Price Rules

Microinvest

2016

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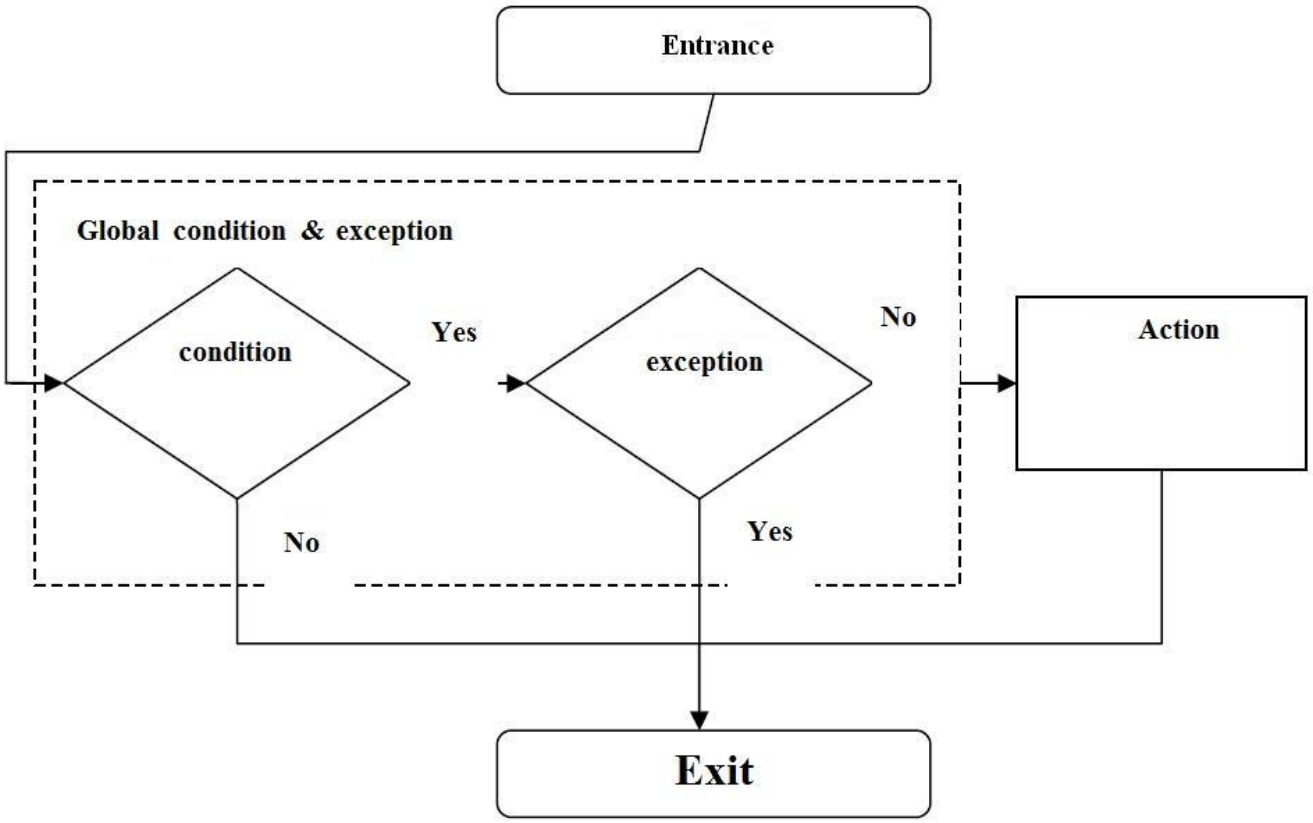
Principle of operation

Price rules represent the system to change parameters of an operation or implementation of other action depending on their properties. They are consisted of two parts: condition and action. The first part specifies the conditions under which the rule should be executed and for which it shouldn't be executed , i.e. exceptions. In one price rule, can have more than one condition. The effect of price rule changes the operation itself or execute another operation such as displaying a message, sending an e-mail message.

One operation (Sale) has global and local parameters. Global are those, which concern the whole operation such as sale to a partner or date of the sale. Local parameters are those which are related to each row of the sale, such as good quantity from the particular row and good price. Similarly, in the price rules, there is global and local conditions. Global conditions are related to the global parameters of the operation, and local are related to the rows of the operation. Lets look at the following cases below: price rule with global condition, price rule with local condition and price rule with global and local condition.

