Plansmith

Coaching Session Guides

Monthly Downloading & Data Verification

Forecasting Growth & Non-Interest Income/Expense

Driver Rates, Offering Rates & Pricing Models

Prepayments, Decay Rates, Custom Reports

Monthly Downloading and Data Verification

Getting Started

Projected Meeting Time: 1 hour

Objectives:

Verifying Your Institution's Data
Understanding Data Correlation to Compass Accounts
Generating Monthly Reports

Materials:

Monthly Data Extract Files
Monthly Update Procedures Excel Workbook
Month End Statement of Condition
Month End Income Statement
Monthly Updating Procedure Checklist

Process:

Archiving Folders
Retrieving Data Extract Files and Saving into the Compass Data Folder
Navigating the Toolbar
Downloading Monthly Data Extract Files into Compass
Correcting Data Errors
Repeating the Download
Verifying your Balance Sheet and Income Statement
Computing
Updating Rates
Review Projections (Clearing Red Flags)
Minimum Equity Ratio
Reports:
    Balance Sheet
    Income Statement
    Capital Adequacy Report
    Variance: Balance Sheet, Income Statement and Board Ratios

Archiving Folders

Create an archive folder prior to the monthly download. The folder should contain a copy of your Plan file(s), RateWorks file, and all of the data extract files for the previous month.
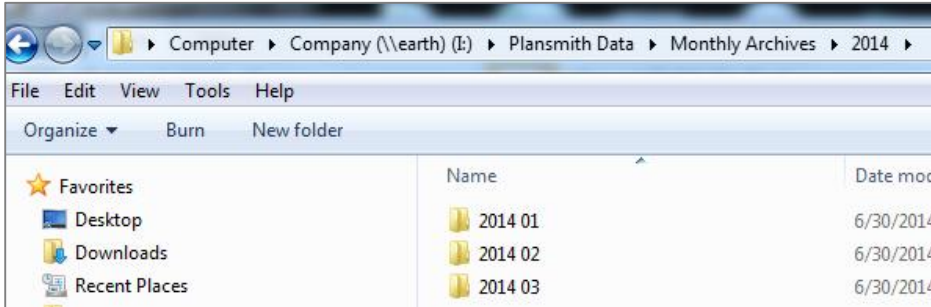
Monthly Update Procedures Workbook

In short, this document is a listing of the vendor data-extract files and the specific file names and formats they must be saved as in order to perform your monthly update. It is also a blue print of the fields from your data files which were used to create the GL, Investment, Loan and Deposit codes. When your data was reviewed during the initial set-up, Plansmith's DataBridge programmers identified key descriptors within the data files. These descriptors were used to determine the level of detail required within your Chart of Accounts and to direct how the data is correlated to the appropriate Compass accounts.

Reference this document when correlating new accounts.

Data Files

Place your current month's data files in the live data folder prior to downloading for the month. By doing so, Compass can access the download files.

Terminology

Data extract files are the files created by your data processer. They contain your institution's financial information which will be downloaded into Financial Compass.

There are two files needed to open Financial Compass - your Plan file and RateWorks file. The Plan file is the working file to which you make adjustments; the RateWorks file contains current rate information. Both files have a .mdb extension.

Monthly Update Procedures
Note: If your Data Processor makes any changes to the set-up or formatting of your data files, you should contact Plansmith immediately. When changes occur, it is essential that we update your file specifications so that Compass may continue to process your data.

Chart of Accounts is a listing of the accounts within your Compass plan.

Why archive monthly?

You may have a future need to reference a report for a specific time period or to access past plan data to complete a back-test. By archiving monthly, you will have the ability to access those plans at will.

Data Validation

You may view your data files by opening up the files through word pad or note pad.

You may also analyze your data by parsing the file through Excel's Data Import Wizard.

The File Specification Table contains the column numbers of the fields within your extract files which are downloaded into Compass (including the descriptors as noted on the DataBridge Specification Sheet).

Tool Bar

You can navigate throughout Financial Compass by clicking on any of the menu bar items or by clicking on the icons directly below the bar.

Performing the Download

Select the DataBridge icon to perform the download. Verify that the appropriate month is selected prior to performing the download.

Why archive on the network?

Computers can crash. By archiving on the network, you can always access your plan and will be guaranteed the ability to retrieve past work.

Tool Bar

The menu and tool bar are organized in order of download operation. First, download your data. Then, update rates, adjust projections, and compute the plan/ compute rate shock. Finally, review your monthly reports.

Downloading Data

There may be instances when you will need to adjust balances due to post-closing adjustments to your GL. Depending on the number of changes you need to make, you may either complete another download using the adjusted data files, or manually enter the revised balances in the Update Financial screen.

DataBridgeDownloadErrors.log

The log contains any codes which have not been previously included your extract files (new GLs, investments, loans or deposits may have been added to your core systems during the month). Each code is listed with the corresponding table in which the code should be entered and correlated.

Please reference your **Monthly Update Procedures** document to determine the layout of your investment, loan and deposit maturity codes.

Tables

There are eight tables: *balance, income/expense, investment maturity, investment repricing, loan maturity, loan repricing, deposit maturity, and deposit repricing.*
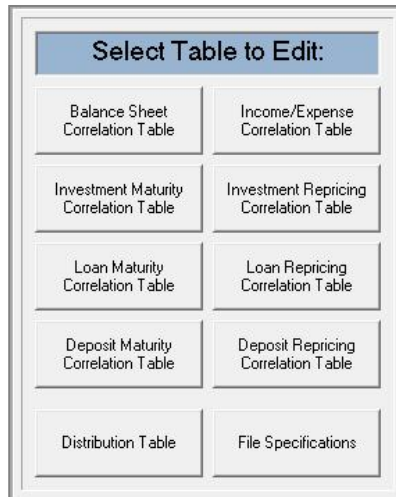
The *distribution table* distributes general ledger account balances over multiple Financial Compass Accounts based upon the downloaded maturity balances.
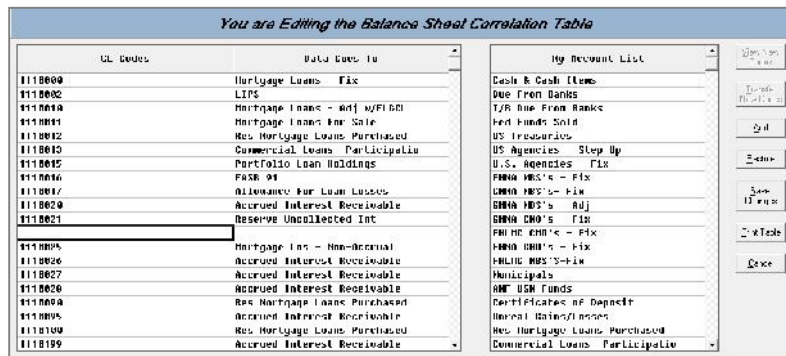
Correcting the Error Log

If there are codes belonging to a new account on your core system which is not yet included in your Compass Chart of Accounts, the account will not appear on the 'My Account List' of the Correlation Table.

To add a new account to your Chart of Accounts, select the folder where the account should reside, right click, and then select 'add an account' option from the dropdown list. The Account Wizard will walk you through the steps required to create the new account.

The account name will then appear in the My Account List column in the Correlation Tables.

Why are codes repeated on the error log?

Since both EOM and Average balances for each Balance Sheet GL are included in the download file, error codes from this table are repeated. Investment, Loan and Deposit codes may also appear multiple times if more than one new customer account with descriptors was booked during the month. Although the codes are repeated, the GL code should only be entered once in the correlation tables.
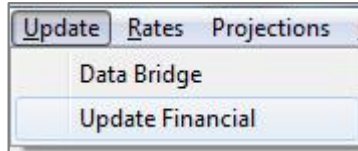
Repeating the Download

Perform the download again after entering and correlating any codes listed in the dberror.log.

Verifying Data

Update Financial has three columns: Enter year-to-date Current Earnings in the Average Balance and End of Month columns if Current Earnings is not being downloaded.

Steps to take during the Update Financial process:

- Verify the month in the upper left-hand corner.
- Verify Total Assets, Total Liabilities and Capital, and Net Income at the bottom of the screen.

Update Financial

Perform manual account entries or edits on this screen. You can access prior months for the year by changing the *Update For* date range. To access prior years, go to the dropdown arrow next to the DataBridge button and select Update History.

