D·C·G
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◆ *Risk Management Strategy & Solutions* ◆

CREDIT: IN A POST-COVID WORLD, WHAT CAN WE EXPECT?

April 28, 2022

D·C·G
Balance Sheet &
Model Risk Management
VIRTUAL CONFERENCE
Save the Date: **June 7-9, 2022**

Justin Bakst, Executive Director
jbakst@darlingconsulting.com

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Government Stimulus Masked Credit Environment

Credit Losses Did Not Materialize…..What Do You See?

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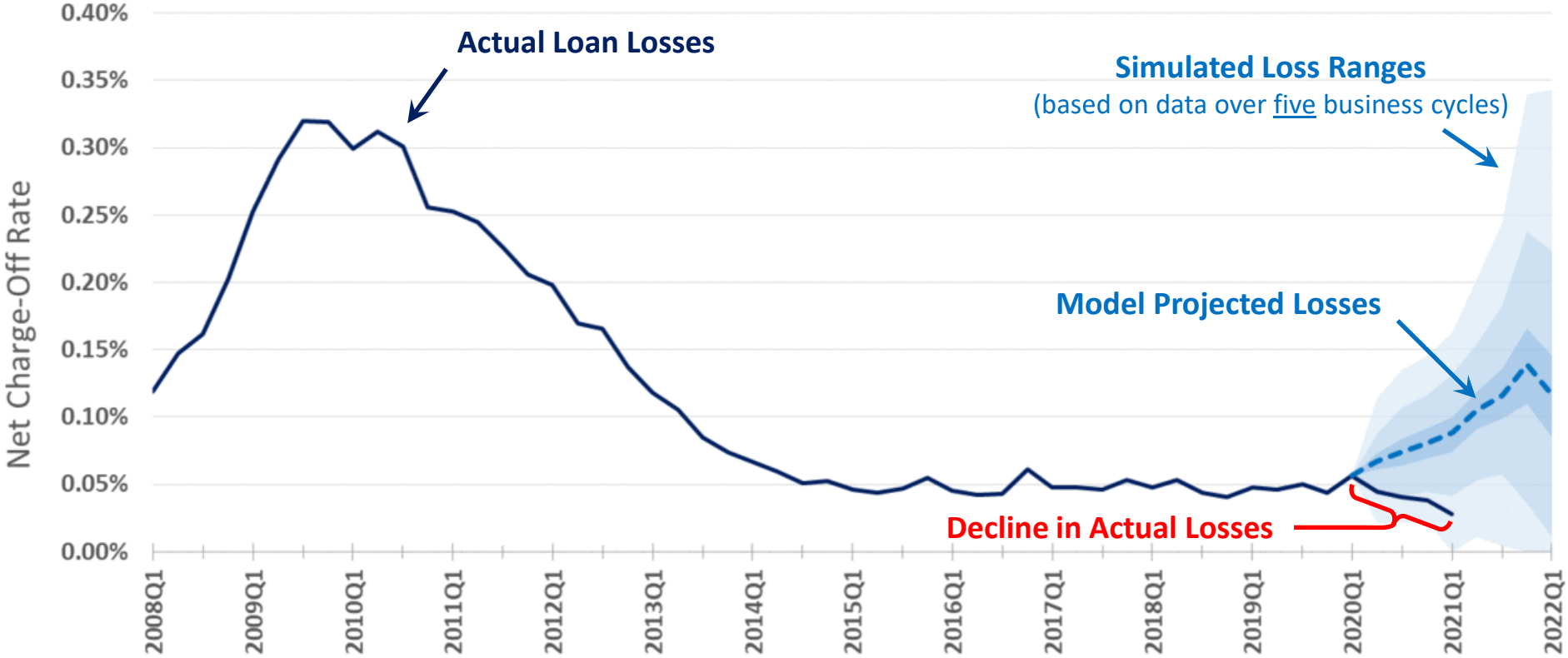
What If U.S. Government Didn't Intervene?



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Market Conditions Impacting Credit

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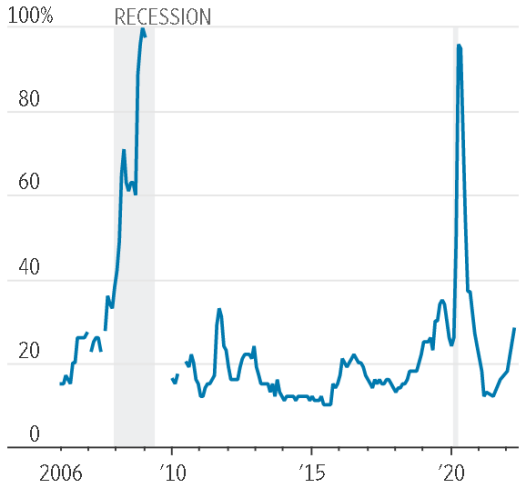
Probability of Recession Beginning to Increase

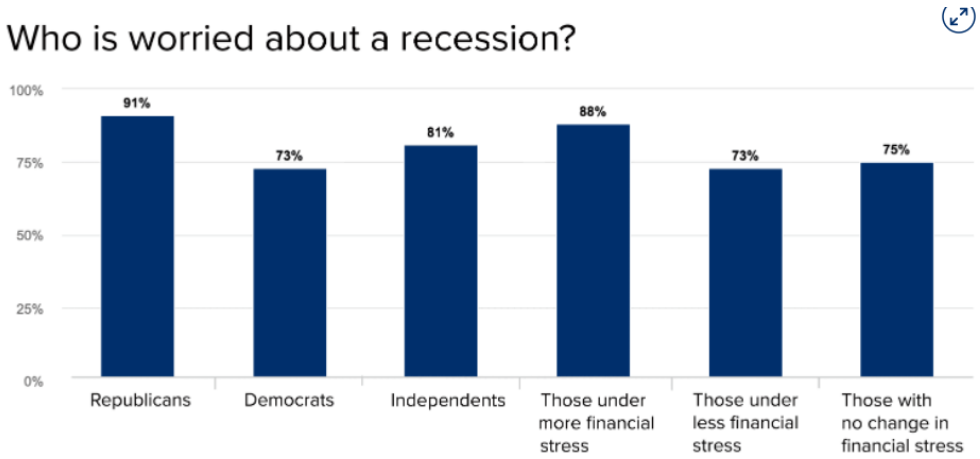
Survey of Economists & Households

Probability the U.S. Is in a Recession in Next 12 Months Including Today



Note: Gaps indicate question not asked or data unavailable
Source: Wall Street Journal survey of economists

81% of U.S. Adults Are Worried About a Recession Hitting This Year



Source: CNBC, Momentive

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Regulators Becoming More Concerned

THE WALL STREET JOURNAL.
English Edition | Print Edition | Video | Podcasts | Latest Headlines

RISK & COMPLIANCE JOURNAL

Top Banking Regulator Calls for Caution as Risk Landscape Worsens

The chance of tail risks—unlikely but highly impactful risk events—has increased with the war in Ukraine, said Acting U.S. Comptroller of the Currency Michael Hsu

By Richard Vanderford Follow
March 31, 2022 4:25 pm ET

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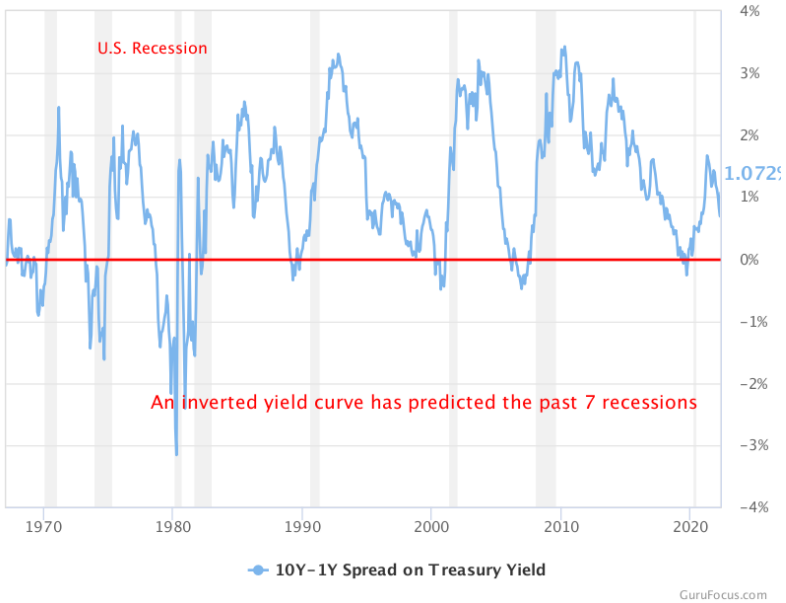
A New Set of Credit Concerns

Uncertainty Remains Elevated

- Russia-Ukraine War
- Inflation / Supply Chain
- Fed Uncertainty
- Volatility
- More COVID Variants

