

The Thrift Savings Plan versus The All-Weather Retirement Portfolio (2nd Edition) for Sustainable and Inflation-Proof Retirement Income

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Executive Summary

The Thrift Savings Plan (TSP) represents an exceptional retirement vehicle for government employees during their working years. In this accumulation phase, the combination of employer matching contributions, tax advantages, and industry-leading low expense ratios creates an unparalleled foundation for retirement savings.

However, once federal employees enter retirement and begin withdrawing funds—the distribution phase—the TSP's advantages diminish significantly. At this critical juncture, the only remaining benefit is continued access to low-cost investment funds, while the plan's structural limitations become increasingly problematic.

This paper examines the TSP in the distribution phase compared to The All-Weather Retirement Portfolio (TAWRP) (2nd Edition). Our research defines the primary goal for retirees as maximizing the probability that their investments will provide sustainable income throughout their lifetime, regardless of economic or market conditions.

Using empirical testing across every 30-, 35-, and 40-year period since the Great Depression, in the distribution phase, TAWRP demonstrates superior performance to even the most optimized TSP portfolio across all key metrics:

- **Longevity of Funds:** In worst-case scenarios, the optimized TSP portfolio was depleted after just 22 years, while TAWRP remained solvent for the full 40-year period.
- **Success Rate:** TAWRP achieved a 96% success rate across all time frames tested, compared to the optimized TSP's 70/30 blend, 89% success rate.
- **Sustainable Withdrawal Rate:** TAWRP supported a 5.5% initial withdrawal rate (adjusted annually for inflation) with a high probability of success. At the same time, the optimized TSP required significantly lower withdrawal rates to achieve similar reliability.
- **Average Ending Value:** TAWRP portfolios consistently finished with substantially higher terminal values, providing greater legacy potential and financial flexibility.

Based on these findings, federal employees entering retirement should strongly consider directly rolling over their TSP balance to an IRA and implementing the TAWRP strategy. The sole exception applies to those retiring between ages 55 and 59½ who need to access funds before age 59½, as the TSP offers unique penalty exemptions during this period that would be lost upon rollover.

This paper also explores recent legislative changes to the TSP, the potential value of professional financial guidance during retirement, and strategies for maximizing retirement security using evidence-based approaches.

The Goal – Defined

The fundamental objectives of investment management shift dramatically between the accumulation and distribution phases of retirement planning. During the working years, the primary focus is on maximizing returns relative to risk tolerance, with portfolio volatility being less concerning due to the mitigating effects of dollar-cost averaging and regular contributions.

In retirement, however, the paradigm changes completely. Controlling volatility becomes paramount as retirees face "sequencing of return" risk—the potentially devastating impact of poor market performance in the early retirement years. This phenomenon can cause portfolios with identical long-term average returns to experience radically different outcomes based solely on the order in which those returns occur. A portfolio averaging 18% annual returns could deplete prematurely, while one averaging just 6% might provide sustainable lifetime income.

Thus, the critical question for retirement distribution portfolios becomes: **How do we invest and diversify assets to maximize the probability of financial security regardless of external economic conditions?**

To evaluate portfolio effectiveness against this standard, we employ a rigorous methodology:

- Examine every 30-, 35-, and 40-year period since 1930
- Test using a 5.5% initial distribution rate, increased annually by inflation
- Calculate the percentage of periods where funds remained at the conclusion

This testing framework encompasses nearly a century of financial history, including multiple recessions, depressions, inflationary periods, asset bubbles, and geopolitical crises. While past performance cannot guarantee future results, this approach provides valuable insights into portfolio resilience across diverse economic conditions. We target a minimum 95% success rate for retirement security across all tested periods.

The TSP Plan

Federal government employees typically rely on the Thrift Savings Plan as their primary retirement savings vehicle. Structured similarly to a 401(k), the TSP offers exceptional benefits during the accumulation phase.

Eligible employees can contribute pre-tax dollars while receiving matching contributions of up to 5% of their salary. With this match, contributing just 5% of income results in a 10% total contribution—an immediate 100% return on the employee's investment that cannot be replicated elsewhere. Combined with the TSP's remarkably low expense ratios (approximately six basis points for a model portfolio), the plan represents the optimal choice for initial retirement contributions.

However, when employees transition to retirement and begin withdrawals, the TSP's limitations become increasingly apparent, particularly in comparison to more flexible alternatives.

