Oracle® Retail Regular Price Optimization

User Guide

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Preface

The Oracle Retail Regular Price Optimization User Guide describes the application's user interface and how to navigate through it.

Audience

This document is intended for the users and administrators of Oracle Retail Regular Price Optimization. This may include price managers and merchandise category managers.

Documentation Accessibility

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Related Documents

For more information, see the following documents in the Oracle Retail Regular Price Optimization Release 13.2 documentation set:

- *Oracle Retail Regular Price Optimization Release Notes*
- *Oracle Retail Regular Price Optimization Installation Guide*
- *Oracle Retail Regular Price Optimization Implementation Guide*

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- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Review Patch Documentation

When you install the application for the first time, you install either a base release (for example, 13.2) or a later patch release (for example, 13.2.1). If you are installing the base release, additional patch, and bundled hot fix releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch and bundled hot fix releases can contain critical information related to the base release, as well as information about code changes since the base release.

Oracle Retail Documentation on the Oracle Technology Network

Documentation is packaged with each Oracle Retail product release. Oracle Retail product documentation is also available on the following Web site:

http://www.oracle.com/technology/documentation/oracle_retail.html

(Data Model documents are not available through Oracle Technology Network. These documents are packaged with released code, or you can obtain them through My Oracle Support.)

Documentation should be available on this Web site within a month after a product release.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Getting Started

Oracle Retail Regular Price Optimization (RPO) assists retail price mangers in pricing hard-line and grocery items.

About Oracle Retail Regular Price Optimization

RPO is suited for long lifecycle items with infrequent price changes. It recommends permanent prices based on initial estimates of an item's total sales volume over a planning period and on price-related sales of items and related items.

RPO includes grouping in its pricing analysis because it considers cross-item elasticities; that is, RPO considers how price changes for one item may affect the sales volume of other items that belong to the same demand group. Users can input objective functions and pricing constraints that define the optimization problem. Once these inputs are defined, the pricing optimizer recommends prices and associated volumes. What–if cases can also be created and evaluated side by side within the context of a pricing scenario. Once an analysis of the what–if cases and recommended prices is complete, the user can make a final decision to submit the recommended prices for the given set of merchandise items and locations.

Demand Group Optimization

A demand group of merchandise is defined as a set of similar items that have their prices determined by cross-item elasticities between items within the group. Price optimization is done at the demand group level. RPO recommends prices at the item level for all the items in a demand group after fully understanding the cross-item elasticities, halo relationships, and cannibalistic relationships between these items.

Goals and Constraints

As part of the RPO planning process, the price manager is trying to achieve a category goal. The category goal is a strategic understanding of the category in the larger plan for the year. RPO can be used to support the category objective. A price manager can run different scenarios (such as maximizing gross margin versus maximizing revenue) to support the category objective. This initial strategy could be optimized in detail as part of the RPO process. RPO is also very cognizant of how prices affect consumers and supports extensive business constraints on item prices.

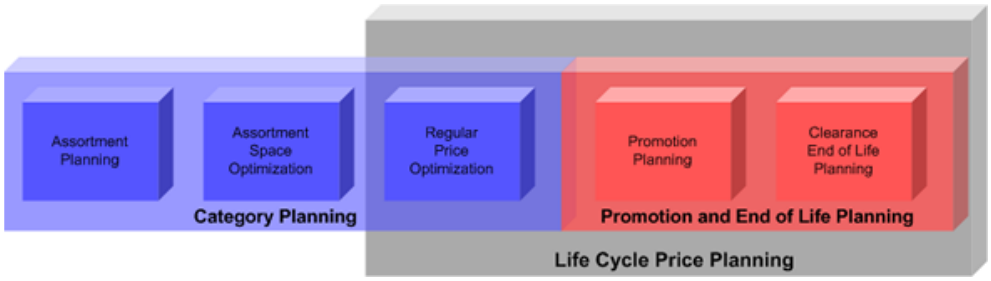
Another important component of the RPO planning process is to strategize against the competition. In this regard, RPO supports price constraints at the item level and also supports optimization goals to maximize the gains against the competition for the entire category.

RPO in the Overall Life Cycle of Price Planning

RPO fits at the intersection of category planning and price planning in hard-line and grocery implementation. It is a key step in the category planning process after the assortment for the current season has been planned. RPO optimizes the price of all the items towards the category objective.

RPO is also the first in a three-step lifecycle pricing process. It is possible to start with RPO and arrive at demand for the planning horizon by item/store/week. This demand can serve as the baseline demand for the promotion process. Once the pricing plan is approved at the end of the RPO process, the demand estimate can be sent to a replenishment system or used as the baseline for the promotion planning process.

Figure 1–1 Life Cycle Price Planning Process



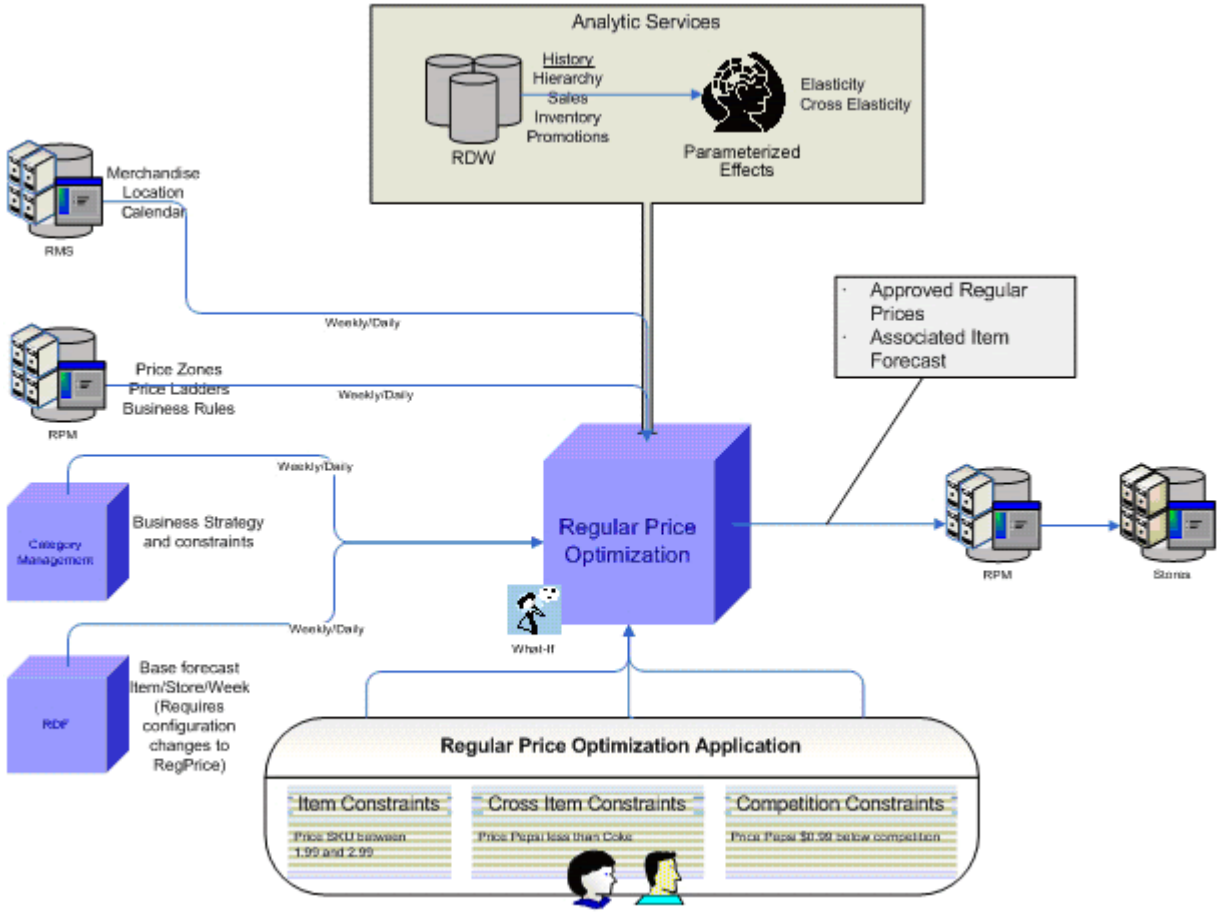
Application Workflow

The following steps describe the workflow of the RPO application:

1. Create a demand group.
2. Create a planning scope.
3. Create a scenario.
4. Using the demand group, planning scope, and scenario, perform a price analysis, including what-if scenario experimentation if desired.
5. Using the what-if scenarios and the scenarios created by the optimizer, perform a scenario comparison. Select a scenario and submit it for pricing.

Data Workflow

Figure 1–2 Regular Price Optimization Workflow Diagram



Users

RPO users may be category managers, price managers, planners, buyers, and merchandisers. In most organizations, price planning is managed by a price manager. The price manager consults the category manager for an overall goal. The price manager then creates a detailed scenario plan and makes a recommendation to the category manager for approval. The boundaries of each of their functions vary by organization; therefore, RPO is flexible to support different roles and functions associated with these roles.

The price planning approach is strategic and varies by organizational goal, competition, and category goals, especially in respect to chain or zone level pricing. RPO supports a flexible notion of this plan and allows the user to manage pricing at one, many, or all price zones.

2

Demand Group Management Workbook

This chapter contains information about managing demand groups. Demand groups are sets of items that have their prices determined by cross-item elasticities between items within the group. Use the Demand Group Management workbook to examine, create, and alter demand group definitions.

The Demand Group Management workbook contains two tabs:

- Create/Modify/Delete Worksheet Tab
- Item - Demand Group Assignment Tab

Building the Demand Group Management Workbook

To build the Demand Group Management Workbook, begin by starting the Demand Group Management wizard as follows:

1. From the File menu, click **New**, or click the **New** toolbar button.
2. From the Reg Price Optimization tab, select the **Demand Group Management** workbook and click **OK**. The Demand Group Management wizard opens.
3. Select demand group(s). Click **Next**.
4. Select categories to add to your demand group.
5. Click **Finish** to build the workbook.

Create/Modify/Delete Worksheet Tab

This tab contains one worksheet, the Create/Modify/Delete worksheet. Use this worksheet to create, modify, or delete a demand group with the use of DPM.

Figure 2–1 Create/Modify/Delete Demand Group Worksheet

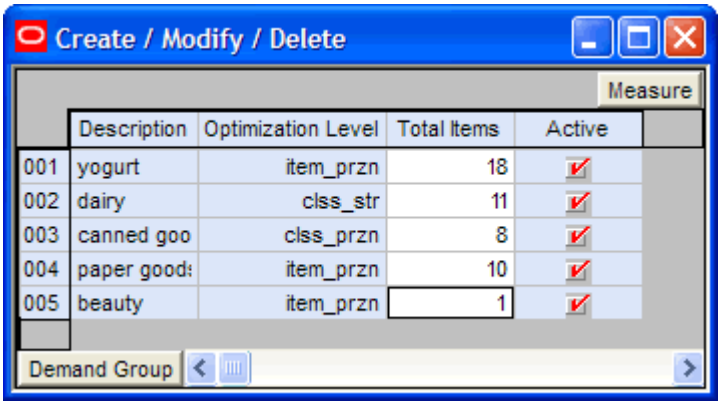


Table 2–1 Create/Modify/Delete Demand Group Worksheet Measures

Measure(s)	Description
Description	Stores the description for the demand group.
Optimization Level	Stores the optimization level for the demand group.
Total Items	A read–only, calculated measure. Stores the total number of items in the demand group.
Active	Select the check box if you want the demand group to be available in other workbooks.

Creating a Demand Group

To create a demand group:

1. From the Create/Modify/Delete worksheet, right-click the Demand Group hierarchy. In the right-click menu, select **Maintain Positions**, and then select **Add Position**.
2. In the Dynamic Position Maintenance window, click in the **Demand Group** field. The Position Description window appears. Enter a position label and position name. The position name must be unique; the position label is a useful description of the demand group. Click **OK**.
3. In the **Optimization Level** field, double-click the field and choose an optimization level from the list.
4. Select **Active** to make the demand group available in other workbooks.
5. Click **Calculate**.
6. From the File menu, select **Commit Now.**

Modifying a Demand Group

You can modify the optimization level for existing demand groups. To edit this field, perform the following:

> **Note:** If you modify a demand group that is referenced in saved workbooks, those workbooks become invalid.

1. From the Create/Modify/Delete worksheet, click the **Optimization Level** field.
2. Use the list to select a new level.
3. Click **Calculate**.
4. From the File menu, select **Commit Now**.

Deleting a Demand Group

> **Note:** If you delete a demand group that is referenced in saved workbooks, those workbooks become invalid.
>
> You may only delete demand groups that were added using DPM.

To delete a demand group:

1. From the Create/Modify/Delete worksheet, right-click the Demand Group hierarch. In the right-click menu, select **Maintain Positions**, and then select **Delete Position**.
2. Select a demand group to remove. Click **OK**.

Item - Demand Group Assignment Tab

This tab contains one worksheet, the Item - Demand Group Assignment worksheet. Use this worksheet to examine or modify item assignment for all existing demand groups.

Figure 2–2 Item - Demand Group Assignment Worksheet

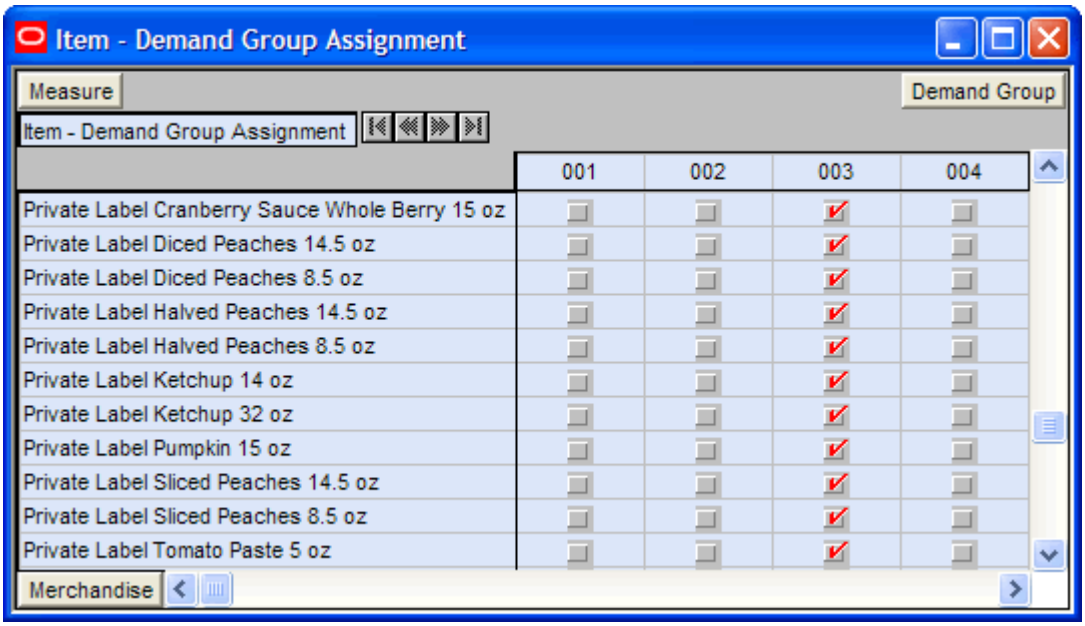


Table 2–2 Item - Demand Group Assignment Worksheet Measures

Measure	Description
Item - Demand Group Assignment	Used to associate items with demand groups.

Associating Items with Demand Groups

To associate an item with a demand group:

1. Open the Item - Demand Group Assignment worksheet.
2. You can associate items individually to a demand group or you can use the Select Rollup feature available in the right-click menu.
   - To select items individually, select the check boxes located next to the items you want to include in your demand group.
   - To use the rollup feature, right-click the Merchandise hierarchy. Click **Select Rollup** and then select the merchandise hierarchy level at which to assign items.
3. Click **Calculate**.
4. From the File menu, select **Commit Now**.

3

Planning Scope Management Workbook

The Planning Scope Management workbook is used to define a planning scope for which the user intends to perform price analysis. A planning scope identifies the beginning and end dates of the time period for which price optimization is performed. It also identifies the price zone or stores associated with the price analysis.

This workbook is used to create planning scopes. A planning scope is defined by its combination of demand groups, price zones, and selling period. Items within a demand group may be sold across multiple price zones. Therefore, the optimization goals, constraints, price zones, and selling periods may all differ as well. A planning scope must be defined for a demand group in order to begin the price analysis and scenario comparison process.

The Planning Scope Management workbook contains two worksheets:

- Create/Modify/Delete Planning Scopes Worksheet
- Price Zone Assignment Worksheet

Building the Planning Scope Management Workbook

To build the Planning Scope Management workbook, begin by using the Planning Scope Management wizard as follows:

1. Select **New** from the File menu, or click the **New** toolbar button.
2. From the Reg Price Optimization tab, select the **Planning Scope Management** workbook.
3. Click **OK**. The Planning Scope Management wizard opens.
4. Select a demand group. Click **Next**.
5. Select a planning scope.
   - If a planning scope does not exist, a sample planning scope called Example is provided. Select this planning scope to continue. After entering the Planning Scope worksheet, you must to create your own planning scope using DPM. The example planning scope is not usable.
   - If one or more planning scopes exist for the selected demand group, the wizard displays all of the associated planning scopes. Select at least one.
6. Click **Finish**.

Create/Modify/Delete Planning Scopes Worksheet

This worksheet is used to create a planning scope with the use of DPM. All planning scopes created within this worksheet are automatically assigned to the demand group in context.

Figure 3–1 Create/Modify/Delete Planning Scope Worksheet

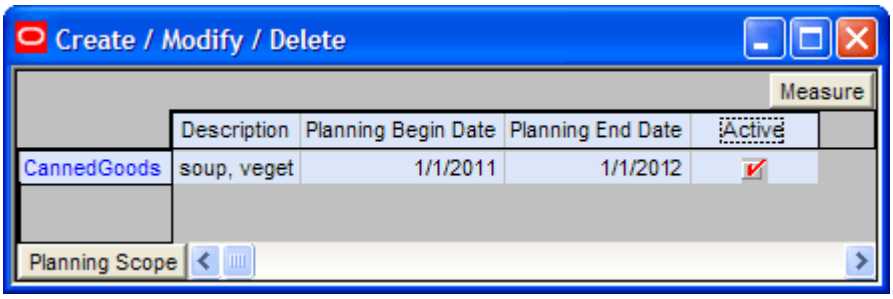


Table 3–1 Create/Modify/Delete Planning Scope Worksheet Measures

Measure	Description
Description	User-defined description of the planning scope.
Planning Begin Date	The begin date for the planning scope.
Planning End Date	The end date for the planning scope.
Active	Select the check box if you want the planning scope to be available in other workbooks.