10Y-1Y Yield Curve Spread
Approaching Inversion



Source: GuruFocus

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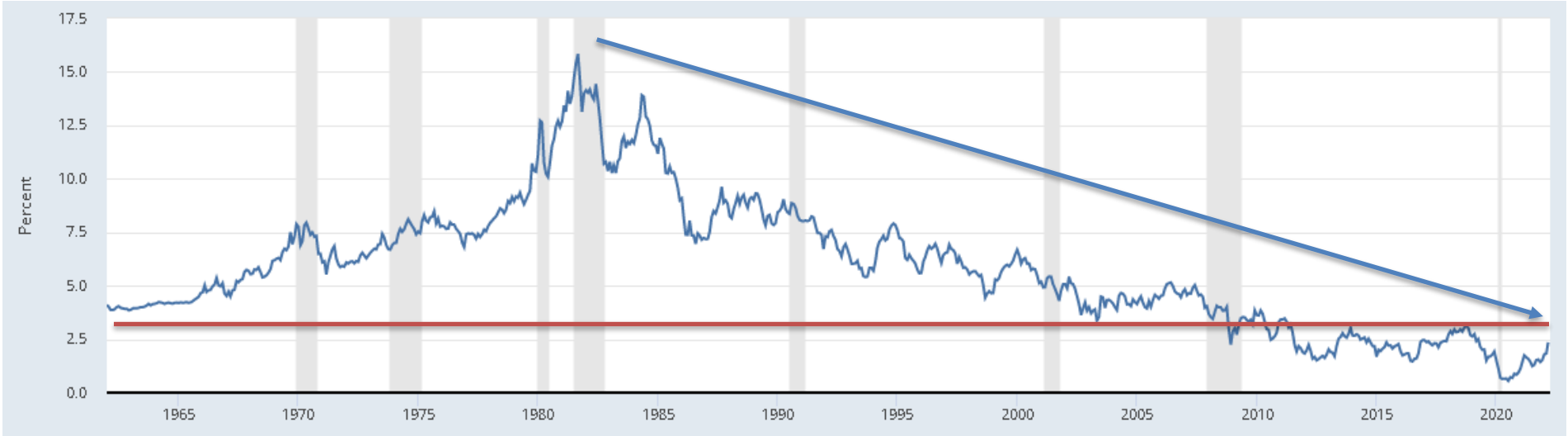
Interest Rate Outlook Top of Mind

10Y Treasury Rates
Have Been Moving Down Since 1982



Source: Board of Governors Federal Reserve (FRED)

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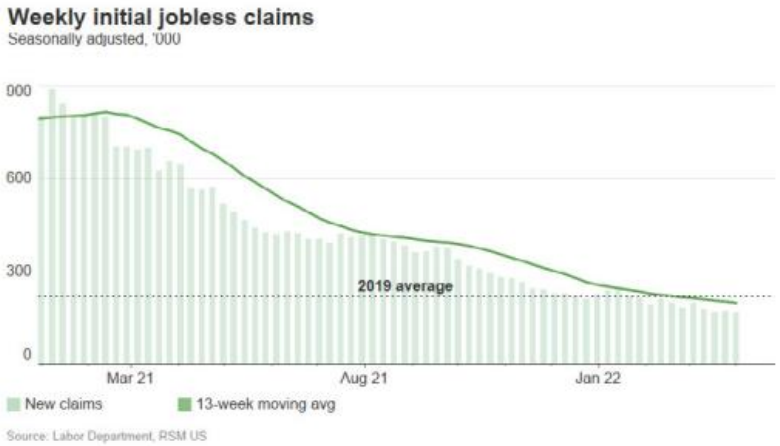
The FOMC Is Committed to Fighting Inflation

FOMC Dashboard: The Dual Mandate

Weekly Jobless Claims Below 2019 Levels



Source: Labor Department, RSM

US Wage Increases 8% While Fed Funds Target Rate Disconnected

Source: Andreas Steno

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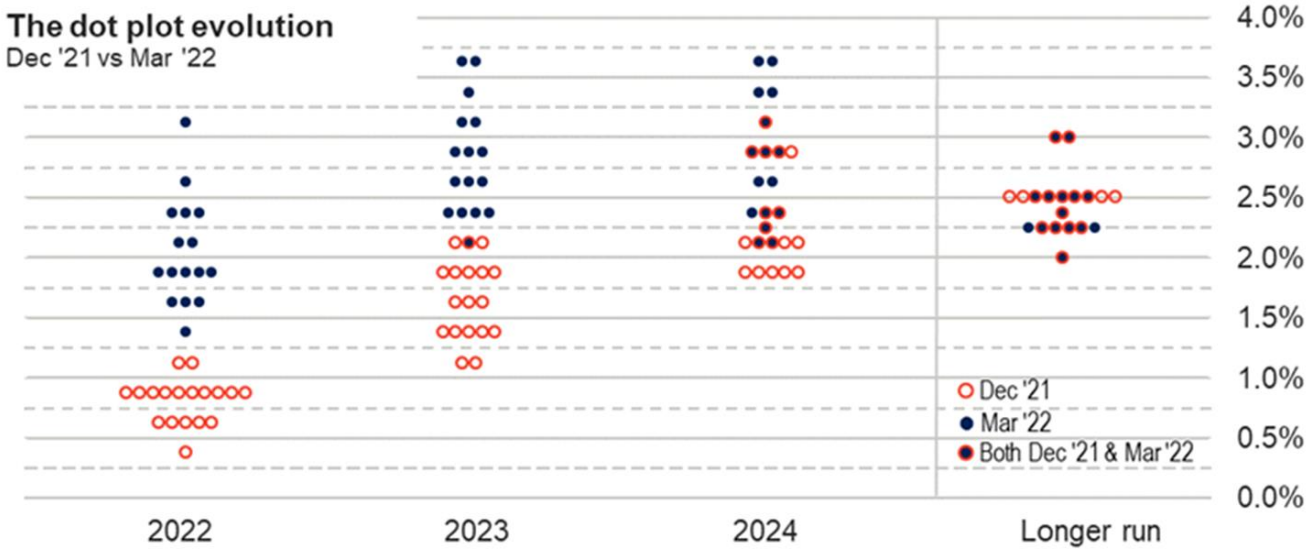
How Will the FOMC Respond?

The FOMC Dot Plot Is Now Inverted



Source: Federal Reserve Board of Governors

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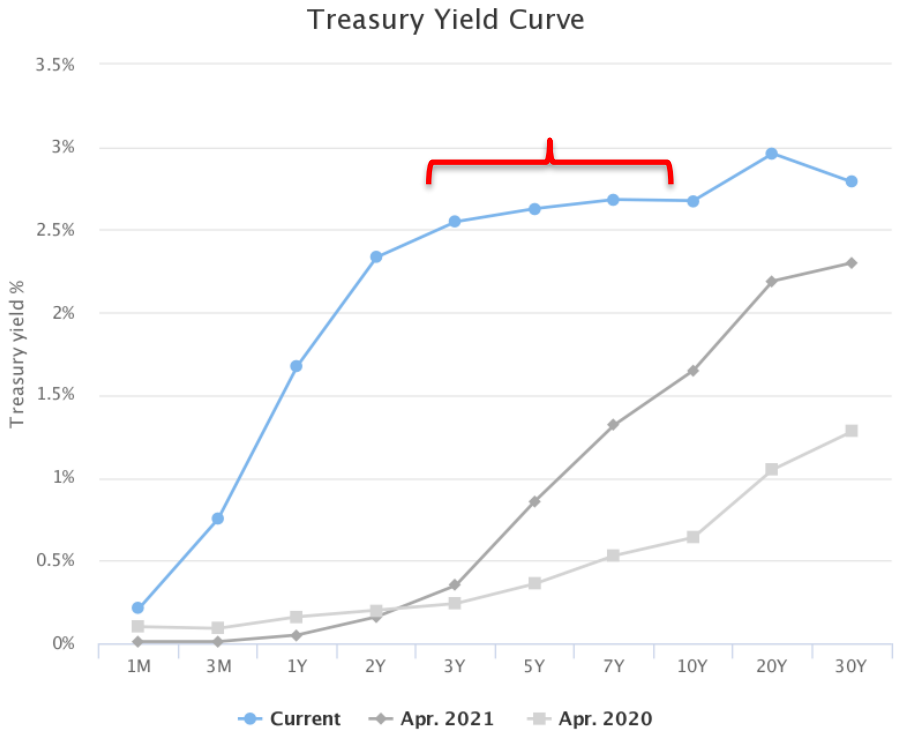
Yield Curve Flat Early in Cycle

Comparing Yield Curves



Source: GuruFocus

2Y-7Y Part of Yield Curve Flat.

Longer-Term Rates May Have Little Room to Move Higher.

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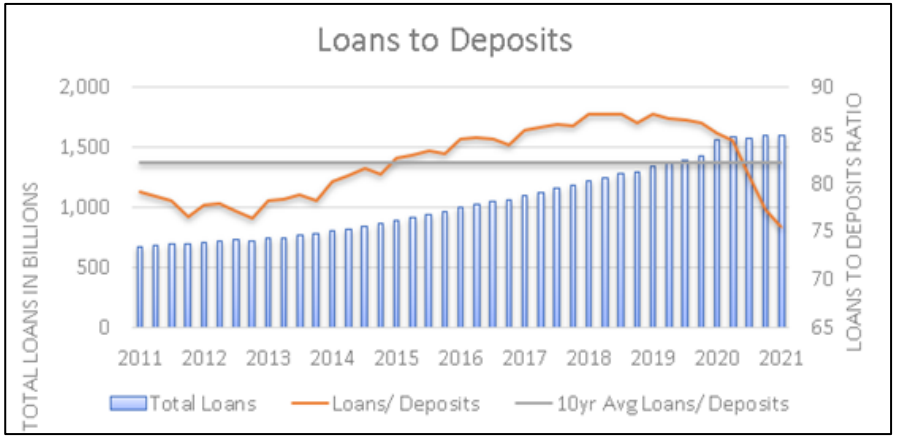
Will Bank Margin Trends Reverse?

