FDIC DFAST-14A Technical Submission Instructions

Contents

1. DFAST-14A Data Submission Overview

This section outlines technical instructions for submitting DFAST-14A data. This document covers the file format and other technical specifications. This document is meant to supplement the Dodd-Frank Act Stress Test information collection (Reporting Form DFAST-14A). Often, submissions that do not comply with the technical instructions cannot be loaded into the system and will require a resubmission.

1.1. File Format

Summary Schedule: Respondents have the choice to submit the DFAST-14A summary schedule in Microsoft Excel .xlsx file format (Excel 2010 or later) or in Extensible Markup Language (XML). Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a common format that can be shared in a consistent way.

An accompanying XML Schema Definition (XSD) describes the elements of XML submission. An XML Schema Definition (XSD) describes a set of rules to which an XML document must conform in order to be considered valid according to that schema. XSD describes the structure of an XML document.

The Master XSD provided should be used for all submissions. Master XSDs contain all data collection items for a given schedule, including ended items. Institutions should use these XSDs going forward for all submissions. Institutions should only populate the data items that are applicable for the report form instructions from the as-of date. Any non-applicable items for a specific as-of date should be omitted from the XML submission.

The XSD items are defined in string format to allow for data types beyond those defined in the data dictionary. This is done to prevent restricting data types in the submission process. The data submitted should still comply with the data formats provided in the data dictionaries that are distributed with the technical instructions. Any data elements that do not comply with the Field Type and Attributes may need to be revised.

All other schedules: All DFAST 14-A excel schedules (Scenario Schedule) applicable to a respondent's institution should be submitted in Microsoft Excel .xlsx file format (Excel 2010 or later). Files should not be password protected or zipped. Respondents should use the DFAST 2017 excel templates provided by the FDIC. Please note that only non-shaded cells should be completed by institutions; do not enter any information in gray highlighted or shaded cells, including those with embedded formulas.

1.2. File Header / Excel Cover Sheet

For DFAST-14A summary schedules, XML file headers must include DATA_ASOF_TSTMP while LAST_ASOF_TSTMP is optional. Please see Appendix A: XML Validation for additional information.

1.3. Primary Keys

Primary keys are required to distinguish records as unique. Primary keys can be determined for each schedule by referring to the data dictionary. Primary keys are non-nullable fields and must be completed.

Summary Schedule: If an institution does not have data to report on a specified table, these items should be left out of the submission rather than reporting "N/A" for primary keys. In the data dictionary, these fields are determined with "Yes" values in the "Primary Key" column. The data

dictionary lists the format the primary keys must be in for files to successfully load. Common primary keys across schedules include:

- ID_RSSD
- D_DT (With the exception of Retail which has Reporting Month instead)
- TRANSTYPE

ID_RSSD must be the unique identifying number assigned by the Federal Reserve.

D_DT and DATA_ASOF_TSTMP must be provided in "Date_Time" format 'YYYY-MM-DDThh:mm:ss'

- YYYY represents the year
- MM represents the month
- DD represents the last day of the reporting month
- T represents the start of the required time section
- hh represents the hour
- mm represents the minute
- ss represents the second

For example, the June 2013 reporting period would be represented as '2013-06-30T00:00:00'

TRANSTYPE should always be filled with the value "I". The FDIC only accepts insertions of new data records, we cannot accept updates to existing data records or deletions of existing data records. Should a respondent wish to updated an existing data record, the respondent must resubmit the entire completed schedule corresponding to the data record. The FDIC only accepts "full" resubmissions; "partial" resubmissions cannot be accepted.

All other Schedules: The primary keys for all DFAST 14-A excel schedules (Scenario Schedule) applicable to a respondent's institution are the fields which are included in the cover sheet of each excel template. This includes:

- Institution Name
- RSSD ID
- CERT
- Submission Date (in MM/DD/YY format)

as well as fields which are specific to individual cover sheets.

1.4. Data Elements

Summary Schedule: DATA_ASOF_TSTMP should be provided in date time format 'YYYY-MM-DDThh:mm:ss', which is provided above. (This format also applies to LAST_ASOF_TSTMP, which is an optional attribute.)

