

TS452

Sourcing and Procurement in SAP S/4HANA - Academy Part II 2/2

PARTICIPANT HANDBOOK INSTRUCTOR-LED TRAINING

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Typographic Conventions

American English is the standard used in this handbook.

The following typographic conventions are also used.

This information is displayed in the instructor's presentation



Demonstration



Procedure



Warning or Caution



Hint



Related or Additional Information



Facilitated Discussion



User interface control

Example text

Window title

Example text

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Course Overview

TARGET AUDIENCE

This course is intended for the following audiences:

- Business Process Architect
- Business Process Owner/Team Lead/Power User
- Industry Specialist
- Solution Architect

UNIT 1

Invoice Entry

Lesson 1

Working with Logistics Invoice Verification

3

Lesson 2

Using Different Types of Invoice Verification

17

Lesson 3

Parking of Documents

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Lesson 4

Applying Taxes

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Lesson 5

Applying Cash Discounts

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Lesson 6

Entering Invoices in Foreign Currencies

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Lesson 7

Creating Invoices for Purchase Orders with Account Assignment

45

UNIT OBJECTIVES

- Post an invoice
- Use different types of invoice verification
- Park an invoice
- Enter taxes
- Enter cash discount information
- Post an invoice in foreign currency
- Enter an invoice for a purchase order with account assignment

Unit 1

Lesson 1

Working with Logistics Invoice Verification



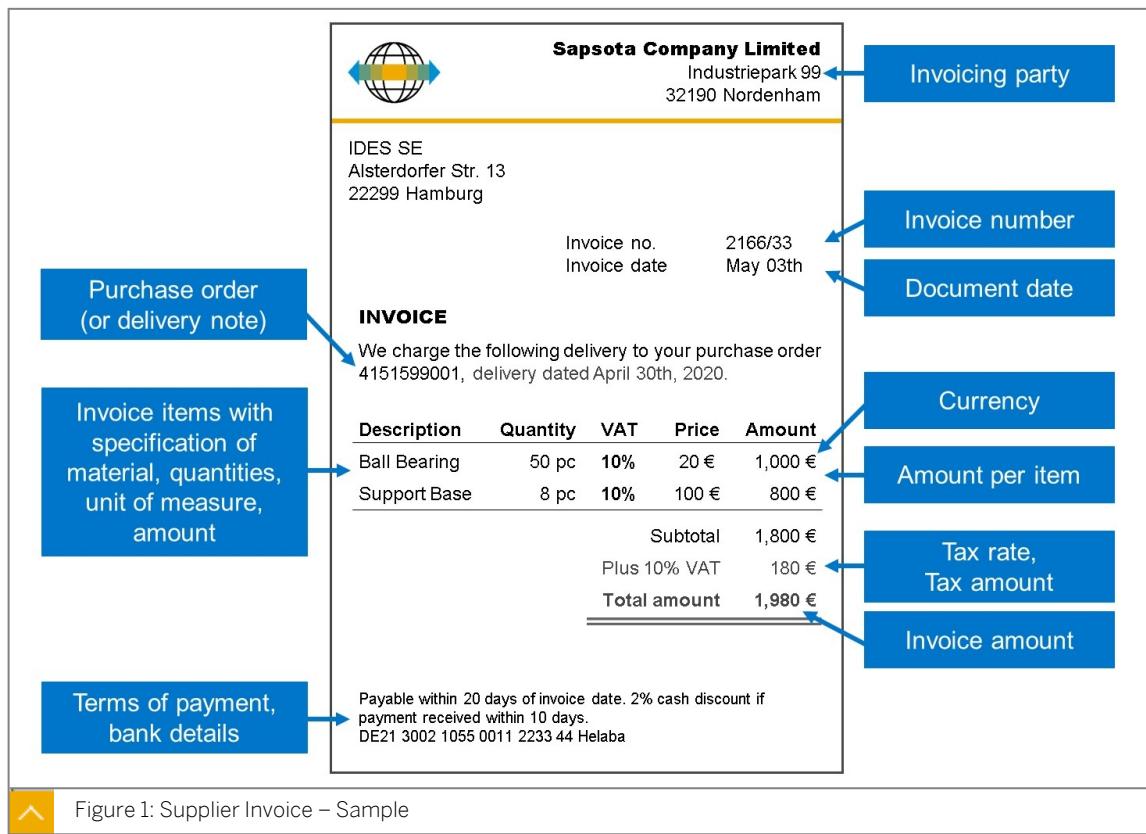
LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post an invoice

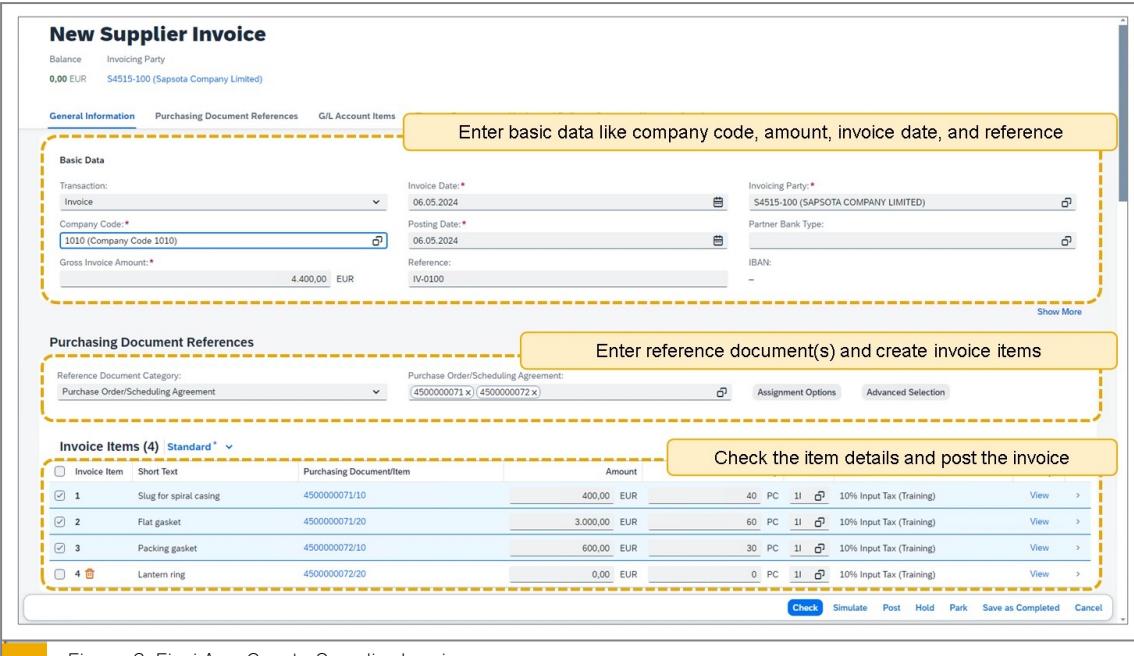
Fiori App Create Supplier Invoice

A supplier invoice contains a variety of information that must be entered in the system. For invoices with purchase order reference, some of the data, such as the invoicing party, the currency, or the items to be invoiced, can be proposed by the system via the reference to the purchase order.



There are two functions in the system for entering supplier invoices manually:

- SAP Fiori App *Create Supplier Invoice*
- Transaction *Enter Incoming Invoice* (MIRO) respectively the app *Create Supplier Invoice - Advanced*



The screenshot shows the Fiori App 'Create Supplier Invoice' interface. At the top, there's a header with a monitor icon and the title 'New Supplier Invoice'. Below the header, there are tabs for 'General Information', 'Purchasing Document References', and 'G/L Account Items'. The 'General Information' tab is active.

Basic Data: This section contains fields for Transaction (Invoice), Company Code (1010), Gross Invoice Amount (4,400,00 EUR), Invoice Date (06.05.2024), Posting Date (06.05.2024), Reference (IV-0100), and Invoicing Party (S4515-100 (SAPSOTA COMPANY LIMITED)). A yellow callout box says 'Enter basic data like company code, amount, invoice date, and reference'.

Purchasing Document References: This section shows a dropdown for Reference Document Category (Purchase Order/Scheduling Agreement) with options like Purchase Order/Order, Scheduling Agreement, and Service Entry Sheet. A yellow callout box says 'Enter reference document(s) and create invoice items'.

Invoice Items (4) Standard: This section displays a table of four items: Slug for spiral casing, Flat gasket, Packing gasket, and Lantern ring. Each item has a checkbox, a short text column, a purchase document/item column, an amount column (400,00 EUR, 3,000,00 EUR, 600,00 EUR, 0,00 EUR), and a details column showing quantity (40 PC, 60 PC, 30 PC, 0 PC), unit (11), and tax (10% Input Tax (Training)). A yellow callout box says 'Check the item details and post the invoice'.

At the bottom right of the interface, there are buttons for Check, Simulate, Post, Hold, Park, Save as Completed, and Cancel.

Figure 2: Fiori App Create Supplier Invoice

With the *Create Supplier Invoice* app, you create a supplier invoice or credit memo based on the received document. In the basic data, select the transaction (invoice, credit memo, subsequent credit, subsequent debit) depending on the supplier document and enter the company code for which you have received the document. In this area, you also enter the gross amount, invoice date, and reference number.

Next, you specify the purchase order items to which your supplier invoice or credit memo relates. As reference, you can use purchase orders, service entry sheets for lean services, delivery notes, and bills of lading. The last two only if the information was entered while posting the goods receipt.

Depending on the reference document category used, the system selects items for goods/services and/or planned delivery costs:

Reference Document Category	Type of Invoice Items to Be Selected
Purchase Order/Scheduling Agreement	Goods/Services and Planned Delivery Costs
Service Entry Sheet - Lean Services	Goods/Services
Delivery Note	Goods/Services
Bill of Lading	Planned Delivery Costs

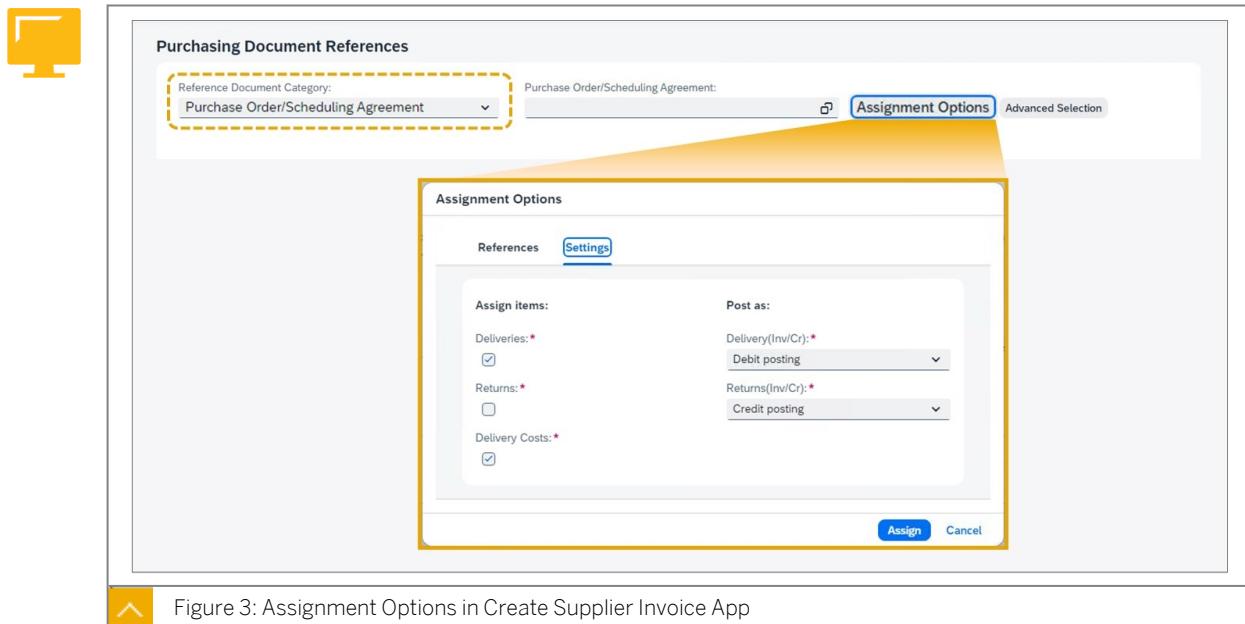


Figure 3: Assignment Options in Create Supplier Invoice App

If you use the reference document category *Purchase Order/Scheduling Agreement*, you can choose which items are to be selected in the *Assignment Options* under *Settings*: Deliveries, Returns, Delivery Costs

After assigning the purchasing document reference, the system automatically copies the following data from the purchase order:

- Invoicing Party
- Terms of payment (if set in PO)
- Currency
- Invoice items:

The system proposes all purchase order items that fulfill the relevant allocation criteria. Quantity and amount are derived from the purchase order history for each item. This means that all items for which goods receipts have already been posted, but which have not yet been completely settled, are selected with quantities and amounts. Items for which no invoice is expected are also listed. However, these items are listed without quantity, amount, and selection. Only the selected invoice items are copied into the document when the invoice is posted.

Compare the proposed data with the data in the supplier invoice. If necessary, correct the data. For example, the proposed values for amount, quantity, and tax code for the items. Deselect the items that are not listed in the supplier invoice.

If you select the *Simulate* or *Post* function, the system compares the quantity and amount data of each supplier invoice item with the data of the related purchase order item. The simulate function allows you to display the account movements before posting the document.

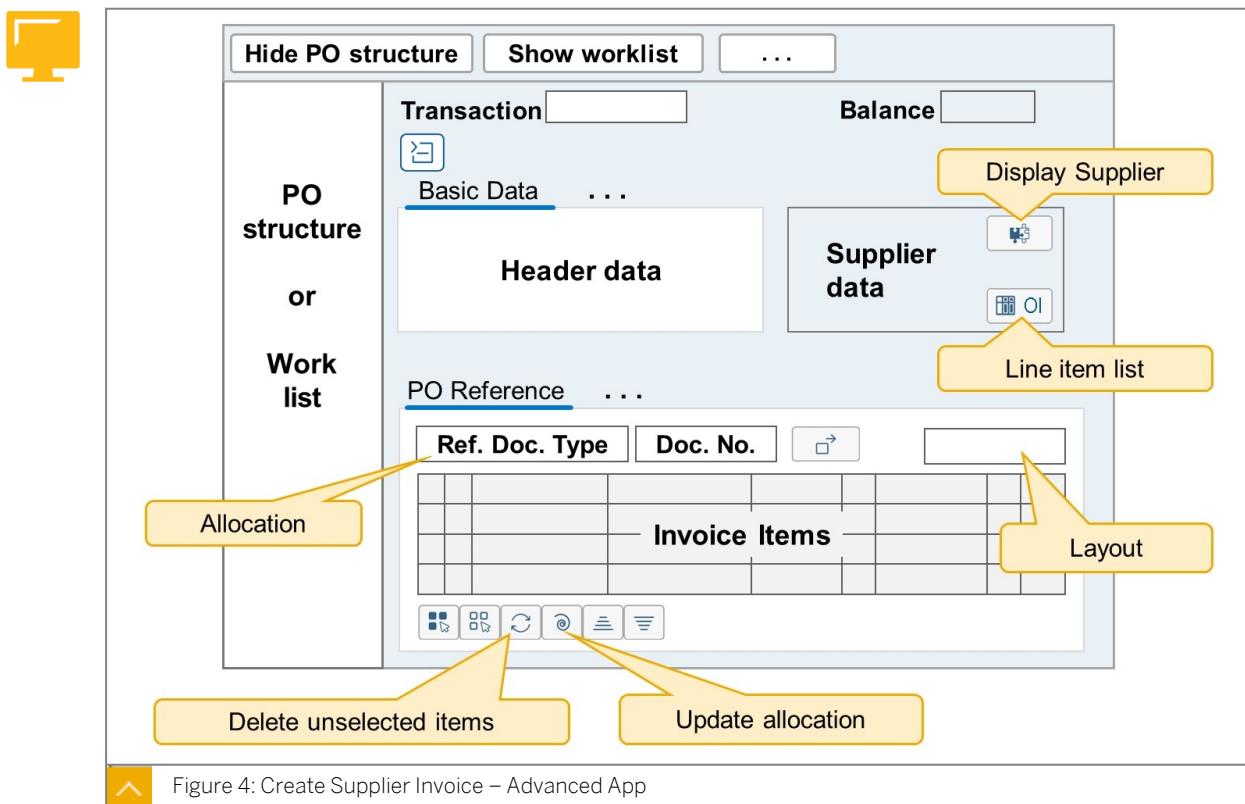
In addition, the *Create Supplier Invoice* app offers the following features:

- Display contact details: With this feature, you can display the contact card for the invoicing party of a supplier invoice and navigate to the *Supplier object page* app for detailed information. The contact card for the invoicing party provides a quick overview of all relevant contact data, such as company data and contact details.

- Display purchase order history
- Check and enter tax data
- Edit terms of payment
- Enter planned and unplanned delivery costs
- Change the exchange rate and document type for the FI document (to open this detail data, use the *Show More* button)
- Hold or park invoices
- Reduce invoices
- Change the tax codes of multiple invoice items at the same time
- Enter items directly to G/L accounts
- Adjust the item list (for example, displayed columns, sorting)

App Create Supplier Invoice Advanced / Transaction MIRO Enter Supplier Invoice

The *Create Supplier Invoice – Advanced* app is a SAP GUI for HTML transaction. You can use this transaction in the Fiori launchpad and in the SAP GUI. If you want to start this transaction in the SAP GUI, on the *SAP Easy Access Menu* screen, choose *Logistics → Materials Management → Logistics Invoice Verification → Document Entry → Enter Invoice*.



The figure, *Create Supplier Invoice – Advanced App*, shows some features and screen areas of the app respectively transaction **MIRO**.

The transaction is a single-screen transaction. It is divided into the following screen areas:

- Transaction:

In the transaction field, you define whether you want to enter an invoice, a credit memo, or a subsequent credit or debit.

- Header:

The header area is divided into various tabs pages. For example, you can enter the document date, invoice amount, and tax information.

- Supplier data:

In the supplier data area, the system displays the name, address, and bank information of the supplier once you match up the invoice. From here, you can branch to the display of the business partner master record.

- Balance:

The balance specifies whether the invoice amount is equal to the total of the individual invoice items, the tax amounts, and the unplanned delivery costs. A traffic light icon indicates whether the invoice can be posted.

- Allocation:

In the allocation area, you enter the numbers of the documents that the invoice refers to (such as PO or delivery notes). Entering these numbers enables you to control the PO items that display for processing in the item list.

- Invoice items:

In the invoice items area, the system suggests the items that correspond to the allocation. You can use various layouts to change the display of the columns and their sequence.

- PO structure:

In the purchase order structure area, the system displays the PO history for the allocations entered. This area can be hidden if necessary.

Allocation Options in Create Supplier Invoice – Advanced App / MIRO Transaction

To create the allocation to the external procurement transactions to be settled, you have various options similar to those in the *Create Supplier Invoice* app. The allocation gives you the option of selecting goods/service items, items for planned delivery costs, or both item types.

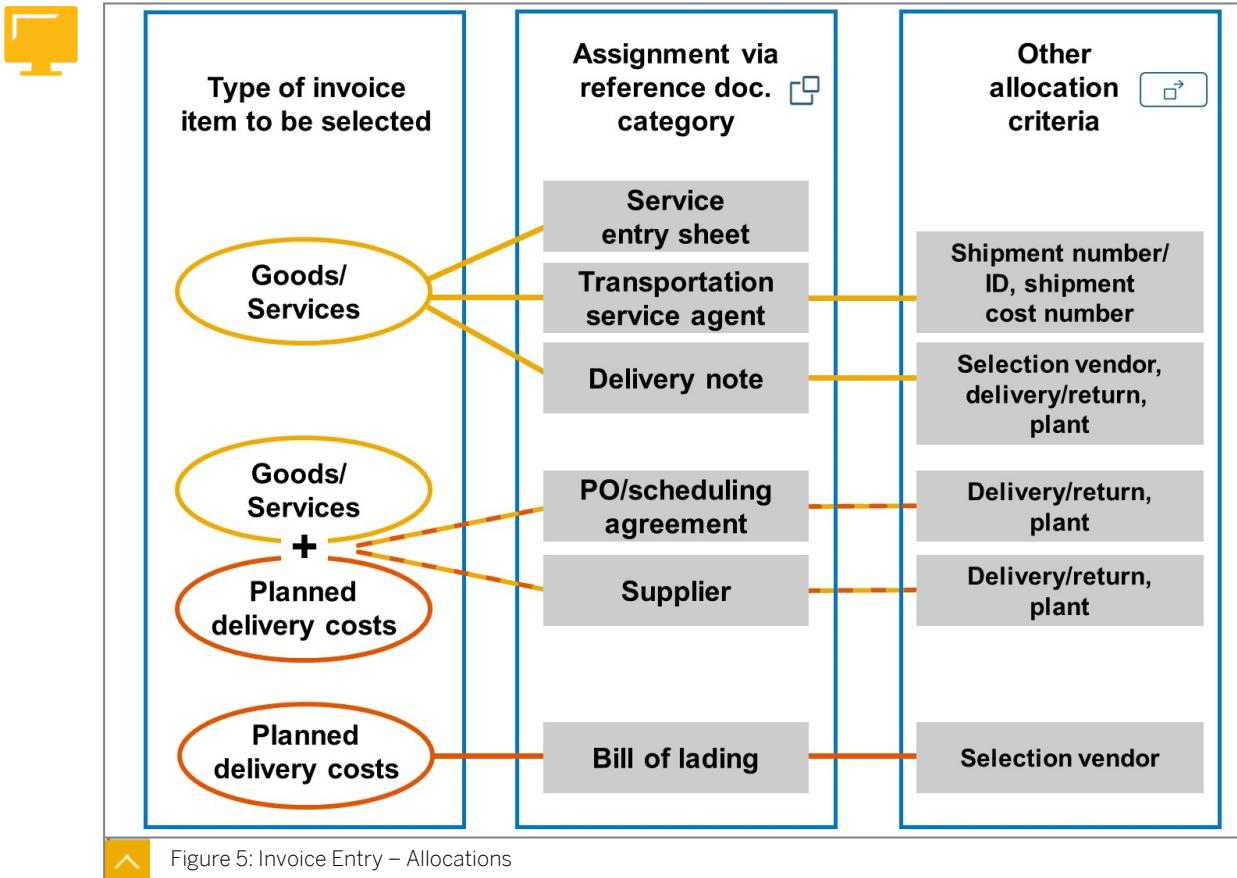


Figure 5: Invoice Entry – Allocations

Goods/service items can be selected with the following reference document categories:

- Service entry sheet
- Transportation service agent (in conjunction with transportation processing from the area of Logistics Execution)
- Delivery note
- Purchase order/Scheduling agreement
- Supplier

Items for planned delivery costs can be selected with the following reference document categories:

- Purchase order/Scheduling agreements
- Supplier
- Bill of lading

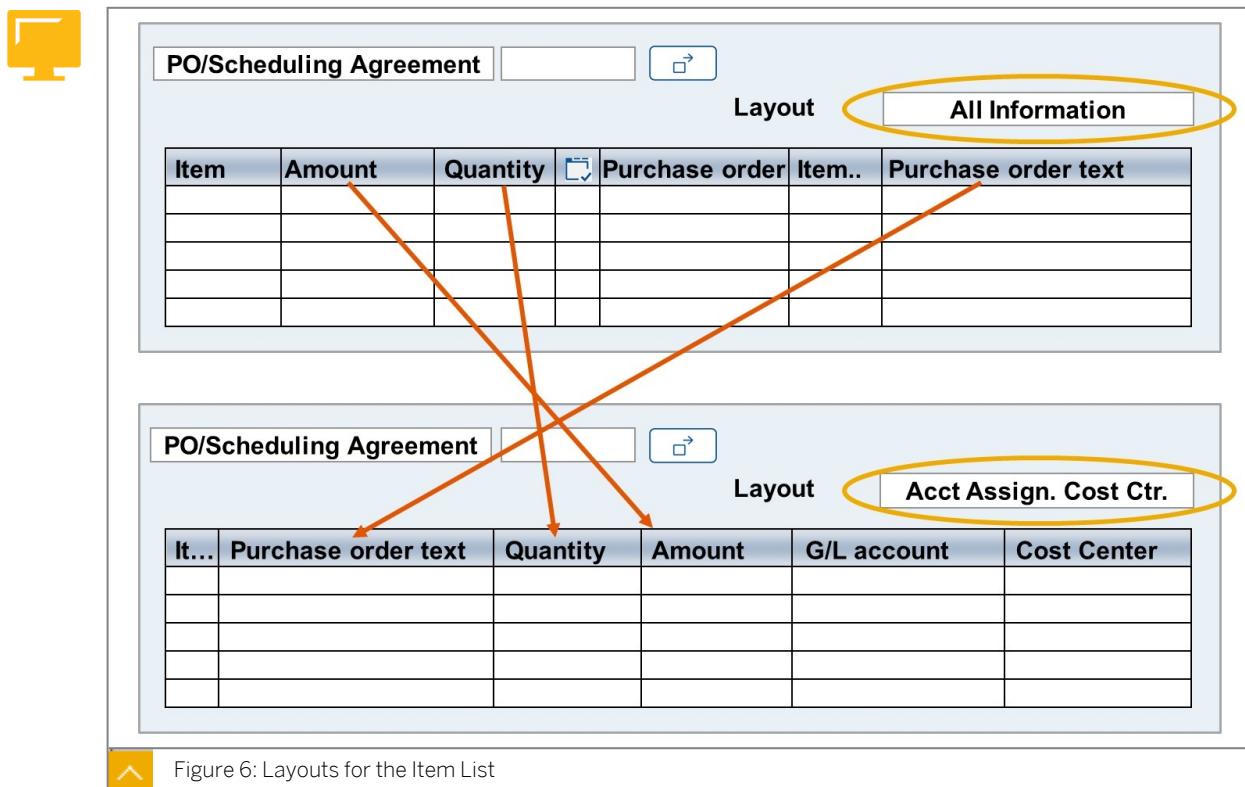
Only for the reference document categories *Purchase Order/Scheduling Agreement* and *Supplier* is it possible to settle goods/service items and planned delivery costs together.

Depending on the reference document category you select, you can choose (*More Allocation Criteria*) to create an allocation for several documents and to specify additional selection criteria.

Item List in Create Supplier Invoice – Advanced App / MIRO Transaction

In the item list, the system proposes all items according to the assignment. The proposal logic in the *Create Supplier Invoice - Advanced* app resp. MIRO transaction corresponds to the logic in the *Create Supplier Invoice* app. And as in the *Create Supplier Invoice* app, you can sort the items, delete unselected items from the list, and change the layout for the list.

However, unlike in the *Create Supplier Invoice* app, you cannot create your own layout for the item list directly in the *Create Supplier Invoice - Advanced* app (MIRO transaction). There are various predefined layouts for the item list to display the data relevant for the respective business case. During processing of the invoice items, you can switch the layout and choose a suitable layout for the transaction.



If the layouts supplied by SAP do not meet your company's requirements, you can define more display variants for item lists in Customizing for *Materials Management*. Choose *Logistics Invoice Verification* → *Incoming Invoice* → *Maintain Item List Variants*.

With this function, you can edit screen variants for the item list screen area for the transaction MIRO (this is the screen with the number 6310 of the SAPLMR1M program). You can create new screen variants by copying an existing screen variant, for example, and then adapting the copy according to your requirements. Using a screen variant, you can control the column sequence and the column width. You can also define whether a column is hidden or an entry has to be made in the column. To change the width and sequence of the columns, choose the *Change with Processing* button while editing the screen variant. Transaction MIRO is then executed, and you can make the changes directly in the item list.

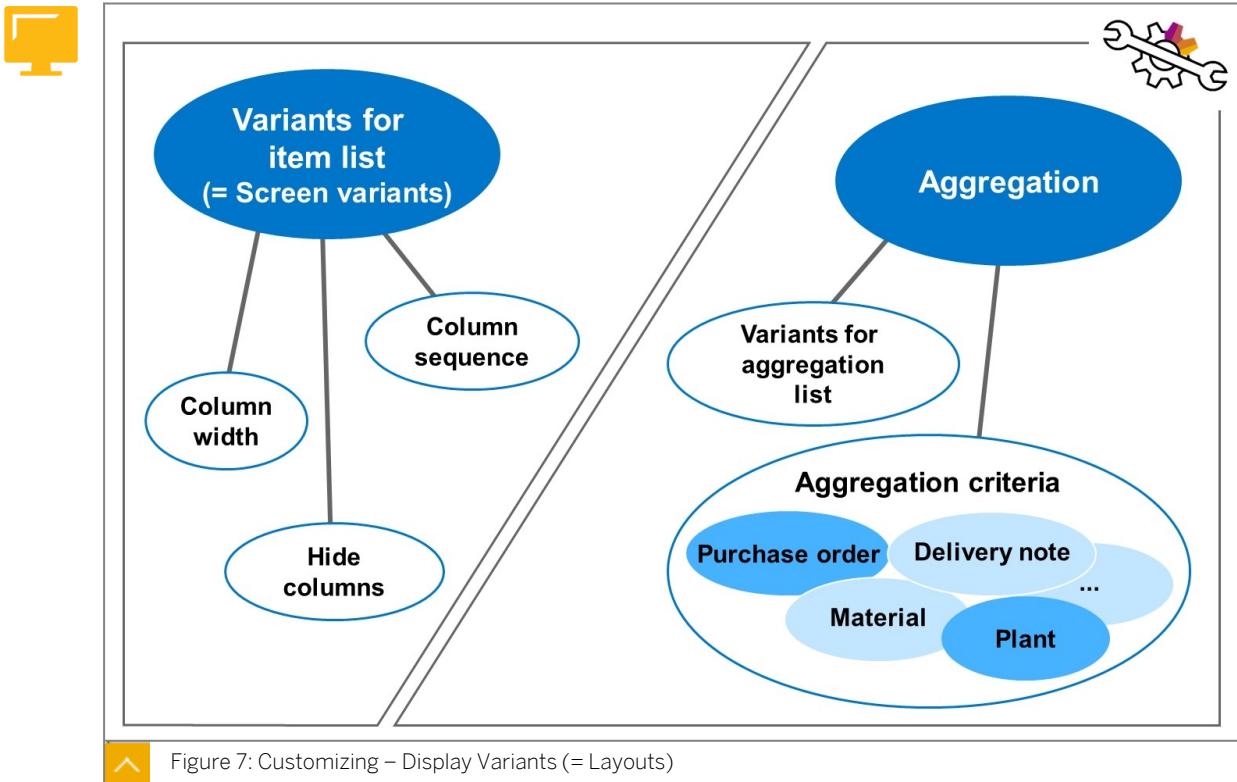


Figure 7: Customizing – Display Variants (= Layouts)

There are special layouts to display the invoice items in an aggregated form. Several invoice items are summarized on one line according to the aggregation criterion. By aggregating an invoice, you can reduce the effort needed to verify the invoice and simplify the search for variances.

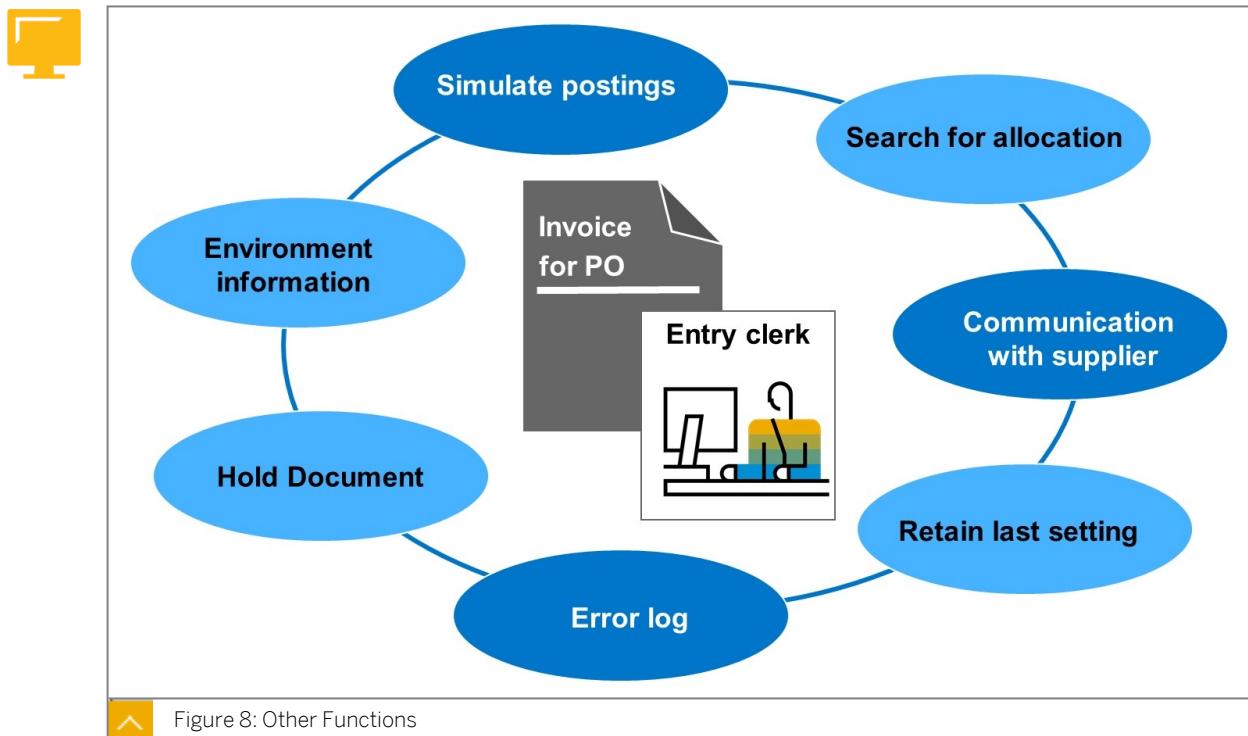
The following criteria are available for the aggregation:

- Purchase order
- Delivery note
- Plant
- Material
- Configurable material
- Net price
- Returns
- Selection indicator
- Tax code

Aggregation variants are also created in Customizing. These are screen variants for screen 6350 of program SAPLMR1M. For each aggregation variant, you specify the criteria to be used for aggregation. All aggregation criteria are always selected as the default setting.

You can find the relevant settings in Customizing for *Materials Management under Logistics* *Invoice Verification* → *Incoming Invoice* → *Aggregation* → *Maintain Variants for Aggregation List* and *Logistics Invoice Verification* → *Incoming Invoice* → *Aggregation* → *Preset Aggregation Criteria*.

Other Functions in Create Supplier Invoice – Advanced App / MIRO Transaction



In addition to the functions already described, the *Create Supplier Invoice – Advanced app* and the *MIRO* transaction provide similar options as the *Create Supplier Invoice app*:

- Simulate postings:

Before posting an invoice, you can choose  (*Simulate*) to simulate the account movements to be made.

- Search for allocation:

If no reference (or an incorrect reference) is specified in the invoice, you can use the input help to search for possible references (POs for suppliers, and so on).

- Display environment information:

You can display various pieces of information about the environment for the current session (for example, PO, PO history, supplier information, or material data).

- Communicate with supplier:

To facilitate communication with the supplier during the invoice entry, the system displays relevant data, such as the telephone number, fax number, and the email address, from the supplier master record in the vendor data.

- Hold Document:

You can hold the data entered for an invoice in a temporary materials management (MM) document. You can change and post a held document at a later time.

- Retain last settings:

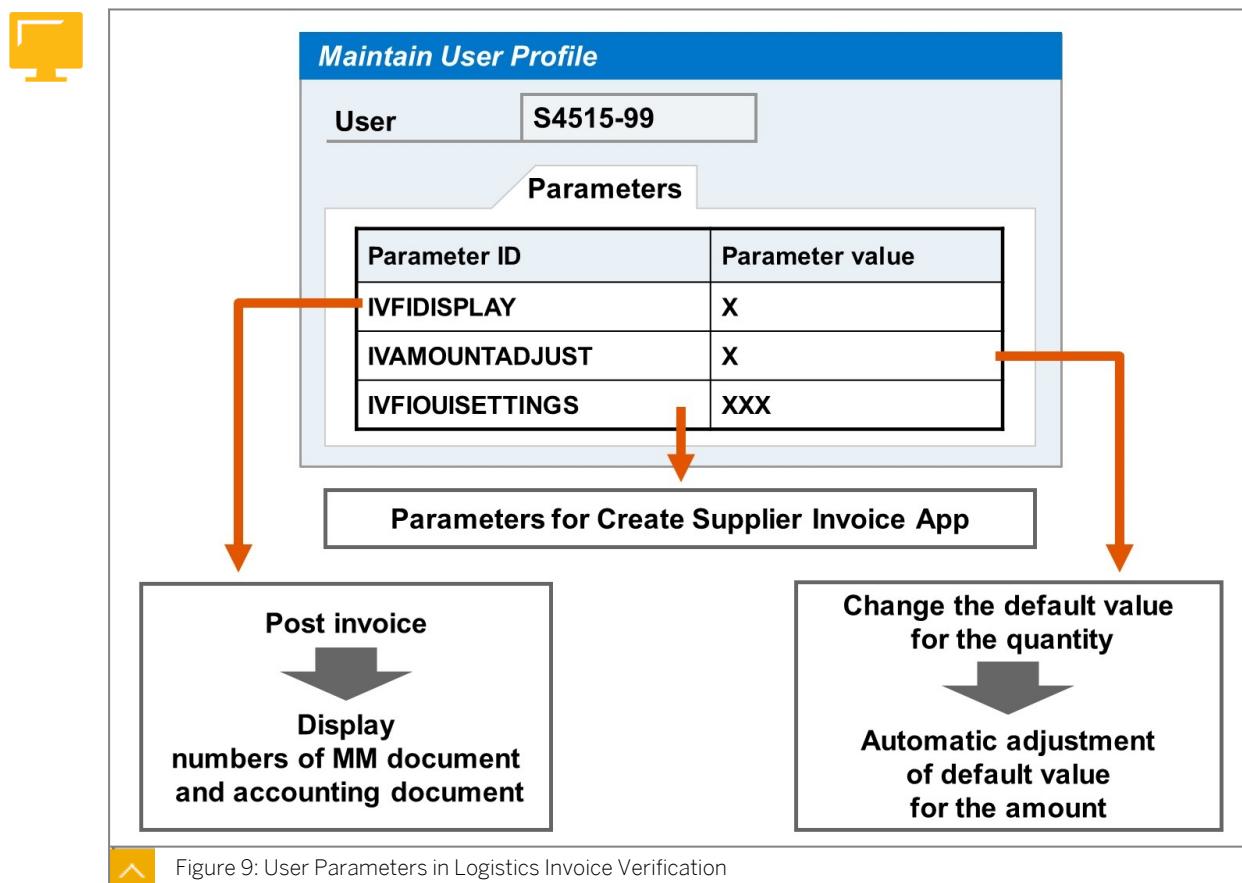
The system notes the last control data used and suggests it again the next time you log on to the transaction. This data includes the transaction, the reference document type, the layout of the item list, and the visible or hidden PO structure.

- View error log:

The system collects error messages in a log.

User Parameters for Logistics Invoice Verification

There are some special user parameters for Logistics Invoice Verification that can be preassigned in the user master record.



User Parameter IVFIDISPLAY

When you post an invoice in Logistics Invoice Verification, the number of the MM invoice document created is displayed in the status bar. If the parameter *IVFIDISPLAY* is activated (= value **x**), the FI document number is displayed in addition to the MM invoice number in the following apps or transactions:

- Create Supplier Invoice app
- Create Supplier Invoice – Advanced app
- Enter Invoice (MIRO)
- Park Invoice (MIR7)
- Cancel Invoice (MR8M)

- *Invoice Overview* (MIR6)

For the following transactions, you can display the numbers of documents created in the output list:

- *Evaluated Receipt Settlement* (MRRL)
- *Revaluation* (MRNB)
- *Invoicing Plan Settlement* (MIRS)
- *Invoice Verification in the Background* (program RMBABG00)



Note:

A user can also set this parameter for their user ID using the *Edit Settings for Supplier Invoices* app.

User Parameter IVAMOUNTADJUST

This parameter makes it easier to correct the quantity and amount in an invoice item. If you have entered the parameter with the value **x** in the user master record and the quantity of an invoice item changes, the amount of this item is automatically adapted. The system calculates the new default value for the item amount based on the quantity multiplied by the PO price. As soon as you overwrite the default value for the amount manually, the amount is no longer adapted automatically.

The parameter works for the following transactions:

- *Enter Invoice* (MIRO)
- *Park Invoice* (MIR7)

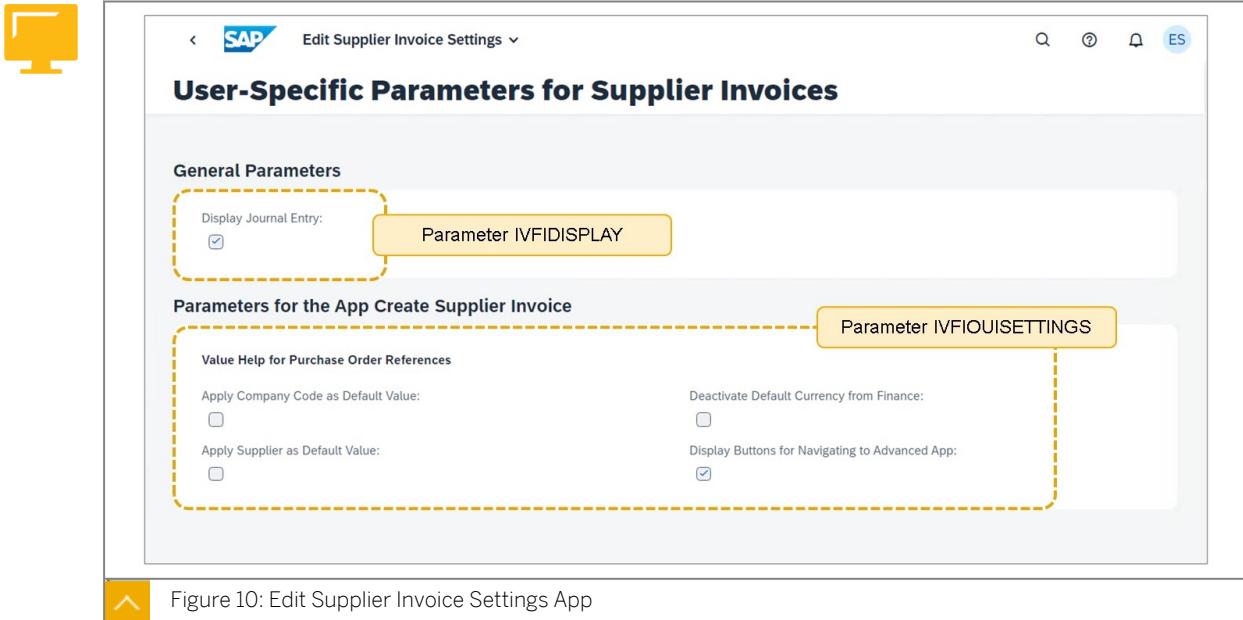


Note:

The *Create supplier invoice* Fiori app does not support this function.

User Parameter IVFIQUISETTINGS

With the *Edit Settings for Supplier Invoices* app, you can maintain the settings for the user parameters *IVFIDISPLAY* and *IVFIQUISETTINGS* for your user.



You use the ***Display Journal Entry*** checkbox to control whether the user parameter *IVFIDISPAY* is set for your user, and therefore whether the FI document number is displayed in addition to the MM invoice document number.

The other settings under *Parameters for the App Create Supplier Invoice* are saved in the user master record using the *IVFIQUISETTINGS* user parameter. The following checkboxes are available:

- ***Apply Company Code as Default Value***: If this checkbox is selected, in the *Create Supplier Invoice* app the company code you entered for the invoice is defaulted in the value help for the purchase order references.

In this case, an “X” appears at the first position in the user parameter *IVFIQUISETTINGS*.

- ***Apply Supplier as Default Value***: If this checkbox is selected, in the *Create Supplier Invoice* app the supplier you entered for the invoice is defaulted in the value help for the purchase order references.

In this case, the second character in the user parameter *IVFIQUISETTINGS* is “X”.

- ***Deactivate Default Currency from Finance***: If this checkbox is selected, no currency is proposed for the invoice. The app then behaves like transaction *MIRO*. This means that the currency can be entered manually or is copied automatically from the purchase order.

If the checkbox is not set, the default value for the currency depends on the default logic in Financial Accounting. For example, the local currency of the company code or the last value entered can be proposed (See SAP Note 2719041).

In this case, an “X” appears at the third position in the user parameter *IVFIQUISETTINGS*.

- ***Display Buttons for Navigating to Advanced App***: If the checkbox is selected, the *Advanced Edit* and *Advanced Display* options will be displayed within the *Create Supplier Invoice* and *Import Supplier Invoice* apps respectively.

In the *Create Supplier Invoice* app you can use the *Advanced Edit* button to continue editing your supplier invoice within the *Create Supplier Invoice – Advanced* app.

If you display a supplier invoice, you can use the *Advanced Display* option to switch the displayed to the *Display Supplier Invoice – Advanced* app.

In the user parameter `/VFI/OUISETTINGS`, this setting is saved in the fourth position.



LESSON SUMMARY

You should now be able to:

- Post an invoice

Using Different Types of Invoice Verification

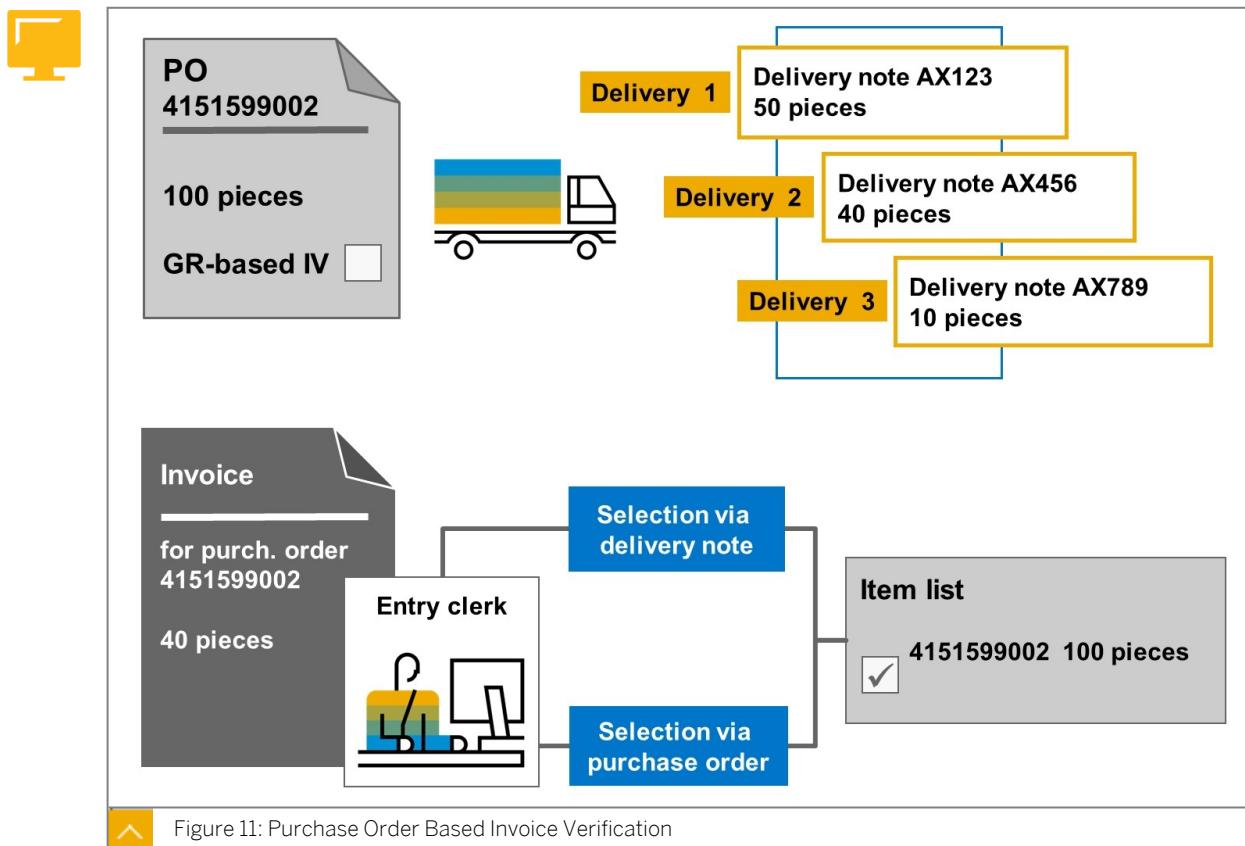


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use different types of invoice verification

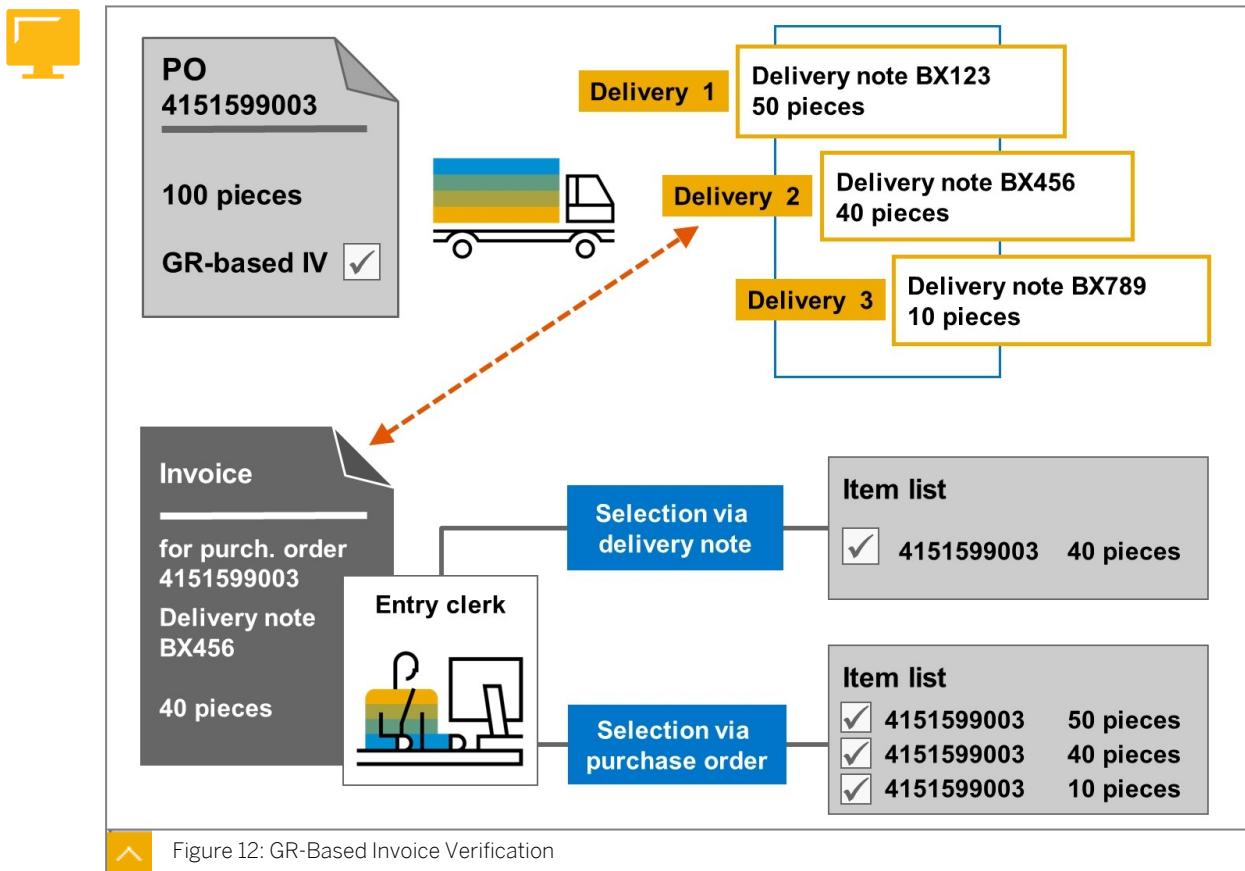
Types of Invoice Verification



In PO-based invoice verification, the system generates an invoice item in the item list for each PO item. The system proposes the quantity to settle as the difference between the total delivered quantity and the total invoice quantity. This means that partial deliveries for a PO item are not flagged as individual invoice items. It makes no difference whether you make the allocation using a PO or a delivery note. If you make the allocation with a delivery note, the system determines the relevant PO items with their total quantities to settle in the same way that it does a reference to a PO. The system does not only propose the quantity from the allocated delivery note.

If there are several GRs and invoices for a PO item, the PO history does not tell you which invoices relate to which delivery.

GR-Based Invoice Verification



The figure illustrates an example of a GR-based invoice verification.

The prerequisites for GR-based invoice verification are as follows:

- In the PO, the indicator for GR-based invoice verification, *GR-Bsd IV* must be set for the relevant item on the *Invoice* tab page. If the indicator has already been set in the supplier master record or the source of supply, the system copies it automatically into the PO as a default.
- You must post at least one GR to be able to enter the invoice in the system.

In GR-based invoice verification, a separate invoice item is created for each delivered partial quantity. If you make the allocation with the PO, the system can propose more than one invoice item as a default if more than one partial delivery has been posted for a PO item. If you make the allocation using the delivery note, the system proposes the PO items from this GR along with the quantities posted in this GR.

In GR-based invoice verification, the invoice quantity should not be greater than the actual delivered quantity. However, it is possible to post a larger invoice amount. If doing so, you must be aware that you cannot reassign invoices from one GR to another.

In GR-based invoice verification, you can assign each invoice item uniquely to a GR item. GRs and invoices are matched up in the PO history.

Return or Reversal During a GR-Based Invoice Receipt (IR)



Purchase Order: 10 pieces at EUR 10/pc (GR-based invoice verification)
Goods receipt: 10 pieces
Invoice: 10 pieces at EUR 12/pc = EUR 120

Return/reversal of goods receipt over 10 pieces
Goods receipt over 10 pcs
(entered as goods receipt or subsequent delivery transaction)



	GR	IR	Reversal/ Return	Either GR as goods receipt	Or GR as subsequent delivery
Stock account	100 +	20 +	120 -	100 +	120 +
GR/IR account	100 -	100 +	120 -	100 -	120 -
Vendor account					

Figure 13: Return/Reversal During a GR-Based IR

You must configure Customizing to determine whether it is possible to reverse or return a GR after the IR, when GR-based invoice verification is intended for the items. Go to Customizing for *Materials Management* and choose *Inventory Management and Physical Inventory* → *Goods Receipt* → *For GR-Based IV, Reversal of GR Despite Invoice*.

If you permit a reversal or return despite the invoice and incorrect GRs are later made, an inconsistency may occur in the GR/IR clearing account (for more information, see SAP Note 184632).

Such an inconsistency where the delivered and invoiced quantities match, but the GR/IR clearing account does not balance, may be caused by the scenario shown in the figure.

An invoice with a price variance is entered after the GR. A reversal or return is posted. Then the subsequent entry of the adjustment posting of the GR reversal or the substitute delivery for the returned quantity is posted in inventory management with the GR transaction rather than the subsequent delivery transaction.

The subsequent delivery transaction allows you to make reference to the original GR document, return or reversal, during the GR. It also means that the GR/IR clearing account can be updated correctly.

If you do not permit a reversal or return when there is a posted invoice, you must cancel the invoice before you can post the return or reversal in inventory management. This prevents incorrect updates to the GR/IR clearing account.



Note:

The inconsistency on the GR/IR clearing account can be corrected using the *Maintain GR/IR Clearing Account* function (transaction MR11).



LESSON SUMMARY

You should now be able to:

- Use different types of invoice verification

Parking of Documents



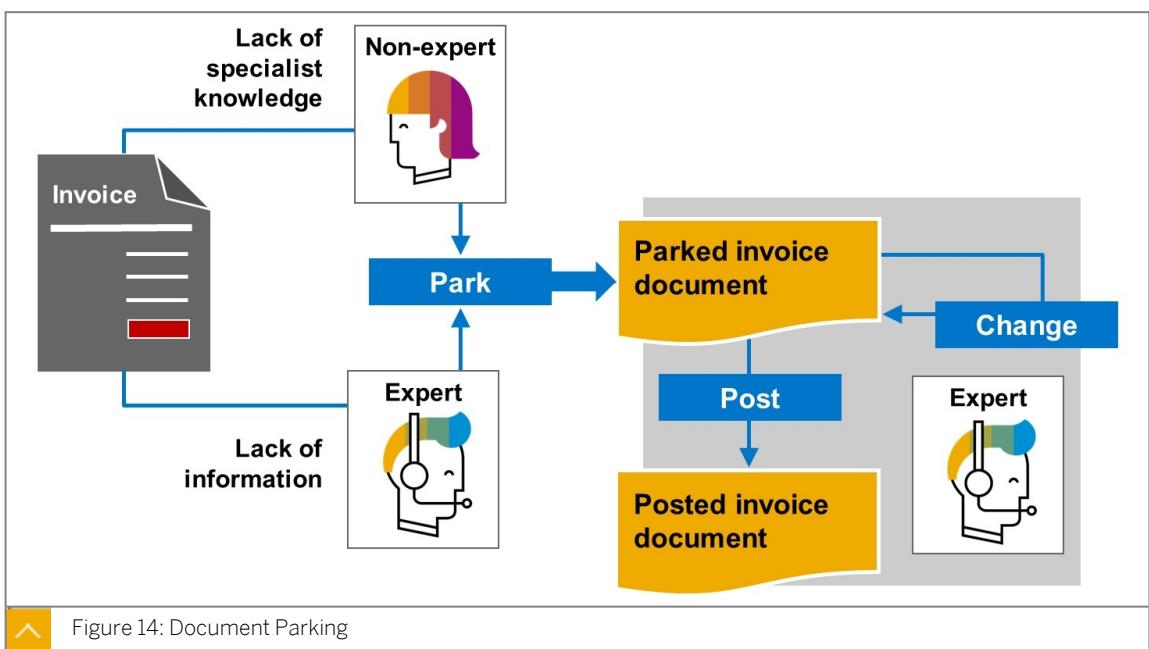
LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Park an invoice

Document Parking

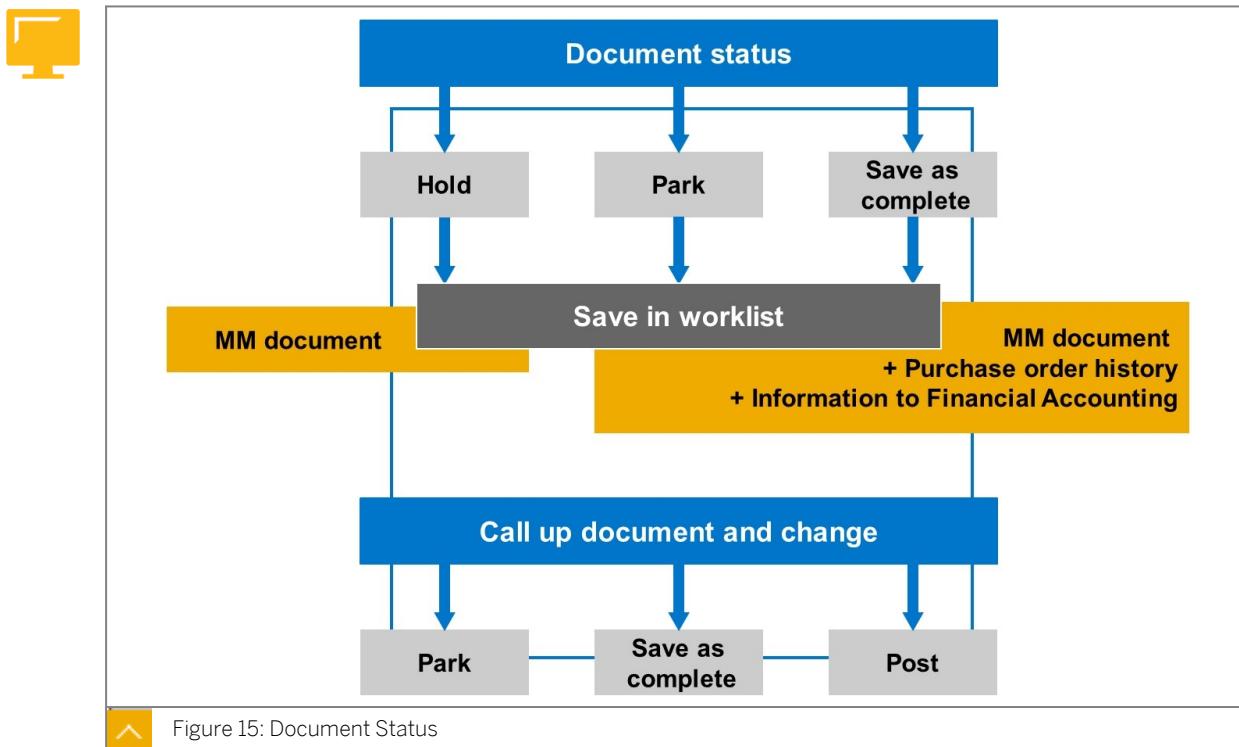
In Logistics Invoice Verification you can park invoices, credit memos, and subsequent debits or credits. This means that you enter data in the system and save it in a document, but do not immediately post it.



Document parking can be used in the following situations, for example:

- An experienced invoice verification clerk wants to process an invoice, but is missing some of the information needed to post the invoice (for example, account assignment information). The clerk parks the invoice. As soon as the missing information is received, the clerk changes the parked document and posts it.
- A less experienced employee enters the invoice data without checking it. The expert then checks the parked document, makes any necessary changes, and posts it.
- An EDI invoice is parked due to variances.

Document Status



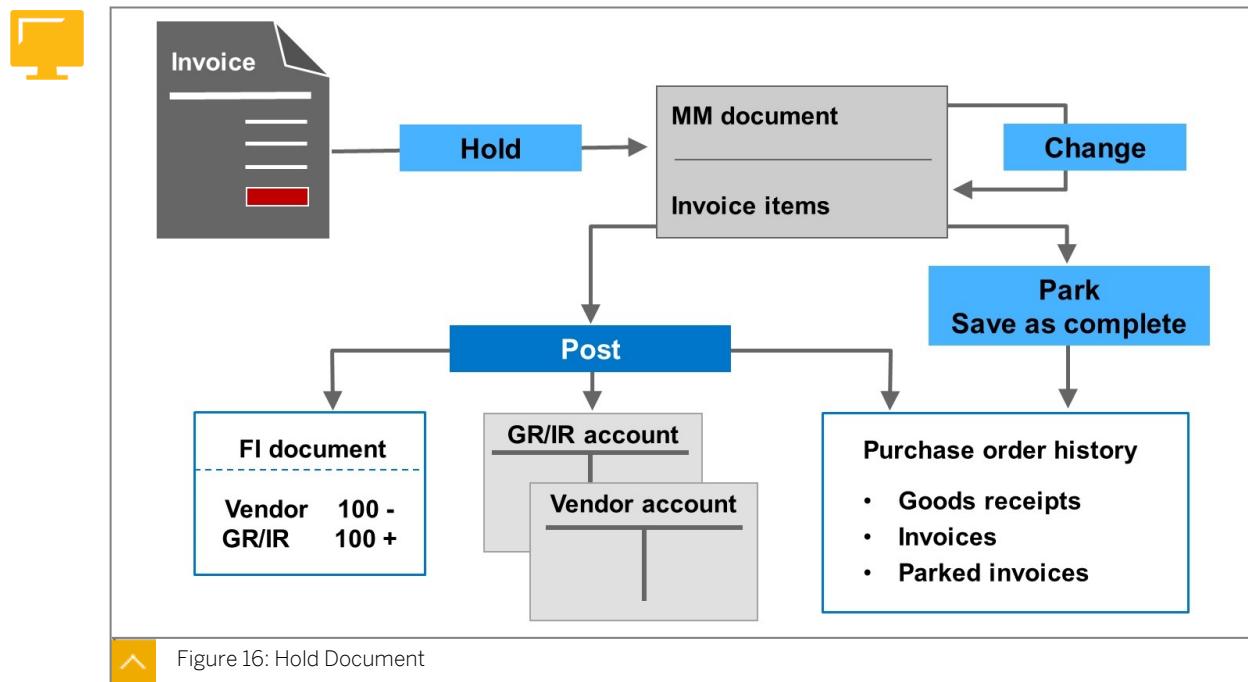
You can see the difference between invoice documents by their invoice statuses.

The following statuses are relevant when parking and holding documents:

- Entered and held (if the invoice was held using the *Create Supplier Invoice* app or the MIRO transaction)
- Parked and held (if the invoice was held using transaction MIR7)
- Parked
- Parked and completed
- Parked and released
- Deleted

Hold Document

You use this option if you want to save the current state of the document. When you hold a document, only minimal checks take place (for example, for the existence of the company code, the supplier, and the currency). A Materials Management (MM) invoice document with the status *Hold* is created, but no information is yet transferred to Financial Accounting (FI) and there is no update in the purchase order history.



The hold function is available in the following apps and transactions:

- *Create Supplier Invoice* app
- *Create Supplier Invoice – Advanced* app and *Enter Incoming Invoice (MIRO)* transaction
- *Park Supplier Invoices* app and *Park Incoming Invoice (MIR7)* transaction

You can change or add information to a held document as often as you like. Held documents can be parked, saved as complete, or posted. Account postings are made when you post a document.

You can also delete held documents. The number of the deleted MM document is not reassigned. After deletion, the document is retained in the database with a document header status of *Deleted*, so that you can see what the document number was assigned to. The line items are deleted from the database.

Document Parking and Saving as Complete

When you park an invoice or save it as complete, a MM invoice document with the status *Parked* or *Parked and completed* is created. In addition, information is transferred to Financial Accounting (FI) and an FI document is created with the status *Parked Document*. Furthermore, parked invoices and saved as complete invoices are updated in the purchase order history.

If configured for the supplier, the system already checks for duplicate invoices.

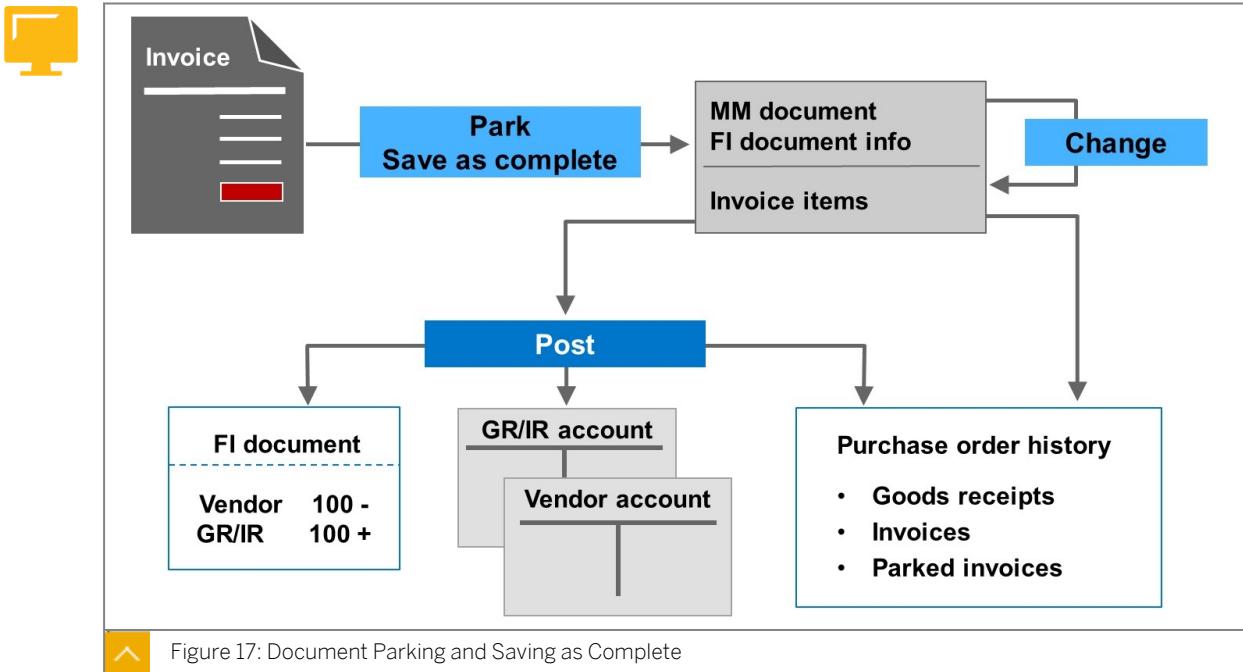


Figure 17: Document Parking and Saving as Complete

The *Save as Completed* function differs from the *Park* function in the following ways:

- The invoice must be postable. This means that the balance must be zero or must fall within the tolerance for small differences or the supplier-specific tolerances.
- The account assignment data is checked and the purchase order commitment is reduced.

You can park invoices or save them as complete in the following transactions and apps:

- *Create Supplier Invoice* app
- *Park Supplier Invoices* app and *Park Incoming Invoice* (MIR7) transaction
- Note: In the *Create Supplier Invoice – Advanced* app and the *Enter Incoming Invoice* (MIRO) transaction, you can branch directly to parking by choosing *(Menu) → Edit → Switch to Document Parking*.

You can change or add information to a parked or saved as complete document as often as you like. You can also delete these documents. The numbers of the deleted documents (both MM and FI) are not reassigned. After deletion, the document is retained in the database with the document header status *Deleted* so that you can see what number was assigned to the document. The line items are deleted from the database.

Report RFPUMS00 (*Input Tax from Parked Documents*) enables you to take into account parked and saved as complete documents for advance tax returns. On the Fiori Launchpad start the *Input Tax from Parked Documents* app or in the GUI, on the SAP Easy Access screen, choose *Accounting → Financial Accounting → General Ledger → Reporting → Tax Reports → General → Input Tax from Parked Documents* (S_ALR_87012362).

Processing of held and parked invoices

Various functions are available for processing held and parked invoices:

1. SAP Fiori App *Supplier Invoices List*:

With the *Supplier Invoices List* app, you can search for invoices and use the search result as a worklist. In addition to many other filter criteria, the *Entry Type* and the *Status* are available as filter criteria.

Depending on the status, you can, for example, do the following:

- Status Held/Parked/Parked as Complete:

You can navigate to the supplier invoice. You can choose the *Edit* function, and you can change the data and simulate, hold, or post the supplier invoice.

- Status Draft:

You can navigate to the supplier invoice. You can complete the detail data and simulate, hold, post, or discard the supplier invoice. Supplier invoices with the status *Draft* are sent out by suppliers using the Business Network.

- Status Draft (Personal):

Supplier invoices with the status *Draft (Personal)* are created whenever you start entering an invoice with the *Create Supplier Invoice* tile. In the supplier invoice list, the supplier invoices with status *Draft (Personal)* are only displayed for your user. The status *Draft (Personal)* allows you to open the invoice draft in several views at the same time.

- Status Posted or Blocked for Payment:

You can navigate to the supplier invoice. You can review the detail data and reverse or release the supplier invoice.

2. Transaction *Invoice Overview* (MIR6):

You can use this transaction to select held, parked, and parked as complete documents for all users and call them up for further processing. To do this, you choose *Held/Parked* as the *Entry Type* and the corresponding *Invoice Statuses* (*Held*, *Parked*, *Parked As Complete*).

The *Entry Type* specifies the way in which an invoice was created in Logistics Invoice Verification. Other *Entry Types* are, for example: Background, Invoice Verified Online, EDI, or Business Network

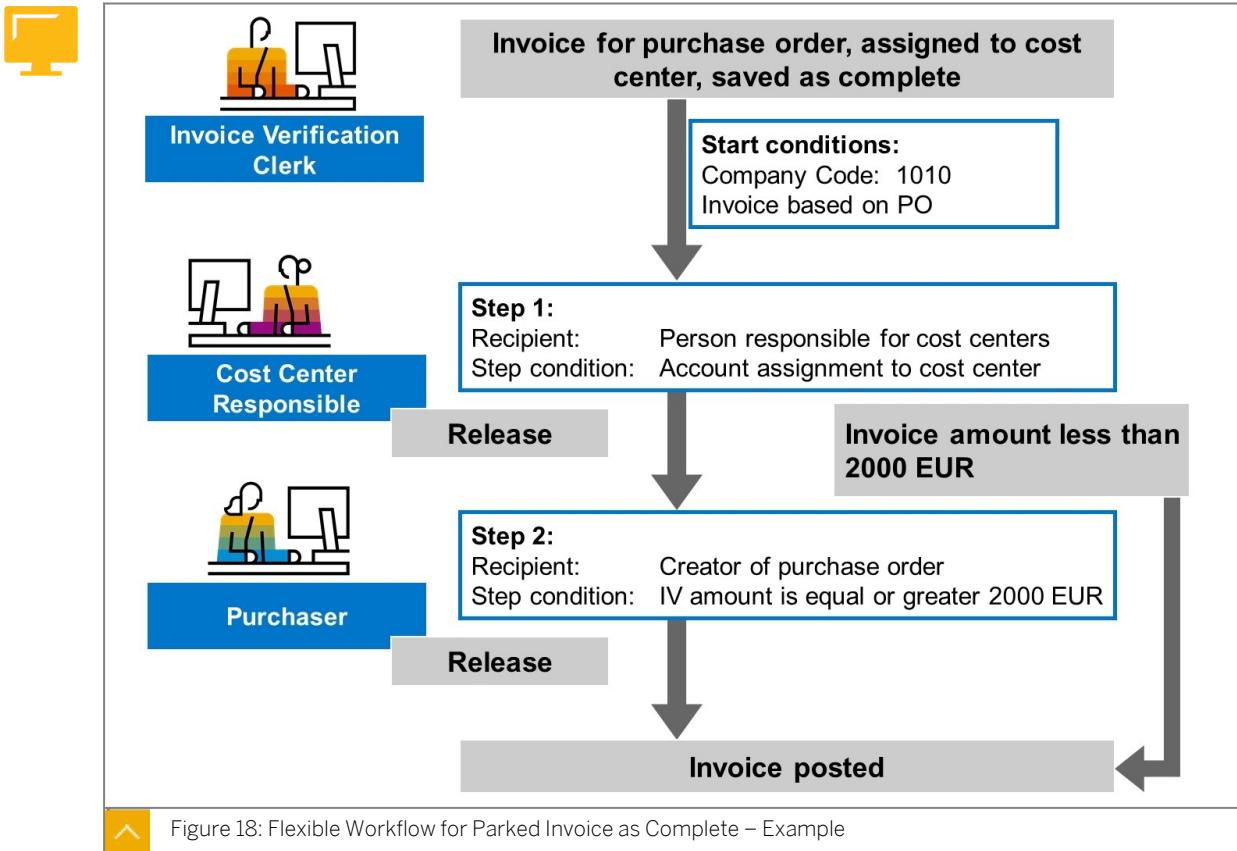
3. Worklist in the transactions *Enter Invoice* (MIRO) and *Park Invoice* (MIR7) and the corresponding apps:

Via the worklist, you can call up your held, parked, and completely saved invoice documents for further processing. It is not possible to process documents belonging to other users via the worklist.

Flexible Workflow for Parked Invoice as Complete

In SAP S/4HANA, a flexible workflow for the approval of invoices saved as completed is available.

The flexible workflow is a general function that allows you to define condition-based workflows for approval processes. The flexible workflow for supplier invoices allows you to define one-step or multi-step approval processes for supplier invoices according to your requirements. Approvers can then approve or reject corresponding work items in the *My Inbox* app.



When you define a new workflow, you can choose from different start conditions to determine when the workflow is started. You can combine several conditions. For example, the following start conditions are possible:

- One of the following account assignment categories is used: Cost Center, Internal Order, Profit Center, WBS Element
- Invoice is based on purchase order
- Company code of supplier invoice
- Supplier release group
- Invoice amount is equal to or greater than a defined value

There are also various options available for determining the approver. For example, you can assign a user directly or have the user responsible for the cost center determined in the case of an account assignment to cost center.

Manage Workflows for Supplier Invoices App

You create flexible workflows for supplier invoices using the *Manage Workflows for Supplier Invoices* app. You can also use this app to copy workflows, activate/deactivate workflows, delete deactivated workflows, and define the order of the workflows.

If you define a new workflow, proceed as follows:

1. Select the workflow scenario for which you want to create a new workflow.
2. Choose *Create* and specify a *Workflow Name* in the *Header* section.
3. Optional: Specify a *Description* and a validity period in the *Properties* section.

4. Define *Start Conditions* on which the workflow is to start.



Note:

If a workflow is to be valid for several company codes, for example, you must create a separate workflow for each company code.

5. In the *Steps* section, define at least one workflow step.

You assign *Recipients* and *Step Conditions* and, if necessary, actions for exception handling to each workflow step.

6. Save your workflow definition and activate the workflow.

7. Define the order in which the start conditions of existing workflows are checked

If you have defined several workflows, the start conditions are checked in the order you have defined. As soon as the start conditions for a workflow are met, this workflow is used. This ensures that only one workflow in the list of your defined workflows is started, even if several workflows have matching start conditions.

The ID for the workflow template for parked invoices as complete is WS00800303. The standard tasks associated with the workflow template are TS00800577 (Release Complete Invoice) and TS00800585 (Revise Invoice).

For more information about the configuration of the flexible workflow for supplier invoices, see the product documentation for SAP S/4HANA at help.sap.com. In the documentation choose *Enterprise Business Applications* → *Sourcing and Procurement* → *Invoice Management* → *Invoice Processing* → *Flexible Workflow for Supplier Invoices* → *How to Configure the Flexible Workflow for Supplier Invoices*.



