

Using Customer Exit Variables in BW/BI Reports: Part - 4



Applies to:

SAP NetWeaver Business Warehouse (Formerly BI), Will also work on SAP BI 3.5. [Business Intelligence homepage](#).

Summary

This article gives clear picture about how to use Characteristic Customer Exit Variables in SAP-BW/BI Reports.

Author: Surendra Kumar Reddy Koduru

Company: ITC Infotech India Ltd. (Bangalore/INDIA)

Created on: 25 December 2009

Author Bio



Surendra Kumar Reddy Koduru is a SAP BI Lead Consultant currently working with ITC Infotech India Ltd (Bangalore/INDIA). He has got rich experience and worked on various BW/BI implementation/Support projects.

Table of Contents

Introduction:	3
Live Scenario:	3
Steps:.....	3
Code:	5
Code Explanation:.....	9
Report Designer:.....	9
Selection Screen:.....	11
Report Result:.....	15
Related Content	16
Disclaimer and Liability Notice.....	17

Introduction:

This article addresses the requirement of Customer Exit variables in BW/BI Reports; in this article I'm explaining the following scenario How to use the Characteristic Customer Exit Variables in BW/BI Reports based on 0CALMONTH. To validate the user Input parameters.

Live Scenario:

In most of the SAP-BI/BW reports (Here I taken Sales example) users want to see the Sales revenue data for entire Financial Year Period.

Whenever the User will executes the report he/she don't want to enter the from Month.Year (MM.YYYY) and To Month.Year (MM.YYYY) , if users will give wrong inputs to 0CALMONTH User Entry Variable then it should populate the error message. i.e. If user will give From and To Month.Year which are not falling in the same Financial Period, it should through an error message.

Eg: Suppose user will execute this report and given From 01.2009 To 12.2009 as input for 0CALMONTH User Entry Variable, it should through an error message because as per Indian Financial Year Period the give From Month and Year doesn't fall in same Financial year Period (This example is as per Indian Calendar, From is April.YYYY To March.YYYY , so in 01.2009 To 12.2009 period 01.2009 doesn't fall in 2009 – 2010 Financial Year Period , it should be in between 04.2009 to 03.2010.

So based on the 0CALMONTH inputs, we need to validate the MM.YYYY and populate the Following Error Message.

**“Pls Enter Correct Months Eg: 04.2009 - 03.2009 From & To months must be with in same Fy Period
Eg: 01.2009 - 03.2010 is WRONG Eg: 04.2009 - 03.2010 is CORRECT”**

Steps:

Create Manual Input/Default Value Variable on Calendar Month (0CALMONTH)

Create ZMTH_I variable on 0CALMONTH, the properties are..

Type of Variable	= Characteristic Value
Variable Name	= ZMTH_I
Processing by	= Manual Input/Default Value
Reference Characteristic	= 0CALMONTH
Variable Represents	= Interval
Variable Entry	= Mandatory

Check ready for input

For reference look into the following screens.

Display Variable 'Month & Year'

Advanced | General | Replacement Path | Details | Default Values | Currency/Unit

Description
Month & Year
 Use Standard Text

Technical Name
ZMTH_I

Global Settings
Type of Variable
Characteristic Value
Processing By
Manual Input/Default Value
Reference Characteristic
[OCALMONTH]

Display Variable 'Month & Year'

Advanced | General | Replacement Path | **Details** | Default Values | Currency/Unit

