SAP Material Ledger Configuration

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INTRODUCTION

Actual costing/Material Ledger gives us 2 main functionalities:-
1) To carry material prices in multiple currencies and valuations in the Material Master and
2) Costing at actual prices

Actual costing helps in determining actual costs for externally procured materials (raw materials) and materials manufactured internally.

In actual costing, all good movements (including raw material and packaging material) are valuated preliminarily with the standard price. (**Recommended by SAP**) At the same time, all price and exchange rate differences for the material are collected in the material ledger. At the end of the period, an actual price is calculated for each material based on all of the actual costs of the particular period. The actual price that is calculated is called the periodic unit price and can then be used to revaluate the material stock for the period to be closed. In addition, you can use this actual price as the standard price for the next period.

Actual costing determines what portion of the variance is to be debited to the next-highest level using material consumption. With the actual BOM, variances can be rolled-up over multiple production levels all the way to the finished product. Further you can even take into account variances from cost centers into the products.(As we go further you will get clarification on most of what we are talking about)

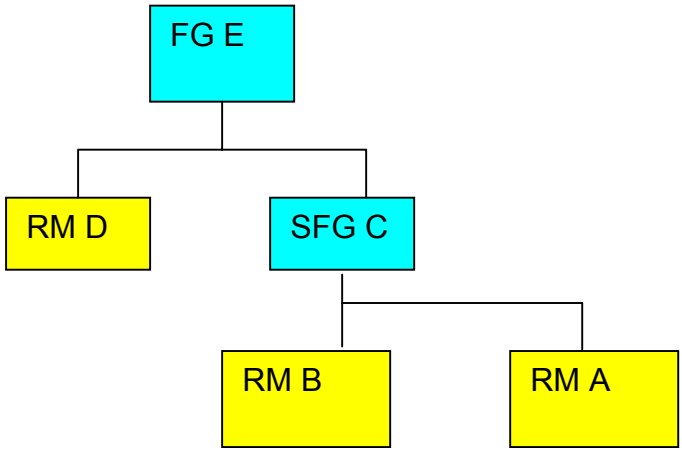
First let us go directly to the price determination factors:

The following 2 options are available for price determination indicator in the material master (accounting view):-
1) **2 – Transaction based price determination** – If you select this option in the material master you have the option of keeping the price control indicator V (moving average) or S (standard price). But by selecting this option you cannot roll up price differences to the next highest level of finished good.
2) **3 - Multi level price determination** – If you select this option in the material master you can only keep the price control indicator S (Standard price). Here you can roll up price differences to the next level in a multi level Bill of Material.

Let us take an example. Concentrate and read slowly

Multi Level Bill of Material:-

SFG (Semi Finished good) C is manufactured using RM (Raw material) A and RM B. SFG C along with RM D is used in the manufacture of FG (Finished good) E. Thus SFG C is STD price material with price determination indicator 3. Actual cost will be calculated at the period end. Any production variance occurred in SFG C will be considered and an actual cost will be calculated. Further the production variances of SFG C will be rolled up to the next level i.e. FG E.



In our current scenario Company A Ltd. (co. code 9100) has a plant 9100.
A Ltd. wants actual costing of finished and Semi-Finished goods. Further it also wants to carry prices for materials in 3 different currencies and possibility of having 3 different valuations in future. Keeping this in mind it is imperative that we activate material Ledger and also activate actual costing.

The raw and packaging materials are kept at moving average price (price control indicator V) and price determination indicator 2. Semi Finished and finished goods are kept at Standard price (price control indicator S). That means only the production variances occurring for semi and finished goods can be rolled up to the next level of finished goods. Since raw and packaging materials are valuated with moving average price, prices are adjusted for actual cost. In case any price difference occur due to shortage of stock, the same will not be considered for actual costing into finished goods

For doing the configuration we use the following path on the SAP application screen: -

SAP Menu → Tools → AcceleratedSAP → Customizing → SPRO - Edit Project → SAP Reference IMG

Configuration for all the modules will be done here. The above path will not be referred henceforth; we will directly refer to the IMG node.

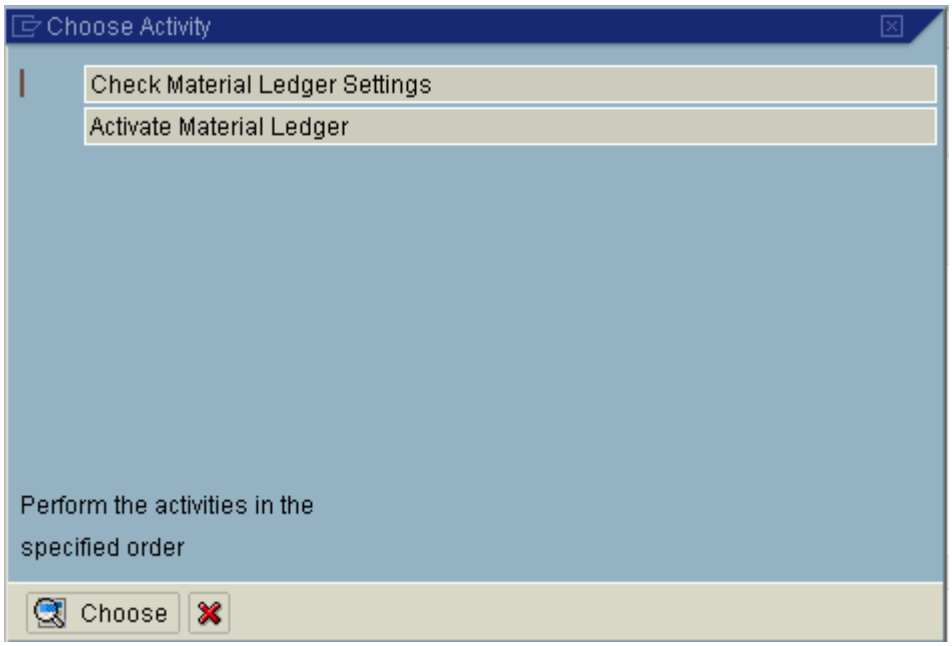
1) Actual Costing/Material Ledger

1.1 Activate Valuation Areas for Material Ledger

IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger →Activate Valuation Areas for Material Ledger

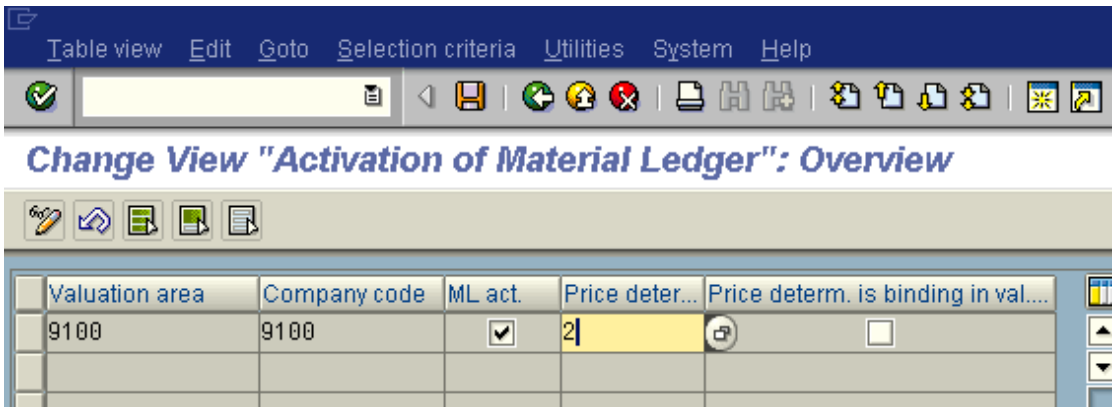
In this step, we will activate the material ledger for our valuation area 9100.If the material ledger is active for a particular valuation area; all materials in the valuation area are valuated using the material ledger except pipeline material.

Before activating material ledger check the additional currencies defined in the company code.



Double Click Activate Material Ledger

Update the following: -



The price determination indicator 2 is defaulted for all material masters created for the plant. We can make the price determination indicator binding in the valuation area by selecting the next option, but we do not want anything binding.

1.2 Assign Currency Types to Material Ledger Type

IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Assign Currency Types to Material Ledger Type

We create material ledger types and allocate up to three currency types to each of these material ledger types.
We have the following options:-
1) If we want to use the currency types that are defined in Financial Accounting, we set the indicator **Currency types from Financial Accounting**. In this case, the currency types are automatically derived from Financial Accounting.
2) If we want to use currency types defined in the currency and valuation profile, set the indicator **Currency types from CO**. In this case, the currency types are derived automatically from the currency and valuation profiles.
3) If we want to use a combination of the currency types from both Controlling and Financial Accounting, set the indicator Currency types from FI and Currency types from CO. In this case, we must check the settings manually:
4) If we want to use other currency types, set the Manual indicator and select Define individual characteristics. As well as the currency type for the company code currency, you can enter (*up to 10*) more currency types.

Before converting data for production startup, make sure that the currency settings in Financial Accounting and in the Material Ledger are correct. You

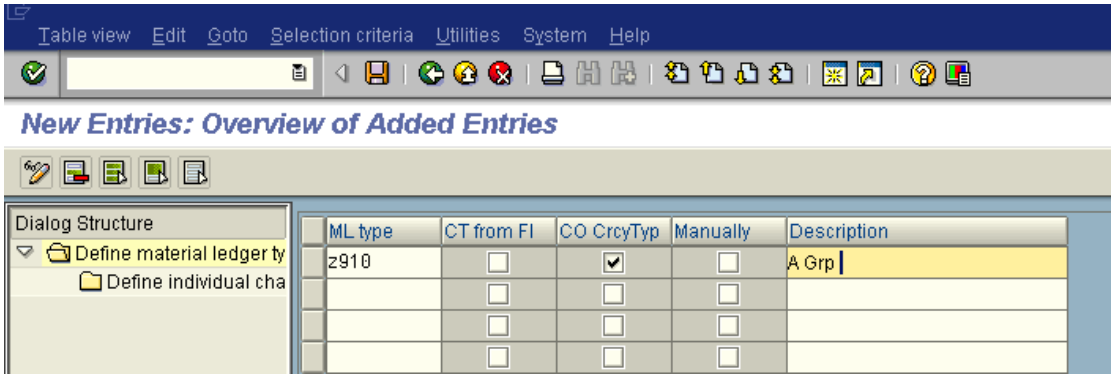
cannot change the currencies, currency types and material ledger types after production startup.

In our scenario we will select the currency types from CO. We have activated currency and valuation profile in the Controlling module.

To keep information consistent across all modules, ensure that the controlling area currency is kept as group currency.

