

Beat Recessionary Fears Through the Power of Analytics

Dan Price

CPA, CFA, VP Prescriptive Analytics

Loan Analytics Solutions

Meet key regulatory reporting requirements



- **Multi-Dimensional Portfolio Analysis**

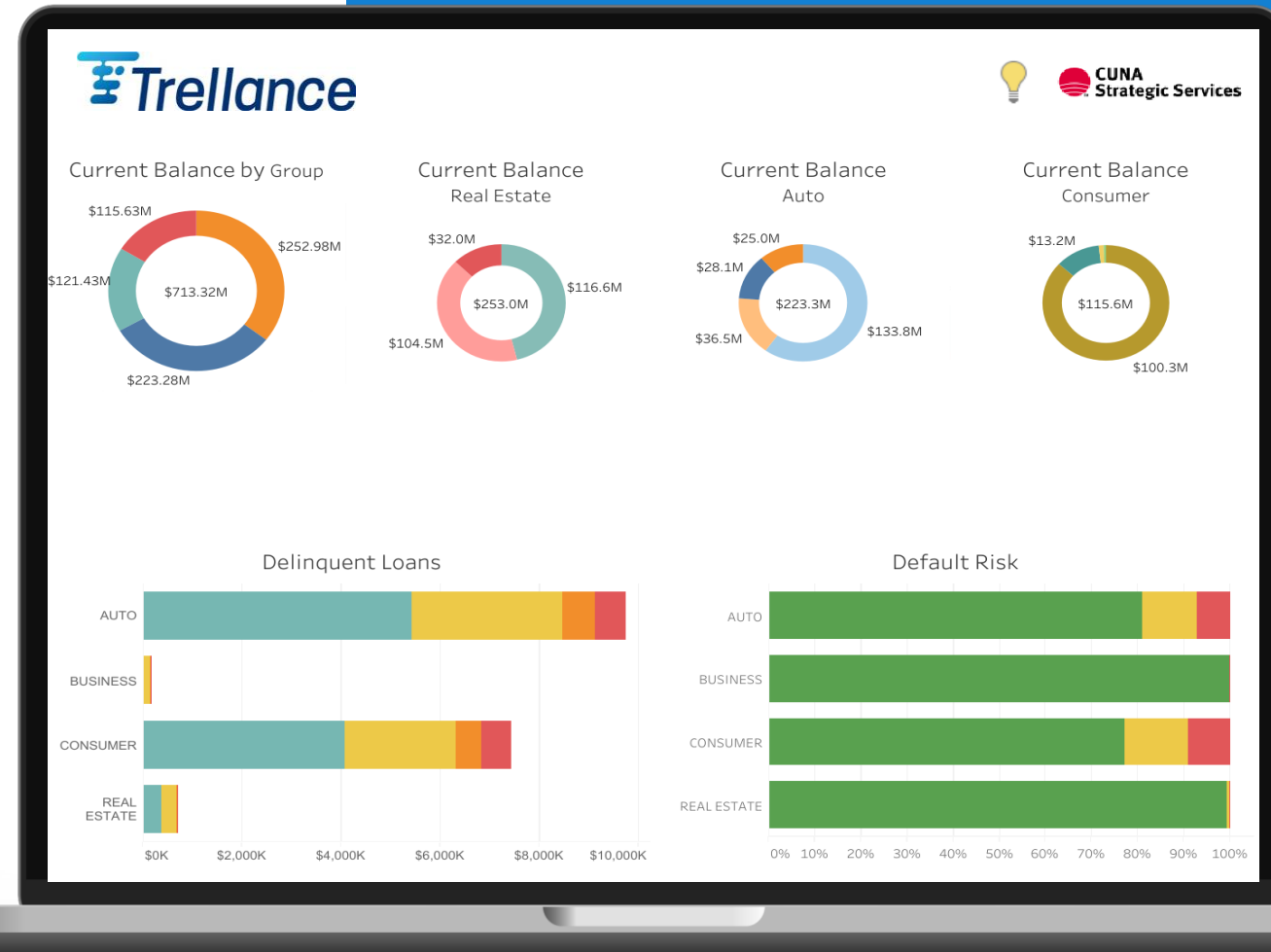
- Current Expected Credit Loss (CECL)
- Concentration Risk Analysis
- Stress Analysis
- Loan Profitability
- Customized Loan Portfolio Analysis

- **Data Enrichment**

- Credit Score Updates (Soft Pulls)
- Real Estate Values
- Auto Values

- **Advanced Benchmarking**

- Loan Level Benchmarking Solutions
- Home Mortgage Disclosure Act
- Metropolitan Area Data



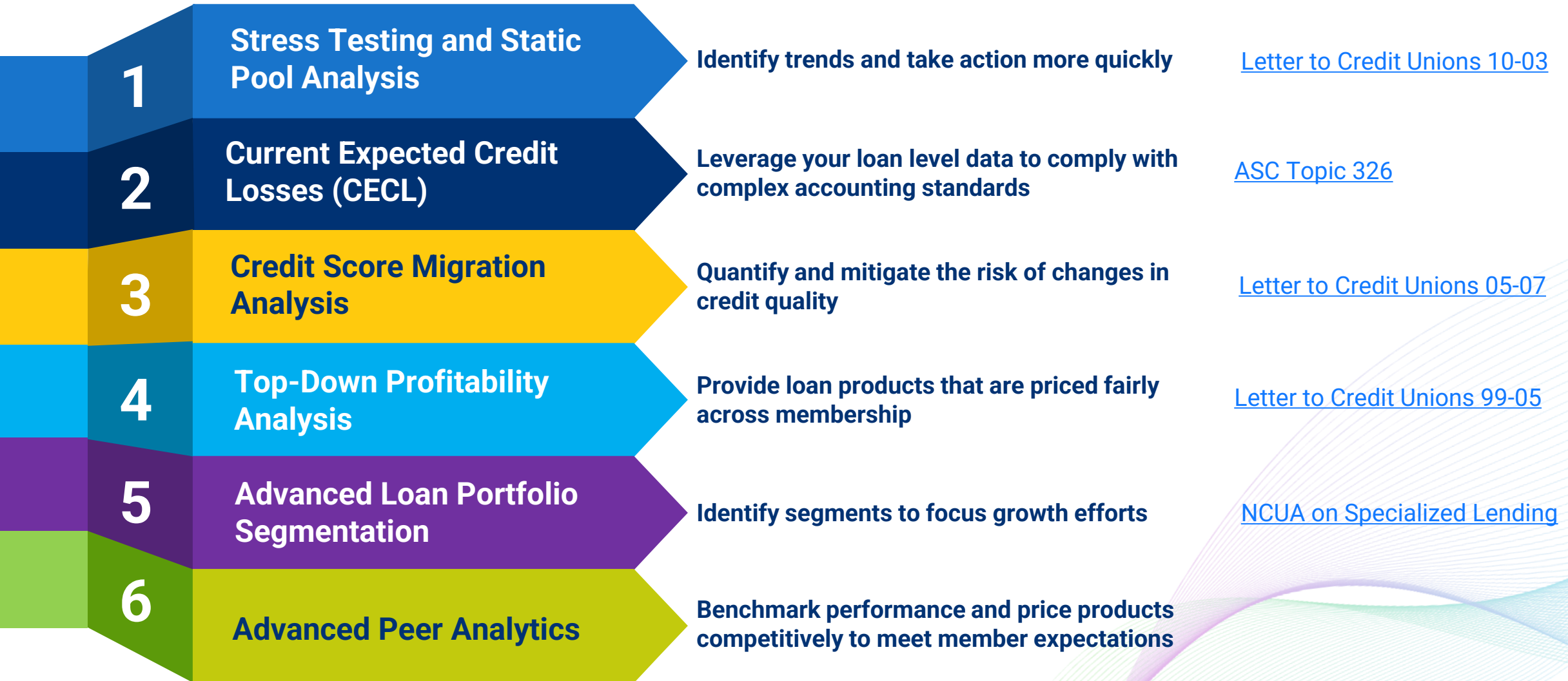
Multi-Dimensional Loan Portfolio Analytics (MDPA)



