

I calculate the Inventory valuation (Material ledger)

Domain: Costing

Responsibility area: Perform product costing monthly closing-ML

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Scope



WW

ERP

PF2

Frequency

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Inventory valuation (Material ledger)
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1. Objective and Scope

1.1. Objective of this Operation

The objective of this operation is to guarantee that all costs posted in Cost Centers are allocated correctly to the final PL of the respective company.

1.2. Scope

This procedure is applied to all companies WW.

2. Definitions

See [Finance - Glossary](#)

3. Tasks description

3.1. I verify that the previous dependent steps have been performed

Confirm that Product Costing is successfully completed.

3.2. I launch the calculation of Inventory valuation

All the finished and semi-finished goods are preliminary valued at standard costs during the month. Consequently, at the end of the period, it is necessary to run Material Ledger, in order to correct the standard price, calculating an actual price for each material, based on all the actual costs for that specific period. This actual price is called "periodic price unit" and can be used to revalue the material stock for the mentioned 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 products.

Material Ledger is activated at company level but its use can be limited by plant or by article. So, if one plant is customized with ML, all the articles in this plant will have material ledger postings but with a different importance depending if the article is included in the end of the month procedure or not.

After the run of Material Ledger, all the inventory stocks are revaluated at actual prices and actual production cost of the period.

The transaction is composed of 5 flow steps which have to be launched in a sequential way and ends with the post closing step.

For WP2 companies, Material Ledger is performed only for Brazil and South Korea, due to fiscal purposes and for that reason the postings are done in local accounts.

In case of FI accounts closed please bear in mind that information in MM might be impacted (CKM3 information). In case this occurred please refresh cockpit to have the most updated status for the materials.

As action, open FI period, re-run post closing step and refresh cockpit again.

If accounts are not opened and material ledger is not refreshed, re-run ML cockpit will be kept in error, originating problems in the following period.

3.3. I check that there are no errors in Material ledger

Check the log of each step processed in CKMLCP to see if there are errors, even with all the status green.

Besides the errors that can appear in the log of each step, above you can find some of the possible errors that we can find during the run of Material Ledger:

- Single Level Price Determination



"You cannot perform price determination in period XXX/YYYY"

This error happens because we are creating a Costing Run for future periods and, so, we have to correct the period.

Or else, if we are in the actual period, it means that the Material Ledger wasn't performed for the previous period and, in that case, we have to check the reason for that and, if necessary, contact locals.



You cannot perform price determination in period 011 / 2009



"Carry out period-end closing for material XXXXX in the previous period"

In this case, there is an inconsistency in the master data of material 32690 (Plant RBAE). This material is marked with "Price Determination: 3 Single-/multi-level" and "Price Control: S Standard price" (transaction MM03 – Accounting 1). This means that this material has to be integrated on the Material Ledger for the current month. However, as it wasn't included on the previous one, it's generating an error.

In these cases, we have to check with SU MAC Team if the mentioned material should be included or not on ML for the closing month.

After, we have to re-start the ML for the closing month.

Exc...	AppAr	MsgNo	zNum...	Message text	Material	Val. type	S	Plant	MTyp	Level	Cycle no.
	C+	805	1	Carry out period-end closing for material 32690 in the previous period	32690			RBAE	Z700		
			1								
			1								

• Multilevel Price Determination



"Periodic Unit Price of the material will be negative"

Differences were collected in the period to be settled and, after the recalculation, a statistical periodic unit price has been calculated with a negative price.

To correct this, we must check if all production orders are settled, and settle the ones that still remain with amount. After having all the production order settled, if we remain with the same error, we need to exclude the mentioned material from the multi-level parameters:

Exc...	AppAr	MsgNo	zNum...	Message Text	Material	Val. type	S	Plant	MTyp	Level	Cycle N...
	C+	723	4	Periodic unit price of the material will be negative	1055912			CCP	YYFP	1	1
			4								
			4								

Maintain Variant: Report SAPRCKMLMV_RUN_MLEVEL_SETTLE, Variant 0000000

Selection Options

Postprocessing Options

Material 1055912

Plant Do not select: Equal to to

Valuation type to

Costing Level to

Treating Materials Already Processed

☒ Process Again ☐ Do not process



"The actual price for XXXX could not be determined"

To solve we need to go to transaction KBK6 and manually change the actual price for the cost center and activity type in error:

In order to not have a variance, we just copy the amount that we have in column VarPlanPriceArea and paste it to column **FxdActPriceArea**.