Loan To Deposits Ratio at 75%
Below Historical Averages



Source: FDIC, DCG

Net Interest Margin Pressure
Given Low Rate Environment & Deposit Surge

Source: Board of Governors Federal Reserve (FRED)

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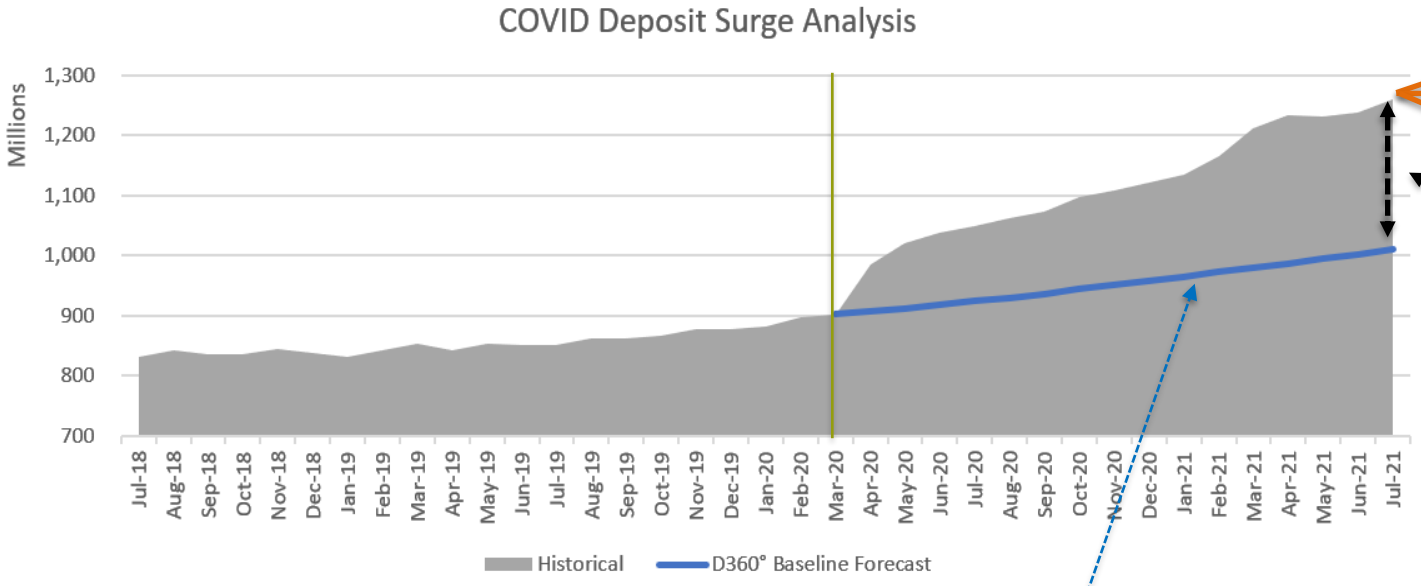
Deposit Behavior Key Variable for Bank Earnings

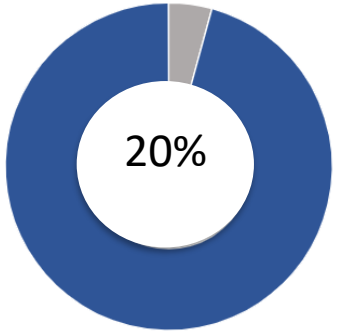
What Is Your Deposit Outlook?



Source: Darling Consulting Group Deposits360

?

"Surge"



Pre-Pandemic Forecast

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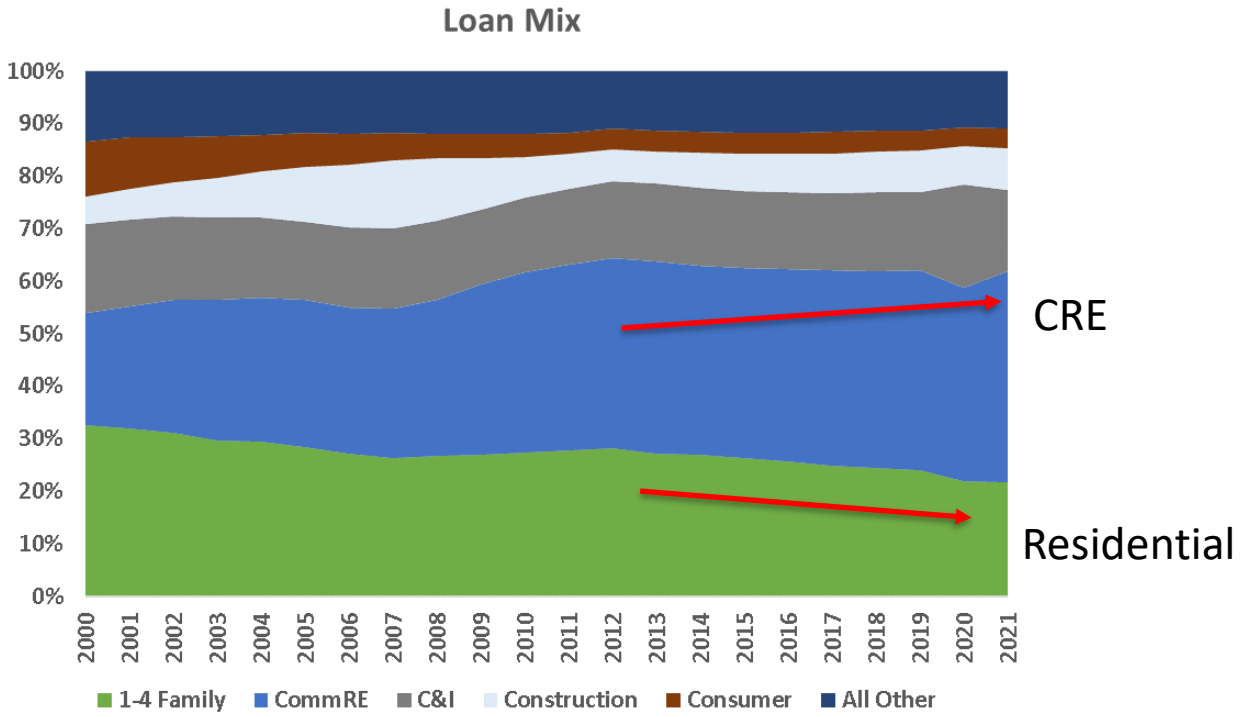
Source: DCG's Deposits 360

Loan Mix : Share of Residential Volume On The Decline

Commercial Real Estate Filling the Void



Source: FDIC, DCG

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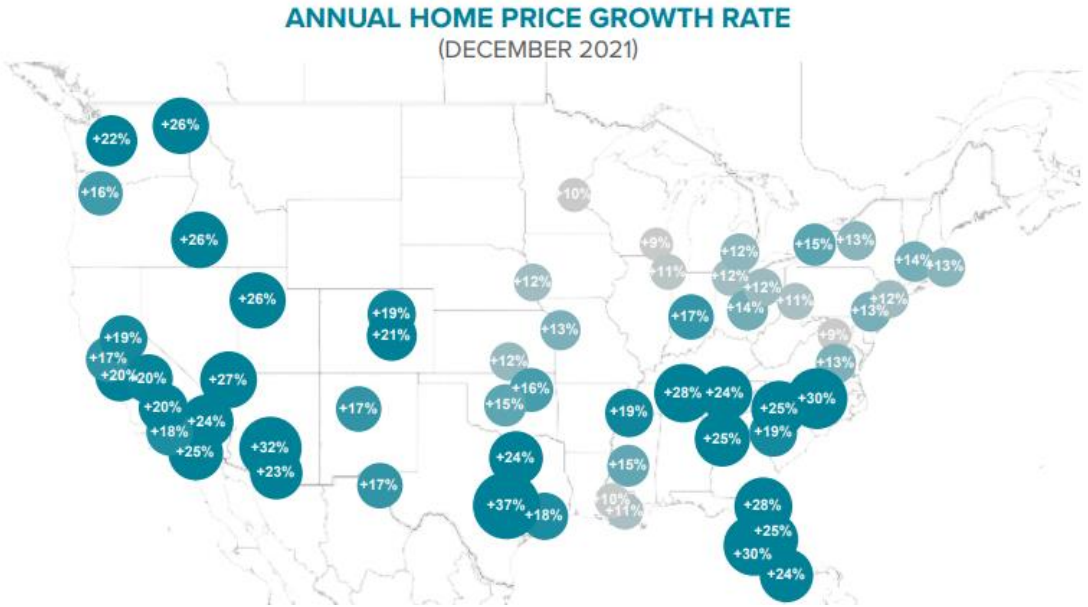
Annual Home Price Increased at Record Levels in 2021



Source: Black Knight Home Price Index

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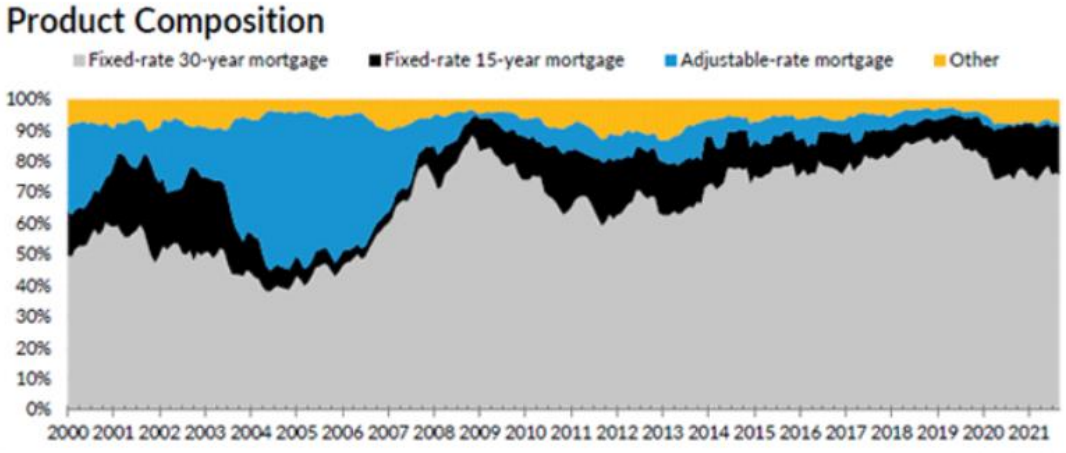
Residential Valuations Are High But This Isn't 2007