LESSON SUMMARY

You should now be able to:

- Park an invoice

Unit 1

Lesson 4

Applying Taxes

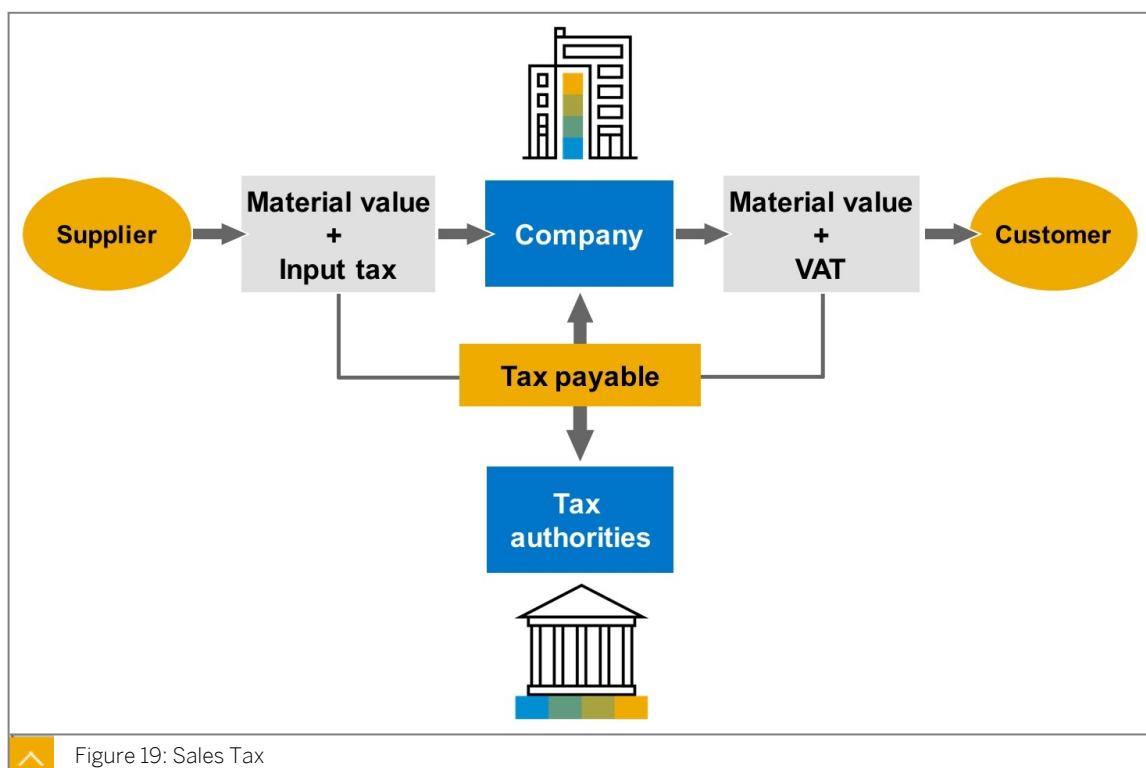


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter taxes

Taxes



The value added to goods is the difference between the purchase price and the sales price. An example of value-added tax (VAT), more commonly referred to in the USA as sales tax, is the amount of money the government adds in addition to the sales price.

The difference between input tax and sales tax is as follows:

- The input tax is invoiced by the supplier to the company. It represents a demand to the tax authorities.
- The sales tax is invoiced to the customer at all production and trade levels. This represents a tax debt to the tax authorities.

Each company needs to pay sales tax to the tax authorities. The payment is calculated as the difference between the sales tax from sales and the input tax from purchasing.

Entry of Tax Data

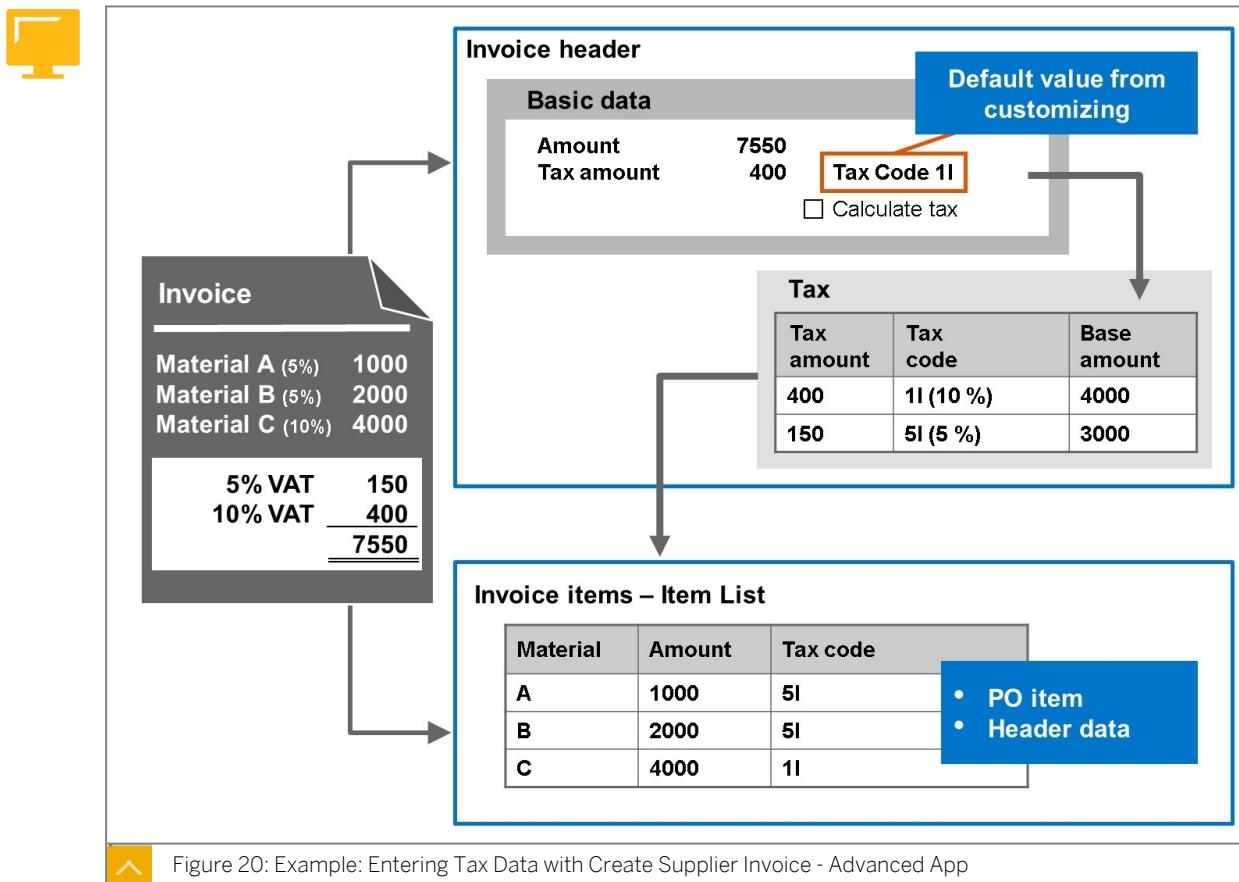


Figure 20: Example: Entering Tax Data with Create Supplier Invoice - Advanced App

When entering an invoice, you must specify a tax code for each invoice item. If you enter an invoice with reference to a purchasing document, the tax codes are proposed from the purchasing document items. If no tax code is defined in a purchasing document item, the system proposes the first tax code from the header data for this invoice item. A default value for the tax code in the header data can be defined for each company code in Customizing for Logistics Invoice Verification.

The two apps for creating supplier invoices differ slightly in the way tax data is entered:

1. Create Supplier Invoice app

In the *Create Supplier Invoice* app, the system calculates the tax amounts automatically based on the amounts and the tax codes of the invoice items. If tax codes are not defined in the purchasing document items or for the company code, you must manually enter the tax codes in the invoice items. The tax amounts are then calculated automatically with these entries.

If the specifications in the supplier invoice differ from these values, you must change the entries for tax codes and tax amounts according to the supplier invoice during invoice entry.

2. Create Supplier Invoice - Advanced app

In the *Create Supplier Invoice - Advanced* app, you can also have the tax amounts calculated automatically from the item data. To do this, select the *Calculate Tax* checkbox

on the *Basic Data* tab page in the header data. If you do not select *Calculate Tax*, you must enter the tax amounts and the relevant tax codes in the header data manually.

For this app, there is an additional customizing setting from Financial Accounting, in which you can define a default value for the tax code for the header data. The customizing settings for Logistics Invoice Verification take precedence over the settings for Financial Accounting.

Customizing – Default Value for Tax Codes

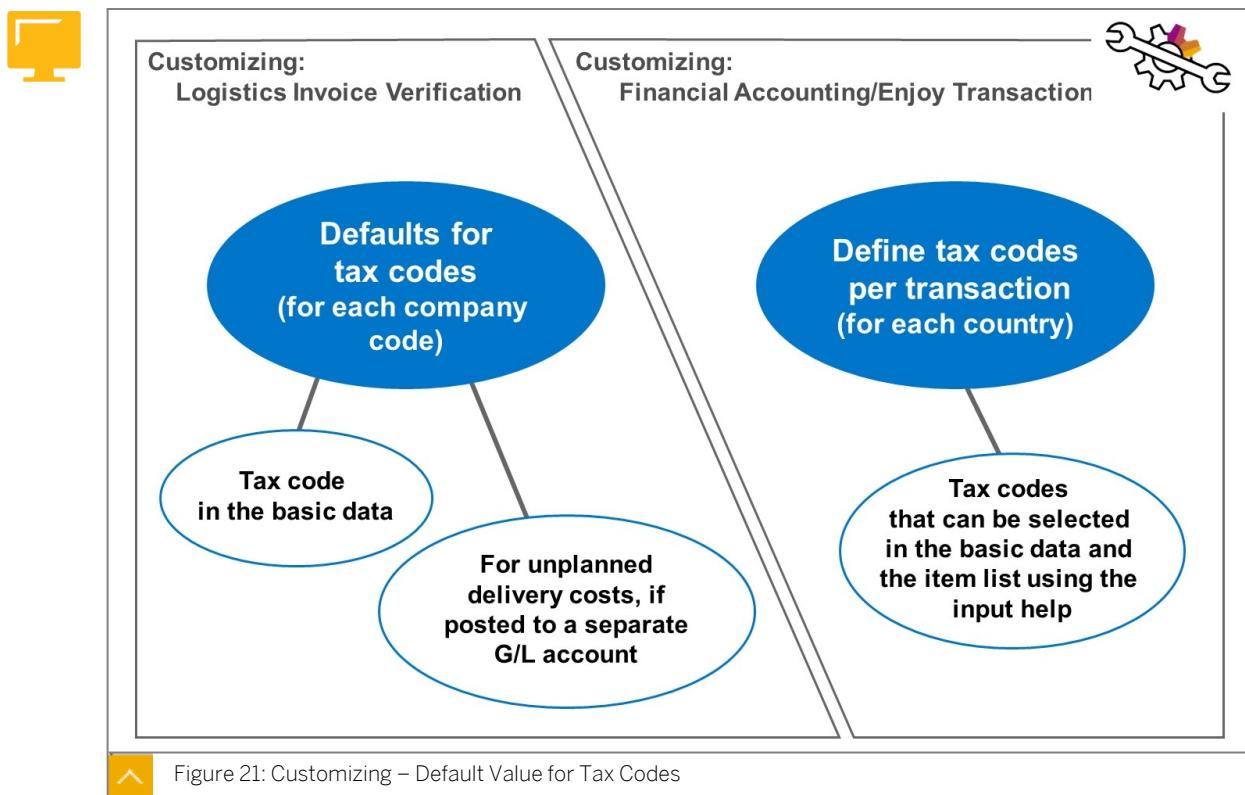


Figure 21: Customizing – Default Value for Tax Codes

The tax code is defined in Customizing for Financial Accounting (FI). Each tax rate requires a separate tax code to determine how the tax is to be calculated and how it is to be posted. If a tax code has already been used in a document, it cannot be deleted from Customizing and the tax rate cannot be changed, otherwise the system can no longer read the document information correctly.

In Customizing, the following settings influence the default values for the tax code in the Logistics Invoice Verification applications:

- In Customizing for Materials Management, choose *Logistics Invoice Verification* → *Incoming Invoice* → *Maintain Default Values for Tax Codes* (OMR2).

Using this function, you define which tax code is the default for the header data. You define the default tax code for each company code. You also define which tax code is a default for unplanned delivery costs. The setting for unplanned delivery costs is relevant only if these costs are posted automatically to a separate general ledger (G/L) account line.

- In Customizing for Financial Accounting, choose *Accounts Receivable and Accounts Payable* → *Business Transactions* → *Incoming Invoices/Credit Memos* → *Incoming Invoices/Credit Memos - Enjoy* → *Define Tax Code per Transaction* (OBZT).

You use this function to define, depending on the country/region and transaction, which values are available in the input help for the tax code in the header and item data.

You can also define one of these tax codes as a default value per transaction (This default value is only relevant for the *Create Supplier Invoice – Advanced* app).



LESSON SUMMARY

You should now be able to:

- Enter taxes

Unit 1

Lesson 5

Applying Cash Discounts



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter cash discount information

Terms of Payment

To define when an invoice must be paid, you can agree on terms of payment with your supplier. The terms of payment contain the terms you have agreed with the business partner with regards to the financial compensation due for deliveries and services rendered. Terms of payment can have three levels, for example, if you pay within 5 days there is a 3% discount, within 10 days a 2% discount, and within 20 days you pay the net price. The discount guaranteed by the supplier therefore reduces the cost price.



The screenshot illustrates the SAP Fiori interface for managing payment terms. It shows two main screens: 'Purchase Order – Header Data' and 'Invoice – Header Data'.

Purchase Order – Header Data

Payment Terms	0003
Payment in	10 days 3 %
Payment in	20 days 2 %
Payment in	30 days net

Invoice – Header Data

Transaction MIRO - Basic data

Amount	Tax amount	Tax Code
Paymt Terms	10 Days 3%, 20 Days 2%, 30 Days net	
Baseline Date	01.02.2023	

Payment

Baseline Date	01.02.2022		
Discount	[Empty]		
Paymt Terms	0003	10 Days	3 %
	20 Days	2 %	
	30 Days net		

Display (highlighted with an orange oval)

Change (highlighted with an orange oval)

Figure 22: Terms of Payment

In the apps for invoice entry, the payment terms and the baseline date for payment are displayed on the *Payment* tab and can be changed here. You can also specify a fixed cash

discount amount on this tab. In the *Create Supplier Invoice - Advanced* app (transaction MIRO), the payment terms and the baseline date are also displayed in the *Basic Data*.

You can also exclude specific items from the cash discount by selecting the *No Cash Discount* checkbox for the relevant item.

The system uses the following logic to determine the terms of payment when an invoice is entered **with** purchase order reference. The following rules apply to all transactions: invoice, credit memo, subsequent debit, and subsequent credit.

Item Type	Terms of Payment Proposal
<ul style="list-style-type: none"> • Goods/service items • Goods/service items + planned delivery costs 	<p>Terms of payment are suggested from the first PO that was specified in the allocation.</p> <p>A warning message displays if the terms of payment for individual POs are different.</p> <p>This proposal also applies when the partner role invoicing party is used in the PO or when the invoicing party is changed during the invoice entry.</p>
<ul style="list-style-type: none"> • Planned delivery costs 	Terms of payment are suggested from the company code data of the supplier that is planned for the delivery costs.

The following rules apply when the terms of payment are determined for invoices **without** purchase order reference.

Transaction	Terms of Payment Proposal
<ul style="list-style-type: none"> • Invoice • Subsequent debit 	Terms of payment for invoices from the company code data of the invoicing party that is to be entered manually.
<ul style="list-style-type: none"> • Credit memo • Subsequent credit 	Terms of payment for credit memos from the company code data of the invoicing party that is to be entered manually.



Hint:

When you enter an invoice, a credit memo, a subsequent debit, or a subsequent credit, you can reference the number of an already posted MM invoice document on the *Payment* tab page, in the *Invoice Reference* field. If you do so, the system transfers the terms of payment, the baseline date for payment, and the payment block from the reference document. In this situation, the system always copies the values from the reference document and these cannot be changed.

Methods of Posting Cash Discount Amount

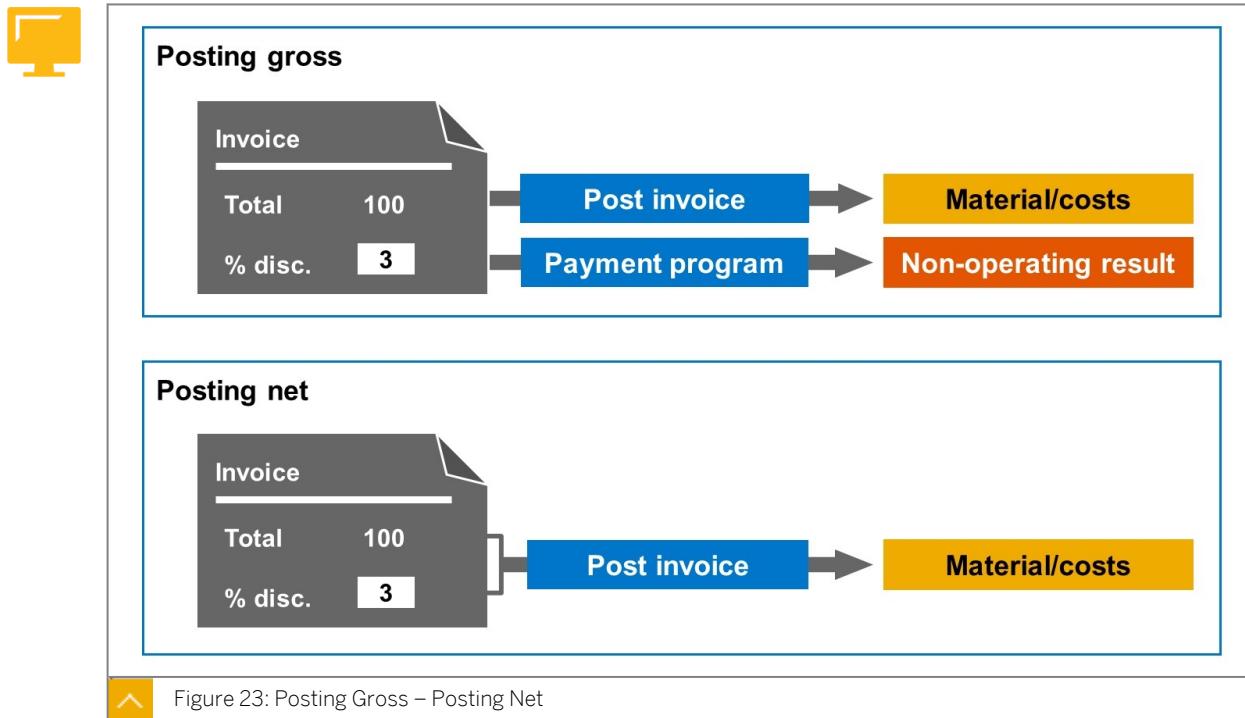


Figure 23: Posting Gross – Posting Net

There are two ways to post the cash discount amount: Gross posting and net posting.

- Posting gross:

When you post the invoice, the cash discount amount is not taken into account; it is only posted to a *Cash Discount* account when the payment is made. Therefore, the cash discount amount is not credited to the stock or cost account.

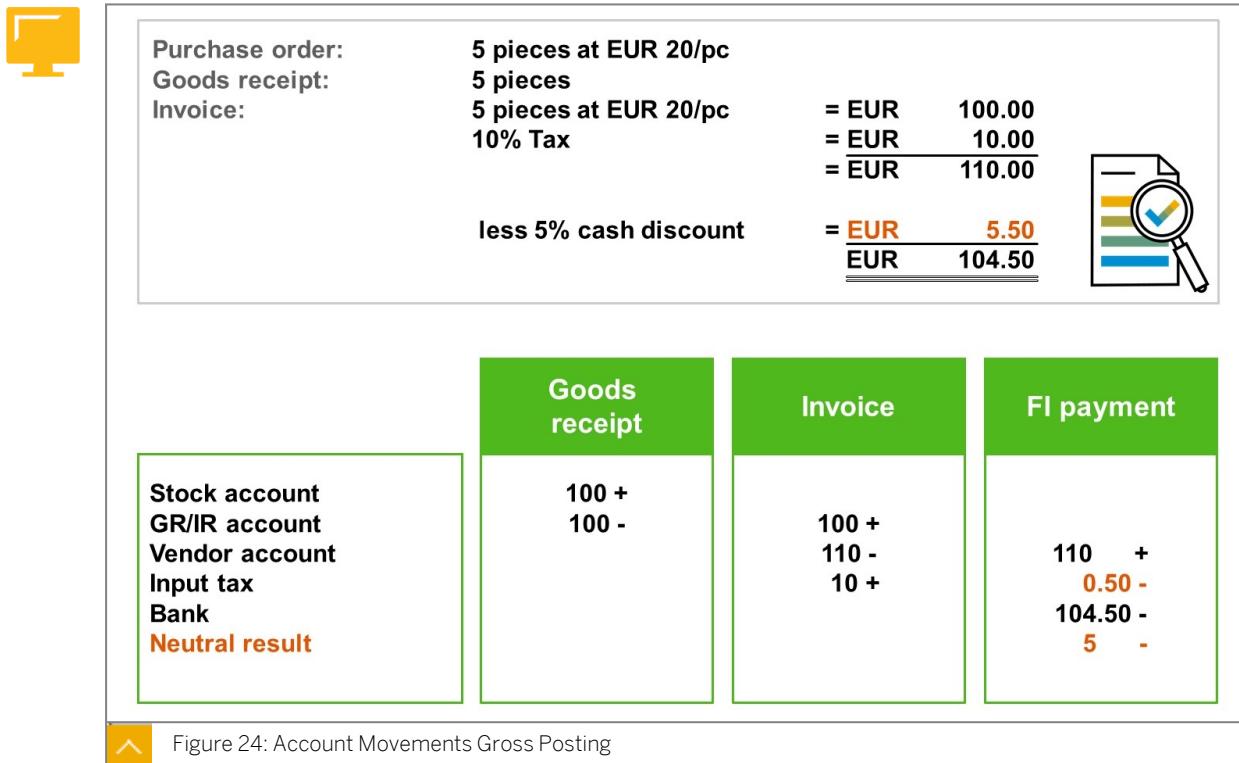
- Posting net:

When you post the incoming invoice, the cash discount amount is posted from a cash discount clearing account to the stock account or cost account. This means that the system posts only the amount reduced by the cash discount amount to the stock account/cost account. The cash discount clearing account is cleared at the time of payment.

Whether an invoice is posted as gross or net depends on the document type of the accounting document. A unique specification is made for each document type that specifies whether the postings are gross or net.

In Customizing, you define a default value for the document type of the accounting document. This default value can be changed during invoice entry. To change the document type of the accounting document in the *Create Supplier Invoice* app, click *More* on the *General Information* tab to display the *Details*. In the *Enter Incoming Invoice* (MIRO), *Park Invoice* (MIR7), *Enter Invoice for Invoice Verification in Background* (MIRA), and the corresponding apps, you find the document type in the header data on the *Details* tab page.

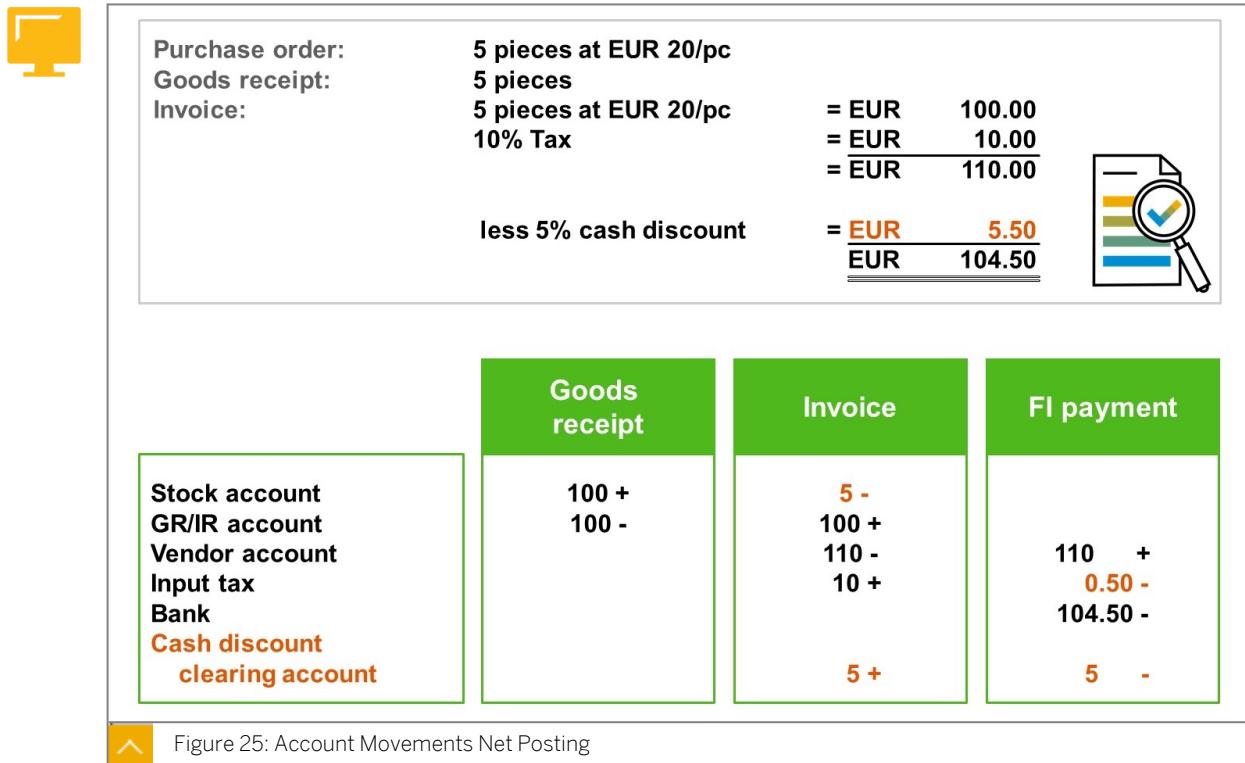
Account Movements with Gross Posting



The cash discount amount is not taken into account when the invoice is posted gross. The cash discount amount is not posted until payment:

- The cash discount amount for the net invoice value is posted at the time of payment as a non-operating result.
- When the invoice is posted, the system posts the tax amount without taking the discount into account. If the payment is made in the discount period, the system re-calculates the tax amount, and the difference is credited to the input tax account.

Account Movements with Net Posting



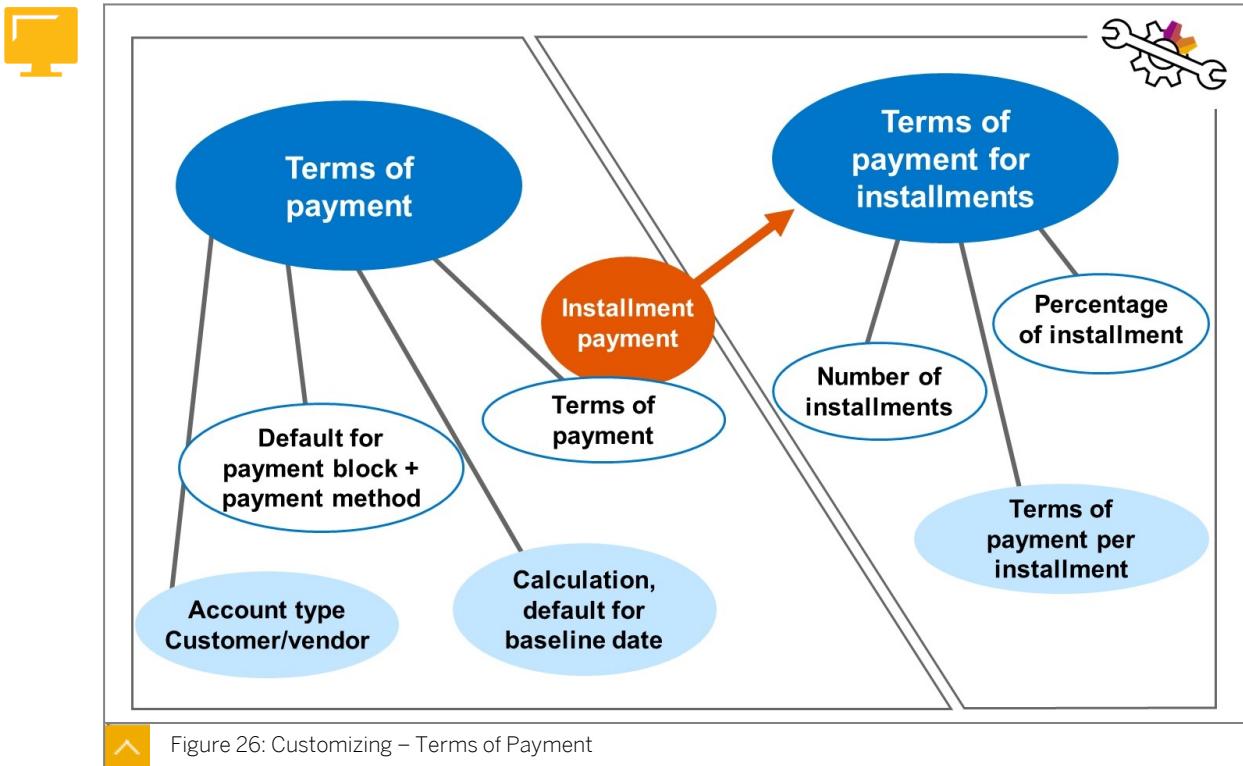
The cash discount amount is already taken into account when the invoice is net posted. The cash discount amount is posted to a cash discount clearing account, which is cleared at the time of payment.

The offsetting posting to the cash discount clearing account depends on the following price control of the material:

- If the material is managed with a standard price, the cash discount is credited to the price difference account.
- If the material is managed with an MAP and there is adequate stock coverage, the cash discount is credited to the stock account. If there is inadequate stock coverage, only the part for which stock coverage exists is posted to the stock account. The system posts the remainder to the price difference account. If there is zero stock coverage, the entire amount is posted to the price difference account.

When the payment is made, the input tax posted in the invoice is corrected.

Customizing Terms of Payment



For terms of payment that you regularly use, you can define terms of payment keys in Customizing for *Financial Accounting*. You only need to enter the key in purchasing or Logistics Invoice Verification. A proposal for a payment block and the determination of the baseline date for payment can also be defined in the terms of the payment key.

You can define special installment conditions that divide the gross invoice amount into several partial amounts (installments) with different terms of payment and therefore, with different due dates. If you enter an installment condition in Logistics Invoice Verification, the system creates a separate vendor line in the accounting document for each installment at the time of posting.

To define terms of payment, use the following Customizing paths:

- In Customizing for *Financial Accounting*, choose *Accounts Receivable and Accounts Payable* → *Business Transactions* → *Incoming Invoices/Credit Memos* → *Maintain Terms of Payment* (OBB8).
- In Customizing for *Financial Accounting*, choose *Accounts Receivable and Accounts Payable* → *Business Transactions* → *Incoming Invoices/Credit Memos* → *Define Terms of Payment for Installment Payments* (OBB9).

Customizing Document Types for Accounting Documents

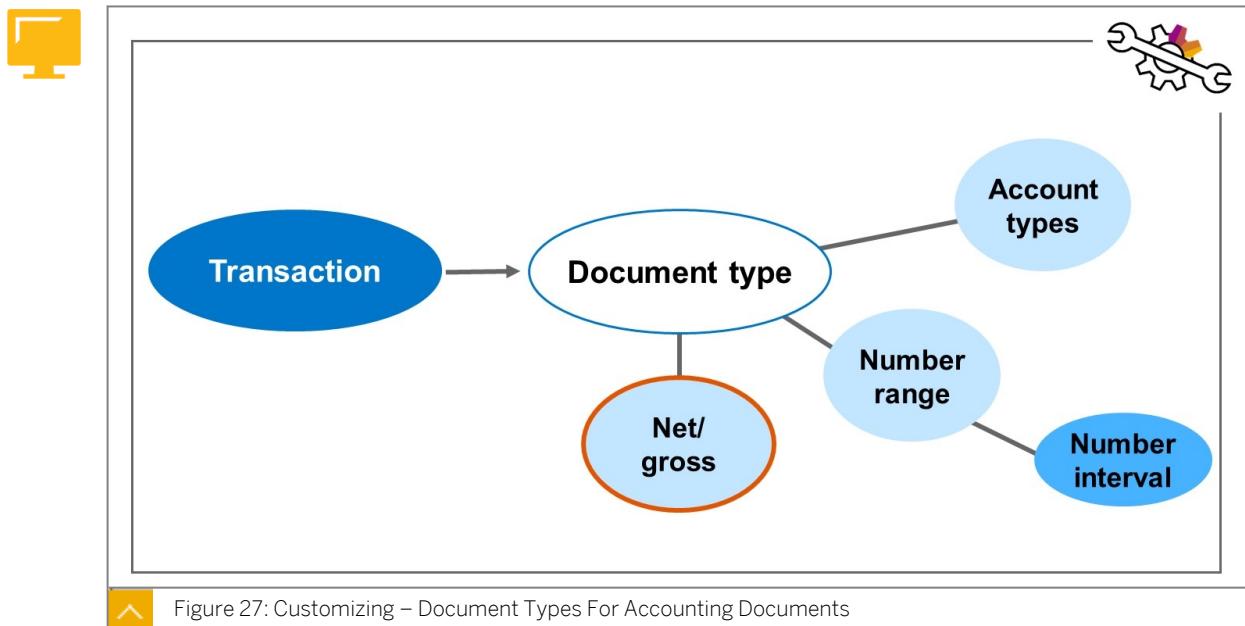


Figure 27: Customizing – Document Types For Accounting Documents

To define and change document types for accounting documents, in Customizing for *Materials Management*, choose *Logistics Invoice Verification* → *Incoming Invoice* → *Number Assignment* → *Maintain Number Assignments for Accounting Documents* (OMR4).

In this activity you also determine which document type the system is to suggest for the accounting document when a transaction is called.



LESSON SUMMARY

You should now be able to:

- Enter cash discount information

Entering Invoices in Foreign Currencies



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post an invoice in foreign currency

Invoices in a Foreign Currency

An invoice in foreign currency exists if the currency in which the invoice amount is specified differs from the local currency set in the company code.

If you enter an invoice in a foreign currency, the following settings must have been made in the system:

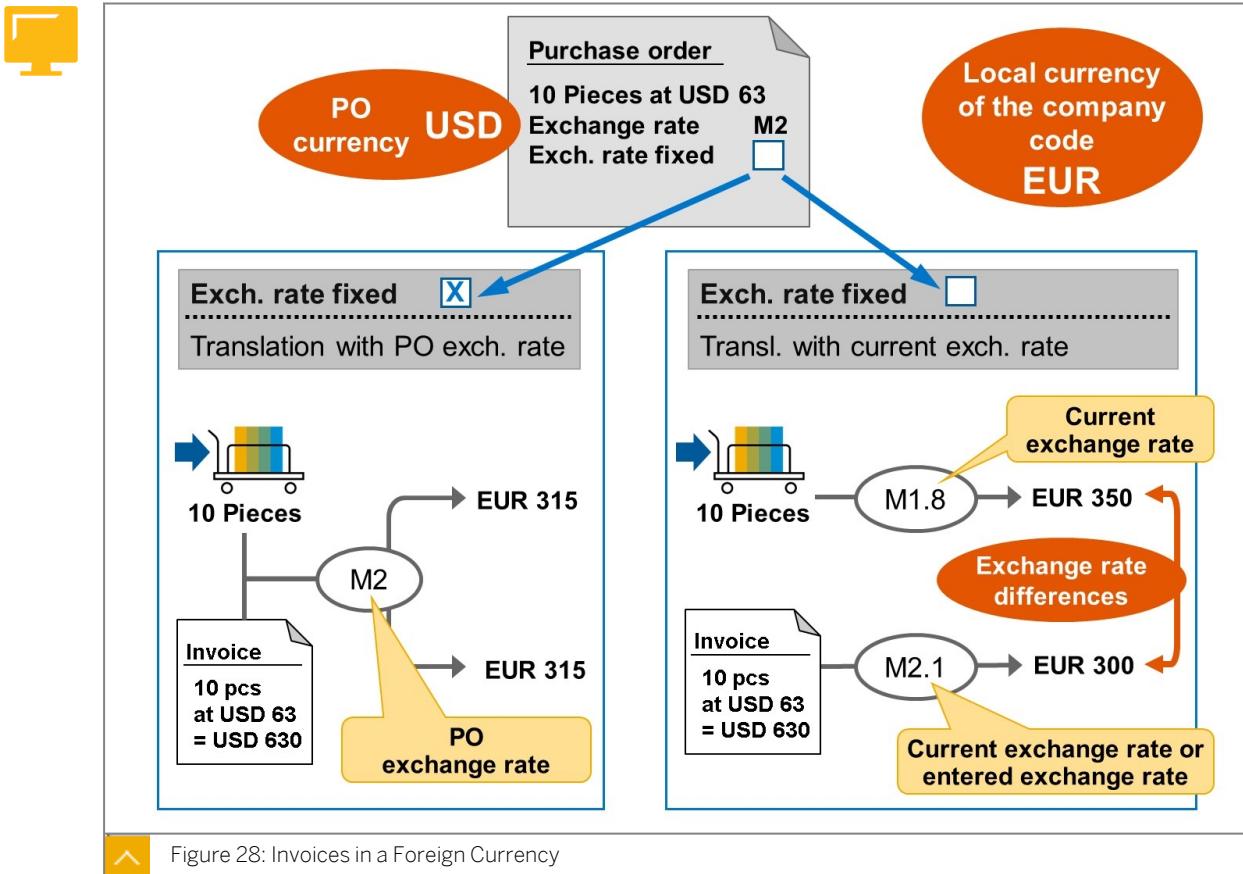
- You must have defined the currency you are using to enter the invoice.
- You must have configured an exchange rate for the given currency and the local currency in Customizing.



Hint:

You can update exchange rates on a daily basis if you receive the information in the electronic form. Use the IDOC **EXCHANGE_RATE** or the **RFTBFF00 report** to do this. Another method is to use the datafeed interface, which allows you to transfer the market data to the SAP system in real time. This interface uses Remote Function Call (RFC) to create a direct link between the external partner system and the SAP system.

Purchase Order in a Foreign Currency



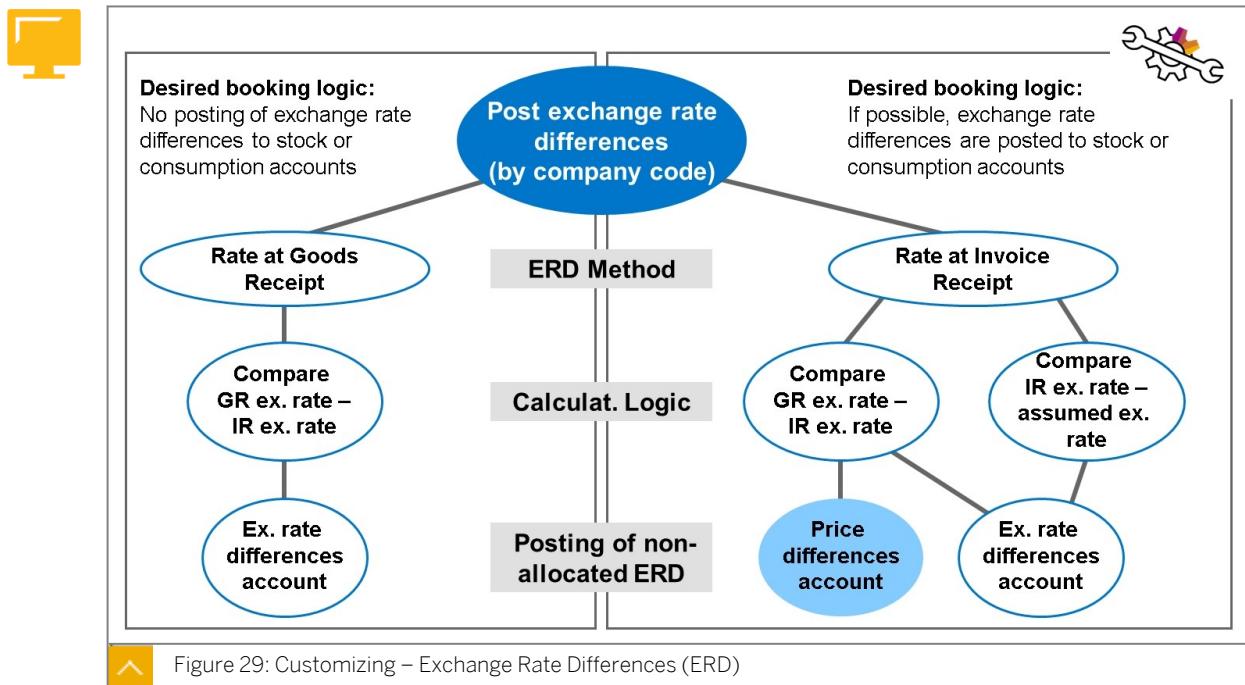
For a purchase order (PO) in a foreign currency, the buyer decides whether the exchange rate is fixed or not. The buyer will find the *Fixed Exchange Rate* indicator in the purchase order in the (header) data for *Delivery and Invoice*.

If the exchange rate is fixed, the system uses the exchange rate from the PO to translate the foreign currency into the local currency at goods receipt (GR) and invoice receipt (IR). If the exchange rate is not fixed, the system uses the current exchange rate when posting a GR. In Logistics Invoice Verification, the system also suggests the current exchange rate as the exchange factor. However, you also can enter the exchange rate manually, and you must enter the exchange rate before you make the allocation.

If the exchange rate is not fixed, exchange rate differences can occur as a result of using different exchange rates for GR and IR. Exchange rate differences are actually the same as price differences. The system posts the exchange rate difference using the following logic:

- When there are PO items with account assignments, the consumption account is credited or debited with the exchange rate difference.
- When there is a material with an MAP and stock coverage, the stock account is credited or debited with the amount of the exchange rate difference.
- When there is a material with a standard price, or a material with an MAP but no stock coverage, the method of posting the exchange rate difference depends on the Customizing settings. You can choose whether the exchange rate difference is posted to a special exchange rate difference account or the normal price difference account for price variances.

Customizing Exchange Rate Differences (ERD)



To configure the settings for posting exchange rate differences, in Customizing for *Materials Management*, choose *Logistics Invoice Verification* → *Incoming Invoice* → *Configure How Exchange Rate Differences Are Treated* (OMRW).

You decide whether postings are made in an exchange rate difference account or a price difference account by setting the *Treatment of Exchange Rate Differences* indicator.

If you set the *Treatment of Exchange Rate Diffs. in Company Code Currency* indicator, the amount of the exchange rate difference is always posted in full to an exchange rate difference account, regardless of the material's price control, and whether there are PO items with account assignment. The settings for the *Treatment of Exchange Rate Differences* indicator are no longer relevant in this situation.

The valuation of the inventories or consumption is effectively done at the exchange rate for the GR, and not at the exchange rate of the invoice. When you post the GR, the fixed exchange rate from the PO is not used. The translation of the PO values to the local currency is always done at the posting date of the goods receipt.



LESSON SUMMARY

You should now be able to:

- Post an invoice in foreign currency

Creating Invoices for Purchase Orders with Account Assignment

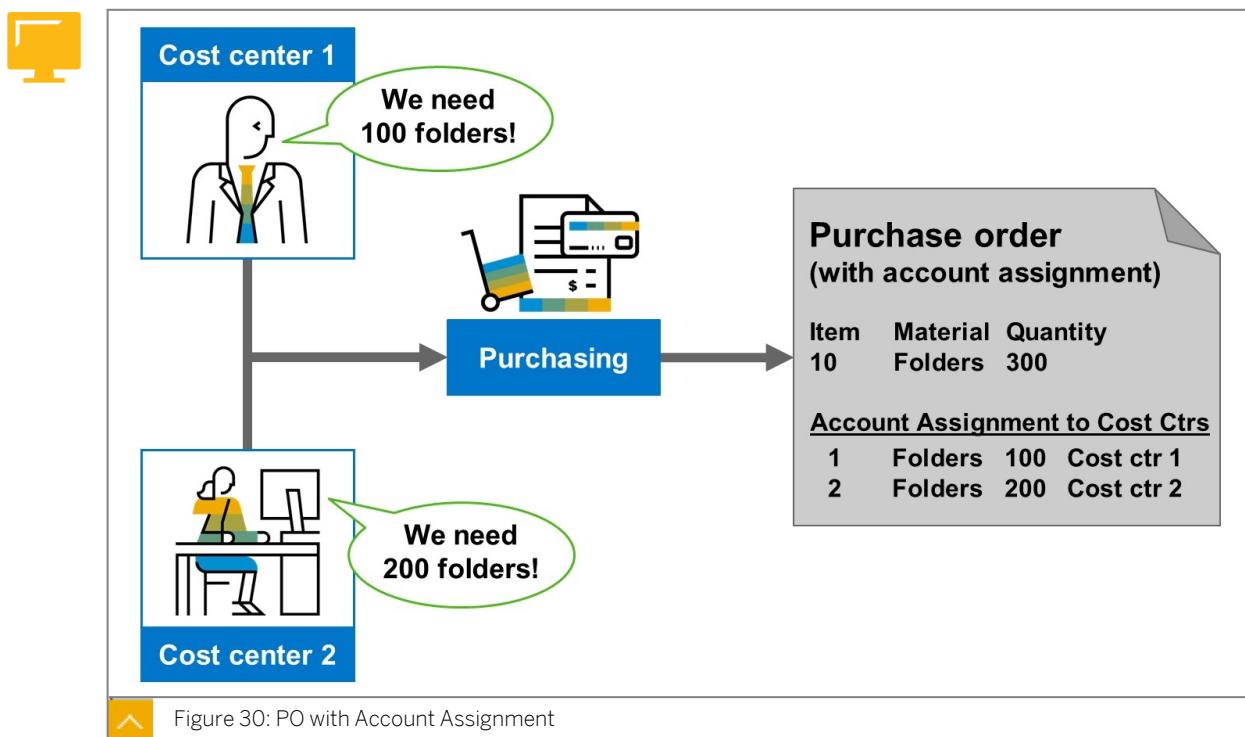


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter an invoice for a purchase order with account assignment

Account Assignment and Invoice Verification



In a purchase order, you can make an account assignment for a item if the material or service is being procured for consumption. For example, you must make account assignments for a purchase order if you order the following items:

- A material that is not planned for inventory management (a material that goes directly for consumption).
- An external service.

The quantity of a PO item can be distributed to multiple account assignment objects. When doing so, you must specify how the PO quantity needs to be distributed between the various account assignment objects.

Normally, you cannot know from the supplier invoice whether it refers to a PO with an account assignment. You can view this in the item list in Logistics Invoice Verification, where the *Acct Assgt* (*account assignment*) column displays whether the PO item has an account assignment. During invoice entry, you can display the account assignment information from PO and change it under certain conditions.

Types of Account Assignment

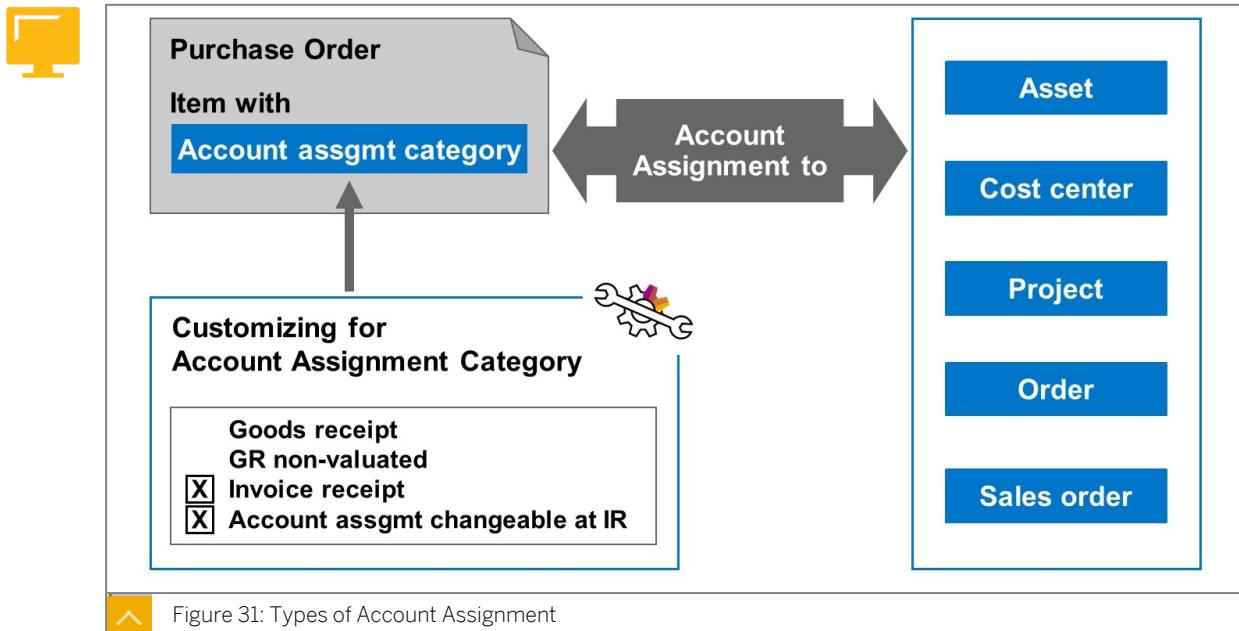


Figure 31: Types of Account Assignment

You use the account assignment category to define the type of account assignment. Among other things the account assignment category controls the following:

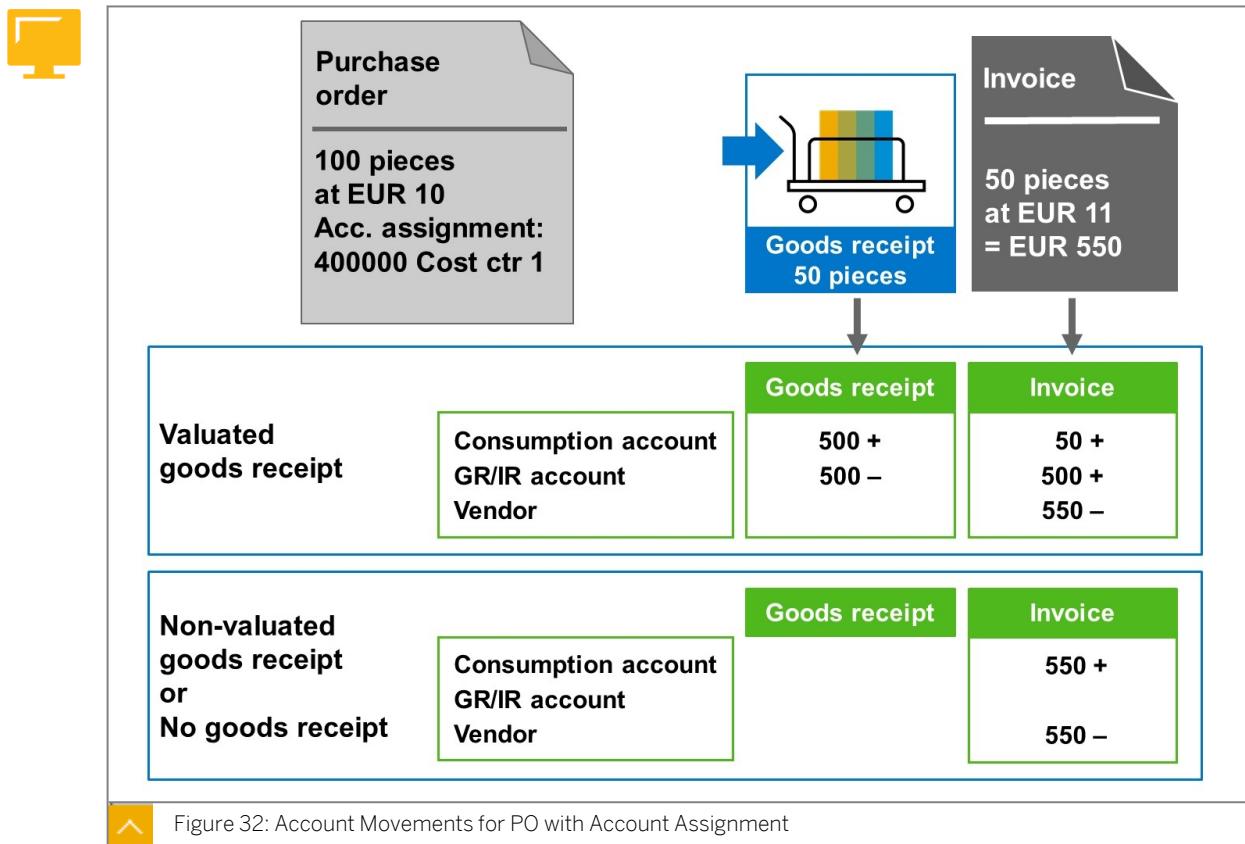
- If a goods receipt (GR) can be posted for the PO item.
- If an invoice receipt (IR) can be posted for the PO item..

If you cannot post a GR, the system suggests the difference between the PO quantity and the invoiced quantity in invoice verification.

The prerequisites for the changeability of the account assignment in invoice verification are as follows:

- The Customizing settings for the account assignment category must allow that the account assignment can be changed in invoice verification. To do this, in Customizing for *Materials Management*, choose *Purchasing* → *Account Assignment* → *Maintain Account Assignment Categories* (OME9) and select the *AA Changeable at IR* (*Acct Assgt Changeable at IR*) checkbox.
- A non-valuated or no goods receipt must be planned for the purchase order item.

Account Movements for POs with Account Assignment



If a valued GR is defined for a PO with account assignment, the system debits the consumption account at GR. The offsetting entry is made to the GR/IR clearing account and cleared by the invoice. The system debits or credits price variances to the consumption account.

If no GR or only a non-valued GR is defined for a PO with account assignment, the posting to the consumption account occurs directly when the invoice is posted.

Multiple Account Assignment in the Purchase Order Item

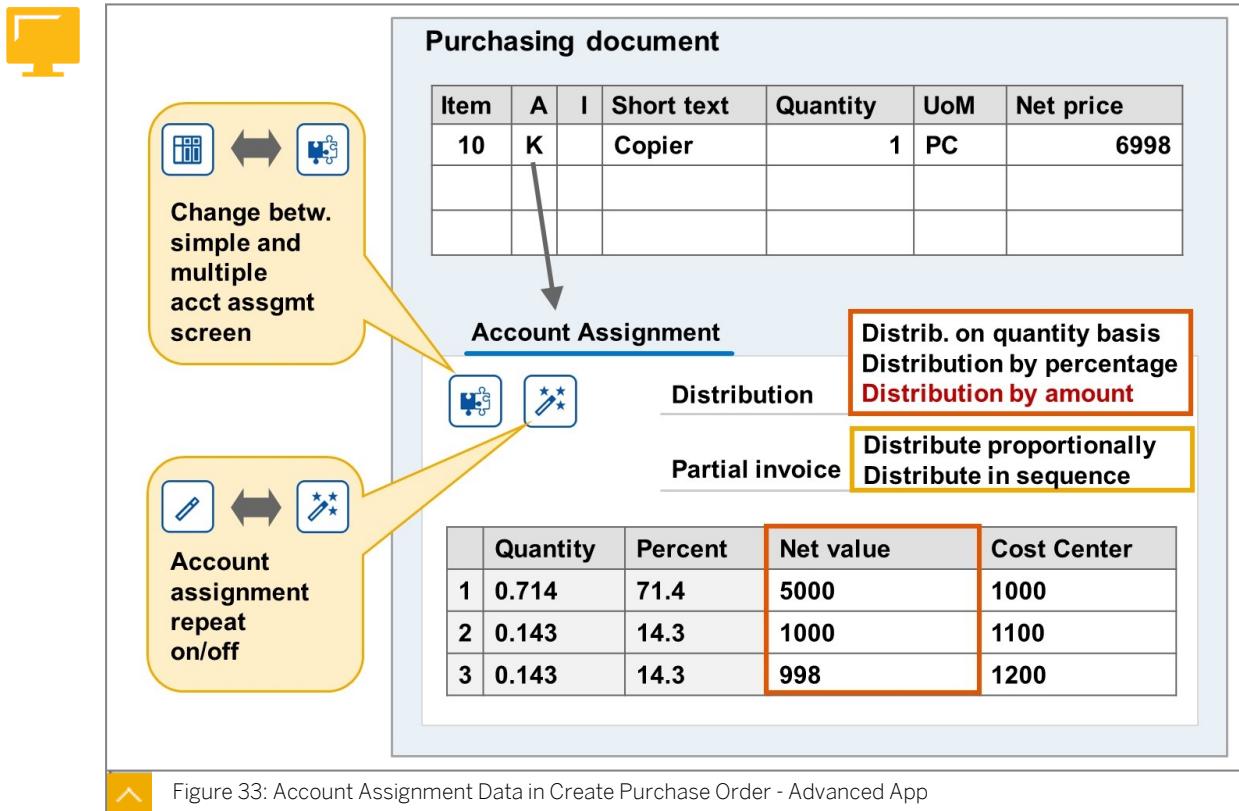


Figure 33: Account Assignment Data in Create Purchase Order - Advanced App

You can assign one or more account assignments to a purchase order item. If you make a multiple account assignment, you must also specify how the order quantity is to be distributed among the individual account assignment objects. You can select the following options here:

- Distribution on quantity basis
- Distribution by percentage
- Distribution by amount

In addition, you must specify in the PO item how the costs are to be distributed if only part of the ordered quantity is initially delivered and invoiced.

Partial Invoice Indicator for Multiple Account Assignment

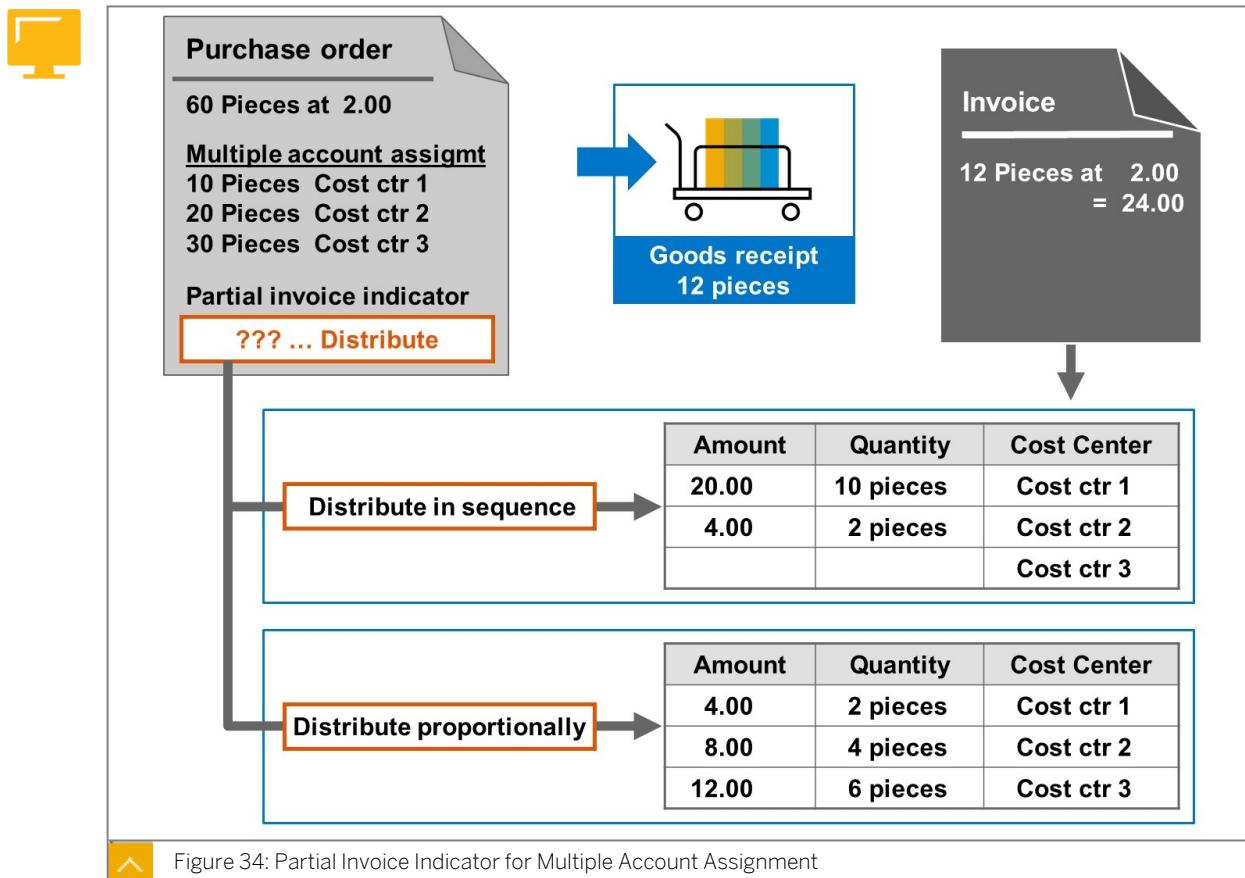


Figure 34: Partial Invoice Indicator for Multiple Account Assignment

For multiple account assignment, you must specify in the PO item how the partial invoices have to be distributed among the individual account assignments. You use the *Partial Inv.* (partial invoice indicator) field to determine whether costs are distributed to rows on a progressive fill-up basis of the row, or proportionally for the planned quantity distribution. Depending on the account assignment category, you can maintain a default value for the partial invoice indicator in Customizing settings for the account assignment category.

If you enter a partial invoice during an IR, the system calculates the distribution of the costs in the invoice verification according to the setting of the partial invoice indicator. The system then proposes the relevant values for the individual account assignments.

If you have selected the option of the valued GR for a PO item with multiple account assignment, the partial invoice indicator is taken into account when the GR is posted. If in this case only a partial quantity is entered in the GR for the PO item, the system distributes to the account assignment items according to the partial invoice indicator. In the GR, you usually have no option to change this distribution. You can use Business Add-In (BAdI) MB_ACCOUNTING_DISTRIBUTE to redefine the distribution to individual account assignments when you enter a valued GR for a PO item with multiple account assignment. But you cannot change the account assignment category selected in the PO or the actual account assignments.

Multiple Account Assignment in Logistics Invoice Verification

Multiple Account Assignment for Item				
	Amount	Quantity	Cost Center	G/L account
<input checked="" type="checkbox"/>	40.00	20	1000	...
<input checked="" type="checkbox"/>	60.00	30	1100	...
<input checked="" type="checkbox"/>	100.00	50	1200	...

	Amount	Quantity	Cost Center	G/L account
<input checked="" type="checkbox"/>	200.00	300.00		
<input checked="" type="checkbox"/>				
<input checked="" type="checkbox"/>				

	Amount	Quantity	Cost Center	G/L account
<input checked="" type="checkbox"/>	60.00	40	1000	...
<input checked="" type="checkbox"/>	90.00	60	1100	...
<input checked="" type="checkbox"/>	150.00	100	1200	...

	Amount	Quantity	Cost Center	G/L account
<input checked="" type="checkbox"/>	300.00	200		
<input checked="" type="checkbox"/>				
<input checked="" type="checkbox"/>				

Change total amount/quantity
+ Check

Figure 35: Multiple Account Assignment in Create Supplier Invoice - Advanced App

You can change the total amount and total quantity of the invoice item on the multiple account assignment screen. The amounts and quantities of the individual account assignment items are then adjusted automatically.

- Change the total amount and/or the total quantity:

If you change the total amount or total quantity and choose the *Check* or the *Back* pushbutton, the new value is distributed automatically to the selected account assignment objects according to the previous distribution schema. This means that you do not have to calculate and enter amounts manually. This prevents data entry and copying errors.

- Change the quantities and amounts in the account assignment lines:

If you change the amounts or quantities in the account assignment lines and choose the *Check* pushbutton, the system calculates the total amounts or quantities. This also happens when you change quantities or amounts in the account assignment lines and the total quantity or amount at the same time. The system calculates total quantity or amount from the values in the account assignment lines and issues a message.

The values calculated automatically are used as default values and can be changed until you save the invoice.



Hint:

The user parameter IVAMOUNTADJUST is not supported in the multiple account assignment screen.

You can also configure whether the *Quantity* and the *Amount* fields are ready for input in the multiple account assignment screen. To do this, in Customizing for Materials Management, choose *Logistics Invoice Verification* → *Incoming Invoice* → *Configure Settings for Multiple Account Assignment*.



LESSON SUMMARY

You should now be able to:

- Enter an invoice for a purchase order with account assignment

Learning Assessment

1. Which of the following functions are available in the invoice verification transaction MIRO?

Choose the correct answers.

- A Table control
- B Hold
- C Message log
- D Personal settings
- E Simulate postings
- F Invoice Upload

2. With the Create Supplier Invoice app, you can enter invoices but not credit memos.

Determine whether this statement is true or false.

- True
- False

3. You are using purchase order (PO)-based invoice verification. Your PO has two items for the same material. There are four goods receipts (GRs) posted for the first item and three GRs posted for the second item. What will the item list look like if you want to post the invoice for this PO, but do not yet have an existing invoice?

Choose the correct answer.

- A A line appears showing the total of all seven items.
- B A line appears showing the total of all GRs in the first item and another line appears displaying the total of GRs for the second item.
- C A line appears for each GR posting. The items posted on the same day are grouped together.
- D A line appears for each GR.

4. You enter an invoice using the MIRO transaction. What happens when you choose the *Hold* function?

Choose the correct answers.

- A The existence of the supplier is checked.
- B An accounting document is created.
- C The system updates the purchase order (PO) history.
- D A materials management (MM) invoice document is created.

5. With which functions of the Invoice Verification can you park an invoice?

Choose the correct answers.

- A App Create Supplier Invoice
- B Transaction Enter Invoice (MIRO)
- C Transaction Park Invoice (MIR7)

6. Which of the following statements about taxes in invoice verification are correct?

Choose the correct answers.

- A Several tax rates can be applied in one invoice.
- B The tax code proposed from the purchase order item cannot be changed in the invoice.
- C An invoice can be posted if the tax information (tax amounts and tax codes) is correctly entered at the header level. Tax codes in the items are not mandatory.
- D For the *Create supplier invoice - Advanced* app, it is possible to define a default value for the tax code at header level.

7. The terms of payment, 14 days 3% cash discount or 30 days net price, are flagged in an invoice. There is no default data from the purchase order (PO). How would you enter the terms of payment?

Choose the correct answer.

- A Go to the supplier master record and enter the terms of payment there. After you have saved the data, it is automatically copied to the current invoice.
- B Enter a key for these terms of payment manually during invoice entry.
- C Enter 14 days and 3% in the first line on the *Payment* tab page, leave the second one blank, and enter 30 days net price in the third line.

8. Which exchange rate is used to convert invoices into a foreign currency?

Choose the correct answers.

- A** If the exchange rate is fixed in the purchase order (PO), that rate is used.
- B** The exchange rate on the day the PO was created is used. The fixing indicator is irrelevant.
- C** If the exchange rate is not fixed in the PO, the exchange rate from the day the invoice was entered is used.
- D** If the exchange rate is not fixed in the PO, the conversion is carried out using the average exchange rate from the date on the PO and from the current day.

Learning Assessment - Answers

1. Which of the following functions are available in the invoice verification transaction MIRO?

Choose the correct answers.

- A Table control
- B Hold
- C Message log
- D Personal settings
- E Simulate postings
- F Invoice Upload

Correct. There are various layouts available instead of the table control functionality. In addition, there is no possibility to maintain personal settings in transaction MIRO or to upload invoices. – However, the functions Hold, Message log and Simulate postings are available in transaction MIRO.

2. With the Create Supplier Invoice app, you can enter invoices but not credit memos.

Determine whether this statement is true or false.

- True
- False

Correct. Credit notes can be entered with the *Create Supplier Invoice* app just like invoices.

3. You are using purchase order (PO)-based invoice verification. Your PO has two items for the same material. There are four goods receipts (GRs) posted for the first item and three GRs posted for the second item. What will the item list look like if you want to post the invoice for this PO, but do not yet have an existing invoice?

Choose the correct answer.

- A A line appears showing the total of all seven items.
- B A line appears showing the total of all GRs in the first item and another line appears displaying the total of GRs for the second item.
- C A line appears for each GR posting. The items posted on the same day are grouped together.
- D A line appears for each GR.

Correct. A line appears showing the total of all GRs in the first item and another line appears displaying the total of GRs for the second item. Only in the case of GR-based invoice verification, a separate line would be displayed for each GR.

4. You enter an invoice using the MIRO transaction. What happens when you choose the *Hold* function?

Choose the correct answers.

- A The existence of the supplier is checked.
- B An accounting document is created.
- C The system updates the purchase order (PO) history.
- D A materials management (MM) invoice document is created.

Correct. When you hold an invoice, an MM invoice document is created and the system performs minimal checks, such as the existence of the company code and vendor. Account postings are made only when you post a document; and held documents are not updated in the PO history.

5. With which functions of the Invoice Verification can you park an invoice?

Choose the correct answers.

- A App Create Supplier Invoice
- B Transaction Enter Invoice (MIRO)
- C Transaction Park Invoice (MIR7)

Correct. In transaction *Enter Invoice* (MIRO) you can hold invoices but not park them. However, you can branch directly from the transaction MIRO to document parking transaction MIR7 by choosing *Edit* → *Switch to Document Parking*. In the other two functions it is possible to park an invoice.

6. Which of the following statements about taxes in invoice verification are correct?

Choose the correct answers.

- A Several tax rates can be applied in one invoice.
- B The tax code proposed from the purchase order item cannot be changed in the invoice.
- C An invoice can be posted if the tax information (tax amounts and tax codes) is correctly entered at the header level. Tax codes in the items are not mandatory.
- D For the *Create supplier invoice - Advanced* app, it is possible to define a default value for the tax code at header level.

Correct. You use the Customizing setting *Maintain default values for tax codes* to define which tax code is used on the *Basic Data* tab page in the *Create Supplier Invoice – Advanced* app. And of course, multiple tax rates can be used in one invoice. If you enter an invoice with a purchase order reference, you can change the suggested tax codes during invoice entry. However, an invoice can only be posted if a tax code is specified for all items.

7. The terms of payment, 14 days 3% cash discount or 30 days net price, are flagged in an invoice. There is no default data from the purchase order (PO). How would you enter the terms of payment?

Choose the correct answer.

- A Go to the supplier master record and enter the terms of payment there. After you have saved the data, it is automatically copied to the current invoice.
- B Enter a key for these terms of payment manually during invoice entry.
- C Enter 14 days and 3% in the first line on the *Payment* tab page, leave the second one blank, and enter 30 days net price in the third line.

Correct. You either enter a suitable key for terms of payment during invoice entry, or you enter 14 days and 3% in the first line and 30 days in the second line on the *Payment* tab page. You cannot enter the terms of payment in the supplier master record and have them copied over to existing invoices.

8. Which exchange rate is used to convert invoices into a foreign currency?

Choose the correct answers.

- A** If the exchange rate is fixed in the purchase order (PO), that rate is used.
- B** The exchange rate on the day the PO was created is used. The fixing indicator is irrelevant.
- C** If the exchange rate is not fixed in the PO, the exchange rate from the day the invoice was entered is used.
- D** If the exchange rate is not fixed in the PO, the conversion is carried out using the average exchange rate from the date on the PO and from the current day.

Correct. If the exchange rate is fixed, the system uses the exchange rate from the PO to translate the foreign currency into the local currency at goods receipt (GR) and invoice receipt (IR). If the exchange rate is not fixed, the system uses the exchange rate at the time of GR.

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Releasing Blocked Invoices

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UNIT OBJECTIVES

- Enter invoices with variances
- Use further blocking reasons
- Reduce an invoice
- Post an invoice with a tolerated variance
- Release blocked invoices

Unit 2

Lesson 1

Entering Invoices with Variances



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter invoices with variances

Invoice Block Due to Variances

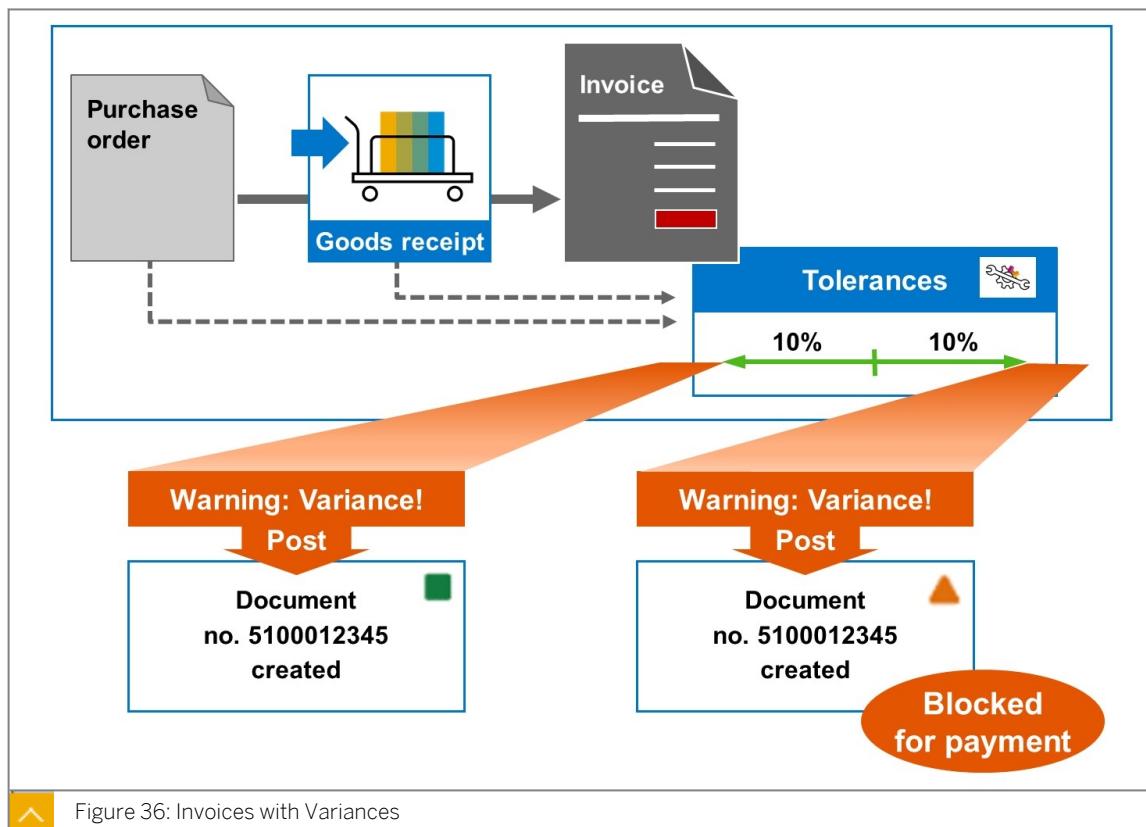


Figure 36: Invoices with Variances

When you enter an invoice with reference to a purchase order, the system proposes values for quantity and amount per item. These default values result from the purchase order agreement and the goods receipts for the purchase order. If an invoice item varies from these values, you must find the cause for the variances, for example, by talking to the purchasing department, goods receiving department, or vendor.

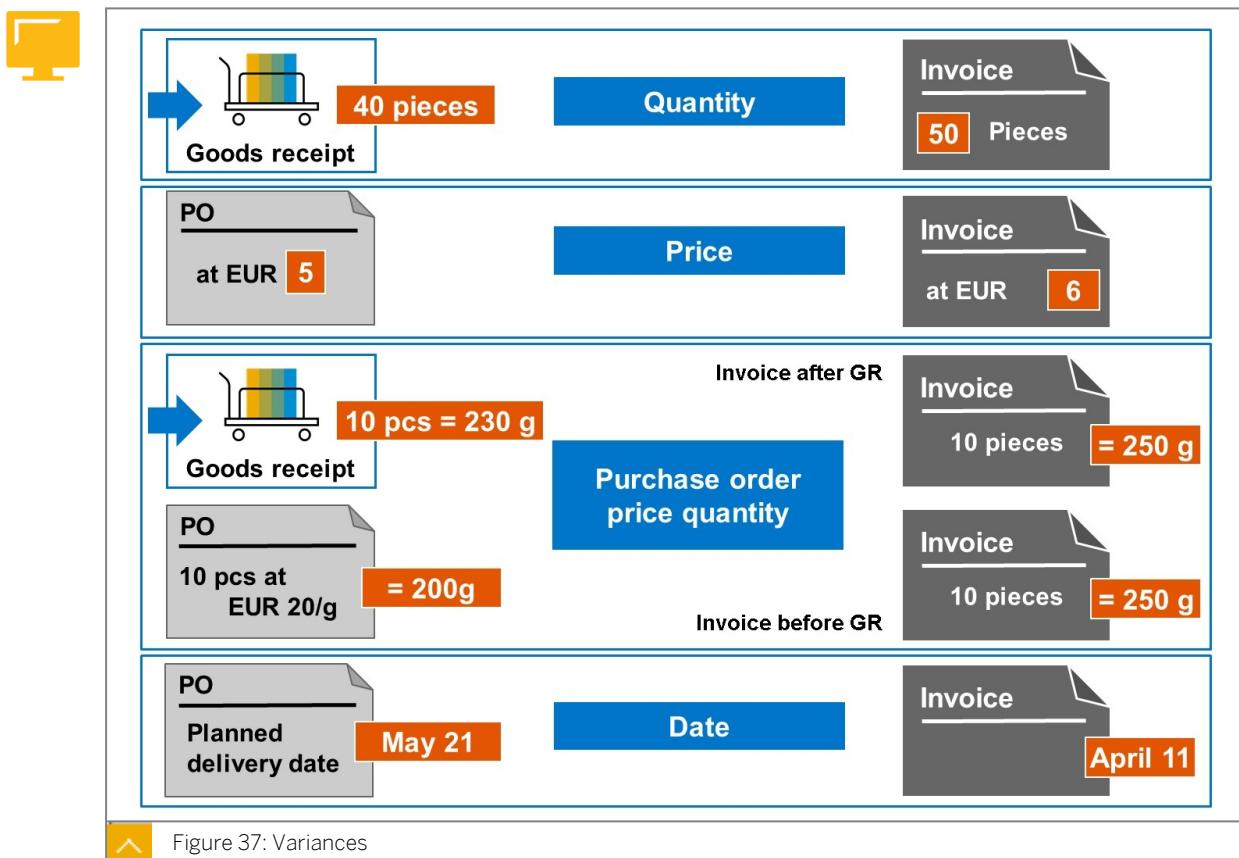
For very small variances it is not worth performing extensive research. For this reason, you can set up tolerance limits for each type of variance in Customizing for *Materials Management* under *Logistics Invoice Verification* → *Invoice Block* → *Set Tolerance Limits*. If you accept a variance in an invoice item and overwrite the default value, the system checks whether the variance is within the tolerance limit in Customizing.