Creating a Planning Scope

To create a planning scope:

1. From the Create/Modify/Delete worksheet, right–click in the Planning Scope hierarchy. In the right-click menu, select **Maintain Positions**, and then select **Add Position**.
2. In the Dynamic Position Maintenance window, double-click the **Planning Scope** field. The **Position Description** window appears. Enter a position label and position name. The position name must be unique; the position label is a useful description of the planning scope. Click **OK** to return to the worksheet.
3. In the **Planning Begin Date** field, enter a begin date for the planning scope.
4. In the **Planning End Date** field, enter an end date for the planning scope.
5. Select **Active** to make the planning scope available in other workbooks.
6. Click **Calculate**.
7. From the File menu, select **Commit Now**.

Modifying an Existing Planning Scope

Note: If you modify a planning scope that is referenced within saved workbooks, those workbooks become invalid.

To modify an existing planning scope:

1. From the Create/Modify/Delete worksheet, locate the planning scope you want to modify.
2. Click any of the following fields to change their values: **Begin Date**, **End Date**, or **Description**.
3. For example, to change the planning scope's name or label:
   a. Right-click the Planning Scope hierarchy. Select **Maintain Positions**, and then select **Modify Positions**.
   b. From the list of planning scopes, select the planning scope for which you would like to change the name. Click **OK**.
   c. Click once on the Planning Scope field. The **Position Label** and **Position Name** fields open.
   d. In the **Position Label** and **Position Name** fields, enter a new name for the planning scope. Click **OK** to return to the worksheet.
4. Click **Calculate**.
5. From the File menu, select **Commit Now**.

Deleting a Planning Scope

Notes:

- You can only delete planning scopes that were created using DPM.
- If you modify a planning scope that is referenced within saved workbooks, those workbooks become invalid.

To delete a planning scope:

1. From the Create/Modify/Delete worksheet, right-click the Planning Scope hierarchy.
2. Select **Maintain Positions**, and then select **Delete Position**.
3. In the Select Planning Scope window, select the planning scope you want to delete and click **OK**.
4. Click **Calculate**.
5. From the File menu, select **Commit Now**.

Price Zone Assignment Worksheet

This worksheet is used to assign price zones to planning scopes.

Figure 3–2 Price Zone Assignment Worksheet

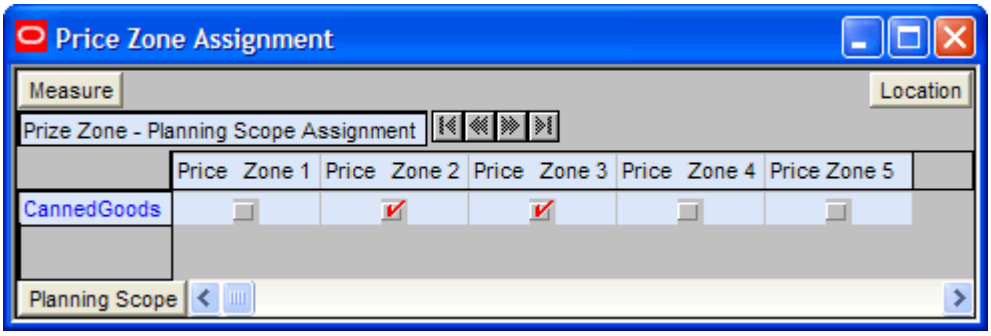


Table 3–2 Price Zone Assignment Worksheet Measures

Measure	Description
Price Zone - Planning Scope Assignment	Specifies the price zones that are associated with each planning scope.

Assigning Price Zones to a Planning Scope

To assign a price zone to a planning scope:

1. From the Planning Scope Management workbook, select the **Price Zone** worksheet.
2. Locate the planning scope you recently added in the previous section or make adjustments to an existing planning scope.
3. From the available price zones, select the check boxes of the price zones you wish to include in your planning scope.
4. Click **Calculate**.
5. From the File menu, select **Commit Now**.

4

Scenario Management Workbook

This chapter contains information regarding the Scenario Management workbook. A scenario is an analysis of a pricing problem. In a scenario, the user proceeds toward a particular optimization goal by following certain business constraints. Using the Scenario Management workbook, a price manager can create one or many scenario for a given demand group and planning scope and then compare these scenarios.

The Scenario Management workbook contains two tabs:

- Create / Modify / Delete Tab
- Copy Tab

Building the Scenario Management Workbook

To build the Scenario Management workbook, begin by starting the Scenario Management wizard:

1. Select **New** from the File menu, or click the **New** button from the toolbar.
2. From the Reg Price Optimization tab, select **Scenario Management** and click **OK**. The Scenario Management wizard opens.
3. Select a demand group. Click **Next**.

> **Note:** If no demand groups exist, the wizard closes.

4. Select a planning scope. Click **Next**.

> **Note:** If no planning scopes exist, the wizard closes and inform you that you first need to create and commit a planning scope before using the workbook.

5. Create or select a scenario.
   - If a scenario does not exist for the chosen demand group and planning scope, a sample scenario called Example is provided. Select this position to continue building the workbook.

Note: After entering the workbook, you must create your own scenario. This scenario is required to build the Price Analysis workbook later.

- If one or more scenarios exist for the selected demand group and planning scope, the wizard displays another wizard that lists the scenarios associated with the selected demand group and planning scope. Select at least one scenario to continue.

6. Click **Finish**.

Create / Modify / Delete Tab

This tab includes one worksheet, the Create / Modify / Delete worksheet. This worksheet is used to create, modify, or delete a scenario with the use of DPM.

Figure 4–1 Create/Modify/Delete Scenarios Worksheet

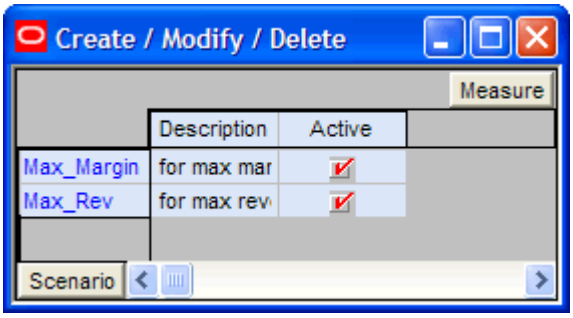


Table 4–1 Create/Modify/Delete Scenarios Worksheet Measures

Measures	Description
Description	User-defined description of the scenario.
Active	Select the check box if you want the scenario to be available in other workbooks.

Creating Scenarios

To create a scenario:

1. From the Create/Modify/Delete worksheet, right–click the Scenario hierarchy. Select **Maintain Position**, and then select **Add Position**.
2. In the Dynamic Position Maintenance window, click the **Scenario** field. The **Position Description** window appears. Enter a position label and position name. The position name must be unique; the position label is a useful description of the scenario. Click **OK** to return to the worksheet.
3. In the Create/Modify/Delete worksheet, enter a description of the new scenario.
4. Select **Active** to make the scenario available.
5. Click **Calculate**.
6. From the File menu, select **Commit Now**.

Modifying Existing Scenarios

Note: If you modify a scenario that is referenced within saved workbooks, those workbooks become invalid.

To modify a scenario:

1. From the Create/Modify/Delete worksheet, locate the scenario you wish to modify.
2. Click the **Description** field to enter a new description.
3. To change the scenario's name or label:
   a. Right–click the Scenario hierarchy. Select **Maintain Positions**, and then select **Modify Positions**.
   b. From the list of scenarios, select the scenario you wish to modify. Click **OK**.
   c. In the Dynamic Position Maintenance window, click in the **Scenario** field. The Position Description window appears.
   d. Enter a position label and position name. The position name must be unique; the position label is a useful description of the scenario.
   e. Click **OK** to return to the worksheet.
4. Click **Calculate**.
5. From the File menu, select **Commit Now**.

Deleting Scenarios

Notes:

- You may only delete scenarios that were created using DPM.
- If you delete a scenario that is referenced within saved workbooks, those workbooks become invalid.

To delete a scenario:

1. From the Create/Modify/Delete worksheet, right–click the Scenario hierarchy.
2. From the right-click menu, select **Maintain Positions**, and then select **Delete Position**.
3. In the Select Scenario window, select the scenario you wish to delete. Click **OK** to return to the worksheet.
4. Click **Calculate**.
5. From the File menu, select **Commit Now**.

Copy Tab

The Copy tab includes one worksheet, the Copy worksheet. This worksheet is used to perform a deep copy from one scenario to another.

Figure 4–2 Copy Scenario Worksheet

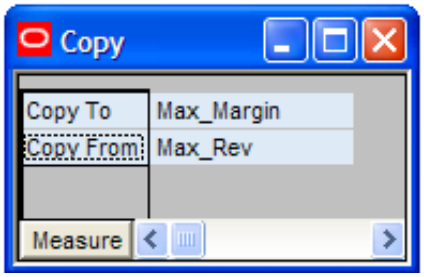


Table 4–2 Copy Scenario Worksheet Measures

Measures	Description
Copy From	The source scenario you wish to copy.
Copy To	The destination scenario.

Copying Scenarios

Note: You cannot use the Example scenario as either a source or destination scenario.

To copy a scenario:

1. Click the **Copy From** field. In the Select Scenario window that appears, select a source scenario. Click **OK**.
2. Click the **Copy To** field. In the Select Scenario window that appears, select a source scenario. Click **OK**.
3. Click **Calculate**.
4. From the File menu, select **Commit Now**.

5

Price Analysis Workbook

The Price Analysis workbook is used to analyze a scenario. The workbook provides the ability to specify pricing constraints, optimize prices, override optimizer recommendations, specify a business goal, and analyze the effect of price changes on decision variables such as gross margin and revenue.

The tabs contained within the Price Analysis workbook are outlined below.

- Global Goals and Constraints Tab
- Priority Setting
- Item Groups Tab
- Item Constraints Tab
- Inter–Item Constraints Tab
- Competition Constraints Tab
- Price Ladders Tab
- Diagnostics Tab
- Recommendations and What–If Tab

Building the Price Analysis Workbook

In order to build the Price Analysis workbook, you must use the Price Analysis wizard. To use the wizard:

> **Note:** You must have a demand group, planning scope, and scenario created in order to build a Price Analysis workbook.

1. Select **New** from the File menu, or click the **New** toolbar button.
2. From the Reg Price Optimization tab, select **Price Analysis**. Click **OK** to open the Price Analysis wizard. The Price Analysis wizard opens.
3. Select a demand group. Click **Next**.
4. Select a planning scope. Click **Next**
5. Select a scenario.
6. Click **Finish** to open the Price Analysis workbook.

Global Goals and Constraints Tab

Use this tab to specify the global goals and constraints for a scenario by defining the variables for the objective function. On the Global Goals and Constraints tab, the Global Goals and Constraints worksheet can be used to enter the various parameters used to define the optimization goals for a given scenario.

Global Goals and Constraints Worksheet

Figure 5–1 Global Goals and Constraints Worksheet

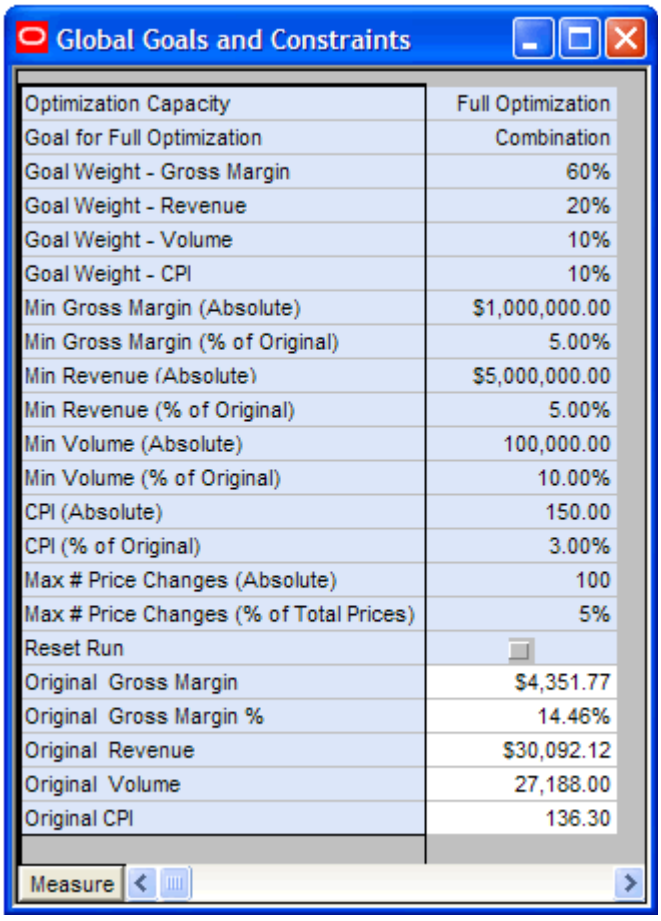


Table 5–1 Global Goals and Constraints Worksheet Measures

Measure	Description
Optimization Capacity	Options are Full Optimization, Price Simulation, and Rule Management.
Goal for Full Optimization	When Full Optimization is chosen for the Optimization Capacity measure, use this measure to select the goal. Options are Highest Item Price, Gross Margin, Revenue, Volume, CPI, and Combination.
Goal Weight - Gross Margin	This is only used if Combination is selected as the option in the Goal for Full Optimization measure. It stores the weight for the Gross Margin objective function component in case a combination is being used. If the Combination option is not used, the value is ignored.

Table 5–1 (Cont.) Global Goals and Constraints Worksheet Measures

Measure	Description
Goal Weight - Revenue	This is only used if Combination is selected as the option in the Goal for Full Optimization measure. It stores the weight for the Revenue objective function component. If the Combination option is not used, the value is ignored.
Goal Weight - Volume	This is only used if Combination is selected as the option in the Goal for Full Optimization measure. It stores the weight for the Volume objective function component. If the Combination option is not used, the value is ignored.
Goal Weight - CPI	This is only used if Combination is selected as the option in the Goal for Full Optimization measure. It stores the weight for the CPI objective function component. If the Combination option is not used, the value is ignored.
Min Gross Margin (Absolute)	Store the entry for the minimum gross margin dollars that the user wants the optimizer to achieve. If this measure is empty for a certain intersection, the cell will be empty and will not be populated with the NA value.
Min Gross Margin (% of Original)	Stores the entry for the minimum gross margin that the user wants the optimizer to achieve. The minimum percentage is expressed to the base of 100%, where 100% is calculated using the current price. If a 10% improvement is desired, the user should enter 110%. If this measure is empty for a certain intersection, the cell will be empty and will not be populated with the NA value.
Min Revenue (Absolute)	Stores the entry for the minimum revenue that the user wants the optimizer to achieve. If this measure is empty for a certain intersection, the cell will be empty and will not be populated with the NA value.
Min Revenue (% of Original)	Stores the entry for the minimum revenue that the user wants the optimizer to achieve. The minimum percentage is expressed to the base of 100%, where 100% is calculated using the current price. If a 10% improvement is desired, the user should enter 110%. If this measure is empty for a certain intersection, the cell will be empty and will not be populated with the NA value.
Min Volume (Absolute)	Stores the entry for the minimum volume that the user wants the optimizer to achieve. If this measure is empty for a certain intersection, the cell will be empty and will not be populated with the NA value.
Min Volume (% of Original)	Stores the entry for the minimum volume that the user wants the optimizer to achieve. The minimum percentage is expressed to the base of 100%, where 100% is calculated using the current price. If a 10% improvement is desired, the user should enter 110%. If this measure is empty for a certain intersection, the cell will be empty and will not be populated with the NA value.
CPI (Absolute)	CPI represents the revenue that would be generated by a pricing scenario's pricing to the average pricing of competitor items. CPI is expressed as a dollar amount difference between your revenue and the revenue based on your competitor's price. If this measure is empty for a certain intersection, the cell will be empty and will not be populated with the NA value.

Table 5–1 (Cont.) Global Goals and Constraints Worksheet Measures

Measure	Description
CPI (% of Original)	CPI represents the ratio of revenue that would be generated by a pricing scenario's pricing to the average pricing of competitor items. CPI is expressed to the base of 100%, where100% represents the current ratio. For example, for a 10% improvement against a competitor, enter 110%. If this measure is empty for a certain intersection, the cell will be empty and will not be populated with the NA value.
Max # of Price Changes (Absolute)	Stores the entry for the maximum number of price change recommendations that the optimizer is allowed to make. If this measure is empty for a certain intersection, the cell will be empty and will not be populated with the NA value.
Max # of Price Changes (% of Total Prices)	Stores the entry for the maximum number of price change recommendations that the optimizer is allowed to make. This value is treated as a percent and should never be greater than 100. If this measure is empty for a certain intersection, the cell will be empty and will not be populated with the NA value.
Reset Run	If selected, the solver does not consider the current recommended price when calculating the price. If not selected, the solver starts from the current recommended price to find a better solution.
Original Gross Margin	The gross margin based on the current prices. This is a read-only field.
Original Gross Margin %	The gross margin expressed as a percentage ratio of (revenue - cost)/cost, based on the current prices. This is a read-only field.
Original Revenue	The revenue based on the current prices. This is a read-only field.
Original Volume	The volume based on the current prices. This is a read-only field.
Original CPI	The current CPI (Competitor Price Index). This is a read-only field.

Priority Setting

The Priority Settings tab allows you to set the priority for rules and competitors.

There are two worksheets contained within this tab:

- General Priority Worksheet
- Competition Priority Worksheet

General Priority Worksheet

The General Priority worksheet allows you to set the priority for each type of rule. The default rule priorities are set at the scenario level. However, the priority level can be overwritten for an individual constraint. Note that multiple constraint types can have the same priority.

