

SAP S/4 HANA

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Material Ledger

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- **Objective Of Material Ledger.**
- **Why Material Ledger is mandatory in SAP S/4 HANA**

Material Ledger

Example Raw Material

Raw Material

Standard Cost USD

Without Material Ledger

Debit Inventory

Credit GR/IR offset

DR/CR PPV / Ex Diff

Balance Sheet

Asset Inventory

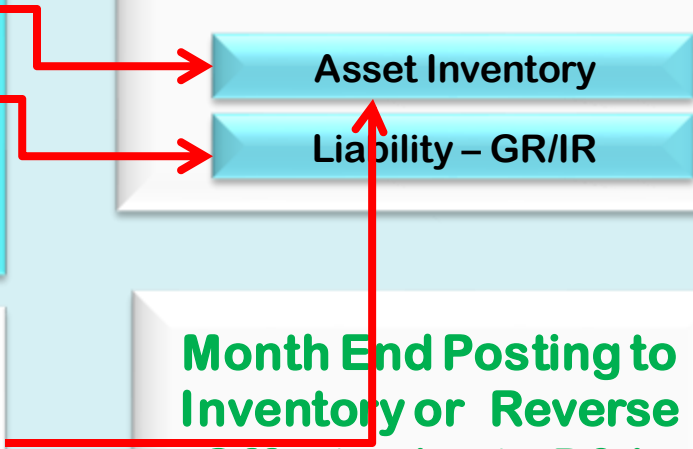
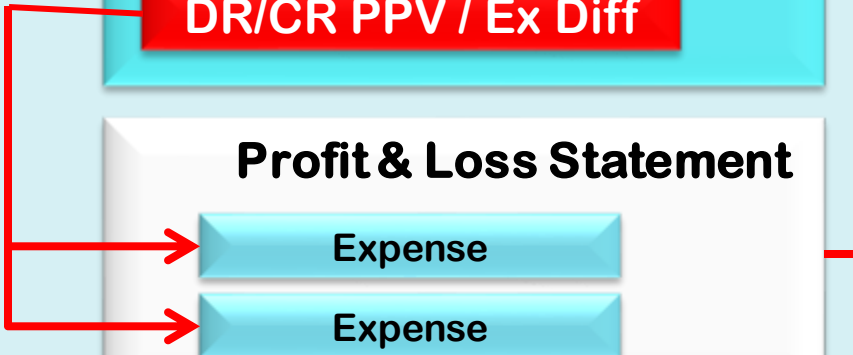
Liability - GR/IR

Profit & Loss Statement

Expense

Expense

Month End Posting to Inventory or Reverse Offset value to P&L (PRY/CRB/LKW)



