Faisal Mahboob

Integrating Materials Management with Financial Accounting in SAP®

- Explains the key financial integration points in Materials Management
- Includes best practices, real-world examples, and configuration steps for logistics, business transactions, and more
- Teaches you how to integrate procurement and financial accounting processes
## Contents at a Glance

1. Overview of SAP ERP ................................................................. 19
2. Overview of the Materials Management and Financials Relationship ................................................................. 41
3. Basics of Configuration and the Processes in Procurement ...................................................... 77
4. Procurement of Stock and Consumable Materials ................................. 133
5. Conditions, Price Determination, and the Basics of Material Price Changes ...................................................... 189
6. Balance Sheet Valuation ........................................................... 231
7. Material Price Change ........................................................... 259
8. Accounts Payable Invoice from Materials Management ................................. 301
9. Variances and Blocking of Invoices ...................................................... 367
10. Additional Functionalities in LIV ...................................................... 431
11. Conclusion .............................................................................. 471

A. Optimizing the Integration between Materials Management and Financial Accounting ...................................................... 479

B. Commonly Used Abbreviations ...................................................... 489

C. References .............................................................................. 493

D. Useful Links ........................................................................... 495

E. The Author ............................................................................. 499
## Contents

Preface ........................................................................................................ 17

1 Overview of SAP ERP .............................................................................. 19

1.1 The Building Blocks of SAP ERP ....................................................... 19
  1.1.1 Financials .................................................................................. 20
  1.1.2 Logistics .................................................................................. 21
  1.1.3 Human Resources ..................................................................... 22
  1.1.4 Materials Management .............................................................. 22

1.2 Integration of Materials Management in SAP ERP .......................... 24

1.3 Analysis and Resources for Materials Management ...................... 25
  1.3.1 SAP Easy Access ........................................................................ 26
  1.3.2 SAP Customizing ...................................................................... 27
  1.3.3 SAP Library .............................................................................. 29
  1.3.4 SAP Service Marketplace .......................................................... 31

1.4 Business Processes ............................................................................ 34
  1.4.1 Procure to Pay (P2P) ................................................................. 34
  1.4.2 Order to Cash (O2C) .................................................................. 34
  1.4.3 Forecast to Stock (F2S) ............................................................... 35
  1.4.4 Record to Report (R2R) ............................................................... 35
  1.4.5 Acquire to Retire (A2R) ............................................................... 35
  1.4.6 Hire to Retire (H2R) .................................................................... 35

1.5 Technical Aspects of SAP ERP ......................................................... 36
  1.5.1 Enhancement Package .............................................................. 36
  1.5.2 Business Function .................................................................... 37
  1.5.3 Switch Framework .................................................................... 38
  1.5.4 Service-Oriented Architecture (SOA) ......................................... 38

1.6 Summary ............................................................................................. 39

2 Overview of the Materials Management and Financials Relationship ... 41

2.1 Elements of Materials Management .................................................. 43
  2.1.1 Purchasing ................................................................................ 44
  2.1.2 Inventory Management .............................................................. 48
  2.1.3 Material Valuation ...................................................................... 49
### Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.4 Logistics Invoice Verification</td>
<td>50</td>
</tr>
<tr>
<td>2.1.5 GR/IR Account Maintenance</td>
<td>51</td>
</tr>
<tr>
<td>2.2 Elements of Financial Accounting</td>
<td>52</td>
</tr>
<tr>
<td>2.2.1 SAP General Ledger</td>
<td>52</td>
</tr>
<tr>
<td>2.2.2 Accounts Payable</td>
<td>53</td>
</tr>
<tr>
<td>2.2.3 Asset Accounting</td>
<td>53</td>
</tr>
<tr>
<td>2.3 Elements of Controlling</td>
<td>54</td>
</tr>
<tr>
<td>2.3.1 Cost Element Accounting</td>
<td>55</td>
</tr>
<tr>
<td>2.3.2 Cost Center Accounting</td>
<td>55</td>
</tr>
<tr>
<td>2.3.3 Activity-Based Costing</td>
<td>56</td>
</tr>
<tr>
<td>2.3.4 Internal Orders</td>
<td>56</td>
</tr>
<tr>
<td>2.3.5 Product Cost Controlling</td>
<td>56</td>
</tr>
<tr>
<td>2.3.6 Profitability Analysis</td>
<td>56</td>
</tr>
<tr>
<td>2.3.7 Profit Center Accounting</td>
<td>56</td>
</tr>
<tr>
<td>2.4 Relationship between the Elements of Materials Management</td>
<td>58</td>
</tr>
<tr>
<td>and Financial Accounting and Controlling</td>
<td></td>
</tr>
<tr>
<td>2.4.1 Commitments in Procurement</td>
<td>58</td>
</tr>
<tr>
<td>2.4.2 Elements of Financial Accounting and Controlling in a</td>
<td>61</td>
</tr>
<tr>
<td>Purchase Order</td>
<td></td>
</tr>
<tr>
<td>2.4.3 Accounting Documents for Goods Receipt</td>
<td>62</td>
</tr>
<tr>
<td>2.4.4 Accounting Documents for Invoices</td>
<td>62</td>
</tr>
<tr>
<td>2.5 Reporting</td>
<td>64</td>
</tr>
<tr>
<td>2.5.1 External Reports</td>
<td>65</td>
</tr>
<tr>
<td>2.5.2 Management Reporting</td>
<td>65</td>
</tr>
<tr>
<td>2.5.3 Business Intelligence</td>
<td>66</td>
</tr>
<tr>
<td>2.6 Troubleshooting Techniques</td>
<td>68</td>
</tr>
<tr>
<td>2.6.1 Introduction to Technical Elements</td>
<td>69</td>
</tr>
<tr>
<td>2.6.2 The Troubleshooting Approach</td>
<td>71</td>
</tr>
<tr>
<td>2.6.3 The Technical Analysis</td>
<td>71</td>
</tr>
<tr>
<td>2.6.4 Debugging</td>
<td>72</td>
</tr>
<tr>
<td>2.7 Summary</td>
<td>75</td>
</tr>
</tbody>
</table>

### 3 Basics of Configuration and the Processes in Procurement 77

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 General Settings</td>
<td>77</td>
</tr>
<tr>
<td>3.1.1 Settings for Currency Codes</td>
<td>79</td>
</tr>
<tr>
<td>3.1.2 Decimal Places for Currencies</td>
<td>79</td>
</tr>
<tr>
<td>3.1.3 Standard Quotation for Exchange Rates</td>
<td>80</td>
</tr>
<tr>
<td>3.1.4 Prefix for Quotation of Exchange Rates</td>
<td>80</td>
</tr>
</tbody>
</table>
### Contents

3.1.5 Exchange Rate Type ........................................................ 81  
3.1.6 Translation Ratios for Currencies ........................................ 82  
3.1.7 Exchange Rates .............................................................. 83  
3.1.8 Exchange Rate Spread .................................................... 83  
3.1.9 Rounding Rule ............................................................... 83  
3.2 Enterprise Structure ........................................................... 84  
3.2.1 Definition ....................................................................... 86  
3.2.2 Assignment .................................................................... 90  
3.2.3 Materials Management Enterprise Structure ................... 93  
3.2.4 Financial Accounting Enterprise Structure ....................... 95  
3.3 Processes in Procurement ........................................................ 96  
3.3.1 Procurement Cycle ......................................................... 99  
3.3.2 Procurement of Stock Material ....................................... 102  
3.3.3 Procurement of Consumable Materials ........................... 102  
3.3.4 Procurement of External Services .................................... 104  
3.4 Master Data ........................................................................ 105  
3.4.1 General Ledger Account ................................................. 106  
3.4.2 Cost Element .................................................................. 107  
3.4.3 Cost Center .................................................................... 107  
3.4.4 Profit Center .................................................................. 108  
3.4.5 Internal Orders ............................................................... 108  
3.4.6 Segment ......................................................................... 109  
3.4.7 Material Master ............................................................. 110  
3.4.8 Vendor Master ............................................................... 113  
3.4.9 Master Data in Purchasing .............................................. 116  
3.5 Documents in Procurement ..................................................... 117  
3.5.1 Purchase Requisition ...................................................... 117  
3.5.2 Request for Quotation and Quotation ............................ 119  
3.5.3 Purchase Orders ............................................................. 121  
3.5.4 Outline Purchase Agreements ........................................ 128  
3.5.5 Purchasing Info Records ................................................. 130  
3.6 Summary ............................................................................ 131  

#### 4 Procurement of Stock and Consumable Materials .......... 133  
4.1 Procurement of Stock Material .................................................... 133  
4.1.1 Stock Material within Document Flow ........................... 134  
4.1.2 RFQs/Quotations .......................................................... 141  
4.1.3 Conditions and Calculation Schema .............................. 145
6.1.2 Lowest Value Determination Based on Range of Coverage .............................................................. 235
6.1.3 Lowest Value Determination Based on Movement Rate ........................................................................ 237
6.1.4 Lowest Value Determination Based on Loss-Free Valuation .................................................................. 241
6.2 LIFO Valuation ........................................................................................................................................ 241
6.2.1 LIFO Methods and the Layer Versions ................................................................................................. 244
6.2.2 Quantity and Index LIFO Procedures ..................................................................................................... 247
6.2.3 Pool LIFO Valuation ............................................................................................................................ 253
6.2.4 Lowest Value Comparison .................................................................................................................... 254
6.3 FIFO Valuation .......................................................................................................................................... 255
6.3.1 FIFO Configuration ............................................................................................................................... 256
6.3.2 Procedures for FIFO Valuation ............................................................................................................... 258
6.4 Summary ..................................................................................................................................................... 258
7 Material Price Change ................................................................................................................................. 259
7.1 Value Changes in Inventory Management .................................................................................................. 259
7.1.1 Goods Receipt for Purchase Orders .......................................................................................................... 260
7.1.2 Account Postings: Planned Delivery Costs .............................................................................................. 262
7.1.3 Delivery Free of Charge .......................................................................................................................... 263
7.1.4 Value Changes in Transfer Postings ......................................................................................................... 264
7.1.5 Initial Entry of Inventory Data .................................................................................................................. 270
7.1.6 Goods Receipt Reversal ........................................................................................................................... 272
7.1.7 Inventory Management Inconsistency Prevention .................................................................................. 278
7.2 Value Changes in Logistics Invoice Verification .......................................................................................... 280
7.2.1 Subsequent Debit/Credit ......................................................................................................................... 281
7.2.2 GR/IR Clearing Account Maintenance .................................................................................................... 284
7.3 Value Changes Resulting from Cash Discounts .......................................................................................... 286
7.3.1 Gross Goods Receipt/Gross Invoice Receipt ............................................................................................ 287
7.3.2 Gross Goods Receipt/Net Invoice Receipt ............................................................................................... 288
7.3.3 Net Goods Receipt/Net Invoice Receipt .................................................................................................. 289
7.4 Revaluation .................................................................................................................................................. 289
7.4.1 Price Changes in the Previous Period Only ............................................................................................ 291
7.4.2 Price Changes in the Previous and Current Period ................................................................................ 292
7.5 Posting to a Previous Period ....................................................................................................................... 293
7.5.1 Posting Goods Movements to the Previous Period ................................................................................ 294
A large portion of Materials Management is initiated and represented by the processes in procurement. The system is configured to represent these processes.

3 Basics of Configuration and the Processes in Procurement

In this chapter, we'll demonstrate and explain the most important elements of the configuration steps that determine the integration of Materials Management (MM) with Financial Accounting (FI) in SAP ERP Financials.

Later in this chapter, you'll learn about the various kinds of master data used in procurement and the different application transactions that correspond to procurement.

The understanding you'll develop in this chapter will help you represent the procurement processes in the SAP system for your business. You'll also learn about the different types of master data you need in the SAP system and the various documents that make use of this master data. Before diving into the details of master data, let's consider the various general settings in Customizing. These settings are used across applications and are therefore the responsibility of SAP NetWeaver consultants. However, the settings related to currency influence the account postings, so they are important, even though you aren't required to maintain these settings as a Materials Management consultant.

3.1 General Settings

As the name signifies, the general settings are the application-independent system settings. These settings are part of SAP NetWeaver and are prerequisite for handling all business transactions across applications and are an inherent part of the general settings in SAP Customizing:

- Countries
- Geocodes
Currencies

For our study of the integration between MM and FI, we’ll focus on the settings related to currencies, as these are the unit of valuation.

All currencies are defined according to the international ISO standard in the standard SAP system. Although you have a provision to define your own currency keys, we recommend you use the ISO standard. You’ll not be able to use data exchange in international communication (e.g., bank-clearing transactions) for your currency keys that do not correspond to the ISO standard.

Figure 3.1 shows the Customizing settings for the currency in SAP system under the menu path SAP IMG • SAP NetWeaver • GENERAL SETTINGS • CURRENCIES.
Let’s now discuss the following aspects of the currency settings that SAP has provided us:

- Settings for currency codes
- Decimal places for currencies
- Standard quotation for exchange rates
- Prefix for quotation of exchange rates
- Exchange rate type
- Translation ratios for currencies
- Exchange rates
- Exchange rate spread
- Rounding rule

The exchange rate between various currencies and the related account postings during various business transactions is an important consideration for both FI and MM. Although we’ll explore the associated account postings later in the following chapters, we’ll study the general settings associated with currencies in the sections that follow.

