Profitability Analysis
CO-PA
Course Objectives

- Understand the functions in Profitability Analysis.
- Explain Profitability management in SAP.
- Understand CO-PA structures and master data.
- Identify the source of actual values.
- Understand planning.
- Use the CO-PA information system.
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Overview

Profitability Management

Master Data

Planning

Actual data flow

Information System
Profitability Analysis at A Grp

Profitability Analysis will enable A Grp to analyze the profitability of market segments according to the following characteristics:

- Products
- Customers
- Sales Districts (i.e. USA West, USA East, Saudi Arabia etc.)
- Others
Flow of actual values in Profitability Anal.

- Actual Postings represent the most important source of information in CO-PA. You can transfer billing documents (used in A Grp) from the Sales and Distribution (SD) application component to CO-PA in real time. You can also transfer costs from cost centers, orders and projects (in next phase), as well as i.e. demurrage costs and revenues from direct postings (G/L account postings in FI, orders received in MM, and so on) or asses costs from CO to profitability segments.

- In costing-based CO-PA, you can valuate incoming billing documents to automatically determine anticipated sales deductions, costs or even estimated costs, such as Estimated Port Charges. You can also revaluate your data periodically to adjust the initial, real time valuation or add the actual costs of goods manufactured.
Profitability Management
Aspects of Profitability Management

Responsibility Accounting (Company oriented)

<table>
<thead>
<tr>
<th>Revenue</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>468</td>
</tr>
<tr>
<td>Materials</td>
<td>230</td>
</tr>
<tr>
<td>Profit</td>
<td></td>
</tr>
</tbody>
</table>

Profitability Analysis By Market segment (Market oriented)

<table>
<thead>
<tr>
<th>Revenue</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discounts</td>
<td>100</td>
</tr>
<tr>
<td>COGS</td>
<td>230</td>
</tr>
<tr>
<td>Contr. Margin</td>
<td>1440</td>
</tr>
<tr>
<td>Advertising</td>
<td>250</td>
</tr>
</tbody>
</table>

Profit Centers

Ethylene  Pharma  Power  Telecom

Profitability Segments
External Market
Terms used in Profitability Analysis

- **Accounting Methods**
  - Period Accounting
  - Cost of Sales Accounting

- **Values**
  - Gross Sales
  - Net Sales
  - Variances

- **Ratios**
  - Economic Profit
  - Contribution Margin
## Methods of Determining Profits

<table>
<thead>
<tr>
<th>Period accounting method</th>
<th>Cost of Sales method</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Revenues</td>
<td>• Revenues</td>
</tr>
<tr>
<td>• Sales deductions</td>
<td>• Sales deductions</td>
</tr>
<tr>
<td>• Changes in stock</td>
<td>• Cost of sales</td>
</tr>
<tr>
<td>• Capitalized internal services</td>
<td>(incl. variances for period)</td>
</tr>
<tr>
<td>• Work in process</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total activities</strong></td>
<td><strong>Gross result</strong></td>
</tr>
<tr>
<td>• Total costs:</td>
<td>• Sales and distribution costs</td>
</tr>
<tr>
<td>Material costs</td>
<td>• Administrative costs</td>
</tr>
<tr>
<td>Personnel costs</td>
<td>• Research &amp; Development</td>
</tr>
<tr>
<td>Other costs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Result</strong></td>
<td><strong>Result</strong></td>
</tr>
</tbody>
</table>
Profitability Analysis (CO-PA) calculates profits according to the cost-of-sales method of accounting.

Profit Center Accounting (EC-PCA), on the other hand, supports both period accounting and cost-of-sales approach.

Both of these methods are used at the same time in your organization.
In Profitability Analysis (CO-PA) you can analyze contribution margin (Sales – Cost of goods sold) according to market segments.

A market segment can comprise of product and customer, customer and region, customer and country, Sales region and material group.
Master Data in CO PA
Master Data – Currency of Op. Concern

Profitability Accounting (costing based)

Operating Concern 9100
Currency B0 = EUR
Master Data in Profitability Analysis

- Cost Element
  - Cost Element Accounting
- Profitability Analysis
  - Profitability Segment
- Characteristics
  - Value Fields
Profitability Segments

Customer

INDO RAMA SYNTHETIS

Product (SBU)

Ethylene Glycol

Sales District

SE Asia
**Profitability Segment** - object within Profitability Analysis to which costs and revenues are assigned. A *profitability segment* corresponds to a market segment. You can calculate the profitability of a profitability segment by setting off its sales revenues against its costs. A profitability segment in an operating concern is defined by a combination of characteristic values. Characteristics can be concepts that already exist in the R/3 System (customer, product, sales organization, and so on).
Categories of Characteristics (1)

