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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Author Bio

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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

Data Warehousing Workbench: Modeling
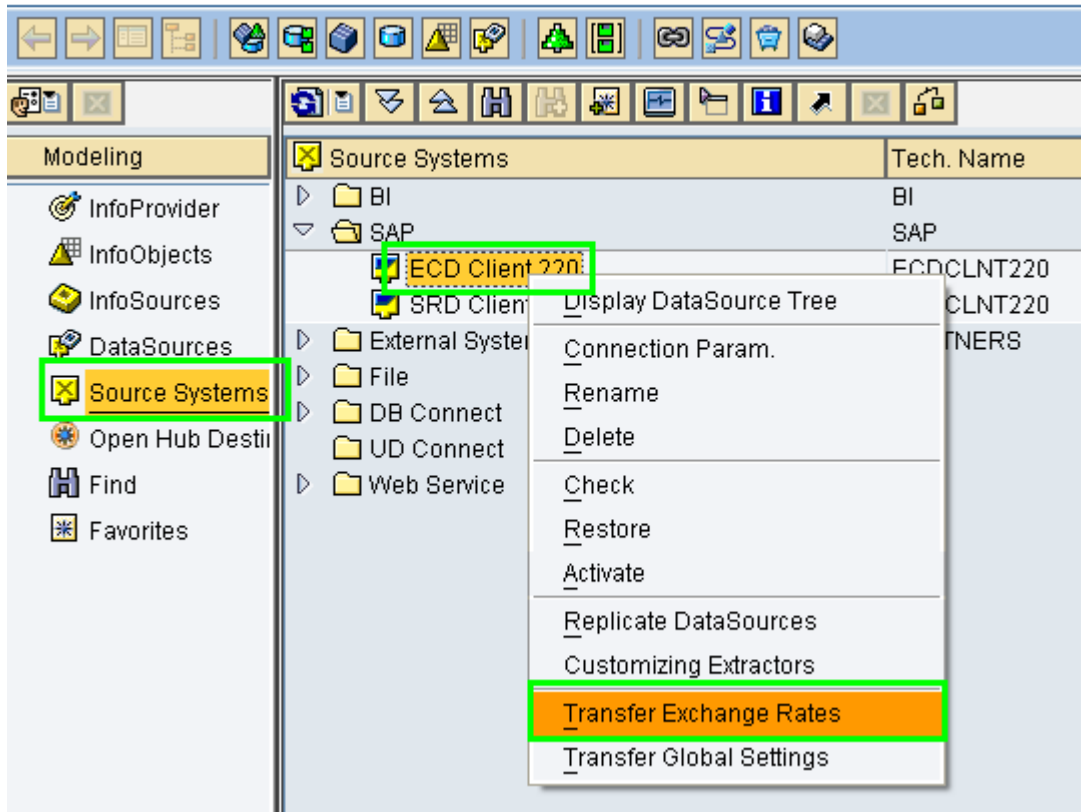
B) The first part is the one time transfer of exchange rates from SAP ECC to the SAP BI, but exchange rates keeps on changing for every hour to hour and day to day in this scenario we need to schedule the back ground job to update the exchange rates

