

User Guide

MBS Cohort Analyzer

Data Dynamics®

November 2020



MBS Cohort Analyzer

New dashboard available in the [MBS section](#) of Data Dynamics

1

S-Curves and WALA Ramp Analysis

Analyze historical prepayment sensitivity at varying refi incentives or at differing levels of seasoning on user-defined loan population cohorts in agency MBS collateral.

2

Extensive Customization Capabilities

User defined loan cohorts and comparative analysis facilitated across two dimensions – Series and Sub-cohorts.

3

Insights

This two-dimensional capability allows users to analyze the relationship between various loan attributes and their impact on prepayment sensitivity.

4

Access

Accessible through the MBS tile in Data Dynamics, click on [MBS Cohort Analyzer](#) to access the new tool.

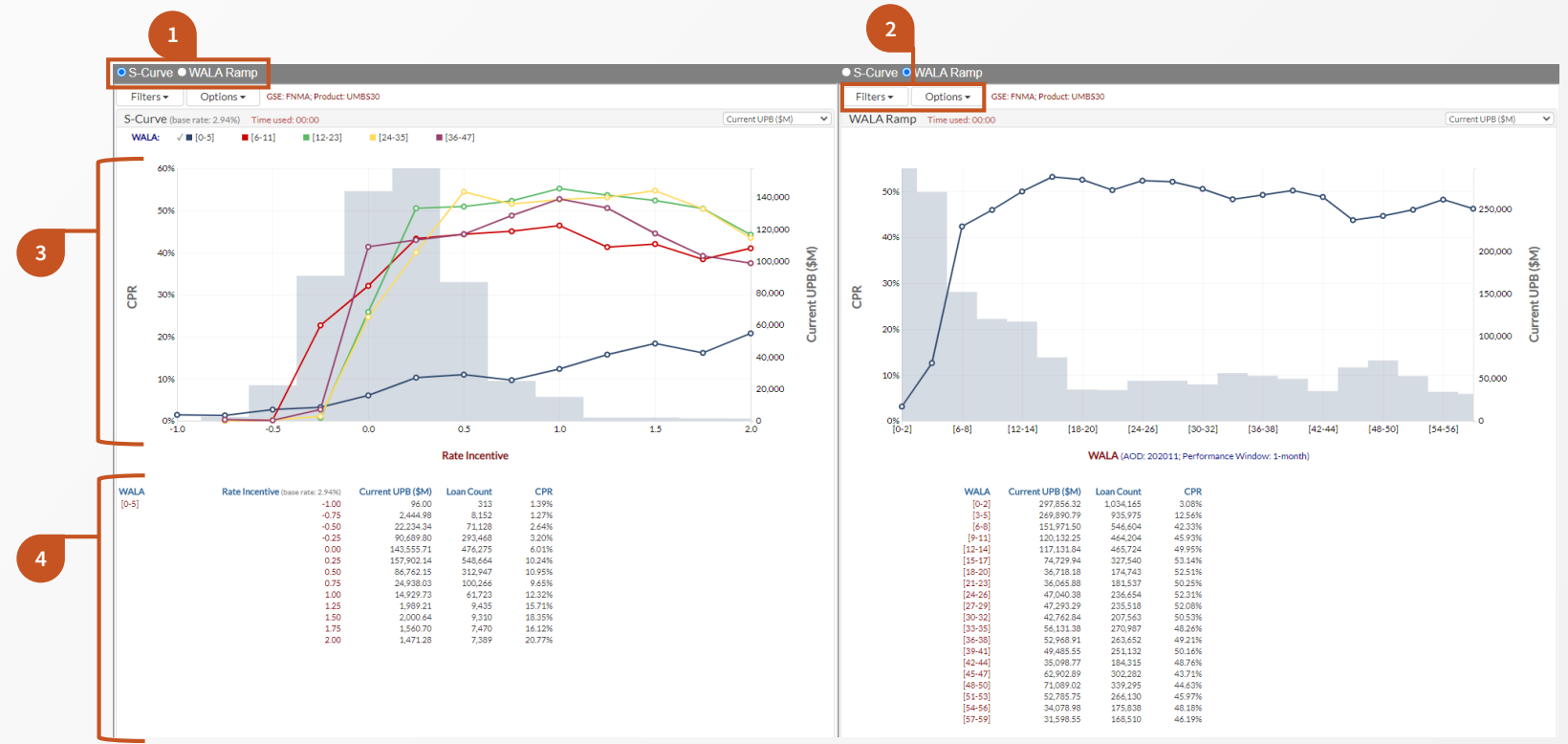


Dashboard Layout

The dashboard includes two panels with each panel allowing the user to employ it for S-Curve or WALA Ramp analysis.

