Maximizing the Potential of Your Balance Sheet

2023 FHLB Topeka Regional Meetings

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Asset Management Group, Inc.

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No Bank Guarantee

May Lose Value



Today's Discussion

- Understanding Rate Cycles
- Understanding Loan Pricing
- Understanding Data



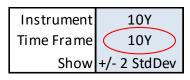
Understanding Rate Cycles

- We often look to the Fed for guidance on future interest rate moves
 - Fed Policy is backward looking, not forward looking
- Is there anything we can use to help us understand the current/future rate cycle?
- What can we learn from previous rate cycles?

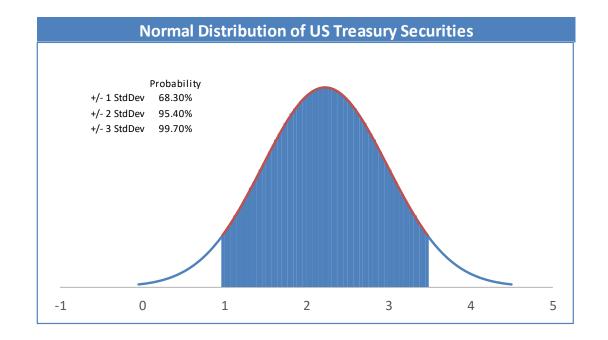
Statistical Regression



Understanding Rate Cycles: <u>Statistical Regression</u> Regression data must be normally distributed



Setti	ings
Mean	2.23
StdDev	0.76
NumRows	120
Zmin	-3
Zmax	3
PctClear	4.60%
PctShade	95.40%
Calcula	ations
ShadeLeft	0.9497491
ShadeRight	3.5047503
CurveMin	-0.0473121
CurveMax	4.5018114

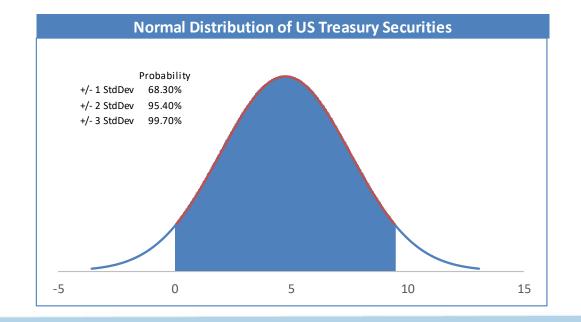




Regression data must be normally distributed; even over long periods of time

Instrument	10Y
Time Frame	100Y
Show	+/- 2 StdDev

Sett	ings
Mean	4.76
StdDev	2.77
NumRows	1200
Zmin	-3
Zmax	3
PctClear	4.60%
PctShade	95.40%
Calcula	ations
ShadeLeft	0.0876643
ShadeRight	9.4265974
CurveMin	-3.5567517
CurveMax	13.071013

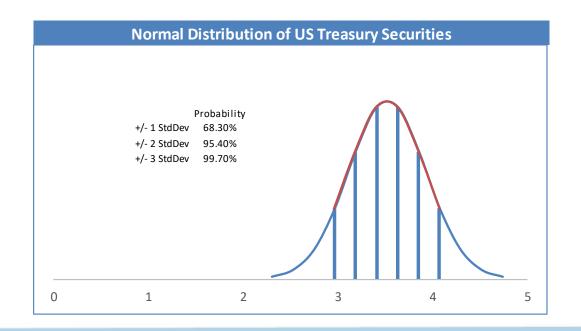




Regression data must be normally distributed; over ANY period of time

Instrument	10Y
Time Frame	1Y)
Show	+/- 2 StdDev

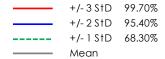
Setti	ngs
Mean	3.52
StdDev	0.41
NumRows	12
Zmin	-3
Zmax	3
PctClear	4.60%
PctShade	95.40%
Calcula	tions
ShadeLeft	2.835136
ShadeRight	4.2055689
CurveMin	2.3003396
CurveMax	4.7403653

