

## **MORTALITY AND OTHER RATE TABLES**

The Mortality and Other Rate Tables application was developed by the SOA to provide its members with easy electronic access to a variety of rate tables of interest to actuaries. The current inventory of rate tables available via this webpage numbers over 900 and includes SOA experience mortality and lapse tables, regulatory valuation tables, population tables and various international tables.

The Mortality and Other Rate Tables application contains features to assist the user in locating individual tables of interest. There is functionality to filter and sort tables based on type, usage and nation. Search capabilities have also been provided. To help determine if a particular table is of interest, a user can view the 'description' of the table by holding the cursor over its 'Name/Description' and reading the 'pop up' information. Once a user locates the table(s) of interest, the data in the table(s) can be viewed on-line or saved into an Excel, csv or xml file. Finally, there is a feature where multiple tables can be selected via check boxes and downloaded into a zip table.

The underlying database for the webpage is a set of xml files that follow [ACORD's](#) XTbML standard. The SOA and ACORD partnered together in 2002 to introduce this new data standard. XML files were chosen as the desired storage format because they provide flexibility and portability for future maintenance of this delivery platform. See the 'XTbML History' link to learn more about XTbML.

To promote the usage of the XTbML standard beyond the current usage here on this webpage, the SOA has added functionality for a user to convert a properly formatted Excel file into an XTbML standard xml file. To create a properly formatted Excel file, the user can start with the Excel template that is available to download or download a similar table to Excel and edit it as necessary. See the 'Convert' link to try converting an Excel file to XML.

For users who want to access rate table data via the desktop application provided by the SOA Technology Section, see the 'Table Manager' link.

You must read, understand and accept the 'Terms of Use' before using any of the tables in this database. A record of changes to existing table and additions to the databases will be available from the website in the near future.

If you have a question, please see the FREQUENTLY ASKED QUESTIONS below.

## FREQUENTLY ASKED QUESTIONS

### 1. How do I select multiple files to send to a zip file?

*Check this box to fill in check marks for all the files on this page. Note, only one page at a time will be checked and sent to a zip file when the 'Zip Checked Files' button is pushed. In this example, 10 files are checked and will be sent to a zip file.*

The screenshot shows a data table with 10 rows. Each row has a checked checkbox in the first column. The table has columns for '#', 'Table Name/Description', and 'Type'. Below the table, there is a 'Zip Checked Files' button and a 'File Type' dropdown menu set to 'Excel'. The table is on page 1 of 95.

#	Table Name/Description	Type
1	1941 US CSO Basic, Age Nearest, Male & Female ITM-Country: US Source of data: Ultimate experience on standard insured lives. Construction method: A special iterative formula was de...	Aggregate
2	1941 US CSO Experience, Age Nearest, Male & Female ITM-Country: US Source of data: Joint Mortality Committee experience on standard insured lives excluding durations 1-5, issue years of ...	Aggregate
3	1941 US CSO, Age Nearest, Male & Female ITM-Country: US Source of data: Ultimate experience on standard insured lives. Observation period: 1930 to 1940 Construction method: ...	Aggregate
4	1941 US CSO, Age Last, Male & Female ITM-Country: US Source of data: Ultimate experience on standard insured lives. Observation period: 1930 to 1940 Construction method: ...	Aggregate
8	1958 US CSO, Age Last, Female ITM-Country: US Source of data: Ultimate mortality on standard ordinary insurance. Observation period: 1950 to 1954 Construction met...	Aggregate
9	1958 US CET, Age Nearest, Male ITM-Country: US Construction method: Margin added to 1958 CSO of greater of 0.75/1000 or 30% Minimum age: 0 Maximum age: 99 Numb...	Aggregate
	1958 US CET, Age Nearest, Female	

### 2. I see the ascending/descending arrows to be able to sort by table number, but how do I sort by Table Name/Description, Nation, or one of the other columns?

*Click on any of the column names to activate the 'sort' arrows. In this example, 'Type' was clicked to make these ascending/descending sort arrows appear.*

The screenshot shows the same data table as above, but with sort arrows on the 'Type' column. The table has columns for '#', 'Table Name/Description', 'Type', 'Content Type', and 'Nation'. The 'Type' column has an ascending sort arrow. The table is on page 1 of 95.

