



Documentation:
Advanced Pricing & Discounts

Document version: 23.0.8

Date: 9/04/2024

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1 Introduction

Welcome to the official manual of the Dynavision Advanced Pricing & Discounts setup.

This extension provides extra functionalities to the pricing and discount functions of Business Central and adds a hierarchical layer for calculating and determining the sales prices for customers.

Dynavision Advanced Pricing & Discounts looks for the best price and discount combination for a specific customer.

If it can't find any it looks for best price and discount for a Customer Price Group and only then it defaults to the best price & discount for all customers.

The combination of looking for both price & discount combinations offers greater flexibility in sales pricing.

The extension also expands the discount methods with options like combined percentage and (fixed) amount discounts.

It also lets you calculate your sales pricing from your cost pricing or purchase pricing for an Item Group or specific item.

By using formulas that combine fixed amounts, multiply coefficients, multiple currencies, rounding methods etc. per Customer Price Group or specific customers it is possible to keep the pricing under control and avoid fixed specific customer pricing.

This powerful extension also gives the possibility to synchronize the prices with digital shoplevels (Digilabel) or to print them on paper shoplevels.

2 Installation

2.1 Extension

The Dynavision Advanced Pricing & Discounts module is a separate Business Central extension.

1. Choose the search icon, enter **Extension Management**, and then choose the related link.
2. Choose **Manage** in the Action bar on the page and choose action **Extension Marketplace**.
3. In the search bar, enter **Dynavision Advanced Pricing & Discounts** and install this app.

3 Price calculation methods

3.1 Standard Business Central - lowest price

In the standard version of Business Central there is only 1 option to automatically determine the best price for the customer, this is the lowest price method.
See Microsoft docs: Pricing documentation Business Central.

By default, the **Price Calculation Method** is always set to **Lowest Price**.

This means that Business Central will start looking at the sales price lists and discount lists that are present (and active) in the system.

From all these lists the lowest price will be taken and this price will be applied for the customer.

If a Sales Price List has been created (and is set to active) for a specific customer, for a Customer Price Group or for all customers, Business Central will use the lowest price from these existing lists when a certain item from these lists is sold.

3.2 Hierarchical price calculation method

In this extension, another price calculation method was implemented, namely hierarchical. If this Price Calculation Method is chosen, it is possible to use a different price calculation for a customer, a Customer Price Group or for all customers.

Remark: the default operation of Business Central will determine which calculation method will be used using following priority:

1. *The Calculation Method set on the Sales & Receivables setup,*
2. *The Calculation Method set on the Customer or Vendor card,*
3. *The Calculation Method set on the Customer Price Group.*

3.2.1 Setup

On **the Sales & receivables setup page, the Customer Card or the Vendor Card**, the Price Calculation Method can be set in the **Billing Tab**.

The options are:

1. Lowest Price, and
2. Hierarchical.

Remark: the field **Price calculation** is possibly hidden in the Sales & Receivables setup. This can be added through personalization.

To set up the Price Calculation Method on the Customer Price group, choose the search icon, enter **Customer Price Group**, and then choose the related link. In the column **Price Calculation Method**, select the desired calculation method for each Customer Price Group.

3.2.2 Hierarchical price calculation

If the hierarchical price calculation method is chosen for on the Customer or Vendor Card or for a Customer Price Group, Business Central will first check if a sales price is present in the system for a specific customer.

If a sales price is found, it will be used in the sales document and the system will not search further in the system for another (potentially lower) price.

If a selling price exists at 1 level, the following levels are not searched.

If no sales price is found at the customer level, the system will look for existing sales prices for the Customer Price Group (if applied to the customer). If a sales price is found at this level, this price will be used and the search will be stopped.

If no sales price is found for the Customer Price Group, the system will look for to the sales price that is set for all customers and that sales price will be applied.

3.2.2.1 Example:

Article	Price List	Price
Item 1	Customer	€ 15
Item 1	Customer Price Group	€ 13
Item 1	All customers	€ 15
Item 2	Customer	/
Item 2	Customer Price Group	€ 20
Item 2	All customers	€ 15

What price will be used? (Assuming the customer in question is also in the customer price group)

Lowest Price calculation:

Item 1 - € 13

Article 2 - €15

Hierarchical Price calculation:

Item 1 - € 15 (price found at customer level so BC will not search further)

Item 2 - €20 (No price found at customer level so BC moves to the next step, the price for the customer price group. Here there is an existing sales price so BC will use that and not look further).

3.2.2.2 Hierarchical Price Priority Settings

It is also possible to specify the order in which the hierarchical price calculation should look at the different prices in order to determine the price that will be given for a customer.

The **Hierarchical Price Priority Settings** can be accessed in two ways.

Option 1

Choose the search icon, enter **Price Calculation Methods** page, and then choose the related link.

On the page that opens, choose the action **Hierarchical Price Priority Settings**.

Option 2:

1. Choose the search icon, enter **Hierarchical Price Priority Settings**, and then choose the related link.
2. On the page that opens, the existing Priority setting is visible. This can be edited and the priority can be changed.
 - a. **Price Source Type**

Indicates the Price Source Type from the price list lines to which the priority will be applied. This is the type of the price list lines to be checked by the system when searching for the prices in the price lists.

The options are:

 - i. All Customers,
 - ii. Customer,
 - iii. Customer Price Group,
 - iv. Customer Disc. Group,
 - v. Campaign, and
 - vi. Contact.
 - b. **Priority**

Indicates the order in which the system will look at the chosen Source Types for the price determination. The higher the number, the lower the priority.
3. Choose action **Set default values** to remove all set priorities, and renumber the priorities based on the default priority value in the hierarchical method.
4. Choose the action **Change Priority Values** to modify the priorities of the Price Source Types on the page.

When this action is chosen, a new column is shown in which the new priority value can be specified. When the new values are inserted in the **New Priority** column, toggle the **Apply new priorities** option to save the changes.

3.3 Advanced price list discounts

The price list functionality is extended further to allow the use of multiple discounts simultaneously, and allow the use of a (fixed) discount amount in the price lists. These discounts can be defined in the Sales Price lists and in the Purchase Price Lists.

3.3.1 Configuration Price List Discounts

Best practice: it is recommended to create separate price lists for prices and discounts. That way, the price lists are more organized

1. Choose the search icon, enter **Sales Price Lists** or **Purchase Price Lists**, and then choose the related link.
2. Choose the action **New** to create a new Discount price list (*by choosing **View Columns for Discount; or price & discount***), or select an existing Discount Price List to update.
3. In the Price List the column **Discount Method** can be found in which the method of the discount to apply can be defined.
The options are:
 - a. Percentage,
 - b. Amount,
 - c. Composed, and
 - d. Amount per quantity.

Remark: If this column is not visible, it can be added via 'personalize'.

3.3.1.1 Discount Method 1 - Percentage

1. **Discount Method**
Choose **Percentage** from the options in the **Discount Method** field. This specifies that the discount value has to be processed as a percentage for the Product on the line.
2. **Discount Value**
Specifies the percentage of discount that will be applied on the Product of the line.
3. **Line discount %**
Specifies the discount percentage. When **Discount Method Percentage** is chosen, this will contain the same value as the entered **Discount Value**. When another method is chosen, the percentage will be calculated if applicable.

3.3.1.2 Discount Method 2 - Amount

1. Discount method

Choose **Amount** from the options in the **Discount Method** field. This specifies that the discount value has to be processed as a fixed amount for the Product on the line.

Remark: this discount method does not take into account the quantity entered on the sales line, the discount is a fixed discount value for the line.

2. Discount Value

Specifies the value of the discount that will be given for the Product. *E.g. entering 10 in this field means that 10 euros (or the chosen currency) will be discounted on the line when selling this product.*

3.3.1.3 Discount Method 3 - Composed

1. Discount Method

Choose **Composed** from the options in the **Discount Method** field. This method allows for consecutive percentages to be used (*e.g. 10+5 --> 14.5%*).