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

Transfer exchange rates: Selection
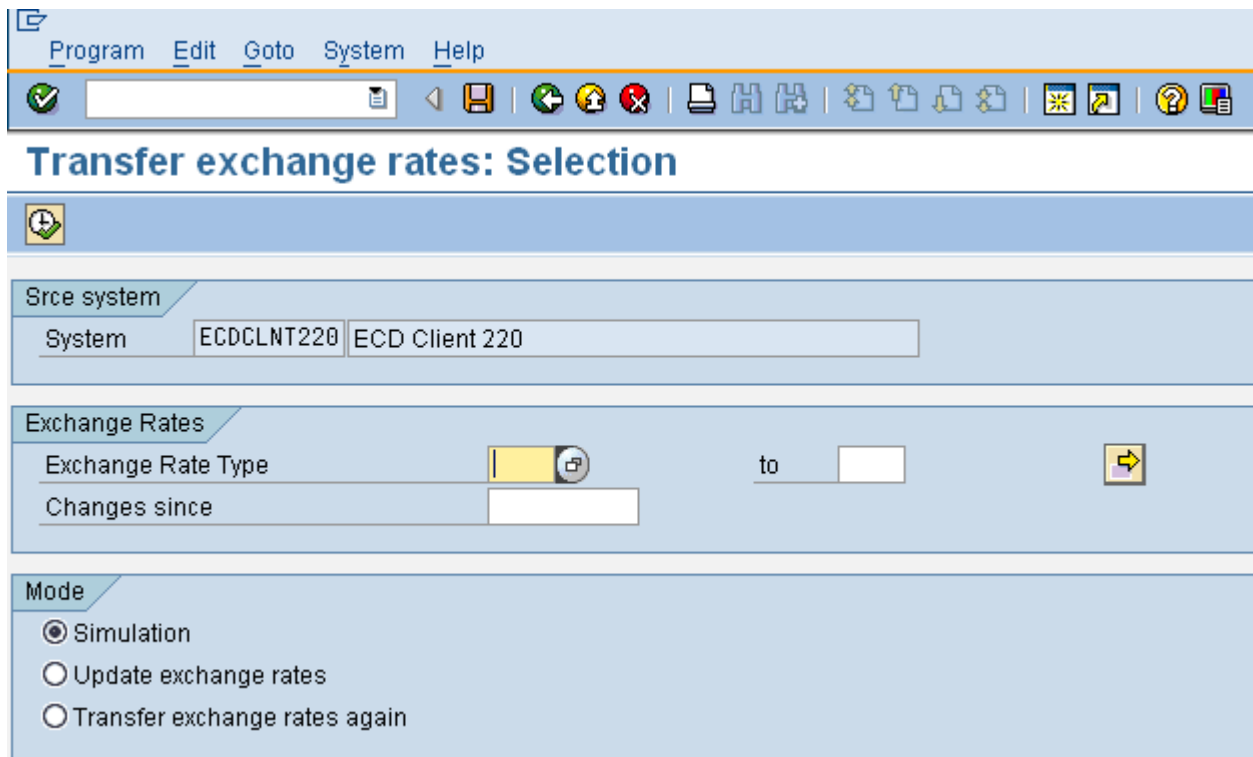
Now select the program in the top left → Select Execute Back ground
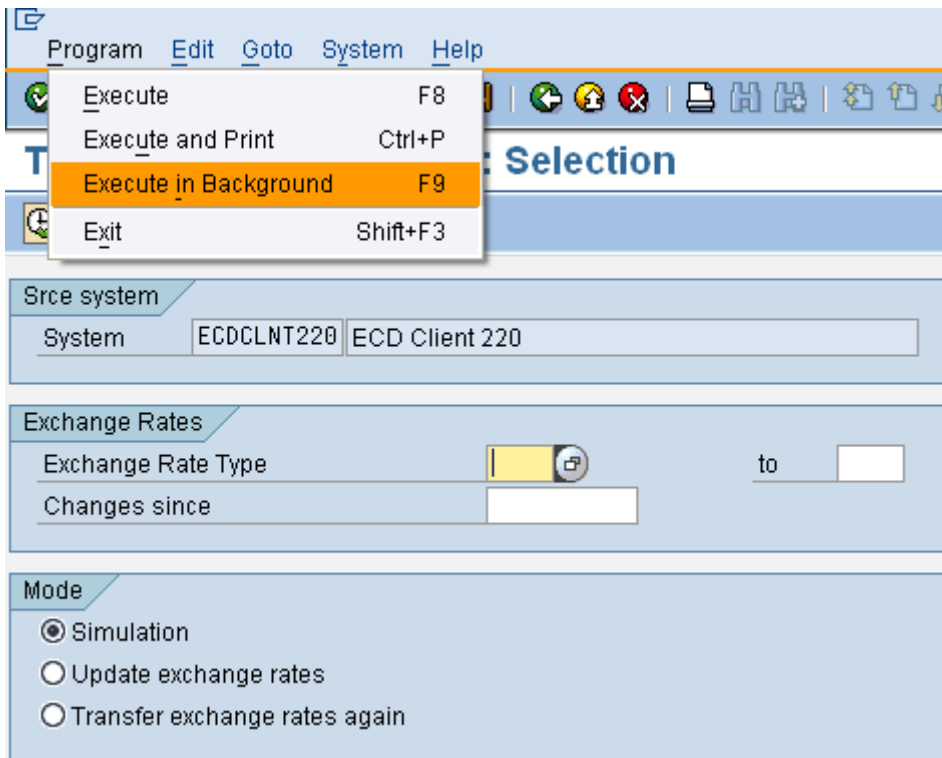
Now you can schedule the jobs hourly/daily as per convenience

