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Effective Pricing with SAP® ERP

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This chapter discusses pricing as a general business process and what that means in the SAP ERP environment. You’ll learn about the organizational elements of pricing and the condition techniques, as well as why they’re used.

1 Pricing Overview

Price, in general, refers to something’s monetary value or worth. It is the amount you pay or receive in exchange for goods, which can be defined as materials or services. Pricing in SAP ERP broadly refers to the calculation of prices in the Sales and Distribution (SD) and Materials Management (MM) functionalities in SAP ERP.

Pricing is often a complex process, and it can be a challenge for companies to arrive at a specific price for a customer or vendor because many factors need to be considered. For example, taxes on goods are determined based on where the product is shipped to and from. Some of your customers may have favorable discounts because they purchase goods in larger quantities or volumes or during busy times of the year (i.e., the holiday season). You might also offer a bonus gift when the customer buys a certain product. These different promotions, discounts, and taxes make the price determination complex. It’s very important to make price determination as automated and effective as possible to prevent manual overrides and price maintenance within your SAP ERP system.

This book provides the details on how the pricing function works within SAP ERP, and we discuss the concepts of various pricing determinations, such as discounts, freight, taxes, and so on. This book addresses the main aspects of the pricing configuration in your SAP ERP system and supports the maintenance and effective use of price determination. The features described in this book may not all be applicable to your specific system because many times it is dependent on the applicable release, but we address the common features across SAP ERP. Throughout the book, we also go over leading practices, tips and tricks, and shortcuts to pricing configuration and maintenance. Before we get into the intricacies of pricing, first you need to understand some of the basics.
1.1 **Overview of Pricing**

As stated previously, pricing in the SAP ERP system refers to the method by which we can determine the prices of goods or services. When a customer receives an invoice, he pays for the goods or services purchased. Similarly, when a vendor sends an invoice to the buyer, the buyer pays for the goods or services purchased.

SAP ERP is made up of individual, integrated software functionalities and components that perform various organizational system tasks. In SAP ERP, pricing can originate in the following functionalities:

- Sales and Distribution (SD)
- Materials Management (MM)

Pricing within SD is used in various sales documents, such as sales orders, quotations, contracts, schedule agreements, inquiries, deliveries, credit memos, and debit memos. Similarly in MM, pricing is used in contracts, quotations, purchase orders (POs), purchase information records, and credit memos.

To grasp pricing as a business process, it's important for you to understand the organizational structure of the SAP ERP system and where your pricing processes fit into the organizational structure.

SAP ERP uses the organizational structure (also called as enterprise structure) to represent various entities such as companies, distribution plants, manufacturing plants, business units selling the products, sales channels, and purchasing organizations.

1.1.1 **Sales Organizational Structure**

Organizational structures represent the key entity within your organization that performs a certain function or role. For example, your company within the SAP ERP enterprise structure can be represented by a company code and the corresponding sales functions by sales organization, division, and so on. The key elements of an organizational structure from an SD perspective (commonly referred to as the sales area) are as follows:

- **Sales organization**
  This represents the selling unit and is responsible for product/service liability and returns. For example, a company can organize its products in North Sales Organization, South Sales Organization, West Sales Organization, or any other
way. These sales organizations are responsible for selling within their respective regions.

- **Distribution channel**
  This is the channel through which the product or service is sold. Examples of distribution channels include retail, wholesale, and online.

- **Division**
  This represents the business unit to which the products/services belong. It establishes responsibility for profits from materials or services. Within each of the sales organizations, you can have various product divisions that are responsible for certain groups of products. For example, the plastics division is responsible for plastics, while the computer division is responsible for laptops and desktops.

By having a separate sales organization for North, South, West, and East sections, the company has better flexibility in setting up pricing by region. Multiple distribution channels and divisions enable pricing to be controlled by product divisions and the channel through which it is sold. For example, if the product is sold through the Web, the company can offer a better price to the customers because they are purchasing the product directly instead of going through a retail or wholesale distribution channel.

