's asset class target should be a custom fixed weight combined return of 87% MSCI EAFE Free (net) / 13% MSCI Emerging Markets Free (gross). The SBI transitioned its asset class target from 100% MSCI EAFE Free (net) to 87% MSCI EAFE Free (net) / 13% MSCI Emerging Markets Free (gross) over an eight month period (5/1/1996 – 12/30/1996), as follows:

Period	Developed Markets Policy Weight (%)	Emerging Markets Policy Weight (%)
April 1996	100	0
May 1996	95.50	4.50
June 1996	91.75	8.25
July 1996	91.75	8.25
Aug 1996	91.00	9.00
Sept 1996	90.25	9.75
Oct 1996	89.75	10.25
Nov 1996	88.00	12.00
Dec 1996	87.00	13.00

The transition was a gradual process that mirrored the underlying actual weights, as the emerging markets managers came into the program. The asset class target was a custom fixed weight combined return of 87% MSCI EAFE Free (net) / 13% MSCI Emerging Markets Free (gross) for the next two and a half years (12/31/1996 – 6/30/1999).

July 1, 1999 – September 30, 2003

Floating Weight:

MSCI EAFE Free (net) + Emerging Market Free (gross)

MSCI EAFE Free (net) + Emerging Market Free (net)

Provisional MSCI EAFE Free (net) + Emerging Market Free (net)

MSCI EAFE Free (net) + Emerging Market Free (net)

During a review of the SBI's International Equity Program in 1999, the SBI considered whether or not a fixed weight asset class target was still appropriate. A fixed weight method requires little rebalancing if both the developed and emerging markets' returns are similar. However, when the developed and emerging markets have very different returns or move in opposite directions, the actual portfolio's weightings diverge from the fixed weight target requiring a rebalance back to the target weights of 87% MSCI EAFE Free / 13% MSCI Emerging Markets Free. While a rebalancing strategy, to sell high price assets and buy low priced assets, is known to add value over the long term, the high transaction costs in emerging markets can quickly reduce or eliminate the value added from rebalancing. The SBI determined that using a custom fixed weight asset class target with periodic rebalancing was not cost effective in the international equity markets, whereas using a published floating market capitalization weighted index, where the SBI's investments would move in tandem with the target, would be essentially self-balancing.

On July 1, 1999, the SBI stopped using the custom fixed weight asset class target. It was replaced with a floating market capitalization weighted index, the MSCI EAFE Free (net) + Emerging Markets Free (gross) index, which is a published index. Once the index provider introduced the "net" version of the MSCI Emerging Markets index, the SBI began using the

MSCI EAFE Free (net) + Emerging Market Free (net) index as its asset class target. Finally, when MSCI announced the float weighting enhancements to its index construction methodology (see "Historical Enhancements to MSCI Indexes" section), the SBI moved to the "Provisional" index ahead of the official index transition dates to minimize the market impact costs associated with these index changes, particularly to the SBI's sizeable passive developed markets portfolio.

October 1, 2003 – present

Floating Weight:

MSCI ACWI ex U.S. (net)

Provisional Standard MSCI ACWI ex U.S. (net)

Standard (large cap + mid cap) MSCI ACWI ex U.S. (net)

During the Asset Allocation, Asset Class Target and Asset Class Structure Review in 2003, the SBI considered whether or not to use a published international equity index that included Canada. As previously mentioned, the MSCI EAFE index and the MSCI EAFE+EM index do not include Canada. Canadian equities are not represented in any equity benchmark in the SBI Combined Funds. However, the SBI's international equity managers (and domestic equity managers) are permitted to invest in Canadian equities, within certain percentage limits for all non-benchmark countries. While dominated by three sectors (Financials, Energy, and Materials), Canada represents a significant investment opportunity set outside of the U.S. (Canada was 6% of the MSCI All Country World ex U.S. Index - MSCI ACWI ex US - as of 6/30/03). Canada has a relatively high correlation with U.S. stocks. However, MSCI's World ex U.S. index, which includes Canada plus the countries in MSCI's EAFE index, has only a slightly higher correlation with MSCI's U.S. index than does the MSCI EAFE index. Therefore, based on historical returns, the SBI would not lose significant diversification benefits (through increased correlation to U.S. equity returns) by adding Canada to the index. In October 2003, the SBI added Canada to its new asset class target, the MSCI All Country World ex U.S. Index. At the same time, the SBI began benchmarking its developed markets managers to the MSCI World ex U.S. index. When MSCI announced the size segmentation/market cap representation enhancements to its index construction methodology (see "Historical Enhancements to MSCI Indexes" section), the SBI moved to the "Provisional" index ahead of the official index transition dates to minimize the market impact costs associated with these index changes, particularly to the SBI's sizeable passive developed markets portfolio.

Updated: October 2010

HISTORY OF ASSET CLASS TARGET

INTERNATIONAL EQUITY

Dates	Index
10/1/1992 – 4/30/1996	MSCI EAFE Free (net) unhedged
5/1/1996 – 12/30/1996	transition from 100% MSCI EAFE Free (net) to 87% MSCI EAFE Free (net) / 13% MSCI Emerging Markets Free (gross) unhedged
12/31/1996 – 6/30/1999	fixed weight: 87% MSCI EAFE Free (net) / 13% MSCI Emerging Markets Free (gross) unhedged
7/1/1999 – 12/31/2000	floating weight: MSCI EAFE Free (net) plus Emerging Market Free (gross) unhedged
1/1/2001 – 9/30/2001	MSCI EAFE Free (net) plus Emerging Market Free (net) unhedged
10/1/2001 – 5/31/2002	Provisional MSCI EAFE Free (net) plus Emerging Market Free (net) unhedged
6/1/2002 – 9/30/2003	MSCI EAFE Free (net) plus Emerging Market Free (net) unhedged
10/1/2003 – 9/30/2007	MSCI ACWI ex U.S. (net) unhedged
10/1/2007 – 5/31/2008	Provisional Standard MSCI ACWI ex U.S. (net) unhedged
6/1/2008 - present	Standard (large cap + mid cap) MSCI ACWI ex U.S. (net) unhedged

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INTERNATIONAL EQUITY

INVESTMENT MANAGEMENT STRUCTURE

Staff Paper

October 2012

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The SBI approved the addition of international developed markets equities as an asset class in the retirement funds in September 1991. The SBI determined that the case for international investing lay in three areas: increased investment opportunity, greater diversification, and potential for higher return. The first international equity manager, a passive developed markets portfolio, was funded in October 1992. Active developed markets mandates were funded in 1993 with the purpose of enhancing returns. The Board initially approved an allocation of 10% of the Basic Funds, the fund that invested active members assets, to international equity. In October 1995, following an asset allocation review, the SBI increased its long term international equity allocation from 10% to 15% in the Basic Funds and the Post Fund, the fund that invested retired member assets. The 15% allocation remains the policy today.

In October 1995, following the same asset allocation review, the SBI approved an allocation of up to 2% of the total fund to the stocks of emerging markets. At the 2% level, emerging markets equities represented approximately 13% of the SBI's International Equity Program. It was argued that the emerging markets offered the potential for higher growth and returns, with the diversification benefits of low correlation to the developed markets. From May 1, 1996 through June 30, 1999 the SBI maintained a fixed 13% weight in emerging markets and 87% weight in developed markets that required rebalancing when the performance of developed and emerging markets diverged. Due to concerns regarding the high transaction costs of rebalancing in international equity markets, the SBI began a transition on July 1, 1999 to floating market capitalization weights. The SBI moved to an allocation between emerging and developed markets as they are represented in the international equity program's asset class target, currently the MSCI All Country World ex US index (ACWI ex US).

At inception of the program in 1992, the SBI's recommended allocation was 100% to passive, developed markets management. The policy provided immediate diversification benefits through exposure across international markets, and large sums of money could be deployed relatively quickly at a lower administrative cost. In addition, it afforded the SBI time to become familiar with administrative issues involved in international investing, including global custody and settlement, multi-currency accounting and performance reporting, without the added complexity of a multiple manager structure. According to the 1992 recommendation, the longer term structure of the program would have at least 50% active management and the SBI would begin its search for active managers as soon as practicable.

During 1993, the SBI added active developed markets managers. In 1995, the SBI added actively managed emerging markets equity managers. Based on the belief that the inefficiencies in emerging markets should allow opportunities for active managers to add value and to obtain the best risk/reward relationship, the SBI decided that emerging market equities should be entirely actively managed. In 1999, due to the success to date of the SBI's developed and emerging markets active managers in adding value relative to their respective benchmark indexes and to allow rebalancing flexibility, the SBI changed the program's policy weights from requiring at least 50% active management and up to 50% passive management to requiring at least 33% active management and at least 33% passive management.

The SBI has sought to mitigate the risk of the active manager program by hiring a set of managers that are diversified by process (fundamental versus quantitative) and by style (growth tilt versus value tilt). Certain active managers are allowed to take market capitalization bets relative to the index when they find small, mid, or large capitalization securities that offer better investment potential. In addition, all managers are permitted to hedge currency risk, but are not required to do so.

In September 2003, the SBI approved a policy allocation of up to 10% to semi-passive management for the international equity program, following a recommendation of the 2003 Asset Allocation, Asset Class Target and Asset Class Structure Review. While it had been used for some time in both the domestic equity and fixed income programs to add incremental value over passive management at lower levels of risk than active management, semi-passive management was a new allocation to the international equity program. Previously, there had been few institutional product offerings in the international equity semi-passive, or enhanced index, space. Staff updated product information in 2003 and determined that, due to increased market interest in international equity enhanced index mandates, there were now a sufficient number of product offerings with established track records and appropriate levels of assets under management.

In 2003, staff performed an optimization study which proposed an allocation of 10% to semi-passive mandates together with 65% to active mandates and 25% to passive mandates. The proposed allocation resulted in a modest increase in total program expected returns with a corresponding modest decrease in total program expected risk compared to the expected returns and risks of the total program's then current actual allocation of 66.7% to active mandates and 33.3% to passive mandates (see Appendix 1). The analysis was based on the historical performance of the SBI's active and passive managers and the track record of a potential semi-passive mandate. The 10% allocation was recommended as a starting point, with a view to possibly increasing the policy allocation in the future based on the success of the actual track record. The SBI hired semi-passive managers in July 2005.

In March 2007, based on the successful performance to date of the SBI's international equity semi-passive managers, an updated optimization study (see Appendix 2) and a need for program rebalancing flexibility, the Board established the current policy ranges for semi-passive, passive, and active management in the international equity program, as follows:

> "No more than 33% to semi-passive management. At least 25% of the program will be passively managed and at least 33% will be actively managed."

The SBI maintains a floating market capitalization weight in developed and emerging markets as they are represented in the program's asset class target. A summary of the History of Investment Management Structure of the international equity program is outlined in Appendix 3.

Updated: October 2012

APPENDIX 1

2003 INTERNATIONAL EQUITY PROGRAM - OPTIMIZATION

Staff conducted an optimization exercise to construct a quantitative basis for a recommendation to add semi-passive EAFE management to the Program. As inputs, Staff used the historical excess returns (vam) and risk of excess returns (tracking error) for the Program's aggregate active and passive developed markets managers, along with the actual excess returns and risk of excess returns of one of the semi-passive index managers (BGI) as a proxy for semi-passive EAFE. In the "Portfolio Statistics" chart below, the optimization results show that the Program would be expected to gain 5 basis points of return, and lower the tracking error by 8 basis points, by adding a 10% allocation to semi-passive EAFE management.

Portfolio Statistics: Historical Data (cap Enhanced at 10%)		
	Proposed	Current
Active EAFE (SBI Agg)	65.0%	66.7%
Semi-Passive EAFE (BGI)	10%	0%
Passive EAFE (SSgA)	25.0%	33.3%
Expected Return	**1.47**	**1.42**
Standard Deviation	**2.32**	**2.4**

Inputs: Long Run Historical Returns, Risk, and Correlations					
	VAM	Tracking Error	Correlation w/Active	Correlation w/Enh	Correlation w/Passive
Active EAFE Aggregate	2.01	3.45	1		
Semi-Passive EAFE (BGI)	1.06	1.49	**0.04**	1	
Passive EAFE (SSgA)	0.25	0.86	0.287	**-0.012**	1

The correlations outlined in the previous "Inputs" chart demonstrate that over this time period, the semi-passive EAFE vam process was uncorrelated with the active and passive EAFE vam process. Vam correlations of zero are good. They indicate that when one set of managers added value, another set did not and vice versa. This gives program structure diversification. Adding semi-passive EAFE should therefore increase the risk/reward relationship, or information ratio, of the SBI's International Equity Program.

APPENDIX 2

2007 INTERNATIONAL EQUITY PROGRAM - OPTIMIZATION

Staff has developed an updated analysis through December 2006. The semi-passive input to the updated analysis was based upon an equal weighted composite of return histories of the three SBI semi-passive managers which included the SBI's actual performance and manager performance prior to being hired by the SBI. The analysis reveals that increasing the allocation to semi-passive management could increase expected return and decrease overall risk for the International Equity Program.

Optimization Inputs: Long-Run Historical VAM, Tracking Error, & Correlation of Vam						
	VAM	Tracking Error	VAM Corr. w/ Active	VAM Corr. w/ Semi-Passive	VAM Corr. w/ Passive	Inception Date
SBI Active DM Mgr Aggr	1.06	2.96	1			Nov-93
SBI Semi-Passive DM Mgr Aggr (History + Actual)	2.59	1.53	0.301	1		Feb-00
SBI Passive DM Mgr	0.22	0.73	0.008	-0.077	1	Oct-92

Optimization Results: Based on Historical Monthly Return Data			
	Current	Proposed	Unconstrained
Constraints:	Max 10% Semi-Passive / Min 25% Passive	Max 33% Semi-Passive / Min 25% Passive	None
SBI Active DM Mgr Aggr.	41%	25.5%	0%
SBI Semi-Passive DM Mgr Aggr. (History + Actual)	10%	33%	70.5%
SBI Passive DM Mgr	49%	41.5%	29.5%
Expected VAM	0.80	1.22	1.89
Expected Tracking Error	1.32	1.06	1.08

APPENDIX 3

HISTORY OF INVESTMENT MANAGEMENT STRUCTURE

INTERNATIONAL EQUITY

Dates	Policy Allocation to Active, Semi-Passive, and Passive
1992	100% Passive
1993	At least 50% Active, up to 50% Passive
1999	At least 33% Active, at least 33% Passive
2003	Up to 10% Semi-Passive, at least 25% Passive. In aggregate, at least 33% Passive and Semi-Passive. At least 33% Active.
2007	No more than 33% Semi-Passive. At least 25% Passive and at least 33% Active.

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INTERNATIONAL EQUITY

SEMI-PASSIVE MANAGEMENT REVIEW

Staff Paper

May 2010

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Background of International Equity Program & Semi-Passive Mandates

The SBI approved the addition of international equities as an asset class in the retirement funds in September 1991. It was felt that the case for international investing lay in three areas: increased investment opportunity, greater diversification, and potential for higher return. The first international equity manager, a passive developed markets portfolio (State Street Global Advisors) was funded in October 1992. Active developed markets mandates were funded in 1993, with the purpose of enhancing returns. The Board initially approved an allocation of 10% of the Basic Funds to international equity. In October 1995, the Board increased its long term international equity allocation from 10% to 15% of the Combined Funds, where it stands today.

In October 1995, the SBI approved an allocation of 2% of the Combined Funds to emerging markets. It was argued that the emerging markets offered the potential for higher growth and returns, with the diversification benefits of low correlation to the developed markets. Today, the SBI maintains a market cap weight in emerging markets as they are represented in the International Equity Program's asset class target, the MSCI All Country World ex US index (ACWI ex US). As of March 31, 2010, emerging markets represented approximately 22.7% of the MSCI ACWI ex US index (which equates to approximately 3.4% of the Combined Funds).

At inception in 1992, to gain the broadest market exposure while controlling the active risk of the overall program, the SBI's International Equity Program was created with a structure that required at least 50% passive management and up to 50% active management. In 1995, when emerging markets equity investments were added to the Program, it was decided that they should be entirely actively managed based on the belief that the inefficiencies in these markets should allow opportunities for active managers to add value. In 1999, due to the success to date of the SBI's developed and emerging markets active managers in adding value relative to their respective benchmark indexes, the Program's policy weights changed to at least 33% active management and at least 33% passive management. The SBI has sought to mitigate the risk of the active manager program by hiring a set of managers that are diversified by process (fundamental vs. quantitative) and by style (growth tilt vs. value tilt). Certain active managers will also take market capitalization bets relative to the index when they view that small, mid, or large capitalization securities offer better investment potential. All managers are permitted to hedge currency risk, but are not required to do so.

In September 2003, the SBI approved a policy allocation of up to 10% to semi-passive management for the International Equity Program, following a recommendation of the 2003 Asset Allocation Committee. While semi-passive management had been used for some time in both the Domestic Equity and Fixed Income Programs to add incremental value over passive management at lower levels of risk than active management, it was a new allocation to the International Equity Program. Previously, there had been few institutional product offerings in the international equity semi-passive, or enhanced index, space. Staff updated product information in 2003 and determined that, due to increased interest in international equity enhanced index mandates, there were now a sufficient number of product offerings with established track records and appropriate levels of asset under management.

In 2003, an optimization study, which proposed an allocation of 10% to semi-passive mandates (together with 65% to active mandates, and 25% to passive mandates), resulted in a modest increase in total program expected returns with a corresponding modest decrease in total program expected risk versus the expected return/risk profile of the total program's then current allocation of 66.7% to active mandates and 33.3% to passive mandates (see APPENDIX 1). The analysis was based on the historical performance of the SBI's active and passive managers and the track record of a potential semi-passive mandate. The 10% allocation was recommended as a starting point, with a view to possibly increasing the policy allocation in the future based on the success of the actual track record. Following the completion of several Domestic Equity Program searches, the SBI conducted a search and in June 2005 hired the following three semi-passive managers in the International Equity Program: AQR Capital Management LLC, Pyramis Global Advisors Trust Company (formerly Fidelity), State Street Global Advisors. These three managers remain current today, with an SBI portfolio inception date of July 2005.

In March 2007, based on the successful performance to date of the SBI's international equity semi-passive managers, an updated optimization study (see APPENDIX 2) and a need for program rebalancing flexibility, the Board established the current policy range for semi-passive, passive, and active management in the International Equity Program, as follows:

> "No more than 33% to semi-passive management. At least 25% of the program will be passively managed and at least 33% will be actively managed."

As of March 31, 2010 the SBI's International Equity Program had an actual weight of 52.37% in active mandates (developed and emerging markets), 36.48% in passive mandates (developed markets), and 11.15% in semi-passive mandates (developed markets).

Analysis of International Equity Semi-Passive Mandates

International Equity Semi-Passive Objectives: Enhance Program returns / Decrease Program risk

Background

Semi-passive mandates were added to the SBI's International Equity Program with the objective of adding incremental value over passive management at a slightly lower risk level than active management, thereby improving the total program's risk/return profile. The semi-passive inception date of July 2005 provides a relatively short time frame (4 ¾ years, or 19 quarters) over which to conduct a meaningful analysis. In addition, this period of time includes the global financial crisis of 2008. Returns from July 2007 through December 2008 are significantly influenced by the series of market crises which unfolded over this time frame, further challenging a short-term analysis of the semi-passive program. It should also be noted that the performance of quantitative strategies was particularly hard hit by the rapid deleveraging in the fall of 2007 and the flight to quality in the fall of 2008. Two of the SBI's semi-passive managers employ quantitative strategies, and did not escape the consequences of these market environments. It may be instructive to examine the semi-passive program's returns over three distinct periods, pre financial crisis (July 2005-June 2007), during the financial crisis (July 2007-December 2008), and during the junk rally following the financial crisis (January 2009-December 2009), in addition to since inception, so that the analysis is not overwhelmed by the effects on returns of the unprecedented market events and their undue negative impact on quantitative strategies.

The targeted portfolio tracking error ranges and information ratio expectations for the international equity semi-passive portfolios, indicated in **Figure 6** below, are stated in the investment guidelines of each manager's account. Every portfolio has its own targeted tracking error range based on the historical range realized by the product in which the SBI is invested. The value of active management (vam), or excess return relative to the benchmark, expectations indicated below are not explicitly stated in the guidelines, but are a product of the tracking error and information ratio expectations. The information ratio is the excess return (vam) divided by the standard deviation of the excess return (tracking error). The expectations for the international equity semi-passive managers (and the passive and active mandates) are as follows:

Figure 6.