2. Discount Value

Enter the desired percentages. *E.g: first 2% discount will be applied to the total amount, then 3% discount will be applied to the remaining amount and then 5% discount will be applied to the remaining amount. This results in a Discount Value 2+3+5.*

3. Line discount %

This field calculates and displays the total discount percentage, based on the entered Discount Value.

Example given: Composed calculation:

Item price: 100€

Discount Method: Composed

Discount Value: '2+3+5'.

Calculation:

100€ - 2% = 98€

98€ - 3% = 95,06€

95,06€ - 5% = 90,307€

The **Total Discount Price** for this item will be 90,307€.

So the **Total Discount** applied to the price is 9.693%

3.3.1.4 Discount Method 4 - Amount per quantity

1. Discount method

Choose **Amount per quantity** from the options in the **Discount Method** field. This specifies that the discount value has to be processed as an amount for the Product on the line.

Remark: This discount takes into account the quantity entered on the sales line.

2. Discount Value

Specifies the value of the discount that will be given for the Product.

This discount amount will be multiplied by the quantity on the line of the Product.

3.3.2 Usage in documents

After creating the Price Lists for the discounts, and activating these Price Lists, when creating a new sales or purchase document (order, invoice, quotation,...) the discounts are applied at line level as configured in the Price Lists for the products for which the discounts are configured.

The Discounts can also be added and applied manually on the documents if needed.

The same discount columns are available on the documents in which the same information can be specified as in the chapter above ([Configuration Sales Price List Discounts](#)).

Remark: if these columns are not visible, they can be added via 'personalize'.

3.3.2.1 Remarks Discount Method on sales and purchase documents

There is a discount priority that is used in Business Central. In standard Business Central, discounts are always by default recalculated to the discount percentage. When fields, *such as line amount excl. VAT*, on the sales and purchase order lines are manually edited, Business Central will recalculate the discount that is applied on the lines. In this case, Business Central will calculate the discount amount, in order to retrieve the discount percentage. Dynavision advanced Pricing and Discounts will thus change the Discount method, based on this discount priority, in order to reflect the correct discount amount. Business Central will recalculate the discount percentage, which will also be indicated on the line.

Summarized for both sales and purchase lines.

- When the line is added to the document, the line has, by default, **ESCA Discount Priority** set to **Line Discount Percentage**.
- Manually validating the value in the column **Line Amount** or **Line discount amount** will set the **ESCA Discount Priority** to **Line Discount Amount** for the calculations that follow.
- Manually validating the value in the column **Line discount %** will set the **ESCA Discount Priority** to **Line Discount Percentage** again.
- When a discount is applied using the price calculation (new pricing experience) and the Line Discount % is different from 0 then the **ESCA Discount Priority** will also be set to **Line Discount Percentage**.
- When manually validating the Discount Method, the corresponding priority is also set:
 - For Discount % and Composed: **ESCA Discount Priority** is set to **Line Discount Percentage**.
 - For Discount Amount and Amount per Qty --> **ESCA Discount Priority** is set to **Line Discount Amount**.
- When a discount gets applied using the price calculation, the corresponding discount priority is taken:
 - For Discount % and Composed: **ESCA Discount Priority** is set to **Line Discount Percentage**.
 - For Discount Amount and Amount per Qty --> **ESCA Discount Priority** is set to **Line Discount Amount**.

4 Advanced Price Calculations

The **Advanced Price Calculation** functionality was developed to make it possible to automatically calculate a profit margin on purchase prices in order to calculate the sales price for products.

The page can be accessed by choosing the search icon, entering **Advanced Price Calculations**, and then choosing the related link.

4.1 Configuration

1. Choose the action **New** to create a new Advanced Price Calculation or select an existing calculation that needs to be edited.
2. Fill in the necessary fields in order to complete the setup of the calculation.
 - a. **Code**
Specifies the Code used to identify the Price Calculation.
 - b. **Applies to type**
This specifies whether the automatic calculation is performed for an **Item** or for an **Item Price Group**.
If **Item Price Group** is chosen, the automatic calculation is performed on the items that belong to that Price Group, *e.g. WINES*.
 - c. **Applies To No.**
This specifies the Item or the Item Price Group on which the calculation will be applied. In the above example, spirits has been selected.
*Remark: after selecting **Item Price Group** as **Applies to type** and selecting the group, in the factbox in the factbox pane, the items are visible that belong to that group.*
 - d. **Purchase Price Formulas**
This shows how the purchase price will be determined for the item(s). Multiple lines can be entered here.
The rules can be entered manually or by using Templates. To use (a) template(s) choose the action **Insert template(s)**.
If Templates are created in advance, the fields in the purchase price formulas are further automatically populated with the fields and values set up in the template.
 - i. **Purchase Price Formula**
Specifies the Code used to identify the formula for the purchase price determination.
 - ii. **Pricing Lookup Method**
Defines the method that is being used to search for the base price.
The options are:
 - **Manual:** makes it possible to manually specify a Starting Price that will be used.
 - **Highest:** retrieves the highest purchase price on the purchase price list of a (particular) supplier.

- **Lowest:** retrieves the lowest purchase price on the purchase price list of a (particular) supplier.
- **Item Unit Cost:** retrieves the Item Unit Cost on the Item Card of the item.
- **Item Last Direct Cost:** retrieves the Item Last Direct Cost on the Item Card of the item.
- **Item Revaluation Cost:** retrieves the Item Revaluation Cost on the Item Card of the item in the basic Unit of Measure, excl. VAT.

Remark: To use this field on the Item Card, Dynavision Advanced Finance must be installed.

Remark: The SKU card also possibly has a cost for stock revaluation field.

Since the Advanced Price Calculation cannot handle variants, the field on the SKU will not be taken into account.

iii. Pricing Lookup From

Defines where the system has to search for the base price of the item. The options are:

- **Any Vendor:** will look at all the purchase prices defined for the item, and will not take the vendor into account.
- **All Vendors (Strict):** will only look at the Purchase Price Lists that have **Assign-to type All Vendors**.
- **Specific Vendor:** will look at the purchase price list lines that are defined for the specific vendor in order to retrieve the desired base price.
- **Vendor From Item Card:** will look at the purchase price list lines that are defined for the vendor that is specified on the Item Card.

iv. Price Source No.

When the **Price Lookup From** value is **Specific Vendor**, the vendor No. needs to be specified in this field.

v. Incl. Line Discounts

Indicates if the starting price should include line discounts.

vi. Discount Lookup Method

In case the discounts need to be included, the Discount Lookup Method should be specified.

The options are:

- Highest, and
- Lowest.

Remark: for a lowest price lookup method, the highest discount lookup method should be selected and vice versa.

vii. Rounding Method

Specifies how the calculated prices need to be rounded. A rounding method configured on the **Rounding Methods** page can be chosen. It is also possible to enter a fixed amount that needs to be added to the rounded value. *E.g. to add a extra 5 euros for transport, enter precision 0.01 and **Amount Asses After 5**.*

It is also possible to add an amount to the price before the rounding is done.

viii. Starting Price

If the **Pricing Lookup Method Manual** is chosen, the starting base price can be defined in this field.

e. Calculation Sales Price Formulas

This shows how the sales price will be calculated for the item(s). Multiple lines can be entered here.

The rules can be entered manually or by using Templates. To use (a) template(s) choose the action **Insert template(s)**.

If Templates are created in advance, the fields in the Calculation Sales Price Formulas are further automatically populated with the fields and values set up in the template.

i. Code

Specifies the Code used to identify the formula for the calculation of the Sales Price.

ii. Target Group

Defines for which group the selling price should be calculated.

