

ADD CONFIDENCE TO YOUR DECISIONS BY MINING YOUR OWN DATA



ZMBAM: BEHAVIORAL ANALYSIS & MINING

Your Data. Your Outlook. Your Business.

Behavioral Analysis & Mining (ZMBAM) from ZM Financial Systems offers financial institutions advanced insights into the drivers behind your unique risk and performance profile. 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.

OVERCOME DATA OBSTACLES

Between regulatory requirements and strategic initiatives to improve performance, institutions increasingly ask what data they need and how can they use it. Gathering, storing and accessing comprehensive historical data, as well as using it in an integrated manner, has been an on-going obstacle.

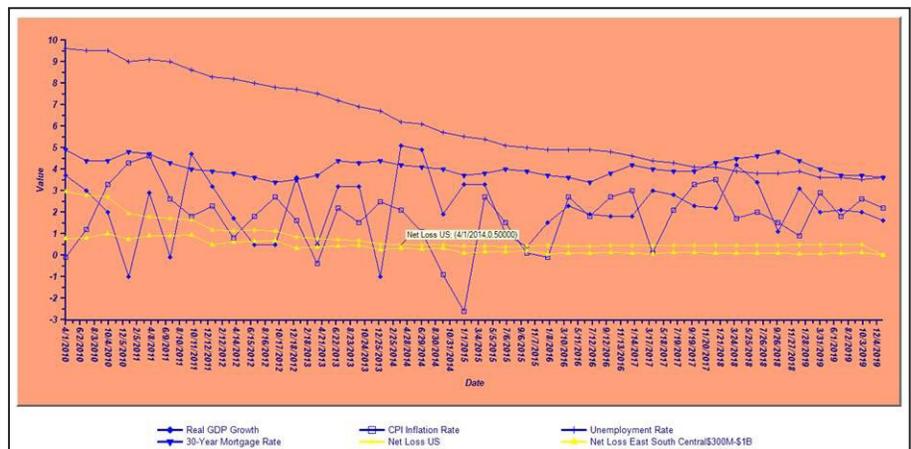
These problems are solved with ZMBAM.

GO BEYOND REGULATORY REQUIREMENTS

Many, if not most, institutions have looked at storing data within the constraints of a particular silo. For example, when looking to satisfy the CECL mandate from FASB, institutions frequently ask, "What data do we need to meet the CECL requirement?"

The questions *should* be:

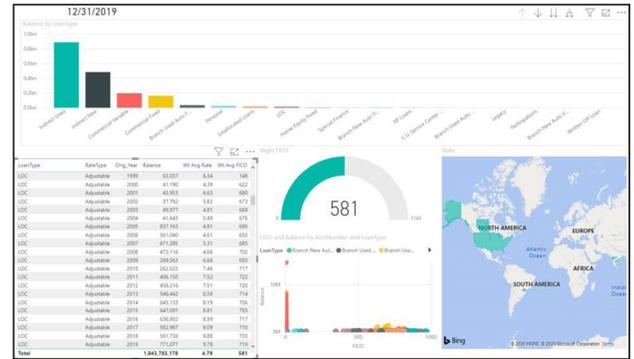
- What data do we already capture that can be reliably stored and leveraged in more ways?
- What additional data is needed or nice to have?
- Can we layer in deposit history to trace rates and attrition?
- How much will historical spreads, terms, and other attributes improve my forecasting process?
- Can I use this data to support simultaneous analysis for loss rates and prepayment rates?
- What can I learn by comparing my own behavior to publicly-available information?



Historical Comparisons

Aligned with Your Needs

With ZMBAM, 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. Delivered out of the box are a wide range of analytics such as historical prepayment and attrition windows, CECL, ALLL, and other types of behavioral trending. These institution-specific results can be utilized for ALM, allowance and other type of projections. By using your own unique and consistent data-driven assumptions, your interest rate risk, credit modeling and liquidity analyses become more defensible.