	SBI Manager Investment Guidelines		
	Vam Expectations	**Tracking Error**	**Info Ratio**
AQR	0.4 – 0.8	2-4%	> 0.2
Pyramis	0.2 – 0.6	1-3%	> 0.2
SSgA	0.2 – 0.8	1-4%	> 0.2
Passive (Dev Mkt)	NA	< 0.60	Annual excess return >0.10%
Active (Dev Mkt)	0.6 – 1.8	Varies by mgr (3-9%)	> 0.2
Active (Emg Mkt)	1 - 2	5-10%	> 0.2

While there is some overlap of vam expectations and targeted tracking error ranges between the active and semi-passive managers, on the whole, the SBI's semi-passive mandates take a different approach to portfolio management than the active mandates. The SBI's active portfolios are typically concentrated in a small number of holdings and take large bets across a fewer number of names, whereas the semi-passive portfolios hold many more stocks and take small bets across a large number of names. Active portfolios typically have broad risk controls in place (ex. plus or minus two times the benchmark weight for any country or sector, maximum individual position sizes, etc) allowing greater flexibility for active bets while ensuring diversification, whereas semi-passive portfolios tend to be close to benchmark neutral at the region, country, sector, market capitalization and/or fundamental characteristics level.

The SBI has a diverse set of semi-passive managers. Two are quantitative managers (AQR and SSgA), and one is a fundamental manager (Pyramis). Figure 7 shows the correlation of each manager's excess return (vam) over the longest time period over which they have return history in common. While AQR and SSgA's excess return shows a significant positive correlation, Pyramis' excess return has a low correlation to each of the other two managers, and therefore provides diversification benefits.

Figure 7. Correlation of VAM Matrix: From 2/2000 to 3/2010

Correlations are statistically significant at the 95% level when they are greater than 0.14962.

	AQR vam	Pyramis-Select vam	SSgA-Alpha vam
AQR vam	1		
Pyramis-Select vam	0.019	1	
SSgA-Alpha vam	0.627	0.185	1

Semi-Passive Program Historical Performance Analysis

The performance of the SBI's semi-passive managers has been mixed over the since inception time frame (July 2005 – March 2010). Therefore, we will examine the performance over distinct market environments during this period. We will seek to answer two questions to ensure that the semi-passive mandates have met their objectives: in aggregate, were the semi-passive mandates within the tracking error and information ratio expectations of the investment guidelines, and did they add incremental value over passive management at a slightly lower risk level than active management.

Pre-Financial Crisis (July 2005-June 2007)

The international equity markets saw strong returns in the second half of 2005 through mid-2007 (3Q05-2Q07). For the eight quarters ending June 2007, the MSCI Emerging Markets index returned 40.1%, the MSCI World ex US index (developed markets) returned 27.0%, and the MSCI ACWI ex US index (developed & emerging markets) returned 28.8%. As indicated in **Figure 8**, in aggregate, the semi-passive managers met their investment guidelines. They far exceeded their information ratio expectation at 0.95 vs. 0.20 and did so with a tracking error of 0.84%, below the range of 1-4% established for these mandates. These mandates added incremental value over passive, at a marginally higher risk level (tracking error) than the active developed markets managers, but at a significantly lower risk level than the active emerging markets managers. In other words, during this time frame, the SBI would have enjoyed the best risk/return trade-off by having all of its developed markets international equity investments in semi-passive mandates.

Figure 8.

Pre-Financial Crisis

7/05 - 6/07	VAM	Tracking Error	Information Ratio
Semi-Passive	0.95	0.84	1.14
Passive	0.15	0.14	1.09
Active Dev Mkt	0.30	0.72	0.42
Active Emg Mkt	1.44	1.91	0.75
Total	0.36	0.48	0.75

Financial Crisis (July 2007-December 2008)

After four years of strong returns, the second half of 2007 marked a turning point for both U.S. and international markets. Equity performance was strong at the beginning of the year, but concerns about the weakness of mortgage-related fixed income securities led to a liquidity crisis beginning in August 2007. Equities were sold en mass to raise liquidity to compensate for losses in fixed income investments. Value was suddenly seen as being too vulnerable to deteriorating credit and economic conditions. Stocks that were ranked highly by various valuation metrics performed poorly. Quantitative managers suffered from the rapid deleveraging and panic selling of highly levered quantitative equity hedge funds and broker proprietary trading desks. While the SBI's portfolios were not levered, they were impacted by the forced sell-off of equities. In 2007, two of the SBI's three semi-passive managers (AQR & SSgA), both quantitative managers with an emphasis on valuation factors, experienced their worst relative performance in any calendar year since inception (see APPENDIX 4 & 6) and to date. Their performance was almost fully offset by the third semi-passive manager (Pyramis), who has an investment process based on fundamental growth-oriented research and quantitatively optimized portfolio construction.

Over 2008, as the uncertainty around complex and highly illiquid mortgage assets increased making reasonable business transactions by many firms impossible, there was an unprecedented series of takeovers, bankruptcies, and government interventions followed by economic recession. These events represented the most significant financial dislocation since the Great Depression. Following the bankruptcy of Lehman Brothers in the fall of 2008, there was a flight to quality market environment that left value managers exposed. Investors dumped equities outright, without regard for price, growth, etc. One of the few things that did well was quality stocks and high dividends. However, for most quantitative managers, the strength of their growth or quality factors could not offset the underperformance of valuation signals over this time. All three of the semi-passive managers underperformed somewhat during 2008 (see APPENDIX 4, 5 & 6).

The market declined significantly from July 2007 through December of 2008. For the six quarters ending December 2008, the MSCI Emerging Markets index returned -32.6%, the MSCI World ex US index (developed markets) returned -31.2%, and the MSCI ACWI ex US index (developed & emerging markets) returned -31.6%. As indicated in **Figure 9**, in aggregate, the semi-passive managers did not meet their information ratio expectation at -0.79 vs. 0.20, but, at 2.14%, remained within the targeted tracking error range of 1-4%. These mandates added significantly less value than passive (and every other category as well) at a higher risk level (tracking error) than the active developed markets managers, but at a lower risk level than the active emerging markets managers. The semi-passive mandates had the worst information ratio of all categories. During this time frame, the SBI would have enjoyed the best risk/return trade-off by having all of its developed markets international equity investments in passive and active mandates.

Figure 9.

Financial Crisis

7/07 - 12/08	VAM	Tracking Error	Information Ratio
Semi-Passive	-1.69	2.14	-0.79
Passive	0.24	0.68	0.36
Active Dev Mkt	0.55	1.46	0.38
Active Emg Mkt	-0.04	4.16	-0.01
Total	-0.05	0.88	-0.06

Junk Rally (January 2009-December 2009)

After six consecutive quarters of loss, where long-term equity valuations reached quarter-century lows, markets rebounded in the second quarter of 2008. Improving economic data and corporate earnings suggested an emergence from recession, tempered by high unemployment and the tentative flow of credit. The equity rally was led by low-quality, previously beaten-down stocks with poor fundamentals. Any focus on quality, earnings, or momentum was not rewarded. Investors referred to this period as the "dash for trash". In 2009, one of the SBI's fundamental semi-passive managers (Pyramis) experienced its worst relative performance in any calendar year since inception (see APPENDIX 5) and to date. The portfolio's focus on quality growth and longer-term fundamentals was penalized, but was almost fully offset by the relative outperformance of the SBI's other two semi-passive managers – a reversal of the performance of the second half of 2007.

For the four quarters ending December 2009, the MSCI Emerging Markets index returned 78.5%, the MSCI World ex US index (developed markets) returned 33.7%, and the MSCI ACWI ex US index (developed & emerging markets) returned 41.5%. As indicated in **Figure 10**, in aggregate, the semi-passive managers did not meet their information ratio expectation at -0.05 vs. 0.20, but, at 1.13%, remained within the targeted tracking error range of 1-4%. These mandates added less value than passive (but lost less than active managers), but at a lower risk level than the active developed and emerging markets managers. From an information ratio perspective, the semi-passive mandates were less attractive than the passive option, but offered a better risk/return trade-off than active developed and emerging markets managers.

Figure 10.

Junk Rally

1/09 - 12/09	VAM	Tracking Error	Information Ratio
Semi-Passive	-0.05	1.13	-0.05
Passive	0.28	0.13	2.13
Active Dev Mkt	-1.35	2.32	-0.58
Active Emg Mkt	-0.69	3.19	-0.22
Total	-0.21	1.28	-0.17

Since Inception of Semi-Passive Mandates (July 2005 – March 2010)

For the nineteen full quarters since inception of the international equity semi-passive program, the MSCI Emerging Markets index returned 15.5%, the MSCI World ex US index (developed markets) returned 4.7%, and the MSCI ACWI ex US index (developed & emerging markets) returned 6.5%. It is not surprising that over this time, a period of extreme market volatility and rotation, that the passive mandate has offered the highest excess return (vam) and the most attractive information ratio as seen in **Figure 11**. A passive portfolio seeks to own the market, taking no bets and expressing no biases. The performance of the semi-passive mandates since inception is not compelling – in fact it is the least attractive category from a risk/return, or information ratio, perspective. However, in breaking down this performance over the market environments that occurred during this time frame, we have shown that the effects of the unprecedented financial crisis and resulting sell-off in equities overwhelmingly influenced these returns. Looking at the performance of the semi-passive managers in a less volatile time period, pre-financial crisis, one draws a different conclusion – they offered the best risk/return trade-off. Over this entire time period, the semi-passive program operated within its established risk range, however it did not achieve its intended excess return and information ratio objectives. It would be premature for the SBI to draw long-term conclusions regarding the international equity semi-passive program from such a short and volatile period of return history. As markets begin to normalize, over time the SBI should expect to see a contribution from the semi-passive program that is in line with its previously-demonstrated record of adding value in excess of the passive mandate at a lower risk level than the active (developed and emerging) mandates.

Figure 11.

Since Inception: Semi-Passive

7/05 - 3/10	VAM	Tracking Error	Information Ratio
Semi-Passive	-0.13	1.44	-0.09
Passive	0.22	0.39	0.56
Active Dev Mkt	0.21	1.47	0.14
Active Emg Mkt	0.19	2.99	0.06
Total	0.10	0.82	0.12

Semi-Passive Program Optimal Policy Weight Range

As of March 31, 2010, the SBI's actual weight in semi-passive mandates was 11.15%. The current policy range, established in March 2007, allows for no more than 33% of the International Equity Program to be invested in semi-passive mandates, at least 25% in passive mandates, and at least 33% in active mandates. In addition, the program maintains a benchmark weight in developed and emerging markets as they are represented in the MSCI ACWI ex US (net) index. Given that the emerging markets mandates are actively managed only, what are the optimal policy ranges for active, semi-passive, and passive (developed markets) mandates within the SBI's International Equity Program?

In **Figure 11**, we have already established that over the time period since inception of the international equity semi-passive program (4 ¾ years, beginning July 2005), passive management offered both the highest excess return (vam) as well as the best risk-return trade-off (information ratio). To look over a slightly longer period, we can use the history of the semi-passive managers prior to inception of the SBI's accounts to create a slightly longer return history for the semi-passive manager aggregate. If we combine the representative account return history plus the actual history of the SBI's semi-passive mandates, to create an equal-weighted combined return of these three portfolios, we get an aggregate (combined) return history going back almost nine years to February 2000 (the earliest time frame these manager's return histories have in common). Using this as a new semi-passive aggregate, **Figure 12** shows a comparison of the returns, vams (excess returns), tracking errors and information ratios of different active, semi-passive, and passive options.

<u>Figure 12.</u>

2/2000 - 3/2010	Return	VAM	Tracking Error	Information Ratio
100% Active (DM)	2.48	0.23	1.54	0.15
50% Active / 50% Passive	2.48	0.29	0.86	0.34
Actual: (52.4% Act / 35.5% Pass / 11.1% SP)	2.63	0.44	0.95	0.47
100% Passive (DM)	2.47	0.22	0.40	0.54
Current Policy: (25% Pass / 33% SP / 42% Act)	2.93	0.74	1.01	0.73
50% Active / 50% Semi-Passive	3.16	0.97	1.32	0.73
33.3% Active / 33.4% Semi-Passive / 33.3% Passive	2.93	0.74	0.91	0.81
100% Semi-Passive (DM)	3.84	1.63	1.64	0.99
50% Semi-Passive / 50% Passive	3.16	0.96	0.86	1.11

Over the time period of February 2000-March 2010 (approximately 9 years), semi-passive mandates have more attractive realized vam (excess return) and risk-return (information ratio) characteristics than either active or passive mandates on their own. However, this semi-passive return history includes performance that the SBI's accounts did not actually experience. In addition, they are returns of accounts that were not subject to the SBI's tobacco, Iran and Sudan restrictions, which are now in place. The results for the current actual SBI weights appear to be at the lower end of the information ratio scale, and the results for the current policy ranges, while better than the results for the actual weights, are not the most optimal. The category that has the highest realized excess return (vam) is the 100% Semi-Passive option, whereas the category that realized the highest risk-return trade-off (information ratio) is the 50% Semi-Passive / 50% Passive option. Clearly, based on this data over this time period, including a higher weight to semi-passive mandates appears to be better.

Conclusions & Recommendations

The time period over which one measures performance and risk has a very significant impact on results. It is difficult to draw conclusions from either of the relatively short periods of returns that have been examined (July 2005-March 2010 and February 2000-March 2010), other than to say that over a longer market cycle, semi-passive mandates have historically looked attractive, on an absolute and risk-adjusted basis, relative to the active and passive options. In terms of the actual performance of the SBI's international semi-passive program since inception (July 2005 – March 2010), it has not achieved its objectives of adding incremental value over passive management at a slightly lower risk level than active management and thereby improving the risk-return profile of the SBI's International Equity Program. However, looking at the least volatile market environment during that since inception time period (Pre-Financial Crisis: July 2005-June 2007), the program met and exceeded those expectations.

The current International Equity Program's policy ranges for active, passive and semi-passive mandates allow sufficient flexibility to increase the semi-passive allocation from its current actual weight of 11.15% (as of 3/31/10) to up to 33%, which longer-term history in normal market environments suggests would be a more optimal weighting. However, the returns and risk of the International Equity Program's semi-passive mandates should be observed over a longer time period before recommending any changes to the semi-passive program such as new policy weight ranges. No other changes to the SBI's International Equity Program's semi-passive mandates are recommended at this time.

APPENDIX 1

2003 ASSET ALLOCATION REVIEW - OPTIMIZATION

Staff conducted an optimization exercise to construct a quantitative basis for a recommendation to add enhanced EAFE management to the Program. As inputs, Staff used the historical excess returns (vam) and risk of excess returns (tracking error) for the Program's aggregate active and passive developed markets managers, along with the actual excess returns and risk of excess returns of one of the enhanced index managers (BGI) as a proxy for enhanced EAFE. In the "Portfolio Statistics" chart below, the optimization results show that the Program would be expected to gain 5 basis points of return, and lower the tracking error by 8 basis points, by adding a 10% allocation to Enhanced EAFE management.

Portfolio Statistics: Historical Data (cap Enhanced at 10%)		
	Proposed	Current
Active EAFE (SBI Agg)	65.0%	66.7%
Enhanced EAFE (BGI)	10%	0%
Passive EAFE (SSgA)	25.0%	33.3%
Expected Return	**1.47**	**1.42**
Standard Deviation	**2.32**	**2.4**

Inputs: Long Run Historical Returns, Risk, and Correlations					
	Vam	Tracking Error	Correlation w/Active	Correlation w/Enh	Correlation w/Passive
Active EAFE Aggregate	2.01	3.45	1		
Enhanced EAFE (BGI)	1.06	1.49	**0.04**	1	
Passive EAFE (SSgA)	0.25	0.86	0.287	**-0.012**	1

The correlations outlined in the previous "Inputs" chart demonstrate that over this time period, the Enhanced EAFE vam process was uncorrelated with the active and passive EAFE vam process. Vam correlations of zero are good. They indicate that when one set of managers added value, another set did not and vice versa. This gives program structure diversification. Adding Enhanced EAFE should therefore increase the risk/reward relationship, or information ratio, of the FE Program.

APPENDIX 2

2007 SBI INTERNATIONAL EQUITY PROGRAM - OPTIMIZATION

Staff has developed an updated analysis through December 2006. The semi-passive input to the updated analysis was based upon an equal weighted composite of return histories of the three SBI semi-passive managers which included the SBI's actual performance and manager performance prior to being hired by the SBI. The analysis reveals that increasing the allocation to semi-passive could result in an increase expected return and decrease overall risk for the International Equity Program.

Optimization Inputs: Long-Run Historical Vam, Tracking Error, & Correlation of Vam						
	VAM	Tracking Error	Vam Corr. w/ Active	Vam Corr. w/ Semi-Passive	Vam Corr. w/ Passive	Inception Date
SBI Active DM Mgr Aggr	1.06	2.96	1			Nov-93
SBI Semi-Passive DM Mgr Aggr (History + Actual)	2.59	1.53	0.301	1		Feb-00
SBI Passive DM Mgr	0.22	0.73	0.008	-0.077	1	Oct-92

Optimization Results: Based on Historical Monthly Return Data			
	Current	Proposed	Unconstrained
Constraints:	Max 10% Semi-Passive / Min 25% Passive	Max 33% Semi-Passive / Min 25% Passive	None
SBI Active DM Mgr Aggr.	41%	25.5%	0%
SBI Semi-Passive DM Mgr Aggr. (History + Actual)	10%	33%	70.5%
SBI Passive DM Mgr	49%	41.5%	29.5%
Expected Vam	0.80	1.22	1.89
Expected Tracking Error	1.32	1.06	1.08

APPENDIX 3

Periods Ending March, 2010

Name	3Q05 & 4Q05	CY 2006	CY 2007	CY 2008	CY 2009	1Y	2Y	3Y	4Y	5Y	Since inception	Inception date
ACTIVE DEVELOPED MARKETS AGGREGATE	14.95	25.80	12.96	-42.76	31.86	53.54	-7.73	-5.71	-0.04	4.53	6.05	October, 1993
ACTIVE DEVELOPED MARKETS AGGREGATE BENCHMARK	15.29	25.70	12.61	-43.52	33.66	55.94	-8.45	-6.08	-0.23	4.38	5.09	October, 1993
ACTIVE EMERGING MARKETS AGGREGATE	27.14	34.36	40.05	-52.99	77.26	79.04	-2.45	4.56	8.89	16.12	7.72	April, 1996
ACTIVE EMERGING MARKETS AGGREGATE BENCHMARK	26.42	32.17	39.89	-53.21	78.50	81.06	-1.98	5.37	9.00	15.79	7.77	April, 1996
SEMI-PASSIVE AGGREGATE	16.23	26.38	12.15	-44.41	33.59	55.86	-8.94	-6.62	-0.68		4.65	June, 2005
SEMI-PASSIVE AGGREGATE BENCHMARK	15.29	25.70	12.61	-43.52	33.66	55.94	-8.45	-6.08	-0.23		4.79	June, 2005
PASSIVE AGGREGATE (SSgA)	15.23	25.96	12.90	-43.38	34.04	56.49	-8.21	-5.81	0.05	4.61	6.60	September, 1992
PASSIVE AGGREGATE (SSgA) BENCHMARK	15.29	25.70	12.61	-43.52	33.66	55.94	-8.45	-6.08	-0.23	4.38	6.36	September, 1992
TOTAL INTERNATIONAL EQUITY	16.58	26.95	17.10	-45.34	41.17	60.36	-6.94	-4.02	1.46	6.28	7.44	September, 1992
TOTAL INTERNATIONAL EQUITY BENCHMARK	16.61	26.65	16.89	-45.47	41.47	60.93	-7.11	-4.07	1.41	6.18	6.78	September, 1992
MSCI ACWI ex-US FREE (GD thru 12/00, then ND)	16.61	26.65	16.66	-45.52	41.47	60.93	-7.18	-4.16	1.34	6.12	7.11	September, 1992
MSCI WORLD EX US (ND)	15.29	25.70	12.44	-43.56	33.66	55.94	-8.49	-6.16	-0.29	4.33	6.50	September, 1992
MSCI EMERGING MARKETS - FREE	26.42	32.17	39.38	-53.33	78.50	81.06	-2.10	5.16	8.83	15.65	9.65	September, 1992