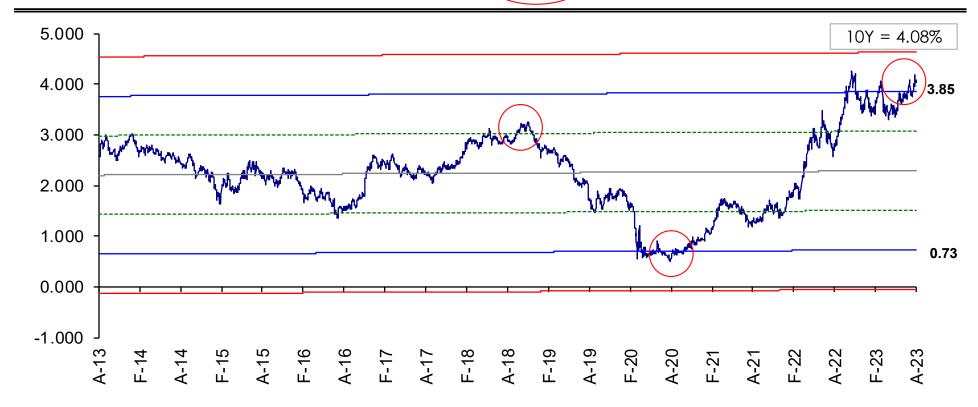




10 Year Treasury Regression

10Y Regression Aug, 2013 (Aug, 2023) over 10 years)





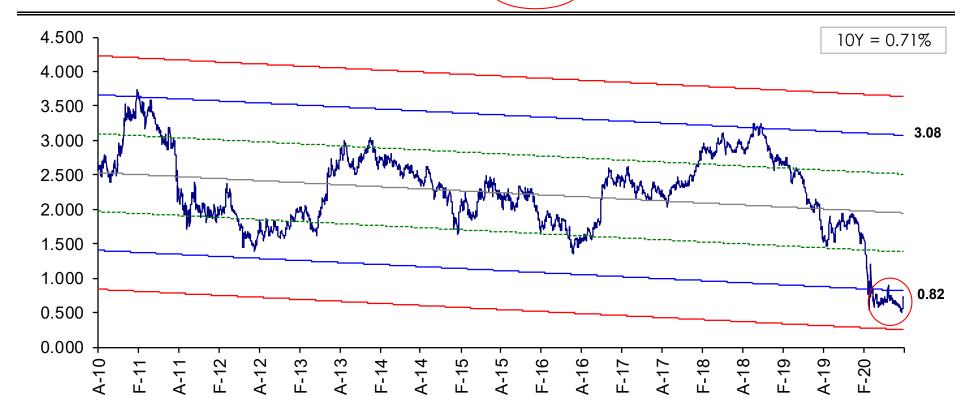
Source: Bloomberg™



10 Year Treasury Regression

10Y Regression Aug, 2010 - (Aug, 2020 (over 10 years)

