Oracle® Retail Analytic Parameter Calculator for Regular Price Optimization

User Guide for the RPAS Fusion Client

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Oracle Retail Analytic Parameter Calculator for Regular Price Optimization User Guide for the RPAS Fusion Client, Release 13.2.3

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Primary Author: Anirudha Accanoor

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Preface

The Oracle Retail Analytic Parameter Calculator for Regular Price Optimization User Guide for the Fusion Client describes the application's user interface and how to navigate through it.

Audience

This User Guide is for users and administrators of Oracle Retail Analytic Parameter Calculator for Regular Price Optimization application. This includes merchandisers, buyers, business analysts, and administrative personnel.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible to all users, including users that are disabled. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at http://www.oracle.com/accessibility/.

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Related Documentation

For more information, see the following documents in the Oracle Retail Analytic Parameter Calculator for Regular Price Optimization Release 13.2.3 documentation set:

- *Oracle Retail Analytic Parameter Calculator for Regular Price Optimization Implementation Guide*
- *Oracle Retail Analytic Parameter Calculator for Regular Price Optimization Installation Guide*
- *Oracle Retail Analytic Parameter Calculator for Regular Price Optimization Release Notes*
- *Oracle Retail Analytic Parameter Calculator for Regular Price Optimization User Guide for the RPAS Classic Client*

For more information on RPAS, refer to the Oracle Retail Predictive Application Server Release 13.2.3 documentation set.

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When contacting Customer Support, please provide the following:

- Product version and program/module name
- 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, 13.2.3). 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
Introduction

Oracle Retail Analytic Parameter Calculator for Regular Price Optimization (APC-RPO) is an analytic application that enables you to generate price elasticities that are necessary for the Oracle Retail Regular Price Optimization application. Price elasticities include self elasticities, HALO cross elasticities, and cannibalization cross elasticities.

This document introduces you to APC-RPO and describes how you can use the application. It also describes the views and measures set up in the application. It includes the following chapters:

- Chapter 1, "Introduction" – The current chapter introduces you to the APC-RPO application and the related concepts. It also highlights how you can use the application taskflow.
- Chapter 2, "Administration Task" – This chapter describes the views and measures included in the Administration task.
- Chapter 3, "Maintenance Task" – This chapter describes the views and measures included in the Maintenance task.
- Chapter 4, "Analysis and Approval Task" – This chapter describes the views and measures included in the Analysis and Approval task.

About Regular Price Optimization

Oracle Retail Regular Price Optimization (RPO) enables users to optimize item prices and reach a desired goals, such as gross margin, revenue, and so on. To provide optimal results, the application requires item self elasticities, HALO cross elasticities, and cannibalization cross elasticities as inputs. The APC-RPO application is designed to calculate and provide information on the elasticities to the RPO application.

Getting Started with APC-RPO

The APC-RPO application includes the following tasks that enable you to set up parameters and, once the elasticities are calculated, review the calculated results:

- Administration Task
- Maintenance Task
- Analysis and Approval Task

The APC-RPO application provides the following business workflow:

1. Access the Administration task to set up the default parameters and threshold values. For more information on the measures and views in the Administration task, see Administration Task.

2. Access the Maintenance task to override the default parameters and threshold values at a specific item and location (price zone) intersection. For more information on the measures and views in the Maintenance task, see Maintenance Task.
3. Once all the parameters are set up, the APC-RPO batch program is run. This batch program includes a sequence of scripts that take the parameters you set up as inputs to calculate the price elasticities. For more information on the batch program, refer to the *Oracle Retail Analytic Parameter Calculator for Regular Price Optimization Implementation Guide*.
4. Once the batch program is complete, all information on price elasticities is made available through the measures included in the Analysis and Approval task. Access the Analysis and Approval task to review the statistics of data filtering, generated price elasticities, and the resolved elasticities at the lowest level. You can then adjust and approve the price elasticities. For more information on the measures and views in the Analysis and Approval task, see Analysis and Approval Task.

Note: Only approved elasticities will be used in the escalations export file.

Accessing APC-RPO

APC-RPO is an Oracle Retail Predictive Application Server (RPAS) based application. The APC-RPO solution is installed on an RPAS Server. To access the application, you must log on to one of the following RPAS Clients:

- RPAS Fusion Client – This document describes how you can access and use APC-RPO from the RPAS Classic Client.
- RPAS Classic Client – For more information on accessing and using APC-RPO from the RPAS Classic Client, refer to the *Oracle Retail Analytic Parameter Calculator for Regular Price Optimization User Guide for the Classic Client*.

This section highlights the common tasks of logging on to a solution, opening an existing workbook, and creating new workbooks. It includes the following topics:

- Logging On to APC-RPO
- Opening an Existing Workbook
- Creating a New Workbook

Note: In addition to the APC-RPO documentation, ensure that you also refer to the RPAS documentation for specific information on various base RPAS features.

Logging On to APC-RPO

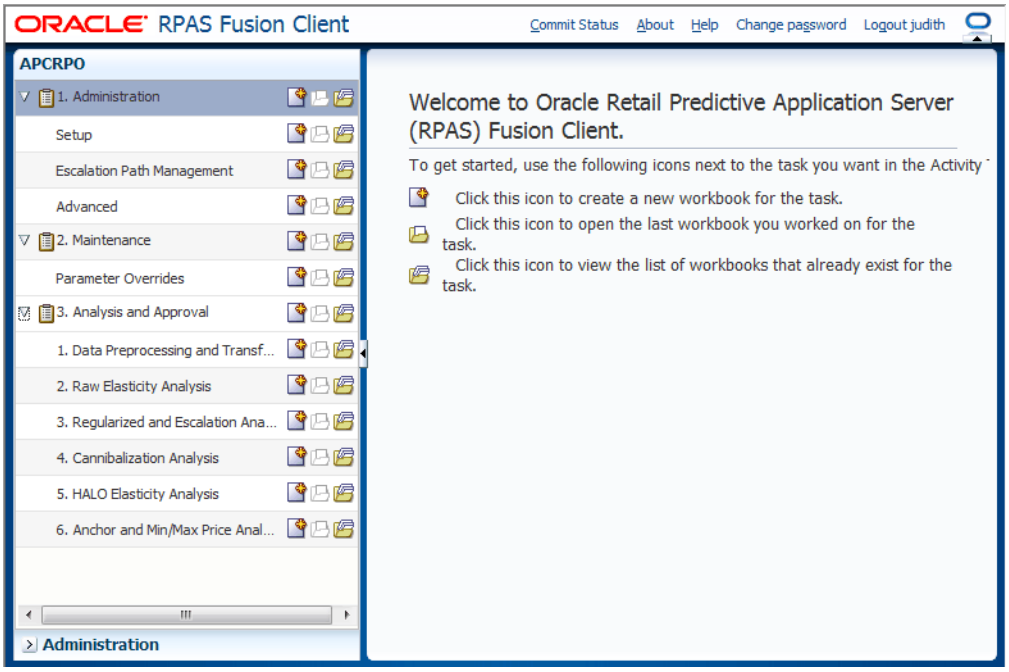
To log on to the APC-RPO application using the RPAS Fusion Client:

1. In the **Address** bar of a Web browser, enter the Fusion Client URL, and press **Enter**. The **Fusion Client Login** page appears.

Figure 1–1 RPAS Fusion Client Login Page

2. On the **Login** page, enter the user name and password set up for APC-RPO, and then select the APC-RPO domain from the **Profile** drop-down list.
3. Click **Login**. The window refreshes and the RPAS Fusion Client home screen appears with the APC-RPO task flow displayed in the left navigation pane.

