Minnesota State Board of Investment
Fiduciary Responsibility & Governance Principles Training
January 21, 2020

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Why Fiduciary Training Is Important?

As a member of the Minnesota State Board of Investment, you are a fiduciary.

Serving as a fiduciary comes with responsibilities of the utmost importance under the law.

Very few people really appreciate the rationale behind the strict fiduciary standards.

This session is to assist you to understand your role, your responsibilities as a fiduciary, and to help you act accordingly.

Evolution of Fiduciary Standards

- Fiduciary law stems from the common law of trusts
- General trust law
  - Settlor = Creates the trust
  - Trustees = Govern the operations of the trust
  - Beneficiary= Receives money from the trust
- Primary Source: State laws applicable to the Minnesota State Board of Investment
- Other sources

Minnesota Public Pension Fiduciary Duty Statute: **Application to Specific Individuals**

- Minn. Stat. Ch. 356A applies to a limited number of individuals.
- With Respect to the SBI:
  - Any member of the State Board of Investment
  - The chief administrative officer of the SBI (Executive Director and CIO)
  - Any member of the Investment Advisory Council
- The Chapter also applies to board members and chief administrative officers of PERA, MSRS, TRA, as well as several other entities.

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Minn. Stat. §356A.02, subd. 1

Public Pension Fiduciary Duty Statute: **General Standard**

A fiduciary "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."

Minn. Stat. §356A.04, subd. 2

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Public Pension Fiduciary Duty Statute: **Persons to whom the duty is owed**

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 finance the plan; and

3. The state of Minnesota, which established the plan.

Minn. Stat. §356A.04, subd. 1

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Fiduciary Duty Statute: **Activities to which the duty applies**

With respect to investments, the activities to which the duty applies include:

- Investment and reinvestment of plan assets
- The maintenance of financial records
- The expenditure of plan assets (SBI budget, management fees, etc.)
- The selection of financial institutions and investment products

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Minn. Stat. §356A.02, subd. 2

Public Pension Fiduciary Duty Statute: **Purpose of activities**

Activities must be carried out <u>solely</u> 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

Minn. Stat. §356A.05(a)

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SBI Prudent Person Rule

- In addition to the Fiduciary Duty standard in Chapter 356A, the SBI's authorizing statutes establish a nearly identical prudent person standard for <u>all</u> SBI investment programs, including those not covered by Chapter 356A.
- 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 […] 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.

Minn. Stat. §11A.09

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Relevance of ERISA to Public Funds

- ERISA does not apply to governmental plans
  - However, it is very influential and provides guidance as to how fiduciaries should act
  - ERISA reflects relevant trust law and its “spirit” is typically followed by the courts in the absence of a stated standard
- State and/or local laws and regulations govern public funds
  - Governmental plan fiduciary standards are typically modeled (often verbatim) after ERISA

Who is a Fiduciary?

- How is one deemed a fiduciary under the law
- Limited in scope
- Cannot avoid
- Trustees are the highest level fiduciaries

Fiducary Duties Overview

Fiduciary Duties

Duty of Loyalty

-Exclusive benefit rule
-Exclusive purpose of providing benefits

Duty of Prudence

- Skill, prudence & diligence
- Prevailing circumstances
- Like capacity & familiar with such matters
- Conduct of an enterprise of like character with like aims

Diversification

- Diversify to minimize risk unless imprudent to do so

Follow Plan Document

- To the extent consistent with applicable law

Prohibited Transactions

- No self-dealing
- No transactions benefiting nonparticipants
- No acting against plan interests
- Limited exceptions

Duty of Loyalty

ERISA Exclusive Benefit Rule:

A fiduciary shall discharge his duties with respect to a plan solely in the interest of the participants and beneficiaries and –

For the exclusive purpose of:

- Providing benefits to participants and their beneficiaries
- Defraying reasonable expenses of administering the plan

ERISA § 404(a)(1)

- The law relating to conflicts of interest comes from the duty of loyalty
- Fiduciary duty takes precedence over other duties
- The duty to pay only reasonable plan expenses stems from the duty of loyalty. Paying expenses from plan assets is a fiduciary decision.

Breaches of the Duty of Loyalty

Discussion of Examples

What are the different prudence standards?

- Some confusion exists with regard to the various prudence standards.

- Different prudence standards have emerged and evolved over time.

  – Prudent “reasonable” man – traditional standard
  – Prudent investor – evolved - higher standard
  – Prudent expert – highest standard - ERISA fiduciary standards are the highest under the law. *Donovan v. Bierwirth,* 754 F.2d 1049 (2d Cir.1985).

Duty of Prudence

"The test of prudence is one of conduct and not a test of the result of performance of the investment. The focus of the inquiry is how the fiduciary acted in his selection of the investment and not whether his investment succeeded or failed."

Donovan v. Cunningham

Fiduciaries are judged by the prudence of their process.

Duty of Prudence in Practice

- Understand what you are voting on
- Collect and understand information before making a decision
- If you don't have the necessary knowledge and skill – retain experts and/or delegate to experts
  - Delegation mitigates risk ⇨ shifts liability if the delegation is prudent
  - Delegation is not abdication ⇨ duty to monitor/ongoing oversight
- **Document, document, document** steps taken in the deliberative decision – making process (evidence of prudent process)

Duty to Delegate?

*A trustee has a duty personally to perform the responsibilities of trustee **except as a prudent person might delegate those responsibilities to others**. In deciding whether, to whom and in what manner to delegate fiduciary authority in the administration of a trust, and thereafter in supervising agents, the trustee is under a duty to the beneficiaries to **exercise fiduciary discretion and to act as a prudent person would act in similar circumstances.***

Restatement of Trusts, § 171

Steer the ship, set the course, but allow the staff to handle the rowing.

Duty to Monitor

- U.S. Supreme court opinion held fiduciaries have a continuing duty-separate and apart from the duty to exercise prudence in selecting investments at the outset- to monitor and remove imprudent investment options. *Tibble v. Edison International*, 135 S.Ct. 1823 (2015).

Breaches of the Duty of Prudence

Discussion of Examples

Duty to Diversify

- ERISA requires diversification so as to minimize the risk of a large loss, unless under the circumstances it is clearly prudent not to do so
- SBI has statutory language requiring diversification
- The duty to diversify emanates from the duty of prudence
- Modern Portfolio Theory

Duty to Follow Plan Document

- Administer plan in accordance with plan documents only to the extent that the plan document complies with the terms of the law (i.e., the Rules and Regulations)
    - **Plan document** can include multiple documents (By-laws, Investment Policy Statement, policies adopted by the board)
- Plan documents need to be consistent with applicable law and reflect plan practices
- Fiduciaries cannot be arbitrary and capricious in their application of applicable law(s) or plan
- Duty to comply with the plain meaning of provisions in a fair manner.

Fiduciary Liability

- The laws governing public fund fiduciaries typically impose liability for a breach of duty
- Under ERISA, a fiduciary who fails to discharge any of their fiduciary responsibilities
  - “[S]hall be personally liable to make good to such plan any losses to the plan resulting from each such breach”
  - Shall also be personally liable to restore any profits which have been made through use of plan assets
  - Shall be subject “to such other equitable or remedial relief as the court may deem appropriate”
- Co-fiduciary liability means “you are your brother’s keeper”

Fiduciary Liability

Discussion of ways to mitigate

What is "Good Governance" And Why is it Important?