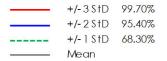


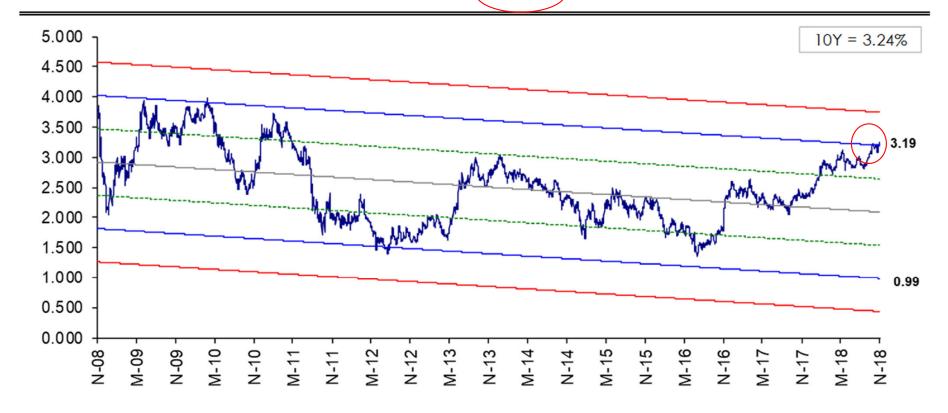


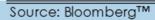
Source: Bloomberg™



10 Year Treasury Regression 10Y Regression Nov, 2008 (Nov, 2018 Jover 10 years)





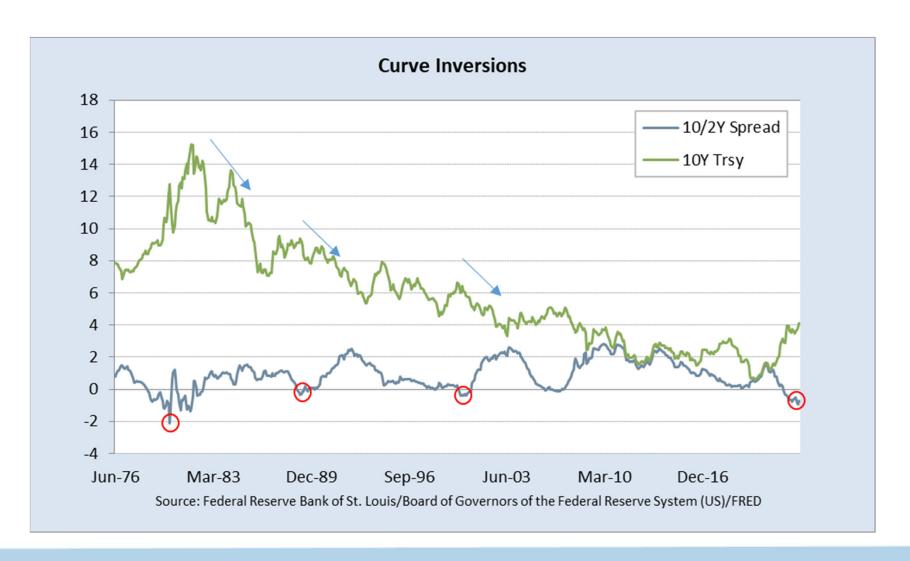




Regression/Decision Matrix

	DECISION MATRIX									
10Y Trsy	Yld Crv	Likely Rate Move	Liabilities	Loans	Credit	Investment	Off Bal Sheet	Leverage		
+2 Std	Inverted	Lower	Short/Call? Whisle; Rate NOT Term	More Fixed; Prepay Penalties; Prime	Tighter Credit Standards	Max Dur; Min Options/CF	Asset: Var>Fix Liab: Fix>Var	Max Leverage (Max Invest)		
+1 Std	Flattening	Lower/Higher	Shorter Mat Call Wholesale	Prefer Fixed; Prepay Penalties; Prime	Begin Tighter Credit	Extend Dur; Fewer Options	Hedge Int. Rate Exp as Needed	Incr Leverage (More Invest)		
-1 Std	Steepening	Higher/Lower	Longer Mat Call Wholesale	Prefer Float; Prepay Penalties; Tsy	Begin Easier Credit	Shorten Dur; Increase CF	Hedge Int. Rate Exp as Needed	Incr Leverage (More Loans)		
-2 Std	Very Steep	Higher	Longest Mat Bullet Wholesale	More Var; Tsy Index; No Caps/Ceil	Easiest Credit Standards	Min Dur; Max CF; Long Mat = HTM	Asset: Fix>Var Dep: Var>Fix	Max Leverage (Max Loans)		







Loan Builder and understanding the "nuts and bolts" of pricing a deal

- Loan Builder is a tool developed by BancPath to assist lenders in properly valuing the options and risks inherent in every deal
- <u>BancPath© Loan Builder | BancPath© from the Asset Management Group</u> (ccbfinancial.com)
- FREE