APPENDIX 4

Investment Manager: AQR CAPITAL MANAGEMENT Benchmark: MSCI WORLD ex U.S. Index (net)						
	PORTFOLIO		BENCHMARK		VAM	
	Quarterly Return	Annual Return	Quarterly Return	Annual Return	Quarterly Return	Annual Return
2005 Q3	12.1		10.9		1.0	
Q4	4.5	17.1	3.9	15.3	0.5	**1.6**
2006 Q1	9.2		9.3		-0.1	
Q2	-0.1		0.7		-0.8	
Q3	3.9		3.7		0.2	
Q4	10.5	25.2	10.1	25.7	0.3	**-0.4**
2007 Q1	2.9		4.0		-1.0	
Q2	8.4		7.0		1.4	
Q3	0.6		2.7		-2.0	
Q4	-2.9	9.0	-1.5	12.6	-1.5	**-3.2**
2008 Q1	-9.6		-8.7		-1.0	
Q2	0.7		-1.1		1.8	
Q3	-23.0		-20.7		-2.9	
Q4	-20.0	-44.0	-21.1	-43.5	1.5	**-0.8**
2009 Q1	-13.1		-13.1		0.0	
Q2	26.4		25.9		0.4	
Q3	20.9		19.4		1.3	
Q4	2.5	36.0	2.4	33.7	0.0	**1.7**
2010 Q1	1.6		1.3		0.2	

	PORTFOLIO	BENCHMARK	VAM
1 yr	59.0	55.9	**2.0**
2 yr	-7.4	-8.4	**1.1**
3 yr	-6.4	-6.1	**-0.3**
4 yr	-0.8	-0.2	**-0.6**
Since Inception	4.6	4.8	**-0.2**
STD. DEV.	21.5	21.2	

APPENDIX 5

Investment Manager: PYRAMIS GLOBAL ADVISORS (Select Int'l) Benchmark: MSCI WORLD ex U.S. Index (net)						
	PORTFOLIO		BENCHMARK		VAM	
	Quarterly Return	Annual Return	Quarterly Return	Annual Return	Quarterly Return	Annual Return
2005 Q3	11.9		10.9		0.9	
Q4	3.5	15.8	3.9	15.3	-0.5	**0.4**
2006 Q1	9.9		9.3		0.5	
Q2	0.2		0.7		-0.4	
Q3	3.3		3.7		-0.4	
Q4	11.5	26.8	10.1	25.7	1.2	**0.9**
2007 Q1	4.5		4.0		0.5	
Q2	7.7		7.0		0.7	
Q3	4.2		2.7		1.5	
Q4	0.8	18.2	-1.5	12.6	2.3	**5.0**
2008 Q1	-8.6		-8.7		0.1	
Q2	0.6		-1.1		1.7	
Q3	-22.0		-20.7		-1.7	
Q4	-21.9	-44.0	-21.1	-43.5	-0.9	**-0.9**
2009 Q1	-12.9		-13.1		0.2	
Q2	23.6		25.9		-1.8	
Q3	18.4		19.4		-0.8	
Q4	2.2	30.2	2.4	33.7	-0.2	**-2.6**
2010 Q1	1.2		1.3		-0.2	

	PORTFOLIO	BENCHMARK	VAM
1 yr	51.3	55.9	**-3.0**
2 yr	-10.2	-8.4	**-1.9**
3 yr	-5.8	-6.1	**0.3**
4 yr	0.2	-0.2	**0.4**
Since Inception	5.3	4.8	**0.5**
STD. DEV.	21.5	21.2	

APPENDIX 6

Investment Manager: STATE STREET GLOBAL ADVISORS (Int'l Alpha) Benchmark: MSCI WORLD ex U.S. Index (net)						
	PORTFOLIO		BENCHMARK		VAM	
	Quarterly Return	Annual Return	Quarterly Return	Annual Return	Quarterly Return	Annual Return
2005 Q3	11.2		10.9		0.2	
Q4	4.3	15.9	3.9	15.3	0.3	**0.6**
2006 Q1	10.1		9.3		0.7	
Q2	0.9		0.7		0.3	
Q3	2.9		3.7		-0.8	
Q4	11.1	27.1	10.1	25.7	0.9	**1.1**
2007 Q1	3.9		4.0		-0.1	
Q2	7.3		7.0		0.3	
Q3	2.1		2.7		-0.6	
Q4	-4.1	9.1	-1.5	12.6	-2.7	**-3.1**
2008 Q1	-9.2		-8.7		-0.5	
Q2	0.2		-1.1		1.3	
Q3	-23.2		-20.7		-3.2	
Q4	-21.8	-45.3	-21.1	-43.5	-0.8	**-3.2**
2009 Q1	-13.1		-13.1		0.1	
Q2	27.2		25.9		1.1	
Q3	19.0		19.4		-0.3	
Q4	2.5	34.9	2.4	33.7	0.1	**0.9**
2010 Q1	1.7		1.3		0.3	

	PORTFOLIO	BENCHMARK	VAM
1 yr	57.7	55.9	**1.1**
2 yr	-9.1	-8.4	**-0.7**
3 yr	-7.6	-6.1	**-1.7**
4 yr	-1.4	-0.2	**-1.2**
Since Inception	4.0	4.8	**-0.7**
STD. DEV.	21.9	21.2	

APPENDIX 7

Investment Manager: SBI INT'L EQUITY SEMI-PASSIVE AGGREGATE Benchmark: MSCI WORLD ex U.S. Index (net)						
	PORTFOLIO		BENCHMARK		VAM	
	Quarterly Return	Annual Return	Quarterly Return	Annual Return	Quarterly Return	Annual Return
2005 Q3	11.7		10.9		0.7	
Q4	4.1	16.2	3.9	15.3	0.1	**0.8**
2006 Q1	9.7		9.3		0.4	
Q2	0.4		0.7		-0.3	
Q3	3.4		3.7		-0.3	
Q4	11.0	26.4	10.1	25.7	0.8	**0.5**
2007 Q1	3.8		4.0		-0.2	
Q2	7.8		7.0		0.8	
Q3	2.3		2.7		-0.4	
Q4	-2.0	12.1	-1.5	12.6	-0.6	**-0.4**
2008 Q1	-9.1		-8.7		-0.5	
Q2	0.5		-1.1		1.6	
Q3	-22.7		-20.7		-2.6	
Q4	-21.2	-44.4	-21.1	-43.5	-0.1	**-1.6**
2009 Q1	-13.0		-13.1		0.1	
Q2	25.7		25.9		-0.2	
Q3	19.4		19.4		0.0	
Q4	2.4	33.6	2.4	33.7	0.0	**-0.1**
2010 Q1	1.5		1.3		0.1	

	PORTFOLIO	BENCHMARK	VAM
1 yr	55.9	55.9	**-0.1**
2 yr	-8.9	-8.4	**-0.5**
3 yr	-6.6	-6.1	**-0.6**
4 yr	-0.7	-0.2	**-0.4**
Since Inception	4.7	4.8	**-0.1**
STD. DEV.	21.6	21.2	

TAB

P

ALTERNATIVE INVESTMENTS

COMMITMENT PACING

PRIVATE EQUITY

REAL ASSETS

YIELD ORIENTED INVESTMENTS

Staff Paper

February 2011

Alternative Investment Pool

1. Alternative Investment Introduction

Alternative investments include real estate, private equity, resource, and yield-oriented investments in which the Minnesota State Board of Investment's participation is limited to commingled funds or other pooled vehicles. Alternative investments are not publicly traded and are therefore only available to qualified investors as defined by various regulatory agencies.

Typically, Alternative investments are structured as limited partnerships, or another form of pooled, non-publicly traded vehicle. The Minnesota State Board of Investment participates in alternative investments exclusively as a limited partner or other type of non-managing or passive investor. A managing and or general partner will select, manage, and sell portfolio investments in compliance with a central legal document that governs the operation of the investment pool throughout its life.

The goal of the alternative investment program is to increase overall portfolio diversification for the Combined Funds. Given their long term investment time horizon, the Combined Funds are especially well-suited for alternative investments. Up to 20% of the market value of the Combined Funds is targeted for alternative investments. Market value plus unfunded commitments can be 1.5 times the market value allocation.

The Minnesota State Board of Investment groups alternative investments into three broad categories: real assets, which includes real estate and resource focused investments, private equity, and yield-oriented investments.

The real asset investment strategy is to establish and maintain a broadly diversified real assets portfolio including, but not limited to, real estate and resource investments. The real asset portfolio is comprised of investments that provide overall diversification by asset type and location. Real estate investments will include investments in real estate investment trusts (REITS), open-end commingled funds and closed-end commingled funds. Resource investments will include oil and gas investments, energy service industry investments and other resource investments. For a more detailed discussion regarding real assets see **page 19.**

The private equity investment strategy, which includes leveraged buyouts, venture capital, and other investments, is to establish and maintain a broadly diversified private equity portfolio comprised of investments that provide diversification by industry type, state of corporate development, and location. For a more detailed discussion regarding private equity see **page 9.**

The strategy for yield-oriented investments will target funds that typically provide a current return and may have an equity component such as subordinated debt or mezzanine investments. Yield-oriented investments will provide diversification by including investments in private equity, resource, and real estate. For a more detailed discussion regarding yield-oriented investments see **page 29.**

2. Investment Pacing / Dollar Cost Averaging

Because the typical convention, behavior, and liquidity of an alternative investment is different than a more traditional, publicly traded investment, achieving and maintaining a target allocation is a complex process. The process begins when the Minnesota State Board of Investment commits a dollar amount to an alternative investment fund. This commitment is then drawn down periodically by the asset manager, sometimes known as the general partner, and invested over time. Once the asset manager makes an investment, the asset manager's goal is to improve the asset's earning capability and value so that the asset manager can then sell this asset for a profit. When the asset manager makes a disposition, the fund will receive remuneration and distribute the proceeds to the investors in the form of cash or stock. Alternative investment funds typically have 10 year lives, but in some cases the fund lives much longer. When the investment fund is complete, the fund is fully liquidated and dissolved. Because alternative investment funds liquidate, it is necessary to consistently commit to new alternative investment funds in order to achieve the Minnesota State Board of Investment's target allocation of 20%. For more information regard the Minnesota State Board of Investment's commitment pacing, please refer to **page 1.**

Legal Requirements

The Minnesota State Board of Investment is authorized to invest in alternative investments according to Minnesota Statutes 11A.24 subd.6. Pursuant to 11A.24, The Minnesota State Board of Investment may only invest in funds that include at least four unrelated owners of the investment other than the State Board of Investment, and it must limit its participation to any investment vehicle to 20% of the total fund size. The Minnesota State Board of Investment cannot accept general liability with regards to any alternative investment.

3. Selection Considerations

Effective selection from the universe of alternative investment managers making offerings in the institutional investor market requires the examination of a number of important investment considerations. These considerations should emphasize both the quality of alternative investment manager as well as the ability of the manager to meet the specific investment needs of the SBI. Staff believes that each potential alterative investment manager considered by the SBI should be evaluated in light of the following considerations: organization, staff, proposed types of investments, acquisition process, investment management, exit capabilities, size of the fund, other fund participants, performance history, and terms and conditions.

4. Operations

a. Maintaining and Monitoring Existing Investments

Once the Minnesota State Board of Investment makes a commitment to an alternative investment partnership, it becomes a part of the State Board's alternative investment portfolio. Ongoing maintenance activities will include drawdown and distribution management, reviewing partnership amendments, and reviewing quarterly financial reports. The staff of the Minnesota State Board of Investment will participate in a number of activities that involve the ongoing managing and monitoring of the alternative investment portfolio. The staff will participate in phone calls, conference calls, webinars, and other industry events. As needed, the staff will attend annual meetings, visits mangers in their place of business, as well as host mangers for meetings in the SBI's offices. The staff should be familiar with the current events in the capital markets and the overall global economy. Staff should continuously monitor alternative investment mangers' portfolios as well as the alternative investment organizations themselves.

b. Sourcing New Investments

Because of the nature of alternative investments, it is critical for the alternative investment staff of the Minnesota State Board of Investment to constantly be sourcing new investment opportunities. Staff should be familiar with which alternative investment organizations are considering raising new alternative investment partnerships by reading industry publications, attending industry events, and being in contact with various industry professionals. Potential investment managers will be asked to come into the State Board's offices periodically to make presentations regarding their firm's investment capabilities. The Minnesota State Board of Investment staff will also visit new potential alternative investment managers in their place of business periodically in an effort to effectively source and cultivate new investment opportunities for the Minnesota State Board of Investment. The staff of the Minnesota State Board of Investment should be aware of market trends as well as keep pace with new investment products in the marketplace.

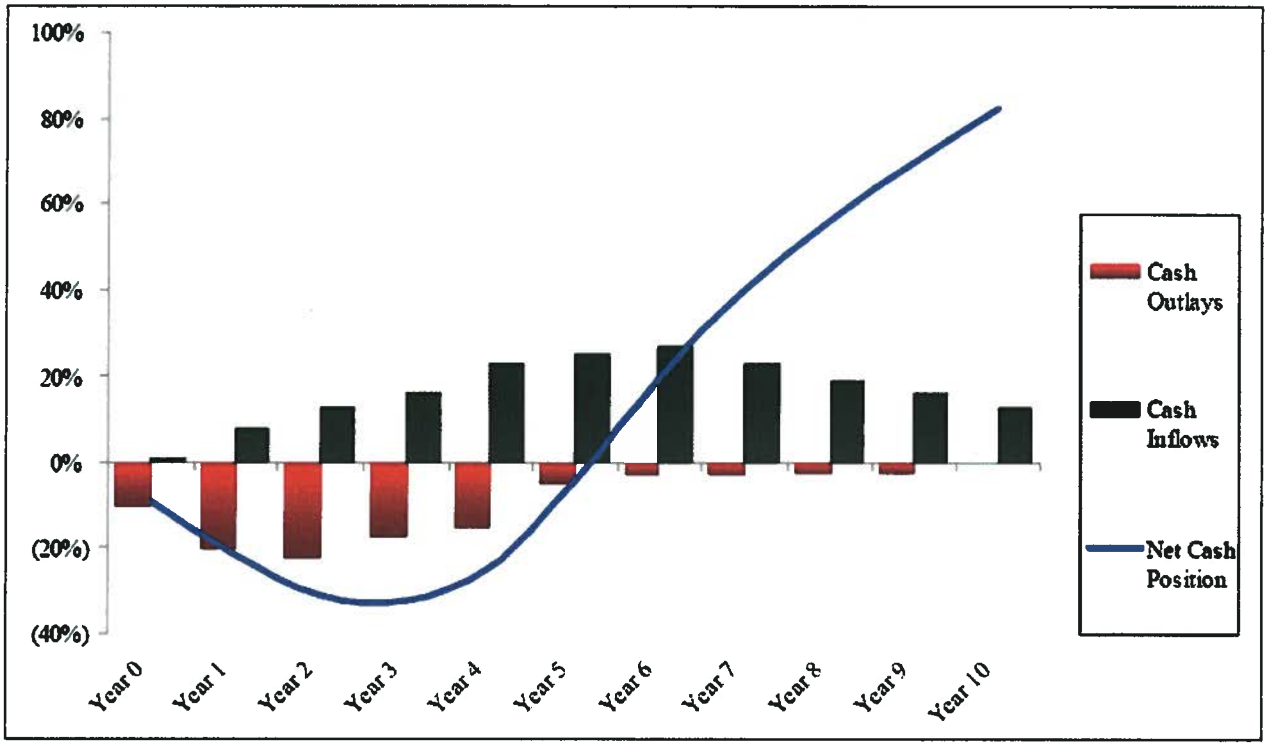
Minnesota State Board of Investment Commitment Pacing

I. Overview: Mechanics of Private Alternative Investments

Obtaining and maintaining an allocation to private market alternative investments is a complicated process which is dependent upon many different variables. To understand the complexities, it is important to first examine the mechanics of the asset class.

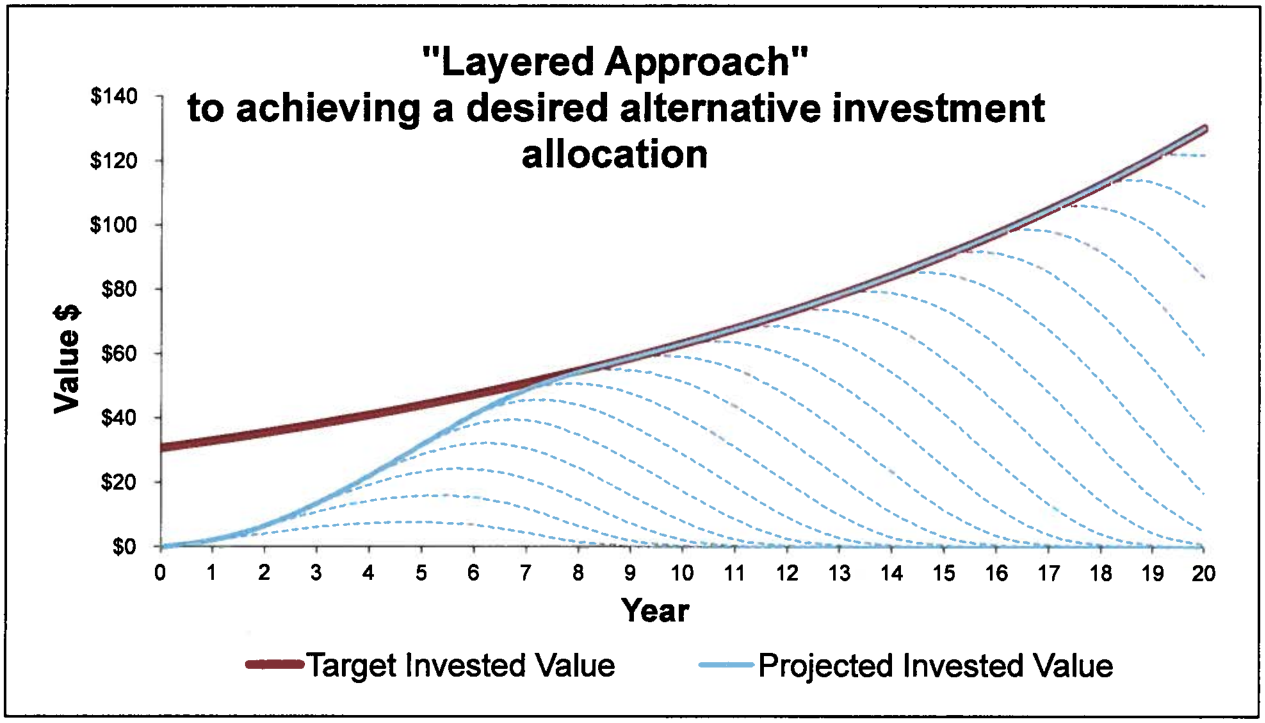
From an institutional investor's perspective, alternative Investments are typically made through non-publicly traded pooled accounts. These accounts or funds are typically structured as limited partnerships with the alternative investment manager serving as the general partner and many different accredited and usually institutional investors as limited partners. An alternative investment limited partnership will typically have a life of about 10 years. In the first few years of the fund, the general partner will seek out new investments according to that particular alternative investment manager's investment strategy. When the new investment is funded, the general partner will request or call capital from its limited partners who previously committed a fixed dollar amount pursuant to the limited partnership agreement that was agreed to by all partners during the formation of the fund. The beginning years of an alternative investment partnership, usually labeled the investment period, are characterized with requests for money that is subsequently invested. In the later years of an alternative investment partnership, sometimes labeled as the harvest period, the alternative investment manger will seek to sell their previously made investments and return their limited partners' capital along with, provided the investment was successful, a profit. During the life of an alternative investment partnership, the net cash flows are said to follow a "J-Curve". Please see Exhibit A for a visual depiction of the cash flow "J-Curve".

EXHIBIT A



As the alternative investment manager continues to sell the assets in the investment fund and subsequently distribute the proceeds to its limited partners, the market value of the fund decreases. As final investments are sold and distributed, the fund will ultimately liquidate itself entirely. The mechanics of alternative investments are such that in order to obtain a meaningful market value of alternative investments, it is necessary for an investor to make commitments in a metered and consistent manner. Some industry professionals will describe this approach as a layering approach, dollar cost averaging, or a consistent pacing or commitment approach. Please see Exhibit B for a visual depiction of this "layered approach".

EXHIBIT B



The Red Line is the investor's desired market value in dollars of an alternative investment program. The dotted blue lines represent the market values of individual alternative investment funds that need to be layered upon one another in order to build the solid blue line which is the sum of the market values of all of the alternative investment funds in a given portfolio.

II. Identification of Variables

Achieving a desired alternative investment allocation takes commitment, conviction, and patience. In order to determine how best to achieve a desired alternative investment market value, it is best to first identify the variables that can affect the market value of alternative investments from an institutional investor's perspective. The variables, definitions, and a brief explanation of these variables are as follows:

1. <u>Draw Down Rate</u>

The Draw Down Rate is the rate at which an alternative investment manger will request or call capital. When an institutional investors makes a commitment to a new investment partnership, that commitment is designated as an unfunded commitment until the investment manager requests or calls capital. When the alternative investment manger calls capital, this reduces the institutional investor's unfunded commitment and increases both its market value and its funded commitment. The market value is comprised of the investment that the investment managers just called capital to fund. Draw down rates can vary considerably and the decision to call capital is made solely by the general partner.