### 3.1.1 Settings for Currency Codes

You must maintain all of the currencies that you intend to use in your business transactions, such as EUR, USD, and GBP. You maintain this under the menu path SAP IMG • SAP NetWeaver • General Settings • Currencies • Check Currency Codes. Under this Customizing setting, you enter the long text and the short text for the currency keys. You also enter the ISO codes for the corresponding currencies. The important point to note is that you may use different SAP currency keys for the same ISO code. However, you must ensure the unique assignment of an ISO code to a SAP currency. Therefore, when you use the same ISO code for various SAP currency keys, you must indicate one of them as the primary currency to ensure the data exchange in international transactions (e.g., bank-clearing transactions).

### 3.1.2 Decimal Places for Currencies

SAP treats every currency as having two decimal places unless otherwise stated in this Customizing setting. For instance, Kuwaiti Dinar has three decimal places, so SAP has already delivered this setting with the value of KWD as “3”.

Amount in Database

The decimal point isn't stored in the field in the database of SAP ERP system tables. The currency fields are stored as decimal figures with a variable number of decimal places. For example, if you've set currency GBP to have two decimal places, and you post an amount of 10 GBP, an amount of 1000 GBP is stored in the currency field in the database. When you display the documents, it uses the values from the database to calculate the actual value based on the number of decimal places and then outputs it on the screen.

3.1.3 Standard Quotation for Exchange Rates

For each currency pair, you can have two types of quotations: direct quotation and indirect quotation. Under this Customizing setting, you can define either the direct quotation or the indirect quotation as the standard quotation for the currency pair with a validity start date.

Direct Quotation

Direct quotation is SAP's terminology for price notation. It's the currency value expressed in units of local currency per unit of foreign currency. For example:

- Local Currency: EUR
- Foreign Currency: USD
- One USD costs 0.75993 EUR

Indirect Quotation

Indirect quotation is SAP's terminology for volume notation. It's the currency value expressed in units of foreign currency per unit local currency. For example:

- Local Currency: EUR
- Foreign Currency: USD
- One EUR costs 1.3159 USD

3.1.4 Prefix for Quotation of Exchange Rates

It will be more helpful to explain the prefix of exchange rate with the help of Figure 3.2. You can enter exchange rate as a direct or indirect quotation. In application
transactions, the SAP system indicates whether the direct or indirect quotation exchange rate was used. It’s important to note the following standard prefix settings:

- ‘(blank space)’ for direct quotation exchange rate
- ‘/’ for indirect quotation exchange rate

So, now you know why there is a space (first bullet point in this section) before the exchange rate value in various application transactions.

### 3.1.5 Exchange Rate Type

You can define exchange rates for different purposes for the same date with the help of exchange rate types. You maintain this under the Customizing menu path SAP IMG • SAP NetWeaver • GENERAL SETTINGS • CURRENCIES • CHECK EXCHANGE RATE TYPES. You can also assign exchange rate types to a document type in Customizing.
This may result in a different exchange rate for just that document type. We’ll examine the following in the context of exchange rate type:

- **Reference currency**
  Reference currency is the currency key that you can use for all foreign currency translation for the corresponding exchange rate type. For example, if USD is your reference currency, and you maintain the exchange rate between USD and GBP, and USD and EUR, then the system would calculate the value of exchange rate between GBP and EUR from those two values.

- **Inverted exchange rate**
  If you allow the inverted exchange rate in the setting for the exchange rate type, the system would use an inverted exchange rate relation if there is a missing exchange rate entry for the currency pair. For instance, if an entry is missing for the translation of GBP to EUR, then the system would use the translation of EUR to GBP to calculate the value.

- **EMU (European Monetary Union)**
  The system uses a different algorithm for calculation if this indicator is set. This algorithm meets the EMU statutory guidelines. However, the reference currency becomes mandatory if you set this indicator.

- **Fixed exchange rate**
  If you set the indicator for fixed exchange rate, you might not be able to use different exchange rates in transactions. For instance, you would get the following message in Transaction MIRO: ‘Exchange rate of EUR fixed for translation from GBP to 1.20396’. However, you can configure this message as a warning message in Transaction OBA5.

### 3.1.6 Translation Ratios for Currencies

The SAP system doesn’t expect the exchange rate between two currency pairs to be of the order of 10000. However, this doesn’t mean that the system will restrict you from entering such diverse exchange rates. At such instances, the concept of translation ratios comes in handy for consultants. For instance, if 1 USD is equal to 27,611.09 MZM (Mozambique Metical), you can factor it by a translation ratio of 1000, so that you can maintain the exchange rate in the system. You’ll then have to maintain the exchange rate as 2.76110.
3.1.7 Exchange Rates

You enter the exchange rate between the currency pairs in this transaction under the Customizing menu path SAP IMG • SAP NetWeaver • General Settings • Currencies • Enter Exchange Rates. You can enter either the direct quotation or the indirect quotation for the currency pair as shown earlier in Figure 3.2. If the exchange rate that you enter here doesn’t have the same quotation as the standard quotation as explained in Section 3.1.3, the exchange rate is highlighted in red. “M” is the exchange rate type that is used for MM in the standard system. In addition, you can maintain a different value for the exchange rate corresponding to the currency pair and the exchange rate type, based on a different valid from date. This serves as the master data for the exchange rate of the various currency pairs.

3.1.8 Exchange Rate Spread

Exchange rate spread refers to the following:

- Difference between average exchange rate and bank buying rate
- Difference between average exchange rate and bank selling rate

For example, if the average exchange rate between the GBP and USD is 1.58430, and the spread is 0.0040, the bank-buying rate for you is 1.5803.

In the Customizing for the exchange rate type, you have the option of entering the buying exchange rate type and selling exchange rate type. You can maintain the bank buying exchange rates and bank selling exchange rates in the exchange rate table as described in the previous Section 3.1.7. You then have to ensure that the application transactions relevant for buying and selling make use of that exchange rate type. Although you won’t have control over the bank buying and selling exchange rates, by using spreads, you can minimize the exchange rate differences in your business transactions.

3.1.9 Rounding Rule

In SAP, you can round the calculated values at various places. You can enter the currency unit to which amounts will be rounded for the company code/currency combination. Payments are then to be made not in the smallest denomination but in a multiple of it.
For example, you may decide that five centimes would be the smallest denomina-
tion for payment transactions for Switzerland. The payment program evaluates
your entries to determine the cash discount and rounds off the amount accordingly.

Now that you've learned about the currency settings for the general settings in SAP
Customizing, which are valid across applications, let's focus on the fundamental
settings for individual applications. It's important to maintain the enterprise struc-
ture before establishing any business process in SAP. In our case, it's the enterprise
structure for MM and FI.

### 3.2 Enterprise Structure

An enterprise is made up of people and departments, and its structure represents
the people within different departments that are a part of the reporting hierarchy.
In an SAP system, the enterprise is represented differently, on the basis of various
operations such as MM, Sales and Distribution (SD), FI, Human Resources (HR),
and so on. We then pursue the integration of these components and, in this book,
will talk about them as and when required. The representation of an enterprise
structure for business into SAP ERP is the first step toward realizing real-time busi-
ness scenarios. If you examine an enterprise's building blocks for the purpose of
analysis, you see that it's made up of organizational units and the relationships
among them.

Customizing is used to configure business functionalities in the SAP system. The
same is true for the enterprise structure, which is represented with the help of the
following two Customizing options:

- Definition
- Assignment

As you can see in Figure 3.3, both options are present for all of the components
that require organizational units specific to them. The enterprise structure shows
the interdependence of the organizational units on one another, and the organi-
zational units of one component may be used in another to define its own enter-
pise structure. For instance, MM uses the company code from FI, the plant from
Logistics – General, and the purchase organization and storage location from MM
to define its enterprise structure. We'll describe the enterprise structures of MM
and FI later in this chapter.
The decision concerning which organizational units to create is a fundamental step in your project. When you've chosen an organizational structure, it's not easy to change it.

**Missing Components in the Enterprise Structure**

You'll find that not all of the application components are included in the enterprise structure in Customizing. The only components included are those that require the organizational units specific to them. Quality Management, Production Planning, Project System, and so on use the organizational units from other SAP software, for example. Therefore, they don't appear under **DEFINITION** or **ASSIGNMENT** under the **ENTERPRISE STRUCTURE**.
Now that you know the enterprise structure is used in Customizing to portray and configure the specific structure of your business, let’s move on to the definition and assignment to help you understand how it’s represented within the SAP system.

3.2.1 Definition

You define various organizational units under the DIVISION section in the Customizing (Transaction SPRO) menu path: SAP IMG • ENTERPRISE STRUCTURE • DEFINITION. In most cases, you’ll find an SAP standard organizational unit already defined. It’s advisable to first come up with the structure and naming convention on paper and then create new organizational units by copying those delivered in the SAP standard. The definition is kept simple and generally represents a code with a text description.

Because our focus in this book is on MM and FI, let’s take a quick look at some of the important organizational units from these areas that help define the enterprise structure in MM and FI.

<table>
<thead>
<tr>
<th>Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>The client is a commercial organizational unit in the SAP ERP system, with its own data, master records, and set of tables. From a business perspective, the client forms a corporate group.</td>
</tr>
<tr>
<td>From the technical point of view, the client is a three-character key you enter along with the user ID and password when you log in to the system. At this time, the client along with the user ID decides the following:</td>
</tr>
<tr>
<td>▶ User master data such as parameters, authorizations, and user groups</td>
</tr>
<tr>
<td>▶ Customizing data such as organizational units, assignments, and document types</td>
</tr>
<tr>
<td>▶ Application data such as business transaction data and material master data</td>
</tr>
<tr>
<td>Because the client is determined at the time of logging in to the system, you’ll notice that in MM or FI, it doesn’t appear as an option in the enterprise structure in Customizing (Transaction SPRO).</td>
</tr>
</tbody>
</table>

Let’s move on to define the various organizational units used in the enterprise structure of MM and FI.

Company

The company is an organizational unit in accounting that represents the business organization and acts as an internal trading partner facilitating inter-company transactions.
**Company Code**

The company code is the smallest legal organizational unit that represents an accounting unit for which you can have an independent accounting department within external accounting.

It’s important to note that the company code has to be a legal entity, but the company may or may not be a legal entity.

<table>
<thead>
<tr>
<th>Company and Company Code: Points to Remember</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ In the SAP system, consolidation functions in FI are based on companies.</td>
</tr>
<tr>
<td>▶ A company can comprise one or more company codes.</td>
</tr>
<tr>
<td>▶ All company codes for a company must work with the same operational chart of accounts and fiscal year. You assign a chart of accounts to each company code. This chart of accounts is the operational chart of accounts and is used for the daily postings in this company code. This is a list of all SAP General Ledger accounts used by one or several company codes.</td>
</tr>
<tr>
<td>▶ The currencies of various company codes of a company can be different.</td>
</tr>
</tbody>
</table>

**Business Area**

A business area is an organizational unit within accounting that represents a separate area of operations or responsibilities in a business organization. The use of business area is optional. However, SAP recommends the use of profit center, which helps in segmental reporting.

**Functional Area**

A functional area is an organizational unit that classifies the expenses of an organization by functions such as administration, sales and distribution, marketing, production, research and development, and so on. The classification takes place to meet the needs of cost of sales accounting.

**Financial Management Area**

The financial management area, also called the FM area, is an organizational unit within accounting that structures the business organization from the perspective of Cash Budget Management and Funds Management.
Controlling Area
The controlling area is an organizational unit in accounting used to subdivide the business organization from a cost accounting standpoint. A controlling area may be assigned to one or more company codes in a 1:1 or 1:n relationship.

Operating Concern
The operating concern is an organizational unit in accounting that structures the enterprise from the point of view of Profitability Analysis (PA), based on the cost of sales accounting method.

Plant
The plant is an organizational unit used to divide an enterprise according to production, procurement, maintenance, and materials planning. It's the place where materials are produced or goods and services are provided.

The valuation level determines the level at which material stocks are valued. You may choose either plant or company code as the valuation level. Your choice of valuation level affects the following:

▶ Maintenance of the material master record.
▶ How accounting data is maintained. In this case, it's maintained for each plant or for each company code in the material master depending on the valuation level.
▶ The SAP General Ledger in which material stocks are managed.
▶ How account determination is defined. In this case, if the material stocks are valued at the company code level, all of the plant stocks for a material are managed in a joint stock for each company code. If material stocks are valued at the plant level, the material stock for each plant can be managed in different accounts. Thus, you can define a separate account determination for each plant.
▶ The SAP General Ledger to which transactions are posted in MM.

Depending on whether the valuation is at the plant level, there is a separate account determination for each plant. If the plant is chosen as the valuation level, you can define material prices for each plant. In addition, each plant can have its own account determination.
Switching the Valuation Level

The valuation level or the valuation area determines the level at which material stocks are valuated. This can be either the plant or the company code level. The valuation area is hidden within the MM component.

This is one of the fundamental settings for materials valuation and should be set carefully because you can’t switch the valuation level from plant to company code or vice versa.

