Profitability Analysis General Overview

This page is to be used to provide a General Overview of Profitability Analysis. There are three levels to learn any concept of SAP.

Level One: Process Understanding

Level Two: Understanding how the process is mapped to SAP

Level three: Intricate field to field details

This is a Level one Explanation to COPA (Profitability Analysis)

Overview

Profitability Analysis (CO-PA) enables you to evaluate market segments, which can be classified according to products, customers, orders or any combination of these, or strategic business units, such as sales organizations or business areas, with respect to your company’s profit or contribution margin.

The aim of the system is to provide your sales, marketing, product management and corporate planning departments with information to support internal accounting and decision-making.

Two forms of Profitability Analysis are supported: costing-based and account-based.

- Costing-based Profitability Analysis is the form of profitability analysis that groups costs and revenues according to value fields and costing-based valuation approaches, both of which you can define yourself. It guarantees you access at all times to a complete, short-term profitability report. Cost of Goods sold is recognized after goods are billed and before being shipped.

- Account-based Profitability Analysis is a form of profitability analysis organized in accounts and using an account-based valuation approach. The distinguishing characteristic of this form is its use of cost and revenue elements. It provides you with a profitability report that is
permanently reconciled with financial accounting. Cost of goods sold is recognized after goods are shipped and before being billed.

From a technical point of view CO-PA is part of OLTP and thus resides in the same database as other transactions of ECC (formerly R/3). The main benefit is quicker reporting and access to the underlying transactions and line items. An OLAP-based reporting is optimized for queries and multidimensional pivoting with no access to transactions, but quicker slicing and dicing of reports. It's provided as an Excel Add-In and called Business Intelligence (formerly BW and BIW). The end result from the business perspective is the same: actual and planned financial results (values and key figures).

**Definition**

Profitability Analysis (CO-PA) enables evaluation of

- Market segments
  - Classified cording to products, customers, orders or any combination of these,

Or

- Strategic business units
  - Such as sales organizations or business areas,

With reference to company's profit or contribution margin.

**Forms of Profitability Analysis:**

**Costing-based Profitability Analysis**

This form of profitability analysis that groups costs and revenues according to value fields and costing-based valuation approaches. It guarantees access at all times to a complete, short-term profitability report.
Thus, this method emphasizes on matching the revenues for goods and/or services provided (the value that a company gains as a result of sales) against the related expenses for those items (the value that is lost when products are transferred out of the company). Therefore, this accounting method displays profit and loss information in a manner optimized for conducting margin analyses, and as such it is optimal for the sales, marketing, and product management areas.

**Account-based Profitability Analysis**

This form of profitability analysis is organized in accounts and using an account-based valuation approach. The distinguishing characteristic of this form is its use of cost and revenue elements. It provides a profitability report that is permanently reconciled with financial accounting.

Thus, this method emphasizes on summarizing the activity and situational change over a period of time, for a given organizational unit. Therefore, this accounting method presents the revenues and primary expenses that have been incurred during a given period of time and the changes in stock value levels, work-in-process, and capitalized activities. As such, it is optimal for the production and profit center areas. Profitability Analysis (CO-PA) calculates profits according to the cost-of-sales method of accounting. ProfitCenter Accounting (EC-PCA), on the other hand, supports both period accounting as well as the cost-of-sales approach.

**Answers CO-PA can provide**

Determining the largest and fastest growing customers—by studying the contribution of individual market segments or sales channels.

The definitions of both 'market segments' and 'performance figures' are freely definable, allowing for maximum flexibility in market evaluation. The definition of a market is configured in the system through the selection of characteristicsthat are to be the subjects of analyses. Performance figures may either be profit and loss account balances or freely defined value fields.

Market segments are normally some combination of information regarding customers, products, and the selling organization. Performance figures are normally measurements of quantities,
revenues, discounts, surcharges, product costs, margins, period costs, etc.

1. Examining achievement of contribution margin goal/targets by the sales force - Margin goals of individual sales force/entities.