Each schedule has an XSD that contains all data elements collected. Respondents can utilize the most recent XSD for both historical and current submissions and submit applicable data items per the instructions of the submission date using the DFAST-14A instructions of the respective as-of date.

All scenarios for the summary schedule, with the exception of any schedule F (business plan

changes) submission, should be submitted together as one file. The mandatory scenarios for DFAST are Supervisory Baseline, Supervisory Adverse, and Supervisory Severely Adverse. Additional supervisory scenarios are optional.

Each projection period and scenario is required for items CCARP006 and CCARP009, respectively.

The permissible values for CCARP006 are the following (mandatory items in red):

- Baseline
- Adverse
- Severely Adverse
- Additional Scenario 1
- Additional Scenario 2

As respondents fill in data elements, they should adhere to the following guidelines:

- Items applicable to the entire projection horizon, such as those on the Trading and Counterparty worksheets, should only be populated for PQ1 and the values should be for the entire projection period.
- Items should be reported as 0 instead of 0.000000. If an item is not applicable to your submission the field should be omitted from the XML submission. In addition, the institution should provide a list of all items which are not submitted or for which null or missing values are provided, along with a brief explanation for why the field is not applicable to the institution.
- Report dollar values in millions of U.S. dollars (unless specified otherwise).
- Dates should be entered in an YYYYMMDD format (unless otherwise indicated).
- Report negative numbers with a minus (-) sign.
- Report income and loss data on a quarterly basis and not on a cumulative or year-to-date basis.

All other schedules: For all DFAST 14-A excel schedules (Scenario Schedule), respondents should adhere to the following guidelines:

- Report dollar values in millions of U.S. dollars (unless specified otherwise).
- Dates should be entered in an YYYYMMDD format (unless otherwise indicated).
- Report negative numbers with a minus (-) sign.
- Report income and loss data on a quarterly basis and not on a cumulative or year-to-date basis.
- An amount, zero, or null should be entered for all items, except in those cases where other options such as "not available" or "other" are specified. If information is not available or not applicable and no such options are offered, the field should be left blank. In addition, the institution should provide a list of all items for which null or missing values are provided, along with a brief explanation for why the field is not applicable to the institution.
- Report income and loss data on a quarterly basis and not on a cumulative or year-to-date basis.

1.5. Submission

The XML file, excel schedules, and all supporting documntation should be submitted via a secure information exchange to the FDIC onsite examination team.

1.6. File Name

Summary Schedule: The file name for all XML data submissions should be formatted as follows:

DFAST14A_(RSSD ID)_(Template_Name)_(Submission Year)_(Version Number).xml*

* "Test" can be used in place of version number to indicate a test file

For example:
- DFAST14A_123456_Summary_2017_1.XML

- DFAST14A_123456_Summary_2017_TEST.XML

Important clarifications for the file naming convention:
- DFAST14A must be one continuous word. No additional spaces or separating punctuation should be included (i.e. use DFAST14A instead of DFAST-14A, DFAST_14A, etc.)
- The template name in the file name must be one continuous word. Underscores in the template name should not be used (i.e. Use RegCapTransitions instead of RegCap_Transitions).

All other schedules: The file name for all DFAST 14-A excel schedules (Scenario Schedule) applicable to a respondent's institution should be formatted as follows:

DFAST14A_(RSSD ID)_(Template_Name)_(Submission Year)_(Version Number).xlsx*

* "Test" can be used in place of version number to indicate a test file

For example:

- DFAST14A_123456_Scenario_2017_1.XLSX

1.7. Common File Load Issues
- Incorrectly formatted record headers.
- Not using the most recent XSD provided.
- Incorrect transtype provided.
- DateTime fields incorrectly formatted.
- Null or missing primary keys.
- Duplicate records with identical primary keys.
- Incorrect ID_RSSD.
- Incorrect D_DT.
- Incorrect filename
- Manipulation of structure of original excel templates
- Zipped XML files or excel submissions
- Failure to submit a cover sheet with each schedule

