**General Overview**

SpecSheet - UnresVariableAppraisal.xlsx: A description of the required inputs and outputs for the RAT-STATS unrestricted variable appraisal module.

Examples - UnresVariableAppraisal.xlsx: Two example RAT-STAT inputs for the variable appraisal module.

tvalueTable.csv: An example of a table with t-values for a fixed set of confidence levels.

VBCode - UnresVariableAppraisal.xlsm: Macro that replicates the RAT-STATS implementation of the unrestricted attribute appraisal module.

Also refer to pages 116 through 124 (sections 3-8 through 3-16) in the RAT-STATS 2010 Companion Manual and pages 202 through 219 (sections 4-19 through 4-36) of the RAT-STATS 2010 User Manual. Both documents can be found on the following page <https://oig.hhs.gov/compliance/rat-stats/>. The data limitations associated with RAT-STATS can be found on pages 386 through 393 (A-1 through B-5) of the RAT-STATS 2010 User Guide.

**Exception Checking**

Your program does not need to provide the exact same error messages as RAT-STATS, but exceptions handled by RAT-STATS must be handled by your submissions as well. Exceptions will be checked through the use of test datasets.

**General Overview**

The aforementioned pages of the RAT-STATS 2010 Companion Manual contain all of the equations necessary to replicate the RAT-STATS results. The z-score, unlike the t-value, is not dependent on the sample size and thus can be obtained through a look-up table that contains a sufficient number of significant digits.

**Types of Data (Examined, Audited, and Difference Values)**

The current version of RAT-STATS allows for the user to input the audited, difference, or examined amounts. The difference amounts equal the audited amounts minus the examined amounts. Consequently, given any combination of the two values it is possible to calculate the third. In fact, when the data input into RAT-STATS includes two values, it automatically calculates and provides a statistical estimate for the third amount. For example, given the audited and examined amounts RAT-STATS will subtracted the examined from the audited and also report the difference amounts.

It is not necessary to replicate this exact feature of RAT-STATS as long as there is a way to replicate the resulting estimates. If this feature is not included, be sure to document the steps required to replicate the RAT-STATS results, and include this documentation when you make your submission.