- Governance is the structure, manner and process by which authority or control is exercised

- "Good governance" begins with a clear understanding of fiduciary duty

- "Good governance helps to ensure better organizational performance, fewer conflicts of interest, higher probability that goals and objectives will be attained, and less opportunity for misuse of corporate or fund assets" - *The Stanford Institutional Investors' Forum*

- Good governance adds value – tangible and intangible

Key Elements of Good Governance Framework

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Governance

- Is the organizational framework for making and implementing investment policies and decisions.
- Having a governance structure that provides inputs and checks and balances is critical to helping to ensure compliance with the fiduciary duty standard.
- Following policies and procedures, consulting with experts, asking questions, documenting the bases for decisions goes a long way to demonstrating prudence.

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Governance – State Board of Investment

The Minnesota Constitution establishes the Board. Minnesota Constitution Article 11 § 8. Minn. Stat. § § 11A.03 and .04 establish the framework with express authority for the Board.

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Governance – SBI Executive Director

- Appointing and evaluating a qualified Executive Director with an appropriate level of knowledge is key.
- Minn. Stat. § 11A.07 statutorily gives authority to the Executive Director to implement investment policy.
- The Board has retained consultants and investment managers to advise board not just SBI Executive Director and staff.

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Governance - IAC

By statue there is an Investment Advisory Council that has 10 of 17 members that have investment knowledge and expertise in addition to the 7 members that are representatives of various constituencies and some of which in practice do have some general investment experience. *See* Minn. Stat. § 11A.08.

Governance – SBI Administrative Committee

The Board has established an Administrative Committee with representation from the IAC, each of the pension fund directors and a designee of each board member to review budget, compensation and administrative matters.

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Governance – SBI Proxy Committee

The Board has adopted proxy guidelines and the Board has established proxy committee with designees from each board member to implement procedures to vote on proxy, which is a fiduciary duty of the Board to exercise its voice as a shareholder on corporate governance, shareholder rights, executive compensation, change in control and other ESG issues.

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Governance – Conflict of Interest

There are statutes and policies in place to limit the potential for conflicts of interest and self-dealing. *See* Minn. Stat. § § 11A.04 (5), 11A.075.

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Governance – Fiduciary Education

- A fiduciary shall make reasonable effort to obtain knowledge and skills sufficient to enable the fiduciary to perform fiduciary activities adequately.
- Each public pension board, including the SBI, is required to develop a continuing fiduciary education program for the board members and chief administrative officer.
- The SBI maintains a fiduciary education program that it reviews each year as part of its budget process.

Minn. Stat. §356A.13

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Structures of Different Public Fund Entities

- Sole Trustee
- Investment Boards – responsibility for investments only - benefits administration is not within the scope of responsibility
- Boards composed solely of statutory officers
- Retirement Boards – responsibility for investments and benefits administration

Different Public Fund Plan Structures

- Examples of Separate Investment Entities:
  - Alaska State Pension Investment Board
  - Florida State Board of Administration
  - Illinois State Board of Investment
  - Massachusetts Pension Reserves Investment Management Board
  - State of Michigan Investment Board
  - Minnesota State Investment Board
  - Montana Board of Investments
  - Nebraska Investment Council
  - New Jersey State Investment Council
  - Oregon Investment Council
  - Rhode Island State Investment Commission
  - South Carolina Retirement Systems Investment Commission
  - South Dakota Investment Council
  - State of Wisconsin Investment Board
  - Washington State Investment Board

Different Public Fund Structures

- Examples of States with Sole Trustee:
  - Connecticut
  - New York
  - North Carolina

- Examples of States with Boards Complied Solely of Statutory Officers
  - Minnesota State Investment Board
  - Florida State Board of Administration

Different Public Fund Investment Authority

- Whole Portfolio Theory – contrary to “legal lists”

- Examples of Funds that still have “legal lists” for investments:
  - Connecticut
  - Minnesota State Investment Board
  - New York
  - North Carolina
  - Public Employees’ Retirement System of Colorado
  - State of Wisconsin Investment Board

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Suite 1500
Chicago, IL 60601
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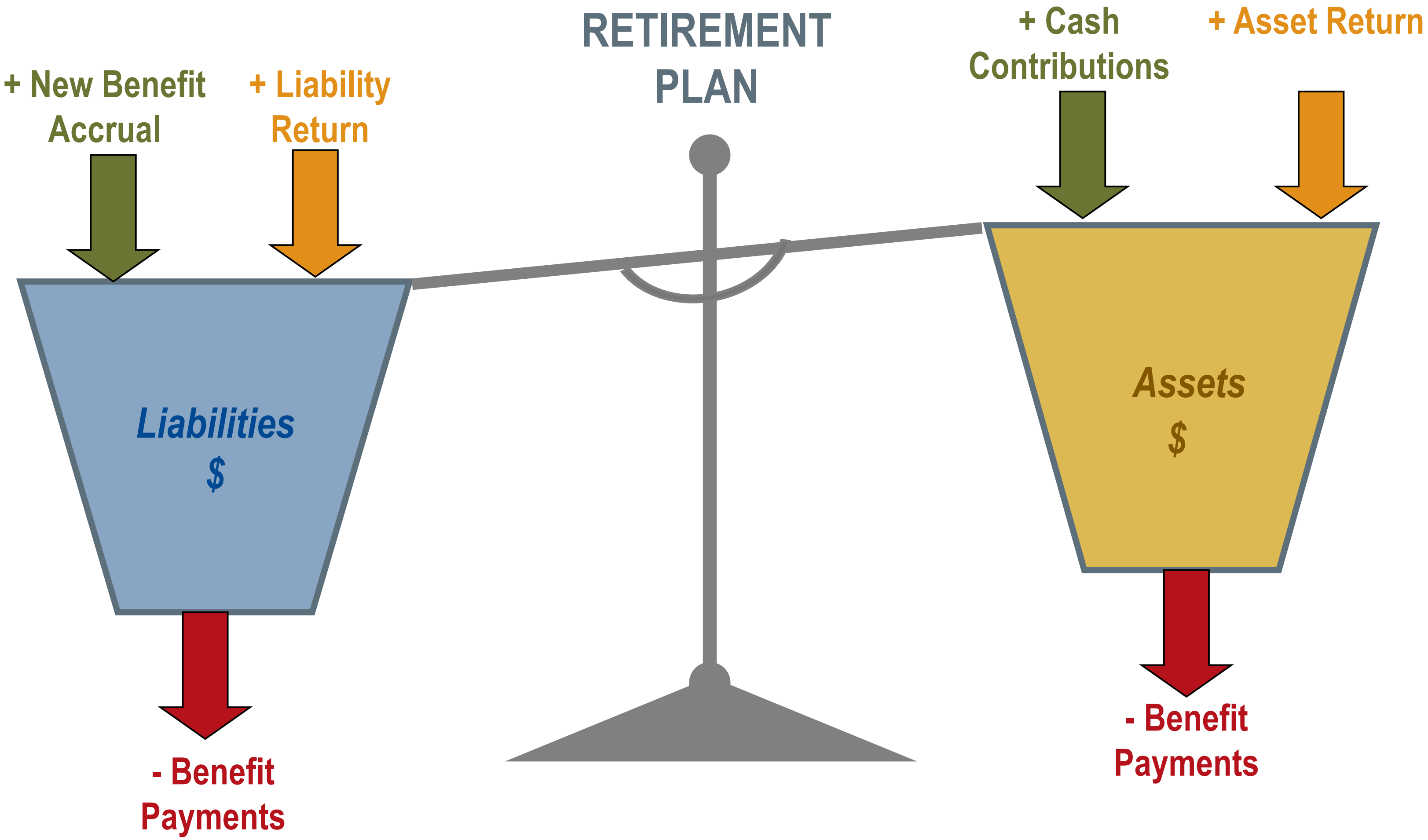
Minnesota State Board of Investments – Asset Allocation