Adjustable-Rate Mortgages
Are Not As Prevalent This Time Around



Source: Housing Finance Policy Center, Black Knight Home, eMBS, HMDA, SIFMA, and Urban Institute
Note: Includes purchase and refinance originations

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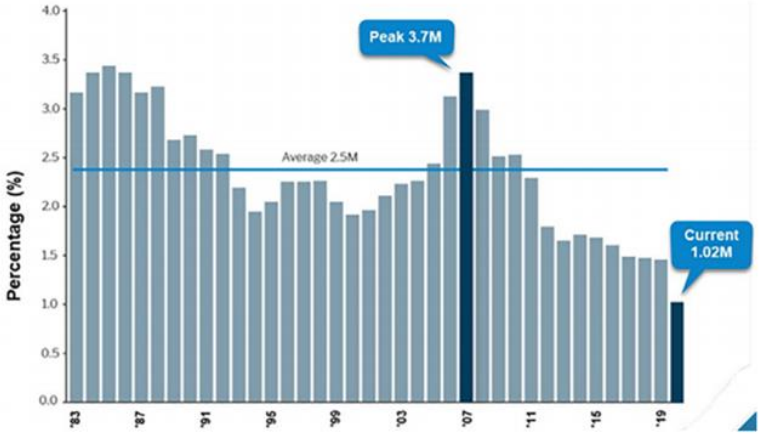
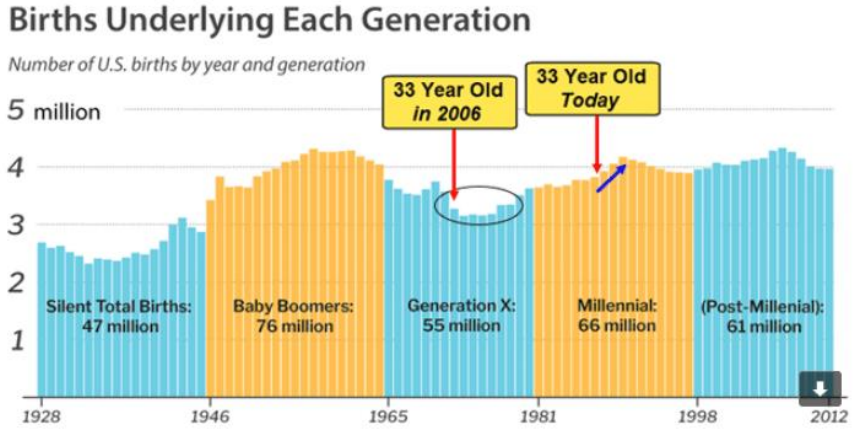
Residential Valuations Are High But…….

Residential Construction (Supply) Still Trending Downwards



Source: Barry Habib, MBS Highway, Mauldin Economics

Demographics Suggest Increased Demand At Prime Home Buying Age



Source: Barry Habib, MBS Highway, Mauldin Economics

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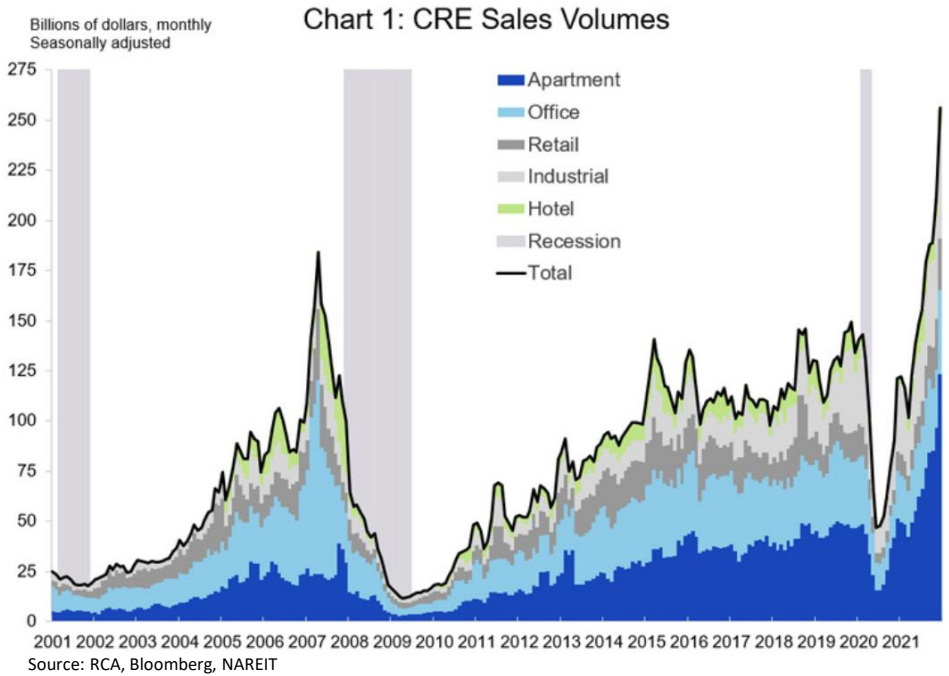
Commercial Real Estate Collateral and Market Risks

CRE Sales Volume Highest in 20 Years
But Beware of Risks



Source: RCA, Bloomberg, NAREIT

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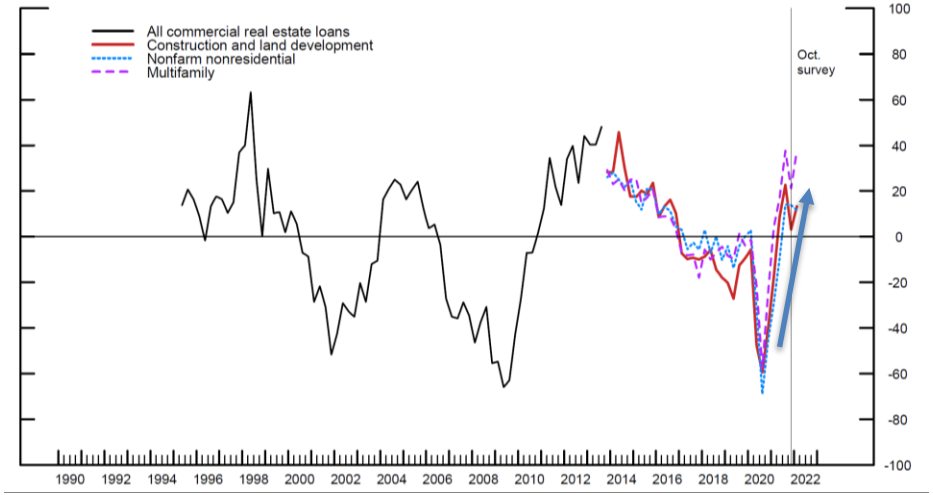
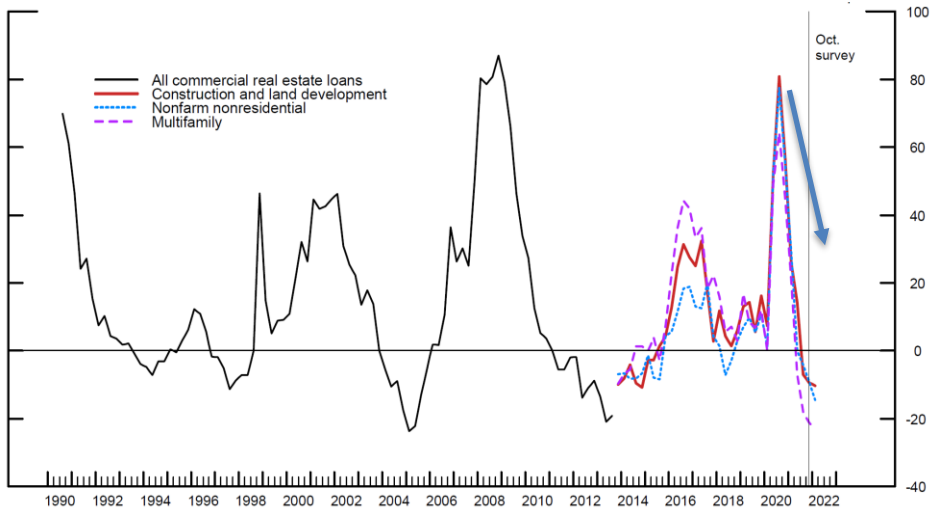
Commercial Real Estate Lending: Supply & Demand

