

Oracle Financial Services

Forecast Rates



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Oracle Financial Services Forecast Rates, Release 26A

G50951-01

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Get Help

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1.1 Get Help in the Applications

Use Help icons to access help in the application.

Note that not all pages have Help icons. You can also access the [Oracle Help Center](#) to find guides and videos.

Additional Resources

- Community: Use [Oracle Cloud Customer Connect](#) to get information from experts at Oracle, the Partner Community, and other users.
- Training: Take courses on Oracle Cloud from [Oracle University](#).

1.2 Learn About Accessibility

For information about Oracle's commitment to accessibility, visit the [Oracle Accessibility Program](#). Videos included in this guide are provided as a media alternative for text-based topics also available in this guide.

1.3 Get Support

You can get support at [My Oracle Support](#).

For accessible support, visit Oracle Accessibility Learning and Support.

1.4 Get Training

Increase your knowledge of Oracle Cloud by taking courses at [Oracle University](#).

1.5 Join Our Community

Use [Cloud Customer Connect](#) to get information from industry experts at Oracle and in the Partner Community. You can join forums to connect with other customers, post questions, and watch events.

1.6 Share Your Feedback

We welcome your feedback about Oracle Applications User Assistance. If you need clarification, find an error, or just want to tell us what you found helpful, we did like to hear from you.

You can email your feedback to [My Oracle Support](#).

Thanks for helping us improve our User Assistance!

1.7 Before You Begin

Refer to following Documents:

- [See What's New](#)

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Forecast Rates

Forecast Rate Scenario Assumptions allow you to define future interest rates, future economic indicators, future currency exchange rates, future interest rate volatility, and select Forecast Rate rule for cash flow calculation. Interest rate forecasts are used to project cash flows, including pricing new business, repricing existing business, calculating prepayments, and determining discount methods. Interest rate volatility forecast are used for option valuation. Economic Indicator forecasts are used to calculate cash flow for inflation-indexed instruments, included in Behavioral Modeling and scenario or stress analysis. Currency Exchange Rate Forecasts are used to account for the effects of currency fluctuations on income.

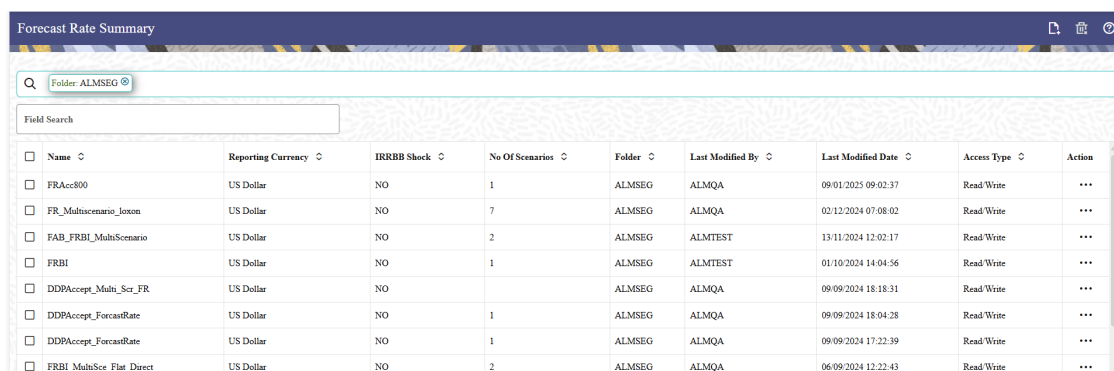
The Forecast Rate Assumptions use interest rate curve, volatility surface, economic indicator, active and reporting currencies, and Forecast Rate rule.

This module describes how to create a Forecast Rates Assumption Rule to forecast Cash Flows and, if you work with multiple currencies, to model relationships between Interest Rates and Exchange Rates.

Forecast Rate Rule Summary

This page is the gateway to all Forecast Rate Rules and related functionality. You can navigate to other pages relating to Forecast Rate Rules from this point.

Figure 2-1 Forecast Rate Summary



<input type="checkbox"/>	Name	Reporting Currency	IRRBB Shock	No Of Scenarios	Folder	Last Modified By	Last Modified Date	Access Type	Action
<input type="checkbox"/>	FRAcc800	US Dollar	NO	1	ALMSEG	ALMQA	09/01/2025 09:02:37	Read/Write	...
<input type="checkbox"/>	FR_Multiscenario_10xom	US Dollar	NO	7	ALMSEG	ALMQA	02/12/2024 07:08:02	Read/Write	...
<input type="checkbox"/>	FAB_FRBI_MultiScenario	US Dollar	NO	2	ALMSEG	ALMTEST	13/11/2024 12:02:17	Read/Write	...
<input type="checkbox"/>	FRBI	US Dollar	NO	1	ALMSEG	ALMTEST	01/10/2024 14:04:56	Read/Write	...
<input type="checkbox"/>	DDPAccept_Multi_Scr_FR	US Dollar	NO		ALMSEG	ALMQA	09/09/2024 18:18:31	Read/Write	...
<input type="checkbox"/>	DDPAccept_ForecastRate	US Dollar	NO	1	ALMSEG	ALMQA	09/09/2024 18:04:28	Read/Write	...
<input type="checkbox"/>	DDPAccept_ForecastRate	US Dollar	NO	1	ALMSEG	ALMQA	09/09/2024 17:22:39	Read/Write	...
<input type="checkbox"/>	FRBI_MultiSec_Flat_Direct	US Dollar	NO	2	ALMSEG	ALMQA	06/09/2024 12:22:43	Read/Write	...

Search Forecast Rate Rule

Prerequisites: Predefined Forecast Rate Rule

To search for a Forecast Rate Rule:

Click **Search** after entering the search criteria. The search results are displayed in a table containing all the Forecast Rate Rules that meet the search criteria.

Or

An alternative method to search a Forecast Rate Rule is through the **Field Search** option. This is an inline wildcard UI search that allows you to enter a search value (such as code, name, etc.) partially or fully. Rows that contain the string you are searching for are fetched and

displayed in the Forecast Rate Rule Summary. You can enter the **Code, Name, Description, Dimension, Hierarchy, and Folder** of the Forecast Rate Rule and click **Search** .

The Forecast Rate Rule Summary displays the following information:

Add: Click the Add icon on the page header to build a new Forecast Rate Rule.

