Handling Amount Values in BW for Specific Currencies

Summary

SAP stores amount values of different currencies with a fixed interpretation of having two decimal places. There are some currencies that do not work well with such two decimal place setting. Usually this is because for some currencies, a fraction of currency unit is meaningless. That is true for the Japanese Yen, the Turkish Lira, and Korean Won and many other such currencies. In some cases, people want to store currencies with more than two decimal places for precision. How SAP handles such currencies (having entry in TCURX table) in BW is explained in details in this document.

Specific Currencies: Specific currencies here mean the currency keys which are present in the TCURX table.

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Introduction to TCURX Table

The table determines the number of decimal places in the output according to the currency key. If the contents of **currency** exist in table TCURX as currency key CURRKEY, the system sets the number of decimal places according to the entry CURRDEC in TCURX. Otherwise, it uses the default setting of two decimal places. That means that TCURX only has to list the exceptions with a number of decimal places other than 2.

Implications of currencies present in TCURX table in BW

We can broadly divide the phenomenon into two steps.

- Step 1: Updating the amount values into BW data target
- Step 2: Displaying the amount values in the BW reports.

Step 1: Updating the amount values into BW data target

When we load the data into BW having amount fields in it, it checks the TCURX table for the currency entry. If the currency entry is present in TCURX table, it divides the amount value by **10** (2- (CURRDEC entry in TCURX table))**.

Step 2: Displaying the amount values in the BW reports.

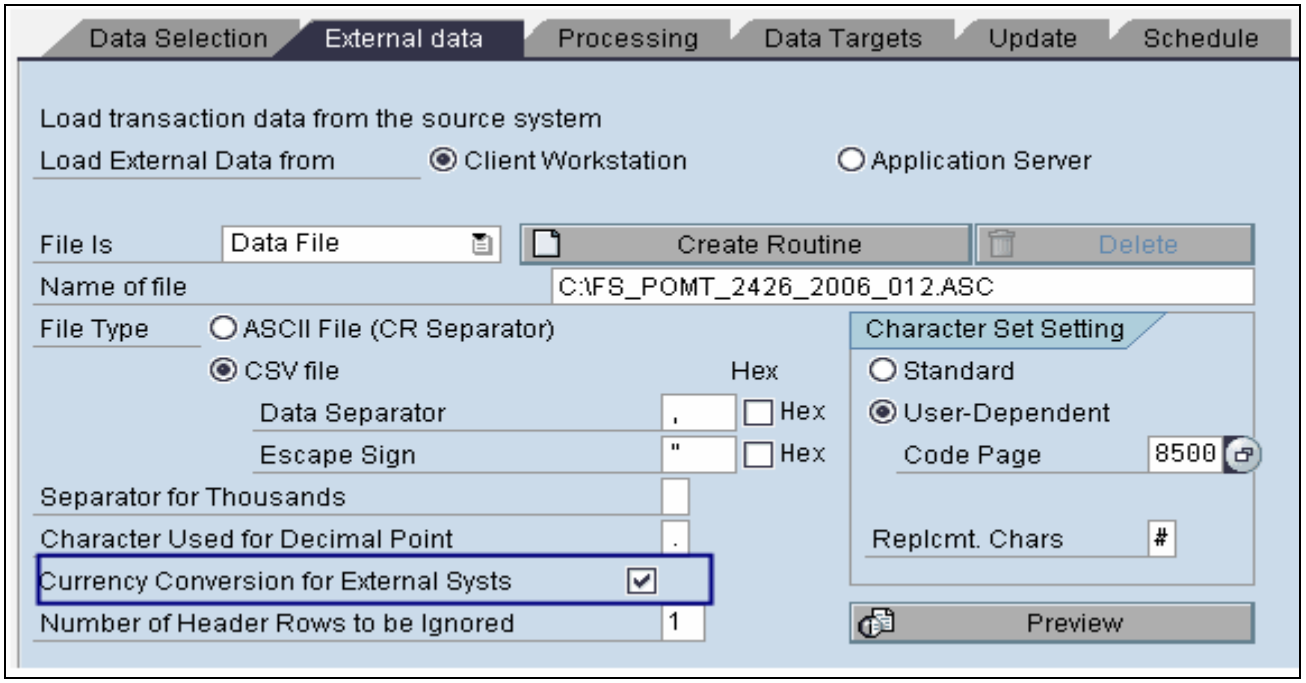
The exactly converse happens while displaying such values in the report output. The amount value will be multiplied by **10** (2- (CURRDEC entry in TCURX table))** while displaying in the report output.

Example

Note: The KRW (Korean WON) currency key is present in the TCURX table with the decimal place value as 0.

Step 1: Whenever the amount 123 KRW is loaded in BW, it checks the TCURX table for the KRW currency. After finding the entry in TCURX table, it stores the amount value in target as 123 / {10** (2 – (0))} that is 1.23 KRW. (The amount is divided by 100)

For this to happen, we have to make a specific setting in the InfoPackage thru which we schedule the loads. The checkbox for “Currency Conversion for External Systs” should be ticked as shown below.



Step 2: While displaying the same amount value in the report output, the exactly opposite will happen. That is the amount value 1.23 KRW will be multiplied by 100 and shown as 123 KRW (Amount is multiplied by 100) in the report output which is the initial value which came from the source system.

General Observations

In most of the cases, we miss step 1 as it need manual intervention (like ticking the checkbox for “Currency Conversion for External Systs”) whereas the step 2 is carried out by default and we get the wrong results in the report output. Even if amount is not divided while loading, the multiplication is carried out by default at the time of reporting. That is the reason why it is necessary to check whether the step 1 is being carried out successfully or not.

As the settings in the External Data tab of InfoPackage applies to the data which is coming from the external source only, the checkbox for “Currency Conversion for External Systs” works for the currencies which are coming from the source system directly. Hence if you write logic to pick up the currency (lookup etc.) in either transfer rules or update rules, step 1 will not be carried out. Step 2 will be carried out by default thereby giving wrong results in the report output.

Key Points to be remembered

1. The currency associated with the amount should come from the source system itself. If you write any logic to pick up the currency (lookup etc.) in either transfer rules or update rules, the division will not be carried out while storing the amount value in target. The default converse (multiplication) will be carried out at the time of displaying in report output thereby giving wrong results.
2. There has to be a direct mapping between the currency fields from the source system to the currency fields in the BW system.
3. This phenomenon occurs only with the amounts having CURR data type.
4. We can nullify this effect by using FLTP type of amount KeyFigures.
5. All the currencies having entry other than 2 in the field CURRDEC of table TCURX will be affected by this phenomenon.
6. The formula by which the division and multiplication is carried out is given as

   [Amount Value] * [10 ** (2- (CURRDEC entry in TCURX table))]
7. The division will be carried out at the time of loading while multiplication will be carried out at the time of report output display.

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