Unless your Current Earnings and Off Balance Sheet accounts are tied to GL accounts, enter Current Earnings under the Supplemental Data section. Off Sheet Balance and Memo Items can also be entered here.

After making any adjustments, Save Data and Compute the Plan. Without Computing, your adjustments will not be reflected.

```
BALANCING RECAP
                        EOM    Average  Income/
                     Balance   Balance  Expense
Total Assets        2,052,019  2,041,404  6,339,698 Interest Income
Total Liabilities   1,878,808  1,866,365    323,756 Interest Expense
Total Capital         173,211    175,039     86,402 Loan Fees
Total Liabilities   2,052,019  2,041,404    300,000 Loan Loss Provision
and Capital                              3,043,815 Non-Interest Income
Difference                  0          0  5,982,389 Non-Interest Expense
                                         2,863,770 Net Pre-Tax Income
                                         1,065,983 Taxes
                                         1,797,787 Net Income
```

Ideally the differences in Average and EOM balances should be 0, but due to rounding of balances a difference of 1 or 2 may occur. To bring the Balance Sheet in Compass into balance, you may choose to account for rounding differences in Other Assets or Other Liabilities as needed.

Computing the Data
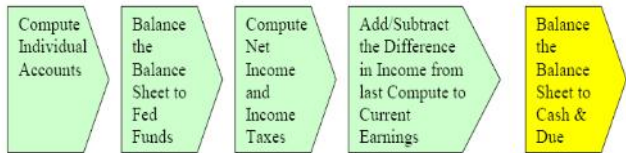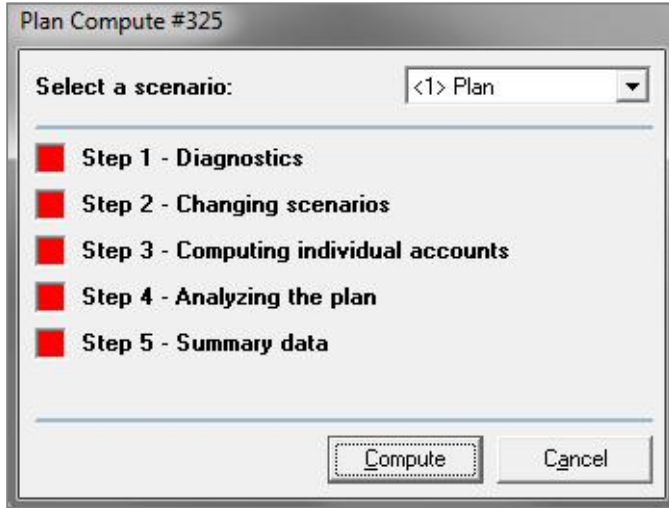
Compass balances your projections during the compute.

Fed Funds is a balancing account within Compass. Compass will override manual entries made to Fed Funds.

After the plan is balanced to Fed Funds, Net Income is calculated. The change to Net Income is posted as a new balance to Current Earnings and a final balancing is posted to Cash.

Review your cash periodically. If cash's growth is too high, you can re-forecast the cash account and re-compute the plan. This change will affect your Fed Funds Purchased or Sold account.

Updating Rates

Rates

There are two ways to enter rates: manually or via a download file.

Select Auto Update from the Rate Forecast screen. The confirmation pop-up will appear, follow the prompts.

Select the Rate Forecast screen and key in specific rates in the monthly cells under each driver to adjust rates manually. You can also use quick edit techniques to adjust rates. In a multi-unit plan, the Rate Forecast may only be edited in the Total Institution plan.
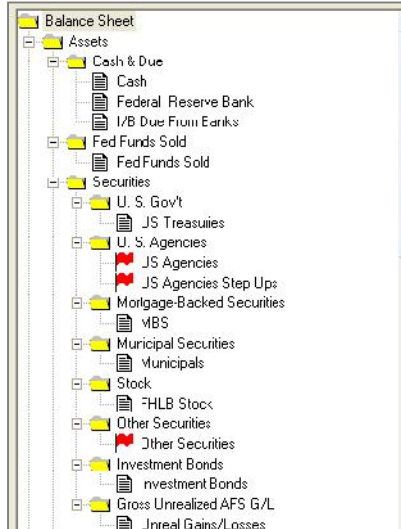

Note: You may only download the current month's rates after completing your download. For example, to download November rates, the October download must be complete.

Review Projections

Account Projections

Red flags indicate that there is a logic issue within the account. Correct red flags prior to printing any report.

To identify the cause of the red flag, select the "Diagnostics" button at the bottom of the projection screen.


Possible causes for red flags:

- Scheduled Maturities do not match the last EOM month balances.

- There are no rates associated with balances.

- Repricing balances are not fully being captured in the scheduled repricing column under the repricing tab.

- Repricing rates – there are no repricing rates associated with repricing balances.

- Negative new balances – in the New Balances column, there are negative new balances.

Clearing the Cash Account

The Cash Account is a balancing account and requires multiple computes in order to retain the desired levels.

You can also select UTILITIES, OPTIONS, CHART OF ACCOUNTS from top menu bar and check the box for Reinvest Net Income to turn that option off.
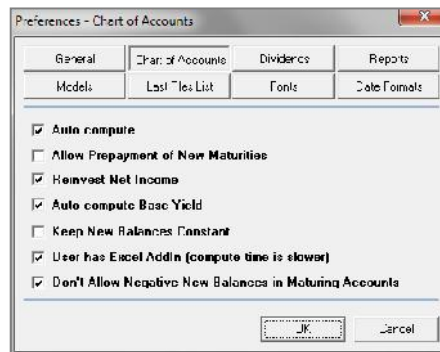
Plansmith provides two download file options: Rate Update or Rate Forecast.

Rate Update is a forecast of rates based on the end of month average from the Federal Reserve. This file uses a flat line of the average rate to forecast the next five years' rates. If you choose this download file, it is suggested that you manually adjust forecasted rates as needed.

Rate Forecast is a dynamic rate forecast using the average rate forecast of the top fifty analysts in the country.
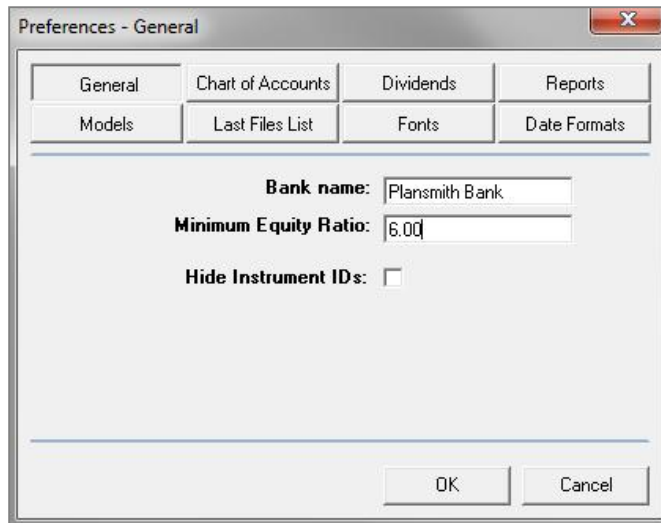
The downloadable rate files are available on the first Monday of every month after 3 PM CST. The files are located in the Client Area at HUwww.plansmith.comUH. To access the client area, please enter your User ID and Password.

The type of rate forecast to which you are subscribed, (Rate Update (RU) or Rate Forecast (RF)), will be available under the heading of Updates. Select the file for your first forecasted month.

Minimum Equity Ratio

From the Top Menu bar, select Utilities, Options, and on the General Tab you can enter the appropriate percentage based upon your institution's policy limits.

By right clicking on any report, you can change the properties that appear on the report.

The properties that are modifiable include detail level, data range, data type, budget report, and reporting period.

There are also many graphing options. You can create a bar graph within a report by double clicking an account, a pie chart by clicking on the top of any row containing two or more accounts within an individual category, or create a comparison graph of two accounts by right clicking on the account names within the body of the report and marking the rows for charting, then right clicking and selecting Build the chart.

Reports

Balance Sheet – provides actual and forecasted assets, liabilities and capital.

Income Statement – provides actual and forecasted income and expenses.

Capital Adequacy– measures your institution's Capital and expresses it as a percentage of the institution's risk weighted credit exposures.