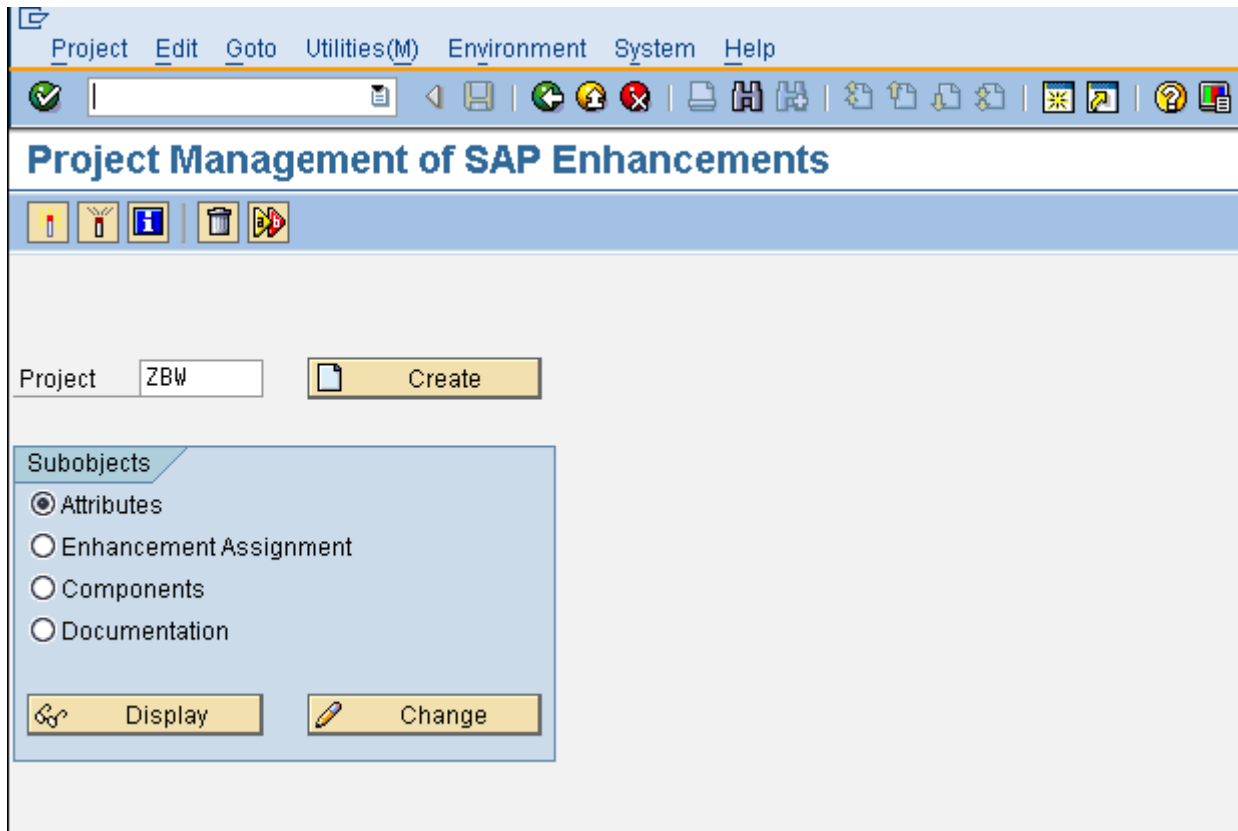
Basic Settings
Variable Represents
Interval
Variable Is
Mandatory
 Variable is Ready for Input
 Variable Is Without Context

Personalization
Copy Personalization Data from This Variable

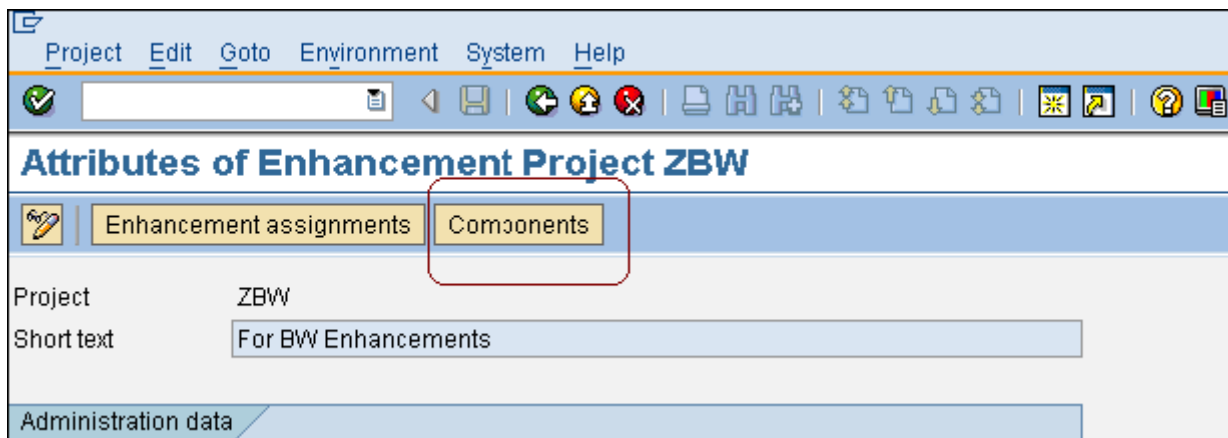
OK Cancel

Code:

Goto CMOD TCode in SAP-BW/BI and then give your Project Name and click on Change button.



Click on **Components**



Double Click on **EXIT_SAPLRRS0_001**

Project				ZBW For BW Enhancements			
Enhancement	Impl	Exp	RSR00001	BW: Enhancements for global variables in report			
Function exit	✓		EXIT_SAPLRRS0_001				

Double Click on **INCLUDE ZXRSRU01** .

Function Builder: Display EXIT_SAPLRRS0_001

Function module: EXIT_SAPLRRS0_001 Active

Attributes Import Expor. Changing Tables Exceptions Source code

```

FUNCTION EXIT_SAPLRRS0_001.
*-----
***"Lokale Schnittstelle:
** IMPORTING
**   VALUE(I_VNAM) LIKE  RSZGLOBV-VNAM
**   VALUE(I_VARTYP) LIKE  RSZGLOBV-VARTYP
**   VALUE(I_IOBJNM) LIKE  RSZGLOBV-IOBJNM
**   VALUE(I_S_COB_PRO) TYPE  RSD_S_COB_PRO
**   VALUE(I_S_RKB1D) TYPE  RSR_S_RKB1D
**   VALUE(I_PERIV) TYPE  RR001_S_RKB1F-PERIV
**   VALUE(I_T_VAR_RANGE) TYPE  RRS0_T_VAR_RANGE
**   VALUE(I_STEP) TYPE  I DEFAULT 0
** EXPORTING
**   VALUE(E_T_RANGE) TYPE  RSR_T_RANGESID
**   VALUE(E_MEEHT) LIKE  RSZGLOBV-MEEHT
**   VALUE(E_MEFAC) LIKE  RSZGLOBV-MEFAC
**   VALUE(E_WAERS) LIKE  RSZGLOBV-WAERS
**   VALUE(E_WHFAC) LIKE  RSZGLOBV-WHFAC
** CHANGING
**   VALUE(C_S_CUSTOMER) TYPE  RR004_S_CUSTOMER OPTIONAL
*-----

INCLUDE ZXRSRU01 .

ENDFUNCTION.