Figure 5–2 General Priority

Table 5–2 General Priority Worksheet Measures

Measure	Description
Inter Item Rule Priority	Used to set the priority for the inter-item rule.
Margin Rule Priority	Used to set the priority for the margin rule.
Max Percentage Price Change Priority	Used to set the priority for the max percentage price change.
Max/Min Price Priority	Used to set the priority for the max/min price.
Price Family Priority	Used to set the priority for the price family.
Price Hold Priority	Used to set the priority for the price hold.

Competition Priority Worksheet

The Competition Priority worksheet allows you to specify which competitor takes priority in the price optimization.

Figure 5–3 Competition Priority Worksheet

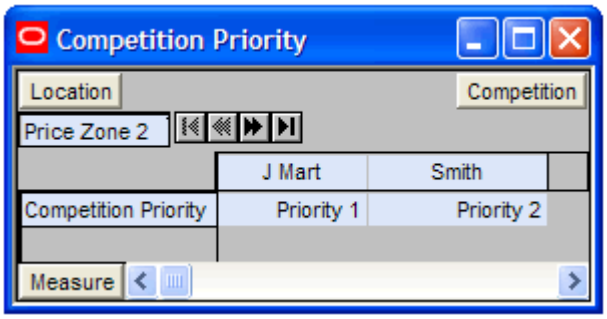


Table 5–3 Competition Priority Worksheet Measures

Measure	Description
Competition Priority	Allows you to specify which competitor takes priority in the price optimization.

Item Groups Tab

Item groups are logical groupings of items within a demand group. The item groups tab allows users to create, modify, or delete item groups. There are two worksheets contained within this tab:

- Create/Modify/Delete Worksheet
- Item Assignment Worksheet

Create/Modify/Delete Worksheet

This worksheet is used to create and delete item groups with the use of DPM. You may also use this worksheet to add, modify or delete descriptions of item groups.

Figure 5–4 Create/Modify/Delete Item Groups Worksheet

Table 5–4 Create/Modify/Delete Item Groups Worksheet Measures

Field	Description
Item Group Description	Stores the description of an item group.
Price Family Indicator	Select this check box if the item group should be treated as a price family.

Item Assignment Worksheet

This worksheet is used to assign items to item groups. Price managers can manually select items by selecting the item group check boxes next to the items.

Figure 5–5 Item Assignment Worksheet

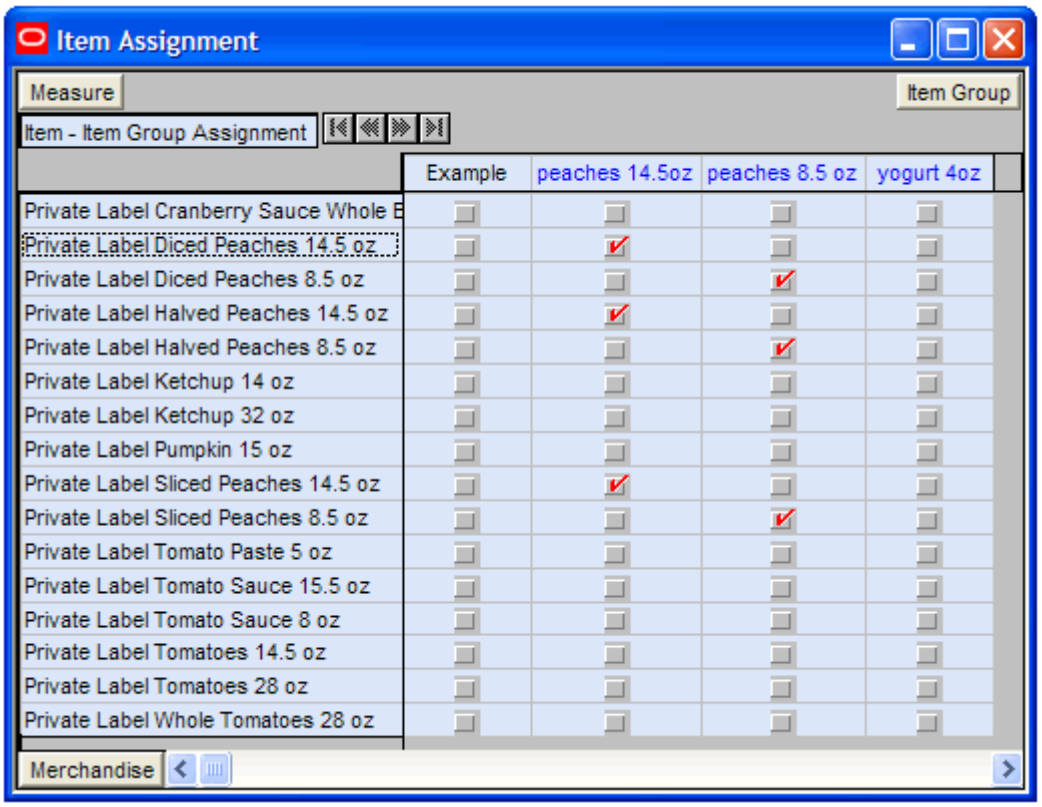


Table 5–5 Item Assignment Worksheet Measures

Measure	Description
Item - Item Group Assignment	Stores the mapping between an item group and items in the form of a Boolean mask.

Item Constraints Tab

This tab is used to create, delete, and modify item constraints related to individual items. This tab contains two worksheets:

- Item Level Worksheet
- Item Group Level Worksheet

Item Level Worksheet

This worksheet is used to enter constraints for individual items.

Figure 5–6 Item Level Worksheet

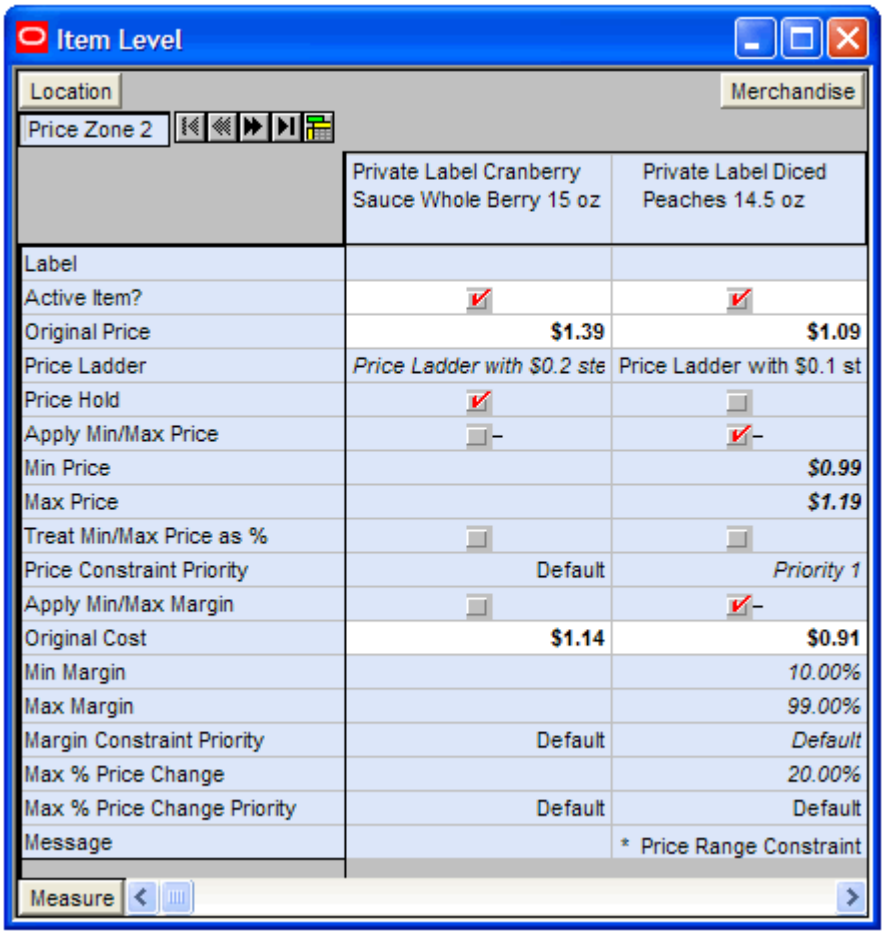


Table 5–6 Item Level Worksheet Measures

Measure	Description
Label	User-defined description of the item constraint.
Active Item?	Displays whether an item is being considered for optimization.
Original Price	This is read-only field for your reference.
Price Ladder	The user's choice of price ladder. All items should be assigned a price ladder.
Price Hold	Select this if there is a price hold constraint on the current price.

Table 5–6 (Cont.) Item Level Worksheet Measures

Measure	Description
Apply Min/Max Price	Select this option to allow the price range constraints to be applied. If selected, the user must enter values for the Min and Max prices.
Min Price	The minimum price for an item.
Max Price	The maximum price allowed for an item.
Treat Min/Max Price as %	Select this option if the minimum and maximum prices should be treated as a percentage rather than an absolute value.
Price Constraint Level	Defines the priority level for the price range constraint.
Apply Min/Max Margin	Select this option to allow the margin constraints to be applied.
Original Cost	This is read-only field for your reference.
Min Margin	The minimum margin allowed for an item.
Max Margin	The maximum margin allowed for an item.
Margin Constraint Priority	Defines the priority level for the margin constraint.
Max% Price Change	The maximum price change allowed as a percent of the current price.
Message	Describes the item constraint violation that has occurred.

Item Group Level Worksheet

This worksheet is used to enter constraints for item groups.

Figure 5–7 Item Group Level Worksheet

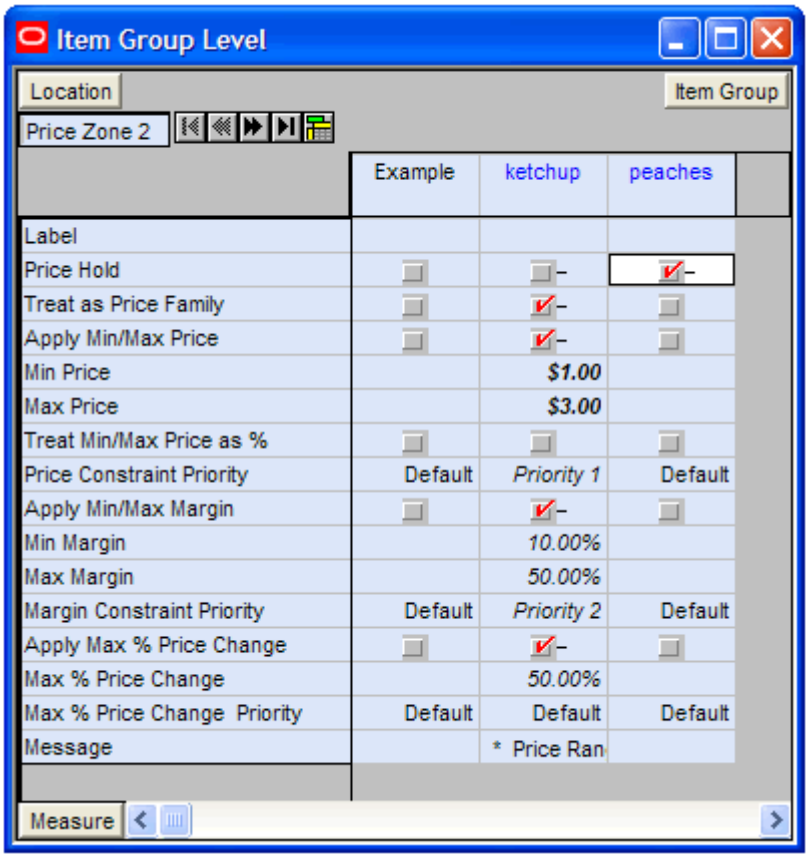


Table 5–7 Item Group Level Worksheet Measures

Measure	Description
Label	User-defined description of the item constraint.
Price Hold	Flag if there is a price hold constraint on the current price.
Treat as Price Family	Flag if the item group is to be treated as a price family.
Apply Min/Max Price	Select this option to allow the price constraints to be applied. If selected, the user must enter values for the Min and Max prices.
Min Price	The minimum price allowed for an item.
Max Price	The maximum price allowed for an item.
Treat Min/Max Price as %	Select this option if the minimum and maximum prices should be treated as a percentage rather than an absolute value.
Price Constraint Priority	Defines the priority level for the price range constraint.
Apply Min/Max Margin	Select this option to allow the margin constraints to be applied.
Min Margin	The minimum margin allowed for an item.
Max Margin	The maximum margin allowed for an item.
Margin Constraint Priority	Defines the priority level for the margin constraint.

Table 5–7 (Cont.) Item Group Level Worksheet Measures

Measure	Description
Apply Max % Price Change	Select this option to allow the price constraints to be applied.
Max% Price Change	The maximum price change allowed as a percent of the current price.
Max % Price Change Priority	Defines the priority level for the price change constraint.
Message	Describes the item constraint violation that has occurred.

Inter–Item Constraints Tab

This tab provides three worksheets that are used to create, modify, and delete inter-item constraints at the item and item group levels. These worksheets also provide the ability to disable constraints without having to delete them.

- Item Group Level Worksheet
- Item Level Worksheet
- Item Link Group Overrides Worksheet

Item Group Level Worksheet

This worksheet is used to enter inter-item constraints at the item group level. Constraints that are placed between item groups are later translated to the item level using the item link groups. Similar to item level constraints, multiple constraints can be entered that have the same item group on the LHS (left hand side) and/or the RHS (right hand side).

Figure 5–8 Item Group Level Worksheet

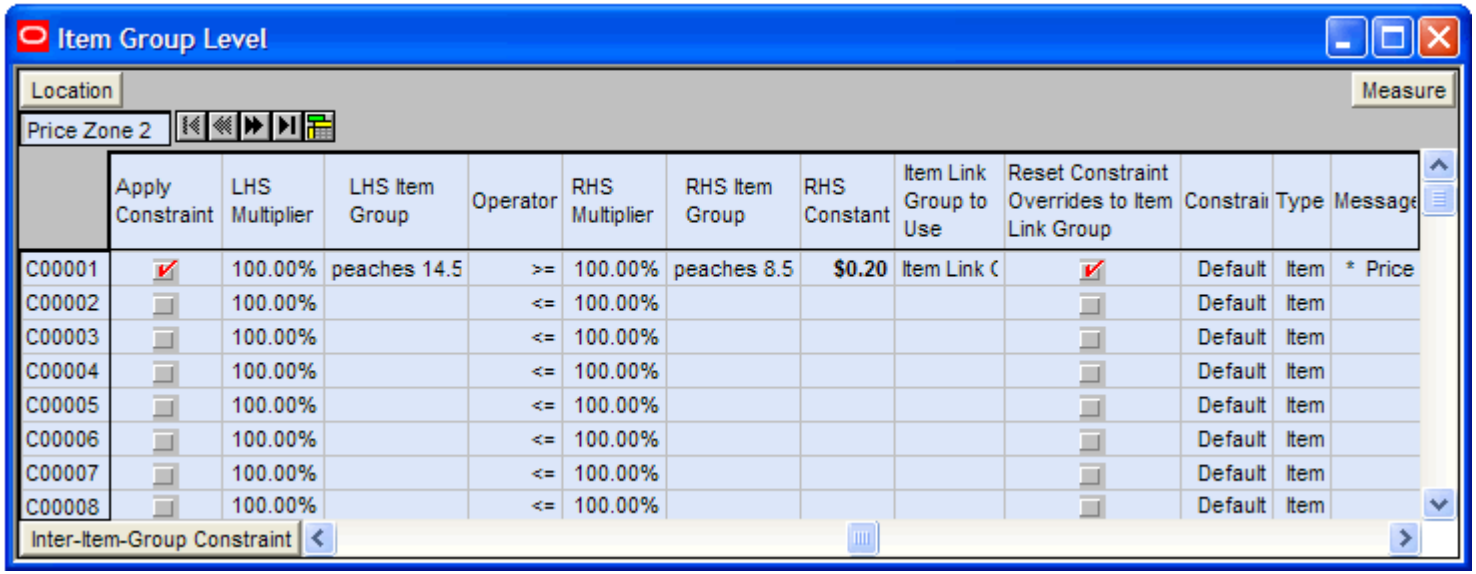


Table 5–8 Item Group Level Worksheet Measures

Measure	Description
Label	The user-defined description of the constraint.
Apply Constraint	Select this option to allow the item group constraints to be applied.
LHS Multiplier	The LHS Unit of Measure (UOM) multiplier for the inter–item constraint.
LHS Item Group	The item identifier for the LHS item group in the inter–item constraint.
Operator	The operator that relates the LHS with the RHS.
RHS Multiplier	The RHS Unit of Measure (UOM) multiplier for the inter-item constraint.
RHS Item Group	The item identifier for the RHS item group in the inter-item constraint.
RHS Constant	The RHS constant in the inter-item constraint.
Item Link Group to Use	Specifies the item link group (and therefore that item group's constraints) that the item will adhere to. The item group's constraints are aggregated to the item level.
Reset Constraint Override	If selected, overrides are removed when the worksheet is calculated.
Constraint Priority	Defines the priority level for the item group constraint.
Type	Specifies the constraint type. This field determines how relationships are handled between items. Relationships can be defined according to item, UOM, or EUOM. **Item**: item to related item (Brand X pen to Brand Y pen) **UOM**: unit of measures (24-pack to 6-pack) **EUOM**: equivalent units (24.6 oz. to 32.8 oz.)
Message	Describes the item constraint violation that has occurred.

Item Level Worksheet

This worksheet is used to enter inter-item constraints at the item level. Managers can enter multiple constraints that have the same item on the LHS (left hand side) and/or the RHS (right hand side).

