

## ZMFS Targeted Solutions: Behavioral Analysis and Mining

# USE YOUR INSTITUTION-SPECIFIC HISTORICAL DATA FOR MORE DEFENDABLE DECISIONS



Your data tells the story of your whole institution: past, present, and future. It also holds the key to helping you manage your balance sheet. The Data Analysis Value Chain provides insight on how using institution-specific historical data can help management make more defensible decisions.

### HISTORIC DATA FOR INFORMED ESTIMATES

From the financial analyst to executive management, to the board of directors, most in the asset liability management industry have expressed the need for better ways to develop realistic assumptions for forecasting models. Utilizing your own history provides thorough insight into your customer behavior. By analyzing historical data to obtain fact-based estimates, management has more information to make more knowledgeable decisions. And, more informed, fact-based decisions are defensible decisions. This improved insight and learning from experience can lead to comprehensive balance sheet management.

For example, using third party or market-level assumptions for customer behavior could dramatically over- or understate potential customer movements to us or away from us. By using institution-specific history to determine default, prepay and attrition rates, assumptions used are more supportable and provide more meaningful budgeting and forecasting results.

### INFORMED ESTIMATES = DEFENDABLE DECISIONS

Analysts mining their institution's data for customer behavior metrics can provide more detailed estimates when used for budgeting and forecasting.

## DATA ANALYSIS VALUE CHAIN

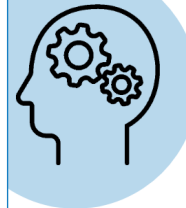
### HISTORIC DATA FOR INFORMED ESTIMATES

Analysts look at institution-specific historic data results that are reflective of clientele behavior = better estimates for Senior Management



### INFORMED ESTIMATES = DEFENDABLE DECISIONS

Senior Management uses data received from Analysts to make informed decisions, then report those results up through ALCO



### DEFENDABLE DECISIONS = CONFIDENCE IN BALANCE SHEET MANAGEMENT

Driving the data to work for Senior Management and ALCO, those defensible decisions lead to confidence in balance sheet management. Management is also more knowledgeable / informed to communicate reports to examiners/auditors.



### ZMBAM: BEHAVIORAL ANALYSIS AND MINING

Informed estimates. Defendable decisions. This is how the data analysis value chain helps instill confidence in your balance sheet management process.



## FINANCIAL SYSTEMS

A Moody's Analytics Company

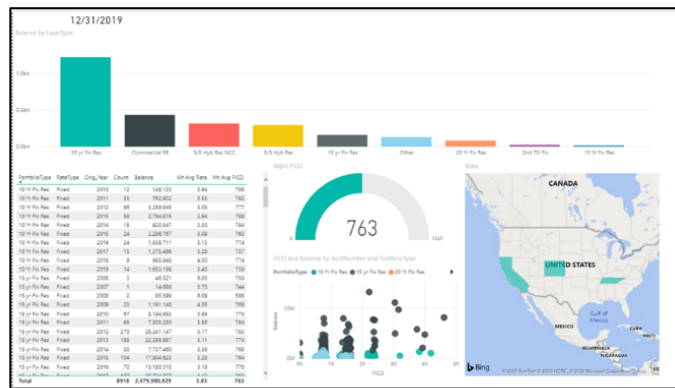
# ZMFS Targeted Solutions: Behavioral Analysis and Mining

With better estimates based on actual customer behavior, management and boards of directors have greater insight into which levers to pull to achieve targeted growth and income while remaining well capitalized. Loan and deposit pricing will become more strategic. For example, based on historic prepayment and loss rates, tiered pricing strategies are created or adjusted to compensate for the impact of the behavior. The tiered pricing allows management to speed up or slow down demand in targeted portfolios and sectors allowing the institution to become more profitable.