Recent Legislative Changes

The TSP Modernization Act of 2019 introduced several positive changes to distribution options, implemented on September 15, 2019:

- **Expanded Distribution Frequency:** Participants can now select quarterly or annual payments in addition to the previous monthly option
- **Flexible Payment Adjustments:** Retirees can modify payment amounts and schedules to adapt to changing needs
- **Age-Based Withdrawals:** Participants 59½ or older can make up to four "on-demand" withdrawals annually
- **Unlimited Partial Withdrawals:** No limit on the number of post-separation partial withdrawals (with a 30-day minimum spacing)
- **RMD Flexibility:** Participants are no longer required to make full withdrawal elections after age 72 (though Required Minimum Distributions still apply)
- **Selective Account Distributions:** Withdrawals can be taken from Roth and traditional accounts independently, rather than pro rata

Persistent Drawbacks

Despite these improvements, several significant limitations remain:

- **Limited Investment Options:** The TSP offers just five broad index funds and five lifecycle funds, lacking exposure to crucial asset classes like large-cap value, small-cap value, emerging markets, international bonds, and high-yield bonds—components essential for optimizing the risk-return profile of a retirement portfolio
- **Lifecycle Fund Constraints:** While lifecycle funds attempt to address diversification, they apply age-based allocations without considering individual circumstances, often proving too conservative and sacrificing control and flexibility
- **Inheritance Limitations:** Non-spouse beneficiaries cannot roll TSP balances into inherited IRAs, instead facing immediate distribution and taxation of the entire balance, potentially creating significant tax consequences
- **Distribution Inflexibility:** Participants cannot specify which investments to liquidate when taking distributions, forcing potentially disadvantageous sales during market volatility
- **No Automatic Rebalancing:** The TSP lacks an automatic rebalancing feature, requiring manual intervention to maintain target allocations
- **Limited Tax Planning Strategies:** TSP participants cannot utilize valuable tax management techniques like Roth conversions, qualified charitable distributions, or 72(t) distributions before age 55

The All-Weather Retirement Portfolio (TAWRP)

The All-Weather Retirement Portfolio represents a specialized investment approach designed specifically for retirement distributions. It has been meticulously constructed and tested to withstand market turbulence and deliver inflation-adjusted income with a success ratio exceeding 95% across every 30-, 35-, and 40-year period since 1930, using an initial distribution rate of 5.5% increased annually by inflation.

Advantages

TAWRP offers several distinct advantages for retirees:

- **Purpose-Built Design:** Specifically engineered for the unique challenges of retirement distribution, optimizing for reliable, inflation-protected income regardless of market conditions
- **Enhanced Diversification:** Incorporates additional asset classes that improve expected returns while reducing risk through more comprehensive diversification
- **Resilient Performance:** Structured to deliver consistent income through market cycles, with fewer and less severe negative years compared to optimized TSP models
- **Investment Flexibility:** Enables replacement of underperforming funds or those experiencing style drift
- **Automated Rebalancing:** Can be configured for automatic rebalancing based on calendar triggers, percentage thresholds, or both
- **Fund Selection Benefits:** Utilizes the Fig360 method of fund selection to enhance performance beyond asset allocation and rebalancing benefits

Disadvantages

While TAWRP offers substantial advantages, it's important to acknowledge potential drawbacks:

- **Active Management Requirements:** Although low-maintenance, TAWRP is not a "set-and-forget" solution, requiring periodic rebalancing and fund evaluation
- **Higher Expense Ratios:** Investment options outside the TSP typically carry higher expense ratios, creating an additional performance hurdle (though not necessarily resulting in lower net returns)

The Test

To objectively compare the TSP and TAWRP, we conducted comprehensive testing across every 30-, 35-, and 40-year period since 1930. Since neither portfolio existed throughout this timeframe, we utilized proxy data from Morningstar® and Global Financial Data, Inc.

For consistent evaluation, we:

- Started with a \$100,000 initial balance
- Applied a 5.5% initial distribution rate (\$5,500 in year one)
- Increased distributions annually by the historical inflation rate
- Measured multiple success metrics, including success rates, sustainable withdrawal rates, and portfolio longevity in worst-case scenarios

Assumptions

For the TSP evaluation, we made several optimistic assumptions that significantly favor TSP performance:

1. **Optimal Equity-Bond Mix:** We assumed retirees maintain the most efficient 70% equity, 30% bond allocation, though observation suggests most retirees select suboptimal allocations
2. **Appropriate Fixed Income Selection:** We assumed use of the F fund rather than the lower-yielding G fund, despite the G fund's greater popularity
3. **Efficient International Exposure:** We assumed the optimal 30% international, 70% domestic equity split, which few retirees implement
4. **Disciplined Rebalancing:** We assumed annual rebalancing despite the absence of an automated feature and low compliance rates
5. **Proper Capitalization Balance:** We assumed the optimal mix between large and small companies (14% in the S fund)
6. **Behavioral Discipline:** We assumed retirees maintain investment discipline during market volatility, avoiding the common mistake of exiting positions during downturns

For TAWRP, we made conservative assumptions:

1. **No Fund Selection Benefit:** We assumed no performance advantage from fund selection, despite research indicating benefits from the Fi360 method
2. **Behavioral Discipline:** We assumed retirees maintain investment discipline during market downturns
3. **Annual Rebalancing:** We assumed annual rather than the recommended quarterly rebalancing

TSP in Retirement

We tested four common TSP retirement configurations:

1. The G Fund

This conservative approach uses only the government money market equivalent.

