

Stefan Eifler & Christoph Theis

# Value Flows into SAP® ERP FI, CO, and CO-PA

- ▶ Value flows based on the sales and production processes
- ▶ Reconciliation between FI and CO-PA
- ▶ Overhead costs and closing tasks
- ▶ Overview of SAP S/4 HANA Finance

# Table of Contents

|   |            |
|---|------------|
| <b>Foreword, or: Value flows into the supreme module</b>                              | <b>7</b>   |
| <b>1 Our prerequisites for describing the logistical sales and production process</b> | <b>13</b>  |
| 1.1 Organizational prerequisites  | 14         |
| 1.2 The standard material costing   | 20         |
| <b>2 The sales order</b>  | <b>35</b>  |
| 2.1 Creating a sales order  | 36         |
| 2.2 SD pricing  | 38         |
| 2.3 Revenue and cost collectors?  | 39         |
| 2.4 Interface to CO-PA  | 42         |
| 2.5 Reconciliation options with accounting  | 53         |
| <b>3 The production order</b>   | <b>59</b>  |
| 3.1 The standard cost estimate for a production order                                 | 59         |
| 3.2 Production process  | 64         |
| 3.3 (Month-end) Closing for the production order                                      | 81         |
| 3.4 Reconciliation options with accounting  | 107        |
| <b>4 Goods issue</b>  | <b>111</b> |
| <b>5 The invoice</b>  | <b>119</b> |
| 5.1 Creating an invoice   | 119        |
| 5.2 Condition type VPRS   | 121        |
| 5.3 Interface to accounting   | 122        |
| 5.4 Reconciliation options with accounting  | 130        |
| 5.5 Excursus: Orders on hand reporting via CO-PA                                      | 140        |
| <b>6 Assessment to CO-PA</b>  | <b>141</b> |
| 6.1 The assessment process to Profitability Analysis                                  | 141        |

|          |   |            |
|----------|---|------------|
| 6.2      | Reconciliation options for the assessment cycle to CO-PA            | 151        |
| <b>7</b> | <b>A further period-end closing activity: Work in process (WIP)</b> | <b>155</b> |
| 7.1      | The WIP calculation process   | 155        |
| 7.2      | Reconciliation options for WIP                                      | 161        |
| <b>8</b> | <b>The future of CO-PA under SAP S/4HANA</b>                        | <b>163</b> |
| 8.1      | Who or what is HANA?  | 163        |
| 8.2      | Changes with SAP S/4HANA Finance                                    | 164        |
| <b>9</b> | <b>Closing words</b>  | <b>167</b> |
| <b>A</b> | <b>The Authors</b>  | <b>172</b> |
| <b>B</b> | <b>Index</b>  | <b>175</b> |
| <b>C</b> | <b>Disclaimer</b>   | <b>180</b> |

## 2 The sales order

Let's assume that our competitive product is known on the market and is enjoying a certain level of demand. Where does the business sequence begin in a logistical sales and production process? **Correct: based on an inquiry, an offer, and potentially sales negotiations, the customer places a *sales order* which we want to enter and process in our SAP ERP system.**

What happens in this process in an integrated system? The sales order is initially processed in the SAP module Sales and Distribution (SD). The main objective here is to create a sales order in the SAP system, to print it out where applicable, and to send an order confirmation to the customer. Other interesting things also take place which are relevant for accounting: on the one hand there is a *price calculation* for the product to be sold, and when we save the sales order, line items are written to Profitability Analysis (CO-PA) and we can use these line items for *sales order controlling*. **However, the sales order does not yet trigger any postings in the balance sheet or profit and loss statement!** Nevertheless, it does set the course for the subsequent posting of the invoice in Finance (FI) and Controlling (CO).