Click on New entries

Update the following: -

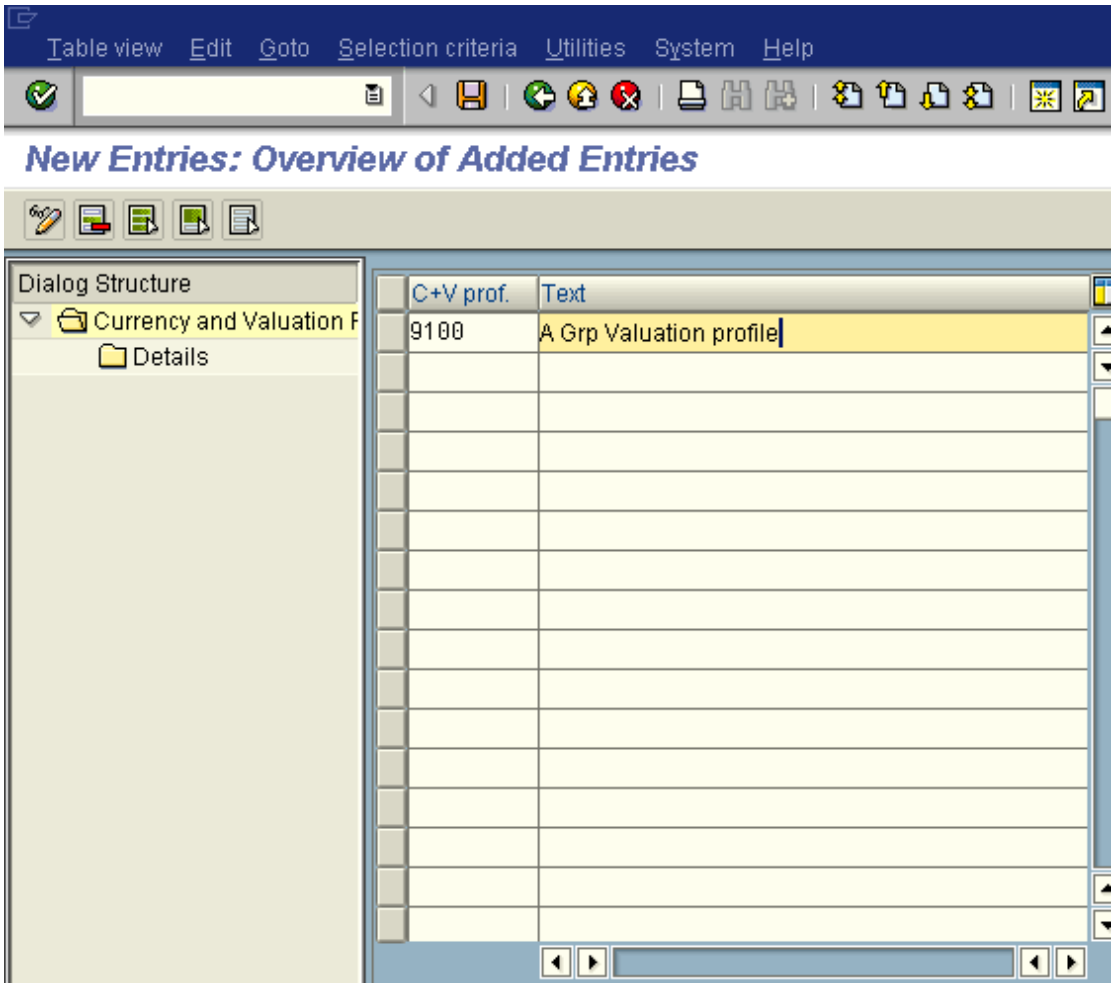


Click on Save

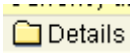
We will see the currency and valuation profile configuration done in controlling (This step must be done before we do the above step).
IMG → Controlling → General Controlling → Multiple Valuation Approaches/Transfer Prices → Basic Settings → Maintain Currency and Valuation Profile

You only need the currency and valuation profiles if you want to manage various valuations in parallel in your system.

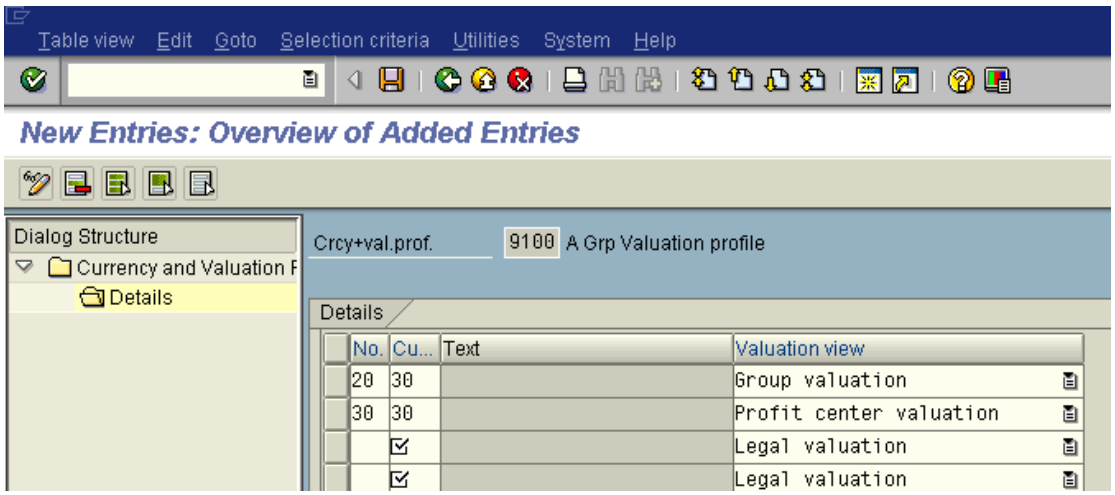
Click on New entries **and update the following: -**



Select  **and**

Double Click 

Click on  **and update the following: -**



Click on Save

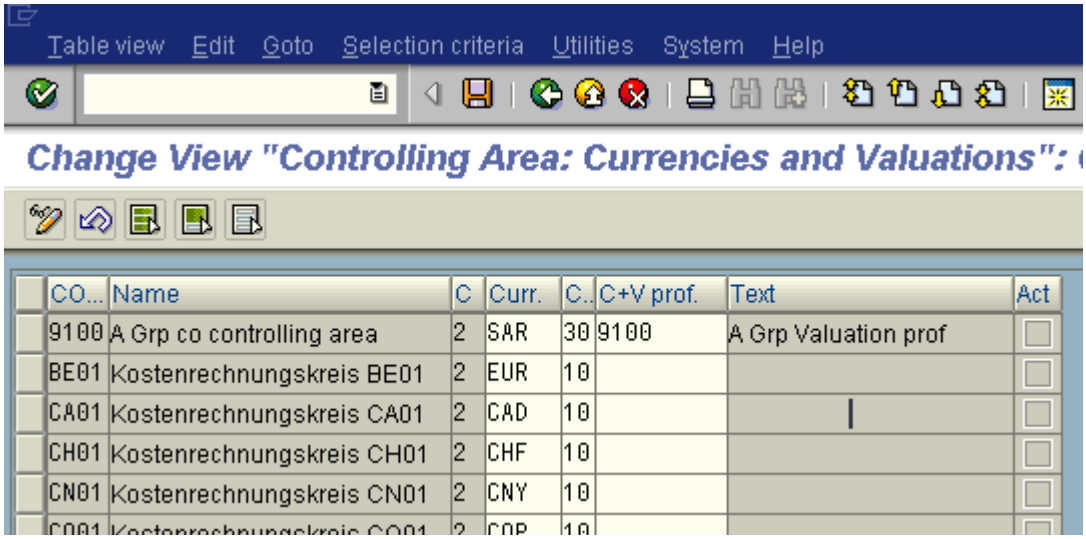
Assign Currency and Valuation Profile to Controlling Area

IMG → Controlling → General Controlling → Multiple Valuation Approaches/Transfer Prices → Basic Settings → Assign Currency and Valuation Profile to Controlling Area

You assign the currency and valuation profiles with which you want to represent scenarios for transfer prices to the respective controlling area. For this purpose, you must ensure that the controlling area currency of the affected controlling area corresponds to either the group currency (currency type = 30) or the company code currency (currency type = 10).

The assignment of the currency and valuation profiles indicates that you want to use transfer prices in the controlling area. It enables you to create actual versions for your different valuations.

Assign C+V prof 9100 to controlling area 9100.



CO...	Name	C	Curr.	C..	C+V prof.	Text	Act
9100	A Grp co controlling area	2	SAR	30	9100	A Grp Valuation prof	
BE01	Kostenrechnungskreis BE01	2	EUR	10			
CA01	Kostenrechnungskreis CA01	2	CAD	10			
CH01	Kostenrechnungskreis CH01	2	CHF	10			
CN01	Kostenrechnungskreis CN01	2	CNY	10			

Click on Save

1.3 Assign Material Ledger Types to Valuation Area

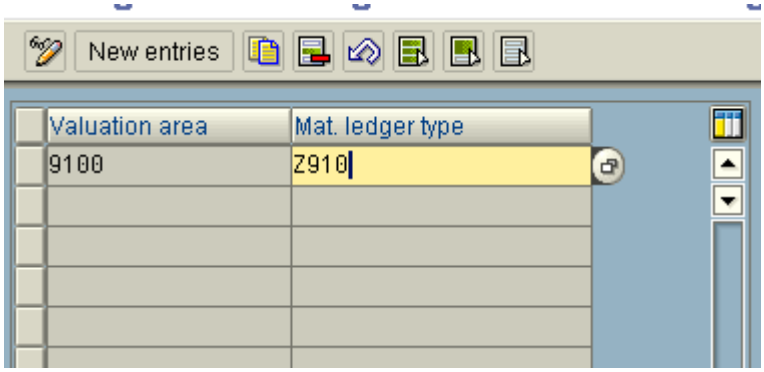
IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Assign Material Ledger Types to Valuation Area

Here we assign material ledger type **Z910** defined earlier to the valuation area 9100.

We can allocate the same material ledger type to several valuation areas. If we have several valuation areas (plants) within a single company code (that is, when the valuation area corresponds to a plant), we must assign all valuation areas in this company code to the same material ledger type.