2. <u>Distribution Rate</u>

The Distribution Rate is the rate at with an alternative investment manager sells their previously made investments and distributes the proceeds to the limited partners of the alternative investment partnership. Distribution rates depend upon the Initial public offering and merger and acquisition markets. The decision of when to sell an investment is made solely by the alternative investment manager and can vary considerably. When an investment in distributed and capital is returned to the institutional investor, the market value of the alternative investment will be reduced as the investor receives cash or stock.

3. <u>Alternative Investment Rates of Return</u>

The alternative Investment rate of return is the rate at which the investments in the partnership grow over time. Investments are valued by the general partner and are typically reported to institutional investors quarterly. Investment returns can vary considerably and sometimes are negative. Factors that affect rates of returns include the operating performance of the asset, the amount of financial engineering, as well as prevailing market prices or comparable trading asset prices.

4. <u>Rate of Return for the Institutional Investor's Portfolio without Alternative Investments.</u>

The alternative investment dollar amount divided by the total dollar amount of the entire institutional investment manager's portfolio is the equation used to calculate the percentage of total. Because the total dollar amount of the entire institutional investment manager's portfolio is on the bottom or denominator of this simple equation, it is commonly referred to as the "denominator effect". If the denominator changes in value then the percentage of total will change in value. The rate of change or rate of return of the rest of an institutional investor's portfolio is affected by the composition of assets in that investor's portfolio as well as the performance of those assets. If the rest of an institutional investor's portfolio increases, all else equal, the market value of alternative investments as a percentage of total will decrease. If the rest of the institutional investor's portfolio decreases, all else equal, the market value of alternative investments as a percentage of total will increase. The performance of the rest of an institutional investment manger's portfolio needs to be carefully monitored when deciding how much and when to commit to an alternative investment partnership.

5. <u>Net Cash Outflow to Pensioners</u>

In a pension fund for example, pensioners are constantly contributing to and receiving distributions from the pension fund. Based on the composition of these cash flows, the overall value of the pension fund will be affected. As the value of the overall portfolio is affected, so is the alternative investment percentage of total.

6. Commitment Size and Timing.

Committing to new alternative investment partnerships can also affect the market value of the alternative investment portfolio as well as its percentage of total. When a new commitment is made it does not increase the market value of the alternative investment portfolio. It is only until the alternative investment manager calls capital and invests in does the market value of an alternative investment increase in value. It is important to note that the institutional investment manager has control over only one variable that affects the market value of alternative investments and that variable is the timing and size of new commitments.

III. Commitment Model and Conclusion

All of the above mentioned variables, and their relative variability, need to be taken into consideration when making a new commitment to an alternative investment fund. The Minnesota State Board of Investment considers these variables to estimate how much the Minnesota State Board of Investment should commit on a yearly basis in order to achieve its desired target allocation.

It is important to note that all of the variables that affect the market value of an alternative investment program are very sensitive and can fluctuate drastically. It is also unknown how these variables co-vary with one another. It is also important to mention that accurate forecasting of one of these variables, let alone all of them, is extremely difficult. It is with these statements in mind that the Minnesota State Board of investment should be very conservative in its assumptions as staff believes there is a bigger risk to being overcommitted to alternative investments than being under-committed.

The year in which an investment is made by an alternative investment manager can have a tremendous amount to do with that investment's performance. The year in which an alternative investment fund makes its first investment is said to be its "vintage year". It is critical for an institutional investor to plan appropriately so that its alternative investment program can be diversified by vintage year. A consistent and metered approach to investing in alternative investments is the best way to adequately diversify ones program by vintage year and appropriately build ones allocation towards its target.

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Private Equity

What is Private Equity?

Originally, the term private equity was best described by simply defining each word separately. Equity is a residual claim or interest of the most junior class of investors in an asset. Private simply means not public or in the case of a company, a private company is one whose shares are not publicly traded on a stock exchange such as the New York Stock Exchange. Used together, private equity describes an interest or investment in a residual claim of a privately held asset or company.

Private equity is not regulated to the degree in which public equity is. In order to sell shares in a company to the broad public markets, a company must register with the Securities Exchange Commission (SEC) and be in compliance with all of its rules and regulations. Private equity investments are not sold to the public and therefore do not have to be registered with the SEC. In order to protect average investors, federal law prohibits many investors from investing in investments that are not registered with the SEC. In order to participate in a private equity limited partnership and own limited partnership interests in a private equity fund, an investor must be an accredited investor as defined in Regulation D under the U.S. Securities Act of 1933. Many institutional investors, such as public and private pension funds, university endowments, foundations, insurance companies, sovereign wealth funds, and wealthy individuals, qualify as accredited investors as defined by the Securities Act of 1933.

The term private equity has evolved over time. Today, the term private equity is used as a broad term that encompasses different types of investment strategies including venture capital, growth capital, buyouts, and distressed or opportunistic investments that are accomplished via private markets.

Venture capital is used to help fund or seed young businesses that need funding in order to operate. These businesses usually do not generate a profit and in many cases are not yet generating revenue. Venture capital backed companies typically lack long operating histories, use cash quickly, and have an unpredictable cash flows.

Growth capital is used to help fund growth initiatives within smaller companies. Growth capital can be used to open an additional manufacturing site, increase research and development, increase sales and marketing, or open an additional business location.

A buyout is a private equity transaction in which a buyer (typically a private equity firm or a management team) acquires from the seller a controlling stake in the equity capital of a target company. A leveraged buyout (LBO) involves the acquisition of a company using borrowed money to finance a significant portion of the acquisition price. Buyouts are used to take a public company private, to separate a division from a corporation to create a stand-alone entity, or to help a management group purchase the company they are currently running (management buyout or MBO). Typically, buyout firms invest in more mature companies with more predictable and stable cash flows as compared to a venture backed firm.

Distressed or opportunistic investing is usually associated with investing in companies within a particular strategic niche or companies that are currently in distress, bankruptcy, or in the process of reorganization that are deeply undervalued by the market.

How to Invest in Private Equity

The private equity industry can trace its roots back to the latter half of the nineteenth century. As the private equity industry has evolved, the limited partnership has emerged as the dominant and most common organizational form. Funds structured as limited partnerships are governed by a limited partnership agreement between the fund manager, called the general partners (GP), and the funds investors, called limited partners (LPs). Institutional investors are able to gain private equity exposure as LPs when they commit to a private equity limited partnerships which is managed by the GP. Whereas the GP has management control over the fund and assumes general liability, the LPs do not have control over the management of the partnership and therefore have limited liability. In a limited partnership, the GP controls all of the partners' capital and invests it according to his or her firm's investment strategy. Private equity limited partnerships are typically set up as 10 year investment funds. Over the course of the ten year life of an investment fund, the private equity group will invest capital into various assets in accordance with their investment strategy. Leading up to and at the end of the life of a fund, all investments are sold and the proceeds are returned to investors, hopefully along with a profit. Many partnerships are extended beyond the 10 years by mutual agreement of the partners in order to provide optimal selling opportunities.

Why Invest in Private Equity

The survival and proliferation of the private equity model depends on some economic advantages its governance structure may have over the public equity governance structure. In many private equity transactions, the GP will own and control a majority interest in the company. A controlling ownership in a company allows private equity firms to be more flexible and creative than a passive or minority investor can be. With increased control, the GP can appoint members to the company's board of directors and affect significant change to a company's operations. A GP can also improve a company's capital structure and its ability to access credit markets on favorable terms. Many GP's believe incentives help them create shareholder value and work towards a better alignment of interests between the private equity owners and the managers of the firms they control. As a private company, ownership can also take a longer term view towards creating value for shareholders as compared to the short term view and demand for near terms results that are often characterized by public companies and Wall Street.

Private equity investments can benefit an institutionally managed portfolio. Institutional investors typically have a long investment horizon that is congruent with the illiquid and long lived nature of private equity funds. Investments in private equity allow an institutional investor to gain exposure to different areas of the global economy that the investor would otherwise be unable to access through the public markets. Due to the increased flexibility of private equity investments, GP's can make Private equity investments into areas of the global economy that have large demands for capital that the public markets are unable to provide. Many small, private, growing businesses are unable to raise money in the public debt or equity markets and can only look towards the private markets for capital.

Public markets are perceived to be more competitive and efficient than private markets. In a situation where there is more demand for capital than supply, all else being equal, capital can be deployed on more favorable terms and will have a better chance of providing investors with a favorable rate of return. With less competition and more assets being misprices by market participants, skilled private equity investors may be able to achieve better than market rates of return.

There are diversification benefits for a large institutional investor to investing in companies at different stages of corporate development. Many private businesses, of various states of development, require substantial capital in order to grow and expand. A firm's owner many not have sufficient funds to invest and finance growth oriented projects for the firm. In order to obtain funds to grow their business, an owner of a private firm will look to use some form of external capital; debt or equity. Typically, private companies, especially smaller ones, are not able to obtain substantial bank loans to fund what is perceived to be a risky growth oriented project such as opening a new store or manufacturing facility. Most private firms are also unable to raise debt in the public debt markets. These private companies are also typically not able to access the public equity markets by selling equity on an exchange through an initial public offering (IPO). If a company, in its earlier stages of development, is unable to sell their debt or equity on a public exchange, then institutional investors are not able to buy this particular company's debt or equity through the public markets. Ultimately, a firm's founder or owner may consider raising private equity, or selling part of their private business to another party that will help it grow and or improve its financial performance. This type of sale or transaction can occur in the form of a sale of a portion of the owner's business to a family friend, or a sale of their business to a private equity firm.

It can be argued that private equity is not expected to be strongly correlated with other asset classes. Many of the events that create value in private equity investments are not dependent upon the broader public markets and will not necessarily move in unison with them. Examples of such events are when a new venture is able to provide customers with previously unmet needs or when an orphaned corporate asset is separated from the parent company and allowed to thrive with a newly dedicated and appropriately incentivized management team. These diversification benefits can provide an institutional investor with a better positioned portfolio.

Investments in private equity can provide an institutional investor with a portfolio that is less vulnerable to inflation. If inflation is present and prices begin to rise, a company is able to adjust to its environment by raising the prices of the goods or services that it sells. Assuming all else is equal, as prices rise so will profit, which can be passed down to residual claimants or equity owners.

Minnesota State Board of Investment's goals for investing in private equity

In the early 1980's, the Minnesota State Board of Investment (MSBI) completed an extensive study of the private equity asset class, considering many of the factors mentioned above, and felt it would be a valuable addition to the alternative investment portfolio. The study concluded that adding private equity to the portfolio should provide high total rates of return and additional diversification.

The MSBI made its first private equity investment in 1984 with a $10 million commitment to Minneapolis-based Northwest Venture Partners. Since that time, the MSBI has continued to steadily invest in private equity in order to achieve its overall portfolio goals of enhancing diversification and provide high total rates of return.

Overtime, The MSBI's goal is to build and continue to support its private equity program. By continually committing to new private equity investment partnerships, the MSBI is ensuring diversification among vintage years. For a more detailed discussion and analysis related to the MSBI's commitment pacing, please see page 1.

Selection Process

When analyzing and evaluating financial performance of a private equity fund from the perspective of an investor, a comprehensive understanding of private equity fund structures, terms of investment, private equity fund valuation, and due diligence is critical. It is also important to understand a private equity group's ability to create value with a private equity investment.

All value enhancing activities are by nature not easy to accomplish. Because of the difficulty in achieving these outcomes, there is a probability that they will not occur. This risk is an inherent risk embedded in the activities of a private equity firm. If the private equity firm is not skilled at creating value, then the performance of that private equity manager will suffer.

Many private equity investments last longer than 10 years. Because of the long term nature of private equity investments, it is absolutely critical that an institutional investor is comfortable that the private equity investment professionals are extremely ethical, qualified, and committed to their firm, their limited partners, and their profession for the long term.

In order to identify those private equity managers that have the best chance of producing the highest rates of returns with the least amount of risk for investors, the MSBI considers many of the following factors in its due diligence and selection activities. The weighting of the factors in the review of a private equity investment will differ depending on the strategy of the investment.

1. Organization
    a. Background, performance and expertise of the firm in their given investment strategy
    b. The structure of the organization
    c. The firm's past experience as a fiduciary
    d. Ownership structure
2. Staff
    a. Experience and age of key professionals and their staffs
    b. Length of time staff member have been working together
    c. Turnover rate
    d. Potential impact of staff departures
    e. Compensation and incentive system
3. Proposed types of investments
    a. Composition of portfolio
    b. Use of financing arrangements and mechanisms
    c. Investment strategy and execution congruence
4. Acquisition process
    a. Background research utilized prior to investment
    b. Deal sourcing
    c. Due diligence capabilities

d. Timeliness of decision making process when an investment in under consideration

e. Role of committees and other entities in the decision making process

5. Investment management

a. Effectiveness of portfolio management in enhancing the value of individual investments in the fund portfolio.

b. Operational improvements

c. Leverage

a. While the use of leverage can enhance fund returns, it also exposes the investment to a higher level of risk. A firm's historical and proposed use of leverage will be evaluated to ensure that the fund will not be exposed to an inordinate level of financial risk.

d. Changes to the investments organizational structure that further aligns management with the goals and objectives of the investment managers.

6. Exit capabilities

a. The existence of a sell discipline

b. Specific factors leading to sell decision

c. The firms sales history

7. Size of the fund

a. Due to the size of the retirement assets, and the MSBI's 20% limitation on the investment of a single fund, the funds generally should have a minimum value of $500 million.

8. Other fund participants

9. Performance history

10. Terms and conditions

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Real Assets

What are Real Asset Investments?

Real asset investments are private market investments in, or involving, actual tangible assets such as real estate or resource investments.

Private market real estate investments typically include investments in office buildings, shopping centers, industrial, warehouses, apartments, hotels, and vacant or raw land.

Private market resource investments include investments in entities that harvest, or assist in the harvesting and use of, natural resources. Private market resource investments typically include investments related to the energy markets such as oil and gas producing properties, oil service companies and energy transmission and storage facilities. Resource investments can also include investments in or related to timberland, coal, rare minerals, wind turbines, water, solar energy, etc. Resource investments are typically made via private markets.

A private real asset means that it is not public or publicly traded via a stock exchange such as the New York Stock Exchange. Private real assets are not regulated to the degree in which a publicly traded fund containing real assets, such as a publicly traded Real Estate Investment Trust (REIT) or Master Limited Partnership (MLP), or a publicly traded company that focuses on developing and harvesting natural resources would be. In order to sell shares in a fund or a company to the broad public markets, a company must register with the Securities Exchange Commission (SEC) and be in compliance with all of its rules and regulations. Private real asset investments are not sold to the public and therefore do not have to be registered with the SEC. In order to protect average investors, federal law prohibits many investors from investing in investments that are not registered with the SEC. In order to participate in a private real asset investment and own interests in a private real asset fund, an investor must be an accredited investor as defined in Regulation D under the U.S. Securities Act of 1933. Many institutional investors, such as public and private pension funds, university endowments, foundations, insurance companies, sovereign wealth funds, and wealthy individuals, qualify as accredited investors as defined by the Securities Act of 1933.

How to Invest in Real Assets

As the real asset industry has evolved, the limited partnership has emerged a common organizational form for private real estate and resource investments. Funds structured as limited partnerships are governed by a limited partnership agreement between the fund manager, called the general partners (GP), and the funds investors, called limited partners (LPs). Institutional investors are able to gain real asset exposure as LPs when they commit to a real asset limited partnership which is managed by the GP. Whereas the GP has management control over the fund and assumes general liability, the LPs do not have control over the management of the partnership and therefore have limited liability. In a limited partnership, the GP controls all of the partners' capital and invests it according to his or her firm's investment strategy. Real asset limited partnerships are typically set up as 10 or 15 year investment funds. Over the course of the ten or fifteen year life of an investment fund, the real asset group will invest capital into various forms of real assets in accordance with their investment strategy. Leading up to and at the end of the life of a fund, all investments are sold and the proceeds are returned to investors, hopefully along with a profit. Many partnerships are extended beyond the 10 to15 years by mutual agreement of the partners in order to provide optimal selling opportunities.

Another commonly used investment vehicle used only in the real estate asset class is the private REIT. Private REITS operate in a manner very similar to the Limited Partnership model outlined above.

<u>Why Invest in Real Assets?</u>

Real asset investments can be made in the private markets as well as the public markets. It is believed that the private market investments can offer institutional investors with some additional benefits in return for the lack of liquidity associated with the private markets. The survival and proliferation of the private market model depends on some economic advantages its governance structure may have over some publicly traded assets and their governance structures. In many private real asset transactions, the GP will own and control a majority interest in the asset. A controlling ownership in a real asset allows private real asset owners to be more flexible and creative than a passive or minority owner can be. With increased control, the GP can affect significant change to a real asset's operations. A GP can also improve an asset's capital structure and its ability to access credit markets on favorable terms. Many GP's believe incentives help them create value and work towards a better alignment of interests between the real asset owners and the managers of the real estate or resource investments they control. Private ownership can allow management to take a longer term view towards creating value for private owners as compared to the short term view and demand for near terms results that are often characterized by publicly traded investments and Wall Street.

Private real asset investments can benefit an institutionally managed portfolio. Institutional investors typically have a long investment horizon that is congruent with the illiquid and long lived nature of real asset investment funds. Public markets are perceived to be more competitive and efficient than private markets. In a situation where there is more demand for capital than supply, all else being equal, capital can be deployed on more favorable terms and will have a better chance of providing investors with a favorable rate of return. With less competition and more assets being misprices by market participants, skilled real asset managers may be able to achieve better than market rates of return.

Real estate offer protection against inflation, especially investments in commercial, residential, and industrial real estate properties. These real estate property types tend to correlate with inflation as measured by the consumer price index (CPI). For this to hold true, during periods of inflation, real estate managers must not be subject to sudden sharp increases in operating costs and have the ability to adjust to their environment by adjusting their properties' income streams to stay abreast with rising prices in order to obtain a real rate of return. Real estate offers the potential for capital appreciation and can typically offer a current yield or rate of return prior to a final sale. With a growing global population, investors may benefit from investing in real estate as it sits upon land which is a finite asset. Real estate investments also provide additional diversification which reduces the volatility of total portfolio returns.

In a world with increasing demand on finite resources, resource investments can provide owners with additional diversification benefits as well. Much like types of real estate investments, investments in natural resources can provide a hedge against inflation. Natural resource investments and investments in other areas of the energy sector are typically tangible real assets which tend to hold and protect their value better against paper currency in an inflationary environment. Moreover, resource investments have intrinsic value which investors recognize and value in times of uncertainty.

Many private real estate and resource related businesses, of various states of development, require substantial capital in order to grow and expand. A real asset's owner many not have sufficient funds to invest and finance growth oriented projects for the firm. In order to obtain funds to grow their business, an owner of a private real asset will look to use some form of external capital; debt or equity. Typically, private real asset owners, especially smaller ones, are not able to obtain substantial bank loans to fund what is perceived to be a risky growth oriented projects such as developing new natural resources, building new energy transmission assets, or building a new real estate development. Most private asset owners are also unable to raise debt in the public debt markets. These private real asset owners are also typically not able to access the public equity markets by selling an ownership stake in their asset on an exchange through an initial public offering (IPO). If a real asset owner is unable to sell debt or equity through the public markets, then institutional investors are not able to buy it. Ultimately, a real asset owner may consider accessing the private markets in an effort to sell a part of their private real asset to another party that will help it grow and or improve its financial performance. This type of sale or transaction can occur in the form of a sale of a portion of the real asset to a family member or friend, or a sale of their private real asset to a real asset investment management firm.

It can be argued that real assets are not expected to be strongly correlated with other asset classes. Many of the events that create value in real assets investments are not dependent upon the broader public markets and will not necessarily move in unison with them. Examples of such events are when a new retail development is opened in an increasingly populated and underserved area, or when additional natural resources are discovered in an area previously known to contain no such natural resources. Dedicated, entrepreneurial, and appropriately incentivized real asset management teams have been and will continue to be able to produce returns for investors despite many macroeconomic headwinds. These diversification benefits can provide an institutional investor with a better positioned portfolio.

Minnesota State Board of Investment's goals for investing in real assets

In the early 1980's, the Minnesota State Board of Investment (MSBI) begin investing in real assets, considering many of the factors mentioned above, and felt it would be a valuable addition to the alternative investment portfolio.

