Myths vs. Fact: SAP Material Ledger in SAP S/4HANA

Rogerio Faleiros
RFERP
Introduction

- This session will clarify some questions related to SAP Material Ledger and what happened with the module in SAP S/4HANA. It will describe some core functionalities and also present additional usage of ML, in this session we will cover:
  - Is material ledger only used to valuate inventory in 3 different currencies?
  - Is one material ledger enough?
  - What happened with ML on SAP S/4HANA?
  - Which reports are available for Material Ledger?
  - Actual status of ML on SAP S/4HANA compared to SAP ERP.
Topics

- Introduction
- Material Ledger Features
- Material Ledger in SAP S/4HANA 1610
- Summary
Introduction

- SAP Evolution and Material Ledger

- 1972 R/1
- 1979 Mainframe R/2
- 1992 Client/server R/3
- 2000 World Wide Web mySAP
- 2004 Service Oriented Architecture ERP
- 2011 In Memory computing SAP HANA
- 2012 SAP BW powered by SAP HANA
- 2013 SAP Business Suite powered by SAP HANA
- 2014 SAP Simple finance powered by SAP HANA
- 2015 SAP S/4 HANA
Introduction (cont.)

- **SAP HANA Evolution and Material Ledger**

- SAP HANA
  - Tables Replication
  - Accelerators
  - Aggregate Reporting
  - Performance Increase for ML

- SAP BW HANA
  - Not Relevant for this session

- ECC on HANA
  - New Transactions
  - Aggregate Reporting
  - Performance Increase for ML

- Simple Finance
  - Universal Journal
  - Split of COGS Based on Standard Cost Components
  - Variances by account

- S/4 HANA
  - Universal Journal
  - Split of COGS Based on Standard Cost Components
  - Variances by account
  - ML Parallel Valuation

Copyright © - RFERP
http://www.rferp.com
Topics

• Introduction
• Material Ledger Features
• Material Ledger in SAP S/4HANA 1610
• Summary
Material Ledger Features

**Material Ledger Functionality**

- Inventory Valuation at actual prices.
- Actual Costing: Actual Price calculation and multilevel*
- Reporting
- Actual Price Cost Component Split
- Up to 3 currencies

- FIFO Valuation
- Transfer Price
- NRV Valuation
- Price capping *
- Remove FX impacts
- Raw materials price change and impact in multilevel *
- Multiple accounting principles
- FIN_CO_COGM
### Material Ledger Features ECC vs. SAP S/4HANA 1610

#### Features ECC vs. SAP S/4HANA

<table>
<thead>
<tr>
<th></th>
<th>Actual Cost</th>
<th>AVR</th>
<th>Parallel Account, (currency profile)</th>
<th>Cogs and Variances Split by Account</th>
<th>Personal Rating for ML</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECC</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>90</td>
</tr>
<tr>
<td>S/4HANA 1503 (SFIN)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>65</td>
</tr>
<tr>
<td>S/4HANA 1511</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>65</td>
</tr>
<tr>
<td>S/4HANA 1605</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>65</td>
</tr>
<tr>
<td>S/4HANA 1610</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>75</td>
</tr>
</tbody>
</table>
Topics

• Introduction
• Material Ledger Features
• Material Ledger in SAP S/4HANA 1610
• Summary
Inventory Data Model in SAP S/4HANA

- Why is material ledger mandatory in SAP S/4HANA?
- What are the new material ledger tables?
- Technical changes in Material Ledger SAP S/4HANA 1610
- Is actual costing mandatory in SAP S/4HANA?
- Can my company still use the standard or moving average without performing material ledger transactions?
- Benefits of having material ledger activated
- Is parallel valuation active in SAP S/4HANA?
- Additional features in SAP S/4HANA
Why is Material Ledger Mandatory in SAP S/4HANA?

• Reporting

• New data model in S/4 simplify how stock is managed in SAP
  • MBEW, EBEW, QBEW, OBEW, MBEWH EBEWH, QBEWH, OBEWH values and quantity are migrated to ACDOCA, meaning one single source of data, “LBKUM, SALK3 and SALKV now in ML”
  • Transactions MBXX are no longer available. MIGO for all process
What Are the New Material Ledger Tables?