#	Table Name/Description	Type	Content Type	Nation
1	1941 US CSO Basic, Age Nearest, Male & Female ITM-Country: US Source of data: Ultimate experience on standard insured lives. Construction method: A special iterative formula was de...	Aggregate	Mortality Insured	United States of America
2	1941 US CSO Experience, Age Nearest, Male & Female ITM-Country: US Source of data: Joint Mortality Committee experience on standard insured lives excluding durations 1-5, issue years of ...	Aggregate	Mortality Insured	United States of America
3	1941 US CSO, Age Nearest, Male & Female ITM-Country: US Source of data: Ultimate experience on standard insured lives. Observation period: 1930 to 1940 Construction method: ...	Aggregate	Mortality Insured	United States of America
4	1941 US CSO, Age Last, Male & Female ITM-Country: US Source of data: Ultimate experience on standard insured lives. Observation period: 1930 to 1940 Construction method: ...	Aggregate	Mortality Insured	United States of America
8	1958 US CSO, Age Last, Female ITM-Country: US Source of data: Ultimate mortality on standard ordinary insurance. Observation period: 1950 to 1954 Construction met...	Aggregate	Mortality Insured	United States of America
9	1958 US CET, Age Nearest, Male ITM-Country: US Construction method: Margin added to 1958 CSO of greater of 0.75/1000 or 30% Minimum age: 0 Maximum age: 99 Numb...	Aggregate	Mortality Insured	United States of America
	1958 US CET, Age Nearest, Female			

- When I click on the XML 'action', it goes right into a browser to view the xml and there is no option to save the xml file, similar to the option that is available when I click on the Excel or CSV 'actions'. How do I save this as an xml file?

*Most browsers have a built in "handler" for XML files and xml files open in the browser instead of prompting the user for an action. You could get around this by right clicking on the 'XML' action and choosing "Save Link As..." or "Save Target As..." to save as an xml file. Alternatively, after the xml code is open in a browser, you can go to "File", then choose "Save As..." or "Save Page As..." to save it as an xml file.*

- How can I get more information about what is contained in a table quickly?

*Hold your cursor over the Table Name/Description of a file until a pop-up box with the description appears.*

The screenshot shows a table with columns: #, Table Name/Description, Type, and Mort. A tooltip is displayed over the 'Table Name/Description' column for the second row. The tooltip text reads: "1941 US CSO Basic, Age Nearest, Male & Female | TM-Country: US Source of data: Ultimate experience on standard insured lives. Construction method: A special iterative formula was developed for removing the margin from 1941 CSO, to find an 'unloaded' Basic version. Minimum age: 0 Maximum age: 100 Number of decimal places: 5 Hash value: -171478238".

#	Table Name/Description	Type	Mort
1	1941 US CSO Basic, Age Nearest, Male & Female	Aggregate	Mort
2	1941 US CSO Basic, Age Nearest, Male & Female	Aggregate	Mort
3	1941 US CSO Basic, Age Nearest, Male & Female	Aggregate	Mort
4	1941 US CSO Basic, Age Nearest, Male & Female	Aggregate	Mort
o	1958 US CSO, Age Last, Female	Aggregate	Mort

- 'Content Type' is blank in a number of files.

*The SOA is aware of this issue with the data. Projects to correct known issues may be prioritized and undertaken in the future. To work around this issue, try reviewing the information in the description. Please see 'Terms of Use' for more information about the completeness and accuracy of the data.*

The screenshot shows a table with columns: #, Table Name/Description, Type, Content Type, and Nation. An arrow points to the 'Content Type' column for the first row, which is blank.

#	Table Name/Description	Type	Content Type	Nation
443	1968-72 Canada CIA Group Waiver Only, Male, ANB	Aggregate		Canada
444	1968-72 Canada CIA Group Waiver Only, Female, ANB	Aggregate		Canada
445	1968-72 Canada CIA Group Waiver Only, Unisex, ANB	Aggregate		Canada
446	1968-72 Canada CIA Group Perm Disab., Male, ANB	Aggregate		Canada
447	1968-72 Canada CIA Group Perm Disab., Unisex, ANB	Aggregate		Canada
448	1968-72 Canada CIA Group Wvr+Perm, Male, ANB	Aggregate		Canada
	1968-72 Canada CIA Group Wvr+Perm, Female, ANB	Aggregate		Canada

6. 'Unknown' appears for the 'Nation' in several tables. What is the correct nation?