Figure 1–2 RPAS Fusion Client Home Screen



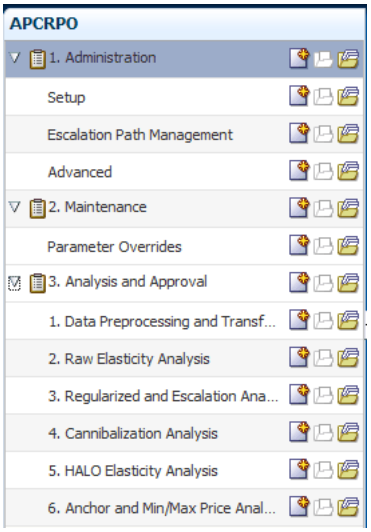
Opening an Existing Workbook

Once you log on to the application, a taskflow pane appears that enables you to navigate through the activities and tasks associated with your user account.

To open an existing workbook:

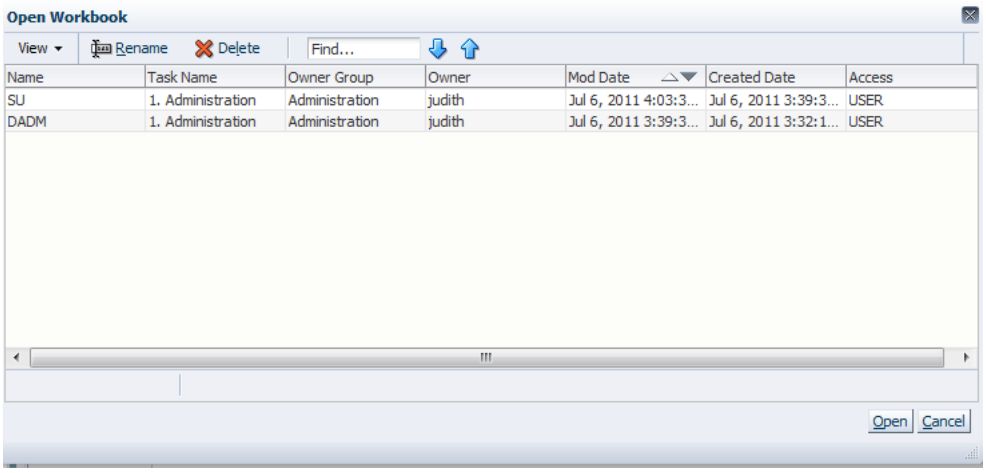
1. On the taskflow pane, click the **Show List of Workbooks** icon next to the task/step you want.

Figure 1–3 APC-RPO Taskflow Pane



The **Open Workbook** window appears.

Figure 1–4 Open Workbook Window



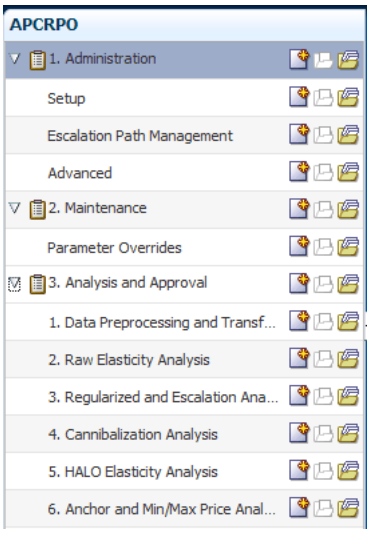
2. Select the workbook you want, and click **Open Workbook**.

Creating a New Workbook

To create a new workbook:

- In the taskflow, click the **Create New Workbook** icon next to the task/step you want.

Figure 1–5 APC-RPO Taskflow Pane



In case you selected **Administration** from the list, the **Administration** workbook appears directly. When you select **Maintenance** or **Analysis and Approval** from the list, a workbook wizard appears. This workbook wizard enables you to select and view specific (or all) item and price zone combination. For more information on opening a specific APC-RPO workbook, refer to the relevant chapter in this guide.

Note: For more information on the other tabs that appear in the New dialog box, refer to the Oracle Retail Predictive Application Server documentation.

APC-RPO Concepts

This section highlights some of the commonly used analytical terms in the application and through this guide. It includes the following:

- Advanced Parameter Calculator (APC)
- Cannibalization
- Cross Elasticity
- Elasticity
- First Differences
- HALO
- Raw Elasticity
- Regularized Elasticity
- Second Differences
- Self Elasticity

Advanced Parameter Calculator (APC)

Several Oracle Retail planning applications include an analytic APC module or integrate with a related APC application (such as APC-RPO). APC modules or applications enables users to calculate the necessary parameters required by an Oracle Retail planning application before hand.

Cannibalization

A measure of the amount in sales of a product that can replace the sales of another product.

Cross Elasticity

The effect on the demand of a product because of a change in the price for a different product.

Elasticity

The effect on the demand of a product because of change in the price for the same product.

First Differences

First differences are calculated based on the difference of logarithms of gross sales units and the relevant average logarithm of gross sales units for a specific item/location. The same transformation is applied to ticket prices. First Differences are part of an intermediate step in the data filtering process.

HALO

The measure of the amount in sales of a product that can enhance the sales of another product.

Raw Elasticity

In APC-RPO, raw elasticities are self elasticities at an intermediate stage of processing. It is calculated from the pre-processed filtered price and sales information. It represents all the items in a price zone.

Regularized Elasticity

In APC-RPO, a regularized elasticity is a raw elasticity that has been further processed and smoothed.

Second Differences

Second differences are calculated based on the difference between the first differences (logarithm of gross sales units and the logarithm of ticket prices) and the relevant averages for a specific department/week. Similar to first differences, the second differences are part of an intermediate step in the data filtering process.

Self Elasticity

This term is identical to "Elasticity". It is used to differentiate the term Elasticity from Cross Elasticity.

2

Administration Task

The Administration task enables you to set up parameters and escalation paths for the application. This chapter describes the views and the relevant parameters that appear in the Administration task. It includes the following:

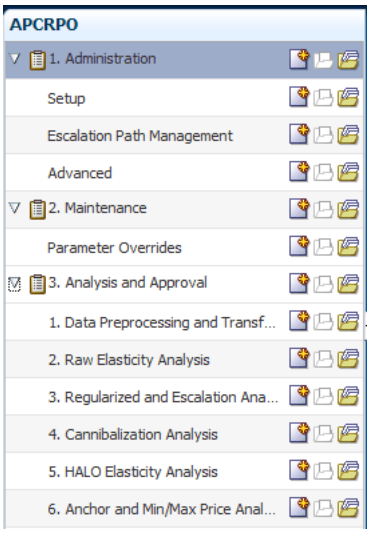
- Accessing the Administration Task
- Setup Step
- Escalation Path Management Step
- Advanced Step

Accessing the Administration Task

To access the Administration task:

1. Log on to the RPAS Fusion Client. For more information, see Logging On to APC-RPO.
2. In the **Taskflow**, under **Administration**, click the **Create New Workbook** icon next to the step you want. You can also choose to click the **Create New Workbook** icon next to **Administration**.