Transfer exchange rates: Selection

Start Time

| Immediate | Date/Time | After job | After event | At operation mode | >> |

Date/Time

| Scheduled start | Date | | Time | |
| No Start After | Date | | Time | |

After job

At operation mode

After event

☐ Periodic job

✓ Check | 💾 | Period values | Restrictions | ✖

Now let us see how we can convert currency in reporting using variable

Let us see some examples with out currency conversions, if we observe from the below report, we can see different country currencies but we need the currencies in USD

Stock Overview-Temp

New Analysis | Open | Save As... | Display As Table ▼ | Info | Send | Print Version | Export to Microsoft Excel | Comments

Country/Region ▲	Item	Stock type ▲	Valuated Stock Qty EA	Value of the stock	Price per unit
Belgium	00M797K	Unrestricted Use	10,000,000	$ 0.00	$ 0.00
	34S0192	Unrestricted Use	30	$ 414.60	$ 13.82
France	00M797K	Unrestricted Use	1,000	$ 0.00	$ 0.00
		Not Defined	0	$ 0.00	$ 0.00
South Africa	34S0192	Unrestricted Use	982	86,416.00 ZAR	88.00 ZAR
		Not Defined	0	0.00 ZAR	88.00 ZAR
Turkey	00M797K	Blocked Stock	3	0.03 TRL	0.01 TRL
		Unrestricted Use	19,999,976	199,999.76 TRL	0.01 TRL
		Not Defined	0	0.00 TRL	0.01 TRL

Columns
- Key Figures

Rows
- Country/Region
- Item
- Stock type

Free characteristics
- Branch
- Calendar Day
- Calendar Year/Month
- Company code
- Controlling area
- Customer number
- Movement Type

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)
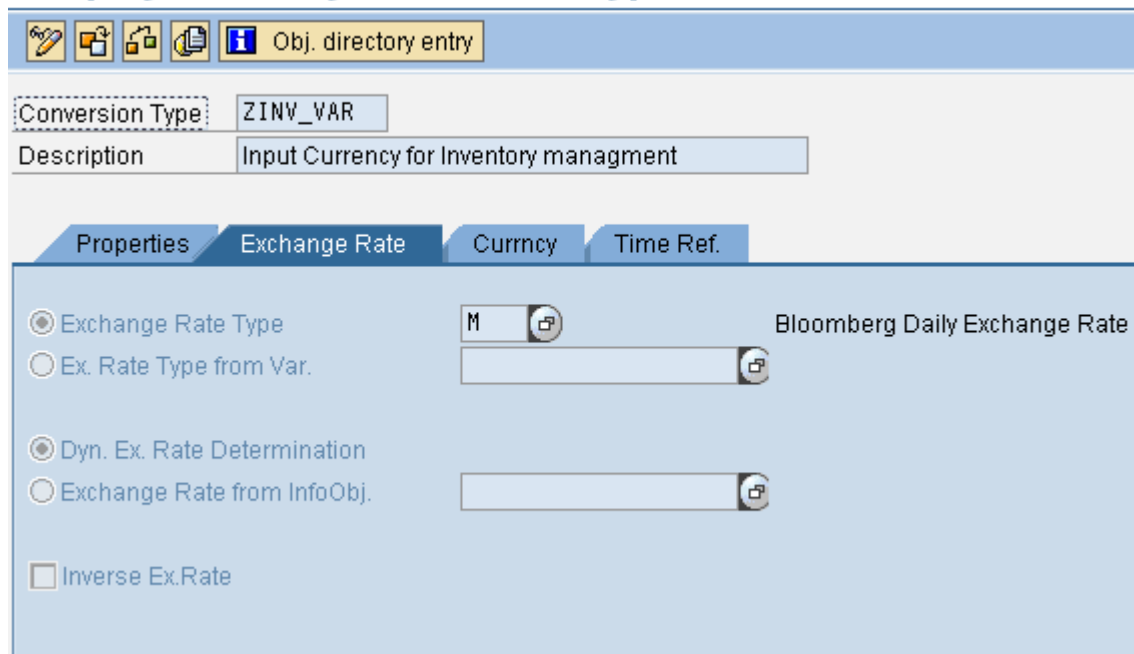
Steps