Variance Balance Sheet, Income Statement and Board Ratios – provides a comparison of actual to budget figures or actual to actual.

Driver Rates – shows the forecasted interest rates that drive the institution's pricing.

Forecasting Growth and Non-Interest Income/Expense

Getting Started

Projected Meeting Time: 1 Hour

Objectives

Forecasting Growth

Creating a Rolling Forecast

Distinguishing between Budget and Projections

Location:

GoToMeeting™

Process:

Chart of Accounts

    Adding, Deleting, Moving Accounts

    Properties on Accounts

Forecasting Growth

Balance Sheet

    Manual Entries

    Quick Edits

    Quick Model

    New Model

    Trending

Allowance for Loan Loss

Income and Expense Accounts

    Manual

    Fee Model

    Annual Growth Rate

    New Month from Previous Month

Reports

    Chart of Accounts

    Balance Sheet Growth Assumptions

    Income/Expense Assumptions

    Plan Notes

Chart of Accounts

Account Projections

This is a typical balance sheet format:
Assets, Liabilities, and Capital (including associated Interest Income/Expense) followed by Non-Interest Income and Expense and then Off-Balance Sheet and Memo Items.
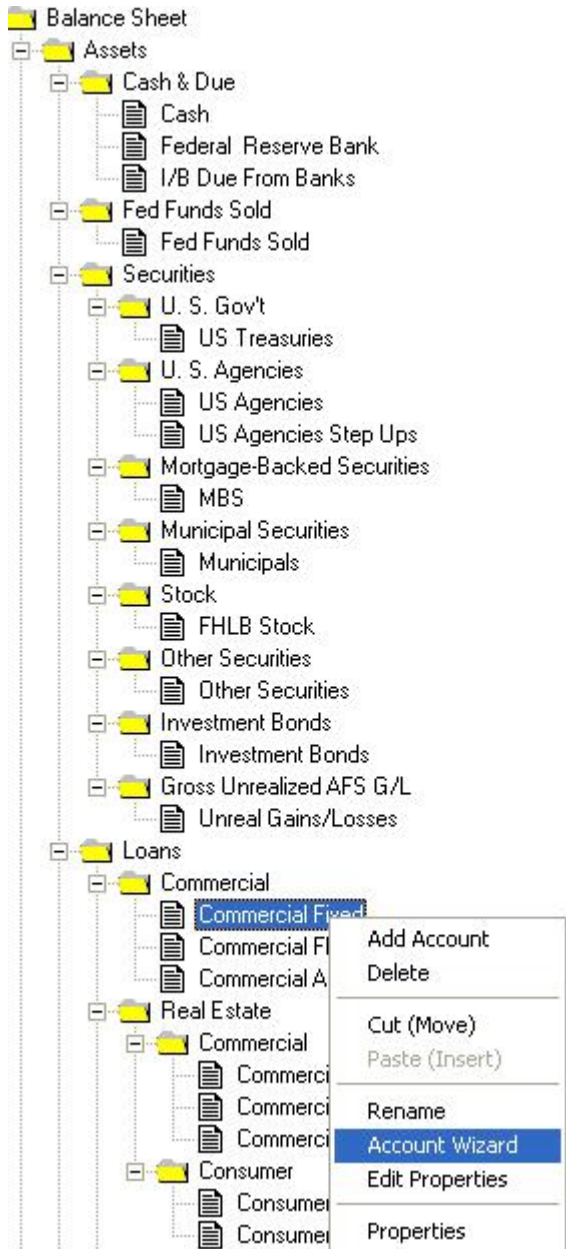

Chart of Accounts

Your Chart of Accounts was created during your initial set-up. You can **add** an account by right clicking on a folder or account.

You can **delete** an account but it is not recommended. If you do, any history or budget associated with the account will be deleted.

You cannot delete a yellow folder.

An account can be moved between folders by selecting **cut** then **paste.**

The **Account Wizard** allows you to apply account properties. A Chart of Accounts Report details the current property settings on all of the accounts.

Components of the Account Projection

Projections	Budget	Maturity	Repricing	Variance	Callable	Fed Funds	Notes

Projections Tab: Contains projected data for each account or category folder. Here the user can forecast balances and rates using the modeling functions found in the Target Balance and Offering Rate columns respectively.

Budget Tab: Contains the locked, budgeted information for balances, interest and yields.

Maturity Tab: Contains scheduled monthly maturity data from your download file, calculated new maturities based on new balances and prepayments, when modeled.

Repricing Tab: Displays downloaded repricing information, including balances and exit rates. This tab only appears if the rate structure is set as Adjustable in the Account Wizard with contractual repricing dates (e.g., ARM loans).

Variance Tab: Compares the actual and projected balances, as well as interest, per account or category against the data stored in your locked budget.

Callable Tab: Tracks callable securities and puttable borrowings by CUSIP.

Fed Funds Tab: Tracks the effect of a change to an account on the overall Fed Funds purchased or sold position.

Notes Tab: Make notes here to explain account projections for later reference.

Account Projections

The heart of Compass resides within the Account Projections, which is to the right of your Chart of Accounts.

On the right side of the screen, several tabs work in concert to reveal key information related to an account. For example, if you change your growth projections within an account, you can instantaneously see the effect on your Fed Funds position by selecting the Fed Funds tab.

Components of the Projections Tab

EOM Balance: Actual and forecasted balances based on either manual edits or models.

New Balances: Calculated balances that need to roll on so the EOM Balance can be attained. The New Balance column adjusts as the EOM Balance is re-forecasted.

Offering Rate: Pricing behavior of your accounts.

Total Maturities: Balances expected to roll off based on your download, modeled prepayments, and new maturities.

Total Maturities Xrate: Rates at which balances roll off. This exit rate is calculated from data contained in your loan maturity download file and is equal to the EOM "blue box" Yield located in the row of the last actual month on the Projections screen. You may edit the EOM "blue box" Yield as needed.

Interest: Actual interest is obtained from your monthly download files. Projected interest is calculated by Compass using the monthly offering rate using the accrual method specified for each account in the Account Wizard.

Yield: Annualized income or expense, divided by average balance.

Average Balance: Last month's balance plus the current month's balance, divided by 2.

Forecasting EOM Balances

There are two ways to forecast EOM Balances: manually or by applying growth models.

Manual entries allow you to enter specific balances each month, but models allow you to apply growth rates and create dynamic simulation when the projections are re-forecasted after the monthly downloads are performed.

EOM Balances

There are two sections within the Projections screen: Actuals, which are in the gray rows and Projections, which are in the white rows.

EOM Balances are equal to the previous EOM Balance – Maturities + New Balance.

Maturities

Your monthly download captures the details of your monthly scheduled maturities. Total maturities can include new maturities based upon new balances and any prepayment assumptions entered.

New Balance

The new balance column reflects the new monies that are added each month.

Rolling Forecasts and Budget Numbers

Rolling forecasts are different from the budget you entered for the year. Rolling forecasts are projections that are continually updated after the monthly downloaded is performed. This results in a more realistic view of where you are headed in the upcoming months.

Manual Entries

To enter specific numbers, set the button at the top of the EOM Balance column to Manual. This allows you to manually enter balances.

Projections	Budget
	EOM Balance
2016	Manual
Dec	7,840
2017 Jan	7,661
Feb	7,502
Mar	7,348
Apr	7,198
May	7,052
Jun	6,909
Jul	6,769
Aug	6,632
Sep	6,497
Oct	6,365
Nov	6,237
Dec	6,111
2018 Jan	5,988

You can also apply quick edits by highlighting a section and after right-clicking on your mouse, selecting the desired quick edit option.

Projections	Budget	Maturity	Variance	Callable	Fed F
	EOM Balance	New Balance	Offering Rate	Total Maturities	Total Maturities Xrate	Inte
2016	Manual	[User Edit]	Quick			
Dec	7,840					
2017 Jan	7,661					
Feb	7,502					
Mar	7,348					
Apr	7,198					
May	7,052					
Jun	6,909					
Jul	6,769					
Aug	6,632					
Sep	6,497					
Oct	6,365					
Nov	6,237					
Dec	6,111					
2018 Jan	5,988					

Quick Edit

Select a Quick Edit Option:
- ○ Constant
- ○ Annual growth rate
- ● Ramp to a value
- ○ Ramp from/to a value
- ○ Offset
- ○ Aggregating Offset
- ○ Distribute (replace existing)
- ○ Distribute (as offset)

Ramp to: 9500

[Ok] [Cancel]

Rolling Forecasts and Budget Numbers, cont.