Figure 5–9 Item Level Worksheet

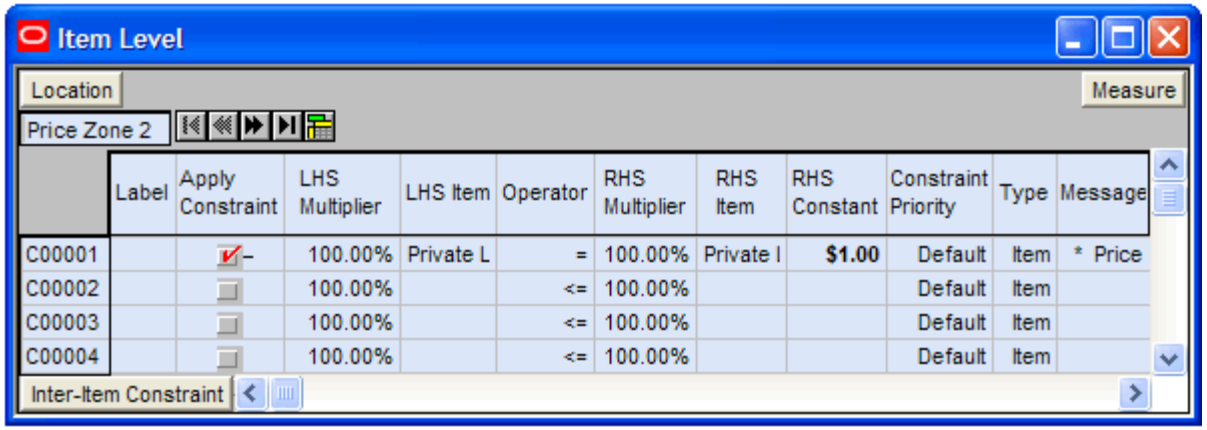


Table 5–9 Item Group Level Worksheet Measures

Measure	Description
Label	The user-defined description of the constraint.
Apply Constraint	Select this option to allow the inter-item constraints to be applied.
LHS Multiplier	The LHS Unit of Measure (UOM) multiplier for the inter–item constraint.
LHS Item	The item identifier for the LHS item in the inter–item constraint.
Operator	The operator that relates the LHS with the RHS.
RHS Multiplier	The RHS Unit of Measure (UOM) multiplier for the inter-item constraint.
RHS Item	The item identifier for the RHS item in the inter-item constraint.
RHS Constant	The RHS constant in the inter-item constraint.
Constraint Priority	Defines the priority level for the item constraint.

Table 5–9 (Cont.) Item Group Level Worksheet Measures

Measure	Description
Type	Specifies the constraint type. This field determines how relationships are handled between items. Relationships can be defined according to item, UOM, or EUOM. **Item**: item to related item (Brand X pen to Brand Y pen) **UOM**: unit of measures (24-pack to 6-pack) **EUOM**: equivalent units (24.6 oz. to 32.8 oz.)
Message	Describes the item constraint violation that has occurred.

Item Link Group Overrides Worksheet

This worksheet is used to examine and override item linkages for inter-item constraints at the item group level. Inter-item link groups define the item to item relationship between two item groups. This relationship determines the item interconnections where the constraint will be applied.

For each constraint at each location, a cross grid shows the LHS items and RHS items with check marks establishing the linkage between items on both sides. Users can override relationships by removing the checks between items. Relationships can be reestablished by adding a check to the check box.

Figure 5–10 Item Link Group Overrides Worksheet

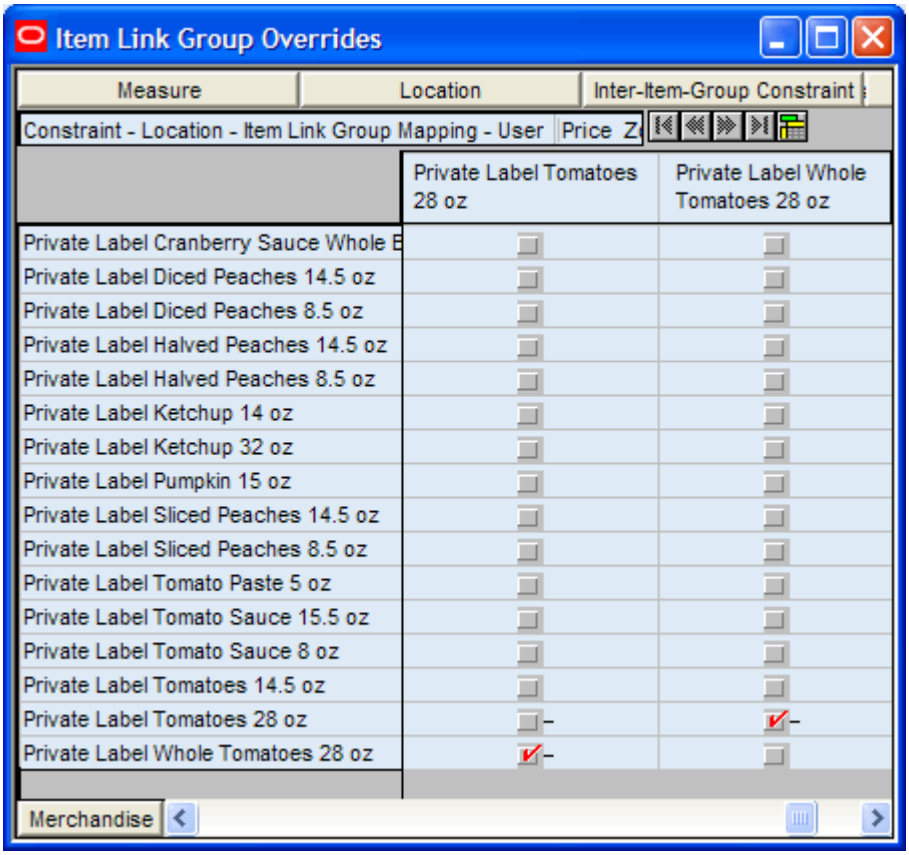


Table 5–10 Item Link Group Overrides Worksheet Measures

Measure	Description
Constraint – Location – Item Link Group Mapping – User	The mapping between LHS items and RHS items for each item link group for a given constraint at a particular location. This mapping is used to translate item group level constraints to the item level for the optimizer.

Competition Constraints Tab

This tab is used to specify competition constraints. Competition constraints can be specified at the item level or at the item group level. This tab contains five worksheets:

- Item Level Worksheet
- Item Group Level Worksheet
- Item - Competition Item Linkage Worksheet
- Competition Item Metrics Worksheet
- Linked Competition Prices Worksheet

Item Level Worksheet

This worksheet is used to specify item level competition constraints. Multiple constraints can be written between the same item and the same competitor.

Figure 5–11 Item Level Worksheet

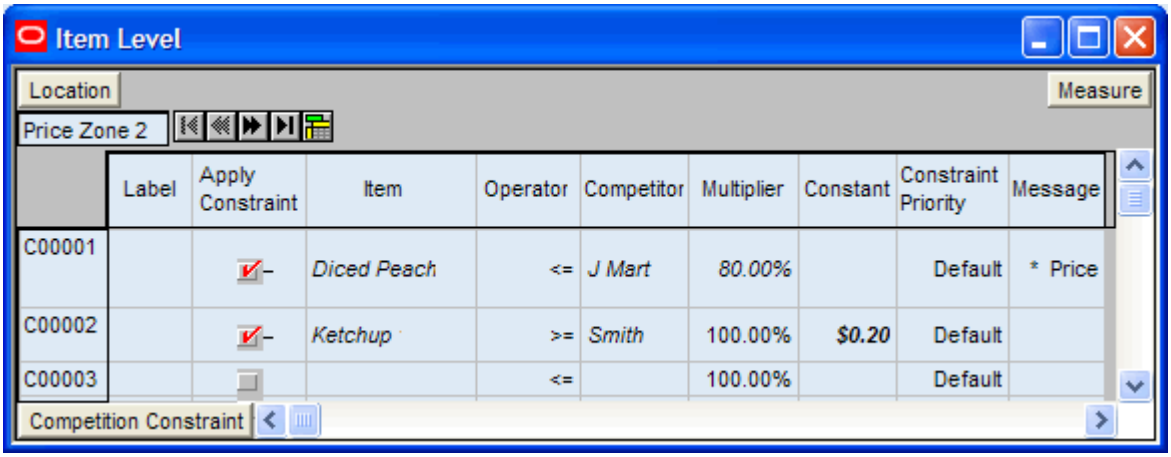


Table 5–11 Item Level Worksheet Measures

Measure	Description
Label	User-defined description of the item.
Apply Constraint	Indicates whether the constraint is applicable for the optimization run.
Item	The LHS Item for the item level competition constraint.
Operator	The comparison operator to relate a retailer's item to the competition.
Competitor	The competitor with whom the particular item is competing.
Multiplier	The RHS multiplier for the competition price.
Constant	The RHS constant.
Constraint Priority	Defines the priority level for the competition item constraint.
Message	Describes the item constraint violation that has occurred.

Item Group Level Worksheet

This worksheet is used to specify competition constraints at an item group level. Constraints are specified using the same parameters as those that are at the item level.

Figure 5–12 Item Group Level Worksheet

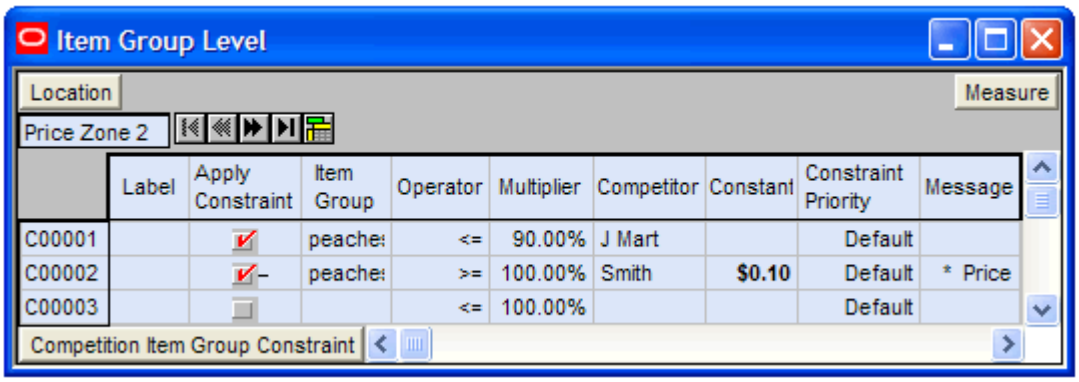


Table 5–12 Item Group Level Worksheet Measures

Measure	Description
Label	User-defined description of the item.
Apply Constraint	Indicates whether the constraint is applicable for the optimization run.
Item Group	The LHS item for the item level competition constraint.
Operator	The comparison operator to relate retailer's item to the competition.
Multiplier	The RHS multiplier for the competition price.
Competitor	The competitor with whom the particular item is competing.
Constant	The RHS constant.
Constraint Priority	Defines the priority level for the item group constraint.
Message	Describes the item constraint violation that has occurred.

Item - Competition Item Linkage Worksheet

This worksheet is used to examine the linkage between the retailer's items and the competition's items. This worksheet cannot be used to modify or override linkages.

Figure 5–13 Item Competition Item Linkage Worksheet

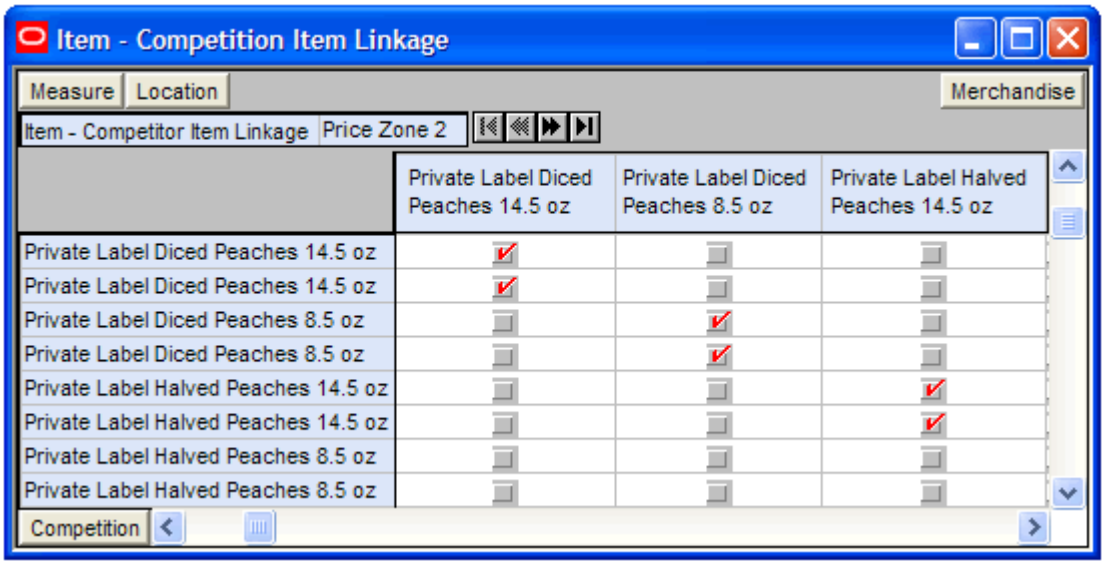


Table 5–13 Item—Competition Item Linkage Worksheet Measures

Measure	Description
Item - Competitor Item Linkage	The linkage between competitor's item(s) and retailer's item.

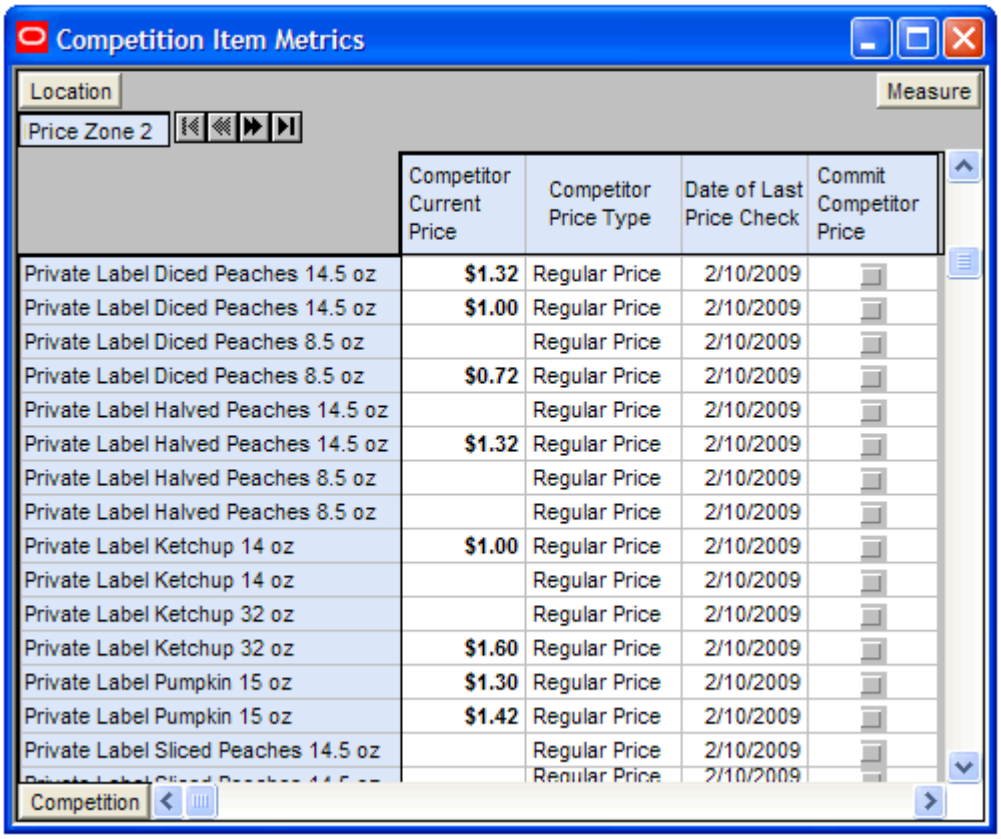
Competition Item Metrics Worksheet

This worksheet is used to examine pricing metrics for competitor items according to current price, the last date when the current price was checked, and the type of price.

Table 5–14 Competition Item Metrics Worksheet Measures

Measure	Description
Competitor Current Price	The current price of the competitor item at a particular location. You may update this by editing the field.
Competitor Price Type	User this field to note the price type for the current price (promotional, regular price, and so on).
Date of Last Price Check	The last date the price was checked.
Commit Competitor Price	Select this option to override the previous competitor price with the price you entered in the Competitor Current Price field.

Figure 5–14 Competition Item Metrics Worksheet



Linked Competition Prices Worksheet

This worksheet is used to compare the retailer's item's original price with the linked items of other competitors. Since each retailer's item could be linked with more than one item of the same competitor, this worksheet displays the range of competitor prices by listing both a minimum and maximum price.

Figure 5–15 Linked Competition Prices Worksheet

	J Mart				Smith			
	Our Current Cost	Our Current Price	Competitor Min. Price	Competitor Max. Price	Our Current Cost	Our Current Price	Competitor Min. Price	Competitor Max. Price
Private Label Diced Peaches	$0.91	$1.09	$1.00	$1.00	$0.91	$1.09	$1.32	$1.32
Private Label Diced Peaches	$0.59	$0.69			$0.59	$0.69	$0.72	$0.72
Private Label Halved Peaches	$1.02	$1.19			$1.02	$1.19	$1.32	$1.32
Private Label Halved Peaches	$0.61	$0.69			$0.61	$0.69		
Private Label Ketchup 14 oz	$0.95	$1.09	$1.00	$1.00	$0.95	$1.09		
Private Label Ketchup 32 oz	$1.48	$1.69	$1.60	$1.60	$1.48	$1.69		
Private Label Pumpkin 15 oz	$1.22	$1.39	$1.30	$1.30	$1.22	$1.39	$1.42	$1.42
Private Label Sliced Peaches	$1.01	$1.19			$1.01	$1.19		
Private Label Sliced Peaches	$0.60	$0.69	$0.70	$0.70	$0.60	$0.69		
Private Label Tomato Paste 5	$0.57	$0.69	$0.50	$0.50	$0.57	$0.69	$0.62	$0.62
Private Label Tomato Sauce 1	$0.75	$0.89	$0.70	$0.70	$0.75	$0.89	$0.72	$0.72
Private Label Tomato Sauce 8	$0.59	$0.69	$0.50	$0.50	$0.59	$0.69		
Private Label Tomatoes 14.5	$0.92	$1.09	$0.90	$0.90	$0.92	$1.09	$0.92	$0.92
Private Label Tomatoes 28 oz	$1.39	$1.59	$1.40	$1.40	$1.39	$1.59	$1.42	$1.42

Table 5–15 Linked Competition Prices Worksheet Measures

Measure	Description
Our Current Cost	Item's cost to the retailer.
Our Current Price	Retailer's current price.
Competitor Min. Price	Competitor's minimum price for all linked items.
Competitor Max. Price	Competitor's maximum price for all linked items.