Getting Started

- The default view is set to display the Fannie Mae UMBS 30-year cohort with the industry standard S-Curve analysis on the left and WALA ramp analysis on the right.
- This layout is customizable. Users can tailor the view via the drop-down filters and options to choose the population, by 30-year or 15-year, As-of Date, vintage, and so on.
- Note that data displayed in both the bar chart and data table corresponds to the selected Series bucket, which can be changed by clicking on the chosen bucket at the top of the respective chart.



Default Dashboard View

- 1 Toggle View**
Switch between S-Curve and WALA ramp for each of the two panels.
- 2 Filtering**
Employ any combination of filters to define the population for the desired cohort. Note the filters for each panel only impact that respective panel.

- 3 Bar Chart**
Each panel also displays a bar chart using either **Current UPB** or **Loan Count** as chosen in the top right-hand corner drop-down.
- 4 Data Tables**
Below each analysis, a data table lists details such as Rate Incentive (for S-Curves), WALA (for WALA Ramps), Current UPB, Loan Count, and CPR. Note only one Series bucket is shown at a time.



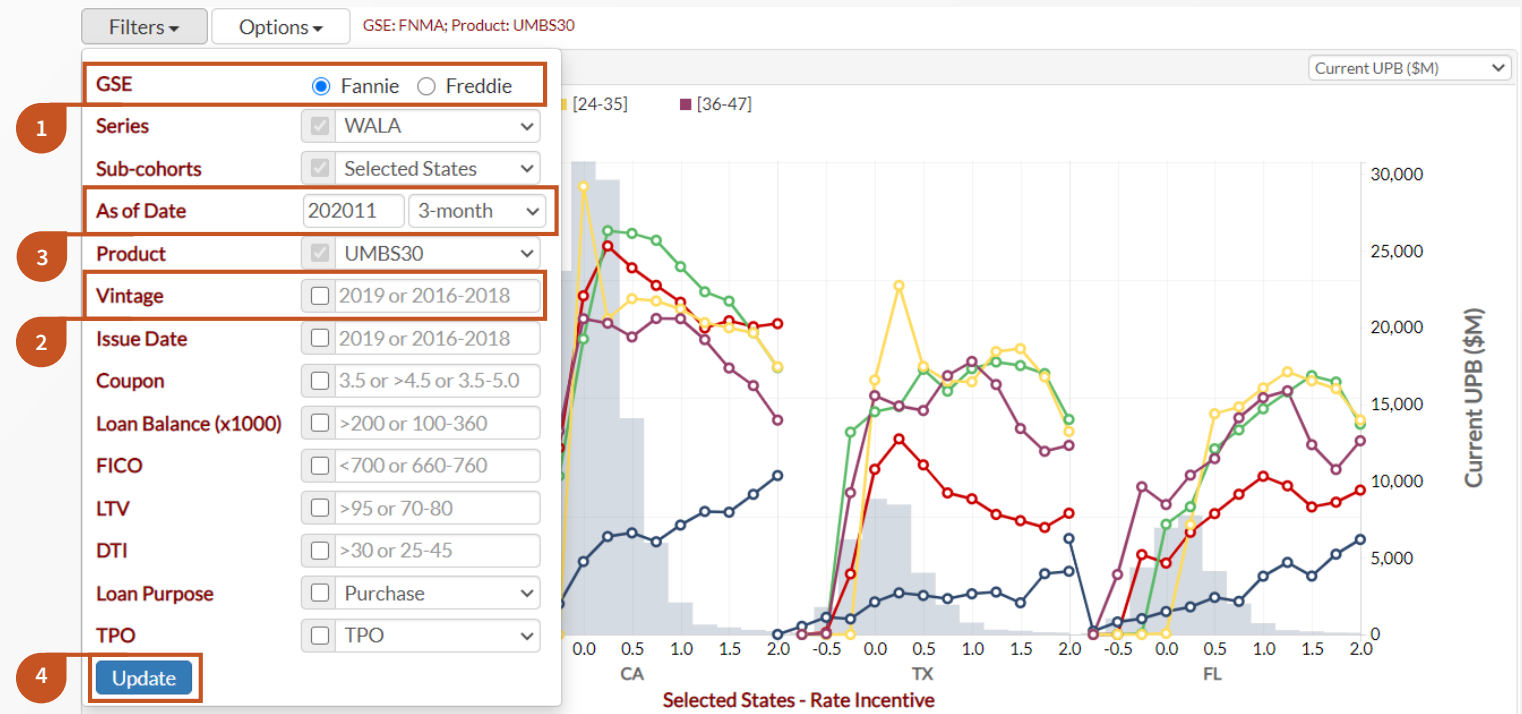
S-Curve Analysis

The S-Curve tool provides two menus that help in defining the cohorts and the layout of the analysis, Filters, and Options.

Comparative analysis is available across two dimensions, Series and Sub-Cohorts.

Series, Sub-Cohorts, and Filters

- The **Series** parameter allows users to choose from a list of loan characteristics by which the underlying cohort can be split. Each selection comes with a default set of buckets represented by separate lines.
- The **Sub-Cohort** parameter represents the second order classification of the underlying population. If a characteristic is chosen, the view will split into multiple panes as defined by the buckets for the chosen characteristic. **Note that the default value for the Sub-Cohort is “None”.**
- The tool also provides several other filtering capabilities to define the desired cohort. A filter can be used by checking the box and defining the range for the loan attribute. The syntax for range definition is shown by default to assist the user.



Considerations when Filtering

- Filter by GSE**
Filters the chart to display only data for the selected GSE. Note that if “GSE” is selected in either the **Series** or **Sub-Cohort** parameters, the chart will display data for both Fannie and Freddie.
- Defining Vintage**
Defined as the MBS issue date for the loans minus the WALA of the pool.
- Selecting the Activity Window**
The drop down allows user to choose the number of months of historical prepayments going back from the As of Date. The choices are 1, 3, 6 and 12 months. For example, the selection shown would include 3 months of activity taken from Aug, Sep and Nov factors.
- Apply Selected Filters**
Click here for any changes to take effect.



