

# Minnesota State Board of Investment Bond Fund

As of September 30, 2023

San-23

#### **HIGHLIGHTS**

Objective

The Fund seeks to generate returns from interest income and capital appreciation.

#### Strategy

The account is invested primarily in high quality government and corporate bonds and mortgage securities that have intermediate to long-term maturities, usually 3 to 20 years. A small portion will be allocated to non U.S. bonds and higher yielding or below investment grade debt issues. The fund is actively managed with professional institutional investment managers and tracks the performance of the Barclays Capital Aggregate Bond Index, which includes broad domestic fixed income securities.

#### Benchmark

Bloomberg Barclays Aggregate Index

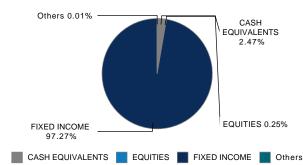
#### **Total Fund Expense**

The Total Fund Expense Ratio for this fund is 0.118%. This includes an Investment Management Fee of 0.11% that is deducted by the investment management companies prior to the calculation of performance and an Administrative Fee of 0.008% that is deducted after performance has been calculated.

# ANNUAL PERFORMANCE - CALENDAR YEAR ENDING 5.00 0.00 -5.00 -10.00 -15.00 2022 2021 2020 2019 2018

BOND FUND Bloomberg U.S. Aggregate

# FUND ALLOCATION



### **ANNUALIZED PERFORMANCE AS OF 09/30/23**

	BOND FUND	Bloomberg U.S. Aggregate	Excess
QTR	-3.28	-3.23	-0.05
YTD	-0.40	-1.21	0.81
1 Year	1.74	0.64	1.09
3 Year	-4.80	-5.21	0.40
5 Year	0.61	0.10	0.50
10 Year	1.64	1.13	0.51

### **FIXED INCOME CHARACTERISTICS**

	BOND FUND	Bloomberg U.S. Aggregate
Effective Duration	5.53	5.91
Convexity	0.51	0.64
Coupon Rate	4.15	3.03
Yield to Maturity	5.68	5.10
Average Life (in months)	108.31	99.71
Rating - Moody's	AA-3	AA-2

# TOP 10 HOLDINGS (% of Net Assets)

Security Name	Asset Weight
S.B.I.MONEY FUND	2.12
SWS101469 IRS USD R F 4.00000	1.36
SWS101444 IRS USD R F 4.18000	1.34
SWS101725 CDS USD R F 1.00000	1.22
US TREASURY N/B	1.07
US TREASURY N/B	0.84
US TREASURY N/B	0.82
US TREASURY N/B	0.77
US TREASURY N/B	0.68
SLM STUDENT LOAN TRUST	0.65

# SECTOR ALLOCATION (% of Net Assets)

	Sep	3ep-23	
	Fund	Benchmark	
MORTGAGE PASS-THROUGH	32.12	26.68	
CORPORATE	27.85	22.30	
US TREASURY	13.45	40.78	
СМО	8.12	1.73	
ASSET BACKED	7.91	0.49	
YANKEE	6.83	5.85	
AGENCY	2.01	1.63	
MUNICIPAL	0.70	0.49	
FOREIGN	0.67	0.02	
SWAPS	0.28		

# Minnesota State Board of Investment

GLOSSARY - Risk Definitions

### Average Life

Also referred to as the weighted average life. The weighted average time to receipt of principal payments (including scheduled pay-downs and prepayments). For non-amortizing securities, the average life equals the time to the stated maturity. For securities with embedded options the average life is based on the call/put date if the security is trading to call/put.

### Convexity

An option-adjusted measure. The average incremental percentage change in a bond's price (including accrued) beyond what is described by its Effective Duration, given +/-100bp shifts in the underlying par curve. If a bond's currency has no associated government yield curve, the U.S. Treasury curve is used in the calculation. Positive convexity indicates that the bond's effective duration increases as interest rates fall, and decreases when interest rates rise. Negative convexity indicates that the bond's effective duration decreases when interest rates fall and increases when rates rise. Expressed as a "Percentage Contribution to Price Change," it is approximately half of the "duration drift" form of convexity (and therefore does not need to be divided by two when used to estimate a bond's price change).

#### Coupon

The average coupon rate of all bonds in the portfolio weighted by market value.

#### **Effective Duration**

An option-adjusted measure. The average percentage change in a bond's price (including accrued) given +/- 100bp shifts in the underlying par government yield curve (spot or par depending on the BondEdge preference setting). Incorporates the effect of embedded options for corporate bonds and changes in prepayments for mortgage-backed securities. If a bond's currency has no associated government yield curve, the U.S. Treasury curve is used in the calculation.

## Moody's Rating

The average quality rating of all bonds that Moody covers in the portfolio weighted by market value.

### Yield-to-Maturity

The internal rate of return that causes the present value of a deterministic set of cash flows (assuming no options for bonds and average prepayment for mortgage backed securities) to equal the bond's market value (price + accrued) as of the pricing date. For Options on Futures, equals annualized Theta, with a maximum of 100%. Assumes a semi-annual discounting of coupon payments.