Click on 

and update the following: -



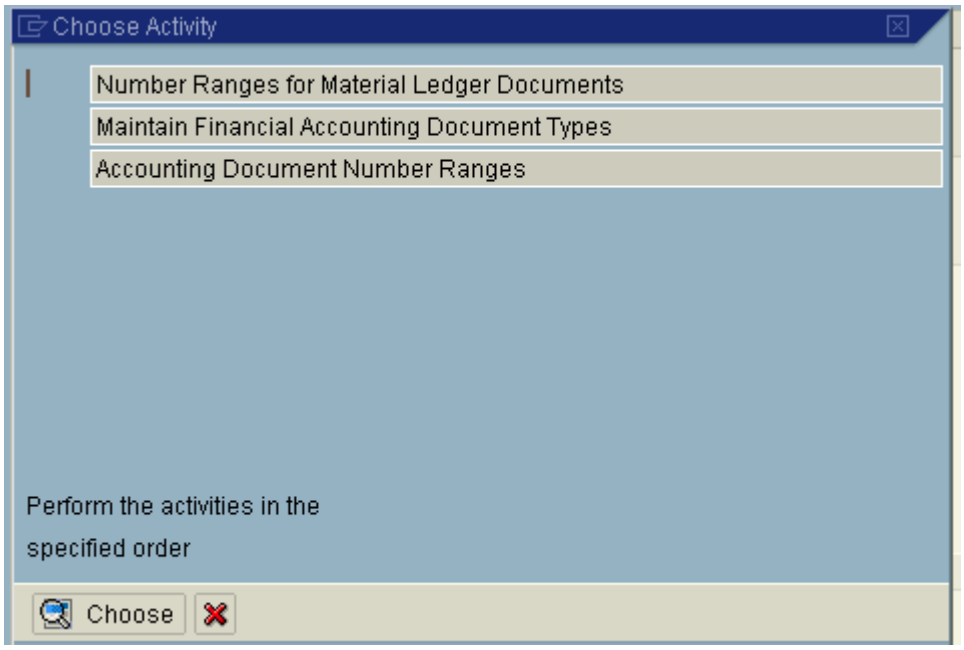
Click on Save 

1.4 Maintain Number Ranges for Material Ledger Documents

IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Maintain Number Ranges for Material Ledger Documents

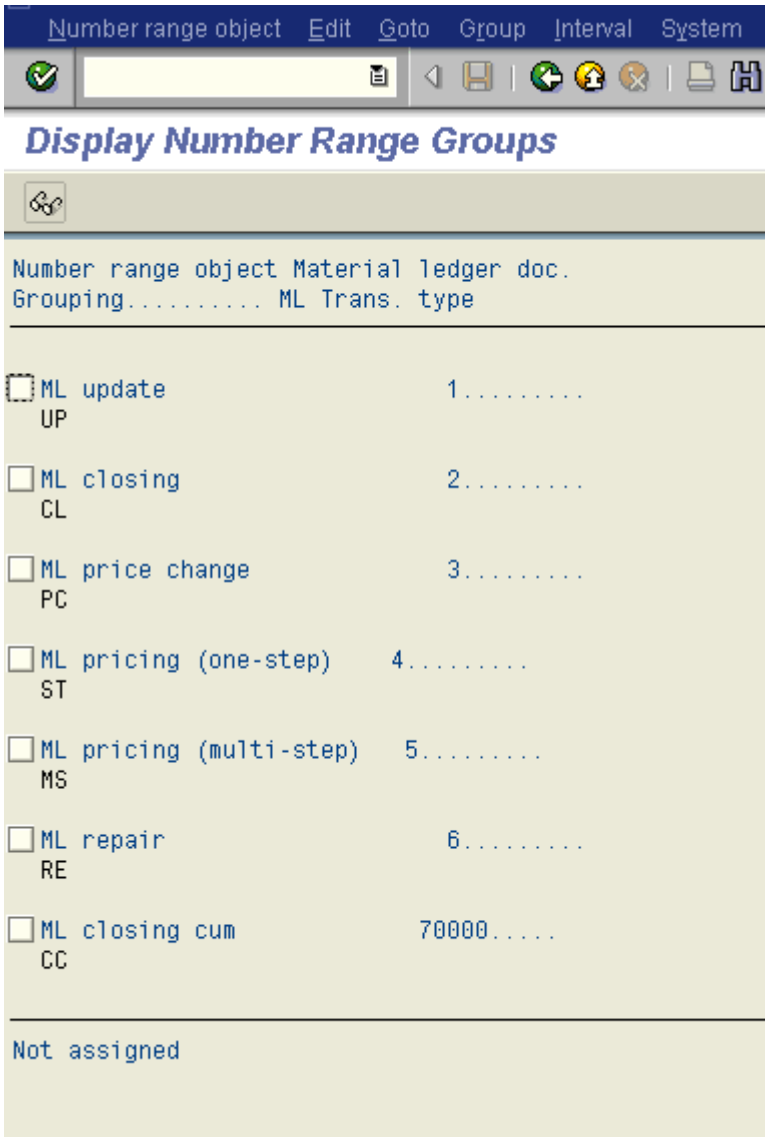
A material ledger document must be clearly identified in the system. This is achieved by saving each transaction in the material ledger under a unique number.
Groups exist for material ledger documents per transaction type in the standard setup.
Material ledger update (Group 01)
Material ledger closing (Group 02)
Material ledger price changes (Group 03)
Single-level material ledger settlement (Group 04)
Multi-level material ledger settlement (Group 05)
Material ledger repair (Group 06)

Each group is assigned to a number range
It is normally not necessary to create new groups.

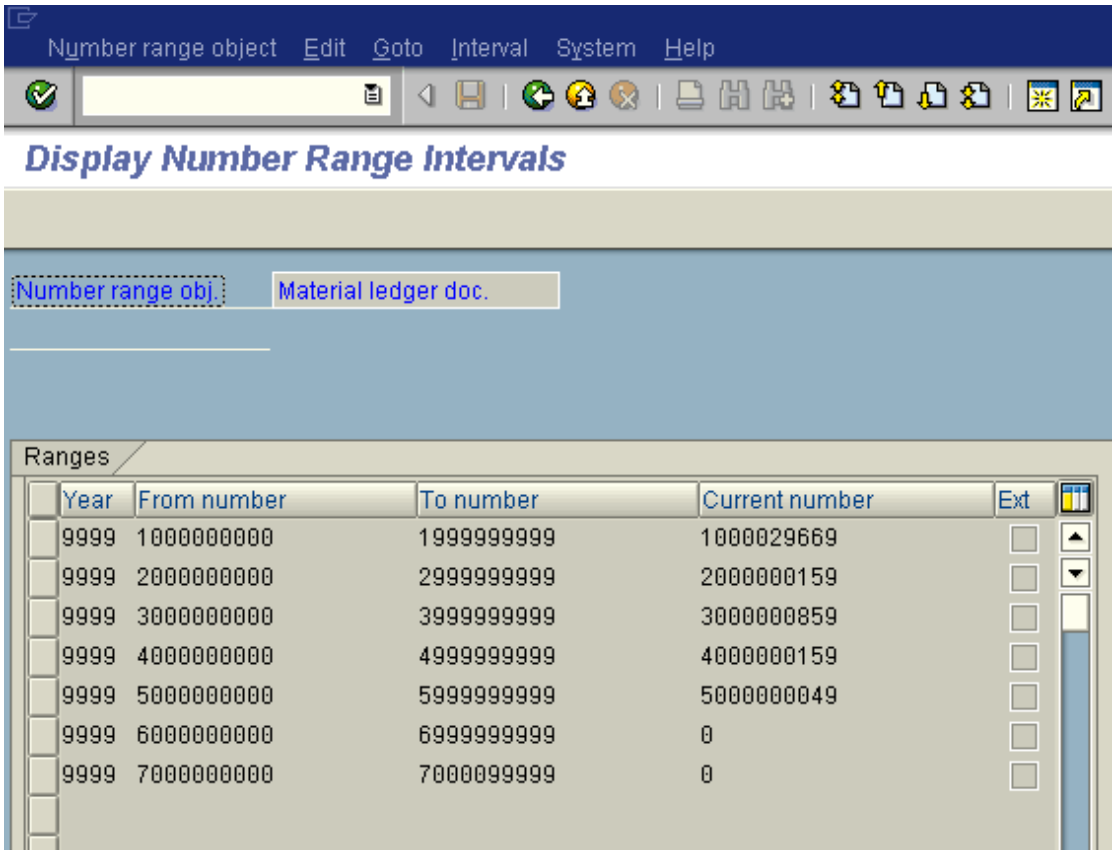


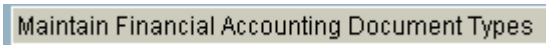
Double Click Number Ranges for Material Ledger Documents

Click on Groups

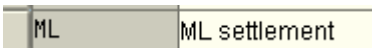

Number range object Edit Goto Group Interval System
Display Number Range Groups
Number range object Material ledger doc.
Grouping..... ML Trans. type
ML update 1.....
UP
ML closing 2.....
CL
ML price change 3.....
PC
ML pricing (one-step) 4.....
ST
ML pricing (multi-step) 5.....
MS
ML repair 6.....
RE
ML closing cum 70000.....
CC
Not assigned

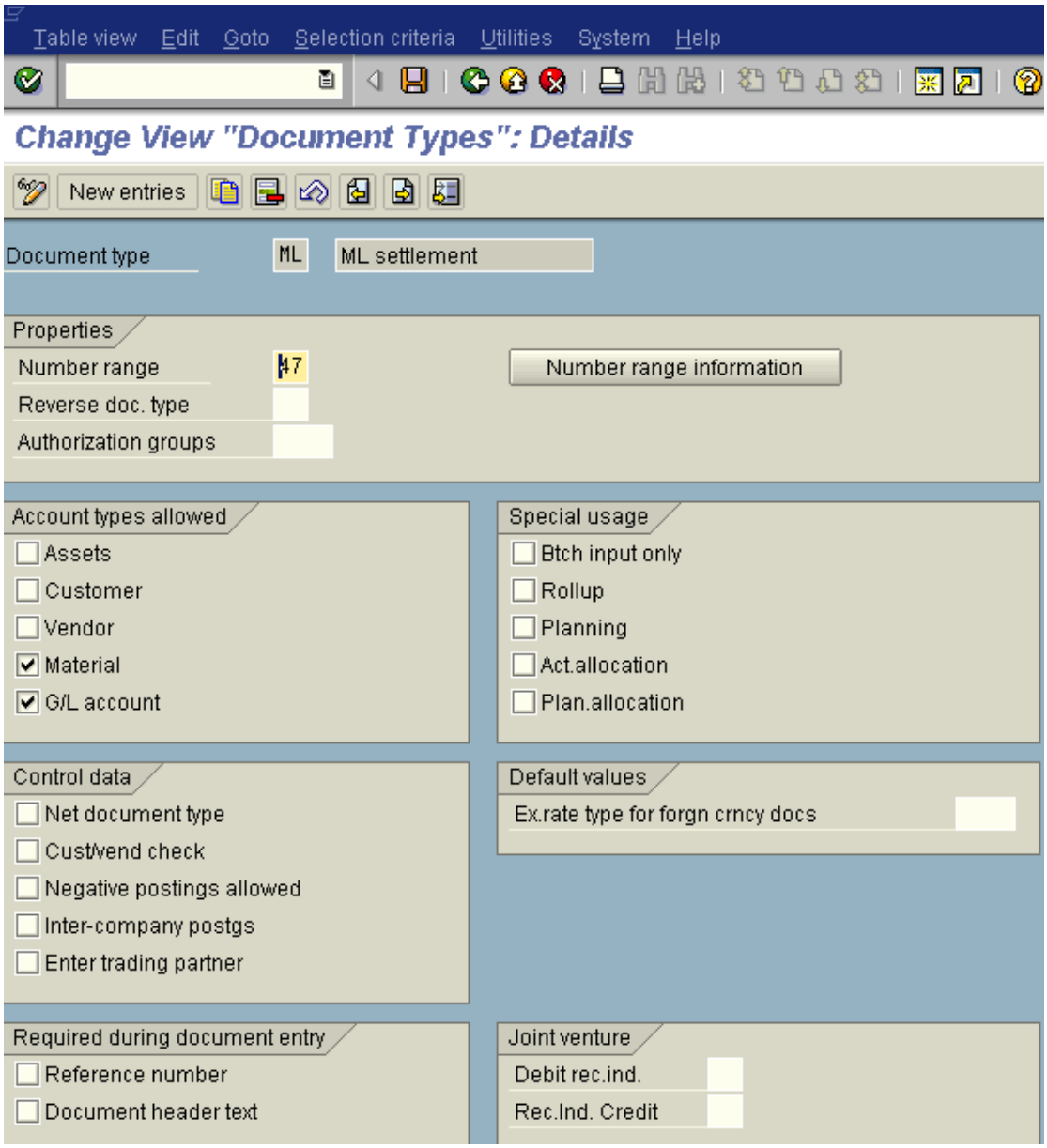
Click on 
Intervals



Double Click 

Document type **ML** is reserved for material ledger documents in the standard system. Ensure that it is maintained. Further the number range that begins with 47 is reserved for material ledger documents in the standard system.

