Adjustable Loans

Compatible Releases:

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Contents

Adjustable Loan Overview

An adjustable rate loan (ARM) is a loan where the loan documents call for periodic adjustments to the interest rate and or payment. There are a number of ways to calculate the new interest rate, the most common method being the addition of a Margin to an Index. Less common adjustable methods call for calculating the percentage change to an index and adding that change to the current rate, or scheduling predefined increases ("steps") in the interest rate.

Principal and Interest Constants for adjustable rate loans may or may not change in accordance with interest rates. Some loan types impose limits on the amount a payment constant may change in one period or over the life of a loan or the loan may be subject to a set number of Interest Rate or P&I Payment changes allowed over the life of the loan. Loan parameters may define the floors, ceilings, increase, and decrease caps as a percentage or as a dollar amount.

STRATEGY's Adjustable Loan Module capabilities are robust enough to automate the review and changes necessary for most adjustable loans. System capabilities include providing automated borrower notices, a complete historical view of all rate reviews and adjustments, and functionality to automate future changes to key adjustable loan parameters.

STRATEGY's Adjustable Loan Processing module allows you to:

Define how the loan will review and change interest rates and payments:
- When boarding a new loan, enter Adjustable Loan information via Loan Setup using the Adjustable Loan Wizard.
- If a loan is active in the servicing system (production), you can change a fixed rate loan to an adjustable loan from the Adjustable Loan Module by
    1. changing the Contract Type in the Master file, and
    2. adding a new record on the Adjustable Loan Information Tab.

Maintaining the Adjustable Loan:
If loan parameters don't change, Strategy will automatically review and update the interest rate and payments. However, Strategy also allows the following:
- Use the Adjustable Loan information tab to update or change adjustable loan information.
- Use the Adjustable Review History tab to view past reviews
- Use the Pending Adjustable Loan Changes to add or modify pending change records for future changes to adjustable loan parameters.

Additional Adjustable Loan Features allow you to:
- Enter and update Index Values by Effective Date
- Enter and update business calendars to ensure loans review and change only on business days
- Create Payment schedules
- Print Adjustable Loan Notices on demand (rather than during dayend)

Day End Processing Considerations:
- There are a variety of dayend programs performing required activities on the review date, the print notice date, and the rate change date.

Supporting Compounding in Arrears (Release 19F)
To support the ARRC recommended use of Compounding in Arrears with the new SOFR Index slotted to replace USD LIBOR rates, the following changes were incorporated into Strategy's adjustable loan module.

- New interest calculation programs to support the ARRCs Compounding the Rate and Compounding with the Balance calculations

- Added new Adjustable Methods to support the Compounding in Arrears calculations and the use of both a Margin and a Spread Adjustment.
- A new Compounding SOFR Interest widget was added to the Portal to view the Interest calculation history for Compounding in Arrears loans. The Compounding SOFR Interest widget allows users with appropriate authority to view the daily compounding calculations and values for the various components used in the calculation.
- With the pending need to transition loans using LIBOR and COF indices to a new Index, additional fields were needed to set future changes to the adjustable loan parameters. This release added a new Adjustable Loan Widget to add, modify and delete Pending Adjustable Loan Change records as well as a new Mapping Tool to upload multiple PARMX records into the system from a spreadsheet.

STRATEGY's Adjustable Loan Processing

How to adjust the Interest Rate and P&I Payment, and when to adjust the Interest Rate and P&I Payment are the backbone of successful processing for Adjustable Rate loans.

When involves several important dates in the system, and **How** involves a number of parameters including the Adjustable Rate Method, Index, and Constants and Constraints.

Adjustable Dates

Like most servicing tasks, timing is everything when it comes to processing Rate and Payment reviews and adjustments. The following dates play an important part in Adjustable Loan Processing.

Field Label	File/Field	Window	Importance of field
Rate Review Date	ABRDAT/PARM	Adjustable Loan Info tab	• Adjustable Loan Processing for a review frequency begins on the Rate Review Date in dayend. • STRATEGY calculates the Rate Review Date using the Rate Change Anniversary Date and the values of Lookback Method and Lookback Days, and any non-Business Days if applicable for the loan.
Index Effective Date	IXEFF/PINDEX	Adjustable Loan Index Rates (Toolbar)	• STRATEGY uses the Index Rate with the most recent Effective Date when selecting the Index to calculate the new Interest Rate.
Rate Change Date	ABECDT/PARM	Adjustable Loan Info tab	• STRATEGY calculates the Rate Change Date based on the Rate Change Anniversary Date, and a Business Calendar if applicable. • Rate Change Date is the date that the New Interest Rate % goes into effect on the loan. (For a monthly loan, if the rate change is to be in effect for 12/1, the Rate Change Date should be 11/1. The 12/1 payment is collecting interest from 11/1 to 11/30.) • Rate Change Date is the date that STRATEGY updates the Master file with new Rate Information. • If payment is re-amortizing, STRATEGY calculates the remaining amortization period using the Rate Change Date as the beginning of the amortization period.
P&I Amortization To Date	ABPITD/PARM	Adjustable Loan Info tab – Update Wizard	• End date for Amortization when calculating a new P&I Payment Amount. • Enter the Amortization Date in this field for Balloon Loans. • If STRATEGY is calculating a new P&I Payment and the P&I Amortization To Date is left blank, STRATEGY will use the Maturity Date in the PMASTR file as the Amortization To Date.

Maturity Date	CMMATD/PMASTR	Loan Administration>Master Info>Payment/Billing	• If no P&I Amortization To Date is supplied, the Maturity Date is used as the date to end amortization when calculating a new P&I Payment.

Adjustable Rate Methods

STRATEGY's Adjustable Rate Methods determine **How** STRATEGY calculates the interest rates using the provided parameters, constants, and constraints. STRATEGY offers several options.

Standard Methods

A	Margin is added to the new Index Rate; this is the most widely used method. This code impacts the calculation of Investor Net Yield when there is a floating net yield on the investor.
J	Margin is added to the index with periodic caps.
K	Index is multiplied by the margin to represent a % of the Index
P	Allows you to use up to two margins and two user-defined arithmetic operators (add/subtract/multiply or divide). With Adjustable method P, the Margin #1 and Operator #1 are required entries used to calculate the new rate. Margin #2 and Operator #2 are optional fields; if they are not used, then the new rate will be the result of Margin #1 and Operator #1 only. If there is a value in the Margin #2 and Operator #2 fields, an additional calculation is performed with these values.

Exception Loans

E	Loan is an exception and must be handled manually. Exception loans must be monthly reviewable; daily reviewable loans cannot use this method.

Federal Home Loan Bank (FHLB) Methods

B	Uses previous index and current rate, then rounds change in rate.
F	Uses previous index and current rate and rounds rate.
L	Uses original index and original rate and rounds change in rate.
M	Uses original index and original rate and rounds the rate.

Step Rate Methods

C	Rate is adjusted up or down based upon a set percentage.
D	Rate is adjusted and converted to a fixed rate.

Growing Equity Loan Methods; not valid for Payment Type F, I, R, or Q
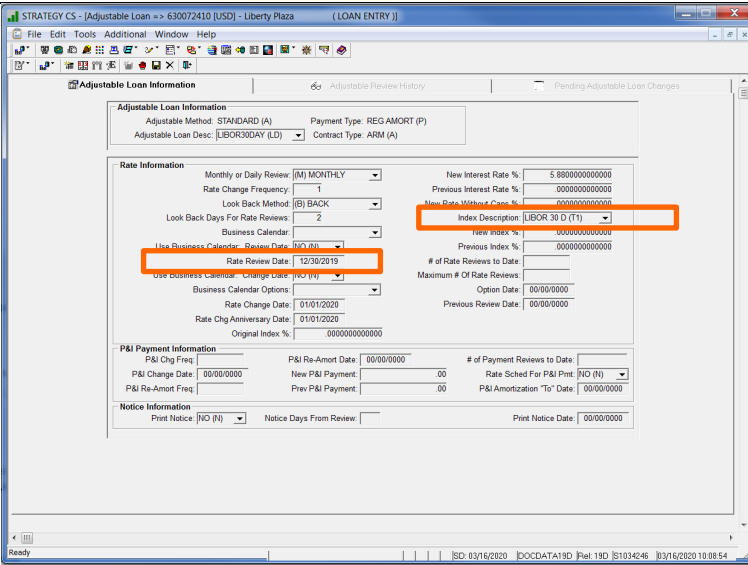
G	P&I Payment increase only, based upon a %.
H	P&I Payment increase only, based on a $.

Compounding in Arrears (SOFR)

6	Compounding in Arrears – Rate 1 Compounding the Rate – simple margin
T	Compounding in Arrears – Rate 1 Compounding the Rate – simple margin & spread adjustment
7	Compounding in Arrears – Rate 2 Compounding the Balance – simple margin
3	Compounding in Arrears – Rate 2 Compounding the Balance – simple margin & spread adjustment

The Adjustable Rate Processing Cycle

The following provides a high level overview of how STRATEGY processes Adjustable Rate Loans. This process repeats unless the *#of Rate Reviews to Date* equals the ***Maximum # of Rate Reviews***.

Any Month						
S	M	T	W	T	F	S
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30 **Rate Review Date**	31	1 Rate Change Date	2

1 & 2	The Beginning:
	
	 Day-end on the **Rate Review Date**. STRATEGY calculates the Rate Review Date based on whether Look Back Days and Business Calendars are applied to the loan.
	
	 • STRATEGY uses the **Index Description** field found on Adjustable Loan Information screen to determine the current Index Rate.
	  ○ STRATEGY takes the most recent value from the Index Table for the Index identified for the loan on the Rate Review date.
	 • Using the **Adjustable Method**, available **Index Values**, Margins, Operations, and Rounding parameters, STRATEGY calculates a preliminary rate.
	 • STRATEGY then looks at any caps identified in the Constants and Constraints to finalize the new rate.
	 • If the P&I Constant changes with the Interest Rate, STRATEGY will use the Projected Unpaid Principal Balance as of the **Rate Change Date**, the **New Interest Rate**, and the remaining months to amortize the loan to calculate the new P&I Constant.
	  ○ STRATEGY calculates the remaining months to amortize from the Rate Change Date to the P&I Amortization 'To' Date. If there is no **P&I Amortization 'To' Date** entered, *STRATEGY* uses the **Maturity Date** in the Master file to determine the end of the amortization period.
	  ○ **# of Rate Reviews to Date** is increased by 1.

| 3	• At the end of processing on the Rate Review Date the following information is updated:
	     o On the Adjustable Loan Information tab
	        ▪ **Rate Review Date** increased by the **Rate Change Frequency** and Look back logic (Method and # of Days)
	        ▪ **Rate Change Anniversary Date** is increased by the Rate Change Frequency and Look back logic (Method and # of Days)
	        ▪ **Rate Change Date**
	        ▪ **P&I Change Date**, if appropriate

4	• *STRATEGY* creates a Rate Review History record found on the Adjustable Review History tab.

A	The Middle:
	
	 Between the **Rate Review Date** and the **Rate Change Date**: After the 30th and before the 1st in the example above.
	
	 • The Rate Review History record is available on the Adjustable Review History tab showing the New Interest Rate%, new P&I Payment etc.
	 • *STRATEGY* uses the information in the history record to update the Loan Administration, Master Info **Interest Rate** and Payment <u>on the **Rate Change Date**</u> (the 1st in the example above).
	        ▪ Users with appropriate authority can adjust the **Index Rate**, **Interest Rate**, or **P & I Payment** in the History record.
	     o File Maintenance will record the changes made to the history record.
	     o Changes made <u>prior to the **Rate Change Date**</u> will be used to update Master Info.
	     o Changes made after the **Rate Change Date** will not affect Master Info, it will be informational only.

5	The End:
	
	 During day end on the **Rate Change Date**, the 1st in the example above.
	
	 • *STRATEGY* updates the values in the system with the **New Interest Rate %** and **New P&I Payment**, if changing.
	     o In Loan Administration, Master Info
	        ▪ **Interest Rate %** from **New Interest Rate %**
	        ▪ **Annual Percentage Rate %**
	     o **P&I Constant** from **New P&I Payment**, if the payment will change
	     o Rate Review History record is updated to show that the Master File has been updated.

6	o In Investor Processing ▪ **Investor Net Yield %** if the record is set for Investor Updates
7	o In Receivables ▪ A new billing receivable record is created using the new rate and payment
8	• File Maintenance History record is created to document Master file changes (MB404ARM).
B	Pending Adjustable Loan Changes should go into effect prior to the **Rate Review Date** to be included in the automated review process.

Rate Review Date – Dark blue Activities occur on the Rate Review Date (1-4)

B

Pending Adjustable Loan Changes should go into effect prior to the Rate Review date to be included in the automated review process.

B

New Rate/Payment Calculation
1

New Rate/Payment Info Updated in ARM module
2

Rate Review Dates Roll
3

Rate Review History Record Created
4

File Maintenance Record Created by MB404ARM
8

Next Receivable created using the new rate and payment
7

Investor Info Updated
6

Master Info Updated from Rate Review History Record
5

A

A

Use the time between the Rate Review Date and the Rate Change Date to review and correct any proposed changes.

Rate Change Date – Orange activities occur on the *Rate Change Date (*5-8)

How to Navigate to the Adjustable Loan Module

STRATEGY provides users the option to use icons or menus to navigate through the system.

Use the drop-down arrow to open the multi-select icon and click on the Adjustable Rate icon
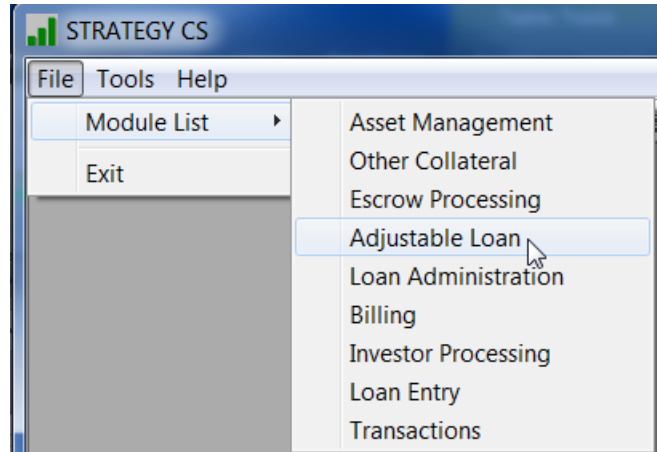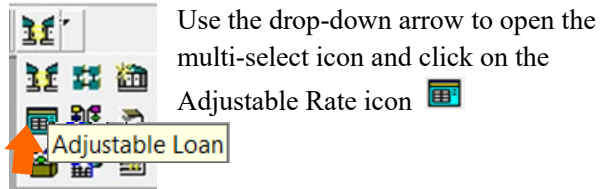
Select the following menu options from the Menu Bar.

- File
- Module List
- Adjustable Loan

Adjustable Loan Module Default Screen Display

When the Adjustable Loan Module opens, the default view is on the Adjustable Loan Information tab. This screen presents basic interest rate and payment adjustment details for the ARM loan displayed in the title bar in a Read Only presentation.
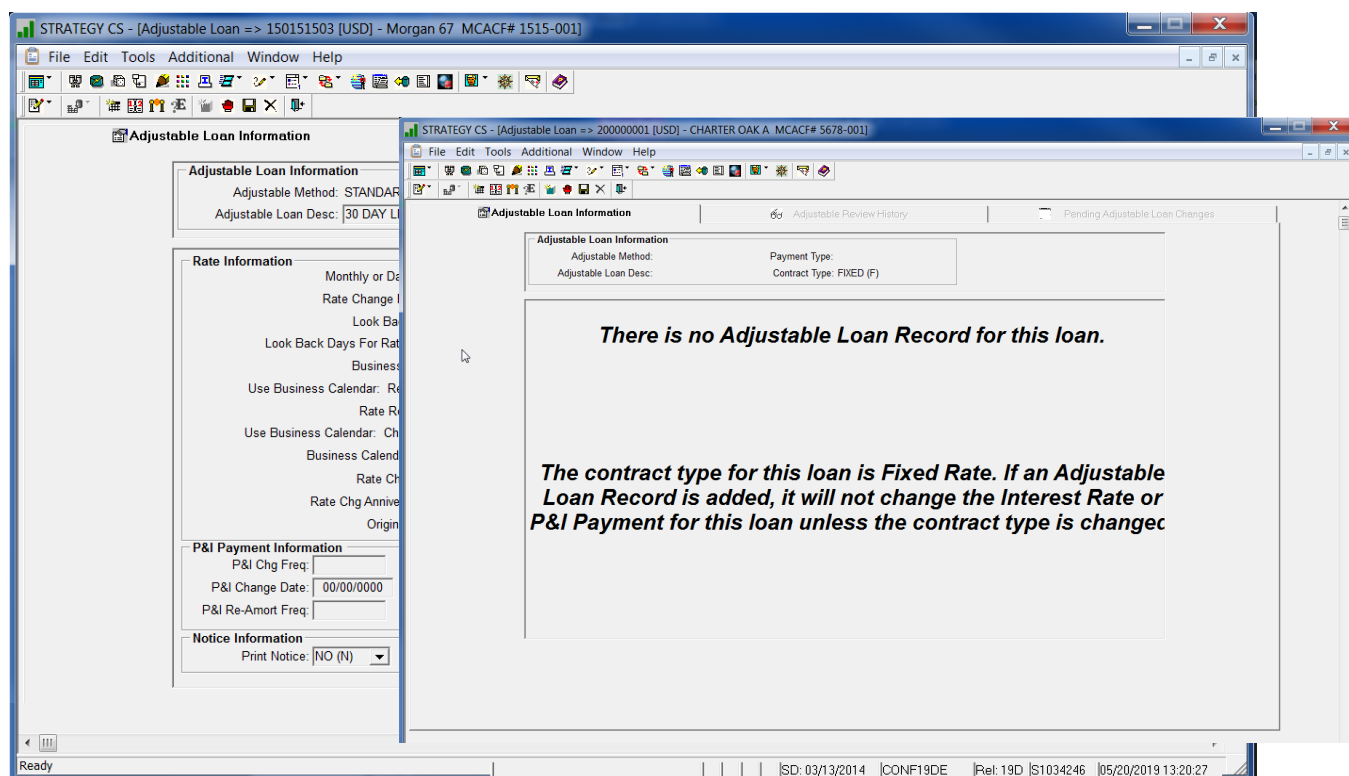
FIGURE 1-DEFAULT VIEWS FOR THE ADJUSTABLE LOAN MODULE.
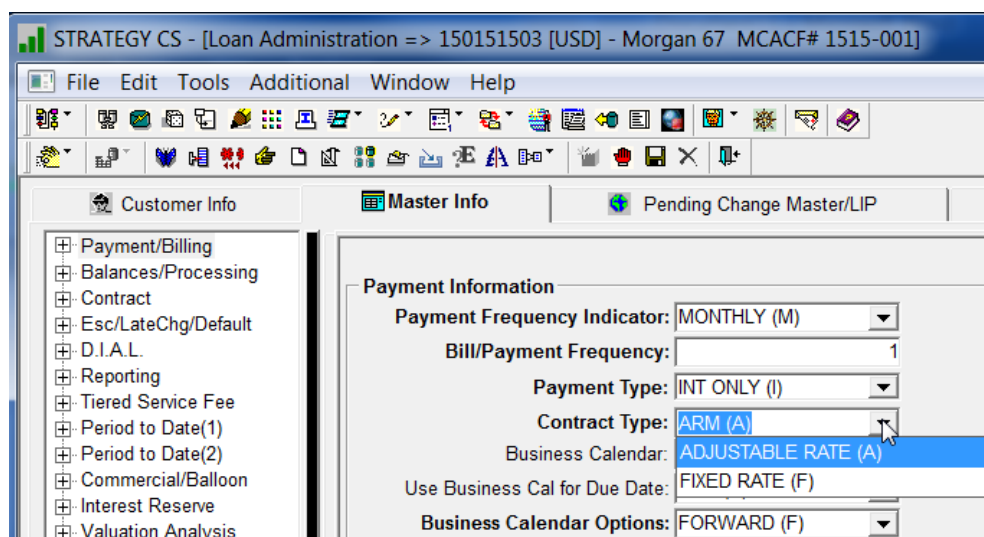
FIGURE 2-CONTRACT TYPE AND PAYMENT TYPES FOUND ON THE MASTER INFO TAB, PAYMENT/BILLING PANEL DETERMINE THE DEFAULT VIEW FOR THE ADJUSTABLE LOAN MODULE.

NOTE: Prior to opening the module, *STRATEGY* checks to ensure that there is a record in the PARM file for the requested loan. If no record exists, the system will display a message saying, "There is no Adjustable Loan Record for this loan."

Additional messages will display based on the Contract Type and Payment Types defined on the Master Info tab in Loan Administration and Adjustable Loan Record. See the troubleshooting section of this book for more information.

Adjustable Loan Module Tabs

The Adjustable Loan module is organized logically into three tabs. As of Update 19F, there are also two Portal widgets to support Adjustable Loan activities. A Mapping Tool template, Pending Adjustable Loan Changes, allows users to upload pending adjustable loan parameters for multiple loans at once.

- Adjustable Loan Information – The first tab in the screen describes the dates and calculation parameters for Rate and P&I Payment changes and instructions for printing an ARM notice. The tab prefills with the results from the most recent rate review. If the loan is not an adjustable loan, the tab shows "There is no adjustable loan record for this loan".
  - Right mouse options available on the Adjustable Loan Information window include:
    - Update Info – detailed settings for the calculation of the interest rate and payment changes are available for update for users with appropriate security.
    - Review Constants and Constraints – reflects values entered when the loan was created to calculate the interest rate and P & I Payment. These values include margins, floor and ceiling rates and expiration dates, and the four fields required for the Two Operation Adjustable Methods, P, T, 3, 6, and 7.
    - Rate Schedule for P&I Payments - allows you to set up a rate schedule for calculation of a new P&I payment. This option is limited to monthly reviewable loans with Payment Types that allow negative amortization (Payment Types: Date of Payment to Date of Payment with Neg Amortization (B) & Negative Amortization Allowed (G)) and a **P&I Chg Freq** greater than zero.
    - User-Defined Fields – displays the User Defined fields for the loan tied to the ARM module. User defined fields display values entered for the active loan.
    - Notes – displays the Notes for the loan. Window defaults to Notes with a **Note Type** *Adjustable Loan (AL)*.
- Adjustable Review History – The middle tab on the screen, the Adjustable Review History tab displays a history of all rate reviews. Users can use the radio buttons provided to *Display all Review History* or *Only Display Review History with Rate or P&I Change.*
  - Right mouse options available from the Adjustable Review History tab include:
    - Review History Detail – displays the Rate, P&I Payment & Notice Information for the selected history record.
    - Find/Filter Options
    - Notes
- Pending Adjustable Loan Changes – This tab is to enter pending or future adjustments to the adjustable loan parameters used to calculate the rate.
  - Right mouse options available from the Pending Adjustable Loan Changes
    - Multiple Record Setup – allows you to recreate multiple change records with different effective dates.
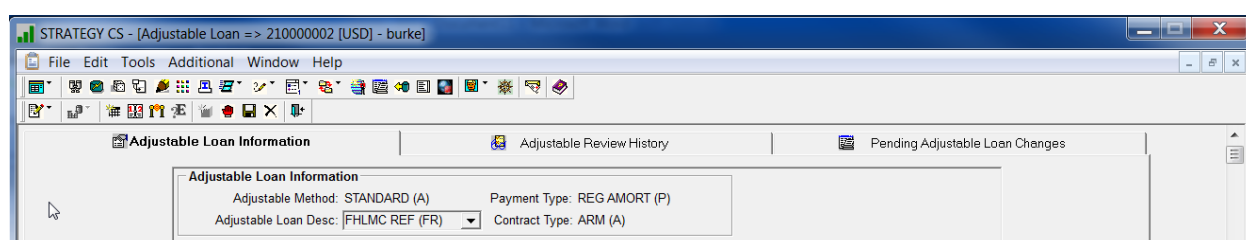

FIGURE 3-THE ADJUSTABLE LOAN MODULE IS MADE UP OF 3 TABS, ADJUSTABLE LOAN INFORMATION, ADJUSTABLE REVIEW HISTORY, AND PENDING ADJUSTABLE LOAN CHANGES

- Adjustable Loan Widget – A browser based application allows users to add, update, or delete Pending or 'future' adjustments to the adjustable loan parameters used to calculate the rate.
  - Allows users to create multiple change records with different effective dates.
  - Expands the fields available to schedule 'future' changes to adjustable loan parameters to support the transitioning of loans from LIBOR and COFR indices being retired.
  - Includes a group delete feature that allows users with appropriate authority to delete a group of unprocessed pending adjustable loan change records uploaded via the Mapping Tool,
- Compounding SOFR Interest – A browser-based application that displays the Compounding in Arrears Accruals and the components that make up the calculation. Similar to Daily Balances & Rates and Investor Daily Balances and Rates, a new Compounding SOFR Interest record is added daily (PCMPNDSOFR).

Module Specific Toolbar Options for the Adjustable Loan Module

The Adjustable Loan Module-Specific Toolbar provides access to features specific to the Adjustable Loan module. This includes:

Icon	Feature	Use
	Indices – tracks Index Rate % by Effective Date	Update Index Rate values using this feature.
	Business Calendars – allows the addition of holiday dates for exclusion from processing	Create and update Business Calendars.
	Rate Changes – allows the processing of Individual or Global Rate changes	Allows you to backdate rate changes for one loan or all loans tied to a specific Index Rate.
	Pending Change Errors -	Review errors for pending rate changes.