Material Ledger

Example Raw Material

Raw Material

Standard Cost USD

With Material Ledger

Debit Inventory

Credit GR/IR offset

DR/CR PPV / Ex Diff

Balance Sheet

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Profit & Loss Statement

Expense

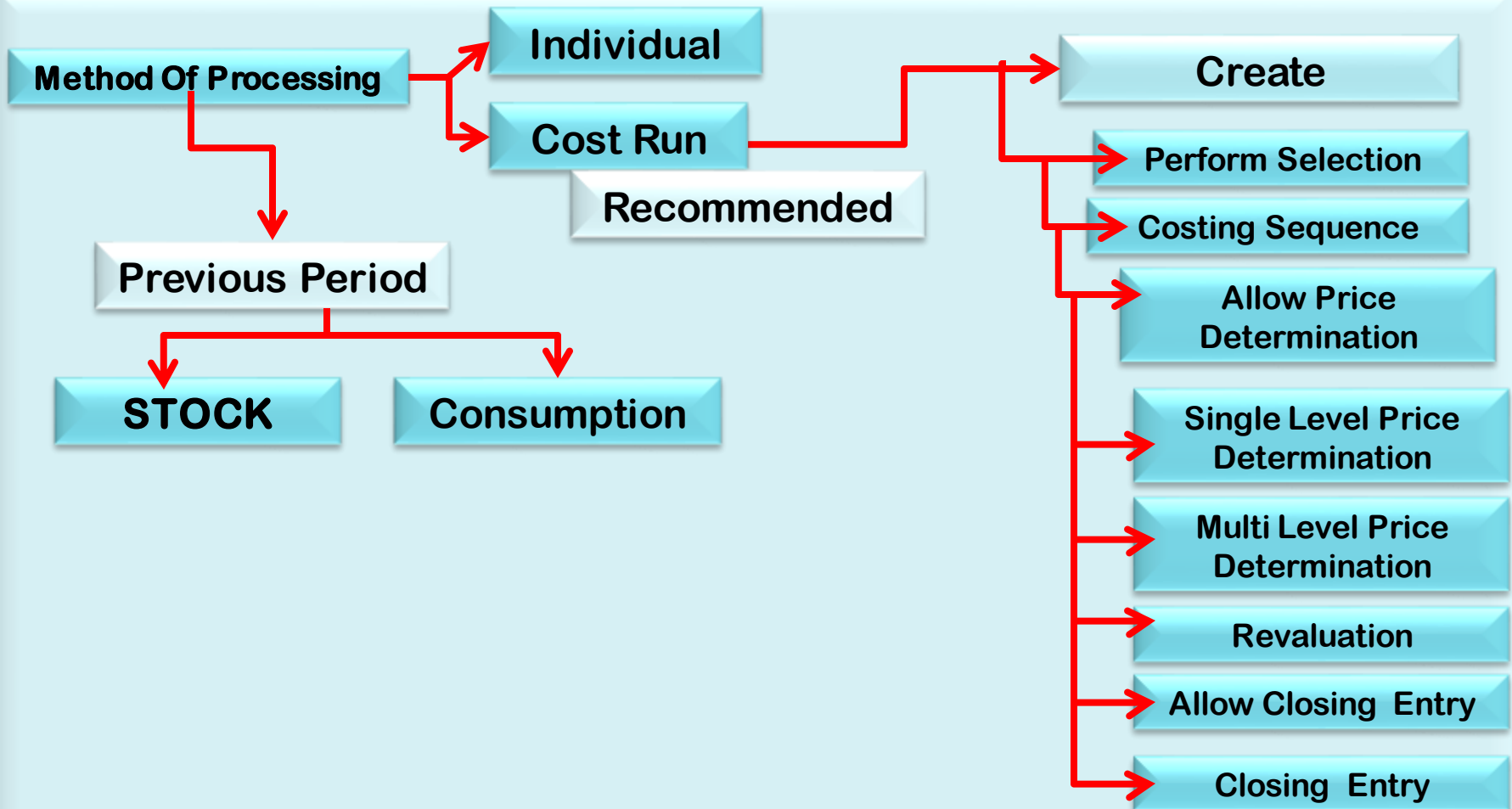
Expense

Month End Wrong
Inventory Value with
Gain or Loss



Material Ledger

Periodic Actual Costing



Material Ledger

- **What is material ledger?**

Material Ledger (ML) is a most useful and important tool with in SAP ERP Software. SAP making continuous improvement in Material Ledger.

Material ledger is classified as a sub-ledger of General Ledger (G/L) accounts. It is an important power full tool is cost management. Material ledger is solution To perform actual costing. There are two traditional methods of valuation of Material.

1. **Standard Costing:** Standard costing an effective method of obtaining stable price of a material which can be benchmark for any price fluctuation. That price variance posted in P& L account if the all product not sale. Price variance effect the cost of product if that products remains long time in your stock.
2. **Moving Average Costing:** Moving average price is a method which is capable to keep your material cost up to date. Because in present era the cost of material having fluctuation. Every time business is perform a goods or invoice receipt. The moving average price is updated based on the total inventory value in which the latest purchase prices is consider and dividing it by the total inventory quantity,. One draw back of moving average costing is that the new price is only posted in back of inventory. Existing inventory will allocated back to inventory. And remainder will be posted to the price variance account. If we looked at moving average price of the material it will not represent the true current price of material.

Objectives Of Material Ledger

The objective of material ledger are

1. Inventory valuation in up to three currencies and valuation method.
2. Performing actual costing.

The material ledger takes the price variances that occur from inventory transactions and posted them back to inventories in order to value them at actual cost. It does while retaining cost is standard cost of the material as benchmark. We have option to reevaluate the current standard cost with the periodic unit price. Which is the actual cost of the material cost calculated by Material Ledger. The price determination with material ledger are of two types.