For switching the valuation level, you must ensure the following:

- An assignment of plant to company code isn’t present.
- Entries don’t exist in Table T001K.
- If materials already exist, all stocks must be cleared and posted again after the conversion.
- The valuation data of the materials (Table MBEW at the valuation area level) must be converted.
- You may have to adjust the account determination for all accounts that depend on valuation areas and valuation classes. Valuation classes represent the assignment of a material to a group of SAP General Ledger accounts. This is explained in detail in Sections 5.2.2, 8.71, 8.72, and 10.8.
- You may have to adjust the assignment of business areas per valuation area, division, and so on.

Storage Location

The storage location is an organizational unit that allows the differentiation of material stocks within a plant. Inventory Management on a quantity basis is carried out at the storage location level in the plant.

Purchasing Organization

A purchasing organization is an organizational level that negotiates conditions of purchase with vendors for one or more plants. It’s legally responsible for completing purchasing contracts.

Now that you have a fair amount of information about defining various organizational units for MM and FI, we’ll continue to explaining the significance of the assignment of these organizational units.
3.2.2 Assignment

The framework of an enterprise for processing business transactions is realized by linking organizational units. The assignment in Customizing provides a set of options available for portraying your enterprise in SAP. It serves the purpose of creating references between the organizational units you’ve defined.

The organizational units from other components can be used during assignment. For instance, only the purchasing organization belongs to MM; however, the following options are present for assignment under the menu path SAP IMG • ENTERPRISE STRUCTURE • ASSIGNMENT • MATERIALS MANAGEMENT:

- Assign Purchasing Organization to Company Code
- Assign Purchasing Organization to Plant
- Assign Standard Purchasing Organization to Plant

Table 3.1 provides the technical details for the definition and assignment for MM, FI, and CO in Customizing.

<table>
<thead>
<tr>
<th>Menu Path</th>
<th>Table/View</th>
<th>Transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>(All of the menu paths listed are found under SAP IMG • ENTERPRISE STRUCTURE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DEFINITION • MATERIALS MANAGEMENT • MAINTAIN STORAGE LOCATION</strong></td>
<td>▶ T001L/V_T001L</td>
<td>OX09</td>
</tr>
<tr>
<td></td>
<td>▶ TLAD/V_TNLAD</td>
<td></td>
</tr>
<tr>
<td><strong>DEFINITION • MATERIALS MANAGEMENT • MAINTAIN PURCHASING ORGANIZATION</strong></td>
<td>T024E/V_T024E</td>
<td>OX08</td>
</tr>
<tr>
<td><strong>DEFINITION • LOGISTICS – GENERAL • DEFINE VALUATION LEVEL</strong></td>
<td>TCURM</td>
<td>OX14</td>
</tr>
<tr>
<td><strong>DEFINITION • LOGISTICS – GENERAL • DEFINE, COPY, DELETE, CHECK PLANT</strong></td>
<td>▶ T001W/V_T001W</td>
<td>OX10</td>
</tr>
<tr>
<td></td>
<td>▶ T005 (T/S/U/G/E/H/F)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▶ T002 (T)</td>
<td>(only for defining the plant organizational unit)</td>
</tr>
<tr>
<td></td>
<td>▶ TFACD (T)</td>
<td></td>
</tr>
<tr>
<td><strong>DEFINITION • FINANCIAL ACCOUNTING • DEFINE COMPANY</strong></td>
<td>T880/V_T880</td>
<td>OX15</td>
</tr>
</tbody>
</table>

Table 3.1 Menu Path and the Technical Elements of the Enterprise Structure for Materials Management, Logistics – General, Financial Accounting, and Controlling
<table>
<thead>
<tr>
<th>Menu Path</th>
<th>Table/View</th>
<th>Transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition • Financial Accounting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Define Credit Control Area</td>
<td>T014/V_T014</td>
<td>OB45</td>
</tr>
<tr>
<td><strong>Definition • Financial Accounting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Definition • Financial Accounting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Define Business Area</td>
<td>T001/V_T001</td>
<td>OX02</td>
</tr>
<tr>
<td><strong>Definition • Financial Accounting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Definition • Financial Accounting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Define Functional Area</td>
<td>TGSB/V_TGSB</td>
<td>OX03</td>
</tr>
<tr>
<td><strong>Definition • Financial Accounting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Definition • Financial Accounting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintain FM Area</td>
<td>FM01/V_FM01_A</td>
<td>OF01</td>
</tr>
<tr>
<td><strong>Definition • Controlling</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Definition • Controlling</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintain Controlling Area</td>
<td>TKA01/V_TKA01_GD</td>
<td>OX06</td>
</tr>
<tr>
<td><strong>Definition • Controlling • Create</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Concern</td>
<td>TKEB/V_TKEB2</td>
<td>KEP8</td>
</tr>
<tr>
<td><strong>Assignment • Materials</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management • Assign Purchasing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization to Company Code</td>
<td>T024E/V_T024E_ASSIGN</td>
<td>OX01</td>
</tr>
<tr>
<td><strong>Assignment • Materials</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management • Assign Purchasing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization to Plant</td>
<td>T000_001W_E</td>
<td>OMKI</td>
</tr>
<tr>
<td><strong>Assignment • Materials</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management • Assign Standard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing Organization to Plant</td>
<td>T024/W_T024W.Assign</td>
<td>OX17</td>
</tr>
</tbody>
</table>

*Table 3.1*  Menu Path and the Technical Elements of the Enterprise Structure for Materials Management, Logistics – General, Financial Accounting, and Controlling (Cont.)
<table>
<thead>
<tr>
<th>Menu Path</th>
<th>Table/View</th>
<th>Transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSIGNMENT • MATERIALS MANAGEMENT • ASSIGN PURCH. ORGANIZATION TO REFERENCE PURCH. ORGANIZATION</td>
<td>T024Z/V_T024Z, T024E</td>
<td>OMKJ</td>
</tr>
<tr>
<td>ASSIGNMENT • LOGISTICS – GENERAL • ASSIGN PLANT TO COMPANY CODE</td>
<td>T001K/V_T001K.Assign, T001, TASSIGN.MM.T001W, T001W, T001W_EXT</td>
<td>OX18</td>
</tr>
<tr>
<td>ASSIGNMENT • FINANCIAL ACCOUNTING • ASSIGN COMPANY CODE TO COMPANY</td>
<td>T001/V_001_Y</td>
<td>OX16</td>
</tr>
<tr>
<td>ASSIGNMENT • FINANCIAL ACCOUNTING • ASSIGN COMPANY CODE TO CREDIT CONTROL AREA</td>
<td>T001/V_001_X</td>
<td>OB38</td>
</tr>
<tr>
<td>ASSIGNMENT • FINANCIAL ACCOUNTING • ASSIGN BUSINESS AREA TO CONSOLIDATION BUSINESS AREA</td>
<td>TGSB/V_GSB_A, TGSBK, TGSBL</td>
<td>OBB6</td>
</tr>
<tr>
<td>ASSIGNMENT • FINANCIAL ACCOUNTING • ASSIGN COMPANY CODE TO FINANCIAL MANAGEMENT AREA</td>
<td>T001/V_T001_FM, FM01, FM01T</td>
<td>OF18</td>
</tr>
<tr>
<td>ASSIGNMENT • CONTROLLING • ASSIGN COMPANY CODE TO CONTROLLING AREA</td>
<td>TKA01/V_TKA01_GD, TKA02/V_TKA02, T001</td>
<td>OX19</td>
</tr>
<tr>
<td>ASSIGNMENT • CONTROLLING • ASSIGN CONTROLLING AREA TO OPERATING CONCERN</td>
<td>TKA01/V_TKA01_ER</td>
<td>KEKK</td>
</tr>
</tbody>
</table>

**Table 3.1** Menu Path and the Technical Elements of the Enterprise Structure for Materials Management, Logistics – General, Financial Accounting, and Controlling (Cont.)

As discussed in the previous chapter, a transaction code might not be available for each menu path in Customizing. The maintenance views and the tables therefore represent the technical elements of such menu paths in Customizing.
In this section, you learned only about the options available for assignment in Customizing. However, to understand how these options impact the enterprise structure, we’ll describe the MM and FI enterprise structures in the following sections.

### 3.2.3 Materials Management Enterprise Structure

The enterprise structure in MM in SAP ERP consists of the organizational units from FI, Logistics – General, and MM, and the relationships between them.

Figure 3.4 shows a typical MM enterprise structure.

As shown in the figure, there is a 1:n (one to many) relationship between client and company codes, company codes and plants, and plants and storage locations. This means that there can be multiple company codes per client, multiple plants per company code, and so on. The client is determined when you log in to the system; therefore, there is only one client for an enterprise structure.

The relationship between company codes and purchase organizations is 1:n and is illustrated in Figure 3.4 by broken lines in the arrow. It means the relationship may not exist, depending on your choice of cross-company code procurement. The relationship between plants and purchase organizations is many to many.

The enterprise structure in MM is simple, except for the relationship between purchasing organizations and company codes and plants. It provides added flexibility in configuring real-time procurement scenarios. Different options exist for organizing purchasing within your company, as you can see in Table 3.2. In this example, we have the purchase organizations A, B, 0001, and C100. The company code is 1000, and the plants are 1000 and 1100. In addition, plants 1000 and 1100...
are assigned to company code 1000, and plants 2000 and 3000 are assigned to company codes 2000 and 3000, respectively.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Purchasing Organizations (A, B, 0001, C100)</th>
<th>Purchasing Organization Assignment to Company Code (1000, 2000, 3000)</th>
<th>Purchasing Organization Assignment to Plants (1000, 1100)</th>
<th>Plant Assignment to Company Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant-specific purchasing organization</td>
<td>A 1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td></td>
<td>B 1000</td>
<td>1100</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>Cross-plant purchasing organization</td>
<td>0001 1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td></td>
<td>0001 1000</td>
<td>1000</td>
<td>1100</td>
<td>1000</td>
</tr>
<tr>
<td>Cross-company code purchasing organization</td>
<td>C100 1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td></td>
<td>C100 3000</td>
<td>3000</td>
<td>3000</td>
<td>3000</td>
</tr>
</tbody>
</table>

**Table 3.2** Different Procurement Scenarios in an Enterprise

As you can see, for configuring the plant-specific purchasing scenario, purchasing organizations A and B are assigned to company code 1000 and plants 1000 and 1100, respectively, which belong to company code 1000.

For configuring the cross-plant procurement scenario, the same purchasing organization 0001 is assigned to company code 1000 and plants 1000 and 1100 belonging to company code 1000.

For configuring purchasing on a cross-company-code basis, the same purchasing organization C100 is assigned to plants 1000, 2000, and 3000 belonging to company codes 1000, 2000, and 3000, respectively. In this case, the purchasing organization isn’t assigned to the company code; therefore, you’ll find that the column for the purchase organization to company code assignment is blank in Table 3.2.

You should now understand the enterprise structure for MM, as well as the different procurement scenarios possible for its representation in the SAP system. Let’s now take a look at the enterprise structure of FI.
3.2.4 Financial Accounting Enterprise Structure

The SAP ERP Financials component includes other components capable of carrying out an organization’s complete financial and management accounting processes. FI provides information on your company’s financial position to external entities such as government regulators and shareholders. CO provides internal stakeholders with information necessary for financial decision making such as that related to overhead and cost of goods. Together, they deliver a complete picture of the overall financial status of your organization and can be integrated with other SAP ERP components to provide real-time cost, revenue, and planning data. Both have their own organizational structures.

Although a full-fledged discussion of FI and CO is beyond the scope of this book, we’ll briefly describe the essential elements of the organizational structures for both of these components and subcomponents, as shown in Figure 3.5.

![Organizational Structure for Financial Accounting and Controlling](image)

Figure 3.5 Organizational Structure for Financial Accounting and Controlling

Figure 3.5 doesn’t represent the assignments in Customizing precisely. Instead, it's meant to provide you with an overview and should help you develop an understanding of the way various organizational units in FI and CO can be visualized.

The controlling area and the operating concern belong to CO, whereas the credit control area, company, and company code belong to FI. Financial management area (FM area) is also called financial area. It’s taken into account in Cash Budget Management and Funds Management and has its assignment in the corresponding components.

The controlling area is used for the purposes of reporting. It’s an organizational unit within a company used to represent a closed system for cost accounting purposes.
A company code is assigned to one controlling area, but a controlling area can have more than one company code assigned to it.

The company code is the most important organizational unit for FI. All other subcomponents connect to FI by assigning their organizational units to the company code.

You have learned about the various organizational units and their relationship in MM, FI, and CO, which are used to realize the enterprise structure. The objective of setting up an enterprise structure is to establish a framework for processing different business transactions. Having set up the enterprise structure, we’re now ready to take a look at the various processes in procurement.

### 3.3 Processes in Procurement

The processes in procurement are optimized to meet financial objectives. At a lower level, these objectives may either be about complying with the principles of external accounting or about providing information for management decision making in CO. Of course, the business objective is to make the materials/services available at the planned date and at the best possible price.

Materials can be procured in your company through various channels such as external vendors or other branches of your company. The departments that are involved are purchasing, inventory management, and invoice verification. SAP has knit together operational requirements with financial objectives using documents. The various documents created in purchasing, inventory management, and invoice verification reflect the integration and configuration flexibility of MM and FI.