Double Click 



1.5 Configure Dynamic Price Changes

IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Configure Dynamic Price Changes

Here we can specify in each valuation area that a planned price is activated as the valuation price upon the first goods movement in a new posting period as long as the validity date of the planned price has been reached.

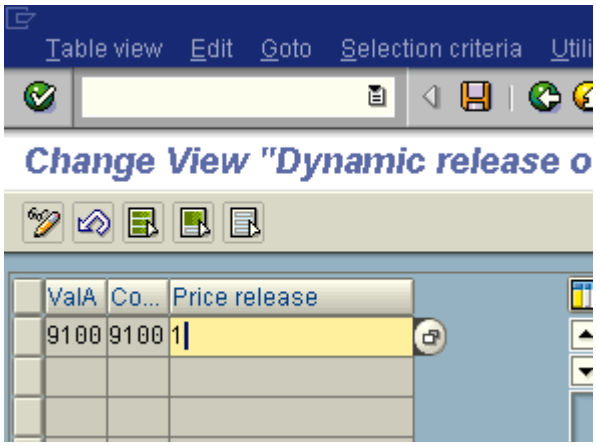
The planned prices are handled by the system with the following priority:

Marked standard cost estimates
Future valuation prices

In the standard system, dynamic price release is not active.

We will activate the dynamic price release. To activate select 1 (dynamic price release active).

Update the following: -



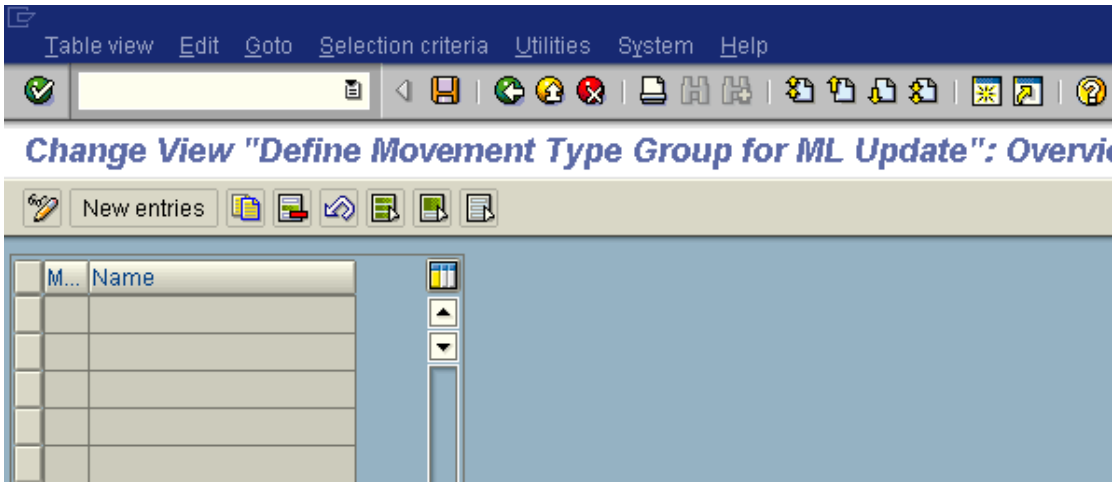
Click on Save 

2. Material Update

2.1 Define Movement Type Groups of Material Ledger

IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Material Update → Define Movement Type Groups of Material Ledger

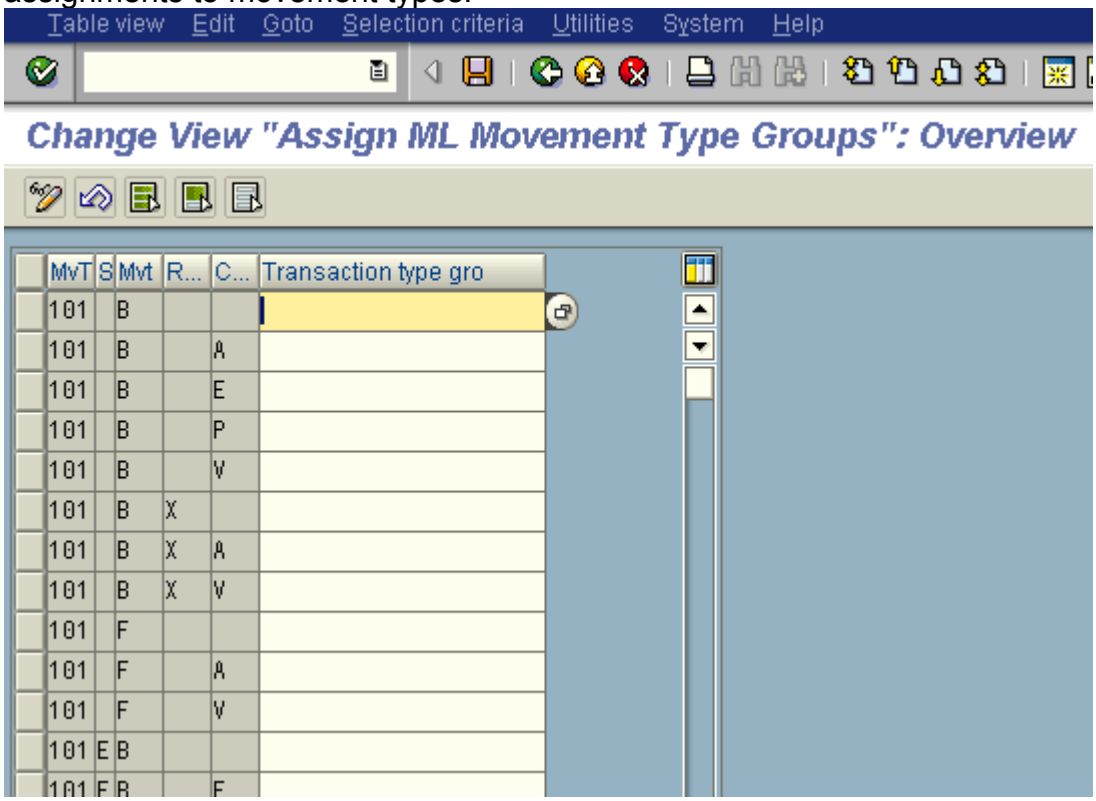
Here we can define movement type groups for the Material Ledger so that we can then assign selected material movements to different categories. The standard setup contains no movement type groups for the material ledger.
We will use the material update structure in the standard setup.
Therefore we do not require any configuration here.



2.2 Assign Movement Type Groups of Material Ledger

IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Material Update → Assign Movement Type Groups of Material Ledger

If the movement type groups are created in the earlier step, then we require to assign this movement type groups to specific movement types. Thereafter we can assign selected material movements to different categories. The standard system contains no movement type groups for the material ledger.
We will use the material update structure in the standard system. Thus we do not need to include any additional movement type groups or make assignments to movement types.



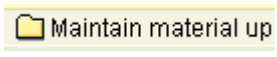
2.3 Define Material Update Structure

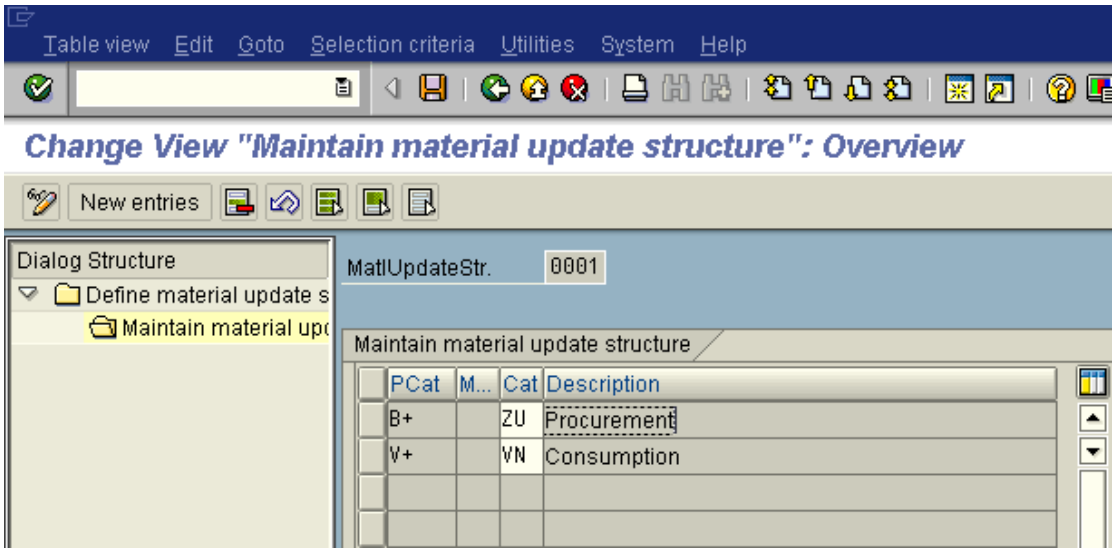
IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Material Update → Define Material Update Structure

During the material ledger update, the system collects data from valuation-relevant transactions such as goods receipts, invoice receipts and settlement of production orders. This data is collected in different categories in the material ledger in accordance with the material update structure.
The material ledger data includes the following categories that reference the respective period in the respective currency:
Beginning inventory
Price change
Receipts
Other receipts/consumption
Cumulative inventory
Consumption
Ending inventory/current inventory
The categories are used in the material ledger update, mainly for the purpose of collecting price differences and exchange rate differences for single-level and multilevel material price determination.
The categories above the line Cumulative inventory influence the calculation of the periodic unit price for the period to be closed, and therefore also influence the valuation of the material if you revaluate the inventory in material price determination.
Consumptions have no influence on such a revaluation because they are always valuated at standard price.This category does not affect the price.
If we want to show particular inward movements (such as inward movements without purchase orders) separately, or if we want particular consumptions (such as withdrawals for sampling) in our enterprise to have an influence on revaluation, we can represent using movement type groups for material update. Such transactions then appear under the category other receipts/consumption.