1. **Single level Price determination:** This take the price variance which occur for an individual material and roll them back into its ending inventory.
2. **Multi level Price Determination:** This takes the variance that occur for a lower level product for a lower level product example Raw Material. And roll them into proportion of consume quantity into a higher level product example finished product.

By using Material ledger revaluation of consumption can be complete and we can achieve actual cost of ending inventory of single or multilevel products and cost of sales. We can measure easily procurement processes according to Standard Costs.

Material Ledger SAP S/4 HANA v/s SAP ERP 6.0

The objective of material ledger are

1. Inventory valuation in up to three currencies and valuation method.
2. Performing actual costing.

In SAP S/4 HANA activation of Material Ledger is mandatory. Material Ledger values inventory in multiple currencies. In SAP ERP traditionally a single currency values the inventory, While in SAP S/4 HANA Material Ledger allows valuation in two additional currencies. This is essential helpful to the global Companies which are evaluating their inventories in multiple currencies.

If an organization records inventory on its balance sheet, they need a sub ledger of sub ledger of inventory postings which provide more granular detail about Inventory transactions than General ledger postings As done with AP, AR, and fixed assets which are also sub ledger of the SAP General Ledger. The sub ledger inventory is existed in SAP ERP system in the form of inventory valuation tables XBEW(H). Such as EBEW, EBEWH, MBEW, MBEWH, OBEW, OBEWH, QBEW and QBEWH. SAP enhanced these tables in SAP S/4 HANA by introducing the Universal Journal.

SAP leveraged the existing functionality of Material Ledger to create a cohesive sub ledger for inventory valuation in SAP S/4 HANA.

Material Ledger SAP S/4 HANA v/s SAP ERP 6.0

The actual functionality of costing is still optional its depends upon the requirement of the companies. If any company not need to report their inventory and cost of sake at actual sales at actual cost don't need to activate this functionality.

SAP S/4 HANA offer a few new currencies options, but more important is SAP S/4 HANA offers new ways of evaluation Material Ledger data. Currency settings available in Universal Journal is integrated with Material Ledger.

Multiple currencies, or parallel currencies is a functionality that allows the companies to record transactions in more than one currencies for every transactions posted to FI. This parallel currency functionality has been extended to the Material Ledger for any inventory transactions, which can be viewed in Material Ledger reports.

In SAP ERP System, you can have one company code currency (local Currency one and up to two parallel currencies local currency 2 and local currency 3 in the FI module, We have the option of adopting the currencies in FI module, the CO module, or both or assigning currency types individually. The currencies are translated are based on the historical rates in the Material Master.

In SAP S/4 HANA, a key improvement that SAP has made with parallel currencies is to allow up to eight free definable currencies in the Universal Journal Table in addition to fixed)local and global currencies as follows:

Material Ledger SAP S/4 HANA v/s SAP ERP 6.0

Local : The company code currency

Global: The Controlling area currency

Freely defined: Up to eight currency types

“Freely defined” means that you can name the currencies any way that makes sense for your business and not rely on SAP’s predefined currency type names. Also, if creating these currencies for parallel ledger, you don’t need to base these currencies on the currency of the leading ledger(as is the case with an SAP ERP system)

Exchange rates should be maintained for these extra currencies and system will perform the real time currency translations of the postings in FI module (and related sub-modules) into these additional currencies.

Alternatively, we could specify that the translation is performed at the end of the period with the foreign currency valuation program. As a result, a company can present it’s financial and management reports to different stakeholders in different currencies, as needed.

In the ledger settings for a company code, you can configure additional currencies along with the local and global currency types by using transaction **FINSC_LEDGER**.

Material Ledger SAP S/4 HANA v/s SAP ERP 6.0

Even though eight additional currencies are allowed in the Universal Journal, only three currencies are allowed in the ML. Therefore, when defining the currencies in ML(which is based on the currencies of the leading ledger), you'll need to specify which additional currencies in the Universal Journal should be mapped to the ML. Also, all the valuation areas(plants) that belong to a company code should have the same currency type settings in the ML.

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Activate Material Ledger

Configuration

These configuration settings are sub divided in to three groups

1. **Prerequisite Settings** that have to be checked which delivered by SAP as part of standard delivery. The term check refers to these prerequisite.
2. **Setting Define by the customer** by the customer in the customer namespace, and customer specific. The system uses automation to request individual customer setting during the personalization process. These settings can be initial or can be reused from existing SAP ERP system.
3. **Additional Settings** that need to be made covered either by automation or manual configuration in the customer namespace.