Adjustable Loan Wizard -
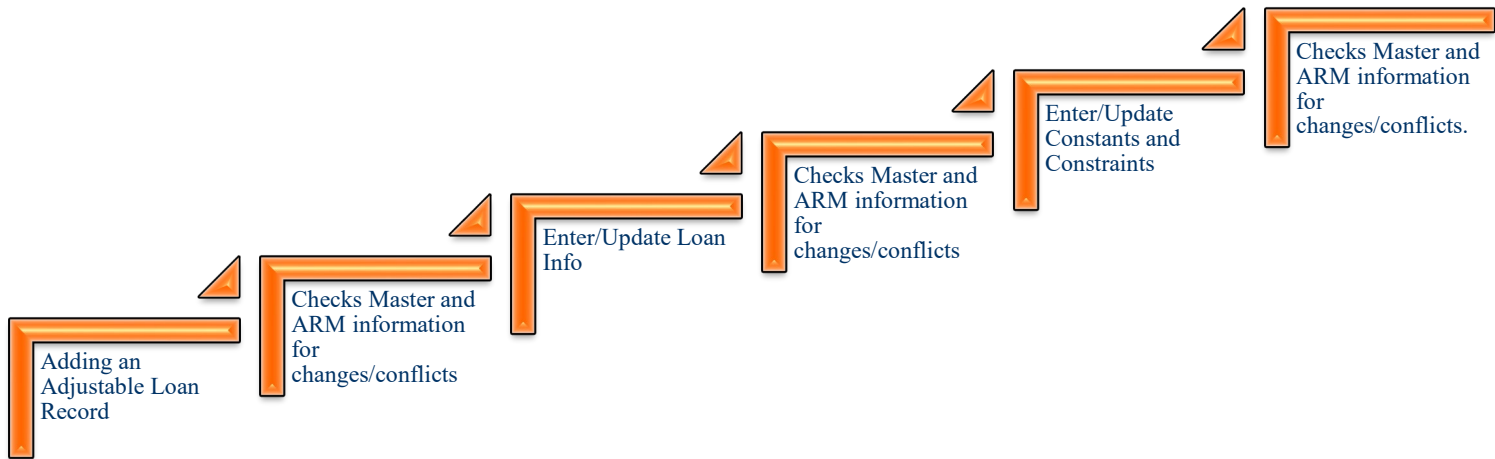
The Adjustable Loan Wizard

STRATEGY uses the Adjustable Loan wizard to create or update an Adjustable Loan record. After each screen, system edits are run to check for conflicts in the information entered or updated.

FIGURE 4-ADDING AN ADJUSTABLE LOAN RECORD WINDOW APPEARS WHEN NEW (OR CTRL + N) IS CLICKED FROM THE ADJUSTABLE LOAN INFORMATION MODULE SPECIFIC TOOLBAR.
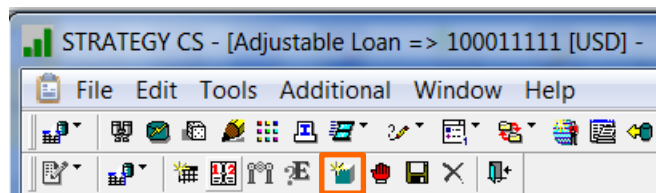
Payment Type and **Contract Type** from Loan Administration, Master Info (PMASTR) as display only fields.

The **Adjustable Loan Desc:** is a required field. – The drop-down values presented come from System Information Table ID 10. Each company may define their own Adjustable Loan Descriptions.

Clicking OK presents the Adjustable Loan Wizard.

The Adjustable Loan Wizard – Enter Adjustable Method Panel

The wizard presents as a series of windows accessed from the left hand menu. As each step in the wizard is completed, *STRATEGY* checks for conflicts in the information entered before displaying the next window.
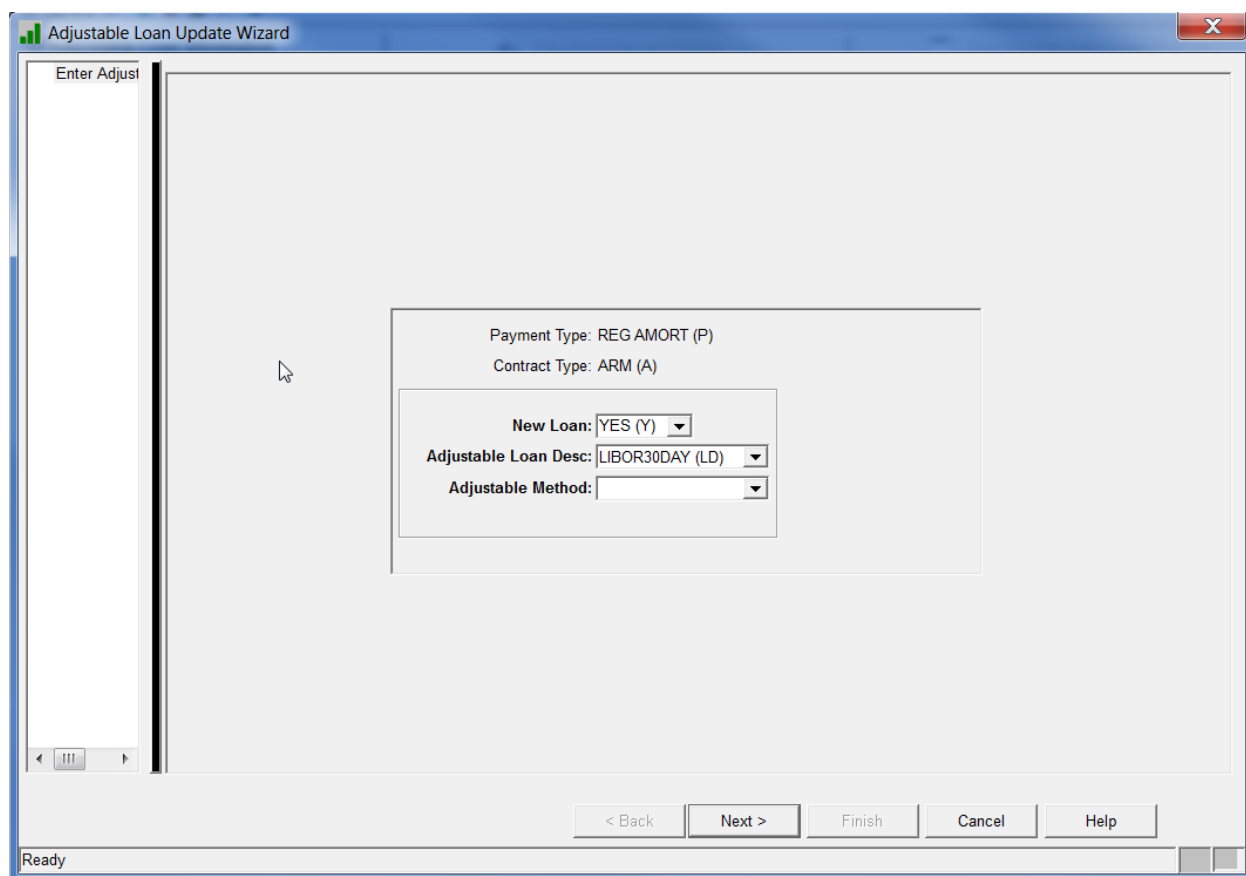
Buttons	Action
< Back	Exits the current panel and displays the prior panel. This button is not active on the Enter Adjustable Info panel.
Next >	Proceeds to the Loan Info panel in the wizard; system edits run to insure all values entered are correct before moving forward.
Finish	Runs edits over information, closes the wizard, and adds or updates the Adjustable Loan record for the loan. This button is inactive on the Enter Adjustable Method panel.
Cancel	Closes the wizard without saving changes.

System Edits

The Payment Type and Contract Type from the Master Info>Payment/Billing panel display for information purposes. *STRATEGY* uses these values to determine if the Payment Type in the Master File has changed since the last update of the Adjustable Loan Information. A change in the Master File may cause conflicts with parameters for rate and payment change reviews in the Adjustable Rate file. If a conflict exists, *STRATEGY* presents messages outlining the

potential conflict and are prompted for processing options. See the Payment Type conflicts section later in this book for more information.

NOTE: With the changes for Compounding in Arrears a number of edits were made to the system to check for parameter conflicts for the new Adjustable Methods added (T,3,6 &7). These edits have not been added to the Adjustable Loan module prior to Release 20 and customers working with Adjustable Loans are encouraged to run the Loan Edits for Adjustable Information and Master Information Daily until new update programs are provided at Release 20. An edit program is provided to add to the day end job stream that will print edit reports daily for review. Add CGR100CAM to the day end job stream right before CMB401Z1.

The Adjustable Loan Wizard – Loan Info Panel

The next panel in the Adjustable Loan wizard is the Loan Info panel.

The Loan Info panel in the Adjustable Loan wizard is the same as Adjustable Loan Information tab in the Adjustable Loan module.
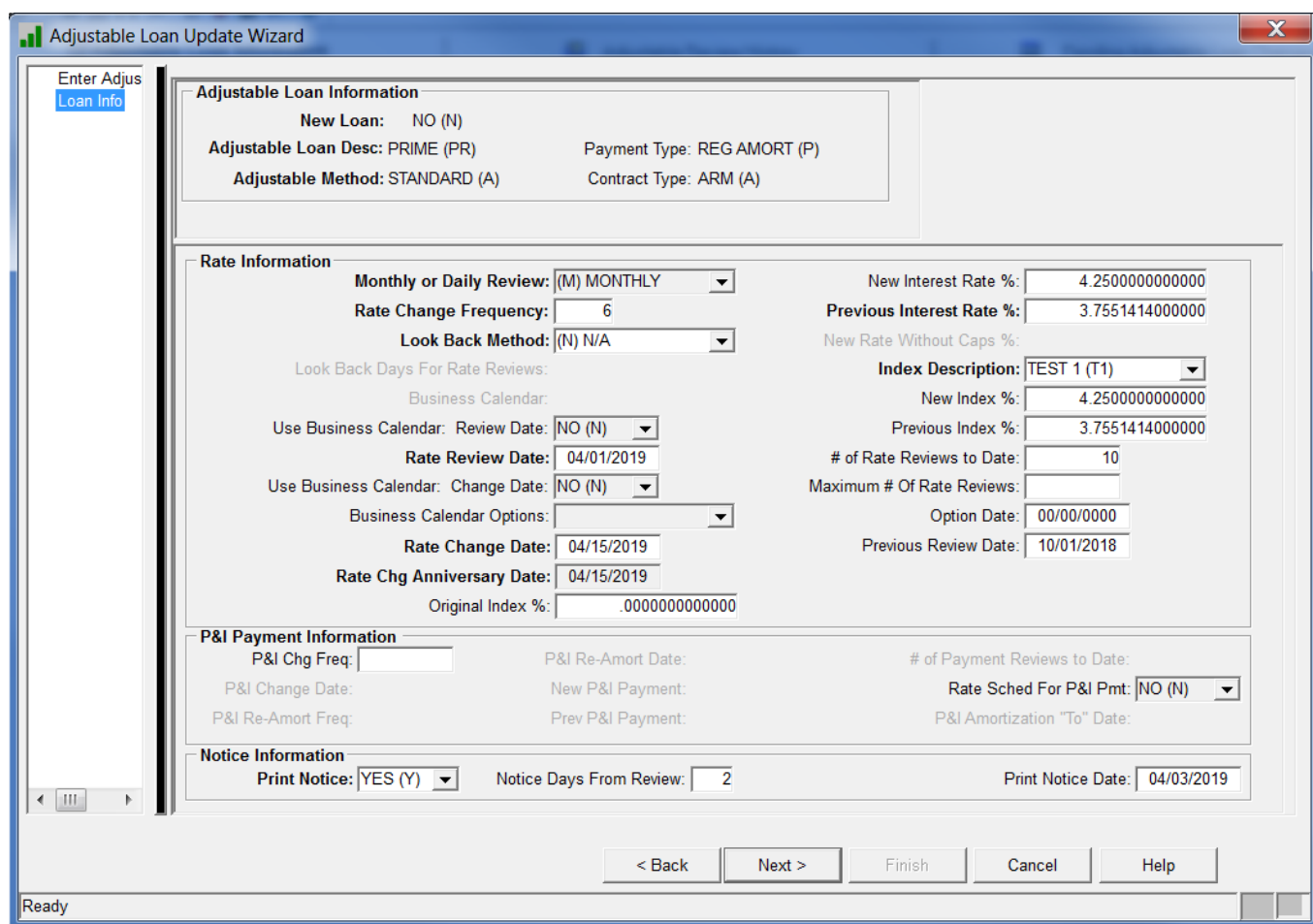
FIGURE 6-ADJUSTABLE LOAN WIZARD – WINDOW #2 - LOAN INFORMATION PANEL

There are 4 sections on the Loan Information Panel

- The top of the Loan Information Panel displays 5 fields: **New Loan, Adjustable Loan Desc, Adjustable Method, Payment Type,** and **Contract Type**. These fields are considered the Adjustable Loan Profile, they govern the fields displayed and available for entry in the wizard and determine how the adjustable loan processes.
- The "Rate Information" section contains entries that determine how and when the rate is calculated. Values in this section update on the **Rate Review Date**.
- The "P&I Payment Information" section captures P&I payment amounts and corresponding dates.
- The "Notice Information" section indicates if, and when notices are generated.

The Adjustable Loan wizard presents information based on a number of field values. As data is entered and updated, other fields may become write-enabled. For example, if *Back (B)* is entered in the **Lookback Method** field, the
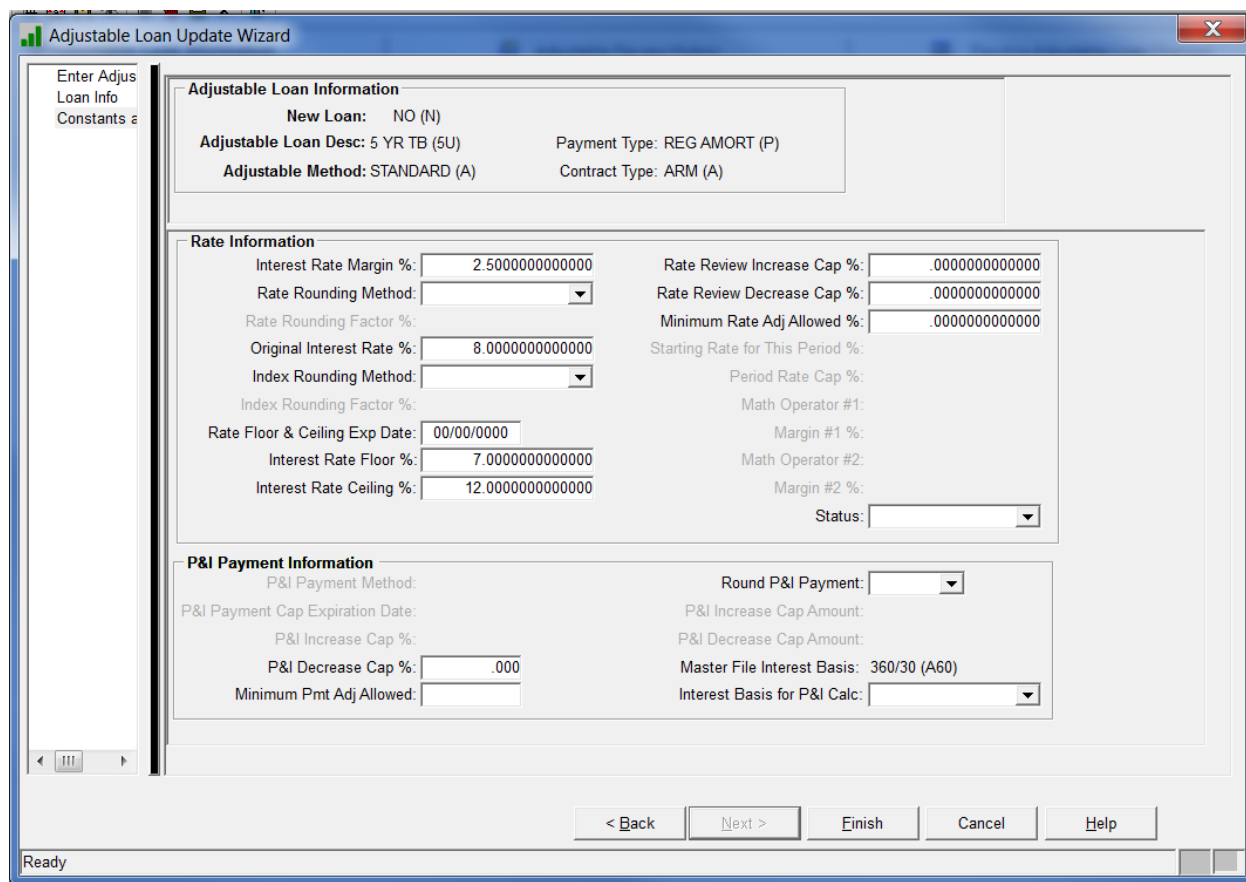
Lookback Days for Rate Review field becomes write-enabled. If *N/A (N)* is selected as the **Lookback Method**, the **Lookback Days for Rate Review** field is greyed out.

Buttons	Action
< Back	Exits the Loan Info panel and returns the user to the Enter Adjustable Info panel. System edits run to check for conflicts.
Next >	Proceeds to the Constants and Constraints panel in the wizard; system edits run to insure all values entered are correct before moving forward.
Finish	Inactive on the Loan Info panel.
Cancel	Closes the wizard without saving changes.

As each screen in the wizard is completed, *STRATEGY* checks the information entered. If entries made could cause a conflict, a *STRATEGY* displays a message and the user can not move on to the next window until the conflict is resolved, for example, the **P&I Chg Freq** is not valid for *Daily Review Loans* or for *Interest Only Loans*, or if the **Monthly or Daily Review** field is set to *(D) Daily*, a **P&I Freq** cannot be entered. Specific field dependencies and conflicts are covered under the Entering an Adjustable Loan section.

The Adjustable Loan Wizard –Constants and Constraints Panel

The third window in the Adjustable Loan Wizard is the Constants and Constraints panel. This panel defines the parameters used to calculate the new interest rates and payments. Define Margins, Rounding Methods and Factors, Rate Floor and Ceilings, and Caps on this panel. The Adjustable Method selected on the first wizard screen determines the fields enabled and available for entry on the Constants and Constraints panel.

When entry on the Constants and Constraints panel is complete, STRATEGY makes one final check for conflicts. The Finish button saves the changes and closes the Adjustable Loan Wizard.

Buttons	Action
< Back	Exits the Constants and Constraints panel and returns the user to the Loan Info panel. System edits run to check for conflicts.
Next >	Inactive on the Constants and Constraints panel in the wizard.
Finish	Runs edits over information, closes the wizard, and adds or updates the Adjustable Loan record for the loan.
Cancel	Closes the wizard without saving changes.

Entering Adjustable Rate Loans – Before You Begin

Review loan documents

Identify the terms outlined in the loan document for how and when your loan will review. What Index, how frequently does it review, how is the interest rate calculated? Are there floors and ceilings described in the agreement?

Check Index Values

- o   Is the Index outlined in your loan documents, described in the database?
- o   Is the Effective Date for the last Index value for the loans Index current?

If not, see your system administrator about adding or updating the Index before you begin. The section on Index Values describes how to add or update an Index in *STRATEGY*.

Business Calendars

Does your loan adhere to business calendars and do the Adjustable Loan review and change parameters require business dates? Do the holidays in the loan agreements align with a Business calendar defined in the system?
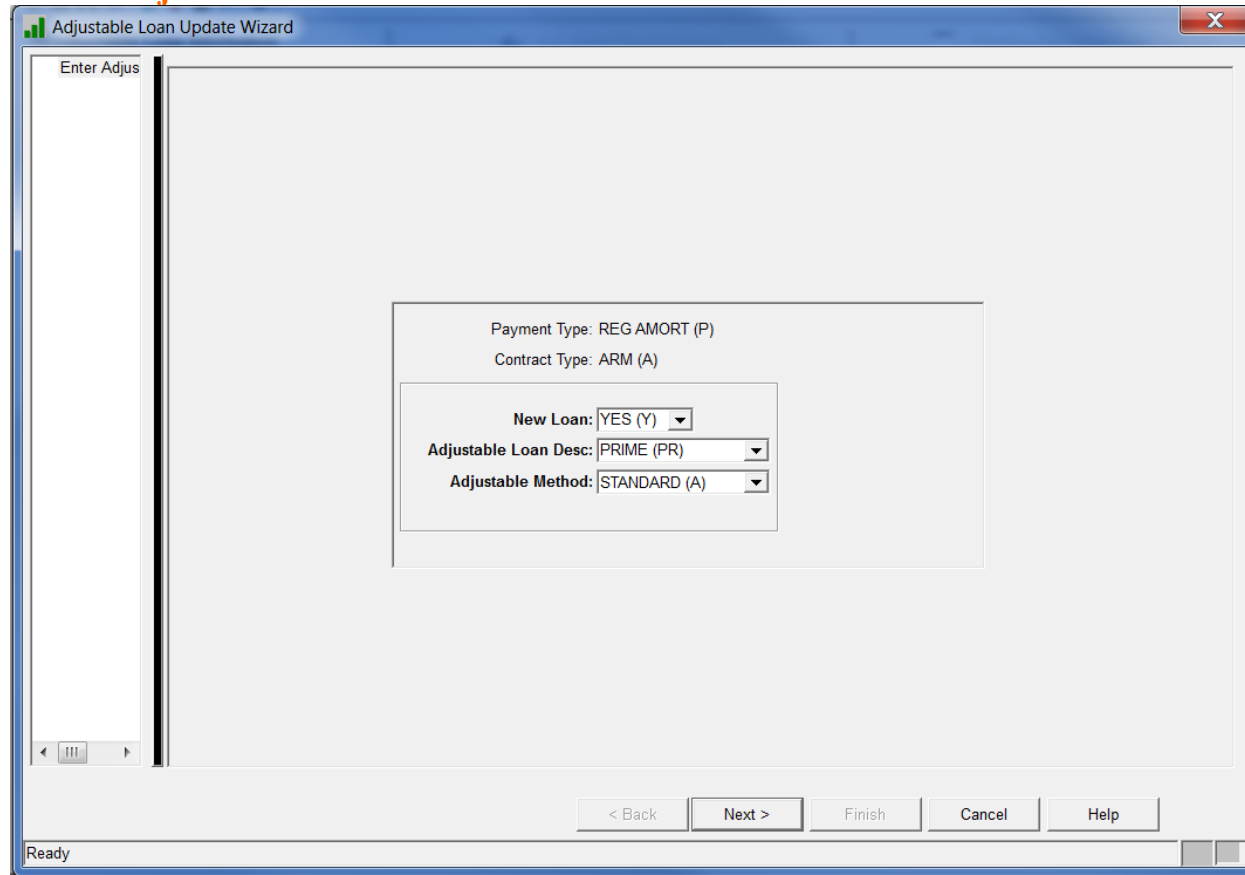
If not, see your system administrator about adding or updating Business Calendars in your library before you begin. Remember that the rule of thumb is to maintain holidays in your business calendars in a frequency that is 2x the longest payment frequency to avoid corrections to due dates, reporting dates, rate reviews, rate changes, late charges and other dates dependent on business day activity.

Once you have reviewed your loan requirements, you can set up your Adjustable Loan record.

The Adjustable Loan Update Wizard

To begin, click the New icon or use 'CTRL + N' to begin a new Adjustable Loan record.

Enter Adjustable Method Panel

The first panel in the Adjustable Loan Update Wizard is the Enter Adjustable Method panel. There are 3 fields on this panel.

- **New Loan Y/N:** - If you are adding an Adjustable Loan record it will display a *'Yes (Y)'*, if you are modifying the Adjustable Loan record it will display a 'No (N)'
- The **Adjustable Loan Desc:** is a required field. – The drop-down values presented come from System Information Table ID 10. Each company may define their own Adjustable Loan Descriptions.
- The **Adjustable Method** is a required field. These are McCracken defined values that determine how the interest rate is calculated using the parameters entered in the wizard. Valid entries are:

  o *STANDARD (A)* – margin is added to the index.

  o *PERIODIC (J) – SAME AS 'A' WITH PERIODIC CAP* - margin is added to the index, but with <u>periodic</u> caps

  o *% OF INDEX (K) – RATE IS A% OF THE INDEX* - index is multiplied by the margin

  o *TWO OPS (P) – 2 OPERATIONS (X?Y=Z)?A=RATE* - allows you to establish 2 margins each with an operation (add, divide or multiply) to apply that value to the index – for example: Index + Margin +Spread Adjustment=Interest Rate

- *FHLB OPT 1 (B) – FHLB OPTION 1* – determines the difference between the current index and previous index then adds it to the current interest rate
- *FHLB OPT 2 (F) – FHLB OPTION 2* – difference between the current index and previous index is added to the current interest rate, then rounded.
- *FHLB OPT 3 (L) – FHLB OPTION 3* – rounds the difference between the current index and original index then adds it to the original interest rate
- *FHLB OPT 4 (M) – FHLB OPTION 4* – difference between the current index and original index is added to the original interest rate, then rounded
- *% INCR (C)* – Fixed % Increase – fixed increase or decrease of the interest rate by the percentage found in the margin field
- *% INCR/CHG (D) - % INCREASE/CHG TO FIXED RATE*– same as C, but names an effective date that the loan becomes Fixed rate
- *GEM % INCR (G) - G.E.M. WITH A% INCREASE*– payment change only – P&I increases by a percentage
- *GEM $ INCR (H) – GEM WITH A FIXED $ INCREASE* – payment change only – P&I increases by a fixed dollar amount
- *EXCEPTION (E) – EXCEPTION (HANDLE MANUALLY)* – loan is an exception. Rate calculation is done outside of *STRATEGY*.
- *TWO OPS COMPOUND % 1 SIMPLE MARGIN (T)* – compounding in arrears, Rate 1 calculation, Compounding the Rate, using a simple margin and spread adjustment. (Transitioning loan)
- *TWO OPS COMPOUND %2 SIMPLE MARGIN (3)* – compounding in arrears, Rate II calculation, compounding the balance, using a simple margin and spread adjustment. (Transitioning loan)
- *STANDARD COMPOUND %1 SIMPLE MARGIN (6)* – compounding in arrears, Rate 1 calculation, compounding the rate, using a simple margin (New loan)
- *STANDARD COMPOUND %2 SIMPLE MARGIN (7)* - compounding in arrears, Rate II calculation, compounding the balance, using a simple margin (New loan)

Click *Next* to Advance to the **Loan Info** panel.

The Loan Info Panel

The Adjustable Loan Info section shows values from the previous screen for New Loan, Adjustable Loan Desc, and Adjustable Method. The fields Payment Type and Contract type pre-fill from the Master Info tab in Loan Administration. The fields are display only.

Rate Information Section

The **Rate Information** section displays fields that pertain to how and when the Rate will Review and Adjust.

- **Monthly or Daily Review** – (required) this entry works in conjunction with the Rate Change Frequency. If you choose *(M) Monthly* in this field and *01* in the rate change frequency, the rate will be reviewed every month; if you entered 12 it will review once a year. If you choose *(D) Daily* in this field and *01* in the frequency, the loan will review every day. For Adjustable Methods *T, 3, 6* or *7* **Monthly or Daily Review** must be equal to *(D) Daily*.