*The SOA is aware of this issue with the data. Projects to correct known issues may be prioritized and undertaken in the future. To work around this issue, try reviewing the information in the description. Please see 'Terms of Use' for more information about the completeness and accuracy of the data.*

7. Why can I only filter and sort on a few items such as 'nation', 'usage' and 'type'?

*At this time, the filtering and sorting functionality is limited to these keywords. Projects to enhance this functionality may be prioritized and undertaken in the future. The 'search' facility can be used to find terms that have been entered into the 'description' of the table.*

8. Some tables, like number 945, do not exist.

*The numbering of the tables is not sequential. Gaps may exist between number sequences. There are no plans to make any changes to the numbering system at this time.*

9. How do I interpret the data that is contained in the row and column headers of the rate table?

*Review the information in the rows immediately preceding the rate table data. There will be information describing the name, type, scale, minimum and maximum of the row and column headers.*

10. For select tables, I can see the select and ultimate data in 'view', but I only see the select data when I open the table as an Excel, csv or xml file.

*For some tables like select/ultimate tables, the data is actually stored as 2 tables in one source xml file. When you open or save the file as an Excel, a csv or xml file, scroll down the file to the end of the first table of select rates and you should see the ultimate data in a second table.*

11. How will I know if a table I downloaded last year has had any corrections or changes made to it?

*The SOA will maintain a 'Change Log', which the user can view, of all changes made to tables. The 'Change Log' is currently under construction and will be available in the near future.*

12. I keep getting errors when I try to convert my Excel file to xml. The error messages do not help me identify where my input is incorrect.

*The conversion facility was designed for the more 'technical' user and is limited in the number of 'user friendly' errors that may appear when problems occur in conversion. Because of this, eliminating any errors may take some time. The following process can be used if you are having problems getting an Excel file to convert. Download an existing table that is similar in format to the table you are trying to convert. Try converting the download Excel file to make sure it converts. Change one or two fields at a time, in the downloaded file, and test that these changes convert without error. If it does not convert, undo one of the changes until you pinpoint the one entry that is causing problems. Once you've pinpointed the problem field, compare your entry to entries on other downloaded Excel files and correct as necessary. Continue changing one or two fields at a time until you have a file that converts with all your necessary changes.*

*If you get to a point where you've pinpointed a field causing the error and have compared it to other downloaded Excel files but you still cannot determine how to change it to get it to convert, send the Excel file that converted before you made the last non-comfortable change, the Excel file that does not convert, the name of the problem field, and a screen print of the error you are getting to [MORT@soa.org](mailto:MORT@soa.org).*

13. How do I know if any new tables have been added or if any tables have had changes/corrections made to them?

*You can check the 'Change Log' for a history of updates to the database. You may also make a request to receive notifications via email any time a change has been made to the database.*

14. How do I sign up to receive notifications of updates to the MORT database?

*A Listserv has been set up for the purpose of communicating updates to interested individuals. You may have your name added to or removed from the MORT Listserv by going to <http://www.soa.org/news-and-publications/listservs/list-public-listservs.aspx> and following the instructions.*

15. Can I make a request to add a new table to the database?

*Yes. Requests to add tables can be made by sending a note to [MORT@soa.org](mailto:MORT@soa.org) with the following information:*

- 1. Name of the table*
- 2. Source of the table (organization/individual that published the table; website; publication source including location)*
- 3. Justification for adding the table. How will the addition of this table benefit the actuarial community, particularly SOA members? How will it be used by the actuarial community, particularly SOA members?*

16. Are all requests to add new tables honored?

*The addition of each table is subject to SOA approval. The SOA will only add a table if it is: of interest to the actuarial community, particularly SOA members; is useful in the work of the actuarial community, particularly SOA members; has been developed by a reliable and recognized source; and is available for use by the SOA without restrictions.*

*If your request is approved, the SOA staff will add the table to the database and the 'Change Log' will be updated to document the addition.*

17. I found an error in one of the tables. What should I do to get it corrected?

*If you find an error in any of the tables, please send a note to [MORT@soa.org](mailto:MORT@soa.org) with the name and number of the table and the specific error that you found. The SOA staff will correct the error and the 'Change Log' will be updated to document the correction.*

Other questions? Contact [MORT@soa.org](mailto:MORT@soa.org).