Currency Conversion using Variables in SAP BI -Reporting

Applies to:
SAP BI 7.0. For more information, visit the Business Intelligence homepage.

Summary
This Article gives you a brief idea on how to do currency conversion by using variables in Reporting in SAP BI 7.0

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Created on: 15th Feb 2010

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Introduction:

Currency Conversion at reporting level is explained in this article by step by step method, as and above SAP BW 3.5 versions we have options of creating variables for currency conversions. In this scenario SAP BI 7.0 Version is been used.

The exchange rates are stored and maintained in SAP BI in the table TCURV (Explained in the later stages in this article), these exchange rates cannot be same these will vary from time to time and day to day the exchange rate type distinguishes between exchange rates that are valid in the same time frame, for example, the bid rate, ask rate or middle rate.

Target currency: The target currency can either be fixed in the translation type or not selected until the time of translation. Create a variable type for the technical InfoObject 0CURRENCY Variable 0PCURPR.

Business Scenario: (Live scenario)

In most of the reports for Example FI, SD, MM etc. Customer always wants to see the currency related keyfigures in the local currencies (Company code currencies as different company codes has different currencies) For example If the company is global and the business is done in various countries and the head office is some where in the Europe or America they always would like to see the currencies in the Local Values.

Ex: If sales happens in Europe and Company is in America they want to see all the sales revenues in USD where as the business is done in Europe Pounds/Franks etc hence we need to convert all the Pounds/sterling’s etc into USD.

To display the data as per above example we create Variable type for the currency variable in BI.

Steps:

Before going into the main topic let us know how to maintain the exchange rates in SAPBI system

A) While transferring the exchange rates from ECC at the initial/First stages follow the menu path

Call Transaction RSA1 in Sap BI System → go to Source systems select ECC source system right click and select → Transfer Exchange rates as shown in the screen shot
The first part is the one time transfer of exchange rates from SAP ECC to the SAP BI, but exchange rates keep changing for every hour to hour and day to day in this scenario we need to schedule the background job to update the exchange rates.

Call the same transaction as shown above and you will enter into the following screen.

**Transfer exchange rates: Selection**

**Srce system**

- System: ECDCLNT220 | ECD Client 220

**Exchange Rates**

- Exchange Rate Type: 
- Changes since: 

**Mode**

- Simulation
- Update exchange rates
- Transfer exchange rates again
Now select the program in the top left → Select Execute Background

Now you can schedule the jobs hourly/daily as per convenience
Now let us see how we can convert currency in reporting using variables.

Let us see some examples without currency conversions. If we observe from the below report, we can see different country currencies but we need the currencies in USD.
if we observe from the below report, we can see different country currencies but we need the currencies in USD/ZAR or TRL

Let see the solution for currency conversions and how to achieve (In this scenario convert all ZAR and TRL currencies into USD)

**Steps**

1. Go to the T code RSCUR and define the currency translation Type as ZINV_VAR and click the create icon on the top

   ![Currency Conversion Key](image)

   **Currency translation type**

   ![Currency Translation Type](image)

   - **Currency Transltn Type:** ZINV_VAR

2. On the exchange rate tab select the exchange rates (in this scenario I have selected exchange rate type as M since exchange rates are updated in BI system on hourly basis)

   ![Display Currency Translation Type](image)

   - **Conversion Type:** ZINV_VAR
   - **Description:** Input Currency for Inventory management

3. In currency tab select the Target currency and the variable 0P_CURPR (it is a variable to 0CURRENCY) since our aim is to get the currencies in Target currency by passing values to the variable.
4. On the time reference tab select the time characteristics (In this scenario `0CALDAY` has been used as Variable time reference since all the exchange rates for the time is stored in BI system. For example we need the data of last month particular day we should get the exchange rates of that particular day)
5. Log in into Bex and open the query

6. We want the Value of the stock and Price per unit in the Target currencies so value of the stock is obtained by calculating Stock on hand multiplied by price per unit so in this example calculated key figure has been taken

7. Currency type(ZINV_VAR) for the variable 0P_CURPR is selected from the tab conversions and from currency translation for the calculated key figure.
8. The same can be repeated for the Value of the stock also

9. After including the currency conversions types for the variable of 0CURRENcy at query level save the query and execute

Now the Variable screen appears as below
10. Now we have the options of selecting the target currencies of different countries' currencies as in the below screen shot.

11. Now select USD as Target currency as shown in the below screen shot.
The result of the query would be in Target Currency USD, all the other country like currencies ZAR and TRL is converted into USD.

Let us see some more examples of converting into other country currencies like INR.
The result of the query would be as in the below screen shot

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Item</th>
<th>Stock type</th>
<th>Valuated Stock Qty</th>
<th>Value of the stock</th>
<th>Price Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>00M797K</td>
<td>Unrestricted Use</td>
<td>10,000,000</td>
<td>0.00 INR</td>
<td>0.000 INR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not Defined</td>
<td>0</td>
<td>0.00 INR</td>
<td>0.000 INR</td>
</tr>
<tr>
<td></td>
<td>3450192</td>
<td>Unrestricted Use</td>
<td>30</td>
<td>10,013.02 INR</td>
<td>633.767 INR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not Defined</td>
<td>0</td>
<td>0.00 INR</td>
<td>0.000 INR</td>
</tr>
<tr>
<td>France</td>
<td>00M797K</td>
<td>Unrestricted Use</td>
<td>1,000</td>
<td>0.00 INR</td>
<td>0.000 INR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not Defined</td>
<td>0</td>
<td>0.00 INR</td>
<td>0.000 INR</td>
</tr>
</tbody>
</table>

We got the targeted currencies as desired

Related Content

Reference 1

Reference 2
http://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/a0d5bf96-b19b-2c10-e3b6-e2f12a3de99a

Reference 3

For more information, visit the Business Intelligence homepage.
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