Financial Variance Reporting Requirements

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Contents

Update 10/30/19 Note – text is the same as previous version of this document except where highlighted in green.

Objectives and Overall Requirements

This document defines the detailed requirements for a family of reports collectively referred to as “fluctuation” reports, or “flux reports.” The objectives and overall requirements of these reports are:

- Provide insight, understanding and explanations into changes in AH4R’s financial performance.
- Support user-controlled report “vertical” structure – selection of and mapping of individual GL accounts to report-specific groupings and totals.
- Built-in balancing to the Trial Balance data for the entities, books, and period selected. For each run, all data from all entities and books, for all accounts are captured from Yardi GL data – i.e., the amounts in the Trial Balance. The data capture & process logic must guarantee 100% match to TB data.
- While individual reports will utilize mapping template files to organize and subtotal the data, the reports must generate totals for the selected entities, books and periods that match equivalent Yardi reports, including a row to capture amounts from Accounts that are not in the mapping template.
- Mapping template files are 100% under the control of Accounting and may be changed at any time by a designated, accounting person trained in the use of the templates. Functionally, the mapping files are a template report structure into which the data is inserted for the actual report.
- Provide all data over time by capturing totals and calculated variances for an individual accounting period / month, enabling comparisons over time to identify trends – e.g., trending up, down, or flat.
- Provide a flexible, easily modified report family which utilizes a common data base, so that new ideas for reports can be quickly created without a report-specific data retrieval process, and so that new reporting options, data filters, rankings, etc., can be provided. Reports comparing different period data are not included in this requirement document but will be developed once this process is in production use so we have experience with it.

Design Overview

The Fluctuation report family will consist of the following elements:

- **Variance Analysis Detail table** – Single, standard process updates data for each month, providing data for all reports. Variance amounts are calculated and stored in this table. Data is persistent, meaning that it remains for each month and is generated for all accounts and all entities each time. Data is not written to the table until the "final data" flag in the SSRS UI is set. Each run generates all data for all entities, books, and accounts for the period, regardless of report type. Details:
    - The report UI will include a "Final" flag setting. The process generating the data for a month can be run at any time and is expected to be run prior to month-end in preparation. If the flag it not set to "Yes" then the process will generate the data for the report only, and not update the data base.
    - If the Final flag is set to "Yes", then the process will write the data to the Variance Analysis Detail table, indicating that it is final, and that month is closed and the data frozen.
    - A separate field will allow "Unfreezing" of the period's data, and re-running of the process and report. This can occur if the month is re-opened and adjustments made.
- **Report types and functions** – Multiple report types;
    - **Mapping File structure -** Each having a type-specific Mapping file which defines how the report is to be built, accounts, sub-totaling, formatting, threshold calculations and highlighting.
    - **Common data source -** All report types get their data from Yardi GL Detail data, which is written to the Variance Analysis Detail table for report runs flagged as "Final."
    - **Report types** are:
        - P&L SEC
        - P&L Margin
        - Balance Sheet
        - FFO

Additional requirements for each report type are defined in more detail in sections later in this document. Several separate Excel files contain information that is part of this requirement documentation.

Requirements Detail

Variance Analysis Detail Table - Data Structure and Process

- **All report data is stored in a common table**, Variance Analysis Detail, in the OpsFinanceReporting Data base, which is in the Data Warehouse. Data is updated by an ETL process from Yardi data at various time intervals.
- All reports utilize this common data structure, and a common update process to calculate variances, and to manage the period update controls.
- There will be one row, which includes all retrieved and calculated variance amount for each combination of
    - Entity (all entities)
    - GL Account
    - Period (Accounting Month)
    - Book
- **Common Processing** – data is generated to the Variance Analysis Detail table / DB as follows:
    - There is a single, common process that is run each time, with whatever selections or subsets of data for the report being selected from the data returned by the common process.
    - There are two modes of processing for this process:
        - Report only – only data that is selected for the individual report – entities, etc. are generated, with no data being written to the table.
        - Final/frozen data – when the "Final Data" flag is set on any of the Report types, the process selects and generates data for all entities, books, and accounts for the period, regardless of which report set the Final Data Flag.

- Always balances to the Trial Balance. The data generation process itself must always generate data for the selected entities, books, and accounts for the period, and not require a separate process to ensure balancing to the TB. It accomplishes this through code structure that cannot miss any data in the Yardi GL data for the period. Part of the UAT validation for this process and its reports will be an independent comparison to TB data.
- Partial period data – When the data captures partial period data, the process will return whatever data is present for the month or quarter, to be displayed in either the current month fields, or in fields labeled "quarter to date" or "Year to date" so there is no confusion about what the data means.