The MSBI made its first real estate investments in 1981 with $10 million investment each in The Aetna Life Insurance Company's Real Estate Separate Account, Equitable Life Assurance Society's Separate Account 8, and the Prudential Insurance Company's PRISA account. The MSBI made its first resource investment with a $15 million investment in AMGO I in 1981. Since that time, the MSBI has continued to steadily invest in real assets in order to achieve its overall portfolio goals of enhancing diversification and provide high total rates of return.

Overtime, The MSBI's goal is to build and continue to support its real asset program. By continually committing to new real asset investment partnerships, the MSBI is ensuring diversification among vintage years. For a more detailed discussion and analysis related to the MSBI's commitment pacing, please see **Page 1**.

Selection Process

When analyzing and evaluating financial performance of a real asset manager from the perspective of an investor, a comprehensive understanding of real asset fund structures, terms of investment, real asset valuation, and due diligence is critical. It is also important to understand a real asset manager's ability to create value with a real asset investment.

All value enhancing activities are by nature not easy to accomplish. Because of the difficulty in achieving these outcomes, there is a probability that they will not occur. This risk is an inherent risk embedded in the activities of any real asset manager. If the real asset manager is not skilled at creating value, then the performance of that manager will suffer.

Many real asset investments last longer than 10 years. Because of the long term nature of real asset investments, it is absolutely critical that an institutional investor is comfortable that the real asset manager's investment professionals are extremely ethical, qualified, and committed to their firm, their investors, and their profession for the long term.

Real estate and resource investments tend to be cyclical in nature. An institutional investor should be aware of the risk associated with cyclical investments especially when debt or financial leverage is involved. Financial leverage amplifies returns in both a positive and negative manner.

In order to identify those real asset managers that have the best chance of producing the highest rates of returns with the least amount of risk for investors, the MSBI considers many of the following factors in its due diligence and selection activities. The weighting of the factors in the review of a real asset investment will differ depending on the strategy of the investment.

1. Organization
    a. Background, performance and expertise of the firm in their given investment strategy
    b. The relative prominence of real estate among the firm's undertakings

c. The relationship among real estate investment, brokerage, and management activities within the firm

d. The structure of the organization

e. The firm's past experience as a fiduciary

f. Ownership structure

2. Staff

a. Experience and age of key professionals and their staffs

b. Length of time staff member have been working together

c. Turnover rate

d. Potential impact of staff departures

e. Compensation and incentive system

3. Proposed types of investments

a. Composition of portfolio by real asset type and location

b. Stage of real asset development (cash flowing real assets vs. developmental assets)

c. Use of financing arrangements and mechanisms

d. Investment strategy and execution congruence

4. Acquisition process

a. Background research utilized prior to investment

b. Deal sourcing

c. Investment time frame

d. Due diligence capabilities

e. Timeliness of decision making process when an investment in under consideration

f. Role of committees and other entities in the decision making process

5. Investment management
    a. Effectiveness of portfolio management in enhancing the value of individual investments in the fund portfolio.
    b. Operational improvements
    c. Leverage
        a. While the use of leverage can enhance fund returns, it also exposes the investment to a higher level of risk. A firm's historical and proposed use of leverage will be evaluated to ensure that the fund will not be exposed to an inordinate level of financial risk.
    d. Changes to the investments organizational structure that further aligns management with the goals and objectives of the investment managers.
6. Exit capabilities
    a. The existence of a sell discipline
    b. Specific factors leading to sell decision
    c. The firms sales history
7. Size of the fund
    a. Due to the size of the retirement assets, and the MSBI's 20% limitation on the investment of a single fund, the funds generally should have a minimum value of $500 million.
8. Other fund participants
9. Performance history
10. Terms and conditions

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Yield Oriented Investments

What are Yield Oriented Investments?

Yield oriented investments are typically private market investments that combine elements of debt and equity to provide a hybrid form of corporate financing that is both versatile and flexible.

Yield oriented investments generally take the form of fixed rate subordinated debt securities in combination with an equity component, typically in the form of warrants, common stock, or contingent interest acquired at nominal additional cost. In certain instances, a yield oriented investment may include senior debt, preferred stock, or common stock in conjunction with subordinated debt.

Private market yield oriented investments can represent investments in a variety of different situations, including recapitalizations, management buyouts and as growth capital for businesses or real assets.

A private yield oriented investment means that it is not public or publicly traded via a stock exchange such as the New York Stock Exchange. Private yield oriented investments are not regulated to the degree in which a publicly traded debt or equity security would be. In order to sell debt or equity investments to the broad public markets, the investments must register with the Securities Exchange Commission (SEC) and be in compliance with all of its rules and regulations. Private yield oriented investments are not sold to the public and therefore do not have to be registered with the SEC. In order to protect average investors, federal law prohibits many investors from investing in investments that are not registered with the SEC. In order to participate in a private yield oriented investment and own interests in a private yield oriented investment fund, an investor must be an accredited investor as defined in Regulation D under the U.S. Securities Act of 1933. Many institutional investors, such as public and private pension funds, university endowments, foundations, insurance companies, sovereign wealth funds, and wealthy individuals, qualify as accredited investors as defined by the Securities Act of 1933.

How to Invest in Yield Oriented Investments

As the yield oriented industry has evolved, the limited partnership has emerged as a common organizational form for yield oriented investments. Funds structured as limited partnerships are governed by a limited partnership agreement between the fund manager, called the general partners (GP), and the funds investors, called limited partners (LPs). Institutional investors are able to gain yield oriented exposure as LPs when they commit to a yield oriented limited partnership which is managed by the GP. Whereas the GP has management control over the fund and assumes general liability, the LPs do not have control over the management of the partnership and therefore have limited liability. In a limited partnership, the GP controls all of the partners' capital and invests it according to his or her firm's investment strategy. Yield oriented limited partnerships are typically set up as 10 year investment funds. Over the course of the ten year life of an investment fund, the yield oriented investment group will invest capital into various forms of yield oriented investments in accordance with their investment strategy. Leading up to and at the end of the life of a fund, all investments are sold or redeemed and the proceeds are returned to investors, hopefully along with a profit. Many partnerships are extended beyond the 10 years by mutual agreement of the partners in order to provide optimal liquidation opportunities.

Why Invest in Yield Oriented Investments?

Yield oriented investments can be structured in many different ways which can be very appealing to both issuers and investors.

For companies, yield oriented investments can be adapted to the specific needs of the company raising capital due to the versatility and flexibility of financing parameters such as the amount, maturity and repayment methods, and the type and scheduling of interest payments. The flexibility of yield oriented investments allows customized intermediate forms of financing combining debt and equity to be designed in order to fill the capital needs of different companies or real assets owners.

When a company's management or real asset owner is looking to expand operations, the owner or management team typically needs capital in order to do so. A company or real asset owner will usually look toward traditional methods of financing which include cash flow from operations, issuing debt or obtaining a loan, or issuing some form of equity. For many businesses or real assets, traditional methods of financing are insufficient to finance the investment amount required. This may be because management is unwilling to dilute existing equity owners or does not wish to give up ownership rights, or it could be because the company is unable to obtain a loan to fund its future growth. As a result of these types of circumstances, financing gaps arise, especially in the case of small and medium sized businesses. Funding gaps or a lack of adequate capital can restrict a company's ability to follow through with value creating projects and may limit its ability to best position itself for the future. In these types of circumstances, a hybrid type of security can be a better solution for both capital providers and capital users.

Yield oriented investments provide customized solutions for financing gaps that can occur within companies or real assets. Established small to medium-sized companies with growth potential, in particular, can close financing gaps by raising yield oriented capital that is structured to suit their individual needs.

For investors, the hybrid nature of yield oriented investments provides institutional investors with some of the risk and return characteristics of both debt and equity. Because yield oriented investments are typically unsecured and subordinated, the financier is accepting more risk than a traditional senior secured lender but users of yield oriented capital typically pay significantly higher interest rates than traditional debt capital.

The equity features of yield oriented investments also allow investors to share in a portion of upside from a well performing investment usually in the form of warrants, common and or preferred equity. Typically yield oriented investments offer investors less risk than traditional equity securities because yield oriented investments provide current income and provide investors with downside protection in the form of creditor rights or covenants, a more senior position in the capital structure, and liquidation preferences over equity securities.

Yield oriented investments can be made in the private markets and it is believed that private market investments can offer institutional investors with some additional benefits in return for the lack of liquidity associated with the private markets. Institutional investors typically have a long investment horizon that is congruent with the illiquid and long lived nature of yield oriented investments. Public debt and equity markets are perceived to be more competitive and efficient than private markets. In a situation where there is more demand for capital than supply, all else being equal, capital can be deployed on more favorable terms and will have a better chance of providing investors with a favorable rate of return. With less competition, skilled yield oriented investment managers may be able to achieve better than market rates of return with assuming less than market risk.

Yield oriented investments can provide institutional investors with additional diversification which reduces the volatility of total portfolio returns. Yield oriented investments can be made into different size businesses, different industries, and into companies or real assets at different stages of development all, of which increase an institutional investors level of diversification.

It can be argued that yield oriented investments are not expected to be strongly correlated with other asset classes and are not dependent upon public exits to generate liquidity due to their fixed income like characteristics. Many of the events that create value in yield oriented investments are not dependent upon the broader public markets and will not necessarily move in unison with them. As long as a company or real asset is able to generate enough cash flow to pay its subordinated debt and equity like securities holders, than the value of these yield oriented investments should be unaffected by various developments in the public markets.

Minnesota State Board of Investment's goals for investing in yield oriented

In the early and mid 1990's, the Minnesota State Board of Investment (MSBI) begin investing in yield oriented investments, considering many of the factors mentioned above, and felt yield oriented investments would be valuable additions to the alternative investment portfolio.

The MSBI made its first yield oriented investment in 1994 with $20 million investment each in Summit Subordinated Debt Fund I. Since that time, the MSBI has continued to steadily invest in yield oriented investments in order to achieve its overall portfolio goals of enhancing diversification and provide high total rates of return.

Overtime, The MSBI's goal is to build and continue to support its yield oriented program. By continually committing to new yield oriented investment partnerships, the MSBI is ensuring diversification among vintage years. For a more detailed discussion and analysis related to the MSBI's commitment pacing, please see **page 1**.

Selection Process

When analyzing and evaluating the financial performance of a yield oriented investment manager from the perspective of an investor, a comprehensive understanding of yield oriented investment fund structures, terms of investment, yield oriented investment valuation, and due diligence is critical. It is also important to understand a yield oriented investment manager's ability to source investment opportunities, to underwrite credit, and to structure the investment in a manner in which it provides upside potential along with downside protection.

All of these activities enhance the value of a yield oriented investment and are by nature not easily accomplished. Because of the inherent difficulty in these activities, there is a probability that they will not occur. This risk is an inherent risk embedded in the activities of any yield oriented manager. If the yield oriented investment manager is not skilled in these value creating activities, then the performance of that manager will suffer.

Many yield oriented investment funds last longer than 10 years. Because of the long term nature of yield oriented investments, it is absolutely critical that an institutional investor is comfortable that the yield oriented manager's investment professionals are extremely ethical, qualified, and committed to their firm, their investors, and their profession for the long term.

In order to identify those yield oriented investment managers that have the best chance of producing the highest rates of returns with the least amount of risk for investors, the MSBI considers many of the following factors in its due diligence and selection activities. The weighting of the factors in the review of a yield oriented investment manager will differ depending on the strategy of the investment.

1. Organization
    a. Background, performance and expertise of the firm in their given investment strategy
    b. The relative prominence of yield oriented investments among the firm's undertakings
    c. The dynamic between the yield oriented investment team and the rest of the firm
    d. The structure of the organization
    e. The firm's past experience as a fiduciary
    f. Ownership structure
2. Staff
    a. Experience and age of key professionals and their staffs
    b. Length of time staff member have been working together
    c. Turnover rate

d. Potential impact of staff departures

e. Compensation and incentive system

3. Proposed types of investments

a. Investment terms, rights, and protections.

b. Composition of portfolio related to investments by industry and location

c. Composition of portfolio by company stage of development

d. Use of financing arrangements and mechanisms

e. Investment strategy and execution congruence

4. Investment or underwriting process

a. Background research utilized prior to investment

b. Deal sourcing

c. Credit underwriting acumen

d. Investment structuring acumen

e. Investment time frame

f. Due diligence capabilities

g. Timeliness of decision making process when an investment in under consideration

h. Role of committees and other entities in the decision making process

5. Investment management

a. Effectiveness of portfolio management in enhancing the value of individual investments in the fund portfolio.

b. Ability to restructure and renegotiate terms and conditions if necessary

c. Leverage

   a. While the use of leverage can enhance fund returns, it also exposes the investment to a higher level of risk. A firm's historical and proposed use of leverage will be evaluated to ensure that the fund will not be exposed to an inordinate level of financial risk.

6. Exit capabilities
    a. The existence of an exit discipline
    b. Specific factors leading to an exit decision
    c. The firms exit history
7. Size of the fund
    a. Due to the size of the retirement assets, and the MSBI's 20% limitation on the investment of a single fund, the funds generally should have a minimum value of $500 million.
8. Other fund participants
9. Performance history
10. Terms and conditions

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MANAGER RETENTION POLICY

Staff Paper

April 2013

OVERVIEW

The SBI retains a diverse group of investment managers for the many funds under its management. An integral feature of the Board's investment policy is evaluating the performance of these managers. The Board seeks to determine the level of confidence it may have or continue to have in each manager.

It may appear that the SBI needs only to observe changes in the value of its investment managers' portfolios over time to make appropriate judgments concerning the managers' talents. Unfortunately, performance evaluation is not this straightforward, but is a complex process. The investment results of even superior managers exhibit a large amount of random variability. This variability makes it difficult to identify investment skill. Without sound procedures, the evaluation process can easily break down into a series of short-run, contradictory decisions that are counterproductive to the funds' long-run interests. In order to make informed judgments regarding the capabilities of its managers and potential managers, the Board requires a comprehensive evaluation process.

By establishing a comprehensive evaluation process, the SBI is able to look beyond quarterly performance numbers to assess the factors that drive performance- the organization, the people, the investment philosophy, the investment process and the portfolio. These qualitative factors are evaluated in conjunction with quantitative measures with the goal of evaluating how much of a manager's performance is due to skill and whether the manager retains the capability to continue to perform. With this process the Board seeks productive evaluation that considers a range of measures to reach a more fully developed understanding of portfolio outcomes without placing too much emphasis on one piece of data. The Board recognizes that evaluation tools are imperfect and that using a host of metrics is essential.

The SBI believes that the evaluation framework in this paper, its manager retention policy, offers three primary benefits:

- It encourages a comprehensive and consistently applied analysis.
- It fosters a long-term attitude toward performance evaluation.
- It communicates investment objectives among the Board, the IAC, investment managers, and staff.

QUALITATIVE GUIDELINES

Qualitative performance evaluation relates to those aspects of an investment manager's investment operations that cannot be easily expressed as measurable targets. By definition, these criteria cannot be readily incorporated into numerical decision rules. As a result, they may require significant judgments on the part of evaluators. The SBI must attempt to deduce the skills of an investment manager by searching for the presence or absence of basic building blocks of sound investment management within a manager's firm.

Qualitative guidelines can be viewed as necessary, but not sufficient, conditions for consistent superior investment performance. To the extent that a manager substantially fails to satisfy these criteria, the SBI may lack confidence that the manager has the necessary elements of a successful investment operation. On the other hand, even if the manager fully satisfies these criteria, there is no guarantee that the manager will exhibit long-run superior results. Because superior investment abilities are difficult to identify, the SBI must rely heavily on qualitative inferences of a manager's skills.

The SBI draws inferences from criteria categorized under two broad headings-organization and investment approach.

Organization

An effective organization is a necessary element of a successful investment program. Qualitative factors that the SBI believes characterize superior investment management organizations are:

- **Experienced and talented staff.** Highly motivated and talented professionals lie at the heart of any successful investment organization. The evaluation criteria are used to evaluate the experience and quality of the professionals employed by a manager.

- **Organizational stability and clear leadership.** The firm maintains a stable organization by retaining talented professionals and integrating these talented people into a cohesive structure through effective leadership. The firm has a well-conceived succession plan for ownership changes and departures of key investment personnel.

- **Business plan.** A manager should have a business plan in place. Uncontrolled growth can impede a manager's performance. Conversely, an unexpected reduction in the firm's asset base could have business risk implications. The growth path of a successful firm should be consistent with the organization's capabilities to manage effectively the portfolios of all clients.

- **Client support.** Large institutional clients, such as the SBI, have a variety of administrative requests of a manager, including data collection and strategy reports. A manager's organization should be responsive to such needs.

- **Compliance and internal controls.** The firm demonstrates its commitment to integrity and fiduciary responsibility. The firm maintains proper accounting, trading operations, compliance and internal control systems.

Investment Approach

Talented people blended into an effective organization are not enough to produce superior investment results. A well-defined investment approach is needed to focus the resources of a manager's organization in a particular direction. Factors that describe the investment approach that the SBI believes characterize superior organizations are:

- **Clearly specified investment strategy.** A manager's investment approach, or strategy, should reflect a specification of those segments of the market in which the manager chooses to focus its energies. The manager should have clear valuation, buy and sell disciplines. Further, a manager should have consistently and successfully applied its investment strategy over a variety of market conditions.

- **Well-conceived decision-making process.** A manager's investment strategy is implemented through a decision-making process. This decision-making process should be clear and well-conceived, transparent and repeatable. It should involve a set of logical portfolio construction procedures, consistent with the manager's investment strategy.

- **Adequate risk control mechanism.** The manager's investment approach must have a risk control system. The manager should understand its performance relative to an appropriate benchmark and the investment risks it takes to generate that performance. The manager should constantly gather information that can be used to refine the investment approach and make it more effective.

Figure 1 provides a detailed list of qualitative criteria which can be used to evaluate the status of the Board's managers and to evaluate potential new managers.

FIGURE 1

MANAGER PERFORMANCE EVALUATION
QUALITATIVE CRITERIA

I. ORGANIZATION AND STAFF

A. Experience and Quality of People

1. Professionals exhibit a high degree of competence and experience.
2. Professionals have managed money successfully under a variety of market conditions.
3. Professionals are familiar with needs of large institutional clients.

B. Stability of Firm

1. Ownership structure and compensation structure are appropriate for retention of key professionals and long-term survival of firm.
2. Current investment team is responsible for firm's track record.
3. There is a well-conceived succession plan in place to deal with ownership changes and departures of key investment personnel.
4. Turnover has not been excessive in terms of numbers of people or reasons for their departures.
5. When turnover has taken place, corrective measures have been promptly taken.
6. Control or business emphasis of firm has not changed, or in those cases in which it has, the firm's investment process has remained intact.

C. Leadership

1. An organization structure is in place that clearly defines which individuals are accountable for directing and motivating the firm's professionals.
2. Investment team works collaboratively.

D. Compliance and Internal Controls

1. Firm demonstrates its commitment to integrity and fiduciary responsibility.
2. Firm has proper accounting, trading operations, compliance and internal control systems.
3. SBI prefers that the firm provide return performance consistent with GIPS standards.

E. Assets Under Management and Accounts Serviced

1. Firm has a viable business plan in place, consistent with its investment approach.
2. Account load of portfolio managers is not excessive.
3. No extreme gain or loss of accounts has occurred in recent years.
4. Success of firm is not dependent on SBI portfolio assets.
5. Firm displays reasonable variation in portfolio composition and returns among clients portfolios in the same investment strategy.
6. SBI prefers the firm have experience managing institutional assets.

F. Client Relations

1. Support staff is adequate to provide satisfactory client servicing.
2. Firm demonstrates willingness to cooperate with clients to achieve client goals.

II. INVESTMENT APPROACH

A. Investment Strategy

1. Investment strategy is attractive in that it reflects a thoughtful consideration of reasonable risk-return opportunities.
2. Investment strategy has clear, consistent valuation, buy and sell disciplines.
3. Investment strategy has been consistently applied over a variety of market environments.
4. Investment strategy is represented by an appropriate benchmark.

B. Decision-Making Process

1. Portfolio construction procedures are specified, efficient, and consistent with the investment style.
2. Investment research coverage is thorough.
3. Decision-making hierarchy among professionals is clearly specified.
4. The process is transparent and repeatable.

C. **Performance Review Process**

1. Comparisons of risk-return performance relative to a pre-determined benchmark are made.
2. Attempts are made to identify and rectify sources of performance problems.
3. Performance results, sources of returns, and investment strategy are clearly presented to clients.