In the standard setup, the categories are defined in material update structure 0001 such that the valuation price from material settlement corresponds to the weighted average price.

Select 

Double Click 



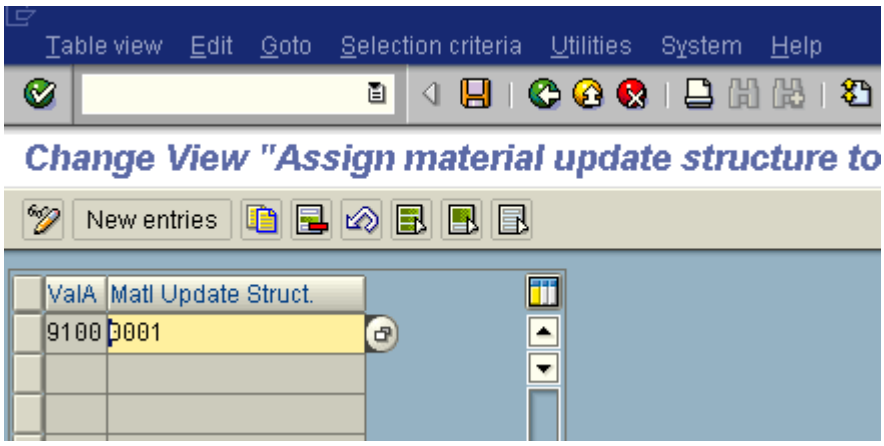
Take a drop down in PCAT

PCat	R	M	Description
B+	☑	☐	Procurement
BB	☑	☐	Purchase order
BBK	☑	☑	Purchase order (grp)
BBV	☑	☐	Procurement (change involving stocks)
BF	☑	☑	Production
BKA	☑	☐	Sales order
BL	☑	☑	Subcontracting
BU	☑	☑	Stock transfer
BUBM	☑	☐	Material tansfer posting
BUBS	☑	☑	Transfer posting - special stock
V+	☐	☐	Consumption
VA	☐	☐	Fixed asset
VBK	☐	☑	Purchase order (grp)
VEAU	☐	☐	Consumption for single-level orders
VF	☐	☑	Production
VK	☐	☐	Cost center
VKA	☐	☐	Sales order
VL	☐	☑	Subcontracting
VP	☐	☐	Project
VU	☐	☑	Stock transfer
VUBM	☐	☐	Material tansfer posting
VUBS	☐	☑	Transfer posting - special stock

2.4 Assign Material Update Structure to a Valuation Area

IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Material Update → Assign Material Update Structure to a Valuation Area

Here we assign a material update structure to one or more valuation areas.



3. Actual Costing

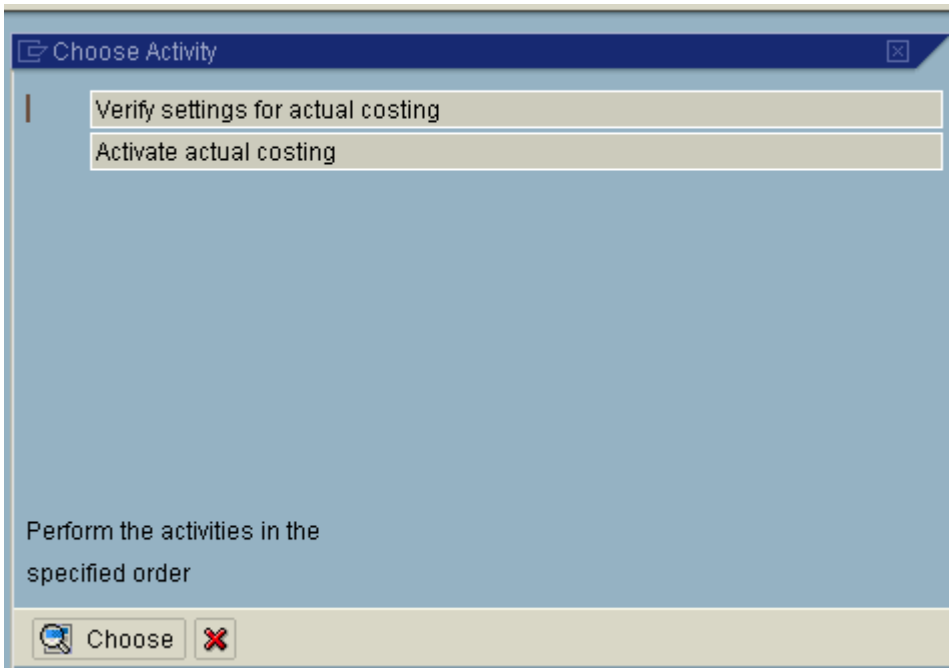
3.1 Activate Actual Costing

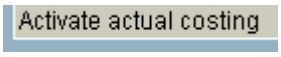
IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Actual Costing → Activate Actual Costing

In this step we can activate, per plant, Actual Costing for materials and activity consumption update in the quantity structure.
If we use Actual Costing, we can decide whether in addition to material consumption, activity consumption which is used to produce a material should be updated in the quantity structure in Actual Costing/Material Ledger.

Depending on the activation type chosen:
1 Actual consumption is updated in the quantity structure but not considered during price determination.
We can use this setting if we just want to receive information on the complete actual quantity structure. Variances between the plan price for the cost center/activity type and the actual price calculated at the end of the period can be debited to the cost object at period closing using the function 'Revaluation at Actual Prices'. **This setting should be done only where we are calculating an actual activity price at the month end in system.**
2 Actual consumption is updated in the quantity structure and is considered during price determination.
If we choose this setting, the variances between the plan price and the cost center/activity type and the actual price calculated at the end of the period are adjusted subsequently. The cost center is then credited and the material associated with the consumption is debited. **This setting should be done only where we are not calculating an actual activity price at the month end in system consequently we cannot use** the function 'Revaluation at Actual Prices' at period closing in Cost Object Controlling. If we use the

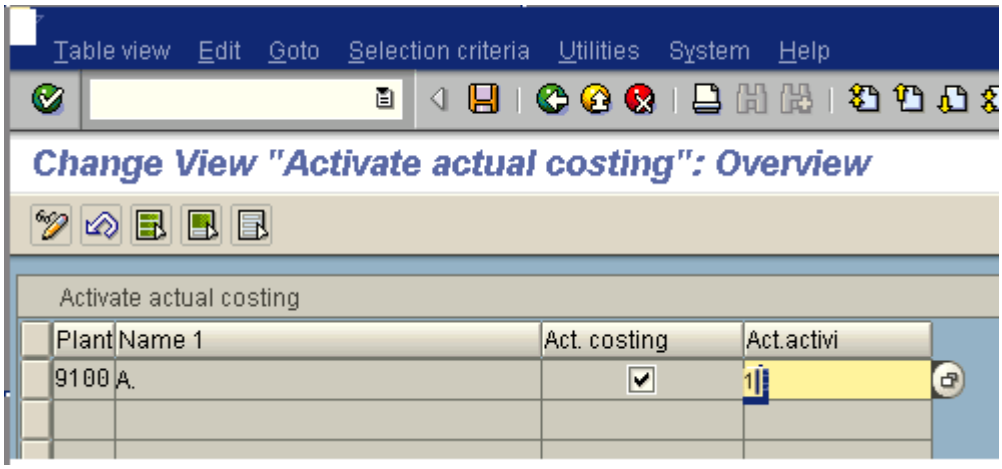
function 'Revaluation at Actual Prices' at period closing, the cost center will be credited twice and the materials will be debited twice.
In OBYC configuration settings for Materials Management, define a G/L account for the closing entries in Actual Costing/Material Ledger for transaction GBB (Offsetting entry for inventory posting) and for the account grouping code AUI (Credit cost center with actual price adjustment). The credit to the cost center is identified under this cost element.



Double Click 

Update the following: -

We will select 1 activity update not relevant for price determination since A Ltd. does an actual activity price calculation from the system and revalues the production orders.

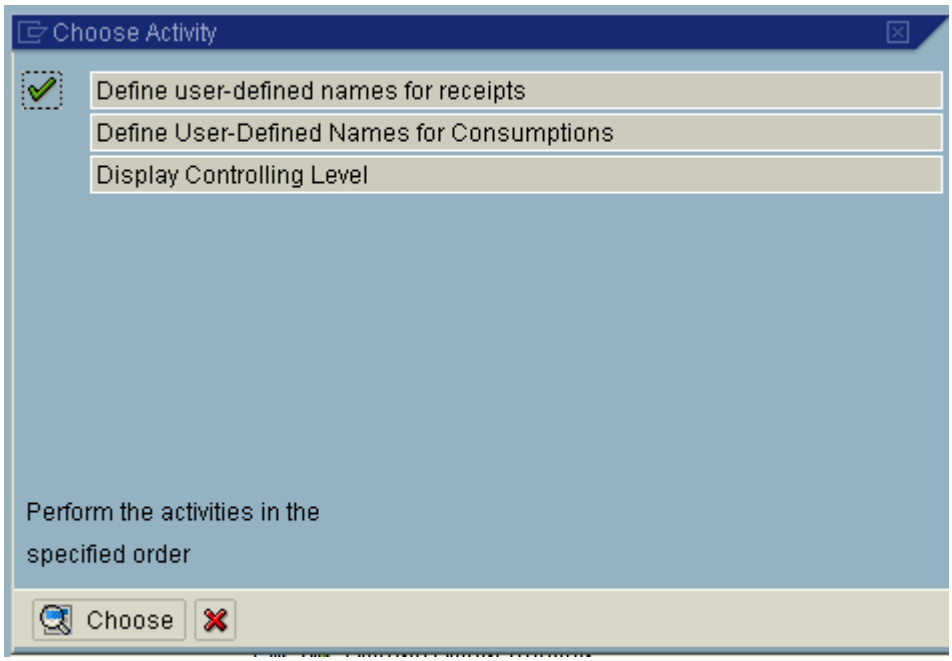


Act...	Short text
0	No activity update
1	Activity update not relevant to price determination
2	Activity update relevant to price determination

3.2 Create User-Defined Names for Receipts/Consumptions

IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Actual Costing → Create User-Defined Names for Receipts/Consumptions

In this activity we can create our own **Controlling level** for transactions that we would like to differentiate in the material ledger, further than the standard system offers.
We will use the Controlling levels in the standard system.