After we must repeat this step (Multilevel price determination) for ML.

Exc...	AppAr	MsgNo	Num...	Message Text	Material	Val. type	S	Plant	MTyp	Level	Cycle N...
	CKMLLA	102	1	The actual price for P232200010/P2M1BP could not be determined	1030404			CCP	YYIM	2	
	CKMLLA	102	1	The actual price for P232200010/P2M6MQ could not be determined	1030522			CCP	YYIM	2	
	CKMLLA	102	1	The actual price for P232200020/P2M6V0 could not be determined	1006458			CCP	YYIM	2	

Cost Centers Manual Actual Price Display: Overview Screen

Version	8	Plan/Act - Version	
Period	7	To	7
Fiscal Year	2009		
Cost Center	P232300010	UP2	Unité de product

Activity	FixdActPriceArea	VarActPriceArea	C	Unit	Actual Price	API	FixdPlanPriceArea	VarPlanPriceArea	Unit	Plan Price	PI		
P2M5VR	78,79			0,00	EUR	00001	5	78,79		0,00	EUR	00001	1

• Post Closing

! "Material XXXXX in valuation area YYYY locked"

Someone is using the material at the same time that we are running Material Ledger. We have to wait until that person leaves the material and re-run this step for the ML.

Remark: This error can also happen on other steps of Material Ledger.

Exc...	AppAr	MsgNo	Num...	Message text	Material	Val. type	S	Plant	MTyp	Level	Cycle no
	C+	710	1	Material 37140 PRODUCED in valuation area RBAE locked: price deter...	37140	PROD...		RBAE	Z700		
	C+	710	1	Material 36975 in valuation area RBAE locked: price deter. not possible	36975			RBAE	Z707	2	
			2								
			2								

! "Period XXX/YYYY is not open for account type M and G/L XXXXXXXXXXXX"

The period is not open.

Go to transaction OB52, open the necessary account type and G/L account and re-run the step.

Exc...	AppAr	MsgNo	Num...	Message text	Material	Val. type	S	Plant	MTyp	Level	Cycle no
	F5	286	21	Period 007/2009 is not open for account type M and G/L 2000010000							
			21								
			21								

! "Account determination for entry COCA LKW not possible"

When choosing the parameters selection, the option "Revalue Material" was not flagged, causing this debit credit inconsistency.

In order to correct this error we have to reverse ML and re-execute the last step flagging the correct fields.

Exc...	AppAr	MsgNo	Σ Num...	Message text	Material	Val. type	S	Plant	MTyp	Level	Cycle no.
	M8	147	48	Account determination for entry COCA LKW not possible							
	F5	846	1	Debit/credit indicator is inconsistent							
	F5	846	1	Debit/credit indicator is inconsistent							
	F5	846	1	Debit/credit indicator is inconsistent							
			51								
			51								



"Maximum number of items in FI reached"

The maximum number of items for a FI document has been exceeded.

To correct this error we have to change the field "No. of Materials in ML Doc." from 50 to 1:

No. of materials in ML doc.

Exc...	AppAr	MsgNo	Number	Message Text	Material	Val. type	S	Plant	MTyp	Level	Cycle N.
	F5	727	5	Maximum number of items in FI reached							
			5								
			5								

3.4. I check the balance of cost center *843*

With the implementation of SPS it was created 1 technical CC *843*, which will receive amounts during all month (at each movement done in the material), registered with the price of the respective material.

At the end of the month, with ML and Integrated Margin, the material price is updated and this is also posted in the same CC *843*.

This means that this CC will collect all the price differences of each material, and that it should be balanced after running the ML and IM, and should remain only with a small amount, that will then be allocated to value field D43 with a cycle.

In order to check the balance, it's important to understand that, in the subcontracting flows, the goods issue and goods receipt will also generate posting into this CC. However, they are not considered a ML variance, so the relevant cost elements should be excluded by the way of filtering in report layout.

There is a specific layout already created in KSB1 (/SPS VAR) that can be used.

