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Mun-Ease News

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Version 16.95 – Our Final Interim Update for the 2015 Release

Welcome! This newsletter describes enhancements for our final interim update for our 2015 release, v. 16.95. Users who have requested our release in a CD format will receive two CDs (a CD containing the 32 and 64-bit Elevate Db version and a CD containing the 32 and 64-bit SQL Server version). The CDs are mailed to the user who has been designated to receive them by your organization. We'll also discuss our upcoming 2017/2018 release later in this newsletter.

About the 16.95 Interim Update

Revised Report Formats

We have revised the format of several reports in the Stand-Alone Reporting and Allocations modules. These reports display combined debt service over a period of time defined by the user. We added additional columns of information to show the beginning outstanding indebtedness, principal additions, and defeasances. Thus the new format allows a user to easily verify how the ending outstanding indebtedness is calculated:

> **Ending Outstanding Debt = Beginning Outstanding Debt + Principal Additions - Principal Reductions – Defeasances**

New Arbitrage Yield Limit Calculations

The Treasury has issued final rules for calculating the arbitrage yield limit. The new rules basically adopt the SIA/MSRB conventions for determining whether a maturity should be valued to the call date or maturity date when calculating the arbitrage yield limit. Thus, the proposed rules eliminated the requirement to test each call date of the callable maturities to determine if it would result in a lower arbitrage yield limit. As with the prior rules, the proposed rules apply to bonds with "significant amounts of bond premium" which are bonds that have a premium that is greater than 0.25% times the par value times the number of full years to call.

When the user chooses the *arbitrage / yield tests / yield-to-call test* menu option, Mun-Ease displays a window that allows the user to perform various yield tests. If the user presses *arbitrage yield tests* button while in this window, Mun-Ease will display a pop-up menu that has three choices:

- <= 5 year calls – arbitrage yield tests,
- > 5 year calls – arbitrage yield tests (pre-10/17/2016),
- > 5 year calls – arbitrage yield tests (on or after 10/17/2016).

Thus, Mun-Ease can perform the calculations using either the old rules or the new rules. We will discuss the new rules later in this newsletter.

Automatic Calculation of the Sequestration cuts for Build America Bonds (BABs)

The original BABs program allowed state and local governments to issue taxable bonds in 2009 and 2010 and to receive a subsidy from the federal government

equal to 35% of the interest (45% for economic recovery zone bonds).

Subsequently, the Budget Control Act of 2011 required that the Director of the OMB reduce spending levels. Among the many spending cuts are reductions to the subsidies made to "direct pay" Build America Bonds. Initially, subsidy payments were reduced by 8.7% in FY 2013. In every year since then, subsidy payments have been reduced - but by different percentages.

In this release, we have added a new capability to generate debt service schedules for BABs that automatically reflect the reduced subsidy amounts in each fiscal year due to sequestration cuts. How do we accomplish this task?

First the user creates a Build America Bond under the *file | fixed rate bonds | new* menu option. The user enters the global subsidy rate (e.g. 35% or 45%). When Mun-Ease generates a debt service schedule from the *file | fixed rate bonds* menu option, the debt service schedule displays a separate column showing the subsidy (35% or 45% of the periodic interest) as a negative amount, thus reducing the debt service.

Once the user has created the bond issue under the fixed rate menu, he can then download the debt service schedule of the BAB to the variable rate module (*file | notes, CP, variable rate bonds, etc. | download*). When performing this task, Mun-Ease displays a dialog box asking if the user would like the subsidy amounts to be adjusted for the sequestration cuts. If the user answers 'Yes', Mun-Ease will then adjust the subsidy amounts for each year based on the mandated sequestration reductions in effect for that fiscal year.

By downloading the adjusted debt service schedule to the variable rate module, the user now has the capability to generate debt service schedules using the gross subsidy or the subsidy that is net of the sequestration cuts. Debt service schedules showing the gross subsidies are generated

under the "fixed rate" menus while debt service schedules showing net subsidies are generated under the "variable rate" menus.

Note that the gross subsidy amount still needs to be entered on the 8038-CP tax form. Mun-Ease will automatically insert the gross subsidy value onto the form when the user creates the 8038-CP form through the *8038s | enter data for 8038 tax forms | 8038-CP* menu option.

Also, note that from an accounting perspective, the interest subsidies are considered to be a revenue source and not a reduction of interest. We can accommodate this requirement. We provide the option to generate a debt service schedule for a BAB under the fixed rate menu that shows only the gross interest (the interest subsidies are omitted from the debt service schedule).