- **Price rule with global condition**



If the condition which affects the global parameters of an operation is executed, and it does not fall in the cases of exception, then the action is performed.

Example:

If the object is central warehouse and reduce the goods *price with 10%.*
IF (Object = 3) THEN Discount=10

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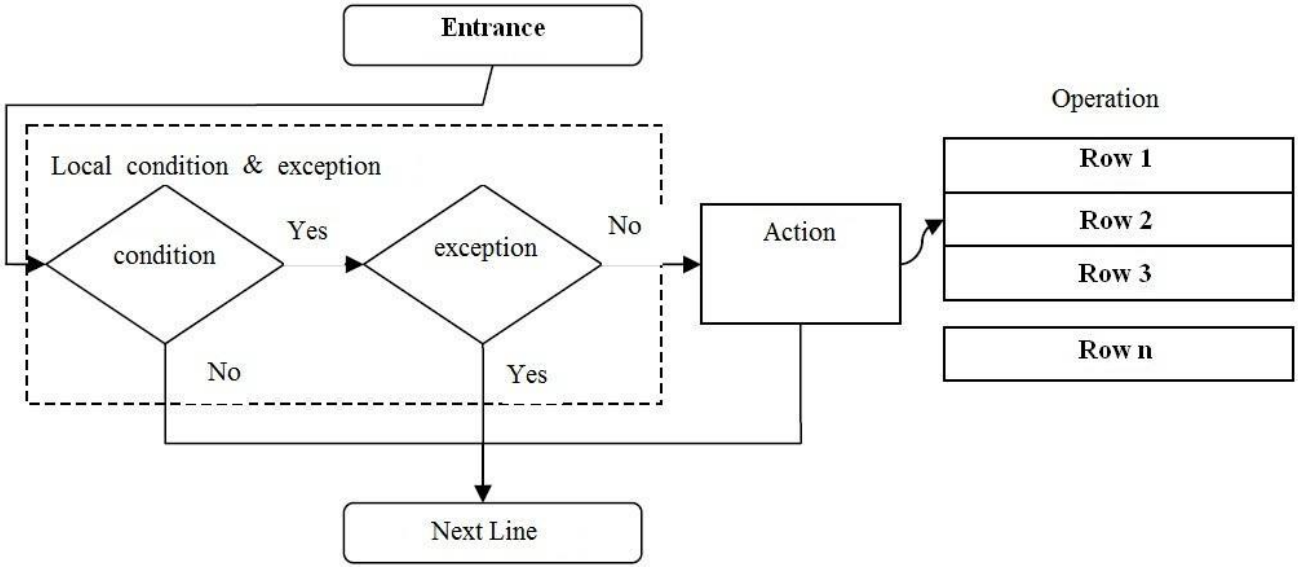
Executing a sale in the central warehouse, all goods in the operation will be sold with 10% discount.

- **Price rule with local condition**



All rows of the operations are being checked and if the local condition is satisfied for some of them, the action is being executed. Such conditions are used, when there is a need to change parameters of a particular row in an operation depending on its properties.

Example:
If the product is beer, and reduce the price with 10%.
IF (Good = 21) THEN Discount=10
Executing a sale - beer and vodka, the rule will change the rebate only on beer.