- If the invoice values are within the tolerance limits, the system accepts the invoice without any further queries. This means that no message is issued and the invoice is not blocked for payment.
- If the value falls below a lower tolerance limit, the system issues a message to this effect. However, the invoice can be posted and is not blocked for payment.
- If an upper tolerance limit is exceeded, the system issues a message as well. Despite this, the invoice can be posted. However, the invoice is then automatically blocked for payment.

The invoice block applies to all items in an invoice. The entire invoice is blocked for payment, even if only one item in the invoice shows a variance.

You must release a blocked invoice in a separate step before it can be cleared for payment.

Blocking Reasons for Variances



With respect to variances in invoice items, some of the blocking reasons are as follows:

- **Quantity variance:**

For a PO, the open quantity to invoice is the difference between the delivered quantity and the quantity already invoiced. There is a quantity variance if the invoice quantity does not match with the open quantity. At the absolute upper limit, the quantity variance is evaluated on the basis of the amount in the invoice item. Therefore, invoice items with a small amount result in a relatively large quantity variance, and invoice items with a large amount result in a small variance. You can also define percentage limits for the quantity variance check, for which the system does not take the PO price into account.

- **Price variance:**

Price variance results if the invoice price (invoice amount divided by the invoice quantity) is not the same as the PO net price. In cases where the price in the PO is flagged as an estimated price, you can set up special tolerances.

- **PO price quantity variance:**

There is a PO price quantity variance if the relationship between the PO price quantity and the PO quantity in the invoice is different than at GR. PO price quantity variance can also occur if no GR has been posted. The system then checks against the relationship defined in the PO.

- **Date variance:**

A date variance exists if the entry date of the invoice is before the delivery date specified in the purchase order. For each item, the system performs the following calculation:

$$\text{Amount} * (\text{Planned delivery date} - \text{Invoice entry date})$$

The system compares the result with the absolute upper limit that you define. This means that invoice items that were delayed by a short period result in a relatively large date variance, and invoice items with a large delay result in a small variance.

Postings for a Quantity Variance

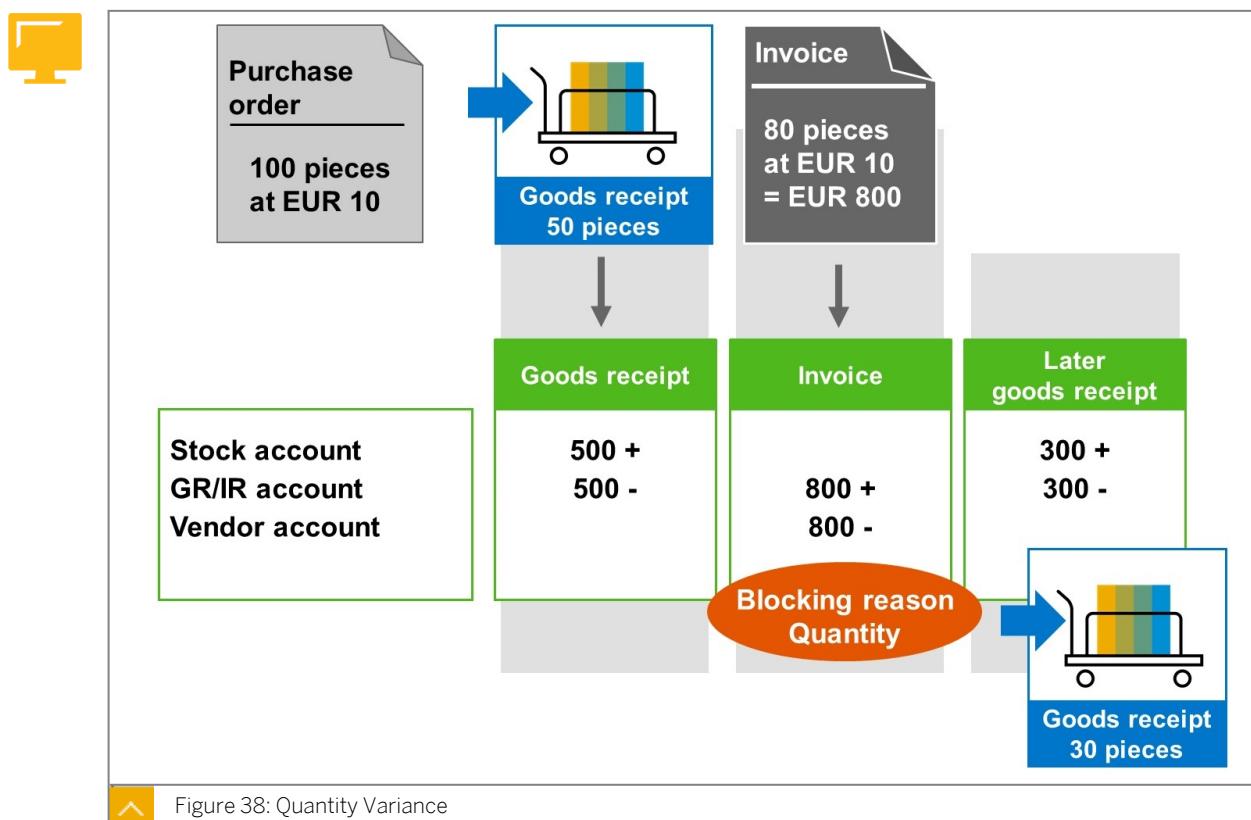
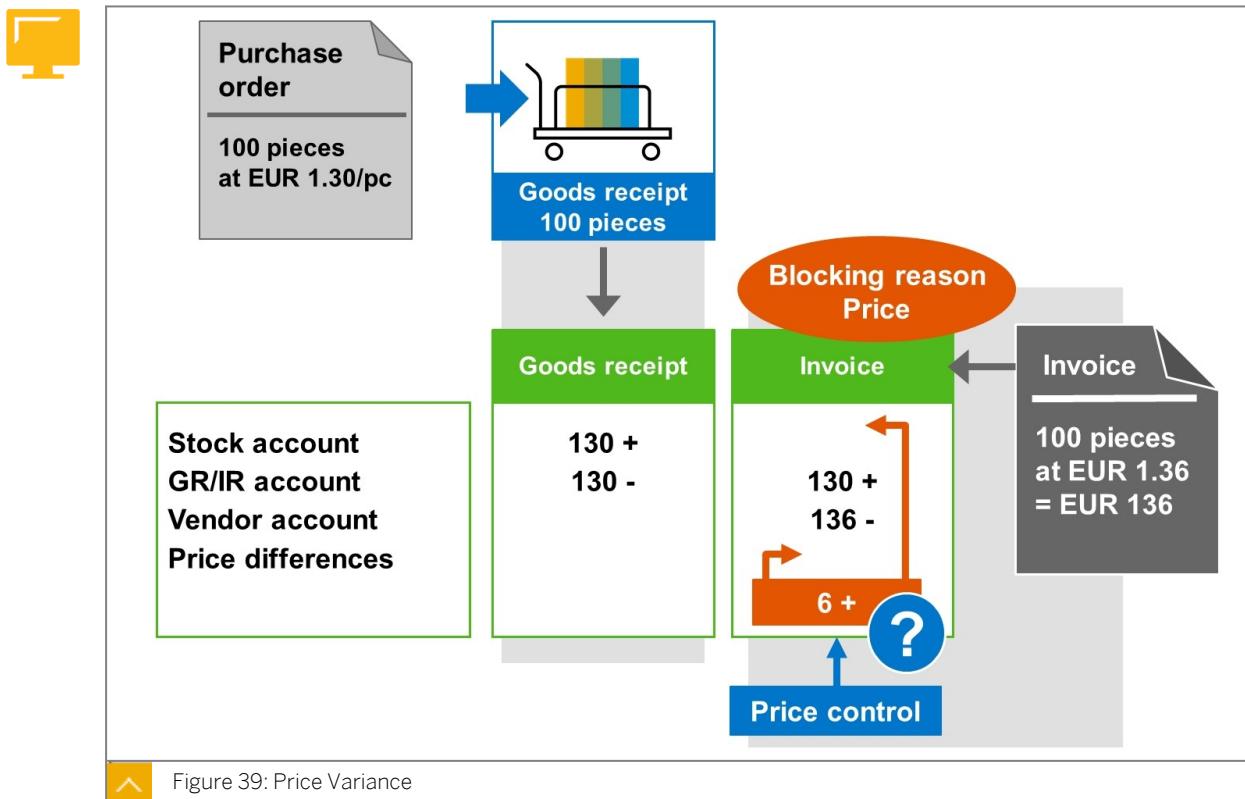


Figure 38: Quantity Variance

In the example shown in the figure, the invoiced quantity is larger than the GR quantity. When you post the invoice, a balance is created on the GR/invoice receipt (IR) clearing account. You expect another GR. The GR/IR clearing account is cleared when you post this GR. The GR/IR clearing account is also cleared if a credit memo is posted for the over-invoiced quantity.

Postings for a Price Variance



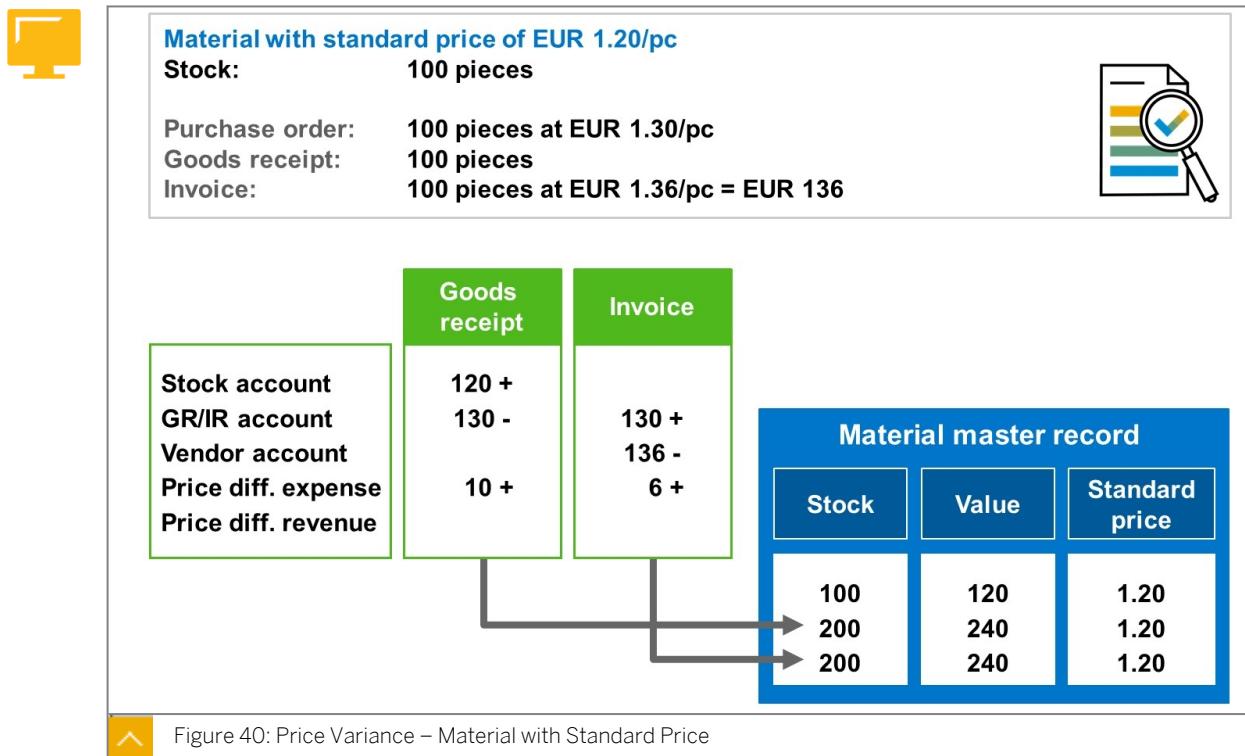
When price variances occur, the account movements differ depending on how the material is valued.

If you post the invoice after GR, the following movements occur, depending on the price control used:

- If the material is subject to a standard price, the system posts the price variance to a price difference account.
- If the material is subject to MAP and there is sufficient stock coverage, the system posts the price variance to the stock account and the MAP is adjusted.

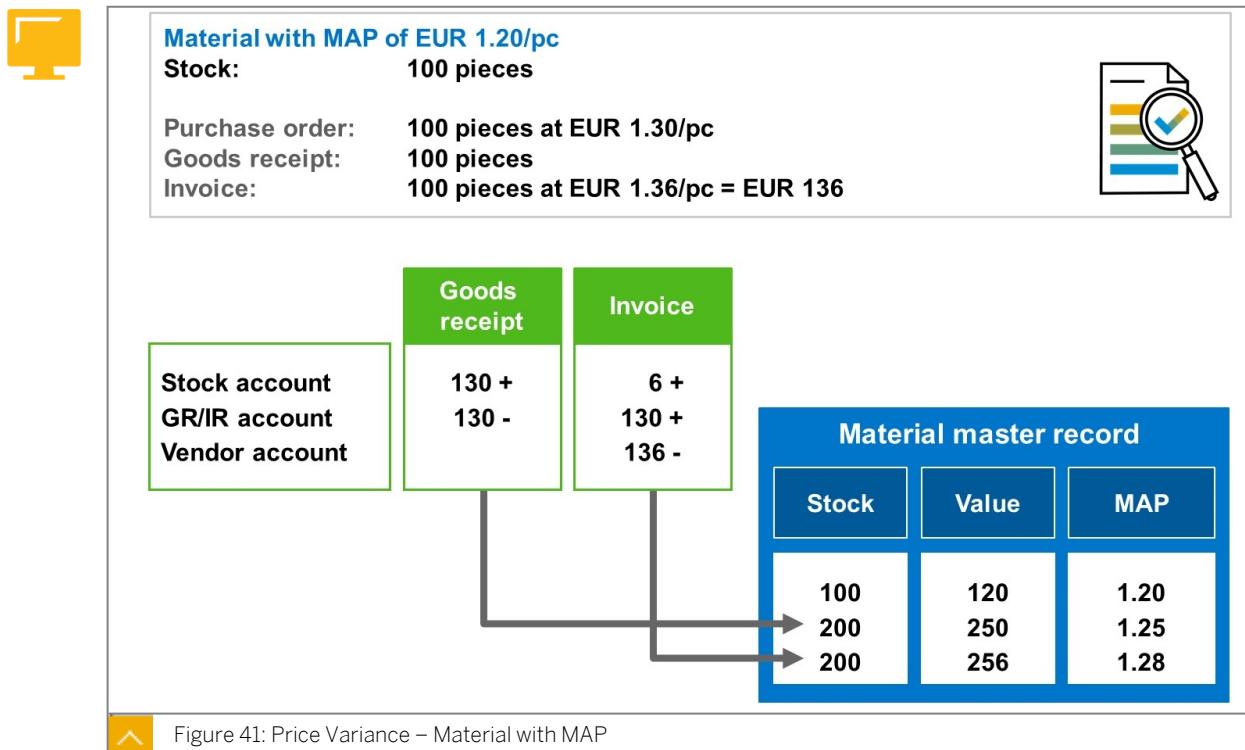
If you post the invoice before the GR, the system posts the price variance to the GR/IR clearing account. The system posts the price variance to the price difference account or stock account when the GR is posted.

Price Variance – Material with Standard Price



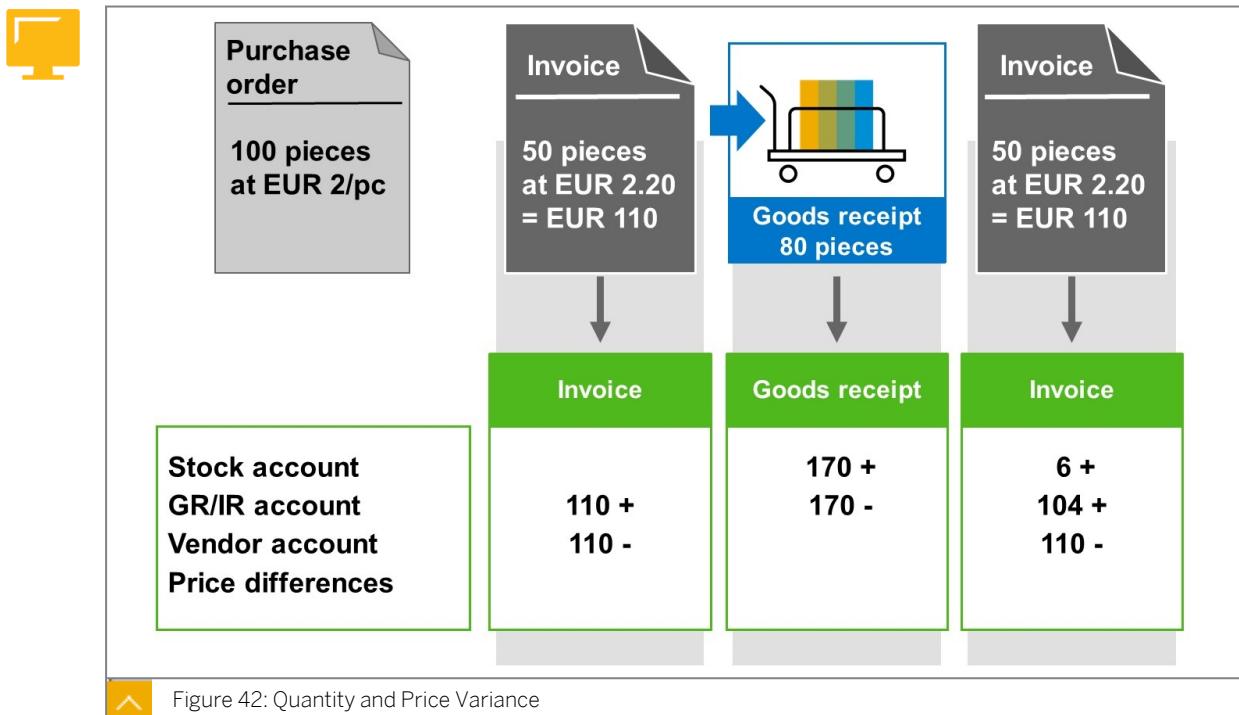
When the materials are valued with a standard price, the price variance is posted to a price difference account. The valid valuation price (standard price) remains unchanged both at GR and IR.

Price Variance – Material with Moving Average Price (MAP)



When there are materials with MAPs, the system posts the price variance to the stock account. If there is insufficient stock coverage for the invoice quantity, the system posts the price variance to a price difference account. If there is stock coverage for only part of the invoice quantity, the system distributes the price variance proportionally between the stock account and price difference account. If a posting is made to the stock account, the MAP changes.

Postings for Quantity Variance and Price Variance



A distinction between the following cases must be made for invoice items with quantity and price variances:

- The quantity of goods received is zero.

If the invoice is posted before the GR, the system posts the invoice value to the GR/IR clearing account.

If you then post a goods receipt with a quantity equal to the quantity already settled, the GR/IR clearing account is balanced. When there is a material with a MAP, the offsetting entry is made to the stock account. Valuation of the material then occurs for the invoice price rather than the PO price.

If, after posting the invoice, you enter a GR with a quantity greater than the invoiced quantity, the portion that has already been calculated is valued with the invoice price, and the portion that has not been calculated is valued with the PO price.

- The quantity of goods received is greater than zero but lower than the invoice quantity.

The GR/IR clearing account is balanced for the quantity already delivered, and a price variance is posted depending on the price control on the stock or price difference account. The system posts the invoice value for the part of the invoice quantity that has not been delivered to the GR/IR clearing account.

Postings for Purchase Order Price Quantity Variance

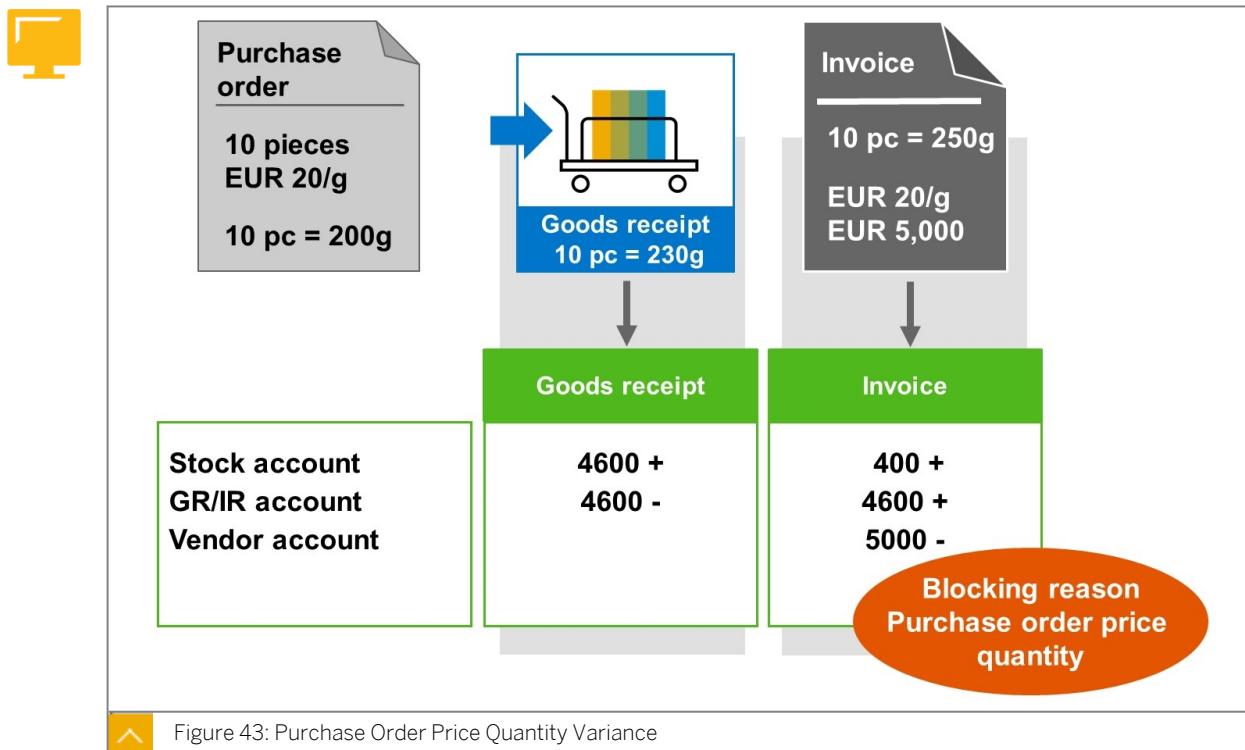


Figure 43: Purchase Order Price Quantity Variance

If you specify a PO price unit for a PO item that is different from the order unit, you have to enter the quantity in both units in the GR, as well as during invoice verification. During invoice verification, the system checks the invoice amount for variances. The system verifies the quantity in the PO price unit as well as the quantity in the order unit.

If the GR is entered before the invoice and there is a quantity variance in the PO price unit, the posting logic corresponds to the logic for price variances. The difference between the expected invoice amount and the actual invoice amount is posted to a stock or price difference account, depending on the valuation control of the material.

If no GR is entered, the system compares the quantity specified in the PO price unit. The posting logic is the same as that for a quantity variance.

Customizing – Tolerance Limits

In Customizing the Logistics Invoice Verification, you can set tolerances for the following variances, as per the company code:

- Quantity variances (tolerance key DQ, DW).
- Price variances (tolerance key KW, PP, PS).
- PO price quantity variances (tolerance key BR, BW).
- Date variances (tolerance key ST).

In addition, there is a tolerance key for the check on amounts (AN, AP), small differences (BD), variances to blanket purchase orders (LA, LD), and maximum changes of the MAP (VP).

You find the settings for tolerance limits in Customizing for Materials Management under *Logistics Invoice Verification* → *Invoice Block* → *Set Tolerance Limits* (OMR6).

The following figure shows the settings for the tolerance key PP for price variances.

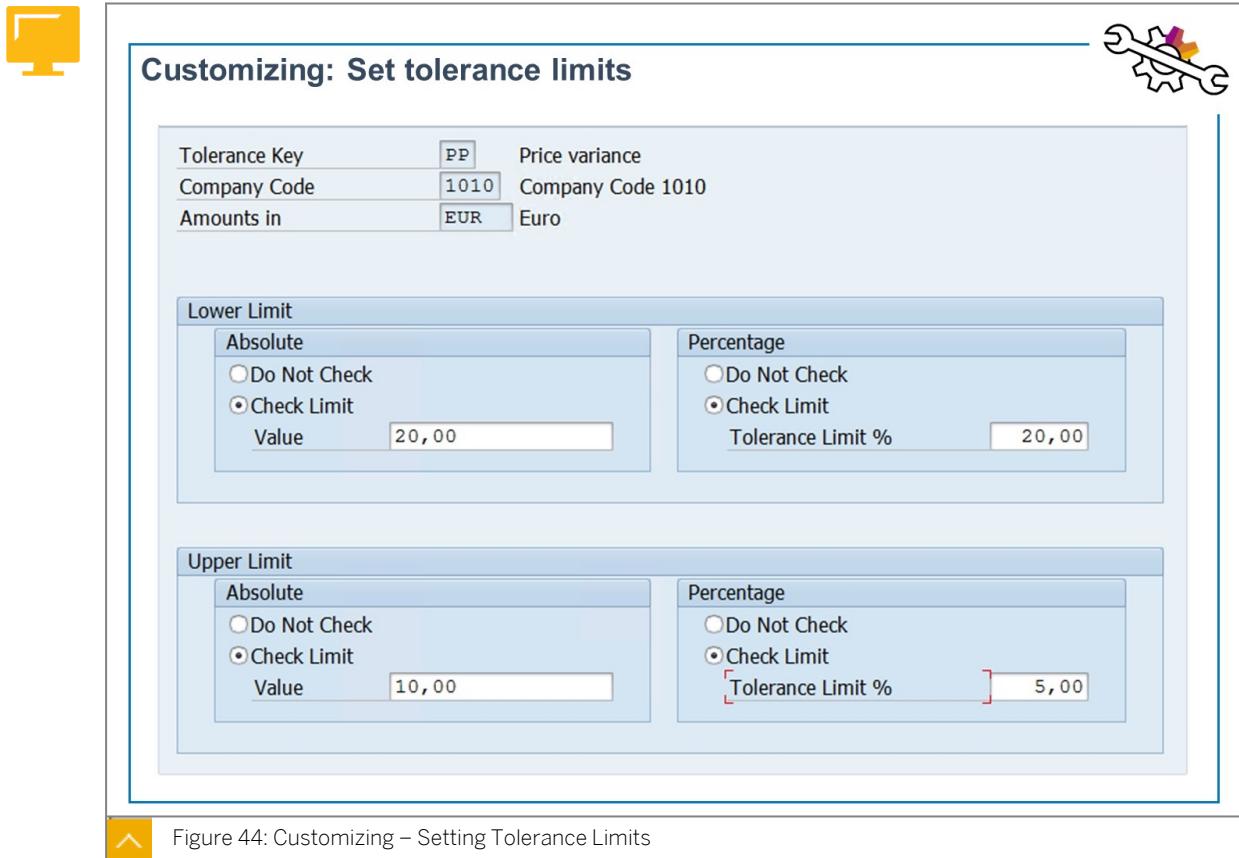


Figure 44: Customizing – Setting Tolerance Limits

You can enter tolerances for lower and upper limits. There is a difference between limits for percentage and absolute variances. If one of these limits is undercut or exceeded, the system issues a warning message. If one of the upper limits is exceeded, the invoice is blocked for payment.

For each tolerance limit, you must decide whether the system needs to check for variance. If you set all limits for a *Do not check* tolerance key, the system does not perform a check and accepts all variances without exception.

If you want to make sure that a certain variance is always blocked, set the value or percentage or for the absolute upper limit to zero and select the *Check limit* radio button.



Hint:

For detailed information about the check logic of individual tolerance keys, see the documentation for Customizing activity on setting tolerance limits.



LESSON SUMMARY

You should now be able to:

- Enter invoices with variances

Unit 2

Lesson 2

Use Further Blocking Reasons



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use further blocking reasons

Manual Blocking

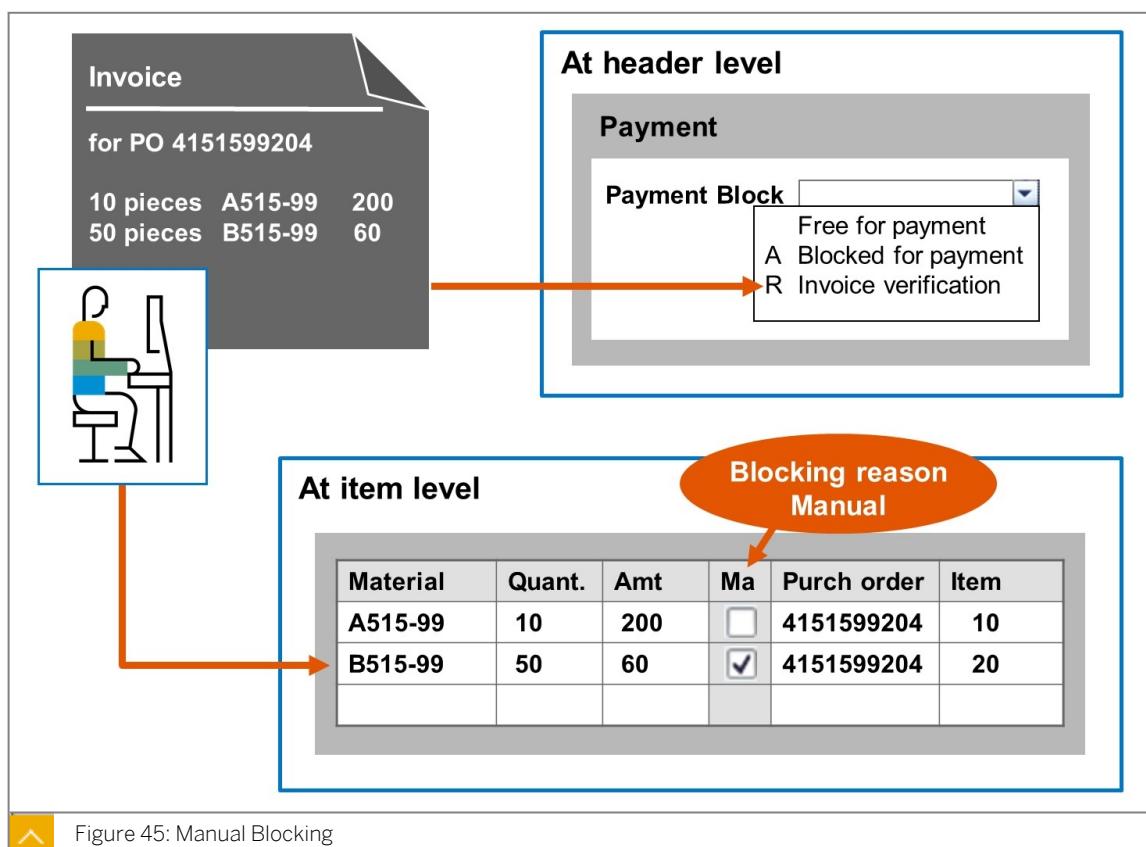


Figure 45: Manual Blocking

In addition to the blocks that the system sets automatically, you can block an invoice manually. To block invoices manually, you have the following options when entering an invoice:

- **Header level**

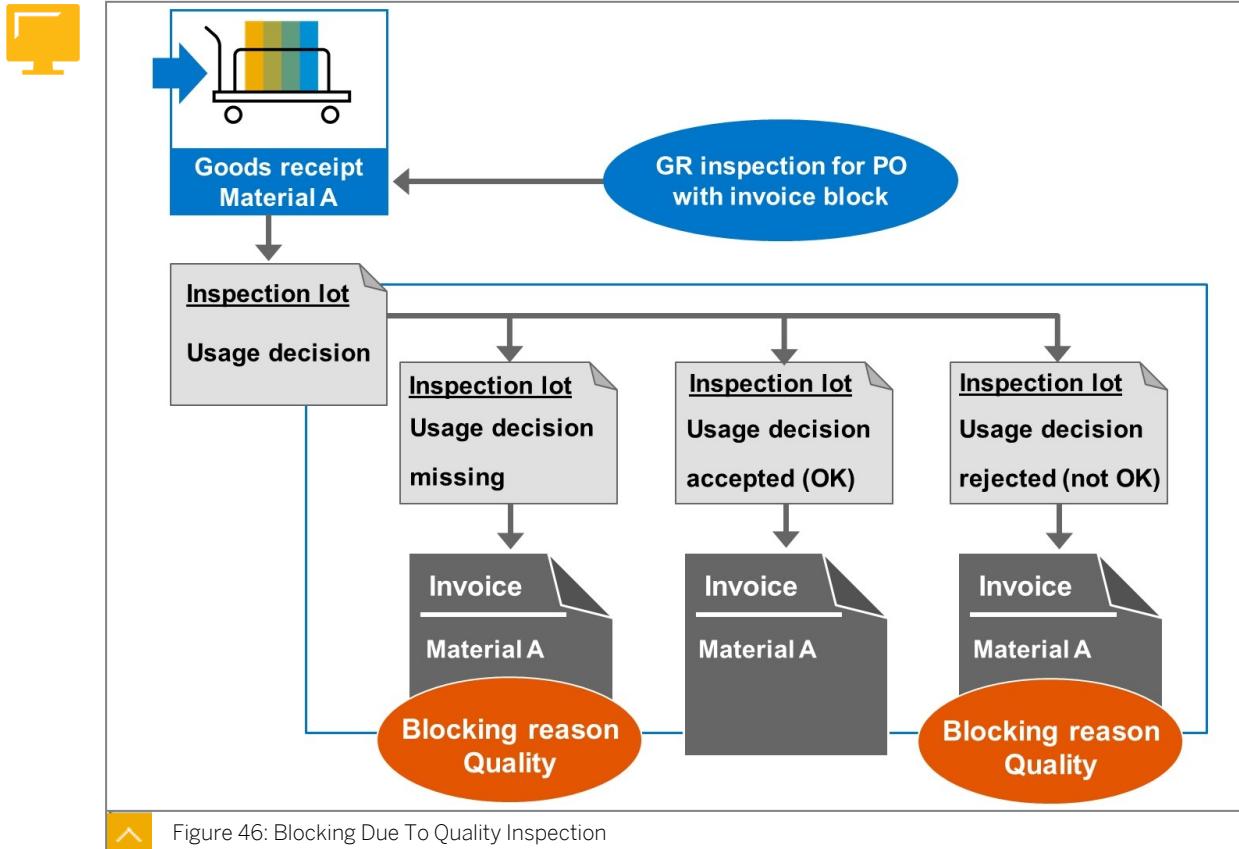
On the *Payment* tab page, select a key for the payment block, such as R (*Invoice verification*) in the *Payment Block* field.

- **Single item level**

In the item list set the *Manual Blocking Reason* (column Ma) checkbox.

Regardless of whether you manually block a logistics invoice at the header or item level, the system automatically sets the payment block in the vendor line of the FI document.

Blocking Due To Quality Inspection



An invoice item can be blocked due to a quality inspection with the blocking reason *Quality*.

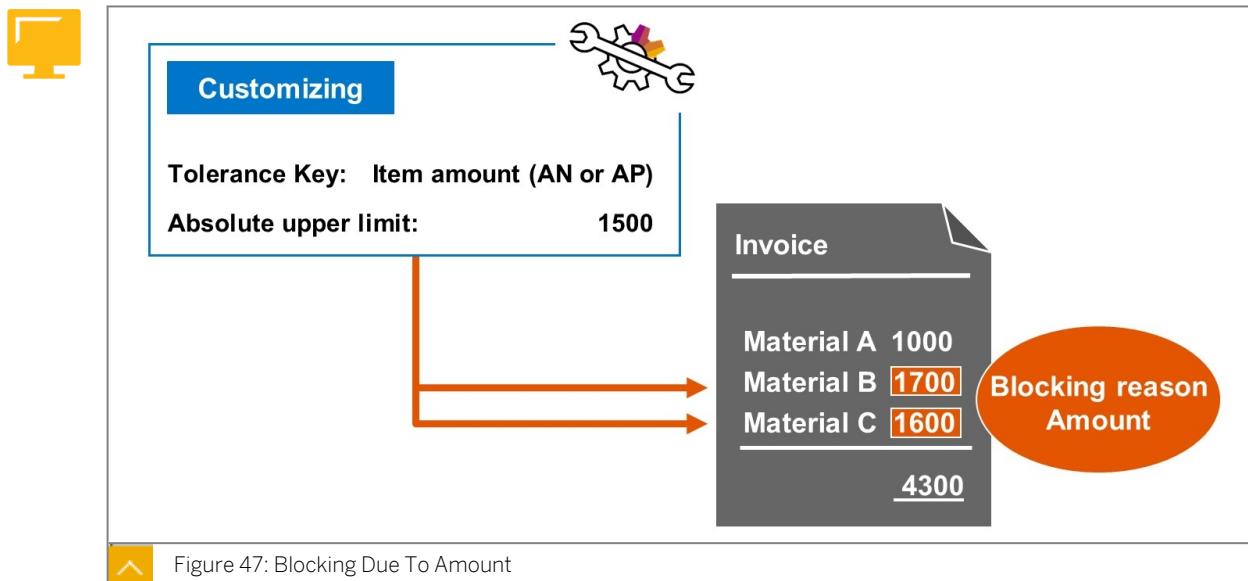
In the material master record, you define the following features:

- Whether a GR for a material is subject to inspection.
In this case, an inspection lot is created for every GR for this material.
- Whether an invoice needs to be blocked due to a quality inspection.
In this case, an inspection lot without a usage decision or a rejected inspection lot leads to the system blocking the invoice.

The system sets blocking reason *Quality* for an item in the following cases:

- GR-based invoice verification.
The invoice is blocked if no usage decision has been made about the inspection lot for the GR concerned, or if the inspection lot has been rejected.
- No GR-based invoice verification (PO-based invoice verification).
The invoice is blocked if no usage decision has been made for any inspection lot for the PO item, or if the inspection lot has been rejected.

Blocking Due to Amount



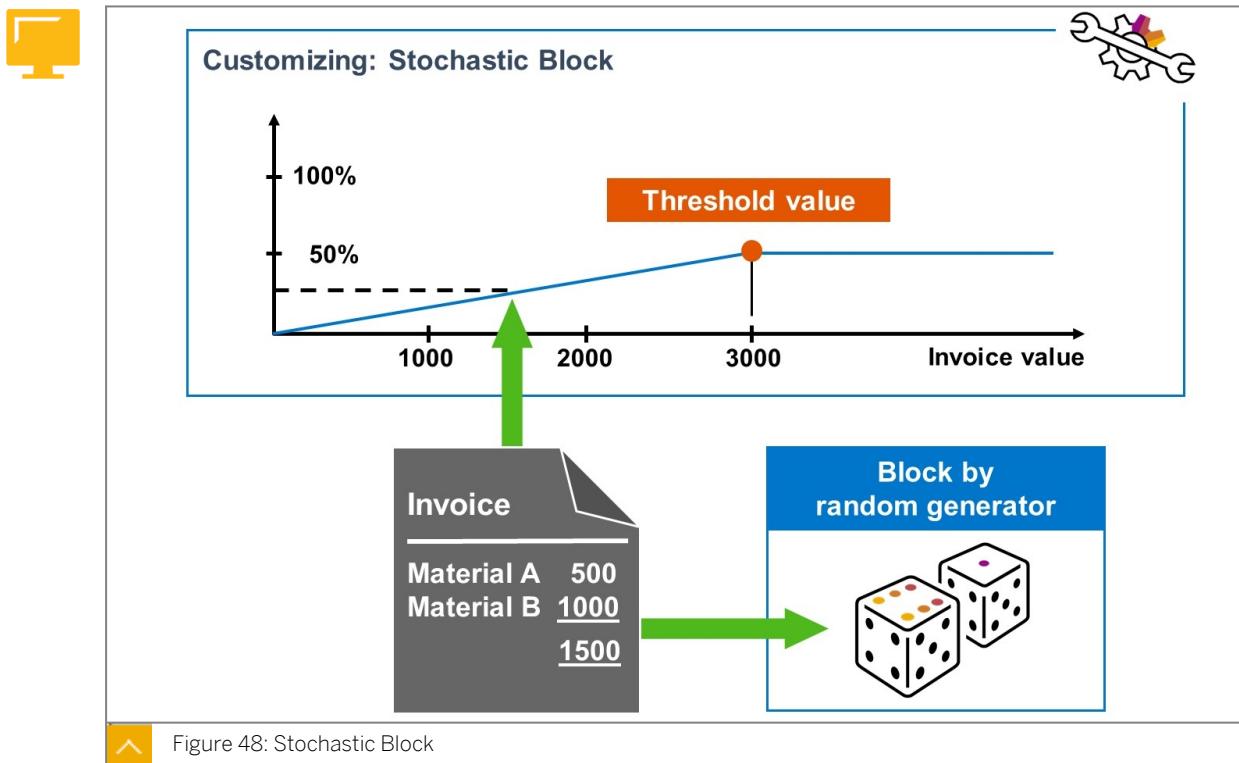
It is possible that invoice items with a large amount are automatically blocked. Use this function when you want such invoice items to be checked by multiple users.

To use the function, you must make the following Customizing settings:

- You must activate the item amount check for the company code.
IMG → Materials Management → Logistics Invoice Verification → Invoice Block → Item Amount Check → Activate Item Amount Check (OMRH).
- Specify the PO items for which the amount in an invoice item is checked, depending on the item category and the GR indicator in the PO item.
IMG → Materials Management → Logistics Invoice Verification → Invoice Block → Item Amount Check → Set Item Amount Check (OMRI).
- Using the tolerance limits AN (*amounts for items without reference to a purchase order*) and AP (*amounts for items with reference to a purchase order*), specify the amounts from which blocks are to be implemented.
IMG → Materials Management → Logistics Invoice Verification → Invoice Block → Set Tolerance Limits (OMR6).

If the amount of an invoice item exceeds the tolerance you set in Customizing, the item is given the *Amount* blocking reason. In this case, the entire invoice is blocked for payment.

Stochastic Block



In addition to the automatic blocking of invoices due to variances or due to the amount, it is also possible to randomly block invoices for checking. You use the stochastic block for this type of random check. Stochastic blocks are valid for the entire invoice and not at the item level.

You need to activate stochastic blocking per company code in Customizing. In addition, you need to set a threshold value and a percentage. This determines the likelihood of a block. If the invoice value is larger than or equal to the threshold value, the probability that the invoice is blocked is the same as the given percentage. If the invoice value is smaller than the threshold value, the probability that the invoice will be blocked is proportional to the given percentage.

- Activate the stochastic block per company code.

IMG → Materials Management → Logistics Invoice Verification → Invoice Block → Stochastic Block → Activate Stochastic Block (OMRF).

- Set the detail data for stochastic block.

IMG → Materials Management → Logistics Invoice Verification → Invoice Block → Stochastic Block → Set Stochastic Block (OMRG).

If the stochastic block is active when you post an invoice that otherwise has no blocking reason, the system decides whether the invoice should be blocked.

Customizing – Invoice Block

The following figure summarizes the most important Customizing settings for the invoice block.

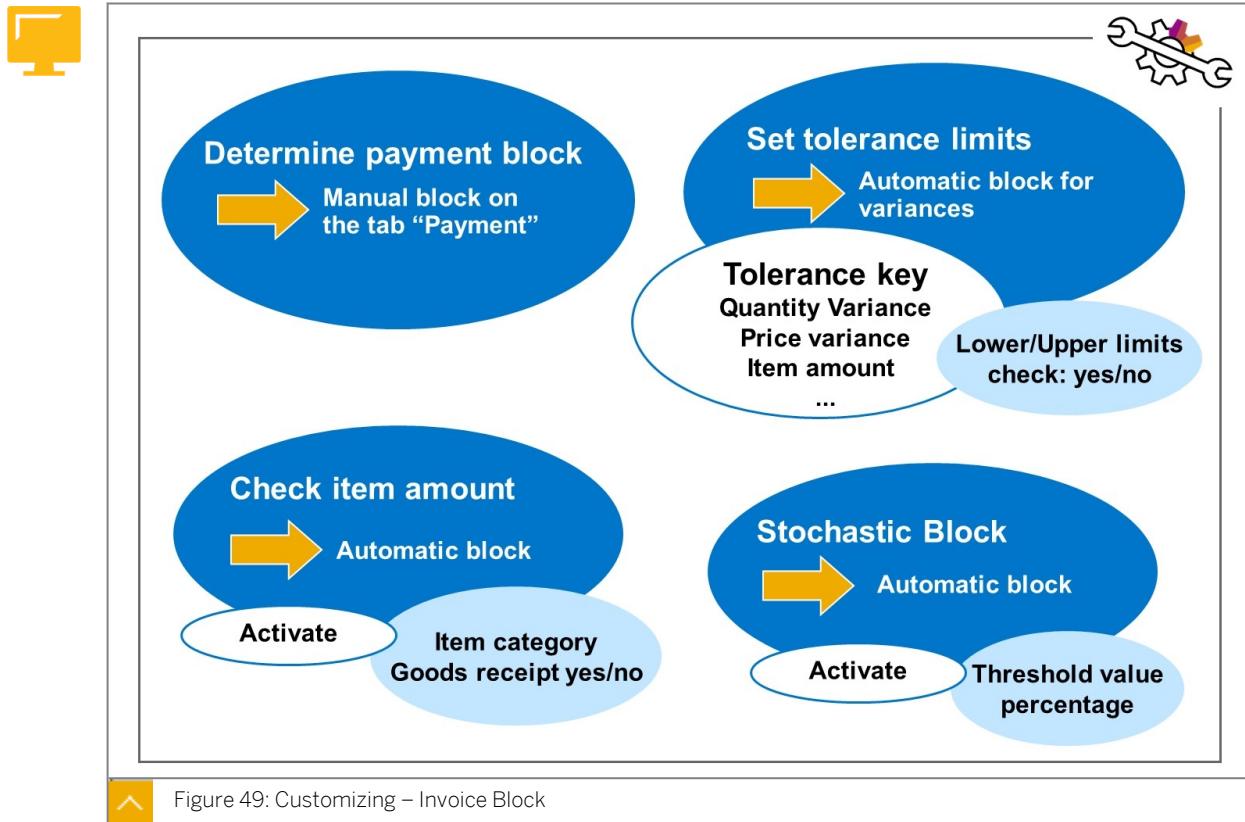


Figure 49: Customizing – Invoice Block

In addition to the Customizing settings described above, you can also define your own *Payment Blocks* for manual blocking (at header level).

To do so, choose in Customizing
Materials Management → *Logistics Invoice Verification* → *Invoice Block* →
Determine Payment Block (OMR9).



LESSON SUMMARY

You should now be able to:

- Use further blocking reasons

Unit 2

Lesson 3

Reducing Invoices



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Reduce an invoice

Invoice Reduction

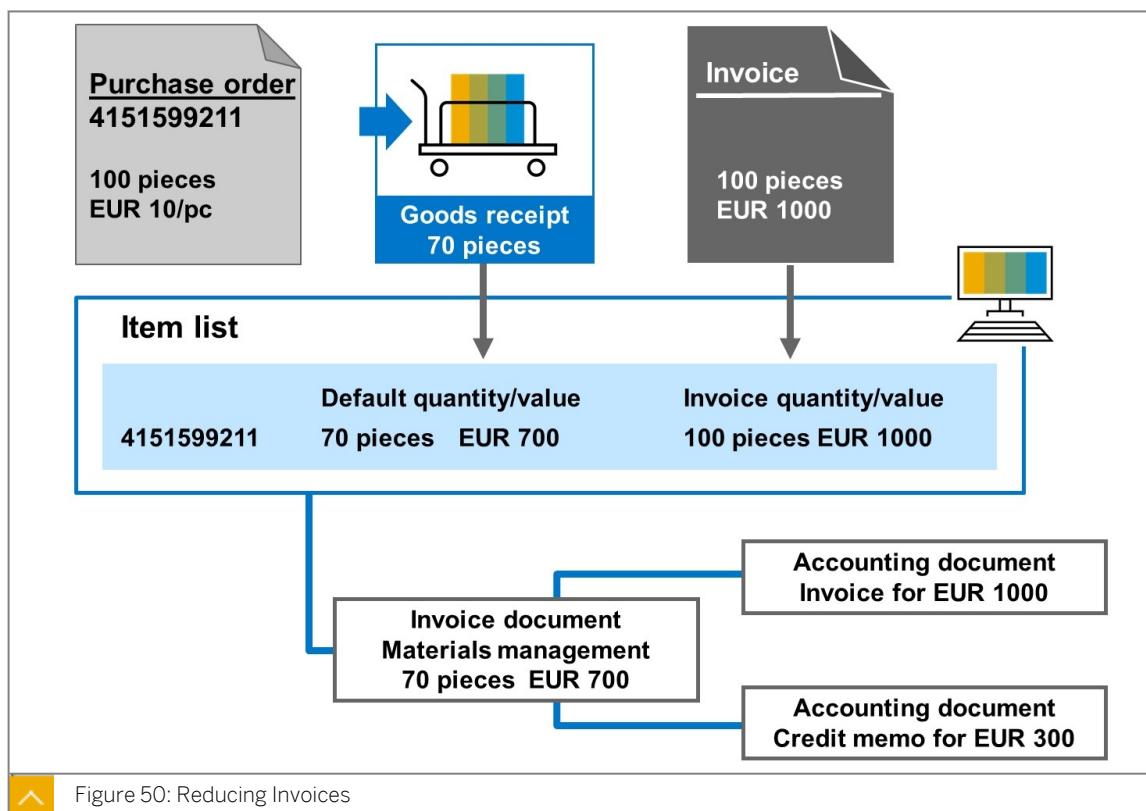


Figure 50: Reducing Invoices

If an invoice item shows a variance from the expected quantity or the expected amount and you do not want to accept this difference, you can reduce the invoice.

To reduce an invoice item, proceed as follows:

- In the item, choose *Supplier error: reduce invoice* as *Correction ID*. This makes the fields *Invoice Quantity According to Supplier* and *Invoice Amount According to Supplier* ready for input in addition to the fields *Quantity* and *Amount*.
- Enter the quantity and amount as specified in the supplier invoice in the additional fields *Invoice Quantity According to Supplier* and *Invoice Amount According to Supplier*.

3. If you want to accept values for amount and quantity that differ from the default values, change the default values. The system determines the difference amount by which the invoice is reduced.

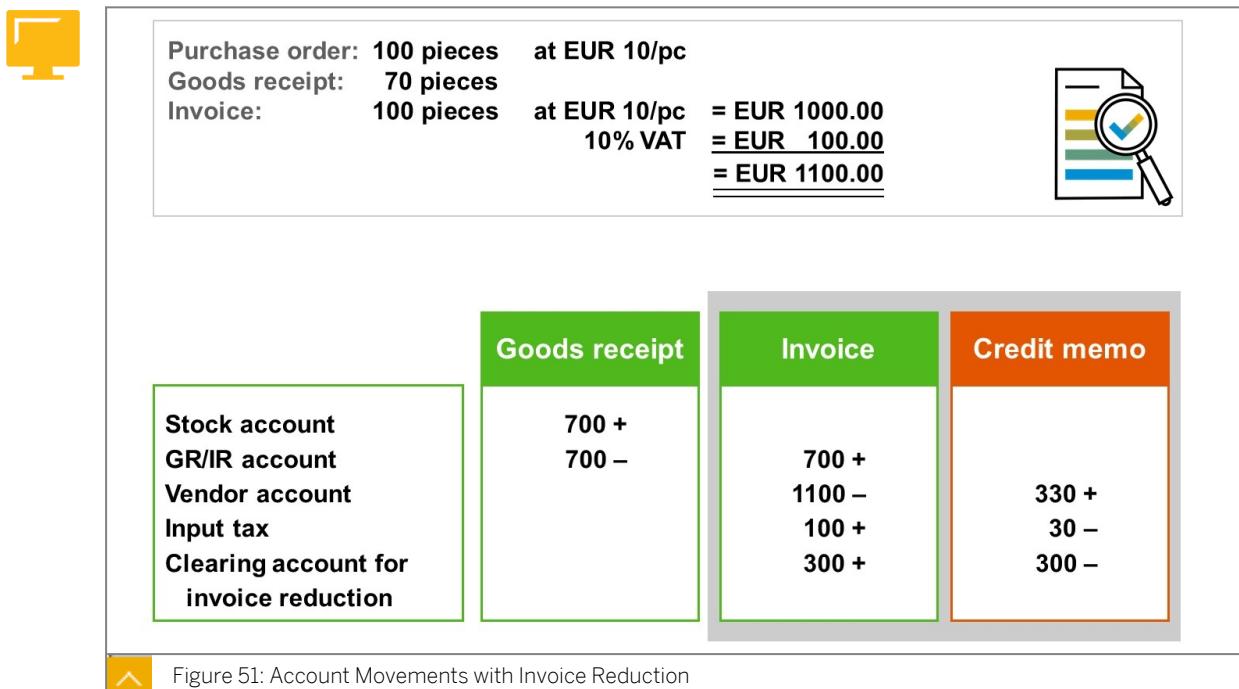
4. Post the invoice.

When you post an invoice with invoice reduction, two accounting documents are created. The first document contains the vendor and tax postings according to the values from the supplier invoice. The second document contains a credit memo for the difference between the actual values and the default (or accepted) values.

This means that an invoice is not really reduced during invoice reduction. Instead, an additional credit memo is posted using the reduction amount. As a result, only the amount reduced by the invoice reduction is kept as a payable to the supplier.

The purchase order history is updated with the default (or accepted) values.

When you post an invoice reduction, the system generates a message. This means that a letter of complaint (notification of credit memo posting) can be issued to the supplier.



The account movements take place during invoice reduction:

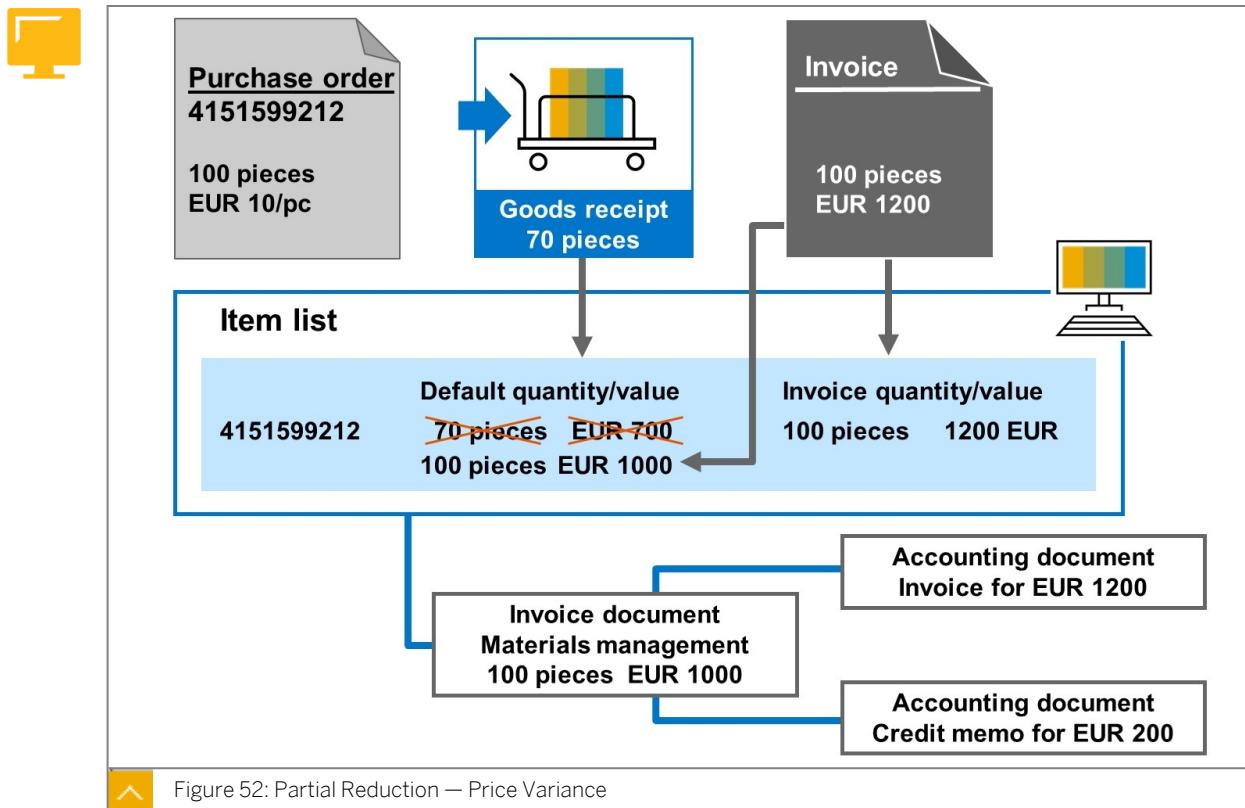
- In the invoice, the entered item amount is split: The GR/IR clearing account is only posted with the amount resulting from the default data. The difference to the invoice amount is posted to a clearing account for supplier invoices reduction.
- In the credit memo, the clearing account for supplier invoices reduction is cleared. The offsetting entry is posted to the vendor account.
- In the invoice, the tax posting is made based on the item amount entered. The credit memo corrects the tax posting.



Hint:

In Customizing for Logistics Invoice Verification, you can define whether the system needs to correct the tax in the original document.

Partial Reduction – Price Variance

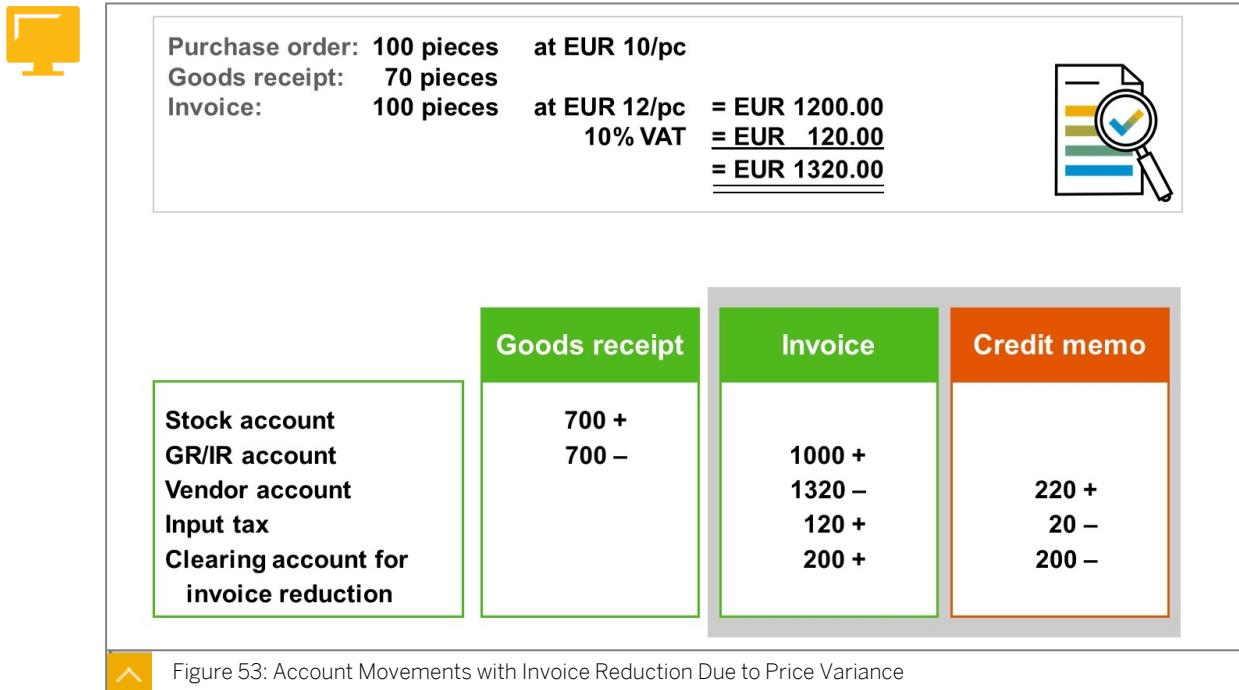


You can also partially accept variances, which means that you reduce only the part of the invoice that you have not accepted.

The invoice in the figure contains a quantity and a price variance. If you accept the quantity variance, you must perform the following steps:

1. Choose *Supplier error: reduce invoice as Correction ID*.
2. Overwrite the default quantity with the actual quantity in the invoice.
3. Overwrite the default amount with the correct amount (= quantity * PO price) for the quantity entered.
4. Enter the quantity and amount as specified in the supplier invoice in the fields *Invoice Quantity According to Supplier* and *Invoice Amount According to Supplier*.

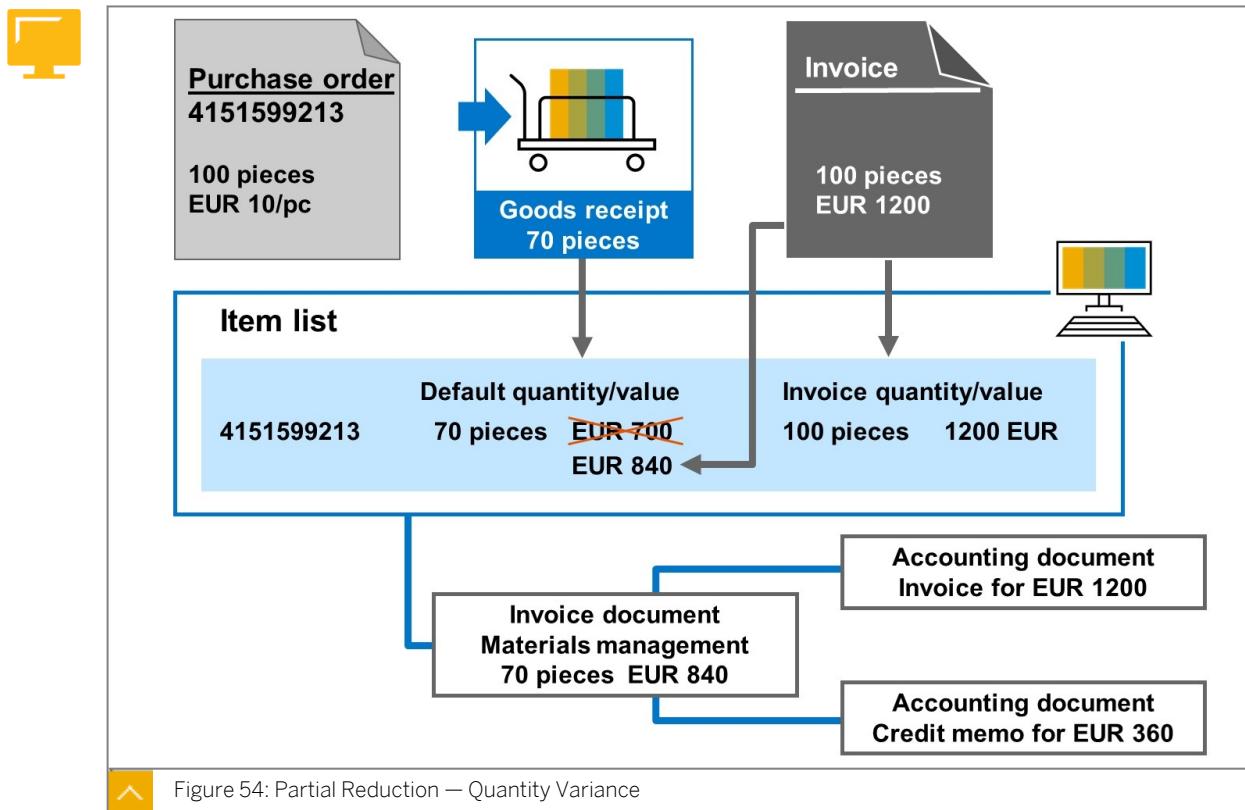
Reduce the invoice by the difference between the actual invoice value and the default value entered.



The figure illustrates an example for account movements with invoice reduction due to price variance.

- Once you have accepted the quantity variance, the system posts EUR 1000 to the GR/ IR clearing account (the system expects another goods receipt for 30 pieces).
- The EUR 200 difference between the accepted invoice amount and the supplier invoice amount is posted to the clearing account for supplier invoice reductions.
- In the credit memo, the clearing account for supplier invoices reduction is cleared. The offsetting entry is posted to the vendor account.

Partial Reduction – Quantity Variance

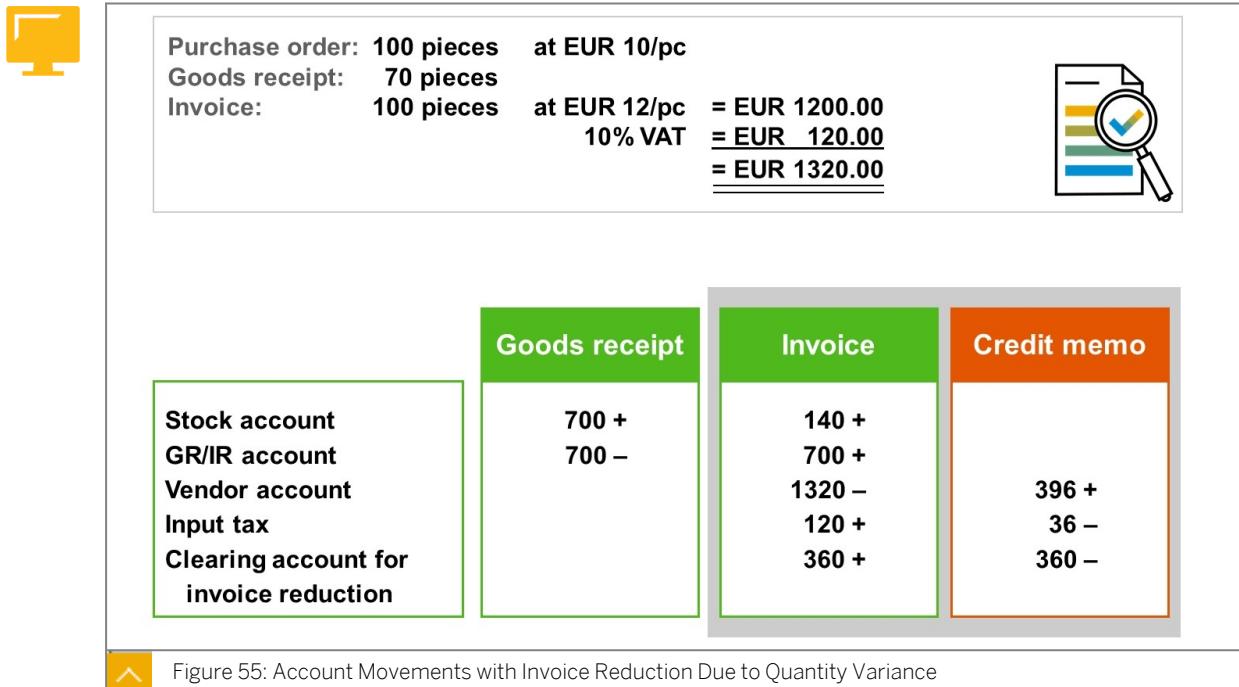


The figure shows an example of partial reduction due to a quantity variance.

If you accept the price variance but not the quantity variance, you must perform the following steps:

1. Choose *Supplier error: reduce invoice as Correction ID*.
2. Overwrite the default value with the result from the default quantity multiplied by the actual invoice price.
3. Enter the quantity and amount as specified in the supplier invoice in the fields *Invoice Quantity According to Supplier* and *Invoice Amount According to Supplier*.

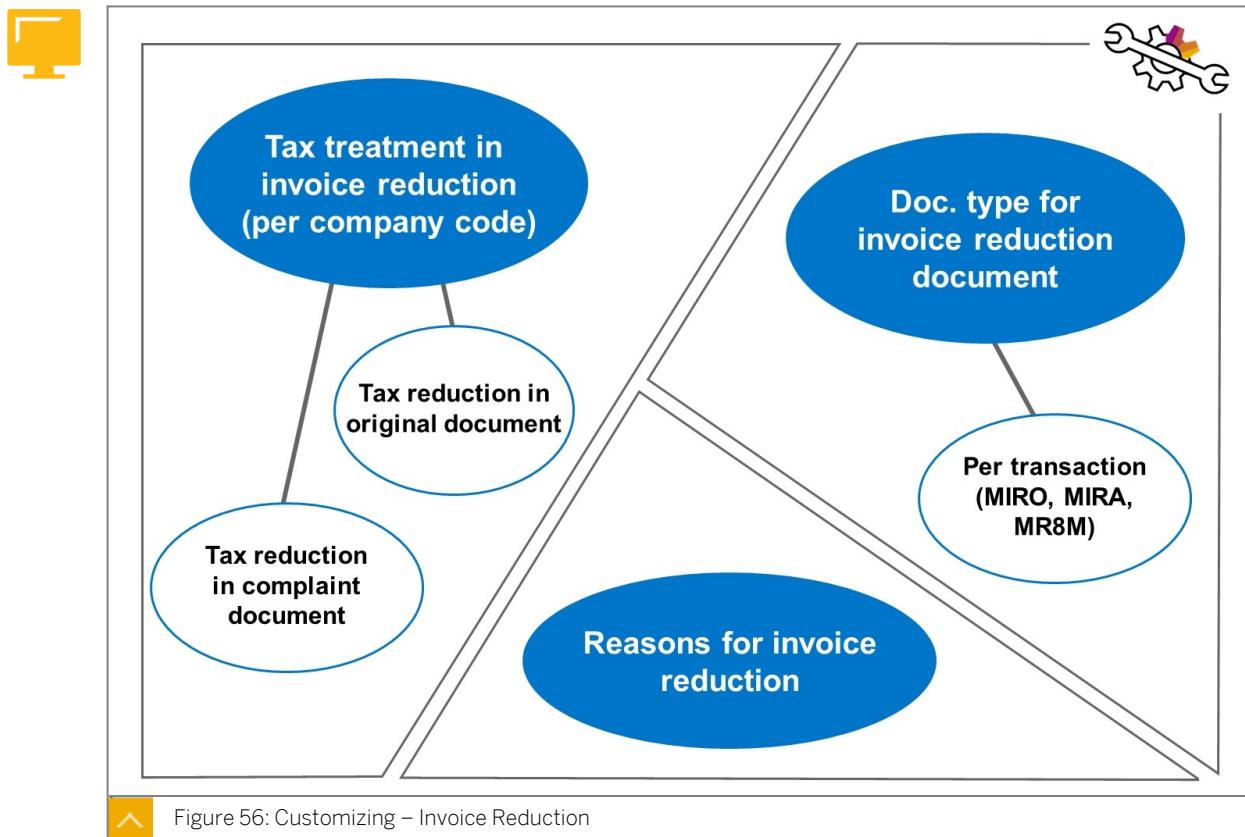
Reduce the invoice by the difference between the actual invoice value and the default value entered.



The figure illustrates an example for account movements with invoice reduction due to quantity variance.

- Once you have accepted the price variance for the delivered 70 pieces, the GR/IR clearing account is cleared in the invoice and the price difference is debited to the stock account (a material with a moving average price and adequate stock is required).
- The EUR 360 difference between the default and the invoice amount is posted to the clearing account for vendor invoice reductions.
- In the credit memo, the clearing account for supplier invoices reduction is cleared. The offsetting entry is posted to the vendor account.

Customizing – Invoice Reduction



For invoice reduction, depending on the company code you can define in Customizing whether the original document needs to be posted with a reduced tax or if the tax needs to be corrected in the reduction document.

You can define the tax treatment in Customizing for *Materials Management* under *Logistics Invoice Verification* → *Incoming Invoice* → *Tax Treatment in Invoice Reduction*.

If you want to specify why you made the manual reduction, you can define complaints reasons for this. To do so, go to Customizing for *Materials Management* and choose *Logistics Invoice Verification* → *Incoming Invoice* → *Maintain Reasons for Invoice Reduction*.



Hint:

Since complaints reasons are entered at the item level, you cannot display them in the MIR5 and MIR6 invoice overviews.

You also have to ensure that a document type can be determined for the credit memo document that is generated automatically. For this, maintain the Customizing settings relating to the number assignment for the accounting document. The document types are assigned depending on the transaction. In Customizing choose *Materials Management* → *Logistics Invoice Verification* → *Incoming Invoice* → *Number Assignment* → *Maintain Number Assignments for Accounting Documents* (OMR4) and then choose *Document Types in Invoice Verification*.



LESSON SUMMARY

You should now be able to:

- Reduce an invoice

Handling of Variances Without Reference to an Item



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post an invoice with a tolerated variance

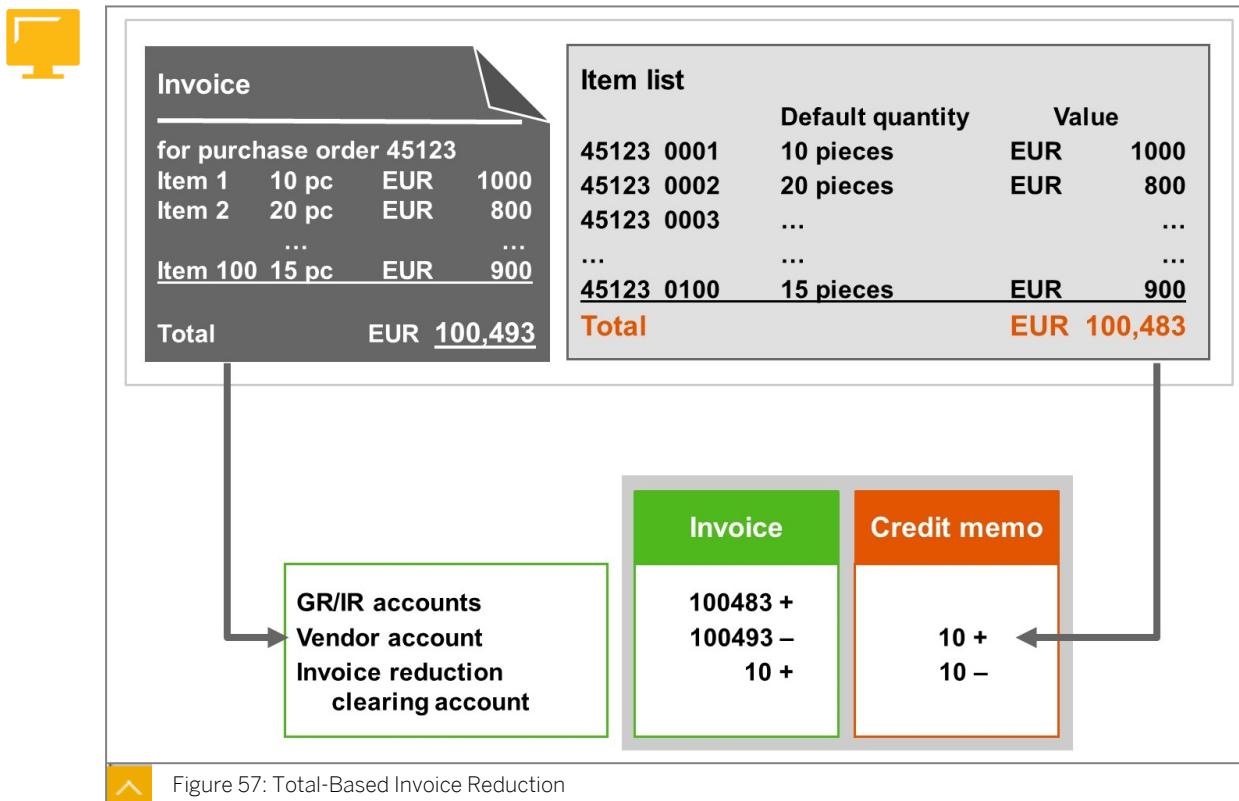
Variances Without Reference to an Item

During invoice entry, the system checks whether the total of the net amounts of the invoice items, the tax amounts and, if applicable, the planned delivery costs match the invoice amount. For invoices with small differences, the question arises whether you need to determine the reason for this variance at item level. If you want to reduce the entry effort, you can use the following functions in such cases:

- Total-based invoice reduction (automatic reduction)
- Total-base acceptance

With both functions, the system can post an invoice despite the difference if the variance is within a predefined tolerance range.

Total-Based Invoice Reduction



Whether a variance is automatically reduced depends on whether you have assigned a tolerance group to the supplier in the supplier master record and on the specific Customizing settings for this tolerance group.

As with manual invoice reduction, two accounting documents are created for total-based invoice reduction. The first document contains the invoice postings and an additional posting to a invoice reduction clearing account. The second document contains a credit memo, which creates the offsetting entry to the invoice reduction clearing account.