Choose Activity
Define user-defined names for receipts
Define User-Defined Names for Consumptions
Display Controlling Level
Perform the activities in the
specified order
Choose

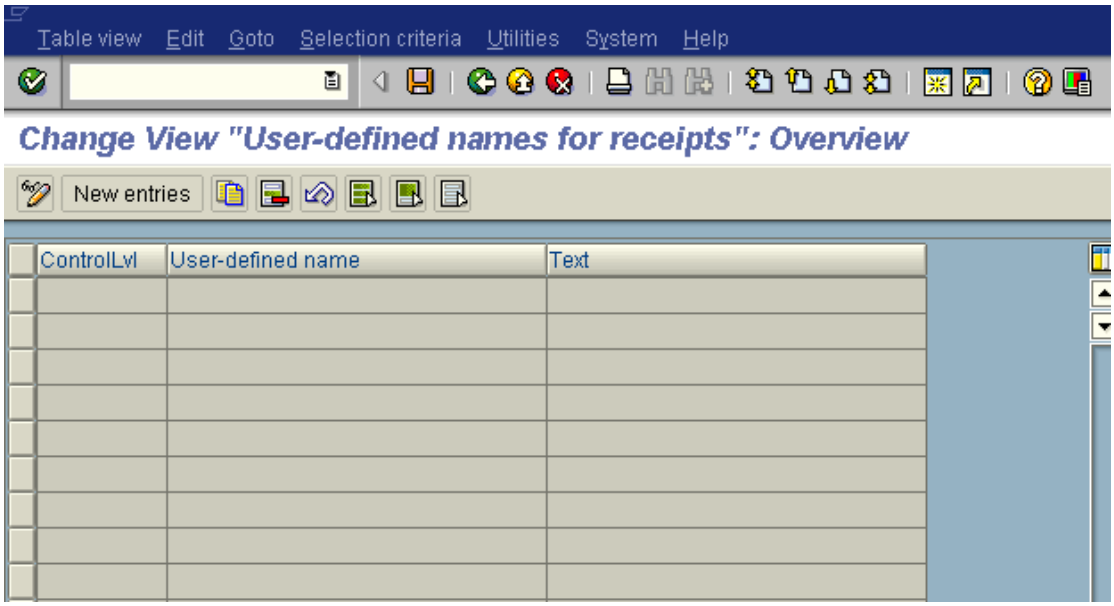


Table view Edit Goto Selection criteria Utilities System Help
Change View "User-defined names for receipts": Overview
New entries
ControlLvl
User-defined name
Text

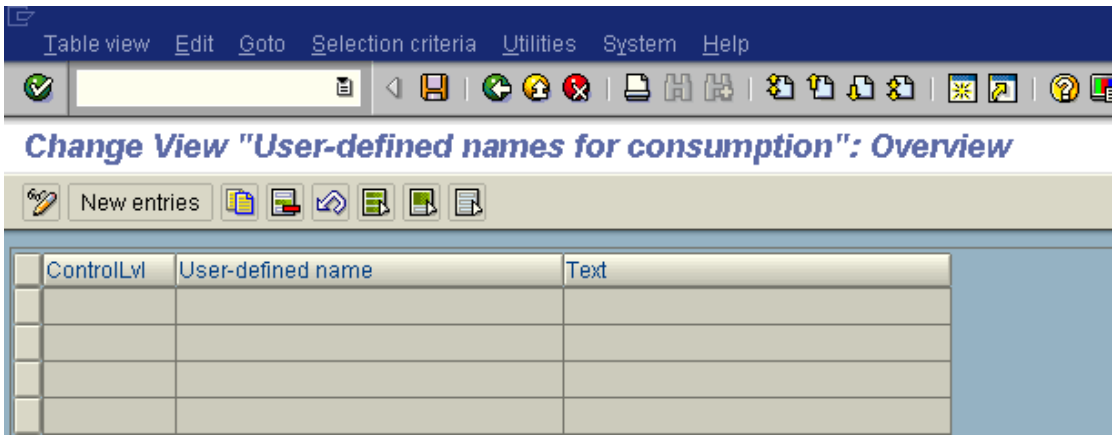
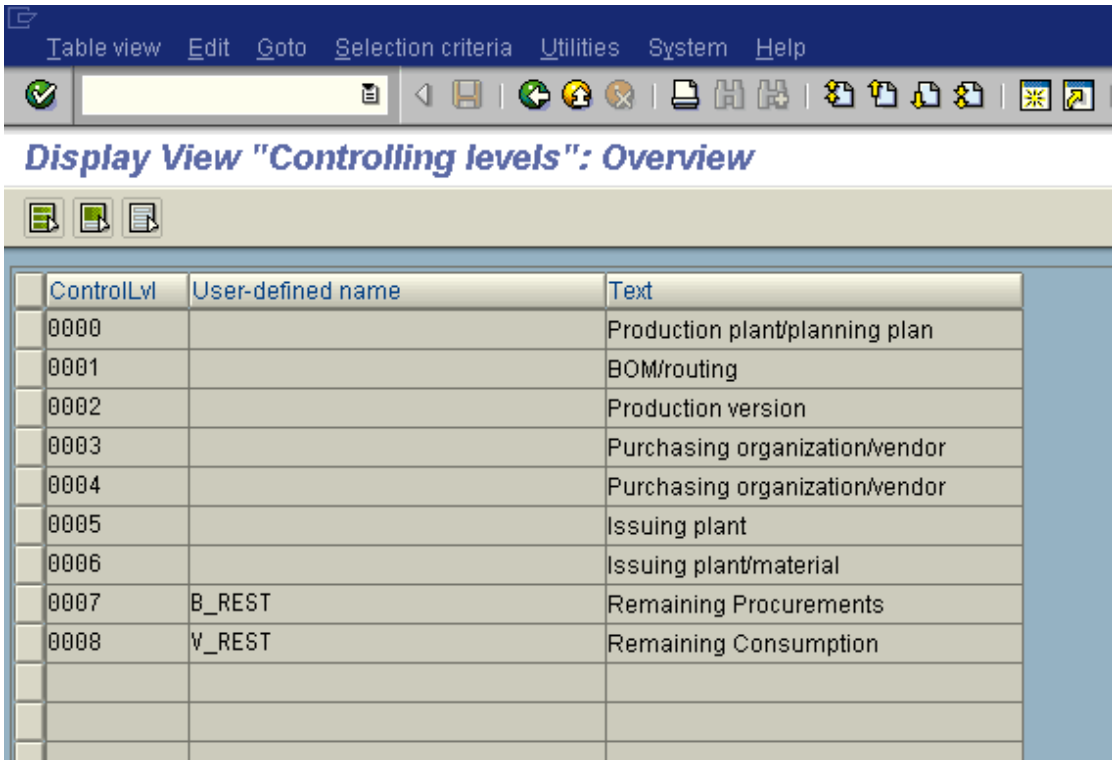


Table view Edit Goto Selection criteria Utilities System Help
Change View "User-defined names for consumption": Overview
New entries
ControlLvl
User-defined name
Text

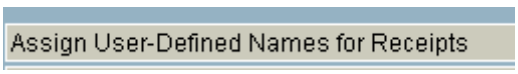


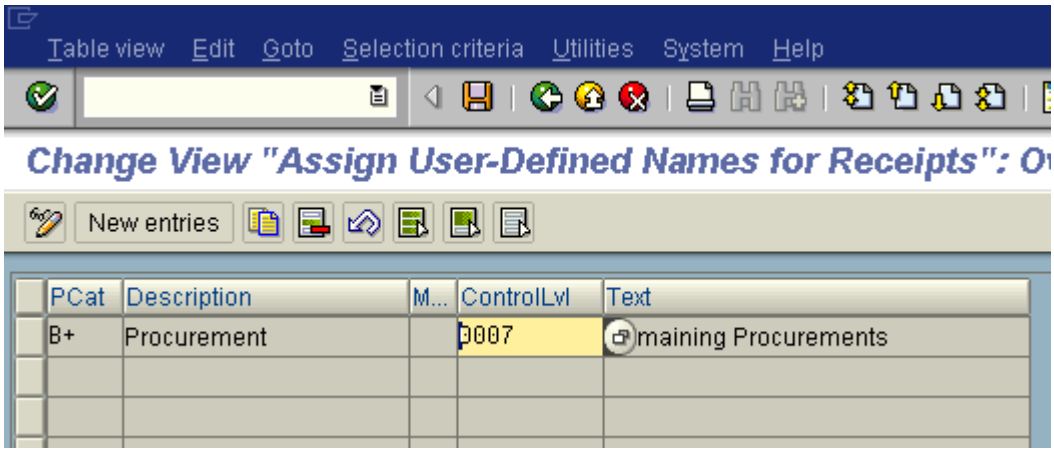
ControlLvl	User-defined name	Text
0000		Production plant/planning plan
0001		BOM/routing
0002		Production version
0003		Purchasing organization/vendor
0004		Purchasing organization/vendor
0005		Issuing plant
0006		Issuing plant/material
0007	B_REST	Remaining Procurements
0008	V_REST	Remaining Consumption

3.3 Assign User-Defined Names for Receipts/Consumptions

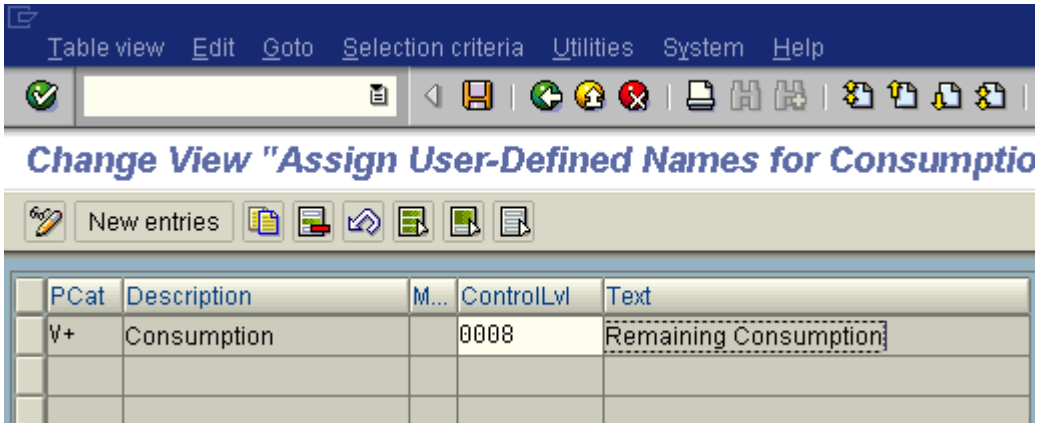
IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Actual Costing → Assign User-Defined Names for Receipts/Consumptions

Here we can assign our own Controlling levels to process categories in order to achieve a more detailed differentiation between specific transactions in the material ledger data. Since we have not defined any names for receipt and consumptions there will be no assignment required here, let us verify the standard settings.