January 2020

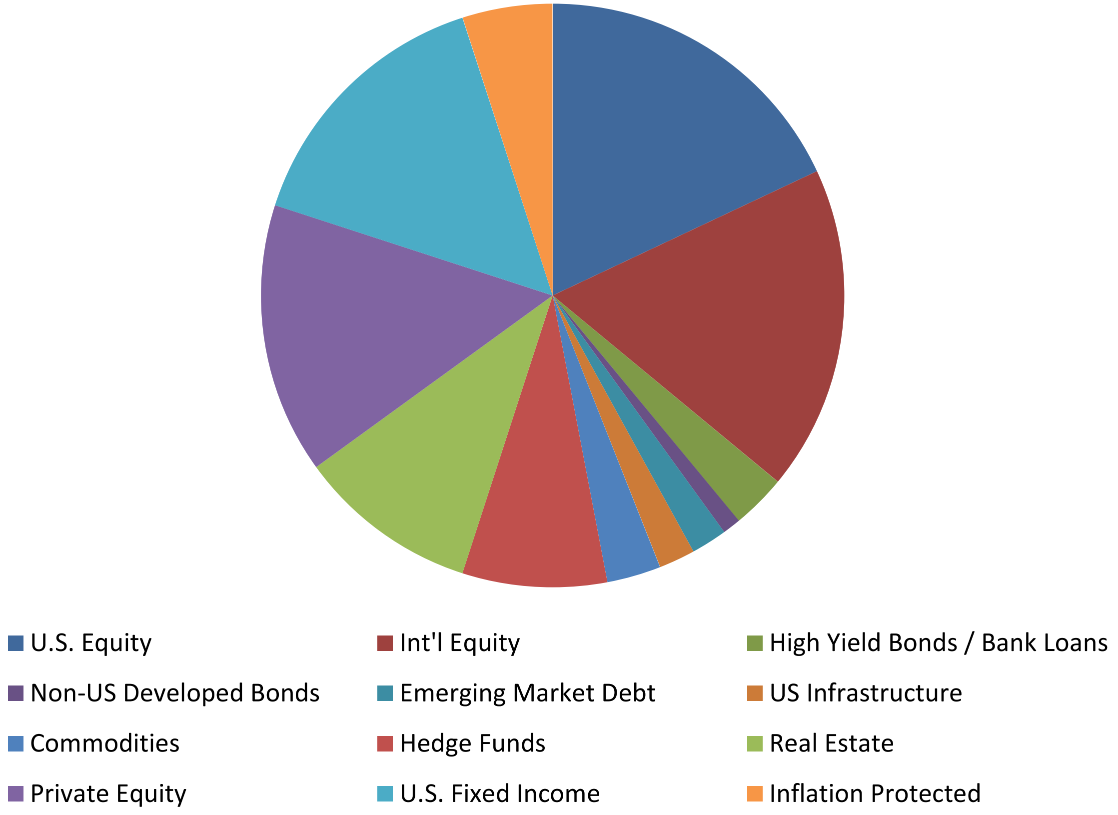
Pension Accounting

Balance of Liabilities and Assets

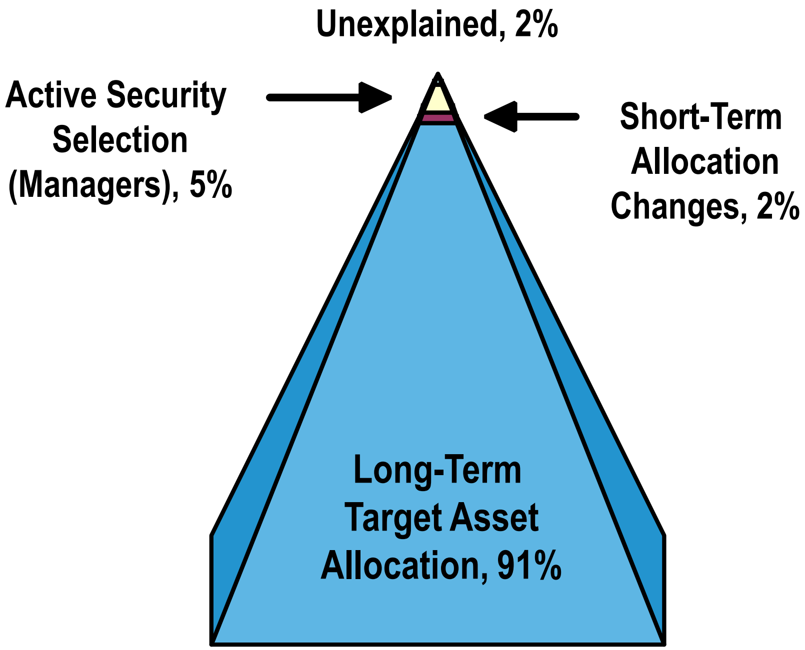


What is Asset Allocation?

Asset allocation refers to the implementation of an investment strategy that seeks to balance reward (investment return) and risk (volatility of returns) by mixing various assets based on investor's risk profile and return goal



