

## **Washems!** Program Updates – 6

In an on-going effort to provide our clients with the most accurate results possible, we're constantly testing and retesting our program to make sure that it can correctly handle any and all types of transactions. When we do come across a discrepancy, we make every effort to notify our clients of the outstanding issue, resolve the problem and to provide an updated program version as soon as possible. Below you'll find a log of these corrected issues by date with the most recent one listed first.

December 23, 2011

### *The Issue*

The program generated a System Error when a Unique Lot ID contained more than 50 characters.

### *The Resolution*

The logic was modified to truncate the Unique Lot ID at 50 characters and eliminate the system error.

October 20, 2011

### *The Issue*

The Scope field under the Report Detail Level did not allow for an entry greater than 100 which proved to be a problem for some of our clients.

### *The Resolution*

The logic was modified to now handle a Scope of any size.

September 7, 2011

### *The Issue*

The existing column headings in the main report may not provide an adequate explanation of the contained data. And, on the Summary Report, an Adjusted Tax Date is being calculated for short positions that, in some cases, is different from the original enter date. But, since short positions are liabilities, they are not considered to have a holding period for wash sale analysis purposes and should not go through the Adjusted Tax Date calculation process.

### *The Resolution*

A new Column Header Reference Table containing expanded column descriptions has been added at the end of the report. The Adjusted Tax Date calculation has been modified to exclude short positions.

August 15, 2011

### *The Issue*

A new Tax Unrealized report has been added as an output report. In order to utilize this new feature, values for both the exit price and gain/loss must be provided for any open transactions. Other changes include a new heading line showing the current version's compile date and a revision of the process used to arrive at the adjusted tax date appearing on the summary report.

### *The Resolution*

Necessary corrections were made.

June 14, 2011

### *The Issue*

Warning Report was not showing all realized loss transactions. Headings on the reports were revised to more accurately describe the column contents.

### *The Resolution*

Necessary corrections were made.

March 18, 2011

### *The Issue*

During the course of our on-going testing, we came across a rare rounding issue that had not been previously reported: In the computational process to calculate the

amount of loss that can be offset by another lot, Microsoft's built in rounding technique is not operating correctly when dealing with even numbers having .5 as their decimal component.

In researching the problem, we found that Microsoft's software engineers use an internal rounding method known as "bankers' rounding" as the default rounding mode in IEEE 754 computing functions, operators and various computing languages such as ANSI/ISO C, C++, VB and Java.

In "bankers' rounding", any number having a fractional part of .5 is rounded up or down to the nearest **even** integer. For example: 23.5 → 24 (ok), 22.5 → 22 (no), -32.5 → -32 (no) and -45.5 → -46(ok).

Since this operation was taking place during the process of calculating the amount of loss that can be offset by another lot, the total offset or washed amount could be \$1.00 off from the desired result as seen in the following example:

Lot A: 20 shares sold for a loss of \$41.00

Lot B: 10 shares bought within the 30 days of the sale of Lot A

Lot C: 35 shares bought within the 30 days of the sale of Lot A

Using Lot B in the initial calculation, our equation to calculate how much of the Lot A loss is offset by Lot B is:  $(10 / 20) * 41 = 20.50 \rightarrow 20$  (after rounding)

Using Lot C now for the remaining 10 shares of Lot A:  $(10 / 20) * 41 = 20.50 \rightarrow 20$

Since our total disallowed wash sales for Lot A add up to \$40.00 – not \$41.00. The bottom line to all of this is that the report now shows an extra \$1.00 of losses that we're really not entitled to.

### *The Resolution*

To correct this issue, we've added additional logic to the calculation process that effectively overrides the built in "bankers' rounding" rounding mechanism. Now, 23.5 → 24, 22.5 → 23, -32.5 → -33 and -45.5 → -46.

Using the example above, the reported wash sales are now calculated as follows:

Lot A: 20 shares sold for a loss of \$41.00

Lot B: 10 shares bought within the 30 days of the sale of Lot A

Lot C: 35 shares bought within the 30 days of the sale of Lot A

Using Lot B in the initial calculation, our equation to calculate how much of the Lot A loss is offset by Lot B is:  $(10 / 20) * 41 = 20.50 \rightarrow 21$  (after rounding)

Using Lot C now for the remaining 10 shares of Lot A:  $(10 / 20) * 41 = 20.50 \rightarrow 21$

Total disallowed wash sales for Lot A = \$42.00

Since we're now disallowing an extra \$1.00 of losses (\$42.00 vs \$41.00), we're using a safer, more conservative approach in our reporting.

***Questions or comments? Please give us a call at (718) 761-1890***