```

Write the following Code in the ABAP Editor in ECC:

```

*****Begin of Data Type Declaration*****
DATA: L_S_RANGE TYPE RSR_S_RANGESID,
      LOC_VAR_RANGE LIKE RRRANGEEXIT,
      zsmv TYPE /bi0/oicalmonth,
      zemy TYPE /bi0/oicalmonth,
      zsmon type UMC_Y_ICHAVAL,
      zemon type UMC_Y_ICHAVAL,
      zsyr type UMC_Y_ICHAVAL,
      zeyr type UMC_Y_ICHAVAL,
      zsfper type UMC_Y_FISCPER,
      zefper type UMC_Y_FISCPER,
      zsyr1 type UMC_Y_ICHAVAL,
      zeyr1 type UMC_Y_ICHAVAL.
*****End of Data Type Declaration*****
*****Begin*****
*****To Validate the given inputs for 0CALMONTH based on INDIAN Financial Year*****
*****From and To Periods and if the Inputs are wrong then it will through an *****
*****error message.
*****Surendra Kumar Reddy Koduru***25-12-2009*****
*****Don't write this code in between CASE and ENDCASE. Write after ENDCASE.*****
CASE i_vnam.
WHEN 'ZABC'.
  IF i_step = 1.
    <Some Code for other Variables>
  ENDIF.
WHEN 'ZXYZ'.
  IF i_step = 2.
    <Some Code for other Variables>
  ENDIF.
ENDCASE.

IF I_STEP = 3. "Our code will starts from here
  LOOP AT i_t_var_range INTO loc_var_range WHERE vnam = 'ZMTH_I'.
  CLEAR: l_s_range.
  zsmv = loc_var_range-low.
  zemy = loc_var_range-high.
  zsmon = zsmv+4(2).
  zemon = zemy+4(2).
  zsyr = zsmv+0(4).
  zeyr = zemy+0(4).
  CALL FUNCTION 'UMC_CALMONTH_TO_FISCPER'
    EXPORTING
      i_periv      = 'V3'
      i_calyear    = zsyr
      i_calmonth   = zsmon
    IMPORTING
      E_FISCPER    = zsfper
  *
  * EXCEPTIONS
  *   INVALID      = 1
  *   OTHERS       = 2
  *
  *
  IF sy-subrc <> 0.
  *   MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO

```

```

*      WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
ENDIF.
CALL FUNCTION 'UMC_CALMONTH_TO_FISCPER'
  EXPORTING
    i_periv      = 'V3'
    i_calyear    = zeyr
    i_calmonth   = zemon
  IMPORTING
    E_FISCPER   = zefper
*
*  EXCEPTIONS
*    INVALID    = 1
*    OTHERS     = 2
*
IF sy-subrc <> 0.
*      MESSAGE ID SY-MSGID TYPE SY-MSGTY NUMBER SY-MSGNO
*      WITH SY-MSGV1 SY-MSGV2 SY-MSGV3 SY-MSGV4.
ENDIF.
zsy1 = zsfper+0(4).
zeyr1 = zefper+0(4).
IF zsy1 NE zeyr1.
  CALL FUNCTION 'RRMS_MESSAGE_HANDLING'
    EXPORTING
      i_class = 'RSBBS'
      i_type  = 'E'
      i_number = '000'
      i_msgv1 = 'Pls Enter Correct Months Eg: 04.2009 - 03.2009 From & To'
              i_msgv2      'months must be with in same Fy Period'
      i_msgv3 = 'Eg: 01.2009 - 03.2010 is WRONG Eg: 04.2009 - 03.2010 is'
              'CORRECT'.
  RAISE again.
ELSEIF zsy1 EQ zeyr1.
  l_s_range-low = loc_var_range-low.
  l_s_range-high = loc_var_range-high.
  l_s_range-sign = 'I'.
  l_s_range-opt  = 'BT'.
  APPEND l_s_range TO e_t_range.
ENDIF.
ENDLOOP.
ENDIF.