- **Rate Change Frequency** – (required) works in conjunction with the **Monthly or Daily Review** field. The number entered determines the number of months (or days) between reviews. An *(M) Monthly* in **Monthly or Daily Review** and a *1* in **Rate Change Frequency** indicates a monthly rate review. For Adjustable Methods *T, 3, 6* or *7* **Rate Change Frequency** must be equal to *1*.

- **Look Back Method** – (required) If your loan calls for the review to occur a certain number of days prior to the rate change date (i.e., the index should be determined 2 days prior to the change date), select *(B) Back* in this field. Otherwise select *(N) N/A*

- **Look Back Days For Rate Reviews** – If *(N) N/A* was entered in **Look Back Method**, this field will be grayed out and unavailable for entry. Otherwise, enter the number of days to look back to obtain the index value.

- **Business Calendar** – This field will not be enabled for input if the **Look Back Method** is *(N) N/A*. The field directs *STRATEGY* to the appropriate business calendar to use. You can create multiple business calendars and choose the appropriate calendar to use for establishing non-business days.

  > NOTE: if you wish to use a business calendar but do not have look back days, simply indicate *(B) Back* in the **Look Back Method** and leave the **Look Back Days for Rate Reviews** field blank. This will allow *STRATEGY* to establish **Rate Review Dates** and/or **Rate Change Dates** using the Business Calendar.

- **Use Business Calendar: Review Date** – This field is only accessible if **Look Back Method** is *(B) Back*. Select from *ROLL BACKWARD (B), ROLL FRWRD NOT NEW MO BCKWD EOM (E), ROLL FORWARD (F), ROLL FORWARD NOT NEW MONTH (R).*

- **Rate Review Date:** (required)

- **Use Business Calendar: Change Date** – This field must be *(Y) Yes* if the **Look Back Days** *> 0* for Adjustable Methods T*, 3, 6, &7.*

- **Business Calendar Options**:

- **Rate Change Date** – (required) This is the date when the new rate becomes effective. This date should be set to one payment frequency prior to the payment due date that the new rate will be used (Interest in Arrears).

- **Rate Chg Anniversary Date** – (required) If **Use Business Calendar: Change Date** = '*NO (N)*', this date will be the same as the Rate Change Date. If a Business Calendar is used, *STRATEGY* uses this field as an "anchor", for advancing the **Rate Change Date**.

- **Original Index %** - The value of the Index on the Loan Closing Date. This value will be used in calculating the rate when using **Adjustable Methods** *'FHLB Option 3(L)' or 'FHLB Option 4 (M)'*. These Adjustable Methods calculate a difference between the **New Index %** and the **Original Index %.** For other Adjustable Methods, the field is optional and informational only.**

- **New Interest Rate %** - the current Interest Rate value. *STRATEGY* updates the **New Interest Rate %** with each rate review that *STRATEGY* performs.

- **Previous Interest Rate %** - the Interest Rate in effect with the previous review. *STRATEGY* updates the field with each rate review that *STRATEGY* performs.

- **New Rate Without Caps %** - If the review results in an interest rate that requires adjustment due to floor or ceiling constraints, this field reflects the value calculated by *STRATEGY* prior to the adjustment. It is informational only.

- **Index Description** – (required) select the proper index code and description to be used with this loan. All index codes are user defined. The **Index Rate%** for that index code must be maintained by the user for correct review results.

- **New Index %** - the current index value. *STRATEGY* updates the **New Index % f**ield with each rate review that *STRATEGY* performs. **

- **Previous Index %** - the index value in effect with the previous review. *STRATEGY* updates the **Previous Index %** field with each rate review that *STRATEGY* performs. **

NOTE**: As of Release 19E, a System Control setting in the General Section on the Processing panel will allow users to turn on the ability to enter an Index Rate that is less than or equal to zero percent. If the value for the system control setting is Yes (Y), the Original Index %, New Index%, and Previous Index % can be entered as a negative or zero%.

- **# of Rate Reviews to Date** – this is a counter to keep track of how many times the loan has reviewed. *STRATEGY* updates the counter with each rate review that *STRATEGY* performs.

- **Maximum # of Rate Reviews** – if the loan is only allowed a certain number of rate reviews; enter that number in this field. Otherwise, leave blank. If populated, *STRATEGY* will compare the **# of Rate Reviews to Date** with the value entered in this field to determine if a review should take place.

- **Option Date** – this date is available for reporting purposes only.

- **Previous Review Date** – indicates the date that *STRATEGY* performed the last review. *STRATEGY* updates this field with each rate review that *STRATEGY* performs.

P&I Payment Information

The **P&I Payment Information** section is used if the P&I constant changes on the loan. Regardless of the schedule or frequency of payment changes, these fields must be populated to effect any change to the **Principal &Interest Pmt** on the Master Info tab in Loan Administration.

- **P&I Change Freq** – enter the frequency at which the P&I payment will change. The field is greyed out for loans where the **Monthly or Daily Review** is (D) Daily or loans with **Payment Types** set to *Commercially Not Fully Funded (F), Interest Only (I)* or *Fixed Principal + Interest (Q)*. If entered, it must be greater than or equal to the **Rate Change Frequency**; if different, it must be a multiple of the **Rate Change Frequency** to adjust the payment on a Rate Change Date. For example, you may change the rate each month (Rate Change Frequency = 1), but the P&I only once a year (P&I Freq =12), or change the rate each quarter (Rate Change Frequency of 3), but the P&I only twice a year (P&I Freq of 6).

- **P&I Change Date** – (required if the **P&I Change Freq** not blank) the next date that the P&I will change. This date must fall on a scheduled **Rate Change Anniversary Date** (equal to a payment anniversary date). Also, the date entered here should be one payment frequency prior to the date the new payment will go into effect (Interest in Arrears). For example, if the new payment amount should be used for the 10/01 receivable, 9/01 should be entered in this field. Remember, *STRATEGY* builds the receivable records one payment frequency prior to the due date.

- **P&I Re-Amort Freq** – The frequency at which *STRATEGY* should calculate the P&I payment ignoring any payment floors/ceiling that may be established on the loan.

- **P&I Re-Amort Date** – Required if the **P&I Re-Amort Freq** is not blank. This is the next occurrence of a true re-amortization of the loan (ignoring any payment caps). The date must be an anniversary of the **P&I Change Date**.

- **New P&I Payment** – (required if the **P&I Change Freq** not blank) the current P&I payment. *STRATEGY* updates the **New P&I Payment** with each payment review that *STRATEGY* performs.

- **Prev P&I Payment** – the previous P&I payment. *STRATEGY* updates the **Prev P&I Payment** with each payment review that *STRATEGY* performs.

- **# of Payment Reviews to Date** – this is a counter to keep track of how many times the payment has been reviewed. *STRATEGY* updates the counter with each payment review that STRATEGY performs.

- **Rate Sched for P&I Pmt Y/N** – if the loan calls for the P&I payment calculation to use a different rate than the interest accrual rate, enter *Yes (Y)* in this field. *STRATEGY* display a table where you can enter effective dates and rates to be used.

- **P&I Amortization "To" Date** – if the amortization date is different than the Maturity Date established in the Master File, enter it here. If this is a Balloon loan (Master Info/Commercial Balloon panel, **Balloon** = *Yes (Y)*), the field is required. If there is a value in this field, *STRATEGY* will use this date when determining the remaining term for the P&I payment calculation rather than the Maturity Date from the Master Info tab in Loan Administration.

Notice Information

The **Notice Information** section controls if and when Rate Review Notices will be produced.

- **Print Notice Y/N** – This field is required. if you wish to have *STRATEGY* create change notices to be printed, enter *Yes (Y),* otherwise *No (N)*.

- **Notice Days From Review** – enter the number of days AFTER the review date that you want to wait before printing a notice.

- **Print Notice Date** – the date when the next notice is to be printed. *STRATEGY* updates the with each rate review that *STRATEGY* performs.

Press **Next** to advance.

McCRACKEN

Adjustable Rate Module

Constants & Constraints Panel
Adjustable Loan Information
Like the Loan Info panel, the Adjustable Loan Info section shows values from the previous screen for New Loan, Adjustable Loan Desc, and Adjustable Method. The fields Payment Type and Contract type pre-fill from the Master Info tab in Loan Administration. The fields are display only.

Rate Information
The **Rate Information** section contains fields that affect how the Interest Rate is calculated. These fields are general applied to the Index Rate during the Interest Rate calculation.

- **Interest Rate Margin %** - enter the margin that applies to this loan.

NOTE: If setting up a loan transitioning from a LIBOR index to SOFR the loan modification may require a Spread Adjustment be included in the calculation of the Interest Rate. This will require the use of the **Adjustable Method** of '*Two Ops (P)*' when using a Daily Simple SOFR rate or a SOFR term rate. Loans transitioning to use Compounding in Arrears would use *TWO OPS COMPOUND % 1 SIMPLE MARGIN (T) or TWO OPS COMPOUND % 21 SIMPLE MARGIN (3)*. The Interest Rate Margin % field will be greyed out, the **Math Operator #1**, **Margin #1 %**, **Math Operator #2**, and **Margin #2 %** fields will be activated. Complete all four fields entering the margin in **Margin #1 %** and the Spread Adjustment in **Margin #2 %** below right. **Math Operator #1** and **Math Operator #2** must be *(A)* Add when the **Adjustable Method** is *(T)* or *(3)*.

- **Rate Rounding Method** – if the loan documents require that the new calculated rate be rounded <u>after</u> the margin has been applied to the index, input the method to be used in the rounding. Valid entries are *'UNCONDITIONAL ROUND UP (U), 'UNCONDITIONAL ROUND DOWN (D)' or 'TO THE NEAREST (1/8)(N)'.* This field works in conjunction with the Rounding Factor, indicating how to apply the factor to the rate.

- **Rate Rounding Factor %** - the factor to be used in rounding the interest rate. For example, if the rate should be rounded to 1/8, you would enter .125 in this field. This field will only be accessible if the previous field has an entry. The Rate Rounding Method will indicate to *STRATEGY* how the factor should be applied – up, down or to the nearest 1/8th.

- **Original Interest Rate %** - The value of the Index on the Loan Closing Date. This value will be used in calculating the rate when using **Adjustable Methods** *'FHLB OPTION 3(L)' or 'FHLB OPTION 4 (M)'.* These Adjustable Methods calculate a difference between the **New Index %** and the **Original Index %.** For other Adjustable Methods, the field is optional and informational only. .

- **Index Rounding Method** – if the index should be rounded prior to applying the margin, input the method to be used in the rounding. Valid entries are Valid entries are *'UNCONDITIONAL ROUND UP (U), 'UNCONDITIONAL ROUND DOWN (D)' or 'TO THE NEAREST (1/8)(N)'.* This field works in conjunction with the Index Rounding Factor, indicating how to apply the factor to the index.

- **Index Rounding Factor %** - the factor to be used in rounding the index. For example, if the rate should be rounded to 1/8, you would enter .125 in this field. This field will only be accessible if the previous field has an entry. The Index Rounding Method will indicate to *STRATEGY* how the factor should be applied – up, down or to the nearest.

- **Rate Floor & Ceiling Exp Date** – if a date is input, any floors or ceilings indicated on the rate will be ignored after the date entered.

- **Interest Rate Floor %** - the minimum interest rate allowed on this loan.

- **Interest Rate Ceiling %** - the maximum interest rate allowed on this loan.

- **Rate Review Increase Cap %** - the maximum % that the rate is allowed to change with each review. For example, your loan documents might indicate that no single review can increase the interest rate on the loan by more than 2%. You would indicate 2.0 in this field to enforce that statement.

- **Rate Review Decrease Cap %** - the minimum % that the rate is allowed to change with each review. For example, your loan documents might indicate that no single review can decrease the interest rate on the loan by more than 2%. You would indicate 2.0 in this field to enforce that statement.

- **Minimum Rate Adj Allowed %** - if the rate must adjust by a certain % before a rate change can actually take effect on the loan, indicate that percentage in this field. For example, your loan documents might state that unless the rate changes by more than .125%, no change should occur on the loan. You would then enter .125 in this field to enforce that statement.

- **Starting Rate for this Period %** - this field is only used with Adjustable Method 'J'. The information here indicates the rate at the beginning of the period – used in conjunction with the **Period Rate Cap %** to determine the new rate.

- **Period Rate Cap %** - this field is only used with **Adjustable Method** '*Periodic Cap (J)*'. The rate can only increase over the value in the field **Starting Rate for this Period %** by the amount entered in this field.

- **Math Operator #1** – this field is used with **Adjustable Method** '*Two Ops (P)*' '*TWO OPS COMPOUND % 1 SIMPLE MARGIN (T), and 'TWO OPS COMPOUND % 21 SIMPLE MARGIN (3)'.* Valid entries are '*Addition*', '*Multiplication*' and '*Division*'. The entry here indicates how *STRATEGY* should apply **Margin #1** to the **New Index%** when calculating the rate. **Math Operator #1** must be *(A) Add* for **Adjustable Methods** *(T)* or *(3)*.

- **Margin #1** – this field is used with **Adjustable Method** '*Two Ops (P)*' '*TWO OPS COMPOUND % 1 SIMPLE MARGIN (T), and 'TWO OPS COMPOUND % 21 SIMPLE MARGIN (3)'*. Enter the margin value to be used in conjunction with **Math Operator #1**.

- **Math Operator #2** - this field is used with **Adjustable Method** '*Two Ops (P)*' '*TWO OPS COMPOUND % 1 SIMPLE MARGIN (T), and 'TWO OPS COMPOUND % 21 SIMPLE MARGIN (3)'*.. Valid entries are '*Addition*', '*Multiplication*' and '*Division*'.. The entry here indicates how STRATEGY should apply **Margin #2** to the **New Index %** when calculating the rate. **Math Operator #2** must be *(A) Add* for **Adjustable Methods** *(T)* or *(3)*.

- **Margin #2** - this field is used with **Adjustable Method** '*Two Ops (P)*' '*TWO OPS COMPOUND % 1 SIMPLE MARGIN (T), and 'TWO OPS COMPOUND % 21 SIMPLE MARGIN (3)'*. Enter the margin value to be used in conjunction with **Math Operator #2**.

- **Status** – leave blank. STRATEGY uses this field to record the stage of this Adjustable Record.

Press *Finish* to complete the changes or addition of this Adjustable Loan record.

Rounding the Index and Spread Adjustment

The final Fed ruling implementing the LIBOR Act introduced a conforming change to the loan documents that stated for a loan moving from LIBOR to SOFR after the June 30 cessation date will round SOFR using the original rounding from the LIBOR loan document. Therefore, if LIBOR loans currently have a rounding convention, it will apply to the loans that transition to SOFR. The LIBOR Act also states that loans that are transitioning from LIBOR to a SOFR rate, may have an additional Tenor Spread Adjustment.

The assumption at the time we originally reviewed the SOFR Transition requirements (Release 19F) was that the rounding would apply to:

- the SOFR Index which would be supported by Strategy's Index Rounding function, or
- to the new rate as a whole (Index + Tenor Spread Adjustment + Margin), also supported by Strategy using the Rate Rounding function.

The final Fed ruling states that the rounding convention used for the LIBOR index will apply to the benchmark replacement for most cash products . The benchmark replacement is defined as the SUM of the comparable maturity term SOFR Rate + the Tenor Spread Adjustment. This rounding method is <u>not</u> supported by Strategy.

To support the new rounding requirement, McCracken will be making a backend programming change to support the new rounding calculation for Adjustable Method P.

Original Index Rounding Calculation:

1. RATE = Index
2. The Index Rounding Factor must be greater than 0,
   a. RATE is rounded based on the Index Rounding Factor and Index Rounding Method

   (If Index Rounding Method is to Nearest 1/8th, enter 0.0125% in Rounding Factor)
3. RATE is adjusted by Margin #1 % based on Math Operator #1

   (Margin from Agreement is entered in the Margin#1% field)

   *(Math Operator#1 can be Add (Rate +Margin#1%), Multiply (Rate *Margin#1%) or Divide (Rate / Margin #1%)*

   RATE is adjusted by Margin #2 % based on Math Operator #2

   (Tenor Spread Adjustment must always be in the Margin#2% field)

New Index Rounding Calculation for Adjustable Method P.

1. RATE = Index + Margin#2 %

   (Tenor Spread Adjustment must always be in the Margin#2% field)

   (Math Operator #2 is defaulted to Add by the program)
2. The Index Rounding Factor must be greater than 0,
   a. RATE is rounded based on the Index Rounding Factor and Index Round Method (Unconditionally Up, Unconditionally Down, or to the Nearest 1/8th of a percent).

   (If Index Rounding Method is to Nearest 1/8th, enter 0.0125% in Rounding Factor)
3. RATE is adjusted by Margin #1 % based on Math Operator #1

   (Margin from Agreement is entered in the Margin#1% field)

   *(Math Operator#1 can be Add (Rate +Margin#1%), Multiply (Rate *Margin#1%) or Divide (Rate / Margin #1%)*

For those loan agreements that may require that the rounding be applied to the Rate after the Margin is applied to the LIBOR Index, Strategy's Rate Rounding feature will add both the Margin #1% and Margin #2% and then round the Rate based on the values entered in the Rate Rounding Method and Rate Rounding Factor.

Activating the New Index Rounding Calculate for Adjustable Method P
Not all customers or loans may use this rounding method, so to apply the use of the New Index Rounding Calculation for Adjustable Method P for a loan, McCracken is placing a loan level User Defined Field on the Adjustable Loan tab to activate the option for each loan that requires this calculation.

The User Defined Field will be added programmatically when the patch is applied as an Inactive User Defined Field. If using the New Index Rounding Calculation for Adjustable Method P for any of your Adjustable Loans, you must change the User Defined field ***Use Round Index + Spread*** to 'Active' using UDF Maintenance.

If the *Use Round Index + Spread* UDF is set to 'Inactive', the field will not appear on the Adjustable Loans, User Defined Fields window and when the Rate Review takes place, any values entered in *Use Round Index + Spread* user-defined field will be ignored and the Original Index Rounding Calculation will continue to be used.

To change the status of the *Use Round Index + Spread* UDF to Active go to Tools>Maintenance>User Defined Fields

For any loan that requires the rounding of SOFR plus the Spread Adustment, the value in the *Use Round Index + Spread* will need to be set to a 'Y'.

The field can be manually updated from the Adjustable Loan Tab>Additional>User Defined Fields. When added, the field will appear at the bottom of the list of User Defined Fields if you have any other User Defined Fields associated with the Adjustable Loan tab.

.7- Make the User Defined Field Active to use the New Index Rounding Calculation for Method P for even one loan.

8- Adjustable Loan>Additional Menu>User Defined Fields

If the *Use Round Index + Spread* User Defined Field is Active in the system:

- When the value in the *Use Round Index + Spread* is set to 'Y' for Yes, <u>and</u> the Index Rounding Factor is greater than zero the New Index Rounding Calculation for Method P above will be used.
- When the value in the *Use Round Index + Spread* is set to 'N' for 'No' or blank, or the Index Rounding Factor is less than or equal to zero the Original Index Rounding Calculation will be used.

If the *Use Round Index + Spread* User Defined Field is Inactive in the system, the Original Index Rounding Calculation will be used.

New Mapping Tool Template for adding/updating 'Use Round Index + Spread'
McCracken will provide a new MaTi template to allow Customers to upload the value for the new User Defined Field – '*Use Round Index + Spread*' value to applicable loans.

Users will use a spreadsheet that contains the Account # and the value for the Use Round Index + Spread UDF.

	A	B
1	Account #	Use Round Index + Spread
2	100100100	Y
3	100100101	Y
4	100100102	Y
5	200100100	N
6	200100101	N
7	200100102	N

- Only one loan per row
- Account # must exist in PMASTR
- Use Round Index + Spread must be 'Y' or 'N'
  - Y applies the New Index Rounding Calculation
  - N uses the Existing Index Rounding Calculation

Either manual entry on the User Defined Field window in the Adjustable Loan module or the new Mapping Tool can be used to insert or update the value of the field.

If the User Defined Field '***Use Round Index + Spread***' is not made 'Active', upon data validation in the Mapping Tool a message will display "Use Round Index + Spread is inactive or not found."

P&I Payment Information

The majority of fields displayed in this section will be greyed out if the **P&I Chg Freq** on the Loan Info panel is blank or equal to 0.

- **P&I Payment Method** – valid entries are 0 or 1, used in conjunction with P&I Rate Schedule.

- **P&I Payment Cap Expiration Date** – if caps are required on the P&I Payment change, enter a valid a date here. Once that date has been reached, *STRATEGY* will continue to calculate payment changes, but will ignore any caps.

- **P&I Increase Cap %** - the maximum % that the payment is allowed to increase with each review. For example, your loan documents might indicate that no single review can increase the payment by more than 2%. You would indicate 2.0 in this field to enforce that statement. A percentage cannot be entered if a **P & I Increase Cap Amount** has been entered.

- **P&I Decrease Cap %** - the maximum % that the payment is allowed to decrease with each review. For example, your loan documents might indicate that no single review can decrease the payment by more than 2%. You would indicate 2.0 in this field to enforce that statement. A percentage cannot be entered if a **P & I Decrease Cap Amount** has been entered.

- **Minimum Pmt Adj Allowed** - if the payment must adjust by a certain amount before a payment change can actually take effect on the loan, indicate that amount in this field. For example, your loan documents might state that unless the payment changes by more than $10.00, no change should occur on the loan. You would then enter 10.00 in this field to enforce that statement.

- **Round P&I Payment**– Select from the drop down values. Valid entries are '*U' (up)*, '*D' (down)* or '*N' (nearest)*. *STRATEGY* will round the payment up, down or to the nearest dollar according to the entry here. Leave blank if you don't want the payment amount rounded. When the Payment Type is Date of Payment to Date of Payment or Regular Amortizing, the option to round *(D) Down* will not be available for selection.

- **P&I Increase Cap Amount** - the maximum dollar amount that the payment is allowed to increase with each review. For example, your loan documents might indicate that no single review can increase the payment by more than $1,000.00. You would input 1000.00 in this field to enforce that statement. *STRATEGY* will only allow input in either the **P & I Increase Cap %** or **P & I Increase Cap Amount** field, not both.

- **P&I Decrease Cap Amount** - the maximum dollar amount that the payment is allowed to decrease with each review. For example, your loan documents might indicate that no single review can decrease the payment by more than $1,000.00. You would input 1000.00 in this field to enforce that statement. *STRATEGY* will only allow input in either the **P & I Decrease Cap %** or **P & I Decrease Cap Amount** field, not both.

- **Master File Interest Basis Code –** Display only, the **Interest Basis Code** entered for the loan on the Master Info tab, in Loan Administration.

- **Interest Basis for P&I Calc -** If the P&I payment should be calculated using an interest basis code different from the interest basis used to accrue interest, select the appropriate Interest Basis Code from the drop down provided.

Press *Finish* to complete the creation or update of this Adjustable Loan record.

Applying Floors and Ceilings using Compounding in Arrears

Two Operators Compounding in Arrears – Transitioning Loans – Margin + Spread Adjustment

The following applies to the Adjustable Methods (*T*) (*TWO OPS COMPOUND % 1 SIMPLE MARGIN*) and Adjustable Method *(3)* (*TWO OPS COMPOUND %2 SIMPLE MARGIN*). Both methods use the Two Operators fields for Margin and Spread Adjustment.

When rate floors and/or ceilings are defined in the loan agreements, the floors and ceiling values should be entered in Strategy in the Constants and Constraints panel of the Adjustable Loan module inclusive of the Margin. If there is no Floor or Ceiling stated in the Agreement, put 0.00 in the appropriate fields on the Constants and Constraints panel.

For example:

- The agreement states a Floor of 1.0%. The Margin stated in the agreement is 0.5%. The value entered into the Interest Rate Floor % on the Constants and Constraints panel should be 1.5% (PARM/ABMIN).
- The agreement states a Ceiling of 4.00%, Margin of 0.5%. The value entered into the Interest Rate Ceiling % on the Constants and Constraints panel should be 4.5% (PARM/ABMAX).

NOTE: Math Operator #1 and Math Operator #2 must be Add (A).

Adjustable Review History

The middle tab on the screen, the Adjustable Review History tab displays a history of all rate reviews for the loan displayed in the Title Bar of the application. Users can use the radio buttons in the top left of the tab to display only the reviews that resulted in a Rate or P&I Change.

The information displayed on this tab is from the Adjustable Loan History file (PARMH). A record gets added to this file each time a loan reviews.

- The default display for the Adjustable Review History tab is **Only Display Review History with a Rate or P&I Change.** When this radio button is active only loans with a 'Y' in PARMH/ARDIFF will display on the grid.
- If Display All Review History is selected, all review history is displayed.

Users can review the detail information for a specific Review History record by highlighting the record in the grid and using the right mouse menu to select Adjustable Review History and Review History Detail from the right mouse menu.

The fields at the right of the grid, Mstr Rate Updated & Mstr P&I Updated indicate that the Rate Change Date has passed and the Interest Rate and P&I Payment in the Master File have been updated using the values in the Adjustable Review History record.

Adjustable Review History Detail

From time to time, there may be problems with the information in the system at the time of the rate review. This may require that a User update the incorrect information within the appropriate areas of the system and then in the Adjustable Review History.

Users with appropriate security may update one or more of the following fields: **Rate Change Date, New Interest Rate %, Previous Interest Rate%, New Index, Effective Date of Index, P&I Change Date, New P&I Payment, Prev P&I Payment, Actual P&I Needed, Effective Princ Balance, New P&I Rate** and **Print Status** on the Adjustable Loan Review History Detail window. If any of the information in the History record is updated and saved the record will be flagged as '*Manually Updated After Review*'.

If **Mstr Rate Updated** and /or **Mstr P&I Updated** are '*Yes (Y)*', any changes entered will be for informational purposes only. The information will not be updated in the Master File.

Rate Change Date – The date entered here must be valid, must be greater than or equal to the Rate Review Date, and the date entered must be unique. If the date entered already exists for the loan, a duplicate date message will appear. The field is display only for growing equity loans (**Adjustable Methods** of '*GEM % INCR (G) or GEM $ INCR (H)*).

New Interest Rate% - The rate shown in the history record is the result of the interest rate calculation defined by the **Adjustable Method**. The value in the **New Interest Rate%** moves to the Master File on the Rate Change Date becoming the rate used to accrue interest on the loan. (##.#############). The field is display only for growing equity loans (**Adjustable Methods** of '*GEM % INCR (G) or GEM $ INCR (H)*).