The options are:

- **All customers:** the sales price will be calculated for all customers.
- **Customer:** the sales price will be calculated for a specific customer.
- **Customer Price Group:** the sales price will be calculated for a specified Customer Price Group.
- **Customer Disc. Group:** *is not allowed.*
- **Campaign:** the sales price will be calculated for a specific campaign.
- **Contact:** the sales price will be calculated for a specific contact.

iii. Target Source No.

For all **Target Groups other than All Customers**, the specific entity for which the Sales Price is calculated needs to be specified.

iv. Target Sales Price List

Specifies the Sales Price List to which the sales price will be added after calculation.

*In the **Target Sales Price List** on which the adjustments need to be made, the **Update Defaults** field must be checked. If this is not checked, it is not possible to override the price lists with the adjustments.*

v. Minimum Quantity

Specifies the minimum quantity for which the price is calculated.

vi. Target Unit of Measure

Specifies the Unit of Measure for which the price is calculated.

The options are:

- All Units of Measure,
- Base Unit of Measure,
- Sales Unit of Measure,
- Purchase Unit of Measure,

- Selected Item Units of Measure,
- Specific, and
- Blank.

vii. Specific Unit of Measure

If **Specific** is chosen in the **Target Unit Type**, the specific Unit of Measure can be specified here.

viii. Fixed Amount Addition

Allows to enter a fixed amount to be added to the starting price.

ix. Price Factor Type

Specifies the type of factor that must be applied to the price during the calculation of the sales price.

The options are:

- Coefficient,
- Margin Calculation Formula, and
- Item Margin Calculation Formula.

x. Margin Calculation Formula

Specifies the Margin Calculation from which the Margin Price formula should be used during the calculation of the sales price.

*Remark: will only be possible to specify when **Margin Calculation Formula** is chosen in the field **Price Factor Type**.*

*When **Item Margin Calculation Formula** is chosen, the item price margin with check **Use on Lines** for the item will be used in the calculation. In case no margin formula is found for the item that is active, the default margin will be used as defined in the Price Margin.*

xi. Targeted Margin

Specifies the value of the targeted margin that must be used by the price margin formula to calculate the sales price.

*Remark: will only be possible to specify when **Margin Calculation Formula or Item Margin Calculation Formula** is chosen in the field **Price Factor Type**.*

xii. Multiply Coefficient

Specifies the factor which is used to multiply the base price in order to calculate the selling price.

*Remark: this is editable when **Coefficient** is selected in the field **Price Factor Type**.*

xiii. Calculate Excise

Indicates whether the excise calculation should be performed and added to the price before or after the application of the multiplication factor.

xiv. Output Currency Code

Specifies for which currency the price should be calculated.

xv. Price Includes VAT

Specifies if the resulting price should include VAT.

xvi. VAT Bus. Posting Gr. (Price)

Specifies the VAT Business Posting Group (Price) that will be used for the resulting price.

xvii. Rounding Method

Specifies the way in which the calculated price should be rounded.

f. Calculation Price Formulas (All)

The Price Calculation Formulas tab shows an overview of the adjustments that will be made. This is an overview of what is set in Calculation Sales Price Formulas, along with the Purchase Price Formulas used for that line.

4.2 Price calculation report

Once all necessary fields are configured and defined in the **Advanced Price Calculation**, the adjustments to the Sales Price List(s) can be calculated by choosing the action **Report: Advanced Price Calculations** which can be found in the actions bar on the page.

Remark: it is also possible to select a particular line that needs to be executed instead of executing all lines on the page.

On the screen that opens after executing the action, some fields can be filled in/ need to be specified, in order to execute the adjustments.

Dates Tab

1. Use Date Formulas

It is possible to fill in specific dates or a date formula can be used that will calculate the requested date upon execution of the report. This is recommended for a scheduled execution of the report. (Job queue)

a. If Use Date Formulas is disabled:

i. Purch. Price Starting Date

Specifies the starting date for the purchase prices that are searched.
Business Central will search for the highest/lowest purchase price that is active starting on that date.

ii. Starting date

Specifies the starting date that will be entered on the Sales Price List for the newly calculated Sales Price.

iii. End date

Specifies the ending date that will be entered on the Sales Price List for the newly calculated Sales Price.

b. If Use Date Formulas is enabled:

i. Show example dates

If checked, example dates that were calculated based on the specified date formula will be displayed at the bottom of the Dates tab. This can be used to validate if the entered date formula is correct.

ii. Purchase Prices Date Formula

Specifies the date formula used to calculate the starting date for the purchase prices that are searched.
Business Central will search for the highest/lowest purchase price that is active starting on that date

iii. Sales Prices Start Date Formula.

Specifies the date formula that is used to calculate the starting date

that will be entered on the Sales Price List for the newly calculated Sales Price.

iv. Sales Prices End Date Formula.

Specifies the date formula that is used to calculate the ending date that will be entered on the Sales Price List for the newly calculated Sales Price.

Options Tab

1. Before Execution

a. Update Purchase Prices pre report.

If enabled, this will update the cost per Base UOM (LCY) field before calculating the new selling prices.

b. Remove existing worksheet lines

If enabled, the existing worksheet lines will be removed before the report is run.

2. After execution

a. Show list of errors

After completion, when enabled, this will show the list of errors if any occurred during the execution.

b. Open Price Worksheet

Opens the Price Worksheet page after execution of the report.

c. Remove Unneeded Calculation Lines

Removes any unneeded calculation lines after the execution of the report. This way, the item lines for which no price adjustments should be executed, will be filtered out of the worksheet lines.

Filters Tab

Additionally, additional filters can be set that will be taken into account when running the report.

Running the Report

After running the report, a worksheet is created that shows the adjustments that were made. If the option **Show list of errors** is checked and there are error messages when calculating the new prices, the following overview is displayed.

***Remark:** when working with margins to calculate the desired sales price and setting a targeted margin, it is possible that the targeted margin value from the calculation is different from the margin calculated on the price list line for the item. This is because the Cost, that is determined in the Item Price Margin, possibly differs from the cost used in the calculation of the Sales price or if the purchase prices are updated pre report (which leads to different base of cost for calculation). Margin calculation on the lines and the margin calculation done when calculating the new sales price are separate calculations.*

4.2.1 Price Worksheet

The **Price Worksheet** can be accessed in two ways.

Option 1

On the **Advanced Price Calculation** page, choose **Related** and choose the action **Open Price Worksheet**.

Option 2:

Choose the search icon, enter **Price Worksheet**, and then choosing the related link.

The adjustment lines are displayed in the Price worksheet that will be added to the Sales Price Lists.

In the lines, the original selling price is visible and in the **New Invoicing Unit Price** column, the new proposed selling price for the item will be noted.

in the **Advanced Price Calculation** column, the advanced price calculation that was executed can be found.

The **Starting Price (Adv. Calc.)** column displays the starting price that was possibly used when calculating the new invoicing unit price.

There are multiple possible actions that can be performed on the proposed lines under the **Calculations** action.

1. Report: Advanced Price Calculations

Starts the report to calculate the new sales prices using the Advanced Price Calculations.

2. Remove Unneeded Calculation Lines

Will remove the unneeded calculation lines. In this way, the item lines for which no adjustment is needed will be filtered out of the worksheet lines.

3. Implement Calculation Price Changes

Pushes the calculated prices to the sales price list(s).

For items whose price changed, an ending date will be inserted in the original line, and a new line will be created for the new price.

This offers the possibility to keep a history of price changes, and also offers the possibility to set up price changes in the future while still using the correct price in the meantime.

- a. Remark: lines that cannot be closed by the ending date are set to draft and the user gets the necessary information. It is then up to the user to 'verify' the lines in the price list.*

4. Show/Hide Prices

Makes it possible to display or hide the purchase prices and the current sales prices in the worksheet (at the bottom).