- Material Ledger Master data is created for all valuation areas/materials (CKMLHD, CKMLPP, CKMLCR)
- MATDOC gets now **MSEG, MKPF**, plus information from MARC, MARD, MCHB, MKOL, etc.
- MBEW, EBEW, QBEW, OBEW, MBEWH, EBEWH, QBEWH, OBEWH values and quantity migrated to ACDOCA, meaning one single source of data.
- MLDOC = MLHD, MLIT, MLPP, MLPPF, MLCR, MLCRF, CKMLPP, CKMLCR, MLCD, CKMLMV003, CKMLMV004, CKMLPPWIP etc.
- MLDOCCCS = MLKEPH, CKMLKEPH, (CKMLPRKEKO)
- MLDOC_EXTRACT
- MLDOCCCS_EXTRACT (cost component split report)
- CKMLMLCR still source for Standard Price. Periodic Unit Price and Price Control
- CKMLPRKEKO and CKMLPRKEPH still valid for cost component split
- MLRUNLIST replaces CKMLMV011
Technical Changes in Material Ledger S4/HANA 1610

• Core information is now retrieved from ACDOCA.
  • V-2 Materials

• As ML tables were merged into MLDOC, select in SQL statement must not happen, usage of functions or classes is required.
  • CKMS_PERIOD_READ_WITH_ITAB
  • CKML_F_DOCUMENT_READ_MLHD,
  • CKML_F_DOCUMENT_READ_MLXX

• Currency customizing must be defined now, no default variant is available. Type 0000 is not supported anymore.
  • Main reason is that you can assign > 3 currencies to a company code and ML still has limit of 3.
Is Actual Costing Mandatory in SAP S/4HANA?

- Material Ledger is mandatory in SAP S/4HANA
- Actual costing is NOT mandatory
Is actual costing mandatory in SAP S/4HANA? (cont.)

- Material Ledger settings
  - Mandatory in SAP S/4HANA
  - New inventory data model
  - New ML tables are filled (CKMLHD, CKMLPP, CKMLCR, etc.)
Is actual costing mandatory in SAP S/4HANA? (cont.)

- Actual costing
  - Not mandatory
  - CKM3 is available with limited functionality
  - No actual cost component split
Can my company still use the standard or moving average without performing material ledger transactions?

- What happens with Material Ledger price differences?
  - With Material Ledger active – S-3, all price differences from material are released at time of use, meaning it stays in inventory until it is sold or used
  - Example Product A Standard 10$ 1 piece purchased at 12$ period 1, and sold 1 piece in period 2

<table>
<thead>
<tr>
<th></th>
<th>Period 1</th>
<th>Period 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S-2</td>
<td>S-3</td>
</tr>
<tr>
<td>Inventory</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Inventory ML Adjustment</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>AP</td>
<td>-12</td>
<td>-12</td>
</tr>
<tr>
<td>AR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>STD Cogs</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>P&amp;L Price Difference</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>P&amp;L ML Posting</td>
<td></td>
<td>-2</td>
</tr>
</tbody>
</table>
Can my company still use the standard or moving average without performing material ledger transactions? (cont.)

- **ML Possibilities in S/4HANA**

<table>
<thead>
<tr>
<th>Price Control-Determination</th>
<th>Actual Costing</th>
<th>Actual cost component split</th>
<th>Multilevel costing</th>
<th>Material Ledger Closing</th>
<th>Price Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-2</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>Released at goods receipt</td>
</tr>
<tr>
<td>S-3</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>Cumulated into Inventory</td>
</tr>
<tr>
<td>V-2</td>
<td>YES</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>Cumulated into Inventory</td>
</tr>
</tbody>
</table>

- **Cost split for transfer price**

```
Comp.Code A
Cost Component   Value
Direct Material   100
Package           5
Labor             15
Overhead          22
Machine           8
Miscellaneous     5
Total             155

Comp.Code B
Cost Component   Value
Direct Material   100
Package           5
Labor             15
Overhead          22
Machine           8
Miscellaneous     5
Mark UP           20
Total             175
```
CKM3

- CKM3OLD
  - +- 1 year of data will be converted in S/4 ML, if you are already using ML, CKM3OLD makes possible to see old data

CKM3
Benefits of Having Material Ledger Activated

- Actual costing
- Actual cost component split
- Multiple valuations, meaning currency and parallel valuation
- Reporting
  - CKM3
  - KKML0
  - Virtual Info provider
• Classic
• Using FCML_*** Tables
  • HDBC to activate
Is Parallel Valuation Active in SAP S/4HANA?

- Currency profile was not available in releases prior to SAP S/4HANA 1610
  - COGM is available in S/4HANA 1610
  - Transfer price is available only in S/4HANA 1610
    - More complicated to set up in SAP S/4HANA
    - 2 methods
      - Parallel single-valuation ledgers (ledger-based)
      - Multi-valuation ledger (currency-based)
Additional Features in SAP S/4HANA

- Split of COGS into accounts
  - In SAP S/4HANA, it is possible to split COGS into accounts mapped to cost component split?
  - Available for legal, group, and profit center valuation
Additional Features in SAP S/4HANA (cont.)