Understanding Loan Pricing

4 Principals to EVERY deal

- 1. Credit Risk
- 2. Interest Rate Risk
- 3. Term Risk (Loss of Liquidity and/or Prepayment Risk)
- 4. Profit





BancPath / Tools / BancPath© Loan Builder

A FREE and EASY 10 Step Loan Pricing Tool

In the highly competitive market for pricing loans, it is vital that risk not only be identified, but also priced properly. By breaking a loan into its component parts, a lender can guarantee that they are properly compensated for both CREDIT RISK and INTEREST RATE RISK. Have comments or feedback?



MARKET INFORMATION DEAL NAME:	A\$ OF 8/1/2023	LOAN AMOUNT	7	
Deal Name Print		\$ 1000000		
STEP 1	Term or Balloon ©		5 Years v	4.03%
STEP 2	Amortization ©		20 Years v	0.05%
	Term + Amort Cost ©			4.08% SOFR RATE
STEP 3	Prepayment Cost ©		0 Years v	1.50%
STEP 4	Liquidity Cost ©			0.99%
STEP 5	Credit Cost ©		3 ~	1.50% "A" Credit
	Prepay + Liquidity + Credit Cost	0		3.98% SWAP SPREAD
RISK AD	JUSTED OFFER RATE			8.06%



Loan Builder – Built around the 4 Principals

STEP 6 Relationship Adj.	9
NET OFFER RATE	8.06%
Total Adjusted Spread Duration of Loan	3.98%



		TOTAL CHARGE ANNUAL CHARGE
STEP 7 Loan Loss Provision	1.25%	11,597 2,883
STEP 8 Capital	9%	83,495
STEP 9 Overhead Cost	1.75%	16,235
STEP 10 Alt Cost of Funds	FHLB ~	4.60%
FEES Additional Fee Income	\$ OR	5,000 0.134%
	0.50%	



14,227 17.04% ROE 1.53% ROAA



Loan Builder – Built around the 4 Principals

- Competitor is offering to make this loan closer to 7.00%, not 8.00%...
 - Should we do that?



COMPETITOR RATE >>> 7.00% **NET OFFER RATE** Total Adjusted Spread 2.92% Duration of Loan 4.02 6.54% Walk Away Rate (Given Credit Consideration Above) **TOTAL CHARGE** ANNUAL CHARGE STEP 7 Loan Loss Provision 11,514 1.25% 2,862 STEP 8 Capital 82,898 9% STEP 9 Overhead Cost 16,119 1.75% STEP 10 Alt Cost of Funds 4.60% FHLB Additional Fee Income FEES 5,000 0.135% 0.50%

ANNUAL NET PROFIT (Before Tax)

4,371 5.27% ROE 0.47% ROAA



NET OFFER RATE	WALK AWAY RATE >>> 7.60%
Total Adjusted Spread Duration of Loan Walk Away Rate (Given Credit Consideration Above)	3.52% 4.02 7.14%
	TOTAL CHARGE ANNUAL CHARGE
STEP 7 Loan Loss Provision	1.25% 11,561 2,874
STEP 8 Capital	99/0 83,242
STEP 9 Overhead Cost	1.75%
STEP 10 Alt Cost of Funds	FHLB 4.60%
FEES Additional Fee Income	\$ 5,000 0.134%
	0.50%

ANNUAL NET PROFIT (Before Tax)

9,933 11.93% ROE 1.07% ROAA



Understanding the 4 Principals

- If you are going to "give away" an option, it is worth knowing the value of that option
- Spread matters, Pricing matters more so now than ever before.
 - As our deposit base becomes more "rate sensitive", we have to become as good at managing the assets of the bank as we have historically been in managing the liabilities.