- **Name:** The Forecast Rate Rule's short name.
- **Reporting Currency:** The Reporting Currency selected in the Forecast Rates Rule.
- **IRRBB Shock:** Displays Yes if IRRBB (Interest Rate Risk in Banking Book) scenario type is defined in the Forecast Rates Rule, Otherwise No is displayed.
- **No. of Scenarios:** The number of scenarios defined in the Forecast Rates Rule
- **Folder:** The Folder name where the Forecast Rate Rule is saved.
- **Last Modified By:** The user who last modified the Forecast Rate Rule.
- **Last Modified Date:** The Date and Time when the Forecast Rate Rule was last modified.
- **Access Type:** The access type of the rule. It can be Read-Only or Read/Write.
- **Action:** Click this icon to view a list of actions that you can perform on the Forecast Rate Rule.
 - Multiple Delete: Enables you to select and delete one or multiple rules in the table simultaneously.
 - View/Edit: Based on the user privilege assigned, you can either only view or edit existing Forecast Rate Rules. To edit a rule, you must have Read/Write privilege.
 - Save As: You can reuse a Forecast Rate Rule by saving it under a new name thus saving time and effort in entering data multiple times; it also leads to reduced data entry errors.
 - Delete: You can delete Forecast Rate Rules that you no longer require. Note that only Forecast Rate Rule owners and those with Read/Write privileges can delete Forecast Rate Rules. A Forecast Rate Rule that has a dependency cannot be deleted.
 - Dependency Check: You can perform a dependency check to know where a particular Forecast Rate Rule has been used. Before deleting a rule, it is always a good practice to do a dependency check to ensure you are not deleting Forecast Rate Rules that have dependencies. . A report of all rules that utilize the selected Forecast Rate Rule is generated.

Note

This is functionality will intended for a future release.

Also See:

- [Create Forecast Rate Rule](#)

2.1 Create Forecast Rate Rule

To create a new Forecast Rate Rule, follow these steps:

1. Navigate to **Forecast Rates Summary** Page.
2. Click **Add** icon. The **Forecast Rates Details** Page is displayed.

3. Enter the following Details

Table 2-1 Forecast Rate Rule – Fields and Descriptions

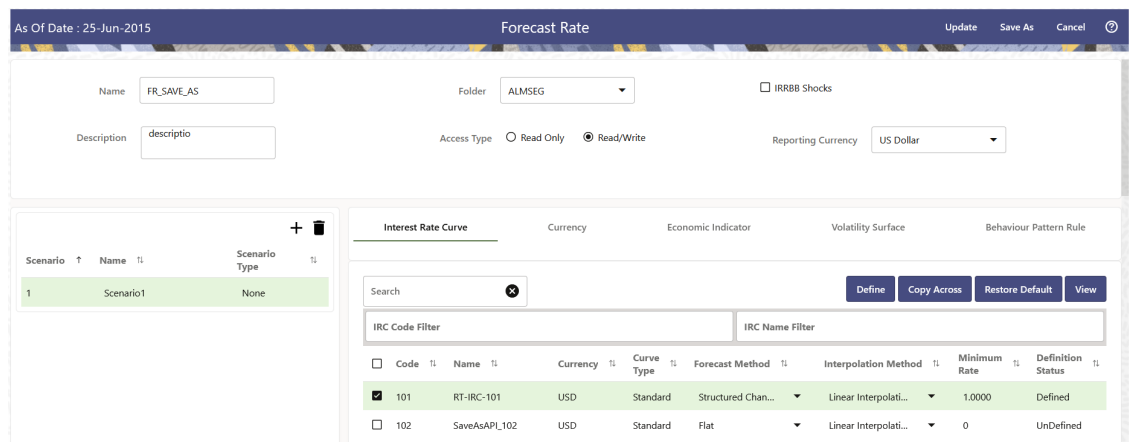
Field	Description
Name	Enter the name of the Forecast Rate Rule.
Description	Enter the description of the Forecast Rate Rule. This is an optional field.
Folder	Select the Folder where the Forecast Rate Rule needs to be saved.
Access Type	Select the Access Type as Read-Only or Read/Write.
IRRBB Shock	Select this checkbox if you want to define IRRBB Scenario. This option is available only in Asset Liability Management Cloud Service. If selected, IRRBB standardized and enhanced approach scenario types can be created.
Reporting Currency	Currencies that were marked as 'Reporting Currency' in Rate Management appear for selection here. Select one Reporting Currency.

- 4. Scenario 1 is selected by default. You can change the name of scenario. Click + to add more scenario, if needed. More than one scenario can be created only in Asset Liability Management Cloud Service.
- 5. Scenario Type is 'None' by default. When IRRBB Shock is enabled then you can select one of the available values from second scenario onwards.
- 6. Click **Save**, if you want to save the Forecast Rate Rule and update it later.

2.1.1 Interest Rate Forecast Methods

The IRCs for all active currencies are listed under Interest Rate Curve section. The options under Interest Rate Curve Forecast Method provide multiple ways to model the effects on portfolio Cash Flows due to Interest Rate changes.

Figure 2-2 Interest Rate Curve Forecast Rates



You can define Interest Rate Forecast for the following methods:

Table 2-2 Forecast Rate rule – Methods and Descriptions

Method	Description
Flat	Forecast no change in the Interest Rate for all dates beginning with the As-of Date.
Direct Input	Type Interest Rates directly for any modeling period or Interest Rate term.
Structured Change	Forecast exchange rates as an incremental change from the previous period. Forecast rate changes in terms of absolute or percent change, for any modeling period or interest rate term, such as: +100 basis points on Day 1 -200 basis points over the first 6 months Yield curve rotation (short point decreasing, long point increasing). This option is available only in Asset Liability Management Cloud Service.
Implied Forward	Forecast interest rates based on the yield-curve interest rates in effect at the as-of date and consistent with the modeling bucket definitions. This option is available only in Asset Liability Management Cloud Service.
Yield Curve Twist	Flatten or steepen the yield curve around a specific point on the curve. This option is available only in Asset Liability Management Cloud Service.
Change from Base	Make incremental changes to an existing forecast scenario. This option is available only in Asset Liability Management Cloud Service.
IRRBB Standardized Approach Shocks	Forecast an interest rate shock according to one of the BCBS IRRBB Standardized Approach shock specifications (Scenario-level specification). This option is available only in Asset Liability Management Cloud Service
IRRBB Enhanced Approach Shocks	Forecast an interest rate shock according to user specifications that will flow into IRRBB Table B reporting. This option is available only in Asset Liability Management Cloud Service.
Formula	Hybrid and Managed Rate IRC can be forecasted using the formula defined in Managed Rate/ Hybrid section of IRC.

