



To: San Bernardino County Employees' Retirement Association

From: NEPC, LLC

Date: March 31, 2022

Subject: State Street Global Advisors MSCI World ex-USA Index Fund

Recommendation

NEPC supports the San Bernardino County Employees' Retirement Association ('SBCERA') recommendation to invest with State Street Global Advisors' ('SSGA') MSCI World ex-USA Index Fund. This passive investment strategy allows for SBCERA to gain equity exposure to 22 developed country markets outside of the USA covering investments in large capitalization and mid capitalization equities.

Firm/Organization

SSGA is a limited purpose trust company, founded in 1978 as the investment management division for State Street Bank and Trust Company ('State Street'). SSGA is a wholly-owned subsidiary of State Street Bank and Trust Company, which is in turn a wholly-owned subsidiary of State Street Corporation, a publicly traded bank holding company whose shares are traded on the New York Stock Exchange under the symbol STT.

Since its founding, SSGA has undergone two relevant reorganizations. In 1995, State Street reorganized its investment management units under the SSGA umbrella. In 2017, the investment management business operated by SSGA as a division of State Street Bank and Trust Company was reorganized under the State Street Global Advisors Trust Company, a wholly owned subsidiary of State Street Bank and Trust Company.

SSGA manages \$4.14 trillion in assets as of December 31, 2021. SSGA and its parent entities are based in Boston, Massachusetts. SSGA also operates four full-service offices in London, England, Paris, France, Tokyo, Japan, and Sydney, Australia as well as a client service/marketing office in Montreal and Toronto, Canada.

Team Overview

The Global Equity Beta Solutions team ('GEBS') consists of approximately 59 index equity portfolio managers and approximately 170 employees overall dedicated to passive investment management. The team manages \$2.67 trillion as of December 31, 2021 across US (\$1.6t), International (\$1.0t) and Emerging Markets (\$84b). The index equity team is made up of individuals organized by regional coverage and the structure of each respective regional team is similar in that each portfolio manager is tasked with managing a cross section of strategies and investment vehicles. As an example, a portfolio manager might manage both US and Global portfolios (developed or emerging markets) across several fund types with different rebalancing and funding requirements. The firm sees this structure as way to promote a dynamic work environment and eliminate key person risk. Each portfolio has a lead and backup portfolio manager, with oversight

and control being conducted at the regional level where the portfolios are being managed. While the primary portfolio manager assumes ultimate responsibility and accountability for a portfolio's performance, the backup portfolio manager is expected to have a full understanding of the detailed requirements within the portfolio and will act as lead portfolio manager when the primary manager is out of the office. Teddy Wong, Sr. Portfolio Manager, and Raymond Donofrio, Portfolio Manager, serve as lead and back-up portfolio manager respectively on the MSCI EAFE Index product and MSCI Canada Index product. The two products combined make up the MSCI World ex-USA Index product. Mr. Wong has been with SSGA for over 20 years having joined the firm in the year 2000, while Mr. Donofrio, having joined the firm in 2008 has been with the firm for approximately 14 years.

Investment Process

As an index manager, SSGA's process is designed to provide the risk and return characteristics of a target index in a cost-efficient manner. Costs are defined by the explicit costs of running the portfolio like trading costs, portfolio turnover and administrative costs in addition to tracking error. Costs are controlled through their portfolio construction approach which includes integration of risk and liquidity analysis into the decision-making process as well as continuously researching and implementing trading strategies and techniques to minimize trading costs. The scale of the firm's equity beta business allows SSGA to keep costs low and take advantage of the daily flow of trades throughout their platform. To determine the most efficient and appropriate portfolio management technique for an indexed portfolio like the MSCI World ex-USA Index Fund, SSGA will take into account the size of the portfolio, tracking error tolerance, constituents in the benchmark, availability of data and liquidity of the constituents to understand whether a full replication or optimization strategy best suites an investor. Note, a replication portfolio is a portfolio management methodology wherein the index manager buys all or a significant majority of the underlying index constituents to replicate the risk and return characteristics of a chosen index. An optimization portfolio construction methodology is a technique wherein a subset of securities in the index are purchased by the index manager using a risk model (SSGA uses a model called Axioma) to track the performance and risk characteristics of an underlying index as closely as possible in a cost-efficient manner. The MSCI World ex-USA Index Fund is constructed using a replication methodology by taking an appropriate allocation in two underlying index funds. By taking the appropriate allocation in the MSCI EAFE Index Fund and MSCI Canada Index Fund SSGA replicates the risk and return characteristics of the MSCI World ex-USA Index. This method of portfolio construction conforms to industry prevailing practices and is used ubiquitously in the industry.

SSGA seeks to remain fully invested in the equity market. A small amount of the portfolio is held as exchange-traded index futures contracts to accommodate cash flows to ensure de minimis cash drag. Trade decisions are made in the context of tracking an index. As such, index changes are incorporated reactively and SSGA does not try to anticipate index changes but waits for announcements and makes the according changes thereafter.

Performance

Referring to Exhibit 1, trailing returns have been in-line with the benchmark over all trailing time periods. The outperformance observed in the SSGA Index Fund of 30 to 40 basis points is a result of the fund's tax-advantaged status and the fund's ability to repatriate dividend withholding taxes versus the benchmark. Referring to Exhibit 2, the tracking error of the SSGA MSCI World ex-USA



Exhibit A: Page 3

Index fund has been very low, 0.21% since inception of the fund. Overall, SSGA has managed the portfolio well against their stated objectives.