Therefore, in invoice reduction you do not actually reduce an invoice. Instead, an additional credit memo for the amount of the reduction is posted. The amount payable to the supplier is the value of the invoice reduced by the credit memo amount.

When you post an invoice reduction, the system creates a message which can be used to send a letter of complaint (notification of credit memo posting) to the vendor. In contrast to manual invoice reduction, you cannot inform the vendor of the cause of the reduction because the system does not actually determine this.

Total-Based Acceptance

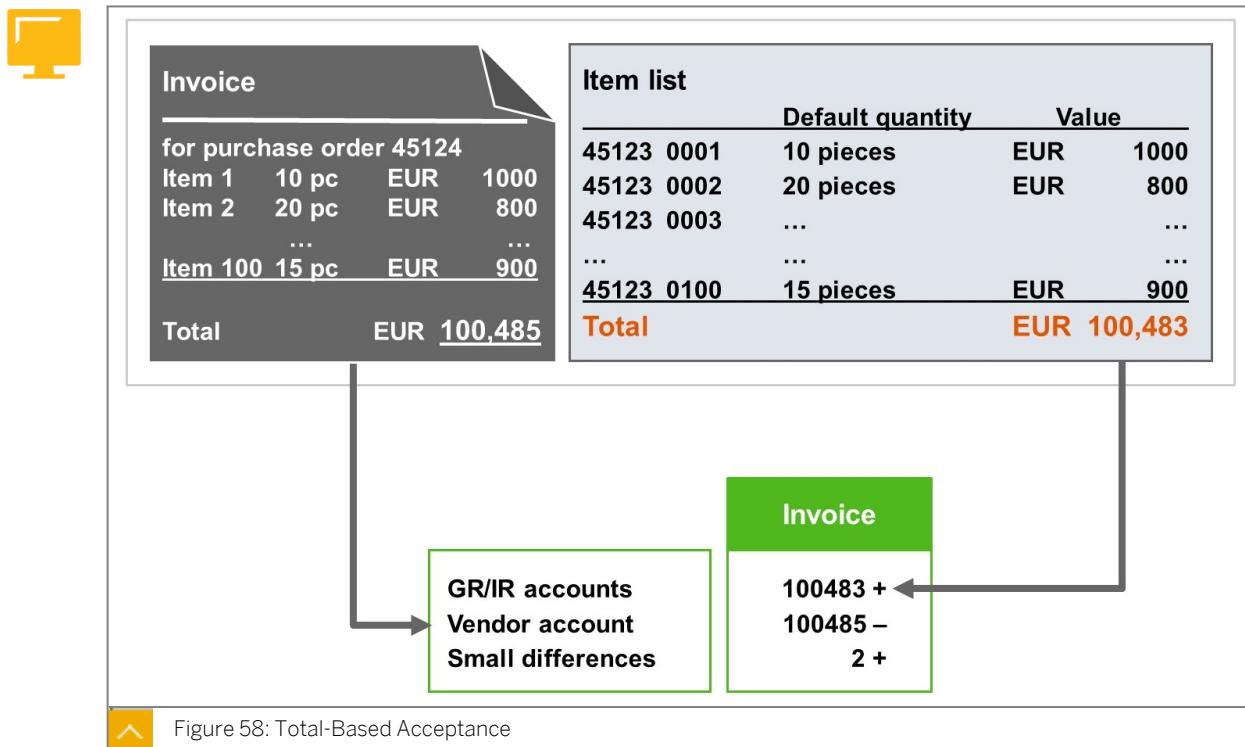


Figure 58: Total-Based Acceptance

In total-based acceptance, a difference in the invoice is assumed and automatically posted to an expense or revenue account.

For example, you can use total-based acceptance in the following situations:

- The invoice is for an amount less than expected.
- The invoice with an increased amount comes from a reliable vendor.
- The reasons for the difference are too minor to be researched.
- The expected costs of research for invoice reduction are too high compared to the amount or the likely impact on vendor relations.

Customizing for Total-Based Reduction and Total-Based Acceptance

You specify the limits for total-based acceptance in Customizing. You have two options:

- Company-code-dependent with tolerance limit BD (**Form small differences automatically**)
IMG → Materials Management → Logistics Invoice Verification → Invoice Block → Set Tolerance Limits (OMR6)

Caution:

If you set the BD tolerance limit to *Do not check*, all variances are accepted as small differences. However, if you do not want to accept small differences automatically, activate the check and do not enter a limit value.

- Supplier dependent and company code dependent using the tolerance group of the invoice verification.

IMG → Materials Management → Logistics Invoice Verification → Incoming Invoice → Configure Supplier-Specific Tolerances (OMRX)

If the master record of the vendor contains a tolerance group for invoice verification, these settings take priority over those of tolerance group BD. Enter the tolerance group of invoice verification in the vendor master record in the company code-specific data for *Payment transactions*.

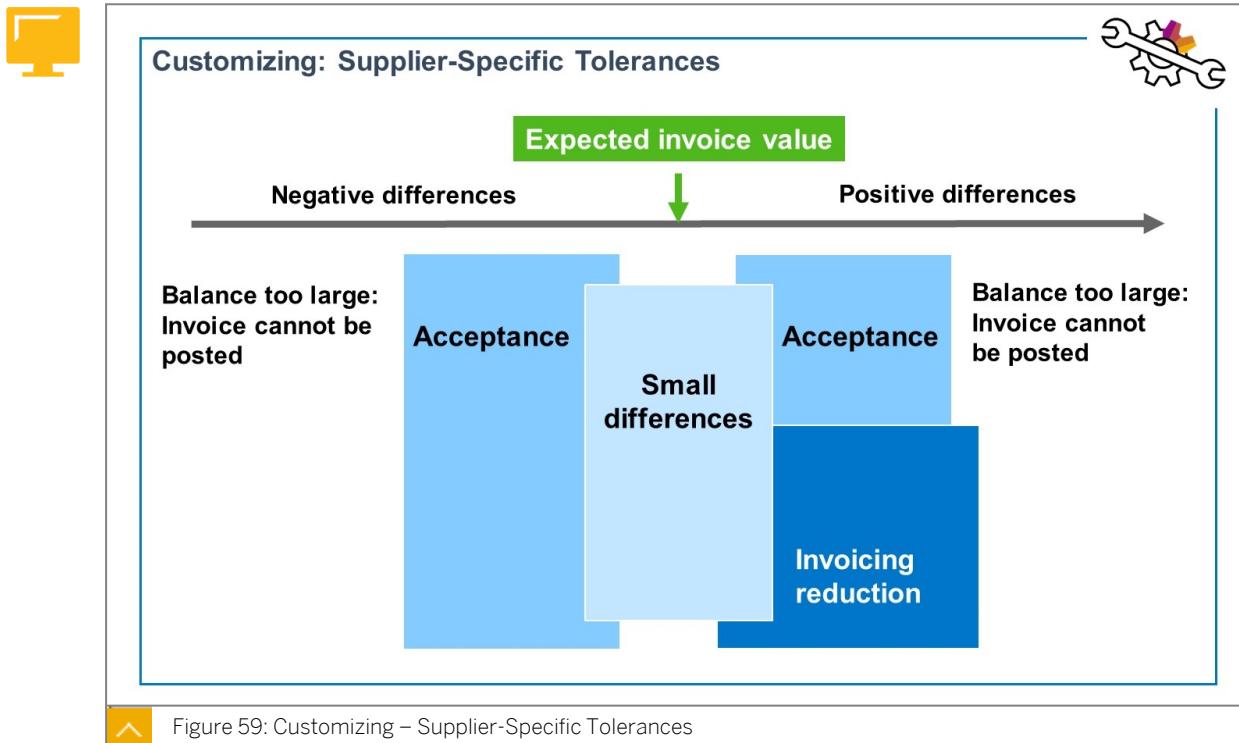


Figure 59: Customizing – Supplier-Specific Tolerances

You can configure different tolerances for each tolerance group of invoice verification:

- **Negative differences:**

You can specify a tolerance for small differences and for total-based acceptance of the invoice.

- If the negative difference falls within the configured tolerance limits for negative small differences, the system creates a posting to the relevant small differences account.
- If the negative difference is larger than the configured small difference, the system checks whether it falls within the tolerance area for total-based acceptance (lower limit). If the difference falls within this tolerance area, the system posts the difference to the small differences account.

If the difference is absolutely greater than the defined tolerances for small differences and total-based acceptance, the invoice cannot be posted.

- **Positive differences:**

You can specify a tolerance for small differences, a tolerance for total-based acceptance, and a tolerance for total-based invoice reduction.

- If the positive difference falls within the configured tolerance limits for positive small differences, the system creates a posting to the relevant small differences account.

- If the positive difference exceeds the small difference tolerance, the system checks whether the difference falls within the defined invoice reduction limit. If it does, the system performs a total-based invoice reduction for the difference amount.
- If the invoice reduction limits are set to *Do not check*, the system compares the variance with the upper limits for total-based acceptance for positive differences. If the positive difference falls within this configured tolerance limit, the system creates a posting to the relevant small differences account.

If the difference is greater than the defined tolerances for total-based acceptance and/or total-based reduction the invoice cannot be posted.

The following figure shows a screenshot of the customizing setting for a supplier-specific tolerance group.

Customizing: Configure Supplier-Specific Tolerances

Company Code: 1010 | Company Code 1010
Tolerance Grp: 515 |
Currency: EUR

Automatic Acceptance of Negative Differences

Absolute Lower Limit	Percentage Lower Limit
Check Limit <input checked="" type="checkbox"/>	Check Limit <input checked="" type="checkbox"/>
NegAccLowerLimit 30,00-	PercLowerAccLim 10,00 %

Negative Small Difference

Check Limit <input checked="" type="checkbox"/>
Small Diff. 5,00-

Automatic Acceptance of Positive Differences

Positive small difference
Check Limit <input checked="" type="checkbox"/>
Small Diff. 5,00

Absolute Upper Limit

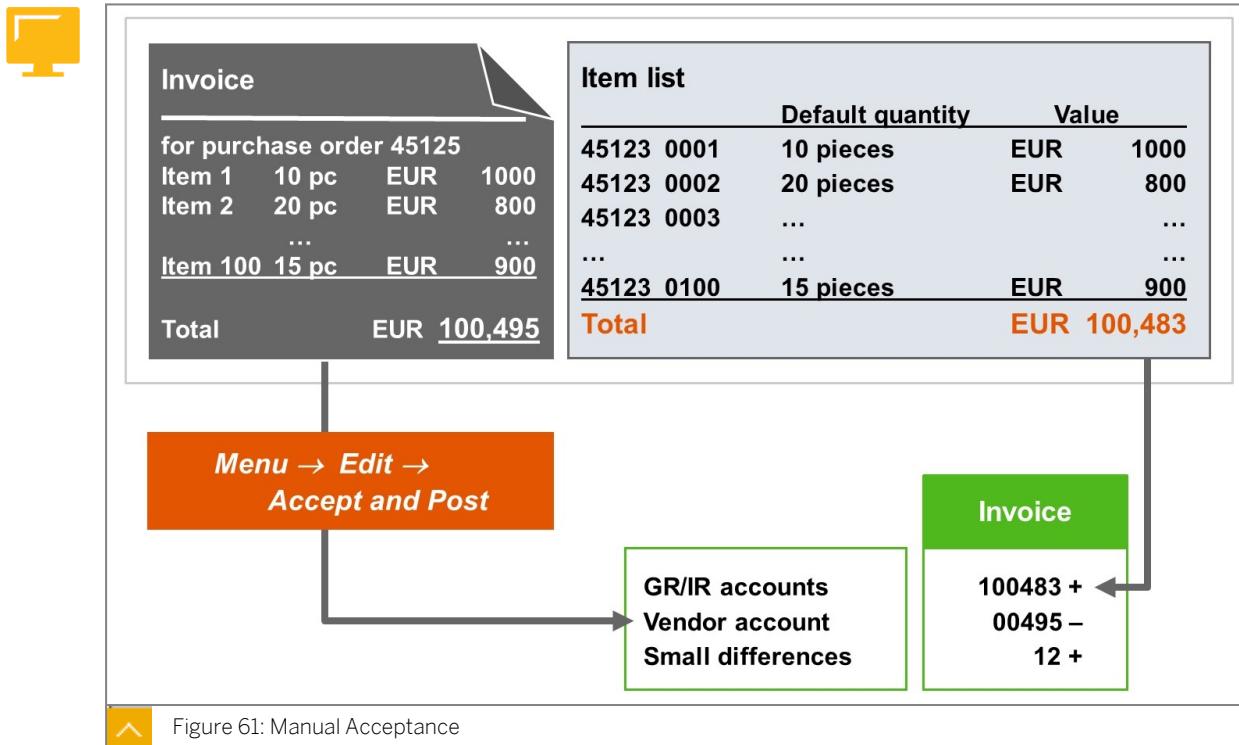
Check Limit <input type="checkbox"/>	Percentage Upper Limit
PosAccUpperLimt	Check Limit <input type="checkbox"/> PercUpperAccLim <input type="text"/> %

Automatic Invoice Reduction

Absolute Upper Limit	Percentage Upper Limit
Check Limit <input checked="" type="checkbox"/>	Check Limit <input type="checkbox"/>
Inv.Red.Tol.Amn 50,00	Per.Inv.Red.Tol. <input type="text"/> %

Figure 60: Supplier-Specific Tolerance Group

Manual Acceptance of Differences in Create Supplier Invoice - Advanced App



When you enter an invoice into the system, if the difference is larger than the defined tolerances, the system displays the balance and the traffic light is red.

To post the document anyway, choose *Menu → Edit → Accept and Post*. By manually accepting this difference, you enable it to be posted to the defined small difference account.

The option of manually accepting small differences is linked to the authorization object M_RECH_AKZ.



Hint:

The manual acceptance function is only available in the *Create Supplier Invoice – Advanced app* and is not available when you further process parked documents.



LESSON SUMMARY

You should now be able to:

- Post an invoice with a tolerated variance

Releasing Blocked Invoices



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Release blocked invoices

Blocked Invoices

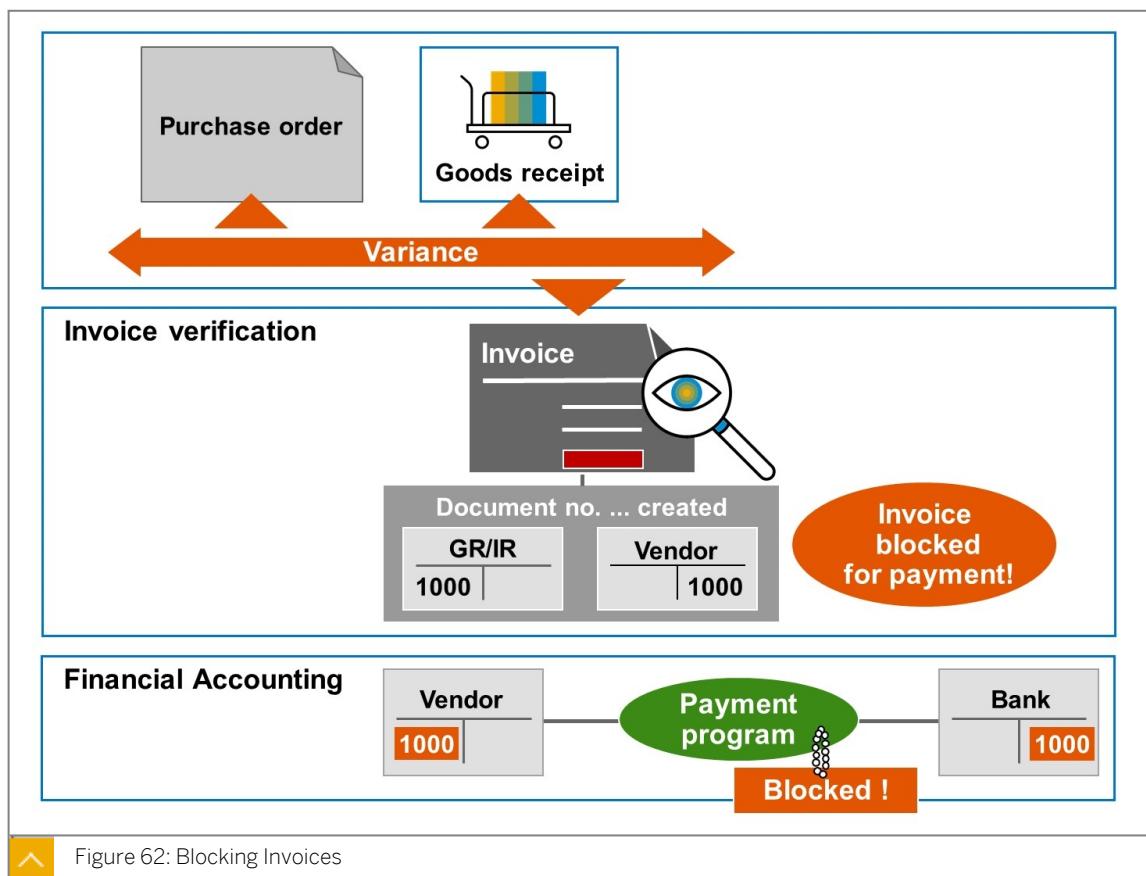


Figure 62: Blocking Invoices

If an invoice is blocked for payment when you post it, the payment block indicator is set in the vendor line item of the accounting document. Financial Accounting (FI) is then unable to pay the invoice automatically.

There are various reasons why an invoice is blocked:

- Due to variances in one or more items
- By manually entering a payment block in the header data or manually blocking an item

- By stochastic blocking
- By the payment block that was determined by the terms of payment key

Blocked invoices must be released in a separate step. You can release them manually or automatically. If the release is successful, the payment block is deleted from the vendor line of the FI document and the invoice can be paid.

Release of Blocked Invoices

The screenshot shows the SAP Fiori app 'Release Blocked Invoices' (MRBR). It has three main sections:

- Selection of Blocked Invoices:** Contains fields for Company Code (1010), Invoice Document, Fiscal Year, Supplier, Posting Date, Due Date, Purchasing Group, and User. To the right are 'to' fields and a vertical stack of eight selection arrows labeled 'Make selection'.
- Processing:** Contains radio buttons for 'Release Manually' (selected) and 'Release Automatically', and a checkbox for 'Move Cash Discount Date'. A callout box labeled 'Specify processing' points to this section.
- Blocking Procedure:** Contains radio buttons for 'Blocked Due to Variances' (selected), 'Manual Payment Block', and 'Stochastically Blocked'. A callout box labeled 'Select blocking procedure' points to this section.

At the bottom left is a navigation arrow pointing up, and at the bottom center is a 'Display options' section with a 'Variant' field.

To start the invoice release transaction, choose the following path from the SAP Easy Access screen:

Logistics → Materials Management → Logistics Invoice Verification → Further Processing → Release Blocked Invoices (MRBR).



Note:

You can also access the function *Release Blocked Invoices* via an app in the Fiori launchpad.

The transaction offers you various selection options to limit the release to specific invoices. In the *Selection* area, select the invoices that you wish to process. In the *Processing* area, specify whether you want to release invoices manually or automatically, and whether the cash discount days in an invoice are to be moved during the release.

In the time between the blocking and releasing of an invoice, the cash discount period could expire. When you release an invoice, you can move the cash discount days - not the baseline date - in order to extend the payment period.



Hint:

The increased number of cash discount days is visible only in the details of the vendor line items in the accounting document.

If you want to release invoices manually, in the *Blocking Procedure* area you can select the blocked invoices that the system should list:

- Blocked due to variances:

In this situation, select invoices that are blocked due to quantity or price variance (for example). The invoice that is blocked manually at item level is also selected.

- Manual payment block:

In this situation, select invoices that have undergone a manual payment block at header level, or invoices for which the payment block originates from the terms of payment.

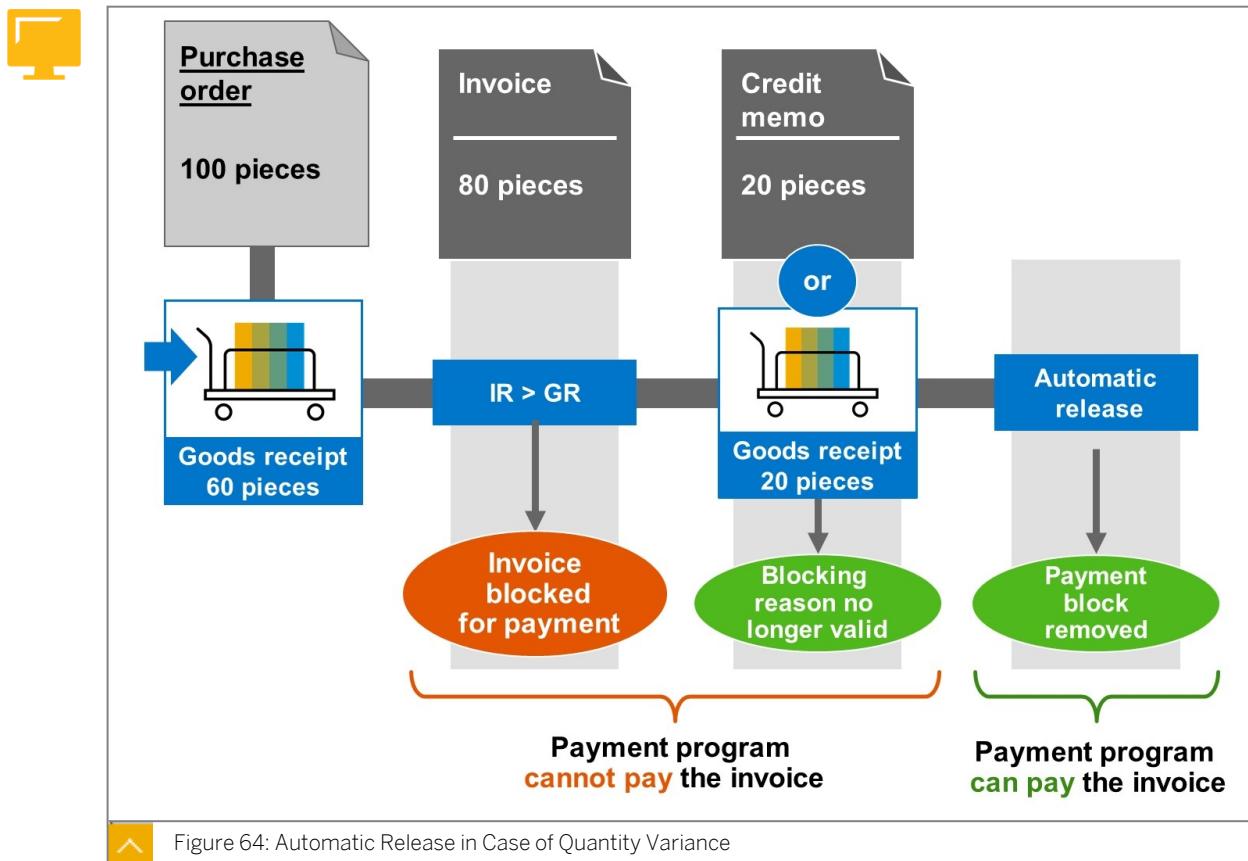
- Stochastically blocked:

This restriction selects only stochastically blocked invoices.

Automatic Release

Automatic release is only possible for the *Blocked due to variances* blocking procedure.

For automatic release, the system checks each blocking reason to see whether it is still valid. This system check can occur for invoices that were automatically blocked due to quantity, price, or date variances, or due to quality checks. If a blocking reason is invalid, the system deletes it. If all blocking reasons for an invoice are deleted, the invoice is automatically released.



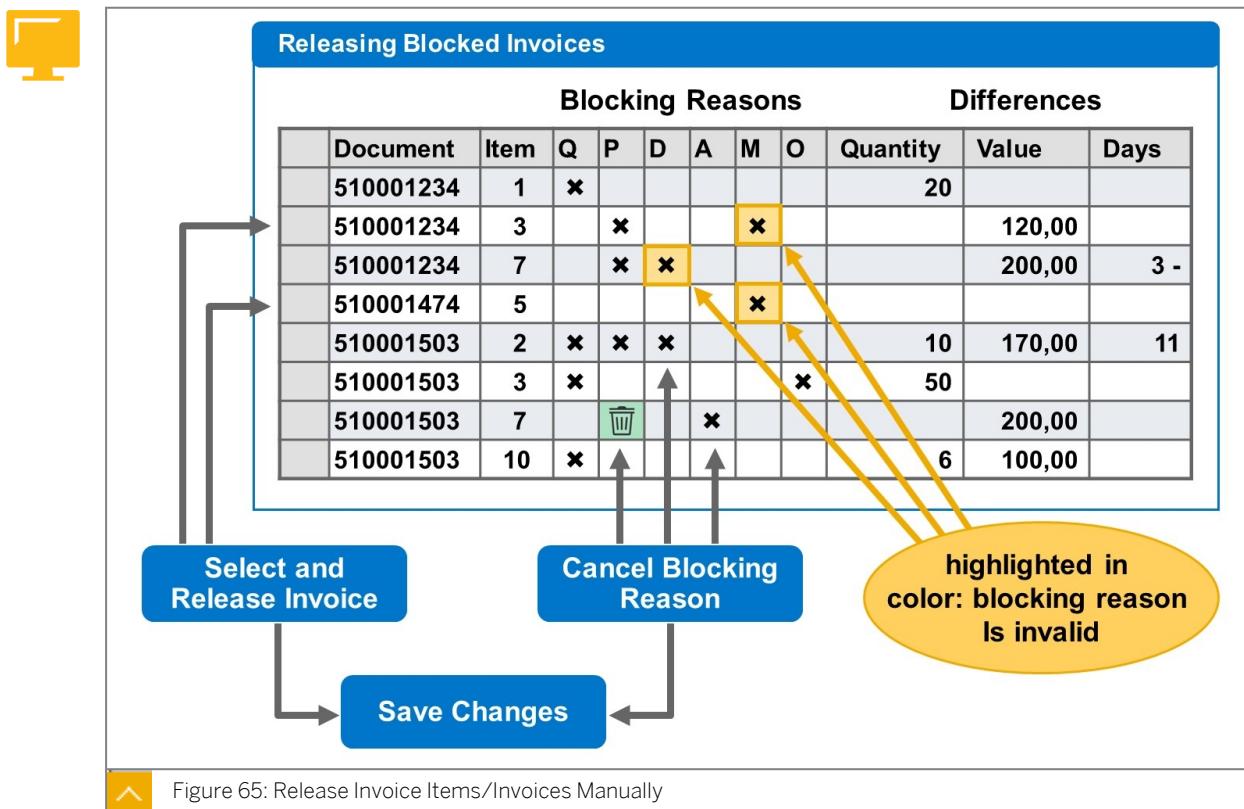
A blocking reason will become invalid in the following cases:

- If you receive a further delivery or a credit memo, blocking because of quantity variance (blocking reason *Quantity*) may no longer apply. With goods receipt (GR)-based invoice verification, the GR must be entered as a subsequent delivery for the material document of the first GR. Only then can the assignment be made between the invoice and GR.
- If you change the PO price or receive a subsequent credit, blocking because of price variance (blocking reason *Price*) may no longer apply.
- The blocking reason *Quality* becomes invalid due to a positive usage decision.
- The blocking reason *Date* becomes invalid as soon as the delivery date is reached.

Invoices that contain both blocking reasons and a manual payment block set in the document header are not released during automatic release, even if the blocking reasons in all items are no longer valid. Invoices with a manual payment block in the header must be released separately.

You can also let automatic release run in the background. Use program RM08RELEASE for this.

Manual Release



For manual release, you decide which invoices you want to process by selecting the *Blocking Procedure*. If you execute the selection, the system displays a list of the blocked invoices according to your selection values. This list contains a lot of information and you can organize it to suit your requirements. If invoices still contain blocking reasons that are no longer valid, these blocking reasons are highlighted in yellow in the list. From this list, you can delete individual blocking reasons or release an entire invoice.

You can delete blocking reasons in single invoice items by placing your cursor on a blocking reason and choosing *Blocking Reason*. When you delete the last blocking reason of an invoice and save your changes, the system releases the invoice for payment.

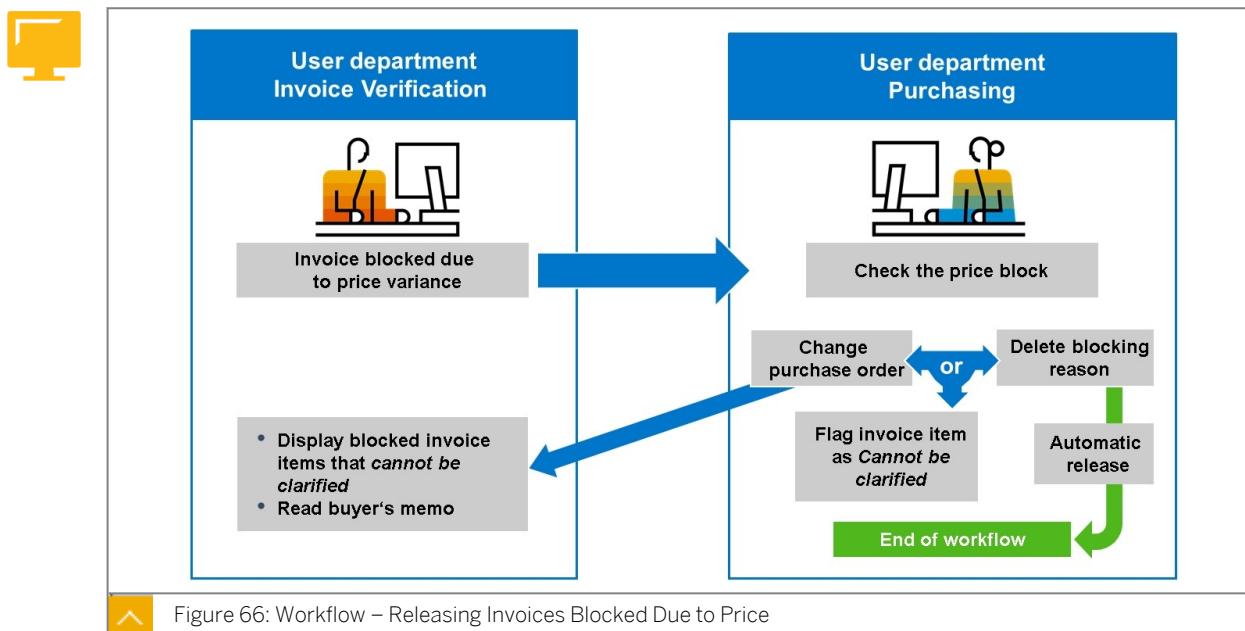
If you want to release an invoice as a whole, choose one line of the invoice and then choose *(Release Invoice)*. As a result, all other items of the invoice are also selected. The system releases the invoices whenever you save your changes. When you release the invoice as a whole, the payment block is deleted from the vendor line. However, the blocking reasons in the items are not changed as a result.



Hint:

You can use authorization object M_RECH_SPG to determine the blocking reason that a user may delete. You may specify display-only authorization for authorization object M_RECH_EKG so that no overall release is possible.

Workflow – Releasing Invoices Blocked for Price Reasons



If an item has been flagged with a price block, then the buyer responsible for the PO can be automatically informed using workflow. To use and configure the predefined workflow template WS20000397, in Customizing for *Materials Management*, choose *Logistics Invoice Verification* → *Invoice Block* → *Activate Workflow Template*.

When you receive a work item in the inbox, you can use the information to check the blocked invoice items.

You can use work items to check the blocked invoice items and process as follows:

- Change PO.
- Release invoice items by deleting the blocking reason.
- Flag invoice items as *Cannot be clarified*.

The workflow ends when the price block for the invoice items is no longer valid because of the change in the PO price, or when the invoice items have been released because of deleting the

blocking reasons. If price blocks in the invoice items have been flagged as *Cannot be clarified*, a work item is generated for the invoice verification clerk. The workflow is then ended by the invoice verification clerk.

In SAP S/4HANA, a scenario for the flexible workflow is also available for the release of blocked invoices.



LESSON SUMMARY

You should now be able to:

- Release blocked invoices

Learning Assessment

1. Which of the following are blocking reasons related to variances in an invoice item?

Choose the correct answers.

- A Quantity
- B Price
- C Material
- D Date
- E Unit of measure

2. If you set an upper and lower tolerance limit for blocking invoices in the system, and if the variance exceeds the upper limit, the system issues a warning message without blocking the invoice.

Determine whether this statement is true or false.

- True
- False

3. 100 pieces of a material were ordered at the price of 5 EUR per piece for the stock. 20 pieces have already been delivered for this purchase order. Now you receive an invoice for this purchase order in which 30 pieces are invoiced at a price of 10 EUR. What amount is posted to the GR/IR clearing account?

Choose the correct answer.

- A 150 EUR
- B 200 EUR
- C 250 EUR
- D 300 EUR

4. When price variances occur in an invoice item for stock material, the account movements depend on how the material is valued (Prerequisite: goods receipt posted before invoice receipt).

Determine whether this statement is true or false.

- True
 False

5. For which of these variances can you store tolerance limits for invoice verification?

Choose the correct answers.

- A Amounts for items without reference to a purchase order (PO)
 B Overdelivery at goods receipt
 C Time limit exceed for blanket purchase order
 D Variances from the standard price material valuation
6. An invoice can be blocked depending on the quality inspection of any materials it contains. Which of the following statements apply in this case?

Choose the correct answers.

- A The invoice is blocked automatically when the goods receipt (GR) is posted as stock in quality inspection, but not yet transferred to unrestricted-use stock at the time of invoice verification.
 B Quality management (QM) procurement must be active for the relevant material.
 C An invoice block occurs if an inspection lot was not released at the time of invoice verification.
 D For PO-based invoice verification, the system blocks an invoice if there is a inspection lot from a previous delivery that was not released in the relevant purchase order item.

7. What do you have to consider when reducing invoices manually?

Choose the correct answers.

- A You must select the correct value for the *Correction ID* in the item line.
 B You must use the document type *Invoice Reduction*.
 C Only one accounting document is created in total. In this document, the original invoice amount is reduced by the difference.
 D Two accounting documents are created, an invoice and a credit memo.

8. The system allows you to partially reduce an invoice by accepting the price or quantity variance.

Determine whether this statement is true or false.

- True
 False

9. Which of the following statements about supplier-specific tolerance are applicable?

Choose the correct answers.

- A Supplier-specific tolerances are maintained in the purchasing data in the vendor master record.
 B For total-based invoice reduction, it is not necessary to correct variances in the invoice items.
 C Any small differences, which are specified for a tolerance key entered in the supplier master record, are posted to a separate general ledger (G/L) account.
 D If the difference is larger than the defined tolerance for total-based invoice reduction, the invoice cannot be posted.

10. In which of the following situations can you release an invoice automatically?

Choose the correct answers.

- A Today is the delivery date of a purchase order (PO) and the invoice was posted five days ago.
 B There was a manual payment block that has since been cancelled.
 C The block occurred due to a quantity variance. The difference quantity has since been delivered.
 D The block occurred due to a quantity variance. In the meantime, a credit memo for the difference quantity has been posted.

11. When you have deleted all your individual blocking reasons and saved your changes, the system releases the invoice for payment.

Determine whether this statement is true or false.

- True
 False

Learning Assessment - Answers

1. Which of the following are blocking reasons related to variances in an invoice item?

Choose the correct answers.

- A Quantity
- B Price
- C Material
- D Date
- E Unit of measure

Correct. In an invoice item, variances in quantity, price, order price quantity, and date can be determined automatically by the system. There are appropriate blocking reasons for these cases. - The specification of an incorrect material or a different unit of measure is to be processed by the invoice verification clerk and the invoice should be only parked until the issue is clarified.

2. If you set an upper and lower tolerance limit for blocking invoices in the system, and if the variance exceeds the upper limit, the system issues a warning message without blocking the invoice.

Determine whether this statement is true or false.

- True
- False

Correct. If a lower limit is not reached or an upper limit is exceeded in invoice verification, the system issues a warning message in both cases. However, the item is only blocked if an upper limit is exceeded.

3. 100 pieces of a material were ordered at the price of 5 EUR per piece for the stock. 20 pieces have already been delivered for this purchase order. Now you receive an invoice for this purchase order in which 30 pieces are invoiced at a price of 10 EUR. What amount is posted to the GR/IR clearing account?

Choose the correct answer.

- A 150 EUR
- B 200 EUR
- C 250 EUR
- D 300 EUR

Correct. For the 20 pieces already delivered, the GR/IR account is to be balanced by $20 * 5 \text{ EUR} = 100 \text{ EUR}$. For the 10 pieces not yet delivered, the invoice price is applied, that is, $10 * 10 \text{ EUR} = 100 \text{ EUR}$. A total of 200 EUR is therefore posted to the GR/IR account.

4. When price variances occur in an invoice item for stock material, the account movements depend on how the material is valuated (Prerequisite: goods receipt posted before invoice receipt).

Determine whether this statement is true or false.

- True
- False

Correct. If the material is subject to a standard price, the system posts the price variance to a price difference account. If the material is subject to MAP and there is sufficient stock coverage, the system posts the price variance to the stock account and the MAP is adjusted.

5. For which of these variances can you store tolerance limits for invoice verification?

Choose the correct answers.

- A Amounts for items without reference to a purchase order (PO)
- B Overdelivery at goods receipt
- C Time limit exceed for blanket purchase order
- D Variances from the standard price material valuation

Correct. The tolerance keys **AN**, *Amount for item without order reference*, and **LD**, *Blanket PO time limit exceeded*, exist in the table for the tolerance limits in invoice verification. The overdelivery is verified during goods receipt, not during invoice verification. If a material is subject to standard price valuation, the system posts the price variance to a price difference account. You cannot set tolerance limits for variances from standard price valuation.

6. An invoice can be blocked depending on the quality inspection of any materials it contains. Which of the following statements apply in this case?

Choose the correct answers.

- A The invoice is blocked automatically when the goods receipt (GR) is posted as stock in quality inspection, but not yet transferred to unrestricted-use stock at the time of invoice verification.
- B Quality management (QM) procurement must be active for the relevant material.
- C An invoice block occurs if an inspection lot was not released at the time of invoice verification.
- D For PO-based invoice verification, the system blocks an invoice if there is a inspection lot from a previous delivery that was not released in the relevant purchase order item.

Correct. If the QM control key specifies an invoice block, the invoice is blocked for payment if there is an inspection lot for the purchase order item without or with a rejected usage decision. The QM control key must be entered in the material master record. Delivery-specific invoice blocking due to quality can only take place if GR-based invoice verification is used.

7. What do you have to consider when reducing invoices manually?

Choose the correct answers.

- A You must select the correct value for the *Correction ID* in the item line.
- B You must use the document type Invoice Reduction.
- C Only one accounting document is created in total. In this document, the original invoice amount is reduced by the difference.
- D Two accounting documents are created, an invoice and a credit memo.

Correct. You need to select *Supplier error: reduce invoice* as *Correction ID* in the invoice item. The system creates two accounting documents so that the invoice is posted with the original invoice amount. The reduction of the difference results from the automatically generated credit note. The system selects the invoice reduction document type automatically for the credit memo.

8. The system allows you to partially reduce an invoice by accepting the price or quantity variance.

Determine whether this statement is true or false.

- True
- False

Correct. You can partially accept variances. In this case, you only reduce the part of the invoice that you have not accepted.

9. Which of the following statements about supplier-specific tolerance are applicable?

Choose the correct answers.

- A Supplier-specific tolerances are maintained in the purchasing data in the vendor master record.
- B For total-based invoice reduction, it is not necessary to correct variances in the invoice items.
- C Any small differences, which are specified for a tolerance key entered in the supplier master record, are posted to a separate general ledger (G/L) account.
- D If the difference is larger than the defined tolerance for total-based invoice reduction, the invoice cannot be posted.

Correct. The tolerance key for the supplier-specific tolerances is maintained in the accounting data and not the purchasing data of the vendor master record. - The idea of total-based invoice reduction is to reduce the time and effort involved in entering invoices. This is achieved by eliminating the need to correct minor discrepancies in the individual item. In total-based acceptance, which includes the small differences, a difference to the expected invoice amount is automatically posted to an expense or revenue account. If the difference is larger than the defined tolerance for total based invoice reduction, the invoice is marked as incorrect. In the *Create Supplier Invoice – Advanced* app. an invoice can then still be posted using the menu path *Menu → Edit → Accept and Post*.

10. In which of the following situations can you release an invoice automatically?

Choose the correct answers.

- A Today is the delivery date of a purchase order (PO) and the invoice was posted five days ago.
- B There was a manual payment block that has since been cancelled.
- C The block occurred due to a quantity variance. The difference quantity has since been delivered.
- D The block occurred due to a quantity variance. In the meantime, a credit memo for the difference quantity has been posted.

Correct. The system cannot release invoices automatically if they were blocked manually. Moreover, the invoice cannot be subsequently changed. All other situations described mean that a blocking reason becomes invalid and can therefore be deleted automatically.

11. When you have deleted all your individual blocking reasons and saved your changes, the system releases the invoice for payment.

Determine whether this statement is true or false.

True

False

Correct. You can delete individual blocking reasons. When you delete the last blocking reason of an invoice and save your changes, the system releases the invoice for payment.

UNIT 3

Subsequent Debit/Credit, Delivery Costs, and Credit Memos

Lesson 1

Entering Subsequent Debits/Credits

107

Lesson 2

Entering Delivery Costs

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Lesson 3

Entering Invoices Without Reference to a Purchase Order

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Lesson 4

Handling Credit Memos and Reversals

121

UNIT OBJECTIVES

- Enter subsequent debit
- Enter planned delivery costs
- Enter unplanned delivery costs
- Enter an invoice without reference to a purchase order
- Enter a credit memo
- Cancel an invoice

Unit 3

Lesson 1

Entering Subsequent Debits/Credits

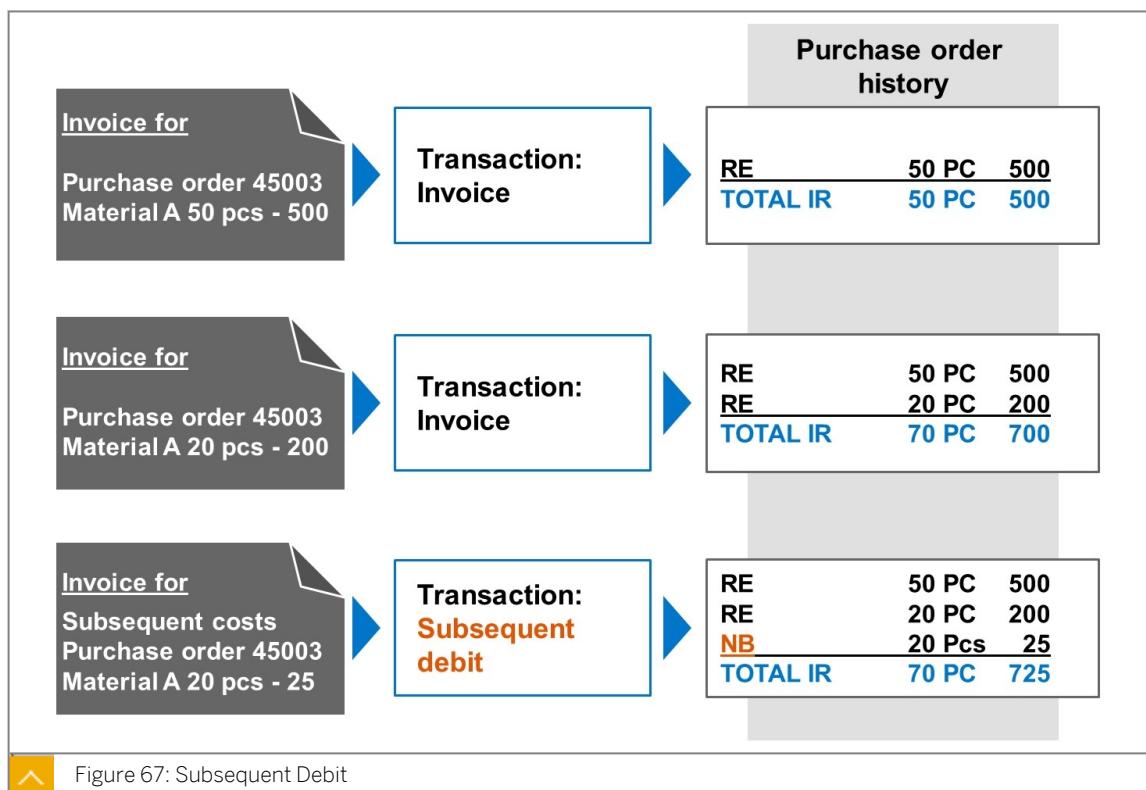


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter subsequent debit

Subsequent Debits/Credits



A subsequent debit or a subsequent credit arises if you receive an invoice or credit memo after a transaction has been settled.

A subsequent debit or credit changes the total invoiced value of a purchase order (PO) item; the total invoiced quantity remains unchanged. Only a value-based update of the purchasing transaction takes place and there is no quantity-based update.

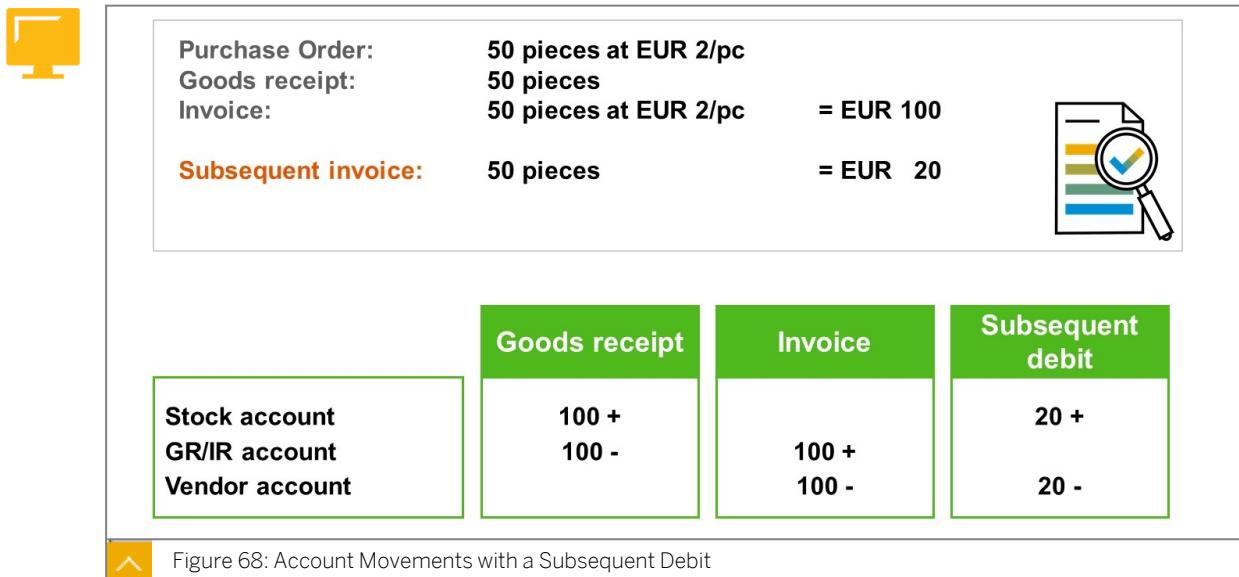
You must enter an invoice as a **subsequent debit** if a PO item has already been invoiced and further costs are incurred. For example, a vendor accidentally invoices you an amount that is too low, and sends you a second invoice for the difference.

You must enter a credit memo as a **subsequent credit** if purchase order PO item was invoiced at too high a price and you have received a credit memo. For example, a vendor accidentally invoices you a price that is too high and sends a credit memo for the difference.

If you enter a subsequent debit or credit, the system suggests the entire invoiced quantity, but no value. The maximum quantity that you can subsequently debit or credit is the quantity that has already been invoiced. You can only enter a subsequent debit or credit for a PO item if an invoice has already been posted for this item.

A subsequent debit or credit cannot refer to a particular invoice. They are listed separately in the PO history.

Account Movements with a Subsequent Debit



When you post a subsequent debit or credit, the system posts the invoice/credit amount to the vendor account.

The remaining account movements depend on whether the quantity to be subsequently debited/credited has already been delivered or not.

- If the quantity associated with subsequently debit or credit has been delivered, the system makes the offsetting entry to the stock account or the price difference account, depending on the price control. For PO items with account assignment, the system makes the offsetting entry to the consumption account.
- If the quantity of the subsequent debit or credit has not been delivered, the system makes the offsetting entry to the goods receipt/invoice receipt (GR/IR) clearing account. When the GR is posted, the system posts the debit or credit to the stock account or the price difference account, depending on the price control. For PO items with account assignment, the system posts to the consumption account.



LESSON SUMMARY

You should now be able to:

- Enter subsequent debit

Entering Delivery Costs



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter planned delivery costs
- Enter unplanned delivery costs

Delivery Costs

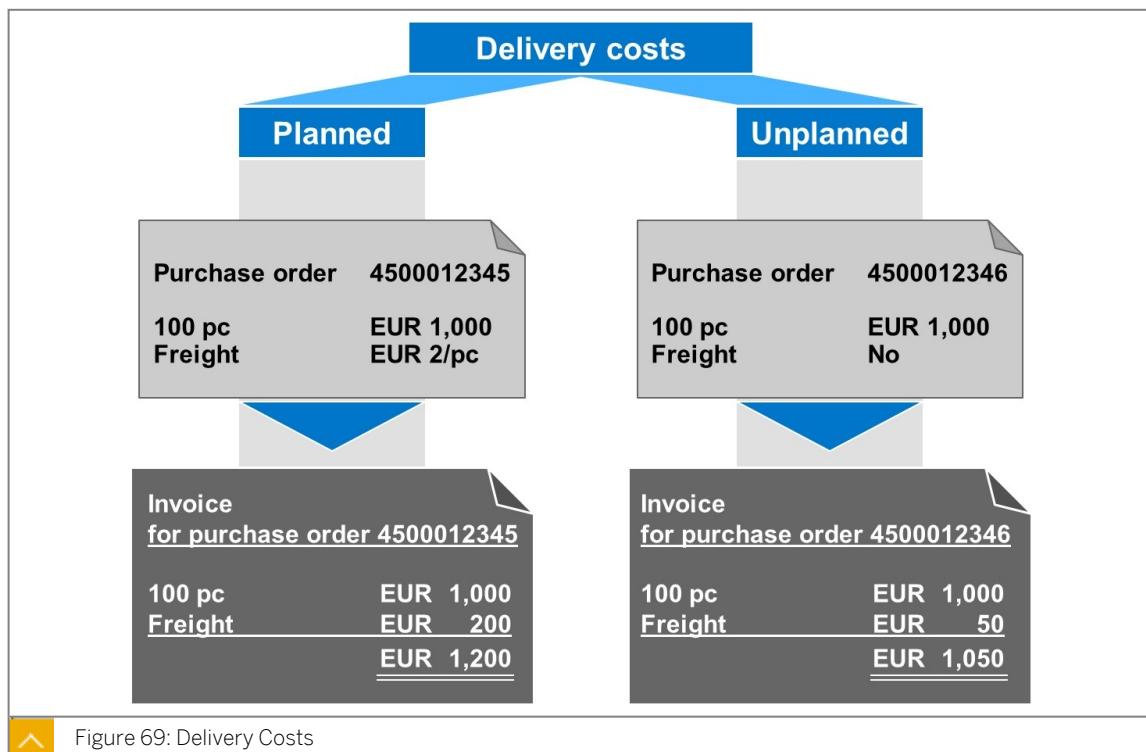


Figure 69: Delivery Costs

Freight costs can be planned in the purchase order. However, it often happens that these costs are not exactly known when the purchase order is created and are only specified in the invoice. In the invoice entry, you must therefore differentiate between planned and unplanned delivery costs.

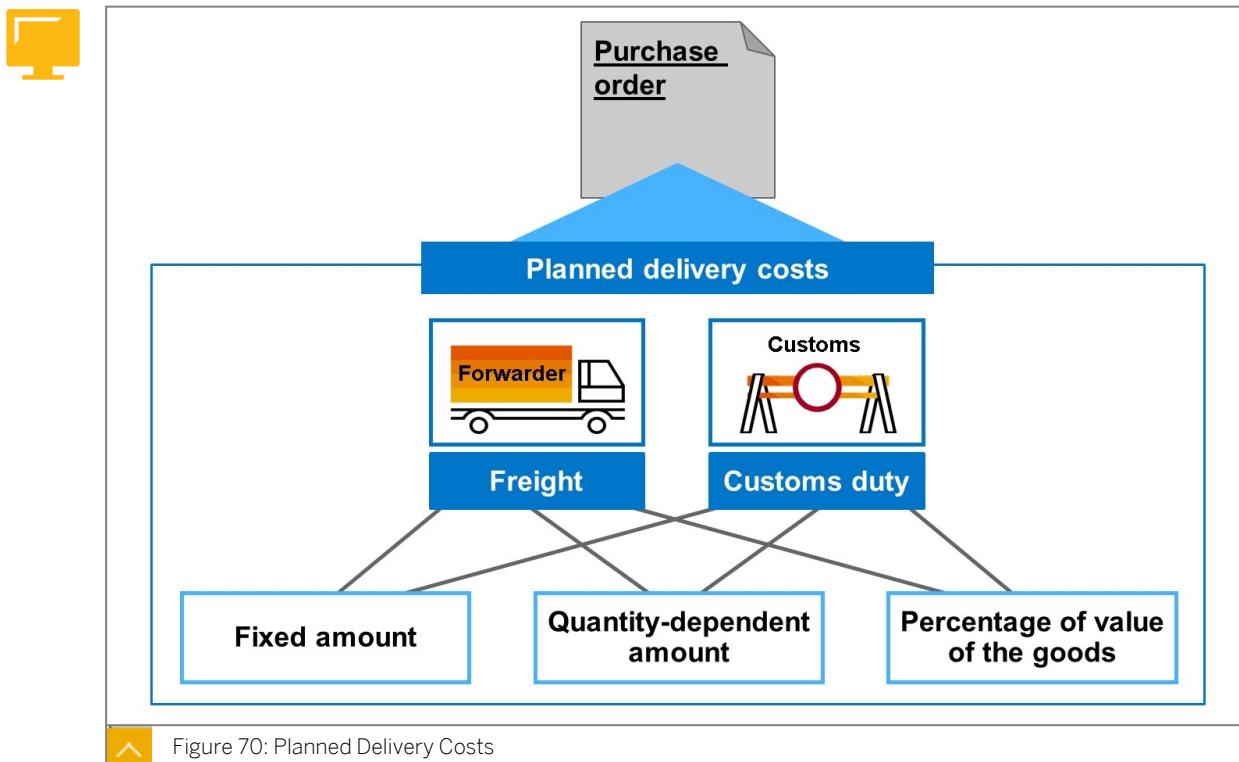
Planned Delivery Costs

Planned delivery costs are delivery costs that are agreed prior to the PO with the vendor and with a freight forwarder or customs office. This means that when the PO is created, these costs have already been entered for each item by special condition types.

During invoice entry, these planned delivery costs are issued for each PO item and condition type. The advantage of planned delivery costs is that they become part of the valuation of a

material at goods receipt (GR), or for a PO with account assignment are debited to the account assignment object.

Planned delivery costs are not binding to one specific vendor. When planning the delivery costs in the PO, you can enter a vendor independent of the goods vendor, such as a freight vendor or a customs authority, for the delivery costs. However, in invoice verification these delivery costs can also be posted to a different invoicing party if you enter a different vendor on the *Details* tab page.

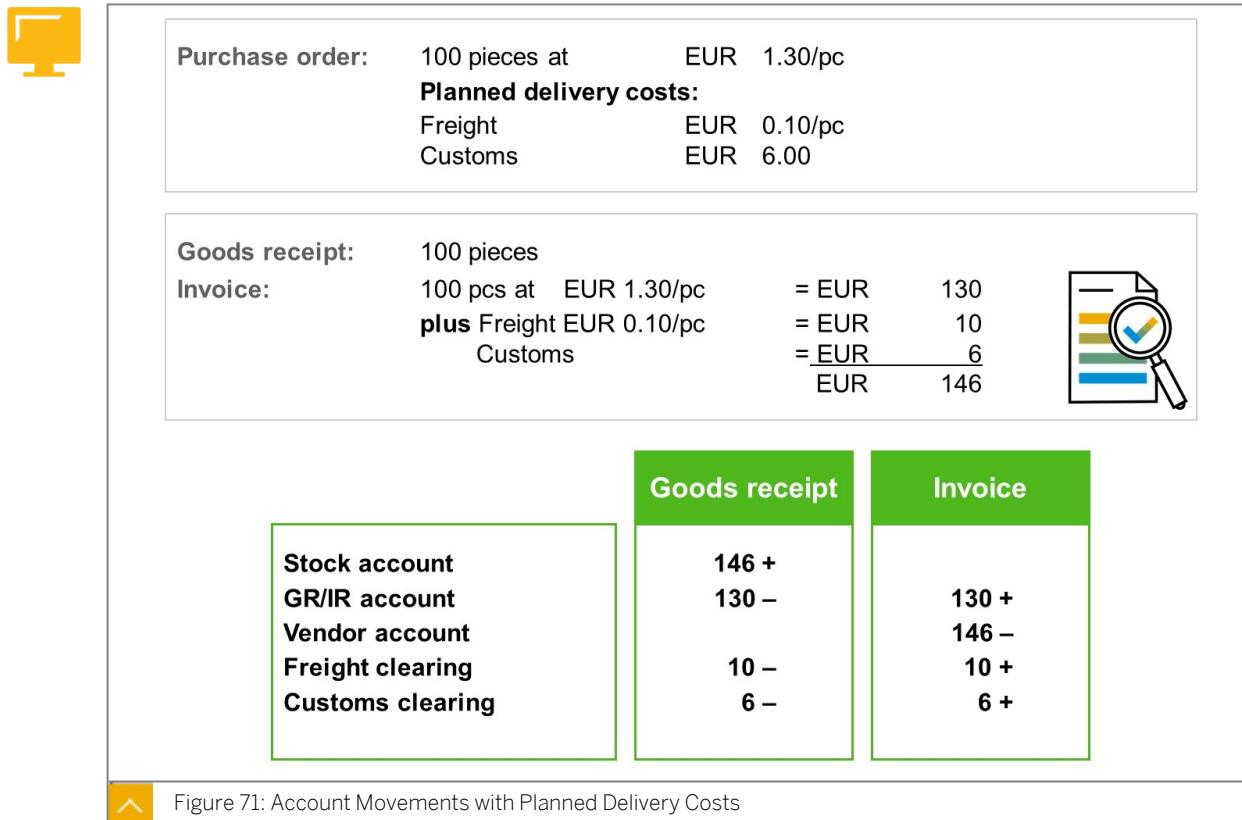


In the case of planned delivery costs, a distinction is usually made between freight costs and customs duty.

Delivery costs can be calculated in one of the following ways:

- Fixed amount (independent of scope of supply)
- Quantity-dependent amount
- Percentage of value of goods to be delivered

Account Movements with Planned Delivery Costs



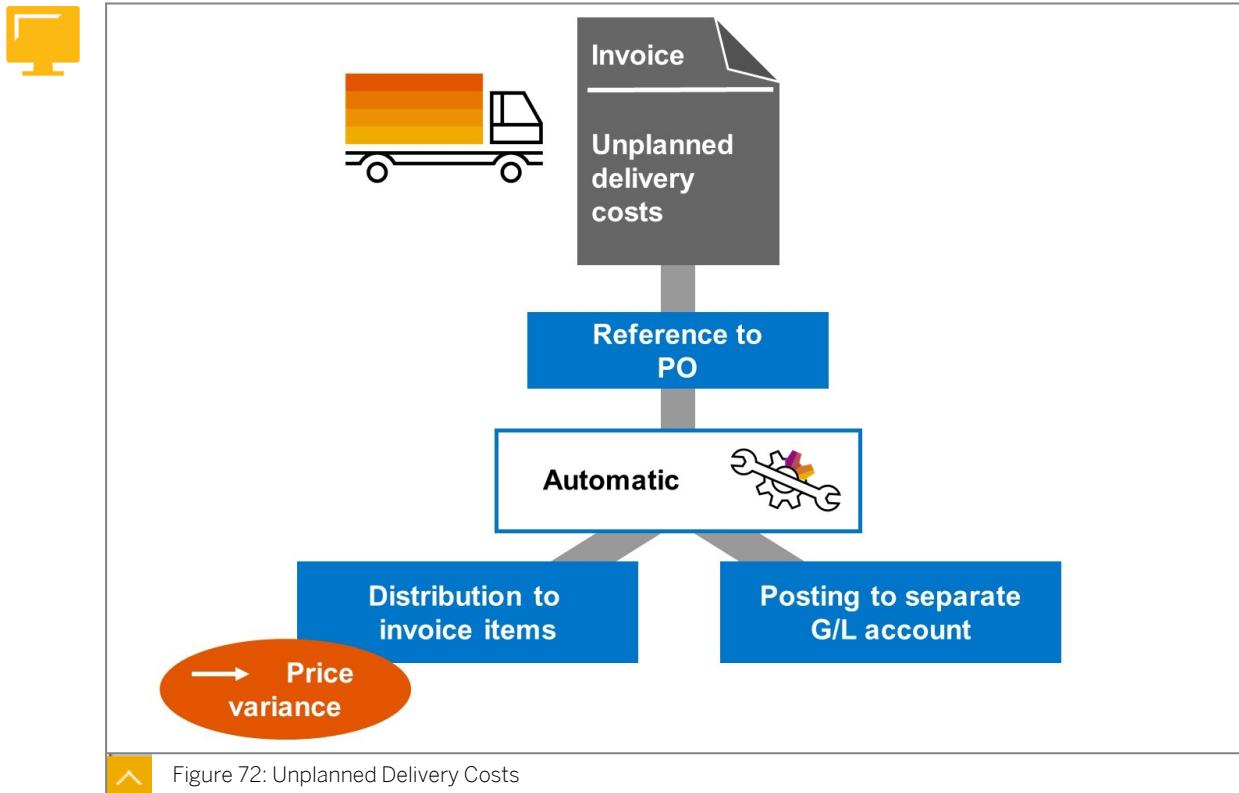
For planned delivery costs at GR, the system posts relevant accruals to a clearing account. Depending on the origin type, you set up a specific clearing account in Customizing. This clearing account is balanced when the corresponding invoice is posted.

If no price differences arise between the planned delivery costs from the PO and the requested delivery costs in the invoice, posting the invoice has no effect on the valuation of the material.

If price differences arise, they are posted according to the same logic as variances from the net order prices.

Unplanned Delivery Costs

Unplanned delivery costs are those that were not agreed in the purchase order and are only recorded in the invoice verification. When you enter the invoice, enter the total amount of the unplanned delivery costs on the *Details* tab page in the *Header* data.



In Customizing, you configure whether the system automatically distributes the unplanned delivery costs among the invoice items or posts the costs to a separate general ledger (G/L) account.

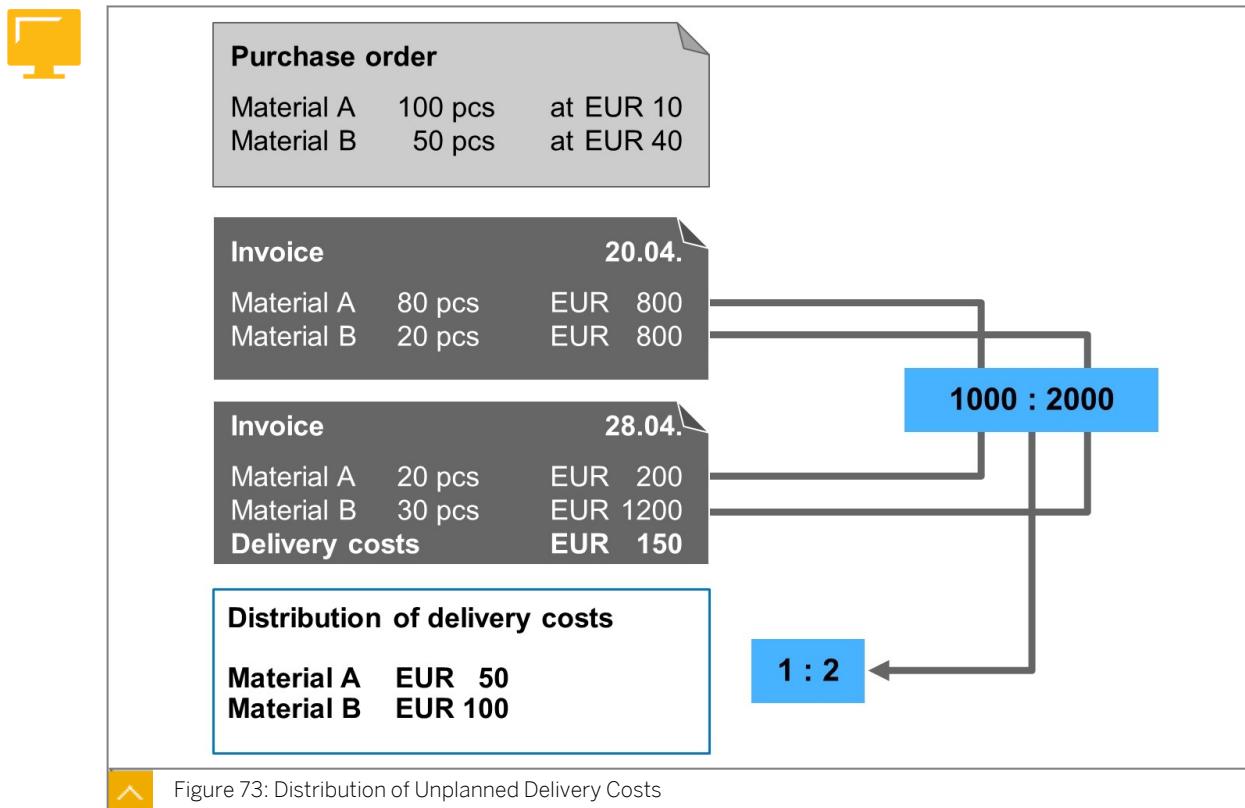
The automatic distribution can only be made to the material items. However, it is also possible to include the items for the planned delivery costs in the distribution.

By distributing the delivery costs to the invoice items, the amounts of the invoice items are automatically increased by the delivery costs part. When you post the invoice, the unplanned delivery costs are treated as price variances. However, the system does not perform a price check after automatically distributing the delivery costs. Unplanned delivery costs that were distributed to individual items are not listed separately in the PO history. They are already a part of the calculated value.

If the unplanned delivery costs are posted to a separate G/L account, the unplanned delivery costs are not debited to the stocks or the account assignment objects. The system does not show unplanned delivery costs that are posted to a separate G/L account in the PO history.

An invoice that contains only unplanned delivery costs can be posted with reference to a PO as a subsequent debit only. This means that at least one invoice for this PO must be received. Otherwise, all the invoiced values would be zero and it would not be possible to distribute the delivery costs.

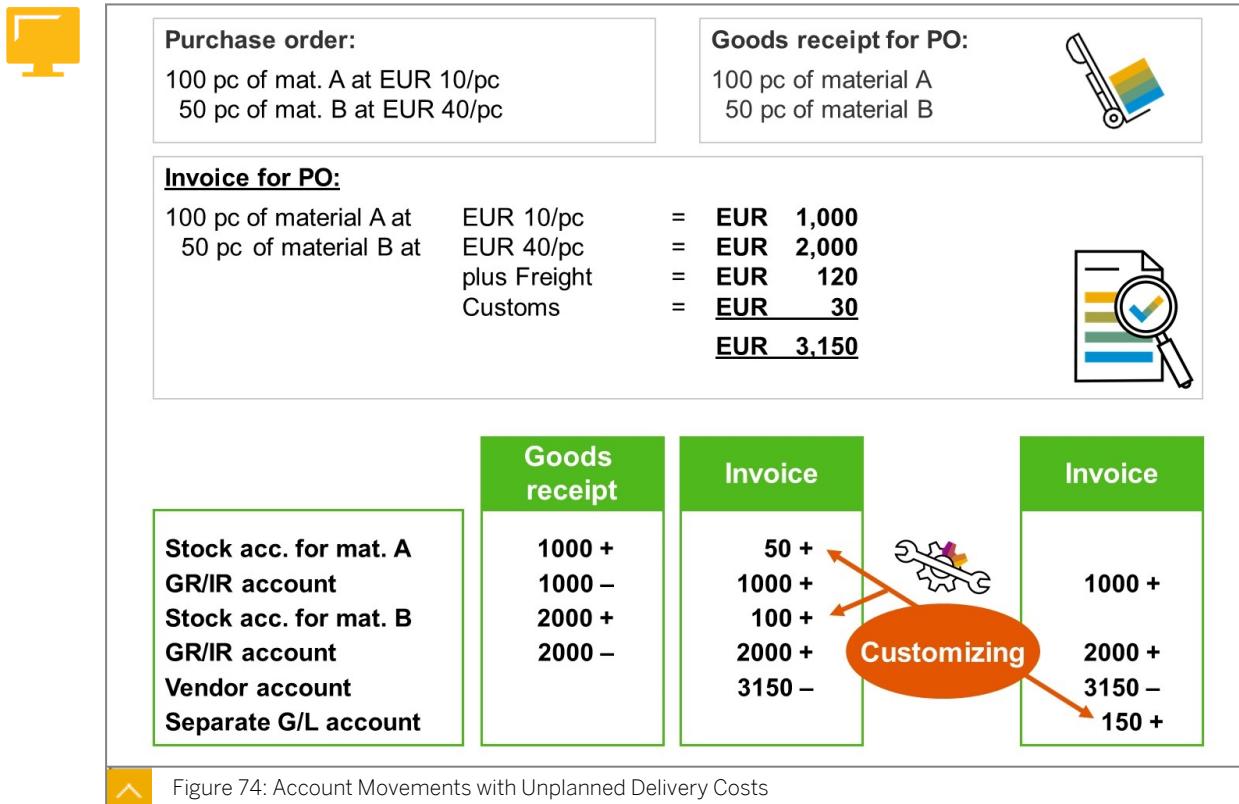
Distribution of Unplanned Delivery Costs



The system apportions the unplanned delivery costs to the items in proportion to the total value invoiced so far and the values in the current invoice.

You can also distribute unplanned delivery costs manually to individual invoice items by manually changing the amounts of the invoice items. In this case, the delivery costs are entered in the same way as price variances. The system performs a price check and the invoices are blocked wherever the tolerances set in Customizing are exceeded.

Account Movements with Unplanned Delivery Costs



If the automatic distribution of unplanned delivery costs is active in Customizing for the company code, the partial amounts allocated to the items are updated as price variances.

Based on the price control of the material, the following movements occur:

- For a material with moving average price (MAP), the system posts to the stock account as long as there is a stock coverage.
- For a material with standard price, the system posts the unplanned delivery costs to the price difference account you have set up.

However, if you selected posting to a separate G/L account in Customizing, then you must also define the G/L account that is to be posted automatically in Customizing. For this, maintain the *Unplanned Delivery Costs* (UPF) transaction in the automatic account determination. The total amount of the unplanned delivery costs is then posted to this G/L account when you post the invoice.

You can maintain a default value for each company code in Customizing for the tax code of the separate posting line.

Customizing – Unplanned Delivery Costs

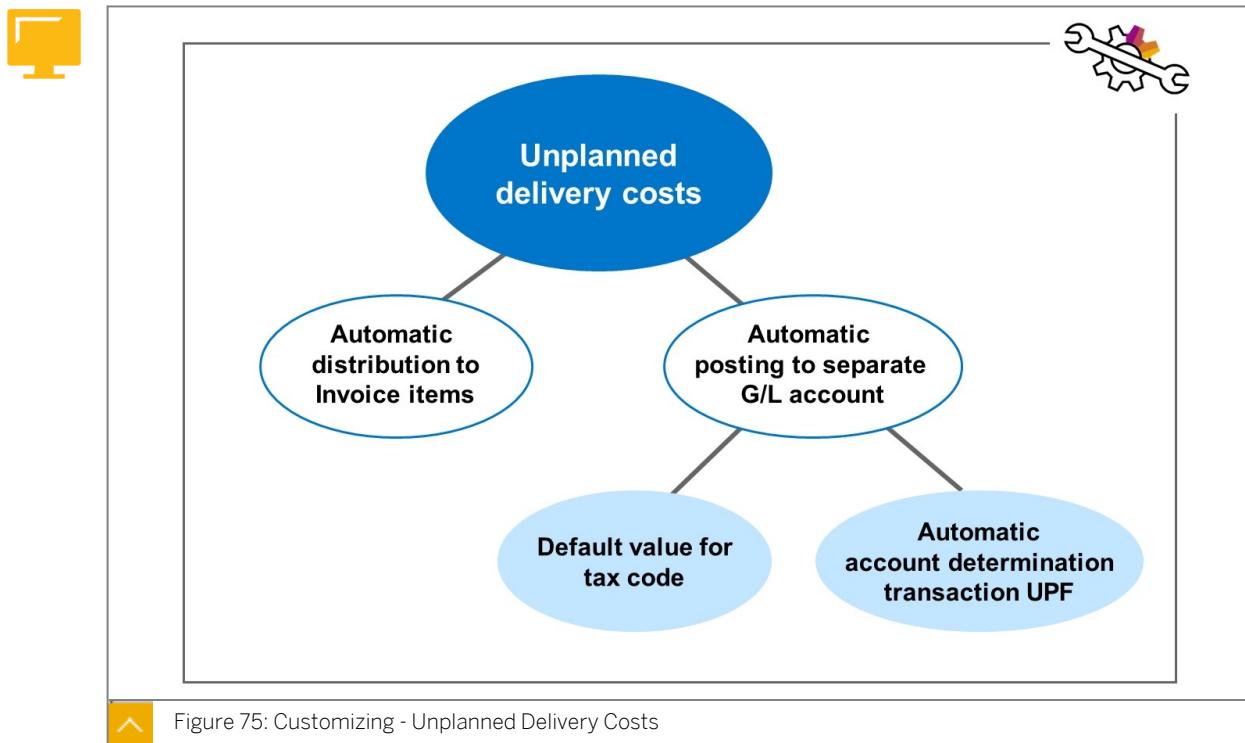


Figure 75: Customizing - Unplanned Delivery Costs

You find the Customizing settings relevant for unplanned delivery cost under the following paths:

- SPRO → Materials Management → Logistics Invoice Verification → Incoming Invoice → Configure How Unplanned Delivery Costs Are Posted
- SPRO → Materials Management → Logistics Invoice Verification → Incoming Invoice → Maintain Default Values for Tax Codes (OMR2)
- SPRO → Materials Management → Logistics Invoice Verification → Configure Automatic Postings (OMR0)



LESSON SUMMARY

You should now be able to:

- Enter planned delivery costs
- Enter unplanned delivery costs

Entering Invoices Without Reference to a Purchase Order



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter an invoice without reference to a purchase order

Invoices without Reference to a Purchase Order

The SAP system allows you to post invoices that do not refer to a PO or to a delivery. In contrast to invoices with a reference, the system does not propose any default values for the invoice items because it cannot determine any PO items or posted goods receipts (GRs) for this invoice.

In the *Create Supplier Invoice – Advanced* app and the MIRO transaction you have the following options for entering items without purchase order reference:

- Posting to a general ledger (G/L) account
- Posting to a material stock account
- Posting to an asset

In the app *Create Supplier Invoice* you can additionally only post directly to G/L accounts.

The screenshot shows the 'Create Supplier Invoice - Advanced' application interface. At the top, there are three tabs: 'Header' (selected), 'Payment', and 'Detail'. The 'Header' tab contains fields for 'Invoice date', 'Posting date', 'Amount/currency', 'Tax amount', and 'Tax code'. The 'Payment' tab contains fields for 'BaselineDt' and 'Terms of payment'. The 'Detail' tab contains a field for 'Invoicing party'. Below these tabs are two tables: 'G/L Account' and 'Material'. The 'G/L Account' table has columns for 'G/L account', 'Amount', and 'Acc.assignment'. The 'Material' table has columns for 'Material', 'Plant', 'Amount', and 'Quantity'. Numbered circles (1, 2, 3, 4) are overlaid on the tabs and tables.

Figure 76: Create Supplier Invoice - Advanced App: Creating Invoices without Reference

If you create an invoice without reference, you must first enter the header data in the same way as for an invoice with reference. In the basic data, you enter invoice date, reference, invoice amount, and currency. However, you must also manually enter the invoicing party (in MIRO on the *Details* tab page). Only then you can enter items for G/L account, material, or asset.



Hint:

For invoices without a purchase order reference, the payment terms are determined from the company code data of the supplier master record.

In the *Create Supplier Invoice – Advanced* app, unlike in the *Create Supplier Invoice* app, the terms of payment are determined only after you have entered an item.

For the *Create Supplier Invoice – Advanced* app and the MIRO transaction, you must activate direct posting to G/L account, material, and asset in Customizing. To do so, in Customizing for Materials Management choose *Invoice Verification* → *Incoming Invoice* → *Activate Direct Posting to G/L & Material Accounts & Assets*

Direct Posting to a G/L Account



The screenshot shows the 'Create Supplier Invoice – Advanced' app on the 'G/L Account' tab. The interface includes tabs for 'PO Reference', 'G/L Account' (which is selected), 'Material', 'Contract Reference', and 'Asset'. A sub-header 'Layout: Standard 1' is visible. The main area displays a table of invoice items with columns: St... (checkbox), G/L acct (dropdown), Short Text, D/C (dropdown), Amount in doc.curr., T... (dropdown), Tax juris..., W/o... (checkbox), Text, Cost center, and Order. Two items are selected: '51600000 Consptn Trde Gds' with a debit amount of 150,00 and '65050000 Unplanned del.costs' with a debit amount of 40,00. Below the table are several small blue icons for navigation.