QUANTITATIVE GUIDELINES

Quantitative performance evaluation relates to those aspects of an investment manager's operation that can be analyzed using numerical measures. These criteria are derived from portfolios and returns produced by the manager, and include the risk incurred by the manager. ***Figure 2*** provides a specific list of criteria which can be used to evaluate the SBI's current managers and potential new managers.

FIGURE 2

MANAGER PERFORMANCE EVALUATION
QUANTITATIVE CRITERIA

I. PORTFOLIO

A. Manager maintains consistent portfolio characteristics over time.

1. Security and sector characteristics are consistent with the investment style.
2. Number of securities and turnover are consistent with the investment style.

II. PERFORMANCE

A. Expectations

1. Returns are consistent with expectations.
2. Risk is consistent with expectations.
3. Tracking error is consistent with expectations.

B. Measurements

1. Relative returns are compared to manager benchmark over time.
2. Risk is defined as the annualized standard deviation of excess returns relative to the benchmark.
3. A measure of performance is the ratio of value added to the variability of excess returns.

Quantitative evaluation criteria should guard against two different types of decision making errors:

- Type I Error. Retain a manager who will not add value in the future.
- Type II Error. Terminate a manager who will add value in the future.

Both of these errors will prove costly to the SBI. Effective decision guidelines should seek an appropriate balance between eliminating managers that are not likely to add value in the future (i.e., attempting to avoid Type I errors) and incurring unproductive manager turnover (i.e., attempting to avoid Type II errors).

Confidence Interval Approach

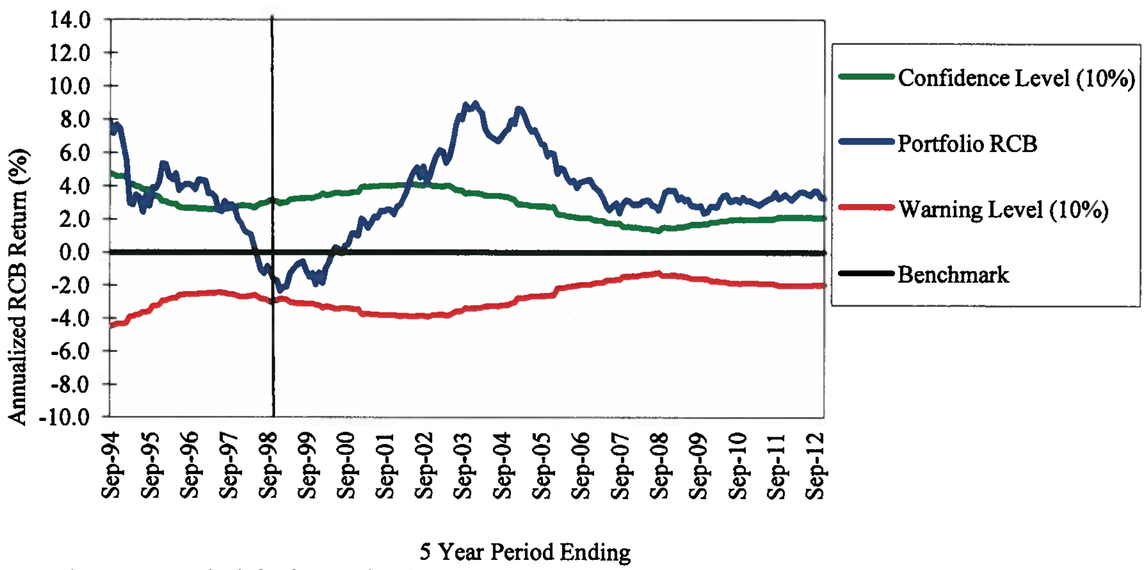
Figure 3 presents a general illustration of an approach to quantitative performance evaluation that attempts to recognize these two types of error. It takes into account both a manager's performance relative to a specified benchmark and the variability of the manager's returns around that benchmark. The following discussion is descriptive in nature and avoids a long presentation of statistical concepts.

The horizontal line in ***Figure 3*** represents the return on a hypothetical manager's benchmark. The manager's actual return less the return on the benchmark is shown by the jagged line. When the manager has exceeded (or conversely, fallen below) the benchmark's return for some specified time period, its relative return line will plot above (or conversely, below) the horizontal line. The graph is constructed using rolling five year periods. That is, each point on the graph depicts the preceding 60 months of returns, annualized and net of fees.

Naturally, the SBI would like its managers' returns always to lie above the horizontal line. But even the most skillful manager may underperform its benchmark for periods of time. How much under-performance should the SBI permit before becoming convinced that a manager is inferior? Conversely, by how much must the manager outperform its benchmark before the SBI feels comfortable that the manager is truly superior? Because the manager's performance relative to its benchmark has a large variable element to it, a precise answer to these two questions cannot be given. Rather, an analysis is required that reduces the probability of an incorrect answer to an acceptable level.

The upper and lower bands in ***Figure 3*** represent a "confidence interval" surrounding the return on the manager's benchmark. The more volatile the manager's returns, the wider the range will be. In between the upper and lower confidence interval bands lies a range of performance relative to the benchmark for which it is difficult to distinguish skill from random chance. That is, in this range a manager's superior or inferior performance relative to the benchmark might be due to skill (or lack thereof), but there also is a high probability that the relative performance is due simply to chance. On the other hand, if a manager's relative return falls outside the confidence interval, this result represents superior or inferior performance that is significant enough that the odds of it being due to chance alone are low.

INVESTMENT MANAGER NAME
Rolling Five Year Returns Compared to Benchmark



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

The SBI uses this confidence interval approach to highlight quantitative performance concerns about its investment managers. Confidence intervals are constructed for each manager using rolling five year time periods. The resulting returns compared to benchmark (RCB) graph plots performance relative to the agreed upon benchmark, net of fees. The confidence interval will be wider or narrower depending on the level of risk that an individual manager takes. As a result, the confidence interval tailors the analysis to the individual manager's investment approach and establishes expectations regarding the manager's return volatility over time. The RCB metric is also used to establish expectations regarding a passive manager's return volatility.

Staff draws the graph when it has two years of experience with the firm. When completed, a graph displays return history and includes the return data that led the SBI to retain the firm as well as the SBI's actual experience. Including a longer time period in the graph puts manager evaluation into a larger context and assists the SBI in distinguishing unusual, deteriorating performance (or superior performance) from recurring patterns in an active manager's returns.

DECISION GUIDELINES

Failure to meet one or more of these qualitative and quantitative criteria should not serve as grounds for the immediate dismissal of a manager. However, there are several important exceptions to this general rule. Certain changes in a manager's organization or investment approach should dictate immediate re-evaluation of the Board's relationship with the firm. These changes are:

- A perceived change in the manager's investment style or decision-making process.
- A change in the firm's structure, ownership or important members of its management team.
- A significant gain or loss of accounts or assets under management.
- Persistent long-term underperformance.

REPORTING

The SBI assembles information about its managers on a continuous basis through face-to-face visits, phone calls, e-mail exchanges and periodic reporting. The SBI uses structured reporting formats as part of its comprehensive evaluation process.

Quarterly Reports

The SBI uses two reporting formats to communicate information about its managers on a quarterly basis:

- **Manager Commentaries.** Quarterly, each manager prepares a brief analysis of its performance over the last quarter and year. This analysis includes a summary of portfolio positions, the investment philosophy and outlook underlying those positions and explanation of what worked and did not work. In addition, the manager highlights any significant ownership and personnel changes along with information about accounts gained and lost. The purpose of the commentary is to convey information about, and directly from, each manager to the Board, IAC and staff on a regular basis. The commentary summarizes the analysis that staff conducts on an on-going basis for each firm. The format for the Manager Commentary is in ***Figure 4***. These commentaries are included in the materials prepared for the quarterly meetings of the Board and the IAC.

- **Evaluation Reports.** The quarterly evaluation report format in ***Figure 5*** summarizes the salient features of the qualitative and quantitative evaluation guidelines. These reports are reviewed by the IAC on a quarterly basis and presented to the Board.

Reports on Manager/Staff Meetings

Staff meets with each manager at least annually, either at SBI offices or at the manager's place of business. Knowledge gained from these meetings may be incorporated into the "staff comment" section of the quarterly Evaluation Reports described above.

In-Depth Reviews

Staff prepares an in-depth written review of a manager if issues arise concerning the future status of the firm. While the components of the review may be tailored for each manager, such a review includes organizational background, investment approach and performance analysis.

PROCESS FOR HIRING AND FIRING INVESTMENT MANAGERS

When the SBI recognizes a need to hire a new investment manager, the following process is used. Staff, with ideas from IAC members and the SBI's general consultant, generates a short list of potential manager candidates and interviews these organizations. The general consultant provides research on the candidate firms. Staff brings the names of finalist candidates to the IAC for discussion. The IAC interviews the finalist firm and makes a recommendation to the Board. The Board acts on the recommendation, and with approval of the recommendation and assistance from legal counsel staff enters into a contract with the approved firm.

The process for terminating a manager is similar. Staff brings a recommendation to the IAC for terminating an investment manager. If it concurs, the IAC recommends approval to the Board who has the authority to terminate a contract. If the Board approves the recommendation, staff terminates the contractual relationship with the manager. Staff has discretion to remove assets from a manager's portfolio. In the event staff must remove all assets, the Board must approve the termination of the contract.

FIGURE 4

MANAGER PERFORMANCE EVALUATION
MANAGER COMMENTARIES

Manager Commentary
(Investment Manager Name)
(Investment Category)

Period Ending:	**xx/xx/xx**	**Returns**	**Qtr.**	**12Months**
Total Firm Assets Under Management	$	Actual	%	%
Total Firm Assets Managed in this Discipline	$	Benchmark	%	%

☐ *Check if Net*

Footnotes:

1. ***Past Performance.*** *Summarize your performance over the last quarter and last 12 months. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List the accounts gained and lost in this discipline and the associated asset value over the same time period.*

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

5. ***Account Reconciliation.*** *Has your firm performed a reconciliation of prices with State Street Bank on the SBI's account, and reported any differences or discrepancies to the Custodian? Does your firm agree with the Custodian's pricing for the quarter?*

6. ***Compliance with Investment Guidelines.*** *Has the portfolio been managed in compliance with investment guidelines during the relevant quarterly reporting period?*

   ☐ *Yes* ☐ *No*

   If no, please describe circumstances resulting in non-compliance.

FIGURE 5

MANAGER PERFORMANCE EVALUATION
QUARTERLY EVALUATION REPORT

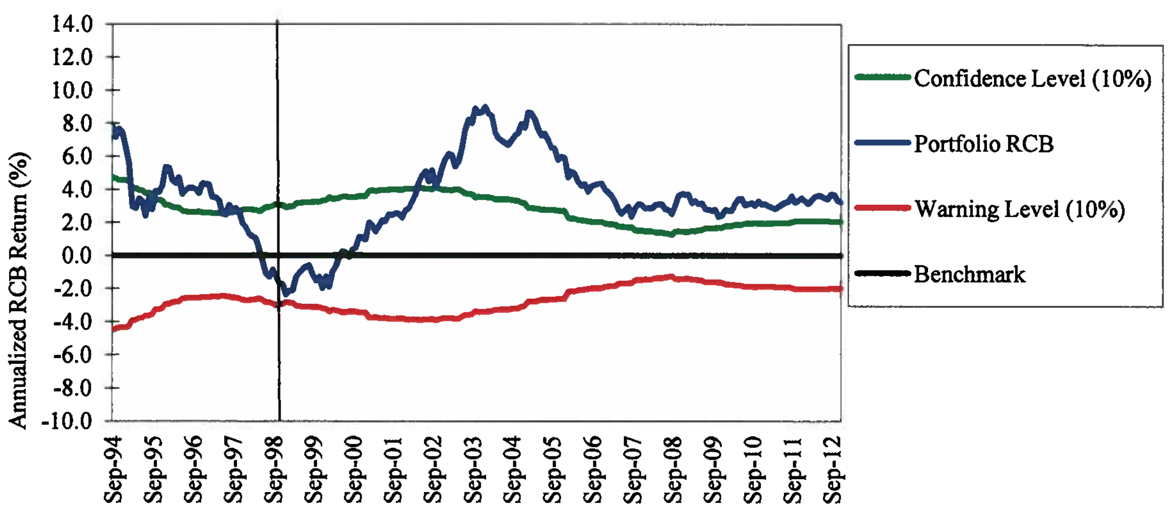
Portfolio Manager: **Assets Under Management: $xxxx**

Investment Philosophy **Staff Comments**

Quantitative Evaluation **Recommendations**

	Actual	Custom Benchmark
Last Quarter		
Last 1 year		
Last 2 years		
Last 3 years		
Last 4 years		
Last 5 years		
Since Inception		

INVESTMENT MANAGER NAME
Rolling Five Year Returns Compared to Benchmark



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

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INVESTMENT ADVISORY CONTRACT

INVESTMENT GUIDELINES

MANAGER COMMENTARY FORM

MANAGER RETURN COMPARED TO BENCHMARK

December 2012

INVESTMENT ADVISORY AGREEMENT
Contract No. M-______

THIS AGREEMENT, made as of the ____th day of __________, between _______________, the Outside Money Manager (hereinafter "Manager" or "Contractor"), and the Minnesota State Board of Investment (hereinafter "SBI").

SBI, being duly authorized pursuant to Minn. Stat. 11A.04 Subd.4, hereby employs Manager to manage certain of the assets presently under the control of SBI. These assets (hereinafter the "Account") are further identified and described in **Exhibit A**, which is attached hereto and incorporated by reference herein.

1. Manager shall have full discretionary authority as agent and attorney-in-fact with respect to the Account to (a) buy, sell, exchange, convert or otherwise trade in any stocks, bonds, and other securities including money market instruments, and (b) place orders for the execution of such securities transactions with or through such brokers, dealers, or issuers as the Manager may select. This discretionary authority of the Manager is subject to SBI's written investment objectives and restrictions referred to in sections 2, and 8 of this Agreement.

2. Manager accepts the appointment as investment manager and agrees, unless and until otherwise directed in writing by the SBI, to supervise and direct the investments of the Account in accordance with the investment objectives and restrictions of SBI as stated in **Exhibit B**, which is attached hereto and incorporated herein.

    (a) Manager may execute on behalf of SBI certain agreements, instruments and documents in connection with the services performed by it under this Agreement. These may include, without limitation, brokerage agreements, clearing agreements, account documentation, futures and options agreements, and any other agreements, documents or instruments the Manager believes are appropriate or desirable in performing its duties under this Agreement, provided that any option and futures trading agreement entered into by the Manager on behalf of the SBI's account must be reviewed and approved by legal representatives of the SBI before entering into the agreement. Any agreement must provide that SBI's liability, including margin requirements, commissions and fees, is limited solely to funds of the SBI under the Manager's control and does not constitute a general obligation of the State of Minnesota. The total SBI liability for margin requirements, commissions and fees among all brokers should be limited to the total market value of the SBI's assets under the Manager's control.

3. Manager will not act as Custodian for the Account. SBI will cause the Account's Custodian Bank, or Trustee Bank acting as Custodian as the case may be, to take all necessary steps to settle purchases, sales, and trades made by the Manager,

including delivery of certificates, payment of funds, and such other acts as may be necessary to fulfill such custodial responsibilities. The Manager shall give notice and directions (and copies thereof) with respect to transactions in such manner as shall be agreed upon with the Account's Custodian Bank and SBI. SBI may at any time and upon written notice to the Manager add to or remove assets from the Account.

4. SBI agrees to furnish the Manager or cause to be furnished to the Manager such information as the Manager may request with respect to the services to be performed by Manager hereunder. Manager will furnish information, reports or accounts at such times and in such manner as SBI may request.

5. By executing this Agreement, SBI authorizes Manager at its discretion to request the issuance of average price confirmations by participating brokers. The Manager further shall have authority to deal directly with brokers and to cause, in the name of the SBI, the purchase, sale and exchange of any or all of the securities and other property in the Account and the investment and reinvestment of the principal and income of such Account. In selecting broker-dealers for execution, the Manager will seek to obtain best execution for securities transactions on behalf of SBI in accordance with the Manager's policies in effect from time to time as described in the Manager's written disclosure statement required by rule 204-3 under the Investment Advisers Act of 1940. Except as provided in **Exhibit B**, SBI authorizes and empowers the Manager to direct the Custodian to open and maintain brokerage accounts for securities and other property, including financial and commodity futures and commodities and options thereon (all such accounts hereinafter called "brokerage accounts") for and in the name of the SBI and to execute for the SBI as its agent and attorney-in-fact standard customer agreements with such broker or brokers as the Manager shall select as provided above. In order to effect transactions on behalf of SBI, the Manager may, using such of the securities and other property in the Account as the Manager deems necessary or desirable, direct the Custodian to deposit for the SBI original and maintenance brokerage and margin deposits and otherwise direct payments of cash, cash equivalents and securities and other property into such brokerage accounts and to such brokers as the Manager deems desirable or appropriate.

6. Manager agrees to accept in full payment for the services rendered hereunder an annual fee of:

See Exhibit C, attached hereto and incorporated herein.

The base fee (described in **Exhibit C1**) provided for herein shall be determined on a three-month basis and shall be based on the net asset value of the Account, including cash and cash equivalents, as of the end of each three-month period ending in March, June, September, and December, of each year during which this Agreement is in force, and shall be payable within fifteen (15) days after said dates.

If this Agreement is not in force for a full three-month period, the base fee for such partial three-month period shall be that portion of the full three-month fee that the number of days of the three-month period for which this Agreement is in effect bears to the total number of days in said three-month period. The performance base fee (described in **Exhibit C**) provided for herein shall be determined as of the end of the twelve month period ending in June. In case of termination, the net asset value of the Account at the close of business on the day of termination shall be substituted for the three-month ending value in calculating the base fee.

7. Manager hereby represents and confirms that it is registered as an investment adviser under the Investment Advisers Act of 1940 and that with respect to the performance of its duties hereunder concerning the Account (if the Account is part of a covered employee benefit plan) Manager will conduct the Account as though Manager were a "fiduciary" as that term is defined in the Employee Retirement Income Security Act of 1974.

8. It shall be SBI's responsibility to notify the Manager in writing of the investment objectives of the Account and of any changes thereto and also to notify Manager of any specific investment restrictions applicable to the Account. In addition to said written objectives and restrictions, the Manager shall be bound by the terms of Minnesota Statutes, Chapter 11A and Chapter 356A (incorporated by reference, a true and correct copy of which can be found at https://www.revisor.mn.gov/pubs/), any changes or amendments thereto and any present or future acts of the Minnesota Legislature or United States Congress affecting or constraining the investment assets in the Account and SBI shall promptly notify Manager in writing of all such changes or amendments known to it.

9. Except for negligence, malfeasance, or violation of applicable law, including failure to meet its fiduciary obligations, neither Manager nor any of its officers, directors, employees or agents shall be liable to SBI hereunder for any actions performed or omitted to be performed or for any errors of judgment in managing the Account. The federal securities laws impose liabilities under certain circumstances on persons who act in good faith, and therefore nothing herein shall in any way constitute a waiver or limitation of any rights which SBI may have under any federal securities laws. It is further agreed that Manager may rely upon information furnished to it that it reasonably believes to be accurate and reliable and that, except as hereinbefore provided, Manager shall not be accountable for any loss suffered by the Account; provided, however, that nothing contained in this Section 9 shall be construed as relieving Manager from responsibility or liability for any responsibility, obligations, or duty hereafter imposed on the Manager by state or federal law.

10. It is understood and agreed that the Manager and its affiliates render investment management advice and services and other services to others who may or may not have investment policies, objectives and investments similar to those of the

Account, and that they may continue to give advice and take actions on behalf of such clients which differ from advice given or actions taken with respect to the Account.

11. Any notice, instruction, request or other communications required or contemplated by this Agreement shall be in writing and shall be duly given when received by the Manager at the address set forth below or when received by SBI at the address set forth below and to the Custodian at such address as it may specify to the Manager in writing; provided that any party may, by notice, designate a different address for such party. The SBI will provide Manager with specimen signatures of those individuals authorized to direct Manager's action.

If to Manager:

____
____
____
____

If to SBI:

Howard Bicker, Executive Director
State Board of Investment
60 Empire Drive
Suite 355
St. Paul, Minnesota 55103-3555

12. This Agreement shall be effective on ____________ or upon all required signatures and approvals are obtained pursuant to Minn. Stat. 16C.05 Subd. 2, whichever occurs later, and shall terminate on ___________. Upon agreement of the parties, this Agreement may be renewed for successive terms.

13. This Agreement may be terminated by the SBI or Manager at any time, with or without cause, immediately upon written notice to the other party and, in such event, Manager's compensation shall be as provided in Section 6.

