



2022 Investment Option Review

Federal Retirement Thrift Investment Board

October 2022

Investment advice and consulting services provided by Aon Investments USA Inc.

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Executive Summary

- The Federal Retirement Thrift Investment Board (FRTIB) retained Aon Investments USA, Inc. (Aon) to conduct a comprehensive review of the Thrift Savings Plan (TSP) investment options.
- Aon completed the following tasks:
 - Summarized our guiding principles with respect to investment structure, and provided an initial evaluation of the TSP investment structure based on these factors
 - Compared the TSP circumstances to those of peer plans
 - Identified key criteria to evaluate asset classes/investment options under consideration
 - Applied the key criteria to a broad array of asset classes/investment fund options to identify those suitable for further consideration
 - Reviewed in detail the appropriateness of certain asset classes/investment fund options and provided our recommendations on whether a new asset class/investment option should be considered for inclusion within the TSP line-up
- Consistent with prior reports, Aon identified one recommendation for the FRTIB to **consider**:
 - Expand the market coverage of the I Fund to include Canada, emerging markets, and non-U.S. small cap stocks

Background Information

Objectives	Investment Option Types	TSP Options	Market Values (\$ Billions) (As of 6/30/2022)
Capital Preservation	Cash Equivalent/ Stable Value	G Fund	\$234.5
Income	Diversified Fixed Income	F Fund	\$20.8
Asset Allocation	Target Date/Lifecycle	L Income, L 2025, L 2030, L 2035, L 2040, L 2045, L 2050, L 2055, L 2060, L 2065	\$159.7
Growth	Global Equity	C Fund S Fund I Fund	\$206.1 \$62.0 \$23.7
N/A	Self-Directed	Mutual Fund Window	\$0.1

- As of July 31, 2022, the TSP had approximately 6.6 million participants. This translates to an average participant balance of approximately \$112,000.

Note: The table shows that assets invested in the core funds are reduced by their representation in the L Funds in order to avoid double counting

Overview of the TSP Investment Structure

- Aon believes that the TSP exhibits the following structure, which reflects our best thinking:
 - Offers sufficient range of choice: the current options 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

- 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 the TSP's participants and beneficiaries.
 - Additionally, the inclusion of the mutual fund window allows for additional portfolio construction flexibility for participants, further supporting the existing simplified investment line-up.

Evaluation Criteria of the 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 the TSP participant portfolios
 - Asset class/category offers daily liquidity and daily valuation
 - Ability to index
 - Ability to engage in securities lending
 - Unusual cost and custody issues, administrative and/or operational complexities
 - Practices of peers
 - Best practices
- Given the extraordinary asset size of the TSP, any investment option 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

- The full opportunity set of asset classes/categories we considered for review are listed in the table below:

Equities	Fixed Income	Alternatives/Other
Broad U.S. Equity	Non-U.S. Bonds	Private Real Estate
Broad Global Equity	High Yield Bonds	Private Equity
Broad Non-U.S. Equity	Emerging Market Debt	Hedge Funds
Global REITs	TIPS	Multi-Asset Inflation Protection
		Commodities
		Infrastructure
		Responsible Investing Funds
		Cryptocurrency

- Based on the initial review of the key criteria, we eliminated several categories from further consideration due to factors such as small market size, illiquidity, overlapping exposure to existing line-up, lack of passive investment strategies, and/or concentrated strategies/purpose. The asset classes excluded from further consideration were:
 - Broad Global Equity
 - High Yield Bonds
 - TIPS
 - Private Real Estate
 - Private Equity
 - Hedge Funds
 - Infrastructure
 - Responsible Investing Funds
 - Cryptocurrency