Figure 77: Create Supplier Invoice – Advanced App: Direct Posting to a G/L Account

You post to G/L accounts if, for example, amounts are settled for freight costs but you do not want to add these to the material or cost accounts for the invoice items.

In the *Create Supplier Invoice – Advanced* app or the corresponding transaction, on the *G/L Account* tab page, you can select different display variants to obtain the relevant account assignment fields in the item list.



Note:

The display variants on the *G/L Account* tab page correspond to the screen variants for items in the *Enter Vendor Invoice (FB60)* transaction.

When posting directly to a G/L account, no posting is made to a GR/invoice receipt (IR) clearing account. The system posts manually entered G/L account lines directly to the G/L account specified. The control specified in the master record of the G/L account is taken into account. The system checks whether manual postings can be made to the account or whether it is subject to account assignment requirement.

Direct Posting to a Material



The screenshot shows a software interface titled "Direct Posting to a Material". At the top, there are tabs: PO Reference, G/L Account, Material (which is underlined), Contract Reference, and Asset. Below the tabs is a table with columns: Material, Plnt, Valuation type, D/C, Amount, Quan..., Ba..., Tax ..., W/o Cash Dscnt. The table contains several rows of data. At the bottom of the table are icons for copy, paste, and delete.

Material	Plnt	Valuation type	D/C	Amount	Quan...	Ba...	Tax ...	W/o Cash Dscnt
A515-00	1010	D.. v	150,00	22	PC	1... v	<input type="checkbox"/>	
C515-00	1010	D.. v	600,00	100	PC	1... v	<input type="checkbox"/>	
D515-00	1010	D.. v	250,00	50	PC	1... v	<input type="checkbox"/>	
		D.. v				1... v	<input type="checkbox"/>	
		D.. v				1... v	<input type="checkbox"/>	
		D.. v				1... v	<input type="checkbox"/>	
		D.. v				1... v	<input type="checkbox"/>	

Figure 78: Create Supplier Invoice – Advanced App: Direct Posting to a Material

You post directly to material accounts (stock accounts), for example, if you want to post a subsequent credit or debit to a material, without an existing PO reference.

When posting directly to a material, no posting is made to a GR/IR clearing account. The system posts manually entered material lines directly to the stock account or price difference account, depending on price control and stock coverage. You must specify the plant as well as the material number and amount in order for the system to determine the material valuation and stock quantity. The system determines the existing stock quantities automatically. However, this proposed quantity can be overwritten.



LESSON SUMMARY

You should now be able to:

- Enter an invoice without reference to a purchase order

Handling Credit Memos and Reversals



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Enter a credit memo
- Cancel an invoice

Credit Memos

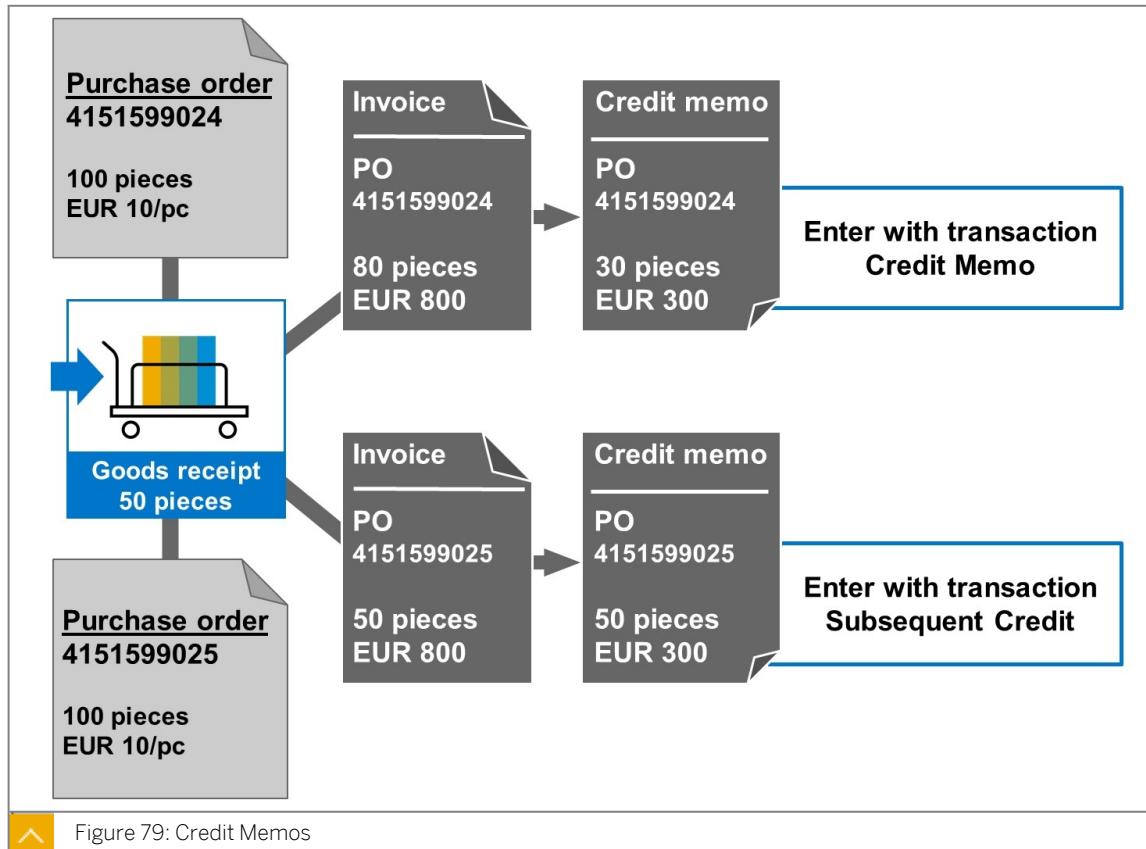


Figure 79: Credit Memos

You usually receive a credit memo from a vendor if the quantity was too large or the price too high, or goods that were already invoiced are returned.

As is the case for invoices, credit memos refer to POs or goods receipts (GRs).

- You post a credit memo if the invoices quantity is too large. When you post the credit memo, the total invoiced quantity in the PO history is reduced by the credit memo quantity. The maximum quantity for which you can make a credit memo is the quantity that has already been invoiced.

Just as a corresponding goods receipt is expected or posted for an invoice, in the case of a credit memo, the system assumes that the credit memo belongs to a return delivery or reversal of the GR. This means that the credit memo is settled using the GR/invoice receipt (IR) clearing account.

- You post a subsequent credit if the price in the invoice is too high. The total quantity invoiced for the PO item remains the same, but the total invoiced value is reduced.

The account movements for a credit memo or a subsequent credit are the same as when you post an invoice or subsequent debit. The system posts to the same accounts, but with the opposite +/- sign next to the entry.

Reversals

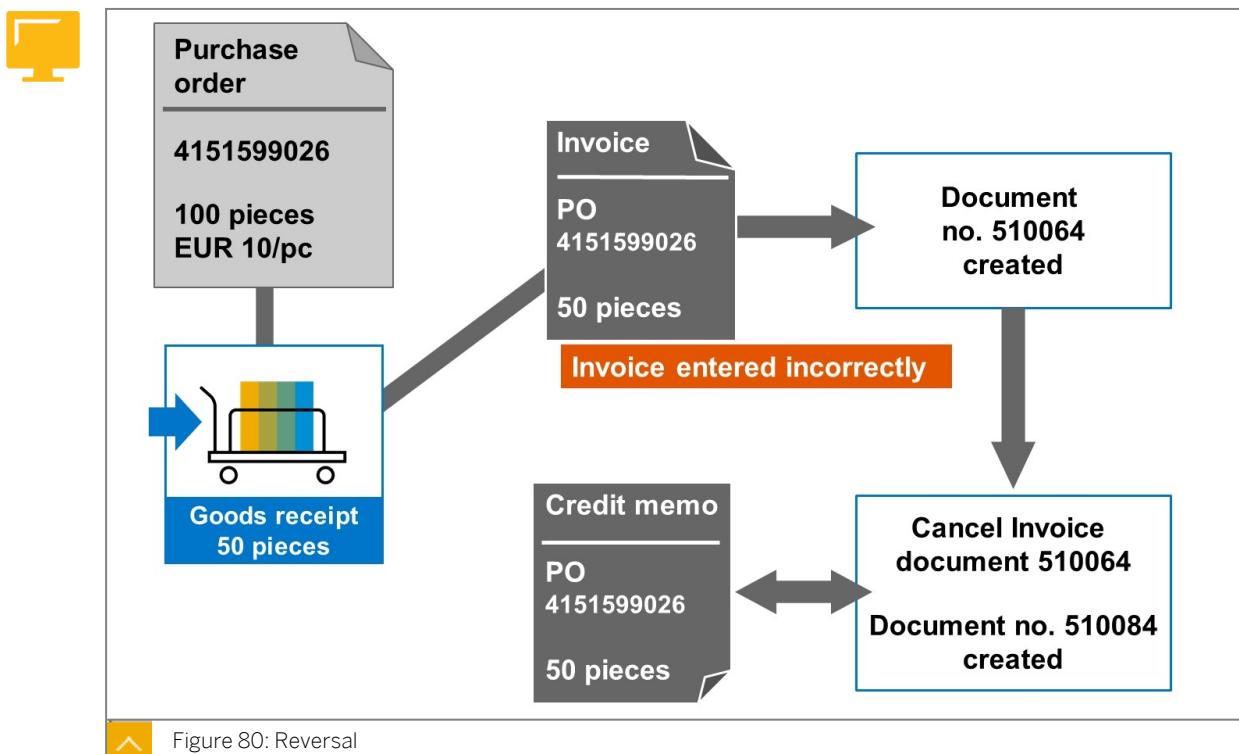


Figure 80: Reversal

Invoice documents, either invoices or credit memos, can be subsequently canceled if, for example, they were posted incorrectly.

When you reverse an invoice, the system automatically creates a credit memo based on the data in the invoice document. The system automatically determines the credit memo amount and quantity from the invoice. This avoids any variances between the invoice and the credit memo.



Note:

If you cancel an invoice, the system automatically generates a credit memo. If you cancel a credit memo, the system automatically generates an invoice.

When you reverse an invoice, the account movements made when the invoice was posted cannot always be reversed. For example, there was sufficient stock coverage when you posted an invoice with a price variance for a material with moving average price (MAP).

However, when you reverse the invoice there is insufficient stock coverage. In this case, the system posts the price difference in the credit memo to a price difference account. This occurs even though the price variance was debited to the stock account when you posted the invoice.

When you reverse an invoice, all items in the document are reversed. You can reverse part of an invoice only by manually entering a credit memo.

You cannot reverse a reversal document. You cannot reverse a balanced invoice or a balanced credit memo either.

When canceling invoices in Logistics Invoice Verification, the document lines in Financial Accounting are not automatically cleared. SAP recommends running this periodically (for example, daily in the background).



LESSON SUMMARY

You should now be able to:

- Enter a credit memo
- Cancel an invoice

Learning Assessment

1. In which of the following cases should you enter an invoice as a subsequent debit?

Choose the correct answers.

- A You have already posted an invoice for 80 pieces for a purchase order. Now you receive an invoice for another 20 pieces for the same purchase order.
- B The gold price was too low in an invoice for gold-plated parts. A second invoice is created to invoice the difference.
- C One part has been inspected and found to be faulty but can still be partially used. The vendor sends you a credit memo for 10% of the original invoice amount.
- D In the payment, the cash discount has been deducted, even though the cash discount period has expired. The vendor demands the cash discount back.

2. Which one of the following statements is correct with respect to delivery costs?

Choose the correct answer.

- A An invoice for planned delivery costs can only be posted after at least one invoice has been posted for goods or service items.
- B Planned delivery cost can include the revised material cost sent by the vendor in a subsequent invoice.
- C In the purchase order, you can specify a vendor other than the goods supplier for planned delivery costs.
- D Unplanned delivery costs are always apportioned on the basis of values in the current invoice document.

3. Unplanned delivery costs are entered via special condition types at invoice receipt.

Determine whether this statement is true or false.

- True
- False

4. What should you pay attention to when you want to enter an invoice without reference to a purchase order (PO) in Logistics Invoice Verification?

Choose the correct answers.

- A A direct posting to a material is not possible with the *Create Supplier Invoice* app.
- B The vendor cannot be a one-time vendor.
- C The currency must always be entered manually.
- D The terms of payment are determined from the accounting data in the supplier master record.

5. Which statements regarding credit memos are applicable?

Choose the correct answers.

- A Credit memos must contain the same terms of payment as the original invoice.
- B You can only enter credit memos for complete items. The differences in credit memos for partial quantities first have to be corrected using a reversal posting.
- C You can also enter credit memos for blocked invoices.
- D If you cancel an invoice, the system automatically generates a credit memo.

6. You cannot reverse a reversal document.

Determine whether this statement is true or false.

- True
- False

Learning Assessment - Answers

1. In which of the following cases should you enter an invoice as a subsequent debit?

Choose the correct answers.

- A You have already posted an invoice for 80 pieces for a purchase order. Now you receive an invoice for another 20 pieces for the same purchase order.
- B The gold price was too low in an invoice for gold-plated parts. A second invoice is created to invoice the difference.
- C One part has been inspected and found to be faulty but can still be partially used. The vendor sends you a credit memo for 10% of the original invoice amount.
- D In the payment, the cash discount has been deducted, even though the cash discount period has expired. The vendor demands the cash discount back.

Correct. A subsequent debit is to be entered if an additional amount is invoiced for a quantity that has already been invoiced. This is the situation in cases B and D. In case A, an additional invoice is to be entered for the purchase order, because a quantity that has not yet been invoiced is being invoiced. In case C, it is a credit memo that is to be entered as a subsequent credit.

2. Which one of the following statements is correct with respect to delivery costs?

Choose the correct answer.

- A An invoice for planned delivery costs can only be posted after at least one invoice has been posted for goods or service items.
- B Planned delivery cost can include the revised material cost sent by the vendor in a subsequent invoice.
- C In the purchase order, you can specify a vendor other than the goods supplier for planned delivery costs.
- D Unplanned delivery costs are always apportioned on the basis of values in the current invoice document.

Correct. An invoice can be entered for planned delivery costs independently of the material costs. Corrected material costs should not be settled via the planned delivery costs, but directly via the material item. For delivery costs, you can store an alternative vendor in the purchase order. In the case of an invoice that only settles the planned delivery costs, this vendor is proposed as the invoicing party. When unplanned delivery costs are distributed automatically, the total invoice amounts per item are always taken into account.

3. Unplanned delivery costs are entered via special condition types at invoice receipt.

Determine whether this statement is true or false.

True

False

Correct. Delivery costs that are already planned in the purchase order are mapped using separate condition types. Unplanned delivery costs are not entered via condition types.

4. What should you pay attention to when you want to enter an invoice without reference to a purchase order (PO) in Logistics Invoice Verification?

Choose the correct answers.

A A direct posting to a material is not possible with the *Create Supplier Invoice* app.

B The vendor cannot be a one-time vendor.

C The currency must always be entered manually.

D The terms of payment are determined from the accounting data in the supplier master record.

Correct. In the *Create Supplier Invoice* app, you can only enter items directly to a G/L account, not to a material. And material accounts are not directly postable. A one-time vendor can always be used in invoice entry. When entering invoices without a purchase order reference, only general and company code-dependent data is transferred from the vendor master record. Therefore, no currency is suggested, but must be entered manually.

5. Which statements regarding credit memos are applicable?

Choose the correct answers.

A Credit memos must contain the same terms of payment as the original invoice.

B You can only enter credit memos for complete items. The differences in credit memos for partial quantities first have to be corrected using a reversal posting.

C You can also enter credit memos for blocked invoices.

D If you cancel an invoice, the system automatically generates a credit memo.

Correct. The terms of payment in a credit memo can vary from the invoice. You can post credit memos for partial quantities. The other answers are correct.

6. You cannot reverse a reversal document.

Determine whether this statement is true or false.

True

False

Correct. You cannot reverse a reversal document. You cannot reverse a balanced invoice or credit memo either.

Lesson 1

Performing Receipt Settlements

133

UNIT OBJECTIVES

- Create invoices automatically from goods receipt data

Performing Receipt Settlements



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create invoices automatically from goods receipt data

Evaluated Receipt Settlement

In the case of automatic settlement of goods receipts (Evaluated Receipt Settlement = ERS), you agree with the supplier that the supplier does not create an invoice for an ordering transaction. Instead, you (the goods recipient) allow the SAP system to generate the relevant invoice automatically. In the ERS, this invoice represents a credit memo for the supplier. The supplier is informed with a message (a credit memo) about the settlement of deliveries.

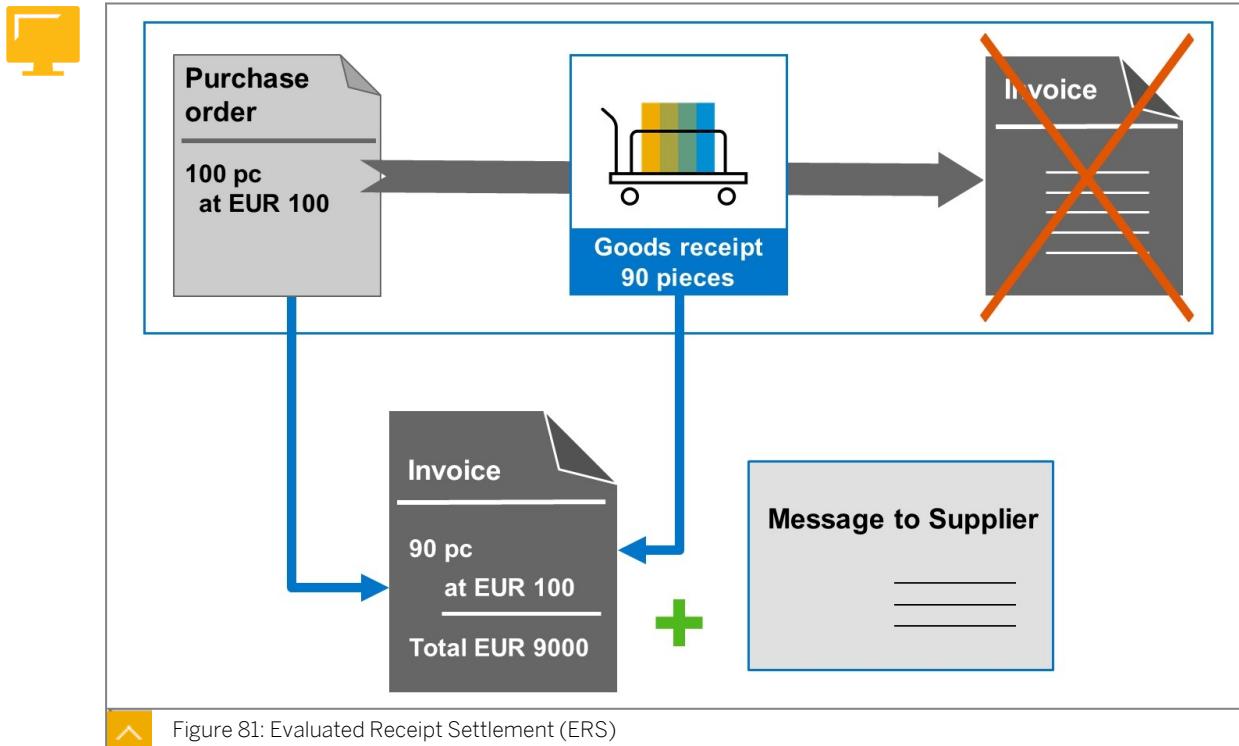


Hint:

The ERS is also described as the credit memo procedure.

The ERS procedure has the following advantages:

- Ordering transactions are completed more quickly.
- Entry errors are avoided.
- Quantity and price variances do not occur in invoice verification.



The basis for creating the invoice is the data from the purchase order (PO) and relevant goods receipts (GRs). The system calculates the amount that must be paid to the vendor using the following data:

- Payment conditions (terms of payment) from the PO header data
- Order price from the PO item
- Tax information from the PO item
- Delivered quantities from goods receipts, that have not been invoiced yet (using the PO history for the PO item)

If you use the ERS procedure, the conditions arranged with the vendor must be clear and you have to continuously update the POs in the system.

If you have already returned settled goods to the vendor, the ERS creates a credit memo with the value of the returned quantity (this credit memo represents a debit memo for the vendor).

ERS - Prerequisites

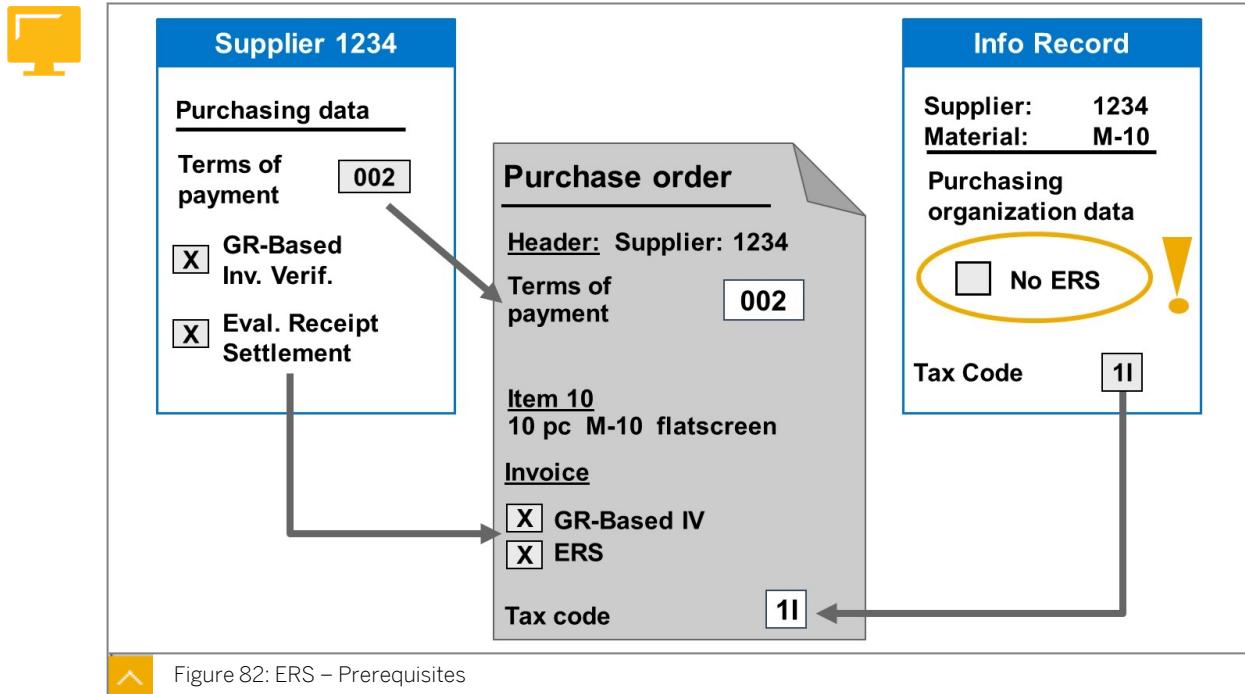


Figure 82: ERS – Prerequisites

To enable you to settle goods receipts for a supplier automatically, the following prerequisites must be met.

- The *Evaluated Receipt Settlement (Eval. Receipt Settlement)* indicator must be set in the supplier master record. The indicator can be found on the purchasing organization data of the supplier master record.
- A *Terms of payment key* must be specified in the header data of the purchase order. The terms of payment key can be proposed from the purchasing organization data of the supplier master record. Note that this is a terms of payment key for which a default value for the baseline date is set in Customizing.
- The following indicators must be set in the purchase order item:
 - The indicator for automatic evaluated receipt settlement (this indicator is only proposed in the purchase order item if it has been set in the supplier master record).
 - The indicator for goods receipt-based invoice verification (this indicator can be proposed from the purchasing organization data of the supplier master record or from the info record for supplier/material/purchasing organization).
 - The tax code (this indicator can, for example, be defined in the info record for vendor/material/purchasing organization or it can be transferred from the contract item during contract releases).
- The indicator for the estimated price must not be set in the order item.

The *Estimated price* indicator can be found in the ME21N transaction and the *Create Purchase Order – Advanced* app in the item details on the *Condition Control* tab page.

- You must enter the goods receipt with reference to the purchase order.
- The necessary settings for determining a message must exist in Customizing:
IMG → Materials Management → Logistics Invoice Verification → Message Determination.

In the purchasing info record there is a *No ERS* indicator. With this indicator, you can ensure that automatic GR settlement is not proposed for a specific material in the purchase order. For example: in the master record of supplier A, the *ERS* indicator is set. In the info record for supplier A and material X, the *No ERS* indicator is set. If you now order material X from supplier A, the *ERS* indicator is not set in this purchase order item. Note that this is only a suggestion that can be changed by the user.

Planned Delivery Costs in ERS

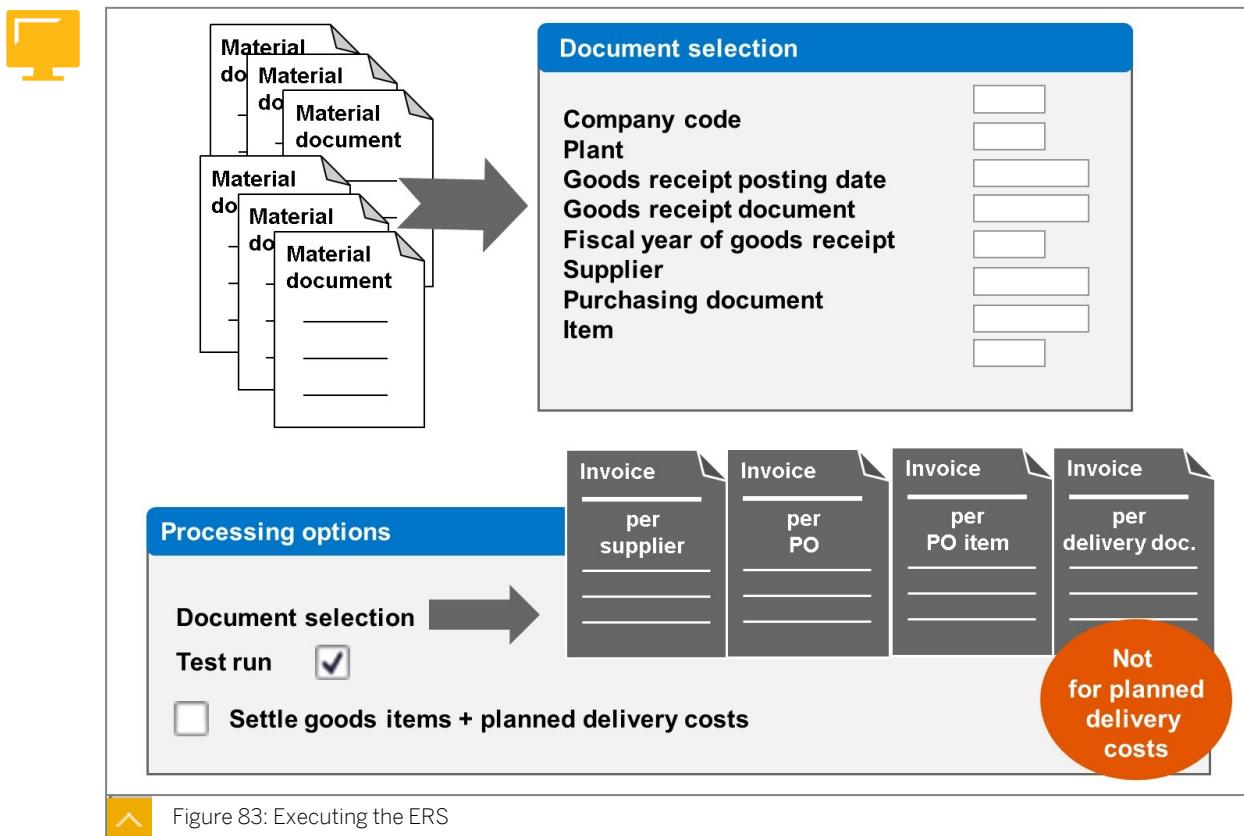
To be able to settle planned delivery costs automatically as well, you must activate this in Customizing for the combination of company code, purchasing organization, and freight vendor.

IMG → Materials Management → Logistics Invoice Verification → Evaluated Receipt Settlement (ERS) → Specify Automatic Settlement of Planned Delivery Costs.

The freight vendor may correspond to the goods vendor. However, you can specify a different vendor for the expense conditions. The indicator for the ERS must not be selected in the supplier master record for this different freight vendor.

The tax code for the item is always used for the delivery cost settlement. You cannot specify a different tax code for this item.

Executing the ERS



To execute the evaluated receipt settlement, choose the *Create Evaluated Receipt Settlement* app in the Fiori launchpad.

Or in the backend system, on the *Easy Access* screen, choose *Logistics → Materials Management → Logistics Invoice Verification → Automatic Settlement → Evaluated Receipt Settlement (ERS)* (transaction `MRRL`).

On the initial screen, specify the operations that the system needs to settle. When you select these operations, the following selection criteria are available:

- Company code
- Plant
- Posting date of GR
- GR document
- Fiscal year of GR
- Supplier
- Purchasing document
- Purchasing document item



Hint:

If you want to settle goods/service items and planned delivery costs in one step, then selection with GR-related data (such as a GR document) is not possible. If only the material or service items are to be settled, this restriction does not apply.

You must also specify the selection that the system uses to create the invoice documents:

- Per supplier
- Per PO
- Per PO item
- Per delivery document or service entry sheet



Hint:

If you want to calculate materials and planned delivery costs in one step, then document selection per delivery document is not possible. This is because GR-based invoice verification is not possible for planned delivery costs.

Planned Delivery Costs in the Case of Evaluated Receipt Settlement

If you only want to settle planned delivery costs, choose the *Create Automatic Delivery Cost Settlement* app in the Fiori launchpad.

Or in the backend system, on the *Easy Access* screen, choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *Automatic Settlement* → *Automatic Delivery Cost Settlement* (transaction MRDC).

This function contains the following adjusted criteria for the document selection:

- Company code
- Freight supplier
- Purchasing document

- Purchasing document item
- Bill of lading

The *Document Selection per Bill of Lading* option replaces the *Document Selection per Delivery Document* option in the list of possible document selections for creating invoices.

In both the transactions `MRRL` and `MRDC`, you can perform a test run before you perform an actual settlement. The result of the settlement is stored in a log, which lists the transactions that were settled.

You can also run the ERS in the background by using the `RMMR1MRS` program. Use the `RMMR1MDC` program if you are settling only delivery costs.



Hint:

The ERS contains a customer exit (`MRMH0001`) and the two Business Add-Ins (BAdIs) (`MRM_ERS_HDAT MODIFY` and `MRM_ERS_IDAT MODIFY`) for customer-specific adjustments.



LESSON SUMMARY

You should now be able to:

- Create invoices automatically from goods receipt data

Learning Assessment

1. Which of the following points must be fulfilled in order to apply the evaluated receipt settlement (ERS) to a purchase order (PO) item?

Choose the correct answers.

- A The ERS indicator must be set in the document item.
- B A tax code must be maintained for the document item.
- C The No ERS indicator must not be set in the info record.
- D The terms of payment of the supplier (to whom the settlement must be made) must be maintained in the supplier's master record.

Learning Assessment - Answers

1. Which of the following points must be fulfilled in order to apply the evaluated receipt settlement (ERS) to a purchase order (PO) item?

Choose the correct answers.

- A The ERS indicator must be set in the document item.
- B A tax code must be maintained for the document item.
- C The *No ERS* indicator must not be set in the info record.
- D The terms of payment of the supplier (to whom the settlement must be made) must be maintained in the supplier's master record.

Correct. The *No ERS* indicator in the info record is merely a default value for the purchasing document. The indicator can still be selected in the purchase order item. If you do want to always exclude a certain material from ERS you could select this checkbox in the info record. The terms of payment of the vendor are not determined from the vendor master record. They are determined from the PO, and so have to be specified in the PO.

Lesson 1

Performing GR/IR Account Maintenance

143

Lesson 2

Using Fiori Apps for GR/IR Reconciliation

147

UNIT OBJECTIVES

- Use the classic GR/IR account maintenance functions
- Use SAP S/4HANA specific apps for GR/IR reconciliation

Unit 5

Lesson 1

Performing GR/IR Account Maintenance



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use the classic GR/IR account maintenance functions

GR/IR Account Maintenance

In an ideal world, amounts and quantities of invoices are always the same as amounts and quantities of the corresponding purchase orders and the goods receipts. In the real world, when there is an open balance on the GR/IR account, you need to check whether the invoice from your supplier really matches the goods you have received.

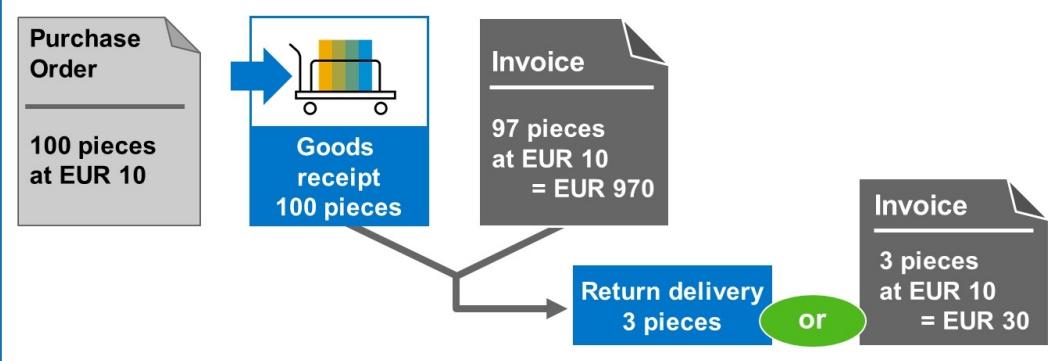
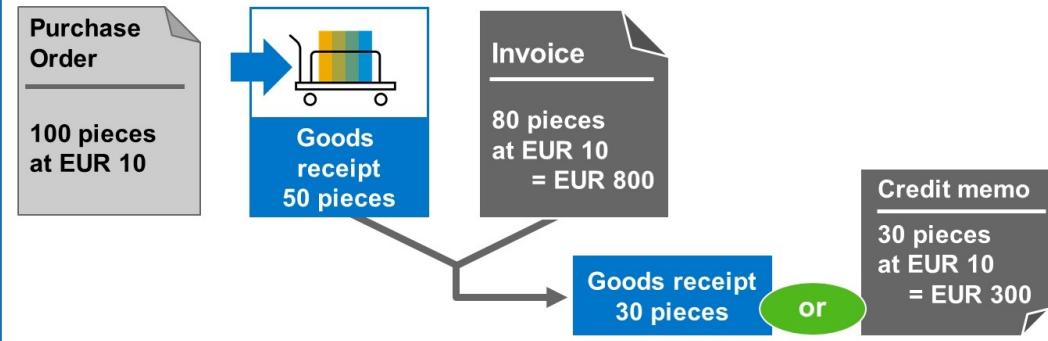


Figure 84: Quantity Variances

The GR/IR clearing account is cleared for a PO item when the delivered quantity and the invoiced quantity are the same.

If the invoiced quantity is more than the delivered quantity, the system expects another GR. If the invoiced quantity is less than the delivered quantity, the system expects another invoice.

If the differences on the GR/IR clearing account are not cleared by a further GR or credit memo, or by an invoice or return delivery, then the GR/IR clearing account must be maintained manually.



Note:

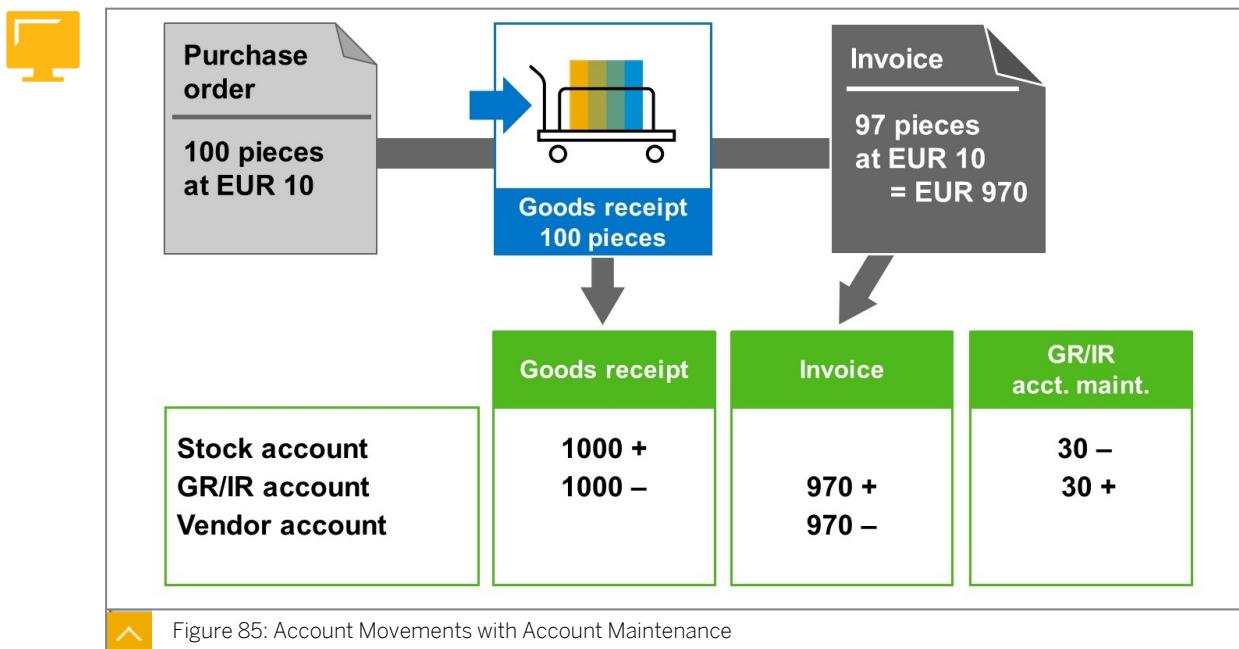
Before maintaining the GR/IR clearing account, establish that no further GRs or IRs are expected for the PO item.

The same principle applies to planned delivery costs. If the delivered quantity differs from the quantity that was calculated for the planned delivery costs, the clearing account for the delivery costs is not balanced. If no more deliveries are received, or if the delivery costs are no longer settled, account maintenance must also be carried out for the clearing account of the delivery costs.

Clearing accounts are maintained periodically, or at the end of the fiscal year, for those PO items for which no further GRs or IRs will be posted.

If quantity differences between the GR and IR for a PO item are cleared using account maintenance, then the system generates an account maintenance document.

Account Movements with Account Maintenance



For a material with moving average price (MAP), the offsetting posting to clear the GR/IR clearing account is posted to the stock account (unless there is no stock coverage). If the material stock is smaller than the quantity to be cleared, the system only partially credits or debits the actual existing stock. The remaining amount is posted to the price difference account.

For a material with a standard price, the system posts the offsetting posting to the price difference account. For a PO item with an account assignment, the system posts the offsetting posting to the consumption account.

Execution Account Maintenance

To clear the GR/IR clearing accounts use the *Clear GR/IR Clearing Account* app in the Fiori launchpad. Or in the backend, you choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *GR/IR Account Maintenance* → *Maintain GR/IR Clearing Account* to start the `MR11` transaction.

Enter the data for the document header of the account maintenance document and the values for selecting the PO items that are to be cleared.

The following criteria can be used to select the PO items that are to be cleared:

- Supplier or freight supplier (when there are planned delivery costs)
- Purchasing organization and purchasing group
- Plant
- Purchasing document, purchasing document item
- PO date
- Purchase document category (PO or scheduling agreement)
- Order type (document type of the PO or scheduling agreement)
- Surplus type: delivery surplus and/or invoice surplus
- Accounts to be cleared: GR/IR clearing account and/or clearing accounts for delivery costs
- Whether the clearing accounts should be cleared for purchase order items that are to undergo evaluated receipt settlement (indicators *ERS Purchase Orders* and *ERS - Delivery Costs*)
- The *Last movement before key date* field, which allows you to restrict the selection to items whose last goods movements fall before a particular date
- Amount of quantity variance (percentage) and amount of value variance (in company code currency)

You can also decide how processing is executed:

- Automatic clearance:

The *Automatic clearance* function can be executed as a background process. To do this, choose *Program* → *Execute in Background*.

- Prepare list:

The selection of individual PO items that show quantity variances is listed in a selection screen. Select the items that you want and then execute the clearing.

If GR/IR account maintenance has been executed for a PO item, the account maintenance document displays in a separate transaction in the PO history. If there is an unexpected GR or IR for the PO item after account maintenance, you can cancel the account maintenance document. To do so, choose *Logistics* → *Materials Management* → *Logistics Invoice Verification* → *GR/IR Account Maintenance* → *Display/Cancel Account Maintenance Document* (`MR11SHOW`) in the backend. Or choose the *Display/Cancel Account Maintenance Document* app in the Fiori launchpad.



LESSON SUMMARY

You should now be able to:

- Use the classic GR/IR account maintenance functions

Unit 5

Lesson 2

Using Fiori Apps for GR/IR Reconciliation



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Use SAP S/4HANA specific apps for GR/IR reconciliation

SAP S/4HANA Specific Apps for GR/IR Reconciliation

In SAP S/4HANA there are new possibilities to run the GR/IR reconciliation more efficiently. There are in total three apps for which a brief overview of the functions will be given in this lesson.

The new apps provide functionalities for reducing the manual effort for GR/IR processing. Breaks between departments are reduced and reconciliation efforts between multiple applications are decreased. By using machine learning offerings, the system can even provide you proposals and manual action is reduced. The use of the analytical possibilities offers you more transparency and potentials for optimizing your processes.

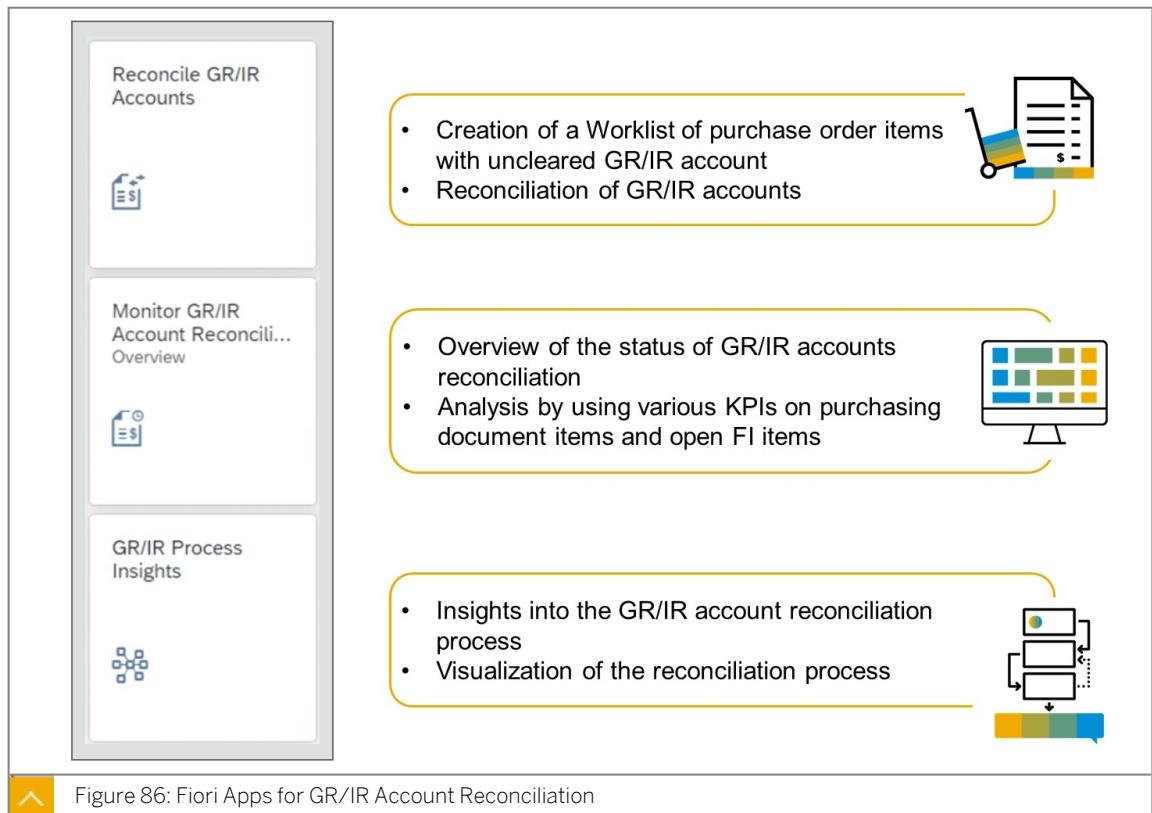


Figure 86: Fiori Apps for GR/IR Account Reconciliation

For the reconciliation of the GR/IR account, the following apps are available to help in executing the manual work.

- Reconcile GR/IR Accounts (App ID F3302)
- Monitor GR/IR Account Reconciliation (App ID F3303)
- GR/IR Process Insights (App ID F5796)

The apps are part of the role SAP_BR_GL_ACCOUNTANT and are part of the finance scope item 2V7.

For more information about the apps, see the SAP S/4HANA documentation at *Enterprise Business Applications → Finance → Accounting and Financial Close → General Ledger Accounting (FI-GL) → Apps for General Ledger Accounting → Closing Operations*.

Fiori App Reconcile GR/IR Accounts

Clarifying and reconciling differences on GR/IR clearing accounts is part of period-end closing and can be a tedious task. You can use this app to reconcile your GR/IR (Goods Receipt/Invoice Receipt) accounts. The app supports you in reducing open items and thus increasing the accuracy of your financial statement and enables you to spot issues early on, for example issues with suppliers.

Figure 87: Fiori App Reconcile GR/IR Accounts

This app provides the following key features:

- Compile a work list with open items that need clarification
The app supports you with creating a worklist of purchase order items with differing amounts and/or quantities in goods receipts and invoice receipts that need your urgent attention at first. The open items to be clarified and processed are displayed in a results table. To get a worklist, you can select by company code, supplier, purchasing document, posting date of latest open item or smart fact, and additional filter criteria.
- Display items to be processed as charts using different chart types or as a results list in table format or both
- Smart facts

Smart facts describe the business situation for the items to be clarified. This facilitates your work as you do not have to analyze the figures and conclude the business situation yourself. You can select the worklist for the items to be clarified by smart facts, such as look for items where no goods receipt or invoice has been posted yet, or for items where the amounts or quantities differ in goods and invoice receipts. The smart facts are also displayed for each purchase order item with open items in Financial Accounting (FI) that needs clarification.

- Display the following details of the purchasing document to be processed:
 - Overview that shows smart facts, the quantity of received goods and the invoiced quantity, and amounts of ordered and invoiced goods
 - Financial Accounting open items that show the journal entries (goods receipt and invoice)
 - Purchasing document history
 - Processing log where processors can create notes that document the progress in clarifying any outstanding issues
- Use filters to create a worklist and save it as a variant
- Display information from purchasing and financial accounting at the same time
- Reduce purchasing document items with FI open items continuously

You can select one or several purchasing documents and assign a status (such as *Check Goods Movement* or *Request Completion of Delivery* or *Request Correction of Invoice*), a priority, a processor or processing department and a root cause (such as *Differing Quantity in Invoice* or *Missing Goods Receipt*). You can also enter comments.

If you want to write-off an open item, you can select the respective purchasing document item and choose *Perform Write-Off*. Note that the *Perform Write-Off* button is only active for purchasing document items with the status values *Perform Write-Off*, *Perform Write-Off of Goods*, or *Perform Write-Off of Delivery Costs*.

The *Reconcile GR/IR Accounts* app supports you with reducing open items with differing values in invoice receipts and goods receipts, but it takes time to investigate, clarify, and classify each item. To make GR/IR account reconciliation even more intelligent and to save time you can use it with Machine Learning. The ML service learns from decisions made in the past, applies the learned knowledge to the new business situation, and proposes the next meaningful steps, the priority and root cause for each item.

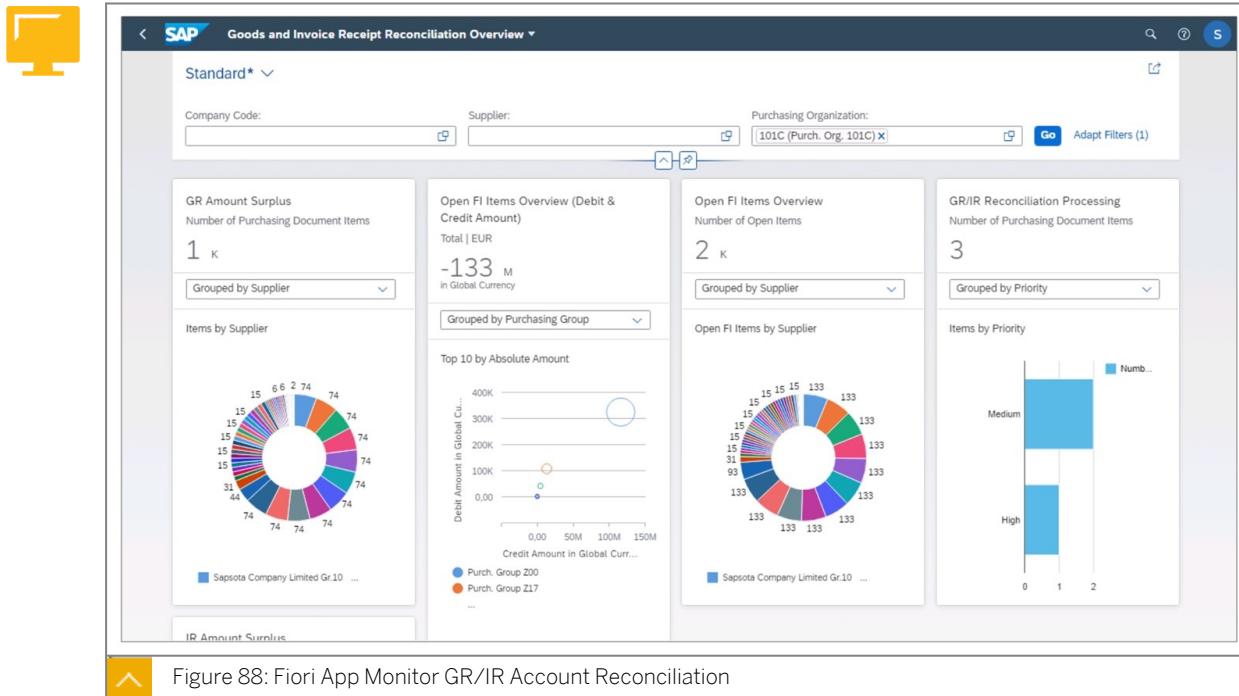


Note:

To use Machine Learning with GR/IR Account Reconciliation, you need a separate subscription license.

Fiori App Monitor GR/IR Account Reconciliation

With this app you can get an overview of the status of open items on your GR/IR accounts that need clarification. You can analyze the goods and invoice receipts reconciliation by several KPIs. After you have detected where you would like to dive deeper, you can also navigate from this app to the *Reconcile GR/IR Accounts* app where you can investigate the details or even start to further clarify purchasing document items where amounts or quantities in goods receipts and invoice receipts do not match.



The overview provided by the app is based on Key Performance Indicators (KPIs) for purchasing document items and open FI items. The following cards are available for the individual KPIs, which you can show and hide on a user-specific basis using the *Manage Cards* function from the *User Action Menu*:

1. Cards for purchasing document items with regard to the amounts of goods receipts and invoice receipts:

These KPIs can be grouped by the dimensions company code, supplier, purchasing organization, purchasing group, material group, or plant.

- Invoice Receipt (IR) Amount Surplus
- Goods Receipt (GR) Amount Surplus
- GR Amount Equals IR Amount

2. Cards for purchasing document items with regard to the GR/IR reconciliation processing:

Depending on the card, different dimensions are available for grouping, for example processor, proposed priority, or various predefined time intervals.

- GR/IR Reconciliation Processing
- GR/IR Reconciliation Processing - Machine Learning Proposals
If you do not use machine learning, you can hide this card.
- GR/IR Reconciliation Processing - Latest Processing Change

This card gives an overview about the time frame in which the purchasing document items have last been processed with the *Reconcile GR/IR Accounts* app.

3. Cards for open FI items with the regard to the absolute amount, debit amount, or credit amount

These KPIs can be grouped by the dimensions company code, supplier, purchasing organization, purchasing group, material group, controlling area, profit center, or plant.

- Absolute Amount of Open FI Items
- Open FI Items Overview (Debit & Credit Amount)
- Open FI Items by Company Code
- Open FI Items by Supplier

4. Cards for open FI items with the regard to the count of open FI items

- Open FI Items Overview
- Open FI Items by Posting Date

The key features of the Monitor GR/IR Account Reconciliation app are:

- Analyze the situation for reconciliation processing of GR/IR accounts that do not balance yet. You can find out, for example:
 - How many purchasing document items with amounts or quantities that do not match for goods receipts (GR) and invoice receipts (IR) do the staff currently process?
 - How does the work load for processors look like currently?
 - Which company code indicates the highest invoice receipt surplus?
 - Which plants have the highest goods receipt surplus?
 - Which company codes indicate most of the open items in financial accounting (FI)?
 - For which supplier exists the most open FI items?
 - For which posting dates exists the highest count of open FI items?
 - For which purchasing document items does machine learning propose as a high priority?
 - For which purchasing document items is the latest processing change more than 180 days in the past?
- Navigate directly from this app to the *Reconcile GR/IR Accounts* app

You can navigate from the cards *GR/IR Reconciliation Processing*, *GR/IR Reconciliation Processing - Machine Learning Proposals*, *GR/IR Reconciliation Processing - Latest Processing Change*, *GR Amount Surplus*, *IR Amount Surplus*, *GR Amount Equals IR Amount* to the *Reconcile GR/IR Accounts* app where you can further clarify the purchasing document items. You can either navigate for the total by just clicking on the card header, or you can navigate for a dimension in a pie chart by just clicking in the segment in question.

For example, if you are focusing on the card *IR Amount Surplus* and display the purchasing document items grouped by purchasing group, you can navigate directly by clicking on a segment for a specific purchasing group in the pie chart. This takes you to the *Reconcile GR/IR Accounts* app, where the list of purchasing document items for this purchasing group is displayed and you can process the items directly.

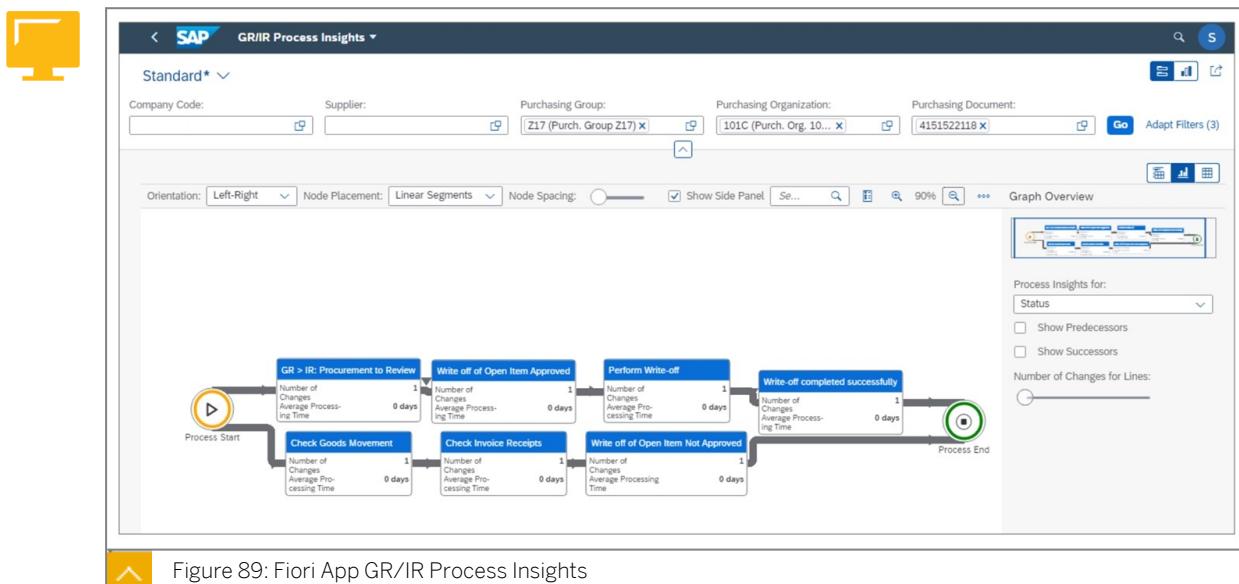
- Navigate directly from this app to the *Display Line Items in General Ledger* app

You can navigate from the *Open FI Items by Posting Date* card to the *Display Line Items in General Ledger* app where you can further analyze the open FI items. You can either navigate for the total by just clicking on the card header, or you can navigate for a dimension in the time axis by just clicking on the bar in question. This navigation is only possible if either no filters are applied in the filter bar or you only use company code as filter.

For example, you want to select items by a company code and are looking at a posting date for which there is a high number of open items, you can navigate from here by just clicking on the appropriate bar in the time axis. This leads you to the *Display Line Items in General Ledger* app where the list of open FI items for this scenario is displayed and you can further analyze the items. If you enter one specific company code you can navigate to all of its open FI items by clicking on the card header of the *Open FI Items by Posting Date* card.

Fiori App GR/IR Process Insights

With this app, you can gain insights into the GR/IR (goods receipt/invoice receipt) account reconciliation process which you perform using the *Process Items* function in the *Reconcile GR/IR Accounts* app. You can visualize the activities of the reconciliation process and thereby identify opportunities for process improvements, such as by discovering bottlenecks, duplicate work, or root causes for delays. You can also retrospectively review all activities on the level of a purchasing document item together with all relevant documents from the purchasing document history. Thus, this app enables you as a process owner to analyze the process efficiency of the GR/IR account reconciliation process and to define improvement activities.



This app provides the following key features:

- Offering the possibility to analyze the completed GR/IR account reconciliation processing in detail.
- Filtering data by organizational units such as company code, supplier, plant, material group, purchasing organization, and more.
- Graphical presentation of process transitions. You can also switch to a table view of the process transitions.

- Graphical presentation using the dimensions, such as processing step (status), processing department, processor, priority, and root cause.

Example: You have assigned a processor using the *Process Items* function in the *Reconcile GR/IR Accounts* app. In the *GR/IR Process Insights* app you can then analyze this assignment process flow.

- Possibility of a detailed analysis on the level of a purchasing document item together with the purchasing document history and the processing log.
- Showing values for number of changes and average processing time in days.



LESSON SUMMARY

You should now be able to:

- Use SAP S/4HANA specific apps for GR/IR reconciliation

Learning Assessment

1. Which of the following leads to differences on the goods receipt/invoice receipt (GR/IR) clearing account?

Choose the correct answers.

- A A vendor waives the charges for a purchase order (PO) item because the delivery was executed as a free of charge sample delivery.
- B A price variance is posted at IR.
- C The GR is posted as non-valuated.
- D Of the 100 pieces of material returned to the vendor, only 98 were credited to the vendor's account because two pieces were damaged in transit.

2. Which app can you use to visualize the activities of the reconciliation process for identifying opportunities for the process improvements?

Choose the correct answer.

- A Monitor GR/IR Account Reconciliation
- B Reconcile GR/IR Accounts
- C GR/IR Process Insights
- D Clear GR/IR Clearing Account

3. Which of the following KPIs of the *Monitor GR/IR Account Reconciliation* app are based on purchasing document items?

Choose the correct answers.

- A Goods Receipt Amount Surplus
- B GR/IR Reconciliation Processing - Latest Processing Change
- C Open FI Items by Supplier
- D GR Amount Equals IR Amount

Learning Assessment - Answers

1. Which of the following leads to differences on the goods receipt/invoice receipt (GR/IR) clearing account?

Choose the correct answers.

- A A vendor waives the charges for a purchase order (PO) item because the delivery was executed as a free of charge sample delivery.
- B A price variance is posted at IR.
- C The GR is posted as non-valuated.
- D Of the 100 pieces of material returned to the vendor, only 98 were credited to the vendor's account because two pieces were damaged in transit.

Correct. The first and the last options are correct. If a price variance occurs at the time of IR, it is posted to the stock account or price difference account, based on the price control setting of the material. If the GR is non-valuated, there is no GR/IR account. Therefore, no differences can arise in these situations.

2. Which app can you use to visualize the activities of the reconciliation process for identifying opportunities for the process improvements?

Choose the correct answer.

- A Monitor GR/IR Account Reconciliation
- B Reconcile GR/IR Accounts
- C GR/IR Process Insights
- D Clear GR/IR Clearing Account

Correct. With the *GR/IR Process Insights* app, you can visualize the activities of the reconciliation process. With this function, you can, for example, uncover bottlenecks or causes for delays.

3. Which of the following KPIs of the *Monitor GR/IR Account Reconciliation* app are based on purchasing document items?

Choose the correct answers.

- A Goods Receipt Amount Surplus
- B GR/IR Reconciliation Processing - Latest Processing Change
- C Open FI Items by Supplier
- D GR Amount Equals IR Amount

Correct. KPIs that deal with GR and/or IR amounts and also KPIs related to the reconciliation processing belong to the KPIs based on purchasing document items. But all “Open FI Items ...” KPIs are based on open FI items.

UNIT 6

Customizing for Material Master Data

Lesson 1

Setting Up Material Master Records

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Lesson 2

Creating Material Types

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Lesson 3

Setting Up Field Selection for Material Master Records

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Lesson 4

Defining Field References for Material Master Records

185

UNIT OBJECTIVES

- Define basic settings for material master records
- Create material types
- Configure field selection for material master records
- Define field references for material master records

Setting Up Material Master Records

LESSON OVERVIEW

This lesson discusses the options for defining a material type for material master records as per requirements. You can use the material types to define important control parameters for material master records.

Business Example

One of the plants of your company produces materials that are transported to other plants for the manufacturing of new products. You are responsible to manage the records for the materials of your production plant.

For this reason, you require the following knowledge:

- An understanding of settings of material master records
- An understanding of how to maintain company codes for materials

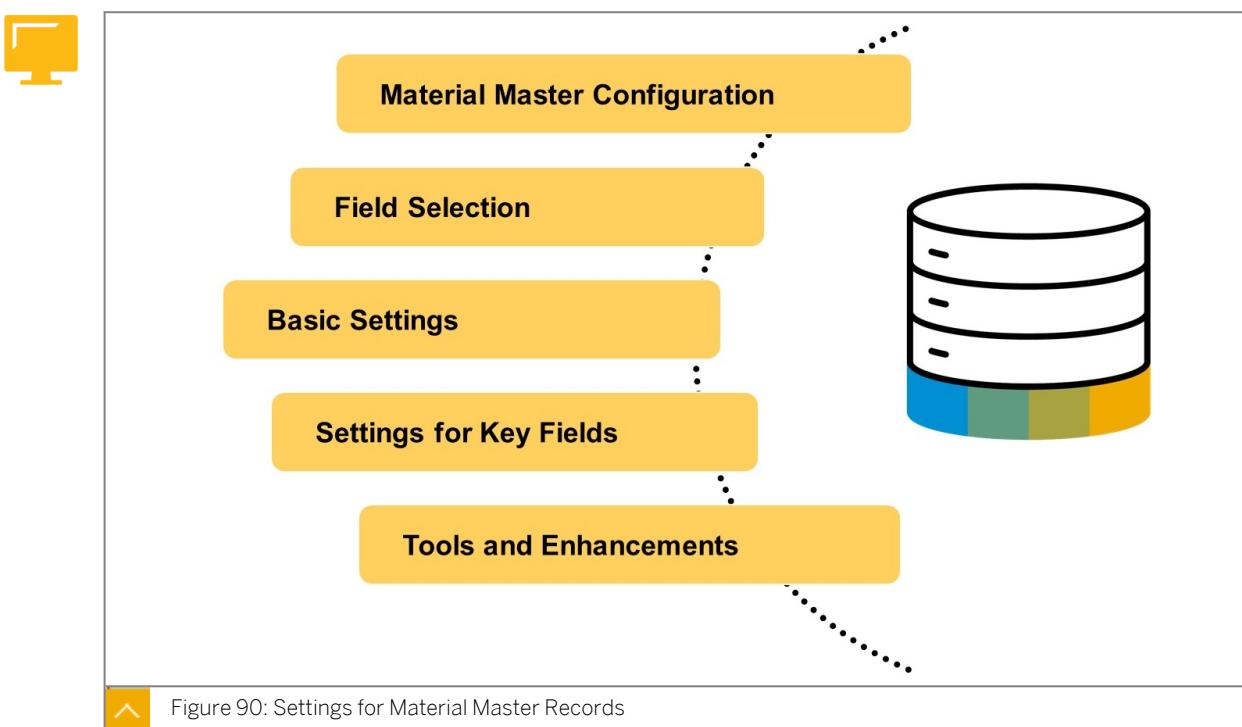


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Define basic settings for material master records

Overview of Settings for Material Master Records



The following activities are subdivided in Customizing:

- Adjust the material master dialog (such as screen layout, order of screens, and so on) in accordance with the specific requirements of your enterprise under *Configuring the Material Master*.
- Specify the material master fields that are to be made ready for input (mandatory or optional entry), display only, or suppressed in Customizing under *Field Selection* menu.
- Make all settings for the material types and number assignment for material master records in Customizing under *Basic Settings* menu.
- In Customizing, under the *Settings for Key Fields* node, you specify which material groups and divisions you use in your company and which types of material statuses you wish to use.
- In Customizing, under the *Enhancements* menu, the documentation, and options for using *Enhancements* and *Business Add-Ins* exist. For example, here you can find the number assignment and default values for material master maintenance for your company.

Functions Performed in Customizing

Perform the following functions in Customizing, under the Tools node:

- Define authorizations and authorization profiles for the maintenance of material master records
- Organize the data transfer for material master records
- Specify the start times of background jobs
- Maintain search help
- Reset test data
- Initialize the periods for the individual company codes

Basic Settings for Material Master Records

The basic settings for the material type are as follows:

- Output format of material numbers
- Global settings
- Company codes for materials management
- Material types and number ranges
- Properties of system messages during material master maintenance

Specify the following data in Customizing, under the *Global Settings* node:

- The type of administrative data update for the technical data (table MSTA) during the processing of material master records:

The system updates the material administration data whenever you create or change material master records. You can use the  (*Information on material*) option in a material master record to see relevant information.

You can choose one of the following settings:

- The update is to take place only at the table level (such as at client level, plant level, and so on).
 - The update has to depend on each maintenance status (such as *MRP*, *Purchasing*, and so on) and data-retention level (such as client, plant, and so on).
 - Data must not be updated.
- Document type:

The standard document type for engineering or design drawings, if your company uses the document management system.

Activate certain special applications of reference materials, such as, using follow-up materials or manufacturer part numbers, by selecting a checkbox.

Maintenance of Company Codes for Materials



Change View "Materials Management View on Company Codes": Overview

63 63 63 63

CoCd	Company Name	Year	Pe	FYr	M.	FYr	L..	ABp	DBp	
0IBP	SAP A.G.	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1010	Company Code 1010	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1710	Company Code 1710	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
90CA	Canadian Company Code	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
90DE	German Company Code	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
90FR	French Company Code	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
90US	US Company Code	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CF00	Central Finance Template	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CF01	Central Finance Template	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CF02	Central Finance Template	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CF03	Central Finance Template	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CF04	Central Finance Template	2022	3	2022	2	2021	12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Figure 91: Maintaining Company Codes for Materials Management

With the initialization of a company code, you specify for the first time the current posting period and the fiscal year for material master records (accounting data) that belong to a company code.

You initialize a company code in *Customizing* under *Logistics - General* → *Material Master* → *Tools* → *Initialize Period (MMPI)*.

Company Code Initialization



Initialize Period for Material Master Records

From Company Code

To Company Code

Enter next period (including fiscal year) or a relevant date
(but not both)

Period

Fiscal Year

or

Date

Figure 92: Initializing a Company Code

For the monthly closing of an accounting period in materials management, you use the period closing program. To call this program, on the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Material Master* → *Other* → *Close Period* (MMPV).



Note:

You cannot reverse the closing of a period by using the period closing program. If you accidentally close the period, you must re-initialize it (see SAP Note 487381).



LESSON SUMMARY

You should now be able to:

- Define basic settings for material master records

Creating Material Types

LESSON OVERVIEW

This lesson explains the different material types and how to create them. It also explains the meaning of the maintenance status, how to define material status, and the output formats of material numbers.

Business Example

In an SAP system, you are required to customize processes in individual applications as per your company's requirements.

- An understanding of how to create material types
- An understanding of how to assign numbers for material master records
- An understanding of how to manage the output format of a material number

For this reason, you require the following knowledge:

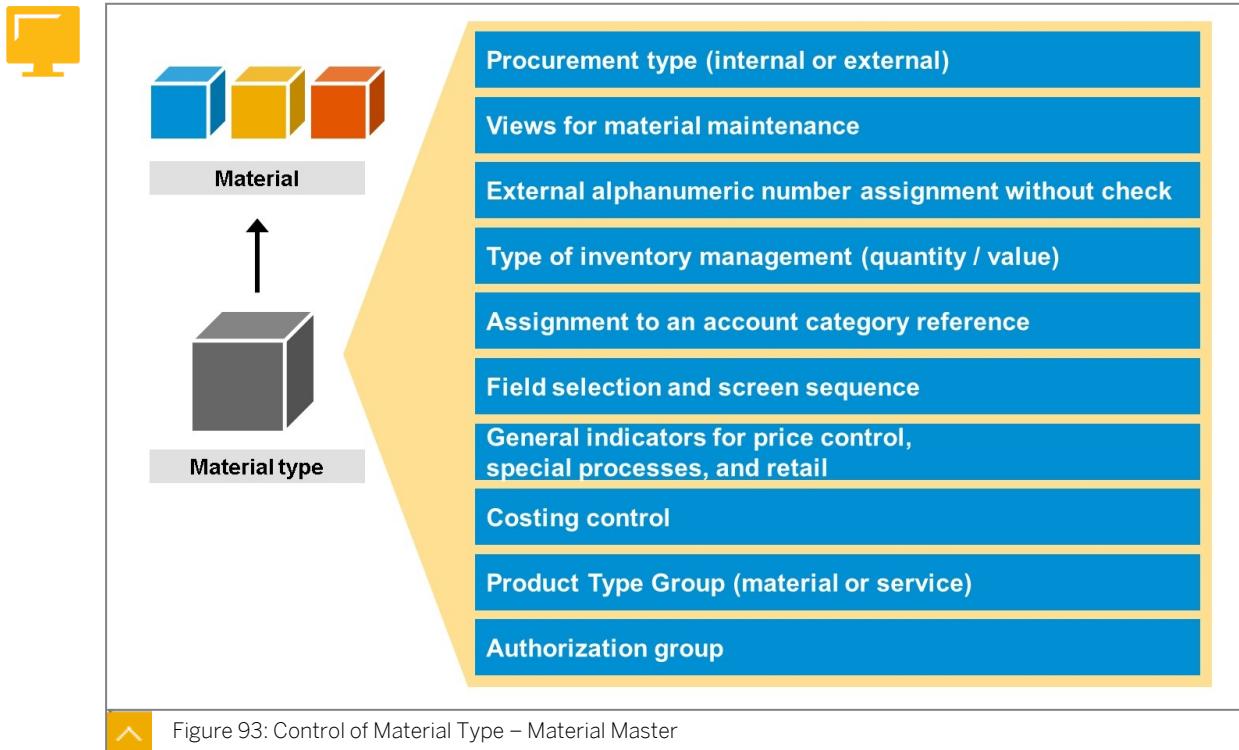


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create material types

Material Types



Using a material type is a way of grouping materials that have the same basic properties, such as raw materials, semi-finished products, or finished products. When you create a material master record, you have to assign the material to a material type. The material type belongs to the general data of the material and controls important processes in individual applications. For example: In Customizing for Production Planning (PP), you can specify the material types for which you want to allow or exclude the creation of bills of material and routings in your company.

The material type controls the following options:

- Whether the material is intended for a certain purpose (for example, manufacturer part)
- Whether the material number assignment is internal or external
- From which number range interval the material number is to be assigned
- Which screens appear during material master maintenance, and in what order
- The field selection
- Which user department data can be entered
- Which procurement type(s) the material can have
- Which product type group (material or service) the material type has

The user departments (maintenance status) defined for a certain material type determine which views can be maintained for a material of this type. The user departments also determine which applications can use the material.

Using the entries for external and internal orders, you specify how materials of a certain type can be procured. In addition, material status and special procurement keys in the material master record can be used to restrict the procurement type for each material and plant.

With the product type group, you can define that a material type is to be used for service materials. In standard, material type SERV is provided for service materials. Using material type SERV, you can create service entry sheets in a corresponding SAP Fiori app without the need of a purchase order with item category Service and a service master.

The type of inventory management (quantity-based and value-based, or only quantity-based) for a material type can be defined depending on the valuation area.

The indicator for price control (standard price or moving average price) can be set as a default value or as a mandatory preset value.

The system assigns the stock and consumption accounts using the valuation classes. The account category reference establishes the link between valuation classes and the material type.



Hint:

The special transactions for creating materials, that already include the material type (for example, MMR1), are obsolete in SAP S/4HANA. You can still use them, but the material type is no longer protected. For more information, see SAP Note 2340925.

You can only change the material type for a material subject to certain restrictions. You must assign either the old and the new material types to the same account category reference or there must be no stocks, purchase orders, or reservations for this material.

Maintenance Status

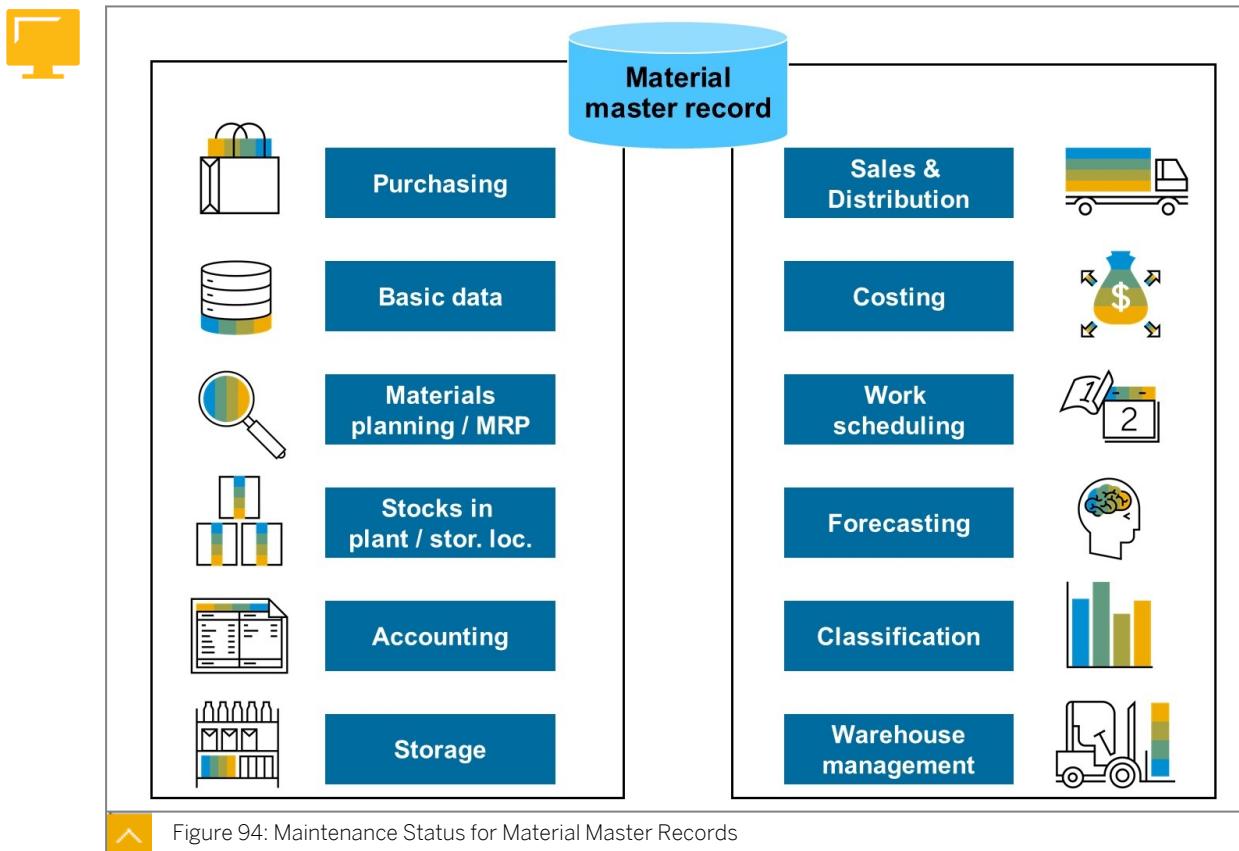


Figure 94: Maintenance Status for Material Master Records

The maintenance status of a material is a key showing which user departments have been maintained for a material master record.

You can use a material in logistics only if the material has certain maintenance statuses. A valued material that you want to purchase for receipt into stock, for example, must have at least the maintenance status E (purchasing) and B (accounting).

Each user department has its own material master record views.