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1. Enterprise Structure Define Valuation Class

T-Code: SPRO

IMG Screen → Enterprise Structure → Definition → Define Valuation Area

2 Option 1. Valuation area Plant Level 2. Valuation Area Company Code Level

→ Select Radio button of Valuation Area Plant Level it is mandatory

2. Activate Valuation Areas for Material Ledger

T-Code: OMX1

IMG Screen → Controlling → General Controlling → Multiple valuation approaches/

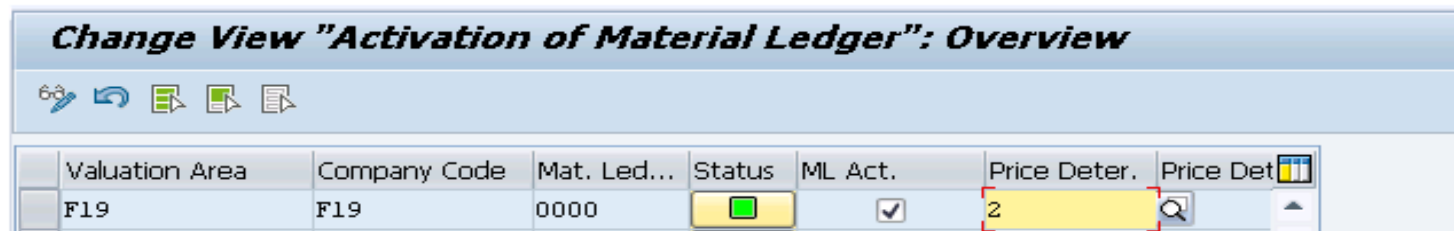
Transfer Prices → Basic Settings → Check Material ledger Settings → Activate



Valuation Areas for Material Ledger → Activate Material Ledger

→ On the change view of “Material Ledger Activation” overview screen make the settings

Click on save

Go to transaction omx1



Valuation Area	Company Code	Mat. Led...	Status	ML Act.	Price Deter.	Price Det.
F19	F19	0000		<input checked="" type="checkbox"/>	2	

3. Assign Currency Types to Material Ledger

T-Code: OMX2

IMG Screen → Controlling → General Controlling → Multiple Valuation

Approaches/Transfer Prices → Assign Currency types to Material Ledger Types

→ On the change view “Define Material Ledger Type” overview screen, choose new entries

Change View "Define material ledger type": Overview

Navigation: New Entries, Delete, Undo Change, Select All, Select Block, Deselect All, Configuration Help, Display, More

Dialog Structure:

- Define material ledger type (selected)
- Define individual characteristic

<input type="checkbox"/>	ML Type	CT from FI	CO CrcyTyp	Manual	Description
<input type="checkbox"/>	0000	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crcy Type/Val. 10
<input type="checkbox"/>	0001	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crcy type/Val. 10 30
<input type="checkbox"/>	9000	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crcy Type/Val. 10
<input type="checkbox"/>	9999	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crcy Type/Val. 10
<input type="checkbox"/>	ML14	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Material ledger for 1401
<input type="checkbox"/>	ML15	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ML for 1501
<input type="checkbox"/>	ML25	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Material ledger for 2507
<input type="checkbox"/>	Z001	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test

4. Assign Material Ledger type 0000 to Valuation Area

T-Code: OMX3

IMG Screen → Controlling → General Controlling → Multiple valuation approaches/

Transfer Prices → Basic Settings → Check Material ledger Settings →

Assign Material ledger type to Valuation Area

→ On the change view of “Assignment of Material Ledger types of Valuation Areas” overview screen choose new entries

Valuation Area

Material Ledger

Company Code

0000

Click on save

Scenario 1: New valuation area has been created in S/4HANA system

- It is required to activate Material Ledger via transactions OMX2, OMX3 and OMX1.
- Afterwards, it needs to be set productive via transaction CKMSTART.

Go to transaction OMX3

Valuation area	Company Code	Mat. ledger type	Status
F19	F19	0000	
		<input checked="" type="checkbox"/>	

5. Define Material Structure

T-Code: SPRO

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

On change view “Define Material update structure” overview screen, choose New Entries

MUS Name

0001 Standard

Click on Save

Select the new entry and in left pane, double click Material Update Structure.

