



Investment Option Review

Federal Retirement Thrift Investment Board

May 31, 2017

Aon Hewitt
Retirement & Investment

Investment advice and consulting services provided by Aon Hewitt Investment Consulting, Inc., an Aon Company.

Nothing in this document should be construed as legal or investment advice. Please consult with your independent professional for any such advice.

Aon
Empower Results®

Agenda

- Executive Summary
- Background Information
- Overview of TSP Investment Structure
- Evaluation Criteria of TSP Investment Structure
- Evaluated Asset Classes
- L-Fund Recommendation
- I-Fund Overview
- I-Fund Forward-Looking Efficient Frontier and Recommendation
- Conclusion



Expand the:
L-Fund
I-Fund

Executive Summary

- Federal Retirement Thrift Investment Board (FRTIB) retained Aon Hewitt Investment Consulting (AHIC) to conduct a comprehensive review of the Thrift Savings Plan (TSP) investment options
- AHIC completed the following tasks:
 - Reviewed circumstances of the TSP and compared to peer plans
 - Identified key criteria for evaluating potential fund additions
 - Applied key criteria to a broad array of potential fund alternatives to identify those suitable for further consideration
 - Reviewed appropriateness of including specific fund alternatives
- AHIC identified two recommendations for the FRTIB to consider expanding:
 1. L-Funds from 10-year to 5-year target retirement year increments
 2. I-Fund Benchmark

Background Information

With the exception of the G Fund, the TSP funds are managed by external index fund vendors; currently one vendor manages all four funds

Investment Option Types	TSP Option	Market Values (\$Billions) (As of 12/31/2016)*
Stable Value	G Fund	\$169.2
Diversified Fixed Income	F Fund	\$21.3
Lifecycle/Target date retirement funds	L Income	
	L 2020	
	L 2030	\$85.4
	L 2040	
	L 2050	
U.S. Stock	C Fund	\$129.6
	S Fund	\$47.7
Non-U.S. Stock	I Fund	\$20.1

* The table shows that investments in the core funds are reduced by their representation in the L Funds in order to avoid double counting

- As of December 31, 2016, the TSP had approximately 5.0 million participants who had approximately \$473 billion invested among the underlying plan options. This translates to an average FERS participant balance of approximately \$120,000.

Overview of TSP Investment Structure

- AHIC believes that the TSP exhibits the following structure, which reflects our best thinking:
 - Offers sufficient range of choice – with options that reasonably span the risk and return spectrum across major investable markets
 - Allows participants to form well-diversified portfolios
 - Is appropriately comparable with peers
 - Meets broad participant demand
- The investment options offered to TSP participants match those that we recommend the TSP offer.
 - U.S. stock
 - Non-U.S. stock
 - Diversified fixed income
 - Cash equivalent/stable value
 - Lifecycle/Target date retirement funds
- One of the hallmarks of the TSP is its simplicity and efficiency. The TSP offers low-cost, broadly diversified options that provide coverage of the broad asset class segments that form the core building blocks of diversified portfolios. We believe the investment structure remains in the best interest of TSP's participants and beneficiaries

Evaluation Criteria of TSP Investment Structure

- While there are numerous criteria to consider when evaluating the types of investment alternatives to offer in a participant directed defined contribution plan, we believe the following criteria (individually and collectively) are among the most relevant for the TSP to consider:
 - Major diversified asset classes/categories not currently offered as an investment option
 - Asset class/category is large enough for the TSP to invest in
 - Potential diversification benefit for TSP participant portfolios
 - Ability to index
 - Daily liquidity and daily valuation
 - Practices of peers
- Given the extraordinary asset size of the TSP, any investment alternative offered should represent an asset class/category of such significance that the likelihood of the TSP becoming a disproportionately large investor and trader of the asset class/category is minimized.

Evaluated Asset Classes

- Based on the criteria we've outlined, we segregate the asset classes/categories that we review into:
 - Broad asset classes/categories not currently offered to TSP participants
 - Asset classes/categories that TSP participants have exposure to via the current investment options, but not as separate fund options

- The broad asset classes/categories currently not available to participants in any way that we review are:

Equities	Fixed Income	Alternatives/Other
Emerging Market Stocks	Non-U.S. Bonds	Private Real Estate
Non-U.S. Small Cap Stocks	High Yield Bonds	Private Equity
Frontier Market Stocks	TIPS	Commodities
	Emerging Market Debt	Hedge Funds

- The asset classes/categories that are not explicitly offered to TSP participants currently, but participants obtain some exposure to via the current investment options offered are:
 - U.S. value stock
 - U.S. growth stock
 - REITs
 - Publicly Listed Infrastructure
 - Socially Responsible Investment (SRI)/ ESG funds

Evaluated Asset Classes Reviewed in Detail

The following asset classes/categories were reviewed in detail. Below is a high level summary of the reasons why they were not recommended as stand-alone options.