Maintenance Status and Views

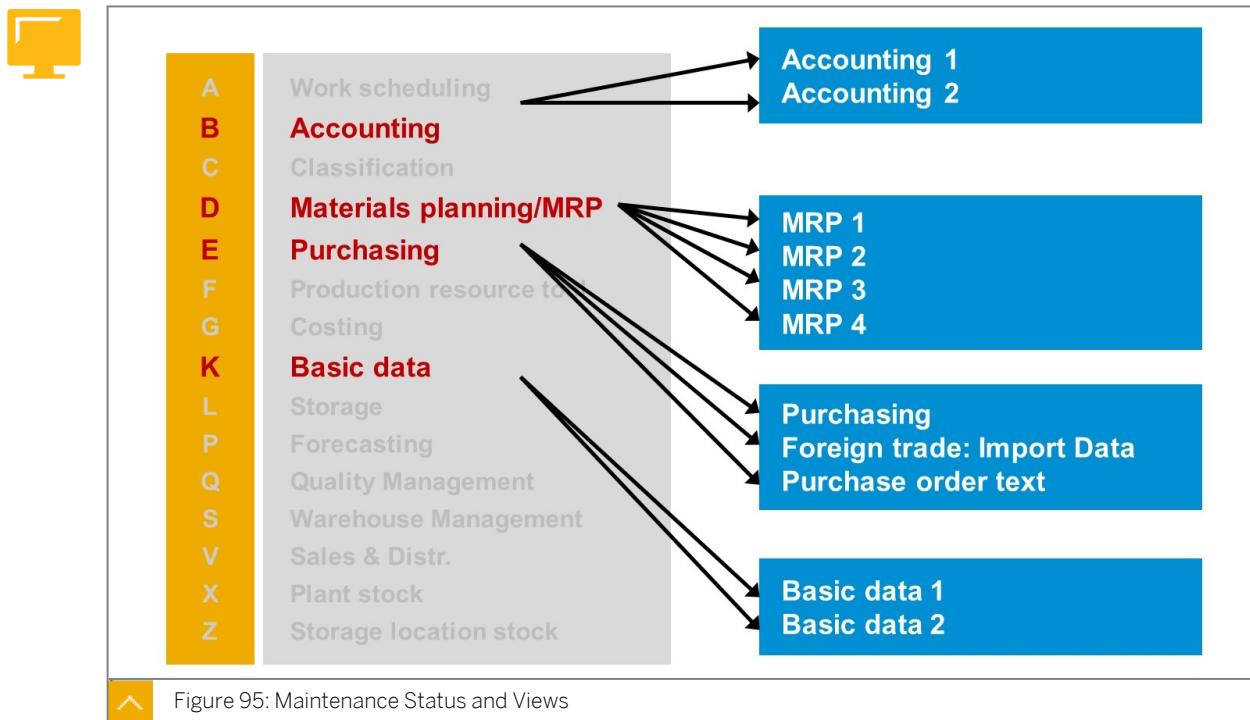


Figure 95: Maintenance Status and Views

You can check the assignment of views for the maintenance status in Customizing under *Configuring the Material Master → Define Structure of Data Screens for Each Screen Sequence*.

For bills of material (BOM) and routing management, you must create at least one view at plant level.

To check whether materials are still to be maintained for your user department, you can call the *Extendable Materials* function: on the SAP Easy Access screen, choose *Logistics → Materials Management → Material Master → Other → Extend Material View(s)* (MM50). Enter the maintenance status corresponding to your user department and any other relevant selection criteria. You can then enhance the material master record directly from the results list.

Material Types Display

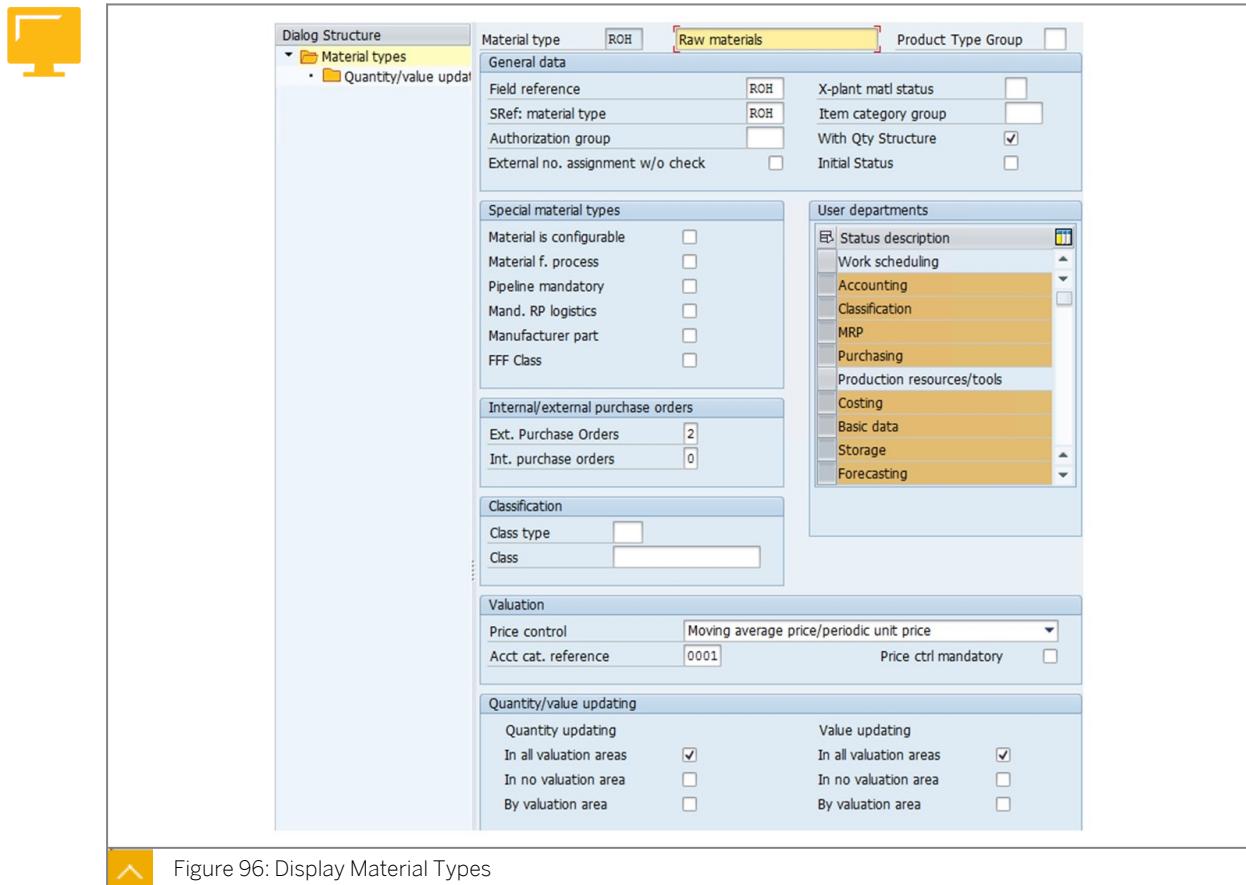


Figure 96: Display Material Types

The figure shows the specifications for the raw materials material type (ROH).

Number Assignment for Material Master Records

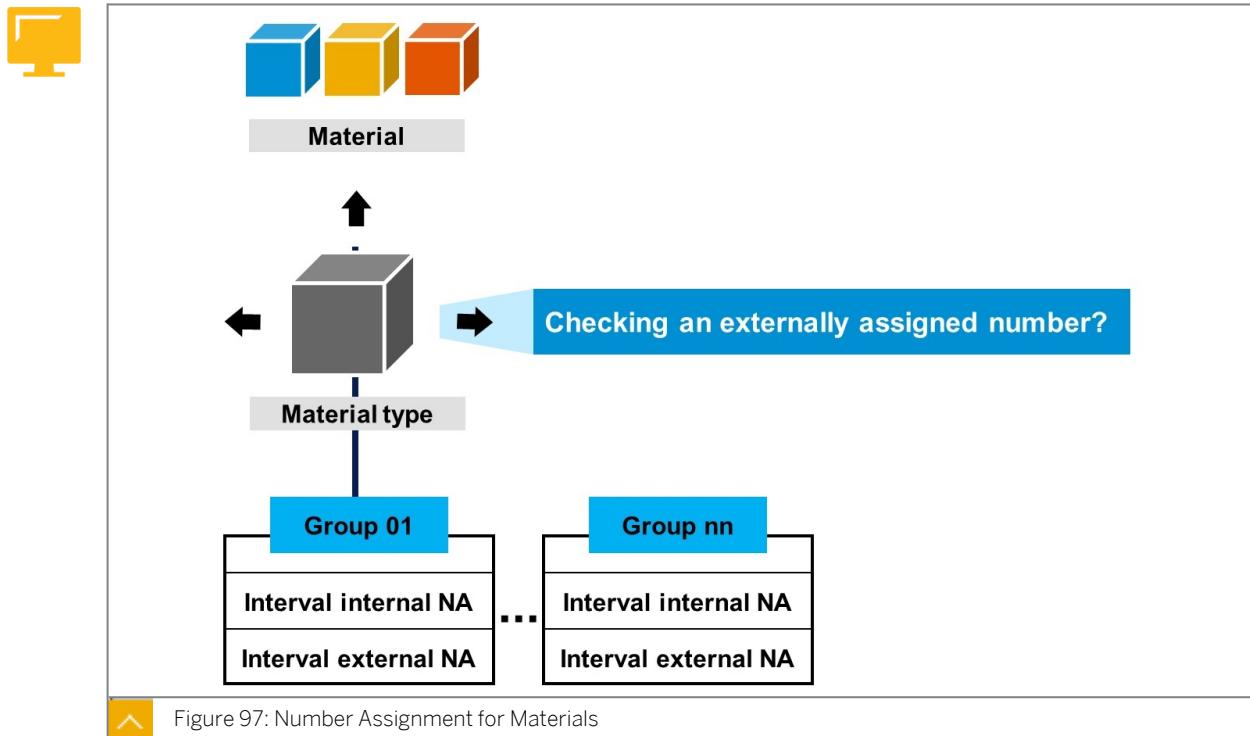


Figure 97: Number Assignment for Materials

In SAP S/4HANA, materials are identified by material numbers. As a rule, for each material a company uses, a material master record must exist. The system stores each existing material master record under a unique material number.

Material master records can be created with internal or external number assignment. In case of internal number assignment, the system assigns the material number when you start the creation of a material master record. If you want to extend an existing material master record, enter the material to be extended in the initial screen of the creation transactions.



Hint:
Internal number ranges must be numerical.

Administer the number ranges for groups of material master records in the following steps:

1. Maintain groups and assign number ranges to the groups.
2. Assign your material types to the groups.

Intervals can only be assigned to one group. However, every group can have an internal as well as an external interval.

You can manually change the current number range status of an interval.

Select the *External no. assignment w/o check* checkbox for a material type to specify whether the system has to check if the material number belongs to a specific number range in the case of external number assignment. If you do not want the system to check the material number, ensure that every externally assigned material number (for this material type) is alphanumeric. In this case, you do not need to assign an external number range interval for a group of this material type.

The standard system uses a buffering system for number assignment of material master records. There are 10 numbers in the buffer. As a result of buffering and the assignment of the material number before the system saves a new material master record, gaps in number assignment might occur. If you reset the current number range status of an interval to the starting value of zero, the gaps are closed when new materials are created.



Hint:

To view the specifications for number assignment for material master records on the SAP Easy Access screen, choose *Tools → ABAP Workbench → Development → Other Tools → Number Ranges (SNRO)*.

The object name is *MATERIALNR*.

Output Format of Material Numbers

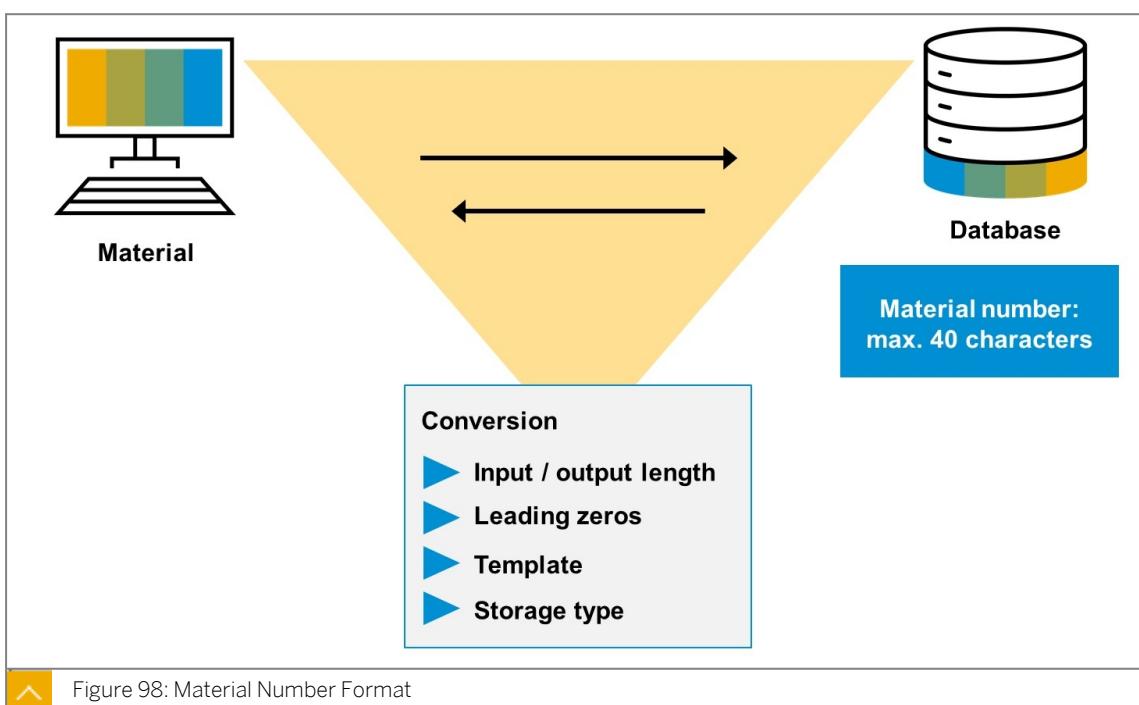


Figure 98: Material Number Format

A material number in SAP S/4HANA can have a maximum of 40 characters. Numeric numbers are restricted to 18 characters.

The default setting, both after the move to SAP S/4HANA and for new installations, is that the material number length is 18 characters and the extended material number functionality is NOT activated. To use a material number with more than 18 characters, you need to activate this functionality. The following settings are required for this:

1. Activation of the Extended Material Number Functionality: The activation is realized as client-dependent customizing table. In Customizing, choose *Cross-Application Components → General Application Functions → Field Length Extension → Activate Extended Fields*. Alternatively, use transaction **FLETS**.
2. Changing the Material Number Format: In Customizing, choose *Logistics General → Material Master → Basic Settings → Define Output Format of Material Numbers (OMSL)*. Here, the settings need to be adapted to allow a field length of more than 18 characters.

Besides, you can use a template to change the format of the material number to create a structured display for larger material numbers. You can use special characters in the template; however, they may not be part of a material number. The system does not store the special characters from the template with the material number.



Table 1: Template: Example

Template __ . __ . __ . __ . __		
Material	Without template	With template
123456	123456	123.456
123456XY	123456XY	12.345.6XY

To interpret numeric material numbers as labels instead of numbers, select the lexicographical format. You must specify the format before you create the first material master record.



Note:

If you are using material numbers with more than 18 characters, observe the restriction which are collected in SAP Note 2233100.

Material Status

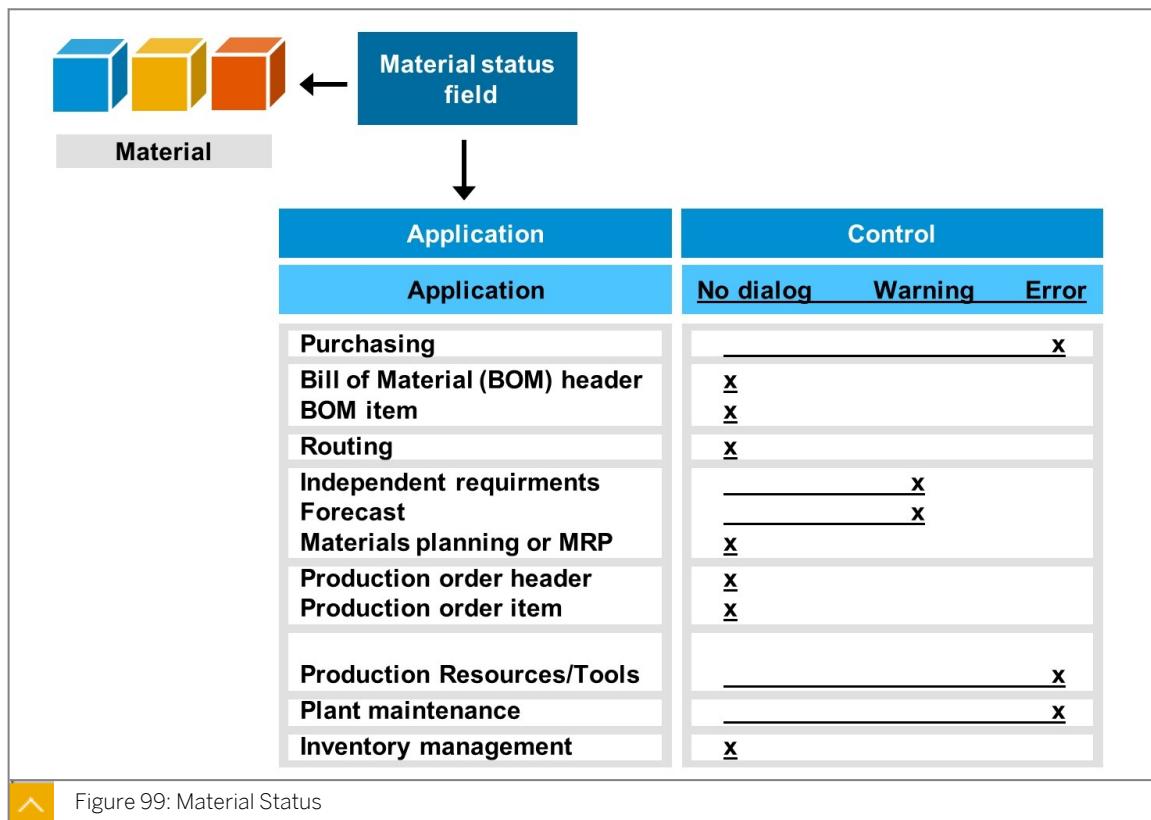


Figure 99: Material Status

The material status determines how the system treats the material in different applications, and in business transactions, such as purchasing, material requirements planning (MRP), and

use in bills of material (BOM). This material status enables you to restrict the usability of a material for various business applications.

You can set a status in the relevant master record for each material. Depending on your settings, the system can issue warning or error messages in the business applications. In the basic data view, you can enter the status as a cross-plant material status. The applied material status then applies to all plants. Plant-specific material status can be defined on views like *Purchasing* or *MRP*.



Hint:

You can maintain a distribution chain or cross-distribution chain material status for sales in the *Sales: Sales Org. 1* view of the material master.

Material Status Definition



Plant-specific settings		Production resources/tools	
Purchasing	Purchasing msg. <input type="checkbox" value="B"/>	PRT message <input type="checkbox"/>	
BOMs	BOM header msg. <input type="checkbox" value="A"/>	Plant maintenance <input type="checkbox"/>	
	BOM item message <input type="checkbox" value="A"/>	Plant maint. message <input type="checkbox"/>	
Routing/recipe	Routing/master recipe message <input type="checkbox"/>	Inventory management <input type="checkbox"/>	
		Inventory mgmt msg. <input type="checkbox"/>	
Material requirements	Ind. reqmt msg. <input type="checkbox" value="A"/>	Warehouse management <input type="checkbox"/>	
	Forecasting message <input type="checkbox" value="A"/>	Transfer requirement msg. <input type="checkbox"/>	
	MRP message <input type="checkbox" value="A"/>	Transfer order message <input type="checkbox"/>	
	LT planning message <input type="checkbox"/>	Cost estimate with quantity structure <input type="checkbox"/>	
		Mat. Cost Estimate Procedure <input type="checkbox"/>	
Production	POrder header msg. <input type="checkbox" value="A"/>		
	PO/network item msg. <input type="checkbox" value="A"/>		
Cross-plant settings	ALE distribution <input type="checkbox"/>		
	Distr. lock <input type="checkbox"/>		
	Profile Name <input type="checkbox"/>		

Purchasing ms... Short Description

No message
A Warning
B Error message

3 Entries found

The figure, Define Material Status, taken from Customizing, shows the definition of a materials status for which no provision has been made for either forecasting or requirements planning and the system does not allow purchase activities. The system allows goods movements, because the *Inventory management* status is blank.

The entry *B* for the application *Purchasing* will cause the system to issue an error message in the event of a purchase transaction for a material with the status *BP*. If the system should issue a warning message (instead of an error message) in the case of purchase transactions, use a material status with attribute *A* for the application *Purchasing*.



LESSON SUMMARY

You should now be able to:

- Create material types

Setting Up Field Selection for Material Master Records

LESSON OVERVIEW

This lesson gives an overview of possibilities and interrelationships in the definition of field attributes. The definition of field attributes is significant because, for some materials, you must define certain fields of material master records as mandatory. It is better to suppress the unnecessary fields by using the field selection control.

Business Example

For your new material type, it is mandatory to maintain the data in certain fields in the material master record. For this reason, you require the following knowledge:

- An understanding of field selection control and its influencing factors



LESSON OBJECTIVES

After completing this lesson, you will be able to:

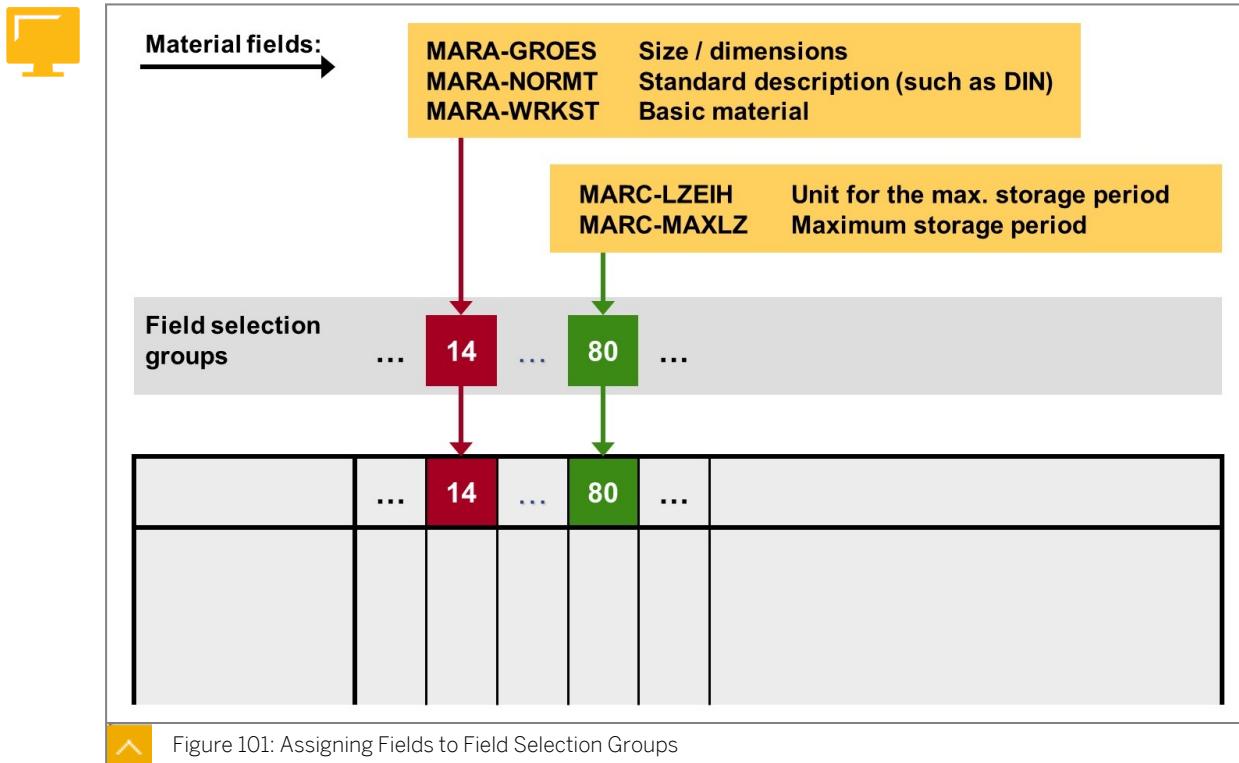
- Configure field selection for material master records

Overview of Settings for Field Selection

The Customizing activities for field selection, during material master record maintenance, allow you to specify whether a field is to be hidden, displayed only, or ready for input. If the field is ready for input, you can specify whether a user input is required or optional.

You can consider different aspects with various influencing factors. For example, you can change the field selection for materials of a certain material type or belonging to a certain industry sector or plant.

Field Selection Groups and Field References



When you process a material master record, several Customizing settings apply to determine the field selection.

In contrast to other applications, you cannot make the field selection settings separately for each field in material master records. You can specify these settings only for a group of fields.

In material master record maintenance, the field attribute is controlled by the field selection group to which a field belongs.

For each field selection group, you can specify the following attributes:

- Hide:

Hide means that the fields are suppressed (invisible) during maintenance of the relevant material master record. This attribute is appropriate for fields that your enterprise does not need.

- Display:

Display means that the fields appear on the screen but are not ready to accept input.

This attribute is appropriate for fields that you fill in your company, for example, at the time of data transfer, and whose values are not to be changed.

- Required entry:

Required entry means that user input in these fields is mandatory.

It is appropriate for fields that need to be filled with user-provided data in your enterprise.

**Caution:**

There are fields in SAP S/4HANA system for which the program demands input (for example, base unit of measure). Do not suppress such fields.

- Optional entry:

Optional entry means that user input is possible but not mandatory.

It is appropriate for fields in which input is not mandatory but you want to use for certain information, if necessary.

You can change the assignment of the fields to field selection groups in cases where some fields of a field selection group are to be controlled uniformly. In SAP S/4HANA, there are 240 field selection groups, 40 of which are reserved for customers. You will find the reserved group numbers in the documentation of the customizing activity *Assign Fields to Field Selection Groups*. The documentation also contains a hint how to control long text fields.

Field Selection for Material – Influencing Factors

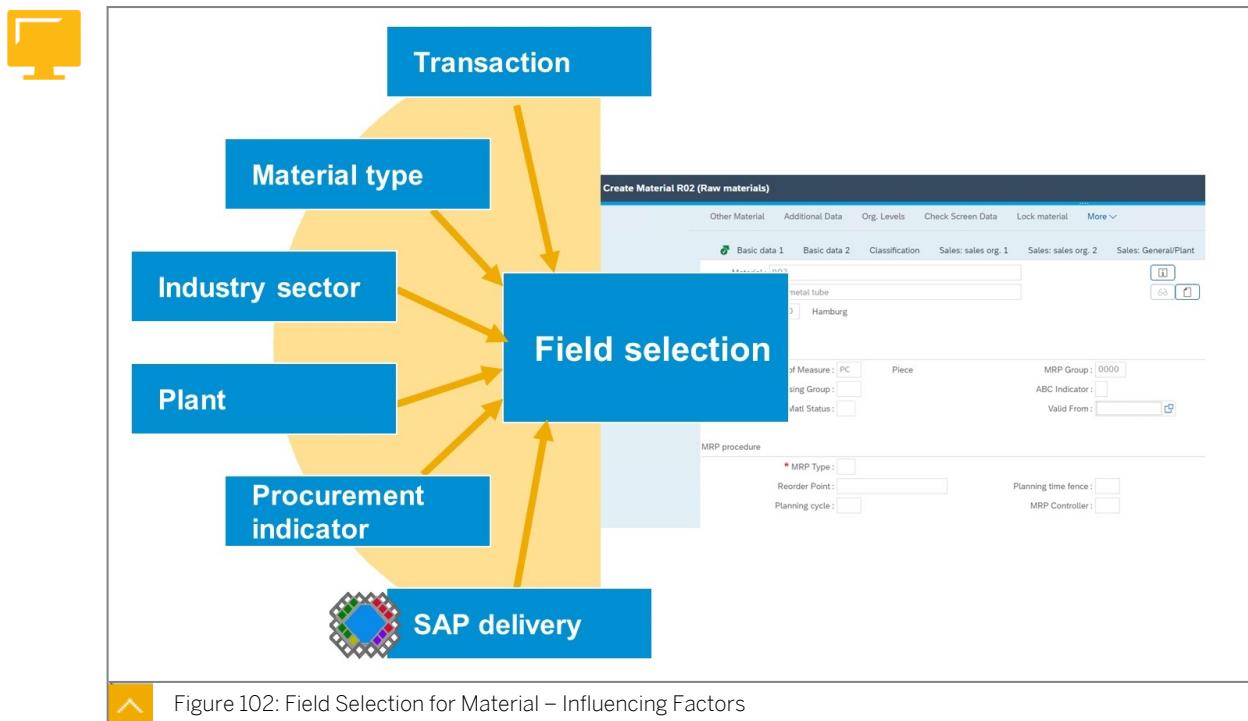


Figure 102: Field Selection for Material – Influencing Factors

Various factors, such as the material type and industry sector, influence the field selection. These factors are automatically determined from the current context.

Field selection for material master records depends on the following factors:

- The transaction that a user calls:

A different field selection applies when a user creates a material master record instead of when the system displays it.

- The procurement type E or F of the material:

The field selection for material master records with in-house production differs from the field selection in case of external procurement.

- The material type:

You can define field selection for every material type by using a field reference.

- The actual plant:

You can define field selection for every plant by using a field reference. You cannot influence fields on client level (table MARA) depending on a plant.

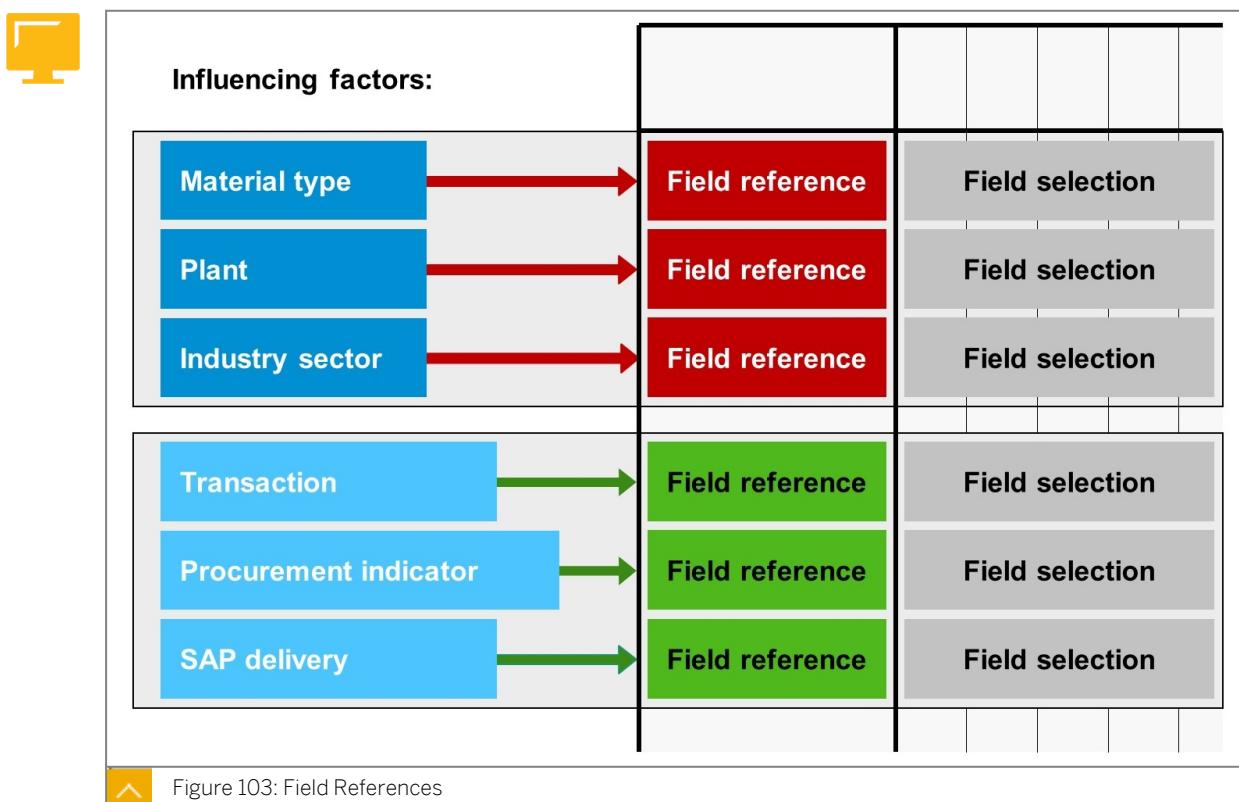
- The industry sector that you have assigned to the material:

You can differentiate field selection for materials belonging to the industry sectors Chemical Industry and Retail.

- SAP Delivery:

These field references are valid client-wide and must not be changed.

Field References



Field references control field selection. You can assign field references in Customizing to the influencing factors material type, plant, and industry sector. SAP maintains the assignment of a field reference to transaction codes, procurement types, and SAP delivery. You cannot change the assignment of these field references in Customizing.

In the standard system, most keys for the field references match with those of the influencing factors.

The following are examples of field reference keys for different influencing factors:

- Material type:

Field reference *ROH* for material type *ROH* (raw material)

- Plant:

Field reference 0001 for plant 0001

- Industry sector:

Field reference M for industry sector M (mechanical engineering)

- Transaction:

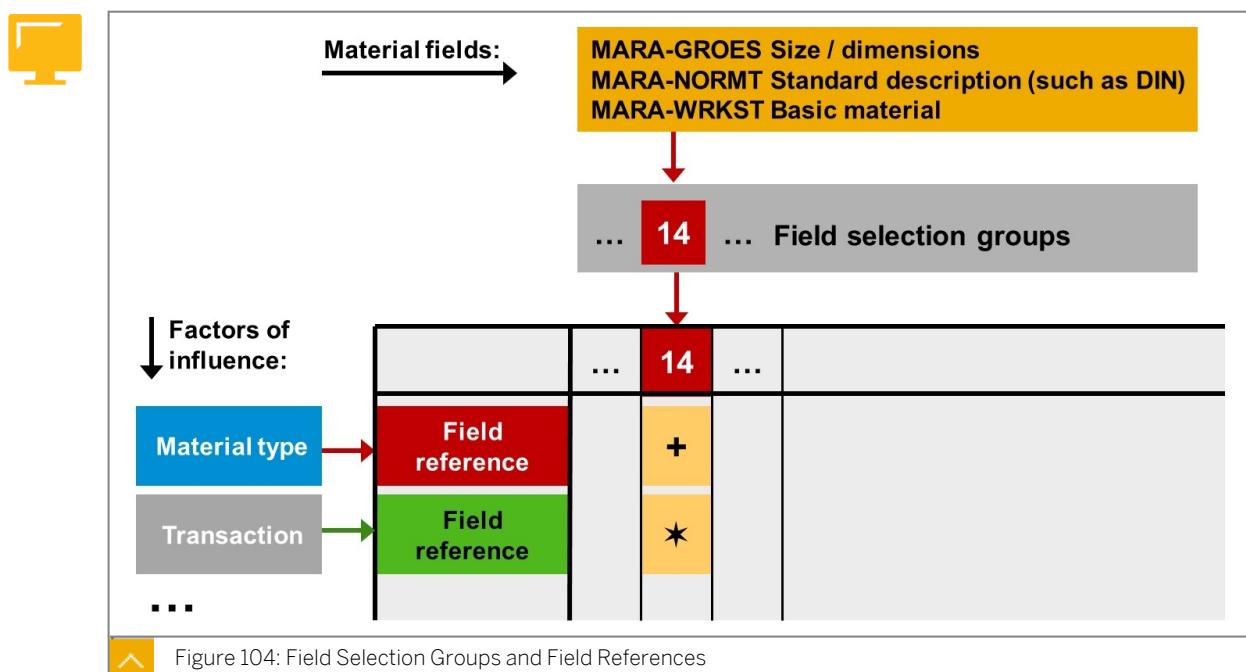
Field reference MM01 for the transaction Create Material (transaction MM01)

- Procurement type:

Field reference E for materials with procurement type E (in-house production)

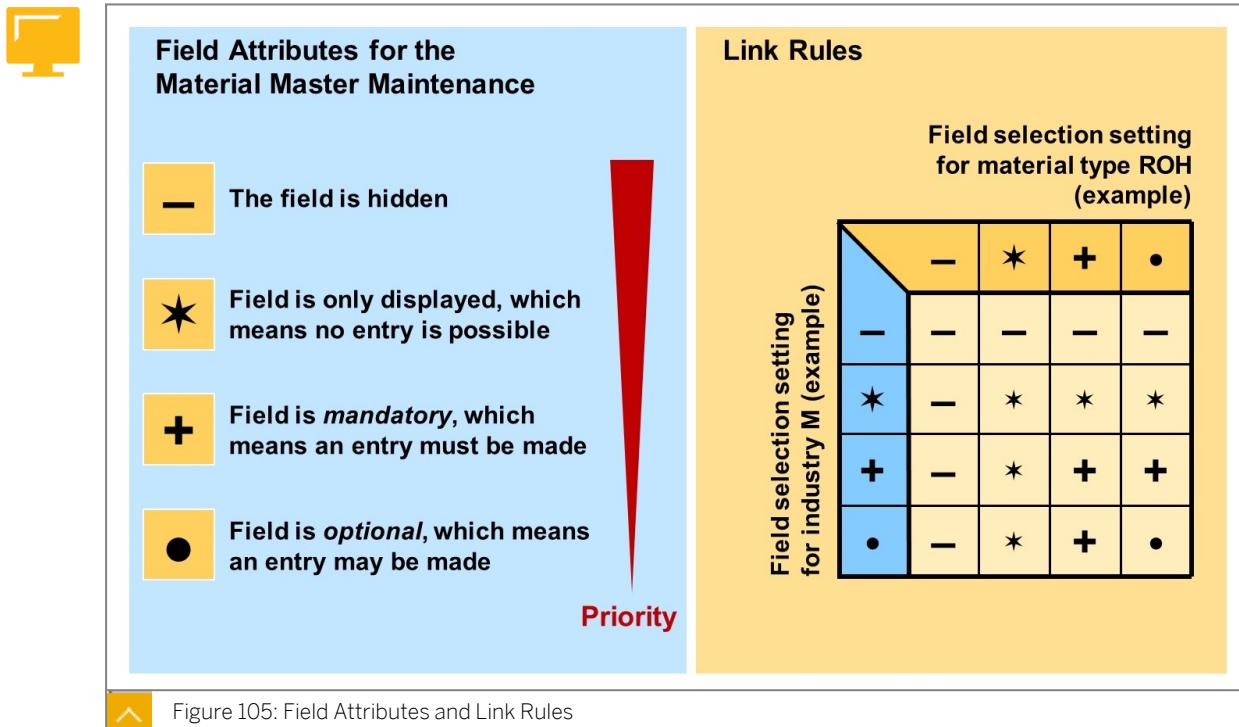
You change the field selection control by using field references. Which field reference you have to change in the process depends on the influencing factor. You change the field reference M, for example, if your change is to affect all the materials of the mechanical engineering industry sector.

Field Selection Groups and Field References



Several field references are used to control field selection. The system links together the entries of all field references applicable to the relevant transaction.

Field Attributes and Link Rules



The link rules shown in the figure determine the result of field selection for each field selection group. The link rules are predefined in SAP S/4HANA and you cannot change them.

Symbol	Meaning
—	Suppress
*	Display
+	Required entry
•	Optional entry

As shown in the figure, if the attributes are different, the attribute with the highest priority always applies to each field selection group.

To Configure Field Selection for Material Master Records

1. Determine the field selection group that contains the field you wish to change.
2. Determine whether other fields also belong to this field selection group.
3. Check whether the change in field selection should also apply to the other fields in this field selection group. If not, change the assignment of the field.
4. Determine the influencing factor for changing the field selection (for example, material type).
5. Determine the current field reference for this influencing factor.
6. Change the field reference or create a new field reference with your changes.

7. Test your settings. If you have created a new field reference, you need to assign it to the influencing factor (for example, material type) beforehand.

Result



Note:

If you make fields mandatory, check if existing materials are affected. If necessary, maintain the missing data in these materials.



LESSON SUMMARY

You should now be able to:

- Configure field selection for material master records

Defining Field References for Material Master Records

LESSON OVERVIEW

This lesson shows you how to define and manage the field references for material master records.

Business Example

To define the field references for material master records, you need to make Customize settings in the SAP system and introduce the options for adjusting the SAP system to your company's specific requirements. For this reason, you require the following knowledge:

- An understanding of field selection control and its influencing factors

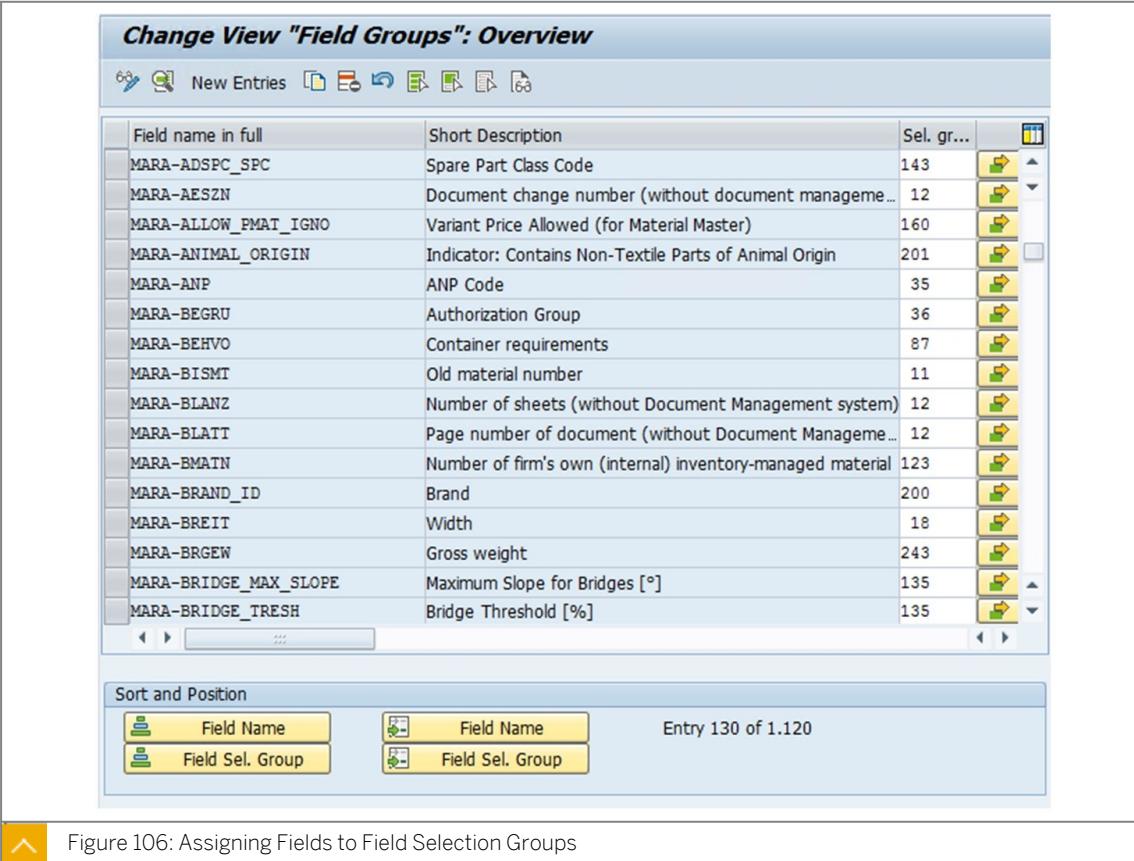


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Define field references for material master records

Settings for Field Selection in the SAP System



The screenshot shows the SAP Change View "Field Groups": Overview screen. The main area is a table with columns: Field name in full, Short Description, Sel. gr..., and a small icon column. The table lists various material master record fields and their descriptions, along with their assigned selection groups (e.g., 143, 12, 160, 201, 35, 36, 87, 11, 12, 123, 200, 18, 243, 135, 135). The bottom of the screen features a toolbar with icons for New Entries, Print, and other functions, and a "Sort and Position" section with buttons for Field Name and Field Sel. Group.

Field name in full	Short Description	Sel. gr...
MARA-ADSPC_SPC	Spare Part Class Code	143
MARA-AESZN	Document change number (without document manageme...	12
MARA-ALLOW_PMAT_IGNO	Variant Price Allowed (for Material Master)	160
MARA-ANIMAL_ORIGIN	Indicator: Contains Non-Textile Parts of Animal Origin	201
MARA-ANP	ANP Code	35
MARA-BEGRU	Authorization Group	36
MARA-BEHVO	Container requirements	87
MARA-BISMT	Old material number	11
MARA-BLANZ	Number of sheets (without Document Management system)	12
MARA-BLATT	Page number of document (without Document Manageme...	12
MARA-BMATN	Number of firm's own (internal) inventory-managed material	123
MARA-BRAND_ID	Brand	200
MARA-BREIT	Width	18
MARA-BRGEW	Gross weight	243
MARA-BRIDGE_MAX_SLOPE	Maximum Slope for Bridges [°]	135
MARA-BRIDGE_TRESH	Bridge Threshold [%]	135

Sort and Position

Entry 130 of 1.120

Field Name Field Sel. Group

Field Name Field Sel. Group

Figure 106: Assigning Fields to Field Selection Groups

The figure shows the assignment of field selection groups to material master record fields in Customizing.

You can use the functions at the bottom to resort the table entries or quickly position the cursor on a certain table entry. Before changing the grouping, get an overview of the current grouping by using the print and display function. You can call this function from the menu bar through *Table View → Print*.

If you select a field and go to the details, you find the *Propose field Content* attribute. This attribute specifies that the field content is proposed from the reference material when creating a material master record using a reference material.

You can also use *Field Selection Maintenance*, to go directly to field selection maintenance for the fields in this field selection group.

Field References

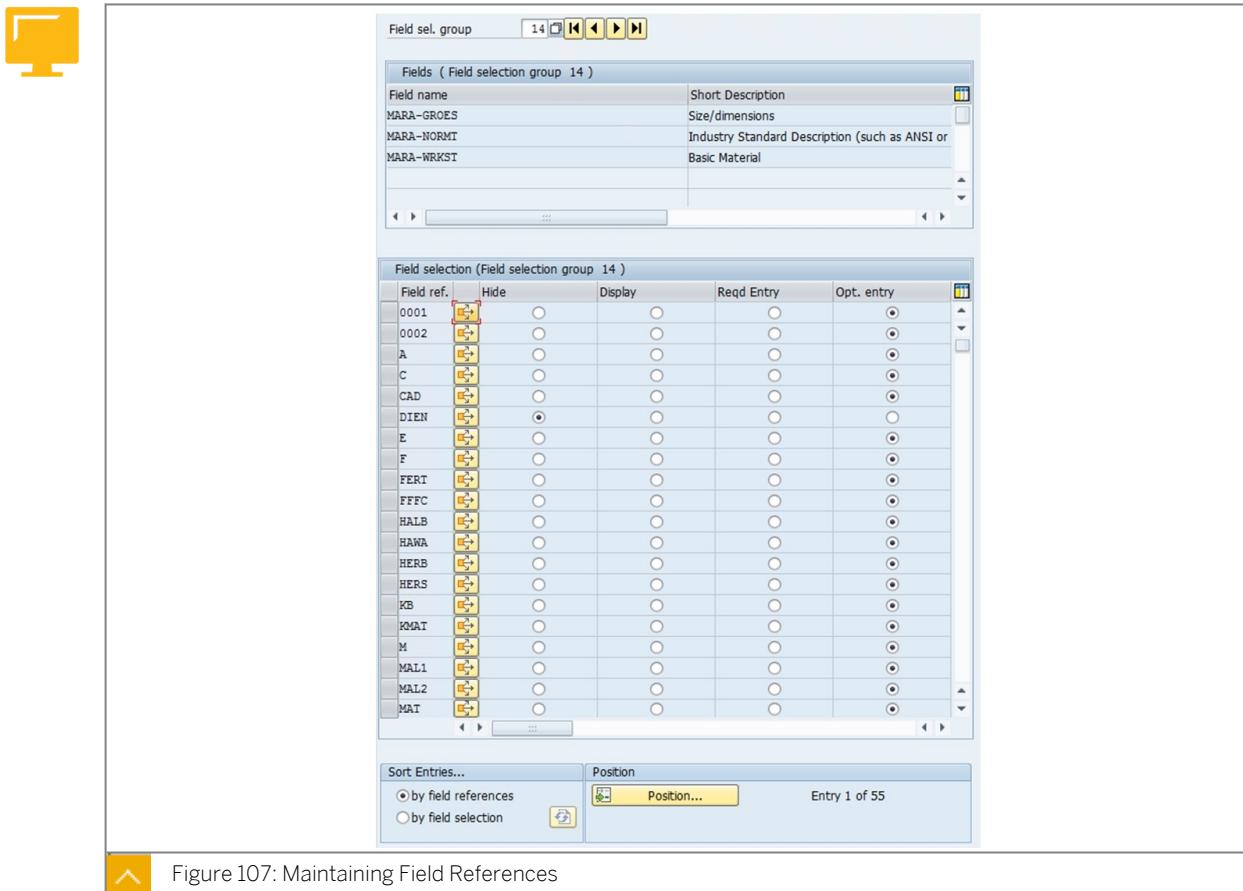


Figure 107: Maintaining Field References

The figure shows the maintenance of the fields belonging to field selection group 14 in Customizing. You see the fields assigned to this group in the upper block.

In the middle part of the screen, you can choose whether the fields of the displayed field selection group are to be suppressed, displayed only, or ready to accept input as optional or mandatory fields. The priority of these settings for field variants decreases from left to right, which means that the suppression of fields has the highest priority.

You can use the functions at the bottom to resort the table entries or quickly position the cursor on a certain table entry.

SAP S/4HANA contains field references that apply to the entire client. The field references SAP1 and SAP2 apply to the standard SAP system (industry solutions). SAPR applies to SAP for Retail clients. Avoid changing these field references.

Besides, SAP S/4HANA contains the field reference KB that is valid for all types of clients. If the field selection changes at client level, adjust this field reference according to the requirements of your enterprise.

Use the *Where-Used List* function, to view the usage of a certain field reference.

Where-Used List for Field Reference

The field reference MM02, for example, is a valid influencing factor when each of the transactions MM02, MM18, MM42, and MMZ2 is called.

Figure 108: Where-Used List for Field Reference

The field reference MM02, for example, is a valid influencing factor when each of the transactions MM02, MM18, MM42, and MMZ2 is called.

Assignment of Field Reference and Plant

Plant	Name 1	Maintenance status	Field reference
0001	Werk 0001	KDEVALBPQSZXCFCFG	0001
0003	Plant 0003 (is-hs-sw)	KDEVALBPQSZXCFCFG	0001
1010	Hamburg	KDEVALBPQSZXCFCFG	0001
1710	Plant 1 US	KDEVALBPQSZXCFCFG	0002

Figure 109: Assignment of Field Reference and Plant

The figure, Assignment of Field Reference and Plant, shows the assignment of field references to individual plants in Customizing.

Lock-Relevant Fields

There are additional logical dependencies to field selection. When you enter **FX** (indicator for fixed lot size) in the *Lot Sizing Procedure* field on the standard view tab page *MRP 1*, for example, the *Fixed Lot Size* field becomes mandatory.

Another example is *Material Group* field in the *Basic Data 1* view. This field becomes mandatory whenever you select purchasing data for the creation of a material master record.



Field Name	Description	Lock. Relevant
MARA-MEINS	Base unit of measure	<input checked="" type="checkbox"/>
MARA-BISMT	Old material number	<input checked="" type="checkbox"/>
MAKT-MAKTX	Material short text	<input checked="" type="checkbox"/>

Change material...

Lock material

Material M123	Monitor, 17"
Base unit	PC
Old material number	A123
...	

Change material...

Reverse material lock

Material M123	Monitor, 17"
Base unit	PC
Old material number	A123
...	

Figure 110: Lock-Relevant Fields

You can define lock-relevant fields for the material master record. You can use this function only in SAP systems for industry, not for SAP Retail. You specify, in Customizing, which fields of the material master record are lock-relevant.

If you lock a material master record, the fields that are flagged as lock-relevant in Customizing can no longer be changed in material master maintenance. In the dialog shown in the figure, these fields are no longer ready for input; the exception is required-entry fields in which you have to enter data when extending a material master record. The lock comes into effect when the system saves the material master record.

If you flag a field of a material master record as lock-relevant although changes are already planned for this field, the changes will not take effect. You can lock a material master record at any time during material master maintenance. You can only reverse the lock with the corresponding authorization and if the material is not subject to configuration management.

The relevant authorization object is M_MATE_MAF:

- Activity 16 – user can lock materials
- Activity 51 – user can reverse material lock

You can also lock material master records and reverse the lock with mass maintenance (field MARA-MATFI).



LESSON SUMMARY

You should now be able to:

- Define field references for material master records

Learning Assessment

1. Which of the following options do you have for updating administrative data in material master records?

Choose the correct answers.

- A Plant-dependent
- B Status-dependent
- C At table level
- D At storage-location level

2. On which organizational level do you define posting periods for materials management?

Choose the correct answer.

- A Company code
- B Plant
- C Storage location
- D Business area

3. Which of the following belongs to the settings for key fields in material master?

Choose the correct answers.

- A Define material groups
- B Define number ranges
- C Define attributes for system messages
- D Define material statuses

4. Which of the following can you see in the Materials Management view on company codes (transaction OMSY)?

Choose the correct answers.

- A Start date of the current fiscal year
- B Which posting period will be next
- C Which was the previous posting period
- D If postings to the previous posting period are allowed

5. What can you define in the attributes for material types?

Choose the correct answers.

- A Field reference
- B Field sequence
- C Screen reference
- D Screen sequence

6. Which procurement type is proposed in material master records if the relevant material type allows internal and external procurement?

Choose the correct answer.

- A None
- B X
- C E
- D F

7. Which maintenance statuses must a valued material at least have to be procured in a purchase order?

Choose the correct answer.

- A K (Basic Data), E (Purchasing) and B (Accounting)
- B E (Purchasing) and B (Accounting)
- C E (Purchasing) and D (MRP)
- D E (Purchasing) and G (Costing)

8. What is the maximum length (in number of characters) for material numbers in SAP S/4HANA without active field length extension?

Choose the correct answer.

- A 8
- B 10
- C 15
- D 18

9. How many field selection groups can you use in SAP S/4HANA?

Choose the correct answer.

- A 175
- B 220
- C 240
- D 500

10. For which influencing factors can you define field references?

Choose the correct answers.

- A Company codes
- B Plants
- C Material groups
- D Material types

11. Which field attribute has the highest priority?

Choose the correct answer.

- A Display only
- B Suppress/hide
- C Mandatory field
- D Optional field

12. On which of the following levels can you define lock-relevant fields?

Choose the correct answer.

- A Client
- B Material
- C User
- D Plan

13. If you flag a field as lock-relevant and changes are already planned for this field of a locked material master record, the system saves these changes.

Determine whether this statement is true or false.

- True
- False

Learning Assessment - Answers

1. Which of the following options do you have for updating administrative data in material master records?

Choose the correct answers.

- A Plant-dependent
- B Status-dependent
- C At table level
- D At storage-location level

Correct. Administrative data can be updated status-dependent or at table level (options B and C). At table level means on plant or storage location level, depending on the change. But these levels (plant/storage location) are not specific levels you can choose in configuration.

2. On which organizational level do you define posting periods for materials management?

Choose the correct answer.

- A Company code
- B Plant
- C Storage location
- D Business area

Correct. The allowed posting periods are defined per company code.

3. Which of the following belongs to the settings for key fields in material master?

Choose the correct answers.

- A Define material groups
- B Define number ranges
- C Define attributes for system messages
- D Define material statuses

Correct. Settings for key fields include defining material groups and material statuses. Number ranges and attributes of system messages are not part of these settings.

4. Which of the following can you see in the Materials Management view on company codes (transaction OMSY)?

Choose the correct answers.

- A Start date of the current fiscal year
- B Which posting period will be next
- C Which was the previous posting period
- D If postings to the previous posting period are allowed

Correct. The previous posting period and whether posting to the previous posting period is allowed, is information you can see in transaction OMSY.

5. What can you define in the attributes for material types?

Choose the correct answers.

- A Field reference
- B Field sequence
- C Screen reference
- D Screen sequence

Correct. Material types contain a field reference key (but no field sequence) and a screen reference (but no screen sequence).

6. Which procurement type is proposed in material master records if the relevant material type allows internal and external procurement?

Choose the correct answer.

- A None
- B X
- C E
- D F

Correct. X as a value for the field procurement type represents both internal and external procurement as valid options.

7. Which maintenance statuses must a valued material at least have to be procured in a purchase order?

Choose the correct answer.

- A K (Basic Data), E (Purchasing) and B (Accounting)
- B E (Purchasing) and B (Accounting)
- C E (Purchasing) and D (MRP)
- D E (Purchasing) and G (Costing)

Correct. At least purchasing and the accounting data need to be created before a valued material can be procured to a purchase order. The correct answer is E (Purchasing) and B (Accounting).

8. What is the maximum length (in number of characters) for material numbers in SAP S/4HANA without active field length extension?

Choose the correct answer.

- A 8
- B 10
- C 15
- D 18

Correct. The maximum length is 18 characters.

9. How many field selection groups can you use in SAP S/4HANA?

Choose the correct answer.

- A 175
- B 220
- C 240
- D 500

Correct. The maximum number of field selection groups that can be used, is 240.

10. For which influencing factors can you define field references?

Choose the correct answers.

- A Company codes
- B Plants
- C Material groups
- D Material types

Correct. Field reference keys can be defined for plants and material types.

11. Which field attribute has the highest priority?

Choose the correct answer.

- A Display only
- B Suppress/hide
- C Mandatory field
- D Optional field

Correct. Suppress/hide has always the highest priority.

12. On which of the following levels can you define lock-relevant fields?

Choose the correct answer.

- A Client
- B Material
- C User
- D Plan

Correct. Lock-relevant fields are defined on client level. For more information, see the *Defining Field References for Material Master Records* lesson in the S4550 or TS452 courses.

13. If you flag a field as lock-relevant and changes are already planned for this field of a locked material master record, the system saves these changes.

Determine whether this statement is true or false.

- True
- False

Correct. In this case the changes aren't saved. For more information, see the *Defining Field References for Material Master Records* lesson in the S4550 or TS452 courses.

UNIT 7

Valuation and Account Assignment

Lesson 1

Describing Automatic Account Determination

201

Lesson 2

Determining the Relevance of Company Codes and Valuation Areas

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Lesson 3

Creating Valuation Classes and Account Category References

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Lesson 4

Setting Up Account Determination for Specific Transactions

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Subdividing a Transaction with the Account Grouping Code

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Adjusting Account Determination for Special Cases

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UNIT OBJECTIVES

- Introduce automatic account determination
- Determine the relevance of company codes and valuation areas
- Create valuation classes and account category references
- Set up account determination for specific transactions
- subdivide a transaction with the account grouping code
- Adjust account determination for special cases

Describing Automatic Account Determination

LESSON OVERVIEW

This lesson covers the process of automatic account determination in materials management (MM). In addition, it discusses the significance of automatic account determination and its influencing factors with examples.

Business Example

You need to gain an overview of the options for automatic account determination in MM processes. For this reason, you require the following knowledge:

- An understanding of factors influencing automatic account determination
- An understanding of simple accounting transactions from inventory management and invoice verification



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Introduce automatic account determination

Automatic Account Determination

Different transactions in inventory management and invoice verification are relevant to accounting. The system records these transactions into an accounting document that contains the postings to the Finance General Ledger (G/L) accounts. The program should automatically determine the G/L accounts to which you make the postings in such a document.

For example, when you issue raw material for a production order, the system makes postings to stock accounts (under credits) and consumption accounts (under debits).

Automatic account determination is a procedure applied to accounting-relevant transactions and is used to identify the G/L accounts to which it makes postings without any user intervention. You must enter these accounts in a special table in Customizing for the transactions in inventory management and invoice verification.

Sample Automatic Postings

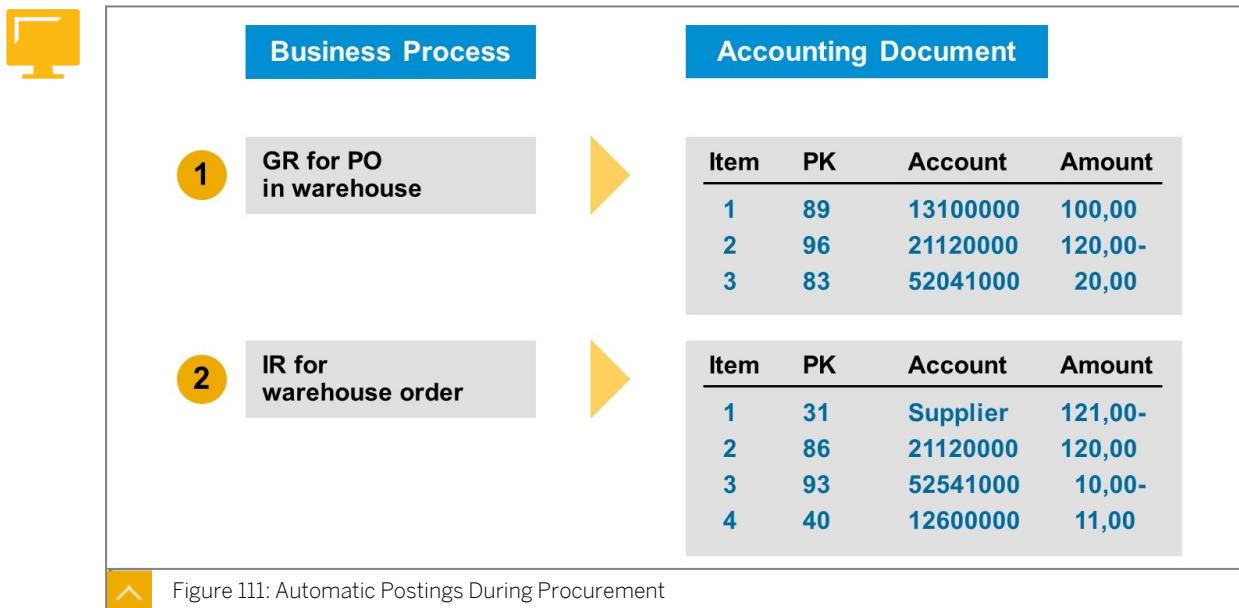


Figure 111: Automatic Postings During Procurement

The figure describes the steps of the procurement process.

The procurement process above is based on the following business processes:

1. A purchase order was created with a quantity of 10 pieces at a price of EUR 12 per piece. The material is valued at a standard price of EUR 10 per piece.
2. In step 1, the goods receipt is posted.

As a result of valuation using the standard price, the received quantity is posted to stock account 13100000 with a value of EUR 100 (10 pieces x EUR 10 standard price).

An offsetting entry with a value of EUR 120 is made to the goods receipt/invoice receipt clearing account 21120000 because an invoice amount of EUR 120 (10 pieces x EUR 12 purchase order price) is expected.

The EUR 20 difference between the order price and the valuation price is posted to price difference account 52041000. The price difference is booked as an expenditure because the order price is higher than the valuation price.

3. In step 2, the invoice receipt is posted.

The invoice is for 10 pieces at EUR 11 = EUR 110, plus 10% Value Added Tax (VAT), which is EUR 11 – a total of EUR 121.

This amount is posted to the supplier account, which corresponds to the reconciliation account from the business partner.

The GR/IR clearing account 21120000 has to be credited with the value from the goods receipt (= EUR 120) because the full quantity that was delivered is invoiced.

The invoice value (EUR 110) is lower than the goods receipt value (EUR 120). This time, the price difference is posted to price difference account 52541000 as revenue.

The system posts the tax amount to account 12600000 as input tax.

Posting Keys (PK) define whether a posting is a credit or a debit and to which type of accounts it is posted (supplier/asset...).

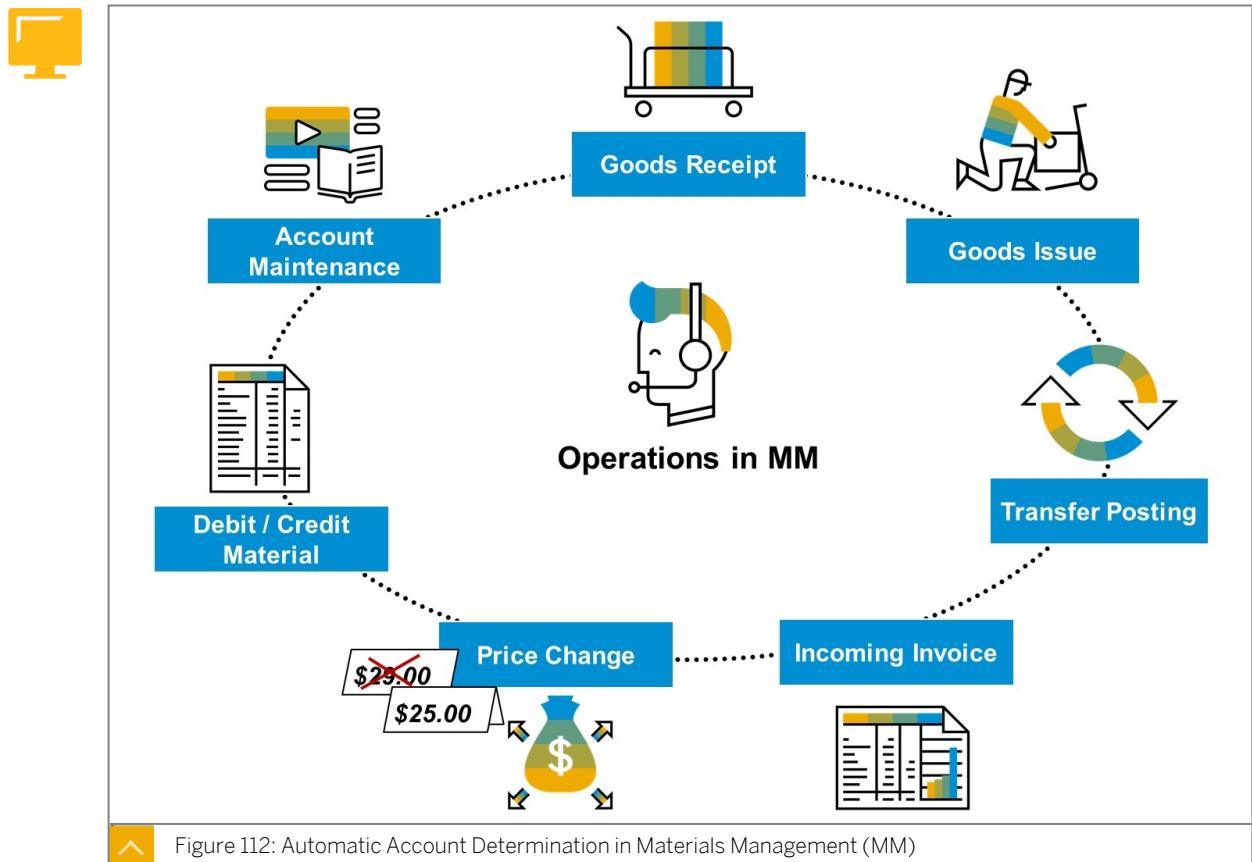
The following table shows typical posting transactions that can occur during a goods receipt into the warehouse or an invoice receipt for a purchase order item of the item category Standard without account assignment.

Transaction or Type of Account Assignment	GR	IR	G/L Account	Origin
Inventory posting	X	X	13100000	Automatic account determination
GR/IR clearing	X	X	21120000	Automatic account determination
Price difference	X	X	52041000	Automatic account determination
Supplier (reconciliation account)		X	21100000	Account in Business Partner
Input tax		X	12600000	Automatic account determination

The system automatically determines the relevant G/L accounts for every transaction in Materials Management.

A transaction in Materials Management, for example, posting a goods receipt with reference to a purchase order, consists of a number of accounting operations, such as stock posting (transaction key BSX) and GR/IR clearing posting (transaction key WRX).

Usage of Automatic Account Determination



The MM transactions for which you can set up automatic postings occur in the areas of inventory management, invoice verification, and material valuation. MM transactions also include goods movements triggered by production or sales operations.

Influencing Factors for Account Determination

In Customizing for Financial Accounting (FI), you can specify the chart of accounts for each company code. For example, the chart of accounts specifies the G/L accounts that are to be used for stock and expense postings. You must set up account determination for each chart of accounts separately because the meaning of individual G/L accounts depends on the chart of accounts.

Automatic Postings Based on Organizational Level



Goods issue for production order for raw material MAT1 in plant 1010			
13100000 (BSX)		51100000 (GBB)	
	100.00		100.00
“Consump. raw mats. plant 1010” to “Stock raw materials plant 1010” 100.00			
Goods issue for production order for raw material MAT1 in plant 1020			
13150000 (BSX)		51500000 (GBB)	
	100.00		100.00
“Consump. raw mats. plant 1020” to “Stock raw materials plant 1020” 100.00			

Figure 113: Example - Influencing Factor Organizational Level for Automatic Postings

The figure above shows the following example: A material is issued for production order in two different plants. We assume that the valuation level is the plant. Different stock and expense accounts can be posted for the same material and the same process, depending on the plant.

Automatic Postings Based on Material or Material Type



Goods issue for production order for raw material MAT1 in plant 1010		
13100000 (BSX)	51100000 (GBB)	“Consumption raw materials_1 plant 1010” <i>to</i> “Stock raw materials_1 plant 1010” 100.00
100.00	100.00	
Goods issue for production order for raw material MAT2 in plant 1010		
13150000 (BSX)	51150000 (GBB)	“Consumption raw materials_2 plant 1010” <i>to</i> “Stock raw materials_2 plant 1010” 100.00
100.00	100.00	
Goods issue for production order for spare part MAT3 in plant 1010		
13160000 (BSX)	51160000 (GBB)	“Consumption spare parts plant 1010” <i>to</i> “Stock spare parts plant 1010” 100.00
100.00	100.00	

Figure 114: Example - Influencing Factor Material or Material Type for Automatic Postings

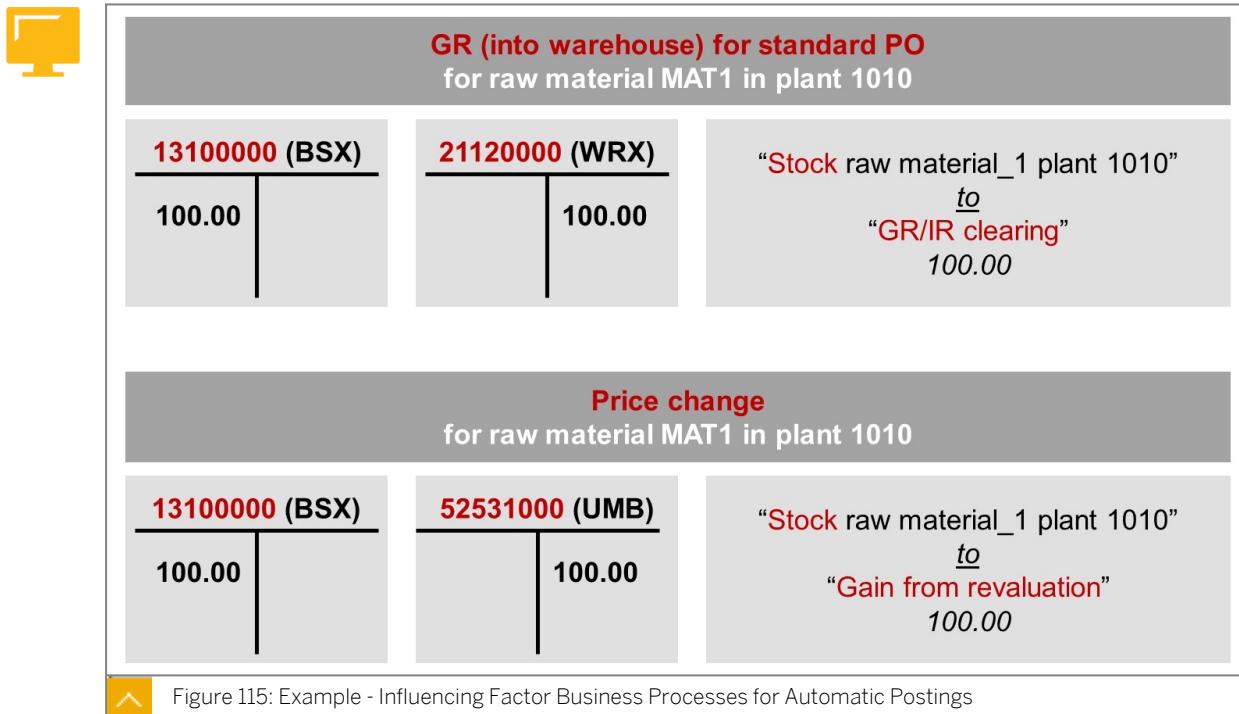
You can also set up automatic account determination depending on material and material type.

The figure shows an example in which the system makes automatic postings to different accounts for the same business process in the same plant, depending on the material type and material.

To set up inventory postings, first analyze the different material types in your company. Depending on the procurement type, you need one or more stock accounts to distinguish between materials produced in-house and those procured externally.

You can also set up automatic account determination depending on the business process.

Automatic Postings Based on Business Processes



The figure shows the postings for two different business processes.

The upper block shows the postings for a goods receipt into the warehouse with reference to a standard purchase order item.

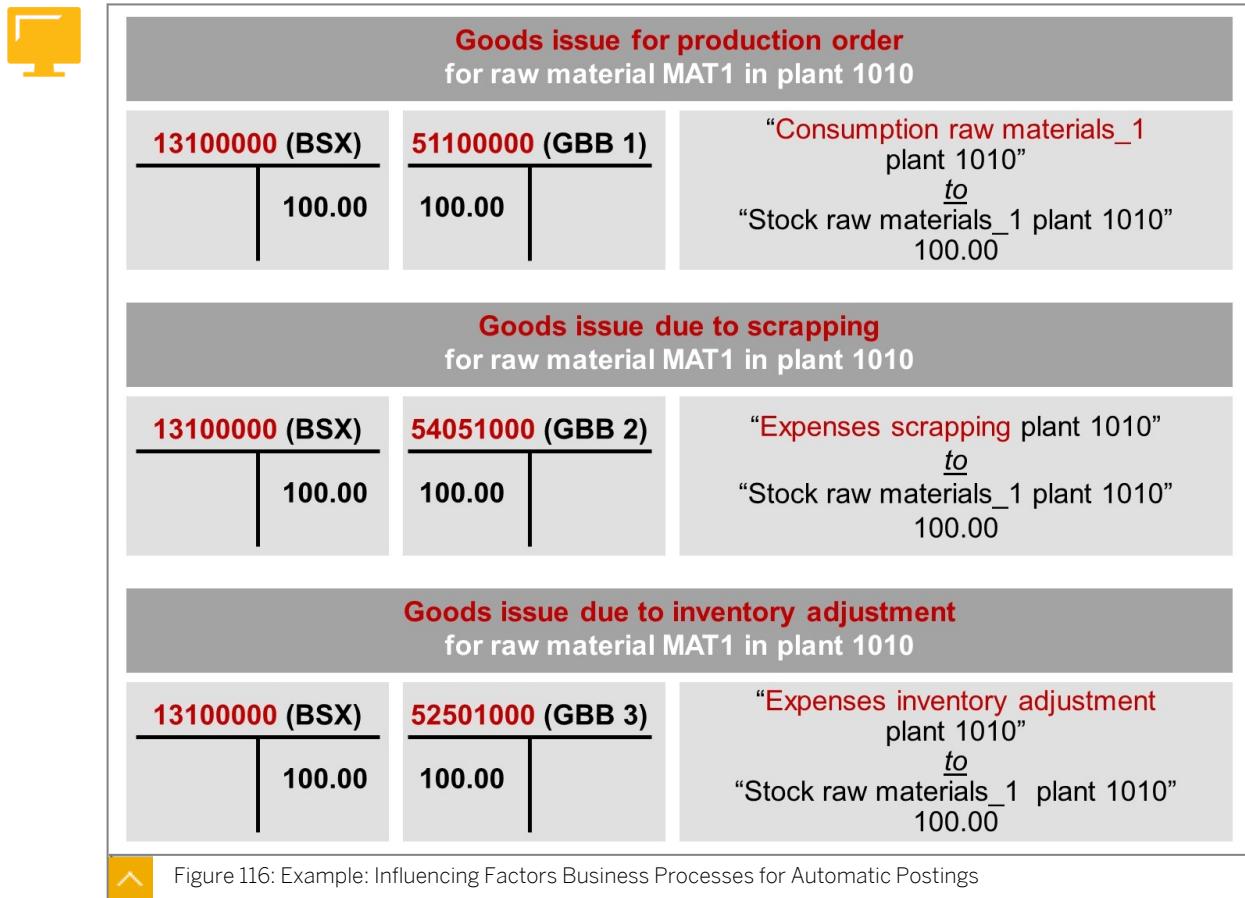
The lower block shows the postings for a valuation price change. When you change the valuation price of a material, you reevaluate the existing material stock and the system creates an accounting document.



Hint:

To change the valuation price of a material, on the SAP Easy Access screen, choose *Logistics* → *Materials Management* → *Valuation* → *Change in Material Price* → *Change Material Prices (MR21)*. Or in the SAP Fiori Launchpad use the corresponding app *Material Price Change*.

Automatic Postings Based on Business Processes



In SAP S/4HANA, you post different goods movements using movement types. For example, you post a material issue for production order with movement type 261, a scrapping with 551. For stock differences, the system also determines specific movement types in the background.