On the change view “Maintain material update structure” overview screen, choose New Entries make following settings

PC At MTG Cat

B+ Blank ZU

V+ Blank VN

Click on save

6. Assign Material Update Structure 0001 to a Valuation Area

T-Code: SPRO

IMG Screen → Controlling → Product Cost Controlling – Actual Costing/ Material Ledger → Assign Material Update Structure to a valuation area

On change view “Assign Material update structure” overview screen, choose New Entries

Valuation Area **Material Update Structure**

Company code 0001

Click on Save

7. Maintain Number Ranges For Material Ledger Documents

T-Code: SPRO

IMG Screen → Material Management → Valuation and Account Assignment → Maintain Number Ranges for Material ledger documents

On the Range Maintenance Material Ledger doc screen,

Number Range	From No	To No	External
01	1000000000	1999999999	No
02	3000000000	3999999999	No
03	6000000000	6999999999	No

Click on Save

Choose Back (F3) Choose change NR Status

Number Range	NR Status
01	0
02	0
03	0

Click on save

8. Run Reports

SAPRCKM_OBLIGATORY_SETTINGS

T-Code: SE38

On ABAP Editor screen, in the program field, enter
SAPRCKA_OBLIGATORY_SETTINGS and choose execute

- New Entries
- Delete
- Undo Change
- Select All
- Select Block
- Deselect All
- Configuration Help
-
- Display
- More ▾

Dialog Structure

- ▾ Define material ledger type
 - ▢ Define individual characteristic

<input type="checkbox"/>	ML Type	CT from FI	CO CrcyTyp	Manual	Description
<input type="checkbox"/>	0000	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crcy Type/Val. 10
<input type="checkbox"/>	0001	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crcy type/val. 10 30
<input type="checkbox"/>	9000	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crcy Type/Val. 10
<input type="checkbox"/>	9999	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Crcy Type/Val. 10
<input type="checkbox"/>	ML14	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Material ledger for 1401
<input type="checkbox"/>	ML15	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ML for 1501
<input type="checkbox"/>	ML25	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Material ledger for 2507
<input type="checkbox"/>	Z001	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test

- New Entries
- Delete
- Undo Change
- Select All
- Select Block



Dialog Structure

- ✓ ▢ Define material ledger type
 - ▢ Define individual characteristic

Mat. Ledger Type:

<input type="checkbox"/>	Crcy type	Short Descript.
<input type="checkbox"/>	10	Company code currency
<input type="checkbox"/>	30	Group currency
<input type="checkbox"/>		

<input type="checkbox"/>	Valuation area	Company Code	Mat. ledger type	Status
<input type="checkbox"/>	FN19	FN19	0000	
<input type="checkbox"/>	HYDP	1401	ML14	
<input type="checkbox"/>	IND6	2050	9000	
<input type="checkbox"/>	MO42	1610	0001	
<input type="checkbox"/>	R100	R100	9000	
<input type="checkbox"/>	RA01	RA10	0001	
<input type="checkbox"/>	RF19	1710	0001	
<input type="checkbox"/>	RN19	RN19	0001	

Valuation Area	Company Code	Mat...	Status	MLAct.	Price Deter.	Price Det. Binding in Val Area
FN19	FN19	0000		<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>
HYDP	1401	ML14		<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>

Display <-> Change More ▾

<input type="checkbox"/>	...	Year	From No.	To Number	NR Status	Ext
<input type="checkbox"/>	01	9999	1000000000	1999999999	1000000259	<input type="checkbox"/>
<input type="checkbox"/>	02	9999	2000000000	2999999999	2000000019	<input type="checkbox"/>
<input type="checkbox"/>	03	9999	3000000000	3999999999	3000000059	<input type="checkbox"/>
<input type="checkbox"/>	04	9999	4000000000	4999999999	0	<input type="checkbox"/>
<input type="checkbox"/>	05	9999	5000000000	5999999999	5000000009	<input type="checkbox"/>
<input type="checkbox"/>	06	9999	6000000000	6999999999	6000000009	<input type="checkbox"/>
<input type="checkbox"/>	07	9999	7000000000	7999999999	0	<input type="checkbox"/>
<input type="checkbox"/>	08	9999	8000000000	8999999999	0	<input type="checkbox"/>
<input type="checkbox"/>						
<input type="checkbox"/>						