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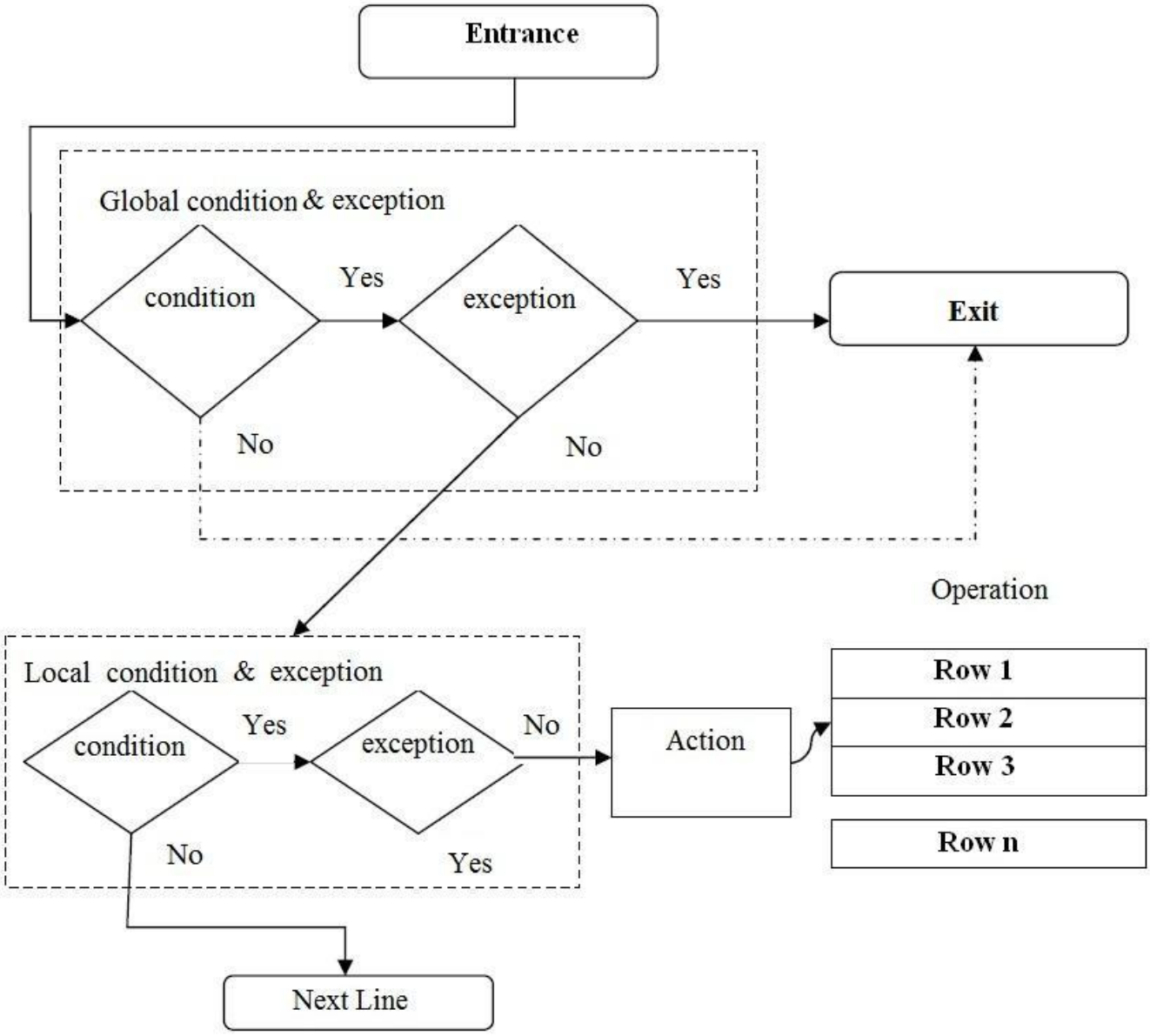
- **Price rule with global and local condition**



In case of combined price rules, the global condition is executed first. If it meets the global properties of the operation, then the local condition is executes, otherwise the execution of the rule is suspended. Local conditions are checked for each row of operation. If the condition is fulfilled for the relevant row, the effect of the price rule is applied.

Example:

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If the partner in group of VIP customers, with the exception of company X and the product is beer, reduce
price with 50%.
IF (PartnerGroup = AAC) AND (Good = 21) AND (NOT Partner = 12) THEN Price= Price - 0.5

If the global condition and the exception are met, next are the local conditions. Each beer sales will be 50 cents cheaper, than it is sought.

Creation of pricing rules

Price rules are created and edited by the price rules manager in ***Microinvest*** Warehouse Pro. Rules can be created, but without applying and it is sufficient just to to remove the checkbox in the list field. Price rules are executed by priority, which can be changed by the arrows in the right pane. In this way you can determine which rules to apply on first place and even to create stop rules ("If the partner is X, stop the application of the price rule). Price rules can be created through wizard system ***Microinvest*** Warehouse Pro, or directly writing Price Rules Script. Through the script editor can be used full power of the price rules, while the wizard of price rules cover only the rules used.