1.8. Version Conventions

All Schedules: The first submission for each 2017 DFAST 14-A schedule is version 1. For example, when a hypothetical respondent with RSSD_ID = "123456" submits the 2017 DFAST summary schedule for the first time, the name of the file would be:

- DFAST14A_123456_Summary_2017_1.XML

If a respondent resubmits a schedule, the version number should be incremented by 1 for each resubmission. For example, if the same hypothetical respondent resubmitted the 2017 DFAST summary schedule, the name of the file would be:

- DFAST14A_123456_Summary_2017_2.XML

Only "full" resubmissions of schedules are permitted, "partial" resubmissions cannot be accepted. A respondent should only provide a full resubmission for the schedule(s) being modified; the respondent should not resubmit all DFAST schedules if only one schedule is being changed.

2. DFAST-14A Edit Documentation

A list of all edit checks are provided in the edit documentation.

2.1. Edit Type

Indicates the type of edit check run on each data element.

- Syntax
  - Address the *data type* and are designed to ensure data is in the correct format. Institutions must correct these edit failures. The start and end dates for active Syntax edits are always 19000101 and 99991231 respectively.
    - Will utilize the following formats: Numeric(digits,dec) and Varchar(#); Integer data type edits will no longer be used
    - Indicate that the field must be numeric and specifies the number of digits and decimals permitted
      - Ex:
        Edit Error Message - Must be numeric & must be decimal(16,6)
        Edit Logic - Must be Numeric(16,6) or for ID_RSSD, use "Must be NUMERIC(7,0)"
- Validity
  - Address the *data accuracy* and include mathematical calculations, factual consistencies, and relational calculations that *must* pass the edit. Depending on instructions, business conditions, and requirements, the condition *must* be true.
      - Ex:
        Edit Error Message - If provided, FIELD 1 must be greater than or equal to 0
        Edit Logic - If <> NULL, FIELD1 >= 0
  - In some instances you will see validity edits that say must not be null, review these items and update if optimal, in instances where a null is the optimal field provide an edit explanation instead of a revision.
- Quality
  - Addresses *data accuracy* but measures the reasonableness of the data that *should* pass the edit. There are valid conditions in which correctly reported data could

trigger an edit resulting in a false positive. The edit responses provided for these false positive edits provide valuable information to the data end users at the Federal Reserve.

- Ex:

  Edit Error Message - If provided, FIELD1 (Current Quarter) should be greater than or equal to FIELD2 (Previous Quarter)

  Edit Logic - If <> NULL, FIELD1 >= FIELD2

- Intraseries
  - Type of quality edits designed to monitor unusual or unexpected changes between report periods.
- Interseries
  - Type of quality edit that compares data for unexpected or unusual reported values between different report series.

Appendix A: XML Validation

XML validation is the process of checking a document written in XML to confirm that it is both well formed and valid. A well formed document follows the basic syntactic rules of XML, which are the same for all XML documents. A valid document respects the rules dictated by the XSD.

There are various free tools available that will validate XML documents against given XSDs.
- XML Notepad 2007 (http://www.microsoft.com/en-us/download/details.aspx?id=7973) provides a simple intuitive user interface for browsing and editing XML documents.
- Notepad++ (http://notepad-plus-plus.org/) plugin that offers XML validation against an XSD.
- Xerces C++ (http://xerces.apache.org/xerces-c/) is a validating XML parser written in a portable subset of C++. Xerces C++ makes it easy to read and write XML data.

Microsoft Excel offers a built in function to validate XML data against an XSD to ensure that any XML data you import to or export from one or more cells in a mapped range in a worksheet conforms to the XSD in the XML Source task pane.

Excel XML Validation

1. On the Developer menu, point to XML, and then click XML Map Properties to display.
2. In the XML Map Properties dialog box, select Validate data against schema for import and export.