Asset Allocation—The Most Important Decision



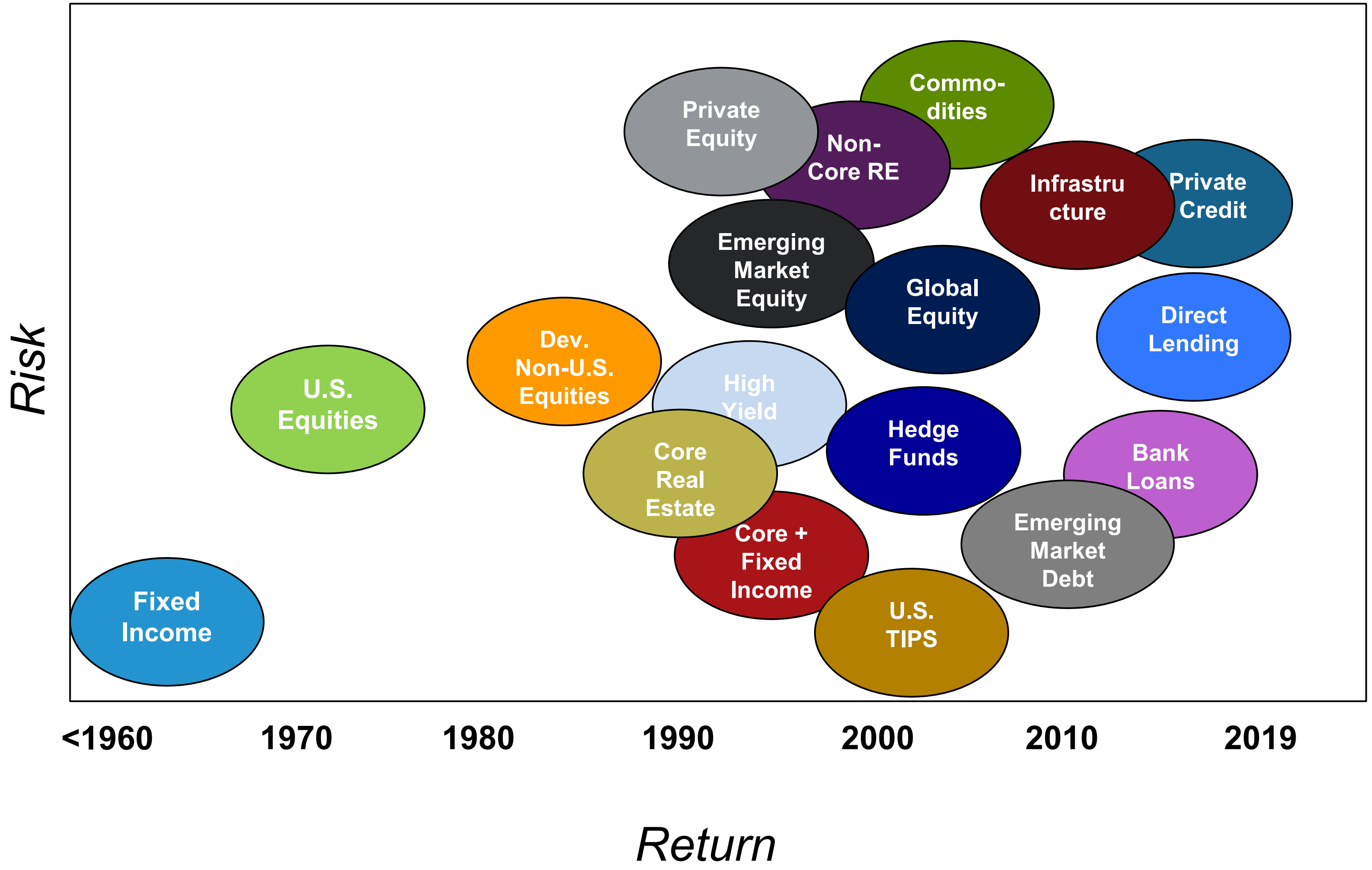
Asset allocation is the most important investment decision as it explains more than 90% of investment return based on multiple historical studies:

- Gary P. Brinson, L. Randolph Hood, and Gilbert L. Beebower, *Determinants of Portfolio Performance*, The Financial Analysts Journal, July/August 1986.
- Gary P. Brinson, Brian D. Singer, and Gilbert L. Beebower, *Determinants of Portfolio Performance II: An Update*, The Financial Analysts Journal, 47, 3 (1991).
- Roger G. Ibbotson and Paul D. Kaplan, *Does Asset Allocation Policy Explain 40%, 90%, or 100% of Performance?*, *The Financial Analysts Journal*, January/February 2000

Source: Brinson, Singer and Beebower, "Determinants of Portfolio Performance II: An Update" 1991.

The Evolution of Institutional Investors' Asset Allocation

The "Institutionalization" of Various Asset Classes



- The asset allocation of institutional investors has and likely will continue to evolve over time.

Importance of an Asset-Liability Study for Setting Asset Allocation

- Provides fiduciaries with an understanding of the dynamic relationship between plan assets and liabilities over time
- Illustrates the impact of various asset allocations on key financial metrics, such as required contributions and funded status, under a range of different macro-economic scenarios
- Identifies future trends in the financial health of the fund based on economic uncertainties that may not be evident from an actuarial valuation, which provides only a snapshot at a point in time
- Helps determine the level of risk that is appropriate in the context of the Plan's liabilities
- Best practice is to complete a study about every five years
- **The key take-away from the asset-liability study is the allocation between equity ("return-seeking") vs. fixed income ("risk-reducing")**

An asset-liability study is a ***comprehensive toolkit*** *for* ***making decisions*** *on a fund's* ***asset allocation*** *and investment risk* ***that align with the liabilities*** *those funds support.*

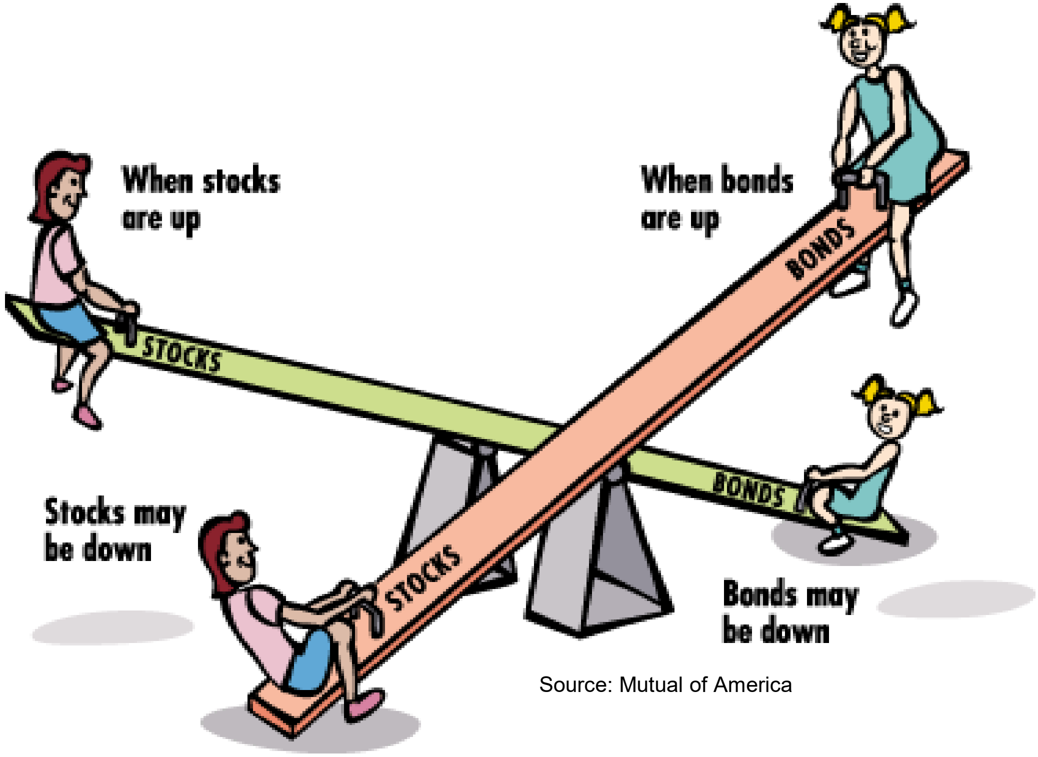
Factors Driving Asset Allocation Implementation