Prev Interest Rate% - This represents the Interest Rate prior to the Rate Review.

New Index % - Represents the value of the Index at Rate Review. Updating it here only updates the Rate Review Record, not the Index table.**

Effective Date of Index – Enter mm/dd/ccyy. This date represents the Effective Date of the value in the New Index %.

P&I Change Date – The P&I Change Date is only required if the **Rate Review History** indicates that there is a P&I Payment Change.

New P&I Payment – Update the P&I Payment amount if necessary and the **P&I Change Frequency** shown is greater than zero. (A P&I Payment is required for Growing Equity Loans (Adjustable Methods *GEM $ INCR (H)* or *GEM % INCR (G)*) where the payment increases by a % or $ amount).

Prev P&I Payment – Represents the P&I Payment prior to the review. This field would only be changed in the event that multiple Rate Review History records were incorrect.

Actual P&I Needed – Update with P&I payment amount needed (#,###,###,###,###.##)

Effective Princ Balance – Effective Principal Balance - update with value ($###,###,###,###,###.##)

New P&I Rate% –

Print Status – Users can change the Print Status. Available values are Do Not Print, Reviewed, and Printed.

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Adjustable Rate Module

The window will display the message 'Manually Updated After Review'.
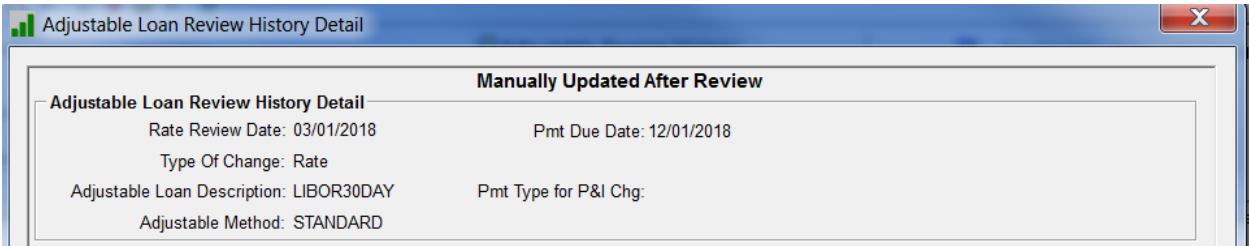
A user with appropriate security can delete a Rate Review History record. Messages display with warnings if the history record indicates that the Rate, P&I Change, or Both, have not been updated in the Master Information record and if you continue with the delete, there will be no change to the Master File and a History Record cannot be added.

Pending Adjustable Loan Changes Tab
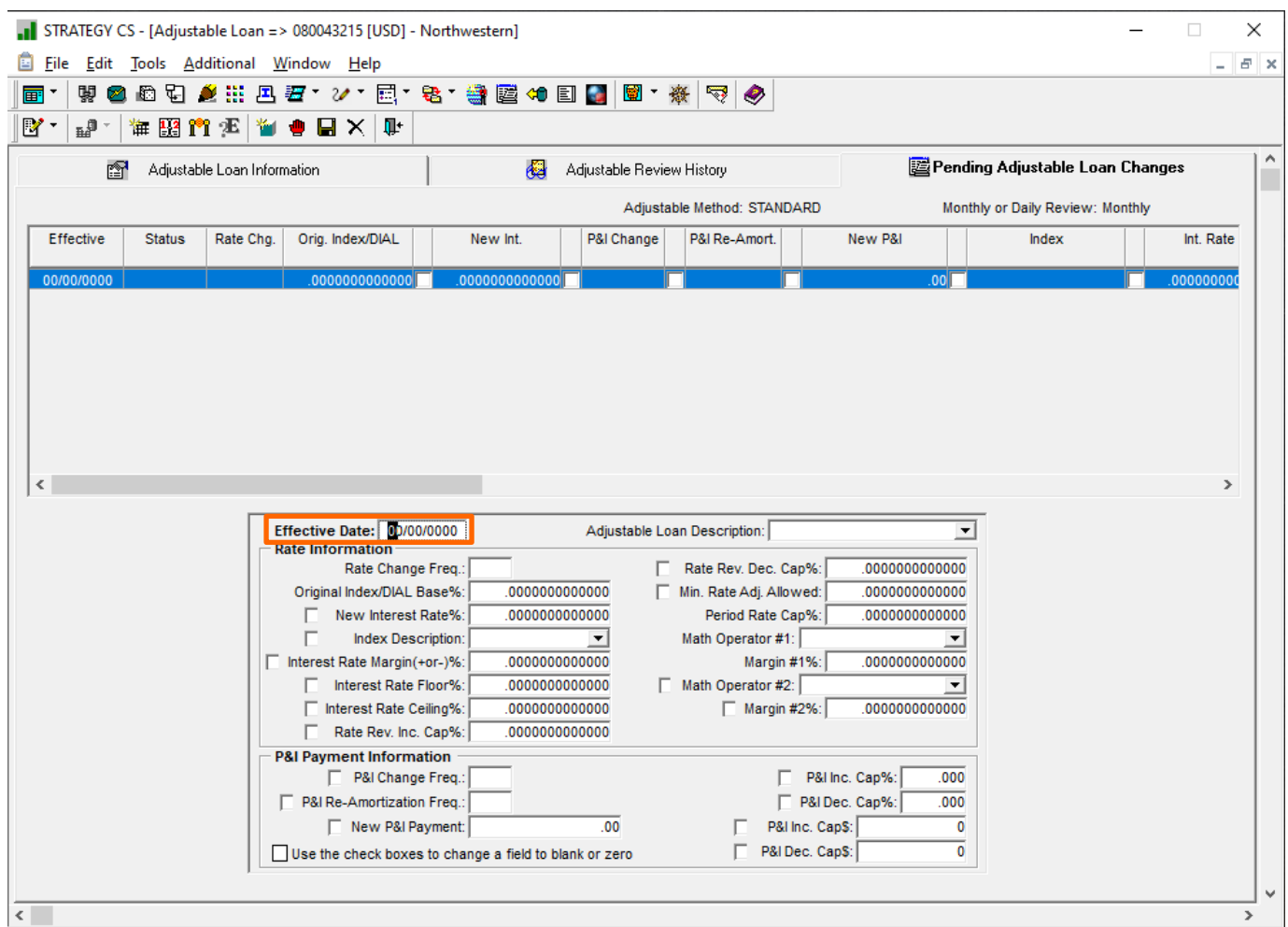
Similar to Pending Changes for the Master File, the third tab in the Adjustable Rate module, allows you to schedule changes to the fields that govern the adjustments to Rate and P&I Payments.

Users enter the Effective Date of the Change. This will be the date that the changes are made to the Adjustable Loan Info. Users can either:

- Update fields to change in the PARM file by entering the values that will take effect on the Effective Date in the fields provided; or
- Activate a check box to the left of a field, to zero or blank out the field in the PARM file during day end on the Effective Date provided in the change record.

Users can update the value in a field, or use the check box to zero out the field, but they cannot do both.

NOTE: The ARRC recommends making any changes to support the transition to SOFR on the first day of a new payment period. Users should set the Effective Date in a Pending Adjustable Loan Change record to be a Payment Anniversary Date.

9- PENDING ADJUSTABLE LOAN CHANGES - 19F - CLICK THE CHECKBOX TO ZERO OUT THE FIELD VALUE OR ENTER A NEW VALUE IN A FIELD TO TAKE EFFECT ON THE EFFECTIVE DATE. PENDING CHANGES CAN BE SET FOR ADDITIONAL FIELDS USING THE ADJUSTABLE LOAN WIDGET IN THE PORTAL.

Day End Processing of Pending Adjustable Loan Changes (MB151A)

When day end runs on the effective date of the PARMX record and, if there if a checkbox is activated putting a 'Y' in the corresponding PARMX field, the corresponding Adjustable Loan field (PARM/PARMH) will be updated with a zero or blank (depending on the data type). Any other numeric, date, or alphanumeric fields will be updated as necessary based on the values entered in PARMX.

After processing the PARMX records for the day's effective date by updating the fields designated with the appropriate new values or zeros/blanks, the day end program (MB151A) updates a status field in PARMX with an "E" or a "U".

- If there were no errors and the update took place the status will become a "U" (updated).
- If there were errors and the update did not take place the status will become an "E" (error). Review History records (PARMH) for the effective date of the PARMX record cannot be updated if the Status is equal to a "U" or an "E".

If an ARM History record is accessed for the effective date of the PARMX record with a Status of 'U' or 'E', the ARM History record will be displayed as read-only.

Adjustable Loan Portal Widget – Update 19F

The Changes to Pending Adjustable Loans File

With the transition to SOFR, Strategy users may have a number of loans that need to be modified to support converting loans to SOFR or another industry Index from LIBOR. The ability to schedule the changes for a future date is helpful for efficiency and quality control purposes, however, not all fields that would need to be modified to transition the loans were available in the Pending Adjustable Changes file. With Update 19F the PARMX file was modified to add fields needed to the schedule changes needed to transition loans.

- Modifications to PARMX file to add fields that may be required to update adjustable rate loan terms.
- New MaTi Template for uploading PARMX values in bulk
- New Portal Widget, Adjustable Loan, to view Pending Adjustable Loan details

NOTE: Fields added to PARMX can only be viewed in the Adjustable Loan widget. The Adjustable Loan module tab for Pending Adjustable Changes was not modified in Update 19F to display the new fields.

The modifications to PARMX include the addition of 41 fields including fields to identify the User and Date the record was created when the information was uploaded via the Mapping Tool. See the File Changes Document – 'Strategy Database Changes from 19E to 19F.xlsx, to identify the fields added to the file PARMX.

NOTE: The ARRC recommends making any changes to support the transition to SOFR on the first day of a new payment period. Users should set the Effective Date in a Pending Adjustable Loan Change record to be a Payment Anniversary Date.

Adjustable Loan Widget

The Adjustable Loan widget displays the Pending Adjustable Loan fields for creating, viewing, or maintaining existing pending adjustable loan change records.

Accessed from the Portal, the new widget opens with a Search screen where users can search and select the appropriate loan to view, add, or update Pending Adjustable Loan Changes by clicking on the appropriate record.

750081001   Search

Search

Loan Search Results

Loan Number	Associated Name	Monthly Payment	Current Principal Balance	Loan Name	Active Status	Name ID	MCA #	Credit Facility #
750081001	Fairlane Realty	15,000.00	2,075,118.79	IRP neg am	Y	108	0	0

RWD DEVDAT19F 19F SD: 01/01/2019 12/10/2020

A new window displays Pending Adjustable Loan Changes for the selected loan by Effective Date.

Search » Pending Adjustable Loan List - 750081001

Pending Adjustable Loan Changes

Cancel   New

Loan # 750081001   Adjustable Method FIXED % INCREASE (C)   Monthly or Daily Review M

Effective Date	Status	Adjustable Loan Description	Rate Change Frequency	Original Index/DIAL Base %	New Interest Rate %	Index Description	Date Imported from Mapping Tool
01/05/2019		LIBOR 30 DAY (LD)	0		12.2500000000000	COST INDEX (C1)	

RWD DEVDAT19F 19F SD: 01/01/2019 12/10/2020

NOTE: Reminder that each loan can have only one Pending Adjustable Change Record per Effective Date

If the loan does not have an adjustable loan information record an error message displays above the search results.

Welcome, Strategy User
Adjustable Loan

Pending Adjustable Loan Changes

Cancel   New   ERROR - No adjustable loan record found

Loan # 30020108   Adjustable Method   Monthly or Daily Review

Effective Date	Status	Adjustable Loan Description	Rate Change Frequency	Original Index/DIAL Base %	New Interest Rate %	Index Description	Date Imported from Mapping Tool
No data available in table							

RWD   DEVDAT19F   19F   SD: 01/01/2019   12/10/2020

If the loan does not have any pending adjustable loan changes entered the search results displays a message 'No data available in table.'

Search » Pending Adjustable Loan List - 80043215

Welcome, Strategy User
Adjustable Loan

Pending Adjustable Loan Changes

Cancel   New

Loan # 80043215   Adjustable Method STANDARD (USED FOR T-BILL IDX) (A)   Monthly or Daily Review M

Effective Date	Status	Adjustable Loan Description	Rate Change Frequency	Original Index/DIAL Base %	New Interest Rate %	Index Description	Date Imported from Mapping Tool
No data available in table							

RWD   DEVDAT19F   19F   SD: 01/01/2019   12/10/2020

Search » Pending Adjustable Loan List - 750081001

Welcome, KIM17
Adjustable Loan

Pending Adjustable Loan Changes

Cancel   New

Loan # 750081001   Adjustable Method FIXED % INCREASE (C)   Monthly or Daily Review M

Effective Date	Status	Adjustable Loan Description	Rate Change Frequency	Original Index/DIAL Base %	New Interest Rate %	Index Description	Date Imported from Mapping Tool
01/05/2019		LIBOR 30 DAY (LD)	0		12.2500000000000	COST INDEX (C1)	

RWD   DEVDAT19F   19F   SD: 01/01/2019   12/10/2020

Clicking the appropriate record in the Pending Adjustable Loan Changes window opens the Pending Adjustable Loan Detail window.

Pending Adjustable Loan Changes Detail

Using the Pending Adjustable Loan Changes Detail window, a user with appropriate security can click New to create a new Pending Adjustable Change record (PARMX), modify an existing PARMX record or delete an exisiting PARMX record.

A user with appropriate security can add a new Pending Adjustable Loan Change record to an adjustable rate loan if there are no error messages on any existing PARMX records. If errors exist, the New button will be greyed out on the Pending Adjustable Loan Change Details page.

10- PENDING ADJUSTABLE LOAN CHANGES DETAIL window cropped on the right for ease of viewing

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Adjustable Rate Module

The Pending Adjustable Loan Changes Detail page displays in several sections: Effective Date & Adjustable Loan Description, Loan: Rate Information, Loan: P&I Information,Constants & Constraints: Rate Information, Constants & Contraints: P&I Information, and Pending Adjustable Loan Change Errors.

Pending Adjustable Loan Change Errors

Loan	Effective Date in Error	Error Message
621050501	11/20/2020	New interest rate % can not be zero
621050501	11/20/2020	Index description cannot be blank when Adj Loan Method is not 'C, D, E, G or H'
621050501	11/20/2020	Operator 1 must be 'A' if Adjustable Loan Method 'T' or '3'
621050501	11/20/2020	Margin 1 is required if Adjustable Loan Method 'P', 'T' or '3'
621050501	11/20/2020	Monthly or Daily Review Must be 'M' if Payment Type = 'A' or 'P'
621050501	11/20/2020	Rate Review Date must be equal or greater than Effective Date
621050501	11/20/2020	Rate Change Date must be equal or greater than Effective Date
621050501	11/20/2020	Rate Chg Anniversary Date must = Rate Chg Date if Use Business Calendar Rate Chg Date = 'N'
621050501	11/20/2020	PMASTR Interest Basis Code must not be 'A60' if Adj Loan Method 'T', '3', '6' or '7'

Certain fields such as, Interest Rate Margin (+ or -), Index Rounding Method, Rate Floor & Ceiling Exp Date, and Rate Review Increase Cap % can be updated with blanks or zeros (depending on the data type). Fields that can be updated with blanks or zeros are displayed with a check box in front of the field label.

☐	Interest Rate Margin (+ or -)	0.0000000000000
☐	Index Rounding Method	-- ▾
☐	Rate Floor & Ceiling Exp Date	
☐	Rate Review Increase Cap %	0.0000000000000

When entering a change to the Pending Adjustable Loan Change Detail page, users can either check the box to indicate the value should be changed to blank or zero, or enter the appropriate data change into the field. If you check a box, the corresponding field will no longer be accessible for entry. If you remove the check mark, the field will become accessible and data can be entered. When a box is checked, the field for the check box in the PARMX record will be updated with a "Y". When a box field on the Pending Adjustable Change Detail page is unchecked, the field will be updated with a blank when the user hits **OK** or **Apply**.

If the user has appropriate security, clicking **OK** or **Apply** will save the record to PARMX and **Delete** will delete the record. **OK** returns the user to the Pending Adjustable Changes page and **Apply** reloads the existing Pending Adjustable Changes Detail page.

When a record is changed, added, or deleted, Strategy calls the edit program. If there are still errors, then the error message will display on the Pending Adjustable Changes page if **OK** was clicked. If **Apply** was clicked to remain on the existing Pending Adjustable Loan Change Detail page, the Pending Adjustable Loan Change Errors grid at the bottom of the page will be repopulated with the error(s).

A Closer Look at the Pending Adjustable Loan Change Detail Screen

Section 1 of the Pending Loan Change Detail page

The top section or header of the Pending Adjustable Loan Change Detail page displays the Loan Number, Adjustable Method, and Monthly or Daily Review in the PARM file.as read only.

The Effective Date & Adjustable Loan Description display below the blue bar labeled as such. They include the Status of the Pending Adjustable Change Detail record as well as the Date Imported and User if the information in the record was uploaded via the Mapping Tool.

11- SECTION 1 - HEADER - PENDING ADJUSTABLE LOAN CHANGES DETAIL PAGE.

Sections 2 & 3 of the Pending Adjustable Loan Changes page

Loan: Rate Information and Loan: P&I Information sections are used to apply future changes to the fields in the corresponding sections on the Adjustable Loan Information window.

12- SECTION 2& 3 - PENDING ADJUSTABLE LOAN CHANGES DETAIL - LOAN INFORMATION FIELDS: RATE & P&I SECTIONS

Sections 4 & 5 of the Pending Adjustable Loan Changes page

The Constants & Constraints: Rate Information and Constants & Constraints: P&I Information are used to apply future changes to the fields in the corresponding sections on the Constants & Constraints window.

Constants & Constraints: Rate Information

☑ Interest Rate Margin (+ or -) 0.0000000000000	☑ Rate Rounding Method --	☑ Rate Rounding Factor 0.0000000000000
☑ Index Rounding Method --	☐ Index Rounding Factor % 0.0000000000000	
☐ Rate Floor & Ceiling Exp Date 12/03/2020	☐ Interest Rate Floor % 3.0009000000000	☐ Interest Rate Ceiling % 20.0000000000000
☑ Rate Review Increase Cap % 0.0000000000000	☑ Rate Review Decrease Cap % 0.0000000000000	☑ Minimum Rate Adj Allowed 0.0000000000000
☑ Period Rate Cap % 0.0000000000000		
☑ Math Operator #1 --	☑ Margin #1 % 0.0000000000000	
☑ Math Operator #2 --	☑ Margin/Spread #2 % 0.0000000000000	

Constants & Constraints: P&I Payment Information

☑ P&I Payment Method 0	☑ P&I Payment Cap Expiration Date
☑ P&I Increase Cap % 0.0000000000000	☑ P&I Decrease Cap % 0.0000000000000
☑ P&I Increase Cap $ 0	☑ P&I Decrease Cap $ 0
☑ Round P&I Payment --	☑ Interest Basis Code --

13- SECTION 4 & 5 - PENDING ADJUSTABLE LOAN CHANGES DETAIL – CONSTANTS & CONSTRAINTS FIELDS: RATE AND P&I PAYMENT INFORMATION SECTIONS

Sections 6 of the Pending Adjustable Loan Changes page

The Pending Adjustable Loan Change Errors display the Loan Number, Effective Date, and Error messages found in relation to any Pending Adjustable Loan Change records on the loan. The errors displayed may refer to the record being viewed or any other Pending Adjustable Loan Changes scheduled for the loan.

Pending Adjustable Loan Change Errors

Loan	Effective Date in Error	Error Message
750081001	01/05/2019	P&I change frequency must be zero
750081001	01/05/2019	P&I Payment Change Date is required if P&I Payment Change Frequency is not zero
750081001	01/05/2019	P&I Amort To Date is required if Payment Chg Freq is not 0 and account is a Balloon Loan

14- SECTION 6 - PENDING ADJUSTABLE LOAN CHANGES - ERROR SECTION AT bottom of screen.

Strategy SOFR Compounding in Arrears

Requirements/Limitations for Using Compounding in Arrears Adjustable Methods

Loan Requirements for using Compounding in Arrears

- Loan Payment Type must be: (Loan Administration>Master Tab>Payment & Billing)
  - o G (Negative Amortization Allowed),
  - o I (Interest Only); or
  - o Q (Fixed Principal plus Interest)
- Cannot use Due Date Bill (Billing Cycle cannot be 'D') (Loan Administration>Master Tab>Payment & Billing)
- Cannot be Interest Basis Code A60 (30/360) (Loan Administration>Master Info>Contract panel)
- DIAL Type must be '0' if using Compounding in Arrears (Adjustable Methods 'T' '3' '6' or '7')

Adjustable Loans Using Compounding in Arrears

- o Must be a Daily Reviewable Adjustable Rate Loan, Frequency 1 (Adjustable Loan Wizard>Adjustable Loan Info)
  - ▪ Monthly or Daily Review set to Daily
  - ▪ Rate Change Frequency set to '1'
- o Use Business Calendar for Change Date must be 'Y' if Adjustable Method is either 'T' or '3' and Lookback Days is > 0.
- o When using Adjustable Methods 'T' or '3', Operator #1 and Operator #2 must both be 'A' for 'Add'.

How Strategy Calculates Compounding in Arrears

The new Adjustable Rate methods call a new program to do the calculations for loans using the Compounding in Arrears Formula Codes. Strategy saves the Total Daily Compounded Accrued Interest and all the components used to calculate that value in the new file PCMPNDSOFR.

- The Effective Margin Rate and Simple Margin Accrued Interest calculations will only be done if a Margin (Interest Rate Margin % ABMARG or Margin #1% ABSPD1) was entered. If no Margin is entered, the Simple Margin Accrued Interest will be zero.
- The Effective Spread Adjustment and Simple Spread Adjustment Accrued Interest calculations will only be done if a Spread Adjustment is entered, Margin #2% (ABSPD2). If no Spread Adjustment is entered, the Spread Adj Accrued Interest will be zero
- To calculate the Effective Rate, Strategy will derive the SOFR index rate by taking the all in rate (ARCRAT) from the ARM History file and subtracting out the Interest Rate Margin %, Margin 1%, and the Margin 2%. This simplifies calculations for working with Floors and Ceilings and individual back dated rate changes but effectively uses the same Index value used to create the New Interest Rate or All-in-Rate found in the PARMH file.
- Loans that have been assigned an Interest Basis Code of A60 (30 days / 360 day year) cannot use the Compounding in Arrears Adjustable Methods.
  - o Strategy will calculate interest based on the number of days in a year stated in the Interest Basis Code assigned to the loan.
    - ▪ 360 days in a year is used for Interest Basis Codes B65, B66
    - ▪ 365 days in a year is used for Interest Basis Codes A65, A66 (if it is not a leap year)
    - ▪ 366 days in a year is used for Interest Basis Code A66 (if it is a leap year)
- For the calculations below, the # of Business Days is calculated as follows:
  - o For normal processing (Monday through Thursday without any holidays) the # of business days would be '1'

- o For processing over a weekend (Friday through Sunday) the # of business days would be '3'
- o The # of business days is adjusted for holidays (based on the Calendar you identify to be used for SOFR Compounding in Arrears). For example, if you had a Monday holiday the # of days on Friday would be 4 (processing for Friday through Monday).

NOTE: SOFR Rate is published by the Federal Reserve Bank of New York at 8 am ET every US business day using the SIFMA calendar. They are entered in the file PINDEX.

Rate I Calculation – Compounding the Balance

Used by Adjustable Method '6' for new loans, uses Interest Rate Margin% (ABMARG)
Used by Adjustable Method 'T' for transitioning loans; uses Margin 1% and Margin2% to capture the margin and spread adjustment (ABSPD1 & ABSPD2).

Result *Field in PCMNPDSOFR*	Calculations
Effective Rate QZEFFRT	# of Business Days * ((Interest Rate less the margin less the spread adjustment) /*number of days in year for interest basis code)*
Compounded Rate QZCMPDR	((1 + (Effective Rate/100)) * (1 + (Prior day Compounded Rate/100)) – 1) * 100
Compounded Rate Accrued Interest QZINDACL	(Unpaid Principal Balance * Compounded Rate) / 100
Effective Margin Rate QZFMARG	# of Business Days * Margin Rate /*number of days in year for Interest Basis Code*
Simple Margin Accrued Interest QZMRGACL	((Effective Margin Rate * Unpaid Principal Balance) / 100)/# of Business Days
Effective Spread Adjustment Rate QZFSPADJ	# of Business Days * Spread Adjustment Rate / *number of days in year for Interest Basis Code*
Spread Adjustment Accrued Interest QZSPRACL	((Effective Spread Adjustment Rate * Unpaid Principal Balance) / 100)/# of Business Days
Total Accrued Interest	(Simple Margin Accrued Interest * # of Business Days) + Compounded Rate Accrued Interest

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Adjustable Rate Module

on Compounding Rate, Margin & Spread Adjustment	+ (Spread Adjustment Accrued Interest * # of Business Days)
Daily Compounded Rate Accrued Interest	(Compounded Rate Accrued Interest - Compounded Rate Accrued Interest of Prior Day)/# of Business Days
Total Daily Accrued Interest *QZDLYTOT*	Simple Margin Accrued Interest + Spread Adjustment Accrued Interest + Daily Compounded Rate Accrued Interest

Rate II Calculation – Compounding the Balance

Used by Adjustable Method '7' for new loans, uses Interest Rate Margin% (ABMARG)
Used by Adjustable Method '3' for transitioning loans; uses Margin 1% and Margin2% to capture the margin and spread adjustment (ABSPD1 & ABSPD2).

Result	Calculations
Effective Rate *QZEFFRT*	# of Business Days * ((Interest Rate less the margin less the spread adjustment) /*number of days in year for interest basis code)*
Compounded Rate Accrued Interest *QZINDACL*	(Unpaid Principal Balance *(Effective Rate/100)) + ((1+ (Effective Rate/100)) * Accrued Interest of Prior Day)
Effective Margin Rate *QZFMARG*	(# of Business Days * Margin Rate) / *number of days in year for interest basis code*
Simple Margin Accrued Interest *QZMRGACL*	((Effective Margin Rate * Unpaid Principal Balance)/100)/* # of Business Days
Effective Spread Adjustment Rate *QZSPRADJ*	(# of Business Days * Spread Adjustment Rate)/*number of days in year for Interest Basis Code*
Spread Adjustment Accrued Interest *QZSPRACL*	((Effective Spread Adjustment Rate * Unpaid Principal Balance)/100)/# of Business Days
Total Accrued Interest on Compounding Rate, Margin and Spread Adjustment	Compounded Rate Accrued Interest + (Effective Margin Accrued Interest * # of Business Days) + (Effective Spread Adjustment Accrued Interest * # of Business Days)
Daily Compounded Rate Accrued Interest	(Compounded Rate Accrued Interest – Compounded Rate Accrued Interest of Prior Day)/# of Business Days
Total Daily Accrued Interest *QZDLYTOT*	Simple Margin Accrued Interest + Spread Adjustment Accrued Interest + Daily Compounded Rate Accrued Interest

NOTE: See the accompanying spreadsheet 'Example spreadsheet of Rate I and Rate II' for examples of the calculations.