Please see the screenshot below for an example of a graphic display of how to validate and export an XML file.
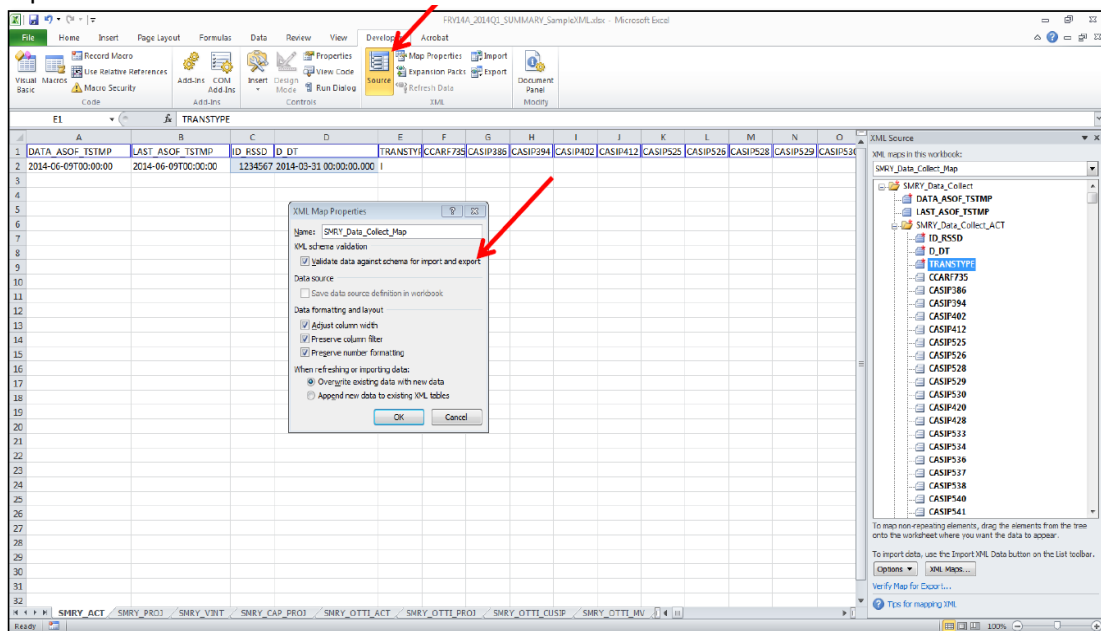

XML File Creation

The following examples provide instructions on how to create an XML file that contain multiple tables. The example provided demonstrates how to properly map a DFAST-14A Summary file but it can be replicated to map any of the multiple table files collected in the DFAST-14A schedules.

Example: Multiple Table XML

The following process is an example of how an XML file can be created. Details for the reported values and the MDRM's can be found in the accompanying data dictionary documentation. This documentation will identify the reported value and further prescribe the data type and format that is expected for the reported values. To map an .xsd follow the steps below using DFAST14A_Summary_Version_1.xsd as an example:

1. Save the DFAST14A_Summary_Version_1.xsd to a local drive that can easily be accessed.
2. Open a new Excel document, select the 'Developer' tab in the toolbar at the top, and locate the 'Source' icon. Once selected a pane on the right most portion of the screen will appear. Select 'XMLMaps...' from the bottom of the pane and then select 'Add...' from the pop-up screen.
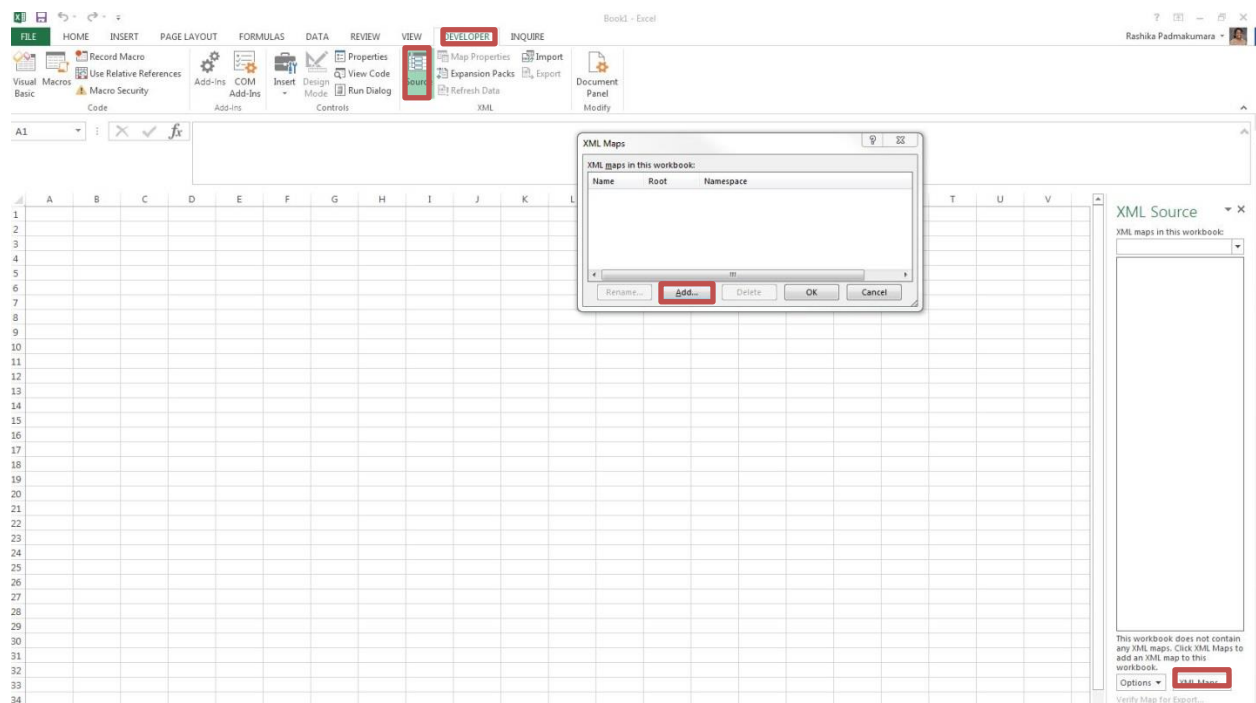

3. Next locate and select the DFAST14A_Summary_Version_1.xsd and click open. The 'Multiple Roots' dialog box will appear. Select the SMRY_Data_Collect option and then click 'OK'
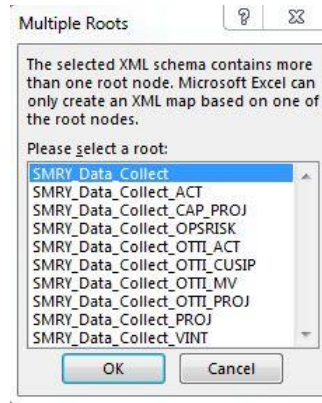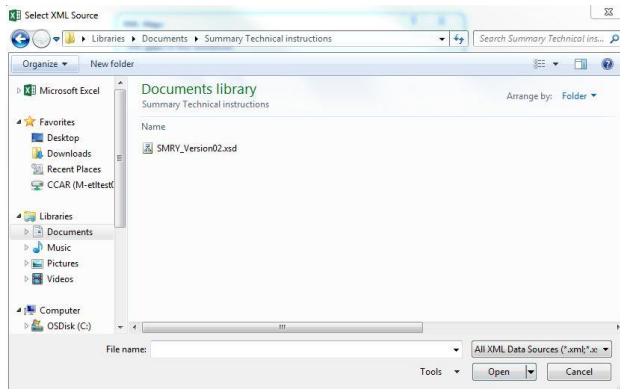
4. Then select 'OK' on the 'XML Maps' dialog box. After selecting 'OK', the data elements will populate in the right hand pane. We will map each of the tables to a separate tab. For reference, label nine tabs according to the nine sets of data being collected.
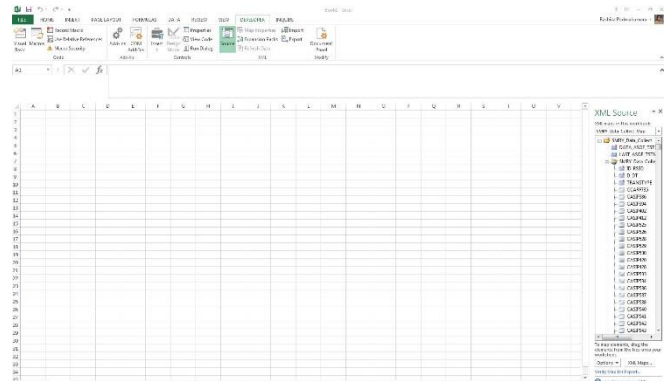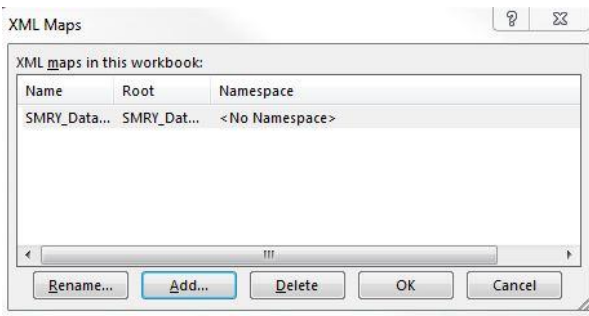