Also it's recommended to set the "Maximum No. of Hits" from 5000 (which is the one by default) to 999999999:

Display Actual Cost Line Items for Cost Centers : Initial Screen

 Further Selection Criteria...

Cost Center to 

or

Cost Center Group

Cost Element to 

or

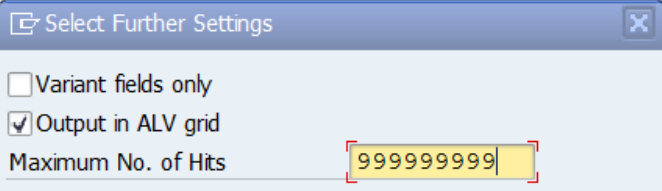
Cost Element Group

Posting Data

Posting Date to

Settings

Layout 3S-lineitems



☐ Variant fields only

☒ Output in ALV grid

Maximum No. of Hits

In case this CC is not balanced (or with a threshold amount agreed with the controllers), it must be analyzed.

There are several reasons for the unbalanced amount, and for some of them it might be necessary to re-run ML.

We can find [here](#) the details of how to make this analysis.

Besides the tips mentioned in the presentation above, we can also try to check also the movements of the material in transaction MB51 and see if we find something outside of the ordinary (can be compared with other material) - eg. movement types not used in the past, ...

Exception for Sp.Pol companies:

The amount unbalanced in CC *843, after the analysis and in case it's supposed to be allocated to PL, must be allocated to the respective materials.

The instructions can be found [here](#) (please note that there 2 to sheets with instructions, depending on the companies)

3.5. I inform the person in charge of product costing that Material ledger is completed

After checking that Material Ledger is finished and CC *843* is OK, an information message should be sent to controllers.



• Costing Run Deletion

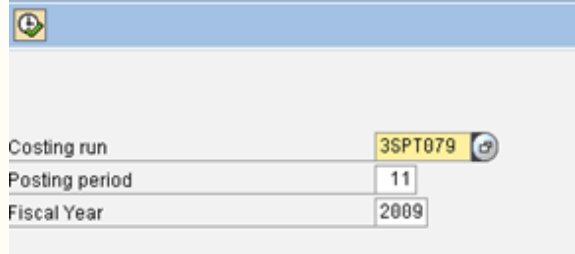
STEP 1

This transaction can only be executed if the Costing Run wasn't processed yet. Otherwise, the message "No authorization to delete the log" will be retrieved.

So, if the Costing Run wasn't processed yet, and when the naming of the Costing Run was not correctly chosen or when the plant selection was mistaken, we can delete it.

Insert the posting period, the fiscal year and the name of the costing run that you want to delete. After, press .

Delete a Costing Run in Actual Costing



Costing run 3SPT079

Posting period 11

Fiscal Year 2009

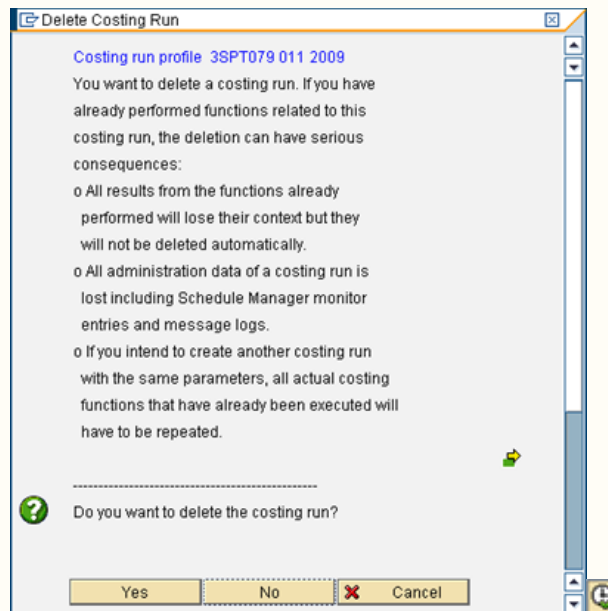
STEP 2

The system issues a warning about the consequences of this deletion.

- Click

Yes

The costing run is deleted and the system indicates from which table was the data deleted from.



• Reverse Material Ledger

The reverse of the Material Ledger is performed just on the last step, the Post Closing.