Calculating Interest – Zero Interest Rate or Negative Index Rate

The first step in calculating the compounded in arrears rate is to calculate the Effective Rate.

All-in-Rate = New Interest Rate from the most recent PARMH record (ARCRAT)

Calculated Index Rate (SOFR Rate) = (All-in-Rate –Interest Rate Margin% – Margin #1% - Spread Adjustment)

NOTE: When using Two Ops (Adjustable Methods P, T, &3) always enter the Margin in Margin #1% and the Spread Adjustment in Margin#2%

Effective Rate = # Business Days* (Calculated Index Rate / *number of days in year for interest basis code*)

The Interest for the Margin and Spread are calculated separately. The Margin and Spread are not compounded. Total Interest will be equal to the sum of the Compounded Interest + Margin Interest + Spread Adjustment Interest

If the All-in-Rate is Zero OR the Calculated Index Rate (SOFR Rate) is negative, Strategy performs the following steps:

If the All-in-Rate is Zero:
- Total Interest, Compounded Interest, Margin Interest and Spread Adjustment Interest will all be Zero

If the Calculated Index Rate is a negative number:
- The Compounded Interest will be calculated using the negative Calculated Index Rate
- The Margin and Spread Adjustment Interest will be calculated (simple interest)
- The Total Interest will be calculated: Total Interest = Compounded Interest + Margin Interest + Spread Adjustment Interest
  - If the Total Interest is a positive number: the Interest amounts calculated will be used.
  - If the Total Interest is a negative number: the Total Interest, Compounded Interest, Margin Interest and Spread Adjustment Interest will all be set to zero.

Applying Floors and Ceilings using Compounding in Arrears

Standard Compounding in Arrears – New Loans – Margin, No Spread Adjustment

Adjustable Methods 6, (Rate 1 – Compounding the Rate) and Adjustable Method 7, (Rate 2 – Compounding the Balance) will use the same logic that currently exists for Strategy Adjustable Method A (Standard Adjustable loan, Index + a Margin)

Two Operators Compounding in Arrears – Transitioning Loans – Margin + Spread Adjustment

The following applies to the Adjustable Methods T (Rate 1 – Compounding the Rate) and Adjustable Method 3 (Rate II – Compounding the Balance). Both methods use the Two Operators fields for Margin and Spread Adjustment.

When rate floors and/or ceilings are defined in the loan agreements, the floors and ceiling values should be entered in Strategy in the Constants and Constraints panel of the Adjustable Loan module inclusive of the Margin. If there is no Floor or Ceiling stated in the Agreement, put 0.00 in the appropriate fields on the Constants and Constraints panel.

> For example:

- The agreement states a Floor of 1.0%. The Margin stated in the agreement is 0.5%. The value entered into the Interest Rate Floor % on the Constants and Constraints panel should be 1.5% (PARM/ABMIN).
- The agreement states a Ceiling of 4.00%, Margin of 0.5%. The value entered into the Interest Rate Ceiling % on the Constants and Constraints panel should be 4.5% (PARM/ABMAX).

NOTE: Math Operator #1 and Math Operator #2 must be Add (A).

Deferred Revenue & Expense Recognition

There are currently 2 Deferred Methods, Level Yield or Standard Interest, used to calculate interest recognition. If a loan is using Compounding in Arrears, the Level Yield Calculation has been modified to calculate the Effective Interest Rate for a deferred item as follows:

> Current Interest Rate from the PARM record (ABCRAT) less the Margin (Interest Rate Margin % or Margin #1 %) and less the Spread Adjustment (Margin #2 %) if applicable.   The Effective Rate is then used to calculate the Compounded Rate Accrued Interest using either the Compounding the Rate or Compounding the Balance methods. The system then adds the Compounded Rate Accrued Interest to the Simple Margin Accrued Interest and the Spread Adjustment Accrued Interest to arrive at the Total Accrued Interest.

Backdated Rates (Global and Individual) for Compounding in Arrears

Global Rate Change by Index

- When a Global Rate Change by Index is processed, the applicable loans tied to the Index go through a re-review process in day end.
- Just as when the loan was originally reviewed, this re-review process updates the ARM History information as needed (New Rate %, New Index %, etc.)

When the loan using Compounding in Arrears is re-reviewed as part of the Global Rate Change process, the Index used to calculate the Effective Rate will be the New Interest Rate % minus the Interest Rate Margin%, minus the Margin #1 % and minus the Margin #2 %.

Individual Rate Change by Account (new changes)

- When an Individual Rate Change by Account is processed, the loan does not go through a re-review because the user is providing the Rate. The ARM History records are not updated.
- Using SOFR Compounding in Arrears:
  - When a user enters the New Interest Rate % on the Individual Rate Change window, the rate should be the All-in-Rate inclusive of the Index, Margin, and Spread Adjustment.
  - The Individual Rate Change program will take the New Interest Rate % that the user entered for the Individual Rate Change, subtract the Margin and Spread Adjustment and that will be used as the Index to calculate the Effective Rate.

Review Calculations for Loans Compounding Interest in Arrears

To allow users the ability to review the Compounding Interest Calculations for loans using Compounding in Arrears and the individual components of the calculation, a new widget in the Portal displays the daily values calculated in much the same manner as Daily Balances and Rates and Investor Daily Balances and Rates.

Compounding SOFR Interest

Users can access the Compounding SOFR Interest widget from the Portal. The first page of the application is the loan search page. Users can locate loans using by entering a loan number, borrower name, etc. in much the same manner as with other Strategy browser based applications.

Loan Number	Associated Name	Monthly Payment	Current Principal Balance	Loan Name	Active Status	Name ID	MCA #	Credit Facility #
180080223	Emmerich Inc	10,000.00	10,000,000.00	SOFR Fixed PR Rate 2 w/ margin IA 23.3	Y	624	0	0
180080227	Emmerich Inc	10,000.00	10,000,000.00	SOFR Fix PR Rt 2 Marg & Spr Indep acc RF	Y	624	0	0

When the loan number has been selected Strategy checks to ensure that the loan is using an Adjustable Method compatible with Compounding in Arrears (T, 3, 6, & 7). When the Compounding SOFR Interest page opens, an error will display if the loan is not using SOFR Compounding in Arrears. Users must hit Cancel and return to the Search page to select another loan.

The Compounding SOFR Interest page contains two sections: Filter results, and Compounding Interest Detail.

Because Compounding SOFR loans are daily reviewable, there can be a large number of records associated with the loan selected. The Filter Results page limits the number of records displayed to 300. The Filter Results section allows users to select a date range to assist with locating the appropriate records. Changing the date range reloads the Search Results with Compounding SOFR Interest records for the loan number displayed above the Review Date From box with a Review Date within the date range entered.

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Adjustable Rate Module

Compounding SOFR Interest

| Cancel | Select SOFR Calendar |

Filter Results

Loan Number   180080227

Review Date From [   ]   Review Date To [   ]

15 - COMPOUNDING SOFR INTEREST - SELECT LOAN - USE REVIEW DATE FROM AND REVIEW DATE TO FIELDS TO LOCATE APPROPRIATE COMPOUNDING INTEREST RECORDS FROM PCMPNDSOFR

Selecting a record in the Filter Results grid displays the values in the Compounding Interest Detail at the bottom of the page. The page is read only.

Compounding SOFR Interest

| Cancel | Select SOFR Calendar |

Filter Results

Loan Number   180080237

Review Date From [   ]   Review Date To [   ]

Review Date	Number of Days	Adjustable Method	Index Description
04/01/2019	1	TWO OPS COMPOUND %2 SIMP MARG (3)	SH
04/02/2019	1	TWO OPS COMPOUND %2 SIMP MARG (3)	SH
04/03/2019	1	TWO OPS COMPOUND %2 SIMP MARG (3)	SH
04/04/2019	1	TWO OPS COMPOUND %2 SIMP MARG (3)	SH
04/05/2019	3	TWO OPS COMPOUND %2 SIMP MARG (3)	SH
04/06/2019	3	TWO OPS COMPOUND %2 SIMP MARG (3)	SH
04/07/2019	3	TWO OPS COMPOUND %2 SIMP MARG (3)	SH
04/08/2019	1	TWO OPS COMPOUND %2 SIMP MARG (3)	SH
04/09/2019	1	TWO OPS COMPOUND %2 SIMP MARG (3)	SH

Compounding Interest Detail

Loan Number	180080237	Review Date	04/05/2019		
Number of Days	3	Index Description	SH	Adjustable Method	TWO OPS COMPOUND %2 SIMP MARG (3)
Interest Basis Code	B66	Index	2.46	Margin	0.25	Spread Adjustment	0.25
Effective Rate	0.0205	Effective Margin	0.00208333333333	Effective Spread Adjustment	0.00208333333333
Compounded Rate	0	Scheduled Balance	10,000,000.00		
Index Accrual Amount	4786.952820355807	Margin Accrual Amount	69.44444444444444	Spread Adjustment Accrual Amount	69.44444444444444
Daily Compounded Accrued Interest	683.52	Total Daily Compounded Accrued Interest	822.41		

16- SELECTING A RECORD IN THE FILTER RESULTS GRID DISPLAYS THE COMPOUNDING INTEREST DETAIL FROM PCMPNDSOFR

Loan Number / QZLN	Review Date / QZDATE	Adjustable Method / QZFORM	
Number of Days / QZDAYS	Index Description /QZINDX	Margin / QZMARG	Spread Adjustment / QZSPD2
Interest Basis Code / QZIBC	Index / QZCNDX	Effective Spread Adjustment / QZFSPADJ	
Effective Rate / QZEFFRT	Effective Margin / QZFMARG		
Compounded Rate / QZCMPDR	Scheduled Balance / QZSCHBAL		
Index Accrual Amount/ QZINDACL	Margin Accrual Amount / QZMRGACL	Spread Adjustment Accrual Amount / QZSPRACL	
Daily Compounded Accrual Interest / QZDLYACL	Total Daily Compounded Accrual Interest / QZDLYTOT		

17 - THE ABOVE TABLE OUTLINES THE FIELDS FROM PCMPNDSOFR THAT POPULATE THE COMPOUNDING INTEREST DETAIL IN THE COMPOUNDING SOFR INTEREST WIDGET

SOFR Calendar

The Select SOFR Calendar button at the top of the page, opens a dialog box allowing the user with appropriate security to select the business calendar to be associated with SOFR Compounding in Arrears. At least one calendar must be added to the file PSOFRCAL to reference holidays when calculating compounded in arrears interest.

The Select SOFR Calendar button allows authorized users to select a business calendar to be used with Compounding in Arrears. If selected the value is stored in the new file PSOFRCAL. Business Calendars available for selection are defined in System Information, Table 'C5'.

NOTE: The ARRC recommends the use of the SIFMA calendar in conjunction with SOFR indices. The holidays referenced in the SIFMA calendar can be found at https://www.sifma.org/resources/general/holiday-schedule/.. Use Adjustable Loan>Tools>Business Calendars to define a SIFMA business calendar. (See Working with Business Calendars for more information)

Calculating Service Fees, Guarantee Fees and Net Yield with Compounding in Arrears

Loans using Compounding in Arrears will review daily, giving the loan the potential to accrue interest at a different rate every day. To ensure that the Investor's Net Yield, the Service Fees, and the Guarantee Fees are calculated correctly, Strategy will use the Investor Daily Balance and Rates file (PIDBNR). This file contains a record for each day for each investor on a loan where the Investor is set for Daily Accrual or the Loan is a SOFR Compounding in Arrears Interest Calculation (Adjustable Methods: 6,T, 3, 7). Each record contains the investor balance, Net Yield Per Diem, Service Fee Rate, Service Fee Per Diem, and Guarantee Fee Rate, Guarantee Fee Per Diem.

For loans that use Compounding in Arrears, the Daily Net Yield Amount or Net Yield Per Diem (PIQNYAMT) will be calculated using the Daily Interest calculated for the loan (PCMPNDSOFR/QZDLYTOT) multiplied the Investor's Percentage Owned (PIMST/IMPP), less the per diem for the Service Fee (PIDBNR/IQSRVAMT) and the per diem for the guarantee fee (PIDBNR/IQGFEEAMT). At the end of the period the Net Yield, Service Fee, and Guarantee Fees will be equal to the sum of the per diems in PIDBNR records for the Loan/Investor for that remittance period.

Adjustable Loan Processing Module – Tools

Module Specific Toolbar Options for the Adjustable Loan Module

The Adjustable Loan Module-Specific Toolbar provides access to features specific to the Adjustable Loan module. This includes:

Icon	Feature	Use
	• Indexes – tracks Index Rate % by Effective Date.	• Update or review Index Rates using this feature.
	• Business Calendars – allows the addition of holiday dates for exclusion from processing.	• Create and update Business Calendars with holiday dates.
	• Rate Changes – allows the processing of Individual or Global Rate changes	• Changes rates on an individual loan or a enter an Index and a Backdate to change adjustable rate loans tied to that Index.
	• Pending Change Errors -	• Review errors related to Pending ARM Changes

Working with Indexes

STRATEGY stores the rates for various published Index Rates using the PINDEX table and System Information. System Administrators add and update Index Rates via the Adjustable Rate Module, module specific toolbar or from the Tools menu, while in the Adjustable Loan module.

Adjustable Loan Module>Tools>Indexes

Adding a New Index

STRATEGY provides a wizard to add a new Index to the system.
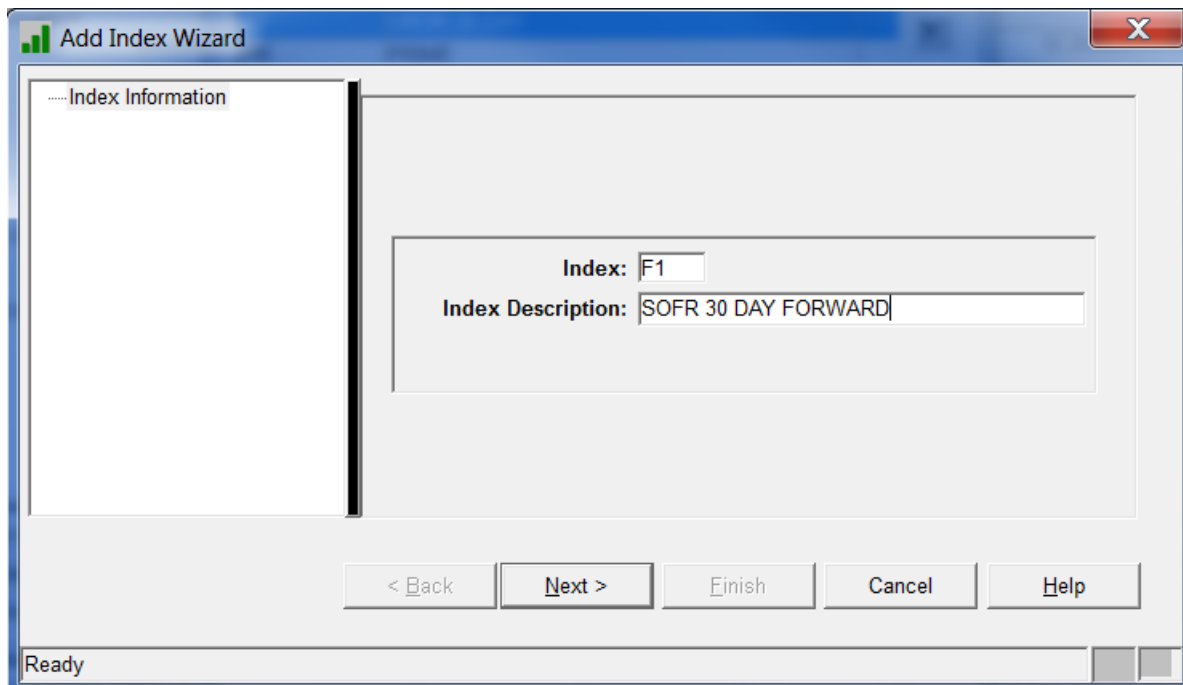
- From the Adjustable Rate module, select Indexes from the Tools menu or use the spreadsheet icon from the module specific toolbar.
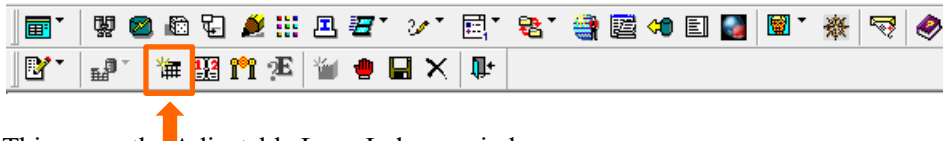
This opens the Adjustable Loan Indexes window.

- Click the 'New' icon or CTRL + N to open the 'Add Index Wizard'.
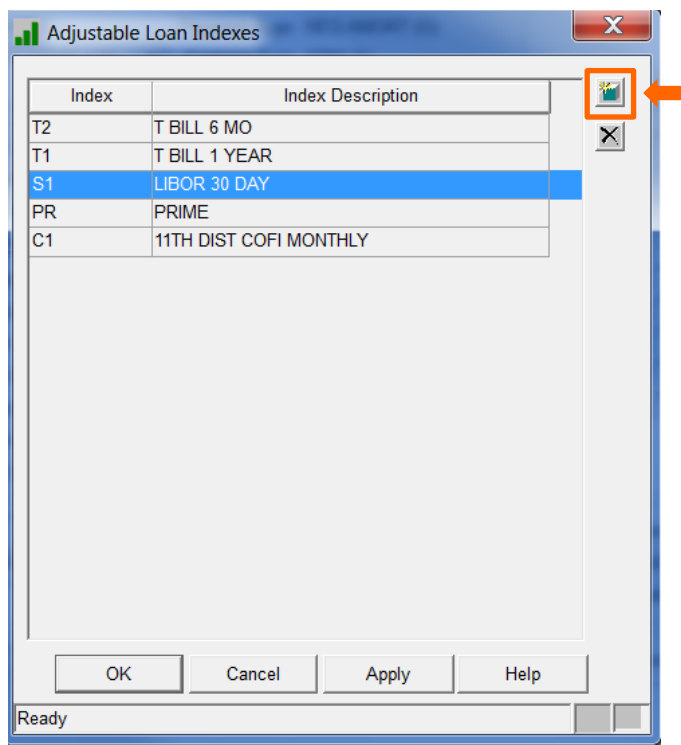
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Adjustable Rate Module

- On the Index Information panel of the wizard, add a 2 digit code for the new **Index**, and an **Index Description** for the Index.
- Click Next to move the Index Rates panel.
- Enter the Effective Date and Index Rate %. Enter the rate using the decimal point (##.#############) and hit enter.
- You can use the 'New' icon to enter additional effective dates and index rate % as needed.

- Click Finish to complete the entry.

STRATEGY will populate the index values in PINDEX and create a new information code in Table ID I2 ARM Index Codes using the two digit code entered on the Index Information window. The Index Description entered in the wizard will become the Full Description in SIFFUL/PINFO for Table ID I2. The first 10 characters will be used for the Short Description and Sort Description in PINFO.
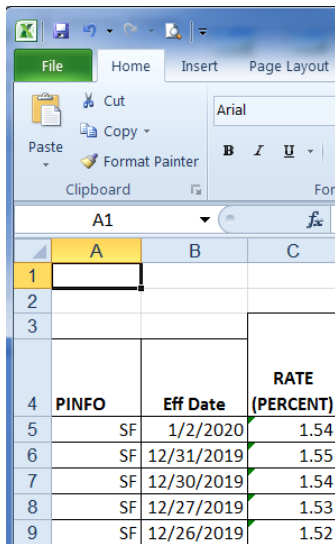
You can view the Index Rates entered for an Index by highlighting the Index you wish to view on the Adjustable Loan Indexes window and using the Right Mouse menu to select Index Rates. The Adjustable Loan Index Rates % window opens displaying a grid of Index Values. The Effective Date and corresponding Index Rate display in descending order with the most recent effective date on top.
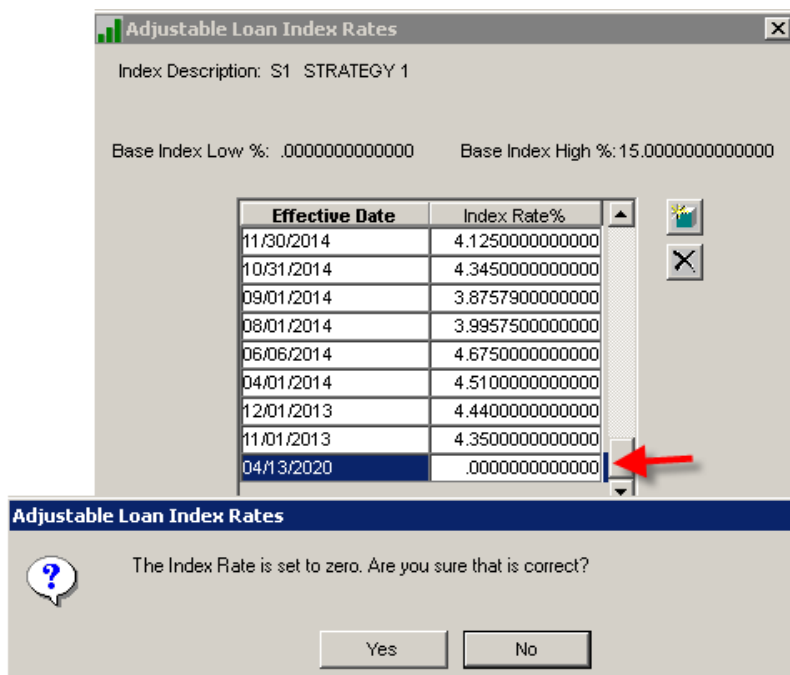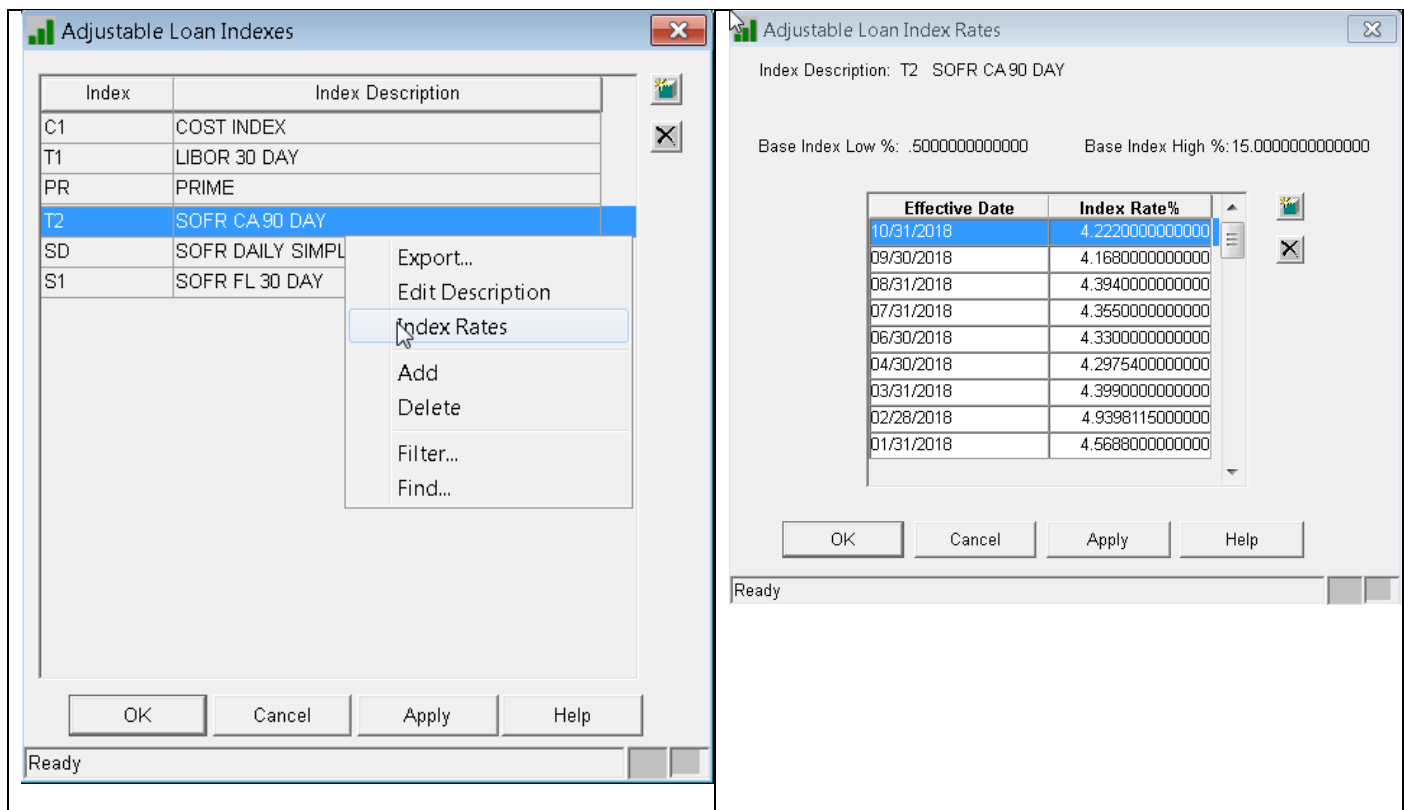
If a zero Index Rate is entered for an effective date, a warning messages will appear.

Entering Index Rates via the Mapping Tool

Once an Index is established in the System Information table (by using the Index wizard or Adding a code to the System Information table I2, and updating system records, the Mapping Tool is available to update values. The spreadsheet must have the established two digit code for the Index, the Effective Date of the Index Rate, and the Index Rate. The columns can be in any order.

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Adjustable Rate Module

Using the Mapping Tool

- Select your spreadsheet containing the Index values from Microsoft Explorer.
- Click Upload
- Select the Index Rate template
- Click Loan Interactively

Click in the **Choose Files** box to open Windows Explorer.

Select your spreadsheet for upload.