5. First map the DATA_ASOF_TSTMP and LAST_ASOF_TSTMP tags. While pressing the 'CTRL' key select those two items with the mouse then click and drag the cursor to cell A1. Cells A1 and B1 will then be highlighted indicating successful mapping of these two items.
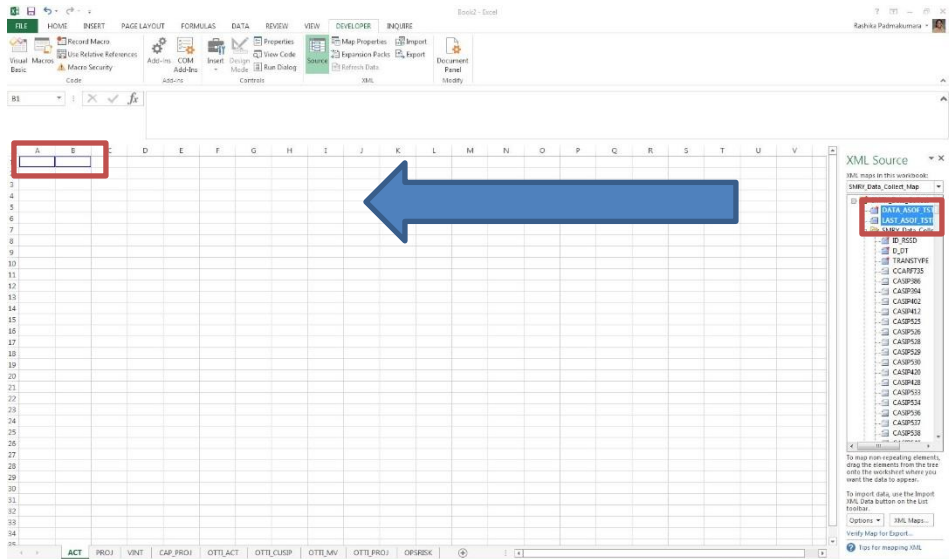
We will next map the items collected on each of the tables. The first set of items for the ACT tab will be mapped using the SMRY_Data_Collect_ACT icon in the right hand pane. Select the SMRY_Data_Collect_ACT which will highlight the corresponding items. Click and drag the heading to cell C1. The image below depicts how this should appear.
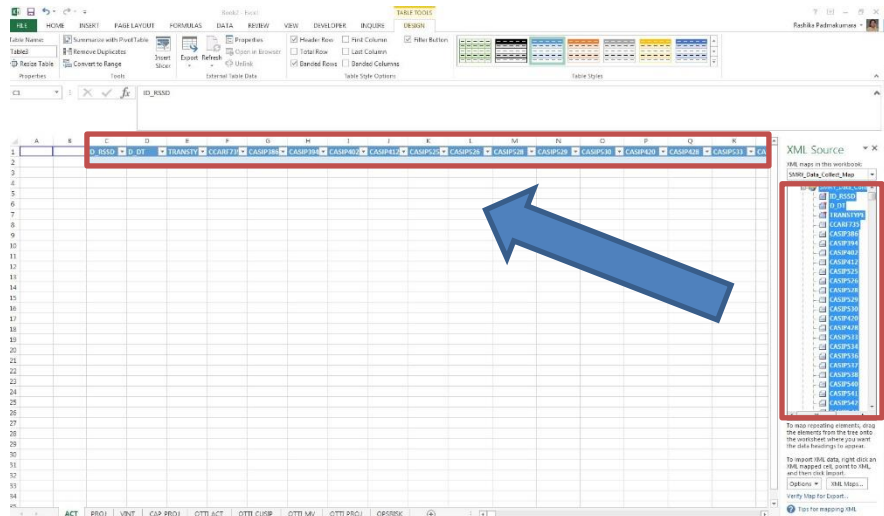
6. The second set of items for the PROJ tab will be mapped using the SMRY_Data_Collect_PROJ icon in the right hand pane. Select the corresponding Excel tab and then select the SMRY_Data_Collect_PROJ which will highlight the corresponding items. Click and drag the heading to cell A1. The image below depicts how this should appear (DATA_ASOF_TSTMP and LAST_ASOF_TSTMP tags do not need to be mapped for this tab).
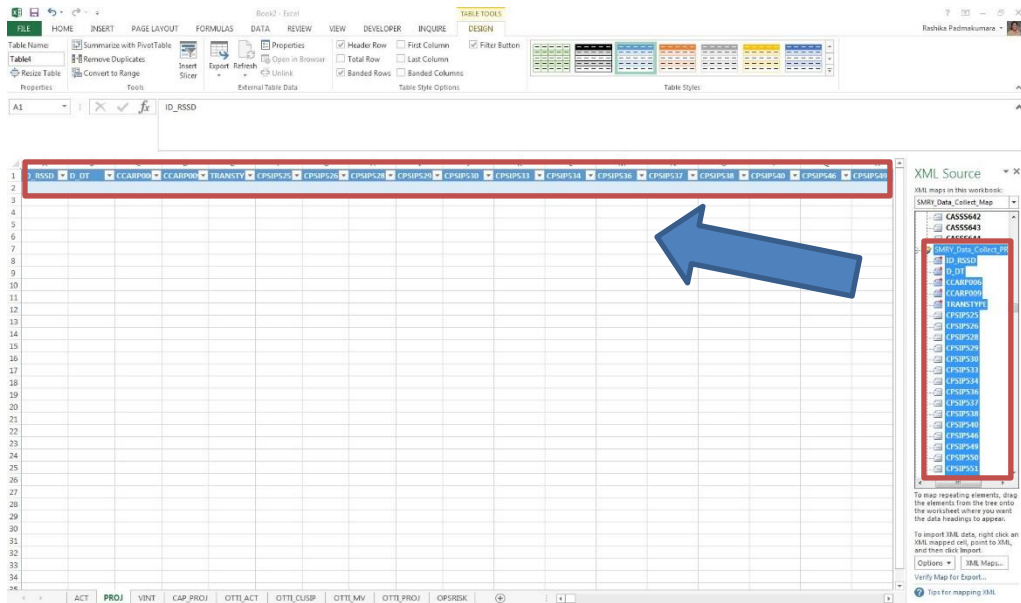
7. Similarly, the rest of the tabs would be mapped according to the above example. DATA_ASOF_TSTMP and LAST_ASOF_TSTMP tags do not need to be mapped for the rest of the tabs.

8. Now all of the requested items have been mapped. Complete the data fields as prescribed by the information in this document and in accordance with the data dictionary document provided (note: all data will be completed below the header. For instruction number 5, DATA_ASOF_TSTMP and LAST_ASOF_TSTMP should be input directly into cells A1 and B1. Once all data have been input, export into the desired .XML format that is needed for submission. First select 'Export' from the 'Developer' tab in the toolbar at the top. Then name file according to the fomat prescribed in section 1.6 of these technical instructions and select 'Export'.

Notes:

- Excel changes date formats into Julian Date; to ensure the date is in the correct format listed in the technical instructions all date fields should be formatted as text.
- If a schedule has multiple tables and an institution does not have data for one of the tables do not provide any values for the primary keys.
- These instructions work for the current excel version of Office 2013 as of September 30, 2014. Any software updates to Microsoft could alter these instructions.