Understanding your data

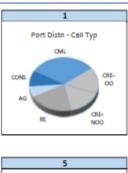
- Every institution here has a goldmine waiting to be discovered
- Your data is your insight into what drives risk and reward spend your resources wisely to uncover what makes your institution profitable (or not?)
- If you don't have the expertise to uncover these gems yourself, partner with someone who can help you.



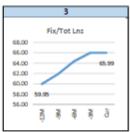
Understanding Your Data

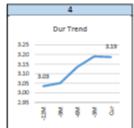
- Data mining allows banks to monitor performance metrics more granularly than ever before.
- Find a way to let YOUR data tell YOUR story
 - How is the Loan portfolio performing?
 - How are your Lenders Performing?
 - What about branch profitability?
 - What funding options should you exploit?
- Understanding YOUR data is one way you can answer these questions









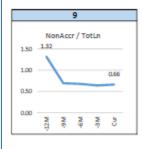


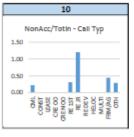






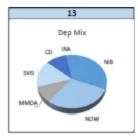


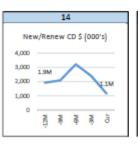


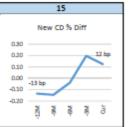






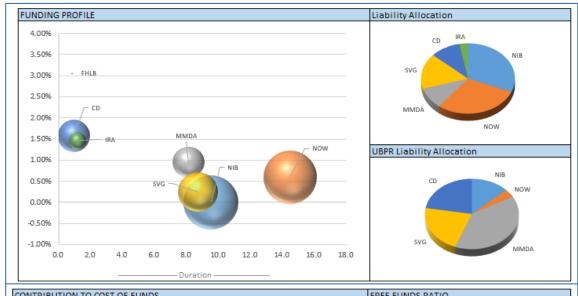


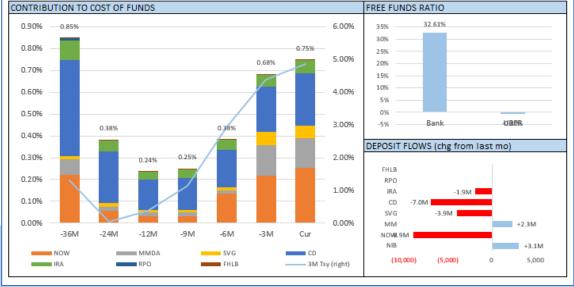








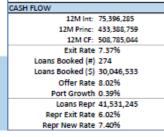






Description	Balance	Rate (TE)	Dur	Fix %	Fx Off %	Var %	Var Off %	Concent
Comm'l & Indust	125,602,775	5.785%	1.409	73.08%	7.14%	26.92%	8.35%	5.61%
Const & Develop	69,479,939	5.687%	1.837	29.91%	8.14%	70.09%	4.71%	3.11%
Municipal / Lease	535,317,261	4.041%	4.756	99.61%	6.40%	0.39%	7.75%	23.92%
Total Comm'l	730,399,976	4.498%	3,903	88.42%	6.69%	11.58%	7.56%	32.64%
CRE	0	0.000%	0.000	0.00%	0.00%	0.00%	0.00%	0.00%
CRE - Owner Occ	335,291,641	4.717%	2.743	39.90%	8.43%	60.10%	7.69%	14.98%
CRE - Non Owner Occ	328,045,314	4.775%	2.824	62.87%	7.58%	37.13%	7.04%	14.66%
Total Comm'l RE	663,336,955	4.746%	2.783	51.26%	8.01%	48.74%	7.37%	29.65%
1-4 Family (1st)	383,305,516	4.460%	4.097	46.44%	7.26%	53.56%	5.75%	17.13%
1-4 Family (Jr)	11,625,232	6.184%	1.977	33.42%	8.51%	66.58%	8.25%	0.52%
Residential Develop	24,692,192	6.085%	0.597	75.84%	8.88%	24.16%	7.70%	1.10%
Home Equity	35,918,801	8.739%	0.102	2.71%	8.86%	97.29%	8.49%	1.61%
Multi Family	37,872,399	5.191%	3.523	57.96%	7.75%	42.04%	7.75%	1.69%
Total Real Estate	493,414,140	4.949%	3,537	45.30%	7.52%	54.70%	6.26%	22.05%
Farmland	83,342,010	5.409%	3.090	34.24%	7.27%	65.76%	7.79%	3.72%
Ag	50,384,314	6.562%	0.992	51.20%	8.12%	48.80%	9.13%	2.25%