Rolling forecasts do not change your budget numbers. Budget numbers are stored values contained in the Budget Tab. Budget numbers are only changed when and if, you lock or re-lock a budget. The Variance Tab reflects the difference between the locked budget and the actual/projected balances.

Manual entries versus Models

Manual entries are great to use when you have specific values to enter like budget figures.

If you anticipate growth based upon a percentage rate, use a model to forecast the growth.

Tip

After entering and locking a budget with manual entries, we recommend reapplying models to EOM Balances so that Compass will create a rolling forecast throughout the year.

Quick Model

Select the Manual button at the top of the EOM Balance column and choose Quick Model, enter an annual growth rate and select OK to apply the model.

For example, in the illustration below, an annual growth rate of 6% or .5% per month is applied to December's ending balance of $7,840. After January's download, the projections are re-forecasted and the 6% annual growth rate is now based off January's ending balance of $7,890 thereby creating a rolling forecast.

Quick Model

Applying a 6% annual growth rate after the February download means that the EOM Balance forecast will increase at the rate of .5% for the next fifty-nine months based on February's EOM balance.

After each month's download, Compass recalculates the EOM Balance forecast for the periods remaining in the projections screen up to 60 months.

Quick Model versus New Model

Quick Model applies a positive or negative growth rate for the next five years.

New Model allows you to enter a detailed growth rate over the next five years.

New Model

Select the Manual button at the top of the EOM Balance column and then choose New Model to enter a detailed monthly growth rate. Select *Save As* to store the model. A saved model can be applied to other accounts.
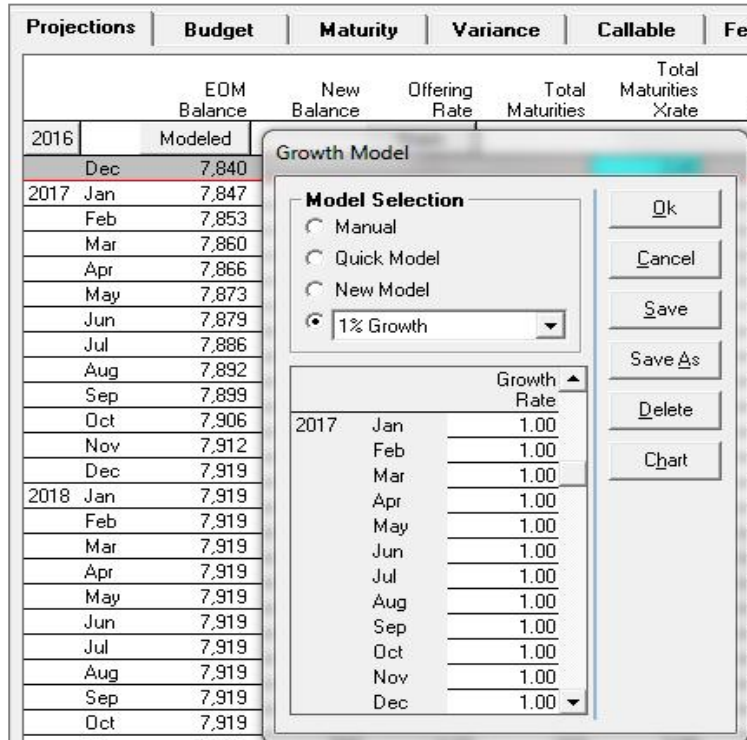
Trending

To Determine a Trend, highlight a range, typically a period of history, click the right mouse button and select Calc. Total, Avg. & Trend. Hit OK and the trend is stored so it can be applied to another range of data. To Apply the Trend, make sure your EOM Balance column is set to Manual, then select a new range in the projections, right-click the mouse button and select Apply Trend from the option list.

Quick Model versus New Model

Quick Model applies a positive or negative growth rate for the next five years.

New Model allows you to enter a detailed growth rates per month over the next five years.

Tips

Apply a growth model at a folder level then review and modify at the sub-account level.

A saved New Model can be applied to other accounts saving time and effort

Trending

The trending function is particularly useful when forecasting growth. The "trend" is the average dollar change per month.

Another technique for applying the trend is to select the Aggregating Offset Option and use the trend value as the amount. Either method produces the same result.

Allowance for Loan Loss

The Loan Loss Reserve (LLR) and Loan Loss Provision (LLP) accounts in Compass can be linked together via the Modeling function so that changes in one account will be automatically updated in the other account. This Modeling functionality allows users to build models that incorporate loan growth changes, include expected net charge-off projections and/or project required Provisions based on Allowance as a % of Loans targets. Those calculated results will be incorporated in both the LLR and the LLP accounts and automatically updated as forecasted loan balances change over time.
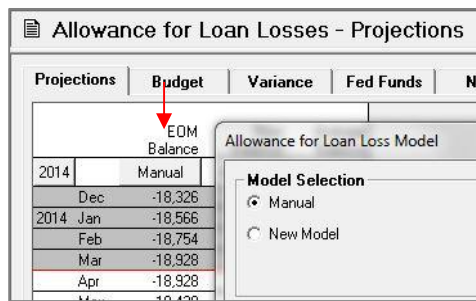
To enter the Model screen, click on the "Manual" or "Modeled" button at the top of the EOM Balance Column (from the LLR account) or the Expense column (from the LLP account). The model can be accessed from either account. When set to the "Modeled" mode, changes made from the LLR account will be reflected on the LLP account, and vice versa. This modeling feature is available for the first account within the Loan Loss Reserve and Loan Loss Provision folders. If set back to the "Manual" mode, these accounts will not be linked and numbers currently in the model will be kept static.

Tips

As you update Loan balances in future months, the ALLL model will recalculate the LLR and LLP and update those accounts accordingly.

Manual Edits

This may be a good tool to use if you would like to analyze these accounts periodically (e.g. quarterly) and apply your results, but do not wish to have monthly fluctuations flow through your projections.

Forecasting Non-Interest Income and Expense

The income statement view is different from the balance sheet view in that the screen is read from left to right. However, all quick editing options available for the balance sheet accounts are available to apply to the Non-Interest Income and Expense accounts when a column is set to Manual.

There are four ways to model Non-Interest Income and Expense accounts:

Manual:

Setting the Projections to Manual allows you to enter balances per month. This is a useful option for accounts with fluctuating balances. Remember, by highlighting and right clicking you can apply quick edit techniques.

Projections	Budget	Variance	Notes				
	2012 Expense	2013 Expense	2014 Expense	2015 Expense	2016 Expense	2017 Expense	2018 Expense
2017						Manual	[Manual]
Dec						284,159	292,300
Jan	262,118	265,386	280,869	303,723	281,887	292,300	301,050
Feb	246,760	243,088	256,187	274,558	270,481	292,300	301,050
Mar	266,523	274,204	276,404	291,579	285,559	292,300	301,050
Apr	261,002	259,367	277,332	280,388	279,747	292,300	301,050
May	270,400	271,024	286,166	288,866	291,549	292,300	301,050
Jun	246,050	257,637	272,267	289,672	276,173	292,300	301,050
Jul	253,281	268,807	280,478	291,470	304,279	292,300	301,050
Aug	257,766	269,401	286,321	313,025	300,634	292,300	301,050
Sep	248,846	258,972	252,518	275,082	279,848	292,300	301,050
Oct	277,264	273,762	293,402	280,266	283,495	292,300	301,050
Nov	260,456	272,221	268,930	270,234	283,879	292,300	301,050
Dec	253,320	276,808	292,161	288,724	284,159	292,300	301,050
Total	3,103,786	3,190,677	3,323,035	3,447,587	3,421,690	3,507,600	3,612,600

Projections	Budget	Variance	Notes				
	2012 Expense	2013 Expense	2014 Expense	2015 Expense	2016 Expense	2017 Expense	2018 Expense
2017		Quick Edit				Manual	[Manual]
Dec						284,159	292,300
Jan	262,118					292,300	301,050
Feb	246,760		**Select a Quick Edit Option:**		Ok	292,300	301,050
Mar	266,523		⦿ Constant			292,300	301,050
Apr	261,002		○ Annual growth rate		Cancel	292,300	301,050
May	270,400		○ Ramp to a value			292,300	301,050
Jun	246,050		○ Ramp from/to a value			292,300	301,050
Jul	253,201		○ Offset			292,300	301,050
Aug	257,766		○ Aggregating Offset			292,300	301,050
Sep	248,846		○ Distribute (replace existing)			292,300	301,050
Oct	277,264		○ Distribute (as offset)			292,300	301,050
Nov	260,456					292,300	301,050
Dec	253,320		**Constant:**	292300		292,300	301,050
Total	3,103,786					3,507,600	3,612,600

Last Calculation Results:

Total: 0
Average: 0.00
Trend: 0.00

Fee Model:

Setting the column to Fee Model allows you to apply a percentage of EOM balances, Average balances, or New balances from a balance sheet account when forecasting income or expense.