The sales organization and distribution channels are used as organizational elements for pricing. Figure 1.1 illustrates the sales organization structure within SD in SAP ERP.

*Figure 1.1* Sales Organizational Structure

Let's review the purchase organization structure in the next section.
### 1.1.2 Purchasing Organizational Structure

A *purchasing organization* is the organizational unit within purchasing in MM. A purchasing organization procures materials and services, negotiates conditions of purchase with vendors, and is responsible for the related transactions.

A *plant* is the organizational unit that is typically responsible for manufacturing or distribution. The purchasing organization and plants can be used as organizational elements for pricing in MM. Figure 1.2 illustrates the purchasing organizational structure.

![Purchasing Organizational Structure](image)

*Figure 1.2* Purchasing Organizational Structure

Let’s consider an example of a conglomerate that makes computers with businesses in Germany, the United States, and India. To have a competitive edge, the company procures raw materials globally. To enable global procurement, a global purchasing organization can be set up for this company. All the contracts, agreements, and POs are raised with this global purchasing organization to give the company better visibility into the purchasing spend. The company can then leverage these spends for negotiating better prices with suppliers and getting better prices for the products purchased and impacting product costing, which increases company profitability.

Several nonorganizational elements are also part of pricing. Pricing can be based on customers, vendors, materials, and material groups to name a few. We will cover these topics in more detail throughout the coming chapters. Now that we understand the organizational elements, the next paragraph explains how pricing is maintained in organizations.

### 1.1.3 Pricing Maintenance

*Pricing maintenance* from a standard business process perspective refers to sales and pricing managers maintaining sales pricing. Because pricing is sensitive data pricing
Overview of Pricing

is only maintained by authorized business users. Because pricing can vary based on different business rules, it is important that this information is kept confidential for competitive reasons or for other business deals. For example, with a specific customer, you may choose to provide a higher discount because it is a strategic account that might help you get more business later or even penetrate a specific market. In another example, the price for intercompany transactions are meant for customs reporting and not for sharing with your customer because it might expose your actual cost and the profit margins you are making on a product or services.

Pricing can be maintained in the SAP ERP system by various methods such as contracts, schedule agreements, pricing condition records, and so on. Access to these transactions is controlled through security, so not every end user or manager has access to them.

Similarly, in procurement, pricing is maintained by contract and purchasing managers, and access to these transactions is also restricted because of the sensitive nature of the data.

Now that we understand who maintains prices, let’s look at the different types of pricing available.

11.4 Pricing Types Overview

Pricing type is a key aspect of the pricing procedure. As you can see in Figure 1.3, pricing conditions in SD can be broadly categorized into the following sections:

- **Pricing**
  Includes price list, customer or material price, and custom pricing conditions.

- **Discounts/Surcharges**
  Includes customer-specific or material-specific discounts and price group discounts.

- **Freight**
  Includes Incoterms-specific pricing. Incoterms (International Commercial terms) are a series of international sales terms published by the International Chamber of Commerce. For example, a commonly used Incoterm is FOB Destination or freight on board Destination. This implies that the ownership of the goods is transferred to the buying company when the goods reach the destination.
**Taxes**

Includes levies or fees based on sales or purchases. Taxes can also be tariff-based on the export/import of goods determined by the departure country or the destination country.

---

**Figure 1.3**  
Sales and Distribution Pricing Conditions Overview

Similarly, on the procurement side, we can categorize the pricing under the same categories, as shown in Figure 1.4. Specifically, Figure 1.4 displays the MM pricing condition overview. The difference is that instead of customers, the focus is on vendors.

---

**Figure 1.4**  
Materials Management Pricing Conditions Overview
In the next section, let's review the condition technique overview.