Note

Formula method is applicable to Hybrid and Managed Rates IRC.

For more information, see the [Cash Flow Engine Reference Guide](#).

The following Interpolation Methods are available.

Table 2-3 Forecast Rate Rule – Interpolation Methods and Descriptions

Method	Description
Linear Interpolation	Linear interpolation uses Linear Yield Curve smoothing. Linear Yield Curves are continuous but not smooth; at each knot point, there is a kink in the yield curve. You may not want to use a Linear Yield Curve with a model that assumes the existence of a continuous Forward Rate Curve, due to the nonlinear and discontinuous knot points of a Linear Yield Curve.
Cubic Spline of Yields	<p>A cubic spline is a series of third-degree polynomials that have the form:</p> $y = a + bx + cx^2 + dx^3$ <p>These polynomials are used to connect the dots formed by observable data. The polynomials are constrained so they fit together smoothly at each knot point (the observable data point.) This means that the slope and the rate of change in the slope with respect to time to maturity have to be equal for each polynomial at the knot point where they join. If this is not true, there is a kink in the yield curve and they are continuous but not differentiable.</p> <p>Two more constraints make the Cubic Spline Curve unique. The first restricts the zero-maturity yield to equal the 1-day interest rate. The second restricts the yield curve at the longest maturity to be either straight ($y''=0$) or flat ($y'=0$).</p>
Quartic Spline	<p>Quartic interpolation requires a minimum of 4 knot points. The quartic interpolation equation can be represented as:</p> $Y = a + bX + cX^2 + dX^3 + eX^4$ <p>The end knot points satisfy equations for one curve and all intermediate points satisfy two curves. Therefore, in a scenario with a minimum number of knot points, there are 6 equations. For n number of knot points, the number of equations is $2n-2$. If n is the number of points to be interpolated, the order of the matrix to be formed is $5*(n-1) \times 5*(n-1)$. The matrix is formed according to the following logic:</p> <p>The second derivative at the endpoints and the first derivative of the last point is Zero. At the points other than the endpoints, the value of the first derivatives, second derivatives, and the third derivatives of the function are equal.</p>

In looking up the Forecast Rates, the Cash Flow Engine (where necessary) performs an interpolation between yield curve term points. For example, in determining a three-month rate from a yield curve that contains only a one-month rate and a six-month rate, the Cash Flow Engine performs an interpolation to determine the implied three-month rate. The Interpolation method used is defined by the selected interpolation method for the Interest Rate Curve.

Forecast rates for 360 calendar months starting from As-of-Date are generated.

Following options are available for Interest Rate Curve Forecast Rule:

- [Define](#)
- [Copy Across](#)
- [Restore Default](#)
- [View](#)

Define

- **Flat Method**
 1. Select Interest Rate Curve using corresponding checkbox and select **Forecast Method** as **Flat**.
 2. Select the Interpolation method.
 3. Input Minimum Rate, if required.
 4. Click **Define**.
The status of the Interest Rate Curve is changed to **Defined**.
- **Direct Input**
 1. Select Interest Rate Curve using corresponding checkbox and select **Forecast Method** as **Direct Input**.
 2. Select the **Interpolation Method**.
 3. Input Minimum Rate, if required.
 4. Click **Define**.
The **Direct Input** window is displayed:

Figure 2-3 Direct Input

Forecast Period	1M	2M	3M	6M	1Y	2Y	3Y	5Y	7Y	10Y	20Y
0	1.136	2.0544	2.8712	3.264	4.04	4.1704	4.2808	4.9768	5.168	5.5168	6.0344
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

5. Enter data and click **Apply**. Right click on data grid and select 'Export to Excel' to save visible data to excel file. You can also copy directly from the grid and paste data from an excel file to the grid.
6. The status of the Interest Rate Curve is changed to **Defined**.
- **Structured Change**
 1. Select Interest Rate Curve using corresponding checkbox and select **Forecast Method** as **Structured Change** .
 2. Select the **Interpolation Method**.
 3. Input Minimum Rate, if required.
 4. Click **Define**.
The **Structured Change** window is displayed:

Figure 2-4 Structured Change

The screenshot shows the 'Forecast Rate' window for 'IT-IRC-101: Structured Change'. The 'As Of Date' is 10-09-2015. The 'Shock Type' is set to 'Rate'. A table below shows the start and end periods for the structured change.

Start Period	End Period	From Date	To Date	1M	2M	3M	6M	1Y	2Y	3Y	5Y
0	0	0	0	1.136	2.0544	2.8712	3.264	4.04	4.1704	4.2808	4.9768
1	1	10-10-2015	11-09-2015								

Buttons: Apply, Cancel

5. Select the Shock Type as Rate or Percent. Shock Type as Rate designates to absolute rate change and Shock Type as Percent designates to percent rate change.
 6. Enter a shock amount to apply to the IRC in absolute rate or percentage change. Enter Start and End period from 1 to 360 months and corresponding shock amount to apply to the IRC. Right click on data grid to all more rows or delete rows. Use the Excel Import or Export feature to add the interest rate changes.
 7. Click **Apply** to save.
 8. The status of the Interest Rate Curve is changed to **Defined**.
- **Implied Forward**
 1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as Implied Forward.
 2. Select the **Interpolation** Method.
 3. Input Minimum Rate, if required.
 4. Click **Define**.
The Implied Forward window is displayed:

Figure 2-5 Implied Forward

The screenshot shows the 'Forecast Rate' window for 'RT-IRC-101: Implied Forward'. The 'As Of Date' is 10-09-2015. The 'Shock Type' is set to 'Rate'. A table below shows the base rate and shock rate for various maturities.