```

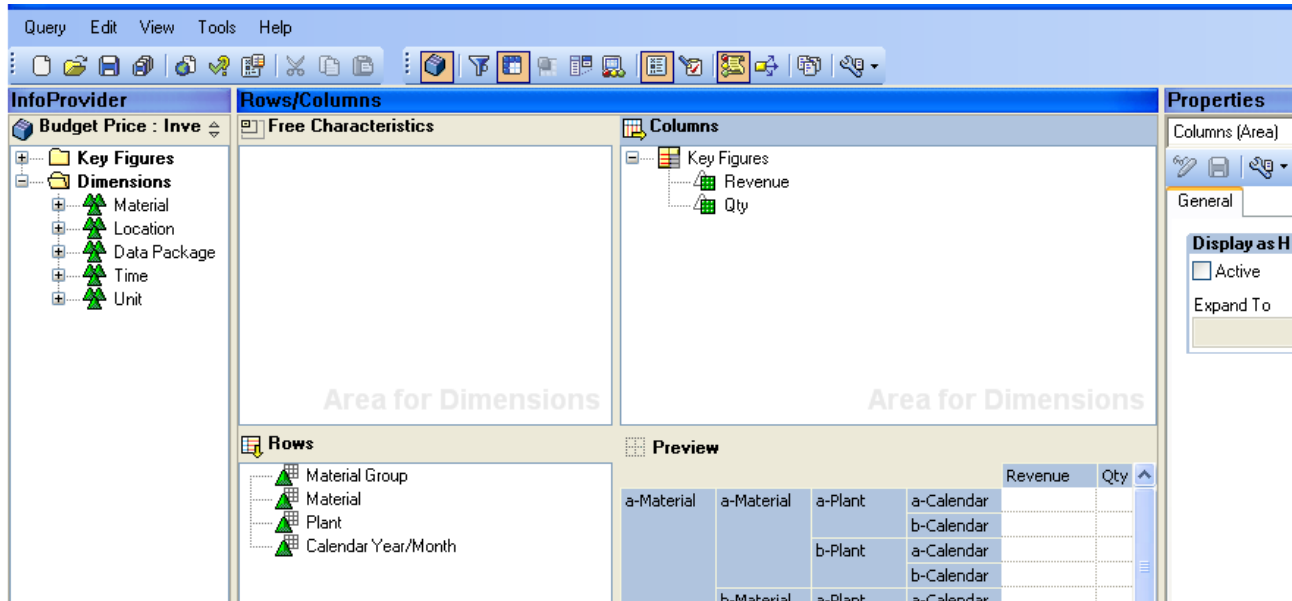
*****End*****

Save and Activate the above code and project.

Code Explanation:

The Function Module 'UMC_CALMONTH_TO_FISCPER' will take Fiscal Year Variant, Year and Month as input, and it will give Fiscal year period under which the given inputs are falling.

The Function Module 'RRMS_MESSAGE_HANDLING' is used to raise Error/Warning messages.

Report Designer:**In Report Rows:**

Drag and Drop Material Group, Material Plant and Calendar Year/Month..

In Report Columns:

Create New Selection and Drag and Drop Revenue and Qty Key figures

Restrict the 0CALMONTH with ZMTH_I Variable.

The screenshot shows the SAP BW/BI configuration interface for a report. The main window is titled "Filter" and is divided into two panes: "Characteristic Restrict" and "Default Values".

- Characteristic Restrict:** This pane is currently empty.
- Default Values:** This pane contains a tree structure of characteristics. The following characteristics are listed:
 - [OPLANT]
 - [OCALMONTH]
 - [ZMTH] (highlighted with a red circle)
 - [OMATERIAL]
 - [OMATERIAL_OMATL_GROUP]

At the bottom of the window, there are two tabs: "Filter" (selected) and "Rows/Columns".

On the right side, a "Properties" pane is visible, showing the "General" tab. It contains the text: "No prop selector" and "To displk more obj".