The following are impacts when you create a document:

- Manual entries
- Master data
- User controls

As shown in Figure 3.6, the elements listed here result in the documents in procurement.

An application transaction results in application document(s) in SAP ERP. We’ll explain the master data and the various documents in procurement later in this
chapter. Still, it will be helpful to understand Figure 3.6 in the context of purchase orders (POs).

You enter a PO in Transaction ME21N and make manual entries, for example, company code, purchasing organization, and purchasing group. The system validates these entries with the help of the enterprise structure maintained in Customizing, other Customizing settings under MM, and the elements hard-coded in ABAP. The system may then issue a warning or error message, if required. The vendor master and material master generally provide the master data from which other information is obtained during PO processing. After the various default values have been assigned, you may still have the ability to overwrite them. Then, depending on the settings in Customizing and the underlying ABAP code, the system again determines whether a warning or error message is issued.

One of the most important features of master data is to maintain the accounting information. It’s impossible to execute transactions in procurement without having knowledge of accounting. We’ll discuss master data in more detail later in the chapter.

Although we’ve described Figure 3.6 for a PO, the process applies to almost all of the application transactions.
### Technical Naming Conventions in Procurement

- **Reports:** RMnnnnnn
  
  Example:  
  RM08RL80 (correct)  
  MM70AMRA (incorrect: not recognizable as a report)

- **Includes of the main programs SAPMMxyz and SAPLMxyz**
  
  **MMxyzinn** Module includes
  
  **LMxyzinn** Function group includes

  “xyz” is defined in the main program. The variable “inn” differentiates among the following type of includes:
  
  TOP = data declaration
  
  Inn = PAI modules
  
  Onn = PBO modules
  
  Fnn = form routines

- **Function modules**
  
  MMPUR_<object>_<verb>

  Example:  
  MMPUR_INVOICE_CREATE (correct)  
  MMPUR_DISPLAY_INVOICE (incorrect: object after verb)

- **Form routines**
  
  <object>_<verb>

  Example:  
  PO_ITEM_DATA_FILL (correct)  
  CHECK_BETRAG (incorrect: mixed languages, object after verb)

- **Data declaration**
  
  Internal tables  
  \[ T_\], LT_ (L=Local)  
  Structures  
  \[ S_\], LS_ (L=Local)  
  Fields  
  \[ F_\], LF_ (L=Local)  
  Parameters in reports  
  PA_  
  Select options in reports  
  SO_  
  Ranges in Reports  
  RA_  
  Constants  
  \[ C_<field name>_<field content or short text>\]
Now that you know the points of interaction in the system during the processes in procurement, we can outline the sequence of steps on which the external procurement in MM is based.

### 3.3.1 Procurement Cycle

External procurement in MM centers around a general cycle of activities called the procurement cycle. Figure 3.7 represents a typical procurement cycle. It comprises a series of eight functional steps, which replicate the procure-to-pay scenario in MM. We’ll briefly describe each step.

**Determination of Requirements**

Either individual user departments determine materials requirements manually or Materials Planning and Control determines them automatically. The determination of requirements in the SAP system is represented by the creation of a purchase requisition. The purchase requisition is an internal purchasing document used to notify the responsible department about material/service requirements. In the SAP system, the purchase requisition can keep track of the status, that is, whether it has been processed to a PO.

**Source Determination**

As you can see in Figure 3.7, source determination is carried out within Purchasing in MM. The Purchasing component helps you identify potential sources of supply, again based on past orders and existing longer-term purchase agreements. This speeds the process of creating requests for quotation (RFQs), which can be sent to vendors electronically via SAP EDI, if desired.
Vendor Selection

Vendors reply to the RFQ with their quotation. In the SAP system, the RFQ and quotation are the same document. The system simplifies the selection of vendors by making price comparisons between the various quotations. You can also configure the system to send rejection letters automatically.

Purchase Order Processing

The PO is a legal and formal document with a set of requests and/or instructions to vendors to supply certain materials or render certain services. You can create a PO from the purchase requisition or the quotation.

Purchase Order Monitoring

The system may automatically generate reminders or expediters at predefined intervals of reminder periods you’ve specified. You can also receive a real-time status of all purchase requisitions, quotations, and POs.
Goods Receipt Examples
You can post a goods receipt (GR) in Inventory Management when you receive the materials against the PO. The PO history is updated accordingly. You can limit the over delivery and under delivery of ordered goods by specifying permissible tolerances at the time of the PO. For instance, if a PO is created for 100 pieces of a material, the over delivery tolerance may be 10%, and the under delivery tolerance may be 20%. In this case, the standard system issues an error message for a GR of more than 110 pieces and a warning message for a GR of fewer than 80 pieces. You can configure these messages as error or warning messages per your requirements. The valuated GR results in the creation of an accounting document.

Invoice Verification
The system suggests the amount and the quantity based on the PO and the GR. The terminology of a three-way and two-way match is also in use in the industry, although it’s not documented officially by SAP. A three-way match is the matching of values among the PO, GR document (material document), and invoice receipt (IR) document. A two-way match involves just the PO and the IR. Nonetheless, in both cases, it has to be verified against the invoice you receive from the vendor. You can configure tolerances to block deviating invoices for payment. In addition to the other tolerances, during invoice verification, the system can check for a mismatch between the quantity at the time of GR and that at the time of invoice verification. It can also check for a mismatch between the price in the PO and that at the time of invoice verification.

Payment Processing
The payment program in FI can make payment against the accounting documents created as a result of invoice verification. In turn, the accounting documents are updated with the clearing document number and the clearing date.

The procurement cycle terminates in FI. Thus, it can’t be completed unless the appropriate accounting information is present for each step.

<table>
<thead>
<tr>
<th>Procurement Cycle for External Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>The procurement cycle for external services varies slightly from that for materials, as follows:</td>
</tr>
<tr>
<td>▶ The automatic generation of purchase requisitions doesn’t occur in Materials Planning but either in Plant Maintenance or Project Systems.</td>
</tr>
</tbody>
</table>
There may be a bid invitation instead of an RFQ. An RFQ is an invitation extended to a vendor by a purchasing organization to submit a quotation (bid) for the supply of materials or performance of services.

The GR isn’t posted manually. Instead, the service entry sheet is posted and service acceptance is made in Transaction ML81N. This creates a corresponding GR document automatically.

Now that you understand the procurement cycle for materials, we'll move ahead to describing the following types of procurement:

- Procurement of stock material
- Procurement of consumable materials
- Procurement of external services

We distinguish these types of procurement because of the way in which the accounting information needs to be handled.

### 3.3.2 Procurement of Stock Material

The materials that are kept in storage following a GR are referred to as stock materials. The stock on hand is updated by the receipt or issue of goods in the storage location. They're managed on a value and quantity basis in Inventory Management.

As indicated earlier, the procurement of stock material categorizes the way in which the accounting information is passed during procurement. The material master record is maintained for stock materials. The references to the accounting information are maintained in the accounting view of the material master. This accounting information, along with the Customizing settings, determines the SAP General Ledger accounts to be used at the time of GR and invoice verification account postings. Because the material master is the key to accounting information, the account determination for stock material is automatic.

### 3.3.3 Procurement of Consumable Materials

The materials that are procured directly for an account assignment object and aren't managed on a value basis in Inventory Management are referred to as consumable materials. Account assignment objects can be objects such as cost centers, internal orders, projects, or business processes to which costs or quantities are posted in CO. Consumable materials are assumed to have been consumed the moment they're
received. For example, they may represent materials such as office supplies that are procured directly for the respective cost centers.

Consumable materials may or may not have a material master record. Nonetheless, a manual account assignment is mandatory. Because the material master for consumable materials doesn’t contain accounting information, it has to be manually entered at the time of creation of a procurement document, for example, a PO. The consumable materials debit has different account assignment objects depending on the account assignment category. Following are the account assignment categories that can be used:

- A: Asset
- K: Cost center
- P: Project
- F: Order
- C: Sales order

The system tries to derive the SAP General Ledger account for consumption from the account assignment information you enter during the creation of a purchase requisition or PO. For example, you have to enter the SAP General Ledger account number manually when you use the account assignment object K, as shown in Figure 3.8. On the other hand, the system derives the SAP General Ledger account number from the asset number you enter when you use the account assignment object A.

---

**Figure 3.8** Purchase Order for Account Assignment K
Table 3.3 provides a comparison between the procurement of stock materials and that of consumable materials.

<table>
<thead>
<tr>
<th>Stock Material</th>
<th>Consumable Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry of material number is required.</td>
<td>Entry of material number isn't required but is possible.</td>
</tr>
<tr>
<td>Account assignment category is left blank.</td>
<td>Account assignment category is mandatory.</td>
</tr>
<tr>
<td>Posts to stock account.</td>
<td>Posts to the consumption account.</td>
</tr>
<tr>
<td>Quantity, value, and consumption are updated in the material master record.</td>
<td>Quantity and consumption may be updated, but the value isn't updated.</td>
</tr>
<tr>
<td>Moving average price is adjusted.</td>
<td>Value isn't updated.</td>
</tr>
</tbody>
</table>

Table 3.3  Procurement of Stock Material versus Consumable Material

3.3.4  Procurement of External Services

The basic steps involved in the procurement of services are as shown in Figure 3.9. The requirements can be determined by all of the departments, just like the procurement of materials. In addition, purchase requisitions can be created and passed to MM from Plant Maintenance (PM) or Project System (PS).

Figure 3.9  Steps in the Procurement of External Services
The procurement of external services involves the following steps:

- Determination of requirements
- Recording of requirements
- Determination of possible sources
- Bid invitation procedure
- Entry of data from quotations submitted by bidders
- Comparison of quotations
- Award phase (order placement)
- Monitoring of POs
- Entry of services actually performed
- Acceptance of services performed
- Verification of invoices for services

Due to the nature of procurement, external services are handled under a different functionality of MM called External Services Management. We’ll discuss this in more detail in the next chapter.

So far, we’ve discussed the enterprise structure and the processes in procurement with very little emphasis on the actual application transactions. Master data serves as an entry aid for the application transactions in procurement. We’ll take a closer look at this in the next section.

### 3.4 Master Data

Data records that are stored in the database for a long period of time are called master data. They’re stored centrally and used and processed on a cross-application basis, thus avoiding redundancy.

In this section, we’ll describe the key FI, CO, and MM master data.

Following are the key master data objects for FI and CO:

- General Ledger account
- Cost element
- Cost center
Basics of Configuration and the Processes in Procurement

- Profit center
- Internal order
- Segment

Following are the key master data objects for MM:
- Material master
- Vendor master
- Purchasing info record
- Source list
- Quota arrangement
- Time-dependent conditions
- Vendor evaluation

As a Materials Management consultant, you might be expected to maintain the master data objects for MM but you don’t have to maintain the FI and CO master data. However, you might encounter warnings and errors in your business transactions due to improperly maintained master data in FI and/or CO. Therefore, it’s important that we next discuss these master data objects.

3.4.1 General Ledger Account

The SAP General Ledger is the tool used for capturing the company’s financial transactions at the lowest possible level. Therefore, you should design the SAP General Ledger account structure to reflect external financial reporting. You should not build any intelligence in the account structure for any form of departmental or cost center reporting because you can get this information through CO. The SAP General Ledger account holds the data corresponding to the chart of accounts and company code and therefore has the following segments:

- Chart of accounts segment
- Company code segment

You can create and maintain the SAP General Ledger account through the menu path SAP Easy Access • Accounting • Financial Accounting • General Ledger • Master Records • G/L Accounts • Individual Processing • Centrally.
refer to Transaction FS03 in Figures 2.4 in Chapter 2, and in Figure 8.15 in Chapter 8, for the screenshot.

### 3.4.2 Cost Element

Cost elements describe the origin of costs. We have the following types of cost elements:

- **Primary cost elements**
  Primary costs are incurred from outside your company. For example, material costs, personnel costs, and energy costs constitute the primary cost elements.

- **Secondary cost elements**
  Secondary cost elements represent activities that are incurred within your company. For example, assessment cost elements, cost elements for internal activity allocation, and cost elements for order settlements constitute the secondary cost elements.

The system FI transfers the postings from the cost and revenue accounts in the form of revenue and cost elements in the CO component in real time. Therefore, you must create primary cost element in the CO component for the SAP General Ledger account in FI. However, you can create secondary cost elements only in CO. You must use secondary cost elements to record the internal flow of values for activities such as assessment in Cost Center Accounting subcomponent and settlements in the Internal Orders subcomponent.

You can create and maintain cost elements through the menu path SAP Easy Access • Accounting • Controlling • Cost Element Accounting • Master Data • Cost Element • Individual Processing.

### 3.4.3 Cost Center

Cost centers represent a clearly delimited location where costs occur. You can set up cost centers based on your functional requirements, allocation criteria, the type of activities or services provided, your geographical locations, and areas of responsibility.

You can create and maintain cost centers through the menu path SAP Easy Access • Accounting • Controlling • Cost Center Accounting • Master Data • Cost Center • Individual Processing.
Note, however, that you can’t create the cost centers within CO until you’ve completed the standard hierarchy. The standard hierarchy is a structure to which you must assign all cost centers within the controlling area.