Structure of the script of pricing rules

IF ([NOT] condition) [AND ([NOT] condition)] THEN Action
The service command "IF" followed by the terms in brackets in each of them may appear "NOT", which makes it a rule exception. In one rule there can be unlimited number of conditions related with the command "AND". Next is service command "THEN" and command describing the action. It is important when writing the script to use UPPERCASE format and to add spaces or separator after each word. Rule with wrongly entered script is not running. In the commands for condition and action can be used numbers, constants and arithmetic operations: addition, subtraction, multiplication and division.

Variables and Constants

The difference between variable and constant is that the value of the variable can be changed with the expression. Both can be used in arithmetic expressions or conditions.

- **Qtty** – Local constant that returns the qtty of product in the line of operation. Can be changed with the expression.

- **Price** – Local variable, return price of the product of an operation.

- **QuantitySum** – Local constant giving the total goods quantity from the current row in the operation.

- **Discount** – Local variable - discount.

- **PrcSum** – Local constant. Sum value of the product line of operation.

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- **LastSalePrc** – Local constant. Last sale price of the goods.

- **GoodPrcIn** – Local constant. Delivery price of the goods.

- **GoodPrcOut01** – Local constant. Price Group 1.

- **GoodPrcOut02** – Local constant. Price Group 2.

- **GoodPrcOut03** – Local constant. Price Group 3.

- **GoodPrcOut04** – Local constant. Price Group 4.

- **GoodPrcOut05** – Local constant. Price Group 5.

- **GoodPrcOut06** – Local constant. Price Group 6.

- **GoodPrcOut07** – Local constant. Price Group 7.

- **GoodPrcOut08** – Local constant. Price Group 8.

- **GoodPrcOut09** – Local constant. Price Group 9.

- **GoodPrcOut10** – Local constant. Price Group 10.

- **varGlobalRows** – Global constant. Number of rows in operation.

- **varGlobalQuantity** – Global constant. Quantity of goods in the operation.

- **varGlobalSum** – Global constant. Cost of operation.

- **varGlobalPriceSum** – Global constant. Sum of the goods prices in the operation.

- **varAffectedRows** – Global constant. Number of rows affected by the current price rule.

- **varAffectedQuantity** – Global constant. Quantity of goods affected by the current price rule.

- **varAffectedSum** – Global constant. Value of goods affected by the current price rule.

- **varAffectedPriceSum** – Global constant. Sum of the good prices affected by the current price rule.

- **DocumentSum** – Global constant. Sum of the value of the document.

- **TurnoverSum** – Global constant. Turnover made by the partner.

- **UnpaidDocumentsSum** - Global constant. Amount that the partner has to pay.

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- **MonthTurnoverSum** - Global constant. Turnover made by the partner for the current month.

- **AdvancePaymentBalance** - Global constant. Balance of partner from payments in advance.

- **AdvPaymentBalanceInObject** - Global constant. Balance of partner from payments in advance in the location where the operation took place.

- **MonthTurnoverSumInclOperation** – Global constant. Monthly turnover of partners, including the amount of current operation.

- **GlobalQuantitySum** – Global constant. The total quantity of goods in the operation.

Conditions

One condition is consisted of operator, sign for comparison (=, <=,> =) and operand (value, constant, arithmetic expression). For some operators it is reasonable for use only equal sign (IF (Good = 430) ...), for others only sign of difference (IF (Time> = 12:00) AND (Time<= 23:59)). Conditions that affect a group of nomenclatures are written in a specific way, because they compare the group code, which is not available to consumers in the program. Condition for membership of the group will meet and belonging to its subgroups.
Below are listed all operands that can participate in condition and character. Unless expressly stated, it is a global condition.

- **Partner** – Partner ID (=).
- **PartnerGroup** – Partner Group (=).
- **Object** – Location ID (=).
- **Objectgroup** – Location Group (=).
- **User** – User ID (=).
- **UserGroup** – User Group (=).
- **Date** – Date of operation (=, >=, <=). Format DD.MM.YYYY
- **Time** – Hour of operation (=, >=, <=). Format HH:mm
- **Weekdays** – Weekday when the operation will be executred. To enforce this condition using a special mask, each day of the week meets a digit (1 - applies, 0 does not apply). Starting from Monday (=).

  Example :
  IF (Weekdays = 0110001) – The pricing policy will be applied Tuesday, Wednesday and Sunday.