- **Other data structure and process requirements**:
  - All variance amounts are calculated for a given row each time it is run.
  - Once written to the table the data is considered "frozen."
  - Variance amounts are stored, but not percentage values, which vary depending on how the amounts they use are totaled.

- **Data Fields** – The table will have the fields defined in the separate Excel file – **Fluctuations Rpts - Variance Analysis Detail Table Structure.xlsx**

Mapping Files Control Report Structure

A Mapping File Defines and Controls Each Report Type.

- **Characteristics:**
  - Excel file, edited by a designated Accounting person.
  - Stored at a designated SharePoint location.
  - Imported into the report's process each time the report is run or at regular intervals.
  - Used to provide the structure / subtotaling, descriptions for total lines, for each report type.
  - Account Descriptions for individual accounts are populated from text entered in the Accounting-maintained Mapping template file and replace the default Account Description values from Yardi.
  - Threshold testing – included in the mapping files are the options to set threshold values for a given row, for each individual variance amount or %.

- **Mapping files define for each report type:**
  - **Vertical structure** – how the individual GL Account totals are to be grouped and subtotaled
  - **Totaling and Subtotaling -** The mapping shows how the individual GL account rows are to be subtotaled and totaled, and the description that is to be used for the headings and total lines for each account group.
  - **Descriptions of the groupings** – e.g. "Rental Income" with a total of multiple different rent-related accounts.
  - **Missing GL Accounts –** each report type includes a row in which amounts for GL Accounts that were omitted from the mapping file are shown, so the overall report totals will always match the Trial Balance amounts for the period, entities, and books selected.
  - **Thresholds Totaling and Percent Logic –**
    - Each Template has separate tabs where the structure and logic for totals is defined.
    - Each Subtotal Group's text that is to appear with the total amounts is defined here.
    - If a percentage of a total is to be shown, the Percentage Control & Calc column is populated. The Percentage logic works as follows
      - If the Percentage Control & Calc column is blank (default), no percentage is shown or calculated.
      - If it is populated, the entry identifies the Group Code total to be used as the Divisor in the calculation.
      - Calculation is:

        Percentage = current row Group Code Amount / Divisor Group Code Amount as a Percent.

      - Additional row in the report – percent values are placed in a separate row, below the total or subtotal upon which it is calculated.
      - Calculated and shown for all months for which there is data.
      - Percent row text – the separate percent row is labeled "% of xxxxxxxx" where xxxxxx = the Divisor Group Code Text value.
      - Example for a single monthly column:

Group Code 120 is Bad Debt Expense.

Divisor is Group Code 10 – **Rents from Single Family Properties**. Amount is $2,000,000

Report shows – normal subtotal line plus additional line for the % calculation:

Bad Debt Expense = $30,000

% of **Rents from Single Family Properties** = 1.5%

- **Flux Thresholds** – values for the individual row in the report which, if the value exceeds this setting, will be highlighted as an "out of range" value. The Threshold Tests Settings are columns in both the tabs for the Mapping of individual GL accounts and the Totals tab. All threshold tests have both amount and % columns, providing considerable flexibility. Only the column with an entry will be processed.

- **Mapping File data definitions** – defined in the separate Excel file - **Fluctuation Rpts - Mapping Files Formats.xlsx.** Please note that the contents of these mapping files are to serve as an example and were taken from the Excel report examples used to generate this requirements document. It is expected that Accounting will want to significantly alter these mapping files over time as experience with this functionality is gained. This includes adding new lines, completely restructuring how totals are calculated, changes to the Account Descriptions or header / total line descriptions, and which variances are to be tested, and how they are to be tested.
  - Changes to this file are highlighted in Yellow.

Report Type Requirements

Format – The columns, selection options and data sources for each of the 3 report types are defined in a separate Excel file - **Fluctuation Rpts Formats.xlsx.** All reports will be generated using SSRS tools.

- Changes to this file are highlighted in Yellow.

Approval & Sign-Off

These requirements are approved and will be used to validate the delivered, functioning report family.

, Senior Accountant _____ Date: _____

Property Operations Controller _____ Date: _____

Attachments – Excel files

Fluctuations Rpts - Variance Analysis Detail Table Structure.xlsx

Fluctuation Rpts - Mapping Files Formats.xlsx

Fluctuation Rpts Formats.xlsx