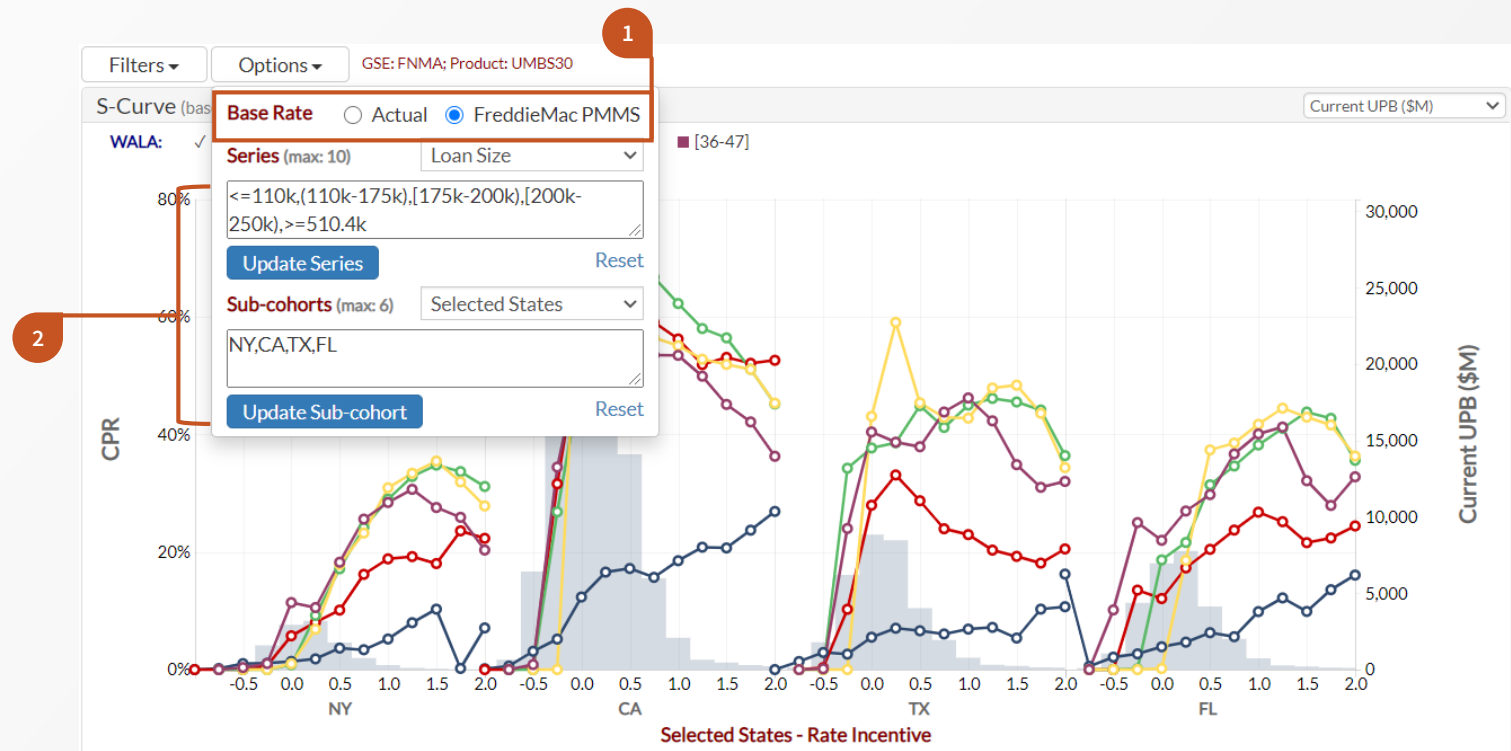
S-Curve Analysis

The S-Curve tool provides two menus that help in defining the cohorts and the layout of the analysis, Filters, and Options.

Comparative analysis is available across two dimensions, Series and Sub-Cohorts.

Further Customizing using Options

- **Series** can be customized with a maximum of 10 buckets at a time. Note that not all Series choices are available for custom bucketing. The list is currently limited to States, Loan Size, FICO, LTV and DTI.
- **Sub-Cohort** can be customized with a maximum of 6 buckets at a time. The available choices for custom bucketing are the same as those in Series above.
- Note that for any changes made to the Options drop-down, the user must navigate to the Filters drop-down and select “Update” for the changes to take effect.



Considerations when using Options

- 1 **Used to Calculate the Rate Incentive (x-axis)**
Actual: Average rate observed on loans with $LTV \leq 80$ and $FICO \geq 660$ for the chosen product and GSE, that were originated two months prior to the performance period chosen.
Freddie PMMS: Survey rate published by Freddie Mac with the same lag as defined in Actual.

- 2 **Syntax for Custom Buckets**
 Buckets can be customized using a list of single values, boundary conditions such as “<”, or ranges using brackets or parentheses. Note that using a parentheses, “(”, excludes the boundary value from within the range and using a square bracket, “[”, includes the boundary value within the range.