Annual Growth Rate:

Setting the column to Annual Growth Rate will allow you to apply an annual percentage of growth to the previous year's total income/expense. If there is not a full year of historical data, then the model will first project a total for the current year based upon the last actual month's number with zero growth.

New Month from Previous Month:

This final selection allows you to apply an annual growth rate to the balance in the same month during the previous year.

Taxes

Access Tax Information under Projections on the top menu bar and enter a nominal rate or an amount for the entire year.

Reports

Chart of Accounts – reflects the properties of each account.

Balance Sheet Growth Assumption – reflects the models applied to Target Balances.

Income Expense Assumption – reflects the models applied to Non-Interest Income and Expense accounts.

Plan Notes – allows all network users with access to the database to view the Assumption notes entered by their peers

Taxes

Verify tax settings for each account by printing out a Chart of Accounts report found in the reporting section. Accounts can be set to Fed Exempt, State and Fed Exempt, or 20% TEFRA. To change a setting, go to the Account Projection Screen, highlight and right click on the account. Select the Account Wizard. The Account Wizard will walk you through a series of prompts that include applying tax settings for the account.

It is recommended that you select "Yes" to distributing state and federal taxes according to net pre-tax income.

For S-Corp institutions, if you want to view reports with simulated FTE adjustments enter the following: set state to *Rate* and then enter the applicable tax rate. Next, set the federal taxes to *Amount* and enter 0 for amount.

To see what updates have recently been made to the plan by other users, simply go to the Reporting tab in **Compass**, scroll down through your folders list, and locate the **'Plan Notes'** folder under 'Assumption Reports'.

Driver Rates, Offering Rates and Pricing Models

Getting Started

Projected Meeting Time: 1 Hour

Objectives:

Creating and Updating Driver Rates

Creating and Applying Offering Rates

Materials:

Internal Rate Sheets / Pricing Documents

Process:

Rate Forecast

Rate Forecast Driver Rates

New Driver Rates

Fill in Gaps

Rate Forecast/Update

Manual Edits

Pricing/Offering Rates

Driver Rate Pricing Models

Offering Rate Pricing Models

Quick Modeling

New Model

Repricing Rates

Reports

Driver Rates

Driver Assumptions

Offering Rates

Pricing Assumptions

Yields and Costs

Driver Rates

The Rate Forecast screen contains the driver rates. Pricing models are tied to these rates.

Offering Rates

Driver Rates

Driver rates are located in the Rate Forecast screen. Download or manually adjust rates to update.

Manually edit rates by placing your cursor in any cell.

New Driver Rates can be added by selecting New Driver. You may then choose to tie the New Driver to an existing Driver Rate by selecting Driver Model or you may manually enter rates for the New Driver (or cut and paste from an Excel spreadsheet into Compass).

Offering Rates

Offering Rates apply to new balances. You can detail your pricing behavior using the Pricing Model options. Models are tied to the movements of driver rates.

Pricing Models

Manual

Quick Model

Manual

It is not recommended that you apply offering rates through manual entries.

Manual will also allow for Quick Edit entries.

Quick Model

A quick model is a simple model that builds a direct relationship between offering and driver rates plus or minus a spread or multiplied by a factor.

As Driver Rates change, so will your Offering Rates depending on the spread or factor you've entered in the model.

New Model

New Model

The New Model option allows you to create a detailed model that reflects your pricing behavior under varying market conditions and enables you to set ceilings and floors.

The Calc dropdown determines the relationship of the New Model to the driver – either plus or minus a spread or multiplied by a factor.

The Edit dropdown allows you to choose to enter the Driver and Spread/Factor (as pictured to the left) or the Driver and the Modeled Rate depending upon how your internal rate sheets display the information.

The Chart feature provides a graphical representation of your model.

Notice that the chart reflects the Model created. As the driver rate decreases, the spread between the driver and offering rate increases. The slope of the line in the chart reflects this pricing model.

For more information on building pricing models please refer to the **Pricing Models; How to Establish Pricing Models** section in the Online User Manual.

Repricing Rates

The Repricing Tab will be included for any accounts set to an Adjustable rate structure with contractual repricing dates (e.g., ARM loans). Scheduled repricing balances and exit rates will be downloaded from your loan maturity file.   The Repricing Rate allows you to apply the new rate at which the balances will be rebooked once they become eligible for repricing.   The Repricing Model includes all of the same modeling options available under the Offering Rates.

## Impact of Applying Models on Rate Shock Income:

Pricing Models must be applied for the Rate Shock to perform properly. The Rate Shock Income report reflects the impact on income/expense if rates increase or decrease, at either a summary level or an account level.

In the following picture, we see a rate shock at an account level. Looking specifically at the Savings account, as rates increase and decrease, expense fluctuates. The offering rate of .50 % was applied to the Savings account as a manual entry. Shocking that rate up 400bps shows us that the expense would hit $163,518 if the offering rate rises to 4.50%. However, is that realistic? Will rates on Savings accounts reach 4.50% in the next 12 months?

Parallel Rate Shock Income

Plansmith Bank
1 Year Parallel Rate Shock   Income
As of the end of August, 2016
Immediate Shock

	-400	-300	-200	-100	0	100	200	300	400
Interest Expense									
Interest Bearing Deposits									
Savings/Money Markets									
Savings/Money Market Accounts	0	0	0	0	18,163	54,506	90,843	127,181	163,518
Time Deposits									
CD's > $250K									
CD's > $250K	10,001	10,001	10,001	10,001	10,262	11,074	12,069	13,471	14,522
QuickRate CD'S 6 MO	238	238	238	238	238	780	523	1,835	3,405
QuickRate CD's - 12 Mo	2,313	2,316	2,316	2,316	3,613	6,510	9,465	12,335	15,313
QuickRate CD's - 18 Mo	3,771	3,771	3,771	3,771	3,803	11,781	16,737	21,734	25,743

Applying a flat rate model will hold the rate at .50% on the Savings accounts. So when you run a rate shock, the expense will hold when rates are shocked up and down.
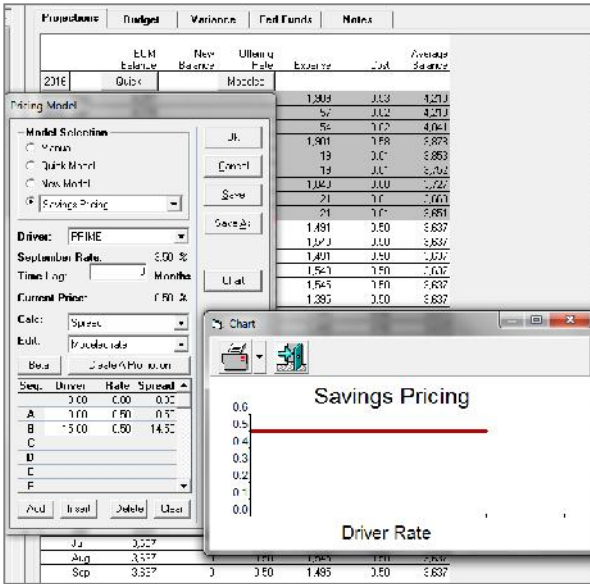
The following represents a Rate Shock income report with a model attached to the Savings Accounts. Income holds whether rates are increased and decreased.
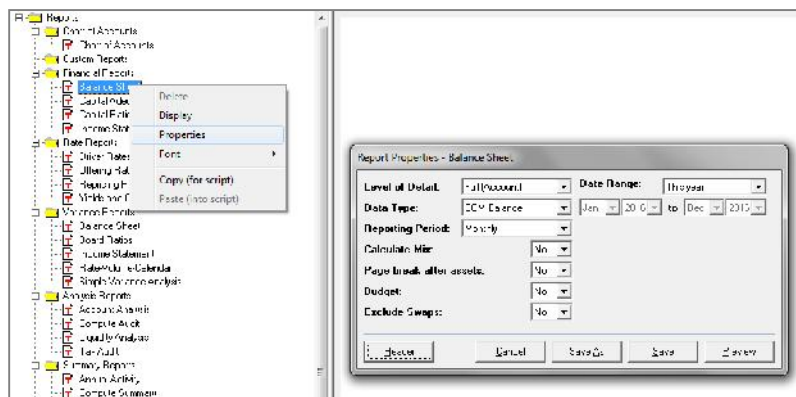

Reporting

The Report Properties allow you to customize the appearance of any report.   Simply right click on the report template to access the Properties option.