Fees

The proposed fee schedule ranks in the first percentile in the eVestment EAFE Passive Equity universe of peers. In other words, the proposed fee schedule to manage SBCERA assets is cheaper than all of the 18 peer investment products in the universe.

Conclusion

SSGA's MSCI World ex-USA Index Fund offers market exposure across developed large and mid cap stocks at an attractive fee with minimal tracking error. SSGA continues to be a 1-rated passive index strategy manager. NEPC supports SBCERA's staff recommendation to invest in SSGA's MSCI World ex-USA Index Fund.

Exhibit 1: Trailing Performance Summary Versus Universe Gross of Fees Ending December 31, 2021

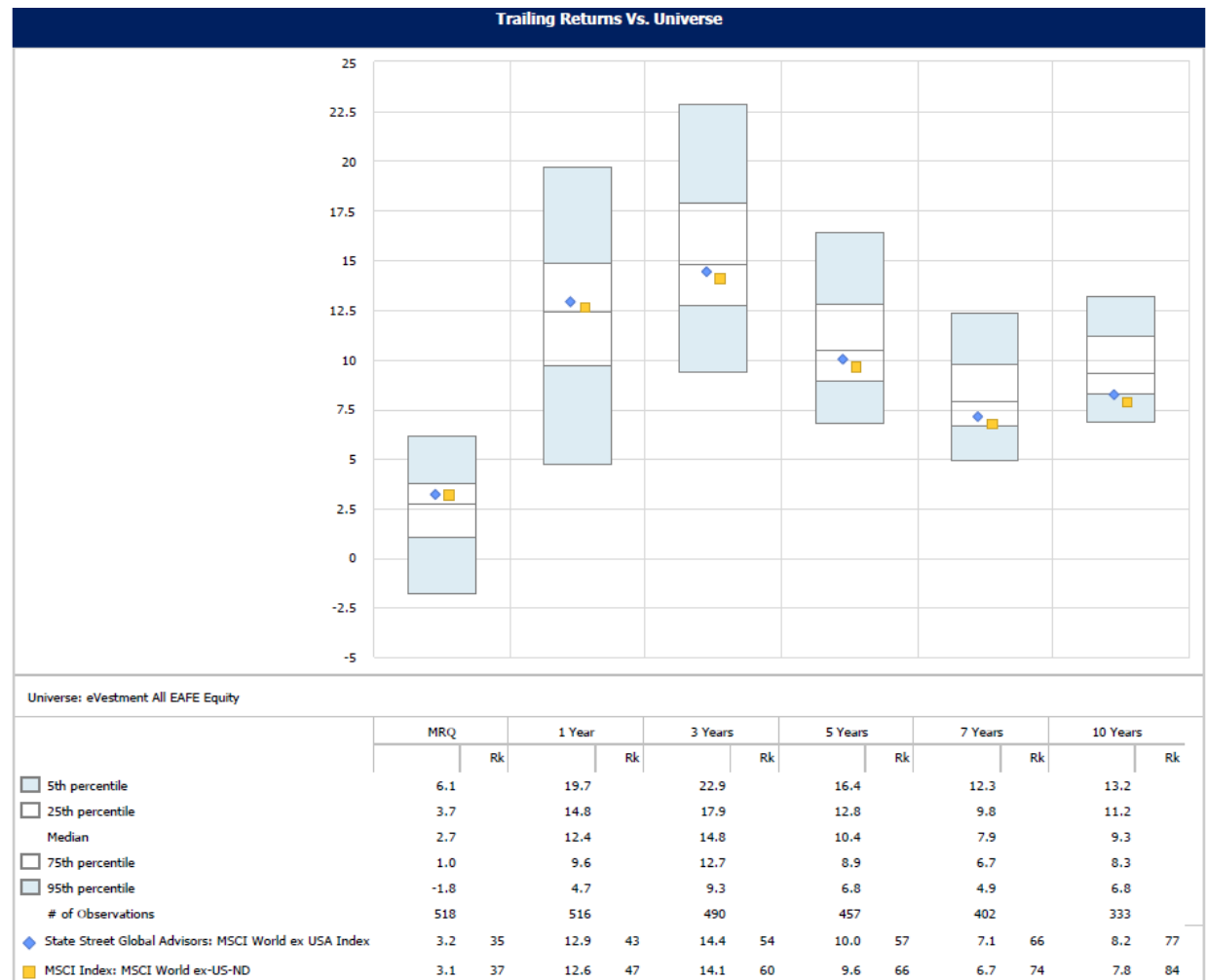


Exhibit 2: Efficiency Measures of SSGA MSCI World ex-USA Index Fund

	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	SI
Sharpe Ratio	1.28	0.78	0.60	0.43	0.54	0.23
Treynor Ratio	12.88	13.55	8.94	6.30	7.65	3.88
Sortino Ratio	2.28	1.21	0.89	0.65	0.82	0.33
Calmar Ratio	2.78	0.62	0.43	0.31	0.36	0.10
Tracking Error	0.11	0.16	0.14	0.13	0.13	0.21
Information Ratio	2.55	2.20	2.62	2.85	3.03	1.43