**Sales Quantity**

- Sales Revenue
- Customer discount
- Sales commission
- Direct sales costs

**Net revenue**

- Direct material costs
- Variable production costs

**Contribution margin I**

- Material overhead
- Fixed production costs

**Contribution margin II**

- Variances

**Contribution margin III**

- Overhead costs

**Operating profit**
1. Study the success of the most recent sales promotion for a product line - Success of Marketing Activities
2. Study the impact of a pricing strategy for a group of customers - Revenue and Cost Structure.

The results of Profitability Analysis can be analyzed with a multidimensional reporting tool, which allows the dynamic sorting and rearranging of data to provide multiple perspectives within a single report.

The method of determining period operating results in Profitability Analysis is based on the assumption that a company's success can be measured primarily on the basis of its transactions with other companies.

This sales-oriented approach in CO-PA means that no contribution to the organization's success is made until a sales transaction has been completed. Consequently, the products sold are transferred to CO-PA in accordance with the cost-of-sales accounting method and provide information on the sales revenue and sales deductions.

This net revenue is then compared with the cost of sales. These costs consist of the cost of goods manufactured of the products sold or services rendered plus any production variances known.

To round off the profitability data, overhead costs can also be assigned to profitability segments in the course of period-end closing activities.

**Views of Profitability Management**

**Sales Reporting:**

CO-PA allows analyzing the profitability of segments of the market segments structured according to products, customers, orders, and summarizations of these and other characteristics as well as organizational units such as company codes or business areas. The aim is to provide
sales, marketing, planning, and management organizations with decision-support from a market-oriented viewpoint.

**Responsibility Reporting:**

EC-PCA allows analyzing internal profit and loss for profit centers. This makes it possible for evaluation of different areas or units within the company. Profit centers can be structure according to region (branch offices, plants), function (production, sales), or product (product ranges, divisions). Profit Center Accounting is a component of the module "Enterprise Controlling".

**Integration**

Profitability Analysis, along with Profit Center Accounting (EC-PCA), is one of the application components for profitability accounting.

**Features**

In the application component CO-PA, users can define own master data, the basic structures of this form of profitability analysis. This master data includes both, units (that are desired to be evaluated (characteristics)) and the categories (in which values analyzed).

- In costing-based CO-PA, "value fields" to store data for analysis are defined.
- In account-based CO-PA, the values are structured by account.

Using the SAP master data (customer, product, customer hierarchy) or CO-PA derivation rules, the system can derive additional characteristics based on the ones entered manually or transferred from primary transactions. The combination of characteristic values forms a multidimensional profitability segment, for which profitability can be analyzed by comparing its costs and revenues.

If company is reorganized into smaller units, such as sales districts or customer hierarchies, the assignments between characteristics for data that has already been posted can be changed.
Actual postings

**Account based CO-PA:** The actual postings represent the most important source of information in CO-PA. Both sales orders and billing documents from the Sales and Distribution (SD) application component can be transferred to CO-PA in real-time. In addition, an interface program is available to transfer external data to the R/3 System. Costs from cost centers, orders and projects, as well as costs and revenues from direct postings (G/L account postings in FI, orders received in MM, and so on) can also be transferred or settle costs from CO to profitability segments.

**Costing-based CO-PA:** In costing-based CO-PA, incoming sales orders or billing documents can be valuated to automatically determine anticipated sales deductions or costs. The data can also be revaluate periodically to adjust the initial, real-time valuation or add the actual costs of goods manufactured.

Planning

In CO-PA planning, a sales and profit plan can be created. Whereas both types of Profitability Analysis can receive actual data in parallel, there is no common source of planning data. Consequently, a plan is always made either in accounts (account-based CO-PA) or in value fields (costing-based CO-PA). In costing-based CO-PA automatic valuation can be used to calculate planned revenues, sales deductions and costs of goods manufactured based on the planned sales quantity.

**Planning: manual**

The manual planning function allows defining planning screens for an organization. With this reference data in planning can be displayed, formulas calculated, forecasts created and more. Planning can be performed at any degree of detail. For example, it can be at a higher level, and have this data distributed top-down automatically.

**Planning: automatic**
In automatic planning, actual or planning data can be copied and reevaluate for a large number of profitability segments at once. Planned sales quantities can also be transferred from (costing-based) CO-PA to Sales and Operations Planning (SOP) for the purpose of creating a production plan there.