Total Farm/Ag	133,726,324	5.844%	2,299	40.63%	7.59%	59.37%	8.30%	5.98%
Credit Card / Revolv	97,576	17.246%	1.311	61.64%	7.75%	38.36%	7.75%	0.00%
Other Consumer	0	0.000%	0.000	0.00%	0.00%	0.00%	0.00%	0.00%
Auto	93,653,597	3.008%	1.907	100.00%	9.33%	0.00%	7.75%	4.19%
Consumer	107,998,350	3.412%	1.695	98.95%	9.85%	1.05%	3.20%	4.83%
Total Consumer	201,749,523	3.232%	1.793	99.42%	9.61%	0.58%	5.31%	9.02%
Depository	0	0.000%	0.000	0.00%	0.00%	0.00%	0.00%	0.00%
Other Loans	122,316	5.939%	1.923	100.00%	7.75%	0.00%	7.75%	0.01%
Unassigned	0	0.000%	0.000	0.00%	0.00%	0.00%	0.00%	0.00%
Total Other	122,316	5.939%	1.923	100.00%	7.75%	0.00%	7.75%	0.01%
NonAcc	14,784,733		1.312	82.11%		17.89%		0.66%
Total Loans	2,237,533,968	4.607%	3,187	65.99%	7.54%	34.01%	7.01%	100.00%

| Loan/Deposit 66.33% | Loan/Asset 60.19% | LLR/Tot Loan 1.18% | Non Perf/Assets 0.56% | Loan Yield (YTD) 4.38% | Charge-Off (YTD) 0 | Texas Ratio 4.31% | > 30 PD + NonAcc 0 | Leverage Cap 328,420,875 | CML % (100%) 222,40% | CRE % (300%) 201,98%



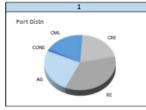






Sample Bank & Trust Lender 1 Officer Report Sample, ST 12/31/20xx Loan Count 145 % Fix 43.70% Yrs to Mat 7.358 12M Int: 1,251,313 12M Princ: 10,993,823 Port. Bal 30,390,652 CML 17.75% Yrs to Rpx 0.757 Avg Loan 209,591 CMLRE 20.47% Dur 1.319 12M CF: 12,245,136 Wtd Rate 5.70% RE 35.30% PD 30-89 0.00% Last 1M Exit: 5.89% Med Loan 75,537 AG 25.07% PD 90+ 0.00% Last 1M Offer: 7.63% CONS 1.41% Med Yield 5.55% Non Acc 0.00% Diff: 1.74% Excl. PPP and HFS Loans

TOP 10										
Acctnbr	Borrower	Balance	Rate	Orig Dt	Mat Dt	Repx Dt	Dur	Days PD	Non Acc	Ann Inc (TE
000-0001	Borrower 1	2,968,734	4.00%	5/9/2022	9/6/2026		1.783			118,749
000-0002	Borrower 2	1,772,175	4.00%	5/9/2022	9/6/2026		1.783			70,887
000-0003	Borrower 3	1,677,000	7.75%	12/1/2020	12/1/2023	3/1/2023	0.083			129,968
000-0004	Borrower 4	1,657,391	8.50%	11/4/2022	11/4/2023	3/1/2023	0.083			140,878
000-0005	Borrower 5	1,471,004	6.25%	9/29/2014	8/15/2034	11/15/2023	0.684			91,938
000-0006	Borrower 6	1,207,333	4.75%	12/23/2020	5/15/2024		0.862			57,348
000-0007	Borrower 7	1,090,018	4.25%	12/31/2021	1/10/2032		4.096			46,326
8000-0008	Borrower 8	909,847	5.25%	3/10/2022	4/15/2023		0.166			47,767
000-0009	Borrower 9	901,844	4.62%	5/28/2021	5/20/2041	5/28/2026	2.920			41,701
000-00010	Borrower 10	742,415	4.17%	8/27/2020	11/28/2040	8/27/2023	0.482	0		30,988
Remainder		15,992,890	5.98%				1.357			956,177
Total		30,390,652	5.70%				1.319			1,732,727