- **Quickest Portfolio Depletion:** 13 years
- **30-Year Success Rate:** 0%
- **40-Year Success Rate:** 0%
- **95% Success Initial Distribution Rate (40-Year):** \$1,660
- **Average 40-Year Ending Value:** -\$636,410

2. The F Fund

This bond-only approach improves over the G Fund but remains inadequate.

- **Quickest Portfolio Depletion:** 14 years
- **30-Year Success Rate:** 19.7%
- **40-Year Success Rate:** 2.0%
- **95% Success Initial Distribution Rate (40-Year):** \$1,820
- **Average 40-Year Ending Value:** -\$976,770

3. The 60/40 Blend (60% C Fund, 40% F Fund)

Often called the Trinity blend, this approach shows substantial improvement.

- **Quickest Portfolio Depletion:** 16 years
- **30-Year Success Rate:** 65.6%
- **40-Year Success Rate:** 45.1%
- **95% Success Initial Distribution Rate (40-Year):** \$3,930
- **Average 40-Year Ending Value:** -\$123,920

4. Optimized TSP Blend (30% F Fund, 35% C Fund, 21% I Fund, 14% S Fund)

This represents the theoretical optimal TSP allocation, though rarely implemented.

- **Quickest Portfolio Depletion:** 22 years
- **30-Year Success Rate:** 88.5%
- **40-Year Success Rate:** 70.6%
- **95% Success Initial Distribution Rate (40-Year):** \$4,750
- **Average 40-Year Ending Value:** \$664,180

TAWRP in the Retirement Distribution Phase

The All-Weather Retirement Portfolio implements a sophisticated multi-asset strategy:

- 12% Large Cap Value
- 23% Large Cap Growth
- 14% Small Cap Value
- 15% International Developed Markets
- 6% Emerging Markets
- 30% Intermediate-Term Corporate Bonds

This allocation cannot be replicated within the TSP's limited investment options.

- **Quickest Portfolio Depletion:** 40+ years
- **30-Year Success Rate:** 96.7%
- **40-Year Success Rate:** 96.1%
- **95% Success Initial Distribution Rate (40-Year):** \$5,560
- **Average 40-Year Ending Value:** \$1,850,000

The performance advantage over even the most optimized TSP portfolio is substantial across all metrics.

The Value of Professional Guidance

When evaluating whether professional financial advice provides sufficient value to justify its cost (typically around 1% of assets annually), it's important to consider multiple facets of the advisor relationship:

1. Asset Allocation

Research consistently demonstrates that 90-95% of portfolio return variability stems from asset allocation decisions. The TAWRP approach delivers an estimated 1.50% additional expected return compared to the optimized TSP model with equivalent risk—a substantial advantage that alone may offset advisory fees.

2. Fund Selection

While the TSP funds are excellent, low-cost options, the Fi360 Fiduciary score[®] methodology can provide modest performance enhancements. Our analysis of actual returns over the decade ending February 9, 2020, shows the TSP's optimized portfolio outperforming a similar external portfolio by just eight basis points annually—effectively a wash when considering fund quality.

3. Rebalancing

According to Vanguard research, regular portfolio rebalancing provides documented benefits ranging from 26 to 44 basis points annually. While the TSP requires manual rebalancing, most advisors implement automated systems that maintain optimal allocations without emotional intervention.

4. Behavioral Coaching

Behavioral coaching is perhaps the most valuable yet least appreciated aspect of professional guidance. Studies demonstrate that individual investors typically make emotionally-driven decisions during market extremes, selling at market bottoms and buying near peaks. Vanguard's Advisor's Alpha research attributes a 1.50% annual performance improvement to this guidance, with other studies suggesting benefits as high as 6.3% annually.

5. Additional Planning Areas

Beyond investment management, advisors often provide significant value through tax-efficient withdrawal strategies, estate planning, insurance analysis, and Social Security optimization. These services can deliver substantial financial benefits that complement portfolio management.

Age-Based Considerations

Federal employees retiring between the ages of 55 and 59½ should note a vital tax provision: TSP withdrawals during this period are exempt from the 10% early withdrawal penalty that would otherwise apply. This exemption is lost upon rollover to an IRA.

Therefore, employees retiring in this age range who anticipate needing distributions before age 59½ should consider maintaining their TSP balance until reaching 59½; at this point, rollover to an IRA and implementing TAWRP would be advantageous.

Conclusion

While the Thrift Savings Plan excels during the accumulation phase of retirement planning, its structural limitations become increasingly problematic during the distribution phase. The All-Weather Retirement Portfolio demonstrates superior performance across all measured metrics, providing significantly higher success rates, sustainable withdrawal amounts, and portfolio longevity.

Federal employees entering retirement should strongly consider directly rolling their TSP balance to an IRA and implementing the TAWRP strategy. The sole exception is those retiring between ages 55 and 59½, who anticipate needing distributions before age 59½.

Retirees can substantially improve their financial security and peace of mind throughout retirement by focusing on proper asset allocation, disciplined rebalancing, and behavioral consistency.