Reports

Driver Rates report – reflects historical and forecasted rates as per the rate forecast screen.

Driver Assumptions report – reflects any New Driver Rate models.

Offering Rates report – reflects the forecasted offering rates per account.

Pricing Assumption report – reflects offering rate models, drivers and spreads.

Yields and Costs report – reflects actual and forecasted yields and costs per account.

Repricing Assumption report – reflects repricing rate models, drivers and spreads.

Prepayments, Decay Rates, Dividends, and Creating Custom Reports

End Product

Projected Meeting Time: 1 Hour

Objectives:

Creating and Applying Prepayment Speed Models

Applying Decay Rates

Entering Dividends

Creating Custom Reports

Materials:

Historical Prepayment Rates

Historical Decay Rates

Process:

Prepayment Modeling

Alternate Discount Rate

Decay Rates

Dividends

Report Designer

Ratio Designer

Exporting to Excel

Reports:

      Alternate Discount & Decay Rates

      Callable Assumptions

      Prepayment Assumptions

Prepayment Models

Customer behavior is not always according to contract terms. Customers prepay loans and redeem certificates of deposit prior to their maturities. Bond issuers may be able to "call" their bonds prior to maturity. Unfortunately, these customer actions usually happen precisely when it is to the financial institution's disadvantage, especially during times of rapidly changing interest rates.

Prepayments become more important as the length of time between rate changes increases, and as the volatility (magnitude of movements) of rates increases. If your portfolio is all short term or floating rate, you can afford to ignore prepayments. But if you have fixed rate loans or deposits that extend for more than 3 years, you need to consider prepayment behavior.

Compass allows both simple and complex prepayment modeling at the account or category level. Not all accounts require such models as some financial institutions do not need to use this feature at all. On the other hand, failure to consider customer prepayments can lead to embarrassing over-estimates of profitability and growth, even in times of minimal interest rate movements.

Compass supports three types of prepayment models: Quick Model, New Model, and Automated Quick Model.

To set up a Prepayment Model: click the **Account Projections** button, click on the account or category, click the **Maturity** tab, and click the **No Model** button at the top of the Scheduled PrePmts column.

Maturities

The Account Wizard allows you to set an account to maturing. The wizard will prompt you to enter an average term in months for new transactions per account.

Notice that a portion of the balances in the New Balances column can be seen maturing in the New Maturities column within the Maturities Tab.

Balances in the Scheduled Maturities column are downloaded from your data files.

Prepayments

Prepayments are accelerated payments.

Modeling allows you to enter prepayment rates which effect total maturities and duration.

Institutions have several options to determine what prepayment assumptions to model in Compass. They may rely on their own in-house analysis of their historical experience, or they may contract with a 3rd party vendor to complete this analysis.
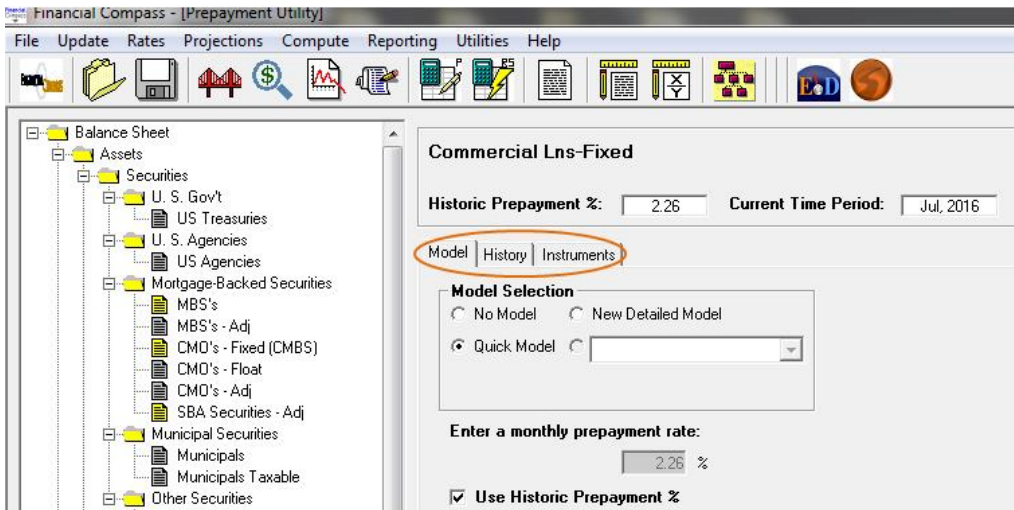
Alternatively, Compass captures an Institution's specific prepayment experience that an institution may use to generate their own unique model.

PREPAYMENTS, DECAY RATES, DIVIDENDS, AND CREATING CUSTOM REPORTS

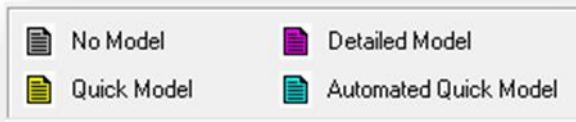## Prepayment Utility Screen

The Prepayment Utility is broken down into three sections: **Model, History and Instruments.**
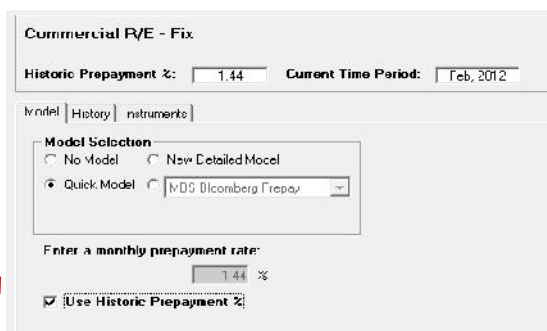

Model Tab

Compass supports three types of prepayment models, plus a "No Model" option:

- **Quick Models**
  Enter the **monthly percentage** of prepayments.

- **New Detailed Models**
  Refer to the **New Prepayment Model** section below.

- **NEW: Automated Quick Model**

PREPAYMENTS, DECAY RATES, DIVIDENDS, AND CREATING CUSTOM REPORTS

Quick Prepayment Model

A Quick Prepayment Model specifies a monthly percentage of prepayment. This percentage will be calculated regardless of the current market rates and the contractual rates on the existing portfolio. Perhaps the most common use for the Quick Prepayment Model is for consumer loans, especially auto loans. Historic analysis shows that these loans generally prepay faster than contractual payments. These prepayments are not driven by customers' desire for refinancing at a better rate.

New Detailed Model

A New Detailed Prepayment Model is dynamic; it allows you to specify different rates of prepayment at various levels of spread. Spread is the difference between the contract rate to the customer and the current rate that you are offering on that product to new customers.

Since the spread between current offering rates and maturity rates influences prepayments, Compass applies the following calculations:
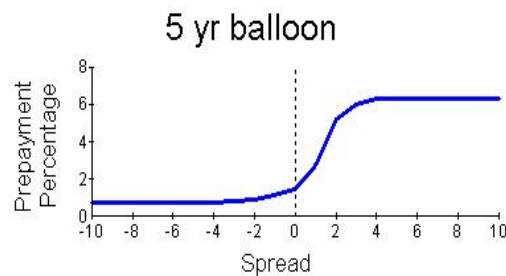
Assets: Maturity Exit Rate less Offering Rate = Spread

Liabilities: Offering Rate less Maturity Exit Rate = Spread

Therefore, a positive spread on an asset or liability reflects a favorable condition for the customer and Compass calculates a prepayment. A negative spread is less favorable to the customer and Compass calculates little or no prepayment.