- Split of variances into accounts
  - Before possible only in cost-based COPA
  - Transparency in P&L
Additional Features in SAP S/4HANA (cont.)

- CKMLCP
  - Same transaction for actual closing and AVR, instead of CKMLCP and CKMLCPAVR
  - New process called preparation
  - Single Level Price Determination, Multilevel Price Determination, Revaluation of Consumption and WIP Revaluation have been replaced by the new step settlement
Additional Features in SAP S/4HANA (cont.)

- CKMLCP
  - Selection (program FCML4H_SELECTION)
  - Preparation (program FCML4H_PREPROCESSOR)
  - Settlement (program FCML4H_SETTLEMENT)
  - Post Closing (program FCML4H_POST_CLOSING)

- Does not distinguish anymore between what is lower lever and multilevel price difference in accounting
  - PRV and KDV are obsolete
  - AUI must be without valuation class
  - New Key PRL
Additional Features in SAP S/4HANA (cont.)

- Migration step of ML
- Archive prior to migration is suggested
- Activate ML in ECC before moving to SAP S/4HANA also suggested to reduce the impact and also get knowledge of functionality before changing
Additional Features in SAP S/4HANA (cont.)

• Material Ledger Helpdesk

• Prior to S/4HANA 1610
  • SAP NOTE 364368 - Material Ledger help desk
  • CKMHELP

• SAP S/4HANA 1610
  • 2433733 - ML Helpdesk tool in SAP S/4HANA
  • Require password or debug access to change mode in execution
  • DONTPANIC- not supported anymore
  • FCMLHELP
Additional Features in SAP S/4HANA (cont.)

- Material Ledger Helpdesk

```
OLD

Material Ledger HelpDesk

NEW

HelpDesk for master data

HelpDesk for transaction data
HelpDesk for master data
HelpDesk for actual cost component split
HelpDesk for miscellaneous
HelpDesk for Production Orders
HelpDesk for Purchase Order History
HelpDesk for Balance Sheet Valuation
HelpDesk for Alternative Valuation Run
HelpDesk for Distribution of Usage Variances (DVAR)
HelpDesk for Deleting ML Documents
HelpDesk for miscellaneou
HelpDesk for WIP
```
Why my personal rating for ML in S/4HANA 1610 is 75

- CKM3 with limitations in conversion and still with several issues
- CKMLQS is not available in alternative valuation run
- AVR Delta Posting Logic is not available
- External Ending/Cumulated Inventory Valuation is currently not available
- The BADI CKMLAVR_SIM is currently not available
- Not possible to rerun old AVR after material ledger conversion
- Currency profile is only available in SAP S/4HANA 1610
- Too many correction SAP Notes > 30
- Cannot distinguish anymore between lower lever and multilevel price difference in accounting.
- Plan/Actual comparison is removed in new CKM3
ML Evolution

ML on ECC

ML on S/4HANA
Topics

- Introduction
- Material Ledger Features
- Material Ledger in SAP S/4HANA 1610
- Summary
Summary

• In this session you have learned the primary differences between Material Ledger in ECC and SAP S/4HANA 1610
• Understand the benefits, possibilities, and weakness of ML in S/4HANA 1610
• Overview of available reports
Resources

• Simplification List for SAP S/4HANA 1610 Initial Shipment Stack
• 2352383 - S4TWL - Conversion to SAP S/4HANA Material Ledger and Actual Costing
• 2217299 - Inventory Valuation (part of Materials Management - Inventory Management) : Change of data model in SAP S/4HANA 1511
• 2416935 - Material Ledger with Actual Costing in SAP S/4HANA 1610: Important Notes
Five Key Ideas

• Material Ledger is mandatory in SAP S/4HANA due to new inventory data model
• Reporting possibilities using material ledger
• The possibilities of activation of material ledger and pros and cons of the choices
• New functionalities available only in SAP S/4HANA
• What expect for the future with Material Ledger for SAP S/4HANA
Questions

• rogerio.faleiros@rferp.com
• @rfaleiros
```
15  *     _substit = 32.
16  *     endif.
17
18  l_broken = broken.
19  if l_broken = 'R' or l_broken = 'r'.
20      call 'TEST_LANG_CP_LOC' ID 'VERSION' field rs
21      if rsb_text_version > 0 and rsb_text_version <
22         "Cry, because the kernel is too old."
23            raise internal_error.
24      endif.
25  endif.
26```