Therefore, in this chapter, we want to address the following important points:

- ▶ How does the SAP system find the prices and conditions relevant for the sales order and how does it use these to calculate the price?
- ▶ In terms of time, how far apart are the sales order and the subsequent invoicing? The answer to this question influences whether we transfer sales order data to CO-PA now or when we issue the invoice.
- ▶ Do we want to collect revenues and costs on our sales orders to then settle them to CO-PA later, for example, or do we transfer the revenues, discounts, and rebates as well as the costing-based material and production costs to CO-PA directly?

The interface of the SD module is the most important for transferring data to CO-PA. This is not surprising because CO-PA was designed as a sales con-

trolling tool for transferring sales order data and then later the corresponding invoice data to CO-PA.

However, not every company transfers sales order data to CO-PA; many transfer only invoice data from SD to CO-PA. For companies where there is a long period of time between receipt of the sales order and invoicing, the recommendation is to also transfer the sales order data. There are two arguments in favor of this: on the one hand, the incoming order already shows how the business situation of your company will develop. On the other hand, you can use the sales order data to build up *orders on hand reporting* in CO-PA. When you have subsequently also transferred the invoice data, by subtracting the sales order data and invoice data, you can report the orders on hand in reporting for CO-PA—and for all characteristics that you also transfer to CO-PA with the sales order or the invoice.

If you configure the Customizing for your sales orders such that the orders are not collectors for revenues and costs, you can even subsequently transfer your invoice data to CO-PA in real time. If this were not the case, the invoice would first return the data to the sales order and you would then have to settle this order to CO-PA. Depending on how often you undertake such settlement, this can potentially delay important findings in sales controlling because the required information is provided too late.

## 2.1 Creating a sales order

We will now create a sales order in the SD module of the SAP system using transaction VA01. To do this, enter a *sales document type* and a *sales area* and confirm your entries. In SD, a sales area always consists of three organizational characteristics: the sales organization, distribution channel, and division. In our example system, we use sales document type (ORDER TYPE field) **TA** and sales organization **ET15**, distribution channel **01**, and division **00** (see Figure 2.1).

For our customer **K1**, we enter an order in which the customer has ordered one piece of our sales product **FERT1**. Figure 2.2 shows an overview with the relevant details.

### Create Sales Order: Initial

Order Type

---

**Organizational Data**

Sales Organization

Distribution Channel

Division

Sales Office

Sales Group

Figure 2.1: Initial screen for creating a sales order

### Create Standard Order: Overview

Standard Order  Net value  EUR

Sold-To Party  Customer 1 / Göttingen

Ship-To Party  Customer 1 / Göttingen

PO Number  PO Date

---

Req. deliv.date  Deliver.Plant

Complete delv. Total Weight  KG

Delivery block  Volume

Billing block  Pricing Date

Payment card  Exp.date

Card Verif.Code

Payment terms

Incoterms

---

All items

| Item | Material | Order Quantity | Un | Description        | S                        | Customer Material Num |
|------|----------|----------------|----|--------------------|--------------------------|-----------------------|
|      | 10 FERT1 | 1              | PC | Finished Product 1 | <input type="checkbox"/> |                       |

Figure 2.2: Overview of the creation of a sales order

In the top right-hand corner you can see the net value of **EUR 6000**. Where did the system get this value from? On the **CONDITIONS** tab for the order item (see Figure 2.3) we can find further information about how this net value is calculated.