It is important to think of a broad range of spreads so that your model will be set to react to any possible change in projected vs. contract rates. Plansmith recommends that your model cover spreads as wide as +10% to –10%. Here's an example of how a New Detailed Model appears.

Prepayment Speeds

As the spread increases over the lifetime of the portfolio, prepayments are likely to increase. As the spread decreases, the likelihood of prepayments will decrease as well.

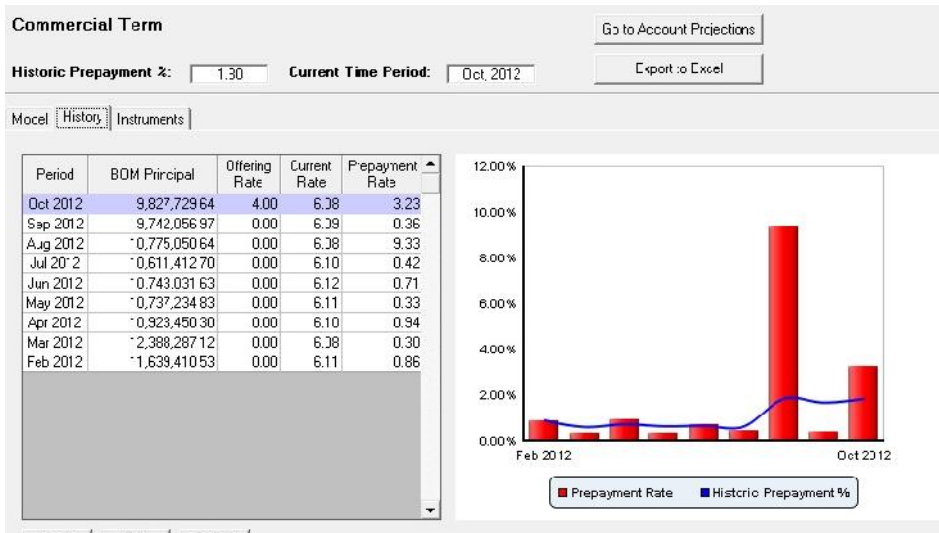| Seg.	Spread	Prepayment Percent
A	-10.00	0.75
B	-4.00	0.75
C	-3.00	0.83
D	-2.00	0.92
E	-1.00	1.17
F	0.00	1.50
G	1.00	2.75
H	2.00	5.17
I	3.00	6.00
J	4.00	6.33
K	10.00	6.33

5 yr balloon

PREPAYMENTS, DECAY RATES, DIVIDENDS, AND CREATING CUSTOM REPORTS

Automated Quick Prepayment Model (New Feature)

An Automated Quick Prepayment Model specifies a monthly percentage of prepayment from history that is accumulated over time. The automated model is updated monthly based on the most recent historical average prepayment experience. It is recommended that an institution closely monitor these results for reasonableness if this option is chosen.

History Tab

The History Tab is updated monthly. **Historic Averages** are stored indefinitely and accumulate a running total with each new month-end download

Prepayment Speeds

History Tab

Data can be viewed at the account or category level.

Details can be edited (inserted, deleted) as well as exported to Excel.

Instrument Tab

Compass utilizes data imported in the download process to analyze the loans and time deposits on an ongoing basis. The current month and prior month balances are compared to create a log of history for generating a prepayment experience. This is the detail behind is what is summarized in the History tab.

Instrument Tab

During the download process, instrument level detail for each loan and certificate of deposit is captured and displayed in the Instrument Tab for further analysis.

To assist you in analyzing the data, you can click/double click on a column header to automatically sort values from highest to lowest or lowest to highest.

Instrument IDs can be masked to hide confidential data.

Callable Tab

	Bond ID	Book Value (thousands)	Coupon Rate	Yield to Maturity	Call Date	Call Freq. (months)	Spread	Final Maturity Date	First Repricing Date
1	31331YRS1	1,000	4.20	4.20	02/05/09	0	0.00	02/05/15	12/31/99
2	3133XP5F7	2,000	4.55	4.55	02/06/09	0	0.00	02/06/15	12/31/99
3	3133XP7D0	700	4.20	4.20	02/11/11	0	0.00	02/11/15	12/31/99
4	3133XPKW3	1,000	4.50	4.50	02/20/09	0	0.00	02/20/15	12/31/99
5	3133XRCM0	2,000	4.85	4.85	12/05/08	0	0.00	06/05/15	12/31/99
6		0	0.00	0.00		0	0.00		

Tabs shown: Projections | Budget | Maturity | Variance | Callable | Fed Funds | Notes

Bond ID
Typically, this will either be the CUSIP number or a code that uniquely identifies the amount of a particular issue that is included in an account.

Book Value (thousands)
This data is downloaded into the Scheduled Maturity fields.

Coupon Rate
The rate paid on the instrument at the time of origination. The coupon rate is usually different than the yield. This value is downloaded into the Scheduled Maturity Xrate (Exit Rate) fields.

Yield to Maturity
The annualized rate of return that you would earn if you bought an investment at its current market price and held it until maturity.

Call Date
This is the first date on which the security can be called or the historical call date (past date).

Call Freq. (months)
The Call Freq. (months) determines how often the Spread will be checked against the difference between the Coupon Rate and Offering Rate to determine prepayment or call. If you do not have any data for this field, enter a value of one (1) month or zero (0) months for a one-time call.

Spread (Or Spread to Call)
This is the differential between the Coupon Rate and Offering Rate that triggers the call.

Final Maturity Date
Date downloaded from your extract file or supplied by your broker for manual entry.

First Repricing Date
This applies only to securities such as Step Ups that can potentially reprice at certain intervals or specified dates.

Callable Tab

There are two ways to enter maturity and call information into your model: download the data from your Investment Maturity file or manually enter the information generated by your broker.

If you are entering this data manually, make sure to update when you perform your monthly update.

You can request an investment tune-up if you would like to discuss options to automate this process.

After entering the call data in the Callable tab, verify that the final maturity is in the Scheduled Maturities column in the Maturity tab. If the maturity is not listed, the call will not work.

Decay Rates

Decay rates allow you to apply artificial maturities to non-maturing account balances. To enter decay rates, right click on a non-maturing account, such as Savings Accounts and select the Account Wizard. Select "Yes" when prompted to apply a decay rate.   Next, select whether the decay rates should be applied when calculating GAP, Duration/Market Value, or both. Finally, enter a decay rate in months.   The System Estimated Beta calculation discussed on the right will also be found here.
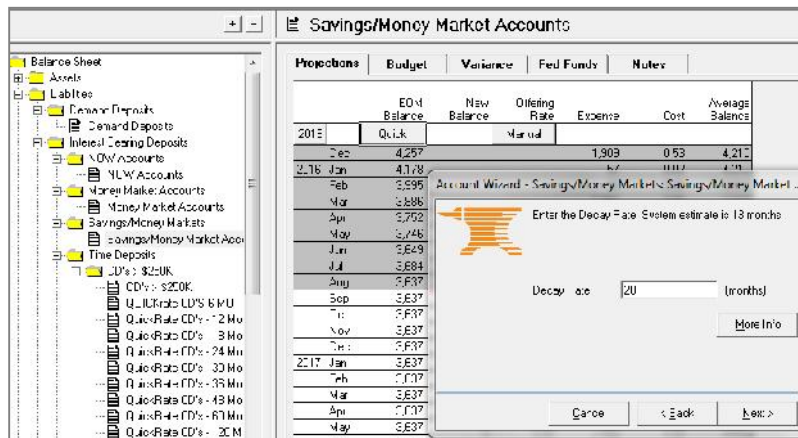

Decay Rates - Beta Calculation

Compass will automatically calculate an estimated Decay rate (in months) for each non-maturing deposit account. Compass compares the relative rate change of each non-maturing deposit account to the 6 month T-Bill rate over 72 months or less depending on the amount of history loaded in the plan.

This estimate is provided as a reference for users. It is not automatically applied to accounts within Compass.