New Arbitrage Rules

The Treasury has issued final arbitrage rules effective October 17, 2016. Shown below is a brief summary of the topics covered by the new rules.

The new rules:

- define how the arbitrage yield limit is to be calculated for bond issues that contain callable bonds issued at a premium. (We'll discuss this calculation in detail later in this newsletter.)

- finalize the proposed rules for short-term and longer-term financings of working capital expenditures. They provide a safe harbor for short-term and longer-term working capital financings so that if followed, the bonds cannot be deemed taxable under the arbitrage anti-abuse rules.

- allow issuers to make yield reduction payments on open market escrows that have a composite yield greater than the arbitrage yield limit.

- finalize the situations for determining whether a swap transaction is a qualified hedge and whether the yield is to be calculated using either the "simple integration" or "super integration" rules. They provide guidance for when a swap transaction is considered to be terminated and define the conditions in which swap termination payments can be included in the arbitrage calculations.

- finalize the requirements on issuers of bonds whose proceeds are disbursed as grants. The issuer is required to consider whether grantee is using the proceeds for private use.

BABs Subsidy Payments for FY 2017

The IRS announced on their website the sequestration cuts to the subsidy rates for Build America Bonds in FY 2017.

In FY 2017, the subsidy rates will be reduced by 6.9%. In FY 2016, the subsidy payments were reduced by 6.8%, in FY 2015, payments were reduced by 7.3%, in FY 2014, the subsidy payments were reduced by 7.2%, and in FY 2013, the subsidy rates were lowered by 8.7%.

Yield Calculations - A Bit of History

MSRB/SIA Rules With Regard to Callable Bonds

The MSRB/SIA rules require broker/dealers to quote the lower of the yield-to-call or yield-to-maturity to prospective buyers of the bonds. Why? Callable bonds that are issued at a premium are bonds in which the coupon rate is higher than the current market rate. Because of the rate differential, it is likely that the issuer will call these bonds when they first become callable (assuming that future market conditions

remain stable). The industry believes that it would be misleading to the investor if the broker/dealer quoted the yield-to-maturity instead of the yield-to-call. This rule is commonly referred to as the yield-to-worst (or price-to-worst) rule.

There is one other complication when performing these calculations. Bond covenants sometimes provide for multiple call scenarios (also referred to cascading call options). A bond may be callable in 10 years at 102, 12 years at 101, and 15 years at par. In these situations, Mun-Ease will test all of the call scenarios to determine which (if any) scenario(s) generate the lowest yield. This calculation is performed when the user presses the *yield-to-worst* button while in the window that is initiated when you choose the *arbitrage / yield tests* menu option.

Treasury Rules for the Arbitrage Yield – Prior to October 17, 2016

The arbitrage yield limit (AYL) is computed to be the discount factor that equates the future debt service of a bond issue to the arbitrage target value. The composite debt service schedule for a bond issue is computed to the maturity date unless one or more of the callable maturities meet the Treasury's yield-to-call test. Generally this test required that you test each callable maturity to determine if the maturity's debt service generated to the call date would reduce the arbitrage yield limit of the bond issue.

This test can be a bit more complicated especially when a bond issue had multiple call scenarios (cascading call options). In essence, you needed to test all combinations of call scenarios to determine their impact on the calculation of the arbitrage yield limit.

The October 17, 2016 Newly Finalized Rules for the Arbitrage Yield

The September 26, 2007 proposed rules basically adopt the SIA/MSRB conventions for determining whether a

maturity should be valued to the call date or maturity date when calculating the arbitrage yield limit. Thus, the proposed rules eliminated the requirement to test each call date of the callable maturities to determine if it would result in a lower arbitrage yield limit. These are rules that were finalized as of October 17, 2016.

Importing Data from Emma into Mun-Ease

EMMA is the official repository of the MSRB (Municipal Securities Rulemaking Board) for municipal bonds in the United States. It contains official statements and a database of information about the maturity structure of bond issues. You can find information for bond issues issued from today back to the early 1990s.

Emma provides a number of different ways to search for a bond issue. These include searches by state, issuer, dated year, and/or by CUSIP. While the primary purpose of EMMA is to provide information to investors, it can be used by a Mun-Ease user to create his database of outstanding debt. It is easy to import data from EMMA into Mun-Ease. Just follow these steps:

1. Go to the EMMA web site (www.emma.msrb.org) and register as a user. There is no cost associated with registering.

2. Start Mun-Ease and create a new bond issue by choosing the *file / fixed rate bonds / new* menu option. Enter the global information about the bond issue. Proceed to the maturity grid. At this point, Mun-Ease has no information about the maturity structure of the bond issue.