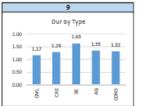














12/31/20xx	LAST YEAR (20xx)													
	JUL		AUG	;	SEPT		ОСТ		NOV	/	DEC		TOTAL	20xx
Description	Fix	Var	Fix	Var	Fix	Var	Fix	Var	Fix	Var	Fix	Var	Fix	Var
Comm'l & Indust	5.52%	5.48%	6.12%	6.46%	5.77%	7.24%	6.46%	7.41%	7.22%	7.66%	6.75%	7.92%	5.38%	6.27%
Const & Develop	0.00%	5.84%	5.66%	4.99%	7.55%	0.00%	3.75%	6.99%	6.37%	8.21%	7.75%	8.44%	5.56%	4.93%
Municipal / Lease	4.61%	0.00%	5.05%	0.00%	5.08%	0.00%	3.54%	0.00%	5.97%	0.00%	0.00%	0.00%	5.09%	0.00%
CRE - Owner Occ	5.86%	6.48%	5.47%	5.82%	4.58%	6.31%	0.00%	6.88%	6.48%	7.40%	0.00%	6.69%	4.56%	6.23%
CRE - Non Owner Occ	0.00%	5.50%	6.16%	6.00%	4.44%	7.25%	0.00%	0.00%	7.00%	0.00%	6.89%	6.31%	4.73%	4.41%
1-4 Family (1st)	5.17%	5.66%	5.21%	6.50%	6.49%	6.75%	6.87%	6.39%	6.67%	7.31%	5.38%	6.88%	5.29%	5.87%
1-4 Family (Jr)	6.76%	0.00%	6.50%	7.70%	0.00%	6.00%	8.18%	7.00%	0.00%	0.00%	7.77%	0.00%	5.56%	6.27%
Residential Develop	4.62%	6.21%	5.84%	0.00%	5.40%	6.25%	7.49%	6.75%	4.50%	0.00%	4.50%	7.66%	5.22%	6.29%
Home Equity	6.00%	6.17%	0.00%	6.36%	0.00%	6.89%	0.00%	7.38%	0.00%	7.71%	8.00%	8.63%	7.79%	5.90%
Multi Family	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.50%	0.00%	0.00%	0.00%	4.50%
Farmland	5.25%	5.46%	5.95%	6.35%	6.00%	7.50%	6.25%	6.00%	6.33%	6.31%	0.00%	6.58%	5.30%	5.99%
Ag	5.93%	6.71%	6.26%	6.45%	7.11%	6.66%	6.84%	6.66%	6.75%	8.07%	8.35%	6.21%	5.13%	5.35%
Credit Card / Revolv	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other Consumer	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Auto	3.24%	0.00%	3.75%	0.00%	6.86%	0.00%	7.09%	0.00%	9.59%	0.00%	11.11%	0.00%	3.39%	0.00%
Consumer	5.31%	3.30%	4.29%	0.00%	7.65%	3.10%	7.34%	3.18%	8.06%	2.43%	7.63%	3.35%	4.55%	3.08%
Depository	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other Loans	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Unassigned	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
New Loan Rate	5.13%	6.07%	5.39%	6.05%	5.16%	6.75%	6.62%	6.60%	6.15%	6.91%	6.69%	7.18%	5.01%	5.51%
New Loan Volume	8,900,525	17,263,314	27,254,203	7,219,053	54,612,707	6,021,225	6,219,781	3,744,438	31,300,971	4,638,764	6,067,699	5,714,835	252,094,579	98,733,085
New Loan Avg Life	3.044	5.686	1.997	5.316	2.424	8.103	2.949	7.000	9,202	5.937	1.825	7.943	3,991	5.899