Factor	Range of Investor Circumstances for Factor			
Governance ▪ Oversight resources ▪ Speed of action ▪ Tolerance for higher cost	**Strategic**	▪ More strategic investing ▪ Greater reliance on market risk ▪ Less alternatives	▪ More opportunistic investing ▪ Greater reliance on active risk ▪ More alternatives	**Flexible**
Time Horizon ▪ Life span ▪ Cash flow position ▪ Tolerance for illiquidity	**Short**	▪ No illiquid alternatives ▪ Diversification over return-seeking	▪ Most illiquid alternatives ▪ Return-seeking over diversification in risk premiums	**Long**
Portfolio Size ▪ Ability to diversify across strategies ▪ Market impact of trades ▪ Potential for closet indexing	**Small**	▪ Less alternatives ▪ Greater reliance on active risk	▪ More alternatives ▪ Greater reliance on market risk	**Large**
Investor Type	**Efficiency**	← **Balance** →		**Opportunity**

Diversification

Diversification is a requirement in the definition of prudent fiduciary investing

- Diversified portfolios are meant to reduce risk while maintaining an expected return
- All asset classes do not produce the same results in a particular economic environment
- An optimization analysis is used to determine optimal portfolios or mixes of assets depending on an investors' risk tolerance



Source: Mutual of America

Diversification Principles

Diversification usually reduces volatility and, under certain conditions, can help increase returns

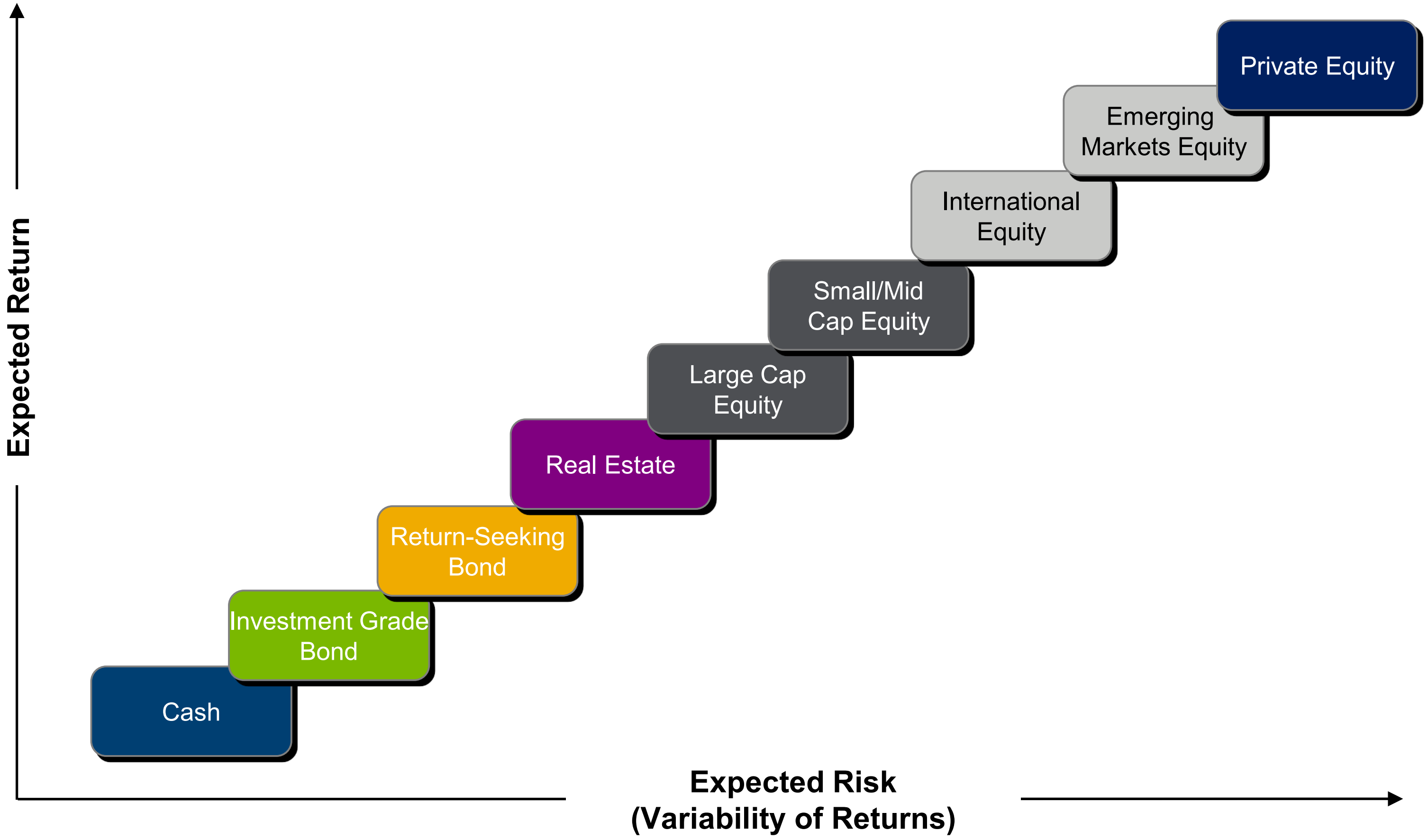
- Below is a simple example of the benefits of diversification
- Investor invests in just Investment A, just Investment B, and then diversifies between the two
- 50/50 Portfolio has the highest return due to diversification of returns

Example – Investor Starts with $100

	Year 1 Return	Year 2 Return	Cumulative Return
Investment “A”: %	20.00%	-10.00%	8.00%
Investment “A”: $	$100*1.2 = $120	$120*0.9 = $108	Final: $108
Investment “B”: %	-10.00%	20.00%	8.00%
Investment “B”: $	$100*0.9 = $90	$90 * 1.2 = $108	Final: $108
50/50 Portfolio: %	5.00%	5.00%	10.25%
50/50 Portfolio: $	$100*1.05 = $105	$105*1.05 = $110.25	Final: $110.25

- This example makes the following assumptions to reach its conclusions:
  - Perfect negative correlation between stocks and bonds
  - Rebalancing at the end of Year 1

Risk-Return Spectrum (Illustrative)



Benchmarking: Purposes & Types

- Benchmarks are used to measure the performance of the Total Fund, asset classes, and individual managers over various time periods and across methodologies to determine the effectiveness of implementation of an investment program

- There are many types of benchmarks that can be used to analyze relative performance of an investment
  - Broad market (MSCI ACWI IMI Index)
  - Style-specific (S&P 500 Value Index)
  - Risk adjusted returns (vs. benchmark Sharpe ratio)
  - Absolute return metric (i.e. 7% return target)
  - Real return target (i.e. CPI + 3%)
  - Peer universe (i.e. Public Funds >$1 billion)

- Careful attention should be paid to appropriateness when selecting the benchmark for a given asset class, manager, or strategy

Characteristics of a Good Benchmark: SAMURAI[1,2]

- ***S**pecified in advance:* the benchmark is specified prior to the start of an evaluation period and known to all interested parties
- ***A**ppropriate:* the benchmark is consistent with the manager's investment style or area of expertise
- ***M**easurable:* the benchmark's return is readily calculable on a reasonably frequent basis
- ***U**nambiguous: t*he identities and weights of securities constituting the benchmark are clearly defined
- ***R**eflective* of current investment opinions: the manager has current knowledge of the securities or factor exposures within the benchmark
- ***A**ccountable:* the manager is aware of and accepts accountability for the constituents and performance of the benchmark
- ***I**nvestable:* it is possible to forgo active management and simply hold the benchmark

[1] As per CFA Institute's **SAMURAI** characteristics. The criteria commonly referenced as industry standard is based on research conducted by Jeffrey Bailey and others. Mr. Bailey published an initial paper titled "Are Manager Universes Acceptable Performance Benchmarks?" in the May-June, 1992, edition of the *Financial Analysts Journal*.
[2] The criteria listed above are more easily fulfilled for publicly traded, morel iquid asset classes. Good benchmarks exist for private markets but they are more challenging to identify.