FRB Senior Lender Survey

Loan Demand
Moving Higher



Loan Supply
Looser Underwriting Standards



Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices

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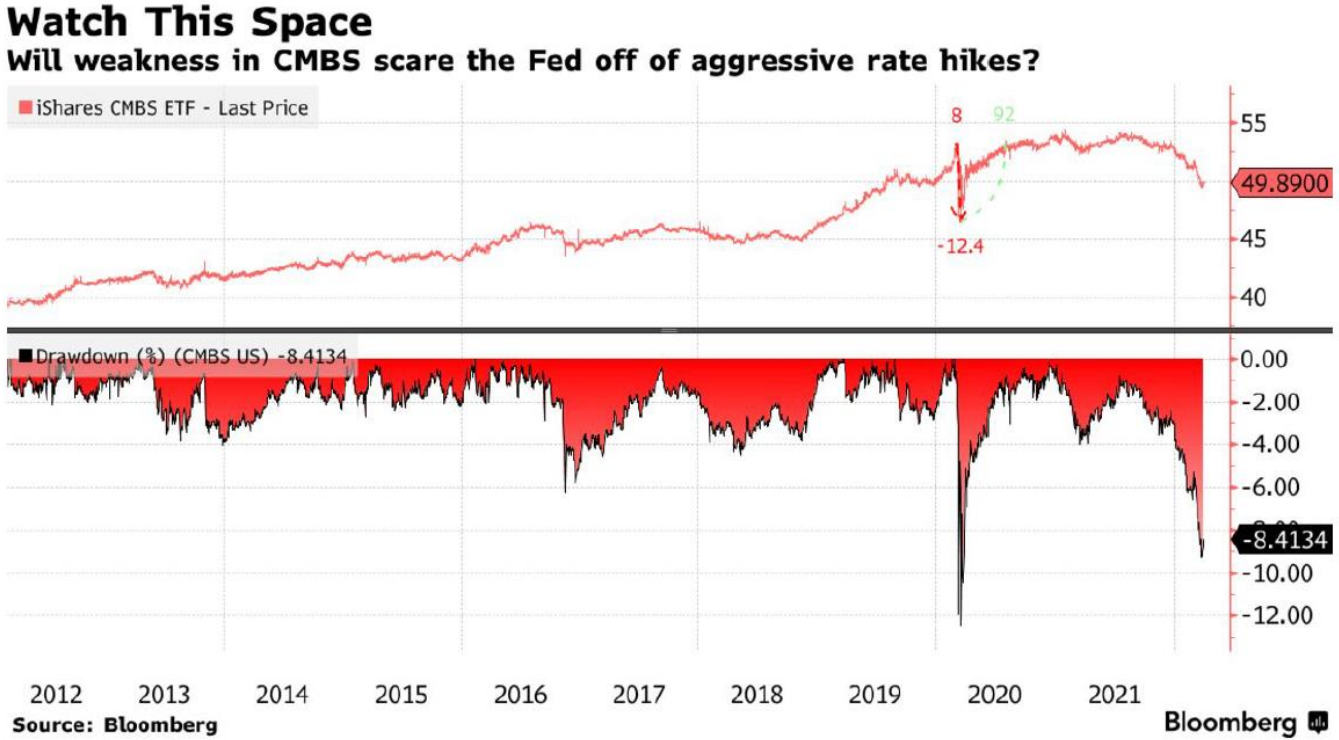
CRE Collateral and Market Risks

CMBS EFT Drawdown Second Worst Ever



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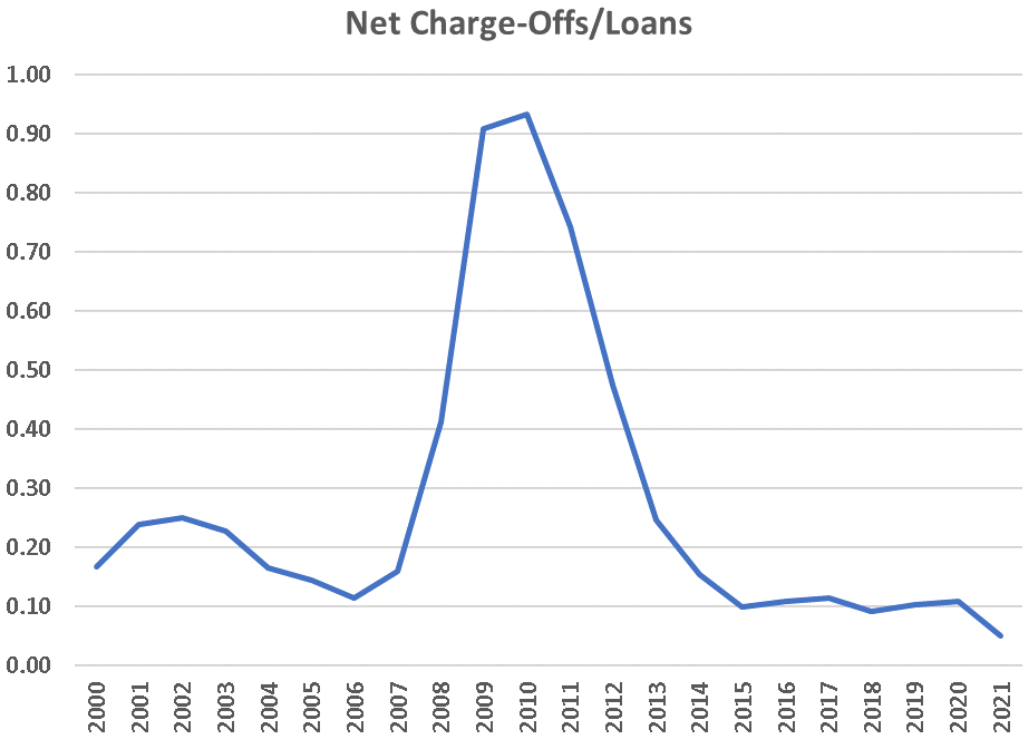
Overall Credit Levels

Net Charge Offs



Source: FDIC, DCG

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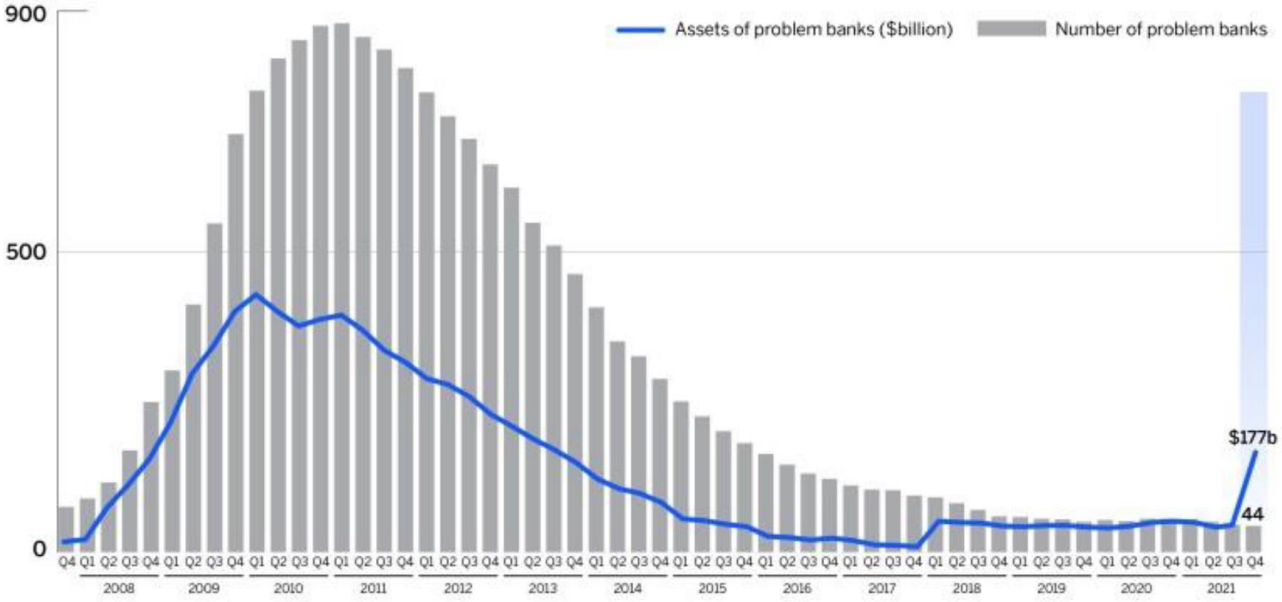
Troubled Assets Have Recently Increased

Sudden trouble

The Federal Deposit Insurance Corp. reported that the amount of assets held by troubled institutions jumped suddenly in the fourth quarter of 2021, even as the total number of troubled institutions declined.