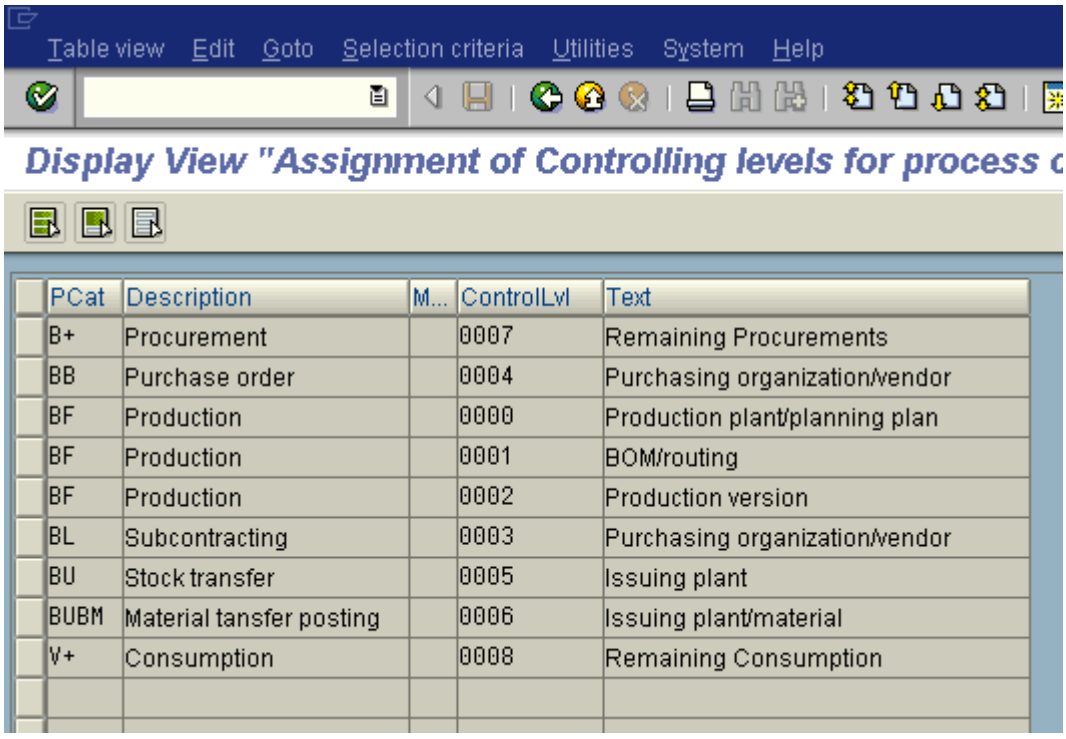
Double Click 



Double Click Assign User-Defined Names for Consumptions



Double Click Display Assignment of Controlling Levels to Process Categori

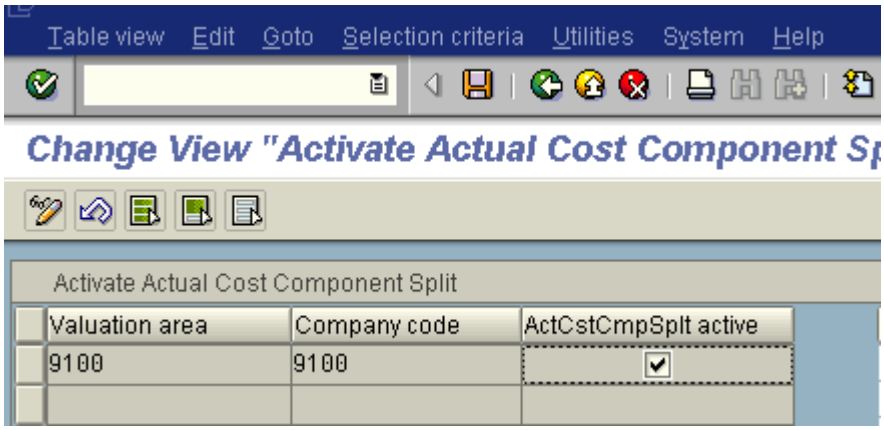


3.4 Activate Actual Cost Component Split

IMG → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Actual Costing → Activate Actual Cost Component Split

Here we can activate the actual cost component split for each valuation area.

Click on the check box to activate



Click on Save 

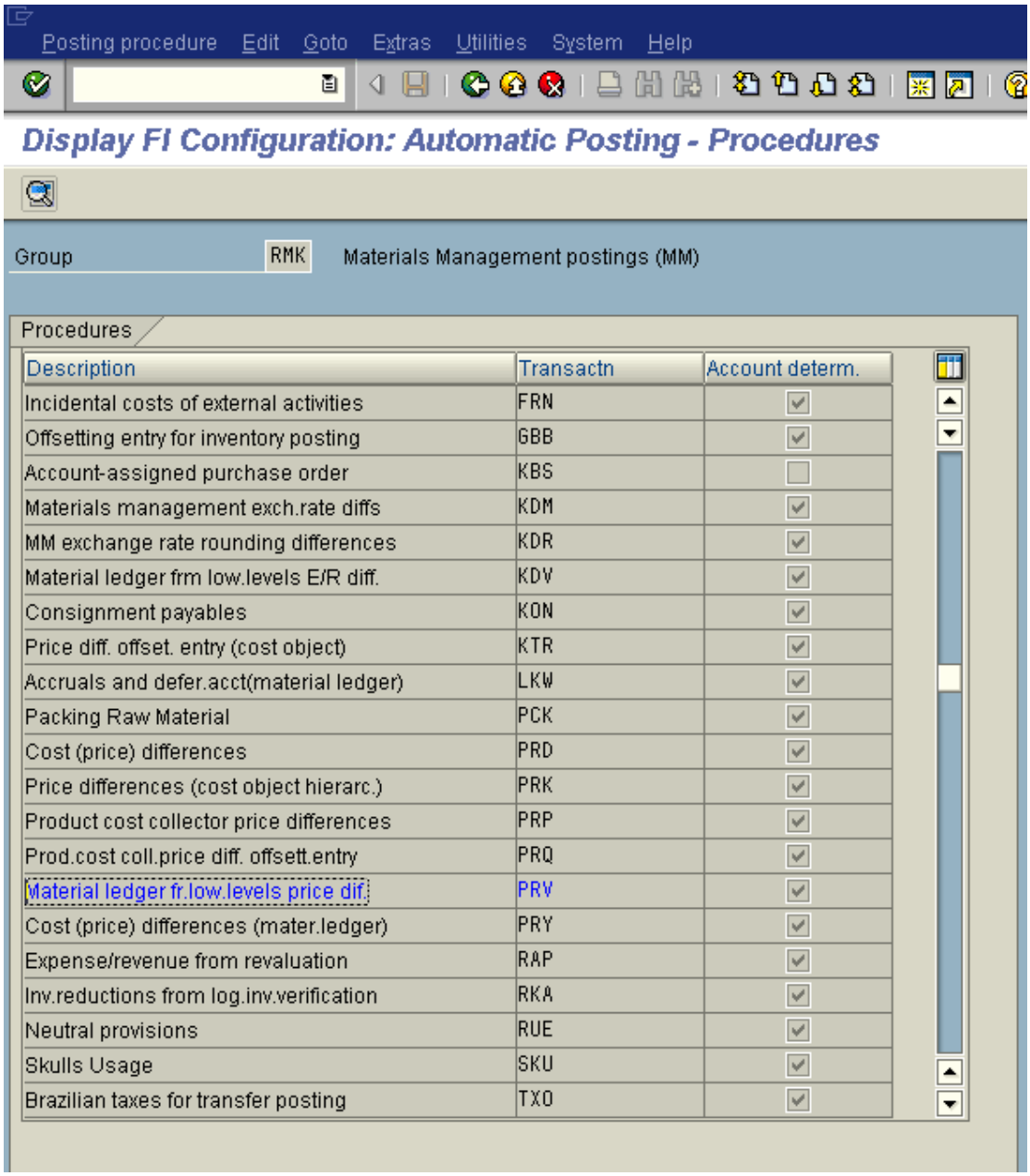
4. Production startup

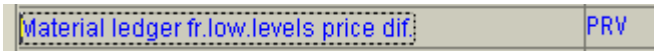
SAP Easy Access → Accounting → Controlling → Product Cost Controlling → Actual Costing/Material Ledger → Environment → Production Startup → CKMSTART - Set Valuation Areas as Productive

The above path is on the main application menu. Make sure that the currency settings are correct in Customizing for Financial Accounting and in the Material Ledger. After production startup of the material ledger, no changes in the currencies, currency types or material ledger types are allowed.

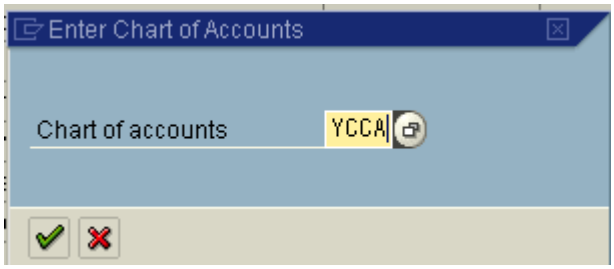
We need to run this transaction before creating material masters in the plant for which material ledger is active. In our case 9100 plant