### 3.4.4 Profit Center

A profit center is an organizational unit in accounting that reflects a management-oriented structure of the organization for the purpose of internal control. It operates practically independently on the market, bears responsibility for its own costs and revenues, and can be expanded into an investment center. The profit center is often called “the concept of a company within the company.”

<table>
<thead>
<tr>
<th>Profit Center for Group Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many companies use profit centers instead of company codes for group reporting. A company code may have multiple profit centers. Note that Profit Center Accounting is now a part of SAP General Ledger (popularly known as the New General Ledger) rather than the CO component. This has the benefit that the business users don’t have to wait for month-end to prepare their financial statements because they will now be available at any time through FI with information updated on a real-time basis.</td>
</tr>
</tbody>
</table>

You can create and maintain profit centers through the menu path SAP Easy Access * Accounting • Financial Accounting • General Ledger • Master Records • Profit Center • Individual Processing.

### 3.4.5 Internal Orders

You can use internal orders to represent individual tasks or projects that you want to report on, in addition to the other account assignment objects such as cost centers. Internal orders can support task-oriented planning, monitoring, and allocation of costs.

Internal orders can be the following:

- **Real**
- **Statistical**

When your internal order is real, it can collect the costs that the task or project is going on. However, you might like to make them statistical when they are supposed
to exist for longer periods to provide you with an additional reporting dimension. In this case, the internal order can accept postings but can’t settle it to any other object.

Table 3.4 describes the various order types for the internal order and their description. The Order Type subcomponent has control functionality and dictates the settings that are used in the creation of internal orders.

<table>
<thead>
<tr>
<th>Order Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead cost order</td>
<td>These monitor costs related to internal activities settled to cost centers.</td>
</tr>
<tr>
<td>Investment order</td>
<td>These monitor costs related to internal activities settled to fixed assets.</td>
</tr>
<tr>
<td>Accrual order</td>
<td>These offset postings for accrued costs calculated in CO.</td>
</tr>
<tr>
<td>Order with revenue</td>
<td>These capture revenue that isn't part of the core business of the company's operations.</td>
</tr>
</tbody>
</table>

Table 3.4  Order Type for Internal Orders

3.4.6  Segment

The US GAAP and IFRS accounting principles require companies to prepare and report financial statements based on segments. One of the advantages of SAP General Ledger is that you can now define segments in your system for this purpose. You can define a segment as a division within a company, for which you can create financial statements to meet external reporting requirements. During account postings, the segment is determined from the profit center master record. It’s also possible to assign the segment manually during account posting for FI transactions. For further information, refer to SAP Help for SAP ERP Financials FI.

The material master and the vendor master are the most important master data in procurement. Among others, they serve the following fundamental purposes:

- Entry aid to default in relevant data during procurement transactions
- Provision of accounting information during procurement transactions, which helps with automatic account determination

Now that you have an overview about the master data in FI and CO, let’s look at the material master and the vendor master in more detail. The material master and vendor master correspond to the master data in MM.
3.4.7 Material Master

The material master is your company's main source of material-specific data and contains descriptions of all materials your enterprise procures, produces, and keeps in stock. Because it can be used by all of the areas such as purchasing, inventory management, materials planning, and invoice verification, the data in the material master is subdivided into various views, including the following:

- Purchasing data for ordering
- Inventory management data for posting goods movements and managing physical inventory
- Accounting data for material valuation
- Material requirements planning (MRP) data for planning material needs

Furthermore, material master data is organized based on organizational units such as client/company code, plant, and storage location. It decides whether the material master should store different values of a particular organizational unit. Figure 3.10 represents some of the views in the material master, along with possible organizational units.

![Figure 3.10 Organization of Material Master Data](image-url)
In the different views—such as Basic Data 1, Purchasing, MRP4, and so on—you can store various fields. The views are organized according to the organizational units client/company code, plant, and storage location. The views maintained at the client/company code level, for example, are valid for all of the plants and storage locations. From the organizational structure in MM, you already know that plants are assigned to the company code, and storage locations are assigned to plants. In Figure 3.10, this is indicated by the arrows.

In addition, you can configure each view and the fields of the material master in Customizing under the menu path SAP IMG • LOGISTICS – GENERAL • MATERIAL MASTER.

In Table 3.5, you’ll find a list of important database tables for the material master.

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Key Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARA</td>
<td>General data</td>
<td>MANDT, MATNR</td>
</tr>
<tr>
<td>MAKT</td>
<td>Descriptions</td>
<td>M, SPRAS</td>
</tr>
<tr>
<td>MARM</td>
<td>Units of measure</td>
<td>M, LRMEI</td>
</tr>
<tr>
<td>MSTA</td>
<td>Status information</td>
<td>M, STATM, ZHLER</td>
</tr>
<tr>
<td>MEAN</td>
<td>Internal article numbers (EAN)</td>
<td>M, MEINH, LFNUM</td>
</tr>
<tr>
<td>MAMT</td>
<td>Texts per unit of measure</td>
<td>M, SPRAS, MEINH, MTXID, LFDNR</td>
</tr>
<tr>
<td>MOFF</td>
<td>Outstanding material master records</td>
<td>G</td>
</tr>
<tr>
<td>MARC</td>
<td>Plant data</td>
<td>M, WERKS</td>
</tr>
<tr>
<td>MARD</td>
<td>Storage location data</td>
<td>M, WERKS, LGORT</td>
</tr>
<tr>
<td>MKOL</td>
<td>Vendor consignment stock</td>
<td>M, P, LIFNR</td>
</tr>
<tr>
<td>MSKA</td>
<td>Sales order stock</td>
<td>M, P, VBELN, POSNR</td>
</tr>
<tr>
<td>MSKU</td>
<td>Customer consignment stock</td>
<td>M, P, KUNNR</td>
</tr>
<tr>
<td>MSLB</td>
<td>Subcontract stock with vendor</td>
<td>M, P, LIFNR</td>
</tr>
<tr>
<td>MVKE</td>
<td>Sales data</td>
<td>M, VKORG, VTWEG</td>
</tr>
<tr>
<td>MLAN</td>
<td>Tax classification</td>
<td>M, ALAND</td>
</tr>
</tbody>
</table>

Table 3.5  The Database Tables for the Material Master and Their Key Fields
Table | Description | Key Fields
--- | --- | ---
MAEX | Export control file 1 | M, ALAND, GEGRU
MAPE | Export control file 2 | M, WERKS, GZOLX
MBEW | Valuation or accounting data | M, BWKEY, BWTAR
MYMS | LIFO-relevant materials | M, MYKEY
MLGN | Warehouse data | M, LGNUM
MLGT | Storage type data | M, LGNUM, LGTYP
MVER | Consumption data | M, WERKS, GJAHR, PERKS, ZAHLR
MAPR | Forecast data | MANDT, WERKS, MATNR
MKAL | Production versions of material | M, WERKS, VERID
QMAT | Inspection type data | MANDT, ART, MATNR, WERKS

**Legend:**
- M is MANDT + MATNR (client + material number) and forms the primary key for most of the database tables.
- P is WERKS + LGORT + CHARG + SOBKZ (plant + storage location + batch + special stock indicator).
- G represents more than five fields.
- MOFF records represent missing views of material.

When you create a material master, the information may be stored in the database tables mentioned in Table 3.5, depending on the views you maintain. During transactions, the system takes the values from these tables to validate the entries and default in certain data.

The material master is created with the help of Transaction MM01, as shown in Figure 3.11. In this transaction, you have to enter the MATERIAL number, depending on whether the number range assignment is internal or external. You also have to enter the INDUSTRY SECTOR, which determines the screen sequence and field selection. Among other things, MATERIAL TYPE decides the valuation classes that will be available in the F4 help of the ACCOUNTING 1 view. Along with other factors, the
Valuation Class entry determines the account assignment. In Chapter 10, you’ll learn about valuation classes in detail.

We’ll now take a detailed look at the vendor master.

3.4.8 Vendor Master

A vendor can have various functions in its interaction with your company. For example, during the procurement transaction, the vendor is first the order recipient, then the supplier of goods, then the invoicing party, and finally, the payee. Whatever partner roles the vendor adopts, it falls under the purview of either
purchasing or accounting. The vendor master is therefore maintained by purchasing and accounting. You use partner functions to define the rights and responsibilities of each business partner in a business transaction. For example, vendors can adopt various roles during procurement such as alternative payee, ordering address, invoice presenter, vendor, and goods supplier. You must maintain purchasing and accounting data for entering invoices in the system before you can order from a vendor.

The vendor master is divided into three areas:

- General data
- Company code data
- Purchasing organization Data

The transaction codes for representing the vendor master have been designed accordingly. In addition, a similar strategy is used for the database tables. Figure 3.12 shows the different transaction codes for creating and displaying the vendor master.

The same design is also reflected in the database tables for the vendor master (where the data is stored), as shown in Table 3.6.

<table>
<thead>
<tr>
<th>Area</th>
<th>Database Table</th>
<th>Description</th>
<th>Key Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Data</td>
<td>LFA1</td>
<td>Vendor master (General Data section)</td>
<td>MANDT, LIFNR</td>
</tr>
<tr>
<td>Purchasing Organization Data</td>
<td>LFM1</td>
<td>Vendor master (Purchasing Organization Data section)</td>
<td>MANDT, LIFNR, EKORG</td>
</tr>
<tr>
<td>Company Code Data</td>
<td>LFB1</td>
<td>Vendor master (Company Code section)</td>
<td>MANDT, LIFNR, BUKRS</td>
</tr>
</tbody>
</table>

Table 3.6 Various Database Tables for the Vendor Master

As shown in Figure 3.12, the screens are limited by transaction codes. This makes the concept of authorization very convenient.

As you can see in Figure 3.12, you need to enter the ACCOUNT GROUP for whichever transaction code you use for creating the vendor master. The account group has control functions and determines the following:
- Vendor number assignment and number range
- Whether the vendor is a one-time vendor
- The partner determination schema

Figure 3.12  Transactions for Creating and Displaying Vendors

Vendor in Accounting

The vendor number is stored as the vendor’s account number by FI, which means that a vendor has the same account number in all company codes. The vendor number is also used as the subledger number in FI. In addition, when you create the vendor master, the system asks for the reconciliation account number.
From the accounting perspective, the vendor master contains the following data:
- Reconciliation account number
- Vendor account number
- Tax numbers
- Bank details
- Payment methods
- Terms of payment

Now that you've learned about master data—such as the material master and the vendor master, which can be stored and used on a cross-application basis—we'll provide you with a brief overview of the application-specific master data in purchasing. We won't cover this in detail because our focus is the interface related to finance.

### 3.4.9 Master Data in Purchasing

In addition to being supported by vendor and material master data, purchasing is also supported in its daily work by the following types of master data:

- Purchasing info record
- Source list
- Quota arrangement
- Time-dependent conditions
- Vendor evaluation

**Purchasing Info Record**

The purchasing info record (also called info record) represents the vendor-material relationship. You can store data for a particular material (e.g., delivery time and purchase price) on a vendor basis in info records.

**Source List**

The possible sources of supply for a material over a given period of time are specified in the source list.
Quota Arrangement

A quota arrangement is a mechanism for determining the source of supply to which a material requirement is assigned. Automatic allocation of the total requirement of a material over a period of time among a number of different sources of supply is possible through a quota arrangement.

Time-Dependent Conditions

Time-dependent conditions are defined centrally, are valid for a certain period of time, and determine the value of POs. They're used as the basis for calculating the effective price. You’ll learn more about conditions in Chapter 5.

Vendor Evaluation

Vendor evaluation constitutes a basis for vendor selection. It’s the process of analyzing and assessing the performance of your external suppliers. Vendors are awarded scores for a number of different criteria, and vendors’ overall scores can be used to determine whether they’re retained in or eliminated from your vendor base.

So far, we’ve discussed the processes in procurement and the various related master data. The goal was to give you a better understanding of the requirements, constraints, flexibility, and flow of documents in procurement. Next, we’ll take a close look at the documents in procurement.

3.5 Documents in Procurement

We’ll briefly describe the functional and the technical aspects of the various documents in procurement. Our analysis is mostly based on an accounting point of view.

3.5.1 Purchase Requisition

A purchase requisition is a request or instruction to purchasing to procure a certain quantity of a material or a service so that it's available at a certain point in time.

Purchase requisitions may be created manually or automatically via some other SAP component such as Consumption-Based Planning, Production Planning, Plant Maintenance, or Project System.
Figure 3.13 shows the screen for creating a purchase requisition for account assignment category K (cost center).

Because we didn’t use stock material in Figure 3.13, the Account Assignment tab appeared, and we had to maintain the Cost Center and the G/L Account fields manually. The FI and CO elements that are derived from the values we entered have been outlined in Table 3.7.

<table>
<thead>
<tr>
<th>Field</th>
<th>Relationship with FI/CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant</td>
<td>The plant is either the valuation area or the company code. A unique company code is determined from a plant.</td>
</tr>
<tr>
<td>Unit</td>
<td>The unit determines whether the commitment is value-based or quantity-based, using the Customizing path IMG • SAP NetWeaver • General Settings • Check Units of Measurement.</td>
</tr>
</tbody>
</table>

Table 3.7 Elements of Financial Accounting/Controlling in a Purchase Requisition
Account Assignment Category

Based on the account assignment category, you enter the cost element (Cost Center, in our case) along with the corresponding G/L Account number.

