

# **Daily Valuation Operating Procedures**

**Effective Date: July 1, 2019**

**For**

**State of Tennessee, Department of Treasury**

**And**

**State Street Bank and Trust Company**

**And**

**Great-West Life & Annuity Insurance Company**

## I. Definitions

**Custodian** – The State Street Bank and Trust Company who acts as the State’s custodian under the terms of an investment master custody services contract first effective July 1, 2019, as may be amended from time to time (the “Custodian Agreement”).

**Deferred Compensation Program** – The State of Tennessee Deferred Compensation Plan II (aka 401(k) Plan) and the Tennessee State Employees Deferred Compensation Plan and Trust (aka 457 Plan).

**Group Trust Declaration** – The Group Trust Declaration for the State of Tennessee Retiree Group Trust dated March 27, 2015, as amended from time to time by the State.

**Group Trust Fund** – The State of Tennessee Retiree Group Trust created March 27, 2015 to hold the assets of the Retirement System and the assets of the Deferred Compensation Program that Participants direct to be invested in the Tennessee Treasury Managed Fund.

**Net Assets** – The Group Trust Fund’s total assets, at market value, less total liabilities. For the avoidance of doubt, the Group Trust’s total liabilities consist of only those liabilities of the Group Trust as a whole. Other liabilities, exclusive to a participating trust account, will be the responsibility of each respective participating trust account.

**Pricing Source Authorization** – The current pricing source authorization, dated March 1, 2019, as may be amended from time to time by the State and the Custodian.

**Recordkeeper** – Great-West Life & Annuity Insurance Company and/or an affiliate of Great-West Life & Annuity Company who acts as the State’s administrator and recordkeeper related to the Deferred Compensation Program under the terms of an administrative and marketing services contract first dated on December 19, 2014, as may be amended from time to time (the “Administrative Agreement”).

**Retirement System** – A retirement system established under the laws of the State of Tennessee for the purpose of providing retirement allowances and other benefits under the provisions of Title 8, Chapters 34 - 37 of the Tennessee Code Annotated, as amended from time to time. Also known as the Tennessee Consolidated Retirement System (Tennessee Code Annotated §8-34-202).

**State** – The State of Tennessee, Department of Treasury.

**Tennessee Treasury Managed Fund** – A fund managed by the State in which the assets of the Retirement System are invested. Also known as the Group Trust Fund.

**Unit Value** – The Net Assets divided by outstanding units in the Group Trust Fund, commonly referred to as the Net Asset Value (“NAV”) per share.

## **II. Introductory**

In accordance with the Group Trust Declaration, all assets (in any account, portfolio and fund, etc.) of the Tennessee Consolidated Retirement System shall be deposited into the Group Trust Fund and unitized at an initial price of ten dollars (\$10) per share. The assets of the Deferred Compensation Program that Participants direct be invested in the Fund will be held in the Group Trust and commingled with the assets of the Retirement System for investment purposes. The Tennessee Treasury Managed Fund will be an approved product available under the Deferred Compensation Program. Only participants in the Deferred Compensation Program are eligible to invest in the Tennessee Treasury Managed Fund.

These Daily Valuation Operational Procedures are valid from the Effective Date and set out the processes and procedures whereby the net asset valuation services for the Group Trust Fund and the administrative and recordkeeping services for the Tennessee Treasury Managed Fund will be provided, subject to the Custodian Agreement between the State and the Custodian and the Administrative Agreement between the State and the Recordkeeper. Any conflict between these Daily Valuation Operational Procedures and the Custodian Agreement or the Administrative Agreement will be governed by the respective agreement (i.e. Custodian Agreement or Administrative Agreement). These Daily Valuation Operational Procedures may be updated or modified from time to time as needed. Any modifications or updates must be made in writing and agreed to by the parties in writing.

## **III. Processing Participant Activity**

Daily participant activity that occurs in the Tennessee Treasury Managed Fund (purchases/redemptions) will be aggregated by the Recordkeeper and reported via facsimile or electronic transmission on a consolidated basis to the Custodian no later than 6:00AM ET. The Recordkeeper will also notify the State of the daily participant activity.

The Custodian will review, at a minimum, the reported participant activity for pricing errors.

## **IV. Cash Reconciliation**

Based on the reports provided by the Recordkeeper, the Custodian will include the net daily participant activity in the State's daily drawdown sheet and follow the established daily cash processes. Upon the State's approval, the Custodian will initiate with the Recordkeeper all necessary wires, receive all incoming wires and settle all associated activity on trade date plus one (TD +1).

The State is responsible for managing liquidity and investing assets on a daily basis.

The Custodian will post daily expense and income accruals. Income payments will be processed by the Custodian on actual settlement, and miscellaneous income items will be posted on a cash

basis when deposited to the account. The Custodian will be responsible for calculating the allocation of expenses and income across the various investment accounts held by the Group Trust Fund. The State will be responsible for directing the Custodian on any changes, adjustments or specific allocations of expense and income accruals. Additionally, the State will direct the Custodian to process expense payments, as necessary.