Remark: the **Price Worksheet** also contains a standard function **Implement Price Change...** When this standard action is chosen, and the Price Worksheet contains lines which originate from the advanced price calculations, an error will be shown to indicate that these lines should be handled by choosing the action **Implement Calculation Price Changes** which can be found by choosing the **Calculations** action in the lines of the worksheet.

4.3 Adv. Price Calculations for selection of items

4.3.1 Starting from Item list page

It is possible to select a set of items for which the calculation needs to be executed.

1. Navigate to the **Items** list page and select the items for which the calculation needs to be executed.
2. Choose the action **Select Adv. Price Calculations** in order to open the **Advanced Calculations: Item & Calculation Selection** page.
*Remark: it is only possible to run the action for items that have an Item Price group assigned with a Advanced Price Calculation or for items that have an advanced price calculation assigned through the **Advanced Price Calculations** page.*
3. The **Advanced Calculations: Item & Calculation Selection** page opens with the items listed. The page contains two sections:
 - a. Selected **items list**, and
 - b. **Advanced calculations** linked to the item and/or advanced calculations linked to the Item Price Group assigned to the selected item.
4. For the calculation Code (either Item specific and Price Group Specific), it is possible to enable or disable the calculation code by selecting the value in the **Enabled** column. This column specifies if the calculation is enabled and should be calculated when running the report.
Click on the value to change this to either Yes or No. The line will be colored in red if disabled, and green if enabled.
5. For the **Price Group Specific calculations**, there is also a column **Sync All** available. When clicking this and confirming the message this record's enabled state will be synced to all calculations for the same Applies-To Type and Applies To-No.
6. After enabling the necessary calculations, choose the action **OK** to open the **Advanced Price Calculations** report. This report will be preset to the selected calculations and items from the previous step.
7. Run the report to generate the new prices for the selected items only.

4.3.2 Item Price & Discount Updates

It is also possible to start the flow to only perform the price calculations for a selection of items from the **Item Price & Discount Updates** page.

1. Choose the search icon, enter **Item Price & Discount Updates**, and then choosing the related link.
2. Fill in the needed filters to find the needed items for which the advanced calculations need to be run.
 - a. **Price Type**
Specifies the Price Type on which needs to be filtered when searching the updates. Choose either sales or purchase.
 - b. **Price Lookup Type**
Specifies the type for which the updates prices & discounts need to be fetched.
 - c. **No.**
Specifies the number or Code of the price asset for which the updated prices & discounts need to be searched. *E.g only search the updates prices for the Item Price group Beer.*
 - d. **Last modified Range**

i. Start

Specifies the start of the date range of the updated prices and discounts. This filter will be applied to the SystemModifiedAt field of the price list lines.

ii. End

Specifies the end of the date range of the updated prices and discount. This filter will be applied to the SystemModifiedAt field of the price list lines.

3. After setting the filters, the list **Items with updated prices & discounts** will show the items that were found based on the specified filters.
4. In the listview **Corresponding updated Prices & Discounts**, the information can be viewed of the prices and discounts that were calculated for the selected line.
5. It is possible to select lines that are displayed in the list, and choose the action **Select Adv. Price Calculations** to open the **Advanced Calculations: Item & Calculation Selection** page.
6. Follow the same steps as described in the previous section [Starting from Item list page](#).

5 Purchase Price List multiple UoM and Currencies

Purchase price lists often include different units of Measure (e.g. *pallets, bottles, bins, etc.*) and possibly different currencies.

To make this possible, an action and two fields were added to the Purchase Price Lists.

1. Cost per base UOM (LCY, Excl. VAT)

Displays the value of the cost per base unit of measure in the local currency.

Remark: in order to calculate this value, everything is recalculated to the base Unit of Measure of the item.

For example, if beer is purchased per pallet, it will have a lower price per bottle than if bottles are purchased.

The cost per base Unit of Measure is used to determine which purchase price is the highest or lowest. *For example, if the lowest price lookup method was chosen the cost per basic unit of the pallet will be taken, the cheapest price.*

2. Action Update Cost per Base UOM (LCY)

If, for example, the currency is changed, an update to the price list can be performed using this action. This will make sure the fields for the Unit of Measure are filled in according to the changed currency.

6 Item Price Group

Choose the search icon, enter **Item Price Groups**, and then choose the related link.

Here it is possible to specify to which items the margins will be applied.

An item can only be part of one Item Price Group, it is not possible to assign an item to multiple Item Price Groups.

On the page that opens, the existing Item Price Groups are visible. In the factbox in the factbox pane, the items are part of the Item Price Group can be viewed.

There are two ways in which an Item Price Group can be assigned to an item.

1. Choose the action **Select Items** on the Item Price Groups page.

The Items list will appear and it is possible to select one or more items to add to the group.

If the selected item already belongs to another group, the item will be removed from that list and added to the selected group.

2. Navigate to the **Item Card** and specify the **Item Price Group** in the field in the Prices & Sales tab.

When changing the **Item Price Group** on an item, a message will be displayed

7 Price List Management

On the Item Card, choose the action **Manage Adv. Sales Prices** or the **Price List Management** page can also be accessed by choosing the search icon, entering **Price List Management** and choosing the related link.

The **Price List Management** page contains the Price List Lines for the Price Types and Items for which Price List Lines are set up in the system. *When choosing the action from the item card, the page will be filtered on the item from which the action is called.*

On the page, several actions are possible. It is possible to navigate to the **Sales Price Lists** and the **Purchase Price Lists**, using the corresponding actions on the page (*under Navigate*). In the **Advanced Pricing & Discounts** action in the header, some actions are possible on the price list line (or a selection of the lines) on the page.

7.1 Delete Lines

Choose the action **Delete Lines** in the page to delete the selected Price list line.

In the report page that opens, it is possible to enable the field **Show Feedback**. This option will show a page with an overview of the result of the execution of the Delete report.

On the report page, the Scenario is displayed of the report that will be executed (*in this case Delete Lines*).

If no errors occur, the selected line(s) will be deleted from the price lists from which they originate (*displayed in the column **Price List Code***).

7.2 Insert New Ending Date

Choose the action **Insert New Ending Date** in the page in order to change the current ending date of the selected price list line(s) to a newly chosen Ending date in the report page that opens.

In the report page that opens, it is possible to enable the field **Show Feedback**. This option will show a page with an overview of the result of the execution of the Insert New Ending Date report.

On the report page, the Scenario is displayed of the report that will be executed (*in this case Insert New Ending Date*).

If no errors occur, the ending dates of the selected line(s) will be modified in the price lists from which they originate (*displayed in the column **Price List Code***).

7.3 Manage Advanced Price Calculations

Choose the action **Manage Adv. Price Calculations...** to edit the price list lines for advanced price calculations which can be selected in the next page that opens.

Select the **Price List Calculations** and choose **OK**.

On the next page that opens, the Price List Lines are displayed for the chosen advanced price calculations. The same actions as mentioned above can be executed, as well as the following actions

- **Manage Sales Prices for item**, which allows to manage the sales prices and discounts for the item on the selected price list line.
- **Manage Purchase Prices for Item**, which allows to manage the purchase prices and discounts for the item on the selected price list line.

8 Renumber price list lines

When adding lines to sales and purchase price lists, by default, Business Central will assign a number with an interval of 10000.

When lines are added in between existing lines, this will also be assigned a number, namely the previous interval (so starting with 10000) divided by 2.

Example given: a line is added to the price list, and the assigned line no. will be 10000.

Another line is added, which will be assigned 2000.

When adding a line in between these lines, this will be assigned Line No. 15000.

8.1 Price List Line Interval

Dynavision Advanced Pricing and discounts made it possible to manually define the line no. intervals. The result of setting a smaller interval, will make it possible for customers to log more price list lines, without the need of renumbering the lines.

Remark: *this interval setting is only applied when new lines are imported using the Price Worksheet.*

1. Choose the search icon, enter **Advanced Pricing Setup**, and then choose the related link.
2. In the field **Price List Line Interval**, specify the interval that needs to be used to number the lines in the price lists.