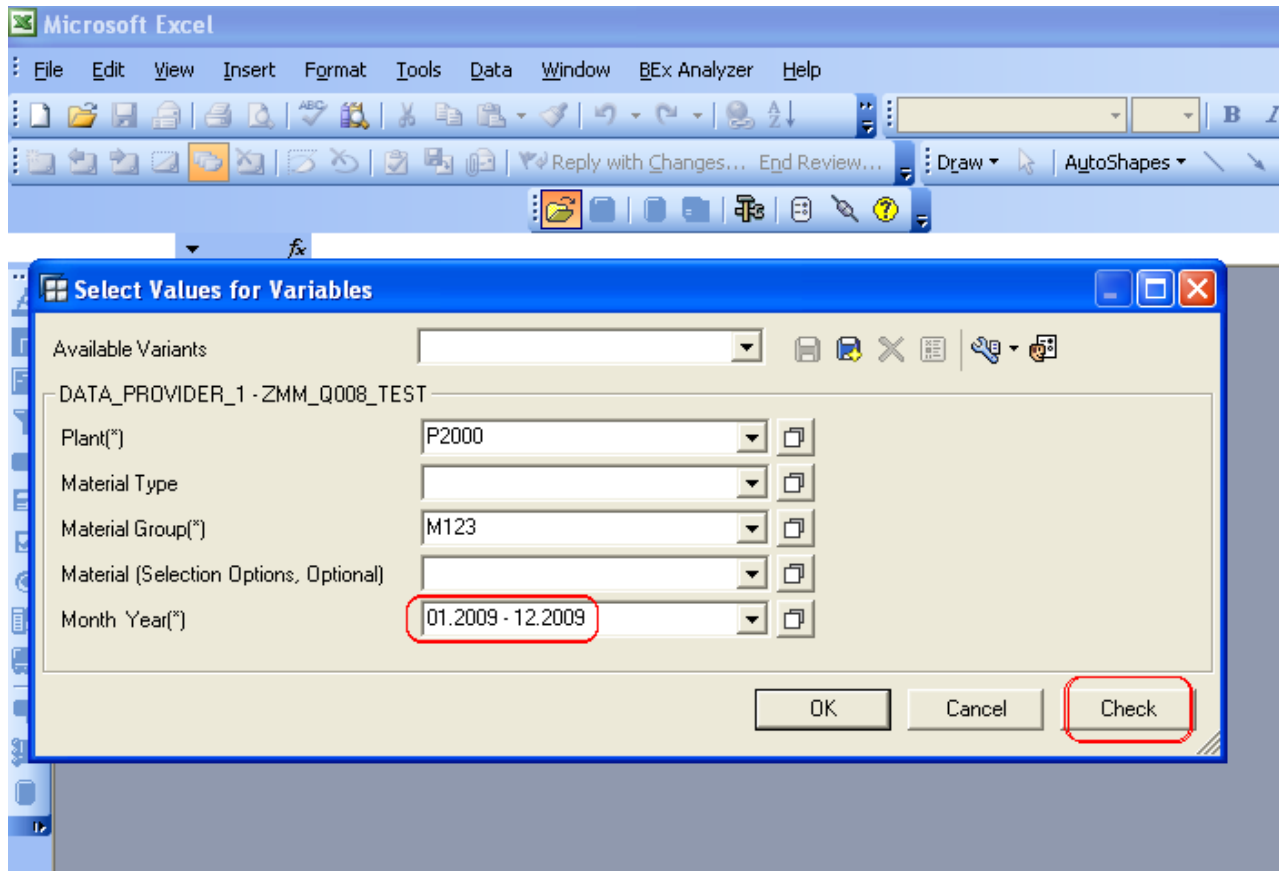
At the bottom left, there is a list of variables under the heading "res ons":

- v_MP051]
- v_MP053]
- v_MP05P]
- v_MP05T]
- v_MP05U]

Save and Execute the Report :

Selection Screen:

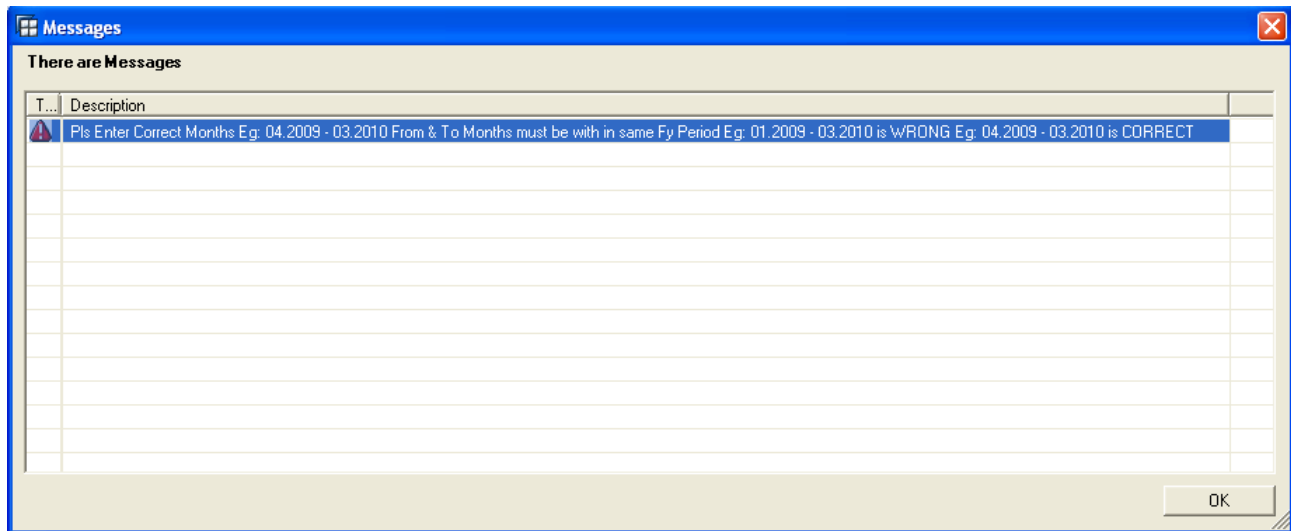
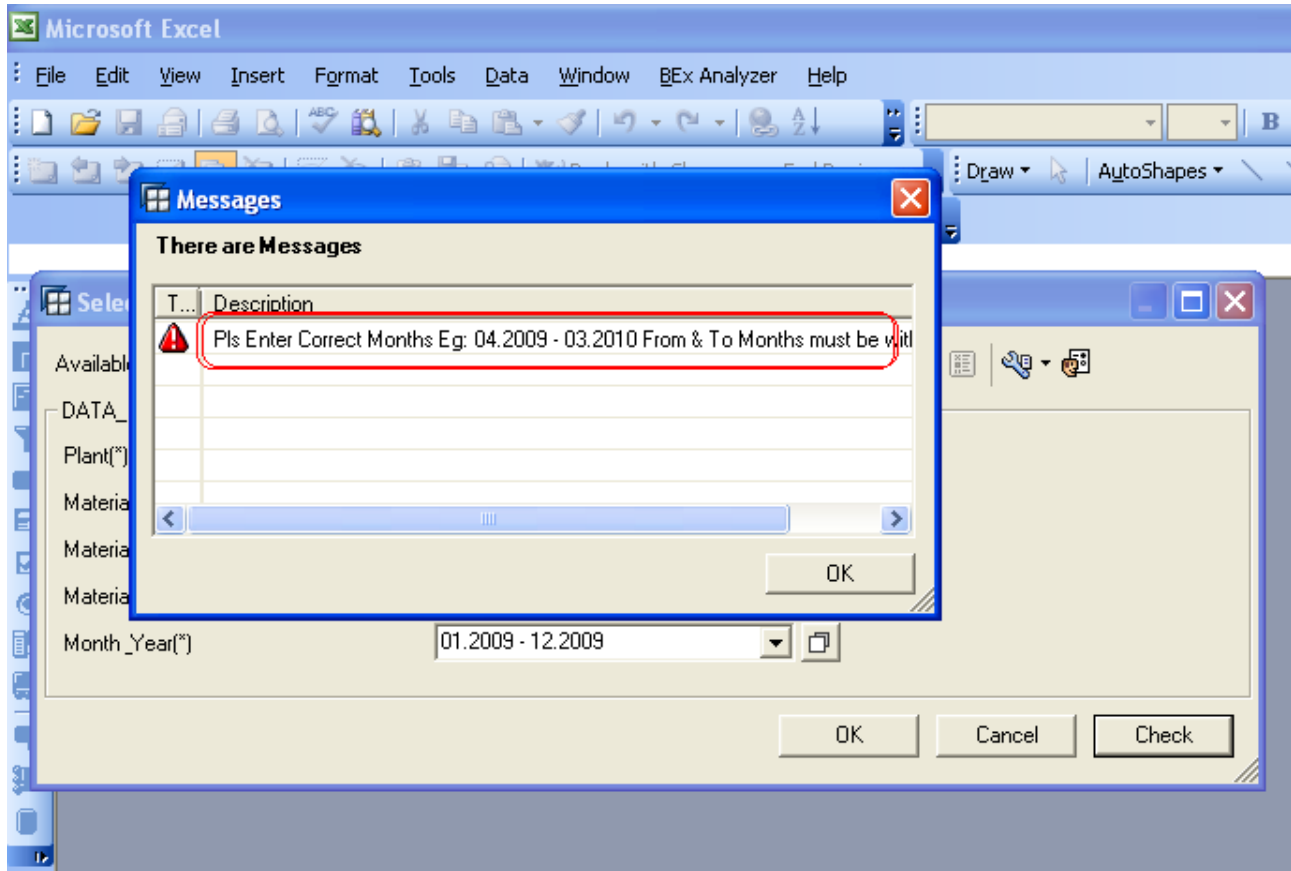
Once you execute the report you can see the following selection screen:



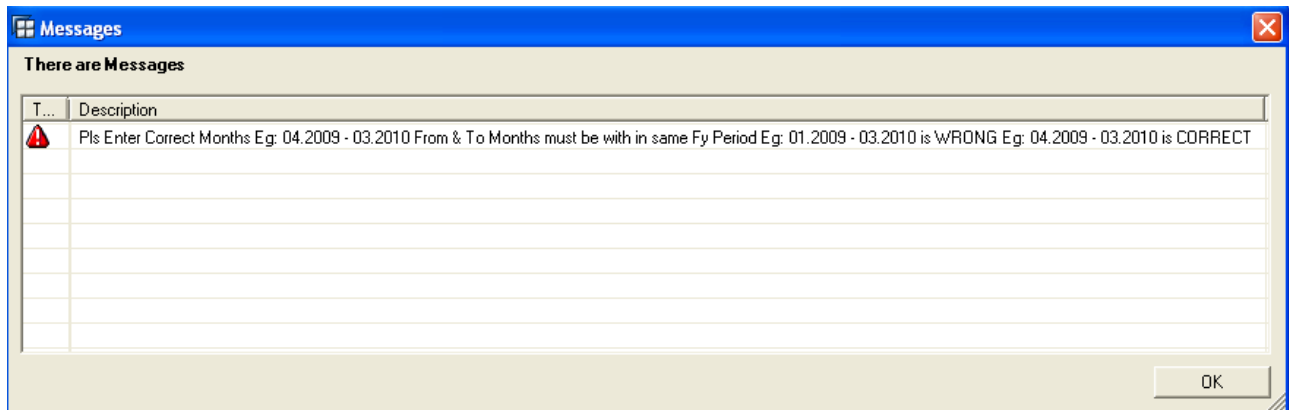
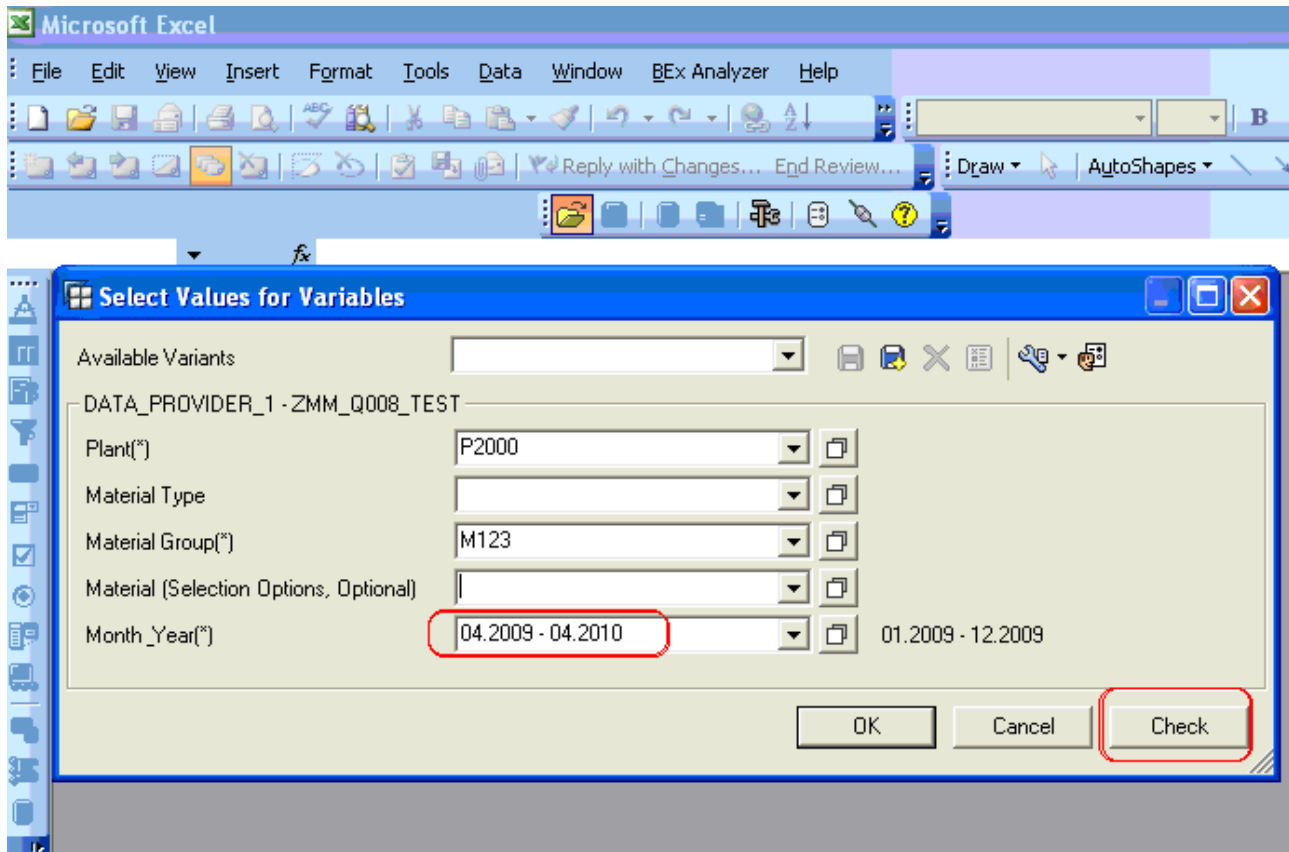
Give Plant, Material Group and Month Year like above (in my report the above values are user inputs, in your case user input values will differ).

So give Inputs and click on Check button.