- **Value and Growth U.S. Stocks**

- Diversification benefits are not material given the TSP's U.S. stock funds provide exposure to the entire U.S. stock market

- **REITs**

- Specific sector of the global equity market and exhibits a higher degree of volatility than the broad equity market

- **Emerging Markets and Non-U.S. Small Cap Stocks**

- Although exposure to these markets improves portfolio diversification, the high risk associated with these markets may result in material losses making them less appealing as stand-alone options
- We would prefer to see these markets included, as part of a broader allocation to international equities through the (I Fund)

- **Non-U.S. Bonds**

- Not common practice in peer plans and the addition of non-U.S. bond funds has not shown to add material diversification benefits above TSP's existing fixed income exposure

- **Emerging Market Debt**

- While correlations to traditional bonds are low, correlation to equities are modestly higher coupled with lower expected returns and high risk making this asset class less appealing as a stand-alone option

- **Commodities**

- Commodity prices are influenced by demand/supply considerations rather than the intrinsic value of a security, and future return expectations are uncertain
- Adds complexity and not common practice in peer plans

Evaluated Asset Classes Eliminated Due to Key Criteria

- Based on the application of the key criteria discussed above, we eliminated several categories from further consideration due to factors such as – small market size, illiquidity, lack of passive investment strategies, concentrated strategies/purpose. The asset classes excluded for further consideration were:
 - Frontier Market Equities
 - High Yield Bonds
 - TIPS
 - Private Real Estate
 - Private Equity
 - Hedge Funds
 - Socially Responsible/ESG Funds
 - Infrastructure

- **AHIC does not feel the above listed asset classes at this time meet the key criteria and do not recommend adding them at this time.**

L-Fund Recommendation

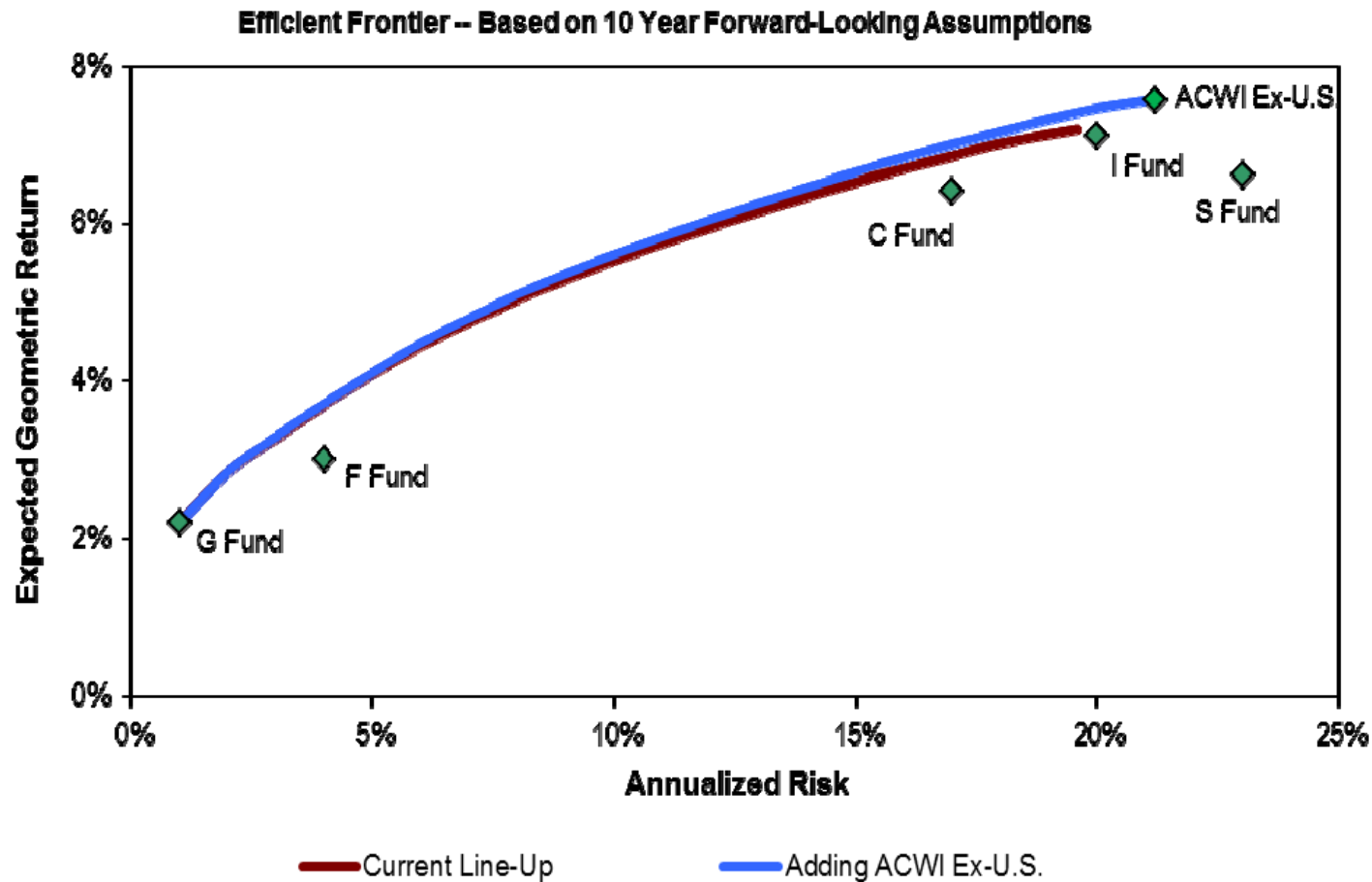
- The L Funds include an Income Fund and four target retirement date funds offered in 10-year increments commencing with a fund with a target retirement date of 2020.
- The L Funds allow participants to select an investment fund that is diversified among and within asset classes.
- More than 90% of peer plans offer lifecycle/target date retirement funds to their participants.
- We have seen peer plans move their Lifecycle funds from 10-year increments to 5-year increments providing participants a more narrow window of time to match their intended retirement date with their asset allocation.
- **We recommend the FRTIB consider expanding the L-Funds from 10-year increment asset allocation solutions to 5-year increment asset allocation solutions.**