### Create Standard Order: Item Data

Sales Document Item: 10      Item Category: TAN      Standard Item

Material: FERT1      Finished Product 1

Quantity: 1 PC      Net: 6,000.00 EUR      Tax: 0.00

| Pricing Elements |      |                    |           |      |     |      |                 |       |   |
|------------------|------|--------------------|-----------|------|-----|------|-----------------|-------|---|
| N                | CnTy | Name               | Amount    | Crcy | per | U... | Condition value | Curr. | S |
| PR00             |      | Price              | 7,500.00  | EUR  |     | 1 PC | 7,500.00        | EUR   |   |
|                  |      | Gross Value        | 7,500.00  | EUR  |     | 1 PC | 7,500.00        | EUR   |   |
| K007             |      | Customer Discount  | 20.000-%  |      |     |      | 1,500.00-       | EUR   |   |
|                  |      | Discount Amount    | 1,500.00- | EUR  |     | 1 PC | 1,500.00-       | EUR   |   |
|                  |      | Rebate Basis       | 6,000.00  | EUR  |     | 1 PC | 6,000.00        | EUR   |   |
|                  |      | Net Value for Item | 6,000.00  | EUR  |     | 1 PC | 6,000.00        | EUR   |   |

Figure 2.3: Conditions of the sales order item

## 2.2 SD pricing

As part of the pricing, a gross list price (condition type **PR00**) in the amount of **EUR 7500** (see Figure 2.4) and a **customer discount (K007)** in the amount of **20.00%** (corresponding to **EUR 1500**) (see Figure 2.5) were determined, resulting in an invoice sale in the amount of **EUR 6000**.

This pricing is defined in the Customizing for SD; the prices and other conditions can be found in the SD master data. These other prices and conditions are created using transaction **VK11**:



**Display Price Condition (PR00) : Condition Supplements**

| SO... | D  | Customer | Material | R | Description |
|-------|----|----------|----------|---|-------------|
| ET15  | 01 | K1       | FERT1    |   | Released    |

  

| Processing status | Description |
|-------------------|-------------|
|                   |             |

  

|            |            |          |            |
|------------|------------|----------|------------|
| Valid From | 11/18/2015 | Valid to | 12/31/9999 |
|------------|------------|----------|------------|

  

| CnTy | Name  | Amount   | Unit | per | U... | DeletionID | Scales                   | Texts                    |
|------|-------|----------|------|-----|------|------------|--------------------------|--------------------------|
| PR00 | Price | 7,500.00 | EUR  |     | 1 PC |            | <input type="checkbox"/> | <input type="checkbox"/> |

Figure 2.4: Gross list price PR00

**Display Customer Discount (K007) : Overview**

|                      |            |                |
|----------------------|------------|----------------|
| Sales Organization   | ET15       | Germany        |
| Distribution Channel | 01         | Direct Sales   |
| Division             | 00         | Cross-division |
| Valid On             | 04/01/2017 |                |

  

| Customer | Description | Amount | Unit | per | U... | C | S | Valid From | Valid to   |
|----------|-------------|--------|------|-----|------|---|---|------------|------------|
| K1       | Inde 1      | 20.000 | %    |     |      | A |   | 11/18/2015 | 12/31/9999 |

Figure 2.5: Customer discount condition K007

## 2.3 Revenue and cost collectors?

Do we collect revenues and costs on our sales order? You can recognize this—once you have returned to the overview of your sales order—by switching to **COST REPORT** in the **ENVIRONMENT** menu item. If the message **ITEM IS NOT RELEVANT FOR COSTS** appears, the sales order is neither relevant for costs nor do we collect revenues on it (see Figure 2.6).



# B Index

## A

Account assignment category 41  
Account assignment object 101  
Account determination 26, 98  
    MM 69, 78, 98, 114  
Account grouping code 115  
Account key 123  
Account modification 99  
Accounting 1 view 113  
Accounts 17  
Activity price 28, 30, 71  
Activity price planning 28, 30, 31  
Activity type 29, 30, 71  
Actual cost of goods  
    manufactured 87, 96  
Actual costs 75, 84, 86  
Actual overhead costing 81, 82  
Actual overheads 81  
Adjusted standard cost estimate  
    13, 49, 52, 53, 62, 90, 96, 113,  
    128  
Administration data 45  
Allocation structure 93  
    receiver objects 93  
    settlement cost elements 93  
    source cost elements 93  
Application 123  
Assessment cycles 142, 147,  
    149, 152  
    allocation bases 143  
    assessment cost element 144  
    receiver 143  
    receiver tracing factor 144  
    receiver value field 144

    segment 143, 149  
    segment header 144  
    segment name 144  
    sender 143  
    sender and receiver rules 143  
    sender values 144