Evaluated Asset Classes Reviewed in Detail

Asset Class	Summary of Analysis	Recommended Change?
Broad U.S. Equity	<ul style="list-style-type: none"> Additional diversification benefits are not material given the TSP's U.S. stock funds provide exposure to the entire U.S. stock market. Although there may be structural benefits to combining the C and S Funds into a broad U.S. all-cap equity option, the TSP's line-up is already very streamlined, and offering one large-cap and one small/mid-cap option is a reasonable approach. 	<p>No Change Continue to offer C and S Funds for U.S. equity exposure</p>
Broad Non-U.S. Equity	<ul style="list-style-type: none"> We favor expanding the I Fund exposure to Canada, emerging markets, and non-U.S. small-cap stocks, as this expansion would provide broader coverage of the international equity markets, more fully capture global growth, and provide enhanced diversification of the international equity portfolio. However, as we consider the appropriate market exposure for the I Fund, it is important to take into account the TSP's unique circumstances such as liquidity needs, unusual cost and custody issues, and administrative and operational complexities. 	<p>Change Recommended Consider expanding market coverage of the I Fund</p>
Non-U.S. Bonds	<ul style="list-style-type: none"> In addition to low utilization by peers, the benefits of adding a non-U.S. bond option are minimal from an expected risk/return and portfolio diversification standpoint for the TSP participants. 	<p>No Change Non-U.S. bond investment option not recommended</p>

Evaluated Asset Classes Reviewed in Detail (cont.)

Asset Class	Summary of Analysis	Recommended Change?
Emerging Market Debt	<ul style="list-style-type: none"> Emerging market debt can experience higher volatility relative to traditional U.S. fixed income. There are limited passively managed products available, and liquidity is generally lower with higher transaction costs. 	No Change EMD investment option not recommended
Multi-Asset Inflation Protection	<ul style="list-style-type: none"> Many of the underlying asset classes that would be included in the context of a multi-asset inflation-hedging investment option have relatively high correlations with the current investment options, resulting in less compelling diversification benefits. We do not believe the benefits of adding this type of investment option materially outweigh the risk associated with potential misuse within participant portfolios, particularly within the context of the simplified TSP line-up. 	No Change Multi-asset inflation protection investment option not recommended
Global REITs	<ul style="list-style-type: none"> Global REITs is a specific sector included within the global equity market and generally exhibits a higher degree of volatility than the broad equity market over longer periods of time. 	No Change Global REITs as a standalone investment option not recommended
Commodities	<ul style="list-style-type: none"> Commodity prices are influenced by demand/supply considerations rather than the intrinsic value of a security, and future return expectations are uncertain. The addition of this asset class adds complexity and is not common practice in peer plans. 	No Change Commodities investment option not recommended

