Material Valuation

In MM, materials are automatically valuated on an ongoing basis. However, you can manually adjust valuations. Valuation data is stored in the material master record.

LIFO valuation, FIFO valuation, and lowest value determination are available to valuate materials for balance sheet purposes. The FIFO (first in first out) valuation method enables stocks of a material to be valuated as realistically as possible. With the FIFO method, the oldest stocks of a material are considered to be the first ones used. The value of the stock is therefore based on the most recent stock received. With LIFO (lat in first out), valuation is based on the principle that the stocks that were last redeived of a material are first to be used.

Valuation Structures

Valuation Level

Valuation can be carried out at the valuation area level. A valuation area can be defined as follows:

- Valuation area = company code

For each material, all stocks in this company code are valuated on a uniform basis.

- Valuation area = plant

For each material, stocks at each plant are valuated separately.

Valuation can be performed at the company code level or at the plant level.

Valuation Control

When you create a master record for a material, you can determine the criteria for valuating the material:

- If you do not want to manage separate stock accounts for each material, you can group different materials with similar characteristics into valuation classes. The system determines the stock account for accounting through the valuation class.
- The system allows you to valuate material stocks according to different criteria, such as procurement, origin, or status. The valuation category determines the criteria.
- Valuation types are defined for each valuation category. Valuation types represent the characteristics of a valuation category. For example, the valuation category Origin has the following valuation types: “Domestic,” “ Other EC,” “USA,” and “Other foreign country.”
- The price control determines whether the material is always valuated at the same standard price (standard price) or whether postings to the material changes the price (moving average price).

The data for valuation control is defined in the material master record. To determine an account for a material, it must have a valuation class. Valuation categories and valuation types are used in split valuation of material stocks.

Material Valuation

The following system transactions, entered with reference to a material, can result in changes to its stock quantity and stock value:

- Goods receipts
- Transfer postings
- Goods issues
- Invoices
- Physical inventory differences
- Revaluations

Value postings made by the system in Materials Management are based on financial accounting documents resulting from goods movement transactions. The type of postings generated by the system depend on the material's price control.

In a company / group, it is often necessary to make cross-company transactions (debits / credit memos). When you enter a document, postings are automatically made to clearing accounts.

As a result of goods movements, value postings are automatically made by the system, depending on price control (standard price or moving average price) and other factors.

Valuation Procedure

Price Control

There are two types of price control with the following characteristics:

- Standard Price
  - All inventory postings are carried out with the standard price
  - Variances are posted to price difference accounts
  - Price changes can be monitored
  - The moving average price is displayed for statistical purposes
- Moving Average Price
  - All goods receipts are posted with the goods receipt value
  - The price in the material master record is adjusted to delivered prices
  - Price differences occur in exceptional cases only, such as stock shortages
  - Manual price changes are usually unnecessary (they are, however, possible)

Posting Procedure

The price control for a material affects the posting procedure for goods receipt and invoice receipt.

When you post a goods receipt, the quantity and net order price are multiplied and the amount is posted to the goods receipt / invoice receipt (GR / IR) clearing

account. When you valuate a material with standard price, the quantity entered is valuated at the standard price.