Trellance MDPA Model

Why Credit Unions Want It

Why Credit Unions Need It





Agenda

Econ 101

State of the Economy

How it Impacts your Members

How it Impacts your Credit Union

Supply and Demand

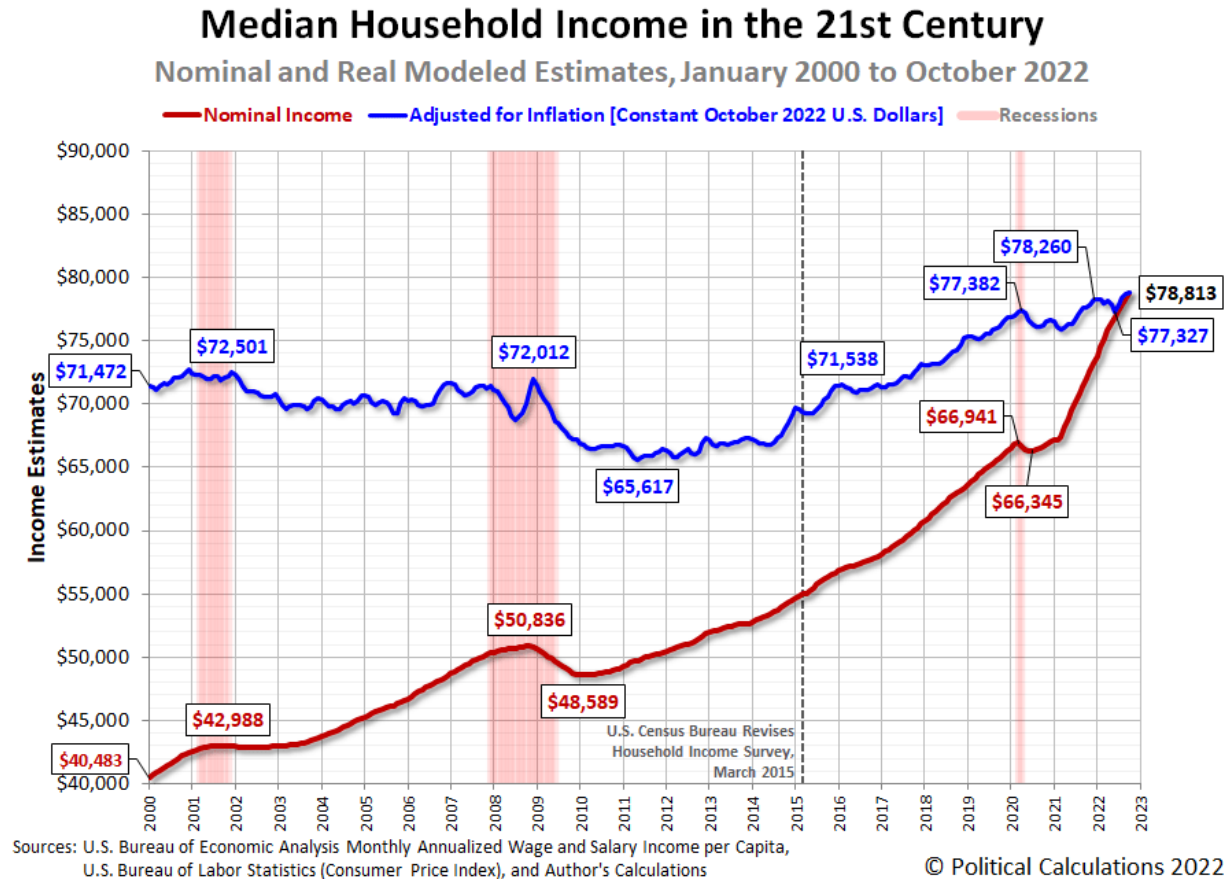


DEMAND	SUPPLY	PRICE
	unchanged	
	unchanged	
unchanged		
unchanged		

Demand – Government Stimulus and Increases in Income



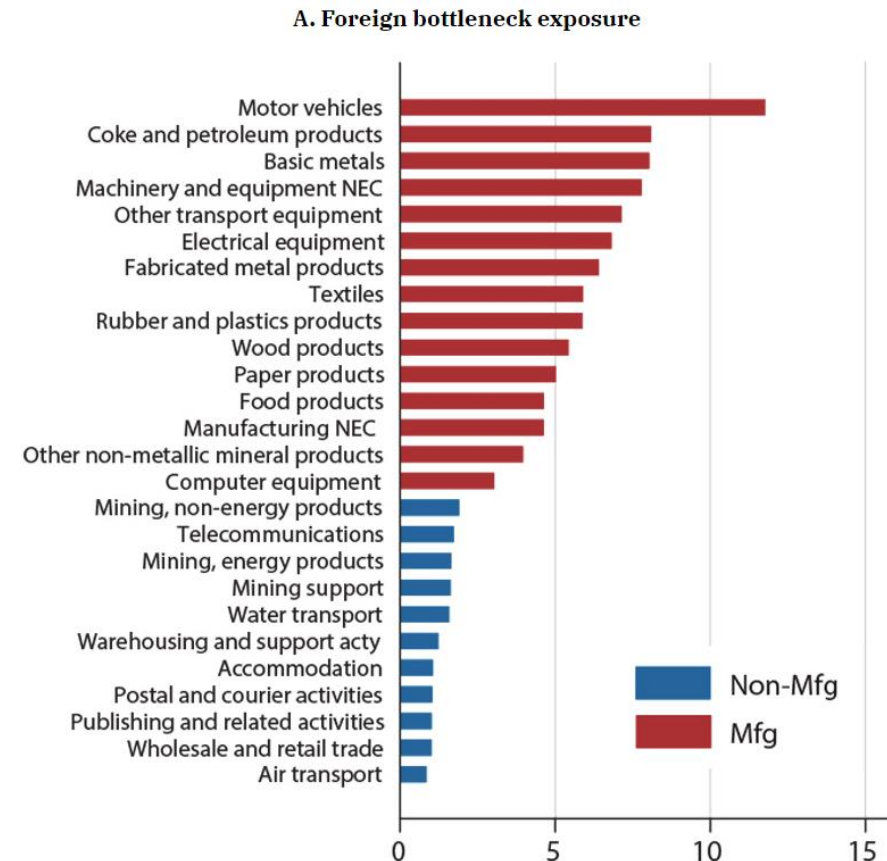
Widespread stimulus was provided to individuals and businesses. Government stimulus money was re-invested into what was unexpectedly a growing workforce and incomes rose.



Supply Chain Bottlenecks



Demand rebounded quickly, but supply chains did not, with pandemic-restricted bottlenecks created across manufacturing sectors.