14. Manager will not assign its rights and/or obligations hereunder, and will not subcontract all or any part of its performance hereunder, without the prior written consent of SBI. Manager agrees to notify SBI of any change in Manager's senior management personnel within a reasonable time after such change.

15. Under Minn. Stat. 16C.05 Subd.5, the books, records, documents and accounting procedures and practices of the Manager relevant to this Agreement shall be subject to examination by SBI and the Legislative Auditor for a minimum of six years from the end of this agreement.

16. If applicable, SBI acknowledges receipt of the written disclosure statements required by Rule 204-3 under the Investment Advisers Act not less than 48 hours prior to entering into this Agreement.

17. **Affirmative Action Requirements for Contracts in Excess of $100,000 and the Contractor has More than 40 Full-time Employees in Minnesota or its Principal Place of Business.**

The State intends to carry out its responsibility for requiring affirmative action by its Contractors.

17.1 ***Covered Contracts and Contractors***. If the Contract exceeds $100,000 and the contractor employed more than 40 full-time employees on a single working day during the previous 12 months in Minnesota or in the state where it has its principle place of business, then the Contractor must comply with the requirements of Minn. Stat. § 363A.36-.37 and Minn. R. Parts 5000.3400-5000.3600. A contractor covered by Minn. Stat. § 363A.36-.37 because it employed more than 40 full-time employees in another state and does not have a certificate of compliance, must certify that it is in compliance with federal affirmative action requirements.

17.2 ***Minn. Stat. § 363A.36-.37.*** Minn. Stat. § 363A.36-.37 requires the Contractor to have an affirmative action plan for the employment of minority persons, women, and qualified disabled individuals approved by the Minnesota Commissioner of Human Rights ("Commissioner") as indicated by a certificate of compliance. The law addresses suspension or revocation of a certificate of compliance and contract consequences in that event. A contract awarded without a certificate of compliance may be voided.

17.3 ***Minn. R. 5000.3400-5000.3600.***

(a) *General.* Minn. R. 5000.3400-5000.3600 implement Minn. Stat. § 363A.36-.37. These rules include, but are not limited to, criteria for contents, approval, and implementation of affirmative action plans; procedures for issuing certificates of compliance and criteria for determining a contractor's compliance status; procedures for addressing deficiencies, sanctions, and notice and hearing; annual compliance reports; procedures for compliance review; and contract consequences for non-compliance. The specific criteria for approval or rejection of an affirmative action plan are contained in various provisions of Minn. R. 5000.3400-5000.3600 including, but not limited to, parts 5000.3420-5000.3500 and 5000.3552-5000.3559.

(b) *Disabled Workers.* The Contractor must comply with the following affirmative action requirements for disabled workers.

(1) The Contractor must not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified disabled persons without discrimination based upon their physical or mental disability in all employment practices such as the following: employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

(2) The Contractor agrees to comply with the rules and relevant orders of the Minnesota Department of Human Rights issued pursuant to the Minnesota Human Rights Act.

(3) In the event of the Contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with Minn. Stat. § 363A.36-.37, and the rules and relevant orders of the Minnesota Department of Human Rights issued pursuant to the Minnesota Human Rights Act.

(4) The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the commissioner of the Minnesota Department of Human Rights. Such notices must state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled employees and applicants for employment, and the rights of applicants and employees.

(5) The Contractor must notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the contractor is bound by the terms of Minn. Stat. § 363A.36-.37, of the Minnesota Human Rights Act and is committed to take affirmative action to employ and advance in employment physically and mentally disabled persons.

(c) *Consequences.* The consequences for the Contractor's failure to implement its affirmative action plan or make a good faith effort to do so include, but are not limited to, suspension or revocation of a certificate of compliance by the Commissioner, refusal by the Commissioner to approve subsequent plans, and termination of all or part of this contract by the Commissioner or the State.

(d) *Certification.* The Contractor hereby certifies that it is in compliance with the requirements of Minn. Stat. § 363A.36-.37 and Minn. R. 5000.3400-5000.3600 and is aware of the consequences for noncompliance.

18. The Manager and SBI must comply with the Minnesota Government Data Practices Act, Minn. Stat. Chap. 13, as it applies to all data provided by the SBI under this contract, and as it applies to all data created, collected, received, stored, used, maintained, or disseminated by the Manager under this contract. The civil remedies of Minn. Stat. 13.08 apply to the release of the data referred to in this clause by either the Manager or the SBI.

    If the Manager receives a request to release the data referred to in this clause, the Manager must immediately notify the SBI. The SBI will give the Manager instructions concerning the release of the data to the requesting party before the data is released.

    The Manager is instructed to communicate with the SBI's custodian, consultant(s), and external accounting vendors as well as the Manager's own service providers in connection with services provided for the SBI account, when those entities request the Manager to release data to them about the Manager's portfolio in accordance with Minn. Stat. Chap 13.

19. Under Minn. Stat. 270C.65 and other applicable law, the Manager consents to disclosure of its social security number, federal employer tax identification number, and/or Minnesota tax identification number, already provided to the State, to federal and state tax agencies and state personnel involved in the payment of state obligations. These identification numbers may be used in the enforcement of federal and state tax laws which could result in action requiring the Manager to file state tax returns and pay delinquent state tax liabilities, if any.

20. Manager will provide evidence of professional liability/errors and omissions insurance coverage to SBI. If Manager has employees located in Minnesota, Manager will provide evidence of workers' compensation insurance coverage that complies with Minnesota state law.

21. Responsibility to initiate, consider or participate in any bankruptcy, securities class action or other litigation against or involving any issuer of securities held in or formerly held in the Account or to advise or take any action with respect to any litigation shall remain with the SBI, and the Manager shall not have any responsibility to, and shall not, initiate, consider or participate in any such matters on behalf of the SBI or the Account unless specifically so requested by the SBI with the consent of the Minnesota Attorney General or his or her designee.

22. This Agreement and all transactions hereunder shall be governed by, interpreted, construed and enforced in accordance with the laws of the State of Minnesota. Venue for all legal proceedings out of this contract, or its breach, must be in the appropriate state court with competent jurisdiction in Ramsey County, Minnesota.

23. If any provision of this Agreement is held to be invalid or unenforceable, such invalidity or unenforceability shall attach only to such provision. The validity of the remainder of the Agreement shall not be affected and the Agreement shall be carried out as if such invalid or unenforceable provision were not contained therein.

24. ***Waiver.*** If SBI fails to enforce any provision of this contract, that failure does not waive the provision or its right to enforce it.

25. ***Contract Complete.*** This contract contains all negotiations and agreements between SBI and the Contractor. No other understanding regarding this contract, whether written or oral, may be used to bind either party.

26. ***Survival of Terms.*** The following clauses survive the expiration of termination of this contract: 2(a), 9, 15 and 18.

In WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the day and year first above written.

MANAGER NAME

The Manager certifies that the appropriate person(s) have executed the contract on behalf of the Manager as required by applicable articles, bylaws, resolutions, or ordinances.

By: ______________________________

Title: ______________________________

Date: ______________________________

By: ______________________________

Title: ______________________________

Date: ______________________________

APPROVED

DEPARTMENT OF ADMINISTRATION

As delegated to Materials Management Division.

By: ______________________________

Date: ______________________________

STATE BOARD OF INVESTMENT

By: ______________________________

Title: ______________________________

Date: ______________________________

EXHIBIT A

Cash and/or securities in kind will be transferred to the investment management supervision of ____________________ at the direction of the SBI on or after __________________. (insert "on an as needed basis" for renewal contracts).

EXHIBIT B

MANAGER NAME

MINNESOTA STATE BOARD OF INVESTMENT
INVESTMENT GUIDELINES

EXHIBIT C

MANAGER NAME

DOMESTIC STOCK MANAGER PERFORMANCE FEE

The annual fee will be composed of two parts:

1) The base fee.
2) The performance fee, when applicable.

A. BASE FEE

The base fee will be paid quarterly, in arrears.

The base fee will be calculated as a percentage of the net asset value of total SBI assets managed by the manager at the end of the quarter.

The annual base fee rate is shown in Exhibit C1.

B. PERFORMANCE FEE

Performance fees become effective once the portfolio assets reach $100 million and will remain in place regardless of a temporary decline in market value, unless a separate agreement is reached. The performance fee will be paid annually, in arrears.

The performance fee will be based upon the net asset value of the total SBI assets, net of all management fees, managed by the manager relative to the market value of a paper portfolio that represents the manager's benchmark and includes all cash flows that occur during the measurement period except fee payments.

The performance fee for the current measurement period will be computed according to the following formula:

$$PF = [(AP - BP) - (.01 \times APV)] / 15$$

Where

PF = Performance fee.
AP = Net asset value of the total SBI assets, net of all management fees, managed by the manager at the end of the measurement period.
BP = Market value of the manager's benchmark paper portfolio including all cash flows during the year, except management fees, at the end of the measurement period.
APV = The average net asset value of the total SBI assets, net of all management fees, managed by the manager for the measurement period. The average net asset value will be determined by adding the month end net asset values and dividing by 12.

The absolute dollar amount (positive or negative) of the performance fee (PF) for each measurement period cannot exceed the option limit that the manager has elected below. Any residual positive or negative performance fee (Residual) will be add to the performance fee (PF) calculated in the following year.

The manager's performance fee for each measurement period will be paid out evenly over a five year period (i.e. five equal Debits or Credits).

The manager has chosen the option that limits the positive or negative performance fee to be no more than 25% of the base fee paid in the most recent performance measurement period. The above option chosen by the manager will remain in effect for the term of the Agreement. At the end of the Agreement's term, the manager can select from the four options available (25%, 50%, 75%, and 100%) but will be limited to a 25% increase or decrease from their current option.

If the manager's performance fee, based on the sum of the current and previous measurement periods, exceeds the maximum or minimum payment limits, the remaining amount will be carried over into the next year (i.e. the Carryover).

Performance measurement period shall be one full twelve-month period ending June 30. After each evaluation period the dollar value of the benchmark portfolio will be reset to equal the net asset value of the total SBI assets managed by the manager.

The performance fee, if positive, will be added to the final quarterly base fee paid at the end of the most recent performance measurement period.

The performance fee, if negative, will be offset against the final quarterly base fee paid at the end of the most recent performance measurement period and any outstanding performance fee balance must be paid in full within 60 days after said date.

C. MISCELLANEOUS

The net asset value and market value of the manager's portfolio and benchmark portfolio, respectively, will be computed by organization(s) designated by the SBI.

If this contract should be terminated prior the end of a full measurement period, no performance fee will be paid or debited for the year.

As noted above, the manager's performance fee for each measurement period will be paid out or debited in five equal annual installments. If this contract is terminated, any unpaid Debits or Credits for future years traceable to prior measurement periods will become due and payable immediately. However, all remaining positive or negative Carryovers and/or Residuals resulting from the fact that the performance fee exceeded the maximum or minimum payment limits in prior measurement periods will not have to be paid or debited.

EXHIBIT C1

MANAGER NAME

BASE FEE SCHEDULE

On the first	$0 million	0.00% per annum	(00 basis points)
On the next	$0 million	0.00% per annum	(00 basis points)
On the next	$0 million	0.00% per annum	(00 basis points)
On the next	$0 million	0.00% per annum	(00 basis points)
Thereafter		0.00% per annum	(00 basis points)

EXHIBIT B

MINNESOTA STATE BOARD OF INVESTMENT
INVESTMENT GUIDELINES
EXTERNAL ACTIVE DOMESTIC COMMON STOCK MANAGERS

The investment actions of the Minnesota State Board of Investment (SBI) external active domestic common stock managers will be governed and evaluated by the following guidelines, which are comprised of Parts A and B:

Part A

A1. RISK/RETURN OBJECTIVES

The Manager will be evaluated, in part, based on performance in delivering cumulative returns, net of fees and expenses, in excess of a predetermined benchmark assigned to the Manager. The Manager is responsible for actively managing the absolute level and composition of the active risk of the Manager's portfolio relative to the benchmark. The Manager's objectives are:

(a) Over the most recent five-year period, the actual portfolio shall have a realized active risk level relative to the benchmark in the range of ___ to ___, where active risk is the annualized standard deviation of the Manager's excess returns relative to the benchmark.

The Manager must notify and explain to Staff in the Quarterly Manager Commentary (see investment guideline B5 (b)) any deviation from this range.

The level of active risk in the actual portfolio will be monitored on a five-year rolling period basis to ascertain the trend in active risk. In addition, the current active risk level will be compared to the active risk of the product at the time the manager was hired. And,

(b) A portfolio information ratio of 0.20 or greater over the most recent 5-year period, where the information ratio is the annualized excess return over the benchmark, net of fees and expenses, divided by the annualized standard deviation of excess return over the benchmark.

The Manager must notify and explain to Staff in the Quarterly Manager Commentary (see investment guideline B5 (b)) any deviation from this range.

The information ratio will also be monitored on a five-year rolling period basis to ascertain the trend in the information ratio. In addition, the current information ratio will be compared to the information ratio of the product at the time the Manager was hired.

A2. BENCHMARK

The benchmark is the Russell _______. This benchmark will also be used to calculate the manager's performance based fee. SBI reserves the right to change the benchmark upon prior written notification to Manager.

A3. ELIGIBLE INVESTMENTS

The Manager is restricted to trading common stocks, stock index futures, exchange traded funds, cash equivalents identified under A3(h), and the SBI STIF fund. The Manager may hold any security received as a distribution from an existing holding. The Manager must have the SBI's written approval to purchase equity options, preferred stocks, warrants and convertible issues. The investments of the Manager must satisfy the following criteria and constraints:

(a) All securities held must be covered by the authorization in *Minnesota Statutes* Chapter 11A.24.

(b) The stocks held must be issued by corporations organized under the laws of the U.S. or its states, the Dominion of Canada or its provinces, and/or be listed on an exchange regulated by an agency of the United States (including NASDAQ) or Canadian national government at time of purchase. These include REITS and American Depository Receipts (ADR's) traded on such an exchange. Securities issued pursuant to Rule 144A may be purchased for the Account if, upon issuance, they will be publicly traded securities and can be priced on a daily basis.

(c) The Manager may not purchase restricted stock or letter stock.

(d) Private placements, defined as those securities for which a public market does not exist or which will be subject to any known trading restrictions at any time during which the security is held in the SBI's portfolio, may not be purchased in the Account. The manager may purchase IPO's, provided the IPO's have no trading restriction, trade on a public market and can be priced daily.

(e) Debt securities can not be purchased in the Account.

(f) Without prior written authorization from the SBI, manager may not purchase open or closed-end funds or pooled investment vehicles. Investments in Business Development Companies that are members of managers' assigned benchmark at time of purchase are permitted.

(g) The Manager shall not hold at any time more than three (3) percent of the total outstanding shares of any corporation in the SBI's portfolio. If a holding should breach this level or the Manager desires to hold a larger position, the Manager must notify the SBI in writing for approval.

(h) Cash equivalents shall be invested in the SBI's STIF fund, managed by its custodian bank, with the exception of cash equivalents used as collateral to maintain futures exposure.

(i) Stock options, if authorized, and stock index futures, purchased through a regulated exchange, may be used to adjust the effective equity exposure of the portfolio. Over-the-counter derivative instruments are not permitted. All option and futures transactions must be entered into with a fully offsetting amount of cash or cash equivalents. The cash or cash equivalent position used to offset the futures position at the time of purchase, plus any mark to market adjustments, must be maintained over the life of the futures position to ensure that a leveraged position, as defined in Part B4, does not occur.

(j) The Manager may not purchase stocks from the SBI's List of Restricted Tobacco Stocks. The SBI will periodically provide the Manager with an updated List.

(k) The Manager may not purchase stocks from the SBI's List of Restricted Sudan Stocks. The SBI will periodically provide the Manager with an updated list and Manager must follow direction provided.

(l) The Manager may not purchase securities from the SBI's List of Restricted Iran Companies. The SBI will periodically provide the Manager with an updated list and Manager must follow direction provided.

A4. PROXY VOTING

The Manager may not vote proxies on behalf of the SBI's account unless specifically requested by the SBI to do so.

Revised: January 2011

Executive Director/
Assistant Executive Director

____

Date ______________________

Commentary Form Instructions

1. Responses must be submitted in this Word form document only. **NO OTHER FORMATS WILL BE ACCEPTED.**

2. The responses to the first 4 questions must not exceed 2 pages.

3. Please respond thoroughly to the questions asked. Specifically, please comment on **BOTH** **3 Month** and **12 Month** portfolio performance. Discuss specific decisions/positions that did/did not add value.

4. Outline all organizational and personnel changes. Specify the number **AND** market value of all accounts gained and lost in the strategy.

Navigating Form

To navigate document form fields, use the tab key or the arrow keys.

Manager Commentary
(Insert Company Name)
(Select Category)

Period Ending:	**3/31/09**	**Returns**	**Qtr.**	**12Months**
Total Firm Assets Under Management	$ M	Actual	%	%
Total Firm Assets Managed in this Discipline	$ M	Benchmark	%	%

☐ *Check if Net*

Footnotes:

1. ***Past Performance.*** *Summarize your performance over the last quarter and last 12 months. Specifically, what active bets did you make relative to your benchmark? Which of these bets worked/did not work and why?*

2. ***Future Strategy.*** *What active bets are in place at the present time relative to your benchmark? Summarize the rationale for making these active bets.*

3. ***Organizational Issues.*** *Describe any significant ownership or personnel changes at the firm over the last quarter. List the accounts gained and lost in this discipline and the associated asset value over the same time period.*

4. ***Other Comments.*** *Highlight any other issues/events that are pertinent to the management of the SBI account at your firm.*

(Insert Company Name) (Cont.)

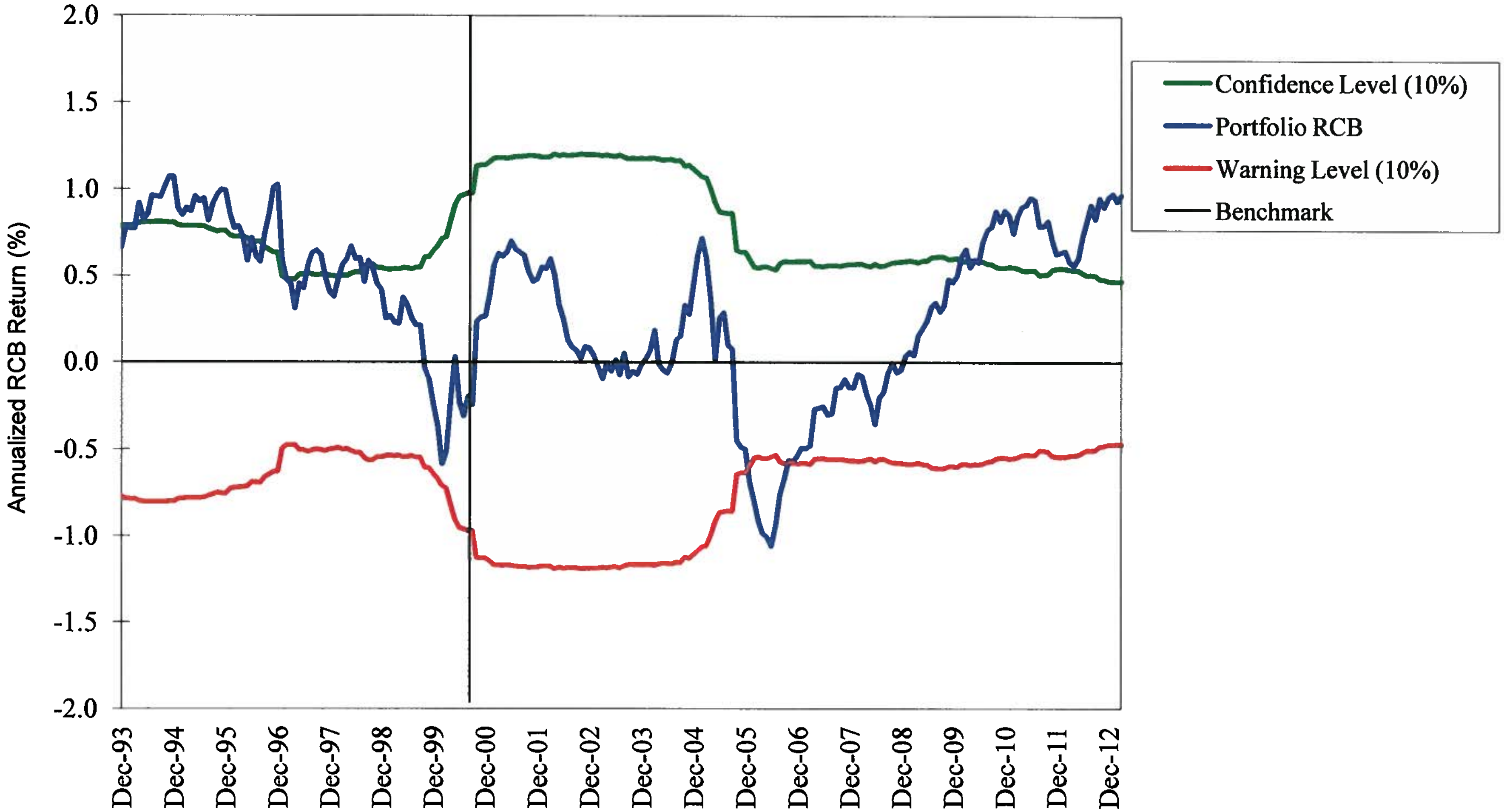
5. ***Account Reconciliation.*** *Has your firm performed a reconciliation of prices with State Street Bank on the SBI's account, and reported any differences or discrepancies to the Custodian? Does your firm agree with the Custodian's pricing for the quarter?*

6. ***Compliance with Investment Guidelines.*** *Has the portfolio been managed in compliance with investment guidelines during the relevant quarterly reporting period?*

   ☐ *Yes* ☐ *No*

   If no, please describe circumstances resulting in non-compliance.