Total Fund Benchmarking

Ideally, Total Fund benchmarks will have the following characteristics:

- It is a passive representation of the broad asset classes included in the established asset allocation policy
- All benchmarks and policy allocations should be determined in advance
  - Asset transition timelines and weights should be determined in advance
  - If a Plan decides to deviate from the policy allocation, the effect of maintaining an asset allocation which deviates from policy should be measured and reported (i.e. measure whether being overweight public equities detracted or added to overall performance for the Total Fund relative to the Policy Benchmark)
  - If the policy allocation is determined to be no longer appropriate, the policy should be amended in advance of the change
  - Changes to the asset class benchmarks should flow through to the Total Fund Policy Benchmark

- Other Total Fund Benchmarks (mainly used for long-term periods: 25+ years):
  - Absolute Return Target (i.e. Actuarial Assumed Rate of Return)
  - Real Return Target
  - Opportunity Cost Benchmark (e.g. mix of public stocks and bonds)

Private Market Benchmarking

Asset Class	Most Commonly Used Benchmark	Alternative Benchmark
Private Equity	Broad Public Market Index[1] + Premium (Longer Time Periods) OR Peer Universe (Shorter Time Periods)	--
Core Real Estate	NCREIF ODCE	--
Non-Core Real Estate	NCREIF ODCE + Premium	Peer Universe
Liquid Alternatives	Peer Universe (of similar strategies)	CPI + Premium or Absolute Return

- Benchmarking private asset classes has challenges (timing, applicability, depth, tracking error, etc.)
- The table above provides an overview of the most commonly used benchmarks for private equity, real estate, and hedge funds
  - We find these benchmarks to be common among peers and other institutional investors
- As peer benchmarks in private equity and private real estate become more robust, more plans are moving to adopt, for shorter time periods (~<10 years)

[1]Most plans use the Russell 3000 or MSCI ACWI as the Public Market Index when applying a premium

Q & A

Minnesota State Board of Investment: Investment Programs

Introduction

- The SBI manages investments for several investment programs:
  - Combined Pension Funds
  - Participant Directed Investment Program
  - Fire Funds
  - Non-Retirement Investment Program
  - State Cash

Combined Pension Plans: Overview

- Represent the three statewide pension plans: MSRS, TRA, PERA
- $74.21 billion AUM as of December 31, 2019
- Board sets asset allocation and reviews investments in public equities, fixed income, private markets, and cash

Combined Pension Plans: Asset Allocation

- SBI's current asset allocation is as follows:
  - Public Equity: 53%
  - Fixed Income/Treasuries: 20%
  - Private Markets: 25%
  - Cash: 2%
- Board reviews the SBI asset allocation periodically.

SBI's Strategic Asset Allocation Framework

Asset Category	Actual % As Of 9/30/19	Category Ranges
Growth - Appreciation	**76.5%**	**50 – 75%**
Public Equity	62.9%	
Private Equity	8.5%	
Non-Core Real Assets	3.5%	
Distressed/Opportunistic	1.5%	
Growth-Income Oriented	**11.3%**	**15 – 30%**
Core Fixed Income	10.4%	
Private Credit	0.9%	
Return-Seeking Fixed Income	0.0%	
Real Assets	**0.7%**	**0 – 10%**
Core Real Estate	0.0%	
Real Assets	0.7%	
Inflation-Protection	**0.0%**	**0 – 10%**
TIPS	0.0%	
Commodities	0.0%	
Protection – U.S. Treasuries	**10.6%**	**5 – 20%**
Liquidity – Cash	**0.9%**	**0 – 5%**
Opportunity	**0.0%**	**0 – 10%**

Participant Directed Investment Program

- Retirement and benefit programs in which participants select investments from options made available by the SBI.
- Total AUM of $11.32 billion. Programs Include:
  - Deferred Compensation Program
  - Unclassified Retirement Plan
  - Health Care Savings Plan
  - PERA Defined Contribution Plan
  - Hennepin County Supplemental Plan
  - Minnesota Achieving a Better Life Experience (ABLE) Plan
  - Minnesota College Savings Plan

Firefighter Plans

- The SBI provides investment options for various volunteer fire departments across the state.
- Statewide Volunteer Firefighter Retirement Plan:
  - Combined fire plans administered through PERA and invested in a balanced fund constructed by the SBI.
  - Total AUM $120.06 million
- Local Volunteer Fire Relief Plans:
  - Individual plans who choose investment options through the SBI's Supplemental Investment Fund (SIF) platform
  - Total AUM: $716.41 million

Non-Retirement Investment Program

- Includes various state trusts and other programs for which the SBI provides investment options.
- Total AUM of $4.30 billion. Programs include:
  - Environmental Trust Fund
  - Permanent School Fund
  - Closed Landfill Investment Fund
  - Other Postemployment Benefits (OPEB)
  - Assigned Risk Plan
  - City and County Equity Investment Program
  - Other various programs for which the SBI provides investment options

State Cash

- The SBI manages state cash not currently needed for general fund expenditures through the Invested Treasurer’s Cash account
- Total AUM of $13.64 billion
- State cash is managed internally in short-term investments such as treasuries and repurchase agreements.

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Minnesota State Board of Investment

January 20, 2020

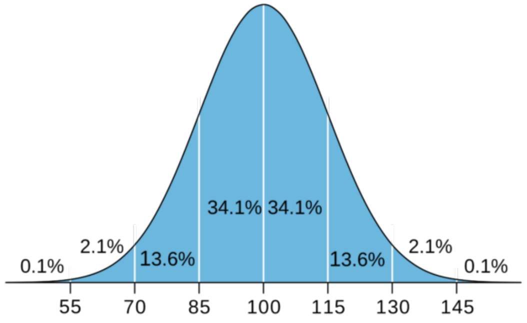
A Brief Discussion of Investment Risk

What is Risk?