In this case:

1. Mark the processing type "Reverse"
2. Mark the parameter "Revaluate" (for WP2, this is not necessary)
3. Delete flag "Background processing"
4. Delete flag "Test run"
5. Mark "Save log"
6. Execute the step Post Closing
7. Refresh Data with Direct Processing

• Material status check

STEP 1

Enter the transaction
Z1K_MLSTATUS.

In the field Valuation Area, add the plants considered in the costing run.

Check on CKMLCP the plants used for a specific costing run and copy them into Z1K_MLSTATUS.

Plant	Plant name	CoCode	Co.Code
JEC	SLC-BE /JEMEPPPE (FEX+SU)	0292	SOLVIC (BE)
JECE	SLC-BE /JEMEPPPE (UE)	0292	SOLVIC (BE)
JECV	SLC-BE /JEMEPPPE (DCE-VC)	0292	SOLVIC (BE)

STEP 2

In the report result, status 70 is "Closing entry performed", so it's OK.

plant material	ML valuation	SP docum.	ST material text	Ending Stock	Receipts	Consumptions	UM
JECV 180465	70	PVC 2648C *2	Callioo 400000 FI	200,000	0,000	0,000	KG
JECV 180466	70	PVC 2712C1 *2	Callioo 400000 P	0,000	0,000	0,000	KG
JECV 181551	70	PVC 2678C1 LINC *2	Callioo 4000	5,500,000	0,000	0,000	KG
JECV 182522	70	PVC 5578B LINC *2	Callioo 400000	2,000,000	0,000	0,000	KG
JECV 182533	70	PVC 5608A *2	Callioo 400000 FI	0,000	0,000	0,000	KG
JECV 182547	70	PVC 2758C1 LINC *2	S15 LPE FI	110,350,000	54,975,000	2,500,000	KG
JECV 184080	70	PVC BCD00001 LINC *2	Callioo 40	31,000,000	26,000,000	22,000,000	KG
JECV 184254	70	PVC 5610F *2	Callioo 400000 P	4,000,000	0,000	22,000,000	KG
JECV 185237	70	PVC 5578B *2	Callioo 400000 FI	17,600,000	0,000	0,000	KG
JECV 185007	70	PVC 1728A *2	S15 27A FI 500000	0,000	0,000	0,000	KG
JECV 188187	70	PVC BCD00001 *2	Callioo 400000	0,000	2,000,000	2,000,000	KG
JECV 190566	70	PVC 5608P01 *2	S15 39A FI 175007	42,825,000	0,000	400,000	KG
JECV 190568	70	PVC 5608C01 *2	S15 39A FI 175007	79,100,000	1,775,000	1,775,000	KG

STEP 3

In the bottom of the screen you will find the description of each status.

If code 05 appears it means that the article was not touched in any transaction

If code 60 appears it means that ML was reversed but missing the relaunch.

When executed the report Z1K_MLSTATUS after Material Ledger, the expected status should be 01, 05 and 70.

- 00 - Not defined
- 01 - New objects
- 05 - Period Without Stock Opened
- 10 - Period opened
- 20 - Price change completed
- 30 - Qties & values entered
- 31 - Values entered
- 40 - Price det. single-level
- 50 - Price det. multi-level
- 60 - Closing entry reversed
- 70 - Closing entry performed

- **ML Posting check**

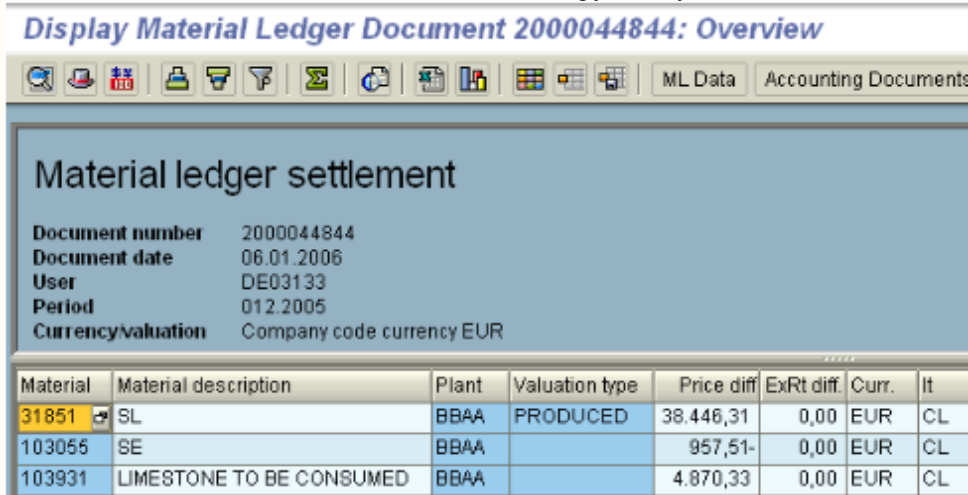
The documents posted by Material Ledger are always two: one with document type WE and another one with ML.