Table 3.7 Elements of Financial Accounting/Controlling in a Purchase Requisition (Cont.)

If we use stock material for creating a purchase requisition, the system uses the ACCOUNTING 1 view data from the material master to determine the accounting details automatically.

The important technical elements of a purchase requisition are shown in Table 3.8.

<table>
<thead>
<tr>
<th>Technical Element</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction</td>
<td>ME51N/ME52N/ME53N</td>
<td>Create/change/display PReq.</td>
</tr>
<tr>
<td>Program</td>
<td>RM_MEREQ_GUI</td>
<td>Report</td>
</tr>
<tr>
<td>Table</td>
<td>EBAN</td>
<td>Purchase requisition</td>
</tr>
<tr>
<td>Table</td>
<td>EBKN</td>
<td>Purchase requisition account assignment</td>
</tr>
</tbody>
</table>

Table 3.8 Technical Elements of a Purchase Requisition

After this functional and technical description of a purchase requisition, we’ll now move forward to Request for Quotations (RFQ) and quotations.

3.5.2 Request for Quotation and Quotation

An RFQ is an invitation extended to a vendor by a purchasing organization to submit a quotation (bid) for the supply of materials or performance of services. In the SAP system, the RFQ and the quotation are the same document. Prices and conditions quoted by vendors are entered in the original RFQ.

Figure 3.14 shows the screen for creating an RFQ and quotation.

While creating an RFQ, the screens Header Data and Item Overview can be maintained in any order.
Figure 3.14  Screens for Creating an RFQ and Maintaining a Quotation

The important technical elements of an RFQ and quotation are shown in Table 3.9.

<table>
<thead>
<tr>
<th>Technical Element</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction</td>
<td>ME41/ME42/ME43</td>
<td>Create/change/display RFQ</td>
</tr>
<tr>
<td>Transaction</td>
<td>ME47/ME48/ME49</td>
<td>Maintain/display/price comparison of quotation</td>
</tr>
<tr>
<td>Program</td>
<td>SAPMM06E</td>
<td>Module pool</td>
</tr>
</tbody>
</table>

Table 3.9  Technical Elements of an RFQ
The RFQ and quotation are found in the same table as purchase orders (PO); therefore, not all of the database tables have been mentioned in Table 3.9.

We’ll now take a look at one of the most important documents in procurement: the PO.

### 3.5.3 Purchase Orders

Purchase orders (POs) are formal requests or instructions from a purchasing organization to a vendor or a plant to supply or provide a certain quantity of goods or services at or by a certain point in time. A PO is one of the most important documents in MM.

The system provides a great deal of flexibility and a great number of options during the creation of a PO. Figure 3.15 shows the screen for creating a PO.
The PO screen has three segments: header data, item overview, and item detail. The elements of FI/CO are summarized in Table 3.10.

<table>
<thead>
<tr>
<th>Field</th>
<th>Relationship with FI/CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vendor</td>
<td>Determines the SAP General Ledger account that is used during invoice verification. Payment Terms, Payment in, and Currency are defaulted in from the vendor master.</td>
</tr>
<tr>
<td>Plant</td>
<td>The plant is either the valuation area or the company code. A unique company code is determined from a plant.</td>
</tr>
<tr>
<td>Unit</td>
<td>The unit determines whether the commitment is value-based or quantity-based, using the Customizing path IMG • SAP NETWeaver • GENERAL SETTINGS • CHECK UNITS OF MEASUREMENT.</td>
</tr>
<tr>
<td>Account Assignment Category</td>
<td>Based on the account assignment category, you enter the cost element (Cost Center, in our case), along with the corresponding G/L Account number.</td>
</tr>
</tbody>
</table>

**Table 3.10** Elements of Financial Accounting/Controlling in a Purchase Order

Table 3.10 represents the case of a PO with account assignment. If you use stock material for creating the PO, the system uses the ACCOUNTING 1 view data from the material master to determine the accounting details automatically.

The important technical elements of the PO are outlined in Table 3.11.

<table>
<thead>
<tr>
<th>Technical Element</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction</td>
<td>ME21N/ME22N/ME23N</td>
<td>Create/change/display PO</td>
</tr>
<tr>
<td>Program</td>
<td>SAPMM06E</td>
<td>Module pool</td>
</tr>
<tr>
<td>Table</td>
<td>EKKO</td>
<td>Purchasing document header</td>
</tr>
<tr>
<td>Table</td>
<td>EKPO</td>
<td>Purchasing document item</td>
</tr>
</tbody>
</table>

**Table 3.11** Technical Elements of a Purchase Order

The system allocates a PO number to you when you save or hold the PO. The data you enter manually, as well as the data that’s defaulted into the transaction automatically, is stored in various database tables. Because POs are the key to learning about MM, we’ll take a detailed look at the fields of the various database tables involved in the upcoming bulleted list.
Although we’ll discuss contract and scheduling agreement delivery schedule later in the chapter, Table 3.12 provides a generic description of the database tables involved during various transactions.

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>PO</th>
<th>RFQ</th>
<th>Contract</th>
<th>Delivery Schedule</th>
<th>Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>EKKO</td>
<td>Header</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>1</td>
</tr>
<tr>
<td>EKPO</td>
<td>Item</td>
<td>M(X1)</td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>2</td>
</tr>
<tr>
<td>EKET</td>
<td>Schedule Line</td>
<td>M</td>
<td>M</td>
<td>N(X2)</td>
<td>S(X3)</td>
<td>3</td>
</tr>
<tr>
<td>EKKN</td>
<td>Account Assignment</td>
<td>A</td>
<td>N(X4)</td>
<td>A</td>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>NAST</td>
<td>Output Message</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>5</td>
</tr>
<tr>
<td>KONV</td>
<td>Document Conditions</td>
<td>A</td>
<td>A</td>
<td>N</td>
<td>A</td>
<td>6</td>
</tr>
<tr>
<td>Dependent Table</td>
<td>Time-Dependent Condition</td>
<td>N</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>7</td>
</tr>
<tr>
<td>EKPA</td>
<td>Partners</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>8</td>
</tr>
<tr>
<td>Dependent Table</td>
<td>Service Data</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>N</td>
<td>9</td>
</tr>
<tr>
<td>EIKP</td>
<td>Import Data Header</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>10</td>
</tr>
<tr>
<td>EIPO</td>
<td>Import Data Item</td>
<td>A</td>
<td>N</td>
<td>N</td>
<td>A</td>
<td>10</td>
</tr>
<tr>
<td>RESB</td>
<td>Subcontracting Component</td>
<td>A</td>
<td>N</td>
<td>N</td>
<td>A</td>
<td>11</td>
</tr>
<tr>
<td>Dependent Table</td>
<td>Text (Header/Item)</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>12</td>
</tr>
<tr>
<td>Dependent Table</td>
<td>Change Documents</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>13</td>
</tr>
<tr>
<td>EKPV</td>
<td>Delivery Data</td>
<td>A</td>
<td>N</td>
<td>N</td>
<td>A</td>
<td>14</td>
</tr>
<tr>
<td>VETVG</td>
<td>Shipping Index</td>
<td>A</td>
<td>N</td>
<td>N</td>
<td>A</td>
<td>14</td>
</tr>
<tr>
<td>EKUB</td>
<td>STO Index</td>
<td>A</td>
<td>N</td>
<td>N</td>
<td>A</td>
<td>15</td>
</tr>
<tr>
<td>EKBE</td>
<td>PO History</td>
<td>A</td>
<td>N</td>
<td>N</td>
<td>A</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 3.12  The Database Tables for Various Procurement Documents
### Table 3.12 The Database Tables for Various Procurement Documents (Cont.)

- **EKKO** contains information about the document type, the vendor/supplying plant and other information valid for all items of the document.
- **EKPO** contains information about what is ordered at which price; you can order material (with or without material number) or services. A document may contain line items ranging from 1 to 99999.
- **EKET** contains the desired delivery date and the quantity you ordered for each delivery date. Each item may contain schedule lines ranging from 1 to 9999.
- **EKKN** stores account assignment data. You need to enter the account assignment data when the material to be ordered isn’t a stock material. This data is directly used at the time of GR and IR to create the accounting documents. Up to 99 account assignments can be entered for one item. If you have more than one account assignment, the valuated GR can't be posted, meaning that no accounting documents can be created. The entries in Table EKKN are updated when EKPO-KNTTP isn’t equal to space, and EKPO-KZVBR isn’t equal to U.
- Normally, every document needs an output message record to send the information to the vendor. The determination of output message records is customizable. In addition, for some processes, you don’t need information flow (e.g., stock transport orders). In MM/Purchasing, the term “message” is used in the context of communication between a buying purchasing organization and its vendors.
A *message* is a document in output format, allowing transmission of the information contained therein to vendors via various media.

- The ordered items in a procurement document may contain conditions for goods that aren't free of cost. You can identify such items by the following fields in coding:
  - EKPO-REPOS ne space or EKPO-XCONDITIONS ne space
  - EKPO-REPOS eq space and EKPO-PSTYP eq 7 (stock transport order)

The following items may contain conditions (e.g., delivery costs) in coding:

- Partners are used to store information about the sender of the invoice, the supplier of the goods, or a different address to which the PO should be sent. The determination of partners and the options for maintaining them in the document is governed by a partner scheme stored in T161 (document type).

- Whether an item contains service data is determined by the item category (EKPO-PSTYP). Service data and limits are necessary when EKPO-PSTYP = 1 (blanket PO) or EKPO-PSTYP = 9 (service). The service data is linked to the PO item through EKPO-PACKNO, which acts like a key for the service database tables.

- Import data is necessary if the vendor belongs to a country different from that of the receiving plant. Depending on the company code, you can decide whether the import data screens should never be processed; be processed every time, for every import; or only if it's an import inside the EU (T001-IMPDA). The import data is linked to the purchasing data through the field EKKO-EXNUM, which is the key field in Tables EIKP and EIPO.

- Subcontracting components are necessary when an item is of category subcontracting (EKPO-PSTYP = 3). Different components are stored for each schedule line. RESB is linked with EKET through the field EKET-RSNUM, and relinked via RESB-EBELN, RESB-EBELP, and RESB-ETENR. Subcontracting is explained in detail in Chapter 4.
Texts are possible at the header and item level. They are stored in database Tables STXH and STXL with TDOBJECT = EKKO for the header texts and TDOBJECT = EKPO for the item texts.

Change documents are created if you create or change a document. There are different types of change documents, as follows:

- Insert or delete a record (e.g., item, schedule line, account assignment data)
- Change a record

<table>
<thead>
<tr>
<th>Change Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change documents are stored in Tables CDHDR and CDPOS. A change document item with a new and old value is created for each field of the record that is changed. However, the data element of the change document needs to be switched on in the Data Dictionary (DDIC) for it to be recorded during the creation of the change document.</td>
</tr>
<tr>
<td>In addition, a change document doesn't exist for all database tables. You'll find all change documents for one of the procurement documents mentioned in Table 3.12 when you perform a search with OBJECTCLAS = EINKBELEG and OBJECTID = EKKO-EBELN.</td>
</tr>
</tbody>
</table>

- EKPV and VETVG are updated for all items that need a delivery through the Logistics Execution Shipping (LES) application. This is the case for stock transport orders (EKKO-RESWK ne space) and return items (EKPO-RETPO ne space and EKPO-LFRET ne space). LES shipping is only possible if the item has a material master. Most of the data of EKPV is derived via function module SD_TRANSFERDATA_DETERMINE. EKPV-LEDAT is populated with the lowest shipping date of all open schedule lines. The shipping date is determined through function module ME_CALCULATE_LEDAT. VETVG is used from LES to create the deliveries and is calculated as the minimum of EKPV-LEDAT of all items of the document. However, if VETVG-LEDAT is 0, the record will be deleted.

- EKUB is stored for stock transport orders (EKKO-RESWK ne space). The index is used in MRP to display and calculate the requirements in the delivering plant (EKKO-RESWK). EKUB is deleted (regularly) to save performance in ATP checks if an item is no longer open. A stock transport order is a PO created specifically for the transfer of stock from one storage location to another. Unlike standard POs, which are sent to vendors, stock transport orders are sent to a plant.
One EKBE record is created for every GR, IR, delivery, goods issue, service entry, or down payment you post against a PO or the delivery schedule.

One EKBZ record is created for every delivery cost condition at the time of GR and IR. For delivery costs, you have to maintain an additional invoice item.

In EKES, information about confirmations and shipping notifications is stored. Both of these documents are from the vendor to confirm the delivery date and the quantity of the ordered materials. The values in Table EKES provide up-to-date information about the material flow in ATP/MRP. The system checks the values in Table EKET after checking the values in Table EKES.