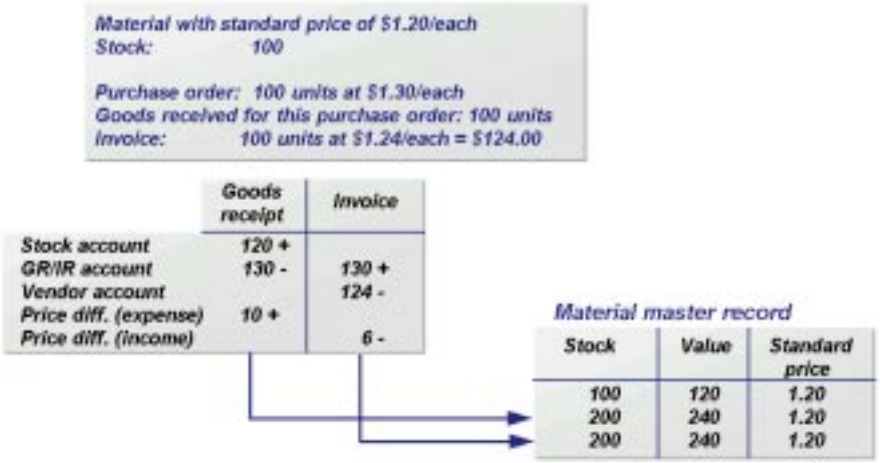

Fig. 7-1: Posting Procedure: Material with Standard Price

Material with Moving Average Price

If the net order price differs from the standard price, the difference is posted to the price difference account. When you enter the invoice, the GR / IR account is cleared. If the invoice price differs from the net order price, this difference is also posted to the price difference account.

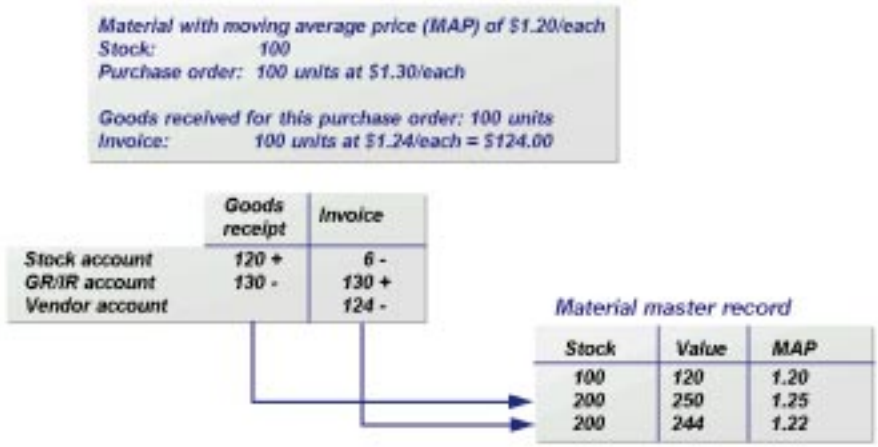

Fig. 7-2: Posting Procedure: Material with Moving Average Price (MAP)

When you post a goods receipt, the quantity and net order price are multiplied and the amount is posted to the GR / IR clearing account. The offsetting entry is made to the stock account. When you enter the invoice, the GR / IR account is cleared. If the invoice price differs from the net order price, the difference is posted to the stock account.

Both goods receipt postings and invoice postings can result in changes to the material price.

There are two types of price control: standard price and moving average price. The price control influences the posting procedure.

Delivery Costs

Delivery costs can be entered in the purchase order. Planned delivery costs are included in the goods receipt posting. They are posted to a freight or customs clearing account. The offsetting entry is made to the stock account or price difference account, depending on the price control.

Delivery costs can result in either a higher valuation price or a price difference posting, depending on the price control.

Cash Discount

Terms of payment agreed upon in the purchase order can be included in material valuation. You can make a net posting for both the goods receipt and invoice receipt. In this case, the stock posting for materials with moving average price is reduced by the relevant cash discount amount. The offsetting entry is made to a cash discount clearing account that is cleared at payment.

Cash discount amounts can result in changes to the valuation price or price differences depending on the price control.

Split Valuation

If a material is subject to split valuation, different stocks of the same material can be managed separately. Each sub-stock is valuated separately. The valuation category determines the criteria for valuation.

Each sub-stock is defined by a valuation type. The following options are available:

- You can determine all the possible valuation types when you create a material master record. For example, with the valuation category Origin, you can specify the different countries as valuation types.
- You can create a new valuation type for each goods receipt (for example, in the case of materials managed in batches).

Each sub-stock is valuated separately. Each valuation category has a valuation header record in which the quantities and values of the corresponding valuation types are stored.

You can valuate sub-stocks of a material separately according to certain criteria using valuation types.

Revaluation

You can manually change a material valuation using the following functions:

- Material price change

  The material price can be changed, effective immediately, or from a certain date.