**Information System**

The Information System lets interactive analysis of existing data from a profitability standpoint using the functions of the drill down reporting tool. Navigation through a multidimensional "data cube" using a number of different functions (such as drill down or switching hierarchies) can also be performed there. The system displays data in either value fields or accounts, depending on the currently active type of Profitability Analysis and the type to which the report structure is assigned.

Each report structure is assigned to either costing-based or account-based CO-PA.

The display parameters can be changed online directly from the displayed report. Report structures with predefined sort orders, number formats and so on can be stored, and executed online or in the background at any time.

**Accounting Methods**

Profitability Analysis (CO-PA) calculates profits according to cost-of-sales method of accounting. Profit Center Accounting (EC-PCA), on the other hand, supports both period accounting as well as the cost-of-sales approach.

Both of these applications can be used -- and consequently both methods -- at the same time in your organization.

The CO-PA application itself offers two forms of Profitability Analysis: costing-based and account-based. Both of these types of CO-PA can be used simultaneously.

**Profitability Analysis Using the Cost-of-Sales Method**
With this method, the emphasis is on matching the revenues for goods and/or services provided (the value that a company gains as a result of sales) against the related expenses for those items (the value that is lost when products are transferred out of the company). Therefore, this accounting method displays profit and loss information in a manner optimized for conducting margin analyses, and as such it is optimal for the sales, marketing, and product management areas.

In cost-of-sales accounting, the cost of sales is set off against revenue using either direct costing or full absorption methods (contribution margin accounting). Fixed costs can be allocated on a proportional basis or en bloc to any level(s) of a hierarchy. Standard costs can be used to valuate the cost of sales for the purpose of obtaining a preliminary profit analysis. Or the variances of production orders and cost centers can also be transferred to Profitability Analysis in order to reconcile CO-PA with Financial Accounting (FI) on the basis of actual costs.

**Costing-Based Profitability Analysis**

This type of Profitability Analysis is primarily designed to allow analysis of profit quickly for the purpose of sales management. Its main features are, firstly, the use of value fields to group cost and revenue elements, and, secondly, automatic calculation of anticipated or accrual data (valuation). The advantage of this method is that data is always up-to-date and therefore provides an effective instrument for controlling sales.

**Account-Based Profitability Analysis**

This type of Profitability Analysis enables reconciliation of cost and financial accounting at any time using accounts. In contrast to costing-based Profitability Analysis, this type uses cost and revenue elements, which gives a unified structure for all of accounting.

The system posts all revenues and costs to both Financial Accounting and Profitability Analysis at the same time and using the same valuation method. This means that the cost of sales is posted to Profitability Analysis at the point of goods issue.
Account-Based Profit Center Accounting Using the Period Accounting Method

With this method, the emphasis is on summarizing the activity and situational change over a period of time, for a given organizational unit. Therefore, this accounting method presents the revenues and primary expenses that have been incurred during a given period of time and the changes in stock value levels, work-in-process, and capitalized activities. As such, it is optimal for the production and profit center areas.

In period accounting, the performance of a particular business unit (profit center) - that is, its revenues, changes in inventory and capitalized services - is set off against the total costs of the period. This occurs at the G/L account level and adheres to the formal structure of Financial Accounting. This gives a uniform structure of report data and allows reconciliation of the data of cost and financial accounting on the basis of cost elements.

Flows of Actual Values in Profitability Analysis

Actual Postings represent the most important source of information in CO-PA. Both sales orders and billing documents can be transferred from the Sales and Distribution (SD) application component to CO-PA in real-time. In addition, an interface program is available to transfer external data to the R/3 System. Costs from cost centers, orders and projects, as well as costs and revenues from direct postings (G/L account postings in FI, orders received in MM, and so on) can also be transferred or costs from CO to profitability segments settled.

In costing-based CO-PA, incoming sales orders or billing documents can be valuated to automatically determine anticipated sales deductions or costs. Data can also be revaluated periodically to adjust the initial, real-time valuation or add the actual costs of goods manufactured.