Source: FDIC, American Banker

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Potential Industry Impact
&
Case Studies

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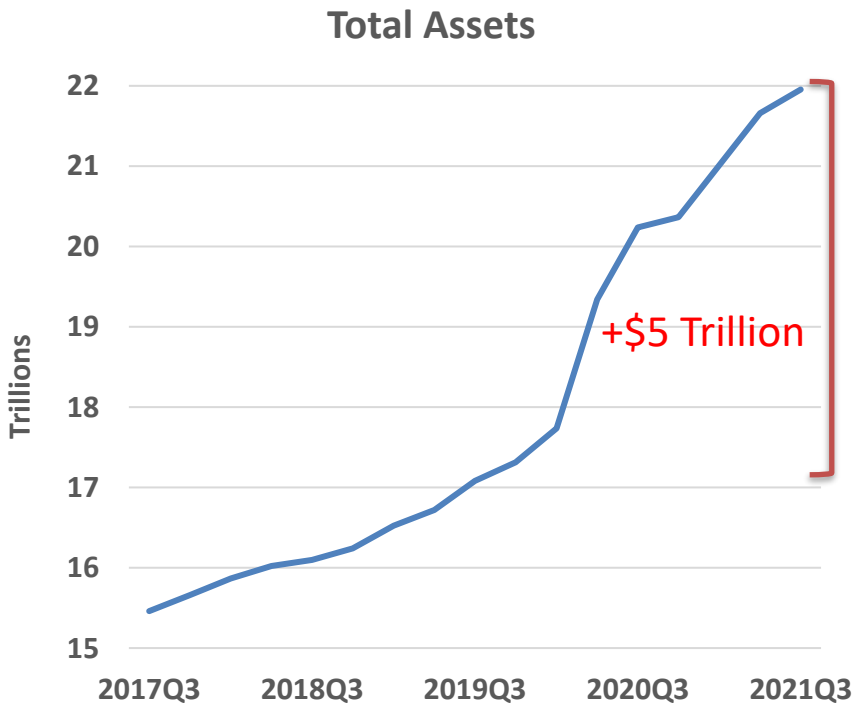
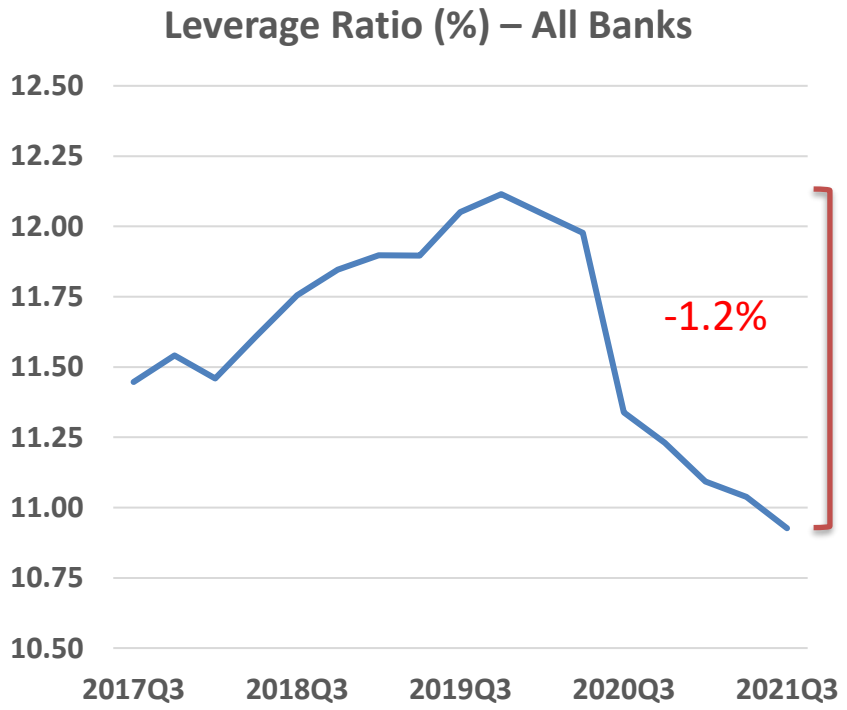
Capital Is King!

Industry Trends





Source: FDIC, DCG

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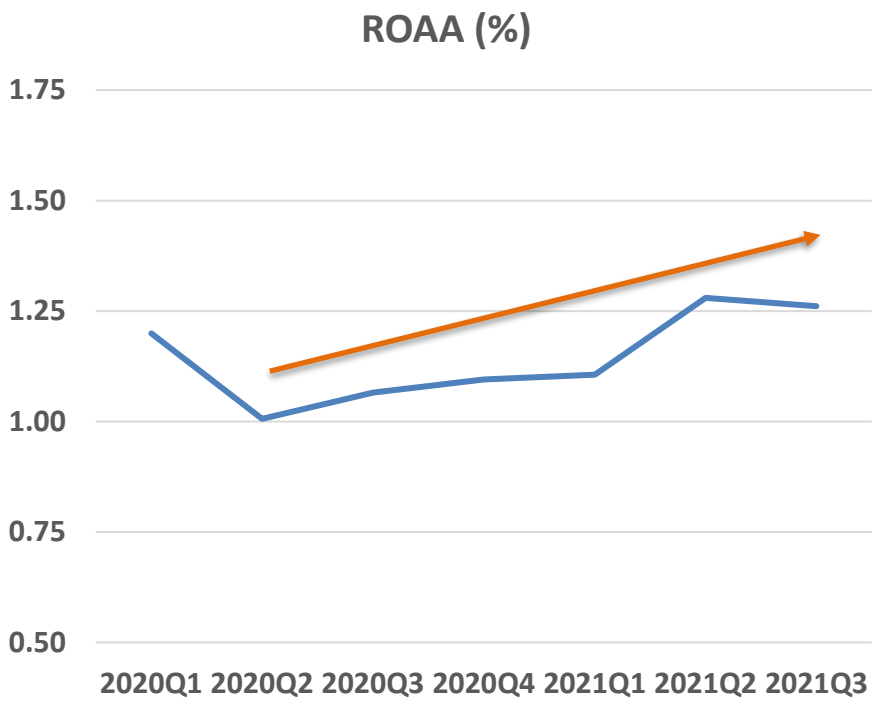
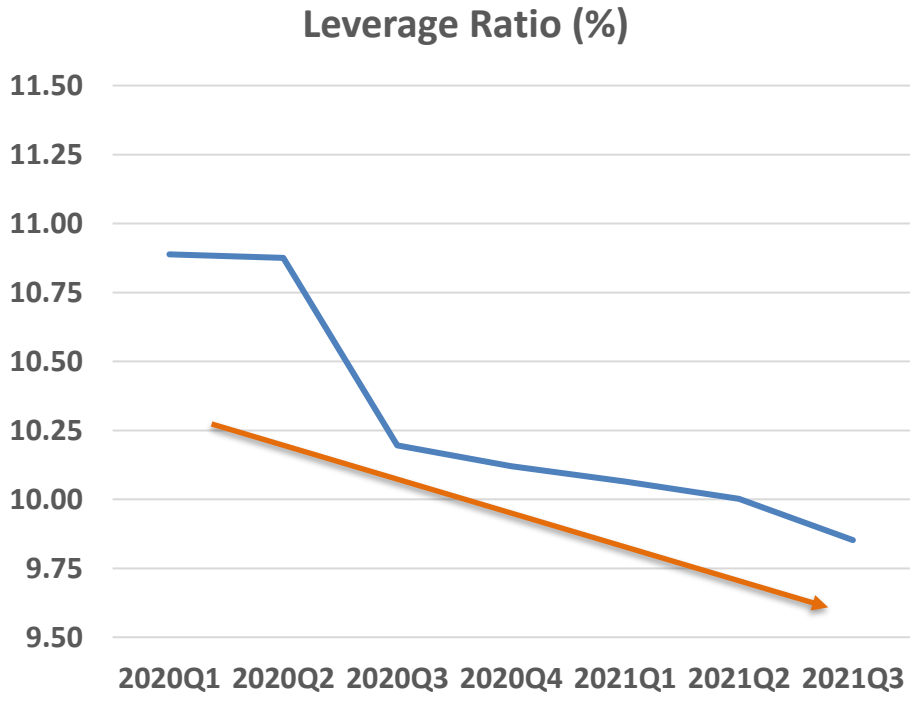
Leverage Ratios Declined Despite Earnings Tailwinds





Source: FDIC, DCG

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How Do We Measure Potential Risks

Oxford Economics Outlook

Source: DCG

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Utilize Industry Trends To Forecast Credit Risk

Create a list of the combinations of all variables

Test the correlations between the variable combinations

Run linear regression on each model

Export for Analysis

Expert Judgment

Final Model

Apply the following model selection criteria:

- Are the directions of the predictions sensible?
- Is model fit sufficiently high?
- Is there sufficient coverage of the different variable types?
- Are the weights of the variables within tolerable limits?
- Are there specific variables that are important to the model?
- Are the projected loss rates directionally consistent?

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Economic Forecasts Are ALWAYS Wrong…

Best Practice

Evaluate and Test

Multiple Outcomes

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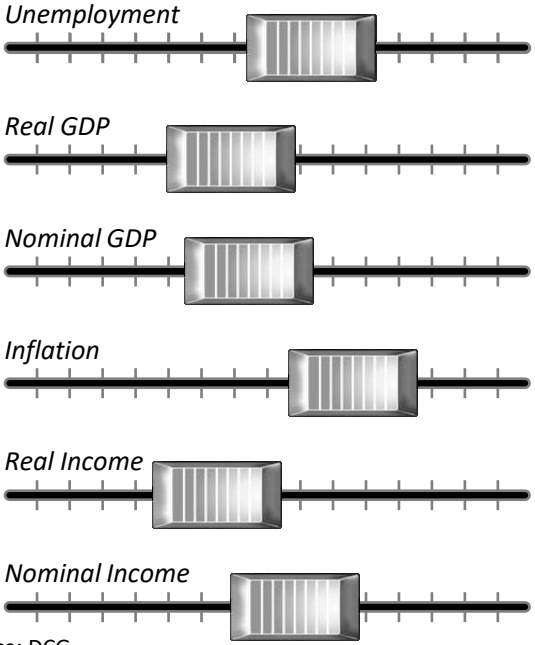
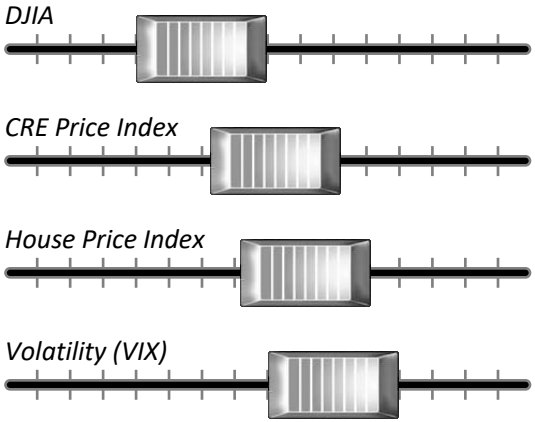
What Are The Factors Used to Project Potential Losses?