Display <-> Change More ▾

<input type="checkbox"/>	...	Year	From No.	To Number	NR Status	Ext
<input type="checkbox"/>	01	2019	0000001000	0000001500	0	<input type="checkbox"/>
<input type="checkbox"/>						

8. Production Startup Material Ledger

In this activity execute the production startup for the Material Ledger

T-Code: CKMSTART

SAP Menu Screen →

The screenshot shows the SAP 'Production Startup of Mat. Ledger' screen. The interface includes a top navigation bar with the SAP logo and the title 'Production Startup of Mat. Ledger'. Below the navigation bar is a menu bar with options: 'Save as Variant...', 'Selection Options', 'Get Variant...', 'Delete Selection Criterion', 'Selection Screen Help', a search icon, 'More', and 'Exit'. The main content area is divided into several sections:

- Plant Selection:** A field labeled '*Plant:' contains the value 'FN19', followed by a 'to:' field and a copy icon.
- Parameters:** Contains 'Exchange Rate Type:' and 'Immediately After Period Chge.:'. Both fields are currently empty.
- Processing Options:** Contains 'Background Processing:' with a checked checkbox and 'Test Run:' with an unchecked checkbox.
- Parallel Processing:** Contains 'Server Group:' and 'Package Size:'. The 'Package Size' field is set to '1,000'.
- History:** A section at the bottom, partially visible, labeled 'History:'.

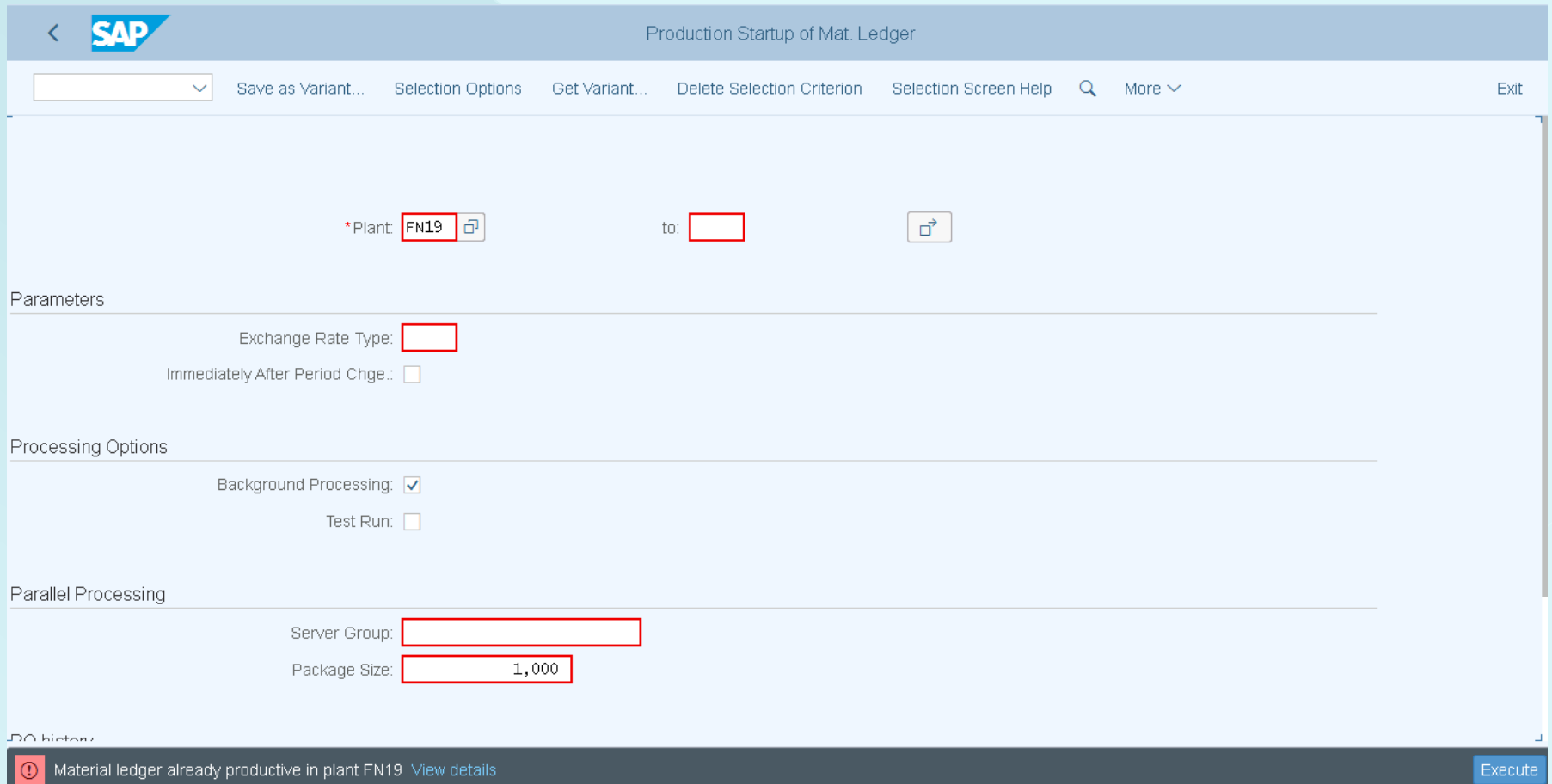
An 'Execute' button is located in the bottom right corner of the screen.