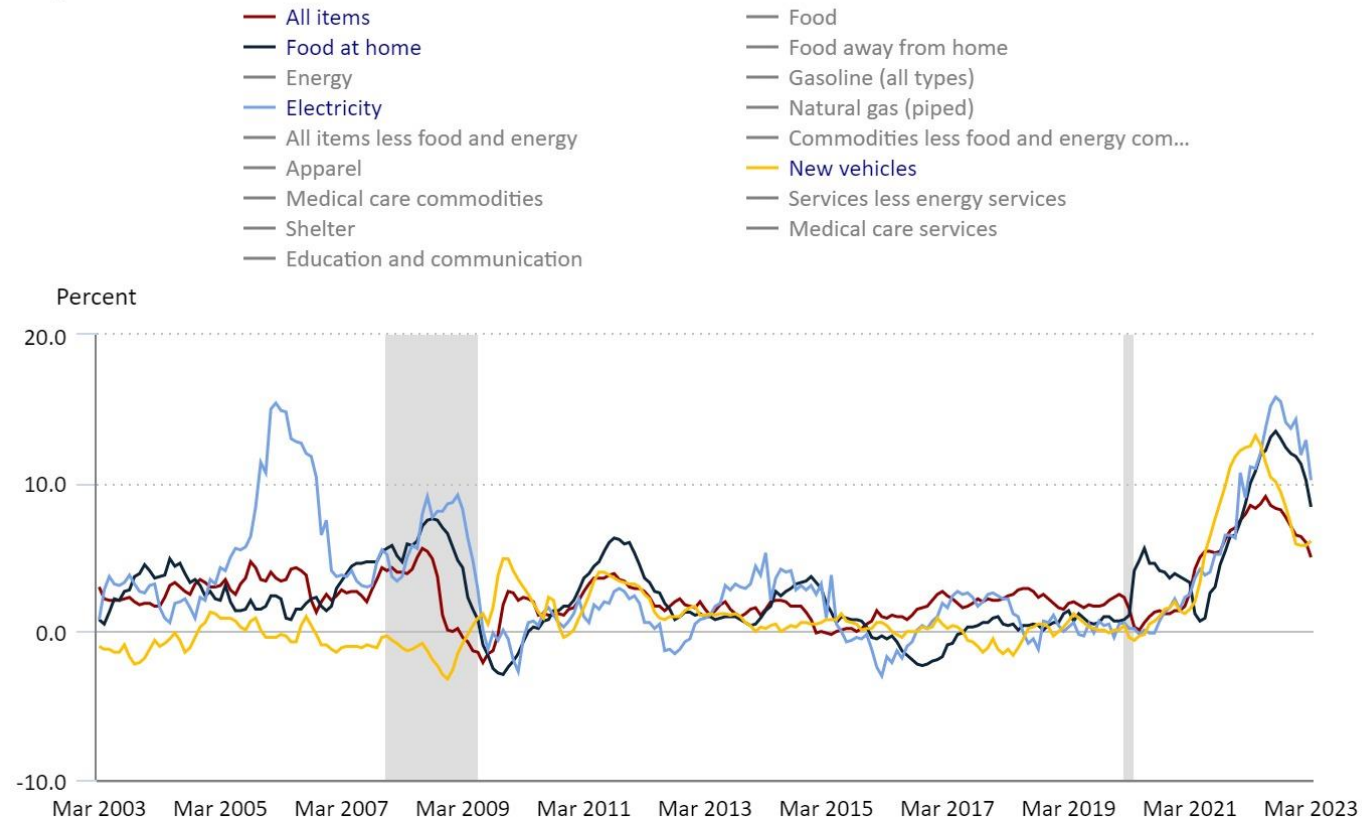


Inflation and Asset Values



Inflation eclipsed the Federal Reserve's 2% target in Q1 2021 and peaked at a whopping 9.1% in Q2 2022.

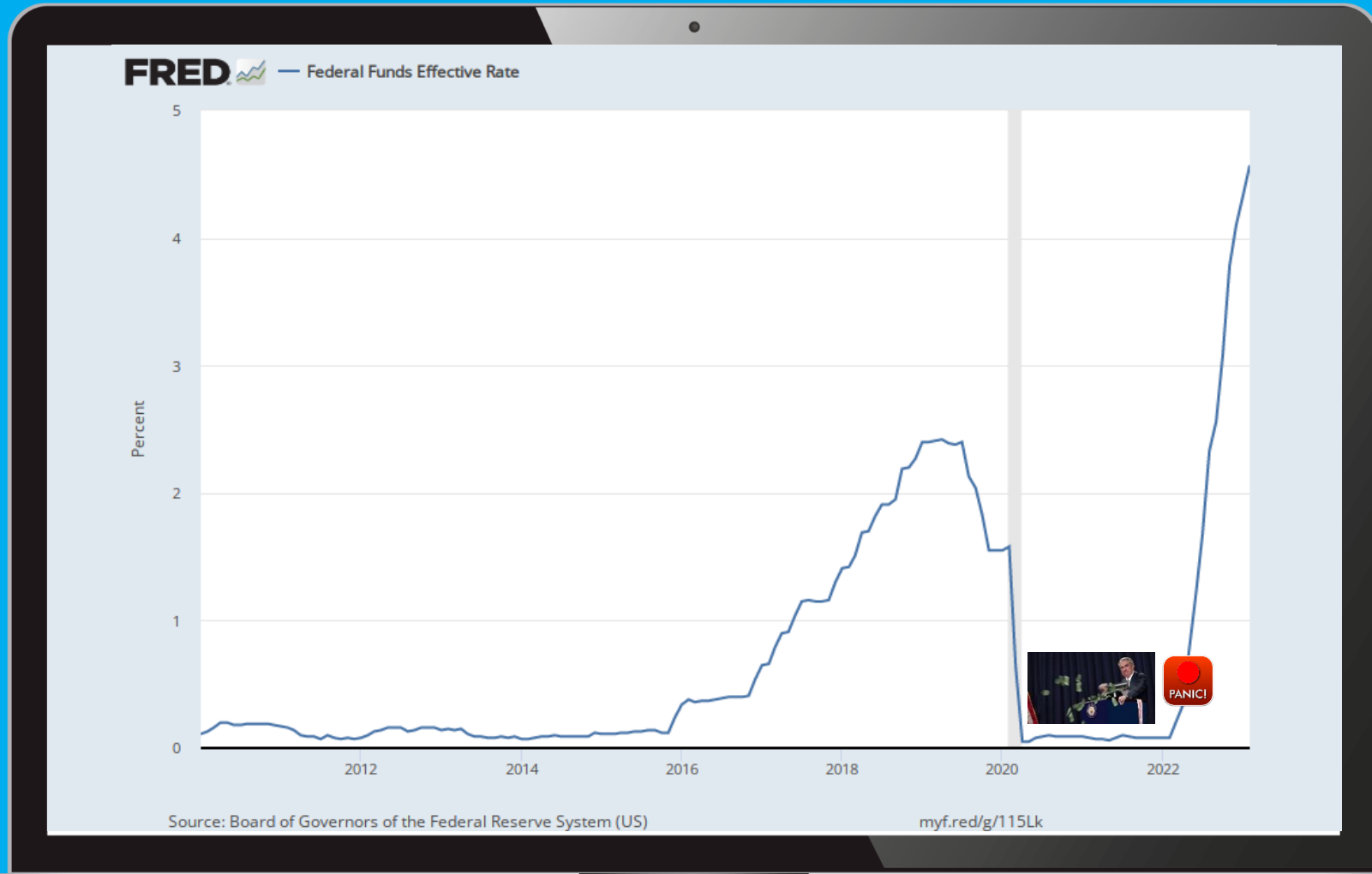
12-month percentage change, Consumer Price Index, selected categories, not seasonally adjusted



Source: U.S. Bureau of Labor Statistics.



State of Interest Rates



Auto Values



As a result of the supply demand imbalance, prices rose. Auto values increased 28.7% in 2021, unprecedented for what is normally a depreciating asset class.

Black Book Vehicle Depreciation	
Annual Depreciation	
2011	-8.3%
2012	-10.4%
2013	-13.3%
2014	-11.8%
2015	-13.2%
2016	-17.3%
2017	-13.2%
2018	-12.4%
2019	-16.8%
2020	-2.0%
2021	28.7%
2022	-22.9%
2023 *	-18.0%

* Forecast

Member Impacts



Decline in Borrower Purchasing Power

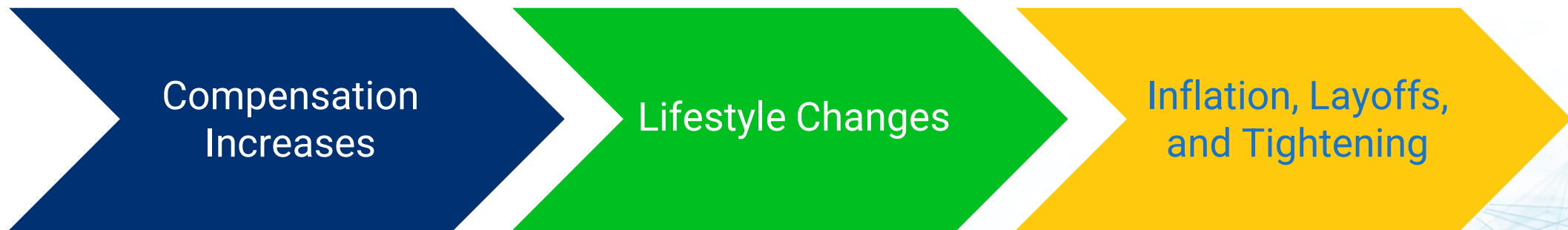
	December 31, 2021	Today
Median Home Price	351,994	377,406
Median Household Income	67,463	78,813
Mortgage Rates (30 Year Fixed)	3.00%	7.00%
31% of Monthly Gross Income	1,743	2,036
Implied Home Value	413,372	306,027
	Change in Purchasing Power	-26.0%

Member Impacts



What Happens when Interest Rates Increase?