L Funds Structure Review

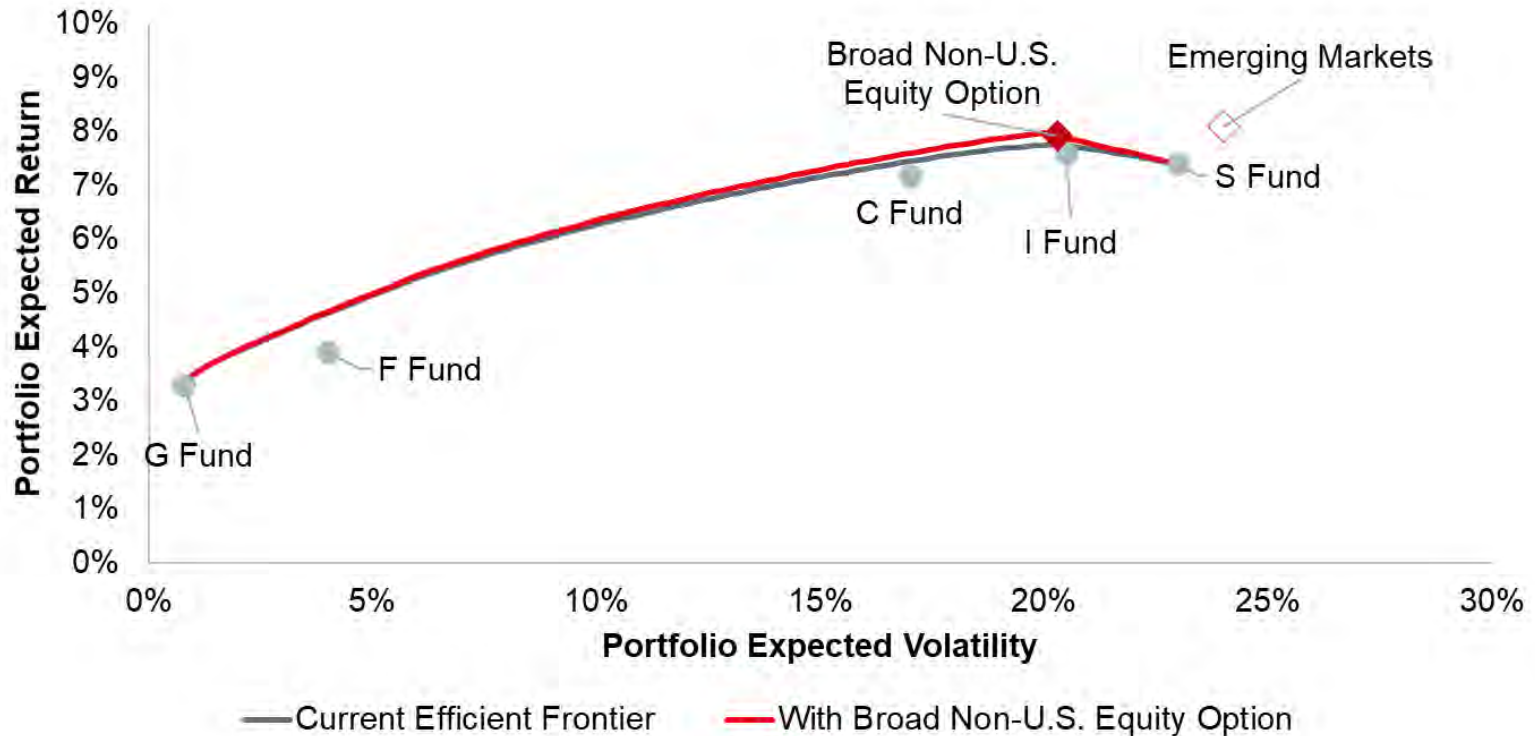
- The L Funds include an Income Fund and nine target date funds offered in 5-year increments commencing with a target retirement/withdrawal date of 2025.
- The L Funds allow participants to select an investment fund that is diversified among and within asset classes, as the L Funds are constructed using the five core investment options.
- More than 80% of peer plans offer target date funds to their participants.
- Following the 2017 Investment Option Review, 5-year vintages were added to the suite of L Funds, which continues to be in line with best practices and allows participants to have a narrower window of time to match their intended retirement date with their asset allocation.
- Aon does not recommend any changes to the structure of the L Funds.

I Fund Overview

- Aon 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 \$26.4 trillion (approximately 39% of world equity market capitalization)
 - The TSP participants do not currently have exposure to Canada, emerging markets, and non-U.S. small cap stocks
 - Daily valued index products are available
 - Securities lending is available in the broad non-U.S. market segment excluding some emerging market countries
- 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

- Broadening the coverage of the I Fund to Canada, emerging markets, and non-U.S. small cap stocks can enhance portfolio diversification and portfolio efficiency.



Source: Aon Capital Market Assumptions as of 3Q – 2022 10 Years

Conclusion

▪ TSP Investment Option Review

- The simplicity and efficiency of the existing line-up make the TSP a very attractive offering to participants.
 - Based on our analysis, Aon believes the current line-up remains in the best interest of the Plan's participants and beneficiaries.
 - For that reason, Aon did not find any of the asset classes (and sub-asset classes) evaluated in detail particularly compelling as a standalone replacement or additional option to the TSP line-up.
 - Aon did find merit in broadening the I Fund market coverage to Canada, emerging markets, and non-U.S. small cap stocks, as it 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 the TSP's equity investment line-up as it would be providing participants access to both U.S. and non-U.S. large- and small-cap stocks.
- **In summary, Aon recommends that the FRTIB maintain the existing structure of its investment line-up while considering expanding the coverage of the I Fund. The expansion of the I Fund is also contingent on the TSP's unique circumstances such as liquidity needs, unusual cost and custody issues, and administrative and operational complexities.**

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