- Material debit/credit

  You can make a debit or credit posting for every material. However, these postings only change the valuation of materials with moving average price.

As a result of a price change or material debit/credit, the material stock is revaluated.

What functions have an effect on material valuation?

- Various posting procedures, depending on the price control
- Delivery costs and cash discount (can result in changes to valuation)
- Split valuation of material stocks (valuation types)
- Material price change, material debit/credit (can result in revaluation postings)

Material Ledger

The Material Ledger is a new type of material sub-ledger that allows stock to be managed in the following ways:

- At periodic unit price
- In up to three currencies

Data from all transactions relevant to valuation is automatically stored in the Material Ledger's master data. This data is used to calculate the valuation price of a material in the three different currencies.

Periodic Unit Price

When the Material Ledger is active in material valuation, you can continue to valuate materials using a standard price or a moving price (referred to as the periodic unit price). You can also define exactly when new prices are to be calculated and how the system should do this.

The Material Ledger allows you to keep the periodic unit price of a material constant over a certain period (for example, a day, week, or month). It is calculated using all the transactions (such as invoice receipts) that lead to a change in the value of the stock of a material. These transactions are collected automatically in the Material Ledger. Only when you close the Material Ledger (that is, when the new periodic unit price is calculated) is the price of the material changed in line with the transactions contained within the ledger.

The periodic unit price has all the advantages of both standard price control and moving average price control. Like the standard price, the periodic unit price can be kept constant over a specific period (like the moving average price, it is calculated using the actual values contained in the R/3 System). An additional advantage of the Material Ledger is its posting logic. This allows price differences and revaluations to be posted to material stock accounts instead of remaining on price difference or revaluation accounts.

To ensure clarity, the Material Ledger also provides detailed information on the postings that were made for the material. This information includes how new prices were calculated, and which transactions led to the calculation of the new prices.

Management of Multiple Currencies

The Material Ledger allows you to manage the stock of a material using the valuation method defined for it (standard price or periodic unit price) in three currencies.

When new periodic unit prices are calculated, the system does not simply translate a new price from one currency to another. Instead, prices are calculated independently of each other in the individual currencies at historical exchange rates. If, for example, an invoice leads to a price change, the system uses the exchange rate valid at the time at which the invoice was posted in the system.

You can configure the system so that the currencies managed in the Material Ledger are the same as those managed in Financial Accounting. When this is the case, accounting documents for material movements and invoices are generated in three different currencies. The material stock accounts in the three different currencies correspond to the stock values managed in the Material Ledger.

Configuring your currencies consistently ensures that information can be passed between Materials Management, Financial Accounting, and Controlling.

Balance Sheet Valuation

The following components are available for balance sheet valuation:

- LIFO valuation
- FIFO valuation
- Lowest value determination

The results of these valuations form the basis for valuation adjustment postings for tax and commercial purposes.

LIFO Valuation

LIFO valuation (Last In First Out) is a valuation method that allows you to valuate stocks using an assumed sequence of usage/consumption. In LIFO valuation, material received last is sold or consumed first. No value change occurs for older stock when new stock is received or consumed. This means that in an inflationary market, fictitious profits are avoided since the lower costs of the stocks procured first are used for balance sheet valuation purposes.

LIFO valuation using MM can be made for an individual material or for a pool (that is, a group of materials). Similar materials, or materials with the same function, can be grouped into pools and valuated together.

MM supports two procedures for LIFO valuation:

- Quantity LIFO procedure
- Index LIFO procedure

Quantity LIFO Procedure

The quantity LIFO procedure is based on the increases or decreases determined in the total quantity of stock at the end of the fiscal year. If the quantities received exceed the quantities issued in a fiscal year, a layer is created which records the increase in the total quantity and value of the stock. If the quantities issued exceed the quantities received in a fiscal year, the preceding layers are reduced accordingly, starting with the most recent layer.