Remark: *if the interval is set to a very small number, it might not be possible to add lines in between existing lines. Keep this in mind when defining the interval.*

8.2 Report Renumber Price List Lines

If the price list lines need renumbering, a report is provided. This report is available in the Sales price lists list page and cards, and the purchase price lists and cards, by choosing the action **Renumber Lines**.

When choosing the action on the card or list page, the selected price list will be set as filter in the report page.

The report can also be accessed by choosing the search action, entering **Renumber Price List Lines** and choosing the relevant link.

If no price list is entered as filter in the report, all price list lines will be regarded and the price list lines that need renumbering will be renumbered.

9 Shop labels/Digi labels

In the Dynavision Advanced Pricing & Discounts module, the functionality to generate, print and export shop labels is implemented. This makes it possible to include the correct information on the labels that are displayed in the shop for the items.

In order to be able to print the shop labels, some configuration needs to be set up in the **Advanced Pricing Setup** Page.

9.1 Advanced Pricing Setup

1. Choose the search icon, enter **Advanced Pricing Setup**, and then choose the related link.
2. On the page that opens, some fields need to be filled in in order to print the Shop Labels.
 - a. **Shop Label Report ID**
Specifies the Report ID that will be used by default to print the shop labels.
 - b. **Report Caption Shop Label**
The Caption of the selected Report ID will be displayed in this field.
 - c. **RequestPage For Shop Label Print**
Specifies if the report should use the request page. If enabled, the page **Print: Shop Label** will be shown in which some additional settings and filters can be specified. If disabled, this page will not be shown and the labels will be printed using the default settings that are specified for printing the labels.
 - d. **System Printer For Shop Label Print**
Specifies if the report should use the system printer.
3. Choose the action **Print Shop Label** to print the shop labels. Based on the setting in the **RequestPage For Shop Label Print** the page **Print: Shop Label** will be shown. (see [Managing the Shop Labels](#) for the explanation of the options on the report page.)
4. Choose the action **Shop Labels** to open the **Shop Labels** page in which the shop labels can be managed (see [Managing the Shop Labels](#)).
5. Choose the action **Report Layout Setup** to open the **Report Layout Setup** page. In this page, the report for printing the shop labels can be configured and managed.

9.2 Managing the Shop Labels

1. Choose the search icon, enter **Shop Labels**, and then choose the related link.
2. On the page that opens an overview can be viewed of the existing shop labels and some actions can be performed.
3. Choose the action **Generate Shop Labels** to open the report to generate the shop labels. On this page, some fields need to be specified in order to generate the shop labels containing the correct information.

Options

 - a. **All Units of Measure**
Specifies whether a shop label should be created for all Units of Measures of the item or only for the Unit of Measure that is used on sales documents.
 - b. **Base Unit of Measure**
Specifies whether a shop label should be created for the Base Unit of Measure of the item.
 - c. **Sales Unit of Measure**
Specifies whether a shop label should be created for the item's Sales Unit of Measure.
 - d. **Reverse Description 1**
This option will invert the colors used to print. When enabled, the background

of the Description will be black and the text will be white. When disabled, the background will be white as default and the text will be printed black.

e. Reverse Description 2

This option will invert the colors used to print. When enabled, the background of the Description will be black and the text will be white. When disabled, the background will be white as default and the text will be printed black.

f. Reverse Promotion Text

This option will invert the colors used to print. When enabled, the background of the Promotion Text will be black and the text will be white. When disabled, the background will be white as default and the text will be printed black.

g. Include Blocked Items.

Specifies if the shop labels should also be generated for blocked items. These items will temporary be unblocked to allow the routine to calculate it's sales and promotion price.

Price date

a. Date for Update

Sets the date that will be used to get the prices during the update of the shop labels.

b. Date Formula for Update

Sets the date formula that will be used to get the prices during the update of the shop labels. This can be useful when using the Job Queue to schedule the generation of shop labels.

In the Filters some additional filters can be specified that will be taken into account when generating the shop labels.

After Generating the shop labels, the new labels will be visible in the overview of the shop labels. The option **To Print** will be **checked** to notify the system and the user that this Shop Label is new and will be printed when using the action **Print Shop Labels**. This field makes it possible for the user to quickly identify the newly generated and not yet printed Shop Labels. This field can be used to only print these new Shop labels.

It is also possible to check this field manually in case a label has to be reprinted by selecting the line and choosing the action **Enable 'To Print'**.

- 4.** Use the action **Update Shop Labels** to open the **Update Shop Labels** report. This report makes it possible to update the prices of the shop labels.

This will update the prices for the items based on the Customer No. specified on the **Shop Labels** page (*checkout customer*).

a. Include Blocked Items, Date for Update, and Date Formula for Update

have the same functionalities as described in the **Generate Shop Labels** report.

b. Overwrite barcodes

When enabled, this will overwrite existing barcodes when a barcode is found on the item references. When disabled, only empty barcodes will be filled in.

c. Overwrite ° alcohol

When enabled, this will overwrite existing ° alcohol with the values from the excise app (when installed). When disabled, only 0° alcohol values will be modified.

In the Filters some additional filters can be specified that will be taken into account when generating the shop labels.

After Updating the shop labels, the new labels will be visible in the overview of the shop labels. The option **To Print** will be **checked** to notify the system and the user that this Shop Label is updated and will be printed when using the action **Print Shop Labels**. This field makes it possible for the user to quickly identify the updated and not yet printed Shop Labels. This field can be used to only print these Shop labels. It is also possible to check this field manually in case a label has to be reprinted by selecting the line and choosing the action **Enable 'To Print'**.

5. Choose the action **Message Types** to open the Message Types page. In this page, it is possible create and configure the Message Types that will be used for the export of the Shop labels.

Choose the plus sign next to the action **New** and choose the action **Get Default Data...** to download the Message Type that has already been provided for the Shop Labels. Choose **Apply** and navigate to the created card in order to complete the set up of the Shop Label Message Type.

6. Choose the action **Export Shop Labels** to open the **Export Shop Labels** report. This report provides the ability to export the generated shop labels to a number of formats.

This report will be used to push the prices to the FTP server to make it possible to visualize the prices on the digital shop labels.

- a. **Update before export**

When enabled, all shop labels will first be updated before they will be exported.

Remark: this delays the export process significantly.

- b. **Date for Update**

Sets the date that will be used to get the prices during the update of the shop labels.

- c. **Date formula for Update**

Sets the date formula that will be used to get the prices during the update of the shop labels. This can be useful when using the Job Queue to schedule the generation of shop labels.

- d. **Message Type**

Specifies the Message Type that will be used for exporting the shop labels. In this field, a predefined Message Type can be selected from the Message Types list. *Only outgoing Message Types can be selected with **Message Type** in the Message Type Card set to **Shop Label**.*

The available export formats are:

- i. Shop Label JSON,
 - ii. Shop Label XML, and
 - iii. DigiLabel XML.

- e. **Delivery Method**

Specifies the delivery method that will be used to export the shop labels.

The options are:

- i. Download,
 - ii. Email, and
 - iii. FTP.

- f. **Max Sequence No.**
Sets the maximum sequence number for the shop label lines that should be included in the export.
Remark: this is only applicable to JSON export files.
- 7. Choose the action **Print Shop Labels** to print the shop labels.
If in the **Advanced Pricing Setup** the option **RequestPage For Shop Label Print** is enabled, the screen **Print: Shop Label** will be opened after choosing the action.
 - a. **Printer**
Displays the printer that will be used to print the Shop Labels. This can be edited.
 - b. **Report Layout**
Displays the report that was set up in the **Advanced Pricing Setup** page. This layout can be edited if necessary.
Remark: an image can be added to the layout using Attribute Printing Sets at the Header level of the label.
 - c. **Publication Date**
This date is used to determine the promotions that are active (*based on the starting date of the promotion*) on the date of printing. This will make sure that the promotion prices can be printed on the labels if applicable.
 - d. **Max Sequence No.**
Only shop label lines with a sequence no. equal to or less then this value will be printed. This **Sequence No.** can be assigned on the **Shop Label** page (see [Configuring the Shop Label](#)).
 - e. **Disable 'To Print' post report**
Disables the values of the **To Print** fields for all shop labels after the execution of this report.
 - f. **Filter: Shop Label – To print**
It is possible to specify that only the shop labels with an enabled field **To Print** should be printed.