1. Go to the T code RSCUR and define the currency translation Type as ZINV_VAR and click the create icon on the top
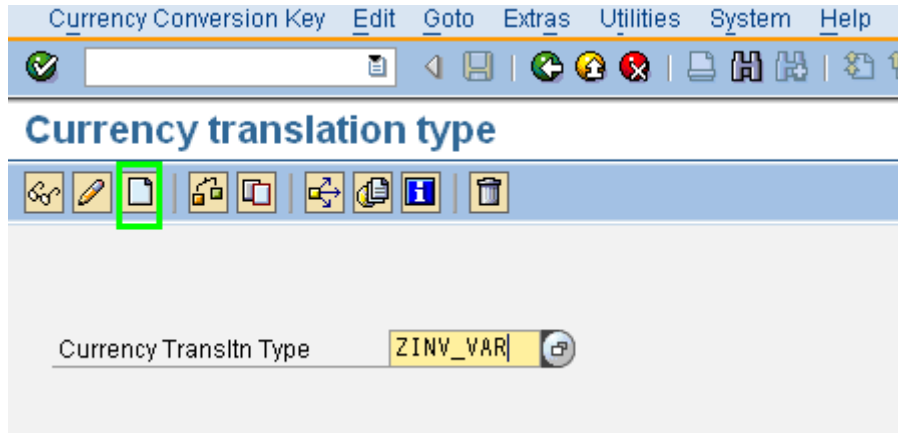
2. On the exchange rate tab select the exchange rates (in this scenario I have selected exchange rate type as M since exchange rates are updated in BI system on hourly basis)

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.

Display Currency Translation Type

[toolbar icons] Obj. directory entry

Conversion Type	ZINV_VAR
Description	Input Currency for Inventory managment

Properties | Exchange Rate | Currncy | Time Ref.

Source Currency

- ⦿ Source Currency from Data Record
- ○ Fixed Source Currency
- ○ InfoObject for Determining Source Currency
- ○ Source Currency from Variable

Target Currency

- ○ Target Currency Selection with Translation
- ○ Fixed Target Currency
- ⦿ Target Currency from Variable   0P_CURPR   Currency
- ○ InfoObject for Determining Target Currency
  - ☐ Use in Transformation Only (InfoObject is a currency)
- ○ InfoSet

InfoProvider/Table Alias	
InfoObject/Field Alias	
Technical Name	

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)

Display Currency Translation Type

Obj. directory entry

| Conversion Type | ZINV_VAR |
| Description | Input Currency for Inventory managment |

Properties | Exchange Rate | Currncy | **Time Ref.**

○ Fixed Time Ref.
    ◉ Current Date
    ○ Key Date
    ○ Time Reference from Variable
    ○ Use Query Key Date

◉ Variable Time Reference   To the exact day
    ◉ Standard InfoObject   0CALDAY   Calendar day
    ○ Special InfoObject
    ○ InfoSet
         InfoProvider/Table Alias
         InfoObject/Field Alias
         Technical Name