Price Ladders Tab

This tab is used to manage price ladders. Price ladders created in this tab are independent of scenarios and can be used with any scenario. Price point - price ladders are expressed as a list of prices in RPO. Items can be assigned to only one price ladder at a time.

Price Points Worksheet

This worksheet is used to examine, create, modify or delete price point - price ladders.

Figure 5–16 Price Points Worksheet

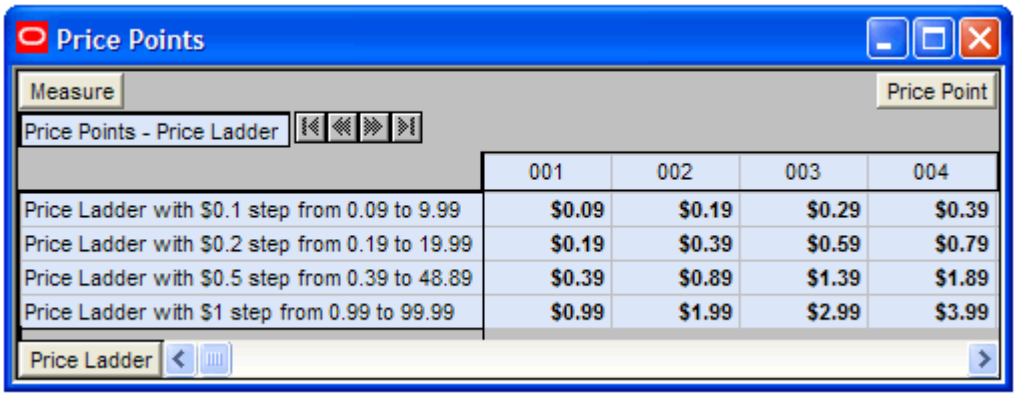


Table 5–16 Price Points Worksheet Measures

Measures	Description
Price Points - Price Ladder	The list of price points for a given price ladder.

Diagnostics Tab

This tab is used after a price optimization or price validation run. It indicates the response of the optimizer and which constraints are relaxed to make the solution feasible or which constraint makes the solution infeasible.

This tab contains eight worksheets:

- Optimization/Verification Response Worksheet
- Violated/Relaxed Items Worksheet
- Violated/Relaxed Item Group Level Item–Specific Constraints Worksheet
- Violated/Relaxed Item Level Item–Specific Constraints Worksheet
- Violated/Relaxed Item Level Inter–Item Constraints Worksheet
- Violated/Relaxed Item Group Level Inter–Item Constraints Worksheet
- Violated/Relaxed Item Level Competition Constraints Worksheet
- Violated/Relaxed Item Group Level Competition Constraints Worksheet

Optimization/Verification Response Worksheet

This worksheet indicates the response of the optimizer after running the price optimization or validation using the Find Constraint Violations or Optimize Prices options in the RegPrice menu. It indicates success or failure, the date and time when the last run was completed, and any recommendations, errors, or other response messages from the optimizer.

Figure 5–17 Optimization Verification Response Worksheet

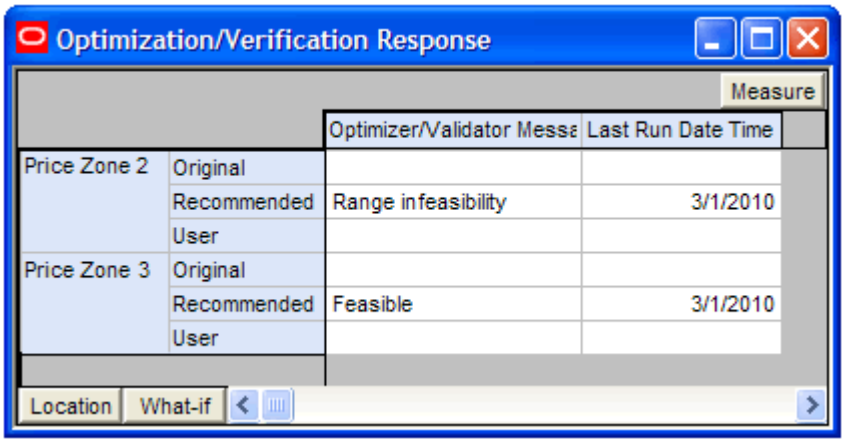


Table 5–17 Optimization/Verification Response Worksheet Measures

Measure(s)	Description
Optimizer/Validator Message	This measure always displays any error or recommendation message from the optimizer or the validator.
Last Run Date Time	Indicates the last date and time when an optimization or validation was run for the price validation.

Violated/Relaxed Items Worksheet

For each validation or optimization run, this worksheet displays the item locations for which constraints were violated or relaxed. For each item location, the worksheet indicates the type of constraint, ranging constraint, and/or inter-SKU constraint that could not be satisfied or has been relaxed.

Figure 5–18 Violated/Relaxed Items Worksheet

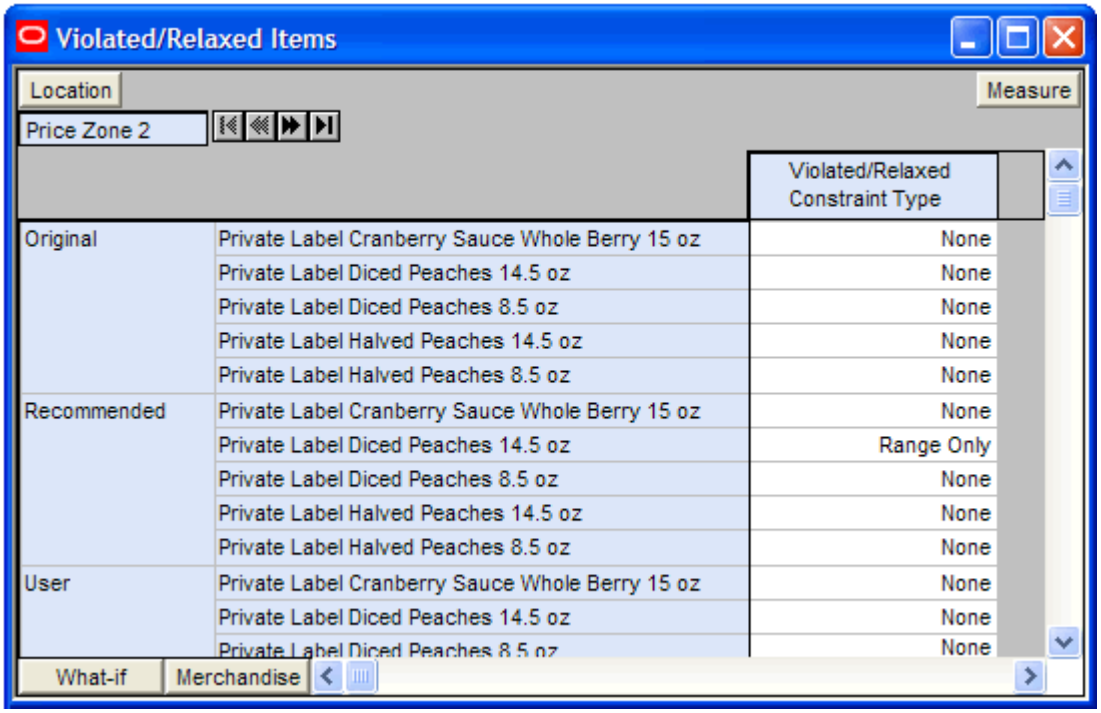


Table 5–18 Violated/Relaxed Item Worksheet Measures

Measure(s)	Description
Violated/Relaxed Constraint Type	This measure indicates whether a constraint was relaxed or violated for a given SKU. Options are: None - No constraints were violated or relaxed. Range Only - A range constraint was violated or relaxed. Inter-SKU Only - An inter-item constraint was violated or relaxed.

Violated/Relaxed Item Group Level Item–Specific Constraints Worksheet

This worksheet displays all item group level item-specific constraints that are related to the SKUs that have violated or relaxed constraints. Such constraints include minimum and maximum price, minimum and maximum margin, price hold, the maximum price change allowed on the item, and the treatment of an item group as a price family.

These constraints are displayed with the same values as in the Item Group Level Worksheet in the Item Constraints tab of the Price Analysis workbook. All other constraints display the measure's N/A value. This worksheet is read-only and cannot be used to modify constraints.

Note: The Return Type measure in this workbook displays whether constraints were violated or relaxed:

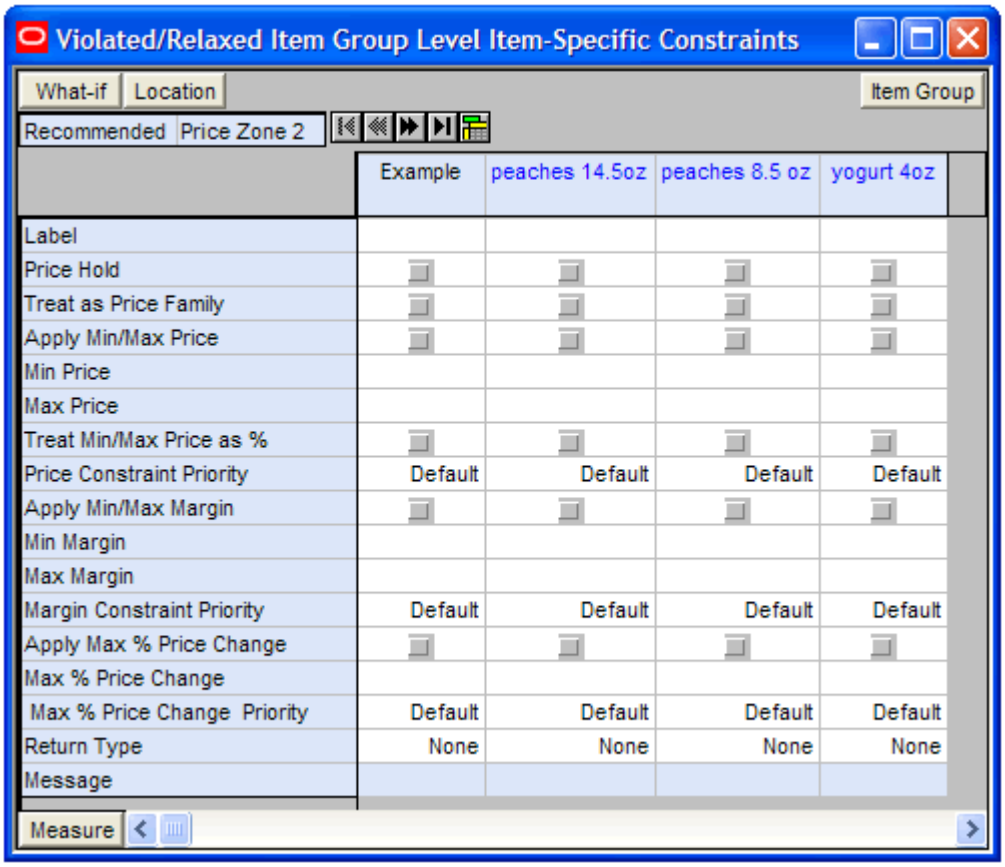
None - No constraints were violated or relaxed.

Range Only - A range constraint was violated or relaxed.

Inter-SKU Only - An inter-item constraint was violated or relaxed.

The Message measure further describes the violation that has occurred.

Figure 5–19 Violated/Relaxed Item Group Level Item-Specific Constraints



Violated/Relaxed Item Level Item–Specific Constraints Worksheet

This worksheet displays all item level item-specific constraints that are related to the SKUs that have violated or relaxed constraints. Such constraints include minimum and maximum price, minimum and maximum margin, price hold, and the maximum price change allowed on the item.

These constraints are displayed with the same values as in the Item Level Worksheet in the Item Constraints tab of the Price Analysis workbook. All other constraints display the measure's N/A value. This worksheet is read-only and cannot be used to modify constraints.

Note: The Return Type measure in this workbook displays whether constraints were violated or relaxed:

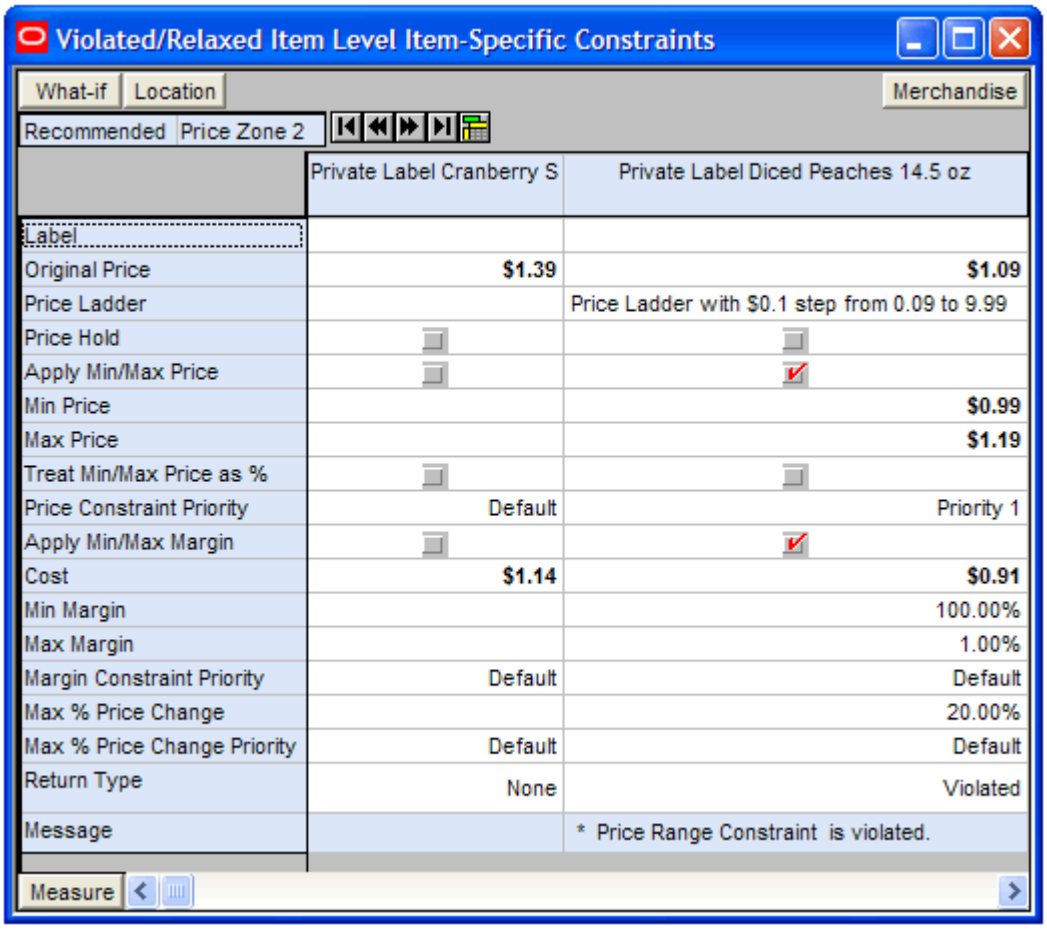
None - No constraints were violated or relaxed.

Range Only - A range constraint was violated or relaxed.

Inter-SKU Only - An inter-item constraint was violated or relaxed.

The Message measure further describes the violation that has occurred.

Figure 5–20 Violated/Relaxed Item Level Item-Specific Constraints



Violated/Relaxed Item Level Inter–Item Constraints Worksheet

This worksheet displays all item level inter-item constraints that are related to the SKUs that had violated or relaxed constraints.

These constraints are displayed with the same values as in the Item Level Worksheet in the Inter-Item Constraints tab of the Price Analysis workbook. All other constraints display the measure's N/A value. This worksheet is read-only and cannot be used to modify constraints.

Note: The Return Type measure in this workbook displays whether constraints were violated or relaxed:

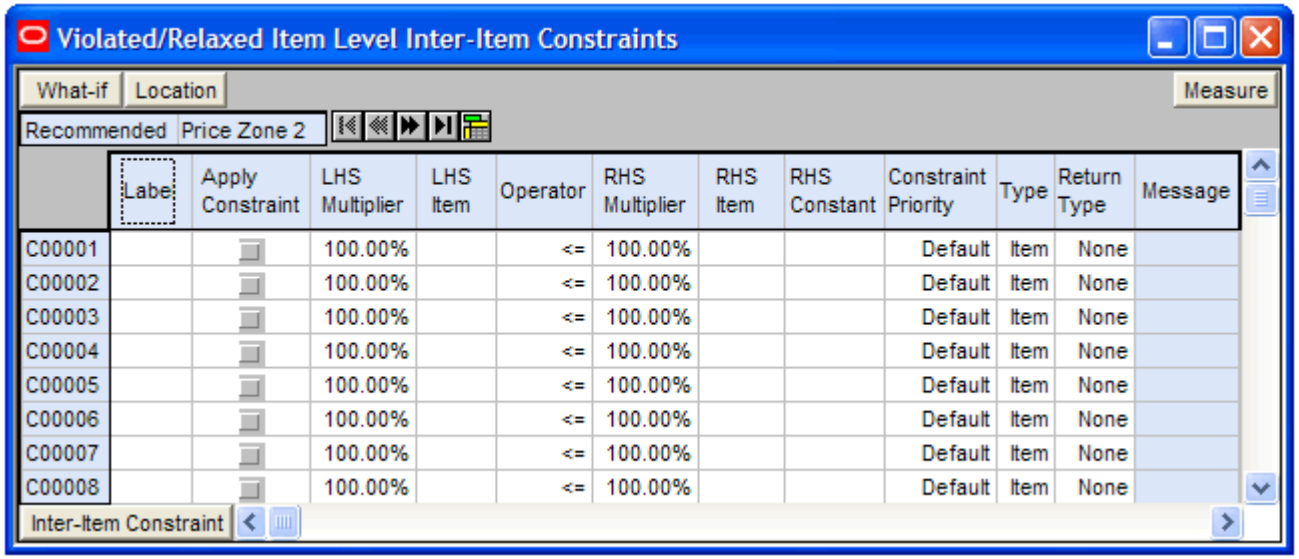
None - No constraints were violated or relaxed.