9.3 Configuring the Shop Label

1. On the page **Shop Labels**, choose the action **New** to create a new Shop label, or select a shop label that needs to be edited.
2. On the page that opens, some fields need to be set to configure the shop label.
 - a. **Customer No.**
Specifies the Customer Number of the Checkout Customer. *This will be a customer that was set up to represent the shop to which the labels belong.* This makes it possible to have different prices per shop by creating a Customer for each shop.
 - b. **Item No.**
Specifies the Item No. for which the Shop Label is configured.
 - c. **Item Description**
The Description of the selected Item No. will be displayed.
 - d. **Description 1**
Specifies the Description that needs to be included on the shop label when generated and printed. This Description can be edited.

- e. Description 2**

Specifies the extended Description that needs to be included on the shop label when generated and printed. This Description can be edited.
- f. Promotion Text**

Specifies the text that will be printed in case the item is in promotion.
- g. Last Modification**

Displays the moment (date and timestamp) that the Shop Label was lastly modified.
- h. Last Upload**

Displays the moment (date and timestamp) that the Shop Label was lastly exported.
- i. Prices Valid From**

Indicates the date from which the prices will be valid.
- j. To Print**

Specifies if the shop label should be printed. This will be automatically enabled when using the actions **Generate Shop Labels**, **Update Shop Label(s)**, and **Print Shop Label(s)**.
- k. Shelf No.**

Displays the Shelf No. that is specified on the Item Card of on the related SKU Card.
- h. Reverse Description 1**

This option will invert the colors used to print. When enabled, the background of the Description will be black and the text will be white. When disabled, the background will be white as default and the text will be printed black.
- i. Reverse Description 2**

This option will invert the colors used to print. When enabled, the background of the extended Description will be black and the text will be white. When disabled, the background will be white as default and the text will be printed black.
- j. Reverse Promotion Text**

This option will invert the colors used to print. When enabled, the background of the Promotion Text will be black and the text will be white. When disabled, the background will be white as default and the text will be printed black.
- l. Shop label lines**

After using the action **Generate Shop Labels** in the **Shop Labels** page, these lines will be filled in with all Units of Measure for the selected Item. In the lines, prices, units, sequence etc. can be modified.

 - i. Sequence No.**

Specifies the Sequence No. for the Unit of Measure. This is used to determine which labels should be printed when using the action **Print Shop Label(s)**, by specifying the **Max. Sequence No.** in the page for the report.
 - ii. Item Unit of Measure**

Specifies the Unit of Measure that will be used to determine the prices and information that will be displayed on the label. It is possible to choose a Unit of Measure that is set up for the selected item.

- iii. Unit of Measure Text**

The Unit of Measure Text will be displayed in this column. This is the Unit of Measure Text that will be displayed on the shop labels. This can be edited if necessary.
- iv. Bar Code**

Specifies the bar code that has been set up in the Item References for the Unit of Measure of the selected item.
- v. Volume (Liter)**

Specifies the volume in liter for the selected item Unit of Measure. This can be printed on the label.
Remark: only available when Dynavision Excise Duties is installed.
- vi. Weight (kg)**

Specifies the weight in kilograms of the item for the chosen Unit of Measure.
- vii. Sales Price**

Specifies the sales price for the Item Unit of Measure of the selected item. This will be filled in with the set up sales price in the Sales Price List when generating the labels. This can be edited if needed.
- viii. Sales Price Begin Date**

Specifies the begin date for the sales price.
- ix. Sales Price Ending Date**

Specifies the ending date for the sales price.
- x. Sales Price Per Liter**

Specifies the sales price per liter.
Remark: only available when Dynavision Excise Duties is installed.
- xi. Sales Price Per kg**

Specifies the sales price per kilograms.
- xii. Reusable Packaging Value**

Indicates the total value of the Reusable Packaging for the unit of Measure.
Remark: only available when Dynavision Reusable Packaging is installed.
- xiii. Promotion Price**

Specifies the promotional price for the item Unit of Measure. A value can be inserted, which will be printed as the promotional price for the item.
- xiv. Promotion Begin Date**

Specifies the starting date for the promotional price.
- xv. Promotion Ending Date**

Specifies the ending date for the promotional price.
- xvi. Promotion Price Per Liter**

Specifies the promotional price for the item per liter. A value can be inserted, which will be printed as the promotional price per liter for the item.
Remark: only available when Dynavision Excise Duties is installed.
- xvii. Promotion Price per kg**

Specifies the promotional price for the item per kilogram. A value can

be inserted, which will be printed as the promotional price per kilogram for the item.

xviii. Degrees Alcohol

Specifies the degrees of alcohol of the item. This can be printed on the label.

Remark: only available when Dynavision Excise Duties is installed.

10 Price from customer

The Price from customer functionality makes it possible for the current customer to inherit the price calculation method, price group, Price Discount Group and Primary contact from another customer.

This will use this customer for the price calculation, but the bill-to customer will still be the selected customer for which the sales document is created.

1. Navigate to the **Customer Card**.
2. In the **Invoicing Tab**, the **Price from customer** is visible with some fields in this input group.
3. Select the customer from which the price information need to be inherited. The fields in the group will be filled in and will display the information in the fields.
4. When creating a new sales document for this customer, in the sales document (*in the **Invoice Details Tab***) this Price from Customer will be automatically filled in by the information set up on the **Customer Card**.

This can always be overruled in the sales documents or can be set there when no Price from Customer is set up on a chosen customer.

***Remark:** it is also possible to add the Customer No. of the sell-to customer in this field. This can be useful when the invoice is billed to another customer, but the prices of the sell-to customer need to be used in the calculation.*

5. If the Price From Cust. No is changed on the sales document, the prices will be recalculated for the items on the document.

*Remark: the same functionality is available for the purchasing flow. A **Price from vendor** can be set on a vendor card or on a purchase document in the **Price From Vendor** field. The operation is analogous to the sales flow.*

10.1 Example

A case where this functionality can be used is the following: **a company applies special prices for their staff (combination of prices and discounts).**

A dummy customer Staff is created (*which can be set to blocked*) and a specific price list is created for this customer.

On each staff member that is created in the system, in the **Price from customer No.** field, the Staff customer is selected

As a result, sales documents for these persons will always use the prices assigned to the customer Staff.

This can be used in many other cases with different pricing structures. One of the biggest advantages of this functionality is that it allows the user to have a much simpler way of managing prices.

Remark: Business Central's price calculation provides the ability to set purchase and sales prices for specific contacts. The price from functionality ignores these prices, both for purchases and sales documents.

11 Print Price List

It is made possible to print the price list per Customer.