◉ Time Shift   0
○ Time Shift from Variable

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.
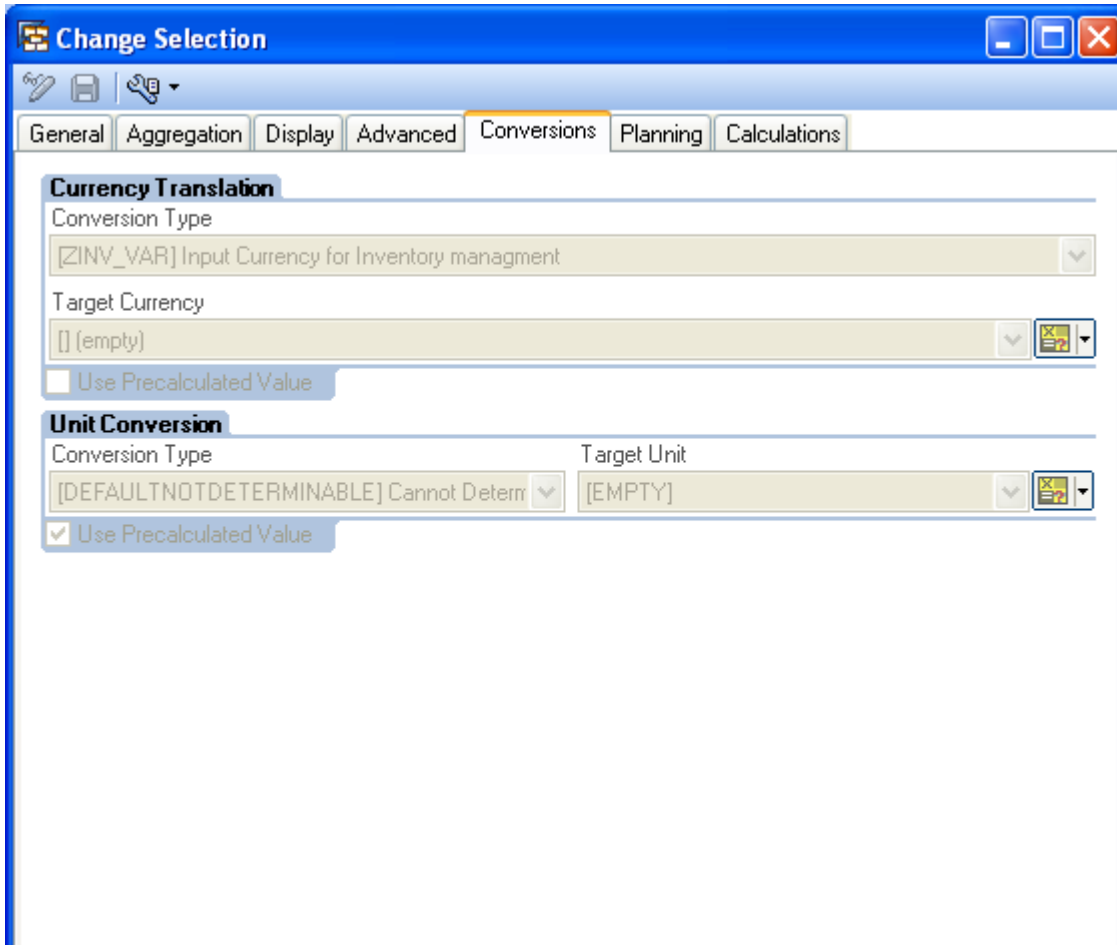
8. The same can be repeated for the Value of the stock also
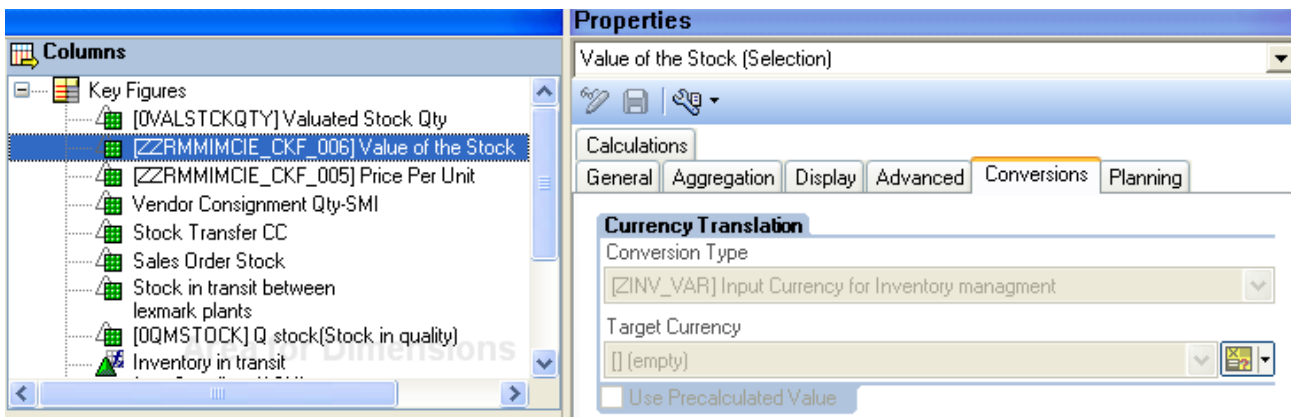
9. After Including the currency conversions types for the variable of 0CURRNECY at query level save the query and execute