- Characteristics are valid in all clients
- Characteristics are available for all Operating Concerns
Categories of Characteristics (2)

- Characteristics delivered by SAP
  - Fixed Characteristics
  - Predefined Characteristics
  - Characteristics copied from SAP Reference Tables
  - Custom Characteristics
- Characteristics created by Customer
Categories of Value Fields

Value Fields delivered by SAP

Predefined Value Fields

<table>
<thead>
<tr>
<th>Value field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSMG</td>
<td>Sales quantity</td>
</tr>
<tr>
<td>ERL0S</td>
<td>Revenue</td>
</tr>
<tr>
<td>VRPR05</td>
<td>Stock value</td>
</tr>
</tbody>
</table>

Value Fields created by Customer

Custom Value Fields

<table>
<thead>
<tr>
<th>Value field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VV002</td>
<td>Freight</td>
</tr>
<tr>
<td>VV001</td>
<td>Marketing Fee</td>
</tr>
</tbody>
</table>
### Execute Drilldown Report TEST1: Detail List

<table>
<thead>
<tr>
<th>Currency Type</th>
<th>BO Operating concern</th>
<th>cu</th>
</tr>
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<tbody>
<tr>
<td>Division</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Product</td>
<td></td>
<td>04</td>
</tr>
<tr>
<td>Customer</td>
<td></td>
<td>10850035</td>
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</tbody>
</table>

#### Key Figures

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tbody>
<tr>
<td>Sales quantity</td>
<td>165,000</td>
</tr>
<tr>
<td>Revenue</td>
<td>24,750.00</td>
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<tr>
<td>Stock value</td>
<td>0.290.00</td>
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<tr>
<td>Input Price Variance</td>
<td>0.03</td>
</tr>
<tr>
<td>Freight</td>
<td>0.03</td>
</tr>
<tr>
<td>Marketing Fee</td>
<td>0.03</td>
</tr>
</tbody>
</table>
Planning
CO-PA Planning Objectives

- Plan Integration
- Plan Versions
- Creation of a sales plan using planning level and planning packages
- Plan Data Transfer
CO-PA Planning Objectives

- Plan Integration
- Plan Versions
- Creation of a sales plan using planning level and planning packages
- Plan Data Transfer
Plan Integration

- Profit planning - V1
- Sales Planning SOP
- Profit planning v2
- Cost of goods manufactured
- Activity price
- Cost centers
- Activity quantities
- Production LTP
CO-PA Planning Objectives

- Plan Integration
- Plan Versions
- Creation of a sales plan using planning level and planning packages
- Plan Data Transfer
Plan Version ‘0’ A Grp

General Version Definition

<table>
<thead>
<tr>
<th>Version</th>
<th>0</th>
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<tbody>
<tr>
<td>Plan</td>
<td>✓</td>
</tr>
<tr>
<td>Actual</td>
<td>✓</td>
</tr>
</tbody>
</table>

Fiscal year dependent parameters in CO-OM

Integrated Planning | ✓

Settings for CO-PA

<table>
<thead>
<tr>
<th>Version Locked</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Currency type</td>
<td>B0</td>
</tr>
<tr>
<td>Exchange Rate</td>
<td>P</td>
</tr>
</tbody>
</table>

1. Plan records are posted as line items from respective areas.

1. The currency type determines the currency or valuation view in which the amounts are to be displayed or planned. B0 - Operating Concern Currency

2. Controls the exchange rate type, i.e. Buying rate, selling rate or P – Standard translation for planning.
CO-PA Planning Objectives

- Plan Integration
- Plan Versions
- Creation of a sales plan using planning level and planning packages
- Plan Data Transfer
Overview of Planning Framework
Overview of Planning Framework

- Maintain Planning Level-Package-Set-Personalization
- Copy Sales Plan
- Upload of COPA Plan - Offline Planning
- Manual Profit Planning
- Valuation Planning Method
- Event Planning Method
- Period Distribution Planning Method
- Ratio Planning Method
- Planning Forecast
- Revaluation Planning Method
CO-PA Planning Objectives

- Plan Integration
- Creation of a sales plan using planning level and planning packages
- Plan Data Transfer
Plan Data Transfer

Excel → COPA → SOP

Quantities / Revenue
Actual data flow
Flow of Actuals in Profitability Analysis

- Overview
- Flow from the Sales and Distribution (SD) Module
  - Flow from Billing Document
- Flow from the FI/MM – direct postings
  - General Ledger Posting
  - MM Postings
- Flow from the Product Costing
  - Settlement of Production Variances to PA
Actual Values Overview

