

Minnesota State Board of Investment Broad International Stock Fund

As of September 30, 2023

HIGHLIGHTS

Objective

The Fund seeks to generate a high rate of return by investing in stock of companies outside of the U.S. and outperform its target, the Morgan Stanley Capital International All Country World Index excluding (ex) USA (MSCI ACWI ex USA (net)).

Strategy

The Fund combines active, passive and semi-passive management strategies and uses the experience of a group of professional institutional investment managers. A majority of the assets are invested in the largest international stock markets, which include the following countries: Japan, China, the United Kingdom, France and Switzerland.

Benchmark

MSCI ACWI ex USA (net)

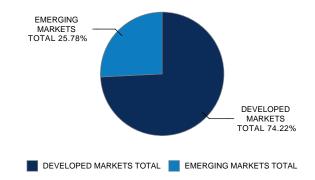
Total Fund Expense

The Total Fund Expense Ratio for this fund is 0.298%. This includes an Investment Management Fee of 0.29% 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



REGIONAL ALLOCATION



ANNUALIZED PERFORMANCE AS OF 09/30/23

| | FUND | International Equity Benchmark | Excess |
|---------|-------|--------------------------------|--------|
| QTR | -3.01 | -3.77 | 0.77 |
| YTD | 6.40 | 5.34 | 1.06 |
| 1 Year | 19.17 | 20.39 | -1.22 |
| 3 Year | 5.38 | 3.75 | 1.63 |
| 5 Year | 3.76 | 2.55 | 1.20 |
| 10 Year | 4.15 | 3.33 | 0.82 |
| | | | |

RISK-RETURN STATISTICS

| | One Year | Three Years | Five Years |
|----------------------------------|----------|-------------|------------|
| Beta | 0.87 | 0.90 | 0.95 |
| Alpha | 0.88 | 1.83 | 1.24 |
| Portfolio Standard Deviation (%) | 15.29 | 15.71 | 16.96 |
| Benchmark Standard Deviation (%) | 17.56 | 17.30 | 17.77 |
| Tracking Error | 2.71 | 2.30 | 1.80 |
| Information Ratio | -0.45 | 0.71 | 0.67 |

TOP 10 HOLDINGS (% of Net Assets)

| Security Name | Asset Weight |
|--|--------------|
| Security Name | Asset Weight |
| UNREALIZED GAIN OR LOSS FORWARD PAYABLES | 3.25 |
| TAIWAN SEMICONDUCTOR MANUFAC | 1.47 |
| NOVO NORDISK A/S B | 1.39 |
| S.B.I.MONEY FUND | 1.37 |
| EARN CHINA A SHARE | 1.32 |
| NESTLE SA REG | 1.28 |
| SAMSUNG ELECTRONICS CO LTD | 1.25 |
| UNREALIZED GAIN OR LOSS FORWARD PAYABLES | 1.18 |
| INR MSCI EMG MKTS CTF | 1.15 |
| ASML HOLDING NV | 1.03 |
| | |

SECTOR ALLOCATION (% of Net Assets)

| | Sep-23 | | |
|--------------------|-------------|-----------|--|
| | <u>Fund</u> | Benchmark | |
| BASIC MATERIALS | 7.47 | 8.78 | |
| CONSUMER GOODS | 0.00 | | |
| CONSUMER SERVICES | 0.01 | | |
| FINANCIALS | 32.77 | 27.34 | |
| FUTURES | -0.00 | | |
| HEALTH CARE | 11.91 | 12.71 | |
| INDUSTRIALS | 17.87 | 17.78 | |
| OIL & GAS | 7.93 | 8.35 | |
| TECHNOLOGY | 14.07 | 15.46 | |
| TELECOMMUNICATIONS | 4.80 | 5.60 | |
| UTILITIES | 3.16 | 3.99 | |

Minnesota State Board of Investment

GLOSSARY - Risk Definitions

Alpha

Alpha, also known as excess return, is the portfolio's return less the benchmark return. If a portfolio's rate of return is higher than the benchmark return, the portfolio is considered to have a "positive alpha".

Reta

Beta measures a fund's sensitivity to market movements. A fund with a beta of 1, indicates that the fund's price has moved with the market. A beta greater than (less than) 1, indicates the fund's price will be more (less) volatile relative to the market.

Information Ratio

The information ratio (IR) is a measure of the portfolio's risk adjusted return. This ratio considers the portfolios return to its benchmark return. The higher the information ratio, the higher the positive alpha the portfolio has generated given a certain amount of risk. The information ratio is determined by taking the portfolio's excess return over the standard deviation of the excess return.

Standard Deviation

Standard deviation is a measure of the portfolio's volatility in rate of return. A volatile portfolio will have a high standard deviation, while a more stable portfolio will have a lower standard deviation.

Tracking Error

Tracking error, also known as active risk, is a measure of how closely the portfolio performs to its benchmark. It is determined by taking the standard deviation of the excess return.