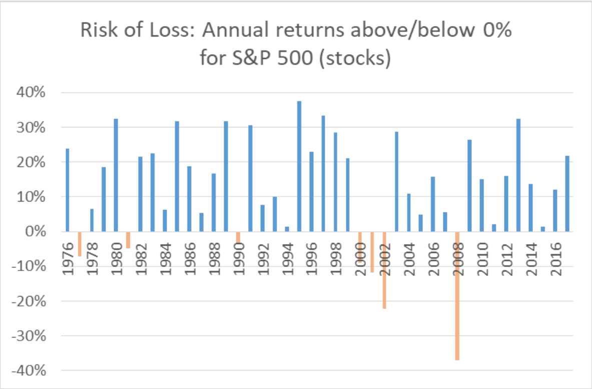
"Risk takes on many forms but is broadly categorized as the chance an outcome or investment's actual return will differ from the expected"[1]

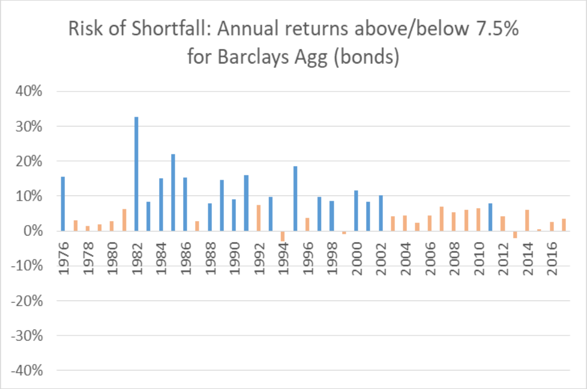
"The possibility of something bad happening. Something bad that might happen"[2]

- The two perspectives reflect a fundamental difference. Traditionally, institutional investors used a statistical measure, standard deviation (a statistic that measures the dispersion of a dataset relative to its mean), which treats positive and negative data points equally. The Cambridge dictionary definition reflects how most people consider risk, "something bad happening".
- There is a role for both in the pension investment decision making process but the common sense use of the term is inclusionary. This allows a wide range of considerations to be balanced
- For investments, one of the most widely used measures of risk is standard deviation, a measure of volatility of returns.



[1] Investopedia
[2] Cambridge Dictionary





- Investors’ objectives vary. Therefore, what outcomes matter most to them, and their willingness to tolerate different outcomes, differ. As a result, no single number can measure all the myriad types of risks
  - The left graph shows the risk of losing money in a calendar year (returns <0% are orange). For stocks, this happened 7 times over 42 years. *Standard deviation of annual returns = 16%.*
  - The right graph shows the risk of falling short of target in a calendar year (returns <7.5% are orange). For bonds, this happened 24 times over 42 years. *Standard deviation of annual returns = 7%.*
- Which is riskier? It depends on the investment objective. The volatility metric does not provide a clear answer.
  - The following page lists some of the different investment risks that may matter to investors.

Different Measurements of Risk

- Permanent Impairment (returns too poor to recover from)
- Loss (negative returns, over some timeframe)
- Shortfall (returns less than a threshold, over some timeframe)
- Failure to meet spending obligations
- Volatility (standard deviation of returns)
- Inflation (losing purchasing power from returns less than inflation rate)
- Underperformance (returns less than a benchmark)
- Peer comparison (returns less than peer institutions)
- Reputation (investment returns or other characteristics will reflect poorly on the institution)
- Behavioral (poor returns cause lack of conviction and deviations from strategy)
- Liquidity (spending obligations can be met only by selling assets at an uneconomic price)

Additional Risk Considerations

- Adequate resources and well-qualified staff
- Economic Regime Change: e.g., a secular shift to a low-carbon economy; a secular increase/decrease in interest rates; etc.
  - Economic Regime Change is very hard to identify in advance

Addressing Economic Regime Change

- Once identified, addressing regime change requires time and resources
- Misidentifying regime change is problematic
- The impacts of regime change on the investment portfolio/capital markets are complex and nuanced
- Developing policy and implementing that policy that addresses a regime change requires significant resources and time.

MEKETA INVESTMENT GROUP

Minnesota State Board of Investment

January 2020

Environmental Social Governance Overview

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1. Introduction to ESG
2. What ESG looks like for institutional investors today
3. Summary

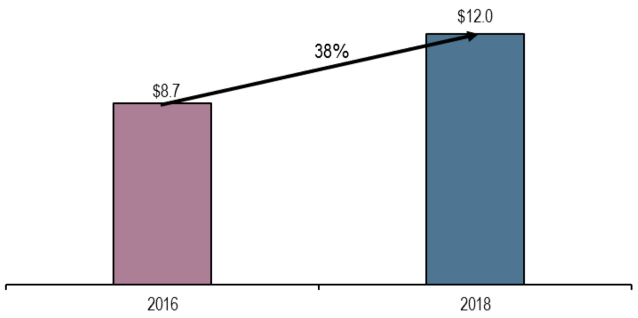
Introduction to ESG

- The Minnesota State Board of Investments (SBI) is among a growing number of U.S. public investment entities taking steps to understand how material Environmental, Social and Governance (ESG) issues may be integrated in to their investment decision-making process to support their fiduciary duties
- Today we provide an overview of institutional investor approaches to ESG and offer a range of potential investment strategy/policy options

ESG Investing

- ESG investing refers to the use of Environmental, Social, and Governance factors in investment decision making and management
- Active managers have to varying degrees always considered ESG risks and opportunities
- The difference today is that ESG factors are being formalized, reflecting increased concern of investors
- ESG investing encompasses a wide range of approaches
- Combined, all versions of ESG invested assets expanded by 38% from 2016 to 2018 in the United States[1]

ESG Asset Growth (In Trillions)



- Much of this growth was driven by asset managers, who now consider ESG criteria across $11.6 trillion in assets, up 44 percent from $8.1 trillion in 2016

[1] US SIF 2018 Report.

ESG Investing

ESG investing encompasses shareholder proxy voting and engagement

- Shareholder proxy resolutions related to ESG issues are gaining increasing traction
- Institutional investor coordinated engagement on ESG issues continues to escalate

ESG Potential Material Factors

- During the past decade, the institutional investor market has become increasingly attentive to the potential material impact of ESG factors on investment performance

Common ESG Considerations

Environment	Social	Governance
Climate change	Consumer rights	Board structure
Energy transition	Health and safety	Board diversity
Sustainability best practice	Product safety	Independent directors
Environmental policy & mgmt.	Labor relations	Chairman / CEO split
Water supply	Community / stakeholder relations	Executive pay
Sustainable transport		Shareowner rights
Waste management		Accounting / audit

Investment Performance and ESG

- ESG data availability, marketing presence and regulation have increased dramatically in the last few years
- In 2011, only 20% of the companies in the S&P 500 Index reported ESG metrics; now over 80% report
- ESG data and scores vary widely among data vendors, which can result in different performance
- Studies of ESG and performance find many positive and neutral performance results of ESG, but not all
- Divestment of fossil fuels has generated mixed performance

Annualized Returns (Periods Ending 12/31/2018)

Index	1 Year (%)	3 Year (%)	5 Year (%)
MSCI ACWI ex-US	-14.20	4.48	0.68
MSCI ACWI ex-US ex Fossil Fuels	-14.94	3.60	0.92
MSCI ACWI ex-US ex Coal	-14.35	4.14	0.72

- There is no one ‘right’ approach to ESG
- Integrating material ESG factors into investment strategy squarely fits within a U.S. public pension plan’s fiduciary duty
- ESG implementation can be costly, time consuming, and require additional staff and external resources

Examples of ESG Investing

Integrate –assess material ESG factors and integrate into financial analysis of investments