To be able to show expenses for production, scrapping or inventory differences separately in financial accounting and cost accounting, you can assign different accounts to the corresponding types of goods issues.

General Ledger Account Determination

When posting a goods movement, you do not need to enter a G/L account because SAP S/4HANA finds it automatically.

SAP S/4HANA determines the G/L accounts based on the following data:

- Organizational level
- Material
- Business transaction

Organizational Level

You directly or indirectly specify the plant(s) for the goods movement.

The system determines the following details from this specification:

- The company code to which the plant belongs and the chart of accounts for this company code
- The valuation area of the plant and a key (the valuation grouping code) that can be used for differentiated account assignment per valuation area

Material

You specify directly or indirectly the material for which the goods movement is carried out.

The system determines the following details from this specification:

- The material type of the material and the indicators showing whether quantity-based and/or value-based updates have been defined for it
- The valuation class of the material, which is responsible for differentiated account assignment, depending on the material and material type

Business Transaction

In inventory management, you select a movement type (directly or indirectly) for the goods movement to be posted. The movement type allows you to differentiate between different types of goods movements (for example, goods receipt, goods issue, and transfer posting).

Among other things, the system determines the following details from this data:

- The specifications for posting to G/L accounts
- The specifications for updating stock and value fields in the material master record

Selecting a process in invoice verification (invoice, credit memo, subsequent debit, or subsequent credit) controls which postings are required for that process. The system also checks whether the quantity that was invoiced or credited is still in stock (stock coverage).

During invoice receipt, for a material that is valued using the moving average price, the system may post to a price difference account if the invoice price differs from the order price and the invoiced or credited quantity is no longer or only partly in stock.



LESSON SUMMARY

You should now be able to:

- Introduce automatic account determination

Determining the Relevance of Company Codes and Valuation Areas

LESSON OVERVIEW

This lesson outlines how automatic account determination is dependent on company codes and valuation areas.

Business Example

You have decided that the postings in your new plant are to be made to different general ledger (G/L) accounts than the postings in your existing plants. You are to make the necessary preparations to facilitate the postings. For this reason, you require the following knowledge:

- An understanding of the chart of accounts used in your company code
- An understanding of the prerequisites to enable a plant-specific assignment of G/L accounts
- An understanding of the significance of the valuation grouping code

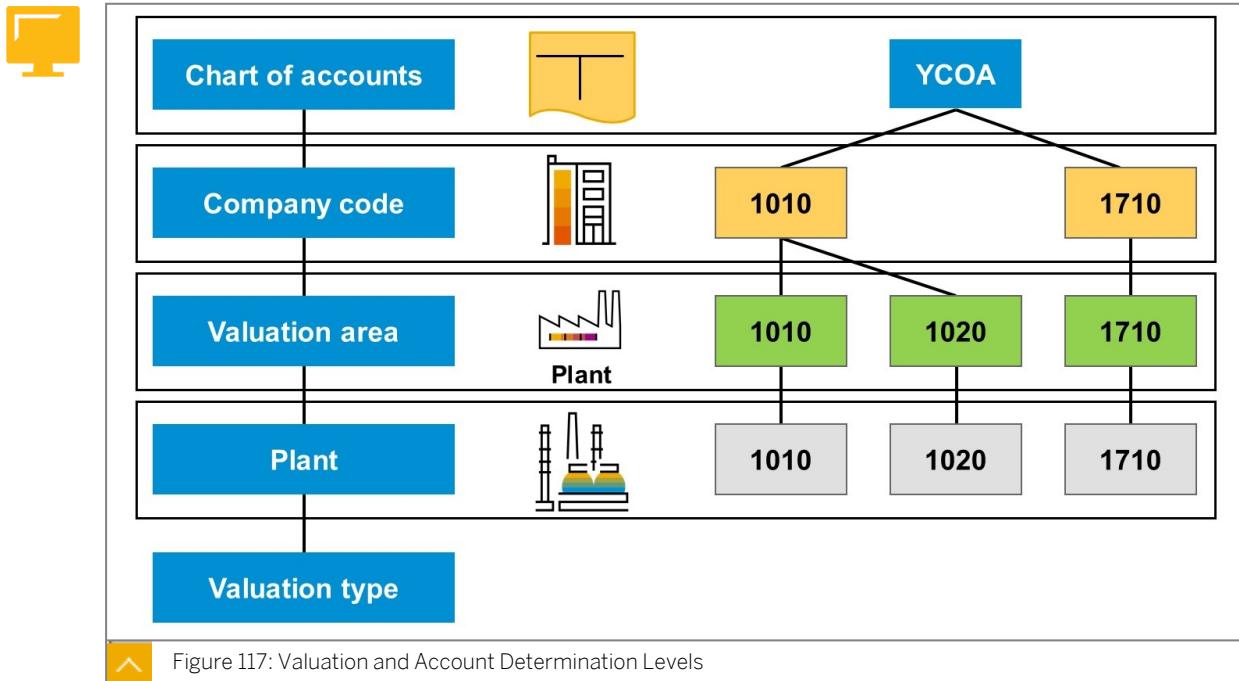


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Determine the relevance of company codes and valuation areas

Levels for Account Determination



The following factors influence the determination of G/L accounts:

- Chart of accounts:
You must set up the account determination process separately for each chart of accounts.
- Valuation area:
You can set up account determination for transactions (such as consumption postings) dependent on the valuation area.
- Valuation type:
If you use split valuation for individual materials, you can also set up account determination, depending on the valuation type.

The assignment of G/L accounts always depends on the chart of accounts. A chart of accounts is assigned to a company code in Customizing for Financial Accounting (FI).

G/L accounts can be assigned per valuation area. When you execute a business process, the valuation area is part of it. In Customizing, you can see whether the valuation area is to be the company code or the plant. This setting must be made before materials are created and Inventory Management transactions are entered.

If a material is subject to split valuation, you can valuate various stocks of the same material differently and manage them in different accounts.

Assignment of G/L Account Numbers for Automatic Account Determination



Depending on the different influencing factors (the assigned chart of accounts, the business transaction, the plant in which the transaction is posted, and possibly the material itself), the program determines which G/L account postings have to be made.

For every possible combination of the influencing factors (chart of accounts, business transaction, plant, and possibly the material itself), a G/L account must be assigned for DEBIT and CREDIT postings.

Client	CAcct	Transaction	VG	AG	VClass	G/L Acct DEBIT	G/L Acct CREDIT
400	YCOA	BSX	0001	--	3000	13100000	13100000
400	YCOA	WRX	--	--	--	21120000	21120000
400	YCOA	PRD	--	PRA	3000	52041000	52541000
400	YCOA	GBB	0001	VBR	3000	51100000	51100000

Figure 118: Assignment of G/L Accounts for Automatic Account Determination

In the preceding and the following figure the abbreviations stand for the following terms:

- **CAcct:** Chart of accounts
- **VG:** Valuation grouping code
- **AG:** Account grouping (valuation modification)
- **VClass:** Valuation class

Chart of Accounts



Client	CAcct	Transaction	VG	AG	VClass	G/L Acct DEBIT	G/L Acct CREDIT
400	YCOA	BSX	0001	--	3000	13100000	13100000
400	YCOA	WRX	--	--	--	21120000	21120000
400	YCOA	BSX	FR01	--	3000	311 000	311000
400	YCOA	WRX	--	--	--	408 120	408120

Figure 119: Chart of Accounts

The chart of accounts is a list of all G/L accounts that are jointly used by one or more company codes. It also specifies the numbers and names of each G/L account and information controlling the function of the account.

The chart of accounts is a key in the table for automatic account determination. You have to assign the individual G/L accounts for automatic account determination separately for each

chart of accounts because the meaning of a G/L account may differ from one chart of accounts to another.

The chart of accounts is used by both Financial Accounting and Costing.

The following charts of accounts may exist in addition to the operative chart of accounts:

- A country-specific chart of accounts that considers the legal requirements of a country
- A group chart of accounts that applies to an entire corporate group and is based on special consolidation aspects

Relevance of Valuation Areas

A valuation area is an organizational unit within Logistics that subdivides a company for uniform and complete valuation of material stocks.

In SAP S/4HANA, you specify the level at which your stocks of materials are to be valued for your company.

Stocks of materials can be valued at the company code or plant level.

If you have selected a plant as the valuation level, each plant represents a valuation area and the key for the valuation area is identical to the key for the plant.

Valuation Grouping Code



Client	CAcct	Transaction	VG	AG	VClass	G/L Acct DEBIT	G/L Acct CREDIT
400	YCOA	BSX	0001	--	3000	13100000	13100000
400	YCOA	GBB	0001	VBR	3000	51100000	51100000
400	YCOA	BSX	0001	--	3040	13400000	13400000
400	YCOA	GBB	0001	VBR	3040	54400000	54400000

↗ Figure 120: Valuation Grouping Code

You can assign G/L accounts for automatic account determination, depending on the valuation area. To minimize the effort involved in account determination, you can group the valuation areas with the same account assignment. The grouping is done using a **valuation grouping code**. This key is used to assign the account numbers.

By activating or deactivating the valuation grouping code, you can enable or disable the dependency of account determination on the valuation area. If the valuation grouping code is activated, a key must be assigned to each valuation area.

Valuation Level – Company Code

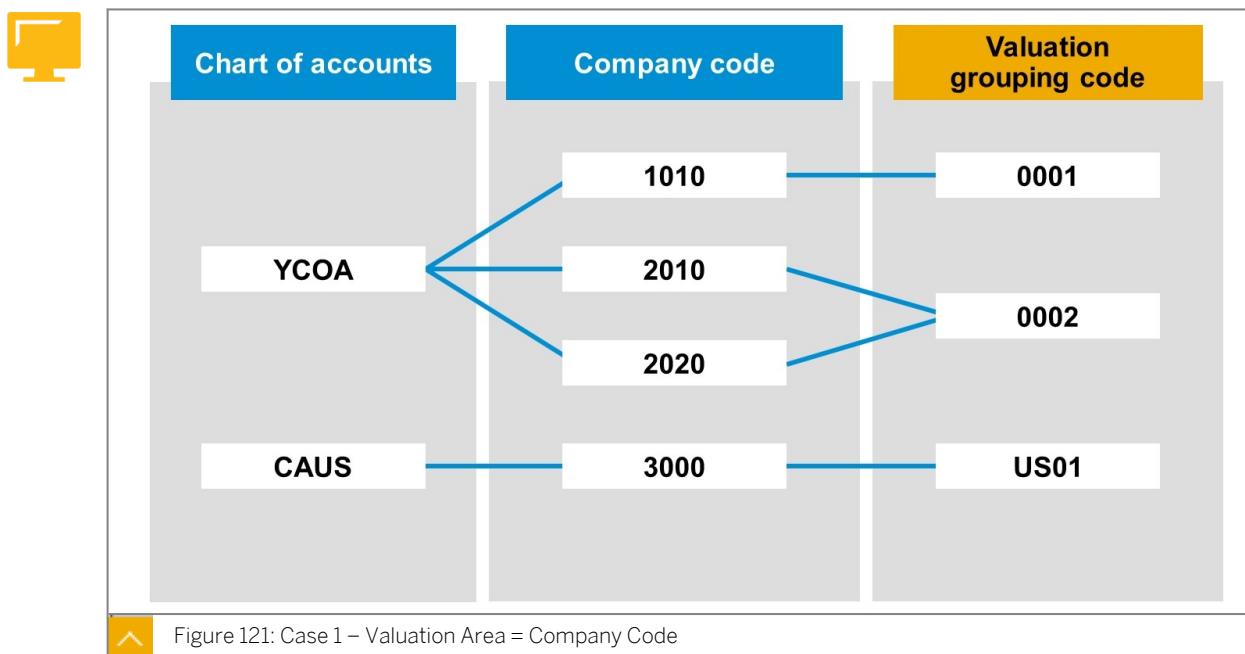


Figure 121: Case 1 – Valuation Area = Company Code

The figure displays a company in which several company codes use the same chart of accounts and one company code works with a different chart of accounts. In such a situation, automatic account determination must be set up separately at least for each chart of accounts. The valuation areas (the level at which material valuation takes place) are the company codes. If you set the valuation area to company code level, the assignment of G/L accounts is uniform across all plants of a company code (it cannot be plant-specific).

If the valuation area is at company code level, the following options are available:

- Valuation grouping code is deactivated:

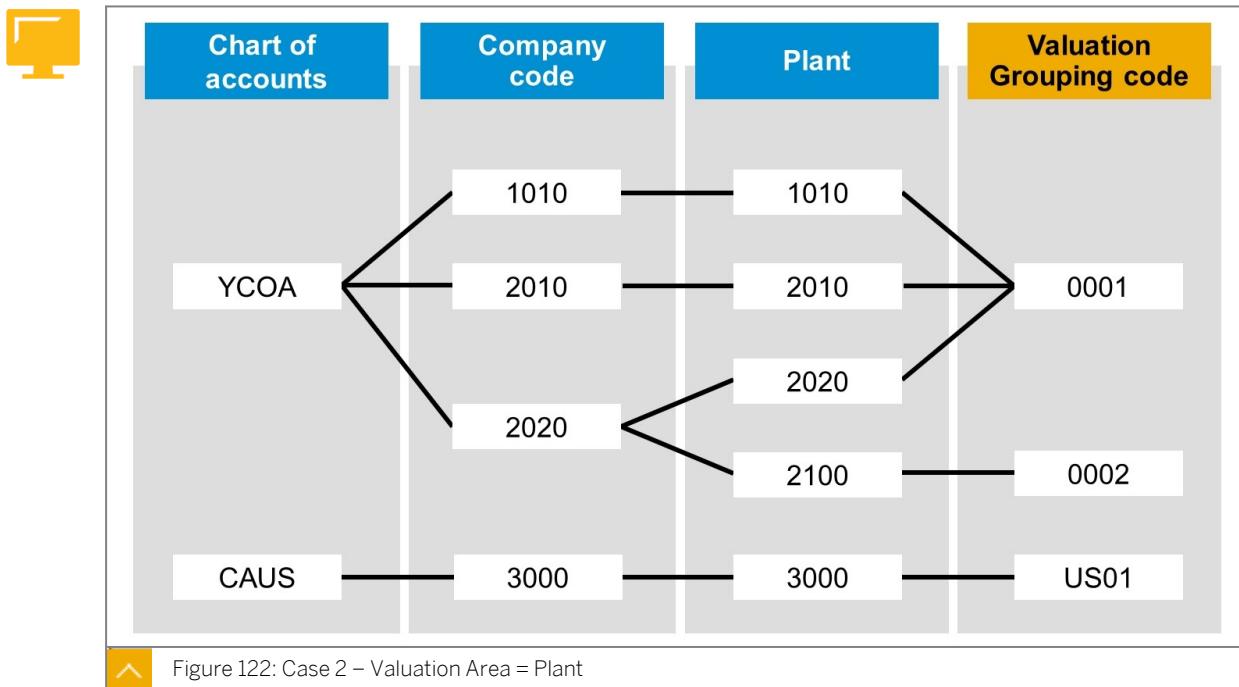
The system would treat the three company codes (1010, 2010, and 2020) to which you have assigned the same chart of accounts, YCOA, identically in terms of account assignment.

- Valuation grouping code is activated:

In this case, assign a valuation grouping code to each company code (1010, 2010, 2020 and 3000). Assign the same code (0002) to the company codes that are assigned to the same chart of accounts (YCOA) and that must be treated identically in terms of account assignment (2010 and 2020).

If you use different valuation grouping codes for the company codes of the same chart of accounts, you can assign different G/L accounts for the same business processes in the individual company codes.

Valuation Area – Plant



In this figure, the valuation is at plant level. If you set the valuation area to plant level, the assignment of G/L accounts can be made plant specific.

If the valuation area is at plant level, the following options are available:

- Valuation grouping code is deactivated.

The system treats the four plants (1010, 2010, 2020, and 2100) that use the same chart of accounts, YCOA, identically in terms of account assignment.

- Valuation grouping code is activated.

You have to assign a valuation grouping code to each plant (1010, 2010, 2020, 2100, and 3000). Plants that must be treated identically in terms of account assignment must have the same valuation grouping code.

If you use different valuation grouping codes for plants of the same chart of accounts, you can assign different G/L accounts for the same business processes in these plants.

Grouping of Valuation Areas — Realization — Example



Goods issue for production order for raw material MAT1 in plant 1010		
13100000 (BSX)	51100000 (GBB)	"Consump. raw mats. plant 1010" <i>to</i> "Stock raw materials plant 1010" 100.00
100.00	100.00	
Goods issue for production order for raw material MAT1 in plant 1020		
13110000 (BSX)	51110000 (GBB)	"Consump. raw mats. plant 1020" <i>to</i> "Stock raw materials plant 1020" 100.00
100.00	100.00	

Figure 123: Realization – Example 1

The figure shows different G/L accounts for plants 1010 and 1020 even though the business process (GI for production order) and the material are the same. Different G/L accounts are possible if the valuation grouping code is activated and a different valuation grouping code is used for each plant.



LESSON SUMMARY

You should now be able to:

- Determine the relevance of company codes and valuation areas

Creating Valuation Classes and Account Category References

LESSON OVERVIEW

This lesson explains how the automatic account determination process depends on the material type and the material master record.

Business Example

You are investigating whether it is possible to use a different account determination process for certain materials or material types. For this reason, you require the following knowledge:

- An understanding of the relationship between the material master record and the account determination process
- An understanding of the account determination process when defining new material types



LESSON OBJECTIVES

After completing this lesson, you will be able to:

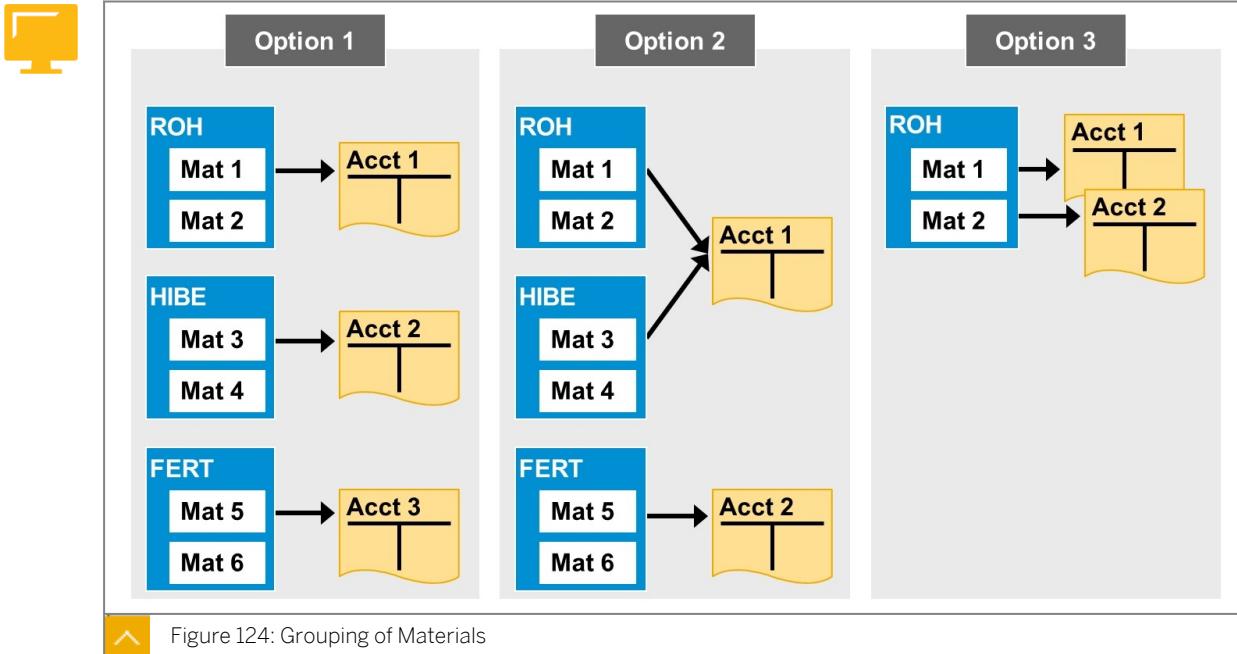
- Create valuation classes and account category references

Material Type and Account Determination

You can define automatic account determination on a material-dependent or material type dependent basis.

If you have, for example, raw materials and trading goods as material types, you can post their materials to different stock accounts at the time of goods receipt. Another option is to post materials of the same material type to different stock accounts, based on whether the materials are manufactured or purchased.

Grouping of Materials



The figure displays variants of the relationships between material types and the account determination process.

You can set up a uniform account determination for all materials of a certain material type (option 1). You can also specify that different G/L accounts are to be determined for different materials of the same material type (option 3). Alternatively, you can group several material types together and define the same G/L accounts for all materials within this group (option 2). Option 2 and 3 can also be mixed so that you can post the materials of a group to different G/L accounts.

Valuation Classes

Client	CAcct	Transaction	VG	AG	VClass	G/L Acct DEBIT	G/L Acct CREDIT
400	YCOA	BSX	0001	--	3000	13100000	13100000
400	YCOA	WRX	0001	VBR	3000	51100000	51100000
400	YCOA	PRD	0001	--	7900	13300000	13300000
400	YCOA	GBB	0001	VBR	7900	54300000	54300000

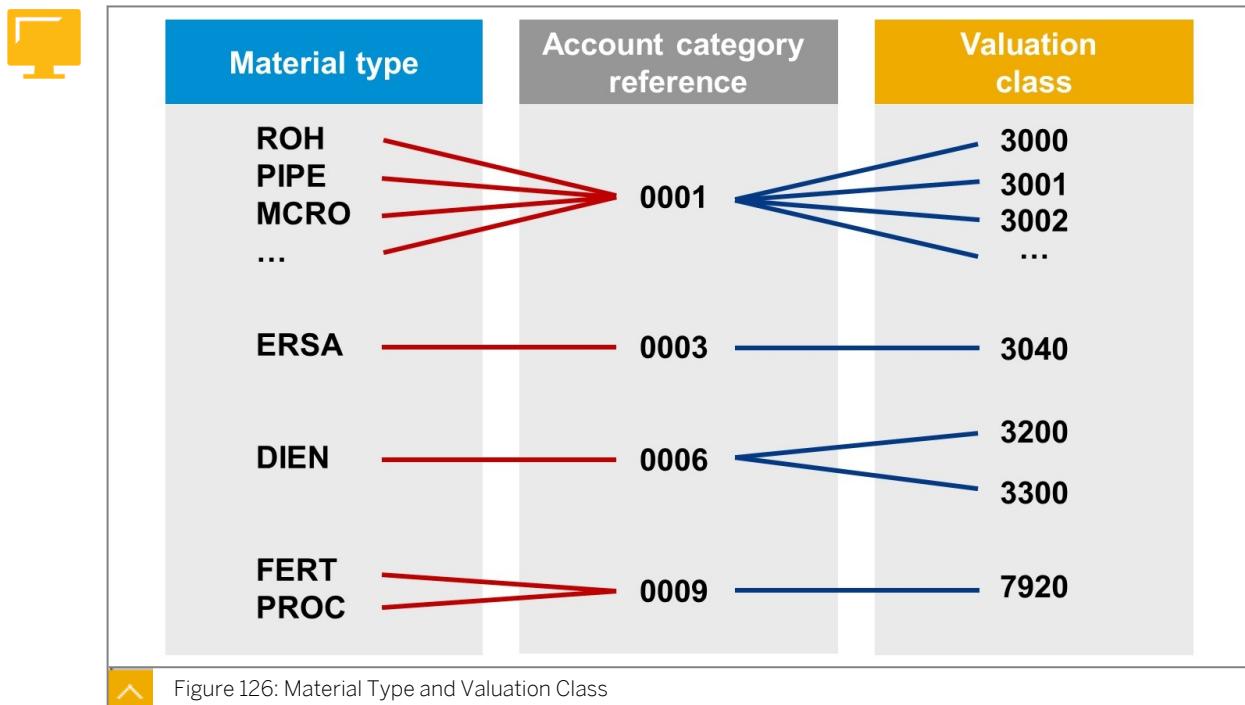
Figure 125: Material/Material Type

The system uses a valuation class to determine account assignment based on the material. The valuation class is a key that is used to group together materials with the same account determination.

The valuation class is entered in the material master record.

To post a transaction to different accounts depending on the valuation class, you must define as a rule that the account determination process for this transaction is dependent on the valuation class.

Material Type and Valuation Class



The permissible valuation classes depend on the material type.

You establish the relationship between valuation classes and material types with the aid of the account category reference. The account category references are assigned to the material types. You can assign only one account category reference per material type.

On the other side, you can assign several valuation classes to one account category reference. However, each valuation class can only be assigned to one account category reference.

When the valuation class in the accounting data of the material master record is entered, the system uses the account category reference assigned to its material type to determine whether the valuation class is allowed.

It is mandatory to assign each material type for which quantity-based and value-based Inventory Management has been defined, to an account category reference.

If a material is subject to split valuation, the allowed valuation classes depend on the account category reference of the valuation type, which can differ from the account category reference of the relevant material.

Grouping of Valuation Classes



Valuation Classes			
ValCl	Description	ARef	Description
0710	Equipment 1	0001	Reference for raw materials
0720	Equipment 2	0001	Reference for raw materials
1210	Spec.complex fixed ass...	0002	Ref. for operating supplies
3000	Raw Materials	0001	Reference for raw materials
3001	Raw materials 2	0001	Reference for raw materials
3002	Raw materials 3	0001	Reference for raw materials
3003	Raw materials 4	0001	Reference for raw materials
3030	Operating supplies	0002	Ref. for operating supplies
3031	Operating supplies 2	0002	Ref. for operating supplies
3040	Spare parts	0003	Reference for spare parts
3050	Returnable Packaging	0004	Ref. f. Returnable Pack. mat.
3100	Trading goods	0005	Reference for trading goods
3200	Purchased Services	0006	Reference for services
3300	General Services	0006	Reference for services
3410	Accommodation	0006	Reference for services
3420	Airfare	0006	Reference for services
3430	Ground Transportation	0006	Reference for services
3440	Travel Expenses Misc	0006	Reference for services
3500	Nonvaluated Materials	0007	Ref. for nonvaluated materials
7900	Semifinished Goods	0008	Ref. for semifinished products
7920	Finished Goods	0009	Ref. for finished products
YB30	Subcontracting	0001	Reference for raw materials



Figure 127: Grouping of Valuation Classes

The figure displays the definition of valuation classes and their assignment to an account category reference. Valuation classes 3000, 3001, 3002, and 3003 are assigned to account category reference 0001.

As a result, the user can select any of these four valuation classes when creating the accounting view of a material with a material type that is assigned to the account category reference 0001.

Material Type and Account Category Reference



Account Category Reference/Material Type			
M...	Material Type Desc.	ARef	Description
GBRA	ETM usable material	0002	Ref. for operating supplies
HALB	Semifinished Product	0008	Ref. for semifinished products
HAWA	Trading Goods	0005	Reference for trading goods
HERB	Interchangeable part	0001	Reference for raw materials
HERS	Manufacturer Part		
HIBE	Operating supplies	0002	Ref. for operating supplies
IBAU	Maintenance assemblies		
LEER	Empties	0004	Ref. f. Returnable Pack. mat.
LEIH	Returnable packaging	0004	Ref. f. Returnable Pack. mat.
LGUT	Empties (retail)	0004	Ref. f. Returnable Pack. mat.
MAT	Material general	0005	Reference for trading goods
NLAG	Non-stock materials		
NOF1	Nonfoods	0005	Reference for trading goods
PIPE	Pipeline materials	0001	Reference for raw materials
PLAN	Trading goods (planned)	0005	Reference for trading goods
PLM	PLM Minimal Material Type		
PROC	Process materials	0009	Ref. for finished products
PROD	Product groups	0008	Ref. for semifinished products
ROH	Raw materials	0001	Reference for raw materials
SERV	Services	0006	Reference for services

Figure 128: Material Type and Account Category Reference

The figure displays the assignment of account category references to material types. Account category reference 0001 is assigned to material types COMP, CONT, and ROH. As a result of this assignment, the same valuation classes for these material types are allowed.

Realization: Example with Materials of the Same Material Type



Goods issue for production order for raw material MAT1 in plant 1010			
13100000 (BSX)	51100000 (GBB)	"Cons raw materials_1 plant 1010" <u>to</u> "Stock raw materials_1 plant 1010" 100,00	
	100,00		
Goods issue for production order for raw material MAT2 in plant 1010			
13150000 (BSX)	51500000 (GBB)	"Cons raw materials_2 plant 1010" <u>to</u> "Stock raw materials_2 plant 1010" 100,00	
	100,00		

Figure 129: Realization - Example with Materials of the Same Material Type

The example in the figure illustrates the effects of allowing various valuation classes within one material type on account determination. Different accounts are found for MAT1 and MAT2, although both materials belong to the same material type, ROH (raw material).

That means that MAT1 and MAT2 must have different valuation classes.

Realization: Example with Materials of Different Material Types



Goods issue for production order for raw material MAT1 in plant 1010		
13100000 (BSX)	51100000 (GBB)	"Cons raw materials_1 plant 1010" <i>to</i> "Stock raw materials_1 plant 1010" 100,00
100,00	100,00	
Goods issue for production order for spare part MAT3 in plant 1010		
13400000 (BSX)	54400000 (GBB)	"Cons spare parts plant 1010" <i>to</i> "Stock spare parts plant 1010" 100,00
100,00	100,00	

Figure 130: Realization: Example with Materials of Different Material Types

In the example in the figure, there are two materials with different material types. The associated accounts are different because different valuation classes are assigned to the two materials. Different account category references are assigned to material types *raw materials* and *spare parts*, which also means that you cannot use the same valuation class for both materials.



Hint:

You can minimize errors in account determination by only assigning one valuation class to an account category reference.



LESSON SUMMARY

You should now be able to:

- Create valuation classes and account category references

Setting Up Account Determination for Specific Transactions

LESSON OVERVIEW

This lesson explains the influence of business transactions on the process of automatic account determination. Key aspects are goods movements and the control function exercised by the movement type. In addition, this lesson explains the options available for the configuration of the account determination process for movement types.

Business Example

You need to familiarize yourself with the scope of the account determination functionality for the processes in your company.

You want to complete the settings for account determination for your new material type. For this reason, you require the following knowledge:

- An understanding of the definition of a value string and how to determine it for goods movements
- An understanding of how to set up and verify the account determination process for individual transactions

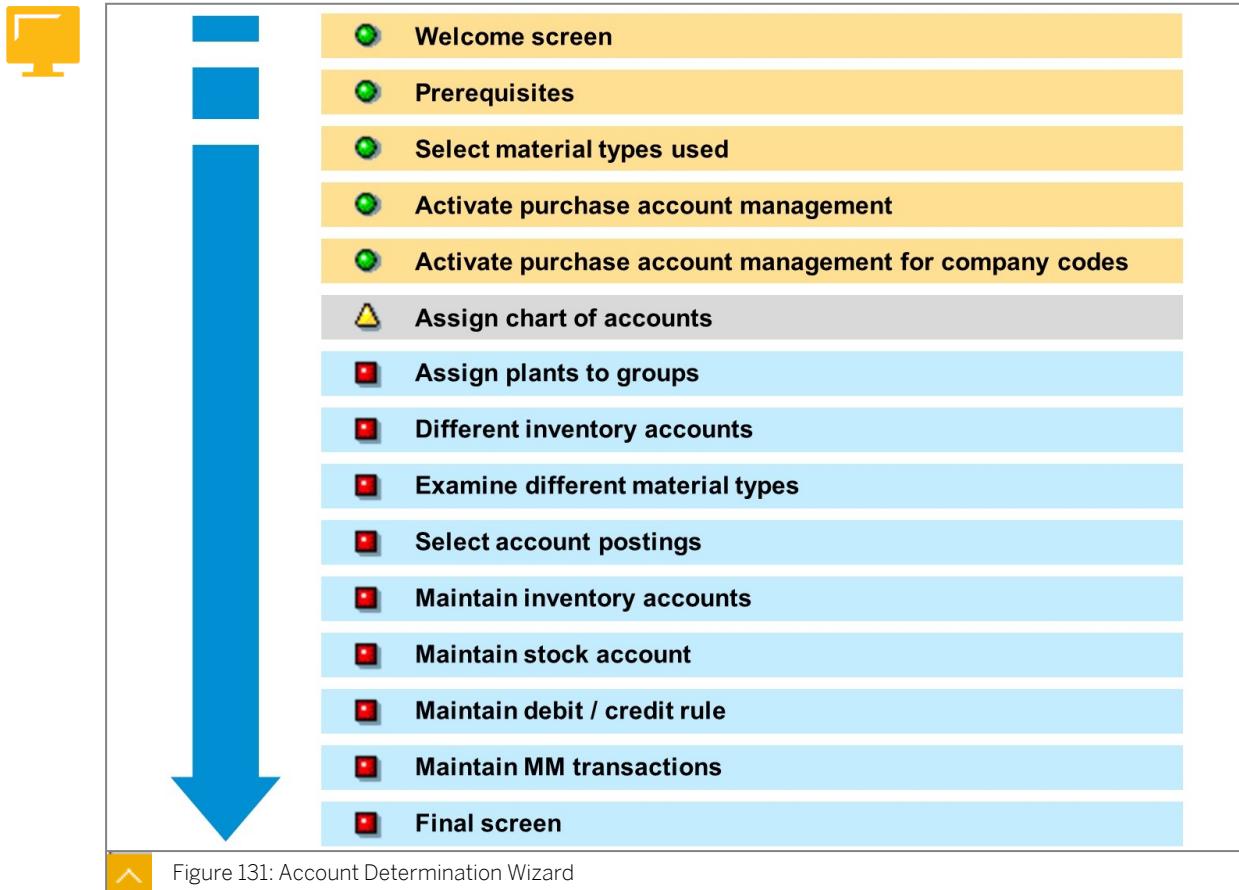


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Set up account determination for specific transactions

Account Determination Wizard



The account determination wizard helps you to understand the sequence of Customizing settings for account determination.

If you work with the wizard, you can specify the system settings for automatic account determination by answering a series of questions. You can call up further information for recommendations and hints. Depending on your answers to the questions, the system accesses the relevant Customizing tables.

Apart from a few restrictions (specified in the wizard), you can call the following functions by using the account assignment wizard:

- Display and/or maintain company codes, plants, and material types (prerequisite)
- Choose the material types to be used
- Set up purchase account management (necessary for certain countries only, such as France, Belgium, and Spain)
- Group together valuation areas
- Define the rules for stock postings and other postings
- Define valuation classes
- Assign stock accounts
- Assign the other General Ledger (G/L) accounts depending on the business transactions

Business Processes and Account Determination



Client	CAcct	Transaction	VG	AG	VClass	G/L Acct DEBIT	G/L Acct CREDIT
400	YCOA	BSX	0001	--	3000	13100000	13100000
400	YCOA	WRX	--	--	--	21120000	21120000
400	YCOA	PRD	--	PRA	3000	52041000	52041000
400	YCOA	GBB	0001	VBR	3000	51100000	51100000

Figure 132: Influencing Factors Business Transaction

In the table in the figure, the abbreviations have the following meanings:

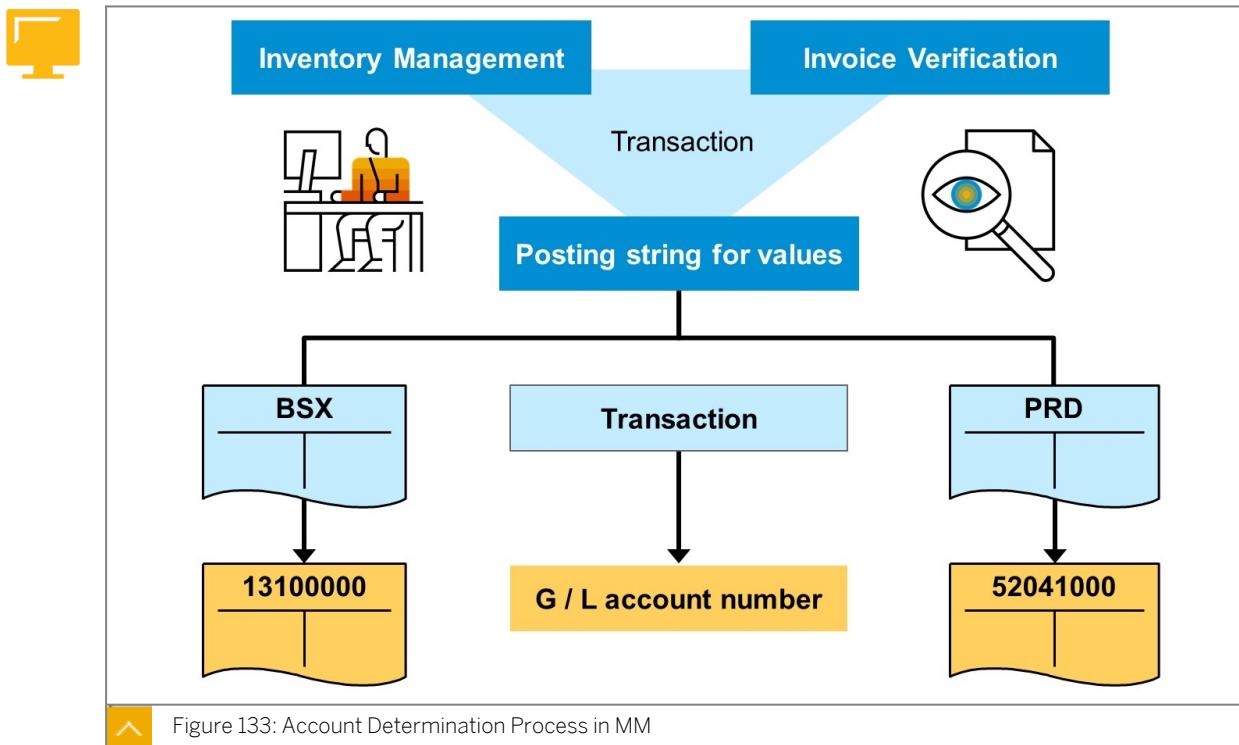
- CAcct = Chart of accounts
- VG = Valuation grouping code
- AG = Account grouping code (account modification or valuation modification)
- VClass = Valuation class

SAP S/4HANA predefines the posting transactions for each accounting-relevant transaction in Materials Management (MM). The transaction key (for example, BSX, WRX, PRD, and GBB) symbolizes the business transaction event. To enable different companies to use different charts of accounts, the system assigns generalized posting records to each transaction. This assignment is done using a value string.

Instead of specific G/L account numbers, the value string contains the transaction event keys for the relevant posting transaction.

The assignment of the value strings for accounting-relevant transactions in inventory management and invoice verification and the keys within a value string cannot be changed.

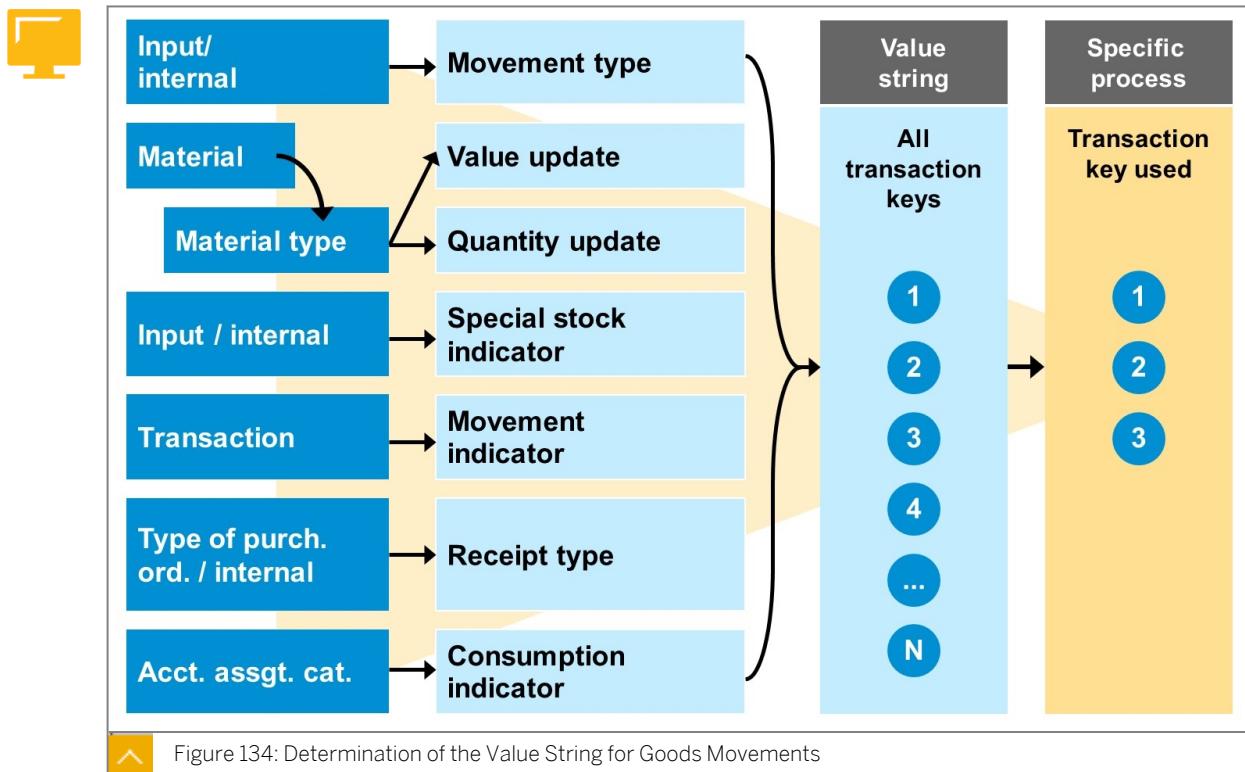
Account Determination Process in Materials Management



The system uses generalized posting records in a value string (posting rule) for each relevant movement type in inventory management and each transaction in invoice verification. Instead of specific G/L accounts, this value string contains the keys for the relevant posting transactions (for example, BSX for stock posting and PRD for price difference posting).

The transaction/event keys are determined automatically from the transaction in invoice verification or the transaction and movement type in inventory management. You only need to assign the G/L accounts to which the system has to make postings for each transaction/event key.

Determination of the Value String for Goods Movements



You can see the assignments of value strings to goods movements and the breakdown of the value strings into transaction event keys in Customizing for Inventory Management and Physical Inventory, but you cannot change them.

You must assign the relevant G/L accounts to the corresponding posting transactions in Customizing for valuation and account assignment.

The system automatically determines the value string assigned to a specific transaction, depending on the parameters you enter manually and parameters derived internally by the system.

The value string contains the maximum possible transaction keys for a transaction. For each transaction, the program determines which of these transaction keys are relevant and lead to G/L postings.

Realization – Example



GR for NB PO for raw material MAT1 in plant 1010		
13100000 (BSX)	21120000 (WRX)	
100.00	100.00	
“Stock raw material_1 plant 1010” <i>to</i> “GR/IR clearing” 100.00		
Price change for raw material MAT1 in plant 1010		
13100000 (BSX)	52531000 (UMB)	
100.00	100.00	
“Stock raw material_1 plant 1010” <i>to</i> “Gain from revaluation” 100.00		

Figure 135: Realization – Example

The system uses different value strings for the transactions shown in the figure.

Value string WE01 is used for goods receipts into the warehouse with reference to a standard purchase order and contains transactions BSX and WRX.

Value string RE05 is used for price changes and contains transactions BSX and UMB.

Value Strings Example – WE01



WE01	BSX Inventory posting
	WRX GR / IR clearing
	PRD Price differences
	KDM Materials Management: Exchange rate differences
	EIN Purchase account
	EKG Purchase offsetting account
	BSV Change in stock account
	FRL External service
	FRN Incidental costs of external services
	BSX Inventory posting
	UMB Gain / loss from revaluation

Figure 136: Value Strings Example – WE01

As shown in the figure, the following transaction/event keys are assigned to value string WE01:

- BSX for postings to stock accounts
- WRX for postings to the GR/IR clearing account
- UMB for the offsetting entry in the case of a price change (accounts for loss or gain from revaluation)

The documentation for the Customizing activity *Configure Automatic Postings* contains more detailed information on all SAP transaction/event keys.



Hint:

Some transaction/event keys (for example, EIN for postings to a purchase account) are country specific.

Check which transactions are relevant for your company. There is no need to assign G/L accounts for transactions that are not relevant to you.

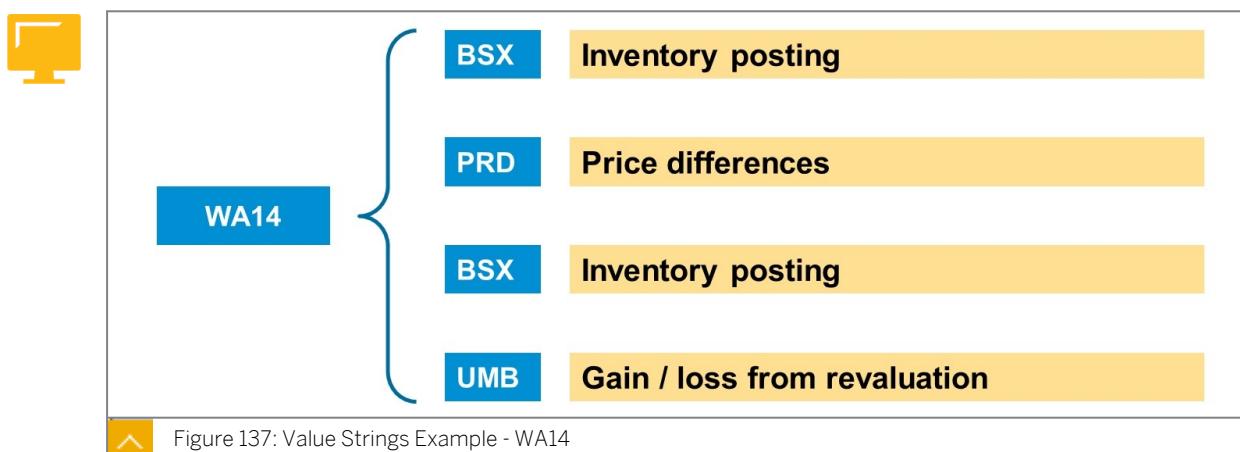
The system assigns value string WE01 to GRs for standard POs (and corresponding reversals and return deliveries) to items that have no account assignment. These GRs are of the category standard or subcontracting for valued material into the warehouse.

Transaction/Event Keys and Their Uses

Transaction/ Event Key Name	Transaction/Event Key Description	Use
BSX	Stock Posting	For a valued GR against a PO item without an account assignment, the system always makes a posting to a stock account.
WRX	GR/IR Clearing Ac- count	The offsetting entry to the valued GR is made to the GR/IR clearing account.
PRD	Price difference post- ing	The system makes this posting if a material is valued at a standard price and the PO price (or invoice price) varies from the standard price.
KDM	Exchange rate differ- ences	This transaction/event key is needed in MM for a PO in foreign currencies in which different exchange rates are applied at the times of goods receipt and invoice receipt. This key is used if the system cannot debit or credit the material account due to standard price control or lack of stock.
EIN	Purchase Account	This transaction/event key is applicable in company codes in which purchase account management is active (for example, as is legally required in France or Belgium).
EKG	Purchase Offsetting Account	This transaction/event key is applicable in company codes in which purchase account management is active (for example, as is legally required in France or Belgium).

Transaction/ Event Key Name	Transaction/Event Key Description	Use
BSV	Changes in stock account	The system uses this transaction/event key only with the item category subcontracting.
FRL	External Services	The system uses this transaction/event key only with the item category subcontracting.
FRN	Incidental costs for External Services	The system uses this transaction/event key only with the item category subcontracting.

Value Strings Example – WA14



As displayed in the figure, transaction/event key BSX appears twice in value string WA14. The explanation for this is in the last case in the list that follows.

The system provides value string WA14 for the goods movement free-of-charge delivery (movement type 511) for materials with value-based inventory management.

Cases for Value Strings Example – WA14

The following are possible cases for value string WA14:

1. Free delivery of a material with price control V.

The system does not generate an accounting document because it valuates the receipt at zero. The system generates a material document, which leads to an increase in stock.

2. Free delivery of a material with price control S (and if the posting date lies in the previous period, standard price in the posting period = standard price in the current period).

The system generates an accounting document containing a stock posting for the receipt at standard price (transaction BSX) and a posting to a revenue account for price differences (transaction PRD).

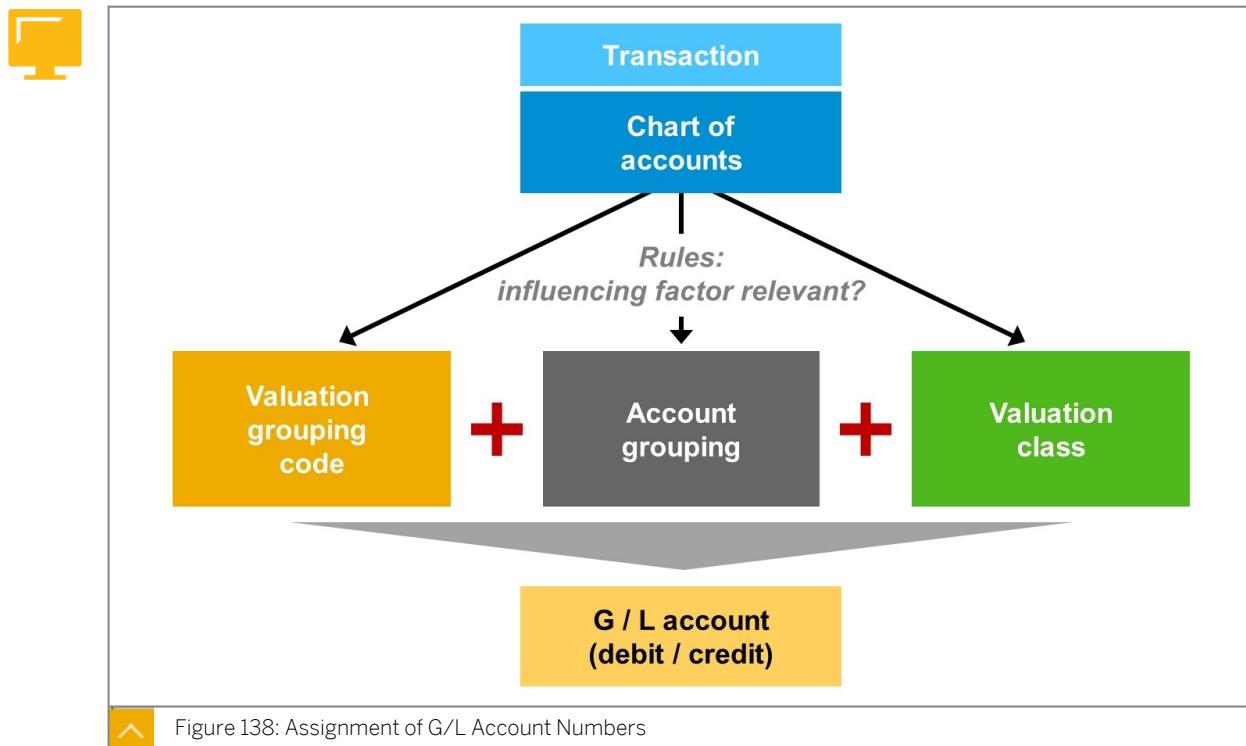
3. Free delivery of a material with price control S and a posting date in the previous period, where the standard price differs from the standard price in the current period.

The system generates accounting documents for the previous and current periods (adjustment posting). Key BSX occurs twice because these accounting documents have the same stock posting (transaction/event key BSX).

The accounting document for the previous period contains the receipt to the stock account at the standard price of the previous period (transaction BSX) and the price difference posting (transaction PRD) with the same amount.

The accounting document of the current period is based on the variance between the standard prices of the previous and current periods. The system carries out a price change for the quantity posted retrospectively to the previous period. This accounting document (posting date = first day of the current period) contains the stock adjustment posting (second transaction BSX) and a posting to a Gain/Loss from revaluation account (transaction UMB).

Assignment of G/L Account Numbers



Using rules, you can specify the influencing factors for the G/L account assignment for particular transactions.

The possible influencing factors are the valuation grouping code (that is, the valuation area), the account grouping code (not possible for every posting key), and the valuation class.

With a further indicator, you can specify for each posting transaction whether different G/L accounts are to be assigned for the debit and credit postings (this assignment is possible for postings to expense or revenue accounts, such as price differences).

Assignment of Stock Accounts (Transaction BSX)

The figure shows the assignment of stock accounts to transaction BSX (stock posting). This assignment applies only within the chart of accounts, YCOA.

Valuation modif.	Valuation class	Account
0001	3000	13100000
0001	3040	13400000
0001	3050	13500000
0001	3100	13600000
0001	7900	13300000
0001	7920	13400000
0001	YB30	13100000

The figure shows the assignment of stock accounts to transaction BSX (stock posting). This assignment applies only within the chart of accounts, YCOA.

For transaction BSX (for the chart of accounts, YCOA), the rules are the valuation grouping code and the valuation class.



Caution:

If you change the rules for a transaction, all entries in the account determination table for this transaction are deleted.

For inventory-managed materials, assign a valid G/L account for each combination of valuation grouping code and valuation class that occurs for a business process.

In addition, assign the Financial Accounting (FI) posting keys for the debit and credit postings to each posting transaction under posting keys. A posting key is a two-character numeric key that controls the entry of document items.

The posting key determines the following:

- Account type (for example, vendor, customer, asset)
- Debit or credit posting
- Layout of the entry screens

Simulation of Account Assignment

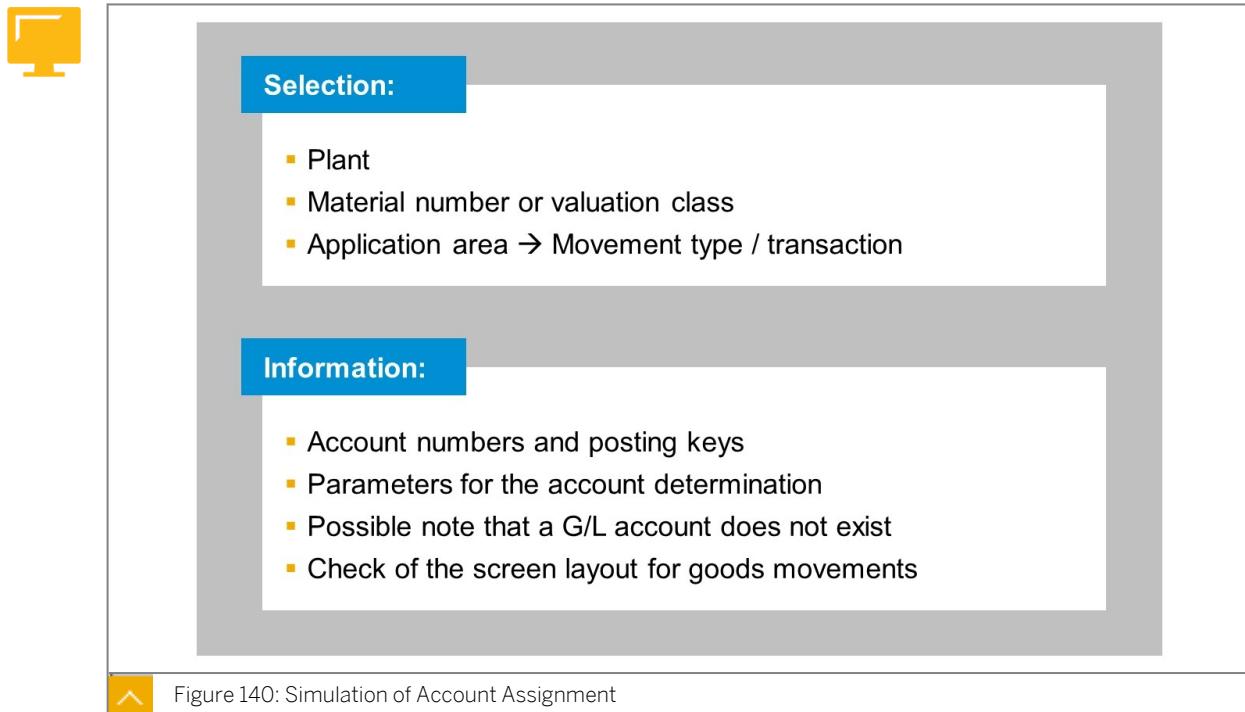


Figure 140: Simulation of Account Assignment

The simulation function enables you to check the settings for automatic account determination. This function outputs all the factors that influence account determination and additional information.



Hint:

The simulation function is especially helpful in inventory management because, in contrast to Logistics Invoice Verification, you cannot execute a simulation in the application.

The simulation, which you can call in the activity *Configure Automatic Postings*, shows the G/L accounts that are assigned to the transactions.

The simulation considers materials, valuation classes, plants and transactions in inventory management or invoice verification.

You can choose between the following options:

- Input of material number or valuation class (input mode)
- Transaction in inventory management or invoice verification (application area)

When you call the simulation function, the system can check whether the accounts you have assigned exist in the chart of accounts.

During the simulation, all transaction/event keys for the relevant value string are taken into account, regardless of their significance to your company code (for example, EIN, EKG, and FRE).

Within the simulation for inventory management transactions, you can compare the settings for field selection for the movement type you select and the assigned accounts. You achieve this by clicking on the *Check Screen Layout* button.

Account Assignment Simulation



Simulate Inventory Mgmt: Account Assignments

Movement + Movement - Check Screen Layout

Organization

Plant	1010	-> Company Code	1010	-> Chart of Accounts	YCOA
		-> Valuation area	1010	-> Valuation Grpg Code	0001

Valuation

Material	I-R101	-> Valuation Class	3000
Material type	ROH	->	<input checked="" type="checkbox"/> Value updating

Movement

Movement type	511	Delivery w/o charge
---------------	-----	---------------------

Posting Lines

Posting Lines Text	VLGcd	AGC	VC1	PK Acct Deb.	PK Acct Cr.
Inventory posting	0001	-e-	3000	89 13100000	
Cost (price) differences	-e-	PRA	3000	83 52045500	93 52545500
Inventory posting	0001	-e-	3000	89 13100000	99 13100000
Gain/loss from revaluation	0001	-e-	3000	83 52031000	93 52531000

 Figure 141: Simulation of Account Assignment

The figure shows the simulated account determination for movement type free-of-charge delivery (MvT 511) for a raw material.

The four posting lines displayed in the lower block correspond to the four transaction/event keys that belong to value string WA14. The entry - e - means that the rule (dependency) is not active for the corresponding transaction.



LESSON SUMMARY

You should now be able to:

- Set up account determination for specific transactions

Subdividing a Transaction with the Account Grouping Code

LESSON OVERVIEW

This lesson explains the influence of business transactions on the process of automatic account determination. The key aspects of this lesson are goods movements and the control function used by the movement type. This lesson also introduces the options available for the configuration of account determination for movement types.

Business Example

You need to familiarize yourself with the scope of the account determination functionality for the processes in your company.

You want to complete the settings for account determination for your new material type. For this reason, you require an understanding of the significance of the account grouping code.

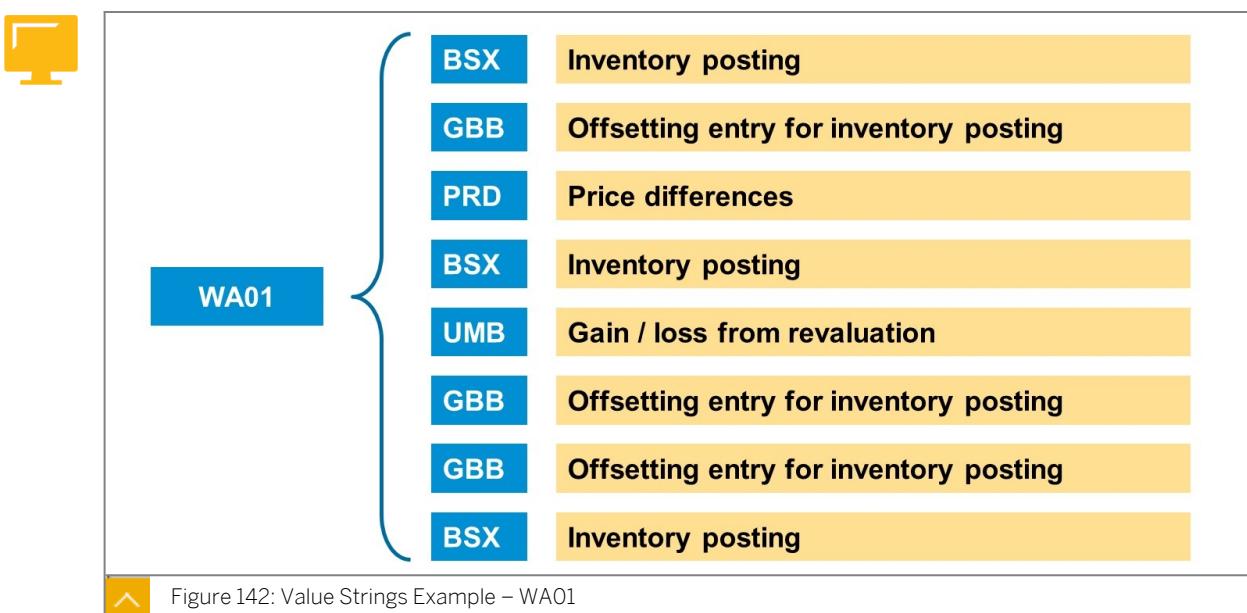


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- subdivide a transaction with the account grouping code

Business Processes and Value Strings



The value string contains all transaction keys that are possible for a specific business process (such as a goods receipt or goods issue posting).

The value string WA01 for example is assigned to various goods issues and other goods receipts. The possible transaction keys are shown in the figure above. The transaction key GBB, for example, stands for offsetting entry to the stock account. However, this offsetting entry depends on whether, for example, a goods issue is posted for a cost center, a sample or a scrapping. To differentiate these movements in the automatic account determination process, you can use the account grouping code.

Account Grouping Code

As an example, the system uses the transaction key *Offsetting Entry for Inventory Posting (GBB)* for different business processes such as goods issue, scrapping, or physical inventory. However, depending on the business process, different accounts should be used for posting (e.g. consumption account, expense due to scrapping, expense or income from inventory differences).

To achieve this, you must further break down the transaction key by adding an additional code: the **account grouping code**.

The account grouping code is also referred to as **general modification**. You can define own keys for account grouping. Some keys (such as VBR) are part of the SAP S/4HANA standard.

The following table shows examples of the influence of business transactions on account determination.



Client	CAcct	Transac-tion key	VG	AG	VClass	G/L Acct DEBIT	G/L Acct CRED-IT
400	YCOA	PRD	—	—	3000	52041000	52541000
400	YCOA	PRD	—	PRA	3000	52045500	52545500
400	YCOA	GBB	0001	BSA	3000	39911000	39911000
400	YCOA	GBB	0001	VBR	3000	51100000	51100000

In the table above, the abbreviations stand for the following terms:

- CAcct = Chart of accounts
- VG = Valuation grouping code
- AG = Account grouping code (*general account modification code or modifier*)
- VClass = Valuation class

Account Grouping Code (AG Column)

An account grouping code enables you to assign G/L accounts by the transaction/event key in account determination. You can assign G/L accounts to individual transactions depending on the movement type of a goods movement.

In the standard system, the account grouping code is active only for a few transactions/event keys such as GBB (offsetting entry for inventory posting). However, you can also use account grouping for other transactions in your company (for instance, for price differences).

For goods movements, you can assign the account grouping code to the posting transaction *Offsetting Entry for Inventory Posting*, depending on the movement type and other indicators.

Transaction/Event Key and Account Grouping Code

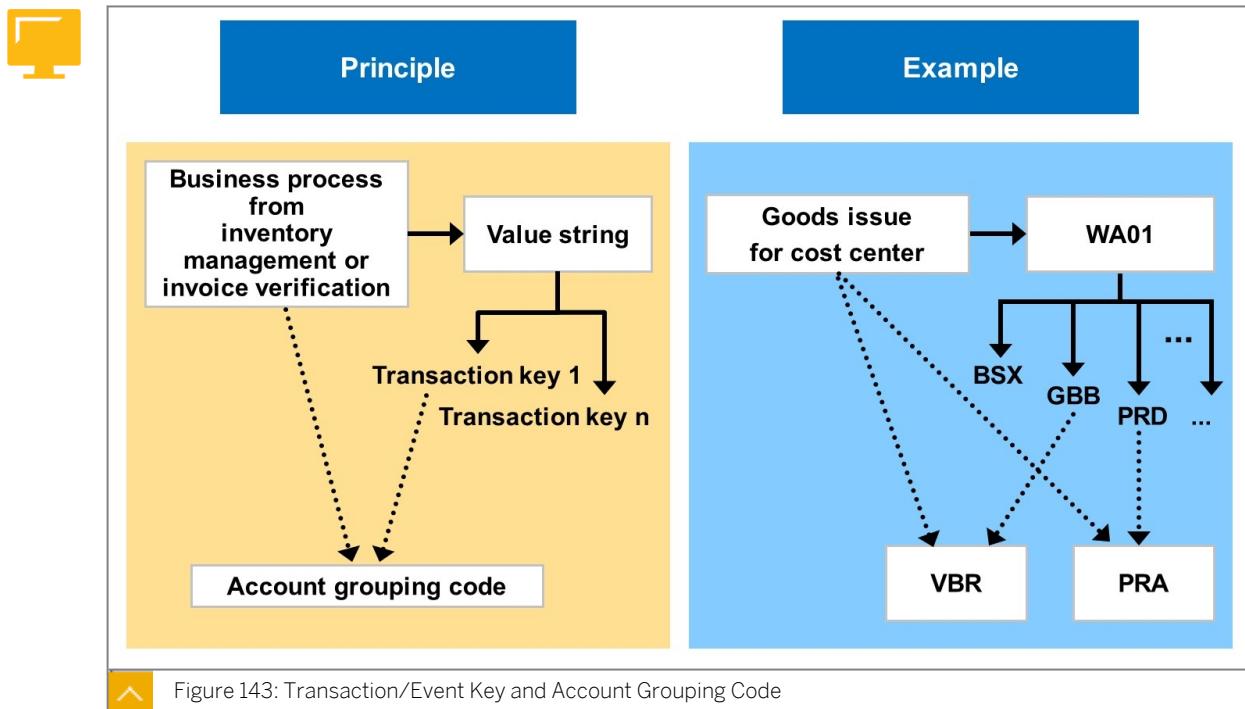


Figure 143: Transaction/Event Key and Account Grouping Code

Value strings contain the keys for the posting transactions (transaction keys) that can lead to G/L account updates in Financial Accounting (FI).

If you think a key is too unspecific, you can enable the general modification as a rule for that key. You can then use account grouping codes to further subdivide the account determination within the respective transaction key.

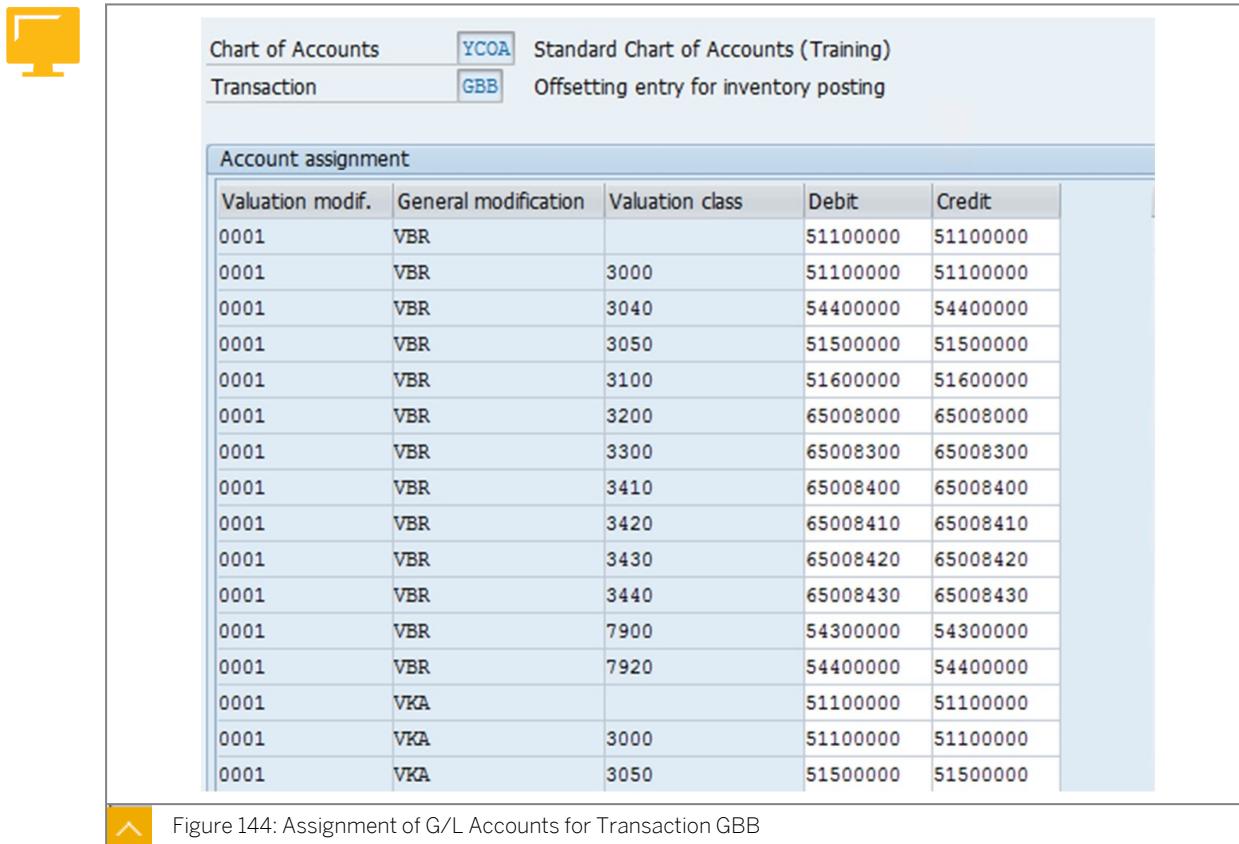
In the case of inventory management transactions, you can assign the account grouping (or modification) code, depending on the movement type and other indicators (such as the special stock indicator).



Hint:

You cannot use the account grouping code for invoice verification transactions.

Assignment of G/L Accounts for Transaction GBB



The screenshot shows a SAP Fiori application window. At the top, there are two tabs: "Chart of Accounts" (highlighted in blue) and "YCOA Standard Chart of Accounts (Training)". Below the tabs, it says "Transaction GBB Offsetting entry for inventory posting". The main area is titled "Account assignment" and contains a table with the following data:

Valuation modif.	General modification	Valuation class	Debit	Credit
0001	VBR		51100000	51100000
0001	VBR	3000	51100000	51100000
0001	VBR	3040	54400000	54400000
0001	VBR	3050	51500000	51500000
0001	VBR	3100	51600000	51600000
0001	VBR	3200	65008000	65008000
0001	VBR	3300	65008300	65008300
0001	VBR	3410	65008400	65008400
0001	VBR	3420	65008410	65008410
0001	VBR	3430	65008420	65008420
0001	VBR	3440	65008430	65008430
0001	VBR	7900	54300000	54300000
0001	VBR	7920	54400000	54400000
0001	VKA		51100000	51100000
0001	VKA	3000	51100000	51100000
0001	VKA	3050	51500000	51500000

Figure 144: Assignment of G/L Accounts for Transaction GBB

The figure displays the assignment of G/L accounts for the transaction key *Offsetting Entry to Stock Posting* for different account grouping codes and valuation classes.

The system does not use any entry with blank valuation class (first line in the table) for goods movements. It uses this blank valuation class entry only as a default account for items with account assignment in purchasing documents.

Realization – Example

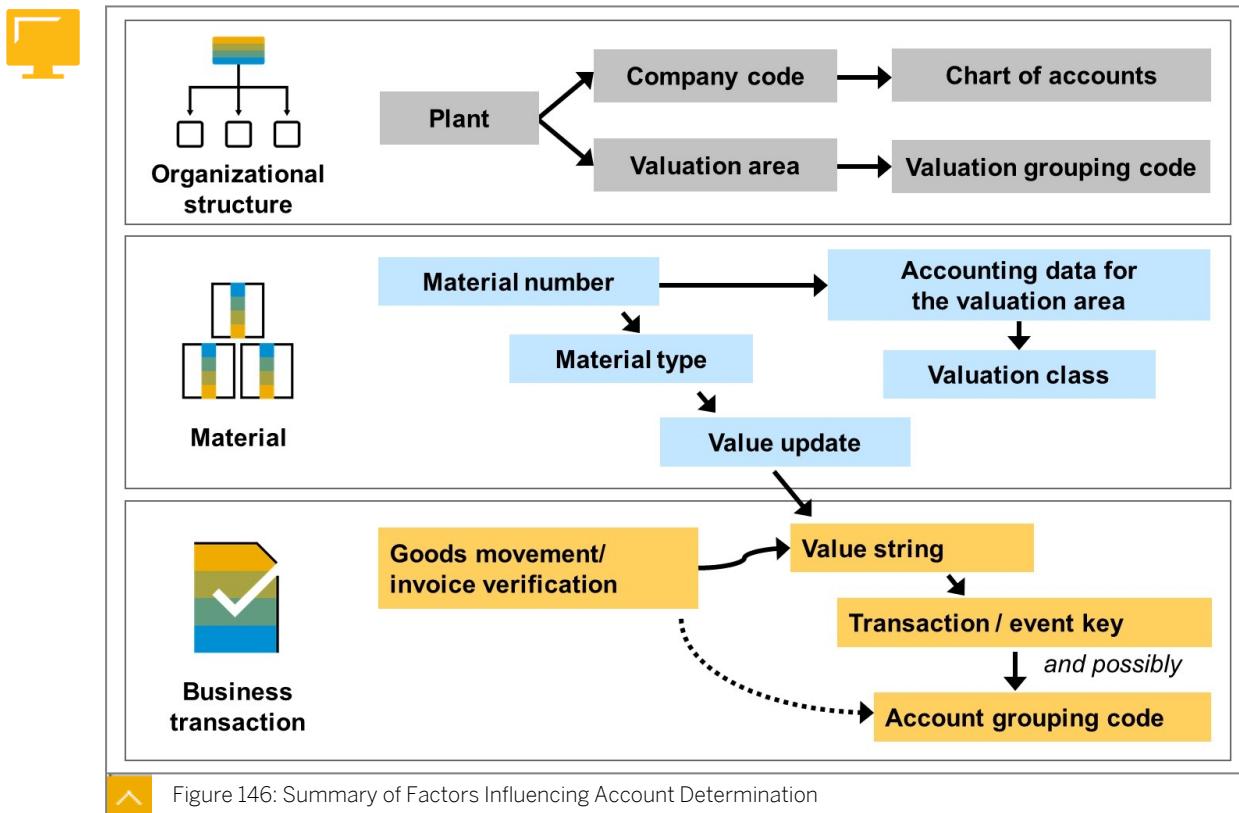


Goods issue for production order – MvT 261 Account grouping code VBR is assigned to MvT 261		
13100000 (BSX)	51100000 (GBB VBR)	"Consumption raw materials_1 plant 1010" <i>to</i> "Stock raw materials_1 plant 1010" 100,00
100,00	100,00	
Goods issue due to scrapping – MvT 551 Account grouping code VNG is assigned to MvT 551		
13100000 (BSX)	54051000 (GBB VNG)	"Expenses scrapping plant 1010" <i>to</i> "Stock raw materials_1 plant 1010" 100,00
100,00	100,00	
Goods issue due to inventory differences – MvT 702 Account grouping code INV is assigned to MvT 702		
13100000 (BSX)	52001000 (GBB INV)	"Exp. inventory differences plant 1010" <i>to</i> "Stock raw material_1 plant 1010" 100,00
100,00	100,00	
 Figure 145: Realization Example		

The figure illustrates various standard account grouping codes that are assigned to movement types, regardless of further indicators.

However, you can assign different consumption accounts to the same movement type (for example, a goods issue for a production order). To distinguish them, you can use a different account grouping code for withdrawal from your own stocks than for withdrawals from consignment stock.

Summary of Factors Influencing Account Determination



The figure summarizes all the factors influencing automatic account determination.

The following system parameters (influencing factors) need to be considered when setting up automatic account determination:

- The chart of accounts of the company code
- The valuation grouping code of the plant or company code
- The valuation class of the material
- The transaction/event key from the value string, possibly with the account grouping code

You must assign the G/L accounts for your business processes in MM according to these parameters.



LESSON SUMMARY

You should now be able to:

- subdivide a transaction with the account grouping code

Adjusting Account Determination for Special Cases

LESSON OVERVIEW

This lesson introduces account determination for postings involving planned delivery costs and the available options to specify a default account for purchasing document items with account assignment. This lesson also explains account determination for tax accounts when posting invoices.

Business Example

Case 1

In your company, delivery costs are often entered in purchasing documents. The members of your project team cannot agree whether the planned delivery costs are to be posted to a single account or different accounts upon receipt of goods.

Case 2

Your buyers and the employees responsible for entering requisitions or purchase orders (POs) in the user departments would like the system to provide special accounts in the case of items with account assignment for various groups of materials.

Case 3

You want to understand how the system determines tax accounts while posting incoming invoices.