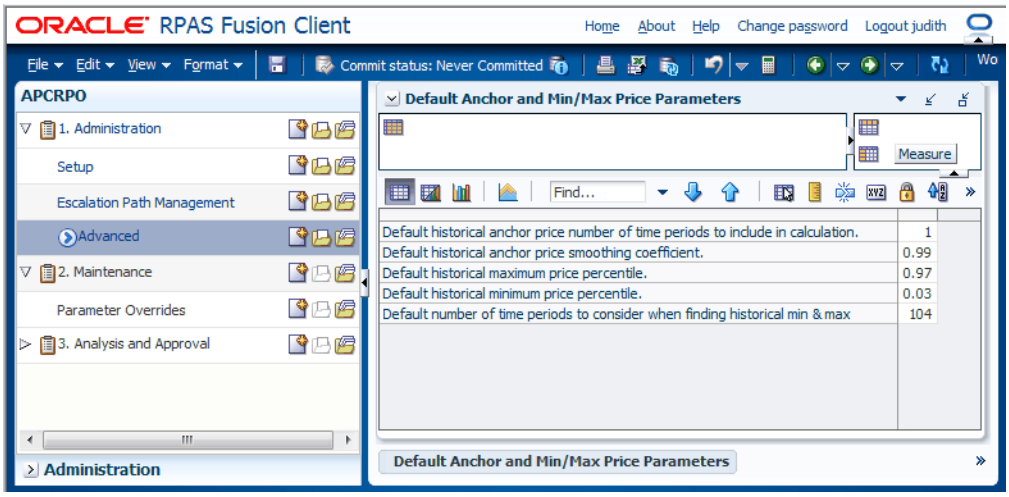
Figure 2–1 APC-RPO Taskflow Pane



The relevant view appears.

Note: To open an existing workbook, click the **Show List of All Workbooks** icon next to the task/step you want. The **Open Workbook** window appears and enables you to open one of the existing workbooks.

Figure 2–2 Administration Workbook with the Advanced View Open



Setup Step

The Setup step includes the Batch Setup view that provides you the ability to enable or disable data processes when the APC-RPO batch is run.

The following table describes the measures in the Batch Setup view:

Table 2–1 Measures in the Batch Setup View

Measure	Description
Enable History Data Filtering	Select this check box to enable the history data filtering process.
Enable Data Transformation and Filtering	Select this check box to enable the transformation and filtering process for the historical data.
Enable Raw Elasticity Generation and Filtering	Select this check box to enable the raw self elasticity generation and filtering process.
Enable Self Elasticity Generation and Filtering	Select this check box to enable the self elasticity generation and filtering process.
Enable HALO Type Cross Elasticity Generation	Select this check box to enable the HALO type cross elasticity generation process.
Enable Cannibalization Type Elasticity Generation	Select this check box to enable the cannibalization type elasticity generation process.
Enable Archiving Current Approved Elasticities	Select this check box to enable the archiving current approved elasticities process.

Escalation Path Management Step

The Escalation Path Management step includes the Escalation Path view that enables you to set up the escalation path information. A set of four pre-configured escalation

levels, in order of increasing priority, appear by default. The escalation level priority specifies the order of escalation level look ups.

The following table describes the measures in the Escalation Path view:

Table 2–2 Measures in the Escalation Path View

Measure	Description
Escalation Level Label	Use this measure to set a relevant label for each escalation level.
Escalation Path	Use this measure to set an order for the escalation level look ups. By default, the path is set to 1 through 4 starting from Level 01 to Level 04.
Escalation Flag	Use this measure to indicate the escalation levels that will be calculated. Select the check box under the relevant escalation level to include the level in the calculation.

Advanced Step

The Advanced step enables you to set or override the default values for various parameters. The parameters are organized in multiple views. The Advanced step includes the following views:

- Default Anchor and Min/Max Price Parameters View
- Default Data Transformation Parameters View
- Default HALO Elasticity Parameters View
- Default Historical Data Filtering Parameters View
- Default Raw Self-Elasticity Parameters View
- Default Regularization and Cannibalization Parameters View

Default Anchor and Min/Max Price Parameters View

The Default Anchor Min/Max Price Parameters view enables you to set up parameters related to historical anchor and minimum/maximum prices. The following table describes the measures in the Default Anchor and Min/Max Price Parameters view:

Table 2–3 Measures in the Default Anchor and Min/Max Price Parameters View

Measure	Description	Default Value
Default historical anchor price number of time periods to include in calculation	The number of weeks to consider, relative to the history end date, when calculating the anchor price.	1
Default historical anchor price smoothing coefficient	Exponential smoothing coefficient for blending the previous anchor price calculations with the new calculations.	0.99
Default historical maximum price percentile	The percentile at which the historical maximum price will be selected.	0.97
Default historical minimum price percentile	The percentile at which the historical minimum price will be selected.	0.03
Default number of time periods to consider when finding historical min & max prices.	The number of weeks to consider, relative to the history end date, when calculating the minimum and maximum historical prices.	104

Default Data Transformation Parameters View

The Default Data Transformation Parameters view enables you to set up parameters related to data transformations. The following table describes the measures in the Default Data Transformation Parameters view:

Table 2–4 Measures in the Default Data Transformation Parameters View

Measure	Description	Default Value
Default First Difference Data Points	The lower threshold value for the first difference data points. The number of non-zero first difference data for an item or location lower than this threshold value will be discarded.	5
Default Second Difference Data Point Threshold	The lower threshold value for the second difference data points. The number of non-zero first difference data for an product or week lower than this threshold value will be discarded.	5
Default Second Difference Upper Bound Threshold	The upper threshold value for the log ticket price second different data points. The data corresponding to the item or location week that have the absolute value higher than this threshold value will be discarded.	0.4

Default HALO Elasticity Parameters View

The Default HALO Elasticity Parameters view enables you to set up parameters related to HALO type elasticities. The following table describes the measures in the Default HALO Elasticity Parameters view:

Table 2–5 Measures in the Default HALO Elasticity Parameters View

Measure	Description	Default Value
Default HALO - Transformed Price Threshold for Item 1	When calculating the effect of the price change of the second item on the demand of the first item, this value is the transformed price threshold for the first item. If the absolute value of the second difference of log price of the first item exceeds this threshold value, the corresponding data will be excluded from HALO calculation.	0.05
Default HALO - Transformed Price Threshold for Item 2	When calculating the effect of the price change of the second item on the demand of the FIRST item, this value is the transformed price threshold for the second item. If the absolute value of the second difference of log price of the second item is less than or equal to this threshold value, the corresponding data will be excluded from HALO calculation.	0.05
Default HALO - Number of Data Point Threshold	The threshold value for the minimum number of data points required. HALO type cross elasticities that have data points lesser than this threshold value will be filtered out.	10

Table 2–5 (Cont.) Measures in the Default HALO Elasticity Parameters View

Measure	Description	Default Value
Default HALO - RAW Effect Difference Threshold	The threshold value for the difference between the HALO type cross elasticities across the two time periods. If this difference exceeds the amount that results from the square root of the threshold value, then the HALO type cross elasticities will be filtered out.	2
Default HALO - RAW Effect Error Ratio Threshold	The threshold value for the HALO cross elasticity and standard error ratio. If a halo type cross elasticity has a value greater than this threshold value multiplied by the standard error for both time periods, then the HALO type cross elasticity will be filtered out.	3
Default HALO - RAW Error Threshold	The standard error threshold value for the HALO type cross elasticities. HALO type cross elasticities with standard error that exceed this threshold value will be filtered out.	0.05
Default HALO - RAW Effect Lower Bound	The lower threshold value for the HALO type RAW cross elasticities. HALO type cross elasticities lower than this threshold value will be filtered out.	-0.5
Default HALO - RAW Effect Upper Bound	The upper threshold value for the HALO type RAW cross elasticities. HALO type cross elasticities higher than this threshold value will be filtered out.	0

Default Historical Data Filtering Parameters View

The Default Historical Data Filtering Parameters view enables you to set up parameters related to historical data filtering. The following table describes the measures in the Default Historical Data Filtering Parameters view:

Table 2–6 Measures in the Default Historical Data Filtering Parameters View

Measure	Description	Default Value
History Start Date	The first date from the historical data to be used in the calculation.	
History End Date	The last date from the historical data to be used in the calculation.	
Default POS Price and Ticket Price Difference % Threshold	The threshold value (in percentage) of the difference between the POS price and ticket price. If the difference between the POS price and the ticket price exceeds this threshold value, the data will be filtered out. Note: POS price is the gross sale amount divided by the gross sales units.	0.05
Default Fixed Ticket Price Period Length Threshold	The threshold value for the minimum number of consecutive weeks of fixed ticket price. From the set time period, data with number of weeks less than this threshold value will be filtered out.	6

Table 2–6 (Cont.) Measures in the Default Historical Data Filtering Parameters View

Measure	Description	Default Value
Default Ticket Price Change % Threshold	The threshold value (in percentage) for the ticket price changes to be considered as fixed price. Prices are considered fixed from week to week, when the price change is less than this threshold value.	0.05
Default Ticket Price Variation % Threshold	The threshold value (in percentage) for the ticket price variations. If the difference between the minimum and maximum price values exceed this threshold value, the data will be filtered out.	0.05

Note: When left blank, values for the History Start Date and History End Date measures default to the start and end dates in the calendar.