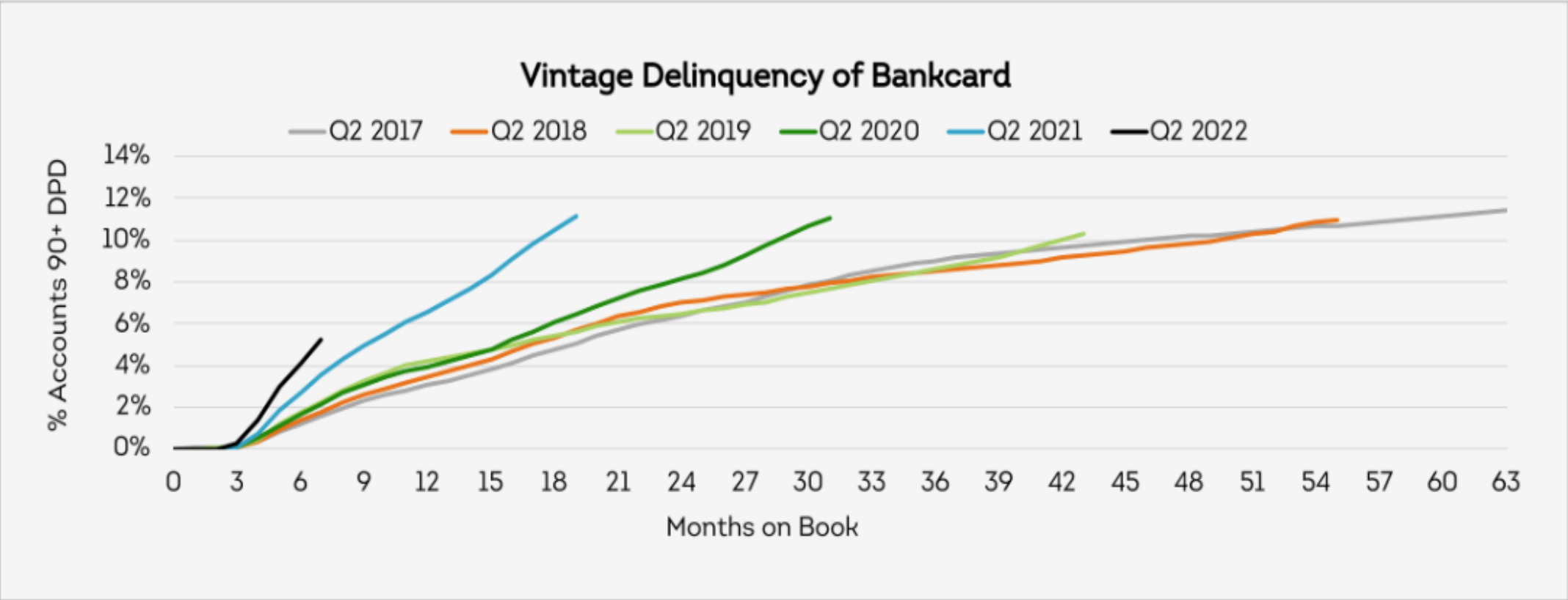
- Inflation has already put pressure on member finances
- Variable rate borrowers incur payment shock
- Defaults may increase as those living paycheck to paycheck reach a tipping point
- Decline in borrower purchasing power