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- **Documentsum** – Sum of the document (=, >=, <=).
- **Turnoversum** – Turnover sum for the partner (=, >=, <=).
- **Paymentsum** – Duty of partner at the time (=, >=, <=).
- **UnpaidDocumentsSum** – Sum of unpaid obligations (=, >=, <=).
- **ContainsGood** – Contents of item in operation (=).
- **ContainsgGroup** – Contents of item from a particular group in the operation (=).
- **Good** – Content of the product in operation. Local condition (=).
- **GoodGroup** – Content from a particular group in the operation. Local condition (=).
- **GoodQttySum** – The quantity of item from this row, which contains in the operation. Local condition (=, >=, <=).
- **PartnersBirthday** – Partner's Birthday. Global condition, which is not comparing with operand.
- **LotSerialNumber** – Serial number of the lot of the good. Used when working method is with lots. Local condition (=).
- **Lotenddate** – Date of expiration of the lot. Used when working method is with lots. Local condition (=, >=, <=).
- **Lotproductiondate** – Date of production of the goods in the lot. Used when working method is with lots. Local condition (=, >=, <=).
- **Lotlocation** – String which defines the position of the good of a certain lot. Used when working method is with lots. Local condition (=).
- **GGroupQtty XXX** – Good's quantity from a group XXX (group code), participating in the operation (=, >=, <=). GGroupQtty might be used in different arithmetic phrases.

Expressions and commands (actions)

Actions are two types: expressions and commands. The expressions just alter some of the variables and the commands provoke action which is not connected with the operation (displaying message, sending e-mail).
Expressions use the following syntax:

Variable = Variable [operator Variable]
With such a structure can be built complex arithmetic expressions that can change the value of the variable.
Example:

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Qtty=Qtty + 4
Price=Price *2 +6.1

In the terms and parameters of commands can be used and descriptive variables to obtain value.
Example:
AddGlobalGood 1;varAffectedQuantity;0
Commands:
- **Exit** – Exit price rules. Can be used to stop the rule. Command displays the message.
Syntax**:**
Exit ***text***

- **Stop** – Stops execution of the operation. Command displays the message.
Syntax**:**
Stop ***text***

- **Message** – Displays a message on the screen without affecting the operation or the price rules.
Syntax**:**
Message ***text***

- **Email** – Sends e-mail to mail out. The command receives two parameters separated by a vertical separator line. Text of the letter and address that can be sent.
Syntax**:**
Email ***text|address***

- **AddGood** – Add as item promotion. The command accepts three parameters: item ID which should be added as a promotion, quantity and sales price. Can be added more than one item as a promotion, the data for each of them must be separated by a vertical separator line. In the command parameters can be used expressions, variables and constants. Squared brackets means that phrase in them is optional. They should not be included in the written script. The command is applied to each row of operation.
Syntax**:**
AddGood ID of item; qtty; sale price [|ID of item; qtty; sale price]

- **AddGlobalGood** – Add the item as promotion. It works as AddGood, but applies only to once for the entire operation.
Syntax**:**
AddGlobalGood ID of item; qtty; sale price [|ID of item; qtty; sale price]

- **Payment –** Add the amount passed as parameter of the command as an advance payment of the partner who performs the operation on the location where the operation took place.
Syntax:
Payment 0.5

CreateOperation – Creating operation. As parameters are taken ID of the type of operation, good ID, quantity and price.

Syntax:

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CreateOperation ID of operation; good ID; quantity; price

PlayWAV – Plays sound WAV file Accepts as a parameter the way to WAV file.

Syntax:
PlayWAV path to the file

ChangeCheapestItemsPriceFromGroup – Change the price of the cheapest goods from several groups.
Syntax:
ChangeCheapestItemsPriceFromGroup group code, quantity, new price

Note:
This command is used together with GGroupQtty for promotions like this:
IF (GGroupQtty AAA >= 3) AND (operation = 2) THEN ChangeCheapestItemsPriceFromGroup AAA, GGroupQtty AAA \ 3, 0

ChangeCheapestItemsDiscountFromGroup – Change the discount on the cheapest goods from several groups.

Syntax:
ChangeCheapestItemsDiscountFromGroup group code, quantity, new price

Note:
This command is used together with GGroupQtty for promotions like this:
IF (GGroupQtty AAA >= 3) AND (operation = 2) THEN ChangeCheapestItemsDiscountFromGroup AAA, GGroupQtty AAA \ 3, 50

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