1. Choose the search icon, enter **Report Layout Setup**, and then choose the related link.
2. Choose the action **Create Default Setup** in case no Report Layout Setup line is visible for the Sales Price List. *Or add this Report Layout Setup manually using the **New** action and choosing the report (71097181 – Sales Price List).*
3. After adding the report, and optionally add a footer, address, etc. on the layout, the page can be closed and the report can be run.
4. Choose the search icon, enter **Sales Price List**, and then choose related report link.
5. On the page that opens, some filters need to be specified in the **Price List Tab** in order to generate the Price List report.
 - a. **Customer No.**
Select the customer for which the prices need to be printed on the report.
 - b. **Minimum Quantity**
Indicates the minimum quantity of the items. This quantity has an effect on the resulting prices. *Default set to 1.*
 - c. **Starting Date**
Indicates the date that will be used to simulate the order date to simulate the sales price for the item(s). If no date is chosen, the current Working Date will be used.
 - d. **Exclude Promotion Prices**
Specifies if the promotion prices need to be excluded in the generation of the report.
 - e. **Hide Empty Price Lines**
Specifies if the report should also print lines for items for which no price could be retrieved. If this option is enabled, only lines will be printed on the report for which prices are found.
 - f. **Adv. Item Filter**
An Advanced Item Filter can be selected that will be used to filter the items that will be printed on the report.
It is possible to reset the Advanced Item Filter by choosing the function in the field below the value field of the Adv. Item Filter field. *This will clear the Adv. Item Filter field.*

g. Show Errors

Indicates if the Error page should be opened if errors occur when running the report.

h. Options

Makes it possible to specify options that need to be taken into account for printing the Sales Price List layout.

6. After specifying the filters, choose the action **Print** or **Preview** to generate the layout with the price list lines for the selected filters.

Remark: when running the report for a lot of items, it is recommended to run the report in the background, as it might take some time to generate.

It is also possible to schedule the generation of the report by choosing the action **Send to...**

7. The report that is generated will show the items, structured and grouped by the Item Categories to generate a clear overview of the prices present in the price lists for the (chosen) customer (*the description of the Category will be printed, and in case no description is found, the code will be printed*). The report will show by default following information:

- a. Item Number,
- b. Item Description,
- c. Quantity (depends on the minimum quantity chosen the report filters),
- d. Unit of Measure (Base Unit of Measure or invoicing Unit of Measure, depends on the setting in the Report Setup, **Use Invoicing UoM**)
- e. Unit price,
- f. VAT, and
- g. Total.

Remark: on the layout of the price list, it is possible to add a Logo, and select if Excise needs to be printed on the lines (like on the sales document), if the Invoicing UoM and Price needs to be used and if Reusable Packaging needs to be printed in a separate column on the layout.

12 Item Price Margin Calculations

In the Dynavision Advanced Pricing & Discounts module, the functionality has been added to define margin formula's, set this up for items, and see the margin on the item on sales documents and sales price lists.

This margin is based on the purchase and sales price that is defined in Business Central for the item.

12.1 Setup

When the Advanced Pricing and Discounts Application is installed, some setup will be added to the environment pertaining to the Margin calculations.

This setup is:

- Default Placeholders in the Advanced Pricing Setup,
- Default Price Calculation Formula's,
- A default Margin Cost Definition, and

- A default Price Margin.

12.1.1 Advanced Pricing Setup

In the page **Advanced Pricing Setup**, the functionality is added to specify the placeholder names that will be displayed in the Margin calculation Formula's.

1. Choose the Search Icon, enter **Advanced Pricing Setup** and choose the related link.
2. Navigate to the tab **Price Margin**
 - a. **Margin – Cost Placeholder**
This placeholder is used in the Margin Calculation Formulas. It will be replaced by the effective cost during the calculation.
 - b. **Margin – Price Placeholder**
This placeholder is used in the Margin Calculation Formulas. It will be replaced by the effective price during the calculation.
 - c. **Calculated Margin Placeholder**
This placeholder is used in the margin Calculation Formulas. It will be replaced by the calculated margin during the calculation.
3. These placeholders need to contain a value and can only contain alphabetical characters. In case letters or other characters are used, they will be omitted. Each placeholder has to be uniquely defined. In case of duplicate values, an error will be displayed.

If a placeholder is updated, confirm the prompt to change the placeholder value in the Margin Calculation Formula's. In case this is declined, the new value will be replaced with the value that is currently noted in the formula's for that placeholder.

12.1.2 Margin calculation Formula's

1. Choose the Search Icon, enter **Margin Calculation Formulas** and choose the related link.
2. On the page that opens, a list is shown of Margin Calculation Formula's.
 - a. *The list of formula's will be filled in with default formula's. These can be edited or deleted if needed.*
3. Choose the action **New** to add a new formula to the list, or choose the action **Edit List** to edit existing lines.
 - a. **Code**
Specifies the Code for the Price Calculation Formula.
 - b. **Description**
Specifies the description of the Price Calculation Formula.
 - c. **Margin Formula**
Specifies the formula to calculate the price margin. Use the placeholder for the cost and the placeholder for the price as specified in the Advanced Pricing Setup.
 - d. **Calculated Margin (PLACEHOLDER NAME)**
Displays the result of the calculation of the margin (in percentage) using the test values.
Remark: *If the calculated margin is zero, the Margin Formula is possibly not correct or the result of the calculation counts more than 10 characters. There is no extra validation on the entered formula.*

e. Price Formula

Specifies the formula to calculate the price. Use the placeholder for the cost and the placeholder for the margin as specified in the Advanced Pricing Setup.

f. Calculated Price

Displays the result of the calculation of the price using the test values.

***Remark:** If the calculated price is zero, the Price Formula is possibly not correct or the result of the calculation counts more than 10 characters.*

There is no extra validation on the entered formula.

4. The entered formula's can be tested by using the fields **Cost (PLACEHOLDER NAME)** and **Price (PLACEHOLDER NAME)**. In these fields, test values can be inserted to check if the entered formula returns a valid result.

12.1.3 Price Margins

In the Price Margins page, the Margin Code needs to be specified, together with how the margin needs to be calculated and how the Cost that will be used in calculation will be found for an item.

The setting on this page determines the way the margin will be calculated on the sales lines.

1. Choose the Search Icon, enter **Price Margins**, and choose the related link. The page can also be accessed by choosing the action **Price Margins** on the page **Margin Calculation Formulas**.
2. Choose the action **New** to add a new Price Margin, or choose the action **Edit List** to edit existing Price Margins.
 - a. **Code**
Specifies the code for the price margin.
 - b. **Description**
Specifies the description for the price margin.
 - c. **Cost Definition**
Specifies where the cost should come from when calculating the price margin. In the next section, it is described how these Cost Definitions can be set up.
 - d. **Margin Calculation Formula**
Specifies the Margin Calculation Formula that will be used to calculate the margin for this margin code.
 - e. **Include Discount**
Specifies if the margin should be calculated on the item including the line discount.
 - f. **Include Excise**
Specifies if the margin should be calculated on the item including or excluding the excise.
 - g. **Threshold**
Specifies the threshold that will be used to indicate if a price is below or above the targeted margin.

***Remark:** if the value in the threshold field is edited, the existing lines will not be updated with this new threshold value. On new lines, the margin calculation will take the new threshold value in to account.*

h. Default

Specifies if this margin code is the default margin code. This Margin will be inserted on the page **Item Price Margins** when choosing the action **Add Default Price Margin**.

12.1.4 Margin Cost definitions

In the Margin Cost Definitions, how the system will determine the Cost that will be used in margin calculations needs to be defined. This can be specified in the Price Margins page when setting up how the margins need to be calculated on sales lines.