Flow of Actuals in Profitability Analysis

- Overview
- Flow from the Sales and Distribution (SD) Module
  - Flow from Billing Document
- Flow from the FI/MM – direct postings
  - General Ledger Posting
  - MM Postings
- Flow from the Product Costing
  - Settlement of Production Variances to PA
Sources of value fields

Source Transaction

Billing Document
- Quantity
- Sales deductions
- Cost of Goods Sold

Direct Posting from FI
- Freight costs
- Inventory re-valuation
Actual Values Overview

Flow of Actual values in Profitability Analysis

- Overview
- Flow from the Sales and Distribution (SD) Module
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  - MM Postings
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Flow from sales and distribution (1)

- **Cost of Goods Sold**
  - **Inventory - Finished Product (FG)**
    - 119430
    - 4,975.00

- **NO POSTING**

- **Stock**
  - **Change Stock**

- **Business process**
  - **Goods Issue**

- **MM**

- **CO PA**

- **FI**
Flow of Actuals in Profitability Accounting

- Overview
- Flow from the Sales and Distribution (SD) Module
  - Flow from Billing Document
- Flow from the FI/MM – direct postings
  - General Ledger Posting
  - MM Postings
- Flow from the Product Costing
  - Settlement of Production Variances to PA
Flow from FI/MM

<table>
<thead>
<tr>
<th>Doc. no.</th>
<th>Ref.doc.no</th>
<th>Rf.itm</th>
<th>Dv</th>
<th>Product</th>
<th>Customer</th>
<th>Est DM&amp;Dtn</th>
<th>Demurge</th>
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</thead>
<tbody>
<tr>
<td>1169</td>
<td>5000000492</td>
<td>000001</td>
<td>10</td>
<td>64</td>
<td>10000008</td>
<td>0.00</td>
<td>15.00</td>
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</tbody>
</table>

Accr. GR/IR

<table>
<thead>
<tr>
<th>CoCd</th>
<th>Cost elem.</th>
<th>PrfSeg</th>
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</thead>
<tbody>
<tr>
<td>1200</td>
<td>484013</td>
<td>✔</td>
</tr>
</tbody>
</table>

Demurrage & Detention

15.00 -
Actual Values Overview

Flow of Actuals in Profitability Accounting

- Overview
- Flow from the Sales and Distribution (SD) Module
  - Flow from Billing Document
- Flow from the FI/MM – direct postings
  - General Ledger Postings
  - MM Postings
- Flow from the Product Costing
  - Settlement of Production Variances to PA
**Flow from CO-PC**

1. Goods Issues of materials from stock
2. Confirmations/ activity allocation
3. Calculate variances
4. Settlement

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Product Costing

- ‘Production Order’
- Plan costs
  - ...
- Actual costs
  - ...
- Delivery
  - Variance

- Delivery to stock
- Warehouse

---

CO-PC

- MM

---

FI

- CO-PA
### Flow from CO-PC

<table>
<thead>
<tr>
<th>Variance Category</th>
<th>Cost Element Group</th>
<th>PA Assignment lines</th>
<th>Value Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRY</td>
<td>Input Price Variance</td>
<td>161</td>
<td>Field name</td>
</tr>
<tr>
<td>QTYV</td>
<td>Input Quantity Variance</td>
<td>102</td>
<td>(W101)</td>
</tr>
<tr>
<td>RSUV</td>
<td>Resource-Usage Variance</td>
<td>103</td>
<td>(W102)</td>
</tr>
<tr>
<td>INPV</td>
<td>Remaining Input Variance</td>
<td>104</td>
<td>(W103)</td>
</tr>
<tr>
<td>MXPV</td>
<td>Mixed-Price Variance</td>
<td>105</td>
<td>(W104)</td>
</tr>
<tr>
<td>OPPV</td>
<td>Output Price Variance</td>
<td>106</td>
<td>(W105)</td>
</tr>
<tr>
<td>LSFV</td>
<td>Lot Size Variance/Fixed-Cost V.</td>
<td>107</td>
<td>(W106)</td>
</tr>
<tr>
<td>REMV</td>
<td>Remaining Variance</td>
<td>108</td>
<td>(W107)</td>
</tr>
<tr>
<td>SCRIP</td>
<td>Scrap</td>
<td>109</td>
<td>(W108)</td>
</tr>
</tbody>
</table>

**Cost element**
- From: 0
- To: 999999

**Field name**
- Description:
  - \(W101\): Input Price Variance
  - \(W102\): Input Quantity Var
  - \(W103\): Resource Usage Var
  - \(W104\): Remaining Input Var
  - \(W105\): Mixed Price Variance
  - \(W106\): Output Price Var
  - \(W107\): Lot Size/Fixed Lot Var
  - \(W108\): Remaining Variance
  - \(W109\): Scrap
Information System
Thank You