Default Raw Self-Elasticity Parameters View

The Default Raw Self-Elasticity Parameters view enables you to set up parameters related to RAW self-elasticities. The following table describes the measures in the Default Raw Self-Elasticity Parameters view:

Table 2–7 Measures in the Default Raw Self-Elasticity Parameters View

Measure	Description	Default Value
Default Max Second Diff Log Price	The threshold value for the maximum second difference log ticket price. Items or locations with a second difference that exceed this threshold value are not included in the calculation.	0.05
Default max allowed standard error for raw self-elasticities	The threshold value for the maximum standard error allowed for RAW self-elasticities. Items or locations with a standard error that exceed this threshold value are not included in the calculation.	0.2
Default minimum data points per time period	The threshold value for the minimum number of data points required. Items or locations with number of data points lesser than this threshold value are not included in the calculation.	5
Default Raw Self Elasticity Lower Bound	The lower threshold value for the RAW self elasticities. Items or locations with RAW self elasticities higher than this threshold value are not included in the calculation.	-1.5
Default Raw Self Elasticity Upper Bound	The upper threshold value for the RAW self elasticities. Items or locations with RAW self elasticities lower than this threshold value are not included in the calculation.	0.5

Default Regularization and Cannibalization Parameters View

The Default Regularization and Cannibalization Parameters view enables you to set up parameters related to regularization and cannibalization. The following table describes the measures in the Default Regularization and Cannibalization Parameters view:

Table 2–8 Measures in the Default Regularization and Cannibalization Parameters View

Measure	Description	Default Value
Lambda High Default	The grid search upper bound threshold value of lambda.	10
Lambda Low Default	The grid search lower bound threshold value of lambda.	0.01
High Range	The upper bound threshold value for regularized self-elasticities.	-0.01
Low Range	The lower bound threshold value for regularized self-elasticities.	-0.9
Regularization Threshold	The threshold value (in percentage) for a valid regularized self elasticity. The amount of the total regularized self-elasticities between the regularized self elasticity lower and upper bounds must be greater than or equal to this threshold value.	0.9
Cannibalization Coefficient Default	The default value for the cannibalization co-efficient.	0.5

3

Maintenance Task

The Maintenance task enables you to override the default parameter values for an item or group of items at a specific price zone (location). This chapter describes the views and the relevant parameters that appear in the Maintenance task. It includes the following:

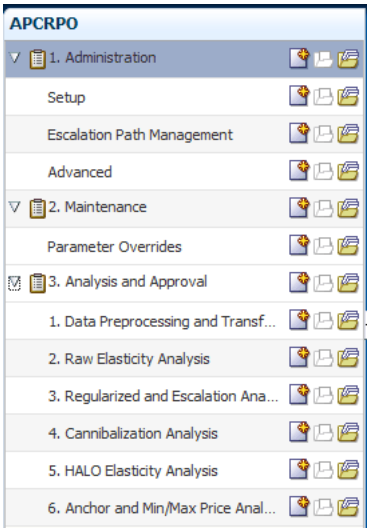
- Accessing the Maintenance Task
- Parameter Overrides Step

Accessing the Maintenance Task

To access the Maintenance task:

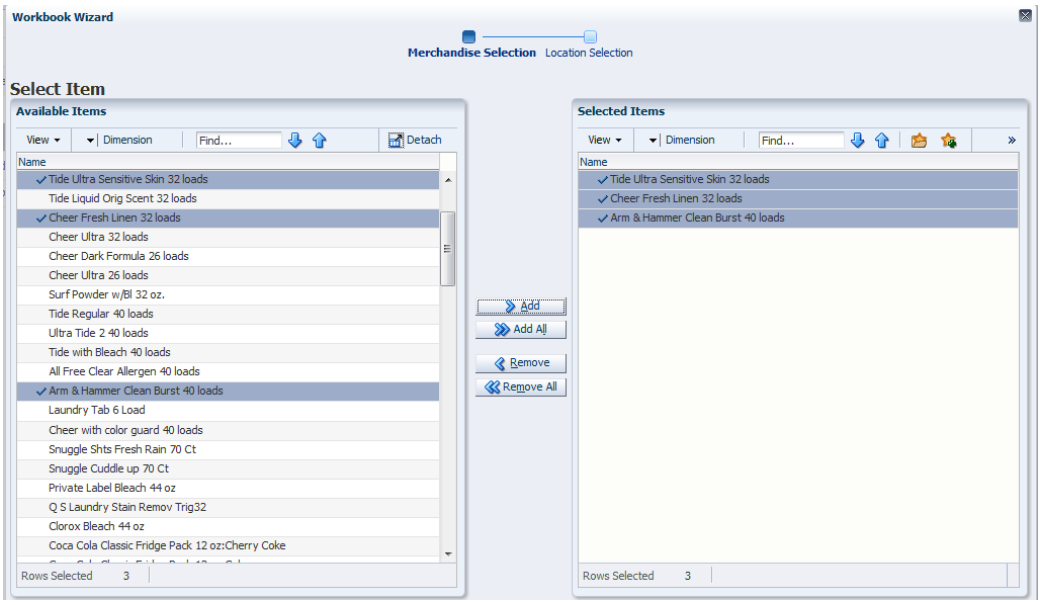
1. Log on to the RPAS Fusion Client. For more information, see Logging On to APC-RPO.
2. In the **Taskflow**, under **Maintenance**, click the **Create New Workbook** icon next to **Parameter Overrides**. You can also choose to click the **Create New Workbook** icon next to **Maintenance**.

Figure 3–1 APC-RPO Taskflow Pane



The Workbook Wizard appears.