Loan Loss Reserve	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%
Capital Charge	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
Overhead Charge	1.21%	1.21%	1.23%	1.23%	1.27%	1.27%	1.34%	1.34%	1.39%	1.39%	1.38%	1.38%	1.21%	1.21%
Marg COF (SOFR) 80%	2.86%	2.79%	3.58%	3.13%	4.18%	3.67%	4.31%	3.88%	3.30%	3.42%	4.52%	3.60%	2.53%	2.19%
Marg COF (INTERNAL) 20%	0.53%	0.53%	0.60%	0.60%	0.58%	0.58%	1.06%	1.06%	1.35%	1.35%	1.36%	1.36%	0.11%	0.10%
Marg COF (TOTAL)	2.39%	2.34%	2.98%	2.63%	3.46%	3.05%	3.66%	3.31%	2.91%	3.01%	3.89%	3.16%	2.64%	2.29%
Add'l Fee Income	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
Ann'l Int Income	456,596	1,047,028	1,468,842	436,522	2,818,903	406,648	411,520	247,187	1,925,410	320,489	405,977	410,272	12,622,663	5,441,490
Ann'l Fee Income	7,310	7,590	34,122	3,395	56,324	1,858	5,272	1,337	8,504	1,953	8,312	1,799	157,927	41,842
Tot Ann'l Income	463,907	1,054,618	1,502,963	439,917	2,875,227	408,506	416,792	248,525	1,933,913	322,443	414,290	412,071	12,780,590	5,483,332
Capital Allocation	712,042	1,381,065	2,180,336	577,524	4,369,017	481,698	497,583	299,555	2,504,078	371,101	485,416	457,187	20,167,566	7,898,647
Ann'l Provision	36,552	37,951	170,608	16,975	281,619	9,288	26,362	6,687	42,518	9,766	41,561	8,994	789,634	209,211
Overhead Charge	107,776	209,042	336,366	89,096	695,177	76,646	83,504	50,271	434,739	64,428	84,030	79,144	3,052,431	1,195,488
Marg Int Expense	212,751	403,534	812,446	189,557	1,887,801	183,810	227,596	124,107	909,734	139,460	236,024	180,328	6,657,919	2,258,585
Ann'l Net Income	106,826	404,091	183,543	144,289	10,630	138,762	79,329	67,460	546,923	108,788	52,674	143,605	2,280,606	1,820,048
ROA	1.20%	2.34%	0.67%	2.00%	0.02%	2.30%	1.28%	1.80%	1.75%	2.35%	0.87%	2.51%	0.90%	1.84%
ROE	15.00%	29.26%	8.42%	24.98%	0.24%	28.81%	15.94%	22.52%	21.84%	29.32%	10.85%	31.41%	11.31%	23.04%
Loan Spread	2.74%	3.73%	2.41%	3.42%	1.70%	3.70%	2.96%	3.29%	3.24%	3.90%	2.80%	4.02%	2.37%	3.22%
Mkt Credit Spread	1.17%	1.51%	0.85%	1.41%	1.30%	2.03%	1.15%	1.69%	1.66%	1.44%	0.81%	1.43%	0.81%	1.43%
Remain Sprxd (Profit)	0.36%	1.01%	0.33%	0.78%	-0.87%	0.40%	0.46%	0.26%	0.19%	1.08%	0.61%	1.21%	0.35%	0.58%

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