5. Customizing settings in OBYC

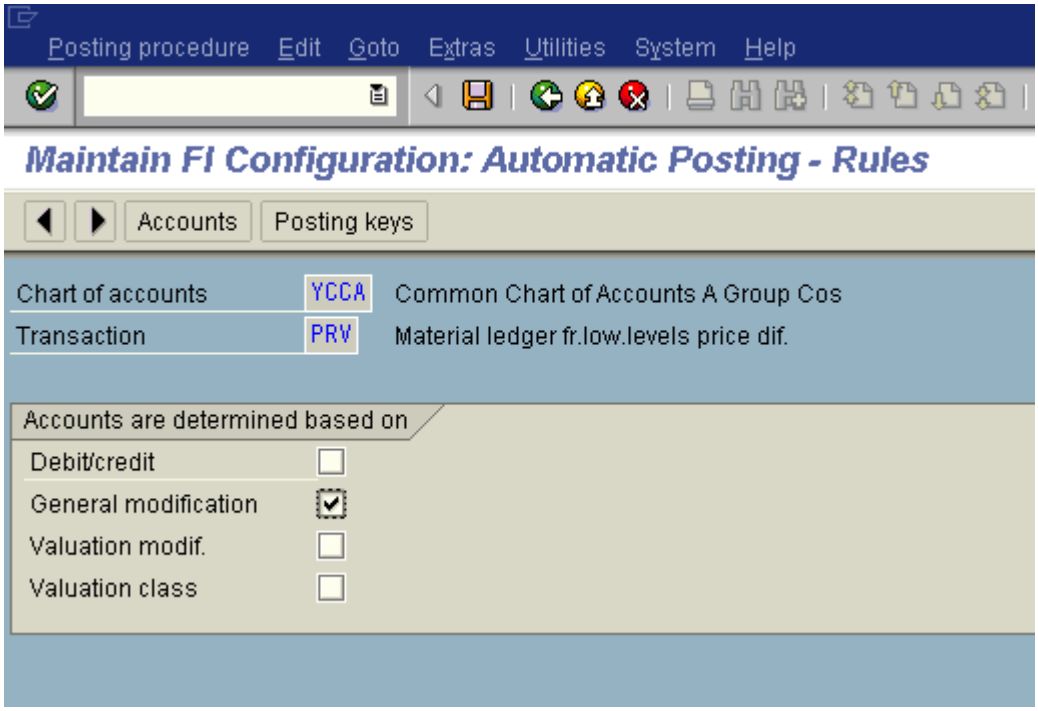


Double Click 

Update the following: -

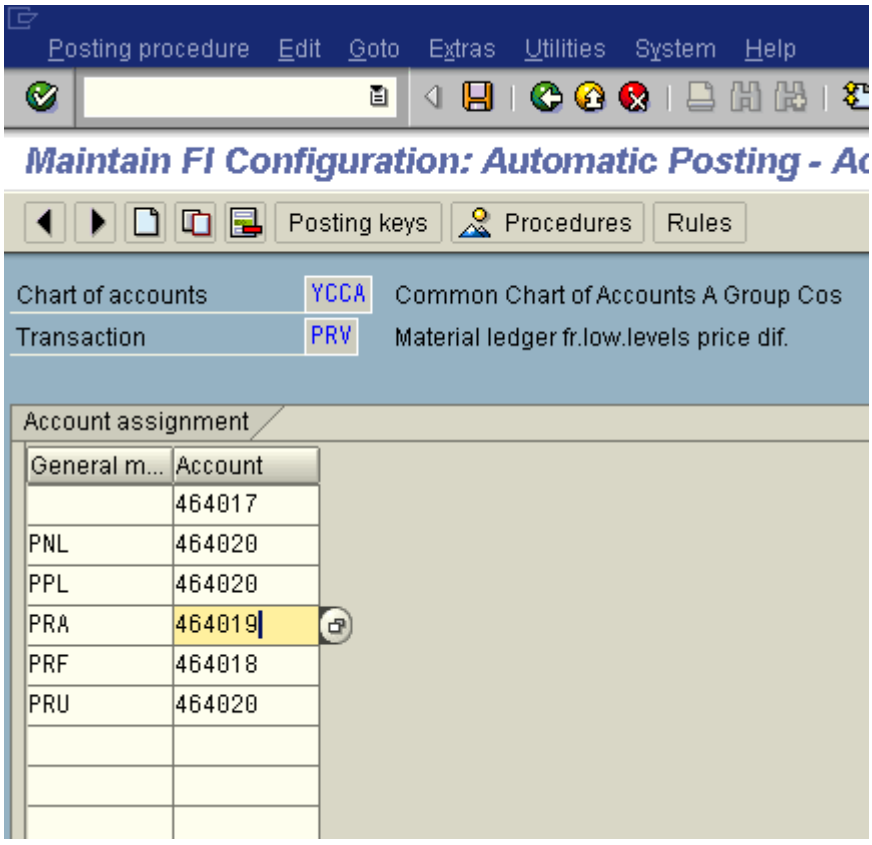


Update the following: -



Click on Save 

Update the following: -



PRA – For goods issue and other movts 201, 261

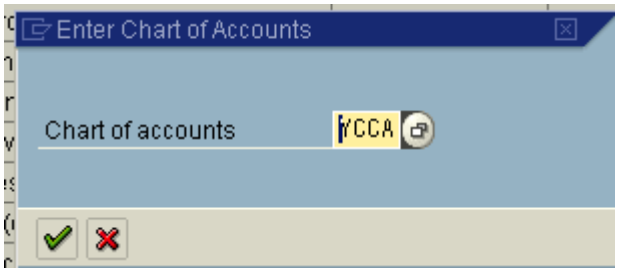
PRF – for goods receipt against production order and order settlement

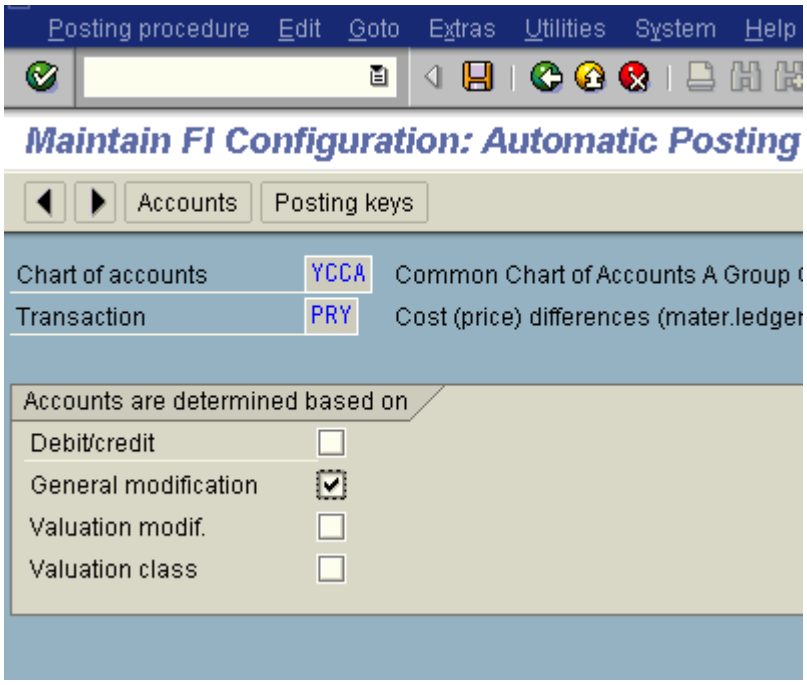
PRV – for 301 movt type (plant to plant)

Click on Save 

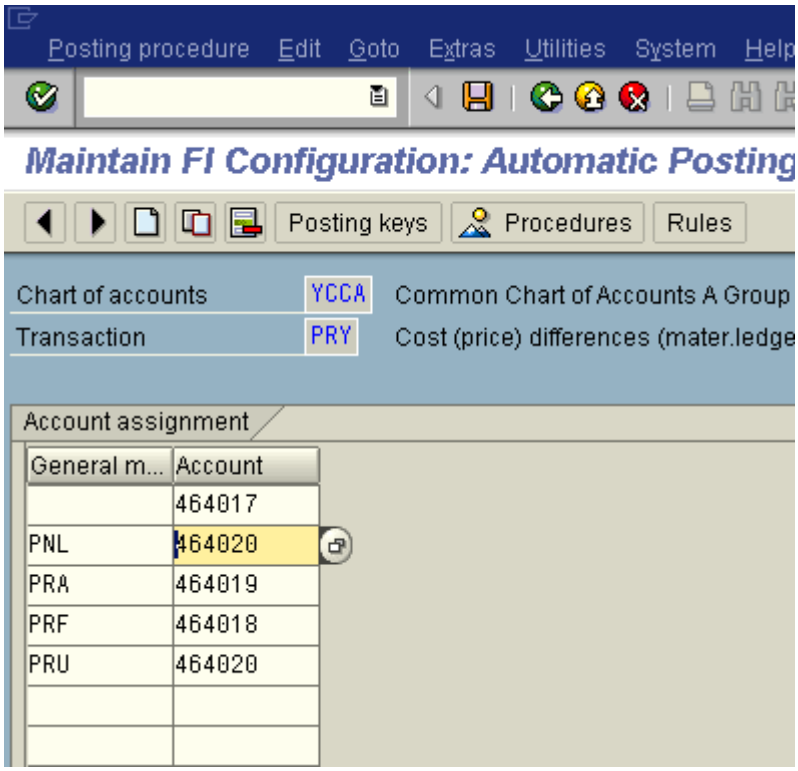
Double Click 

Update the following: -





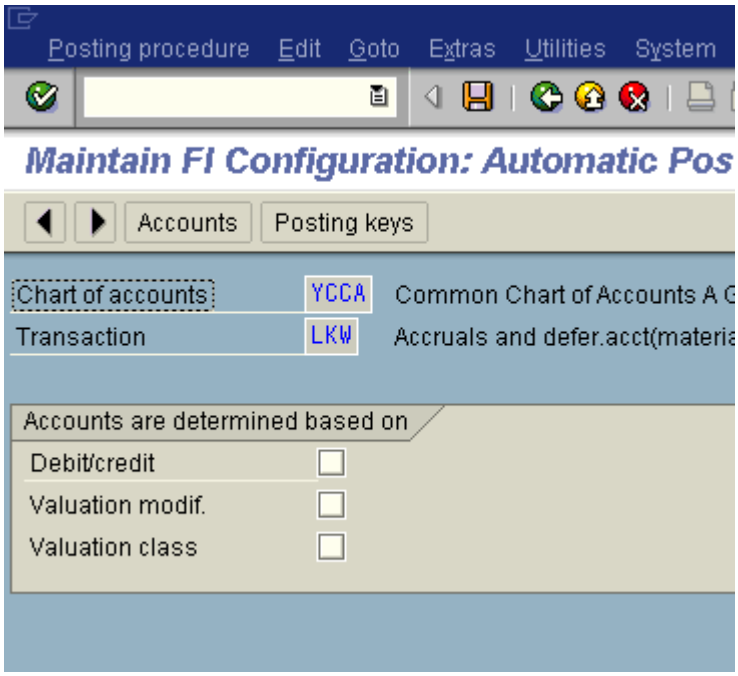
Click on Save 



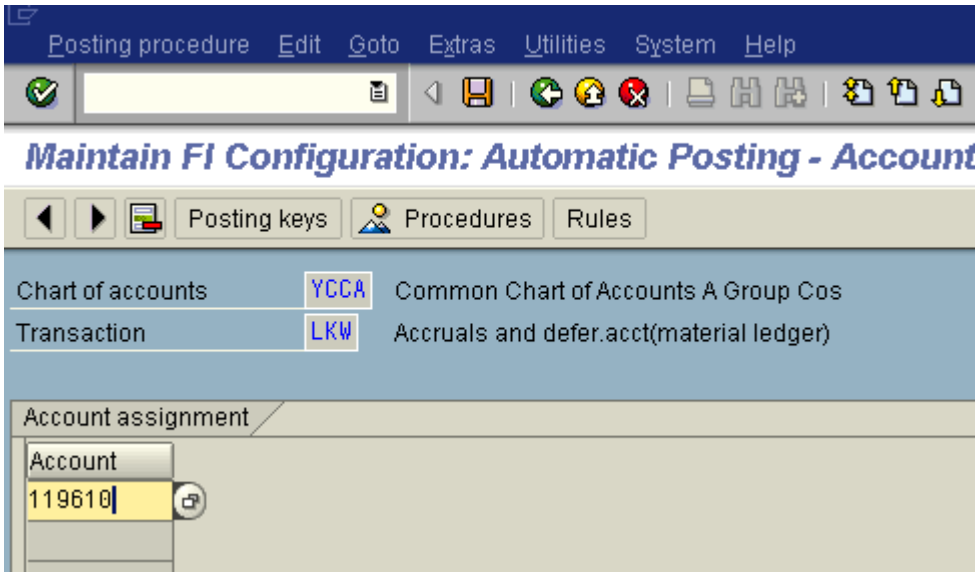
Click on Save 

LKW is required in case we decide not to revalue stock and only make a provision in the balance sheet. Here we specify the balance sheet provision account for stock revaluation.

Double Click 



Click on Save 



That's it then, for Material Ledger configuration.