Figure 3–2 Workbook Wizard - Select Item



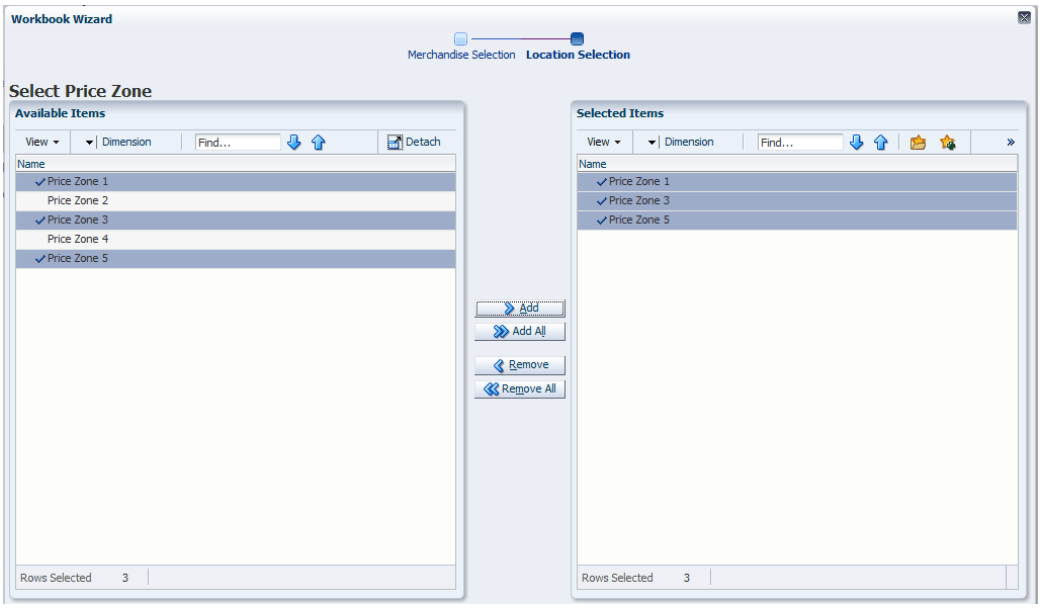
3. In the **Maintenance Wizard**, from the **Available Items** area, select the items you want by holding down the Ctrl or Shift keys, and click **Add**. You can click **Add All** to select all the items.

   OR

   Drag and drop the positions to the Selected Items area.

4. Click **Next**. The **Select Price Zone** screen appears.

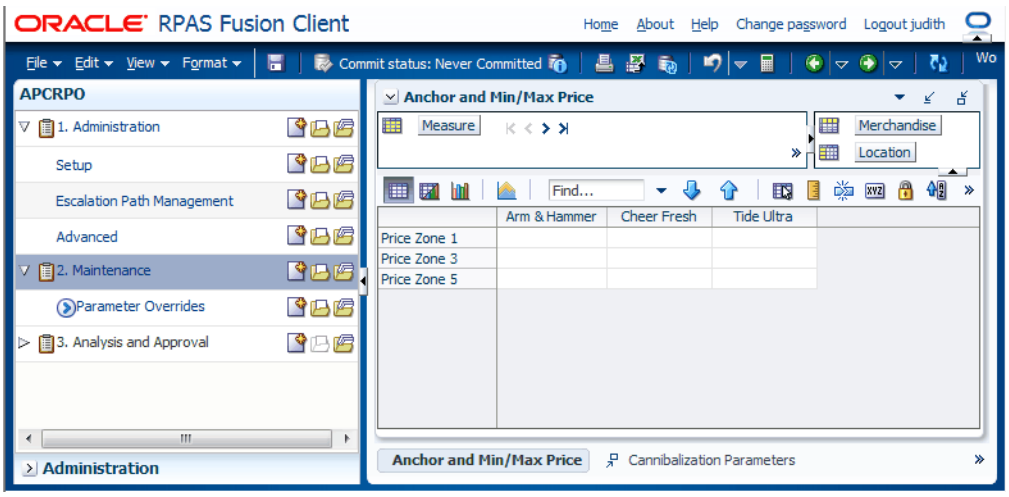
Figure 3–3 Workbook Wizard - Select Price Zone



5. From the **Available Items** area, select the price zones you want, and then click **Finish**. The relevant view appears.

Note: To open an existing workbook, click the **Show List of All Workbooks** icon next to the task/step you want. The **Open Workbook** window appears and enables you to open one of the existing workbooks.

Figure 3–4 Maintenance Workbook with the Parameter Overrides View Open



Parameter Overrides Step

The Parameter Overrides step includes the following views that enable you to override the parameters for specific items and price zone combination:

- Historical Data Filtering Parameters View
- Data Transformation and Filtering Override Parameters View
- Raw Elasticity Regularization and Cannibalization Parameters View
- Escalation Path Override View
- HALO Elasticity Parameters Override View
- Raw Self Elasticity View
- Anchor and Min/Max Price View
- Cannibalization Parameters View

Historical Data Filtering Parameters View

The Historical Data Filtering Parameters view enables you to override the default values for parameters related to historical data filtering. The following table describes the measures in the Historical Data Filtering Parameters view:

Table 3–1 Measures in the Historical Data Filtering Parameters View

Measure	Measure Description
Fixed Ticket Price Period Length Threshold Override	The threshold value for the minimum number of consecutive weeks of fixed ticket price. From the set time period, data with number of weeks less than this threshold value will be filtered out.

Table 3–1 (Cont.) Measures in the Historical Data Filtering Parameters View

Measure	Measure Description
POS Price and Ticket Price Difference % Threshold Override	The threshold value (in percentage) of the difference between the POS price and ticket price. If the difference between the POS price and the ticket price exceeds this threshold value, the data will be filtered out. **Note:** POS price is the gross sale amount divided by the gross sales units.
Ticket Price Change % Threshold Override	The threshold value (in percentage) for the ticket price changes to be considered as fixed price. Prices are considered fixed from week to week, when the price change is less than this threshold value.
Ticket Price Variation % Threshold Override	The threshold value (in percentage) for the ticket price variations. If the difference between the minimum and maximum price values exceed this threshold value, the data will be filtered out.

Data Transformation and Filtering Override Parameters View

The Default Transformation and Filtering Override Parameters view enables you to override the default values for parameters related to data transformations. The following table describes the measures in the Data Transformation and Filtering Override Parameters view:

Table 3–2 Measures in the Data Transformation and Filtering Override Parameters View

Measure	Measure Description
First Difference Data Points Override	The lower threshold value for the first difference data points. The number of non-zero first difference data for an item or location lower than this threshold value will be discarded.
Second Difference Data Point Threshold Override	The lower threshold value for the second difference data points. The number of non-zero first difference data for an product or week lower than this threshold value will be discarded.
Second Difference Upper Bound Threshold Override	The upper threshold value for the log ticket price second different data points. The data corresponding to the item or location week that have the absolute value higher than this threshold value will be discarded.

Raw Elasticity Regularization and Cannibalization Parameters View

The Raw Elasticity Regularization and Cannibalization Parameters view enables you to override the default values for parameters related to raw elasticity regularization and cannibalization. The following table describes the measures in the Raw Elasticity Regularization and Cannibalization Parameters view:

Table 3–3 Measures in the Raw Elasticity Regularization and Cannibalization Parameters View

Measure	Measure Description
Lambda High Override	The grid search upper bound threshold value of lambda.
Lambda Low Override	The grid search lower bound threshold value of lambda.
High Range Override	The upper bound threshold value for regularized self-elasticities.
Low Range Override	The lower bound threshold value for regularized self-elasticities.

Table 3–3 (Cont.) Measures in the Raw Elasticity Regularization and Cannibalization Parameters View

Measure	Measure Description
Regularization Threshold Override	The threshold value (in percentage) for a valid regularized self elasticity. The amount of the total regularized self-elasticities between the regularized self elasticity lower and upper bounds must be greater than or equal to this threshold value.
Regularization Run Mask	Select the check box to apply the regularization run mask.

Escalation Path Override View

The Escalation Path Override view enables you to override the default order for the escalation level lookups.

The following table describes the measure in the Escalation Path Override view:

Table 3–4 Measures in the Escalation Path Override View

Measure	Measure Description
Escalation Path Override	Use this measure to override the default set order for the escalation level look ups. By default, the path is set to 1 through 4 starting from Level 01 to Level 04.