A record in Table EKAB is created each time you create a PO or a scheduling agreement delivery schedule. A scheduling agreement is a form of outline purchase agreement under which materials are procured on predetermined dates within a certain time period. The delivery schedule is issued against the scheduling agreement and can replace a large number of discrete POs. EKAB contains information about the open quantity of a contract item, as follows:

- X1: In Transaction ME21N, it's possible to hold a PO without any item.
- X2: A solution is available for IS-Retail to allow schedule lines in contracts. This is governed by the table field T161-KOETT. This can't be maintained in Customizing.
- X3: Schedule lines form the core of a scheduling agreement delivery schedule. However, you can't maintain schedule lines when you create/change a scheduling agreement delivery schedule. You can only maintain them later in a separate transaction (ME38). There might be performance issues if Table EKET contains a particularly large number of entries. Therefore, an option exists to aggregate the records in Table EKET and save the original entries in database Table EKETH. This option is used exclusively for scheduling agreement delivery schedules.
- X4: The account assignment information isn't stored in the RFQ, even if the RFQ in question is created with reference to an account-assigned purchase requisition. When the quotation is converted to a PO, the system may take the accounting data from the corresponding purchase requisition.

We’ll provide you with more information on the various database tables and their fields in the next chapter.

We’ll now take a look at outline purchase agreements.
3.5.4 Outline Purchase Agreements

An outline purchase agreement, or simply outline agreement, is a longer-term agreement between a purchasing organization and a vendor regarding the supply of materials or the performance of services within a certain period according to predefined terms and conditions.

Outline purchase agreements are of the following two types:

- **Contract**
- **Scheduling agreement**

**Contract**

A contract is a type of outline agreement against which release orders (releases) can be issued for agreed-on materials or services as and when required during a certain overall time frame.

On the basis of availability in the SAP system, contracts can be divided into the following:

- **Centrally agreed contracts**
  You can negotiate more favorable terms of purchase with a high-level contract for all of your plants. This may apply to a vendor's entire corporate group. For this, you don't specify a plant in the contract until you create a contract release order against that contract.

- **Distributed contract**
  You can create a contract in one SAP system and distribute it to other independent SAP systems with the help of the Application Link Enabling (ALE) technology.

On the basis of the order type (document type in the SAP system), contracts can be divided into the following:

- **Quantity contracts**
  You create a quantity contract if you know the quantity of materials/services you want to procure during the validity period of the contract.

- **Value contracts**
  You create a value contract if you know the value of the materials/services you want to procure during the validity period of the contract.
The important technical elements of a contract are outlined in Table 3.13.

<table>
<thead>
<tr>
<th>Technical Element</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction</td>
<td>ME31K/ME22K/ME23K</td>
<td>Create/change/display contract</td>
</tr>
<tr>
<td>Program</td>
<td>SAPMMP06E</td>
<td>Module pool</td>
</tr>
<tr>
<td>Table</td>
<td>EKKO</td>
<td>Purchasing document header</td>
</tr>
<tr>
<td>Table</td>
<td>EKPO</td>
<td>Purchasing document item</td>
</tr>
</tbody>
</table>

Table 3.13  Technical Elements of a Contract

The other type of the outline purchase agreement is the scheduling agreement.

**Scheduling Agreement**

A scheduling agreement is a longer-term purchase arrangement with a vendor for a specified period and a specified total purchase quantity. You create delivery schedules against the scheduling agreement to communicate delivery dates and the quantities to the vendor.

Procurement using scheduling agreements helps reduce the volume of documents in use because delivery schedules or schedule lines don’t constitute separate documents but form a part of the same document.

Based on the method or creation (controlled by the document type in the scheduling agreement), scheduling agreements can be classified into the following:

- **Scheduling agreement with release documentation**
  For these types of scheduling agreements, the schedule lines aren’t communicated to the vendor until you explicitly create a scheduling agreement release. This allows you to display the various releases transmitted to a vendor over a certain time period.

- **Scheduling agreement without release documentation**
  For these types of scheduling agreements, the schedule lines are immediately transmitted to the vendor when you save them. There is no release documentation in this case.

The important technical elements of scheduling agreement are outlined in Table 3.14.
Now that you know about the basic concepts of outline purchase agreements, we’ll continue by discussing purchasing info records.

### 3.5.5 Purchasing Info Records

Master data for procurement stores the data at the purchasing organization or plant level pertaining to a material and vendor. The vendor's current price is stored in the info record.

The important technical elements of a purchasing info record are outlined in Table 3.15.

<table>
<thead>
<tr>
<th>Technical Element</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction</td>
<td>ME11/ME12/ME13</td>
<td>Create/change/display info record</td>
</tr>
<tr>
<td>Program</td>
<td>SAPMM06I</td>
<td>Module pool</td>
</tr>
<tr>
<td>Table</td>
<td>EINA</td>
<td>Purchasing info record – general data</td>
</tr>
<tr>
<td>Table</td>
<td>EINE</td>
<td>Purchasing info record – purchasing organization data</td>
</tr>
<tr>
<td>Table</td>
<td>EIPA</td>
<td>Order price history, info record</td>
</tr>
</tbody>
</table>

Table 3.15  Technical Elements of a Purchasing Info Record

After this overview of the various documents in procurement, we’ll now summarize what you’ve learned so far.
3.6 Summary

In this chapter, you learned about the general settings for the currencies and the definition of various elements of the enterprise structure and their assignment in Customizing. From there, we discussed the details to define the enterprise structure of MM and FI. The various processes in procurement, including the procurement cycle, procurement of stock material, procurement of consumable materials, and procurement of external services, were demonstrated based on our understanding of the enterprise structure. The FI, CO, and MM master data such as the SAP General Ledger account, cost element, cost center, profit center, internal order, segment, material master, vendor master, and various master data in purchasing were explained before discussing the documents in procurement that use them.

In the next chapter, we'll cover the procurement of stock and consumption materials in more detail and from an accounting perspective.
Index

A

A2R, 34, 35
Access sequence, 193, 194
Account assignment category, 160
Account determination, 42, 345, 431, 434
Account grouping code, 438
Accounting1, 136
Accounting document, 309
  header, 312
Account key, 210
Accounts payable, 53, 301
Accounts Payable invoice, 301
Accounts receivable, 301
Accrual key, 210
Acquire to retire, 34, 35
Activity-Based Accounting, 56
AFS, 280
AP Invoice, 301
Apparel and Footwear Solution, 280
Asset Accounting, 53
Authorization data, 25
Automatic account assignment
  simulation, 443
Automatic account determination, 440
Automatic invoice reduction, 460
Automatic settlements, 445

Base currency, 420
BEx, 67
Bid invitation, 105
BI Java SDK, 67
Bill of materials, 177
BI platform, 67
BI Suite, 67
Blanket purchase order, 162, 163
  account assignment, 164
BOM explosion, 177
BSV, 439
BSX, 423, 439
BTE, 331
Business Add-In, 331, 486
Business area, 57, 87
Business Explorer (BEx), 67
Business intelligence, 66
Business processes, 34
  acquire to retire, 35
  forecast to stock, 35
  hire to retire, 35
  order to cash, 34
  procure to pay, 34
  record to report, 35
Business Transaction Event, 331
Business volume, 224

C

Calculation schema, 145, 147, 195
  RM0000, 148, 191, 197
Call transaction, 305
  MIR7, 305
  MIRO, 305
Cash Budget Management, 95
Cash discount, 146, 286, 360
  cash discount gross, 362
  cash discount net, 362
  gross goods receipt, 287
  net goods receipt, 289
  net invoice receipt, 288
  value changes, 286
Index

CGS, 280
Change document, 126
Change log, 262
Chart of accounts, 435
Client, 86
Closing previous period for posting, 299
Collective number, 143
Commitments, 45
    in procurement, 58
Company, 86, 95
Company code, 87, 95
Condition
    time-dependent, 146
    time-independent, 146
Condition record, 192
Condition records, 148
Conditions, 145, 189
Condition table, 192
Condition technique, 189
Condition type, 146, 191
    PB00, 192, 201
    PBXX, 201
    SKTO, 286
Configuration, 77
Consignment and pipeline settlement, 450, 460
Consumable materials, 159, 441
    account determination, 441
Consumer Goods & Services, 280
Contract, 128
    centrally agreed contract, 128
    distributed contract, 128
    quantity contract, 128
    technical elements, 129
    value contract, 128
Contributor recognition program, 33
Controlling, 21
Controlling area, 88, 95
Conventional invoice verification, 303
Conversion date, 420
Cost center, 57
Cost Center Accounting, 55
Cost Element Accounting, 55
Credit control area, 95
Credit memo, 284, 299, 462
    warning and error messages, 284
Customer example, 280
    change in posting date, 419
    delivery costs with new price determination for GR, 205
    different invoicing party in LIV, 327
    duplicate settlement for Transaction MRRL, 449
    error in Transaction MIRO/MR8M, 209
    exchange rate, 419
    exclude from ERS, 448
    inconsistent screen variant, 327
    incorrect postings for multiple account assigned PO, 167
Inventory Management, 280
    revaluation, 456
    subsequent credit, 283
    subsequent debit, 283
    third-party interface, 280
    tolerance check, 395
    Transaction MIRO, 319
    Transaction MRKO, 451
Customer exits, 486
Customizing data, 26

D

Data warehousing, 67
Debugger, 72
Debugging, 72
    Debugging screen, 74
Default SAP General Ledger account, 417
Delivery completed, 262
Delivery costs, 402
Delivery free of charge, 263
Determination of requirements, 99
Direct posting, 349
Documents in procurement, 97, 117
Duplicate invoice check, 323
    points to remember, 324

E

Effective price, 146
EIN, 439
Index

EKG, 439
Elements of Controlling, 54
End-of-period rebate, 146
Enhancement, 329
   LMR1M004, 329
Enhancements, 486
Enterprise structure, 84
   assignment, 90
definition, 86
Financial Accounting, 95
Materials Management, 93
technical elements, 90, 91, 92
ERS, 445
   planned delivery cost, 446
Evaluated receipt settlement, 445
Exchange rate, 419
differences, 422
   rounding difference, 421
   type, 420
External reports, 65
External services, 168
   procurement cycle, 168

F

F2S, 34, 35
FIFO valuation, 255, 257
   configuration, 257
   sample, 256
Final Invoice indicator, 173
Financial Accounting (FI), 21
Financial management area, 87, 95
Financials, 20
FI Substitution, 483
FI Validation, 481
Forecast to stock, 34, 35
Framework order, 162, 165
Freight charge, 146
FRL, 439
FRN, 439
Functional area, 87
Function module, 319
   MRM_BADI_INVOICE_CHECK, 319

G

Goods issue, 272
   value changes, 272
Goods receipt, 23, 101, 261
   goods receipt reversal, 272
   price variance, 261
Goods receipt-based invoice verification, 318
Goods receipt reversal, 272
   after goods receipt and invoice receipt, 274
   purchase order price-quantity variance, 275
GR-based IV, 456
GR/IR account maintenance, 51
GR/IR clearing account, 284, 432, 466
GR non-valuated, 49
Gross goods receipt, 287
Gross price, 146
Group conditions, 211
GR valuated, 49

H

H2R, 34, 35
HANA, 68
Header conditions, 211
Hire to retire, 34, 35
HotNews, 33
Human Resources
   Payroll, 22
   Personnel Management, 22
   Personnel Time Management, 22
   Talent Management, 22
   Training and Event Management, 22

I

Implementation consultant, 31
Index LIFO procedure, 250
   example, 250
Info record, 130, 144, 150
   automatic update, 150
   last purchase order, 151
Initial entry of inventory data, 270
Index

Integration of Materials Management, 24
  Controlling, 25
  Financial Accounting, 24
  Human Resources, 24
  Logistics Execution, 24
  Production Planning, 24
  Quality Management, 24
  Sales and Distribution, 24
Internal Orders subcomponent, 56
International Accounting Standards Board, 231
Inventory Management, 23, 48, 156, 259
  inconsistency, 278
  initial entry of inventory data, 270
  stock valuation, 156
  value changes, 259
Invoice
  foreign currency, 418
  purchase order with account assignment, 416
Invoice blocking, 385
Invoice item amount block, 390
Invoice parking, 332
  hold, 333
  park, 333
  save as complete, 334
  substitution, 336
  validation, 336
  workflow, 334
Invoice reduction, 460
Invoice release, 396
Invoice reversal
  after goods receipt, 463
  without goods receipt, 464
Invoice verification, 23, 101, 301
  in the background, 341
  online, 313
Invoice with variances, 367
Invoicing party, 307
Invoicing plan settlement, 457, 460
  partial invoicing plan, 458
  periodic invoicing plan, 457

K
KBS, 423, 426
KDM, 423, 426, 439

L
Layer, 242
Layer versions, 244
Levels of valuation, 42
LIFO/FIFO
  layer versions, 246
  methods, 244, 245
  models, 244
  procedures, 247
  progressive fill-up basis, 249
  quantity and index, 247
  quantity comparison parameter, 246
  sample, 242
  valuation, 241
Logistics, 21
  Execution, 22
  General, 21
Logistics invoice verification (LIV), 50, 280, 301, 303
  clearing details, 310
  direct posting, 349
  duplicate invoice check, 323
  important tables, 310, 311
  important transactions, 304, 305
  insufficient stock coverage, 281
  messages, 459
  several accounting documents, 298
  taxes, 352
  value changes, 280
Lowest value comparison, 254
Lowest value determination, 232
  based on market prices, 233
  base price, 240
  movement rate, 238
  range of coverage, 235
Lowest value principle, 232
M