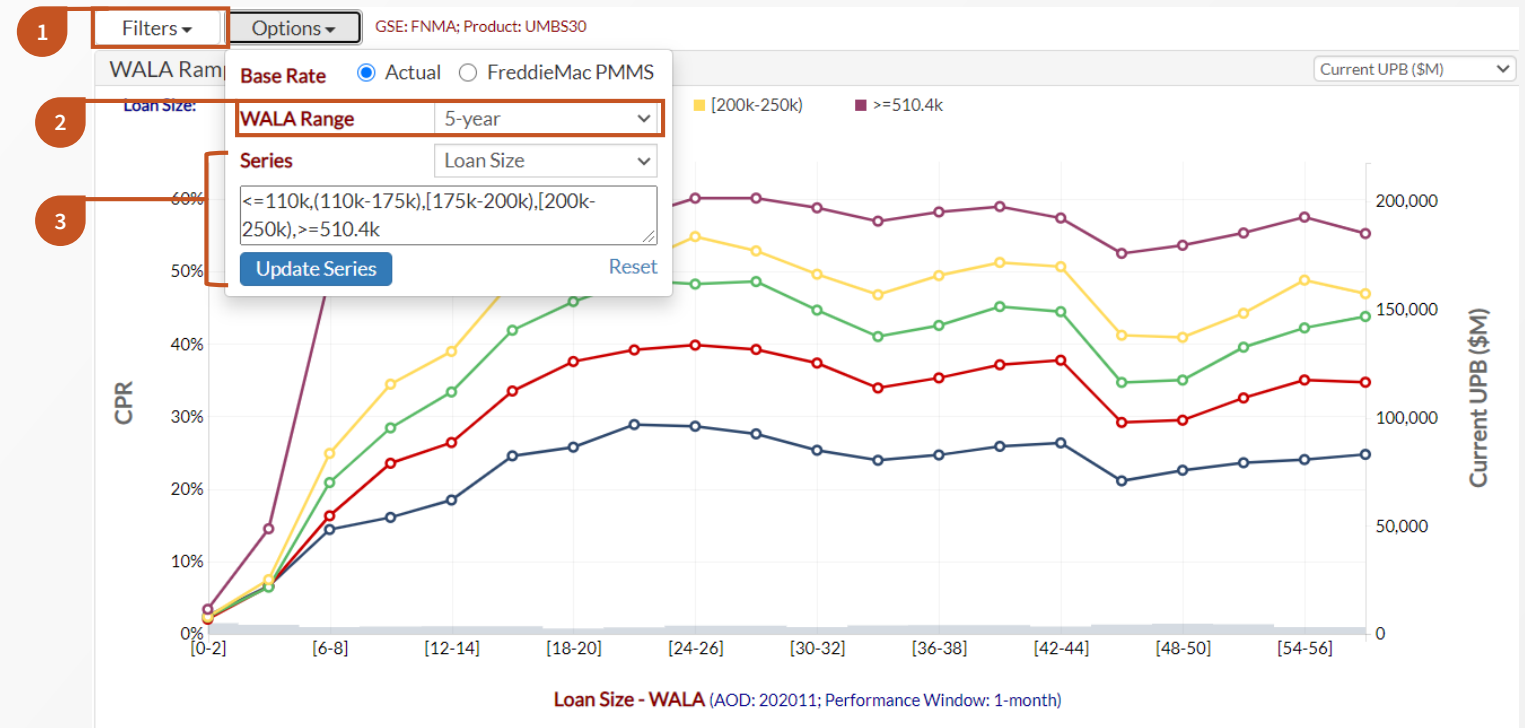
WALA Ramp Analysis

The WALA Ramp tool provides two menus that help in defining the cohorts and the layout of the analysis, Filters and Options.

Comparative analysis is available using the Series filter.

Customizing with Filters and Options

- **Series** can be customized with a maximum of 10 buckets at a time. Note that not all Series choices are available for custom bucketing. The list is currently limited to States, Loan Size, FICO, LTV and DTI.
- Note that for any changes made to the Options drop-down, the user must navigate to the Filters drop-down and select “Update” for the changes to take effect.



Considerations when using Options

1 Comparing Filters to S-Curve

The same filtering capabilities are available for WALA ramps with one exception: the **Sub-Cohort** filter/option is only available for the S-Curve.

2 Customizable WALA Buckets

3-, 4-, 5-, or 10-year range can be chosen, which will drive the x-axis.

3 Syntax for Custom Buckets

The **Series** syntax is the same as described for the S-Curves.





Resources

- ◆ **MBS Cohort Analyzer Video Tutorial**
Click [here](#) to watch the video
- ◆ **Access Data Dynamics:**
www.fanniemae.com/datadynamics
- ◆ **Sign up for Fannie Mae communications:**
www.fanniemae.com/CMsignup
- ◆ **Contact us with questions:**
1-800-232-6643, Option 3 or by [e-mail](#)