Sample Loan Analytics

Evolves with Your Needs

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. You will gain insights into relationships allowing for closer monitoring of changes and watchlists. Pricing strategies will become clearer, and more meaningful targeted marketing and relationship management will lead to increased profitability.

LoanType	10/31/2019	11/30/2019	12/31/2019
Branch New Auto Fixed	94,372.28	94,197.57	94,020.91
101	94,372.28	94,197.57	94,020.91
207229	6,596.15	6,596.15	6,596.15
228656	8,594.66	8,594.66	8,594.66
231506	10,231.60	10,231.60	10,231.60
233394	23,360.30	23,360.30	23,360.30
235397	28,855.20	28,855.20	28,855.20
250985	6,757.87	6,757.87	6,757.87
259678	6,982.18	6,982.18	6,982.18
389550	22.93	22.93	22.93
8792	9	2,796.68	2,620.02
Total	94,197.57	94,020.91	

AcctNumber	CFDate	Balance	InRate	DateOrigination	DatePayLast	DateMaturity	FICO
12/31/2019	2,620.02	4.85	02/22/2017	12/31/2019	02/22/2021	699	
11/30/2019	2,796.68	4.85	02/22/2017	11/30/2019	02/22/2021	699	
10/31/2019	2,971.39	4.85	02/22/2017	10/31/2019	02/22/2021	699	

Detailed Research Capabilities

Result: New Historical Prepay_1 [Edit ID] [Edit Notes]

Time Frame: Annually Quarterly

Protect Historical Prepay

LoanType	IsIncluded	Detail	Start Date	Months	End Date	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10
10 Yr Fix Res	<input checked="" type="checkbox"/>	Open	01/01/2010	120	12/31/2019	2.00%	1.80%	2.12%	2.79%	3.34%	3.63%	3.39%	2.34%	2.04%	4.57%
15 yr Fix Res	<input checked="" type="checkbox"/>	Open	01/01/2010	120	12/31/2019	0.68%	1.04%	1.11%	1.18%	1.67%	1.70%	1.86%	2.26%	2.68%	1.46%
20 Yr Fix Res	<input checked="" type="checkbox"/>	Open	01/01/2010	120	12/31/2019	0.15%	0.69%	0.51%	0.86%	0.62%	0.43%	0.68%	1.18%	0.43%	0.43%
2nd TD Fix	<input checked="" type="checkbox"/>	Open	01/01/2010	120	12/31/2019	0.63%	1.22%	1.45%	2.32%	0.74%	1.12%	1.27%	3.02%	0.20%	0.00%
30 yr Fix Res	<input checked="" type="checkbox"/>	Open	01/01/2010	120	12/31/2019	0.39%	0.40%	0.34%	0.49%	0.60%	0.63%	0.83%	0.43%	0.40%	0.40%
5:5 Hyb Res	<input checked="" type="checkbox"/>	Open	01/01/2010	120	12/31/2019	0.63%	0.93%	0.79%	0.79%	0.87%	2.15%	0.89%	0.00%	0.00%	0.00%
5:5 Hyb Res NCC	<input checked="" type="checkbox"/>	Open	01/01/2010	120	12/31/2019	0.41%	0.62%	0.65%	0.65%	0.94%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial RE	<input checked="" type="checkbox"/>	Open	01/01/2010	120	12/31/2019	0.30%	0.35%	0.21%	0.28%	0.70%	0.41%	0.80%	4.19%	0.02%	0.00%
Other	<input checked="" type="checkbox"/>	Open	01/01/2010	120	12/31/2019	0.76%	0.68%	0.39%	1.65%	0.81%	3.68%	0.46%	0.36%	4.88%	0.44%

Sample Screen

START USING YOUR OWN DATA TODAY

At ZM Financial Systems, we provide opportunities to be discovered by leveraging your own data in a meaningful way. Talk to us about a demonstration of ZMBAM, the applications which can utilize the data in the warehouse, and the benefits you can achieve.

SCHEDULE A DEMO: Email: sales@zmf.com Phone: 919.493.0029