- Public Equity - Large-Cap Sustainable Growth strategy seeks to outperform over a full market cycle with less risk through a concentrated portfolio of companies that have sustainable business advantages, fundamental strength and attractive valuations
- Private Infrastructure fund seeks to invest in a pipeline of contracted transactions in renewable energy infrastructure that have the potential to generate mid-teen or higher pro forma net returns, which the manager believes is well in excess of most renewable infrastructure financings
- Private Real Estate fund evaluation of properties for investment includes incorporating ESG variables as part of risk, return, and diversification considerations to address issues such as climate risk, energy, water, waste, and greenhouse gas emissions (GHG) management, physical impacts of climate change, and regulatory changes

Impact – seek market returns and quantitative socially responsible results

- Private Equity fund that seeks to invest globally in growth-stage businesses with proven technology and commercial traction, run by talented mission-driven management teams; The fund is an active minority investor, providing growth capital to help accelerate market adoption
- Public equity fund that seeks to outperform global equities by investing in innovative companies whose core products and services address three of the world’s major social and environmental challenges Life Essentials, Human Empowerment, and Environment
- Fixed Income bond fund that actively tilts toward Green Bonds while seeking outperformance of market

Socially Responsible - invest based on social issues, regardless of investment return implications

- Negative screens include state mandates to divest/exclude companies related to Iran, Sudan

What ESG Looks Like For Institutional Investors Today

ESG at U.S. Public Pension Plans

- ESG approaches may be incorporated into any or all of the following aspects of a plan’s investment strategy and governance
  - Investment beliefs
  - Investment policy
  - Asset allocation
  - Investment manager selection
  - Monitor investment managers
  - Monitor investment portfolio
    - Select ESG factors
    - Climate change reporting
  - Engagement
    - Investment Managers
    - Regulators/Government
    - Companies

ESG at U.S. Public Pension Plans

- Plans vote their proxies in accordance with their ESG policies, with a service provider's or custom guidelines
- Plans of widely different sizes may also conduct ESG engagement that can be heavily resource intensive
  - Engagement with investment managers
  - Engagement with regulatory/government organizations
  - Engagement with companies in which the plan is invested
- Some plans are beginning to monitor their investment managers approach to material ESG factors
- Some plans allocate assets using ESG criteria, with an increasing trend toward ESG integration, and impact

ESG at U.S. Public Pension Plans

A handful of plans are beginning to monitor their overall investment portfolio

- Accelerating this year - climate change risk (some legally required)
  - Carbon footprint
  - Carbon footprint, green revenue share, physical climate risk
  - Climate risk report, including forward-looking climate scenario analyses and assessments of company strategies to address climate risks, in line with TCFD (Task Force on Climate Related Financial Disclosures) guidelines
  - Climate change Value at Risk (incubator)

- Emerging – overall portfolio monitoring on key E, S, and G metrics (some specific asset class already)
  - Challenges
    - Overview ESG scores among data providers range widely
      - Moody's and Fitch bond ratings correlation is over 99% - clear market signals
      - ESG data ratings correlations range between 44% and 77% (no standards)
    - ESG data metrics can capture key points but do not provide integrated overview

- The time and resources required to launch and implement monitoring vary widely by approach

ESG at U.S. Public Pension Plans

Below provides just a sample of the activities of a few plans:

- CalPERS ($380 billion) – Co-founder of a number of global organizations, from the UN PRI to Climate Action 100+, to 2019 Net Zero Asset Owners Alliance; sustainability allocations; exclusions for tobacco, and mandated Sudan, Iran, thermal coal
- CalSTRS ($242 billion) – Leads engagements (civilian firearms); lead investor in ESG passive index strategies such as Women on Boards and Low Carbon; active private equity green/clean tech investor; exclusions for tobacco, and mandated Sudan, Iran, thermal coal
- New York CRF ($207 billion) – new climate policy to address portfolio resilience to energy transition and physical climate risks, includes monitoring managers and consultants for alignment with policy, and put service providers on watch for non-compliance
- San Francisco ERS ($25 billion) – monitors fossil fuel company's climate financial risk; watch & exclude criteria
- Hawaii ERS ($17 billion) – PRI member; adjusting investment portfolio to state legislation aligned with the Paris agreement on environmental and renewable energy goals -reducing ERS fossil fuel company exposure
- Vermont Pension Investment Committee ($4.5 billion) – co-filer on multiple climate shareholder proposals
- Seattle City ERS ($3 billion) – developed their first climate scenario portfolio analysis in 2019

Minnesota State Board of Investment Proxy Voting and ESG Overview

SBI Investment Belief

Utilizing engagement initiatives to address environmental, social, and governance related (ESG) issues can lead to positive portfolio and governance outcomes.

Proxy Voting: Procedures

- U.S. securities are voted internally;
- Non-U.S. securities are voted by investment managers;
- The Board delegates voting authority to a four person committee to execute proxy voting rights for U.S. securities.

Proxy Voting:
Committee Meetings

- The proxy committee meetings are scheduled on an as-needed basis to vote resolutions not covered by precedent.
- SBI staff provide applicable materials in advance of the meeting.
- The proxy committee votes by majority and may set precedent with a unanimous vote.

Proxy Voting: Precedent

- Most proxy ballots are voted according to precedent

Example of Proxy Precedent:

Performance Based Stock Options [Executive Compensation]

Vote FOR shareholder proposals to adopt a policy of executive compensation that utilizes performance based stock options.

Environmental, Social and Governance (ESG) Introduction

The SBI engages in environmental, social and governance (ESG) initiatives to address long-term, material risks and opportunities that are expected to lead to positive portfolio outcomes.

ESG Initiatives Include: Proxy voting, Coalitions and Memberships, and Engagement.

ESG: Coalitions and Memberships

- Council of Institutional Investors (CII)
- United Nations Principles of Responsible Investing (PRI)
- Ceres Investor Network
- Institutional Limited Partners Association (ILPA)
- Climate Action 100+ (PRI and Ceres)
- Thirty Percent Coalition
- Midwest Investors Diversity Initiative

ESG: Recent Initiatives

- Engagement activities through Ceres and Climate Action 100+
- Signatory to initial engagement letters sent on behalf of the Midwest Investors Diversity Initiative and Thirty Percent Coalition
- Signatory to the Investor Agenda Global Investor Statement to Governments on Climate Change (Ceres; Investor Agenda)
- Signatory to Investor Expectations on Deforestation (Ceres)

ESG: Recent Initiatives

- Signatory to initial engagement letters sent on behalf of the Midwest Investors Diversity Initiative and Thirty Percent Coalition
- Signatory to several letters to regulatory agencies on shareholder and limited partner rights and protections (ILPA; CII)
- Signatory to resolution calling for increased corporate transparency regarding gender diversity (As You Sow)

ESG: Examples of Engagement Successes

- In September 2019, Duke Energy committed to a goal of being carbon neutral by 2050. CalSTRS led the engagement effort with the support of other public plans and organizations including the Climate Action 100+.
- TPG, an SBI private markets manager added 64 female directors to 53 portfolio company boards over the last two years. TPG partnered with the Thirty Percent Coalition to find qualified candidates.

ESG: Future Development

- Continue to incorporate ESG into investment management process;
- Devote additional SBI resources and expand engagement efforts;
- Continue to conduct research on material ESG issues; and
- Continue education efforts.