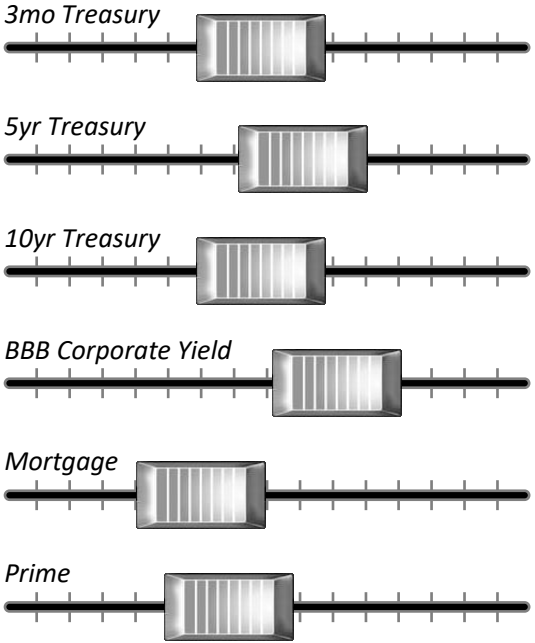
Economic Activity



Asset Prices



Interest Rates



Source: DCG

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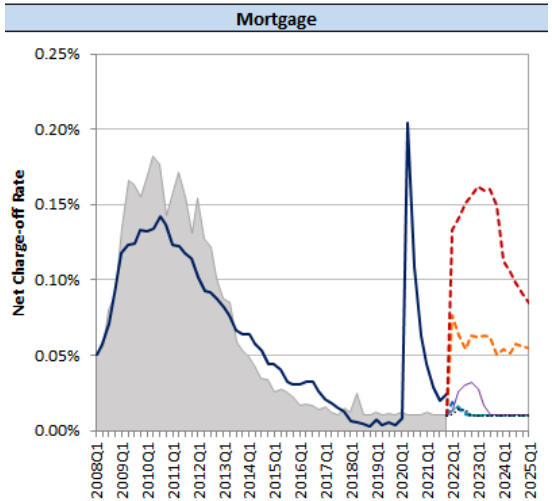
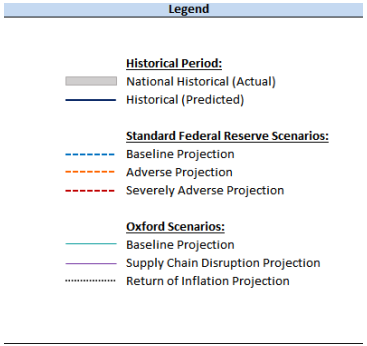
Credit Loss Simulations By Portfolio

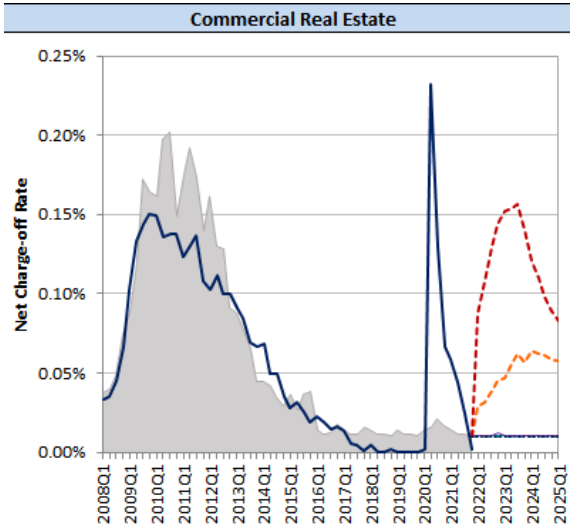
A Bank Case Study

Potential Net Charge-off Rates in Mortgage Portfolio





Potential Net Charge-off Rates in Commercial Real Estate Portfolio



Source: DCG

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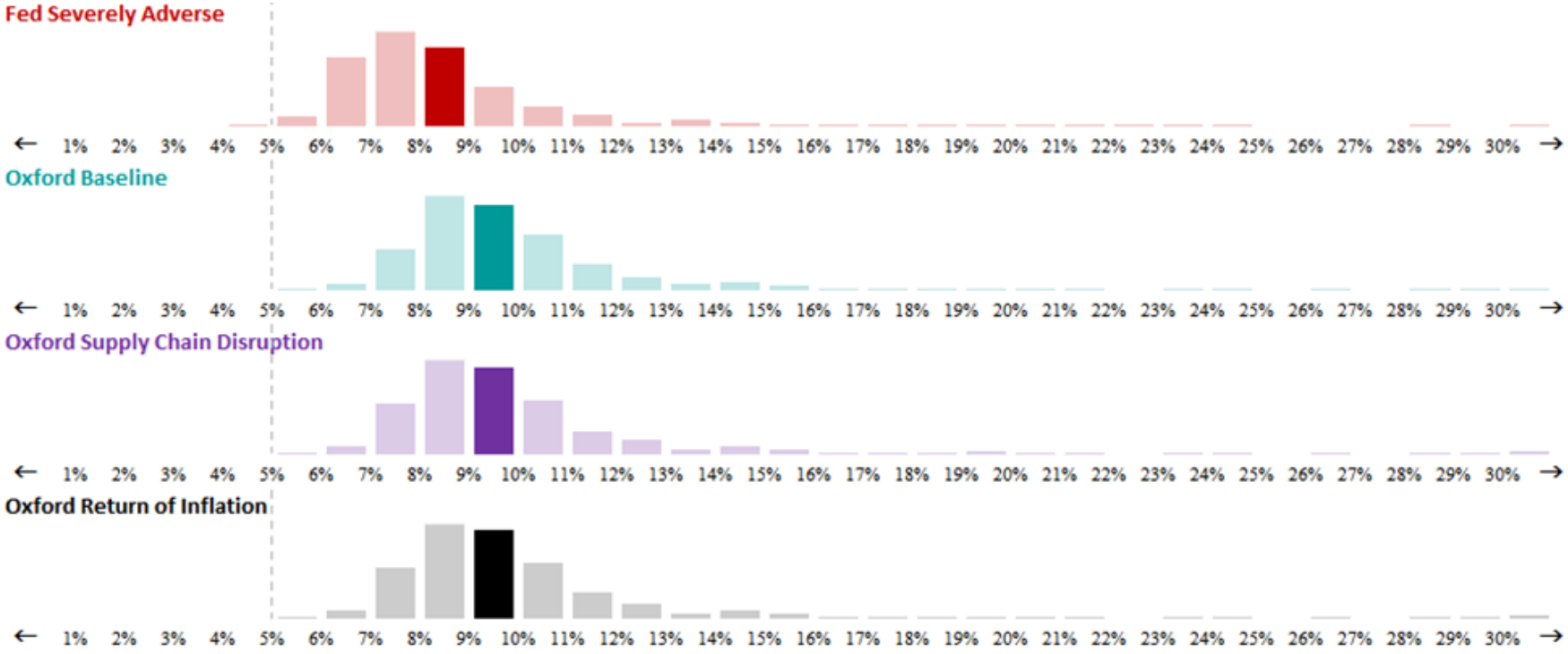
Recession Impact On Credit Losses and Capital

Scenarios Output



Source: DCG

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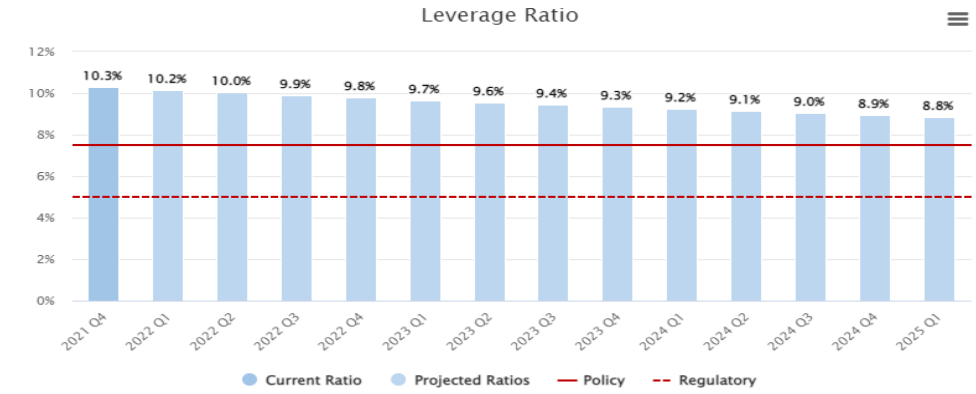
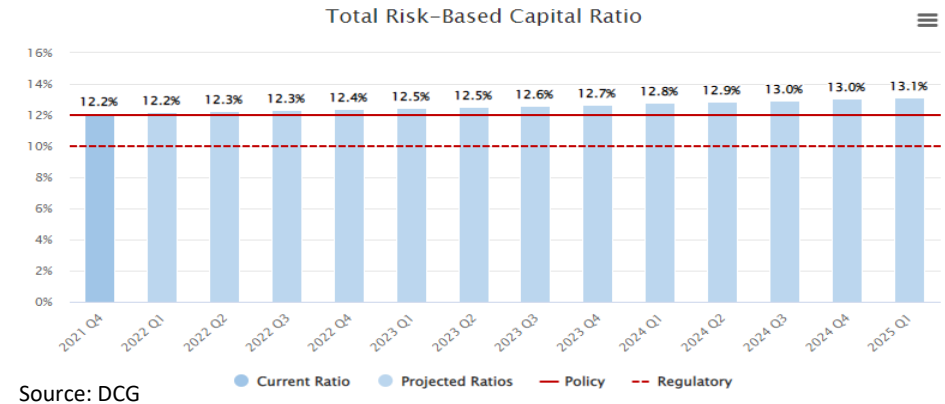
Capital Simulations (“What If-ing”)