## B

Bill of material 23, 62, 67  
Billing due list 131  
Business warehouse 54  
BW system 54

## C

Characteristic derivations 46  
Characteristics 17, 45, 46  
Chart of accounts 114, 123  
Closing process 81  
CO account assignment  
    determination 101  
CO object 41, 69, 74, 99, 101,  
    102, 148  
Company code 15  
Components 62  
Condition list 121  
Condition type 38, 51, 115, 121  
Conditions 38, 121  
Confirmation 62, 64, 67, 71, 73  
Controlling area 15  
Controlling-relevant account  
    assignment 19  
CO-PA 15, 17, 42, 92  
    account-based 164  
    actual line item report 109

- costing-based 165
  - line items 136
  - report 52
  - reporting 53
- CO-PC 53
- Correction documents 138
- Cost analysis 61, 70, 75, 79, 84, 86, 104
- Cost center 28
- Cost center activity price planning 73
- Cost center assessment 141
- Cost center report 152
- Cost component split 165
- Cost components 23, 25, 28, 31, 33, 49
- Cost element 17, 19, 29, 69, 165
- Cost element type 28
- Cost of goods manufactured 71
- Cost of sales 131
- Cost of sales accounting 74, 131
- Cost of sales accounting ledger 74
- Costing 22
  - holding 33
- Costing sheet 25, 31, 81, 83
  - base 25, 26, 31
  - credit 25, 27, 32
  - overhead rate 25, 26, 32
- Costing type 123
- Costing view 87
- Cost-relevant 39
- Costs of goods issue 50, 51
- Creating an invoice 119
- Credit 73
- Credit cost center 82
- Credit limit release 56
- Customer discount 38

**D**

- Debit 73
- Default value 87
- Delivery 111, 112, 117
- Detail lists 96
- Direct account assignment 101, 102
- Direct manufacturing costs 31
- Direct material costs 25
- Discounts 47, 122, 132
- Distribution channel 14, 36
- Division 14, 36
- Document flow 112

**E**

- ERP system 20

**F**

- Financial statement schema 13, 15
- Functional area 74, 148

**G**

- G/L account 164
- G/L account determination 123
- General modification 98, 115
- Goods issue 62, 63, 64, 67, 68, 112, 116, 117, 135
- Goods receipt 62, 63, 65, 67, 76
- Goods receipt posting 77
- Gross list price 38, 47, 121
- Gross profit structure 13, 16, 17, 52

**I**

- Incoming sales order 36
- Incorrect order receipt 57
- Indirect costs 83

In-memory database 163  
Internal activity allocation 73  
Invoice 121, 124, 125, 135  
Invoice condition type 127  
Invoice data 36  
Invoice line item 125, 138  
Invoice sale 38, 131  
Invoice transfer 138

## L

Layout 107  
Line identification 158  
Line item layout 136  
Line items 42, 45  
List selection 148

## M

Main memory 163  
Manufacturing overhead 31, 33,  
50, 81  
overhead 82  
rate 31  
Material costing 22, 33, 48  
Material input 50  
Material overhead 25, 28, 50, 81  
overhead rate 25, 26, 63, 81,  
83  
Material type 49  
Materials 13  
Month-end closing 80, 81  
Month-end closing activity 87  
Month-end closing process 95,  
162

## N

Net value 38  
New General Ledger 74

## O

Operating concern 15  
Order header 60  
Order number 61  
Order receipt 53, 54, 55, 56, 140  
Order settlement 98, 100  
Order type 59, 91  
Orders on hand 36, 140  
Orders on hand reporting 36  
Organizational structure 13, 14  
Origin data 45  
Over/under absorption 141, 145  
Over/under absorption amount  
150  
Overhead costing 81, 85  
Overhead Rate (O/H Rate) 62