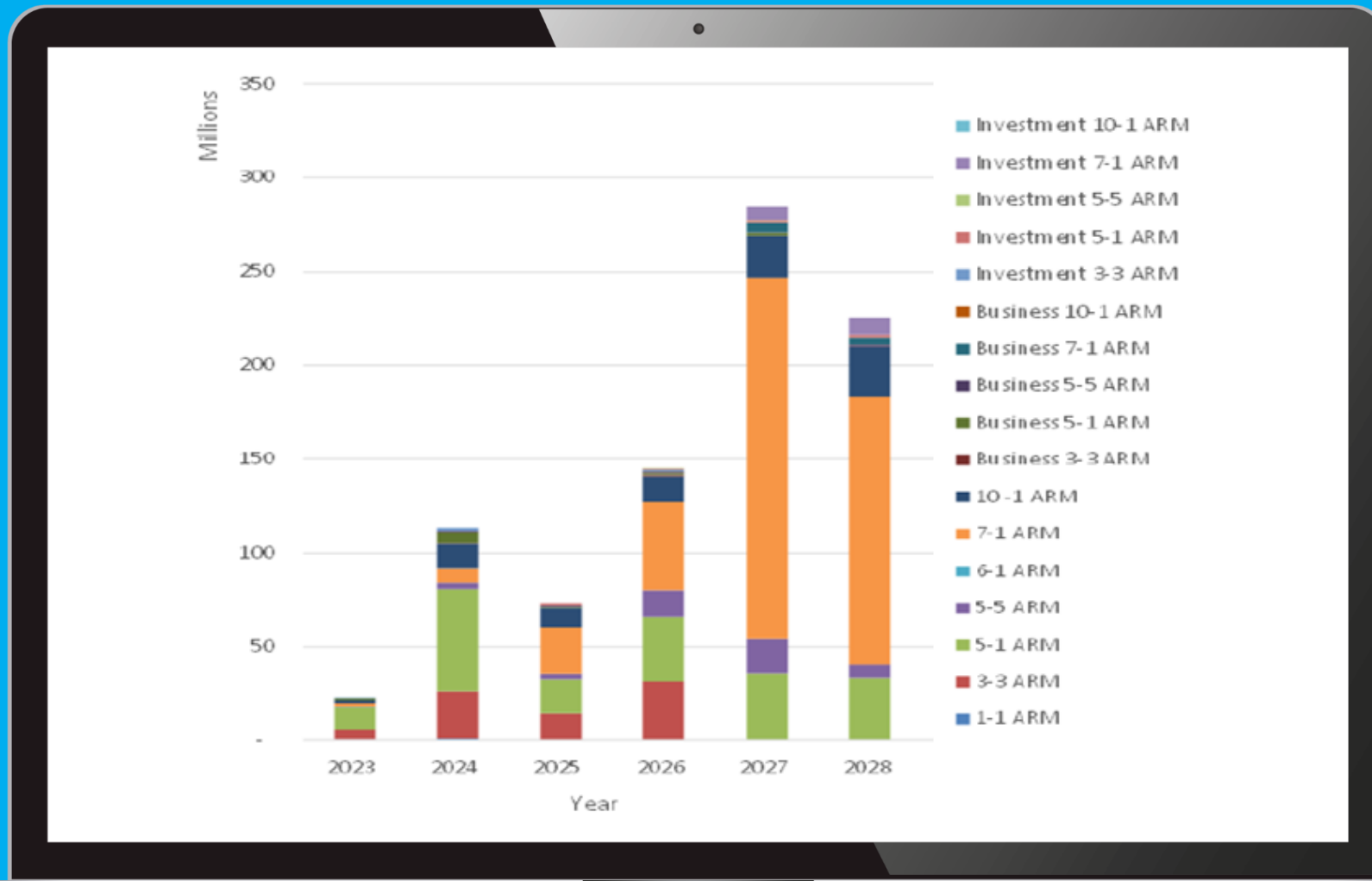
Member Impacts



BANKCARD



Interest Rate Repricing



Interest Rate Repricing

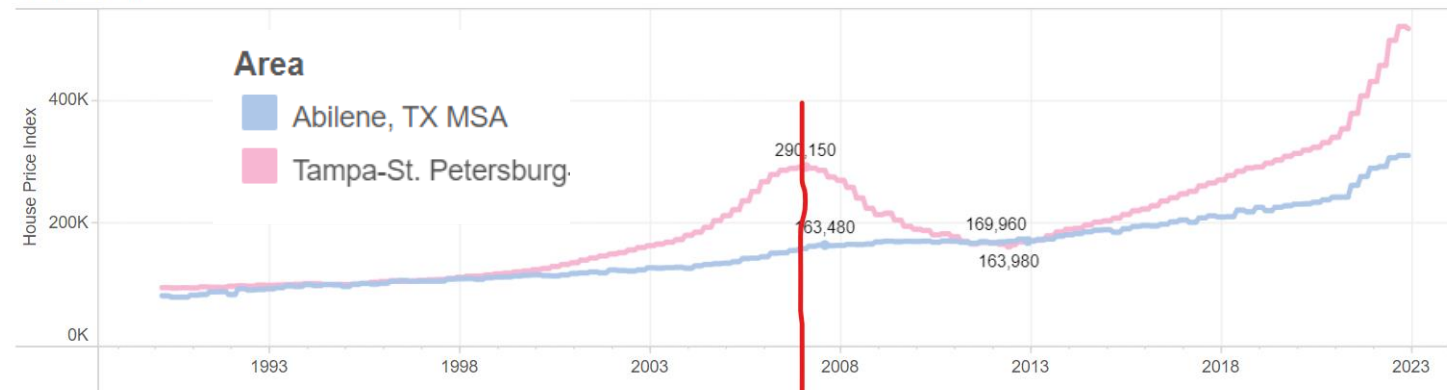


Loan Type	Units	First Adjustment %	Balances	P&I Payment Before	P&I Payment After	P&I Payment Change	Interest Rate Before	Interest Rate After	Interest Rate Change
1-1 ARM	7	0%	\$ 1,280,763	\$ 2,513	\$ 2,687	\$ 174	4.53%	5.12%	0.60%
3-3 ARM	138	14%	\$ 30,912,432	\$ 2,362	\$ 2,906	\$ 544	3.17%	4.89%	1.72%
5-1 ARM	320	19%	\$ 66,795,233	\$ 2,102	\$ 2,295	\$ 193	3.89%	4.70%	0.81%
5-5 ARM	12	100%	\$ 3,367,377	\$ 1,695	\$ 2,146	\$ 451	3.00%	5.00%	2.00%
7-1 ARM	37	86%	\$ 8,656,046	\$ 1,806	\$ 2,231	\$ 425	3.17%	4.96%	1.79%
10 -1 ARM	61	20%	\$ 15,838,331	\$ 2,108	\$ 2,218	\$ 110	4.16%	4.62%	0.46%
Business 3-3 ARM	2	0%	\$ 319,295	\$ 2,248	\$ 2,506	\$ 258	3.57%	5.17%	1.60%
Business 5-1 ARM	52	29%	\$ 6,408,682	\$ 1,872	\$ 1,961	\$ 89	3.84%	4.65%	0.81%
Business 5-5 ARM	4	100%	\$ 469,909	\$ 1,842	\$ 2,112	\$ 269	2.78%	4.78%	2.00%
Business 7-1 ARM	1	100%	\$ 201,382	\$ 2,530	\$ 2,884	\$ 354	2.25%	4.14%	1.89%
Investment 3-3 ARM	1	100%	\$ 1,697,190	\$ 7,112	\$ 8,872	\$ 1,760	2.50%	4.27%	1.77%
Grand Total	635	25%	\$ 135,946,640	\$ 2,189	\$ 2,488	\$ 299	3.67%	4.75%	1.08%

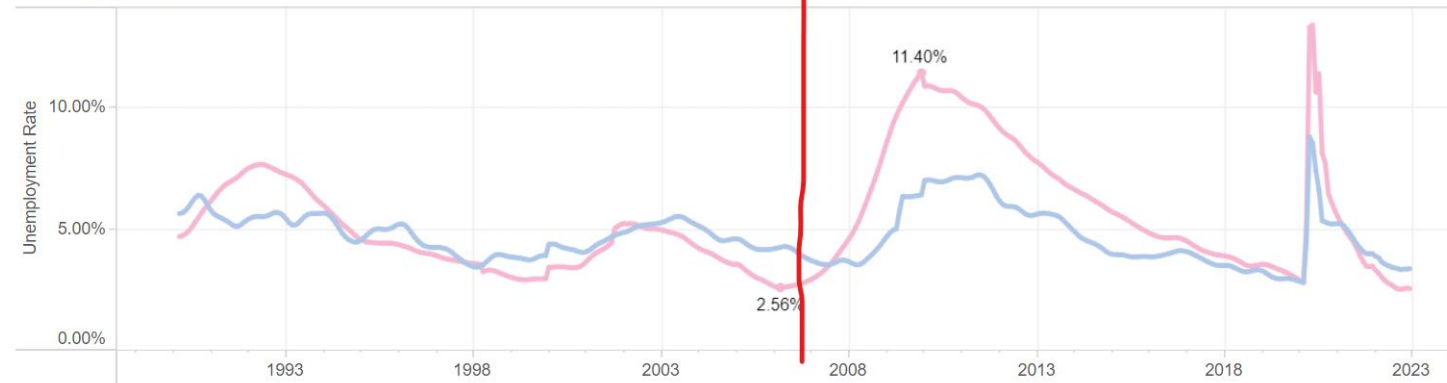
Economic Impacts

Quantifying Potential Severity

Home Indices



Unemployment



Economic Impacts – Concentration Risk



Loan Subgroup	Current Balance	Balance as a % of Net Worth	Balance as a % of Total Assets	% of Current Balance	Available Credit	Total Funded and Unfunded Commitments	% of Total Funded and Unfunded Commitments	Total as a % of Net Worth	% of Total Assets
AUTO - DIRECT NEW	28,102,703	29.57%	3.55%	3.94%	0	28,102,703	3.77%	29.57%	3.55%
AUTO - DIRECT USED	133,755,106	140.72%	16.92%	18.75%	0	133,755,106	17.94%	140.72%	16.92%
AUTO - INDIRECT NEW	24,959,922	26.26%	3.16%	3.50%	0	24,959,922	3.35%	26.26%	3.16%
AUTO - INDIRECT USED	36,462,886	38.36%	4.61%	5.11%	0	36,462,886	4.89%	38.36%	4.61%
BUSINESS	121,431,336	127.75%	15.36%	17.02%	3,564,865	124,996,201	16.76%	131.50%	15.81%
CONS - CREDIT CARD	608,480	0.64%	0.08%	0.09%	659,876	1,268,357	0.17%	1.33%	0.16%
CONS - OTHER SECURED	100,327,042	105.55%	12.69%	14.06%	0	100,327,042	13.46%	105.55%	12.69%
CONS - SHARE SECURED	1,479,877	1.56%	0.19%	0.21%	0	1,479,877	0.20%	1.56%	0.19%
CONS - UNSECURED	13,212,064	13.90%	1.67%	1.85%	8,081,199	21,293,263	2.86%	22.40%	2.69%
R/E - 1ST MORTGAGE	116,572,056	122.64%	14.75%	16.34%	0	116,572,056	15.63%	122.64%	14.75%
R/E - HOME EQUITY	31,950,328	33.61%	4.04%	4.48%	19,972,174	51,922,502	6.96%	54.63%	6.57%
R/E - MANUFACTURED HOMES	104,455,449	109.89%	13.21%	14.64%	0	104,455,449	14.01%	109.89%	13.21%
Grand Total	713,317,250	750.46%	90.23%	100.00%	32,278,115	745,595,364	100.00%	784.42%	94.31%

Economic Impacts – Stress Testing



Real Estate Stressor Auto Stressor Unemployment Stressor Minimum Net Worth



Total Assets Regulatory Net Worth Other Shock Loan Loss Reserve Min Probability of Default