HALO Elasticity Parameters Override View

The HALO Elasticity Parameters Override view enables you to override the default values for the parameters related to HALO type elasticities. The following table describes the measures in the HALO Elasticity Parameters Override view:

Table 3–5 Measures in the HALO Elasticity Parameters Override View

Measure	Measure Description
HALO - Number of Data Point Threshold Override	The threshold value for the minimum number of data points required. HALO type cross elasticities that have data points lesser than this threshold value will be filtered out.
HALO - Transformed Price Threshold for Item 1 Override	When calculating the effect of the price change of the second item on the demand of the first item, this value is the transformed price threshold for the first item. If the absolute value of the second difference of log price of the first item exceeds this threshold value, the corresponding data will be excluded from HALO calculation.
HALO - Transformed Price Threshold for Item 2 Override	When calculating the effect of the price change of the second item on the demand of the FIRST item, this value is the transformed price threshold for the second item. If the absolute value of the second difference of log price of the second item is less than or equal to this threshold value, the corresponding data will be excluded from HALO calculation.
HALO - RAW Effect Difference Threshold Override	The threshold value for the difference between the HALO type cross elasticities across the two time periods. If this difference exceeds the amount that results from the square root of the threshold value, then the HALO type cross elasticities will be filtered out.

Table 3–5 (Cont.) Measures in the HALO Elasticity Parameters Override View

Measure	Measure Description
HALO - RAW Effect Error Ratio Threshold Override	The threshold value for the HALO cross elasticity and standard error ratio. If a halo type cross elasticity has a value greater than this threshold value multiplied by the standard error for both time periods, then the HALO type cross elasticity will be filtered out.
HALO - RAW Error Threshold Override	The standard error threshold value for the HALO type cross elasticities. HALO type cross elasticities with standard error that exceed this threshold value will be filtered out.
HALO - RAW Effect Lower Bound Override	The lower threshold value for the HALO type RAW cross elasticities. HALO type cross elasticities lower than this threshold value will be filtered out.
HALO - RAW Effect Upper Bound Override	The upper threshold value for the HALO type RAW cross elasticities. HALO type cross elasticities higher than this threshold value will be filtered out.

Raw Self Elasticity View

The Raw Self Elasticity view enables you to override the default values for parameters related to raw self elasticities. The following table describes the measures in the Raw Self Elasticity view:

Table 3–6 Measures in the Raw Self Elasticity View

Measure	Measure Description
Max Second Diff Log Price Override	The threshold value for the maximum second difference log ticket price. Items or locations with a second difference that exceed this threshold value are not included in the calculation.
Max allowed standard error for raw self-elasticities (override).	The threshold value for the maximum standard error allowed for RAW self-elasticities. Items or locations with a standard error that exceed this threshold value are not included in the calculation.
Minimum data points per time period (override).	The threshold value for the minimum number of data points required. Items or locations with number of data points lesser than this threshold value are not included in the calculation.
Raw Self Elasticity Lower Bound Override	The upper threshold value for the RAW self elasticities. Items or locations with RAW self elasticities higher than this threshold value are not included in the calculation.
Raw Self Elasticity Upper Bound Override	The lower threshold value for the RAW self elasticities. Items or locations with RAW self elasticities lower than this threshold value are not included in the calculation.

Anchor and Min/Max Price View

The Anchor and Min/Max Price view enables you to override the default values for the parameters related to anchor and minimum/maximum ticket prices. The following table describes the measures in the Anchor and Min/Max Price view:

Table 3–7 Measures in the Anchor and Min/Max Price View

Measure	Measure Description
Override historical anchor price number of time periods to include in calculation.	The number of weeks to consider, relative to the history end date, when calculating the anchor price.

Table 3–7 (Cont.) Measures in the Anchor and Min/Max Price View

Measure	Measure Description
Override historical anchor price smoothing coefficient.	Exponential smoothing coefficient for blending the previous anchor price calculations with the new calculations.
Override historical maximum price percentile.	The percentile at which the historical maximum price will be selected.
Override historical minimum price percentile.	The percentile at which the historical minimum price will be selected.
Override number of time periods to consider when finding historical min & max prices.	The number of weeks to consider, relative to the history end date, when calculating the minimum and maximum historical prices.

The NA value of the measures needs to be set to an invalid value for that parameter. And the value NA indicates that there is no override value.

Cannibalization Parameters View

The Cannibalization Parameters view enables you to override the default value for the cannibalization co-efficient parameter. The following table describes the measures in the Cannibalization Parameters view:

Table 3–8 Measures in the Cannibalization Parameters View

Measure	Measure Description
Cannibalization Coefficient Override	The default value for the cannibalization co-efficient.

4

Analysis and Approval Task

Once the batch processes are run, self-elasticities are generated. The Analysis and Approval task enables you to review the calculation results, approve, and override the elasticities. When you access the task, a workbook wizard appears that enables you to select and review all or group of items at specific price zones (locations).

This chapter describes the views included in the Analysis and Approval task. It includes the following:

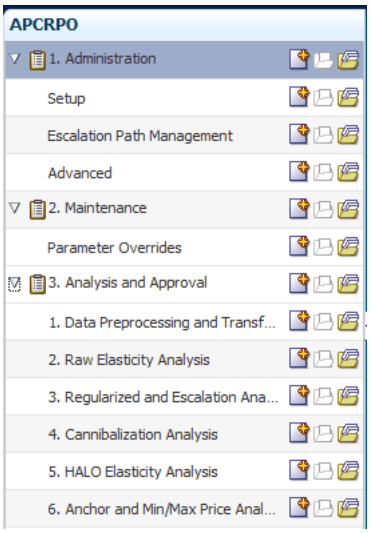
- Accessing the Analysis and Approval Task
- Data Preprocessing Analysis Step
- Raw Elasticity Analysis Step
- Regularized and Escalation Analysis Step
- Cannibalization Analysis Step
- HALO Elasticity Analysis Step
- Anchor and Min/Max Price Analysis Step

Accessing the Analysis and Approval Task

To access the Analysis and Approval task:

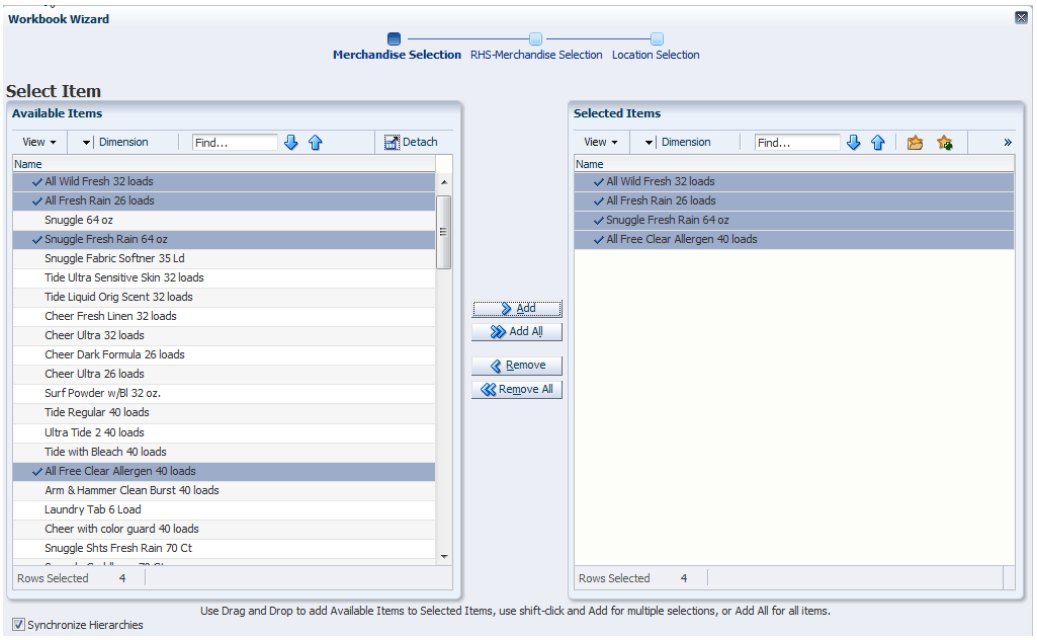
1. Log on to the RPAS Fusion Client. For more information, see Logging On to APC-RPO.
2. In the **Taskflow**, under **Analysis and Approval**, click the **Create New Workbook** icon next to the step you want. You can also choose to click the **Create New Workbook** icon next to **Analysis and Approval**.

