

**Commonwealth of Pennsylvania
Public School Employees' Retirement System**

DATE: April 9, 2015

SUBJECT: Bridgewater Optimal Portfolio

TO: Members of the Board

FROM: Susan E. Oh, CFA 
Senior Portfolio Manager

At the April Finance Committee meeting, staff and Aon Hewitt ("AHIC") will recommend that PSERS invest in Optimal Portfolio, Ltd ("Fund"), a risk parity strategy with tailored active market views by Bridgewater Associates, LP ("Bridgewater"). All Weather is Bridgewater's optimal beta/risk parity strategy, and Pure Alpha is their optimal standalone alpha strategy. Beta is return derived from passively held long positions and earning the market risk premium. Alpha is return derived from actively timing and trading markets. The Fund aims to combine their best beta with tailored value-adding and risk-reducing alpha, producing a high, consistent, and diversifying return stream.

Staff and AHIC completed a review of Bridgewater's capabilities and believe they have the resources and industry expertise to successfully manage this mandate. Staff recommends an initial funding of \$600 million in this Fund, an amount that is within the target ranges established in Exhibit E of the Investment Policy Statement, Objectives and Guidelines as amended from time to time. The funding of \$600 million will come entirely from the existing allocation to the All Weather strategy (currently \$1.8 billion).

Staff believes this allocation will reduce the risk within the Risk Parity mandate (to such risks as a rapid rise in interest rates or a decline in equity markets) and will reduce the total risk of PSERS total fund. The Fund is based on the same investment principles, people, and processes applied to All Weather and Pure Alpha. Bridgewater Associates is a global leader in institutional portfolio management with approximately \$170 billion in assets under management. As a firm, they offer only three core strategies: Pure Alpha, All Weather, and Optimal Portfolio. Bridgewater began investment operations in 1975, and is a pioneer in risk budgeting and the separation of alpha and beta.

Included with this memo are AHIC's recommendation memo, a power point presentation prepared by staff, and the resolution recommending an investment in the Bridgewater Optimal Portfolio, Ltd.

If you have any questions or comments, please contact me at 717-720-4621.



Risk Parity Allocation

Bridgewater Optimal Portfolio, Ltd.
April 30, 2015

Susan E. Oh, CFA
Senior Portfolio Manager

Bridgewater Optimal Portfolio

Recommended action to improve Risk Parity Mandate

- Shift 1/3 or \$600 million from existing Bridgewater All Weather allocation (\$1.8 billion) into Bridgewater Optimal Portfolio.

Reason:

- Bridgewater created Optimal Portfolio as a way to reduce systematic market risks within their Risk Parity product.

We believe this allocation will:

- Reduce the total risk of the Fund.
- Reduce the risk within our Risk Parity mandate (to such risks as a rapid rise in interest rates or a decline in equity markets).

Bridgewater Optimal Portfolio

Fund Strategy

- Aims to combine All Weather with tailored, diversified portfolio of alphas.
 - All Weather is Bridgewater's optimal strategic asset allocation.
 - Combines with a diversified portfolio of longer term alphas that are value-adding and risk-reducing to beta.
 - Alphas are primarily a combination of short outright positions and market neutral positions.
 - Provides downside protection during periods of market stress.
- Invests in across 70+ global markets.
- Liquidity – quarterly with 30 days notice, 9 months for full redemption.
- Leverage – yes, explicit leverage is utilized for All Weather as well as tailored alpha trades.
- Downside Risk – both directional and relative value alpha provide valuable diversification and protection during market stress.
- Same principles, people, and process as existing strategies.

Bridgewater Optimal Portfolio

History with PSERS:

- Multiple successful investment across multiple asset classes
 - \$1.0 billion in Bridgewater Pure Alpha in Absolute Return program.
 - \$1.9 billion in Bridgewater TIPS portfolio in Fixed Income program.
 - \$1.8 billion in Bridgewater All Weather in Risk Parity program.

Funding of Optimal Portfolio strategy

- Existing investment in All Weather will be partially liquidated to fund entire \$600mn initial investment in Optimal Portfolio strategy.