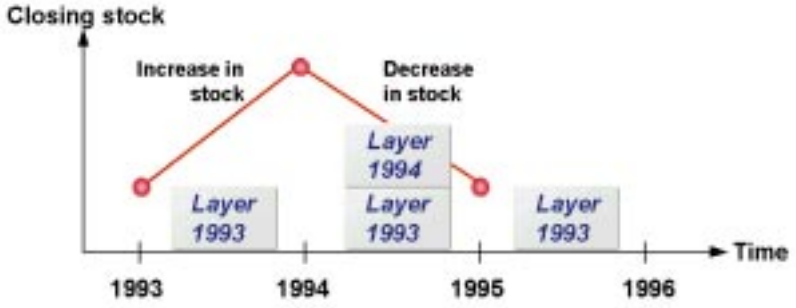

Fig. 7-3: LIFO Valuation

In MM, you have the following options for valuating a layer:

- Valuation with the moving average price (from material master record)
- Valuation with the moving average price for goods receipts in the reporting year for:
  - All posting periods (price for total year)
  - The first n posting period (price for partial year)
  - Individual posting periods starting at the beginning of the year and replenishing until the layer stock is reached

Index LIFO Procedure

With the index LIFO procedure, you can manage pool layers by value only. The value of the pool at the end of the fiscal year is recalculated using the price level of the base year with reference to a price index. It is compared with the base value of existing layers. If the value calculated is greater than the base value of existing layers, a layer is created for this fiscal year. If the value calculated is less than the base value of existing layers, the previous layers are reduced, beginning with the most recent.

Lowest Value Determination

After completing LIFO valuation, the values in the layers can be used in lowest value determination. These values are gross values, which can be automatically devalued by MM according to the lowest value principle. The results of the lowest value determination can be updated in the material master record in the tax and commercial price fields.

FIFO Valuation

FIFO valuation is a method of valuating stocks of a material at their most current value. FIFO (First In, First Out) is based on the assumption that the oldest stocks of a material received are used before any other stocks. The stock value is therefore based on the last receipts.

Calculation of the FIFO Value

The FIFO value is calculated using FIFO-relevant receipts. The system works backwards, by adding up the cumulated monthly receipts of a material until the current stock level of the material is reached. The total value of these receipts is the FIFO value. The FIFO value of a material can be updated in the material master record.

Lowest Value Determination

The FIFO value calculation can be combined with lowest value determination. Once the lowest value has been determined, the FIFO value calculated from the receipts is devaluated if the lowest value determined is not the FIFO value.

Lowest Value Determination

The lowest value principle states that the lower of two possible values must be used (strict principle) or may be used (moderate principle). For example, you can use delivered and production costs or commodity exchange or market prices for

valuation purposes. The lowest of the two values forms the upper value limit according to the strict lowest value principle.

In MM, the following procedures are available for determining the lowest value for externally procured materials:

- Lowest value determination according to market prices

  To determine the lowest price, you can include the following price sources:

  - Purchase orders
  - Contracts
  - Purchasing info records
  - Receipts for purchase orders

- Lowest value determination according to range of coverage

  The range of coverage can be determined in two ways:

  - Based on past consumption
  - Based on forecast values

  Range of coverage is calculated in months (a percentage discount is deter mined depending on the months).

- Lowest value determination according to movement rate

  A material's movement rate is determined using receipts and issues of the material. The movement rate for a material specifies the percentage calculated from the units of measure received and issued in relation to material stock. If the material is classified as slow or non-moving, a devaluation indicator is set. A percentage reduction is determined based on the devaluation indicator.

Multiple Levels

MM supports a link between the individual procedures. For example, you can determine the lowest value according to market prices and then you can devalue the lowest price according to range of coverage or movement rate.

Results

The results of the lowest value determination process can be updated in the material master record in the tax and commercial price fields.

To determine the value of your material stock according to tax or commercial price, you can generate a list that proposes which transfer postings you could make to devalue your individual stock accounts.

In lowest value determination, the lower value is always selected.

How can you valuate material stocks for balance sheet purposes?

- LIFO valuation allows you to stocks using an assumed regnence consumption.
- Lowest value determination allows you to valuate material stocks using the lowest value.