Alternate Discount Rate

Non-maturing accounts also offer the option to set an Alternate Discount Rate in the Account Wizard. In the Discount Rate drop-down, select the Driver Rate that is used in lieu of the Offering Rate to calculated discounted Cash Flows, Duration, and Market Value.
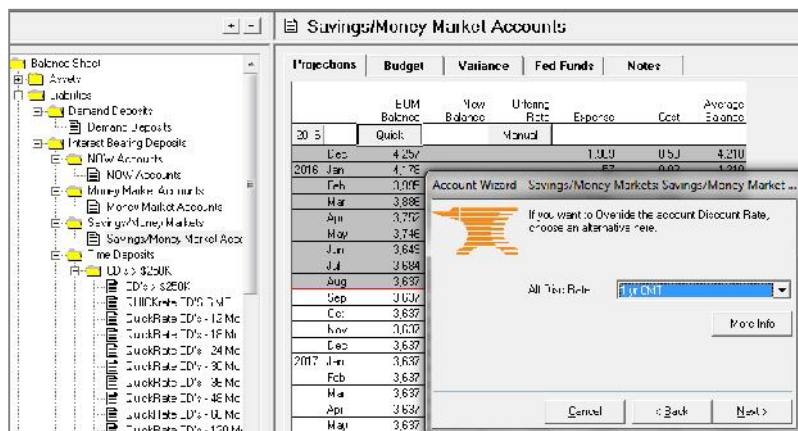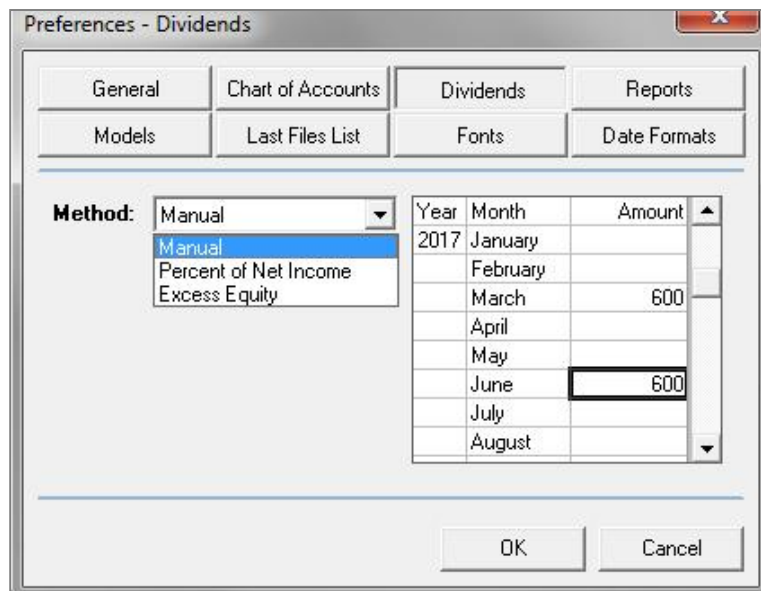
Dividends

Enter projected dividends through the options setting under utilities. Be certain to compute the plan after entering the dividends here in order to update the projections.
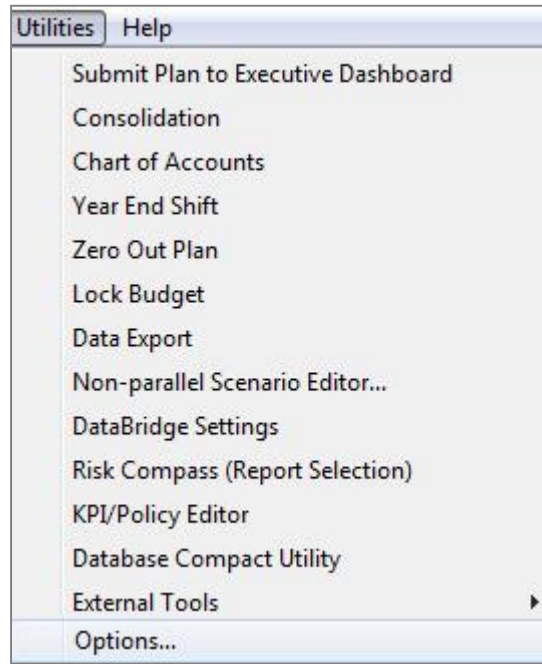
Utilities

The utilities drop down gives you access to occasionally used features as well as the Options feature.

PREPAYMENTS, DECAY RATES, DIVIDENDS, AND CREATING CUSTOM REPORTS

Report Designer

Report Designer allows you to design your own reports. First, select the report properties from the menu bar located at the top.

Next, double click on the individual accounts or ratios from the Accounts/Summary Items list or you can right click on Category Yellow folders for more options to bring in the data. Save the report.

Once saved, the report will appear in the Custom Reports folder in the reports' directory.

Ratio Designer

If you are unable to find a specific ratio(s), you can create custom ratios through the Ratio Designer.

Select the accounts that you want for the components of the ratio by dragging and dropping them from the Account/Summary Items list, and then select the Data Type for the numerator and denominator.
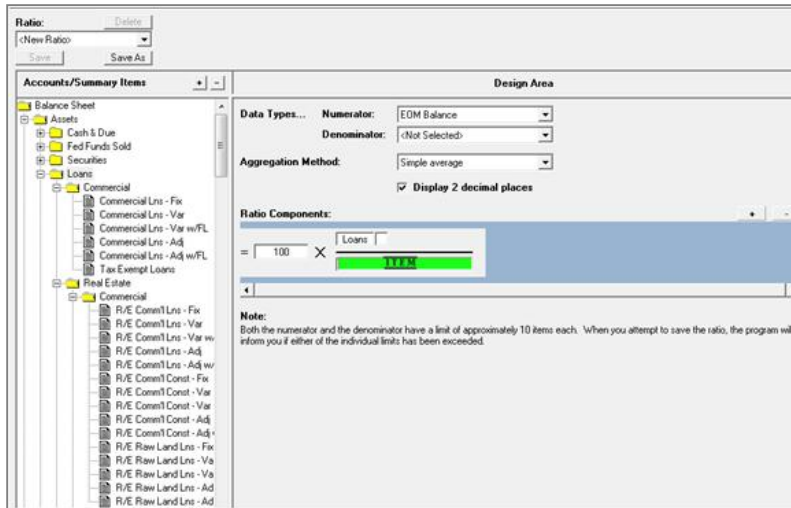
After making your selections and populating the appropriate fields, save and name the new ratio.
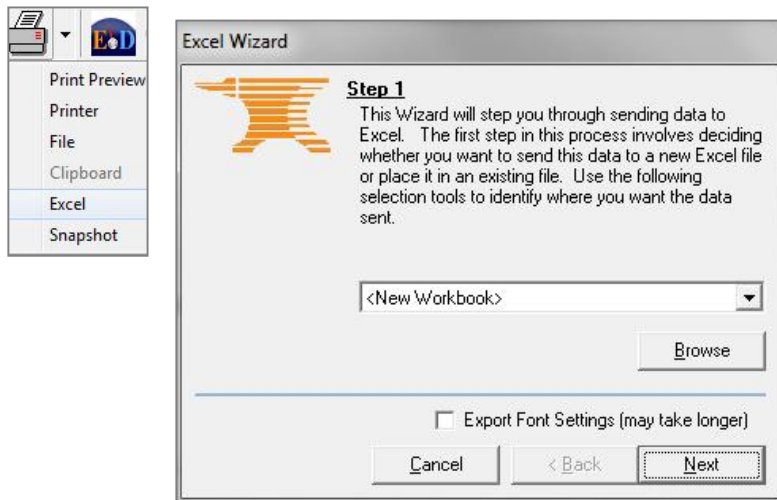

The ratio will appear in the Custom Ratios section on the Report Designer screen.

Reports-
Exporting to Excel

Compass provides the option to export any report to Excel. The Excel Wizard walks you through all of the steps required to export the report to a new workbook (default file name is "Report.xls") or add on to an existing workbook.   You can export multiple reports to various sheets within a single workbook provided that you have added a sufficient number of new sheets to the workbook through Excel prior to exporting. Please note that <u>the Excel workbook cannot be open when attempting to export from Compass into the workbook</u>.

Reports

There are a variety of ways to manipulate reports. You can export your report to Excel or change the appearance of a report by selecting the print preview table.

Reports

Alt Discount & Decay Rates Assumptions - summary of the Alternate Discount Rate and Decay Rate settings for non-maturing liabilities

Callable Assumptions- summary of all callable information for both Asset and Liability accounts with Callable settings.

Prepayment Assumptions - reflects the prepayment models attached to accounts.