1. Choose the Search Icon, enter **Margin Cost Definitions** and choose the related link. This page can also be accessed by going to the **Price Margins Page**, and choosing the action **Cost Definitions**.
2. Choose the action **New** to add a new Cost Definition, or choose the action **Insert template(s)**, and select a Cost Definition template to add to the list.
 - a. *If a line exists in the Margin Cost definition with the same name as the selected template to import, the existing line will not be overwritten, but a number will be added to code of the newly added line.*
 - b. *It is possible to apply a template on an existing line in the list. Select the line and choose the action **Apply template....** The Code of the existing line will not be changed.*
3. Specify the values in the fields in order to set up the Margin Cost Definitions.
 - a. **Code**
Specifies the Code to identify the Margin Cost Definition.
 - b. **Pricing Lookup Method**
Specifies the method that will be used to find the base price.
The options are:
 - i. Manual,
 - ii. Highest,
 - iii. Lowest,
 - iv. Item unit Cost,
 - v. Item Last Direct Cost, and
 - vi. Item Revaluation Cost.
 - c. **Pricing Lookup From**
Specifies where the base price has to be found.
The options are:
 - i. Any Vendor,
 - ii. All Vendors (strict),
 - iii. Specific Vendor, and
 - iv. Vendor from Item Card.
 - d. **Price Source No.**
Specifies the source of the Base Price, in case **Specific Vendor** is chosen in the **Pricing Lookup From** field.
 - e. **Incl. Line Discount**
Specifies if the starting price should include line discounts.
 - f. **Discount Lookup Method**
Specifies how the discount will be found.
The options are:
 - i. Empty,
 - ii. Highest, and
 - iii. Lowest.

g. Rounding Method

Specifies the way that the calculated prices will be rounded.

h. Starting Price

Displays the price that is used as a base to calculate the selling price.

4. After setting up these Margin Cost Definitions

12.1.5 Item Price Margins

This page is used to link multiple defined Price Margins to an item.

It is also possible to specify the Margin per variant if the item has variants set up.

1. Choose the Search Icon, enter **Item Price Margins** and choose the related link. The page can also be accessed for a specific item by navigating to the item Card of the item for which the margin calculations need to be defined and choosing the action **Price Margins**, which can be found by choosing **Prices & Discounts** in the actions bar in the header.
2. Specify the different margin calculations that can be used for the item. One of these defined calculations will be used to calculate the margin on the lines and in the fact boxes of the item.
 - a. **Item No.**
Specifies the item number of the item for which the Item Price Margin is set up. *This is displayed when navigating to the **Item Price Margins page**, using the Search Icon in Business Central.*
 - b. **Price Margin Code**
Specifies the Price Margin to apply to the item - variant combination.
 - c. **Cost Definition**
Indicates the Cost Definition that has been set up for the selected Price Margin.
 - d. **Price Margin Calculation Formula**
Displays the Price Margin Calculation Formula of the selected Price Margin.
 - e. **Cost per base UOM (LCY, Excl. VAT)**
Indicates the value of the Cost per base UOM, displayed in the Local Currency and excluding VAT.
 - f. **Costing Date**
Specifies the date for which the cost was calculated. This will be updated when using the action to update the cost.
 - g. **Default**
Specifies if the item margin will be used to calculate the margin on the sales lines, price list lines and price worksheet lines. *Only one Price Margin can be used on the lines for the item – variant combination.*
 - h. **Variant Code**
Specifies the variant for which the Item Price Margin is set up. If a Variant is selected in the column, the line is valid for that selected item variant. If no variant is specified, the line is valid for all variants of the item for which no specific margin has been set up. **Remark:** *this column is not visible by default. This needs to be added to the page using **personalization**.*

3. When a Price Margin Code is selected in the lines for an item, the fact box in the fact box pane displays the detailed information of the selected margin code. This contains the Cost Definition Information and the Calculation information.
4. Choose the action **Update Costs (Selection)** to update the value in the column **Cost per base UOM (LCY, Excl. VAT)**.

12.2 Usage

12.2.1 Items

On the list page of items, in the fact box **Item Details – Invoicing** which can be found in the fact box pane, the **No. of Price Margins** that are defined for the Item is displayed. This number includes all set up margins for the item, also these that are set up for the variants of the item.

Choosing the value in the field of the **No. of Price Margins** redirects to the **Item Price Margins** page, displaying the margins that are set up.

On the **Item Card**, some extra fields have been added in the **Prices & Sales Tab**.

- **Calculated Margin**
Indicates the value of the calculated margin for this item, using the default Item Price Margin (*Use on Lines is checked*). This calculation uses the **Unit Price** on the Item Card in the calculation.
It is possible to select the three dots displayed next to the field.
This will open a page, displaying all set up Item Price Margins for the item.
In case option **Price Includes VAT is enabled**, the VAT information will be displayed on this page. *The values are calculated using the fields on the item card.*
- **Price Margins**
Allows to view and/or set up Item Price Margins for the item. Choose the value in the field to open the page **Item Price Margins**.

In the fact Box **Price Margins**, an overview is shown of the Item Price Margins that have been defined for the item. The Item Price Margin that is used on the lines is colored green. Choose the action **Price Margins** to navigate to the Item Price Margins page. In the fact box, the options for updating the Cost and Add the Default Price Margin are also implemented.

12.2.2 Sales documents

On the sales order, it is possible to add following margin columns using personalization. *The columns are not visible by default.*

- **Price Margin**
Displays the calculated margin for the item, using the Item Price Margin that is indicated as default on the **Item Price Margin Page**.
It is possible to select the value displayed in the column on the line. This will open a page, displaying all set up Item Price Margins for the item on the line. In case the item includes VAT, the VAT information will be displayed on this page.
If there is a discount applied on the line, this will also be displayed on the page to show the discount that is used when calculating the values for the margin.

- **Price Margin Code**
Displays the Item Price Margin Code that is used to calculate the Price Margin.
- **Margin Status**
When a price margin calculation applies to the line, this field will indicate if the Unit Price is sufficient compared to the targeted threshold for the margin. This threshold is set in the Price Margins Page for the selected Price Margin Code.

When adding an item to the lines, for which a Item Price Margin is set up, these margin fields will be populated by the calculated and set values. If the calculated margin is above the set threshold, the Margin Status will be Sufficient and colored green, together with some other fields like Line amount excl VAT.

If the Calculated margin is below the specified threshold, the Margin Status, will be Insufficient and the fields will be colored red.

12.2.3 Sales price lists and Sales Price Worksheet

On the sales price list and the sales price worksheet, it is possible to add the columns for the price margin calculation. By default the column **Price Margin** and **Price Margin Incl. Discount** will be visible.

Other columns can be added through Personalization.

The margin columns cannot be edited.

When using the function **Report: Advanced Price Calculations** on the **Price Worksheet**, the margin of the item will be calculated, based on the set Item Price margin of the item, and using the information that is found; like Margin Cost per base UOM. The calculated Net price will be used to calculate the Price Margin.

This calculated margin will not change when another price is set in the Price Worksheet.

When transferring the lines to the Sales Price List, the margin will be calculated on the list itself, and it will there display the calculated margin using the information on the lines.

The margin information on the price list lines will not get transferred to the sales lines. They are merely indications of the margin with the line setup.

The working of the Margin calculation and indications is the same as for the Sales Documents, as described in the section above.

There is a difference in determining if the margin calculation should **include the discount on excise**. This is determined by the Customer Price Group to which the customer for which the price list lines are created is assigned. When there is a Customer Price Group assigned, the value of the column **Line Discount on Excise on Sales Documents** will be fetched and used in the calculation. In case no Customer Price group is assigned, the value on the **Excise Setup** will be fetched and used.

12.2.4 Item Template

On the Item Template, an extra field is added in which a Price Margin can be selected that will be added to the items that are created using the template.

Navigate to the **Item Templates**, add a new one or select one to edit. In the tab **Advanced Pricing & Discounts**, specify the **Default Price Margin**.

Remark: the cost per base of the added Item Price Margin will be set to zero and will have to be updated manually.

12.2.5 Copy Item

When copying an item with Margin codes set up, the possibility is added to also copy the Margins for the item (and variants if applicable).

1. Navigate to the **Item card** of the item that needs to be copied.
2. Choose the action **Copy Item**.
3. In the tab **Advanced Pricing & Discounts**, the functionality **Price Margins** is added. When enabled, the Price Margins that are defined for the item will be copied as well. If Variants are set up on the item to copy, and the option **Item Variants** is enabled, the variant specific Price Margins will also be copied.
 - a. *The cost for the copied Item Price Margins is set to zero. This needs to be updated manually by the user, using the action **Update Costs (Selection)**.*