Text appears in the scroll box below the *Upload* button once Upload has been selected.

Select Index Rate in the **Select Template** field and click the *Load Interactively* button.

NOTE: If you have uploaded the spreadsheet format in the past and mapped it to the Index Rate template, *STRATEGY* will remember and suggest a mapping for you.

Index Rate Template

	Column A	Column B	Column C
Row 1			Secured Overnight Financing Rate
Row 2			
Row 3			RATE (PERCENT)
Row 4	PINFO	Eff Date	RATE (PERCENT)
Row 5	SF	01/02/2020	1.54
Row 6	SF	12/31/2019	1.55
Row 7	SF	12/30/2019	1.54
Row 8	SF	12/27/2019	1.53
Row 9	SF	12/26/2019	1.52
Row 10	SF	12/24/2019	1.52
Row 11	SF	12/23/2019	1.52
Row 12	SF	12/20/2019	1.53
Row 13	SF	12/19/2019	1.53
Row 14	SF	12/18/2019	1.53
Row 15	SF	12/17/2019	1.54
Row 16	SF	12/16/2019	1.62
Row 17	SF	12/13/2019	1.54
Row 18	SF	12/12/2019	1.53
Row 19	SF	12/11/2019	1.54
Row 20	SF	12/10/2019	1.55
Row 21	SF	12/09/2019	1.56

	INDEX CODE	INDEX RATE EFF DATE	INDEX RATE
Row 1			
Row 2			
Row 3			
Row 4			
Row 5	SF	01/02/2020	1.54
Row 6	SF	12/31/2019	1.55
Row 7	SF	12/30/2019	1.54
Row 8	SF	12/27/2019	1.53
Row 9	SF	12/26/2019	1.52
Row 10	SF	12/24/2019	1.52
Row 11	SF	12/23/2019	1.52
Row 12	SF	12/20/2019	1.53
Row 13	SF	12/19/2019	1.53
Row 14	SF	12/18/2019	1.53
Row 15	SF	12/17/2019	1.54
Row 16	SF	12/16/2019	1.62
Row 17	SF	12/13/2019	1.54
Row 18	SF	12/12/2019	1.53
Row 19	SF	12/11/2019	1.54
Row 20	SF	12/10/2019	1.55
Row 21	SF	12/09/2019	1.56

Check All   Uncheck All

Data passed validation but was not submitted to Strategy

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Adjustable Rate Module

The contents of the spreadsheet you uploaded appears on the left. Drag the rows, columns or individual cells on the left to the correct row, column or cells representing the STRATEGY fields on the right. Clicking validate will make sure that the information is correct and ready for upload. Remember that the Index Code must be established in STRATEGY before you upload rates using the Mapping Tool. See the Mapping Tool manual for more information on the use of the Mapping Tool.

Pending Adjustable Loan Changes Mapping Tool Template

A Mapping Tool template is available at Update 19F and higher to assist with loading Pending Adjustable Loan Changes. Records entered here will display in the Adjustable Loan module, Pending Adjustable Loan Changes tab and in the Adjustable Loan widget, Pending Adjustable Loan Changes page.
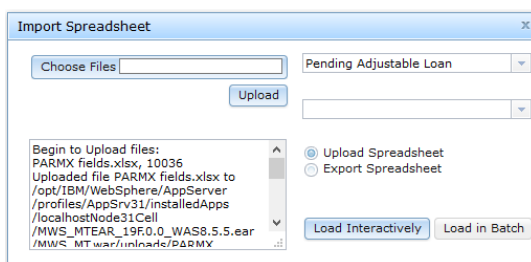
- Pending Adjustable Loan Changes is an insert only template containing fields from PARMX.
- All fields that are to change on the same Effective Date should be entered in the same record (or spreadsheet row if uploading via MaTi). There can only be one Pending Adjustable Loan Changes record for a loan for that Effective Date.

NOTE: As of Update 19F, there are a number of fields required to enter pending changes that relate to the processing of loans using compounding in arrears interest rate calculations. These fields were added to the file but not the screen in the Adjustable Loan, Pending Adjustable Loan Changes window. Records will only appear in the Adjustable Loan widget until Release 20. Any error messages that are caused by conflicts with the new fields must be corrected using the Adjustable Loan widget.

Records uploaded via the Pending Adjustable Loan Changes template carry the Import date, and the Username of the person uploading the data. This allows for bulk changes to Adjustable Loan terms, e.g. Loans transitioning from LIBOR to another index and they can be grouped by upload dates and user to be deleted prior to completing the application of the scheduled change.

See the Appendix for the fields available for upload via the Pending Adjustable Loan Changes template.

Working with Business Calendars

Some loan documents and servicing agreements require that certain types of processing are excluded from taking place on 'Non-Business Days'. STRATEGY's Business Calendars functionality assumes that weekends are Non-Business Days and allows the users to define additional days, most likely holidays, that are also excluded from processing. Organizations can define multiple calendars to address the servicing needs of different countries and clients. These calendars can be applied to Late Charges, Accruals, Payment Due Dates, Adjustable Rate Reviews and Changes, and for CMBS Investor Reporting dates. Business Calendars are generally maintained by system administrators with appropriate authority.
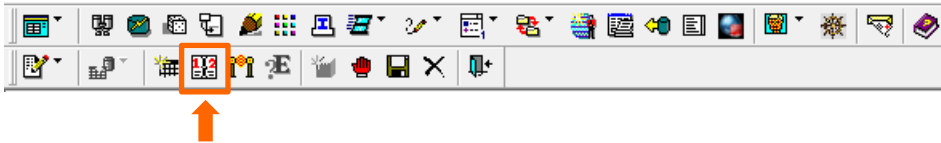
To view or update a Business Calendar, go to the Adjustable Loan module. Access the Business Calendars from the Tools menu by selecting Business Calendars or select the desk calendar icon from the module specific toolbar.

This opens the Business Calendars window listing the defined Business Calendars.
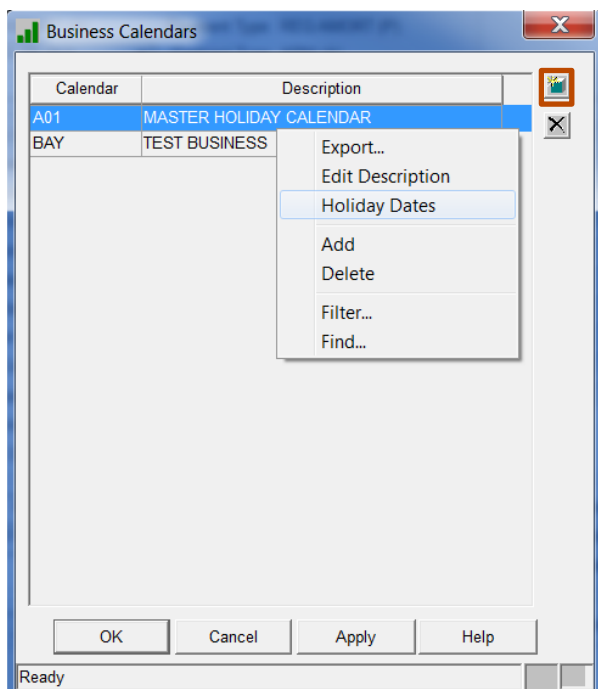
Select the 'New' icon, select 'Add' from the right mouse menu or 'Ctrl + N' to add a new business calendar.

Select 'Edit Description' from the right mouse menu to rename the highlighted Business Calendar

Select 'Holiday Dates' from the right mouse menu to view and add dates defined for the highlighted calendar.

The right mouse option Delete (Ctrl + 'D' or the Delete button), will remove the highlighted Business Calendar if the calendar is not in use in the system. If the highlighted calendar is in use, the user receives a message and the Business Calendar cannot be deleted.

Adding a Business Calendar

STRATEGY provides a wizard to add a Business Calendar to the system.

The wizard makes it easy to define the calendar and add holidays to the system. Click the 'New' icon to start the wizard.
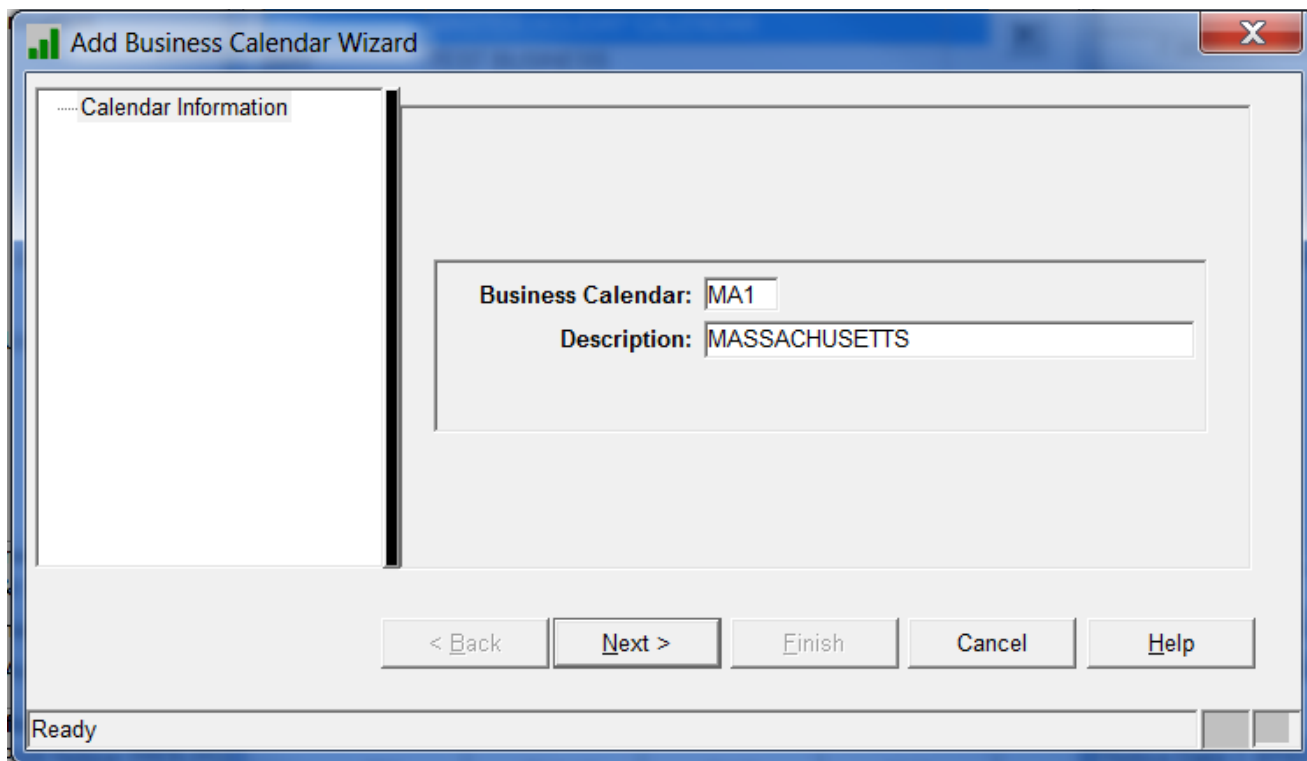
The Calendar Information panel of the wizard is the first panel to display. The Business Calendar and Description fields are both required.

- Enter a 3 character alphanumeric code as the unique identifier for the calendar in the **Business Calendar** field. The Business Calendar code cannot already exist in the associated System Information Table C5.
- Enter a **Description** that allows you to easily identify how the business calendar is used in the system.
- Click *Next* to move to the Holiday Dates panel of the Wizard.

Entry of additional Holiday Dates is optional. When a Business Calendar is applied, STRATEGY assumes all weekends are Non-Business Days. If a Business Calendar exists and there are no Holiday Dates for the Calendar, only weekends will be bypassed during processing.

- Hit the 'New' icon, or Ctrl + 'N' to define your holidays.
- Enter a **Holiday Date** (MM/DD/CCYY). The date must be unique for the Business Calendar.
- When you hit 'Tab' STRATEGY enters the **Day of the Week** and places the cursor in the **Description** field.
- Type a holiday description. If you enter a **Description**, the **Holiday Date** is required.
- Hit 'Tab' again to complete the entry for each holiday.
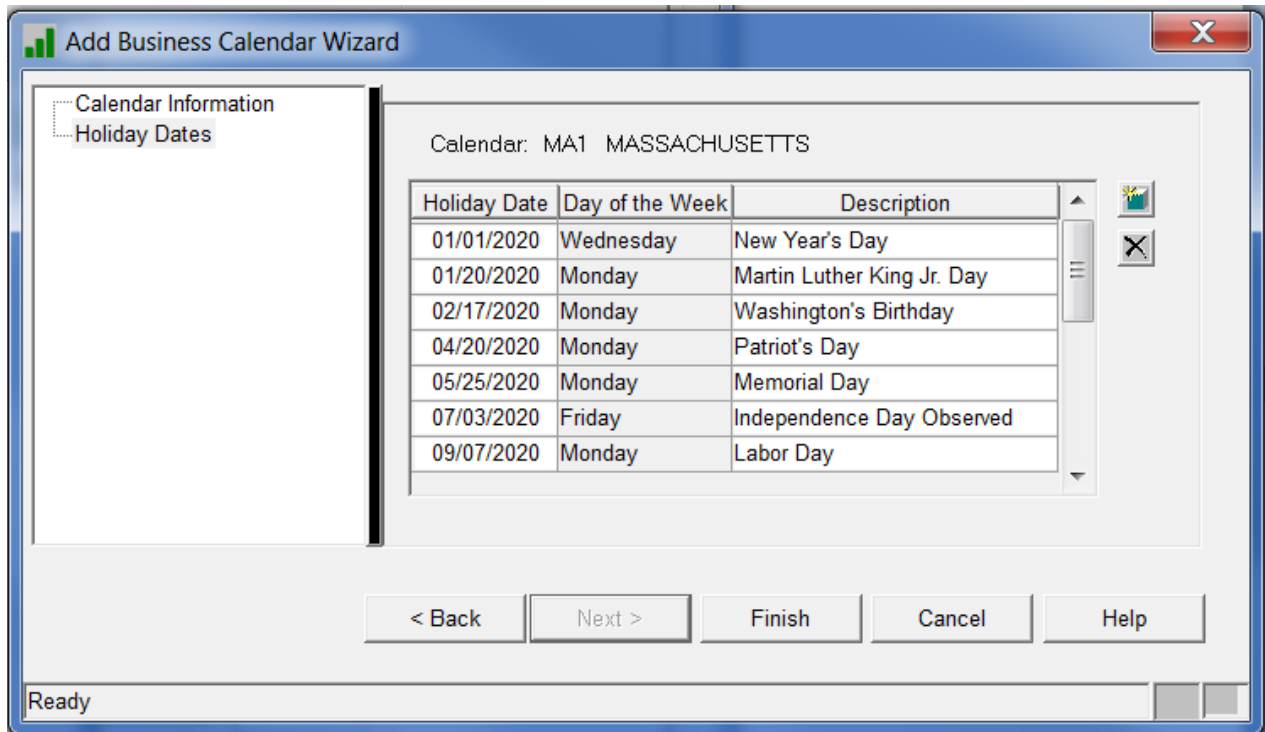
Once all Holidays have been entered, click Finish. STRATEGY updates the System Information Table C5 with the Calendar Code and Description.

To Modify an Existing Calendar

User's with appropriate authority can update Business Calendars. Select Business Calendars from the Tools menu while in the Adjustable Loan Module or from the Adjustable Loan Module specific toolbar using the Desk Calendar icon. This opens the Business Calendar window listing all existing Business Calendars. Select the Calendar you wish to modify and click the right mouse to access the menu. Use the Edit Description option to change the description of the Business Calendar. The ***Calendar*** code is protected and once created cannot be changed. Click in the ***Description*** field to update the name of the calendar. Click *Apply* to save the changes. The Calendar ***Description*** will be updated and appear in future Business Calendar selection fields.
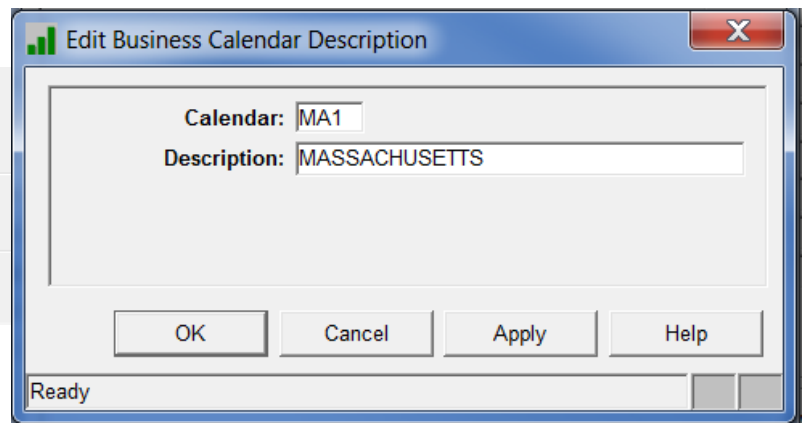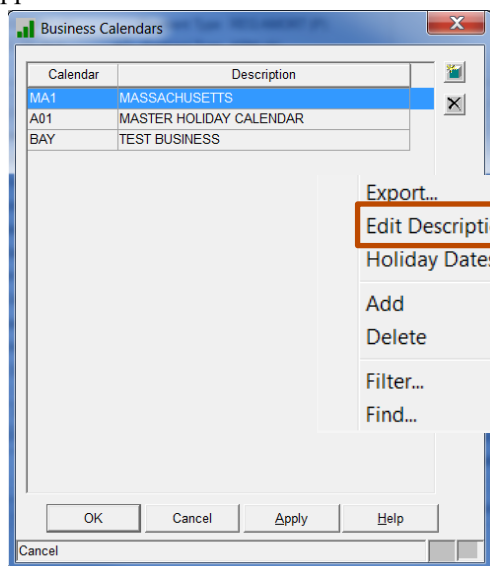
To Add or Modify Dates in an Existing Calendar

User's with appropriate authority can add or modify dates in existing Business Calendars. Select Business Calendars from the Tools menu while in the Adjustable Loan Module or from the Adjustable Loan Module specific toolbar. This opens the Business Calendar window listing all existing Business Calendars. Select the Calendar you wish to modify and click the right mouse to access the menu. Use the Holiday Dates option to open the Business Calendar Holiday Dates window. This window operates like the Holiday Dates window in the wizard. Use the Add icon or accelerator key (Ctrl +N) to add new dates. Highlight a date in the window and click the field to modify the information, or use the Delete icon or Ctrl +D to delete a date from the calendar. Use the OK button to save your changes and exit the Business Calendar Holiday Dates window, or click Apply to save changes made so far and continue working on the active Business Calendar.
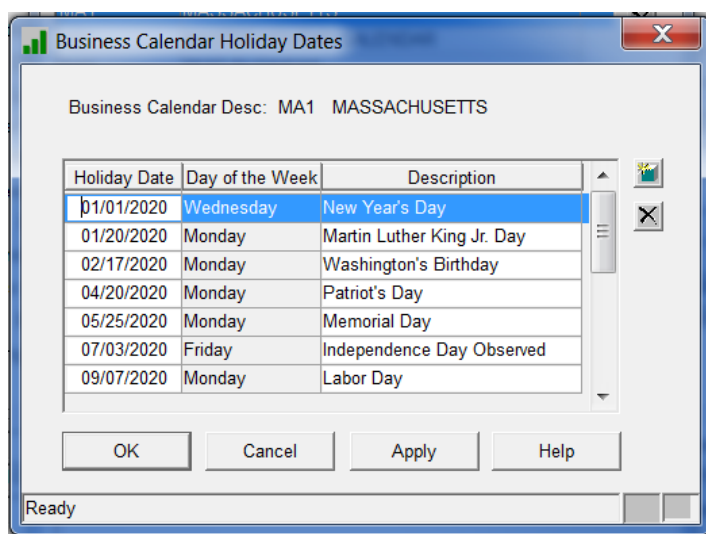
NOTE: To insure that processing continues as expected each year, McCracken recommends that you create and maintain Business Calendars with as much lead time as possible. A good rule of thumb would be to set a recurring process to maintain your business calendars for a period that is twice the length of your longest accrual period. (If you have loans with quarterly payments, you want to update your Business Calendars every 6 months). Remember that *STRATEGY* creates your receivable records one payment frequency period in advance, so you want to be sure that Business Calendar is properly updated to avoid file maintenance to correct any processing scheduled for a holiday that did not get entered.

These websites list banking holidays in the US and UK respectively.

https://www.frbservices.org/holidayschedules/ or https://www.gov.uk/bank-holidays

Applying Individual or Global Rate Changes
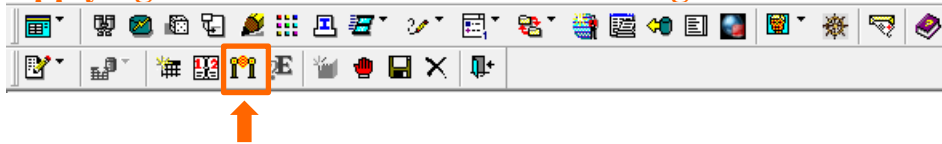
The Rate Changes feature allows users to create rate changes for a single loan or change the rate for all loans tied to a particular index or a Global Rate Change. The rate change may be created for a future change or backdated up to 25 days in the past (subject to System Control settings). This functionality is available for both adjustable and fixed rate loans.

When using the Rate Changes tool, rather than manually updating interest rates throughout the portfolio, STRATEGY processes the necessary updates to the Receivable record(s), the Accrual record(s), the Investor Master record(s), and Investor Remittance ("IREM") record.

Access Rate Changes from the Tools menu by selecting Rate Changes, or select the icon with two columns from the module-specific toolbar.

When the Rate Changes window opens, it displays a grid of all pending rates changes for the portfolio.
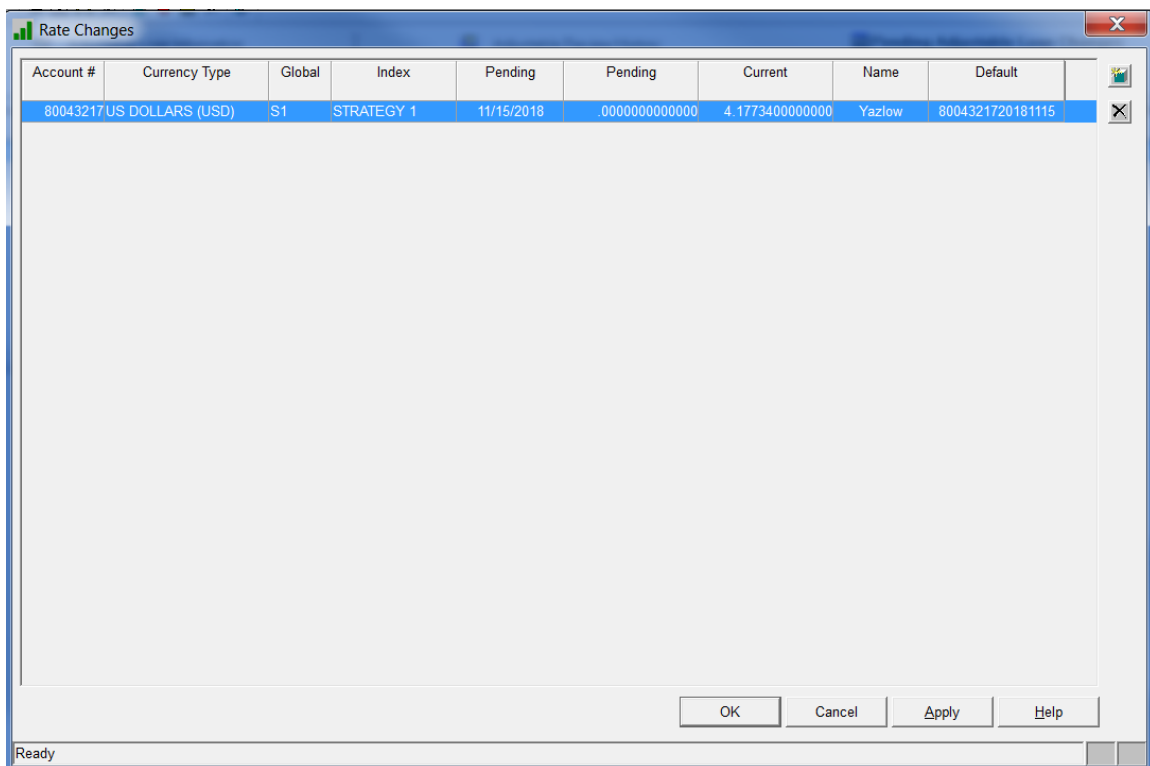
View Rate Change Detail by highlighting the record and using the right mouse option to select Rate Change Information. The Rate Change Information window opens to display details about the Rate Change.

Rate Change records can be deleted by carefully selecting the Rate Change record you wish to delete and clicking on the Delete icon to the right of the grid or by selecting Delete from the right mouse menu. STRATEGY displays a Confirm Delete dialogue box.

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Adjustable Rate Module
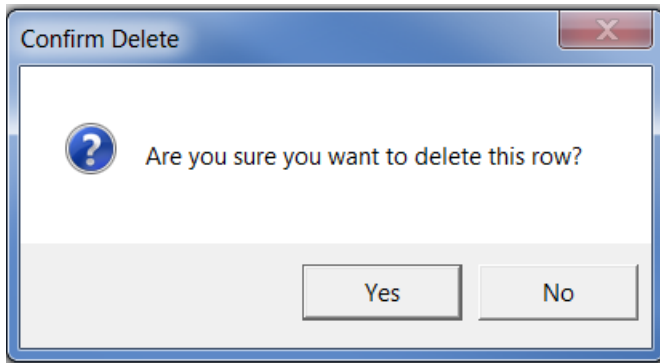
Clicking '*Yes*' to the 'Are you sure you want to delete this row?' message deletes the selected Rate Change record permanently and returns you to the Rate Changes window.

Clicking '*No*', cancels the delete request and returns you to the Rate Changes window, the selected record remains.