Figure 4–1 APC-RPO Taskflow Pane



The Workbook Wizard appears.

Figure 4–2 Workbook Wizard Screen



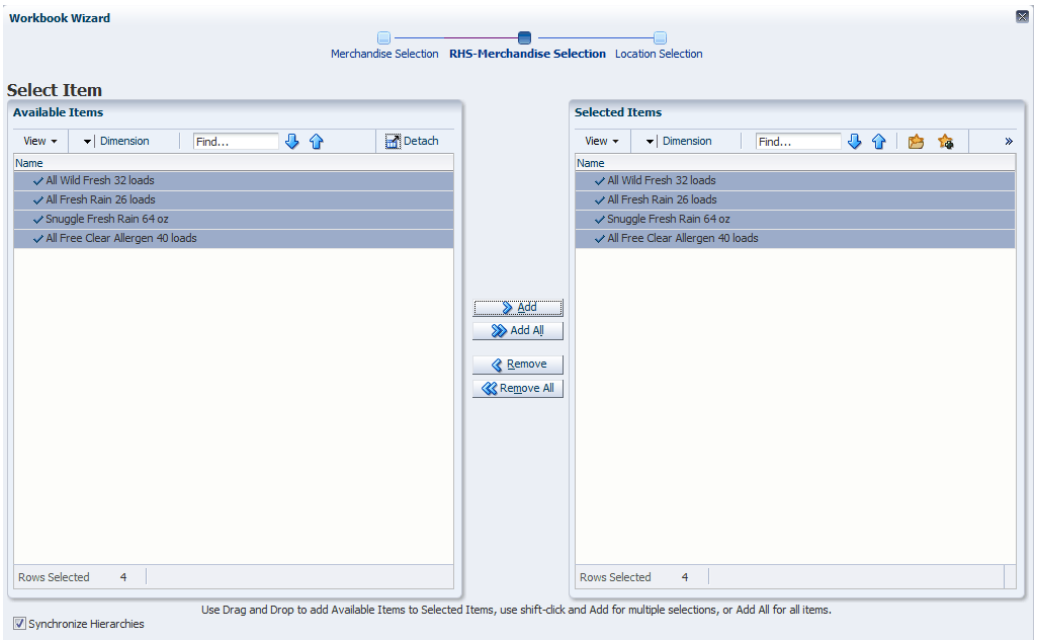
3. In the **Workbook Wizard**, from the **Available Items** area, select the items you want by holding down the Ctrl or Shift keys, and click **Add**. You can click **Add All** to select all the items.

   OR

   Drag and drop the positions to the Selected Items area.

4. Click **Next**. The **Select Item (RHS Merchandise Hierarchy)** screen appears.

Figure 4–3 Workbook Wizard - Select Item (RHS Merchandise)



5. From the **Available Items** area, select the items you want by holding down the Ctrl or Shift keys, and click **Add**. You can click **Add All** to select all the items.

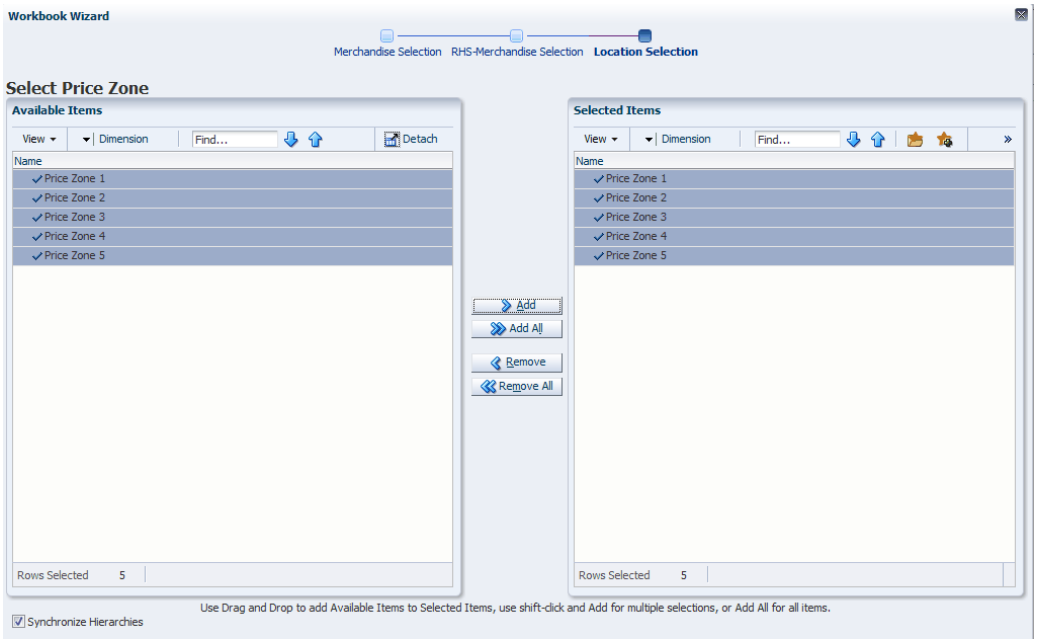
   The RHS hierarchy is a duplicate of the merchandise hierarchy set up to support cross item elasticity.

   OR

   Drag and drop the positions to the Selected Items area.

6. Click **Next**. The **Select Price Zone** screen appears.

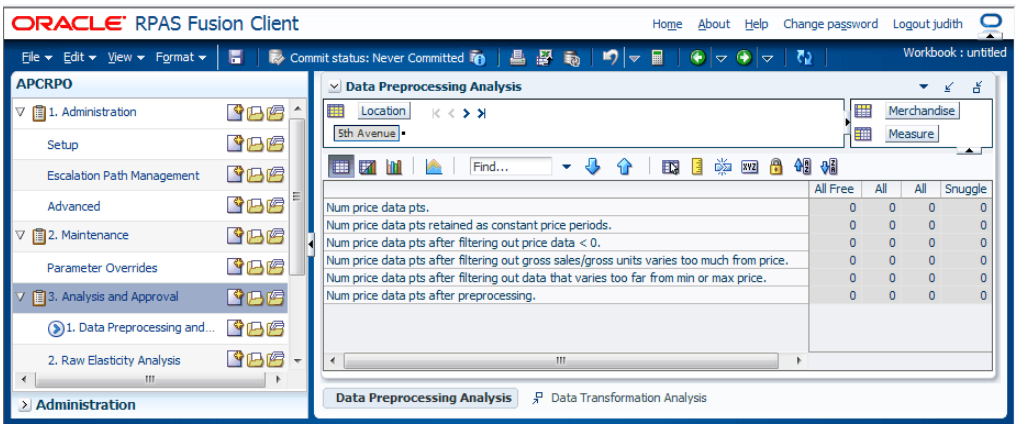
Figure 4–4 Workbook Wizard - Select Price Zone



7. From the **Available Items** area, select the price zones you want, and then click **Finish**. The relevant view appears.

> **Note:** To open an existing workbook, click the **Show List of All Workbooks** icon next to the task/step you want. The **Open Workbook** window appears and enables you to open one of the existing workbooks.