## DEFENDABLE DECISIONS LEAD TO CONFIDENCE IN BALANCE SHEET MANAGEMENT

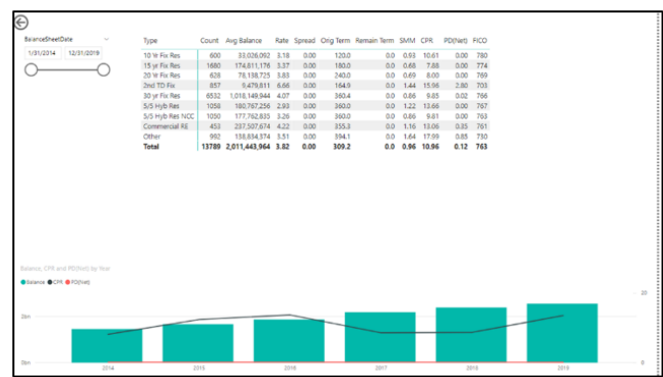
Driving the data to work for senior management and ALCO, those defensible decisions lead to confidence in balance sheet management, especially in an uncertain financial world. Senior manage-

### Sample Visualization Loans



ment is also more knowledgeable and informed to communicate reports to examiners/auditors. Improving profitability relies on understanding the relationship between existing business and new business. New business involves the strategy of growth and pricing assumptions. Existing business is the current commitments and for the most part only impacted by customer behavior. Depending on customer behavior with respect to the existing business, there is more or less reliance on new business to achieve desired goals.

By using your own unique and consistent data-driven assumptions, your interest rate risk, credit modeling and liquidity analyses become more defensible. Standard and custom tools allow you to mine this data easily. Applications such as Excel, PowerBI and Tableau can be connected to further analyze, quantify, trend, and provide valuable insights into behavior of the underlying products and customers/members.



### Sample Visualization Deposits



As an example, if historical behavior indicates there will likely be higher defaults, more prepayments and increased deposit attrition, lower loan pricing and higher deposit pricing may be needed to attract the new business needed.

In another example, analyzing the historic loss data could indicate loans in certain sectors or with certain characteristics suffer greater losses than others. With this information, marketing initiatives can be created to target other more profitable sectors or create pricing strategies to mitigate loss exposure.

With either example, profitability and performance can be improved with the knowledge of customer behavior specific to the institution.

### **BETTER BALANCE SHEET MANAGEMENT: A REAL-TIME SOLUTION FOR A COMPLEX TASK**

#### *ZMFS Approach*

By using institution-specific experience for behavior assumptions defendable estimates of forecasted cashflows, earnings and capital can be obtained. The improved results will help the institution create more insightful plans and be more competitive and profitable.

A robust integrated platform makes this easier to accomplish. ZM Financial Systems (ZMFS), a Moody's Analytics Company, offers a Behavioral Analysis and Mining (ZMBAM™) tool allowing institutions to store historical data to be used in obtaining historical loss rates, prepayment rates and decay rates. With ZMBAM, institution-specific history is stored centrally and used to evaluate default and attrition patterns, determine reserves, assess

prepayment drivers, analyze outliers, and quantify parameters such as spreads, term structures, and pricing behavior. Users define their own depth (periods/periodicity) and breadth (attributes). Any type of instrument data can be stored—from loans and deposits to investments, borrowings, and hedges.

### **THE BOTTOM LINE**

Not all data is created equal, though examining your institution's data will help you make better estimates and educate your senior management, ALCO, and board. With an educated team, you are more likely to make smarter decisions and improve the way you manage your balance sheets.

A robust tool like ZMBAM can provide insight into relationships allowing for closer monitoring of changes and watchlists. Pricing strategies will become clearer, and more meaningful targeted marketing and relationship management will help you gain confidence in your balance sheet management process.

### **HARNESS THE POWER BEHIND YOUR UNIQUE DATA!**

Discover how your data can work for you by scheduling time with our experts today:

- **Email:** [sales@zmf.com](mailto:sales@zmf.com)
- **Phone:** 919.493.0029
- **Web:** [w3.zmf.com](http://w3.zmf.com)