Adding an Individual Rate Change Record

To add a Rate Change record for an individual loan (this can be an Adjustable Rate Loan or a Fixed Rate Loan) click the 'New' icon to the right of the Rate Changes grid, or select 'Add' from the right mouse menu.
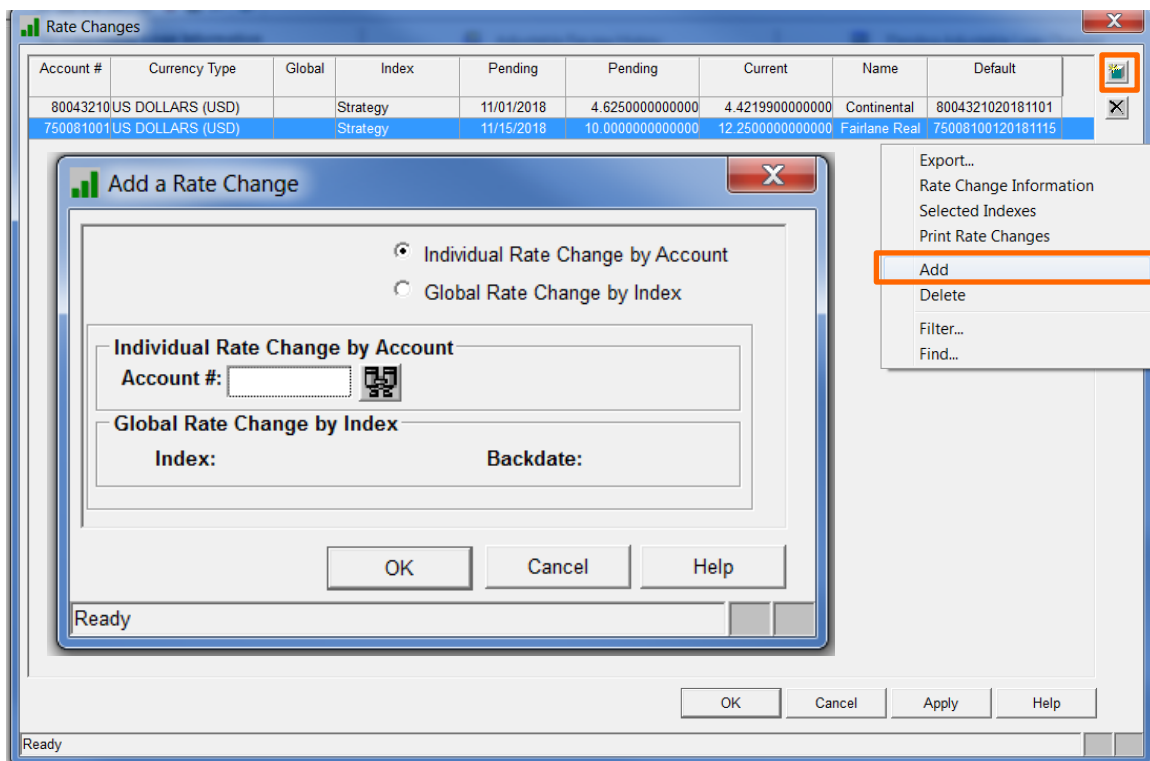
This opens the Add a Rate Change dialogue box. Radio buttons in the upper right allow you to choose between adding a rate change for a single loan (Individual Rate Change by Account) or changing rates for all loans with the same Index (Global Rate Change by Index).

An Individual Rate Change is the default view. Type in the **Account #** or use the Binocular icon to Search for the loan number.

- o OK – continues the Rate Change flow, taking you to the Rate Change Information window.
- o Cancel – cancels the Rate Change and returns you to the Rate Changes window.

Once you have selected your loan number and clicked okay to proceed with the Individual Rate Change, STRATEGY opens the Rate Change Information window so you can enter the loan level rate change and investor level rate change for the selected loan..

Enter Loan Level information at the top of the Rate Change Information window.

Effective Date is the date that the rate change will take effect. Interest is generally collected in arrears, so to be sure that the receivables is built using the correct interest rate, you would generally enter an Effective Date that is one payment frequency ahead of the first payment date of the payment date the rate will take effect.

New Interest Rate %: Enter the New Interest Rate for your loan.

NOTE: Using SOFR Compounding in Arrears:

When a user enters the new rate on the Individual Rate Change window, the **New Interest Rate %** should be the All-in-Rate inclusive of the Index, Margin, and Spread Adjustment.

The Individual Rate Change program will take the **New Interest Rate %** that the user entered for the Individual Rate Change, subtract the Margin and Spread Adjustment and that will be used as the Index to calculate the Effective Rate.

New Annual Percentage Rate %: Generally this is the same as your interest rate.

Enter Investor Rate Information for the active loan at the bottom of the Rate Change Information window.

The Investor Rate Information portion of the screen will display one line for each active Investor on the loan. Users can update the New Net Yield Rate % field (New Interest Rate % less Current Serv Fee Rate %) for each investor. *STRATEGY* will calculate the New Excess Net Yield Rate.

- o   Clicking OK saves your changes and closes the Rate Change Information window returning you to the Rate Changes window.
- o   Cancel returns you to the Rate Changes window without saving the Rate Change.
- o   Apply saves your changes. You remain on the Rate Change Information window.

Individual Rate Change by Account

- When an Individual Rate Change by Account is processed, the loan does not go through a re-review because the user is providing the Rate. The ARM History records are not updated.
  - o   The Rate in the Master File is updated with the Rate the user entered on the Rate Change window and an Interest Adjustment and File Maintenance entry are created.
  - o   This is basically automated 'file maintenance' and is the equivalent of the user manually updating the Rate in the Master File and creating a manual Interest Adjustment.
- Issue for SOFR Compounding in Arrears:
  - o   Because Strategy generally calculates the Index rate using the New Interest Rate% less the margin and the spread adjustment,
    - ▪ This means that when the user enters the Rate on the Individual Rate Change window it should be the whole loan rate meaning it will include the Index plus the margin and spread.

Global Rate Changes

To change all loans that use the same Index, use the Global Rate Change feature. Select the Rate Change feature. Adjustable Rate Module>Tools>Rate Change.

This opens the Rate Change window displaying all pending Rate Changes.
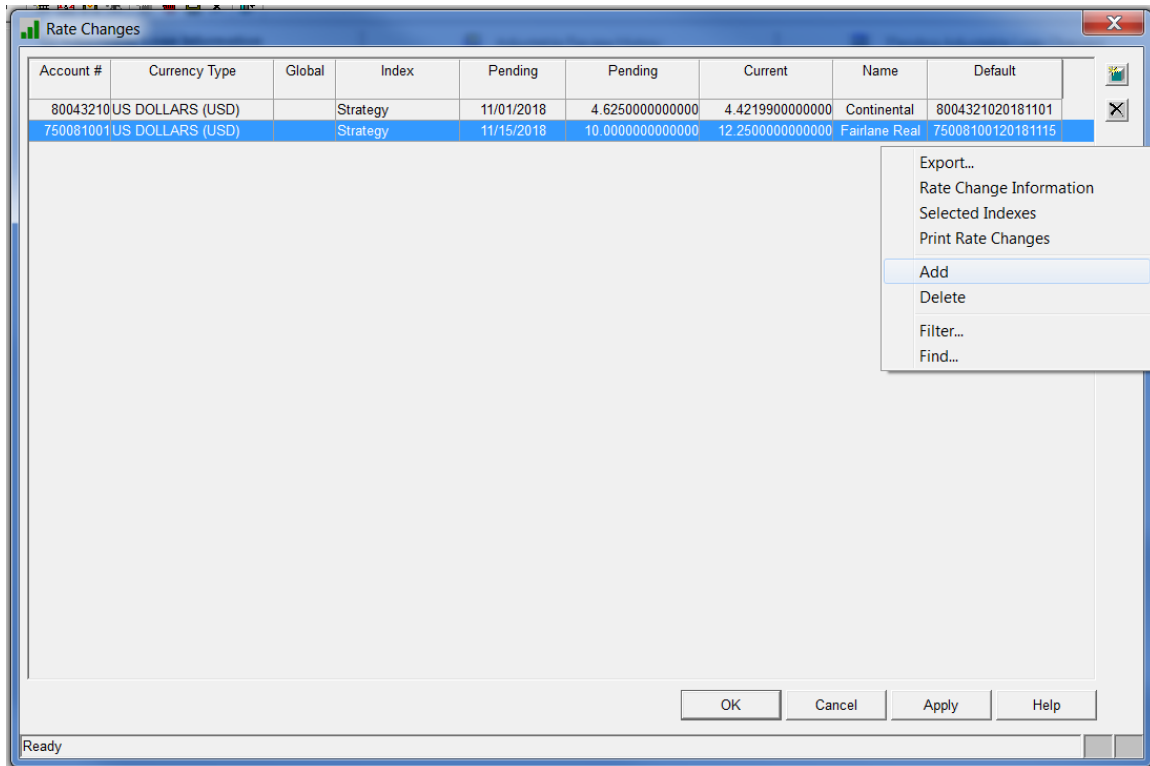
Click Add on the right mouse menu or click the New icon to the right of the Rate Changes grid to open the Add a Rate Change window.

Select the Global Rate Change by Index radio button.
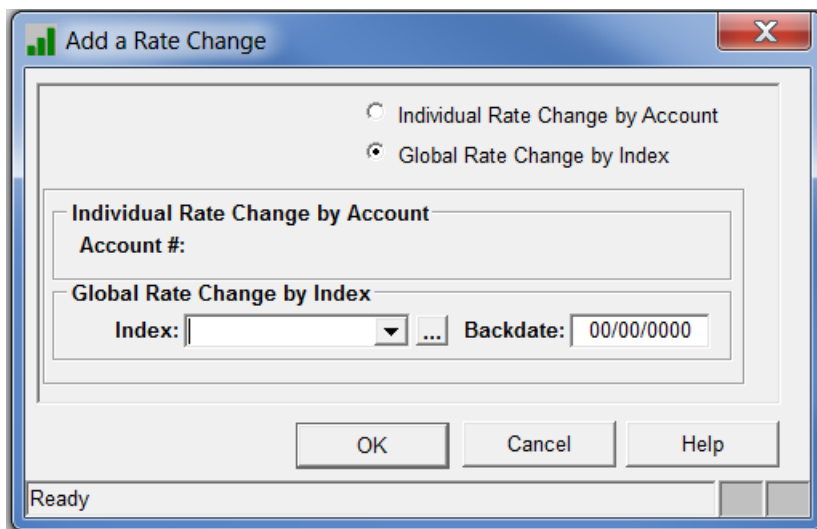
Select the Index to which you wish to apply the backdated rate change from the Index drop down.

The ellipsis button next to the Index can also be used view the Adjustable Loan Indexes window (and update if you have security).

Enter the date the Index Rate should be effective for in the Backdate field.

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Adjustable Rate Module

Clicking Okay displays the confirmation message showing the rate and date of for the Index.

Add a Rate Change

⚠️ The index rate of 01.0180000000000 which is effective on 10/31/2018 will be used for this global back date.

[OK]   [Cancel]
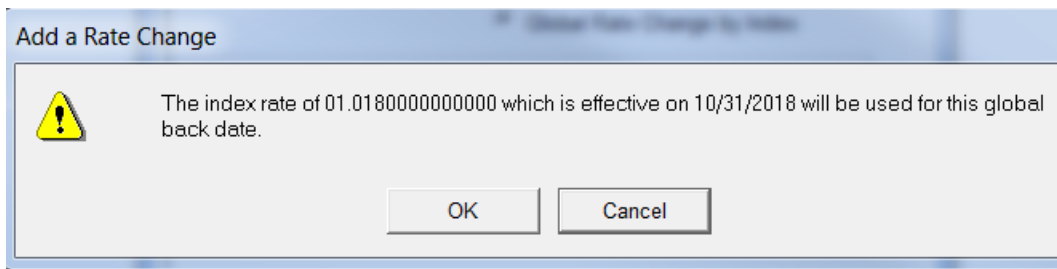
Using the right mouse menu, click Selected Indexes to view all Indexes scheduled to update globally.
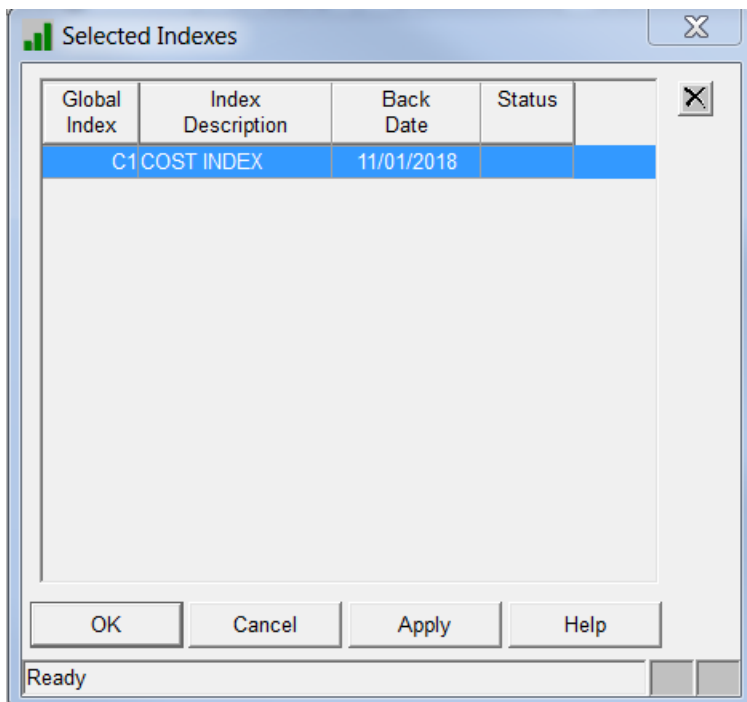
Selected Indexes

Global Index	Index Description	Back Date	Status
C1	COST INDEX	11/01/2018	

[OK]   [Cancel]   [Apply]   [Help]

Ready

- When a Global Rate Change by Index is processed, the applicable loans tied to the Index go through a re-review process in day end.
- Just as when the loan was originally reviewed, this re-review process updates the ARM History information as needed (New Rate %, New Index %, etc.)

When the loan using Compounding in Arrears (**Adjustable Methods** *(T), (3), (6)* and *(7)*) is re-reviewed as part of the Global Rate Change process, the Index used to calculate the Effective Rate will be the New Interest Rate % (from the Review History) minus the Interest Rate Margin%, minus the Margin #1 % and minus the Margin #2 %.

Pending Rate Changes

The Pending rate change will remain in the Rate Changes window until after the day end of the Effective Date when STRATEGY processes the Rate Change.

Pending Change Errors

When selecting the Pending Adjustable Loan Changes tab, a program runs checking for error conditions based on the changes outlined in the record that will take effect.

If *STRATEGY* determines an error condition exists the following will take place when the tab opens:

- o A window showing the error will be displayed:
- o The Effective Date of the 1st Pending Change record with the error will appear at the top of the Pending Loan Change Error window.
- o The error conditions found for the Pending Adjustable Loan record with the Effective Date shown display in the window.
- o Users can not add additional pending changes until the condition is resolved.

The Pending Change Error feature can also be accessed from the Tools menu while in the Adjustable Loan module or from module specific toolbar. The option is only accessible Pending Change Errors exist. If there are no Pending Change Errors, the option is disabled.
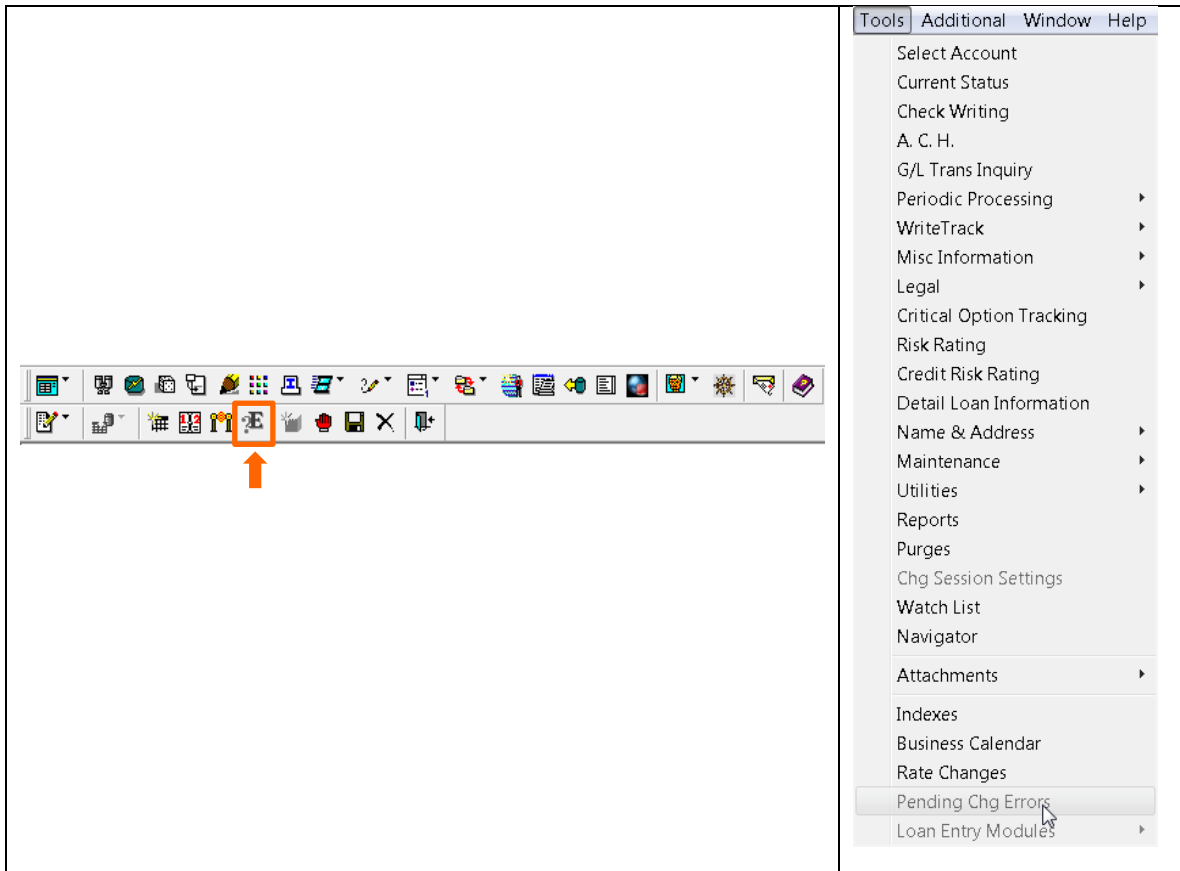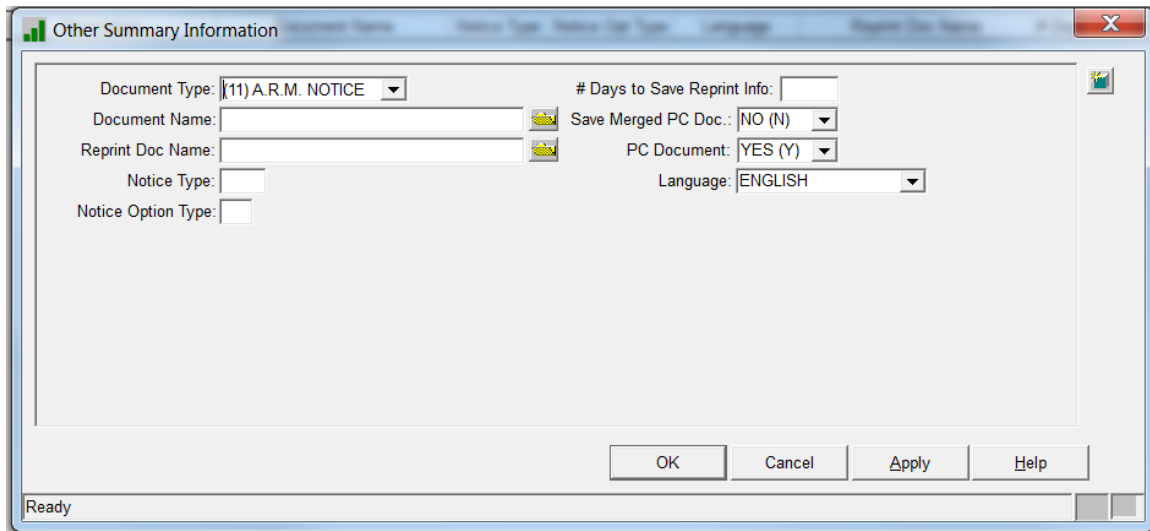
NOTE: Pending Loan Change Errors that reference PARMX fields added at Release 19F will need to be corrected using the Portal widget.

Notices

Adjustable Loan Document Information Records

WriteTrack allows you to design your own forms and notices using Microsoft Word®. Using Other Summary Documents, A.R.M. Notices (11) in conjunction with Adjustable Loans Processing:

When adjustable loan notices print, *STRATEGY* checks the Adjustable Loan record (PARM) for each account to see whether the rate has changed, then prints the appropriate notice. You must create a minimum of two notice types - one that prints when the rate changes, and one that prints when the rate has not changed.

The Notice Type and Notice Option Type allow you to define notices that vary from loan program to loan program.

Notice Type: Select the appropriate Adjustable Loan Description (ARM Type from System Information) for the Notice you are creating.

Notice Option Type: Select A for Notices applicable when the index rate has changed, and B for Notices applicable when the index rate has not changed.

See the WriteTrack manual for more information about creating Notices.

Field Number/Name for PC Merge Documents

Document Type: 11 - A.R.M. NOTICE

Number	Name	Type	Len	Dec	Description
1	ARDPRT	A/N	12		Date printed
2	ARCNAM	A/N	60		Customer name
3	ARSALU	A/N	60		Salutation

Number	Name	Type	Len	Dec	Description
4	ARACCT	A/N	10		Account number
5	ARPRP1	A/N	34		Description of property (line one)
6	ARPRP2	A/N	42		Description of property (line two)
7	ARPID	A/N	12		Payment installment date
8	ARNTP	N	11	2	New total payment
9	ARNPI	N	9	2	New P&I payment
10	ARTESC	N	9	2	Tax escrow constant
11	ARNIND	N	7	5	New index
12	ARICD	A/N	30		Index code description
13	ARMARG	N	7	5	Margin
14	ARNRAT	N	7	5	New rate
15	ARLBAL	N	11	2	Loan balance
16	ARSERV	A/N	2		Servicer code
17	ARGNAM	A/N	30		GL company name
18	ARGADD	A/N	30		GL company address
19	ARGCTY	A/N	41		GL company city
20	ARSDAT	N	6	0	System date
21	ARRIC	N	7	5	Review increase cap
22	ARRDC	N	7	5	Review decrease cap
23	ARMXAR	N	7	5	Maximum allowable rate
24	ARMNAR	N	7	5	Minimum allowable rate
25	ARNRM	N	2	0	Month of new rate (loan balance as of date)
26	ARNRD	N	2	0	Day of new rate (loan balance as of date)
27	ARNRY	N	2	0	Year of new rate (loan balance as of date)
28	ARSIGN	A/N	1		Sign (-) or blank (for margin)
29	ARNPIM	N	2	0	New P&I payment month
30	ARNPID	N	2	0	New P&I payment day
31	ARNPIY	N	2	0	New P&I payment year
32	ARORAT	N	7	5	Original rate
33	ARNTOT	N	10	2	New total payment

Number	Name	Type	Len	Dec	Description
34	ARPIND	N	7	5	Prior index
35	ARPRAT	N	7	5	Prior rate
36	ARPIP	N	9	2	Prior P&I payment
37	ARACT	N	9	2	Actual P&I required to fully amortize the loan
38	ARIRNC	N	7	5	Interest rate exclusive of review cap
39	AROIDX	N	7	5	Original Index
40	ARADD1	A/N	60		Formatted Name & Address Line 1
41	ARADD2	A/N	60		Formatted Name & Address Line 2
42	ARADD3	A/N	60		Formatted Name & Address Line 3
43	ARADD4	A/N	60		Formatted Name & Address Line 4
44	ARADD5	A/N	60		Formatted Name & Address Line 5
45	ARADD6	A/N	60		Formatted Name & Address Line 6
46	ARADI1	A/N	60		Additional Address Info Line 1
47	ARADI2	A/N	60		Additional Address Info Line 2
48	ARCPYT	A/N	12		Document Distribution Copy Text

System Control

Strategy's System Control settings for Adjustable Rate loans include the ability to allow users to enter Index values equal to or less than zero, and to set minimum and maximum values for a variety of Constant and Constraints.

Tools >Maintenance>System Control>General>Processing

When the value in the System Control>General>Processing option **Allow Negative Index** is set to "Yes", the following Index fields in the Adjustable Loan Information screen, Adjustable Loan History, and Pending ARM Changes will allow the entry of Index Rates values that are less than zero (Negative Index Rates)..

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Adjustable Rate Module

Tools>Maintenance>System Control>General>Allowable Values

During system setup your system administrator would have set minimum and maximum values for Adjustable Loan parameters. Strategy's Adjustable Loan module will validate entries against the low and high values to make sure that your company's lending limits and policies are maintained.

Adjustable Loan Information

Base Index % values set here represents the lowest Index Rate value and highest Index Rate value that can be entered for the data library.

\# of Months for Change Frequency represents the low and high values that can be entered in the rate change frequency field.

Constants and Constraints

The remaining fields in the Adjustable Loan Information Section represent low and high values for parameters such as Interest Rate (Floor)% and Interest Rate (Ceiling)% that are found on the Constants and Constraints window in the Adjustable Loan wizard.

Security

The following Task IDs are available for the Adjustable Loan module and features:

Task Name	Default Rights
Adjustable Loan Module *Pending Adjustable Loan Changes tab and Adjustable Loan Widget*	Execute
Adj Loan Changes	Read, Write, Delete, Print
Adj Loans Info Tab	Read, Write, Delete, Print
Add Adj Loan Wizard	Execute
P&I Rate Schedule	Read, Write, Delete, Print
Adj Loan Notices	Read, Write, Delete, Print
Adj Loan Review History	Read, Write, Delete, Print
Adjustable Loan – Mapping Tool Group Delete [W]	Execute
Adjustable Loan Indexes	Read, Write, Delete, Print
Adding an Index	Read, Write, Delete, Print
Adjustable Loan Index Rates	Read, Write, Delete, Print
Index Rates Group Delete	Read, Write, Delete, Print

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Adjustable Rate Module

Task Name	Default Rights
Business Calendars	Read, Write, Delete, Print
Adding a Business Calendar	Read, Write, Delete, Print
Business Calendar Holiday Dates	Read, Write, Delete, Print
Pending Rate Changes	Read, Write, Delete, Print
Web Portal	Execute
Compounding SOFR Interest [W]	Read, Write, Delete, Print
Compounding SOFR Interest – I\U\D	Read, Write, Delete, Print

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Adjustable Rate Module

Reports

On-demand Reports

- ARM Notices/Print Only
- ARM Rate Review Report
- ARM listing by Investor

Period End Reports

- CMB173R – Dayend - Adjustable Rate Reviews for backdating – Rates backdated on that day
- CMB173E – Dayend - ARM Automated File Maintenance Report – Updates to the Master file with automated Rate and Payment Updates.
- CMB 173 Reports - Monthend –
    - Rate Analysis, Exception List and Summary.
    - Adjustable Loan Master Pmt Type Changes

Appendix:

Master File: Payment Types

The Payment types entered in the Master file determine how STRATEGY calculates the Principal and Interest Payments on a loan. When processing an Adjustable Rate Loan, the Payment Types and Adjustable Method Codes must work together to calculate interest appropriately. Certain limitations and edits may be applied during processing to insure the loan will process correctly.