Capital Risk Matrix

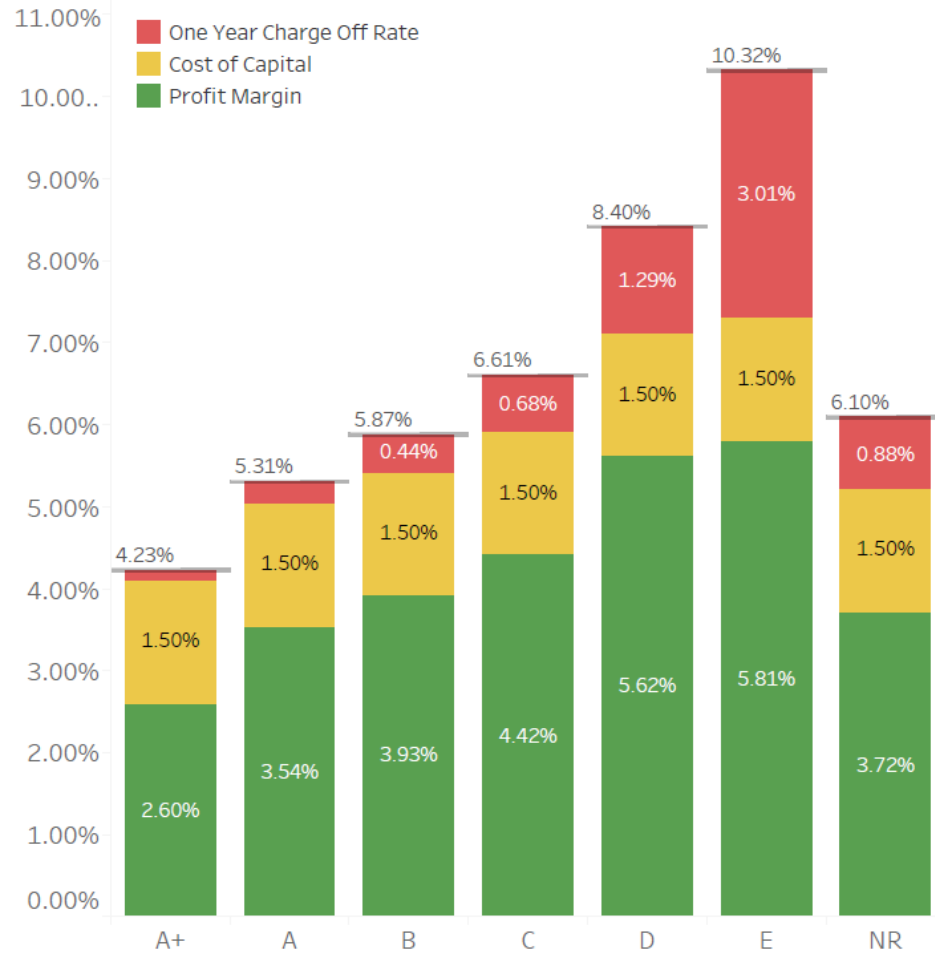
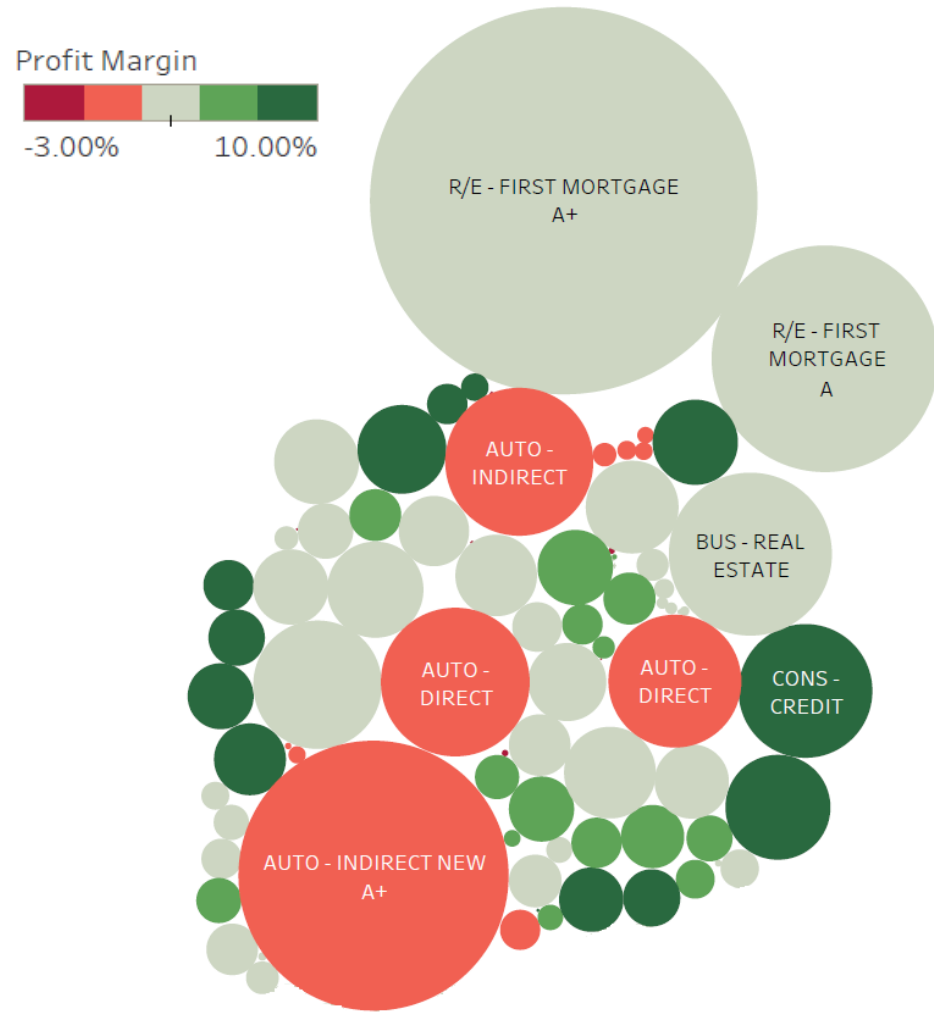
Regulatory Net Worth	95,050,771	Total Assets	790,555,069	<u>Net Worth Summary.</u>	
High Risk Unfunded Commitments	254,699	Stress Adjusted Risk of Loss High	16,478,775		
Stress Adjusted Risk of Loss High	16,478,775	Risk Adjusted Total Assets	774,076,294	Net Worth %	12.02%
Interest Rate / Other Shock	1,000,000	Minimum Net Worth	46,444,578	Risk Adjusted Net Worth %	10.38%
Allowance for Loan Losses	3,000,006	Capital Cushion / (Deficiency)	33,872,725		
Risk Adjusted Net Worth	80,317,303				

What does success look like to your Credit Union?

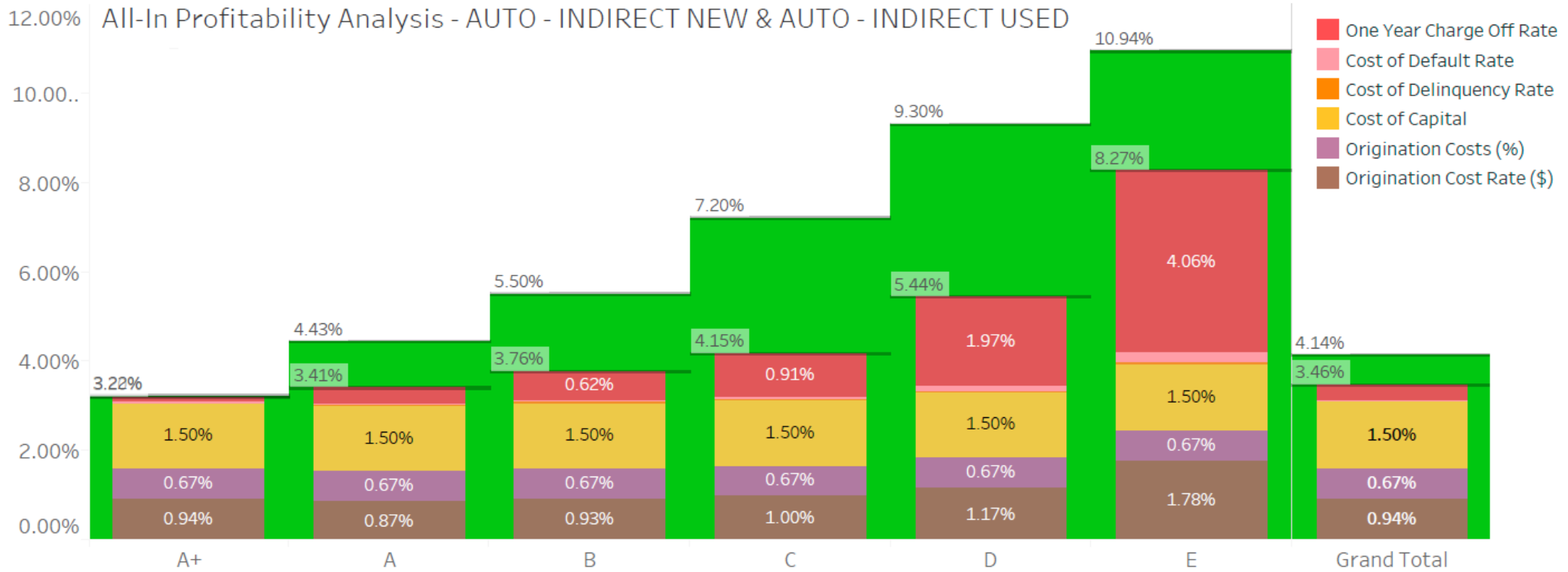
Mission Statement

The mission of Credit Union is to focus on serving the financial needs of our members by providing quality services while maintaining fiscal soundness.