	1M	2M	3M	6M	1Y	2Y	3Y	5Y	7Y	10Y	20Y
Base Rate	1.136	2.0544	2.8712	3.264	4.04	4.1704	4.2808	4.9768	5.168	5.5168	6.0344
Shock Rate											

Buttons: Apply, Cancel

5. Select the Shock Type as Rate or Percent. Shock Type as Rate designates to absolute rate change and Shock Type as Percent designates to percent rate change.
 6. Enter a shock amount to apply to the IRC in absolute rate or percentage change. If no change is required to the base curve, leave at 0.0, and click **Apply**.
 7. The status of the Interest Rate Curve is changed to Defined.
- **Yield Curve Twist**
 1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as Yield Curve Twist.
 2. Select the **Interpolation** Method.
 3. Input Minimum Rate, if required.
 4. Click **Define**.
The Yield Curve Twist window is displayed:

Figure 2-6 Yield Curve Twist

Forecast Period	1M	2M	3M	6M	1Y	2Y	3Y	5Y	7Y	10Y	20Y
0	1.136	2.0544	2.8712	3.264	4.04	4.1704	4.2808	4.9768	5.168	5.5168	6.0344

- Select Start and End Period. Start Period must 1 or higher while highest End Period can be 360.
- Select the tenors using the Short Point, Mid Point, and Long Point.
- Add the required shock amounts for each tenor. At runtime and display time, the rate changes are added to the As-of-Date rates to create a future scenario.
- Click **Apply**.
The status of the Interest Rate Curve is changed to Defined.

- Change From Base**

Note

This method is available from second scenario onwards.

- Select Scenario 2 or higher as Scenario.

Figure 2-7 Change From Base

Code	Name	Currency	Curve Type	Forecast Method	Interpolation Method	Minimum Rate	Definition Status	
<input type="checkbox"/>	101	RT-IRC-101	USD	Standard	Change From Ba...	Linear Interpolation	0.0000	Defined
<input checked="" type="checkbox"/>	102	SaveAsAPI102	USD	Standard	Change From Ba...	Linear Interpolation	0	UnDefined

- Select Interest Rate Code using corresponding checkbox and select Forecast Method as Change from Base.
- Select the Interpolation Method.
- Input Minimum Rate, if required.
- Click Define. The Change From Base window is displayed.

Figure 2-8 Change From Base

Forecast Period	1M	2M	3M	6M	1Y	2Y	3Y	5Y	7Y	10Y	20Y	30Y
0	1.136	2.0544	2.8712	3.264	4.04	4.1704	4.2808	4.9768	5.168	5.5168	6.0344	6.0344
1												

6. Scenario 1 is used as base scenario.
 7. Enter the Forecast Period from 1 to 360 months and the corresponding change amount to apply to the base forecasts IRC. Right click on data grid to all more rows or delete rows. Use the **Excel Import or Export** feature to add the interest rate changes.
 8. The status of the Interest Rate Curve is changed to Defined.
- **Standardized Approach Shocks**

Standardized Approach shocks are different than other Interest Rate Rules as these are applied at the scenario level instead of at the IRC level. When you create a new Forecast Rates rule, update the IRC Forecast Method for IRRBB Shocks Scenarios.

 1. In Forecast Rates window, select the IRRBB Shocks. This allows you to define either Standardized or Enhanced Approach Scenarios, or both for a single Forecast Rates Rule. Once a forecast rates rule is designated as IRRBB Shocks, this checkbox cannot be unselected unless there are no defined scenarios as either Standardized or Enhanced Approach scenario type.
 2. To apply a Standardized Approach scenario, click the Add Scenario.
 3. In the Add Forecast Rates Scenario section, select the Scenario Type to apply the scenario. The following are the shock scenarios:
 - Standardized Approach Shock - Parallel UP
 - Standardized Approach Shock - Parallel DOWN
 - Standardized Approach Shock - Short UP
 - Standardized Approach Shock - Short DOWN
 - Standardized Approach Shock - Flattener
 - Standardized Approach Shock - Steppener
 4. Only one Standardized Approach shock can be applied to a single scenario, and no two SA shocks of the same type may be applied to the same Forecast Rates rule. All qualifying IRCs will inherit this SA shock and cannot be changed except for their interpolation method and minimum rate.
 5. Click Apply to make scenario as Standardized Approach shock.
 - **Enhanced Approach Shocks**

Like Standardized Approach shocks, Enhanced Approach shocks are scenario-level rules. When you create a new Forecast Rates rule, update the IRC Forecast Method for IRRBB Shocks Scenarios. However, unlike Standardized Approach shocks, the Forecast method for each IRC is not pre-established. This means that users must define the Forecast method, interpolation method and minimum rate for all Interest Rates in each scenario. Once defined and processed, the results will flow through into the Table B reporting.

 1. In the Forecast Rates window, select the IRRBB Shocks. This allows you to define either Standardized or Enhanced Approach scenarios, or both for a single Forecast Rate rule. After a Forecast Rate rule is designated as IRRBB Shocks, this checkbox cannot be unselected unless there are no defined scenarios as either Standardized or Enhanced Approach Scenario Type.
 2. To apply an Enhanced Approach scenario, click the Add Scenario. The following are the shock scenarios:
 - a. Enhanced Approach Shock - Parallel UP
 - b. Enhanced Approach Shock - Parallel DOWN
 - c. Enhanced Approach Shock - Short UP
 - d. Enhanced Approach Shock - Short DOWN

- e. Enhanced Approach Shock - Flattener
- f. Enhanced Approach Shock - Steppener
- 3. Only one Enhanced Approach shock can be applied to a single scenario, and no two EA shocks of the same type can be applied to the same Forecast Rates rule. All IRCs in this scenario remain fully editable for the Forecast method, Interpolation method, and Minimum Rate.
- 4. Click Apply to make the scenario as Enhanced Approach shock.
- **Formula**

Note

This method is applicable for Hybrid and Managed Rate IRC definitions. For Hybrid and Managed Rate IRC definitions, following methods are applicable: Flat, Formula, and Direct Method.

1. Select Interest Rate Curve using corresponding checkbox and select **Forecast Method** as **Formula**.
2. Select the **Interpolation Method**.
3. Input Minimum Rate, if required.
4. Click **Define**.
5. The status of the Interest Rate Curve is changed to **Defined**.

Copy Across

This allows you to copy Forecast Method and related details from one IRC to another.

For example, if you have 10 IRCs enabled in the application and you must input only one set of assumptions, then copy those assumptions across all enabled IRCs, instead of having to input 10 full sets, thereby saving a significant amount of input time.

Note

You must select a defined IRC to Copy Across. For more information, see the [Define](#) section of Interest Rate Curve.