Payment Type	Description
A	Date of Payment to Date of Payment
B	Date of Payment to Date of Payment with Negative Amortization
F	Commercial Not Fully Funded
G	Negative Amortization Allowed
I	Interest Only
P	Regular Amortizing
Q	Fixed Principal + Interest
D	Rule of 78ths Payment Processing
E	Escrow Servicing Only Processing
1	Horizontal Payments – Amounts Ahead
2	Horizontal Payment
3	Date of Payment – Date of Payment: Amounts Ahead

Setting Up/Maintaining a New Loan

When you first enter the Adjustable Loan module, STRATEGY presents the Adjustable Loan Information tab. The tab will either show the Adjustable Loan Information in read only mode (existing Adjustable Loan record), or it will display a message depending on the Payment Type in the loan's master record (CMPYT/PMASTR).

Contract Type in PMASTR (CMCOT)	Payment Type in PMASTR (CMPYT)	Adjustable Loan Record Exists CML#/PMASTR = ABLN/PARM	Message Displayed
A	A, B, F, G, I, P, Q	Yes	Displays the Adjustable Loan Info tab in Read Only Mode
A	A, B, F, G, I, P, Q	No	"There is no Adjustable Loan Record for this loan."
Anything	D, E, 1, 2, or 3	No	"An Adjustable Loan Record cannot be setup for this payment type."
F	A, B, F, G, I, P, Q	No	"The contract type for this loan is Fixed Rate. If an Adjustable Loan Record is added, it will not change the Interest Rate or P&I Payment for this loan unless the contract type is changed."
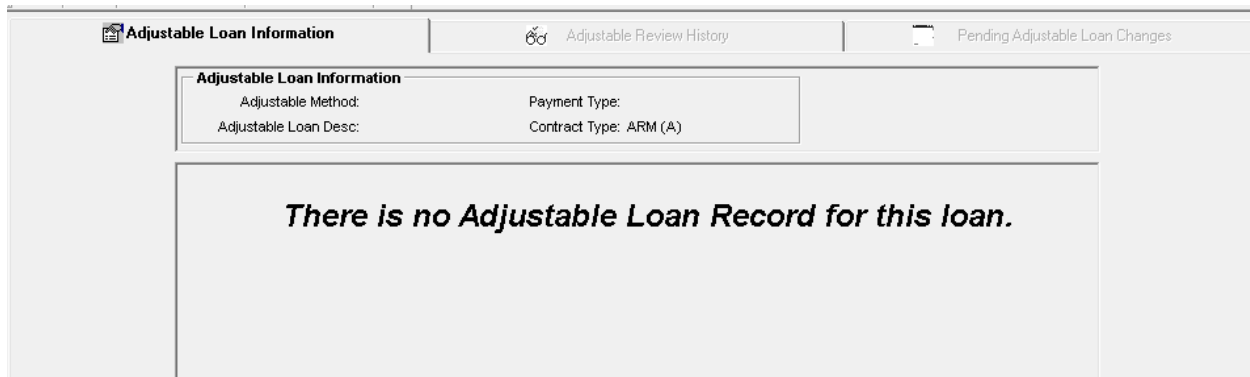
To add an Adjustable Loan record, click the New ( ) icon, or click "Ctrl+N". Users must have 'Write' authority to Adjustable Loan Information to add a record.

NOTE: A loan can only have one Adjustable Loan Record. Users must modify the existing ARM Loan Information or set Pending Adjustable Loan Changes up to change how *STRATEGY* will review and change the rate or payment.

Additional Adjustable Loan Edits

Adjustable Method	Edit Message
T, 3, 6, 7	Monthly or Daily Review must be 'D' if method is T, 3, 6, 7. (MSG 167)
T, 3, 6, 7	Rate Change Frequency must be 1 f method is T,3,6,7 (MSG168)
T, 3, 6, 7	Payment Type must be G,I or Q if method is T,3,6,7 (MSG169)
T, 3, 6, 7	Interest Basis Code must not be 'A60' if method is T,3,6,7 (MSG170)
T, 3, 6, 7	Billing Cycle must not be 'D' if method is T,3,6,7 (MSG171)
T,3	Method T or 3 operator 1 must be 'A' (MSG172)
T,3	Method T or 3 operator 3 must be 'A' (MSG173)
T, 3	Use Bus.Cal for Change Date must be Y w/method T,3 & Lookback Days > 0 (MSG174)
T, 3, 6, 7	DIAL Type must be '0' if method is T,3,6,7 (MSG175)
T, 3, 6, 7	Interest Basis Code must not be 'A60' if method T,3,6,7 (MSG370)
T, 3, 6, 7	Billing Cycle must not be 'D' if method T,3,6,7 (MSG371)
T, 3, 6, 7	DIAL Type must be '0' if method is T,3,6,7 (MSG372)
P, T, 3	Operator 1 must be blank if method is not P, T, 3 (MSG113)
P, T, 3	Operator 1 is required if method is P, T, 3 (MSG115)

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Adjustable Rate Module

P, T, 3	Margin 1 must be blank if method is not P, T, 3 (MSG116)
P, T, 3	Margin 1 is required if method is P, T, 3 (MSG117)
P, T, 3	Operator 2 must be blank if method is not P,T,3 (MSG118)
P	Method P Operator 2 must be 'A', 'D' or 'M'(MSG119)
P, T, 3	Margin 2 must be 0 if method is not P, T, 3 or operator 2 is ' '(MSG120)
P, T, 3	Method P, T, 3 margin 2 required when operator 2 is not blanks (MSG121)

Pending Adjustable Loan Changes Mapping Template

- Pending Adjustable Loan Changes is an insert only template containing fields from PARMX.
- Required fields are **bolded** and outlined in Blue. (Loan Number and Effective Date)
- When two fields shown below are grouped in the same box – only one of the fields can be entered. The fields with a description beginning with 'Zero' or 'Blank' and a field name beginning with 'AXZ' are 1 character fields that contain a Y or blank in the file. They represent the check boxes on the Pending Adjustable Loan Detail page of the Adjustable Loan widget. The 'AXZ' fields indicate that the associated field will be blanked or made a zero value when day end runs on the Effective Date of the record.
- All fields that are to change on the same Effective Date should be entered in the same record (or spreadsheet row if uploading via MaTi). There can only be one Pending Adjustable Loan Changes record for a loan for that Effective Date.
- Date fields must be formatted as a date in the spreadsheet (mm/dd/ccyy or mm/dd/yy).

Field Description/ Section on Pending Adjustable Loan Changes Detail page	File	Field Name	File Definition	PINFO Table ID	Business Rules/Edits
LOAN NUMBER **Section 1**	**PARMX**	**AXLN**	**9,0**		**Required. Must exist in PMASTR and PARM. AXLN/AXEFFD cannot already exist in PARMX.**
EFFECTIVE DATE CYMD **Section 1**	**PARMX**	**AXEFFD**	**Date**		**Required. Must be a valid date and be greater than or equal to the Process Thru Date PSYSCPER.S2PTDT. AXLN/AXEFFD cannot already exist in PARMX.**
ADJUSTABLE LOAN METHOD **Section 1**	PARMX	AXFORM	1	AF	Optional. Must exist in PINFO.
ADJUSTABLE LOAN DESC **Section 1**	PARMX	AXATYP	2	10	Optional. Must exist in PINFO.
MONTHLY OR DAILY REVIEW **Section 2**	PARMX	AXMORD New Field	1		Must be M, D or blank
RATE CHANGE FREQUENCY **Section 2**	PARMX	AXFREQ	3,0		
LOOK BACK METHOD **Section 2**	PARMX	AXLBOF New Field	1		Must be N, B or blank
ZERO/# OF DAYS TO LOOKBACK	PARMX	AXZLTR New Field	1		Must be Y or blank. Cannot have an entry in both AXZLTR and AXLTR
# OF DAYS TO LOOKBACK **Section 2**	PARMX	AXLTR New Field	3,0		
BLANK/BUSINESS	PARMX	AXZBDC	1		Must be Y or blank. Cannot have

Field Description/ Section on Pending Adjustable Loan Changes Detail page	File	Field Name	File Definition	PINFO Table ID	Business Rules/Edits
CALENDAR		New Field			an entry in both AXZBDC and AXNBDC
BUSINESS CALENDAR **Section 2**	PARMX	AXNBDC **New Field**	3	C5	Optional. Must exist in PINFO.
BLANK/RATE CHANGE DATE ROLL F, B, R	PARMX	AXZNU1 **New Field**	1		Must be Y or blank. Cannot have an entry in both AXZNU1 and AXDNU1
RATE CHANGE DATE ROLL F, B, R	PARMX	AXDNU1	7		Must be blank, B or F (only uses the 1st position of field)
BLANK/USE BUSINESS CALENDAR REVIEW DATE	PARMX	AXZCCR **New Field**	1		Must be Y or blank. Cannot have an entry in both AXZCCR and AXUCCR
USE BUSINESS CALENDAR REVIEW DATE **Section 2**	PARMX	AXUCCR **New Field**	1		Must be N, Y or blank
RATE REVIEW DATE **Section 2**	PARMX	AXRDAT **New Field**	8,0		Optional. Must be a valid date between 01/01/1900 and 12/31/2100. In file as MDCY
BLANK/USE BUSINESS CALENDAR RATE CHANGE DATE	PARMX	AXZCCE **New Field**	1		Must be Y or blank. Cannot have an entry in both AXZCCE and AXUCCE
USE BUSINESS CALENDAR RATE CHANGE DATE **Section 2**	PARMX	AXUCCE **New Field**	1		Must be N, Y or blank
RATE CHANGE DATE **Section 2**	PARMX	AXECDT **New Field**	8,0		Optional. Must be a valid date between 01/01/1900 and 12/31/2100. In file as MDCY
RATE CHANGE ANNIVERSARY DATE **Section 2**	PARMX	AXRCAD **New Field**	8,0		Optional. Must be a valid date between 01/01/1900 and 12/31/2100. In file as CYMD
ORIG INDX/DIAL BASE % **Section 2**	PARMX	AXONDX	15,13		

Field Description/ Section on Pending Adjustable Loan Changes Detail page	File	Field Name	File Definition	PINFO Table ID	Business Rules/Edits
ZERO/NEW INTEREST RATE %	PARMX	AXZCRA	1		Must be Y or blank. Cannot have an entry in both AXZCRA and AXCRAT.
NEW INTEREST RATE % Section 2	PARMX	AXCRAT	15,13		
BLANK/INDEX DESCRIPTION	PARMX	AXZIND	1		Must be Y or blank. Cannot have an entry in both AXZIND and AXINDX.
INDEX DESCRIPTION Section 2	PARMX	AXINDX	2	I2	Optional. Must exist in PINFO.
ZERO/MAXIMUM # OF RATE REVIEWS	PARMX	AXZMXR New Field	1		Must be Y or blank. Cannot have an entry in both AXZMXR and AXMAXR.
MAXIMUM # OF RATE REVIEWS Section 2	PARMX	AXMAXR New Field	5,0		
ZERO/P&I CHANGE FREQUENCY	PARMX	AXZPCH	1		Must be Y or blank. Cannot have an entry in both AXZPCH and AXPCHG.
P&I CHANGE FREQUENCY Section 3	PARMX	AXPCHG	3,0		
ZERO/P&I CHANGE DATE	PARMX	AXZPDT New Field	1		Must be Y or blank. Cannot have an entry in both AXZPDT and AXPDT.
P&I CHANGE DATE	PARMX	AXPDT New Field	8,0		Optional. Must be a valid date between 01/01/1900 and 12/31/2100. In file as CYMD
ZERO/P&I RE-AMORT FRE	PARMX	AXZRAF	1		Must be Y or blank. Cannot have an entry in both AXZRAF and AXRAFQ
P&I RE-AMORT FREQUENC Section 3	PARMX	AXRAFQ	3,0		
ZERO/P&I RE-AMORT DATE	PARMX	AXZRPD New Field	1		Must be Y or blank. Cannot have an entry in both AXZRPD and AXRPDT

Field Description/ Section on Pending Adjustable Loan Changes Detail page	File	Field Name	File Definition	PINFO Table ID	Business Rules/Edits
P&I RE-AMORT DATE Section 3	PARMX	AXRPDT **New Field**	8,0		Optional. Must be a valid date between 01/01/1900 and 12/31/2100. In file as CYMD
ZERO/NEW P&I PAYMENT NEW P&I PAYMENT Section 3	PARMX PARMX	AXZCPI AXCPI	1 15,2		Must be Y or blank. Cannot have an entry in both AXZCPI and AXCPI
ZERO/P&I AMORTIZATION TO DATE P&I AMORTIZATION TO DATE Section 3	PARMX PARMX	AXZITD **New Field** AXPITD **New Field**	1 8,0		Must be Y or blank. Cannot have an entry in both AXZITD and AXPITD Optional. Must be a valid date between 01/01/1900 and 12/31/2100. In file as MDCY
ZERO/INTEREST RATE MA INTEREST RATE MARGIN Section 4	PARMX PARMX	AXZMAR AXMARG	1 15,13		Must be Y or blank. Cannot have an entry in both AXZMAR and AXMARG
BLANK/RATE ROUNDING METHOD RATE ROUNDING METHOD Section 4	PARMX PARMX	AXZOND **New Field** AXROND	1 1	AR	Must be Y or blank. Cannot have an entry in both AXZOND and AXROND Optional. Must exist in PINFO.
ZERO/RATE ROUNDING FACTOR RATE ROUNDING FACTOR Section 4	PARMX PARMX	AXZACT **New Field** AXFACT	1 13,13		Must be Y or blank. Cannot have an entry in both AXZACT and AXFACT

Field Description/ Section on Pending Adjustable Loan Changes Detail page	File	Field Name	File Definition	PINFO Table ID	Business Rules/Edits
BLANK/INDEX ROUNDING METHOD	PARMX	AXZIRM **New Field**	1		Must be Y or blank. Cannot have an entry in both AXZIRM and AXIRM
INDEX ROUNDING METHOD **Section 4**	PARMX	AXIRM **New Field**	1	AR	Optional. Must exist in PINFO.
ZERO/INDEX ROUNDING FACTOR %	PARMX	AXZIRF **New Field**	1		Must be Y or blank. Cannot have an entry in both AXZIRF and AXIRF
INDEX ROUNDING FACTOR % **Section 4**	PARMX	AXIRF **New Field**	13,13		
ZERO/RATE FLOOR & CEILING EXP DATE	PARMX	AXZCDT **New Field**	1		Must be Y or blank. Cannot have an entry in both: AXZCDT and AXFCDT
RATE FLOOR & CEILING EXP DATE **Section 4**	PARMX	AXFCDT **New Field**	8,0		Optional. Must be a valid date between 01/01/1900 and 12/31/2100. In file as MDCY
ZERO/INTEREST RATE FL	PARMX	AXZMIN	1		Must be Y or blank. Cannot have an entry in both AXZMIN and AXMIN
INTEREST RATE FLOOR % **Section 4**	PARMX	AXMIN	15,13		
ZERO/INTEREST RATE CE %	PARMX	AXZMAX	1		Must be Y or blank. Cannot have an entry in both AXZMAX and AXMAX
INTEREST RATE CEILING % **Section 4**	PARMX	AXMAX	15,13		
ZERO/RATE REVIEW INC	PARMX	AXZRIC	1		Must be Y or blank. Cannot have an entry in both AXZRIC and AXRICP
RATE REVIEW INCREASE **Section 4**	PARMX	AXRICP	15,13		
ZERO/RATE REVIEW DEC	PARMX	AXZRDC	1		Must be Y or blank. Cannot have an entry in both AXZRDC and

Field Description/ Section on Pending Adjustable Loan Changes Detail page	File	Field Name	File Definition	PINFO Table ID	Business Rules/Edits
RATE REVIEW DECREASE **Section 4**	PARMX	AXRDCP	15,13		AXRDCP
ZERO/MIN RAT ADJST AL	PARMX	AXZMAD	1		Must be Y or blank. Cannot have an entry in both AXZMAD and AXMADJ
MIN RATE ADJ ALLOWED **Section 4**	PARMX	AXMADJ	15,13		
ZERO/PERIODIC RATE CA	PARMX	AXZCAP	1		Must be Y or blank. Cannot have an entry in both AXZCAP and AXCAP
PERIOD RATE CAP % **Section 4**	PARMX	AXCAP	15,13		
BLANK/METHOD P OPERATOR #1	PARMX	AXZOP1 **New Field**	1		Must be Y or blank. Cannot have an entry in both AXZOP1 and AXOP1
METHOD P OPERATOR #1 **Section 4**	PARMX	AXOP1	1		Must be blank, A, M or D
ZERO/METHOD P MARGIN #1 %	PARMX	AXZSP1 **New Field**	1		Must be Y or blank. Cannot have an entry in both AXSPD1 and AXZSP1
METHOD P MARGIN #1 % **Section 4**	PARMX	AXSPD1	15,13		
BLANK/METHOD P OPERATOR #2	PARMX	AXZOP2	1		Must be Y or blank. Cannot have an entry in both: AXOP2 and AXZOP2
METHOD P OPERATOR #2 **Section 4**	PARMX	AXOP2	1		Must be blank, A, M or D
ZERO/METHOD P MARGIN 2%	PARMX	AXZSP2	1		Must be Y or blank. Cannot have an entry in both AXZSP2 and AXSPD2
METHOD P MARGIN #2 % **Section 4**	PARMX	AXSPD2	15,13		
BLANK/P&I METHOD	PARMX	AXZPIF	1		Must be Y or blank. Cannot have an entry in both AXZPIF and

Field Description/ Section on Pending Adjustable Loan Changes Detail page	File	Field Name	File Definition	PINFO Table ID	Business Rules/Edits
		New Field			AXPIF
P&I PAYMENT METHOD **Section 5**	PARMX	AXPIF **New Field**	1,0		
ZERO/P&I PAYMENT CAP EXP DATE	PARMX	AXZIXD **New Field**	1		Must be Y or blank. Cannot have an entry in both AXZIXD and AXPIXD
P&I PAYMENT CAP EXPIRATION DATE **Section 5**	PARMX	AXPIXD **New Field**	8,0		Optional. Must be a valid date between 01/01/1900 and 12/31/2100. In file as MDCY
ZERO/P&I PMT INC CAP %	PARMX	AXZPIP	1		Must be Y or blank. Cannot have an entry in both AXZPIP and AXPICP
P&I PMT INCREASE CAP % **Section 5**	PARMX	AXPICP	5,3		
ZERO/P&I PMT DEC CAP %	PARMX	AXZPDP	1		Must be Y or blank. Cannot have an entry in both AXZPDP and AXPIDP
P&I PMT DECREASE CAP % **Section 5**	PARMX	AXPIDP	5,3		
ZERO/P&I PMT INC CAP $	PARMX	AXZPID	1		Must be Y or blank. Cannot have an entry in both AXZPID and AXPIID
P&I PMT INCREASE CAP $ **Section 5**	PARMX	AXPIID	11,0		
ZERO/P&I PMT DECR CAP %	PARMX	AXZPDD	1		Must be Y or blank. Cannot have an entry in both AXZPDD and AXPIDD
P&I PMT DECREASE CAP $ **Section 5**	PARMX	AXPIDD	11,0		
BLANK/ROUND P&I PAYMENT	PARMX	AXZDPI **New Field**	1		Must be Y or blank. Cannot have an entry in both AXZDPI and AXRDPI
ROUND P&I	PARMX	AXRDPI	1	AR	Optional. Must exist in PINFO.

Field Description/ Section on Pending Adjustable Loan Changes Detail page	File	Field Name	File Definition	PINFO Table ID	Business Rules/Edits
PAYMENT Section 5		New Field			
BLANK/INTEREST BASIS CODE	PARMX	AXZIBC **New Field**	1		Must be Y or blank. Cannot have an entry in both AXZIBC and AXIBC
INTEREST BASIS CODE Section 5	PARMX	AXIBC	3	PI	Optional. Must exist in PINFO.

This template can be used to update the Index Description, Adjustable Loan Method, Margin #1%, Math Operator #1, Margin #2%, and Math Operator #2 as needed.

	A	B	C	D	E	F	G	H
1	Account #	Effective Date	Adjustable Method	Index Description	Margin 1%	Math Operator #1	Tenor Spread Adjustment Margin 2%	Math Operator #2
2					AXSPD1	AXOP1	AXSPD2	AXOP2
3	MUST EXIST IN PMASTR AND PARM, AND THERE CANNOT BE ANOTHER PENDING ARM CHANGE RECORD FOR THE LOAN WITH THE SAME EFFECTIVE DATE	VALID DATE GREATER THAN OR EQUAL TO THE PRODCESS THROUGH DATE	P	SOFR INDEX USING MUST BE DEFINED PINFO TABLE I2	MARGIN STATED IN THE LIBOR AGREEMENT	A, D OR M	TENOR SPREAD ADJUSTMENT DEFINED FOR TERM SOFR RATE	A

19- Sample Pending Adjustable Loan Changes spreadsheet.

Transitioning an existing loan to SOFR Compounding in Arrears with Lookback Days

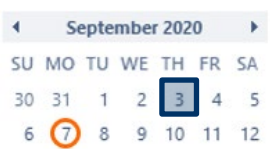The following steps would be taken to ensure that the loan transitions properly.

Example Loan: Currently an adjustable loan with a payment anniversary date of the 10th of the month. The loan is set to transition to SOFR Compounding in Arrears on 9/8/2020 using 2 Lookback Days and a Business Calendar for the Rate Review Date and the Rate Change Date.
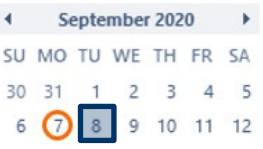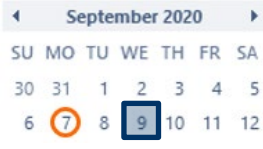

Using 2 Lookback Days with a standard US Business Calendar the loan will have its first SOFR review on the 3rd of September. Monday, September 7th is a Holiday.

The loan will transition to SOFR on 9/8/2020. However, with the lookback days, weekend, and holiday the first SOFR Rate Review will take place on September 3rd. So, from September 3rd through September 7th, the loan will commence with Daily SOFR Compounding in Arrears reviews, while continuing all other processing in Strategy as a LIBOR loan. Interest is calculated differently for LIBOR vs. SOFR Compounding in Arrears.

To successfully transition an adjustable loan processing from a LIBOR loan to a SOFR Compounding in Arrears loan with lookback days use the following steps. For purposes of this example, the steps consider the example of a loan transitioning where the new Index takes effect on 9/8 with a rate review happening on 9/3.

When:	What to do:
9/3 before Day end	Update the ARM record as follows: • Change to Daily Review, Rate Change Frequency 1 • Rate Change Date should be 9/8. With 2 lookback days this will calculate a Review Date of 9/3 (because of a weekend and Monday holiday) • Change Index Code to SOFR Index Code • Update Margin for SOFR Margin NOTE: If the loan is going to require both a Margin and a Spread Adjustment and it is not currently a Method P (Two Ops), make the Adjustable Method P (Two Ops) in order to enter the Margin (Margin 1%) and Spread Adjustment (Margin 2%) <u>DO NOT</u> change the ARM record to have an Adjustable Method that is SOFR Compounding in Arrears (T, or 3)
Day end will run for 9/3	Verify that the ARM history record (Review Date 9/3, Rate Change Date 9/8) has the correct New Index and New Rate for SOFR. If they are not correct, update them in the ARM record and ARM history record
Day end will run for 9/4	Verify that the ARM history record (Review Date 9/4, Rate Change Date 9/8) has the correct New Index and New Rate for SOFR. If they are not correct, update them in the ARM record and ARM history record

When:	What to do:
9/8 before Day end September 2020 SU MO TU WE TH FR SA 30 31 1 2 3 4 5 6 (7) [8] 9 10 11 12	SOFR Compounding in Arrears is going to go into effect Update the Adjustable Method to the correct SOFR Compounding in Arrears Method based on the rate calculation method being used. • Margin and Spread Adjustment (T or 3) • Simple Margin (6 or 7)
Day end will run for 9/8	During Day end the Rate Review will happen and create ARM History record that will have the SOFR Method: Review Date 12/8 Rate Change Date 12/10 The accrual for 12/8 will be calculated using the new interest calculation for compounding in arrears (and the rate, margin, spread (if applicable) from the ARM history record with a Review Date of 12/3 and a Rate Change Date of 12/8.
Day end will run for 9/9 September 2020 SU MO TU WE TH FR SA 30 31 1 2 3 4 5 6 (7) 8 [9] 10 11 12	Review will happen and create ARM History record that will have the SOFR Method: Review Date 12/9 Rate Change Date 12/11 The accrual for 12/9 will be calculated using the new interest calculation for compounding in arrears (and the rate, margin, spread (if applicable) from the ARM history record with a Review Date of 12/4 and a Rate Change Date of 12/9. The loan will continue to review daily with the Review Date being the 2 Business Days ahead of the Rate Change Date.

Glossary

Index - This is a published interest rate, such as the prime rate, LIBOR, T-bill rate, the 11th District COFI, or the new SOFR rates. Lenders use indexes to establish interest rates charged on mortgages. Lenders frequently add margins to an index, or perform other calculations or comparisons with the Index to determine the interest rate on a loan.

Margin – Spread applied to an index to determine the interest rate. The margin can be added to, subtracted from, or multiplied against the index to determine the new interest rate.

Spread Adjustment – Additional amount applied to loans transitioning from rates based on LIBOR to rates based on SOFR.

Adjustable Loan Method – defines the calculations taken to determine a new interest rate on a loan.

Business Calendar – Calendar in *STRATEGY* that denotes holidays. Used by *STRATEGY* to exclude certain functions from processing on weekends or entered holidays. Each data library can have multiple Business Calendars.

Adjustable Rate Module