8. Production Startup Material Ledger

In this activity execute the production startup for the Material Ledger

T-Code: CKMSTART

SAP Menu Screen →



The screenshot shows the SAP 'Production Startup of Mat. Ledger' screen. The title bar includes the SAP logo and the text 'Production Startup of Mat. Ledger'. Below the title bar is a navigation bar with a dropdown menu, 'Save as Variant...', 'Selection Options', 'Get Variant...', 'Delete Selection Criterion', 'Selection Screen Help', a search icon, 'More', and 'Exit'. The main content area is divided into several sections: 'Parameters' with fields for '*Plant: FN19' and 'to:'; 'Processing Options' with checkboxes for 'Background Processing' (checked) and 'Test Run'; and 'Parallel Processing' with fields for 'Server Group' and 'Package Size: 1,000'. At the bottom, there is a status bar with a warning icon and the message 'Material ledger already productive in plant FN19' with a 'View details' link, and an 'Execute' button.

< **SAP** Production Startup of Mat. Ledger

Save as Variant... Selection Options Get Variant... Delete Selection Criterion Selection Screen Help 🔍 More ▾ Exit

*Plant: to:

Parameters

Exchange Rate Type:
Immediately After Period Chge.:

Processing Options

Background Processing:
Test Run:




Parallel Processing

Server Group:
Package Size:

DO history

⚠ Material ledger already productive in plant FN19 [View details](#) Execute

Set Material Ledger as Productive

  Technical Information  Help



Ty...	Message Text
<input checked="" type="checkbox"/>	PO history only :
<input checked="" type="checkbox"/>	Following plants will be processed:
<input checked="" type="checkbox"/>	Plant : F19
<input checked="" type="checkbox"/>	Currency in Material Ledger : USD Company code currency (Cur.type 10)
<input checked="" type="checkbox"/>	Real MA Price Logic Activated
<input checked="" type="checkbox"/>	ML Insert-only is activated
<input checked="" type="checkbox"/>	The following valuation area will now be processed: F19
<input checked="" type="checkbox"/>	Step: Block materials in plant
<input checked="" type="checkbox"/>	Step: Delete material ledger master data
<input checked="" type="checkbox"/>	Step: Delete Production Order History in the Additional Currencies
<input checked="" type="checkbox"/>	Step: Delete purchase order history in additional currencies
<input checked="" type="checkbox"/>	Step: Generate master data for stock materials
<input checked="" type="checkbox"/>	Step: Generate master data for sales order materials
<input checked="" type="checkbox"/>	Step: Generate master data for project material
<input checked="" type="checkbox"/>	Step: creating master data for vendor materials
<input checked="" type="checkbox"/>	Step: Order Conversion
<input checked="" type="checkbox"/>	No data found in valuation area: F19
<input checked="" type="checkbox"/>	Step: Translate purchase order history
<input checked="" type="checkbox"/>	Step: Set EKPO-MLMAA

Thank You.....