INVESTMENT MANAGER NAME
Rolling Five Year Return Compared to Benchmark



Five Year Period Ending

Note: Area to left of vertical line includes performance prior to retention by SBI.

TAB

S

PERFORMANCE BASED FEES

Staff Paper

February 2010

DATE: February 9, 2010

TO: Members, Investment Advisory Council

FROM: Tammy Brusehaver
PatC Ammann

SUBJECT: Review of Performance Based Fees

The Minnesota State Board of Investment (SBI) has utilized performance fees for over twenty years. Periodically, Staff reviews the performance based fee structure to determine if there are opportunities for enhancement. The objectives of performance based fees are the following:

- Share the risk of performance so there is a more equitable relationship between the SBI and the Manager;
- Provide more incentive to the Manager to manage the SBI's portfolio as efficiently as possible.

All active domestic equity managers are required to participate once their portfolio market values exceed $100 million. Semi-passive and passive Managers do not participate in performance based fees.

Fee Structure
The base fee calculation is based on the quarter ending market value of the portfolio and is paid quarterly in arrears to the Manager.

The performance fee is currently calculated with the following criteria:

- Dollar values are calculated as of month end for the benchmark portfolio.
- Based on a one-year period ending June 30, the dollar value of the actual portfolio is compared to the dollar value of the benchmark portfolio plus a 1% hurdle rate.
- The Manager selects the limit of the performance fee from four options: 25%, 50%, 75% or 100% of the base fee. For example, if a manager chooses 25%, that manager may earn or lose, due to performance, up to 25% of their total base fee paid over the year.
- The Manager's share is $1/15^{th}$ or 6.67% of the net positive or negative value added. If the Manager's share is in excess of the limit it is a residual amount used in the next year's calculation.

- The manager's portion is paid out over five years.
- If the manager's potential performance fee (positive or negative) exceeds the above limit, the remaining amount will be a carryover to the following year.

The attached presentation is a detailed description of how the SBI determines performance based fees. Exhibit A is an actual calculation for a current manager.

Summary

Staff gathered information from other large public plans and found that SBI's performance based fee has some advantages over other public plan formulas and is still consistent with the objectives.

- The SBI's formula includes symmetrical distribution so the Managers share in outperformance as well as underperformance.
- Having a performance hurdle that the Manager must exceed before any performance fee is earned is also beneficial in allowing the SBI to maintain the entire portion of that outperformance.
- Capping the Manager's bonus limit and calculating it over a five year period encourages consistent long-term performance.
- The SBI's methodology properly accounts for cash flows in the portfolio.

Staff recommends no change to the current performance based fee structure.

SBI Performance Fees

February 16, 2010

IAC Presentation

Overview

- The Managers in the Active Domestic Equity program have 2 fee calculations:
- 1. **Base Fee (BF)**
  Paid quarterly in arrears, based on the quarter ending market value of the portfolio and the fee schedule included in each manager's contract.
- 2. **Performance Fee (PF)**
  Calculated annually by SBI based on the performance of the portfolio compared to a benchmark portfolio, and is paid in arrears.
- All active managers are required to participate in Performance Fees once the SBI's portfolio exceeds $100 M.
- *Semi-passive and passive managers do not participate in Performance Based Fees.*

- The method used to calculate performance fees is a symmetrical fulcrum, whereby a base fee is adjusted positively or negatively depending on the actual performance of the portfolio relative to a performance target.

- The PF is calculated based on a dollar measure approach.

- The PF is determined as a percentage of the base fee. The manager selects the percentage from one of four options – 25, 50, 75, or 100%. For example, if a manager chooses 25%, that manager may earn or lose up to 25% of the total base fee for the year, depending on performance.

- One fifth of PF calculated is recognized in each of the next five years.

- 18 managers are compensated with performance fees and they have made the following selections:
  - 5 at 100%
  - 0 at 75%
  - 1 at 50%
  - 12 at 25%

PERFORMANCE FEE CALCULATION FOR FY2009:

	1.	2.	3.	4.	5.
			BENCHMARK VALUE CALCULATION		
YYMM	Market Value	Base Fee	Bnmk Ret	Bnmk Value	Cashflows
Jun-08	$ 130,000,000			130,000,000	
Jul-08	$ 131,000,000		-1.39	128,196,900	0
Aug-08	$ 132,000,000		2.99	132,028,705	0
Sep-08	$ 133,000,000	100,000	0.98	133,317,306	0
Oct-08	$ 134,000,000		5.09	140,102,756	0
Nov-08	$ 135,000,000		2.85	144,097,787	0
Dec-08	$ 136,000,000	100,000	0.87	145,353,166	0
Jan-09	$ 137,000,000		1.50	147,530,557	0
Feb-09	$ 138,000,000		-1.23	145,718,734	0
Mar-09	$ 139,000,000	100,000	1.21	147,477,268	0
Apr-09	$ 140,000,000		1.04	149,007,639	0
May-09	$ 141,000,000		-3.67	143,544,125	0
Jun-09	$ 145,000,000	100,000	-2.33	140,198,399	0
TOTAL BASE FEE		400,000			
OPTION ELECTION		25%	6.		
BONUS LIMIT		100,000			

1. Portfolio market value at month end
2. Base fee as calculated by accounting at quarter end
3. Portfolio's benchmark
4. Benchmark value at beginning of FY is the portfolio's market value . End of FY value is calculated using benchmark returns and cashflows
5. Cashflow – contributions or withdrawals during the year
6. PM can select maximum performance fee of 25, 50, 75 or 100%. Can change when contract is renewed in 25% increments

Value Added Calculation	
Asset Value at year-end	145,000,000
Benchmark Value Calculation:	
Ending value	140,198,399
1% hurdle rate based on avg. benchmark value	1,367,500
Yearend Benchmark Value	141,565,899
Total Dollar Value Added	3,434,101

- The equivalent of a 1% hurdle rate is added to the June 30 Benchmark Value to calculate the Yearend Benchmark Value
- The manager's portfolio is then compared to the benchmark portfolio to determine the total dollar value added

FY	FY TOTAL $ VALUE ADDED	MANAGER SHARE[1]	PLUS PRIOR FY RESIDUAL[2]	BONUS LIMIT	RESIDUAL[3]	Current FY2009	FY2010	FY2011	FY2012	FY2013	
	1	see footnote	see footnote	2	3	4					
2005	1,600,000	106,667	106,667	100,000	6,667	20,000					
2006	-1,500,000	-100,000	-93,333	100,000	0	-18,667	-18,667				
2007	1,600,000	106,667	106,667	100,000	6,667	20,000	20,000	20,000			
2008	1,600,000	106,667	113,334	100,000	13,334	20,000	20,000	20,000	20,000		
2009	3,434,101	228,940	242,274	100,000	142,274	20,000	20,000	20,000	20,000	20,000	
CURRENT AND PREVIOUSLY EARNED BONUS						$61,333	41,333	60,000	40,000	20,000	161,333
PREVIOUS YEAR CARRYOVER						$0					SUM OF
TOTAL POTENTIAL BONUS						$61,333	5				FUTURE
											YEARS
BASE FEE						$400,000	6				
CURRENT PORTION OF FY PERFORMANCE BONUS						$61,333					
FY2007 TOTAL BASE AND PERFORMANCE FEE						$461,333	5+6				
CARRYOVER (CURRENT BONUS CARRIED OVER IF IT EXCEEDS LIMIT)						$0					

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[1]MANAGER SHARE OF DOLLAR VALUE ADDED IS 1/15 (6.7%).

[2]MANAGER'S CURRENT BONUS PLUS PREVIOUS YEAR'S RESIDUALS.

[3]IF ABS VALUE OF MANAGER SHARE > ABS VALUE OF OPTION LIMITATION, DIFFERENCE IS CARRIED OVER TO THE NEXT YEAR.

1. Difference between portfolio market value and benchmark portfolio
2. Determined by managers % selection of base fee
3. Amount that exceeds bonus limit, carries over to following year
4. Bonus limit spread out over 5 years
5. Bonus for current year
6. Sum of base fee for all 4 quarters

Final invoice sample

MANAGER:		**0**
PERIOD ENDING:		**June 30, 2009**
BASE FEE PAID TO MANAGER (Q1 - Q3)		$300,000.00
BASE FEE - Q4:	$100,000.00	
PERFORMANCE FEE:	$61,333.40	
TOTAL FEE -- FISCAL 2009		$461,333.40
BALANCE DUE TO MANAGER:		**$161,333.40**
BALANCE DUE FROM MANAGER:		**$0.00**

- Manager has added value versus the benchmark
- Manager earned $61,333.40 in performance fees for the period ending June 30, 2009
- SBI needs to remit payment to manager
- When manager owes the SBI, it is credited towards the next invoice

Summary

- Evaluation period is one year, ending on June 30.
- On June 30, the dollar value of the actual portfolio is compared to the dollar value of the benchmark portfolio plus a 1% hurdle rate.
- The manager's share is the net positive or negative value added on a 1 to 15 shared ratio (i.e. the manager gets 1/15th of the value added).
- The manager's portion is paid out over five years.
- The PF is limited to the percentage of the base fee selected by the manager (25%, 50%, etc).
- If the manager's potential performance fee (positive or negative) exceeds the above limit, the remaining amount will be a "carryover" to the following year.
- Following this page is Attachment A, which is an active manager's actual spreadsheet.

ATTACHMENT A

PERFORMANCE FEE CALCULATION FOR:

FY 2009 0906

BENCHMARK VALUE CALCULATION					
YYMM	Market Value	Base Fee	Bnmk Ret	Bnmk Value	Cashflows
Jun-08	$ 130,000,000			130,000,000	
Jul-08	$ 131,000,000		-1.39	128,196,900	0
Aug-08	$ 132,000,000		2.99	132,028,705	0
Sep-08	$ 133,000,000	100,000	0.98	133,317,306	0
Oct-08	$ 134,000,000		5.09	140,102,756	0
Nov-08	$ 135,000,000		2.85	144,097,787	0
Dec-08	$ 136,000,000	100,000	0.87	145,353,166	0
Jan-09	$ 137,000,000		1.50	147,530,557	0
Feb-09	$ 138,000,000		-1.23	145,718,734	0
Mar-09	$ 139,000,000	100,000	1.21	147,477,268	0
Apr-09	$ 140,000,000		1.04	149,007,639	0
May-09	$ 141,000,000		-3.67	143,544,125	0
Jun-09	$ 145,000,000	100,000	-2.33	140,198,399	0
TOTAL BASE FEE		400,000			
OPTION ELECTION		25%	*performance fee hurdle option		
BONUS LIMIT		100,000			

Value Added Calculation	
Asset Value at year-end	145,000,000
Benchmark Value Calculation:	
Ending value	140,198,399
1% hurdle rate on avg. asset value	1,367,500
Yearend Benchmark Value	141,565,899
Total Dollar Value Added	3,434,101

FY	FY TOTAL $ VALUE ADDED	MANAGER SHARE[1]	PLUS PRIOR FY RESIDUAL	BONUS LIMIT	RESIDUAL[3]	Current FY2009	FY2010	FY2011	FY2012	FY2013
2005	1,600,000	106,667	106,667	100,000	6,667	20,000				
2006	-1,500,000	-100,000	-93,333	-100,000	0	-18,667	-18,667			
2007	1,600,000	106,667	106,667	100,000	6,667	20,000	20,000	20,000		
2008	1,600,000	106,667	113,334	100,000	13,334	20,000	20,000	20,000	20,000	
2009	3,434,101	228,940	242,274	100,000	142,274	20,000	20,000	20,000	20,000	20,000

	Current FY2009	FY2010	FY2011	FY2012	FY2013	SUM OF FUTURE YEARS
CURRENT AND PREVIOUSLY EARNED BONUS	$61,333	41,333	60,000	40,000	20,000	161,333
PREVIOUS YEAR CARRYOVER	$0					
TOTAL POTENTIAL BONUS	$61,333					

BASE FEE	$400,000
CURRENT PORTION OF FY PERFORMANCE BONUS	$61,333
FY2007 TOTAL BASE AND PERFORMANCE FEE	$461,333
CARRYOVER (CURRENT BONUS CARRIED OVER IF IT EXCEEDS LIM	$0

[1]MANAGER SHARE OF DOLLAR VALUE ADDED IS 1/15 (6.7%).

[2]MANAGER'S CURRENT BONUS PLUS PREVIOUS YEAR'S RESIDUALS.

[3]IF ABS VALUE OF MANAGER SHARE > ABS VALUE OF OPTION LIMITATION, DIFFERENCE IS CARRIED OVER TO THE NEXT YEAR.

ATTACHMENT A

MINNESOTA STATE BOARD OF INVESTMENT

PERFORMANCE FEE SETTLEMENT STATEMENT

MANAGER:		**0**
PERIOD ENDING:		**June 30, 2009**
BASE FEE PAID TO MANAGER (Q1 - Q3)		$300,000.00
BASE FEE - Q4:	$100,000.00	
PERFORMANCE FEE:	$61,333.40	
TOTAL FEE -- FISCA 2009		$461,333.40
BALANCE DUE TO MANAGER:		**$161,333.40**
BALANCE DUE FROM MANAGER:		**$0.00**

EXHIBIT C

MANAGER NAME

DOMESTIC STOCK MANAGER PERFORMANCE FEE

The annual fee will be composed of two parts:

1) The base fee.
2) The performance fee, when applicable.

A. BASE FEE

The base fee will be paid quarterly, in arrears.

The base fee will be calculated as a percentage of the net asset value of total SBI assets managed by the manager at the end of the quarter.

The annual base fee rate is shown in Exhibit C1.

B. PERFORMANCE FEE

Performance fees become effective once the portfolio assets reach $100 million and will remain in place regardless of a temporary decline in market value, unless a separate agreement is reached. The performance fee will be paid annually, in arrears.

The performance fee will be based upon the net asset value of the total SBI assets, net of all management fees, managed by the manager relative to the market value of a paper portfolio that represents the manager's benchmark and includes all cash flows that occur during the measurement period except fee payments.

The performance fee for the current measurement period will be computed according to the following formula:

PF = [(AP - BP) - (.01 X APV)] / 15

Where

PF = Performance fee.
AP = Net asset value of the total SBI assets, net of all management fees, managed by the manager at the end of the measurement period.
BP = Market value of the manager's benchmark paper portfolio including all cash flows during the year, except management fees, at the end of the measurement period.
APV = The average net asset value of the total SBI assets, net of all management fees, managed by the manager for the measurement period. The average net asset value will be determined by adding the month end net asset values and dividing by 12.

The absolute dollar amount (positive or negative) of the performance fee (PF) for each measurement period cannot exceed the option limit that the manager has elected below. Any residual positive or negative performance fee (Residual) will be add to the performance fee (PF) calculated in the following year.

The manager's performance fee for each measurement period will be paid out evenly over a five year period (i.e. five equal Debits or Credits).

The manager has chosen the option that limits the positive or negative performance fee to be no more than 25% of the base fee paid in the most recent performance measurement period. The above option chosen by the manager will remain in effect for the term of the Agreement. At the end of the Agreement's term, the manager can select from the four options available (25%, 50%, 75%, and 100%) but will be limited to a 25% increase or decrease from their current option.

If the manager's performance fee, based on the sum of the current and previous measurement periods, exceeds the maximum or minimum payment limits, the remaining amount will be carried over into the next year (i.e. the Carryover).

Performance measurement period shall be one full twelve-month period ending June 30. After each evaluation period the dollar value of the benchmark portfolio will be reset to equal the net asset value of the total SBI assets managed by the manager.

The performance fee, if positive, will be added to the final quarterly base fee paid at the end of the most recent performance measurement period.

The performance fee, if negative, will be offset against the final quarterly base fee paid at the end of the most recent performance measurement period and any outstanding performance fee balance must be paid in full within 60 days after said date.

C. MISCELLANEOUS

The net asset value and market value of the manager's portfolio and benchmark portfolio, respectively, will be computed by organization(s) designated by the SBI.

If this contract should be terminated prior the end of a full measurement period, no performance fee will be paid or debited for the year.

As noted above, the manager's performance fee for each measurement period will be paid out or debited in five equal annual installments. If this contract is terminated, any unpaid Debits or Credits for future years traceable to prior measurement periods will become due and payable immediately. However, all remaining positive or negative Carryovers and/or Residuals resulting from the fact that the performance fee exceeded the maximum or minimum payment limits in prior measurement periods will not have to be paid or debited.

TAB

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EXECUTIVE DIRECTOR'S

PROPOSED WORKPLAN FY 2014

May 2013

STATE BOARD OF INVESTMENT
Executive Director's Proposed Workplan

FY14
(Categories A, B, C, D, E correspond to the position description)

	Projected Time Frame
A. DEVELOPMENT OF INVESTMENT POLICIES	
1. Review of Transition Managers	Jul – Mar
2. Using Swaps	Ongoing
3. Derivatives in Fixed Income Program	Jul – Jun
4. Municipal Bond Pool	Jul – Jul
5. Review of Investment Options for Unclassified Employees Plan	Jul – Jul
B. IMPLEMENTATION OF INVESTMENT POLICIES APPROVED BY THE SBI	
1. Meet or Exceed the Performance Objectives	Ongoing
2. Investments with New/Existing Alternative Asset Managers	Ongoing
3. Conduct Investment Manager Compliance Review of Guidelines and Contracts	Ongoing
4. Manager Search Process	Ongoing
5. Implement State Law Concerning Iran	Ongoing
6. Implement State Law Concerning Sudan	Ongoing

C. REVIEW AND CONTROL OF INVESTMENT POLICIES	Projected Time Frame
1. Monitor and Evaluate Investment Manager Performance	Ongoing
2. Manager Guidelines	Ongoing
3. Provide Staff Support to Proxy Committee for Proxy Voting and Shareholder Initiatives	Jul – Jun
4. Monitor Implementation of Northern Ireland Mandate	Oct – Mar
5. Provide Staff Support for Corporate Actions and Miscellaneous Legal Issues	Jul – Jun
6. Assess Impact of Tri-Party Repo Market Reform	Jul – Jun
D. ADMINISTRATION AND MANAGEMENT	
1. Coordinate Financial Audit by Legislative Auditor	Jul – Dec
2. Prepare 2014 Legislative Package	Jul – May
3. Prepare FY14 Management and Budget Plan	Jul – Jun
4. Annual Update of Disaster Recovery/Pandemic Plan	Apr – Jun
5. Implement New Custodian Services Contract	Jan – Ongoing
6. Conversion to New Trading and Internal Control System	Jan – Dec
7. Prepare Annual SIF Investment Options Prospectus and Information Booklet for the Voluntary Statewide Volunteer Firefighter Plan (VSVFP)	May – Sep

E. COMMUNICATION AND REPORTING	Projected Time Frame
1. Prepare reports on investment results	Qtly
2. Prepare Status Reports	As requested
3. Meet with SBI and IAC	Qtly
4. Meet with Board's designees	Qtly
5. Convert Performance Reporting System	Jul – Jun
6. Prepare FY 2013 Annual Report	Jul – Jan
7. Review and Revise Procedures for Transferring Assets of Local Fire Plans Joining Voluntary Statewide Volunteer Firefighter Plan	Ongoing
8. Coordinate Public Pension Plan Performance Reporting Disclosure	Ongoing
9. Conduct Manager Roundtables	Periodic