### 1.2 Condition Technique Overview

The SAP ERP system uses a special mechanism called a *condition technique* to enable pricing. To understand the condition technique, it is important to understand the elements of pricing.

The following are some basic definitions you need to understand before moving on:

- **Condition technique**
  - The mechanism SAP ERP uses to calculate the prices for a given product or service.

- **Condition types**
  - The way SAP ERP identifies the various pricing elements such as discounts, costs, list price, taxes, and so on.

- **Condition table**
  - The combination of fields that identifies an individual condition record.

- **Condition record**
  - The way SAP ERP retrieves pricing data from the system. Condition records can be created for all condition types such as discounts, list price, and so on.

- **Pricing procedure**
  - The way SAP ERP groups the various condition types, such as prices, discounts, taxes, and so on, to arrive at a final price for the customer.

To help illustrate the elements of pricing, let's look at a customer buying a book at a bookstore, illustrated in Table 1.1. If the book is priced at $15.00 USD, the customer will pay $15.00 USD. (Taxes weren’t included to show an easier example.)

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<thead>
<tr>
<th>Price Element Description</th>
<th>Value</th>
<th>Currency</th>
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<tr>
<td>List Price</td>
<td>15.00</td>
<td>USD</td>
</tr>
<tr>
<td>Gross Price</td>
<td>15.00</td>
<td>USD</td>
</tr>
<tr>
<td>Net Price</td>
<td>15.00</td>
<td>USD</td>
</tr>
</tbody>
</table>

*Table 1.1 Pricing Elements*
As you can see in this simple example, there is only one pricing element, the list price (including value and currency). The gross price and net price are also calculated. *Gross price* refers to the price before any deductions are taken, such as discounts, while *net price* refers to the price after all the deductions are taken into account.

So, let’s look at a more complex example, where the same book is offered at a discount of 10%, as shown in Table 1.2. In this case, the following pricing elements are considered: list price, discount, taxes, gross price, and net price.

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<tr>
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<th>Value</th>
<th>Currency</th>
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<tbody>
<tr>
<td>List Price</td>
<td>15.00</td>
<td>USD</td>
</tr>
<tr>
<td>Gross Price</td>
<td>15.00</td>
<td>USD</td>
</tr>
<tr>
<td>Discount @ 10%</td>
<td>1.50</td>
<td>USD</td>
</tr>
<tr>
<td>Taxes @ 10%</td>
<td>1.35</td>
<td>USD</td>
</tr>
<tr>
<td>Net Price</td>
<td>14.85</td>
<td>USD</td>
</tr>
</tbody>
</table>

*Table 1.2  Pricing Elements with Discounts*

The pricing elements that make up the price are influenced by various factors. For example, in SD, the pricing elements are influenced by sales regions, distribution channel, and product division.

The previous examples represent simple business scenarios. But there are several business scenarios where pricing can be considerably more complex:

- Discounts can be offered based on volume of purchase, sales, or other criteria (strategic account, etc).
- A free product is offered for every product purchased.
- Certain groups of customers receive a discount of 10% while others receive 15%.
- Pricing is cumulative, meaning that the customer is eligible only if the value of the sales order exceeds $100.00.
- Rebates are offered to customers at a later time, rather than at the time of purchase.
- Customers can purchase products where numerous permutations and combinations of the products are possible (i.e., cars and computers).
Condition techniques are permutations, and combinations require a mechanism to calculate the prices. To manage the various pricing elements (list price, discounts, surcharges, taxes, etc.), SAP ERP uses the condition technique to calculate these prices. We will discuss this in detail in later chapters.

The condition technique helps determine the various pricing elements in SD and MM documents. All the pricing elements are then brought together in a pricing procedure.

At a very high level, Figure 1.5 illustrates how all these elements fit together.

Whether it is SD pricing or MM pricing, the technique is the same. For SD documents or MM documents, the pricing procedures are determined. The pricing procedures provide the various pricing conditions (i.e., pricing, taxes, freight, discounts, etc.).