Maintenance view, 28
Management reporting, 65
Manual block, 392
Manual invoice reduction, 460
MAP, 155
Master data, 26, 105, 307
  purchasing, 116
Material document, 309
Material Ledger, 299, 420
  parallel currencies, 420
Material master, 110, 134, 226, 262
  Accounting1, 136
  accounting view, 113
  change log, 262
  database table, 111, 112
  organization of, 110
Material master price, 249
Material price change, 189, 224, 259
Materials Management, 21, 22
Material type, 134, 227
Material valuation, 49
  procedure, 154
ME21N, 442
Message schema, 461
MIRO
  Layout, 314
Movement rate, 238
Movement type, 201, 202, 227, 280
Moving average price, 154, 155
  sample posting, 157
MRBR
  Technical program flow, 400
MRRL, 449

N

Net goods receipt, 289
Net invoice receipt, 288
Net price, 146
Non-valuated goods receipt, 53

O

O2C, 34
Offsetting entry for inventory posting, 438
OLAP, 67
One-time vendor, 319
Online Analytical Processing, 67
Open Analysis Interfaces, 67
Open Fi, 331
Operating concern, 88, 95
Order price quantity variance, 382
Order to cash, 34
Order unit and the order price, 275
OSS Message, 33
  Note, 32
Outline purchase agreements, 128

P

P2P, 34
Parallel currencies, 420
Parking workflow, 334
Partial invoicing plan, 458
Payment block, 394
PB00, 192
Periodic invoicing plan, 457
Pick Ticket Management System, 280
PkMS, 280
Planned delivery cost, 158, 213, 262, 402, 446
  account postings, 262
Plant, 88
Plant Maintenance, 22
Pool LIFO valuation, 253
  merging, 253
  splitting, 253
Pool number, 254
Posting to a previous period, 293
Posting to previous period
  after a price change, 295
  posting goods movements, 294
  posting invoices, 295
PRD, 423, 439
Precious metal condition, 211
Prepayment, 337
Price change, 291
  previous and current period, 292
  previous period only, 291
Price determination, 147, 189
Price variance, 372
Pricing in Transaction ME21N, 207
Processes in procurement, 77, 96
Procurement cycle, 22, 23, 99, 100
  external services, 101, 104
  services, 101
Procurement
  of consumable materials, 102, 159
  of external services, 168
  of stock material, 102
Procure to pay, 22, 23, 34
Product Cost Controlling, 56
Production Planning, 22
Product Lifecycle Management, 21
Profitability Analysis, 56
Profit center, 57
  Accounting, 56
Purchase account management, 299, 347
  postings at receipt value, 348
  postings at stock value, 348
Purchase commitment, 45
Purchase order, 121, 160
  database table, 123, 124
  elements of Financial Accounting, 122
  monitoring, 100
  processing, 100
  service, 169
  technical elements, 122
Purchase order-based invoice verification, 317
Purchase order history, 312
  chronological order, 312
Purchase order with account assignment, 416
Purchase requisition, 23, 117, 160
  technical elements, 119
Purchasing, 44
Purchasing document, 117
Purchasing info record, 116, 130, 150
  technical element, 130
Purchasing organization, 89
  cross-company code, 94
  cross-plant, 94
  plant-specific, 94

Q
  Quality Management, 22
  Quantity and price variance, 377
  Quantity update, 49
  Quantity variance, 368
    account postings, 369
  Quick Cut and Paste, 479
  Quota arrangement, 117
  Quotation, 119, 141, 142

R
  R2R, 34, 35
  Recognition-of-loss principle, 232
  Reconciliation account, 63
  Record to report, 34, 35
  Reporting, 64
  Request for quotation, 119
    Technical element, 120, 121
  Return, 462
  Return delivery, 276, 277
    Purchase orderPO price- quantity variance,
      277
  Revaluation, 230, 289, 453, 460
    account postings, 290
    credit memo, 455
    invoice, 454, 455
  Reversal, 462
  RFQ, 141, 142, 144
    collective number, 143
    technical elements, 144, 145
  RM08RELEASE, 400

S
  Sales and Distribution, 22
  SAP Best Practice, 278
  SAP Customer Message, 33
  SAP Customer Note, 32
  SAP Customizing, 25, 27, 28
  SAP Developer Network, 33
  SAP Easy Access, 25, 26, 27
  SAP ECC, 22
<table>
<thead>
<tr>
<th>Term</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP ERP, 19, 41</td>
<td></td>
</tr>
<tr>
<td>building blocks, 19</td>
<td></td>
</tr>
<tr>
<td>Financial Accounting, 77</td>
<td></td>
</tr>
<tr>
<td>Financials, 20, 21, 23, 77, 301</td>
<td></td>
</tr>
<tr>
<td>Human Capital Management, 22</td>
<td></td>
</tr>
<tr>
<td>Logistics, 21</td>
<td></td>
</tr>
<tr>
<td>SAP General Ledger, 52, 134, 442</td>
<td></td>
</tr>
<tr>
<td>SAP HANA, 68</td>
<td></td>
</tr>
<tr>
<td>SAP HotNews, 33</td>
<td></td>
</tr>
<tr>
<td>SAP Library, 25, 29, 30</td>
<td></td>
</tr>
<tr>
<td>SAP Service Marketplace, 31</td>
<td></td>
</tr>
<tr>
<td>SAP Support Portal, 32</td>
<td></td>
</tr>
<tr>
<td>SAP TopNotes, 33</td>
<td></td>
</tr>
<tr>
<td>Scheduling agreement, 129</td>
<td></td>
</tr>
<tr>
<td>technical element, 130</td>
<td></td>
</tr>
<tr>
<td>without release documentation, 129</td>
<td></td>
</tr>
<tr>
<td>with release documentation, 129</td>
<td></td>
</tr>
<tr>
<td>Screen Layout, 479</td>
<td></td>
</tr>
<tr>
<td>SDN, 33</td>
<td></td>
</tr>
<tr>
<td>Service acceptance, 105</td>
<td></td>
</tr>
<tr>
<td>Service entry, 105</td>
<td></td>
</tr>
<tr>
<td>Service entry sheet, 171</td>
<td></td>
</tr>
<tr>
<td>acceptance, 171</td>
<td></td>
</tr>
<tr>
<td>entry, 171</td>
<td></td>
</tr>
<tr>
<td>field selection, 175</td>
<td></td>
</tr>
<tr>
<td>final Invoice indicator, 173</td>
<td></td>
</tr>
<tr>
<td>invoice reversal, 174</td>
<td></td>
</tr>
<tr>
<td>partial invoice, 173</td>
<td></td>
</tr>
<tr>
<td>Service Marketplace, 31</td>
<td></td>
</tr>
<tr>
<td>Service purchase order, 169</td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td></td>
</tr>
<tr>
<td>user exit, 176</td>
<td></td>
</tr>
<tr>
<td>Source determination, 99</td>
<td></td>
</tr>
<tr>
<td>Source list, 116</td>
<td></td>
</tr>
<tr>
<td>Split valuation, 43, 197</td>
<td></td>
</tr>
<tr>
<td>Standard price, 154, 422</td>
<td></td>
</tr>
<tr>
<td>Stochastic block, 391</td>
<td></td>
</tr>
<tr>
<td>Stock consistency check, 279</td>
<td></td>
</tr>
<tr>
<td>Stock material, 23, 133</td>
<td></td>
</tr>
<tr>
<td>account determination, 434</td>
<td></td>
</tr>
<tr>
<td>database table, 137, 138, 139, 140, 141</td>
<td></td>
</tr>
<tr>
<td>material master, 134</td>
<td></td>
</tr>
<tr>
<td>Stock materials, 434</td>
<td></td>
</tr>
<tr>
<td>Stock overview, 152</td>
<td></td>
</tr>
<tr>
<td>Stock shortage in the current period, 297</td>
<td></td>
</tr>
<tr>
<td>Storage location, 89</td>
<td></td>
</tr>
<tr>
<td>Subcontracting, 176</td>
<td></td>
</tr>
<tr>
<td>account postings, 179</td>
<td></td>
</tr>
<tr>
<td>technical elements, 187</td>
<td></td>
</tr>
<tr>
<td>Subcontracting in Inventory Management, 178</td>
<td></td>
</tr>
<tr>
<td>Subcontracting in Logistics Invoice</td>
<td></td>
</tr>
<tr>
<td>Verification, 179</td>
<td></td>
</tr>
<tr>
<td>Subcontracting in Purchasing, 177</td>
<td></td>
</tr>
<tr>
<td>Subledger accounting, 63</td>
<td></td>
</tr>
<tr>
<td>Subsequent debit</td>
<td></td>
</tr>
<tr>
<td>account postings, 282, 283</td>
<td></td>
</tr>
<tr>
<td>Subsequent debit/credit, 281</td>
<td></td>
</tr>
<tr>
<td>Subsequent settlement, 221</td>
<td></td>
</tr>
<tr>
<td>Substitution, 483</td>
<td></td>
</tr>
<tr>
<td>Supplementary conditions, 202</td>
<td></td>
</tr>
<tr>
<td>Support consultant, 31</td>
<td></td>
</tr>
<tr>
<td>Support Portal, 32</td>
<td></td>
</tr>
<tr>
<td>T</td>
<td></td>
</tr>
<tr>
<td>Taxes, 352</td>
<td></td>
</tr>
<tr>
<td>Customizing, 357</td>
<td></td>
</tr>
<tr>
<td>deductible taxes, 353</td>
<td></td>
</tr>
<tr>
<td>nondeductible taxes, 353</td>
<td></td>
</tr>
<tr>
<td>proposal logic, 355</td>
<td></td>
</tr>
<tr>
<td>Technical naming convention, 98</td>
<td></td>
</tr>
<tr>
<td>Time-dependent condition, 117, 146</td>
<td></td>
</tr>
<tr>
<td>Time-independent condition, 146</td>
<td></td>
</tr>
<tr>
<td>Timesheet, 22</td>
<td></td>
</tr>
<tr>
<td>Tolerance keys, 386</td>
<td></td>
</tr>
<tr>
<td>TopNotes, 33</td>
<td></td>
</tr>
<tr>
<td>Total-based acceptance, 412</td>
<td></td>
</tr>
<tr>
<td>Total-based differences, 412</td>
<td></td>
</tr>
<tr>
<td>Total-based invoice reduction, 299, 413</td>
<td></td>
</tr>
<tr>
<td>Transaction, 437</td>
<td></td>
</tr>
<tr>
<td>GGB4, 482</td>
<td></td>
</tr>
<tr>
<td>MB5K, 278</td>
<td></td>
</tr>
<tr>
<td>ME41, 143</td>
<td></td>
</tr>
<tr>
<td>ME47, 143</td>
<td></td>
</tr>
<tr>
<td>MI10, 280</td>
<td></td>
</tr>
<tr>
<td>ML81N, 102</td>
<td></td>
</tr>
<tr>
<td>MM01, 112</td>
<td></td>
</tr>
<tr>
<td>MM03, 279</td>
<td></td>
</tr>
<tr>
<td>MMBE, 152, 279</td>
<td></td>
</tr>
<tr>
<td>MMRV, 299</td>
<td></td>
</tr>
<tr>
<td>MR11, 468</td>
<td></td>
</tr>
</tbody>
</table>
Transaction (Cont.)
  MR11SHOW, 468
  MRKO, 451
  MRRL, 449
  OB22, 421
  OB28, 482
  OB52, 300
  OBYC, 479
  OKC9, 331
  OLMRLIST, 327
  OMED, 148
  OMS2, 279
  OMWB, 28
  SM30, 28
  SPRO, 27
Transaction code, 27
Transaction data, 26, 308
Transaction ME21N
  SAP General Ledger, 442
Transaction MIRO
  exchange rate, 419
  header screen, 313
  nonunique tax code, 359
  planned delivery costs, 405
  text transfer, 328
Transaction MRBR, 400
Transaction MRKO
  field reference and assignment, 451
Transfer posting, 264
  consignment to company-owned stock, 267
  material to material, 269
  valuation type to valuation type, 269
  value changes, 264
Types of data, 25
  authorization data, 25
  Customizing data, 26
  master data, 26
  transaction data, 26

U

UMB, 439
Unplanned delivery cost, 158, 159, 407
Update allocation, 334
User-exit, 329
  EXIT_SAPLMRMP_004, 329
User parameter, 203, 204

EFB, 204
EVO, 203

V

Validation, 481
  Check, 482
  Message, 482
  Prerequisite, 482
Validation and Substitution
  Call-Point, 484
  Field usage, 484, 485
  Technical Elements, 483
Valuation, 431
  area, 42, 89, 153
  category, 227
  class, 136, 227, 417, 436
  grouping code, 435
  level, 42, 89, 153
  lowest value, 235
  modifier, 435
  price, 160
  structure, 227
  switching, 89
  type, 227
Value added tax, 302
Value-based commitment, 60
Value
  flow, 65
  string, 439
  update, 49
VBR, 442
Vendor evaluation, 117
Vendor master, 113, 222
  company code data, 114
  general data, 114
  purchasing organization data, 114
  subsequent settlement, 222
  transaction, 115
Vendor selection, 100
View, 28

W

Web Design API, 67
WRX, 423, 439