Range Only - A range constraint was violated or relaxed.

Inter-SKU Only - An inter-item constraint was violated or relaxed.

The Message measure further describes the violation that has occurred.

Figure 5–21 Violated/Relaxed Item Level Inter–Item Constraints Worksheet



Violated/Relaxed Item Group Level Inter–Item Constraints Worksheet

This worksheet displays all item group level inter-item constraints that are related to the SKUs that had violated or relaxed constraints.

These constraints are displayed with the same values as in the Item Group Level Worksheet in the Inter-Item Constraints tab of the Price Analysis workbook. All other constraints display the measure's N/A value. This worksheet is read-only and cannot be used to modify constraints.

Note: The Return Type measure in this workbook displays whether constraints were violated or relaxed:

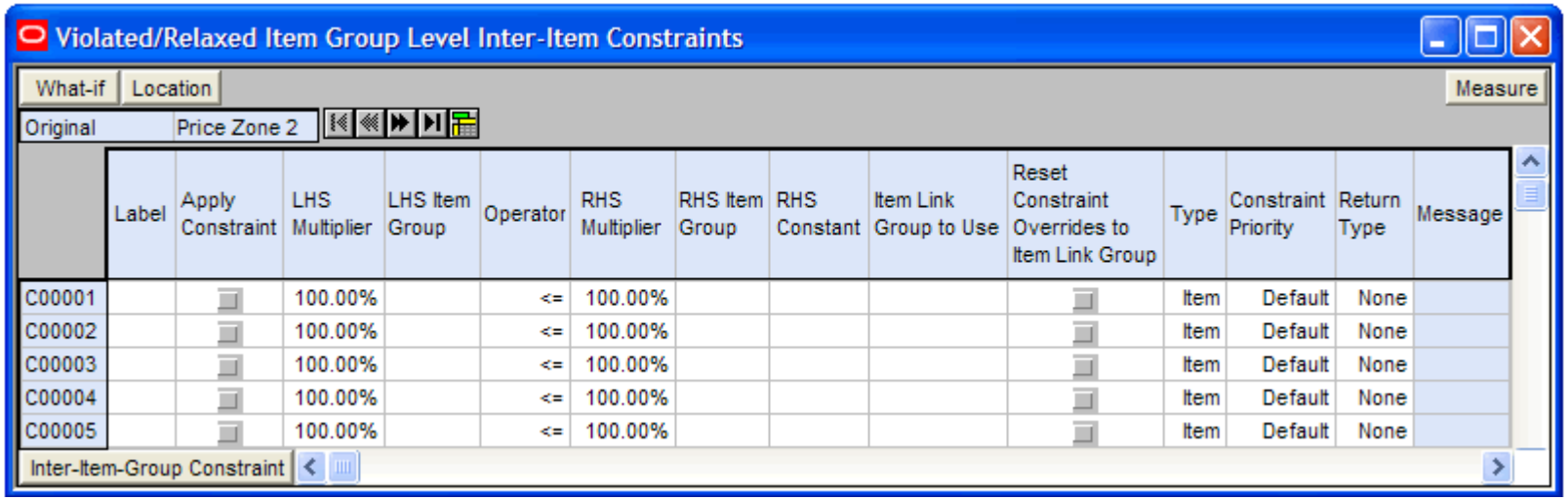
None - No constraints were violated or relaxed.

Range Only - A range constraint was violated or relaxed.

Inter-SKU Only - An inter-item constraint was violated or relaxed.

The Message measure further describes the violation that has occurred.

Figure 5–22 Violated/Relaxed Item Group Level Inter–Item Constraints Worksheet



Violated/Relaxed Item Level Competition Constraints Worksheet

This worksheet displays all item level competition constraints that are related to the SKUs that had violated or relaxed constraints.

These constraints are displayed with the same values as in the Item Level Worksheet in the Competition Constraints tab of the Price Analysis workbook. All other constraints display the measure's N/A value. This worksheet is read-only and cannot be used to modify constraints.

Note: The Return Type measure in this workbook displays whether constraints were violated or relaxed:

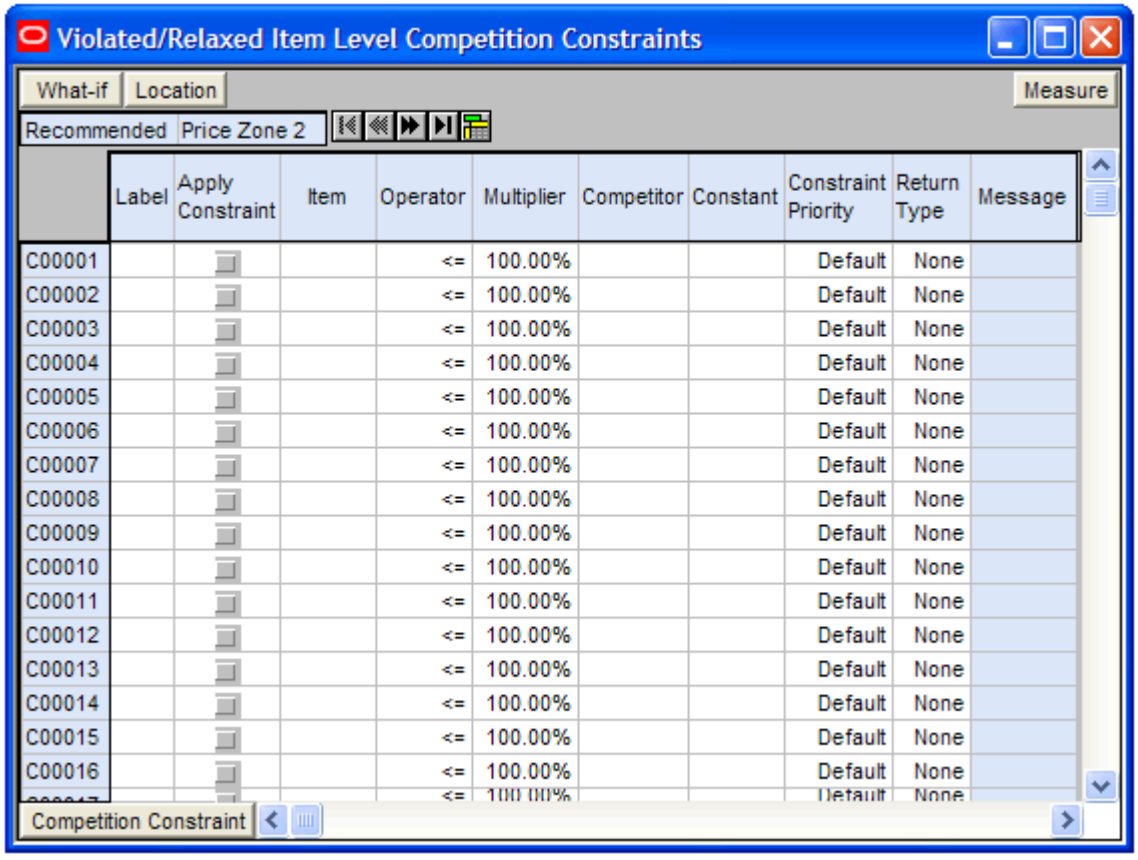
None - No constraints were violated or relaxed.

Range Only - A range constraint was violated or relaxed.

Inter-SKU Only - An inter-item constraint was violated or relaxed.

The Message measure further describes the violation that has occurred.

Figure 5–23 Violated/Relaxed Item Level Competition Constraints



Violated/Relaxed Item Group Level Competition Constraints Worksheet

This worksheet displays all item group level competition constraints that are related to the SKUs that had violated or relaxed constraints.

These constraints are displayed with the same values as in the Item Group Level Worksheet in the Competition Constraints tab of the Price Analysis workbook. This worksheet is read-only and cannot be used to modify constraints.

Note: The Return Type measure in this workbook displays whether constraints were violated or relaxed:

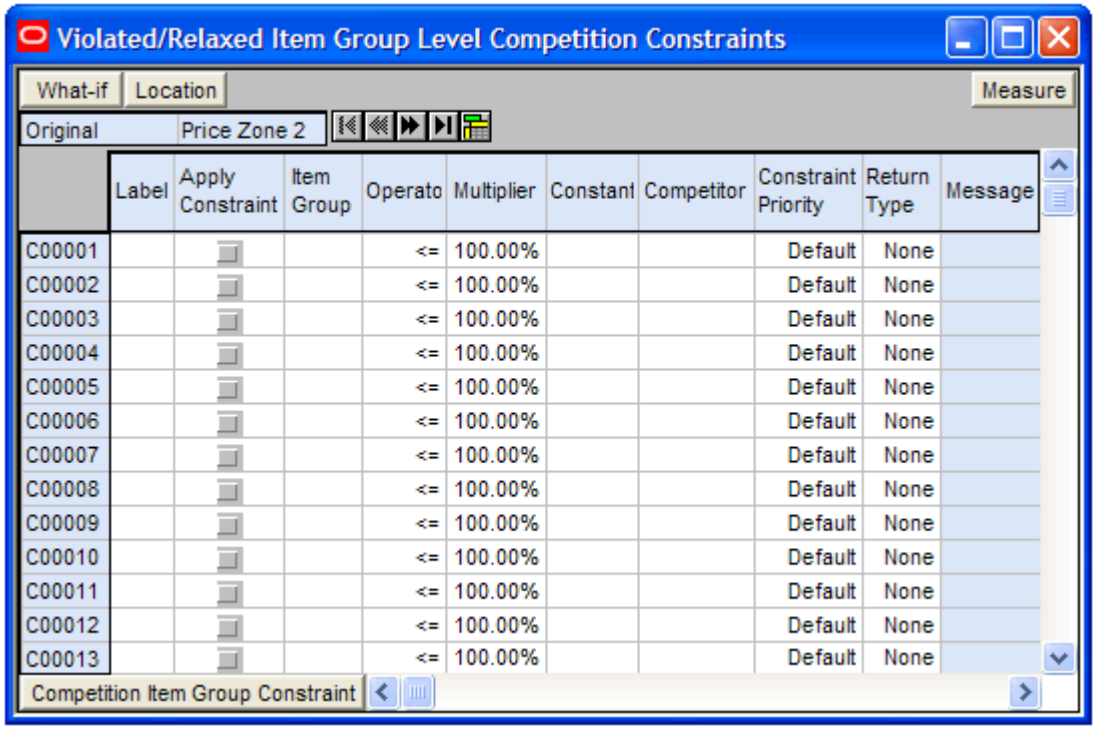
None - No constraints were violated or relaxed.

Range Only - A range constraint was violated or relaxed.

Inter-SKU Only - An inter-item constraint was violated or relaxed.

The Message measure further describes the violation that has occurred.

Figure 5–24 Violated/Relaxed Item Group Level Competition Constraints



Recommendations and What–If Tab

This tab is used to analyze price recommendations from the optimizer side by side with the what-if price overrides. These metrics include gross margin dollars, volume, revenue, and CPI. The workbook also includes the percent change from the original and recommended prices and the total number of price changes made in each case.

The Recommendations and What-if tab contain five worksheets:

- Constraint Verification Console

  Global Metrics Worksheet
- Detail Metrics Worksheet
- Price Entry Worksheet
- What–If Selection for Scenario Worksheet

Constraint Verification Console

The Constraint Verification Console worksheet is used to determine if any prices entered in the Price Entry worksheet are valid for the constraints established at the global, item, and item group levels.

Figure 5–25 Constraint Verification Console Worksheet

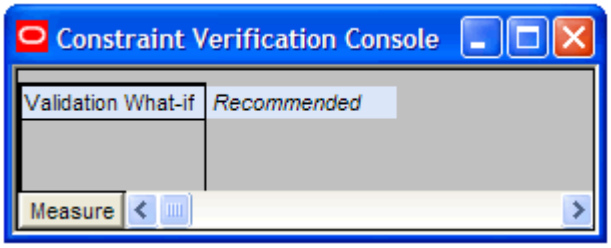


Table 5–19 Constraint Verification Console Worksheet Measures

Measures	Description
Validation What-if	Allows the user to select the what-if case in order to check the price validation.

Global Metrics Worksheet

This worksheet is used to compare demand group level metrics for the original, recommended, and what-if cases. These metrics include gross margin amount, volume, revenue, and CPI.

Figure 5–26 Global Metrics Worksheet

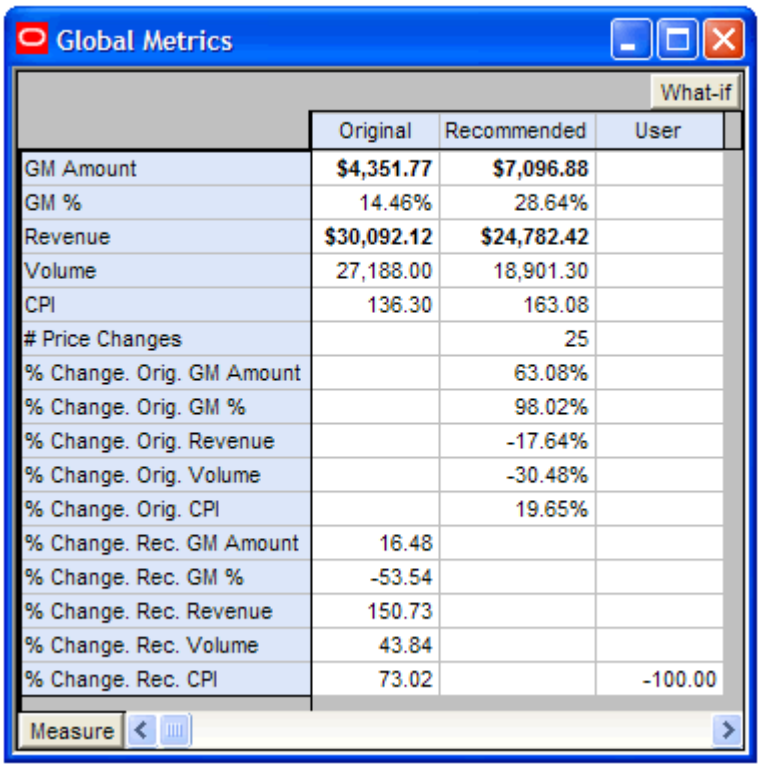


Table 5–20 Global Metrics Worksheet Measures

Measure	Description
GM Amount	Demand group level gross margin amount.
GM%	Demand group level gross margin percent.
Revenue	Demand group level revenue.
Volume	Demand group level volume.
CPI	Demand group level CPI.
# Price Changes	Total number of price changes made.
% Chg Orig. GM Amount	The percent change in gross margin for the original price.
% Chg Orig. GM%	The percent change in gross margin rate for the original price.
% Chg Orig. Revenue	The percent change in revenue for the original price.
% Chg Orig. Volume	The percent change in volume for the original price.
% Chg Orig. CPI	The percent change in CPI for the original price.
% Chg Rec. GM Amount	The percent change in gross margin for the recommended price.
% Chg Rec. GM%	The percent change in gross margin rate for the recommended price.

Table 5–20 (Cont.) Global Metrics Worksheet Measures

Measure	Description
% Chg Rec. Revenue	The percent change in revenue for the recommended price.
% Chg Rec. Volume	The percent change in volume for the recommended price.
% Chg Rec. CPI	The percent change in CPI for the recommended price.

Detail Metrics Worksheet

This worksheet allows the user to observe the item level decision variables for each what-if case side by side. These variables include the item cost, anchor price, original price, recommended price, and the prices for each what-if case side by side with a percent ratio indicating how each what-if case differs from the original and from the optimizer recommendation. These variables also include each item contribution to the gross margin dollars, volume, and revenue and how each what-if case compares to the values with original and recommended prices.

Figure 5–27 Detail Metrics Worksheet

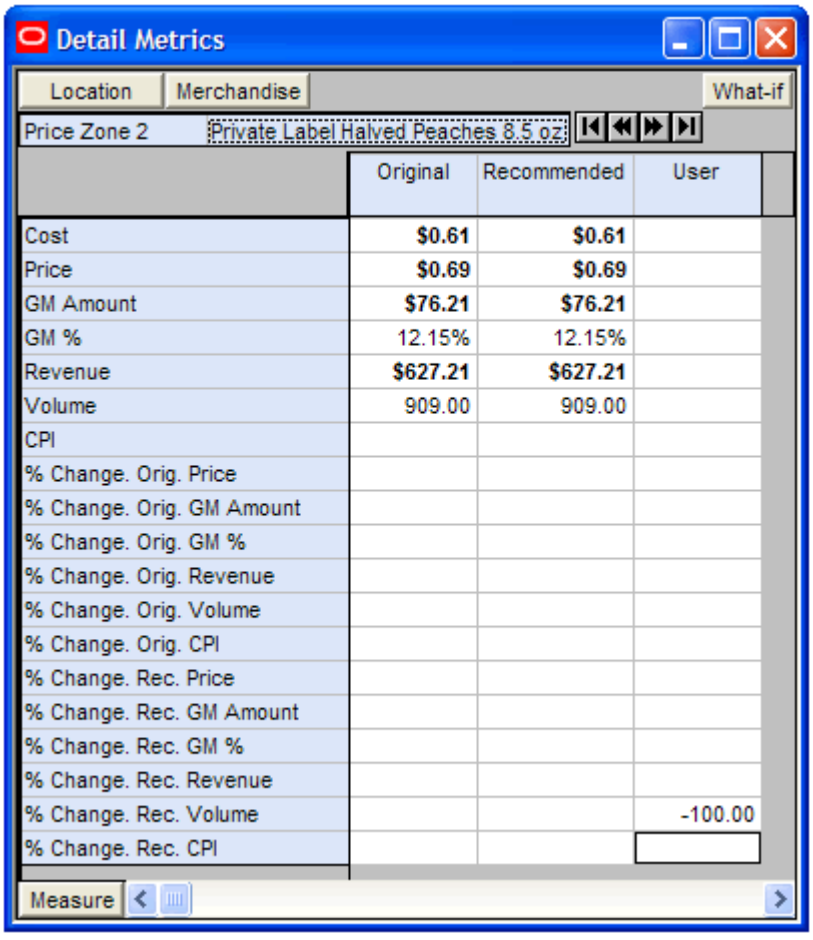


Table 5–21 Detail Metrics Worksheet Measures

Measure	Description
Cost	Item cost.
Price	Item price.
GM Amount	Item gross margin amount.
GM%	Item gross margin rate.
Revenue	Item revenue.
Volume	Item volume.
CPI	Item cost per item.
% Change Orig. Price	The percent change in price for the original price.
% Change Orig. GM Amount	The percent change in gross margin for the original price.
% Change Orig. GM%	The percent change in gross margin rate for the original price.
% Change Orig. Revenue	The percent change in revenue for the original price.
% Change Orig. Volume	The percent change in volume for the original price.
% Change Rec. Price	The percent change in price for the recommended price.
% Change Rec. GM Amount	The percent change in gross margin for the recommended price.
% Change Rec. GM%	The percent change in gross margin rate for the recommended price.
% Change Rec. Revenue	The percent change in revenue for the recommended price.
% Change Rec. Volume	The percent change in volume for the recommended price.
% Change Rec. CPI	The percent change in CPI for the recommended price.