Here's a quick breakdown of pricing:

- **Pricing procedure**
  This is usually represented by a six-digit alphanumeric code. Figure 1.6 shows some examples of pricing procedures. Custom pricing procedures usually have a Y or Z starting prefix, for example, ZVAXUS or YVAXUS. Like other custom-defined objects, the pricing object is defined or copied over from the standard start with Y or Z, so that during an upgrade, they are recognized as your own defined objects, and the SAP ERP system doesn’t overwrite them.

- **Pricing conditions**
  This is a four-digit alphanumeric code. Figure 1.6 shows examples of pricing conditions. Custom pricing conditions usually are preceded by a Y or Z, for example, ZRO0 or YR00. As explained earlier, Y or Z prefix not only helps you identify the condition type that is being custom defined but also helps you manage them during upgrades.
Pricing Conditions

Access sequences
This is a four-digit alphanumeric code. Figure 1.7 shows some examples of pricing access sequences. Custom pricing conditions usually are preceded by a Y or Z, for example, ZR00 or YR00.

<table>
<thead>
<tr>
<th>AS</th>
<th>Description</th>
<th>Ty.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR00</td>
<td>Price</td>
<td>Access sequence relevant for pricing</td>
<td></td>
</tr>
<tr>
<td>FR01</td>
<td>Price (item price list)</td>
<td>Access sequence relevant for pricing</td>
<td></td>
</tr>
<tr>
<td>FR02</td>
<td>Price with Release Status</td>
<td>Access sequence relevant for pricing</td>
<td></td>
</tr>
<tr>
<td>PREF</td>
<td>Preference Price</td>
<td>Access sequence relevant for pricing</td>
<td></td>
</tr>
<tr>
<td>PREK</td>
<td>Preference price - config</td>
<td>Access sequence relevant for pricing</td>
<td></td>
</tr>
<tr>
<td>PREV</td>
<td>Preference price - cross pnt</td>
<td>Access sequence relevant for pricing</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1.6 Pricing Conditions

Condition tables
This is a three-digit numeric code. Figure 1.8 shows examples of pricing condition tables. Custom pricing conditions usually are preceded by a 5 (i.e., 501,502, etc.).

Table fields
This is a 30-digit alpha numeric code. Figure 1.9 shows some examples of allowed fields. Custom fields can be added with a preceding Z or Y (ZEKGRP or YEKGRP).

As illustrated by Figure 1.6 through Figure 1.9, the pricing conditions have access sequences that store the condition records in condition tables. The condition tables have condition fields that help provide the fields used to determine pricing. In Chapter 3, we'll discuss condition records, tables, and techniques in more detail.
Throughout the rest of this book, we'll discuss how the pricing procedures are determined, how the pricing conditions are activated, and which tables are accessed by the access sequences.

### 1.3 Summary

Pricing elements such as list price, discounts, surcharges, taxes, and so on, are used to determine the final price that is charged to the customer.
For you to arrive at the final price and to keep track of all these different pricing elements, you can use a condition technique in SAP ERP. By using this technique, when a sales order document or PO document is created, the various pricing elements are determined in the system.

Organizational elements that are relevant to sales pricing include the sales organization, distribution channel, and sales division. Organizational elements that are relevant to purchase pricing are the purchasing organization and plants. Pricing is maintained by sales or purchasing managers, and access to these transactions is restricted because of sensitive data.

A condition technique is the mechanism in the SAP ERP system that determines the various pricing elements such as list price, discounts, surcharges, and taxes. All these pricing elements are brought together in a pricing procedure. You can use the definitions and examples of organizational structures we show in this chapter as a guideline to set up an organizational model for your company, including your company's sales organizations, distribution channels, product divisions, and purchasing organizations. This chapter also helps you identify the various pricing elements for a product.

Now that you understand what pricing is, the next chapter discusses how pricing works in SD documents.
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