These are only posted in FI, MM and CO-PCA, and they correct the cost of goods sold (COGS) against stock accounts.

1. Transaction CKMB

In transaction CKMB, enter the document number and the running year and you will be able to see the Material Ledger posting by material

Display Material Ledger Document 2000044844: Overview



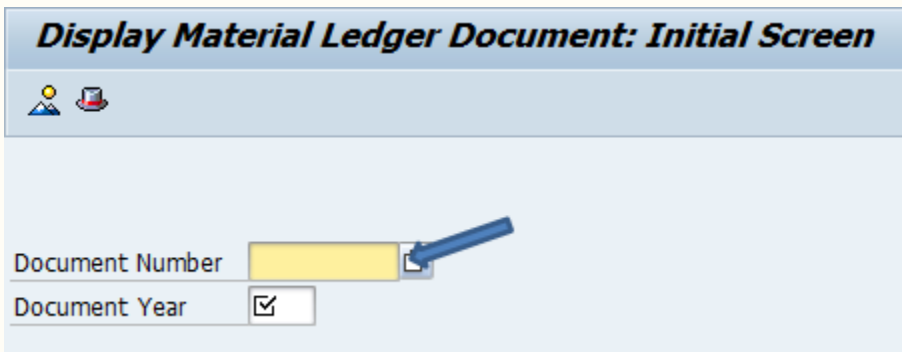
The screenshot shows the SAP CKMB Overview screen for document 2000044844. It includes a toolbar with various icons and a table of material ledger settlement data.

Material	Material description	Plant	Valuation type	Price diff	ExRt diff	Curr.	It
31851	SL	BBAA	PRODUCED	38.446,31	0,00	EUR	CL
103055	SE	BBAA		957,51-	0,00	EUR	CL
103931	LIMESTONE TO BE CONSUMED	BBAA		4.870,33	0,00	EUR	CL

2. Transaction CKMS

In case of not having accessed immediately CKMB after step 5 of ML cockpit run (otherwise you will not have the document number), in order to assure the entry of ML Post Closing enter in CKMB, please select the match code

Display Material Ledger Document: Initial Screen



The screenshot shows the SAP CKMS Initial Screen. It has two input fields: 'Document Number' and 'Document Year'. The 'Document Number' field is highlighted with a yellow background and a blue arrow pointing to it. The 'Document Year' field has a checkmark icon next to it.

You will enter in CKMS transaction. Select the plants codification included in CKMLCP – Assigned Plants.

Searching for Material Ledger Documents

Activity Type Selection

Material to

Plant ☒ to

Valuation Type to

Sales Document to

Item (SD) to

WBS Element to

Scope of list

User name to

ML transaction type to

Posting Year to

Posting period to

Posting Date to

Document Number to

Document Year to

Errors with PrDeterm. to

Settings

Maximum No. of Hits

☒ Documents

☐ Document items for each mat.

Note: It's normal that the transaction takes some time to run.

Create a filter by the document number codification 2000*:

Searching for Material Ledger Documents 31 Hits

ML transaction type Year DocumentNo User Entered on Time Revrse

ML transaction type	Year	DocumentNo	User	Entered on	Time	Revrse
Material ledger settlement	2009	2000160271	IT78652	09.01.2009	10:51:16	

Determine values for filter criteria

Select

Document number to

Searching for Material Ledger Documents 31 Hits

ML transaction type Year DocumentNo User Entered on Time Revrse

ML transaction type	Year	DocumentNo	User	Entered on	Time	Revrse
Material ledger settlement	2009	2000159224	PT400068	05.01.2009	16:37:53	
		2000159223	PT400068		16:37:50	
		2000159222	PT400068		16:37:46	

We will be able to access the Post Closing documents.