I-Fund Overview

- AHIC reviewed the merits of expanding the I Fund (e.g. Canada, emerging markets, and non-U.S. small cap stocks) to provide more complete coverage of the international equity opportunity set.
 - Large market with total capitalization of over \$20.2 trillion (approximately 46% of world equity market capitalization)
 - TSP participants do not currently have exposure to Canada, emerging markets, and non-U.S. small cap stocks
 - Daily valued index products are available
- Modern portfolio theory suggests that the “market portfolio” is the most efficient portfolio (in terms of risk/return trade-off) that an investor can hold.
- The “market portfolio” is a market-cap weighted sum of all available asset classes/regions/countries. Excluding segments of the market limits investors’ opportunities (return and/or diversification potential).

I-Fund Forward-Looking Efficient Frontier and Recommendation

- AHIC recommends the FRTIB expand the I-Fund to include broader exposures such as Canada, emerging markets, and Non-U.S. small capitalization stocks



Conclusion

▪ TSP Investment Option Review

- The simplicity and efficiency of the existing line-up makes the TSP a very attractive offering to participants.
- Based on our analysis, AHIC believes the current line-up G, F, C, S, and I Funds currently offered by the TSP remains in the best interest of the Plan's participants and beneficiaries.
- For that reason, AHIC did not find any of the eight asset classes/categories evaluated in detail particularly compelling as a stand-alone investment fund addition to the TSP line-up with an exception to broadening the I Fund.
- AHIC believes broadening the I-Fund market coverage to Canada, emerging markets, and non-U.S. small cap stocks would enhance the efficiency of the TSP without compromising materially on its simplicity.
- In addition, broadening the coverage of the I Fund to encompass the full opportunity set will provide symmetry to TSP's equity investment lineup as it would be providing participants access to both U.S. and non-U.S. large and small cap stocks

- **In summary, AHIC recommends that the FRTIB maintain the existing structure of its investment line-up while considering expanding the coverage of the I Fund and expanding the L-Funds to 5-year asset allocation solutions.**

Legal Disclosures and Disclaimers

Investment advice and consulting services provided by Aon Hewitt Investment Consulting, Inc. (“AHIC”). The information contained herein is given as of the date hereof and does not purport to give information as of any other date. The delivery at any time shall not, under any circumstances, create any implication that there has been a change in the information set forth herein since the date hereof or any obligation to update or provide amendments hereto.

This document is not intended to provide, and shall not be relied upon for, accounting, legal or tax advice or investment recommendations. Any accounting, legal, or taxation position described in this presentation is a general statement and shall only be used as a guide. It does not constitute accounting, legal, and tax advice and is based on AHIC’s understanding of current laws and interpretation.

This document is intended for general information purposes only and should not be construed as advice or opinions on any specific facts or circumstances. The comments in this summary are based upon AHIC’s preliminary analysis of publicly available information. The content of this document is made available on an “as is” basis, without warranty of any kind. AHIC disclaims any legal liability to any person or organization for loss or damage caused by or resulting from any reliance placed on that content. AHIC reserves all rights to the content of this document. No part of this document may be reproduced, stored, or transmitted by any means without the express written consent of AHIC.

Aon Hewitt Investment Consulting, Inc. is a federally registered investment advisor with the U.S. Securities and Exchange Commission. AHIC is also registered with the Commodity Futures Trading Commission as a commodity pool operator and a commodity trading advisor, and is a member of the National Futures Association. The AHIC ADV Form Part 2A disclosure statement is available upon written request to:

Aon Hewitt Investment Consulting, Inc.
200 E. Randolph Street
Suite 1500
Chicago, IL 60601
ATTN: AHIC Compliance Officer

© Aon plc 2017. All rights reserved.