Quantifying Value



Quantifying Value

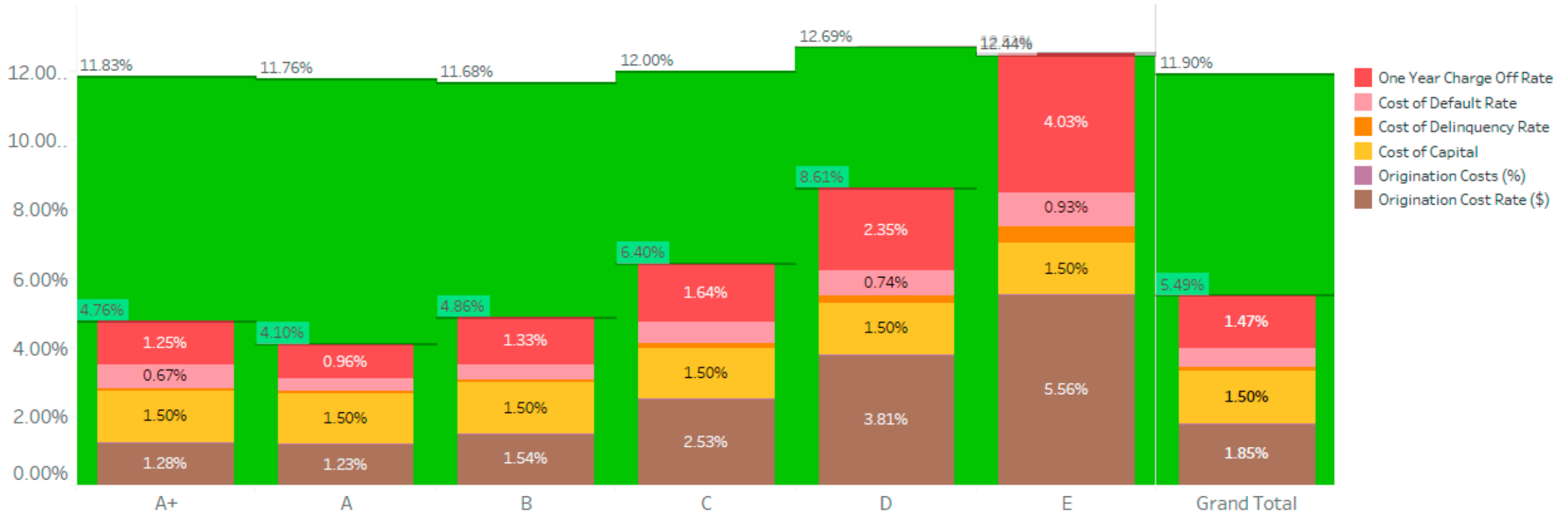


	A+	A	B	C	D	E	NR	Grand Total
Net Profit Margin	0.02%	1.03%	1.74%	3.05%	3.86%	2.66%	-46.46%	0.67%

Quantifying Value

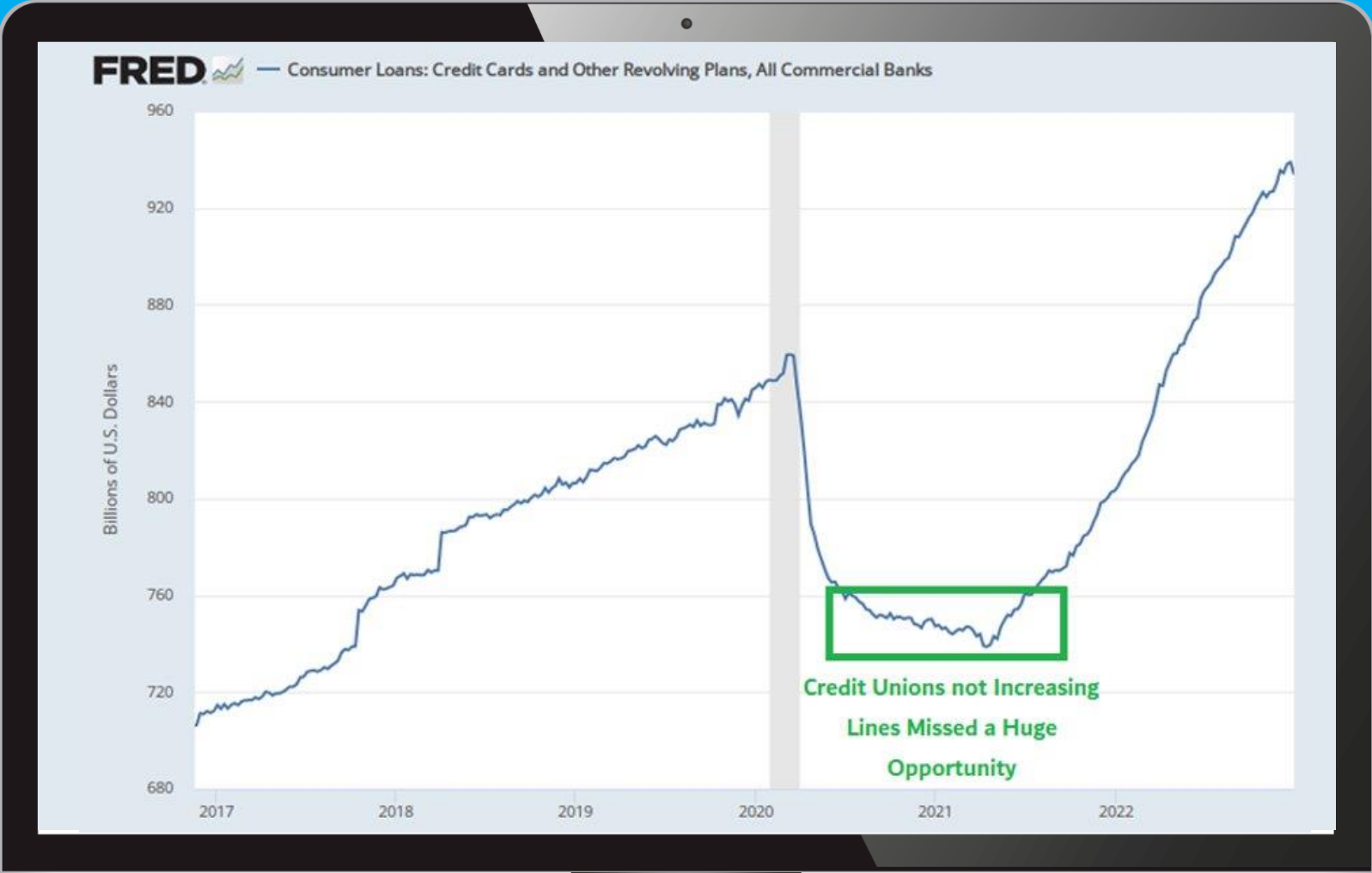


All-In Profitability Analysis - CONS - CREDIT CARD



	A+	A	B	C	D	E	NR	Grand Total
Net Profit Margin	7.07%	7.66%	6.82%	5.60%	4.08%	-0.07%	3.55%	6.00%