Bridgewater Optimal Portfolio

Board Issues

- Placement Agent(s): No
- Political Contribution in PA: None
- Relationships with Aon Hewitt: None
- Introduction Source: PSERS Staff

Recommendation

Staff, together with Aon Hewitt, recommends (i) that the Board invest \$600 million in the Optimal Portfolio Ltd., strategy managed by Bridgewater Associates, LP and (ii) that the Investment Office shall have the discretion to invest additional sums within the target ranges established in Exhibit E of the Investment Policy Statement, Objectives and Guidelines.



Memo

To: **Board of Trustees**
PSERS

From: Satya Kumar, CFA
Partner, Aon Hewitt

Claire Shaughnessy, CFA
Partner, Aon Hewitt

CC: **James H. Grossman, Jr., CPA, CFA, Chief Investment Officer**
PSERS

Date: April 9, 2015

Re: Bridgewater Optimal Portfolio

Executive Summary

Aon Hewitt Investment Consulting (AHIC), having been duly authorized by the Board of PSERS, has reviewed the newly launched Bridgewater Optimal Portfolio fund (OP) and is of the view that the strategy is conceptually sound and presents an attractive investment opportunity. Leaving aside the effect of higher fees and restrictive liquidity terms, we are constructive on the opportunity set for OP and believe that it should fare better than Bridgewater All Weather (AW) in a rising interest rate environment. As such, we concur with Staff's recommendation to consider diversifying exposure to Bridgewater's risk parity strategy across AW and OP. AHIC concurs with Staff recommendation to allocate \$600 million to OP with a volatility target of 10%, sourcing the moneys from the existing allocation to the AW strategy.

Bridgewater Associates Background

Bridgewater Associates (Bridgewater) is a marquee name in the quantitative investment field with a well-diversified and fully institutional investor base. The firm is based in Westport, CT, and as of the date of this memorandum, runs approximately \$170 billion in assets across three products: Pure Alpha (standalone alpha), AW (standalone beta), and OP (50% alpha/ 50% beta). Bridgewater has adopted a one-team approach and there is no segregation by product. In other words, OP was designed and is managed by the same investment team that manages AW and Pure Alpha (PA).

Investment Overview

The new OP strategy is, effectively, an extension of AW comprised of 50% AW assets (market beta) and 50% customized alpha (based on the same logic and signals as used in PA) that is tailored to be both value-adding and risk-reducing to the beta. Betas are comprised of passively held long positions. Alpha positions can either be directionally short or relative value (differential or spread trades).



The OP investment process is based on the same fundamental, systematic, and diversified approach that Bridgewater employs in all of its strategies. The only difference is that in the case of OP, Bridgewater is applying this process to a combined portfolio of alpha and beta, instead of a standalone portfolio of just alpha (PA) or just beta (AW).

AHIC Assessment and Conclusion

The new OP is, effectively, an extension of AW comprised of 50% AW assets (beta) and 50% customized alpha that is tailored to work well with the beta, including a de-risking component. Note that, unlike some of the newcomers to the risk parity space, Bridgewater does not have an active risk management component in AW, because in their view, that would qualify as an alpha overlay. In OP, Bridgewater bridges that gap and takes the new product a level further by expanding its investment universe and adding the ability to go long or short a market. While it would be unfair to compare OP to Bridgewater's PA strategy as OP is structurally different and is using a slower set of indicators than PA, we have sufficient confidence that OP will be value additive during extended market (beta) shifts. Given the short live track record of OP, it is still too early to determine whether the Fund will achieve its return objectives. That said, Bridgewater has a strong record of engineering products and an investment in OP is a bet on Bridgewater's skill at systematizing logic and trading alpha. It is critical to highlight that OP is a fully developed strategy as opposed to an evolving concept and there are no imminent changes planned in the way it trades on the alpha or the beta side.

AHIC concurs with Staff recommendation to allocate \$600 million to OP with a volatility target of 10%, sourcing the moneys from the existing allocation to the AW strategy.