3. Transaction CKMLCP

Staying in the costing run, there's also the possibility to look to the closing results.

Costing Cockpit: Actual Costing - Display

Costing run ML3471

Period 3 2016

ML3471 03/2016

General Data

Process

Costing Results

Click on the Costing Results option and you will have an overview:

View

Overview: Costing Run

Hierarchy

CstngRun / plant / mat.type / val.class / origin group

Results (Costing Run Overview)		Short Text	Num...	S	M	R	B
ML3471	31.03.2016	ML3471 03/2016	115				
839C		SCBF-FR /SOGEMA SETE	1				
DOCA		SCBF-FR /DOMBASLE P...	16				
DOCB		SCBF-FR /DOMBASLE P...	98				

Select a plant on the top node (corresponds to the company with all assigned plants, treated in the costing run)

Double click on the selected object and an additional frame appears

View

Overview: Costing Run

Hierarchy

CstngRun / plant / mat.type / val.class / origin group

Results (Costing Run Overview)		Short Text	Num...	S	M	R	B	Display Material List				
▼ ML3471	31.03.2016	ML3471 03/2016	115					OS	Plant	Material	Valuation T	Description
▶ 839C		SCBF-FR /SOGEMA SETE	1						DOCB	10075	PRODUCED	BIR 81-EX "D
▶ DOCA		SCBF-FR /DOMBASLE P...	16						DOCB	31867	PRODUCED	BIR TEC 0/50
▶ DOCB		SCBF-FR /DOMBASLE P...	98						DOCB	31871	PRODUCED	BIR TEC 13/27
									DOCB	31871	PRODUCED	BIR TEC 13/27
									DOCB	31871	PRODUCED	BIR TEC 13/27
									DOCB	32041		BIR 0/10 @INT
									DOCB	32042		BIR 0/13 @INT
									DOCB	32043		BIR 0/50 @INT
									DOCB	32044		BIR 13/27 @INT
									DOCB	32045		BIR 13/50 @INT
									DOCB	32046		BIR 27/50 @INT
									DOCB	32438		Na2CO3 PUR @INT
									DOCB	32583		BIR CDX 0/10 @INT

On the right side, open the selection button , click on Choose Layout and select a layout (e.g. /TADFSTOCK)

The right side will change and show the costing results by material and the total by plant or by other chosen level

4. Transaction CKM3 - material price analysis for one material

Material Price Analysis

Material: H2O2 CC 60 @
Plant: ☒ SCHM-DE /BERNBURG (H2O
Valuation type:
☐ Sales order stock/project stock
Period/year: 8 2005 ◀ ▶ Period status
Curr./valuation: Company code currency
View: Price determination structure 
☐ Price and inventory values

Enter the material number, plant, valuation type (blank, produced, purchased) and analysis period

Choose view (usual ' price determination structure')

Click on refresh

See below the stock development for the selected material in the chosen period

In the bottom line see the period-end inventory revaluated in the material ledger at actual cost (column: ActualVal), the new periodic unit price, the preliminary value (stock quantity * standard price in column: PrelimVal) and the single and/or multi-level price differences, which are finally posted and lead to adjustments in inventories at the end of the period.

Category	Quantity	Unit	ActualVal.	Price	Currency	PrelimVal	S-L diff.	Mul
Beginning inventory	1.384.490,000	1KG	295.621,83	213,52	EUR	307.578,28	656,65	12.61
Receipts	4.780.683,000	1KG	1.128.388,82	236,03	EUR	1.062.076,54	835,27	65.4
Cumulative inventory	6.165.173,000	1KG	1.424.010,65	230,98	EUR	1.369.654,82	1.491,92	52.8
Consumption	5.207.533,000	1KG	1.202.818,21	230,98	EUR	1.156.905,51	1.260,18	44.6
Ending inventory	957.640,000	1KG	221.192,44	230,98	EUR	212.749,31	231,74	8.2

End of document.