3. Start EMMA and search for your bond issue. Select the entire table that contains information about the maturities in the bond issue. Right-click, and choose the *copy* option. (Note that EMMA does not allow

you to select and copy individual columns).

4. Paste the table into Excel. From there, you can select individual columns of information to be imported into Mun-Ease. In Excel, right-click on a column of data and press the *copy* menu option.

5. Now switch back to Mun-Ease and press the *paste from clipboard* button below the maturity grid. A pop-up window appears with a pull-down menu asking which column in the grid is to receive the information (for example, you would choose the *principal column* from the pull-down menu to import principal amounts). Now click on the *paste to Mun-Ease* button. Repeat the process for each column of data. Mun-Ease can import data for the principal, coupon rate, reoffering price, reoffering yield, and CUSIP number fields.

Note that the EMMA site does not break out the mandatory redemptions for a term bond. Thus if you import a bond issue that contains term bonds with mandatory redemptions, you'll need to manually split the term bond into separate maturities for each mandatory redemption. The mandatory redemption features are described in the bond issue's official statement which can also be viewed on EMMA.

About our Upcoming 2017 / 2018 Release

We plan to issue a new major release of Mun-Ease in February/March of 2017. This release will include the following features:

Server-Based Installations

Users will now have the option to install the Mun-Ease executable and Crystal Report specifications on the server. While the executable can reside on the server, the task itself will run on the

client. (If you start the Windows task manager, you will see the task only on the client PC and not on the server.) This design ensures that there will be a minimal impact of Mun-Ease on the performance of the server. The decision to install the executables on the server instead of the client is completely up to the user. (Please note though, that you must still comply with the terms of the Mun-Ease license agreement with regard to how by whom the software is used).

There are both advantages and disadvantages to a server-based installation:

Advantages: When the I. T. Department applies our interim updates to Mun-Ease, they will need to apply the update only once to the files residing on the server. This approach should significantly reduce the time and effort needed to keep Mun-Ease current with our interim updates in multi-user environments. Our interim updates are released several times a year and are posted to our web site. Customers can download these updates at their convenience.

Disadvantages: Many users run Mun-Ease on a laptop and they often take their laptop home or to a client's premises. These users will not be able to run Mun-Ease installed on the server unless their I.T. department sets up separate desktop icons for (a) a locally installed Mun-Ease executable and/or (b) for remote access to the server-based Mun-Ease executable. You will also need to have a reasonably fast internet connection for the latter scenario. In these situations, users may decide to just install Mun-Ease locally on the client PC.

Important! While it is okay to install the Mun-Ease executable and Crystal Report specifications in a common location on the server, each user must always have his own personal directory (which is also the Mun-Ease start-up folder for that user). This directory is where we store temporary files needed for reports and calculations. Failure to create a separate personal directory for each user could result in one user overwriting the work of another user. Generally we recommend that the personal folder reside on the C drive of the user's PC.

New Database Table for Commercial Paper Allocations

Commercial paper (CP) rollovers for a commercial paper program are stored within a single bond issue in the Variable Rate Transactions database table (Vdebtsvc). Each rollover is identified by a tranche identifier which normally contains the CUSIP number of the rollover. Currently, if the user wishes to allocate CP rollovers, then he must use the same allocation percentages across all of the rollovers contained in a bond issue.

One of our users has requested that we change this architecture so that each rollover can have its own allocations. In response to this request, we have created a new Allocations database table (DSvcAlloc3) that allows the user to set up allocations by Bond ID, Tranche, and Allocation Coding Block. This table is in addition to the existing Allocations database table DSvcAlloc2. In that table, allocations are defined by just the Bond ID and Allocation Coding Block.

New Windows 10 User Interface Features

Microsoft refers to the features and appearance of its Windows 10 operating system as the Metropolis user interface. Our 2017/2018 release is developed with the Delphi 10.1 Berlin compiler and contains many features that take advantage of Metropolis. We plan to continue the implementation of new Metropolis features as they become available - but only when they are an improvement over our existing user interface. We won't be making a change just because it is new or different.

Updated Tutorials Guide

We have updated many of the examples in our Tutorials Guide. All of the Sizing and Refunding examples are new and are based on real-life situations.

Video Tutorials

The 2017 /2018 release will include revised manuals (User Guide, Tutorials Guide, and Report Samples Guide). We will also include a new set of video tutorials. Each video tutorial will be based on an example in the Tutorials Guide and will be 5-10 minutes in length. We plan to release the video tutorials during the first half of 2017. To give you an idea of what we have in mind, try viewing a few videos on the Khan Academy website (www.khanacademy.org).