- **Flat Method**
 1. Select Interest Rate Curve using corresponding checkbox and select **Forecast Method** as **Flat**.
 2. Click **Copy Across**.
 3. Click **Apply Copy Across**.
 4. You can click **Cancel Copy Across** to cancel the Copy Across function.
- **Structured Change**
 1. Select Interest Rate Curve using the corresponding checkbox and select **Forecast Method** as **Structured Change**.
 2. Click **Copy Across**.

3. Click **Apply Copy Across**.
 4. You can click **Cancel Copy Across** to cancel the Copy Across function.
- **Implied Forward**
 1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as Implied Forward.
 2. Click Copy Across.
 3. Click Apply Copy Across.
 4. You can click Cancel Copy Across to cancel the Copy Across function.
 - **Change From Base**
 1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as Change From Base.
 2. Click Copy Across.
 3. Click Apply Copy Across.
 4. You can click Cancel Copy Across to cancel the Copy Across function.
 - **Formula**

Note

This method is applicable for Hybrid and Managed Rate IRC definitions. For Hybrid and Managed Rate IRC definitions, following methods are applicable: Flat, Formula, and Direct Method.

1. Select Interest Rate Curve using corresponding checkbox and select **Forecast Method** as **Formula**.
2. Click **Copy Across**.
3. Click **Apply Copy Across**.
4. You can click **Cancel Copy Across** to cancel the Copy Across function.

Restore Default

Use this action to reset previously entered details to Undefined status.

- **Flat Method**
 1. Select Interest Rate Curve using corresponding checkbox and select **Forecast Method** as **Flat**.
 2. Click **Restore Default**.
 3. The status of the Interest Rate Curve is changed to **Undefined**.
- **Direct Input**
 1. Select Interest Rate Curve using corresponding checkbox and select **Forecast Method** as **Direct Input**.
 2. Click **Restore Default**.
 3. The status of the Interest Rate Curve is changed to **Undefined**.
- **Structured Change**

1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as **Structured Change**.
 2. Click **Restore Default**.
 3. The status of the Interest Rate Curve is changed to Undefined.
- **Implied Forward**
 1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as **Implied Forward**.
 2. Click **Restore Default**.
 3. The status of the Interest Rate Curve is changed to Undefined.
 - **Yield Curve Twist**
 1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as **Yield Curve Twist**.
 2. Click **Restore Default**.
 3. The status of the Interest Rate Curve is changed to Undefined.
 - **Change From Base**
 1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as **Change From Base**.
 2. Click **Restore Default**.
 3. The status of the Interest Rate Curve is changed to Undefined.
 - **Formula**

Note

This method is applicable for Hybrid and Managed Rate IRC definitions. For Hybrid and Managed Rate IRC definitions, following methods are applicable: Flat, Formula, and Direct Method.

1. Select Interest Rate Curve using corresponding checkbox and select **Forecast Method** as **Formula**.
2. Click **Restore Default**.
3. The status of the Interest Rate Curve is changed to **Undefined**.

View

After defining Forecast Method and other parameters for an IRC you can view the forecasted interest rates by clicking this button.

- **Flat Method**
 1. Select Interest Rate Curve using corresponding checkbox and select **Forecast Method** as **Flat**.
 2. Click **View** to see the output table.
- **Direct Input**
 1. Select Interest Rate Curve using corresponding checkbox and select **Forecast Method** as **Direct Input**.
 2. Click **View** to see the Output Table.

- **Structured Change**
 1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as **Structured Change**.
 2. Click **View** to see the Output Table.
- **Yield Curve Twist**
 1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as **Yield Curve Twist**.
 2. Click **View** to see the Output Table.
- **Implied Forward**
 1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as **Implied Forward**.
 2. Click **View** to see the Output Table.
- **Change From Base**
 1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as **Change From Base**.
 2. Click **View** to see the Output Table.
- **Formula**

Note

This method is applicable for Hybrid and Managed Rate IRC definitions. For Hybrid and Managed Rate IRC definitions, following methods are applicable: Flat, Formula, and Direct Method.

1. Select Interest Rate Curve using corresponding checkbox and select Forecast Method as **Formula**.
2. Click **View** to see the Output Table.

2.1.2 Define Currency Forecast Methods

The following Currency Forecast methods are available when you select a currency (other than the reporting currency) from the **Currency Codes** list. Currency forecast methods is available in Asset Liability Management Cloud Service only.

Figure 2-9 Currency Forecast Methods

Table 2-4 Currency Forecast Methods

Method	Description
Flat	Forecast no change in the exchange rate for all dates beginning with the as-of date.
Structured Change	Forecast exchange rates as an incremental change from the previous period.
Direct Input	Type exchange rates to use in forecasting.
Parity	Forecast the exchange rate between two currencies based on forecasted interest rate associated with the currencies. The parity method can be used only if both the reporting currency and the selected currency have a Reference IRC. If reference IRC is not available for both or any one currency then flat method is used.
No Arbitrage	Forecast the exchange rate required to maintain a no-arbitrage condition between two currencies. The No Arbitrage method can be used only if both the reporting currency and the selected currency have a Reference IRC. If reference IRC is not available for both or any one currency then flat method is used.

Following options are available for Currency Forecast Rule:

- [Define](#)
- [Copy Across](#)
- [Restore Default](#)
- [View](#)

Define

• Flat Method

1. Select Currency Code using corresponding checkbox and select Forecast Method as **Flat**.
2. Input Minimum Rate, if required.

3. Click **Define**.
 4. The status of the Currency Code is changed to **Defined**.
- **Direct Input**
 1. Select Currency Code using corresponding checkbox and select Forecast Method as **Direct Input**.
 2. Input Minimum Rate, if required.
 3. Click **Define**. The **Direct Input** window is displayed:

Figure 2-10 Direct Input window

Forecast Period	Rate Value
0	0
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	

4. Right click on data grid and select 'Export to excel' to save visible data to excel file. You can also copy directly from the grid and paste data from an excel file to the grid. Enter data and click **Apply**.
 5. The status of the Currency Code is changed to **Defined**.
- **Structured Change**
 1. Select Currency Code using corresponding checkbox and select Forecast Method as **Structured Change**.
 2. Input Minimum Rate, if required.
 3. Click **Define**. The **Structured Change** window is displayed:

Figure 2-11 Structured Change window

Start Period	End Period	From Date	To Date	1M	2M	3M	6M	1Y	2Y	3Y	5Y
0	0	0	0	1.136	2.0544	2.6712	3.264	4.04	4.1704	4.2808	4.9768
1	1	10-10-2015	11-09-2015								

4. Select the Shock Type as Rate or Percent. Shock Type as Rate designates to absolute rate change and Shock Type as Percent designates to percent rate change.
 5. Enter Start and End period from 1 to 360 months and corresponding shock amount to apply to the Currency. Right click on data grid to all more rows or delete rows. Use the **Excel Import or Export** feature to add the interest rate changes. Click **Apply**.
 6. The status of the Currency Code is changed to **Defined**.
- **Parity**

1. Select Currency Code using corresponding checkbox and select Forecast Method as **Parity**.
 2. Input Minimum Rate, if required.
 3. Click **Define**.
 4. The status of the Currency Code is changed to **Defined**.
- **No Arbitrage**
 1. Select Currency Code using corresponding checkbox and select Forecast Method as **No Arbitrage**.
 2. Input Minimum Rate, if required.
 3. Click **Define**.
 4. The status of the Currency Code is changed to **Defined**.