## P

P&L 15, 17, 19  
PA transfer structure 92, 94, 102  
source 92, 102  
source cost element 102  
Period-end closing 152  
Periodization 131  
Planned costs 62  
costed 61  
Plant 14, 22  
Price calculation 35  
Price difference posting 101  
Primary cost elements 18  
Procedure 98, 114  
Procedures 62  
Processing options 96  
Product Cost Controlling 106  
Product master data 20  
base unit of measure 21  
material number 21, 22  
material short text 21

- moving price 21, 24
- price control 21
- procurement type 21
- standard cost estimate 21
- standard price (S) 21
- valuation class 21
- Production 64
- Production labor
  - variable 50
- Production order 59, 62, 64, 67, 73, 81, 87
- Production order costing 62
- Production overhead
  - overhead 83
- Production process 59
- Production variance 106, 166
- Profitability Analysis 35, 42, 99, 100
- Profitability segment 99, 124, 164

## R

- Raw materials 23
- Real time 122
- Real-time integration 73, 74, 84, 148
- Real-time integration account 74
- Record type 43, 44, 101, 104, 106, 109, 125, 136, 149, 154
- Report Painter 134
- Reporting 54
- Requirements class 40, 41, 122, 132
- Requirements type 40
- Results analysis key 157
- Results analysis version 158
- Revenue element 124
- Revenue-collecting 132
- Revenues 121, 122, 132
- Routing 28, 30, 31, 62, 71

## S

- Sales 130, 132
- Sales area 36
- Sales deductions 123
- Sales document type 36
- Sales order 14, 35, 36, 47, 48, 53, 67, 117
  - cost collector 39
  - process 53
  - revenue collector 39
- Sales order controlling 35
- Sales order data 36
- Sales organization 14, 36, 123
- SAP HANA 163
- SAP module Production Planning (PP) 59
- SAP module Sales and Distribution (SD) 35
- SAP S/4HANA 164
- Scrap 87
- SD account determination 122
- SD condition types 42
- SD pricing 38
- Secondary cost elements 18, 73, 74, 83
- Secondary posting 83
- Settlement 87, 90, 95, 97, 100, 102, 106
- Settlement parameters 94
- Settlement profile 90, 91, 92, 94
- Settlement rule 93
- SIS tool 54
- Special ledger 74
- Standard cost estimate 61, 63
  - ongoing 90
- Standard layout 136
- Standard material costing 20
- Standard price 76, 114

Status 155  
Stock change account 113  
Stock change postings 33  
Storage location 14

## T

Table ACDOCA 164  
Target cost version 90  
Target costs 90, 96  
Total stock value 114  
Total variance 96, 101, 102, 104

## U

Universal journal 164  
Update 158

## V

Valuation class 114  
Valuation method 158  
Valuation strategy 48, 49  
Value fields 13, 17, 42, 45, 47,  
48, 49, 92, 102, 128, 165  
Value flow 13, 59, 64, 65, 66, 85,  
96, 105, 116, 128, 150  
FI/CO/CO-PA 70, 75, 79

Variance 86, 87, 92, 95, 96, 97,  
100, 161  
Variance calculation 87, 95, 96,  
110  
Variance categories 88, 89, 92,  
94, 96, 97, 100, 104  
input price variance 88  
input quantity variance 88, 96  
lot size variance 89  
mixed price variance 89  
output price variance 89  
remaining input variance 89,  
96  
remaining variance 89  
resource-usage variance 88  
Variance key 87  
Variance variant 88, 89  
Views 20  
VPRS 50, 52, 115, 117, 121, 136

## W

WIP amount 162  
WIP calculation 155, 159, 161  
WIP posting 160  
Work center 28, 31, 71  
Work in process (WIP) 155