Generally:

- Investment purchases and sales are recorded on trade date (TD) and trade date plus one (TD +1) for futures, swaps and externally managed portfolios.
- The gain/loss on all investment dispositions are based on an average cost. Average cost per unit/share for a security is calculated by taking the aggregate cost of all security lots divided by the total units/shares held.
- Gains and losses on foreign currency balances are realized on every disposition of foreign currency. Currency gain (loss) on trades receivable and payable is recognized on each trade settlement. Market gain (loss) is separated from currency gain (loss). The market component of gain (loss) is calculated using the current foreign exchange (FX) rate (or FX rate on the trade date of the sale) multiplied by the local market gain (loss). Forward foreign exchange contracts are classified as discrete investments and are valued using automated interpolation of forward rates. Currency gain (loss) on forward exchange contracts is realized upon the settlement of each contract. Base currency cost of accrued interest on fixed income securities is the accumulation of the daily accruals transacted at daily FX rates.
- Variation margin or collateral will be posted on a settlement basis. Variation margin receipts/payments are treated as unrealized gains (losses) until the contract is close, when the realized gains (losses) become realized.
- Dividends, stock splits, and reverse stock splits are recorded on the ex-date or as soon as the information is made available. Corporate action information (such as mergers, liquidations, etc.) is generally recorded on ex-date, the effective date, or as soon as information is available.
- Interest income on fixed income securities is accrued on a daily basis and calculated using the asset indicative information (i.e., interest rate, day count, payment frequency, etc.) particular to each security issue.
- On payment dates (interest, dividends, etc.), cash received by the account is reconciled by the Custodian. Any variance is researched by the Custodian and appropriate measures taken (claims filed, funds returned, etc.) upon the approval of the State.

## V. Asset Reconciliation

The State has established a daily reconciliation process with the Custodian. Additionally, the State has established with its external investment managers that each is responsible for reconciling assets with the Custodian, as applicable, on a monthly basis. The State's Lending Agent is responsible for reconciling on-loan positions daily. The State's investment advisers and fund managers provide statements to the Custodian. The Custodian will work with the State and/or external investment managers, investment advisers and fund managers, as applicable, to resolve discrepancies. Any adjustments would be posted within the current period (versus "as of").

## VI. Asset Valuation

All assets of the Group Trust Fund will be valued by the Custodian in accordance with the current Pricing Source Authorization, incorporated herein by reference.

## VII. Asset Valuation Review

Upon the valuation of the Group Trust Fund's assets, the Custodian will perform a review of each of the Group Trust Fund portfolios, identifying and evaluating each portfolio's top five (5) securities that experienced the greatest absolute market value change relative to the other securities within the portfolio. Additionally, as a control measure, the Custodian will complete a cursory review of each portfolio's performance relative to its respective benchmark or index.

After the asset valuation review process has been completed, the Custodian will sign off on a daily audit package and the day's Net Assets and Unit Value will be calculated.

## VIII. Calculate Unit Value

The Custodian will add all assets (cash, open sells, interest, etc.), valued at market value, and subtract all liabilities (open buys, accrued expenses, etc.) to calculate Net Assets:

$$\text{Total Assets} - \text{Total Liabilities} = \text{Net Assets}$$

Then Net Assets will be divided by outstanding units to determine the Unit Value:

$$\text{Net Assets} / \text{Outstanding Participant Units} = \text{Unit Value}$$

## **IX. Report Unit Value**

The Custodian will report the daily Unit Value via electronic feed to the Recordkeeper by 7:30PM ET or as commercially reasonable. The Custodian will also notify the State of the daily Unit Value. In the event the Unit Value is not received by 7:30 PM ET, the Recordkeeper may complete daily activity using the previous trade day's price. In such case, the Recordkeeper will then process a price revision the following trade day to correct, if necessary, the previous trade day's activity.

## **X. Materiality and Escalation**

### **A. Unit Value Materiality Policy**

If a calculating or pricing error is discovered in previously calculated Unit Values, the Custodian will evaluate and determine if the error is equal to or greater than thirty basis points ( $\geq 30\text{bps}$  or  $\geq 0.003$ ) of the Net Assets. If the error is equal to or greater than thirty basis points ( $\geq 30\text{bps}$  or  $\geq 0.003$ ) of the Net Assets, the error will be deemed material and further investigation will be conducted by the Custodian. If the error is less than thirty basis points ( $< 30\text{bps}$  or  $< 0.003$ ) of the Net Assets, the error will be deemed immaterial and no further action is required. In either case, the Custodian will immediately notify the State of its determination.

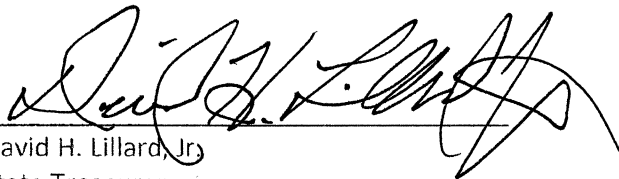
Upon an error being deemed material, the Custodian will notify the Recordkeeper and all transactions will be promptly reprocessed and corrected. The Custodian and the Recordkeeper are expected to absorb, as part of the normal course of business, their respective costs associated with reprocessing due to a material pricing error. In the event an overpayment cannot be recouped (e.g. insufficient participant account balance, full termination, etc.), the party at fault for the material pricing error (either the Custodian or the Recordkeeper) shall reimburse the Tennessee Treasury Managed Fund.

### **B. Escalation**

In the event a party is i) unable to meet a timeframe or other requirement as stipulated under these Daily Valuation Operational Procedures or ii) identifies a material issue, such party is to notify the remaining parties via electronic mail or messaging platform regularly used by the parties for purposes of conducting business and continue to do so until the timeframe or requirement is met or the material issue is resolved or mitigated.

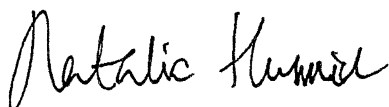
## XI. Acknowledgement

State of Tennessee, Department of Treasury:



David H. Lillard, Jr.  
State Treasurer

State Street Bank and Trust Company:



Name: Natalia Humrich  
Title: Vice President

Great-West Life & Annuity Insurance Company:



Name: Joseph Smolen  
Title: SVP Core Market