Copy Across

This allows you to copy Forecast Method and related details from one Currency to another.

For example, if you have 10 Currency codes enabled in the application and you must input only one set of assumptions, then copy those assumptions across all enabled Currency codes, instead of having to input 10 full sets, thereby saving a significant amount of input time.

You must select a defined Currency to use Copy Across. For more information, see the [Define](#) section of Currency.

- **Flat Method**
 1. Select Currency Code using corresponding checkbox and select Forecast Method as **Flat**.
 2. Click **Copy Across**.
 3. Click **Apply Copy Across**.
 4. You can click **Cancel Copy Across** to cancel the Copy Across function.
- **Structured Change**
 1. Select Currency Code using corresponding checkbox and select Forecast Method as **Structured Change**.
 2. Click **Copy Across**.
 3. Click **Apply Copy Across**.
 4. You can click **Cancel Copy Across** to cancel the Copy Across function.
- **Parity**
 1. Select Currency Code using corresponding checkbox and select Forecast Method as **Parity**.
 2. Click **Copy Across**.
 3. Click **Apply Copy Across**.
 4. You can click **Cancel Copy Across** to cancel the Copy Across function.
- **No Arbitrage**
 1. Select Currency Code using corresponding checkbox and select Forecast Method as **No Arbitrage**.
 2. Click **Copy Across**.

3. Click **Apply Copy Across**.
4. You can click **Cancel Copy Across** to cancel the Copy Across function.

Restore Default

Use this action to reset previously entered details to Undefined status.

- **Flat Method**

1. Select Currency Code using corresponding checkbox and select Forecast Method as **Flat**.
2. Click **Restore Default**.
3. The status of the Currency Code is changed to **Undefined**.

- **Direct Input**

1. Select Currency Code using corresponding checkbox and select Forecast Method as **Direct Input**.
2. Click **Restore Default**.
3. The status of the Currency Code is changed to **Undefined**.

- **Structured Change**

1. Select Currency Code using corresponding checkbox and select Forecast Method as **Structured Change**.
2. Click **Restore Default**.
3. The status of the Currency Code is changed to **Undefined**.

- **Parity**

1. Select Currency Code using corresponding checkbox and select Forecast Method as **Parity**.
2. Click **Restore Default**.
3. The status of the Currency Code is changed to **Undefined**.

- **No Arbitrage**

1. Select Currency Code using corresponding checkbox and select Forecast Method as **No Arbitrage**.
2. Click **Restore Default**.
3. The status of the Currency Code is changed to **Undefined**.

View

After defining Forecast Method and other parameters for a Currency you can view the forecasted Currency by clicking this button.

- **Flat Method**

1. Select Currency Code using corresponding checkbox and select Forecast Method as **Flat**.
2. Click **View** to see the output table.

- **Direct Input**

1. Select Currency Code using corresponding checkbox and select Forecast Method as **Direct Input**.
2. Click **View** to see the Output Table.

- **Structured Change**
 1. Select Currency Code using corresponding checkbox and select Forecast Method as **Structured Change**.
 2. Click **View** to see the Output Table.
- **Parity**
 1. Select Currency Code using corresponding checkbox and select Forecast Method as **Parity**.
 2. Click **View** to see the Output Table.
- **No Arbitrage**
 1. Select Currency Code using corresponding checkbox and select Forecast Method as **No Arbitrage**.
 2. Click **View** to see the Output Table.

2.1.3 Define Economic Indicator Forecast Rule

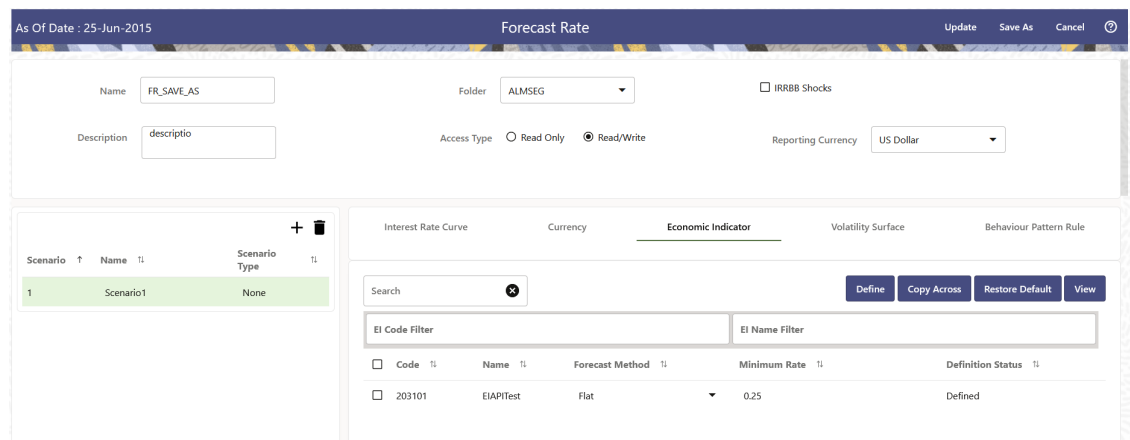
The Economic Indicators (EI) defined previously are listed under EI Section. The options under EI Forecast Method provide multiple ways to model the effects on Portfolio Cash Flows due to changes in inflation index and other micro or macro-economic parameters.

The following Economic Indicator Methods are available.

