FEDERAL RETIREMENT THRIFT INVESTMENT BOARD
1250 H Street, NW   Washington, DC 20005

August 30, 2007

Memorandum for Greg Long, Executive Director

From: Tracey Ray, Chief Investment Officer

Subject: Pricing of TSP Investment Funds

The prices of the investment funds in the TSP are currently truncated to two decimal places. This truncation causes some issues with participant returns in the G Fund and with monitoring tracking error. I recommend expanding the prices to four decimal places.

Participant Returns in the G Fund

All returns for TSP funds are realized through price appreciation only. TSP share prices are currently truncated to two decimal places. Thus, if a fund's price were $12.0099, the TSP record keeping system would use a price of $12.00 to value a participant's holdings. One result of this practice is that a participant can buy shares in the G Fund, hold them for five days, and realize a 0% return. That is because at current interest rates, the price of the G Fund only increases every 5 to 6 days.

As an illustration, a participant purchases 10,000 shares of the G Fund at $12.00 a share, an investment of $120,000. Assume the G Fund is paying 5% interest. The table below shows the daily value of the account if pricing were expanded to four decimal places.

Value of 10,000 Shares of the G Fund with Pricing at 4 Decimal Places

	$ Price of G Fund	$ Value of Account
Purchase Date	12.0000	120,000
Day 1	12.0017	120,017
Day 2	12.0033	120,033
Day 3	12.0050	120,050
Day 4	12.0067	120,067
Day 5	12.0083	120,083
Day 6	12.0100	120,100

As one would expect, the participant's balance increases every day. However, under the current pricing scheme, the price of the G Fund would be consistently reported as $12.00 until Day 6. If the participant redeemed shares on Day 5, he would receive $12.00 per share, or $120,000, his original investment.

Tracking Error

The Board reviews the tracking error of the returns of the TSP funds versus the BGI-managed funds each month. TSP share prices are currently truncated to two decimal places. Thus, if a fund's price were $12.0099, the TSP record keeping system would use a price of $12.00 when calculating the fund's return. TSP returns can be affected by 4 to 9 basis points, depending on the share price, solely because of the price truncation. The maximum difference between the price used to calculate the return and the price carried to the 4th decimal is .0099. The F Fund is the lowest priced TSP fund, at $11.38. A .0099 difference in price is 8.6 basis points (.0099/11.38). At $23.13, the I Fund is the highest priced TSP fund. A .0099 difference in price is 4.3 basis points (.0099/23.13). The example below illustrates this concept.

I Fund	Price – 4 decimal	Price - Truncated
Beginning	$22.0099	$22.00
Ending	$23.0000	$23.00
Change	$0.9901	$1.00
% Change	4.50%	4.55%

There is a 5 basis point difference in the posted return under the two different methods, 4.50% versus 4.55%, which would appear to be tracking error but is not. Changing the pricing convention would remedy this anomaly.

Implementation

The Office of Participant Services has determined that the change is manageable, particularly if the announcement is made concurrently with other communications updates. The Office of Automated Systems estimates that it would cost $150,000 to make the change to the TSP record keeping system.

Recommendation

Greater precision in share price calculation will provide substantial benefits to participants via more accurate performance calculations and will enable the Board to better monitor tracking error of the TSP funds, all at a relatively low cost. I recommend expanding the share price calculation to four decimal places.