Figure 4–5 Analysis and Approval Workbook with the Data Preprocessing and Transformation Analysis View Open



Data Preprocessing Analysis Step

The Data Preprocessing Analysis step includes the following views that display the results of the historical data preprocessing:

- Data Preprocessing Analysis View
- Data Transformation Analysis View

The views includes information at the POS intersection, without the calendar, to highlight the information filtered out at successive steps in preprocessing.

Data Preprocessing Analysis View

The following table describes the measures in the Data Preprocessing Analysis view:

Table 4–1 Measures in the Data Preprocessing Analysis View

Measure	Measure Description
Num price data pts.	Number of price data points prior to any filtering.
Num price data pts retained as constant price periods.	Number of price data points retained as constant price periods.
Num price data pts after filtering out price data < 0.	Number of price data points after filtering out price data less than zero (0).
Num price data pts after filtering out gross sales/gross units varies too much from price.	Number of price data points after filtering out the gross revenue/gross units varying too far from price.

Table 4–1 (Cont.) Measures in the Data Preprocessing Analysis View

Measure	Measure Description
Num price data pts after filtering out data that varies too far from min or max price.	Number of price data points after filtering out the data that varies too far from the minimum or maximum price.
Num price data pts after preprocessing.	Number of price data points after filtering out stock outs. This is the final step in the preprocessing and represents the final count of price data points.

Data Transformation Analysis View

The following table describes the measures in the Data Transformation Analysis view:

Table 4–2 Measures in the Data Transformation Analysis View

Measure	Measure Description
First Diff Price Count	Number of price data point first differences.
First Diff POS count	Number of POS data point first differences.
Price count passing first diff filter.	Number of price data points passing the first difference filter.
POS count passing first diff filter.	Number of POS data points passing the first difference filter.
Price count passing second diff filter.	Number of price data points passing the second difference filter.
POS count passing second diff filter.	Number of price data points passing the second difference filter.

Raw Elasticity Analysis Step

The Raw Elasticity Analysis step provides information on the calculated raw elasticities. The view displays information at the item and price zone intersection. It includes the following view:

- Raw Elasticity Analysis View

Raw Elasticity Analysis View

The following table describes the measures in the Raw Elasticity Analysis view:

Table 4–3 Measures in the Raw Elasticity Analysis View

Measure	Measure Description
Raw Elasticity	The calculated raw elasticities.
Raw Elasticity Fitting Error	Standard error in calculation of raw elasticities.
Item Counter	The number of data points used to calculate each raw elasticity.

Regularized and Escalation Analysis Step

The Regularized and Escalation Analysis step provides information on the regularized and escalated elasticities. It includes the following views:

- Regularized Elasticity Analysis View
- Ancestor Regularized Elasticity Analysis View
- Escalation Level Views

Regularized Elasticity Analysis View

The Regularized Elasticity Analysis view provides information on the regularized elasticities at the base escalation level intersection (for example, item and price zone). The following table describes the measures in the Regularized Elasticity Analysis view:

Table 4–4 Measures in the Regularized Elasticity Analysis View

Measure	Measure Description
Post Regularized Elasticity	The elasticity resulting from the regularization process.
Escalation Self Elasticity	Self-elasticity at the escalation level.
Final Self Elasticity	The elasticity after the escalation search.
Escalation Selection	Selected escalation order.

Ancestor Regularized Elasticity Analysis View

The Ancestor Regularized Elasticity Analysis view provides information on the regularized elasticities for the ancestor levels. It displays information at the ancestor intersection, typically class and price zone.

Ancestor level is a Product/Location level used to calculate regularized self-elasticity. Ancestor level is a level which is higher than the historical data's item/location level as far as both merchandise and location hierarchy are concerned.

The following table describes the measures in the Ancestor Regularized Elasticity Analysis view:

Table 4–5 Measures in the Ancestor Regularized Elasticity Analysis View

Measure	Measure Description
Sum of 2nd Diff Price	Sum of the second difference prices. This statistic is used to calculate elasticity and standard error.
2nd Diff Sales times Price	Sum of the second difference sales multiplied by price. This statistic is used to calculate elasticity and standard error.
Sum of 2nd Diff Sales Units	Sum of the second difference sales units. This statistic is used to calculate elasticity standard error.
Number of data points	Number of data points used in the calculation.
Feasible Lambda Found	Indicates that an acceptable lambda value was found.
Ancestor Standard Error	Standard error of the ancestor elasticity.
Raw Ancestor Elasticity	Elasticity of the ancestor. Used for the regularization of the elasticity.
Selected Lambda	Lambda value returned from regularization.

Escalation Level Views

The Regularized and Escalation Analysis step includes an Escalation Level view for each higher escalation level. Each Escalation Level view provides information on the escalated elasticity at the specific escalation level. The views display information at the escalation level intersection. The following table describes the measures in each Escalation Level view:

Table 4–6 Measures in the Escalation Level View

Measure	Measure Description
Regularized Elasticity Escalation level	The refined/smoothed version of the raw elasticity.
Approved Elasticity Escalation level	The approved elasticity at the specific escalation level (after any modification).
Last Approved Elasticity Escalation level	The last approved elasticity values.

Cannibalization Analysis Step

The Cannibalization Analysis step provides information on the calculated market share and cannibalization effects. It includes the following views:

- Market Share View
- Cannibalization Elasticity Analysis View

Market Share View

The Market Share view provides information on the calculated market share effects. It displays information at the item and price zone intersection. The following table describes the measures in the Market Share view:

Table 4–7 Measures in the Market Share View

Measure	Measure Description
Market Share	Market share relative to the other items within the class.

Cannibalization Elasticity Analysis View

The Cannibalization Elasticity Analysis view provides information on the calculated cannibalization effects. It displays information at the cross item elasticity intersection. The following table describes the measures in the Cannibalization Elasticity Analysis view:

Table 4–8 Measures in the Cannibalization Elasticity Analysis View

Measure	Measure Description
Cross Item Elasticity (Cannibalization)	The cross item elasticity (cannibalization).
Approved Cross Item Elasticity (Cannibalization)	The approved cross item elasticity (cannibalization).
Archived Cross Item Elasticity (Cannibalization)	The last approved cross item elasticity (cannibalization).

HALO Elasticity Analysis Step

The HALO Elasticity Analysis step provides information on the calculated HALO effects. The view displays information at the HALO effect intersection. It includes the following view:

- HALO Elasticity Analysis View

HALO Elasticity Analysis View

The following table describes the measures in the HALO Elasticity Analysis view:

Table 4–9 Measures in the HALO Elasticity Analysis View

Measure	Measure Description
HALO Type Cross Item Elasticity	The calculated HALO type cross item elasticity.
HALO Elasticity Standard Error	The standard error in the calculation of the HALO cross item elasticity.
HALO Effective Data Point Count	The number of data points used in the calculation.
Approved HALO Type Cross Item Elasticity	The approved HALO type cross item elasticity.
Last Approved HALO Type Cross Item Elasticity	The last approved HALO type cross item elasticity.

Anchor and Min/Max Price Analysis Step

The Anchor and Min/Max Price Analysis step provides information on the historical anchor, and minimum and maximum ticket price. It includes the following view:

- Anchor and Min/Max Price Analysis View

Anchor and Min/Max Price Analysis View

Table 4–10 Measures in the Anchor and Min/Max Price Analysis View

Measure	Measure Description
Historical anchor price.	The calculated historical anchor price.
Minimum historical ticket price.	The calculated minimum historical ticket price.
Maximum historical ticket price.	The calculated maximum historical ticket price.