What–If Selection for Scenario Worksheet

Use this worksheet to select and commit a what-if case to the domain for scenario comparison.

Figure 5–28 What–If Selection for Scenario Worksheet

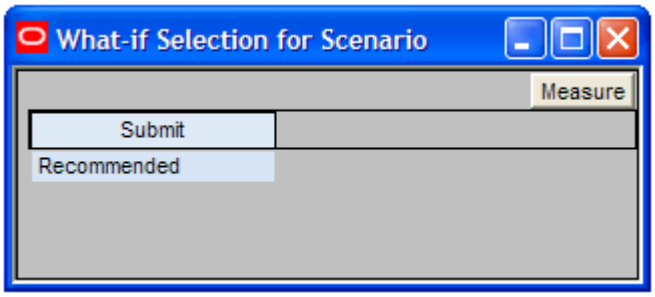


Table 5–22 What–If Selection for Scenario Worksheet Measures

Measures	Description
Submit	The what–if case to submit.

Price Entry Worksheet

This worksheet is used by the manager to override prices. Even though the user is allowed to edit the original and the recommended prices in this worksheet, these edits are discarded for all calculations.

Figure 5–29 Price Entry Worksheet

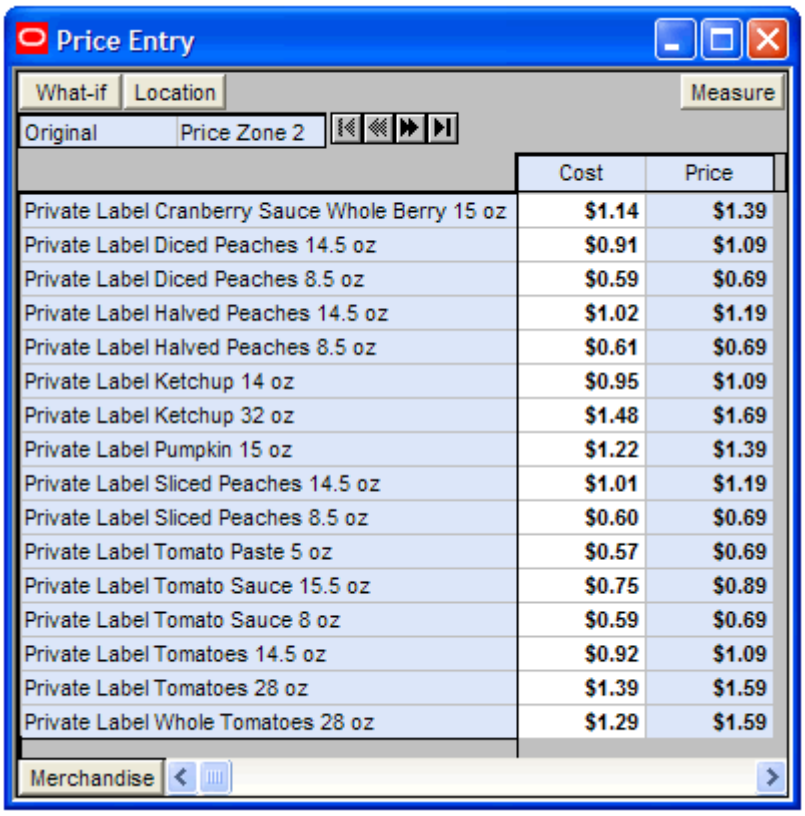


Table 5–23 Price Entry Worksheet Measures

Measures	Description
Cost	A display-only measure to help guide the user in deciding price overrides.
Price	The user-defined price for an item.

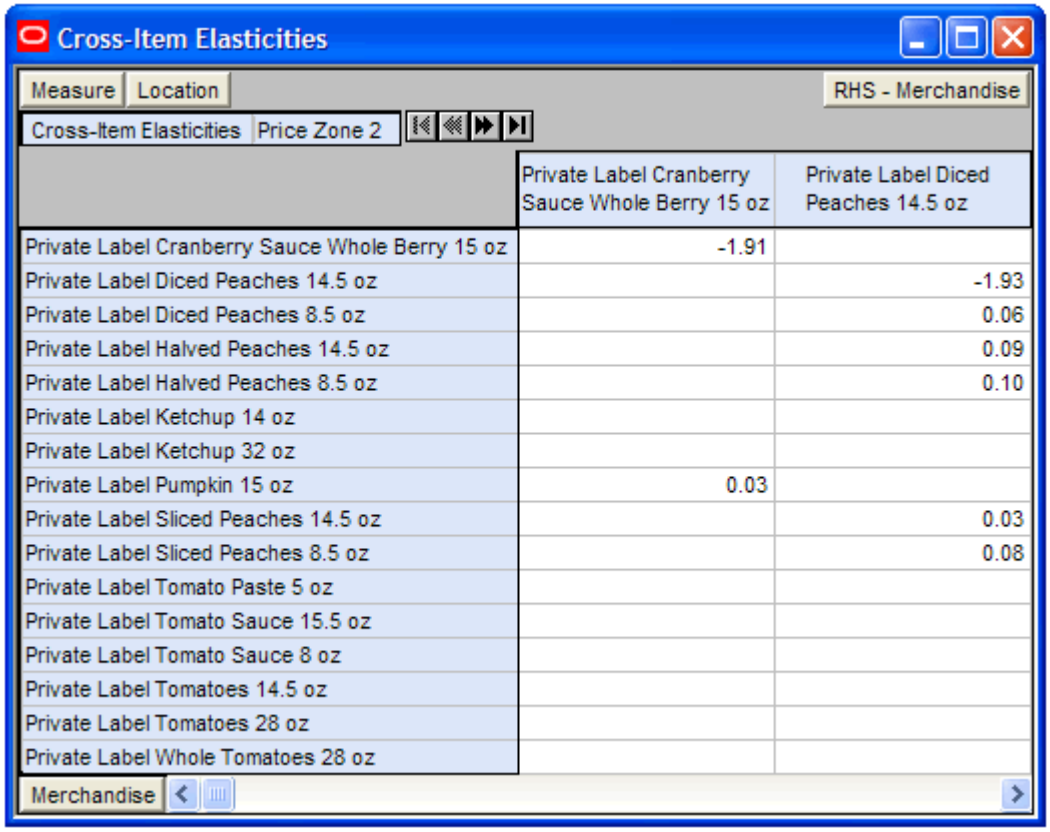
Cross-Item Elasticities Tab

This tab is used to maintain cross-item elasticities which represent the effect of price on volume for items whose demand is correlated with a certain item. Cross-item elasticities are usually loaded and are used during the optimization.

Cross-Item Elasticities Worksheet

This worksheet is used to examine cross-item elasticities.

Figure 5–30 Cross-Item Elasticities Worksheet



	Private Label Cranberry Sauce Whole Berry 15 oz	Private Label Diced Peaches 14.5 oz
Private Label Cranberry Sauce Whole Berry 15 oz	-1.91	
Private Label Diced Peaches 14.5 oz		-1.93
Private Label Diced Peaches 8.5 oz		0.06
Private Label Halved Peaches 14.5 oz		0.09
Private Label Halved Peaches 8.5 oz		0.10
Private Label Ketchup 14 oz		
Private Label Ketchup 32 oz		
Private Label Pumpkin 15 oz	0.03	
Private Label Sliced Peaches 14.5 oz		0.03
Private Label Sliced Peaches 8.5 oz		0.08
Private Label Tomato Paste 5 oz		
Private Label Tomato Sauce 15.5 oz		
Private Label Tomato Sauce 8 oz		
Private Label Tomatoes 14.5 oz		
Private Label Tomatoes 28 oz		
Private Label Whole Tomatoes 28 oz		

Table 5–24 Cross-Item Elasticities Worksheet Measure

Measure	Description
Cross Item Elasticities	Displays the cross-item elasticities for all items.

Price Analysis Sample Workflow

The following sections provide a sample workflow for the Price Analysis workbook.

Creating a What-If Case

By default, the Recommendations and What-if tab has one what-if case already defined which is named User. To create additional what-if cases, perform the following:

1. After building the Price Analysis workbook, go to the Recommendations and What-if tab. Open the Global Metrics worksheet.
2. Right-click the What-if hierarchy.
3. Select **Maintain Positions**, and then select **Add Position**.
4. In the Dynamic Position Maintenance window, double-click the What-If field. The Position Description window appears.
5. In the **Position Name** field, enter a position name.
6. In the **Position Label** field, enter a position label.
7. Click **OK**.

Optimizing Prices for the Recommended Scenario

Before entering prices for the what-if cases you created above, it is recommended that you run the optimizer to optimize prices for the recommended scenario.

To optimize prices:

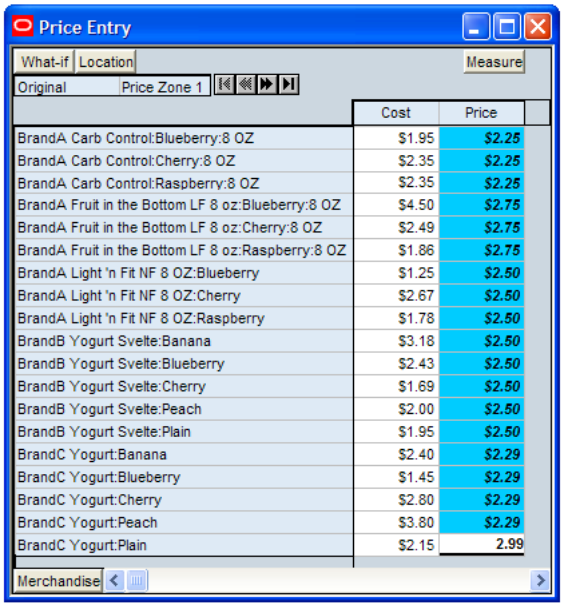
1. From the RegPrice menu, select **Optimize Prices**.
2. A notification window opens displaying a success message. Click **OK**.

Entering Prices

After creating a what-if case, you can enter prices for that case within the Price Entry worksheet.

In the Price Entry worksheet, you have the ability to enter prices for the default user what-if case or any other what-if case you have created. Use the arrow buttons at the top of the window to navigate past the original and recommended what-if cases (as shown in Figure 5–31).

Figure 5–31 Entering Prices for a What–If Scenario Using the Price Entry Worksheet



To enter prices:

1. From the Recommendations and What-if tab, open the Price Entry worksheet. Use the arrows to navigate to the User what-if case or to a what-if case you have created.
2. Using the Price column, enter prices by clicking into the cell of the product whose price you wish to modify.
3. After entering prices, click **Calculate**.
4. From the File menu, select **Commit Now**.

Finding Constraint Violations Using the Constraint Verification Console

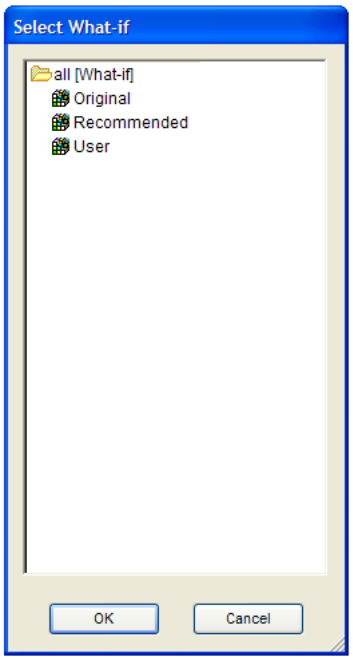
Use the Constraint Verification Console worksheet within the Recommendations and What-if tab to determine if any of the prices you entered in the previous section are valid for the constraints that you established at the global, item, and item group levels.

Before using the constraint verification console, you must first select a what-if case for use within the verification console. The verification console checks for constraint violations using one what-if case at a time. If you have created multiple what-if cases, you will need to repeat this process for each of them.

To select a what-if case:

1. From the Price Analysis workbook, select the Recommendation and What-if tab.
2. Open the Constraint Verification Console worksheet.
3. Click the **Validation What-if** field. The Select What-If dialog box opens as shown in Figure 5–32.

Figure 5–32 Select What–If Dialog Box



4. Click a what-if case to select it. Click **OK**.
5. From the RegPrice menu, select **Find Constraint Violations**.
6. To view constraint violations, open the Optimization/Verification Response worksheet in the Diagnostics tab.
7. For the constraints that you established, review the corresponding worksheets within the Diagnostics tab to review the violations.

Selecting a What-If Case for the Scenario Comparison Workbook

After creating what-if cases and validating those cases using the Find Constraint Violations feature, you can select a what-if case to use later within the Scenario Comparison workbook.

> **Note:** Only one what-if case can be submitted for use in the Scenario Comparison workbook. If you select a different what-if case and submit it after previously submitting another, the previous what-if selection is overwritten with the new one.

To select a what-if case for a scenario:

1. From the Recommendations and What-if tab, open the What-if Selection for Scenario worksheet.
2. From the axis labeled Submit, click once on a what-if case. The Select What-if window opens listing all available what-if cases.
3. Click once on the desired what-if case to select it. Click **OK**.
4. Click **Calculate**.
5. From the File menu, select **Commit Now**.

6

Scenario Comparison Workbook

The Scenario Comparison workbook is used to compare scenarios side by side. For example, a retailer may wish to determine the impact on gross margin dollars when it competes aggressively versus unaggressively. Once different scenarios have been compared, this workbook can be used to submit final prices from a particular scenario.

This workbook contains the following worksheets:

- Global Goals and Constraints Worksheet
- Global Metrics Worksheet
- Item Level Metrics Worksheet
- Competition Worksheet
- Submit Prices Worksheet

Building the Scenario Comparison Workbook

To build a Scenario Comparison workbook, begin by using the Scenario Comparison wizard. To open the wizard:

1. Select **New** from the File menu, or click the **New** toolbar button.
2. From the Reg Price Optimization tab, select the **Scenario Comparison** workbook, and click **OK** to open.
3. Select a demand group. Click **Next**.
4. Select a planning scope. Click **Next**.
5. Select one or multiple scenarios. The scenario labeled "Original" represents current prices.
6. Click **Finish** to build and open the workbook.

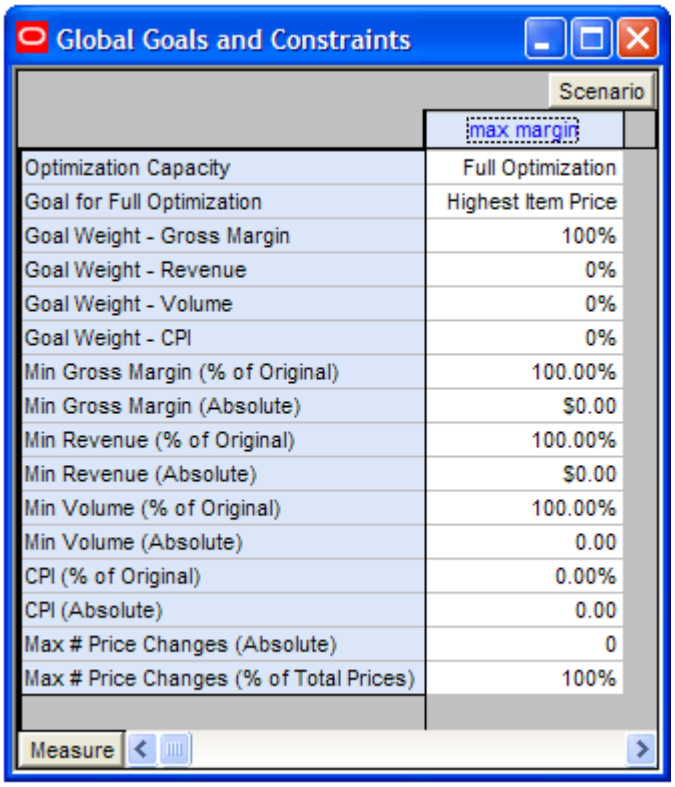
Global Goals and Constraints Worksheet

This worksheet is used to compare the context of the scenario according to the following:

- The last time the optimization was run. This is used to indicate if the scenario has been optimized or not.
- Objective function type and weights of each component.
- Scenario level constraints (for example, limits on gross margins, volume, and revenue).

> **Note:** This worksheet uses the same measures used within the Global Goals and Constraints Worksheet of the Price Analysis workbook.

Figure 6–1 Global Goals and Constraints Worksheet

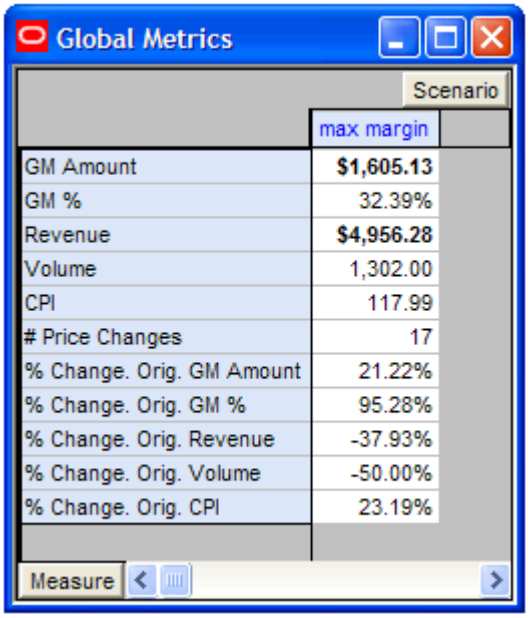


Global Metrics Worksheet

This worksheet is used to compare the overall scenario performance.