Objects in Profitability Management (CO-PA part)
Profitability Segments

- Characteristics
- Characteristic values
- Value fields or accounts

Profitability segments are the market channels or strategic business units that are to be analyzed in CO-PA. They may be combinations of product, customer, and sales structure information, and/or may encompass company code, business area, and profit center information.

Since reporting margins and other profitability figures along marketing lines (as defined by these profitability segments) is the primary purpose of CO-PA, its design has been optimized for producing profit and loss statements under the cost-of-sales accounting format and philosophy.

Parallel Currencies in Profitability Management

In costing-based CO-PA, all amounts are stored at minimum in an operating concern currency, which is specified in the operating concern attributes.

It is also possible to configure the attributes to store values in the local currency as well; this has the effect of doubling the stored transaction data, though.

Account-based CO-PA stores all transaction in three currencies, the transaction currency, the local currency, and the controlling area currency.

Structures

The Master Data determines the basic structure of CO-PA. This includes both units to be evaluated (characteristics) and the categories in which values are analyzed. Thus master data provides the fundamental data and content within the structures and is determined by characteristics and value fields.
Using the SAP master data (customer, product, customer hierarchy) or CO-PA derivation rules, the system can derive additional characteristics based on the ones entered manually or transferred from primary transactions.

The combination of characteristic values forms a multidimensional **profitability segment**, for which profitability can be analyzed by comparing its costs and revenues. *Creation:* The creation of structures determine the possible valuation levels and are required to be created first.

To create the structures, the following need be defined:

- The operating concern
- The characteristics and
- Value fields belonging to the operating concern from different field sources.
- Identify and set non-segment-level characteristics

From a technical point of view, this actually amounts to creating different tables.

In the operating concern, structures can be defined so that the revenues and sales deductions (value fields) are shown that correspond to the respective levels (customer, customer group, sales office, and product (= characteristics)).

Thus master data is closely linked to the structures in Profitability Analysis. Master data **consists of the individual values** that the characteristics and value fields can take. **The combination of the latter specifies the valuation level.** In other words, the combination of particular characteristic values forms the actual analysis object, called the **profitability segment**.

**Organizational Units**

The **operating concern** is the highest reporting level within CO-PA; it defines the limit of sales and marketing information, which can be reported together from this module. **One or more controlling areas are assigned to an operating concern** when organizational structures are defined. Often, corporations have only a single operating concern, which is recommended for the
sake of simplicity and convenience if all controlling areas and company codes share the same fiscal calendar.

The structure of an operating concern is determined by

- Analysis criteria (characteristics) and
- The values to be evaluated (value fields) (only in costing-based Profitability Analysis).
- G/L accounts (only in account-based Profitability Analysis).

In a first step, the **characteristics** have to be defined for the operating concerns. Characteristics are defined in the Customizing activity **Maintain characteristics**. For costing-based Profitability Analysis, **value fields** also need to be defined. This is done using the activity **Maintain value fields**. These characteristics and value fields can be used in several operating concerns. Their definition applies to all clients.

After this, the structure of the operating concern has to be defined, by selecting the desired characteristics and adding them to the data structures of the operating concern, in the activity **Maintain operating concern**. If **costing-based** Profitability Analysis is active, the required value fields also need to be selected and added. The structure of an operating concern is valid in all clients.

In the step "Maintain operating concern", the attributes of the operating concern (fiscal year variant, currencies) are also specified. By maintaining the attributes, an operating concern is made "known" in the current client. The attributes are client-specific.

The **controlling area** is an organizational unit delimiting the organization's independent cost accounting operations (cost center accounting, profit center accounting, and order accounting). Company codes are assigned to controlling areas when organizational structures are defined.
Often, a 1:1 relationship exists between the company code and the controlling area. However, a controlling area can also incorporate several company codes to take cross-company cost allocations into account.

The **company code** is an independent accounting unit within a client. The legal requirements of a balance sheet or profit and loss statement are fulfilled on the company code level. Plants are assigned to company codes when organizational structures are defined.

The **plant** represents a production facility. It is the **primary organizational unit** in the SAP R/3 Materials Management and Production Planning application components.