For this reason, you require the following knowledge:

- An understanding of dependencies for a default account in purchasing
- An understanding of how to assign the accounts for planned delivery costs
- An understanding of dependencies for input tax accounts

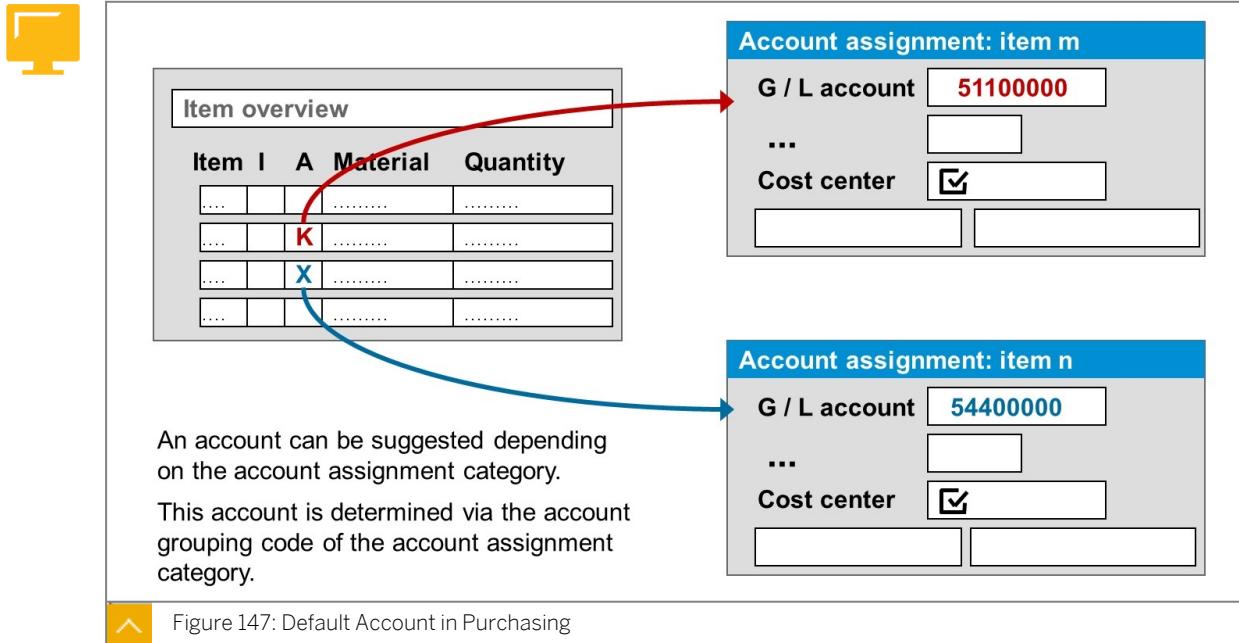


LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Adjust account determination for special cases

Default Account in Account Assigned Purchasing Documents

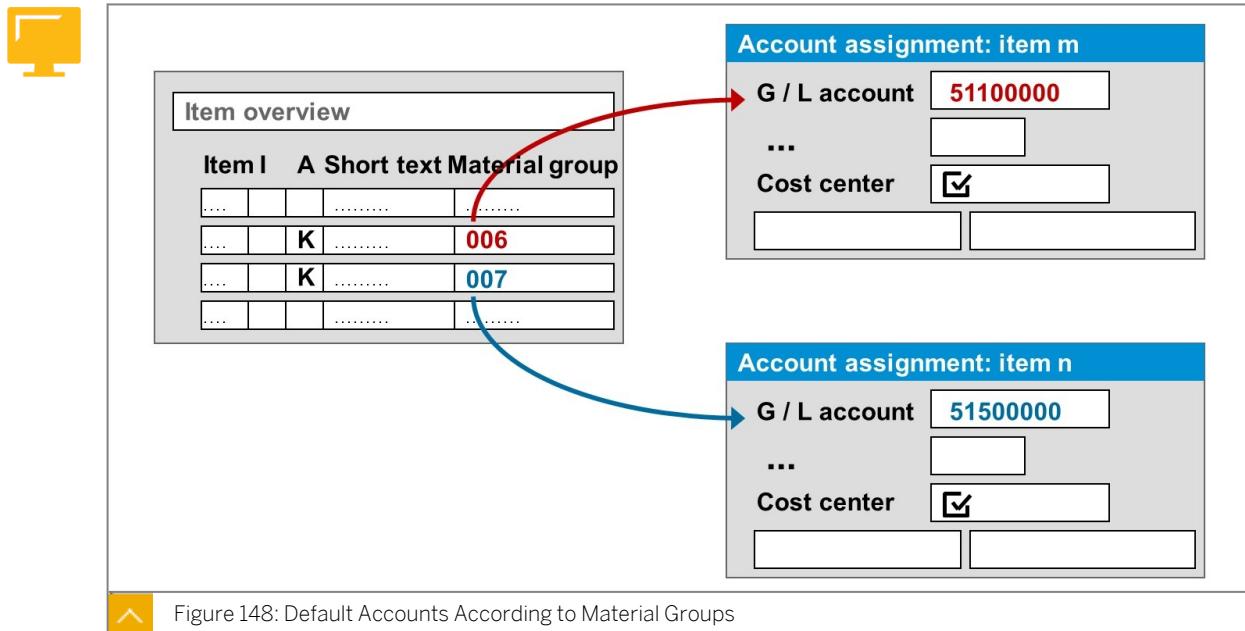


Transaction key GBB in conjunction with the account grouping code (account modification) of the account assignment category is used to automatically determine the default account in purchasing documents. You can define further account assignment categories in Customizing for Purchasing and assign new account grouping codes to them.

In the case of items with account assignment in combination with a material master record, the system uses the valuation class from the accounting view of the material master. If the material master record does not contain a valuation class (for example, as is the case with material type NLAG), the system uses the ‘‘(blank) valuation class.

In the case of items with account assignment without a material master record, the system uses the valuation class of the material group or the ‘‘(blank) valuation class.

Default Accounts According to Material Groups



You can default an account for procurement without a material master depending on the material group.

The system uses the transaction/event key GBB, the account grouping code (account modification) of the account assignment category and the valuation class of the material group to determine the default account.

You can assign valuation classes to the material groups in Customizing for *Purchasing* under *Entry Aid for Items Without Material Master*. The system then determines the accounts by using these classes.



Hint:

The standard does not support the parameter ID SAK for the G/L account. If you want to pre-assign the G/L account in purchasing documents, you can modify the field by activating the *SET/GET parameter* function for it.

While maintaining a G/L account master record, (transaction FS00), you can define an account assignment object default value (order or cost center) if necessary.

Accounts for Planned Delivery Costs

You can plan delivery costs in purchasing documents by using different condition types (for example, FRA1, FRB1, and FRC1).

For these condition types, it is specified in Customizing for *Purchasing* that the system is to post the planned delivery costs to a separate account (clearing account or provision account) upon receipt of goods.

The clearing or provision account is cleared when you post the invoice for the planned delivery costs.



Note:

In the figure below, PK is the abbreviation for the posting key.



Business Process		Accounting Document			
		Item	PK	Account	Amount
1	Goods receipt for purchase order into warehouse with planned freight costs	1	89	13110000	120,00
		2	96	21120000	100,00-
		3	50	21730000	20,00-
2	Invoice receipt for freight costs planned in the purchase order	1	31	Supplier	22,00-
		2	40	21730000	20,00
		3	40	12600000	2,00

Figure 149: Example: Accounts for Planned Delivery Costs

The figure is based on the following business process:

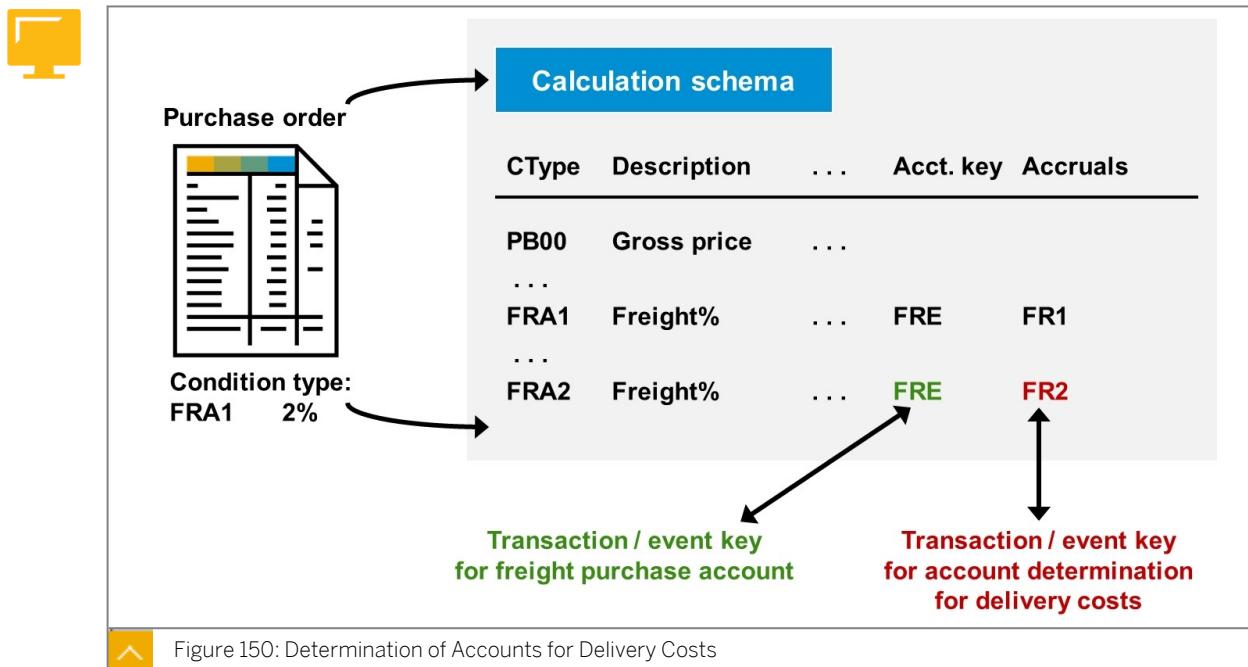
- A purchase order item in the amount of EUR 100 is created for a stock material valued at the moving average price. An amount of EUR 20 is added as planned freight costs.
- In step one of the figure, the goods receipt (GR) is posted. The total amount of EUR 120 (value of the good + planned delivery costs) is posted to the stock account.

The offsetting entries are split. EUR 100 for the value of the material is posted to the GR/IR clearing account, and EUR 20 for the planned delivery costs is posted to a freight clearing account.

- In step two of the figure, the freight invoice is posted, which in this example is billed by another vendor than the goods item.

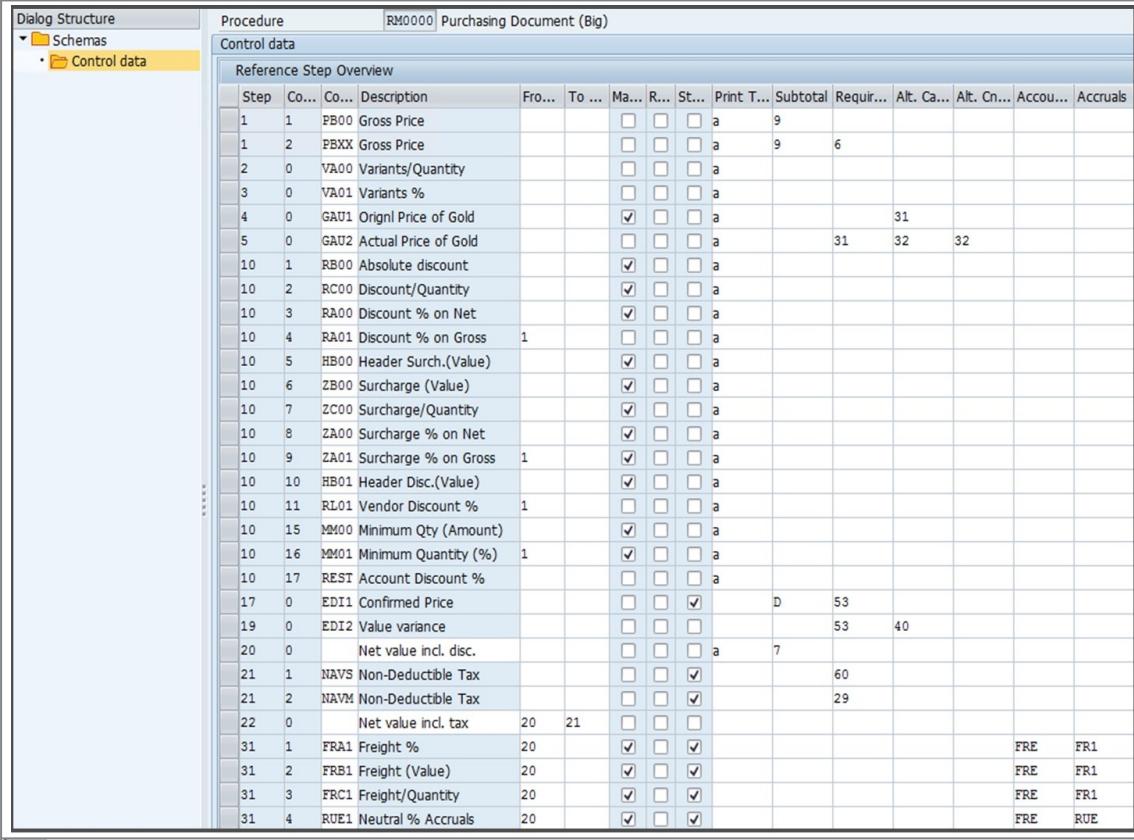
The invoice value of EUR 22 (EUR 20 + 10% VAT) is posted to the vendor account. The system debits EUR 20 from the freight clearing account and posts EUR 2 to an input tax account.

Determination of Accounts for Delivery Costs



The transaction keys for delivery cost postings come from the calculation schema for purchasing (account keys) and not from the value string. If required, you can define further account keys for new condition types in Customizing for price determination and use them for additional clearing or provision accounts.

Account Key



The figure displays the details of a calculation schema for purchasing. The table shows the 'Reference Step Overview' for the 'Control data' of the 'Purchasing Document (Big)' procedure. The columns include Step, Condition Type, Description, From..., To..., Max..., Range..., Start..., Print T..., Subtotal, Requirements, Alt. Ca..., Alt. Cr..., Account..., and Accruals.

Step	Condition Type	Description	From...	To...	Max...	Range...	Start...	Print T...	Subtotal	Requirements	Alt. Ca...	Alt. Cr...	Account...	Accruals
1	1	PB00 Gross Price						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a	9		
1	2	PBX0 Gross Price						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a	9	6	
2	0	VA00 Variants/Quantity						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
3	0	VA01 Variants %						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
4	0	GAU1 Orignl Price of Gold						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			31
5	0	GAU2 Actual Price of Gold						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a		31	32
10	1	RB00 Absolute discount						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	2	RC00 Discount/Quantity						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	3	RA00 Discount % on Net						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	4	RA01 Discount % on Gross	1					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	5	HB00 Header Surch.(Value)						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	6	ZB00 Surcharge (Value)						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	7	ZC00 Surcharge/Quantity						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	8	ZA00 Surcharge % on Net						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	9	ZA01 Surcharge % on Gross	1					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	10	HB01 Header Disc.(Value)						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	11	RL01 Vendor Discount %	1					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	15	MM00 Minimum Qty (Amount)						<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	16	MM01 Minimum Quantity (%)	1					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
10	17	REST Account Discount %						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a			
17	0	EDI1 Confirmed Price						<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		D	53	
19	0	EDI2 Value variance						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			53	40
20	0	Net value incl. disc.						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	a	7		
21	1	NAVS Non-Deductible Tax						<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			60	
21	2	NAVM Non-Deductible Tax						<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			29	
22	0	Net value incl. tax	20	21				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
31	1	FRA1 Freight %	20					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				FR1
31	2	FRB1 Freight (Value)	20					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				FR1
31	3	FRC1 Freight/Quantity	20					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				FR1
31	4	RUE1 Neutral % Accruals	20					<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				RUE

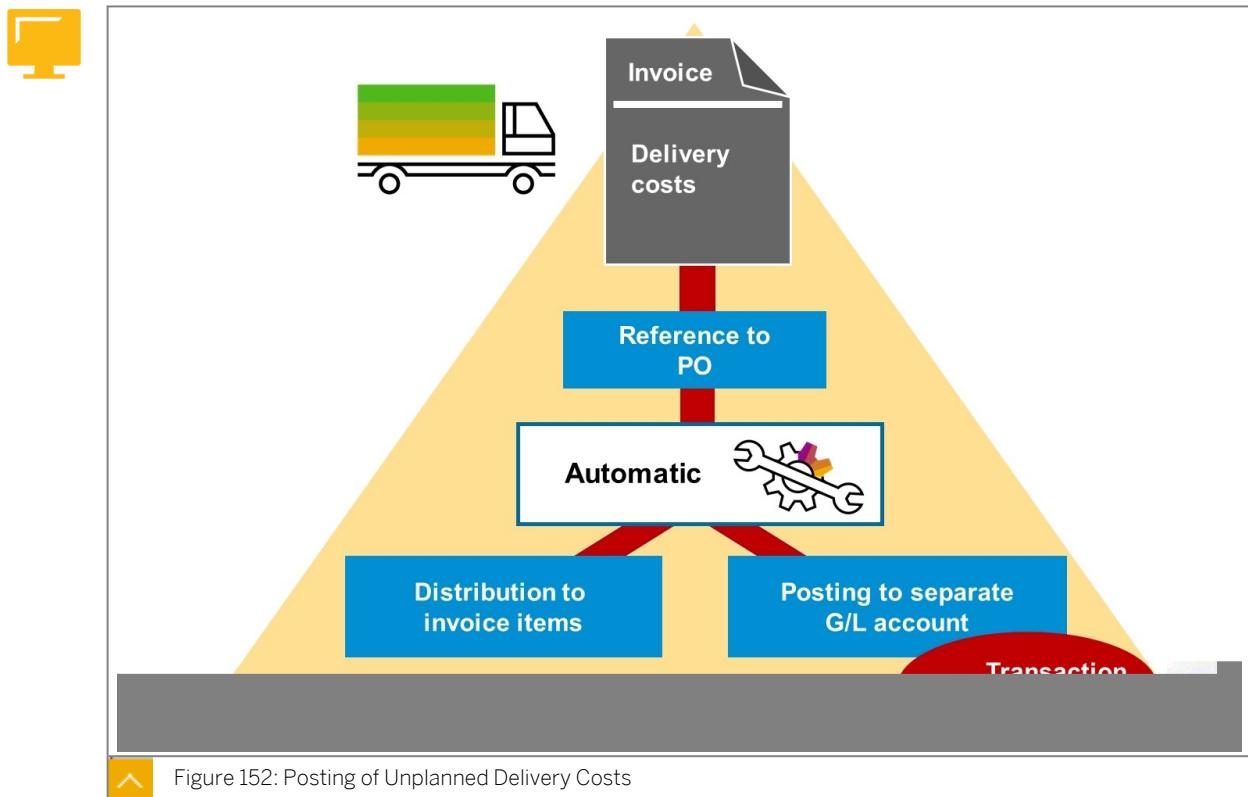
Figure 151: Account Key

The figure displays the details of a calculation schema for purchasing.

The figure only contains a few selected condition types of a standard calculation schema. Before you can assign new provision keys for posting the planned delivery costs, you first have to define them in a separate Customizing activity.

In Customizing, go to *Materials Management → Purchasing → Conditions → Define Price Determination Process → Define Transaction/Event Keys*.

Accounts for Unplanned Delivery Costs



In contrast to planned delivery costs, unplanned delivery costs are unknown at the time a purchase order is placed.

For example, as International Commercial terms (incoterm), you have agreed on *Carriage paid packing* with the supplier. The invoice, therefore, lists packing costs. You enter these packing costs in the invoice header.

In Customizing for logistics invoice verification, you can define how these costs are to be handled. By default, the costs are distributed among the invoice items.

However, you can define that the unplanned delivery costs are posted to a special G/L account. In this case, you must assign a G/L account for transaction key UPF in the account determination table.

In Customizing, go to *Materials Management → Logistics Invoice Verification → Incoming Invoice → Configure How Unplanned Delivery Costs Are Posted*.

Tax Accounts and Other Transactions in Invoice Verification



Figure 153: Tax Accounts

In Customizing for Financial Accounting, a tax determination procedure is assigned to the country in which your company code is located. This procedure provides various condition types for calculating the tax amounts and transaction keys for tax accounts.

Example of a Tax Determination Procedure

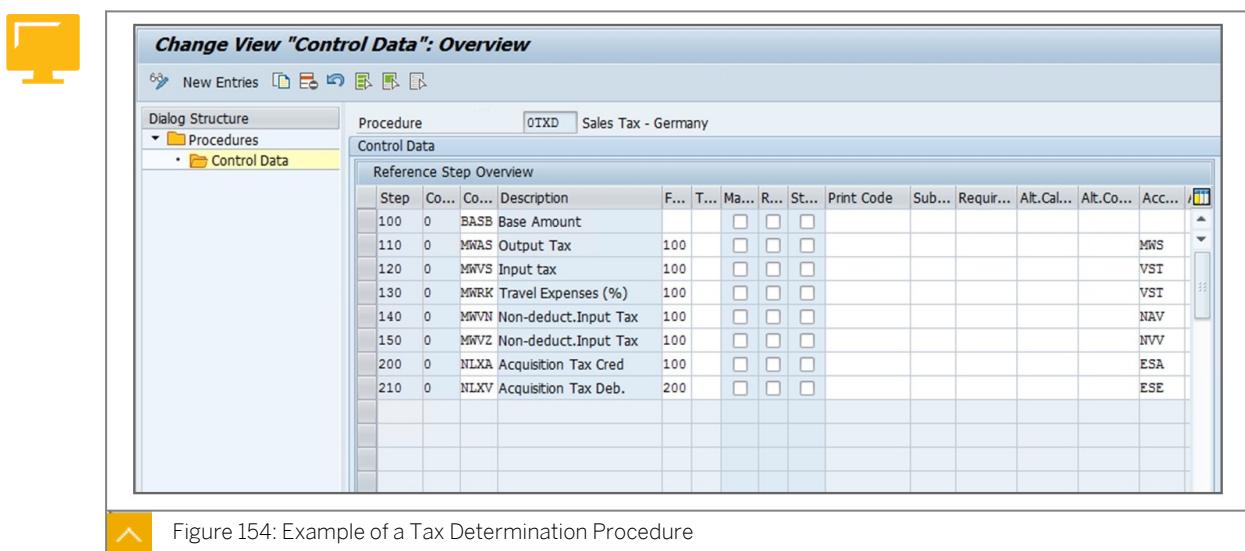


Figure 154: Example of a Tax Determination Procedure

The figure shows a tax determination procedure with condition types and assigned account keys (transactions).

Maintenance of Tax Codes



Maintain Tax Code: Tax Rates

		Properties	Tax accounts	Deactivate line		
Country Key	DE	Germany				
Tax Code	1I	10% Input Tax (Training)				
Procedure	OTXD					
Tax Type	V	Input tax				
Percentage rates						
Tax Type	Acct Key	Tax Percent.	Rate	Level	From Lvl	Cond. Type
Base Amount				100	0	BASB
Output Tax	MWS			110	100	MWAS
Input tax	VST		10,000	120	100	MWVS
Travel Expenses (%)	VST			130	100	MWRK
Non-deduct.Input Tax	NAV			140	100	MWVN
Non-deduct.Input Tax	NVV			150	100	MWVZ
Acquisition Tax Cred	ESA			200	100	NLXA
Acquisition Tax Deb.	ESE			210	200	NLXV

Figure 155: Maintaining Tax Codes

For every country, you define your tax codes with reference to the tax determination procedure. Besides, you assign the tax rate to a condition type and an account key.

Rules for the Assignment of Tax Accounts



Change View "Rules": Overview

Dialog Structure		Transaction																		
<ul style="list-style-type: none"> New Entries Posting Key Rules Accounts 	VST																			
<table border="1"> <thead> <tr> <th colspan="3">Rules</th> </tr> <tr> <th>ChAc</th> <th>Tax Code</th> <th>Country</th> </tr> </thead> <tbody> <tr> <td>YCOA</td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Rules			ChAc	Tax Code	Country	YCOA	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
Rules																				
ChAc	Tax Code	Country																		
YCOA	<input type="checkbox"/>	<input checked="" type="checkbox"/>																		

Figure 156: Rules for the Assignment of Tax Accounts

When assigning tax accounts for tax postings, you can specify rules to set the dependency of the tax accounts on the tax code. You assign the accounts for tax postings in Customizing under *Financial Accounting* → *Financial Accounting Global Settings* → *Tax on Sales/Purchases* → *Posting* → *Define Tax Accounts*. The transaction key for input tax is VST.



Note:
For more information about tax determination in Purchasing, see SAP note 501054.



LESSON SUMMARY

You should now be able to:

- Adjust account determination for special cases

Learning Assessment

1. Which account is determined from the business partner record when you post an invoice in Logistics Invoice Verification?

Choose the correct answer.

- A GR/IR clearing account
- B Bank account
- C Reconciliation account
- D Price difference account

2. Which of the following scenarios causes price difference postings?

Choose the correct answer.

- A Valuated goods receipt (GR), material valued at standard price of EUR 10, purchase order (PO) price is EUR 12
- B Valuated GR, material valued at moving average price of EUR 10, PO is free of charge
- C Receipt per initial entry of stock balances into unrestricted-use stock, material is valued at standard price of EUR 10, no external amount is entered
- D GR for consignment POs

3. Which postings are relevant for account determination?

Choose the correct answers.

- A Transfer posting between two storage locations within a plant
- B Transfer posting between two plants
- C Transfer posting from unrestricted use stock to blocked stock
- D Transfer posting from consignment stock to your stock

4. Which movement types are relevant for account determination?

Choose the correct answers.

- A 101 (Goods receipt (GR) for purchase order (PO) into warehouse)
- B 103 (GR for PO into GR blocked stock)
- C 105 (Release of GR blocked stock for warehouse)
- D 109 (GR from valued blocked stock)

5. An accounting document is generated for every goods receipt (GR) posting referencing a purchase order (PO).

Determine whether this statement is true or false.

- True
- False

6. The movement type used to enter a goods receipt affects the G/L accounts of the goods receipt posting.

Determine whether this statement is true or false.

- True
- False

7. Which of the following items are valuation and account determination levels in Materials Management (MM)?

Choose the correct answers.

- A Valuation area
- B Valuation type
- C Valuation section
- D Valuation group

8. From which organizational level is the chart of accounts determined?

Choose the correct answer.

- A Plant
- B Client
- C Company Code
- D Valuation Area

9. What do you assign to plants that should have the same settings in account determination?

Choose the correct answer.

- A The same valuation type
- B The same valuation class
- C The same valuation modification
- D The same valuation grouping code

10. The level of material valuation can be changed in the production system.

Determine whether this statement is true or false.

- True
- False

11. To use production planning (component PP), material valuation must be set up at company code level.

Determine whether this statement is true or false.

- True
- False

12. Account determination always takes place on a plant-dependent basis.

Determine whether this statement is true or false.

- True
- False

13. Only one operative chart of accounts can be assigned to a company code.

Determine whether this statement is true or false.

- True
- False

14. What can you assign to a material type for account determination?

Choose the correct answer.

- A Valuation classes
- B Valuation grouping code
- C Account category reference
- D Account modification

15. Which of the following items are linked directly?

Choose the correct answers.

- A Valuation class – Account category reference
- B Valuation class – Material type
- C Price control – Account category reference
- D Account category reference – Material type

16. On which levels can you assign valuation classes to material master records?

Choose the correct answers.

- A Valuation area
- B Client
- C MRP area
- D Valuation type

17. A valuation class can be assigned to several account category references.

Determine whether this statement is true or false.

- True
- False

18. You can assign several account category references to one material type.

Determine whether this statement is true or false.

- True
- False

19. Which application areas can you select in the account determination simulation?

Choose the correct answers.

- A Payment transactions
- B Invoice verification transactions
- C Purchasing transactions
- D Inventory management movements

20. What is the posting key for stock postings?

Choose the correct answer.

- A PRD
- B WRX
- C UMB
- D BSX

21. To which of the following items are value strings (posting rules) assigned?

Choose the correct answer.

- A Movement types
- B Stock types
- C Valuation types
- D Material types

22. Which posting key occurs twice in some value strings?

Choose the correct answer.

- A WRX
- B BSX
- C UMB
- D PRD

23. Which transaction is relevant for account modification?

Choose the correct answer.

- A BSX
- B GBB
- C UMB
- D WRX

24. Where can you assign account grouping codes?

Choose the correct answers.

- A Material types
- B Movement types
- C Item categories
- D Account assignment categories

25. Value strings can be changed and extended in each company according to its requirements.

Determine whether this statement is true or false.

- True
- False

26. In an SAP system, you can record the consumption of your materials and consignment materials in different cost elements.

Determine whether this statement is true or false.

- True
- False

27. For which of the following objects can you use default accounts in Purchasing?

Choose the correct answers.

- A Purchasing groups
- B Material groups
- C Account assignment categories
- D Item categories

28. Which transaction/event key is relevant automatic determination of the default account in purchasing documents?

Choose the correct answer.

- A BSX
- B WRX
- C PRD
- D GBB

29. Which Customizing settings can you make regarding unplanned delivery costs in logistics invoice verification?

Choose the correct answers.

- A They are to be posted to a price difference account.
- B They are to be posted to a certain stock account.
- C They are to be distributed among invoice items.
- D They are to be posted to a separate G/L account.

30. Where do you assign event keys for planned delivery costs?

Choose the correct answer.

- A In purchase orders
- B In the customizing settings for condition types
- C In the customizing settings for incoming invoices
- D In the customizing settings for calculation schemas

31. Check the following statement on the expense account that is to be provided by SAP S/4HANA as the default value in purchase requisition and purchase order items with account assignment: **The default account in purchasing can vary, depending on the account assignment category that is used.**

Determine whether this statement is true or false.

- True
- False

32. Check the following statement on the expense account that is to be provided by SAP S/4HANA as the default value in purchase requisition and purchase order items with account assignment: **In purchasing, the system determines a default account only for items with a material number.**

Determine whether this statement is true or false.

- True
 False

33. Check the following statement on the expense account that is to be provided by SAP S/4HANA as the default value in purchase requisition and purchase order items with account assignment: **The default account in purchasing depends on the material group from the material master record.**

Determine whether this statement is true or false.

- True
 False

34. Check the following statement on the expense account that is to be provided by SAP S/4HANA as the default value in purchase requisition and purchase order items with account assignment: **The system provides only a single default account for items without a material master record.**

Determine whether this statement is true or false.

- True
 False

Learning Assessment - Answers

1. Which account is determined from the business partner record when you post an invoice in Logistics Invoice Verification?

Choose the correct answer.

- A GR/IR clearing account
- B Bank account
- C Reconciliation account
- D Price difference account

Correct. The business partner record contains the reconciliation account. This account is used when posting the invoice in your SAP system.

2. Which of the following scenarios causes price difference postings?

Choose the correct answer.

- A Valuated goods receipt (GR), material valued at standard price of EUR 10, purchase order (PO) price is EUR 12
- B Valuated GR, material valued at moving average price of EUR 10, PO is free of charge
- C Receipt per initial entry of stock balances into unrestricted-use stock, material is valued at standard price of EUR 10, no external amount is entered
- D GR for consignment POs

Correct. Valuated goods receipt (GR), material valued at standard price of EUR 10, purchase order (PO) price is EUR 12 leads to a price difference posting. This is because the material is valued using a standard price and there is a difference between the current standard price and the purchase order price. The other presented scenarios will not lead to any price difference posting.

3. Which postings are relevant for account determination?

Choose the correct answers.

- A Transfer posting between two storage locations within a plant
- B Transfer posting between two plants
- C Transfer posting from unrestricted use stock to blocked stock
- D Transfer posting from consignment stock to your stock

Correct. Transfer posting between two plants and transfer posting from consignment stock to your stock are relevant since they create accounting documents. Transfer posting between two storage locations within a plant and transfer posting from unrestricted use stock to blocked stock do not create accounting documents so no automatic account determination is necessary.

4. Which movement types are relevant for account determination?

Choose the correct answers.

- A 101 (Goods receipt (GR) for purchase order (PO) into warehouse)
- B 103 (GR for PO into GR blocked stock)
- C 105 (Release of GR blocked stock for warehouse)
- D 109 (GR from valued blocked stock)

Correct. 101 and 105 movement will lead to an accounting document and that means that automatic account determination is needed. 103 and 109 do not.

5. An accounting document is generated for every goods receipt (GR) posting referencing a purchase order (PO).

Determine whether this statement is true or false.

- True
- False

Correct. For example, the system does not generate an accounting document for a GR entered against a PO of the item category consignment. This is because in such a case the material remains the property of the supplier and does not become part of your valued stock. In cases of non-valuated goods receipts for PO items with account assignment, no accounting documents are created. An accounting document is not generated for a GR against a stock transport order.

6. The movement type used to enter a goods receipt affects the G/L accounts of the goods receipt posting.

Determine whether this statement is true or false.

True

False

Correct. The system makes postings to different accounts, depending on the transaction involved. For example, initial entry of stock balances (movement type 561) or GR for production order (movement type 101).

7. Which of the following items are valuation and account determination levels in Materials Management (MM)?

Choose the correct answers.

A Valuation area

B Valuation type

C Valuation section

D Valuation group

Correct. Valuation area and valuation type are valid levels on which stocks are valued.

8. From which organizational level is the chart of accounts determined?

Choose the correct answer.

A Plant

B Client

C Company Code

D Valuation Area

Correct. The chart of account is assigned to the company code.

9. What do you assign to plants that should have the same settings in account determination?

Choose the correct answer.

- A The same valuation type
- B The same valuation class
- C The same valuation modification
- D The same valuation grouping code

Correct. You can group plants for account determination purposes using a valuation grouping code.

10. The level of material valuation can be changed in the production system.

Determine whether this statement is true or false.

- True
- False

Correct. Changing the valuation level may result in inconsistencies. If the valuation level were to be changed, a lot of time and effort would need to be spent on converting all the inventory accounting data and documents.

11. To use production planning (component PP), material valuation must be set up at company code level.

Determine whether this statement is true or false.

- True
- False

Correct. The use of production planning requires the valuation area to be set at plant level. Only then can the program access the accounting data for the material (for example, for the purpose of determining costs with a production order).

12. Account determination always takes place on a plant-dependent basis.

Determine whether this statement is true or false.

- True
- False

Correct. Accounts can be assigned on a plant-dependent basis only if the valuation level is a plant and the valuation grouping code is active and assigned to each plant separately.

13. Only one operative chart of accounts can be assigned to a company code.

Determine whether this statement is true or false.

A True

B False

Correct. You can assign only one operative chart of accounts to a company code.

14. What can you assign to a material type for account determination?

Choose the correct answer.

A Valuation classes

B Valuation grouping code

C Account category reference

D Account modification

Correct. You connect material types to valuation classes via the account category reference.

15. Which of the following items are linked directly?

Choose the correct answers.

A Valuation class – Account category reference

B Valuation class – Material type

C Price control – Account category reference

D Account category reference – Material type

Correct. Valuation class – Account category reference and Account category reference – Material type represent direct links.

16. On which levels can you assign valuation classes to material master records?

Choose the correct answers.

A Valuation area

B Client

C MRP area

D Valuation type

Correct. Valuation area and valuation type are valid levels in the material master record on which you can assign the valuation class needed.

17. A valuation class can be assigned to several account category references.

Determine whether this statement is true or false.

True

False

Correct. You can only assign a valuation class to only one account category reference.

18. You can assign several account category references to one material type.

Determine whether this statement is true or false.

True

False

Correct. You can assign only one account category reference to a material type.

19. Which application areas can you select in the account determination simulation?

Choose the correct answers.

A Payment transactions

B Invoice verification transactions

C Purchasing transactions

D Inventory management movements

Correct. You can simulate inventory management movements and invoice verification transactions. You can't simulate payments or purchasing transactions.

20. What is the posting key for stock postings?

Choose the correct answer.

A PRD

B WRX

C UMB

D BSX

Correct. BSX is used in stock postings.

21. To which of the following items are value strings (posting rules) assigned?

Choose the correct answer.

- A Movement types
- B Stock types
- C Valuation types
- D Material types

Correct. Value strings are assigned to movement types.

22. Which posting key occurs twice in some value strings?

Choose the correct answer.

- A WRX
- B BSX
- C UMB
- D PRD

Correct. BSX occurs twice in some value strings. An example is a posting to stock in a previous period, where the system also needs to perform a new valuation of the stock afterward in a second step in the current period.

23. Which transaction is relevant for account modification?

Choose the correct answer.

- A BSX
- B GBB
- C UMB
- D WRX

Correct. Account modification is valid for the GBB transaction/event key.

24. Where can you assign account grouping codes?

Choose the correct answers.

- A Material types
- B Movement types
- C Item categories
- D Account assignment categories

Correct. The account grouping codes can be assigned to movement types and account assignment categories.

25. Value strings can be changed and extended in each company according to its requirements.

Determine whether this statement is true or false.

- True
- False

Correct. The value strings are fixed. You can not change them or create new ones.

26. In an SAP system, you can record the consumption of your materials and consignment materials in different cost elements.

Determine whether this statement is true or false.

- True
- False

Correct. In an SAP system, it is possible to record the consumption of your materials and consignment materials in different cost elements.

27. For which of the following objects can you use default accounts in Purchasing?

Choose the correct answers.

- A Purchasing groups
- B Material groups
- C Account assignment categories
- D Item categories

Correct. Default accounts can be used for material groups and for account assignment categories.

28. Which transaction/event key is relevant automatic determination of the default account in purchasing documents?

Choose the correct answer.

- A BSX
- B WRX
- C PRD
- D GBB

Correct. GBB is relevant for automatic determination of the default account in purchasing documents.

29. Which Customizing settings can you make regarding unplanned delivery costs in logistics invoice verification?

Choose the correct answers.

- A They are to be posted to a price difference account.
- B They are to be posted to a certain stock account.
- C They are to be distributed among invoice items.
- D They are to be posted to a separate G/L account.

Correct. Unplanned delivery costs in logistics invoice verification can be distributed among invoice items or can be posted to a separate G/L account.

30. Where do you assign event keys for planned delivery costs?

Choose the correct answer.

- A In purchase orders
- B In the customizing settings for condition types
- C In the customizing settings for incoming invoices
- D In the customizing settings for calculation schemas

Correct. The event keys for planned delivery costs are assigned in calculation schemas.

31. Check the following statement on the expense account that is to be provided by SAP S/4HANA as the default value in purchase requisition and purchase order items with account assignment: **The default account in purchasing can vary, depending on the account assignment category that is used.**

Determine whether this statement is true or false.

True

False

Correct. You can assign different account grouping codes to the account assignment categories, except for the account assignment categories A (Asset) and U (Unknown). Depending on the account grouping code (and other influencing factors), the system assigns different accounts.

32. Check the following statement on the expense account that is to be provided by SAP S/4HANA as the default value in purchase requisition and purchase order items with account assignment: **In purchasing, the system determines a default account only for items with a material number.**

Determine whether this statement is true or false.

True

False

Correct. For items with a material number, the system determines the default account with the valuation class from the material master record (and other influencing factors). For materials without a valuation class (for example, materials of material type UNBW), the system uses the ‘‘(blank) valuation class. The system applies this class or the valuation class of the material group during account determination for items without a material number.

33. Check the following statement on the expense account that is to be provided by SAP S/4HANA as the default value in purchase requisition and purchase order items with account assignment: **The default account in purchasing depends on the material group from the material master record.**

Determine whether this statement is true or false.

True

False

Correct. The default account in requisitions or PO items with account assignment and a material number depends on the valuation class of the material (and other influencing factors), not on the material group.

34. Check the following statement on the expense account that is to be provided by SAP S/4HANA as the default value in purchase requisition and purchase order items with account assignment: **The system provides only a single default account for items without a material master record.**

Determine whether this statement is true or false.

- True
- False

Correct. For items without a material number, you can assign a default account with the ‘‘(blank) valuation class or use the option of assigning the default accounts, depending on the valuation class of the material group.

UNIT 8

Special Features of Material Valuation

Lesson 1

Posting Goods Movements for Material Types UNBW and NLAG

273

Lesson 2

Configuring Split Valuation

277

UNIT OBJECTIVES

- Create a PO for nonvaluated material and enter goods movements for nonvaluated material
- Post goods movements for split-valuated material and check the results of these postings

Unit 8

Lesson 1

Posting Goods Movements for Material Types UNBW and NLAG



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create a PO for nonvaluated material and enter goods movements for nonvaluated material

Material Type UNBW (Nonvaluated Material)

For the material type UNBW, it is defined in Customizing that quantities, but no values are updated in the material master record.

This means that no accounting data is maintained in the material master record for materials of this material type, and stock values are not updated. These materials can, therefore, only be procured through account assignments.

The screenshot shows the SAP Fiori interface for configuring material types. At the top, there are tabs for 'Material type' (selected), 'UNBW', and 'Nonvaluated materials'. A wrench and gear icon is also present. Below this, under 'Quantity/value updating', there are two sections: 'Quantity updating' and 'Value updating'. In 'Quantity updating', the option 'By valuation area' is selected. In 'Value updating', the option 'In no valuation area' is selected. A blue arrow points from a 'Quantity/value updating' button in a sub-menu to a table titled 'Quantity / value updating by valuation areas'. This table lists four valuation areas (1000, 1010, 1020, 1030) against material type UNBW. For each row, the 'Qty updating' checkbox is checked, while the 'Value upd.' checkbox is not checked. The table has columns for Val..., Mat.Type, Qty updating, Value upd., Pipe. man., and Pipe. A..

Val...	Mat.Type	Qty updating	Value upd.	Pipe. man.	Pipe. A..
1000	UNBW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1010	UNBW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1020	UNBW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1030	UNBW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The settings for the material type can be found in Customizing under *Logistics - General → Material Master → Basic Settings → Material Types → Define Attributes of Material Types* (OMS2).

Goods Receipt for Valuated and Nonvaluated Material



Quantity/Value Update	UNBW		ROH	
	Purchase order with acct assgt		Purchase order without acct assgt	Purchase order with acct assgt
GR for purchase order				
Quantity	Warehouse +	Warehouse +	Warehouse +	Consumption +
Value	Consumpt. acct +	Stock account +	Consumpt. acct +	Consumpt. acct +
Goods issue				
Quantity	Warehouse -	Warehouse -	Consumption +	
	Consumption +	Stock acct -		
Value		Consumpt. acct +		

Figure 158: Goods Receipt for Valuated and Nonvaluated Material

For materials that are managed both on a quantity and value basis, for example, materials of material type ROH (raw material), the goods receipt for a purchase order with account assignment has the following effects:

- The quantity is posted to consumption. The consumption statistics are updated in the material master record.
- The value is posted to a consumption account. The costs are debited to the account assignment.
- The total quantity and total value of the warehouse stock remain unchanged.

For materials of material type UNBW, on the other hand, the goods receipt for a purchase order with account assignment has the following effects:

- The quantity is posted to stock. The stock data is updated in the material master record.
- The value is posted to a consumption account. The costs are debited to the account assignment.



Caution:

The consumption statistics in the material master record are not updated after the posting of a GR.

- The total quantity of the warehouse stock is increased.

For other goods receipts, transfer postings, or goods issues, the system does not create postings in Financial Accounting (FI). The field control of a movement type may make it

necessary to specify an account assignment, but there are still no postings in FI. If you enter a goods issue for consumption, the system updates the consumption statistics in the material master record.

Material Type NLAG

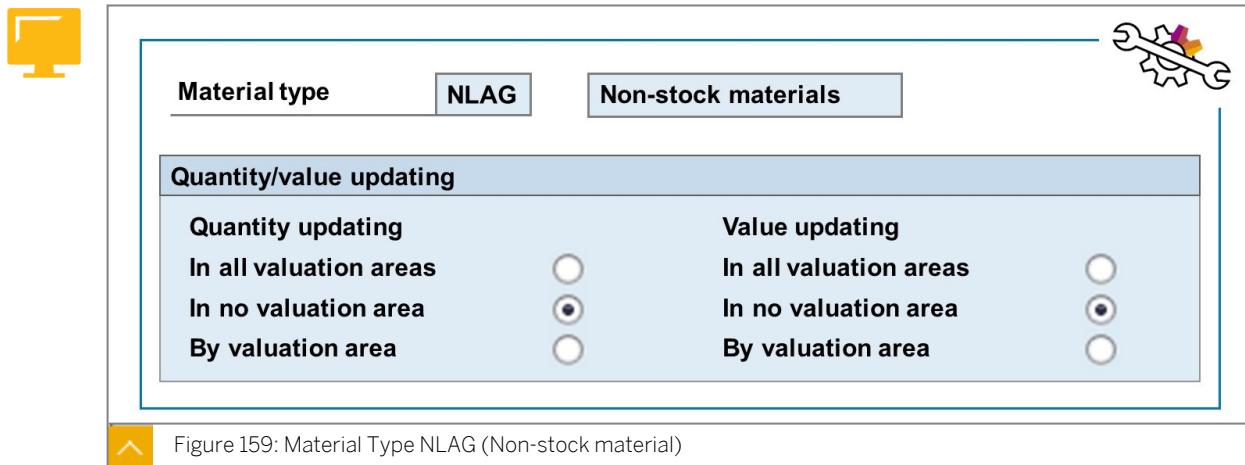


Figure 159: Material Type NLAG (Non-stock material)

For material type NLAG, it is defined in Customizing that neither quantity nor value-based inventory management takes place.

This means that materials of this material type can only be procured with account assignment and no stock quantities and values are updated in the material master record.

For materials of material type NLAG, the goods receipt for a purchase order with account assignment has the following effects:

- The quantity is posted to consumption and the consumption statistics are then updated in the material master record.
- The value is posted to a consumption account. The costs are debited to the account assignment.



LESSON SUMMARY

You should now be able to:

- Create a PO for nonvaluated material and enter goods movements for nonvaluated material

Configuring Split Valuation



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Post goods movements for split-valuated material and check the results of these postings

Split Valuation – Overview

With split valuation, you have the option of differentiating between partial stocks of a material according to particular criteria and handling them differently, regarding the valuation, within a plant. A split valuation might be necessary in the following cases:

- When the stock of material from in-house production has a different valuation price to the stock of the same material from external procurement.
- When the stock of a material is to be distinguished by quality and the value is determined depending on the quality.
- When the different batch stocks of a material have different valuation prices.

If you want to use split valuation, it must be activated and configured in Customizing. The activation of split valuation allows you to perform split valuation for single materials, as required, but it does not mean that every material needs to be valued separately.



Hint:

In the SAP standard system, split valuation is set to Active.

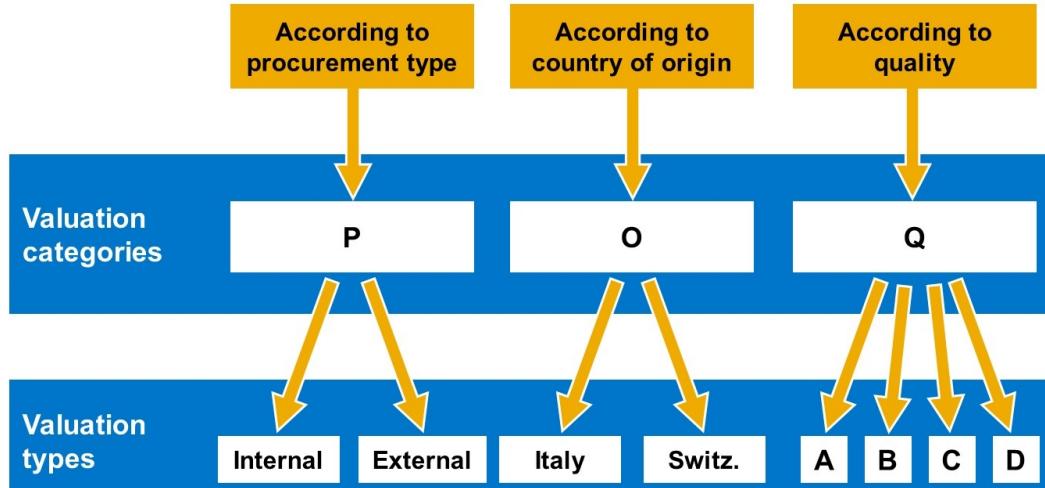


Figure 160: Split Valuation

To differentiate between material stocks, you must define a valuation category and at least two valuation types. The valuation category defines the criterion according to which the partial stocks are to be differentiated. The valuation types describe the possible features of the partial stocks.

For example, you want to differentiate between your stocks according to the procurement type for in-house and externally procured parts. The criterion (valuation category) in this case is the procurement type. The possible attributes (valuation types) are "Internal" and "External".

Settings for Split Valuation in Customizing

You activate split valuation in Customizing for *Materials Management* under *Valuation and Account Assignment* → *Split Valuation* → *Activate Split Valuation* (OMW0).

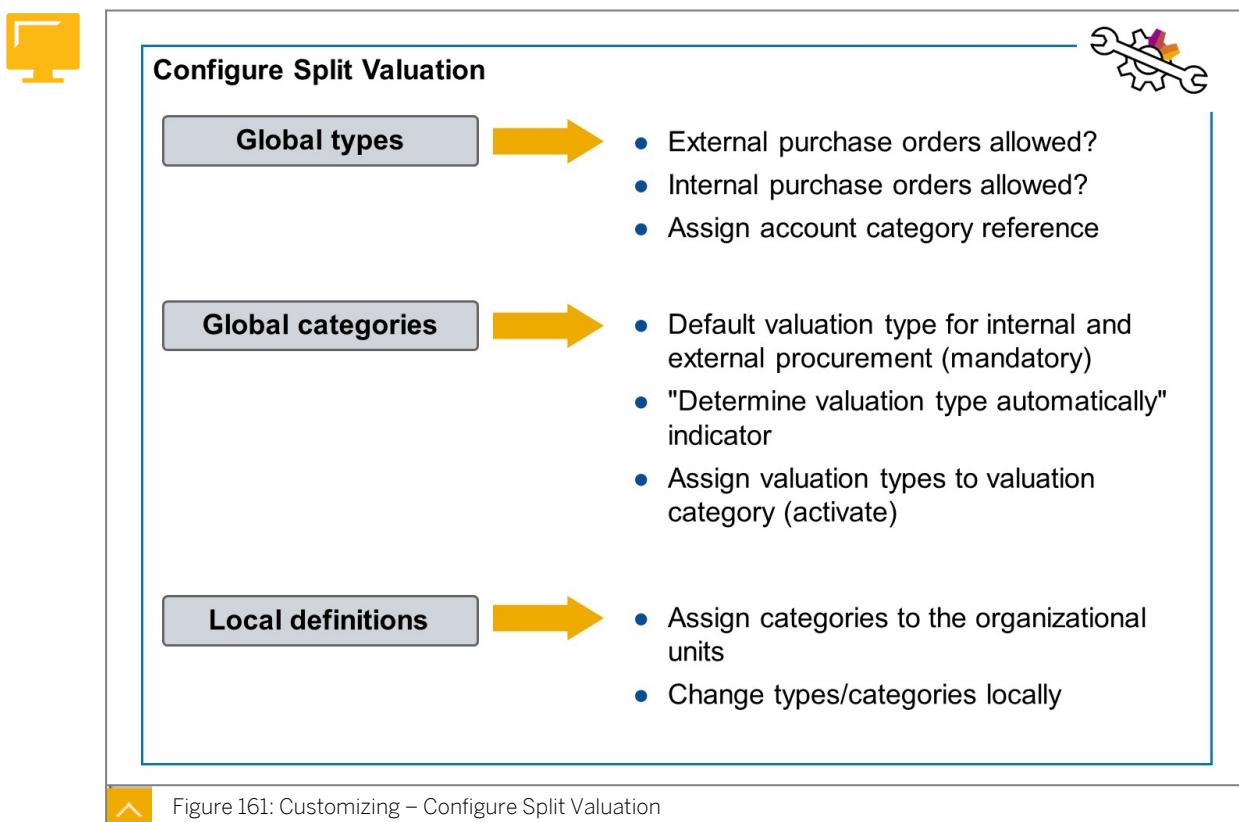


Figure 161: Customizing – Configure Split Valuation

Define the valuation categories, valuation types, and the assignment of types to categories in Customizing for *Materials Management* under *Valuation and Account Assignment* → *Split Valuation* → *Configure Split Valuation* (OMWC).

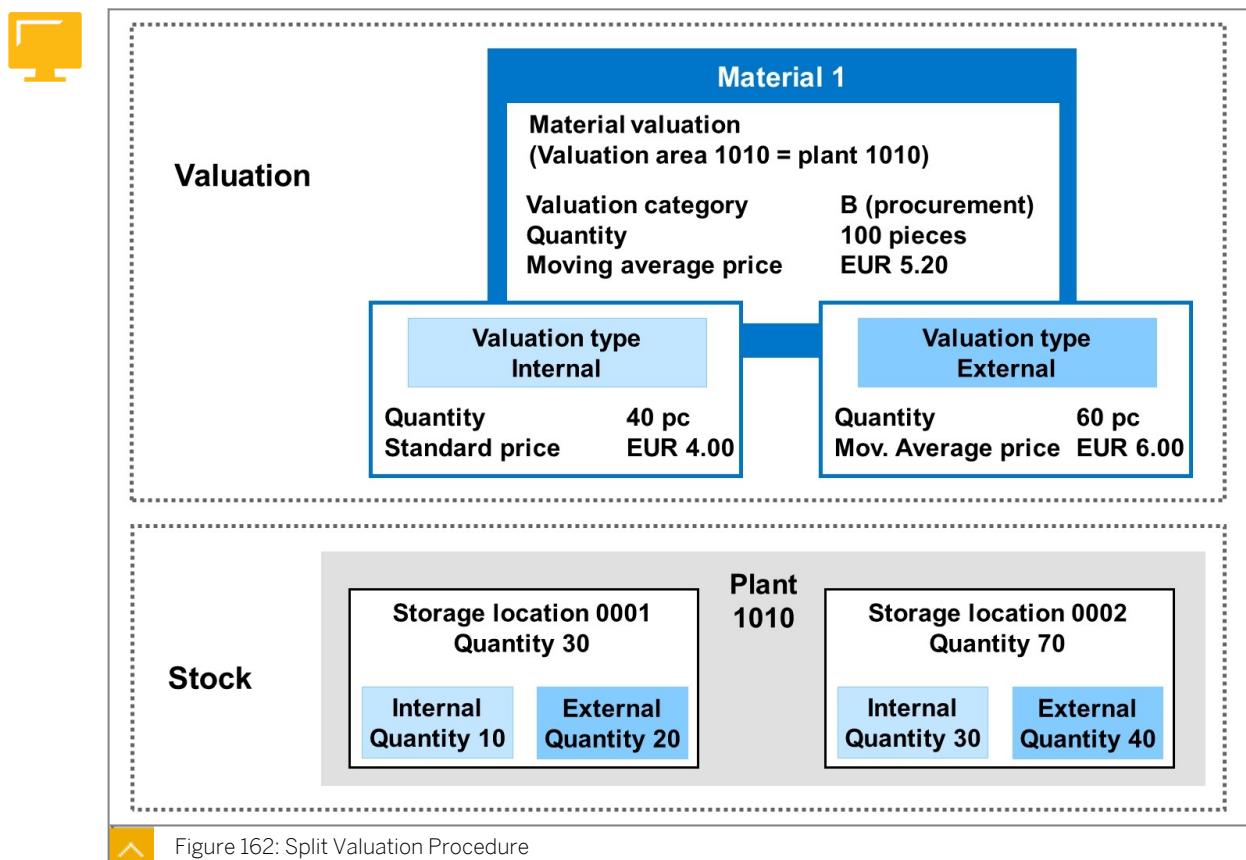
The settings for Split Valuation are as follows:

- Global definition of valuation types, independent of the valuation area
- Global definition of valuation categories, independent of the valuation area
- Assignment of the valuation types to the valuation category, independent of the valuation area
- Determination of the globally defined valuation categories that can be used in a valuation area; this valuation area specific setting is called local definition.

For the individual valuation type, you can define whether it can be used in an internal and/or external procurement process. Via the valuation category you control whether a valuation type is binding for a process. For example, it is useful for differentiation according to procurement type that only the valuation type "external" is allowed for externally procured parts of the material, whereas only the valuation type "own" is allowed for quantities produced in-house.

In addition, you can use the valuation type to influence account determination by specifying different account class references for the valuation types. For the above example, this means that the in-house produced stock of the material can be managed in a different stock account than the externally procured stock.

Settings for Split Valuation in the Material Master Record



To configure split valuation for a material, you have to perform the following steps:

1. Enter a valuation category in the valuation area-dependent accounting data of the material and select price control V (moving average price).



Note:

For a material whose stocks are valued separately, you can only create the valuation header record with price control **V** because the individual stock values are cumulated and the total value is updated in the valuation header record.

2. For all specifications, that is, for all valuation types that are to be possible for this material, you must additionally create accounting data for the combination of valuation area and

valuation type. At this level, you can then freely choose between price control according to standard or moving average price as well as different valuation classes.



Hint:

If a valuation category specifies that the valuation type is set automatically, then the system creates the valuation type automatically at the first receipt. Such a valuation category is useful for materials that are handled in batches if individual batch valuations are used.

Effects of Split Valuation in the Application

Every transaction involving valuation, whether it is a goods receipt (GR), goods issue (GI), invoice receipt, or physical inventory, is executed at the partial stock level. When you process these transactions, you must always specify which partial stock is affected. Only one value change occurs for the partial stock affected. The other partial stocks are not affected. In addition to the affected partial stock, the total stock is also updated.

The value of the total stock is calculated from the sum of the stock values and the stock quantities of the individual partial stocks.



LESSON SUMMARY

You should now be able to:

- Post goods movements for split-valuated material and check the results of these postings

Learning Assessment

1. Material that you do not manage in stock on a value basis must always be ordered with account assignment. True or False?

Determine whether this statement is true or false.

- True
- False

2. The valuation category determines the criterion for distinguishing among stocks. True or False?

Determine whether this statement is true or false.

- True
- False

3. Which of the following statements regarding the split valuation are true?

Choose the correct answers.

- A SAP delivers predefined valuation categories, and you cannot define an own one.
- B You must define which valuation categories could be used in a valuation area.
- C For split-valuated materials, each goods movement is carried out at partial stock level.
- D For split-valued materials, the price control indicator S (Standard Price) must be set in the valuation area-dependent accounting data of the material master record.
- E The stock value of a split-valuated material can be managed on a different stock account for each valuation type.

Learning Assessment - Answers

1. Material that you do not manage in stock on a value basis must always be ordered with account assignment. True or False?

Determine whether this statement is true or false.

True

False

Correct. For material without value-based inventory management, no inventory value is updated in the material master record. Therefore, such a material can only be procured with an account assignment.

2. The valuation category determines the criterion for distinguishing among stocks. True or False?

Determine whether this statement is true or false.

True

False

Correct. The valuation category determines the criterion for distinguishing among stocks.

3. Which of the following statements regarding the split valuation are true?

Choose the correct answers.

- A SAP delivers predefined valuation categories, and you cannot define an own one.
- B You must define which valuation categories could be used in a valuation area.
- C For split-valuated materials, each goods movement is carried out at partial stock level.
- D For split-valued materials, the price control indicator S (Standard Price) must be set in the valuation area-dependent accounting data of the material master record.
- E The stock value of a split-valuated material can be managed on a different stock account for each valuation type.

Correct. You can define your own valuation categories in Customizing. You must define which valuation categories could be used in a valuation area. For split-valuated materials, you must also specify a valuation type in addition to the plant and storage location for a goods movement. For split-valuated materials, the price control indicator V (Moving Average Price), must be set in the valuation area-dependent accounting data of the material master record. The stock value of a split-valuated material can be managed on a different stock account for each valuation type.

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UNIT OBJECTIVES

- Describe the procedure for implementing business process requirements in the system
- Create a new plant as copy from an existing plant
- Create a new material type and a new condition type
- Create a value contract for material group
- Maintain settings for account determination

Unit 9

Lesson 1

Processing the Case Study – Procedure



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Describe the procedure for implementing business process requirements in the system

Procedure for Working on the Case Study

Business Example

You work for a medium-sized company that produces and sells bicycles among other things. The following processes are to be implemented in Purchasing.

- Extension of the enterprise structure
- Procurement of brochures that are to be managed in stock on a quantity but not on a value basis
- Procurement of some components using a value contract.
- Procurement of consumable material

You can find detailed information for individual processes in the following lessons.



Step 1: Reading the inputs for the individual business process



Step 2: Structuring the process and analyzing the problems

- Enterprise structure complete?
- Customizing settings necessary?
- Master data complete?



Step 3: Implementing the business process



Figure 163: Procedure for Working on the Case Study

When you implement the various business processes, the following procedure is recommended. You should make notes for step 2 at least (process analysis), as these notes will be helpful to you during step 3 (implementation).

Step 1: Reading the inputs for the individual business process

Read the entire text related to this business process thoroughly.

Step 2: Structuring the process and analyzing the problems

Note the most important elements of the process and work out the problem(s). Answer the following questions:

1. Which elements of the enterprise structure are relevant? At what level does this process take place? Do you have to create new organizational elements?
2. What Customizing settings are required / which settings still need to be made?
3. What master data is required? For which organizational levels and which user departments do you have to maintain master data? Which indicators or controlling settings are required?

You should also take note of which substeps need to be worked on, and in what order, to realize the process in the SAP system.

Step 3: Implementing the business process

After you have carried out a detailed process analysis in step 2 and collected all the necessary data, you can now implement the process in the SAP system step by step. Finish off your implementation with a test run of the business process.



LESSON SUMMARY

You should now be able to:

- Describe the procedure for implementing business process requirements in the system

Reviewing Company Structure and Master Data



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create a new plant as copy from an existing plant

Enterprise Structure

The product group of bicycles is manufactured in the main plant 1010. Due to the high demand your company is expanding. In the future bicycles will also be manufactured in a new subsidiary, plant WF##. The new plant has the two storage locations L##1 (Raw material) and L##2 (Finished mat.).

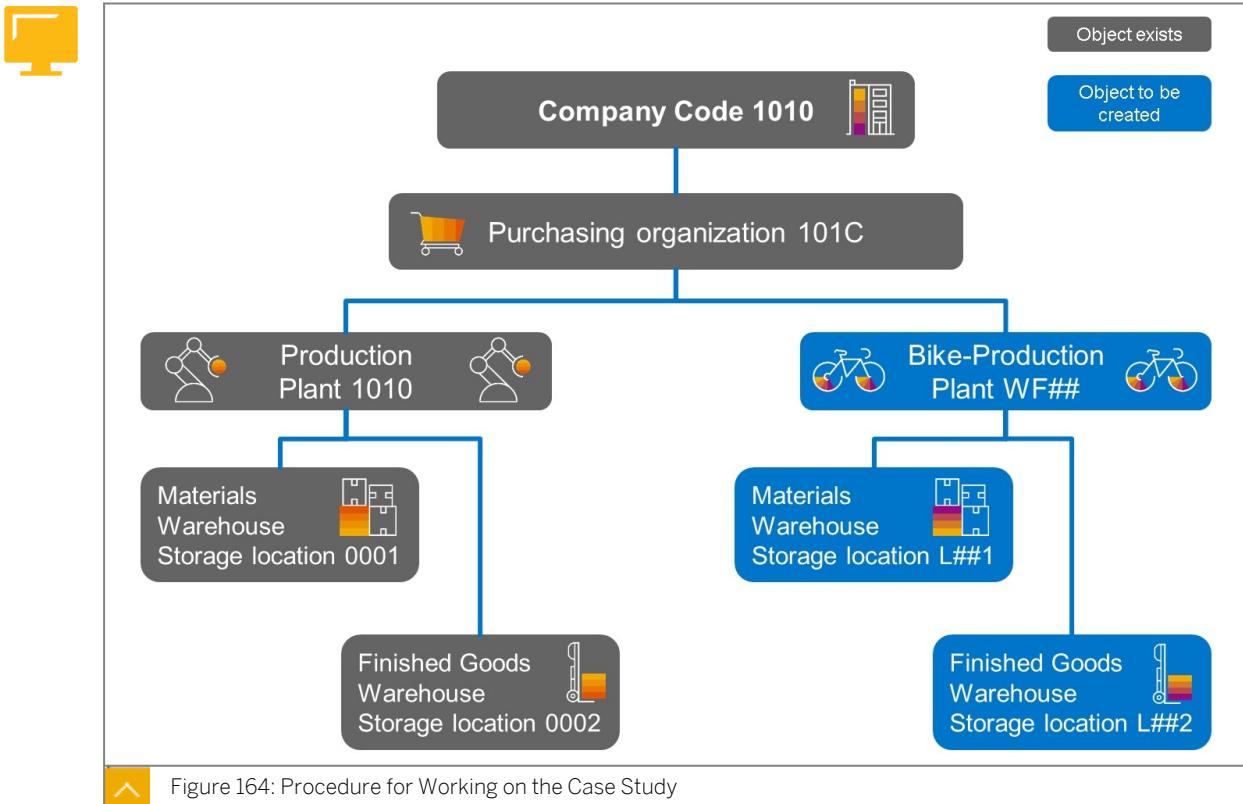
For the new plant WF##, all settings from plant 1010 are copied initially, with the exception of the storage location. Only the storage locations mentioned above need to be created for the new plant.

Create the new organizational levels in the system and make the assignments as shown in the following figure.



Note:

Don't forget to start transaction CKMSTART to set the plant productive for the material ledger.



Organizational Levels for Realization of the Business Processes

Provided that the description of the business process does not specify another organization levels, implement this business process with the following values:

Organizational level	Value
Company code	1010
Plant	WF##
Storage location	L##1
Purchasing organization	101C
Purchasing group	Z##
Cost center	10101201

Consider how you can simplify data entry by preassigning user parameters and personal settings.

Master Data

Supplier Master Data

The following supplier master records have already been created for company code 1010 and purchasing organization 101C:

Supplier number	Supplier name
T-S50A##	Motormarkt Heidelberg
T-S52A##	EFT-Parts ## GmbH

Supplier number	Supplier name
S520-1##	S4 Express Gr.##
S520-2##	UP Supply Gr.##
S4515-2##	Abbot Supplies Inc. Gr.##

Control the language key in the supplier master records. If you want, you can change the language to your preferred language.

Material Master Data

The following material master records have already been created for plant 1010:

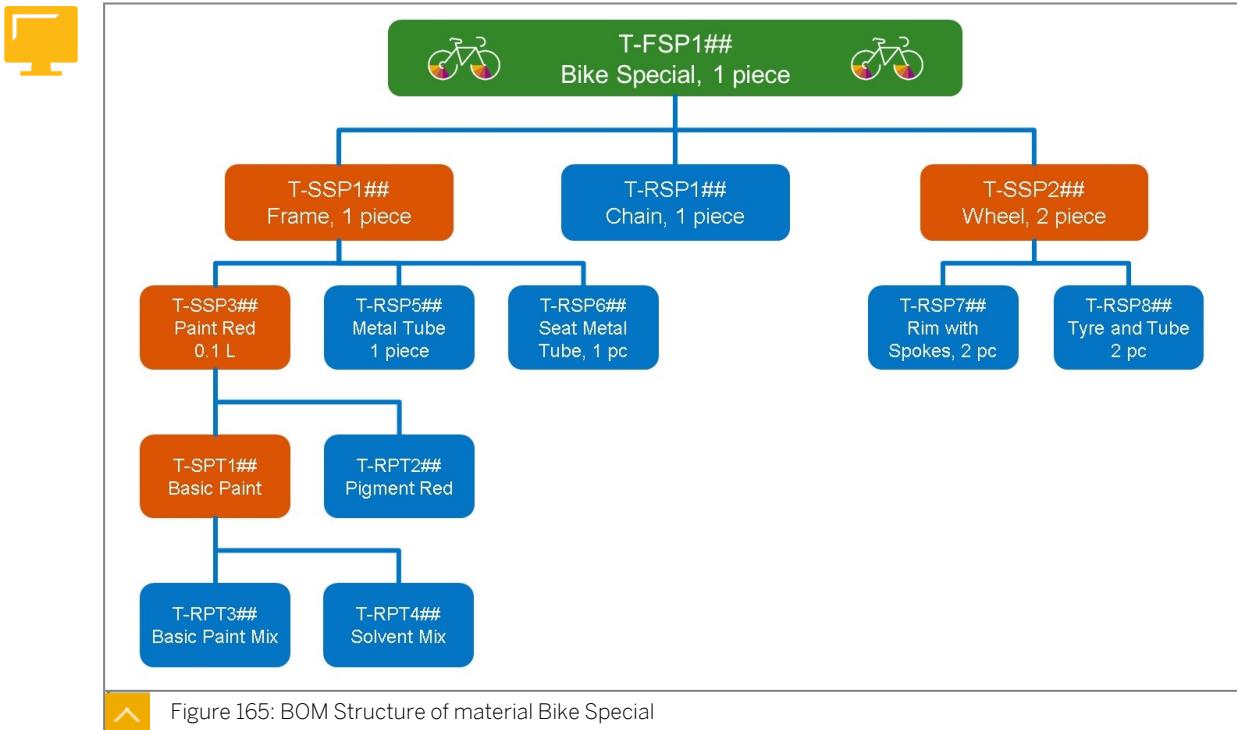
Material type	Material number	Short text
Raw material (ROH)	T-RPT1##	Can
	T-RPT2##	Pigment Red
	T-RPT3##	Basic Paint Mix
	T-RPT4##	Solvent Mix
	T-RSP1##	Chain
	T-RSP5##	Metal Tube
	T-RSP6##	Seat Metal Tube
	T-RSP7##	Rim with Spokes
	T-RSP8##	Tyre and Tube
Semifinished products (assemblies) (HALB)	T-SSP1##	Frame
	T-SSP2##	Wheel
	T-SSP3##	Bike Paint Red
	T-SPT1##	Basic Paint
Finished Product (FERT)	T-FSP1##	Bike Special



Caution:

To implement the business process, it may be necessary to add some missing departments to the material master data.

The materials listed above are components to produce the Bike Special T-FSP1## . The following diagram shows the BOM structure of the material.



Other Data

If a printer is required for message output, you can use printer LP01.

If some detailed information is missing from a process description, for example, details of a purchase price, choose a reasonable value for this yourself.



LESSON SUMMARY

You should now be able to:

- Create a new plant as copy from an existing plant

Business Process 1 - Purchasing of Brochures



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create a new material type and a new condition type

Basic Information for Business Process 1

A separate material type BD## is to be created for brochures and documentation material. These materials are only procured externally and should always be managed in stock on a quantity basis, but never on a value basis. It should also be possible to plan the materials.

In principle, only external number assignment is required, but no internal number assignment. Since only selected users may create materials with this material type, the assigned number does not have to be checked explicitly by the system.

Create the new material type BD##. If possible, use a suitable material type as reference.

Your company has all its brochures and documentation for plant 1010 created by an external print-works, supplier S520-2##. In this scenario, the brochure "Bike Special – a special bike" is purchased from this supplier.

Create a material master record for the brochure "Bike Special – a special bike". Use T-BBS## as the material number and as material type BD##. At present, no details are available for requirements planning.

The costs for all brochures is assumed by the sales department (cost center T-MKT##).

For the first order of a brochure at supplier S520-2## flat-rate reproduction costs (repro costs) at a value of 500 EUR result. For subsequent orders of the brochure, these repro costs will no longer be invoiced, but only the normal printing costs. The one-off repro costs should be recorded using a separate condition ZR## (Repro costs##).

Create the new condition type ZR##.



Note:

The condition type for the repro costs should not be assigned to any condition category, nor should it be assigned to condition category B (delivery costs). Use an existing condition type with suitable settings as a template (for example, ZB00).

Don't forget to assign the new condition type to the calculation schema for purchase orders.

Procurement of Brochures - Test Process

Once you have made all settings and maintained all the necessary data, you should be able to execute the following process for plant 1010:

1. Create a first order for 500 units of the brochure “Bike Special - a special bike”
2. Post a goods receipt for the purchase order and analyze the effects (stock quantity, stock value).
3. Post a stock withdrawal for 50 units of the brochure and analyze the effects.
4. Create a follow-on order of an additional 500 copies of the brochure.



LESSON SUMMARY

You should now be able to:

- Create a new material type and a new condition type

Business Process 2 - Procurement of Production Components Using a Value Contract



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Create a value contract for material group

Basic Information for Business Process 2

Your company buys several materials of the material group L002 from supplier T-S52A##. In order to negotiate better prices, you have concluded a long-term contract with the supplier. In this contract, the purchase of goods with a total value of 3,000,000 Euro was agreed for the next two years. In addition, the supplier provides a discount of 7% on all materials purchased through this contract. However, the contract does not specify exactly which materials and which quantities are to be purchased. The contract start date is the first of the current month.

In addition, binding agreements have been made with the supplier regarding delivery time and price for the following materials. These agreements are valid for the next six months, start date is the first of the current month, and are only valid for plant WF##.

Material	Planned Delivery Time	Price
T-RSP1##	3	2.90 Euro
T-RSP5##	3	0.30 Euro
T-RSP6##	3	2.50 Euro
T-RSP7##	3	16.00 Euro
T-RSP8##	5	11.00 Euro

In purchasing the system should automatically determine the value contract as the relevant source of supply for the materials listed above (not in the planning run). All purchase requisitions for which this supplier is determined as the source of supply should be automatically converted to purchase orders.

All materials from the list above are to be planned automatically in plant WF##. The control data for MRP is initially the same for all materials. Therefore, an MRP profile is to be used.

All materials are procured externally, and manual reorder point planning is used as the MRP procedure; reorder point is 200 pieces. The stock should always be replenished up to the maximum stock level of 2000 pieces. The goods receipt for purchase orders must take place in storage location L##1. For all materials the responsible MRP controller is P## and the responsible purchasing group is Z##.

Create an appropriate MRP profile ZF##. After this extend the material master data with the data required for the following test process.

Create the value contract, and maintain the price information for the materials in the system.

Procurement of Components - Test Process

Once you have made all settings and maintained all the necessary data, you should be able to execute the following process:

1. Total planning run online for plant WF## (result: purchase requisitions for the T-RSP-materials, quantity per material 2000 pieces, no source of supply).
2. Source assignment (result: the determined source of supply is the value contract for the material group)
3. Convert purchase requisitions to purchase orders automatically; one purchase order per supplier (prices for the materials in accordance with list above minus a 7 % discount from value contract).
4. Goods receipt for the purchase order in plant WF##. The storage location L##1 must be proposed from the purchase order.
5. Invoice receipt for delivery.



LESSON SUMMARY

You should now be able to:

- Create a value contract for material group

Business Process 3 - Procurement of Office Supplies



LESSON OBJECTIVES

After completing this lesson, you will be able to:

- Maintain settings for account determination

Basic Information for Business Process 3

Details for Material and Account Determination

You buy office supplies for your plant WF## from the supplier S4 Express Gr.## (S520-1##). To simplify price agreements and evaluations for office supplies, a separate material group OS## (Office supplies ##) is planned for these materials.

For office material that must be procured regularly, material master records and prices should be maintained in the system. Therefore, it was also specified that a separate material type OM## (Office material ##) should be used. This material type can initially be created as a copy of material type ROH.

For all office materials (with or without material master record), G/L account 65100000 should always be used for the consumption posting. The G/L account 13105500 should always be determined as the stock account.

The withdrawal of office material from the stock is always posted to cost center 10101201. This cost center is also used if you procure office supplies directly for consumption.

Maintain all necessary customizing settings for the material master data and account determination. If you need a new valuation class use key OC## and if you need a new account category reference use key OR##.

Details regarding the release strategy for purchase requisitions

In addition, there is the following requirement for plant WF##. If material is requested, the purchase requisition item must be released if account assignment is to cost center and the item value is 100 Euros or more. This release has to be carried out with release code Z2.

For purchase requisition items without account assignment a release is required if the item amount is 500 Euros or more. This release has to be carried out with release code Z3.

This requirement applies to all requisition items with purchasing groups Z01 to Z30.



Note:

If you want to create new release strategies, you should use the following strategy keys for these: ## and ??, whereby ?? = ## + 50 (example: group ## = 06 can use the key 06 and 56).

Procurement of Office Supplies - Test Process

Once you have made all customizing settings and maintained all the necessary data, you should be able to execute the following process for plant WF##:

1. Create a material master record OS-1## for a box of copy paper, A4 80 g/m², white, with 2500 sheets. Use material type OM## and assign the material to material group OS##. Valuation price for one box is 20 Euro, and the responsible purchasing group is Z##.



Note:

Take note of the previous settings when you select the valuation class.

2. Create a purchase requisition with two items:

- **First item:** Request the copy paper OS-1## to replenish the stock of the material. Check whether the release strategy for stock material is determined correctly. For example, change the quantity (24 boxes or 25 boxes), or change the purchasing group of the item.

Save this item with a quantity of 30 boxes and purchasing group Z##.

- **Second item:** Request some packs photo paper, A4, 200 g/m², white, 100 sheets. Valuation price for 1 pack with 100 sheets is 17 Euro.

Check whether the release strategy for consumption material is determined correctly. And check that G/L account is 65100000.

Save this item with a quantity of 10 packs and purchasing group Z##.

3. Release the purchase requisition items.

4. Create a purchase order with reference to the purchase requisition. The supplier of the materials is S520-1##.

5. Post the goods receipt for the purchase order.

Control the accounting document. Are the G/L accounts correct for the stock and the consumption item?

6. Post a goods issue for material OS-1## with transaction MIGO.

Use the following data:

- Action: Goods Issue
- Reference document: Other
- Movement type: 201 (GI for cost center)
- Material: OS-1##
- Quantity: 2 box
- Cost center: 10101201
- Plant / Storage Location: WF## / L##1 (or L##2)

Control the accounting document. Are the G/L accounts correct for the stock and the consumption posting?



LESSON SUMMARY

You should now be able to:

- Maintain settings for account determination