Note: This worksheet uses the same measures within the Global Metrics Worksheet of the Recommendations and What-if tab of the Price Analysis workbook.

Figure 6–2 Global Metrics Worksheet

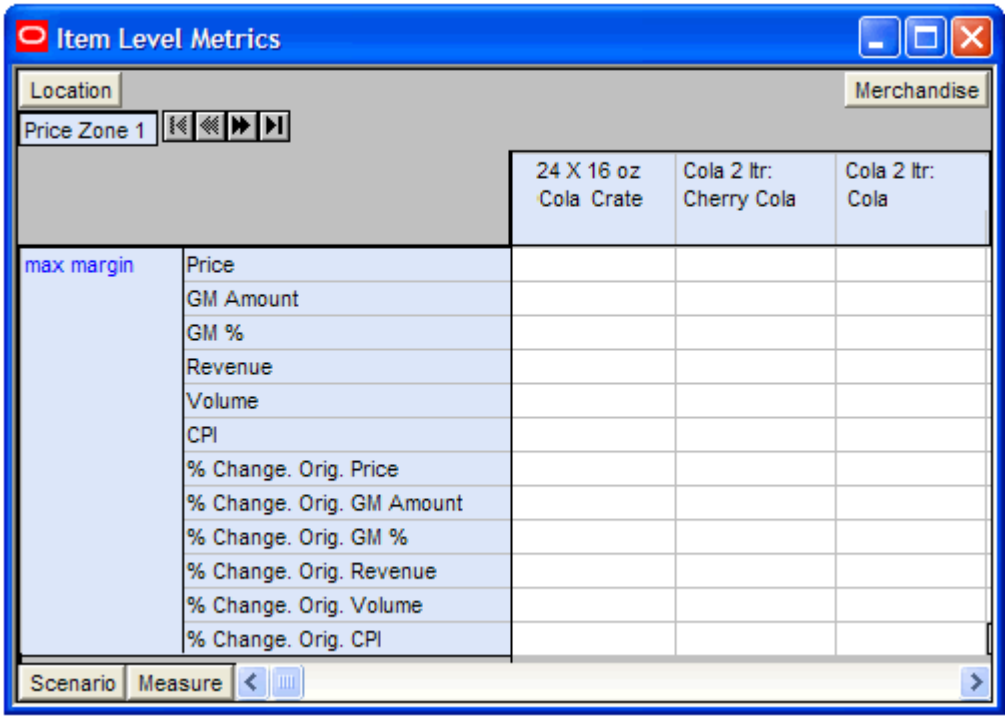


Item Level Metrics Worksheet

This worksheet is used by the manager for comparing the scenario performance at the item level.

Note: The measures used within this worksheet are the same as those used in the Recommendations and What–If Tab worksheets in the Price Analysis workbook.

Figure 6–3 Item Level Metrics Worksheet

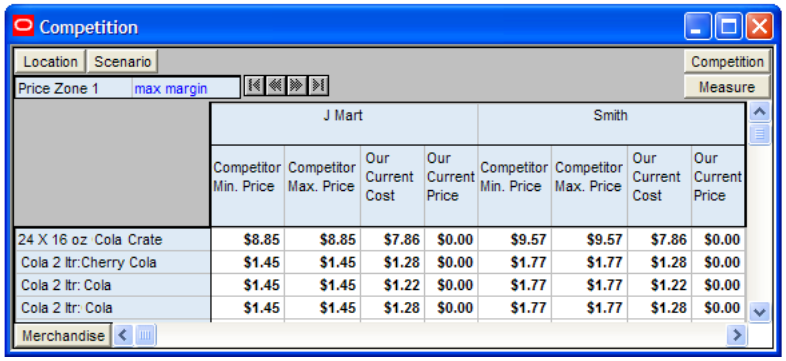


Competition Worksheet

This worksheet is used to compare each scenario's price with that of the competition. To assist with decision making, each item's cost to retailer is also available for side by side comparison.

> **Note:** The measures used within this worksheet are the same as those listed in the Linked Competition Prices Worksheet in the Competition Constraints tab of the Price Analysis workbook.

Figure 6–4 Competition Worksheet



Submit Prices Worksheet

This worksheet is used to select a scenario and invokes the Submit Prices operation.

Figure 6–5 Submit Prices Worksheet

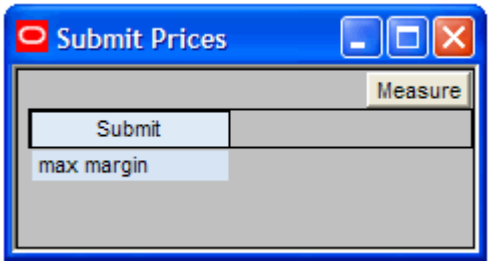


Table 6–1 Submit Prices Worksheet Measures

Measure	Description
Submit	The scenario that must be submitted.

Submitting Prices of a Scenario

To submit prices of a scenario:

1. From the Scenario Comparison workbook, open the Submit Prices worksheet.
2. Click once on the name of any scenario listed on the Submit hierarchy.
3. The Select Scenario window opens. Click once on the name of the desired scenario, and click **OK**.
4. From the RegPrice menu, select **Submit Scenario**.

7

Item Link Group Management Workbook

This workbook can be used to create, modify, or delete item link groups. These item link groups can be used later in inter–item constraints.

This workbook contains one worksheet:

- Item Links Worksheet

Building the Item Link Group Management Workbook

To build the Item Link Management workbook, begin by starting the Item Link Group Management wizard.

1. Select **New** from the File menu, or click the **New** toolbar button.
2. From the Reg Price Optimization tab, select the **Item Link Group Management** workbook, and click **OK** to open the Item Link Group Management wizard.
3. Select a demand group. Click **Next**.
4. Select item link groups. Click **Finish** to open the Item Link Group Management workbook.

Item Links Worksheet

This worksheet is used to examine or modify linkages for item link groups.

Figure 7–1 Item Links Worksheet

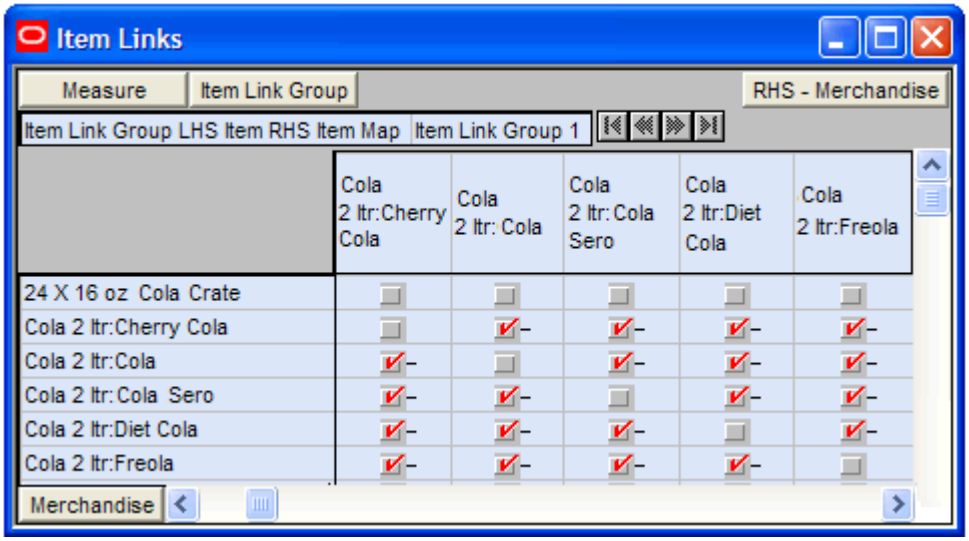


Table 7–1 Edit Item Linkage for Item Link Groups Worksheet Measures

Measure	Description
Item Link Group LHS Item and RHS Item Map	Mapping between LHS items and RHS items for each item link groups.

Modifying Item Link Groups

To modify an item link group:

1. From the Item Links worksheet, locate the item links you wish to modify.
2. Use the check boxes to select or deselect an item.
3. When finished, click **Calculate**.
4. From the File menu, select **Commit Now**.

8

Optimizer Administration Workbook

This workbook is used to examine optimizer parameters (such as minimum number of optimization passes allowed). Parameters listed within this workbook are read-only.

The Optimizer Administration workbook contains one worksheet:

- Optimizer Administration Worksheet

Building the Optimizer Administration Workbook

To build the Optimizer Administration workbook, begin by starting the Optimizer Administration wizard.

1. Select **New** from the File menu, or click the **New** toolbar button.
2. From the Reg Price Administration tab, select the **Optimizer Administration** workbook, and click **OK**.

The Optimizer Administration workbook opens at the Optimizer Administration worksheet.

Optimizer Administration Worksheet

This worksheet is used to examine tuning parameters for the price optimization algorithm.

Figure 8–1 Optimizer Administration Worksheet

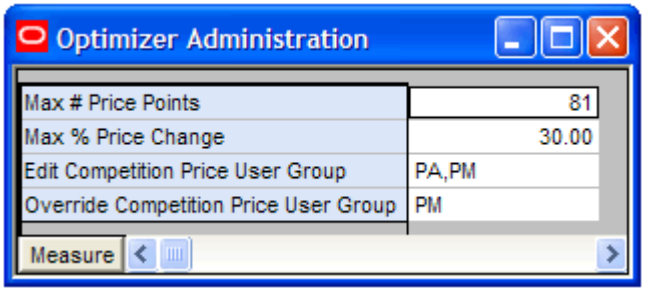


Table 8–1 Optimizer Administration Worksheet Measures

Measure	Description
Max# of Price Points	Limits the number of price points. This parameter is used to control the optimizer's computation time.
Max% Price Change	Stores the user entry for the maximum default price change allowed on any item. If a maximum price change percentage is not given for an item, this value is used as default.
Edit Competition Price User Group	Displays the users who are allowed to change the competition item prices for what-if.
Override Competition Price User Group	Displays the users who are allowed to change and commit competition item prices.

9

Like Items

The Like Item workbook is used to give parameters to new items by assigning like items. When a new item is assigned a like item, the user can selectively copy demand, cost, and price information from the like item.

This workbook contains one worksheet:

- Like-Items Worksheet

Building the Like-Items Workbook

In order to build the Like-Item workbook, you must use the Like-Item wizard. To use the wizard:

1. Select **New** from the File menu, or click the **New** toolbar button.
2. From the Reg Price Administration tab, select the **Like Item** workbook, and click **OK**. The Like Item wizard opens.
3. Select the items that you wish to include in the workbook. These items should include both the new items and the like items that you wish to associate the new items with. Click **Next**.
4. Select the price zones or stores for which you want the demand parameters to apply to. Click **Next**.
5. Select the weeks that you wish to include. The weeks you select do not have to be consecutive. Click **Finish** to open the Like Item workbook

Like-Items Worksheet

This worksheet allows you to select a like item and choose which parameters you would like to apply to the new item: cost, price, base demand, demand group, or price elasticity.

Figure 9–1 Like-Items Worksheet

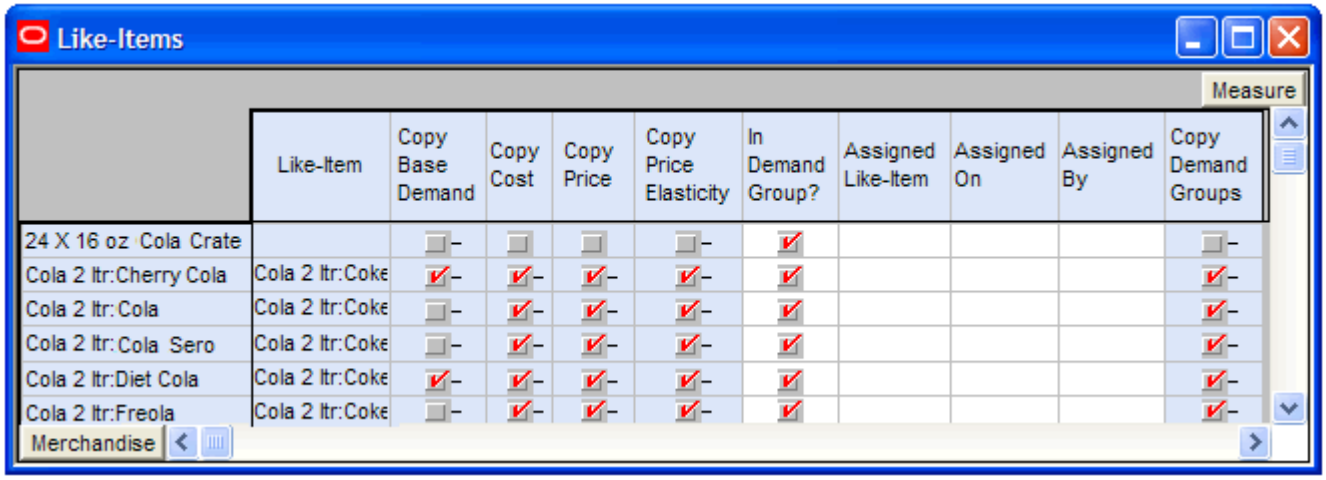


Table 9–1 Submit Prices Worksheet Measures

Measure	Description
Like-Item	Identifies the like item you wish associate with the new item.
Copy Base Demand	Select the check box next to this item to indicate that you want to use the like item's base demand.
Copy Cost	Select the check box next to this item to indicate that you want to use the like item's cost.
Copy Price	Select the check box next to this item to indicate that you want to use the like item's price.
Copy Price Elasticity	Select the check box next to this item to indicate that you want to use the like item's price elasticity.
In Demand Group?	This check box indicates that the item belongs to some demand group(s).
Assigned By	The person who assigned the like item to the item.
Assigned Like-Item	The like item that was assigned to the item.
Assigned On	The date that the like item is assigned to the item.
Copy Demand Groups	Select the check box next to this item to indicate that you want to use the like item's demand group(s).

To assign like items:

1. In the Like-Items worksheet, locate the item that you would like to assign a like item to. In Like-Item column for that item's row, click the cell. The Select Item window will appear. Select the item that you would like to use as the like item. Click **OK**.

2. Select the attributes of the like item that you want to use for the item. You may choose Copy Base Demand, Copy Cost, Copy Demand Groups, Copy Price, and/or Copy Price Elasticity.
3. To perform the copy, select **Calculate**.
4. From the File menu, select **Commit Now**.

The next time you open the Like Item worksheet, it will display the username of the person who assigned the like item assignment, the like item assigned, and the date that it was assigned.

10

Analyst - Category Assignment Workbook

This workbook is used to map price managers to their categories. Price managers can only change prices for categories that have been assigned to them using this workbook. Price managers cannot build the Price Analysis workbook if the selected demand group includes an item that belongs to a category to which the manager does not have permission.

This workbook contains one worksheet:

- Analyst - Category Assignment Worksheet

Building the Analyst - Category Assignment Workbook

To build the Analyst - Category Assignment workbook, begin by using the Analyst - Category Assignment wizard. To open the wizard:

1. Select **New** from the File menu, or click the **New** toolbar button.
2. From the Reg Price Administration tab, select **Analyst - Category Assignment**, and click **OK** to open the Analyst - Category Assignment wizard.
3. Select the managers to whom you want to assign categories. Click **Next**.
4. Select a category to assign to the manager.
5. Click **Finish**. The Analyst - Category Assignment workbook opens. The manager selected from the wizard appears within the workbook.

Analyst - Category Assignment Worksheet

This worksheet allows the user to manually assign categories to price managers. The worksheet does not check to see if the same category has been assigned to more than one price manager.

Figure 10–1 Analyst - Category Assignment Worksheet

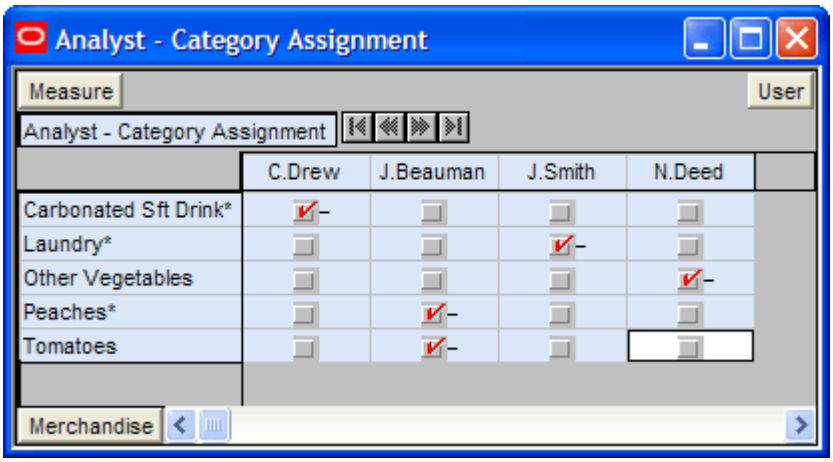


Table 10–1 Analyst - Category Assignment Worksheet Measures

Measure	Description
Category Analyst Management	Stores a mask that specifies the categories that a user can alter the prices for.

Adding or Removing Categories Assigned to an Analyst

To change the categories assigned to an analyst:

1. From the Analyst - Category Assignment worksheet, locate the column where the analyst's name is listed.
2. Select or deselect items from the merchandise hierarchy as desired to change the categories assigned to the analyst.
3. When finished, click **Calculate**.
4. From the File menu, select **Commit Now**.

Glossary

competition

Competition refers to the competitor's pricing for a given item. Competition is definable by item.

demand group

A demand group is a collection of items that should be optimized together.

item

An item in Regular Price Optimization is merchandise that is being optimized. Items are located on the same level within the product hierarchy where the demand and cross-item elasticities are produced.

item link groups

Item link groups are definitions that link one item to another. They are primarily used for inter–item constraints.

item group

Item groups are logical groupings of items within a demand group.

planning scope

Identifies the begin and end dates for the planning season and price zones for which planning is being performed.

price zone

Price zones are store clusters that have been created to support different pricing groups by merchandise division. Pricing zones are established so all stores within the pricing zones have the same price for any single item.

scenario

A configuration of constraints and objectives. In Regular Price Optimization, a user can create many scenarios for a given demand group and compare these scenarios side by side in terms of the decision variables to choose a set of prices that best achieve the objectives.