Demand for Credit Lines



Demand for Refinance

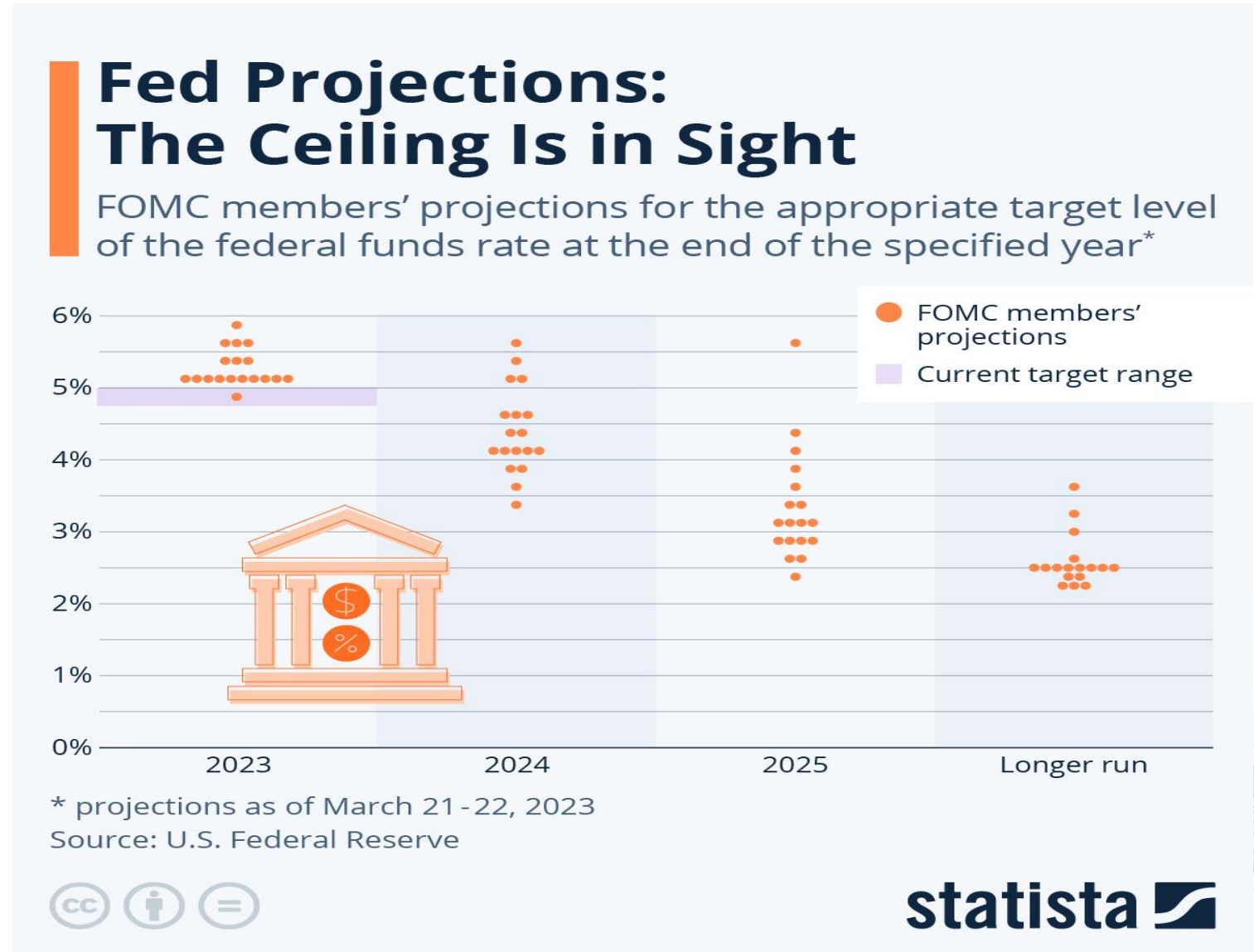


Where do we go from here?



March 2023 FOMC Projections

- 2023: +25 bps
- 2024 to 2026: -50 bps to -100 bps annually



Where do we go from here?



June 2023 FOMC Projections

- Update: FOMC expects (at least) one more rate hike in 2023 and slower decline.

Fed Pauses Rate Hikes But Signals More to Come

Upper limit of the U.S. federal funds target rate range*



* Dotted lines indicate median projections of the midpoint of the appropriate target rate range at the end of the specified calendar year.

Source: U.S. Federal Reserve



State of Interest Rates – March 7, 2023

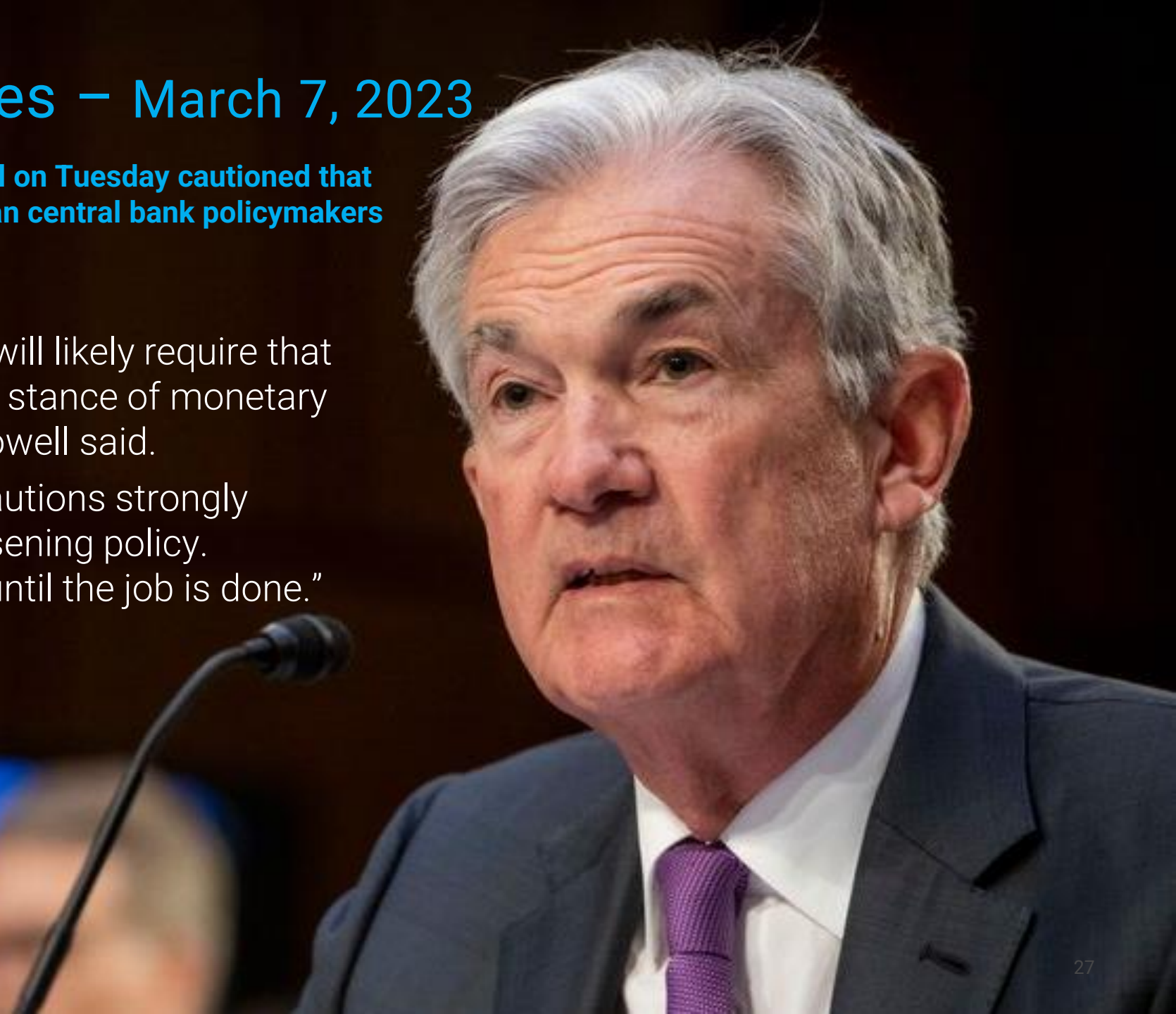
Federal Reserve Chairman Jerome Powell on Tuesday cautioned that interest rates are likely to head higher than central bank policymakers had expected.



Restoring price stability will likely require that we maintain a restrictive stance of monetary policy for some time,” Powell said.

“The historical record cautions strongly against prematurely loosening policy. We will stay the course until the job is done.”

[Read the Full Story](#)





Thank you!

For more visit Trellance.com