Table 2-5 Forecast Rate Rule – Economic Indicator Methods and Descriptions

Method	Description
Flat	Forecast no change in the EI rate for all dates beginning with the As-of Date.
Direct Input	Type-specific Economic Index Rates to use in forecasting.
Structured Change	Forecast the economic index as an incremental change from the previous period. This option is available only in Asset Liability Management Cloud Service.

Figure 2-12 Economic Indicator Forecast Rates



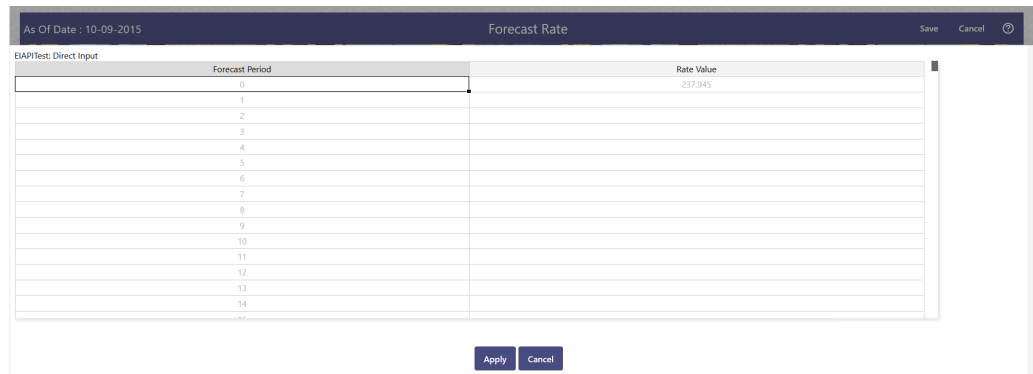
Following options are available for Economic Indicator Forecast Rule:

- [Define](#)
- [Copy Across](#)
- [Restore Default](#)
- [View](#)

Define

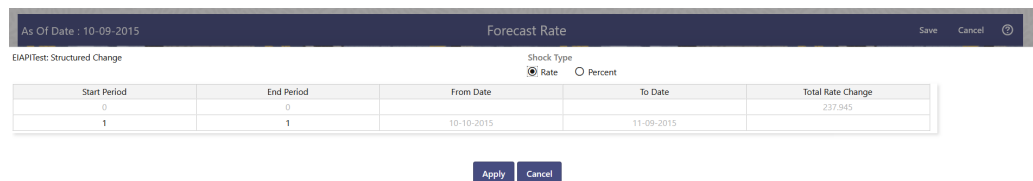
- **Flat Method**
 1. Select Economic Indicator Code using corresponding checkbox, select **Forecast Method** as **Flat** and enter minimum rate.
 2. Click **Define**. The status of Economic Indicator Code is changed to **Defined**.
- **Direct Input**
 1. Select Economic Indicator Code using corresponding checkbox, select Forecast Method as **Direct Input** and enter minimum rate.
 2. Click **Define**. The **Direct Input** window is displayed:

Figure 2-13 Direct Input window



3. Right click on data grid and select 'Export to Excel' to save visible data to excel file. You can also copy directly from the grid and paste data from an excel file to the grid. Enter data and click **Apply**.
 4. The status of Economic Indicator Code is changed to **Defined**.
- **Structured Change**
 - 1.
 2. Select Economic Indicator Code using corresponding checkbox, select Forecast Method as **Structured Change** and enter minimum rate.
 3. Click **Define**. The **Structured Change** window is displayed:

Figure 2-14 Structured Change window



4. Enter Start and End period from 1 to 360 months and corresponding shock amount to apply to the Currency. Right click on data grid to all more rows or delete rows. Use the **Excel Import or Export** feature to add the interest rate changes. Enter data and click Apply.
5. The status of Economic Indicator Code is changed to Defined.

Copy Across

This allows you to copy Forecast Method and related details from one Economic Indicator Code to another.

For example, if you have 10 Economic Indicator Codes enabled in the application and you must input only one set of assumptions, then copy those assumptions across all enabled Economic Indicator Codes, instead of having to input 10 full sets, thereby saving a significant amount of input time.

Note

You must select a defined Economic Indicator Code to use Copy Across. For more information, see the [Define](#) section of Economic Indicator.

- **Flat Method**
 1. Select Economic Indicator Code using corresponding checkbox and select Forecast Method as Flat.
 2. Click **Copy Across**.
 3. Click **Apply Copy Across**.
 4. You can click **Cancel Copy Across** to cancel the Copy Across function.
- **Direct Input**
 1. Select Economic Indicator Code using corresponding checkbox and select Forecast Method as Direct Input.
 2. Click **Copy Across**.
 3. Click **Apply Copy Across**.
 4. You can click **Cancel Copy Across** to cancel the Copy Across function.
- **Structured Change**
 1. Select Economic Indicator Code using corresponding checkbox and select Forecast Method as **Structured Change**.
 2. Click **Copy Across**.
 3. Click **Apply Copy Across**.
 4. You can click **Cancel Copy Across** to cancel the Copy Across function.

Restore Default

Use this action to reset previously entered details to Undefined status.

- **Flat Method**
 1. Select Economic Indicator Code using the corresponding checkbox and select **Forecast Method** as **Flat**.
 2. Click **Restore Default**.

3. The status of the Economic Indicator Code is changed to **Undefined**.
- **Direct Input**
 1. Select Economic Indicator Code using the corresponding checkbox and select **Forecast Method** as **Direct Input**.
 2. Click **Restore Default**.
 3. The status of the Economic Indicator Code is changed to **Undefined**.
 - **Structured Change**
 1. Select Economic Indicator Code using the corresponding checkbox and select **Forecast Method** as **Structured Change**.
 2. Click **Restore Default**.
 3. The status of the Economic Indicator Code is changed to **Undefined**.

View

After defining forecast method and other parameters for an Economic Indicator Code you can view the forecasted interest rates by clicking this button.

- **Flat Method**
 1. Select Economic Indicator Code using corresponding checkbox and select **Forecast Method** as **Flat**.
 2. Click **View** to see the output table.
- **Direct Input**
 1. Select Economic Indicator Code using corresponding checkbox and select **Forecast Method** as **Direct Input**.
 2. Click **View** to see the output table.
- **Structured Change**
 1. Select Economic Indicator Code using corresponding checkbox and select **Forecast Method** as **Structured Change**.
 2. Click **View** to see the output table.