Budget Forecast





Source: DCG

- Asset Growth 10% Per Year
- Risk Weighted Asset Growth 2% Per Year
- Loan Growth 2% Per Year
- ROAA 0.50% Per Year
- No Capital Distributions

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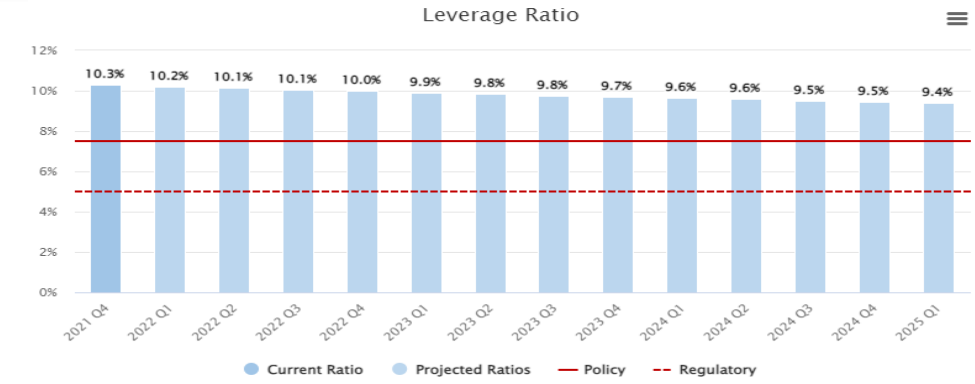
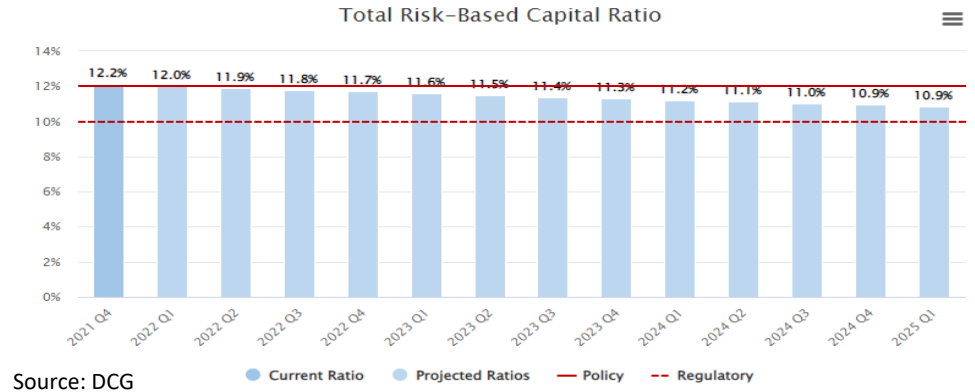
Capital Simulations (“What If’ing”)

Increase in Demand for Credit – with Asset Growth





- Asset Growth 10% Per Year
- Risk Weighted Asset Growth 10% Per Year
- Loan Growth 10% Per Year
- ROAA 0.70% Per Year
- No Capital Distributions

Source: DCG

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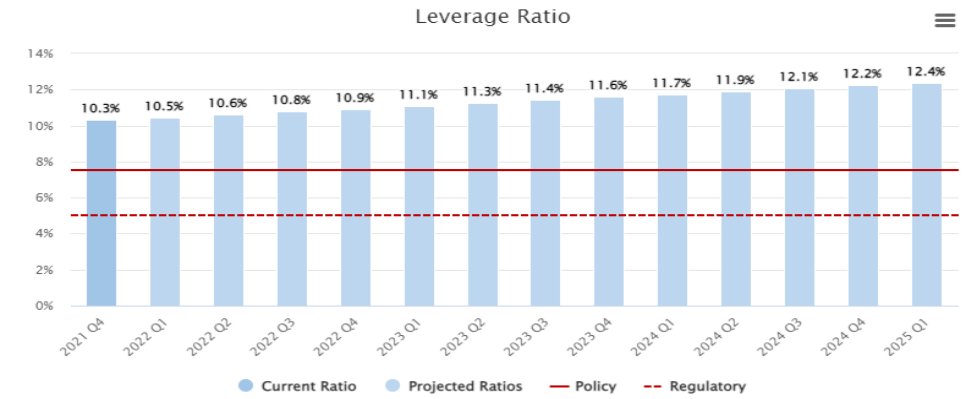
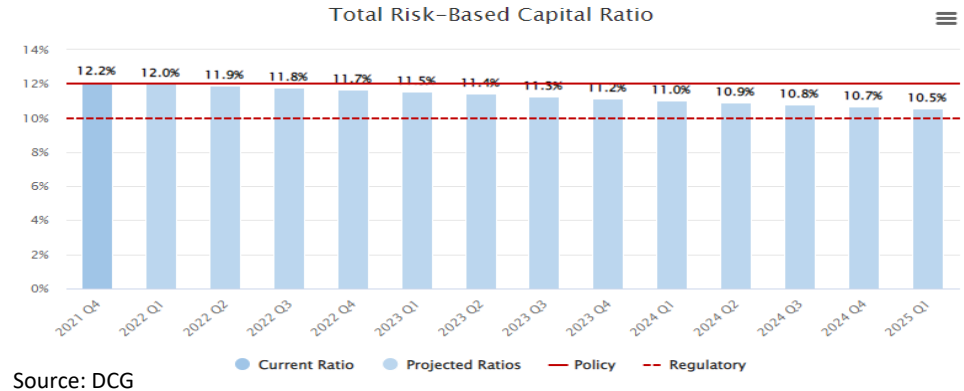
Capital Simulations (“What If’ing”)

Increase in Demand for Credit – without Asset Growth





- Asset Growth 0% Per Year
- Risk Weighted Asset Growth 10% Per Year
- Loan Growth 10% Per Year
- ROAA 0.70% Per Year
- No Capital Distributions

Source: DCG

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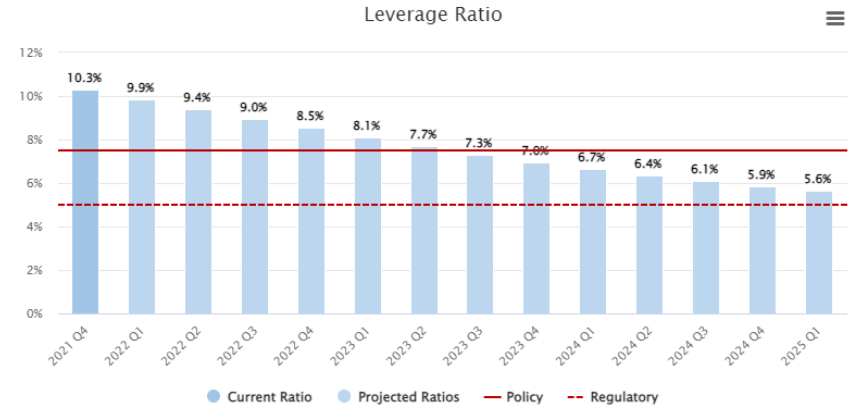
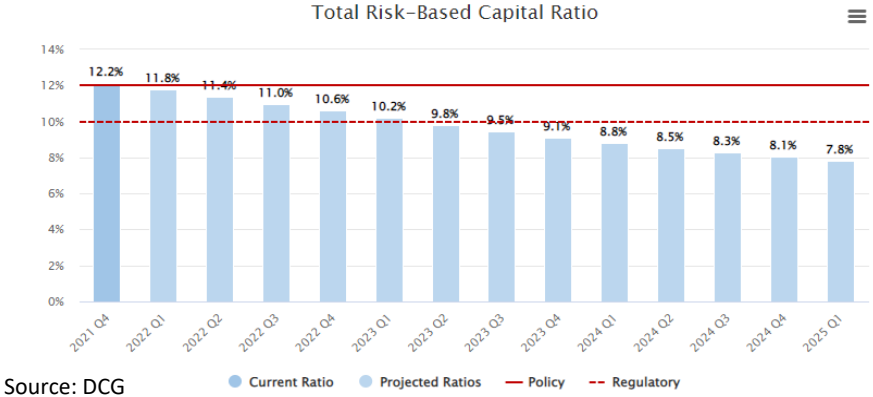
Capital Simulations (“What If’ing”)

Perfect Storm of Capital Pressures





Source: DCG

- Asset Growth 15% Per Year – flight to safety
- Risk Weighted Asset Growth 10% Per Year
- Loan Growth 10% Per Year
- ROAA 0.20% Per Year
- Fed Severely Adverse Credit Losses
- No Capital Distributions

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Credit and Capital Modeling Post-Pandemic

Support decision-making on key issues

- Evaluate several economic outcomes
- Support: growth plan, dividend distributions, stock buybacks, capital raise
- Internal policies → *Minimums for capital ratios & max concentrations*

Knowledge and an overall comfort level to your Board

"Best-in-class" approach that is well-received from all stakeholders

- Regulators | Auditors | Management | Board

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Q&A

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