Now the Variable screen appears as below
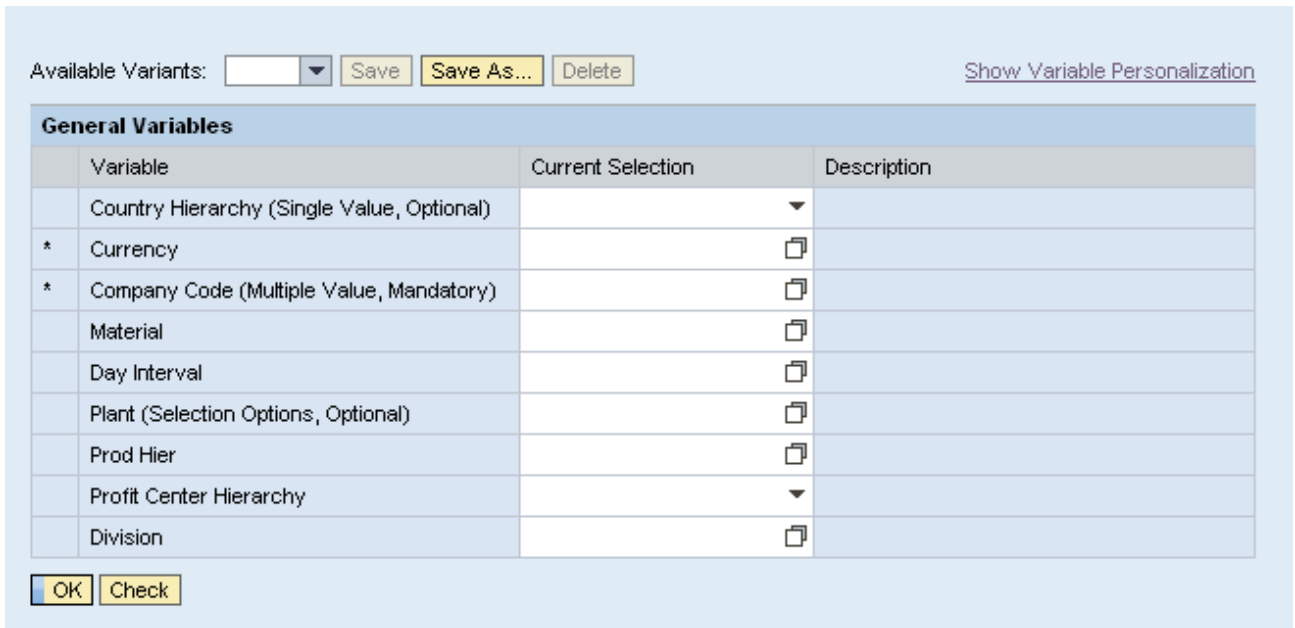
10. Now we have the options of selecting the target currencies of different countries currencies as in the below screen shot
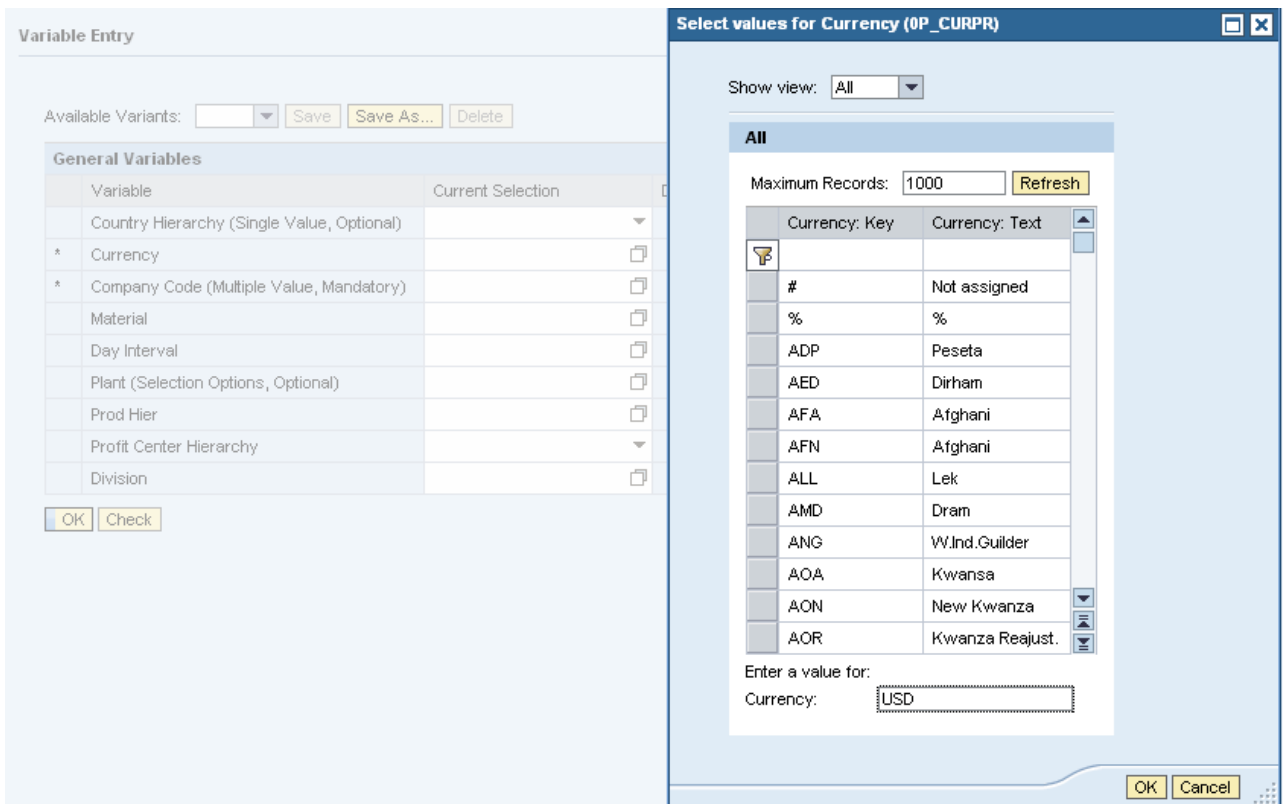
11. Now select USD as Target currency as shown in the below screen shot

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

We got the targeted currencies as desired

Related Content

Reference 1

 http://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/e473ab90-0201-0010-22ac-fdd925cac167

Reference 2

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

Reference 3

http://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/287bab90-0201-0010-f48e-cc55b0cd13d0

For more information, visit the Business Intelligence homepage.

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