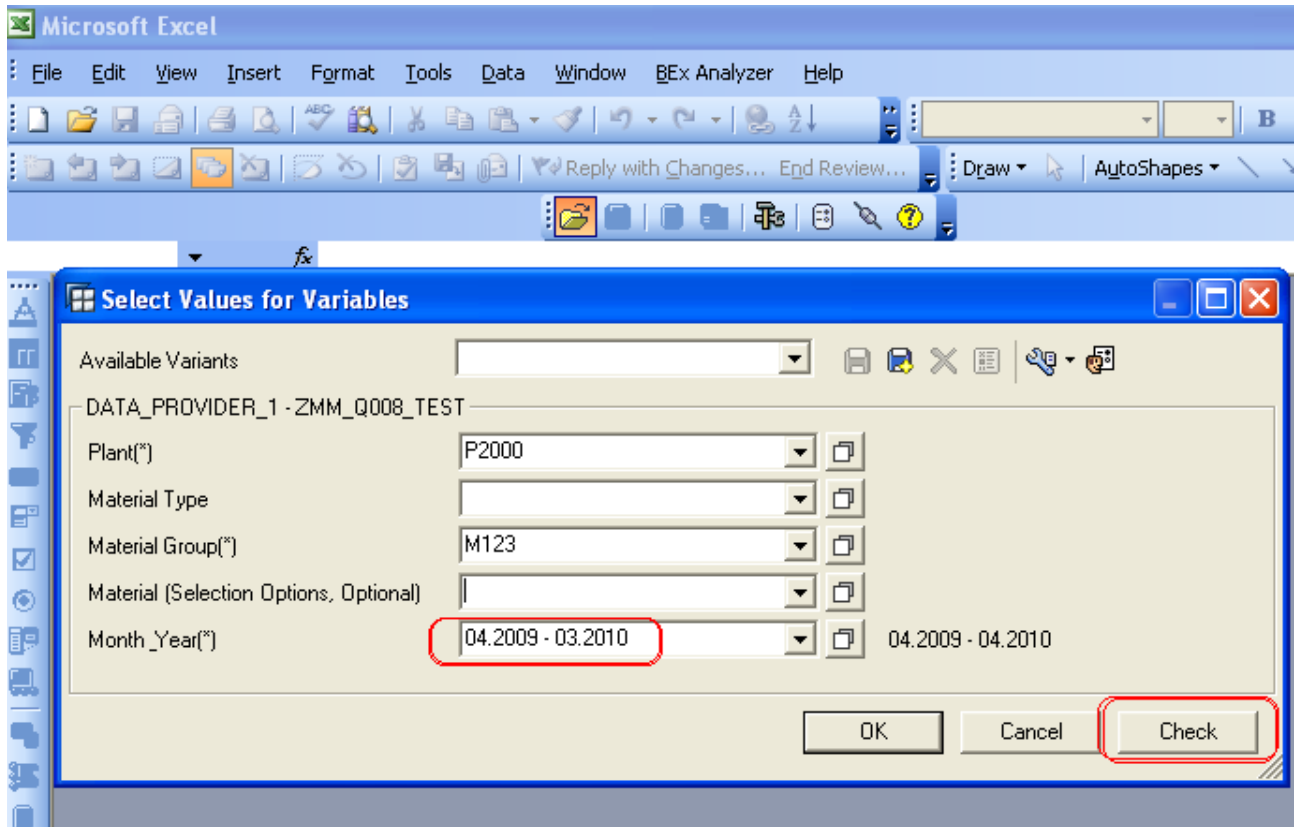
The given inputs i.e. From and To Month and Years are wrong, because the input Month & Years are not falling in the same Financial Year, so it is populating Error Message.



Again give 04.2009 – 04.2010 as inputs, this time also show error message, because 04.2010 is not with in the Financial year period. i.e. 2009 – 2010 Period.



Now give 04.2009 – 03.2010, and check, it won't give any Error Message, so execute the report and see the result.



Report Result:

See the following Report Result:

Here the Report Heading showing that From 04.2009 To 03.2010, for this I have written Customer Exit Code using Text Variables. For references you can check the following URLs given below.

The screenshot shows a SAP BW/BI report titled "Sales Revenue Report From 04.2009 To 03.2010". The report is displayed in a grid format with columns for Material Group, Material, Plant, Calendar Year/Month, Revenue, and Qty. The data is summarized in a table below.

Material Group	Material	Plant	Calendar Year/Month	Revenue	Qty
M123	M3201088	P2000	04.2009	120.00	10
			05.2009	145.00	12
			06.2009	170.00	14
			07.2009	195.00	16
			08.2009	220.00	18
			09.2009	200.00	20
			10.2009	270.00	22
			11.2009	295.00	24
			12.2009	320.00	26
			01.2010	345.00	28
			02.2010	370.00	30
			03.2010	395.00	32
			Result	3,045.00	252
	M3201089	P2000	04.2009	170.00	16
			05.2009	195.00	18
			06.2009	220.00	20
			07.2009	200.00	22

Related Content

[Using Customer Exit Variables in BW Reports Part - 3](#)

[How to use Customer Exit Variables in BW Reports: Part - 2](#)

[Using Customer Exit Variables in BW or BI Reports Part - 1](#)

[Using Text Variables with Customer Exits in Report Headings](#)

[Using Text Variables with Customer Exits in Report Headings](#)

[Variables of Type Customer Exit](#)

For more information, visit the [Business Intelligence homepage](#).

Disclaimer and Liability Notice

This document may discuss sample coding or other information that does not include SAP official interfaces and therefore is not supported by SAP. Changes made based on this information are not supported and can be overwritten during an upgrade.

SAP will not be held liable for any damages caused by using or misusing the information, code or methods suggested in this document, and anyone using these methods does so at his/her own risk.

SAP offers no guarantees and assumes no responsibility or liability of any type with respect to the content of this technical article or code sample, including any liability resulting from incompatibility between the content within this document and the materials and services offered by SAP. You agree that you will not hold, or seek to hold, SAP responsible or liable with respect to the content of this document.