2.1.4 Define Volatility Surface Forecast Methods

The following Volatility Surface Forecast methods are available when you select a Volatility Surface from the **Volatility Surface Codes** list. Volatility Surface forecast method is available in Asset Liability Management Cloud Service only.

Figure 2-15 Volatility Surface Forecast Methods

As Of Date : 25-Jun-2015 Forecast Rate Update Save As Cancel

Name: FR_SAVE_AS Folder: ALMSEG IRRBB Shocks

Description: descriptio Access Type: Read Only Read/Write Reporting Currency: US Dollar

Scenario	Name	Scenario Type
1	Scenario1	None

Interest Rate Curve Currency Economic Indicator **Volatility Surface** Behaviour Pattern Rule

Search [x] Define Copy Across Restore Default View

VS Code Filter VS Name Filter

<input type="checkbox"/>	Code	Name	Currency	Forecast Method	Shock Percentage	Definition Status
<input checked="" type="checkbox"/>	11001	Volatility_Test	USD	Flat	0	Defined

Table 2-6 Volatility Surface Forecast Methods

Method	Description
Flat	Forecast no change in the exchange rate for all dates beginning with the as-of date.
Global Shock	Single shock rate is defined and applied to base volatility matrix
Detail Shock	Shock rate is defined for every intersection of Strike & Expiry Date
Direct Input	Implied volatility is given as input for every intersection of Strike & Expiry Date

Following options are available for Volatility Surface Forecast Rule:

- [Define](#)
- [Copy Across](#)
- [Restore Default](#)
- [View](#)

Define

- **Flat Method**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Flat.
 2. Click Define.
 3. The status of the Volatility Surface Code is changed to Defined.
- **Global Shock**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Global Shock.
 2. Input Shock Percentage, if required.
 3. Click Define.
 4. The status of the Volatility Surface Code is changed to Defined.
- **Detail Shock**

1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Detail Shock.
2. Click Define. The Detail Shock window is displayed:

Figure 2-16 Detail Shock window

Strike Rate	23-Oct-2015	30-Nov-2015
4		
5		
6		

3. Right click on data grid and select 'Export to Excel' to save visible data to excel file. You can also copy directly from the grid and paste data from an excel file to the grid. Enter data and click Apply.
 4. The status of the Volatility Surface Code is changed to Defined.
- **Direct Input**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Direct Input.
 2. Click Define. The Direct Input window is displayed:

Figure 2-17 Direct Input window

Strike Rate	23-Oct-2015	30-Nov-2015
4		
5		
6		

3. Enter a shock amount to apply to the Volatility Surface. Right click on data grid and select 'Export to Excel' to save visible data to excel file. You can also copy directly from the grid and paste data from an excel file to the grid.
4. Click Apply.
5. The status of the Volatility Surface Code is changed to Defined.

Copy Across

This allows you to copy Forecast Method and related details from one Volatility Surface to another.

For example, if you have 10 Volatility Surface codes enabled in the application and you must input only one set of assumptions, then copy those assumptions across all enabled Volatility Surface codes, instead of having to input 10 full sets, thereby saving a significant amount of input time.

You must select a defined Volatility Surface to use Copy Across. For more information, see the [Define](#) section of Volatility Surface.

- **Flat Method**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Flat.
 2. Click Copy Across.

3. Click Apply Copy Across.
 4. You can click Cancel Copy Across to cancel the Copy Across function.
- **Global Shock**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Global Shock.
 2. Click Copy Across.
 3. Click Apply Copy Across.
 4. You can click Cancel Copy Across to cancel the Copy Across function.
 - **Detail Shock**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Detail Shock.
 2. Click Copy Across.
 3. Click Apply Copy Across.
 4. You can click Cancel Copy Across to cancel the Copy Across function.
 - **Direct Input**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Direct Input.
 2. Click Copy Across.
 3. Click Apply Copy Across.
 4. You can click Cancel Copy Across to cancel the Copy Across function.

Restore Default

Use this action to reset previously entered details to Undefined status.

- **Flat Method**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Flat.
 2. Click Restore Default.
 3. The status of the Volatility Surface Code is changed to Undefined.
- **Global Shock**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Global Shock.
 2. Click Restore Default.
 3. The status of the Volatility Surface Code is changed to Undefined.
- **Detail Shock**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Detail Shock.
 2. Click Restore Default.
 3. The status of the Volatility Surface Code is changed to Undefined.
- **Direct Input**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Direct Input.

2. Click Restore Default.
3. The status of the Volatility Surface Code is changed to Undefined.

View

After defining Forecast Method and other parameters for a Volatility Surface you can view the forecasted Volatility Surface by clicking this button.

- **Flat Method**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Flat.
 2. Click View to see the output table.
- **Global Shock**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Global Shock.
 2. Click View to see the Output Table.
- **Detail Shock**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Detail Shock.
 2. Click View to see the Output Table.
- **Direct Input**
 1. Select Volatility Surface Code using corresponding checkbox and select Forecast Method as Direct Input.
 2. Click View to see the Output Table.

2.1.5 Map Behavior Pattern Rule

The Behavior Pattern Rule section allows you to map an existing Behavior Pattern Rule to current forecast scenario.

The BP Rule drop-down list shows the list of existing Behavior Pattern Rule. Select any behavior pattern rule to map with the current forecast scenario. To map a Behavior pattern to all the forecast scenarios, use the Apply to All Scenarios check box (applicable only to Asset Liability Management Cloud Service). For more information about the Behavior Pattern Rule, see the Behavior Pattern Rule section.

To map Behavior Pattern Rule with Forecast Scenario, follow these steps:

1. Navigate to **Forecast Rate Summary** Page.
2. Navigate to the Behavior Pattern Rule section.
3. Select Behavior Pattern Rule from **BP Rule To Be Applied To Current Scenario** drop-down list. Enable **Apply to All Scenarios** check box if you want to apply the selected Behavior Pattern Rule to all scenarios.

Figure 2-18 Map Behavior Pattern Rule

As Of Date : 25-Jun-2015 Forecast Rate Update Save As Cancel

Name: FR_SAVE_AS Folder: ALMSEG IRRBB Shocks

Description: descriptio Access Type: Read Only Read/Write Reporting Currency: US Dollar

Scenario	Name	Scenario Type
1	Scenario1	None

Interest Rate Curve Currency Economic Indicator Volatility Surface **Behaviour Pattern Rule**

BP Rule To Be Applied To Current Scenario: Apply to All Scenario

Apply

4. Click **Apply**.