

Finance. Risk. Unified.

by **Sola Analytics** and **OnPoint Risk Advisors**

Rapid Loan Portfolio Stress Testing Service

Program Overview

Prepared by:

Finance. Risk. Unified.

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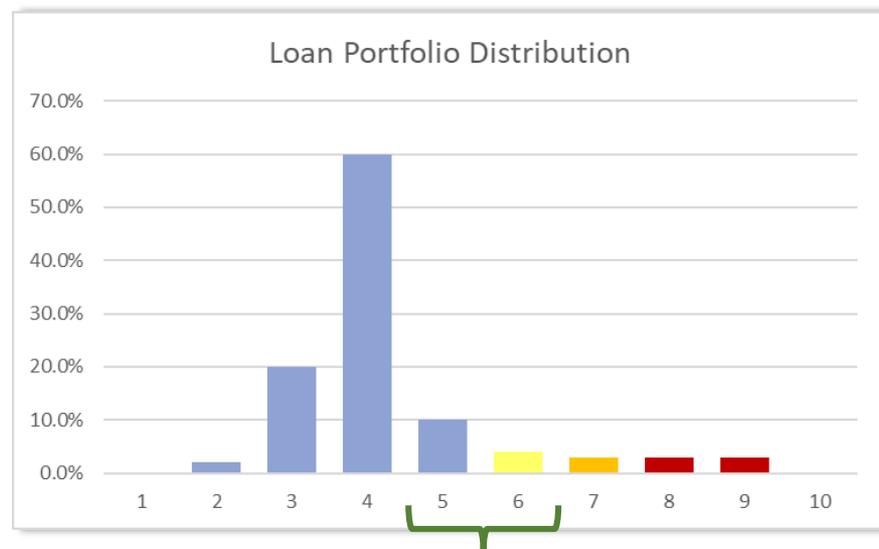
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Common Loan Portfolio Challenges

Many banks struggle quantifying the level of risk in their loan portfolios and have little visibility to forward looking incremental changes in credit quality.

- Point in time risk ratings based on historical, backward looking data
- Pass rated loans tend to be lumped into a few categories
- **Risk Mitigation Zone too narrow**
- **Unable to detect loans most vulnerable to an economic downturn**

As a result, bank executives do not have the data they need to make decisions. Simply put, they lack strategic visibility.



Risk Mitigation Zone

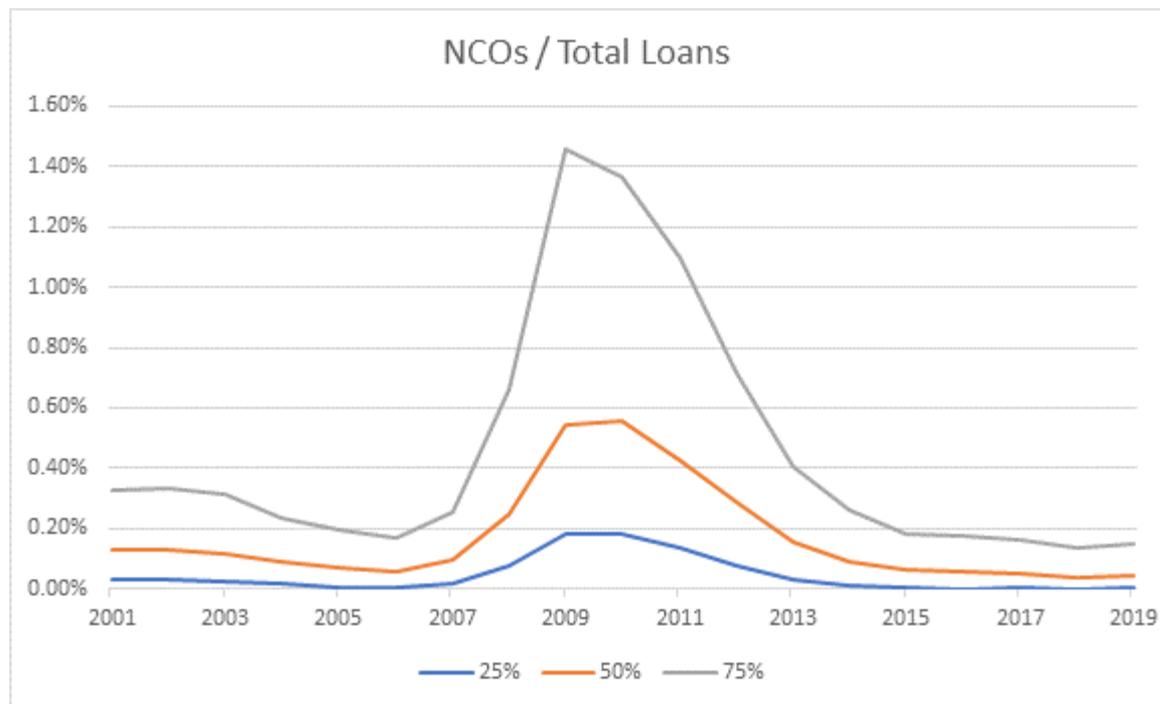
Common Loan Portfolio Challenges

Past Industry Performance Driving Change

Head toward the Blue Line

In the Great Recession:

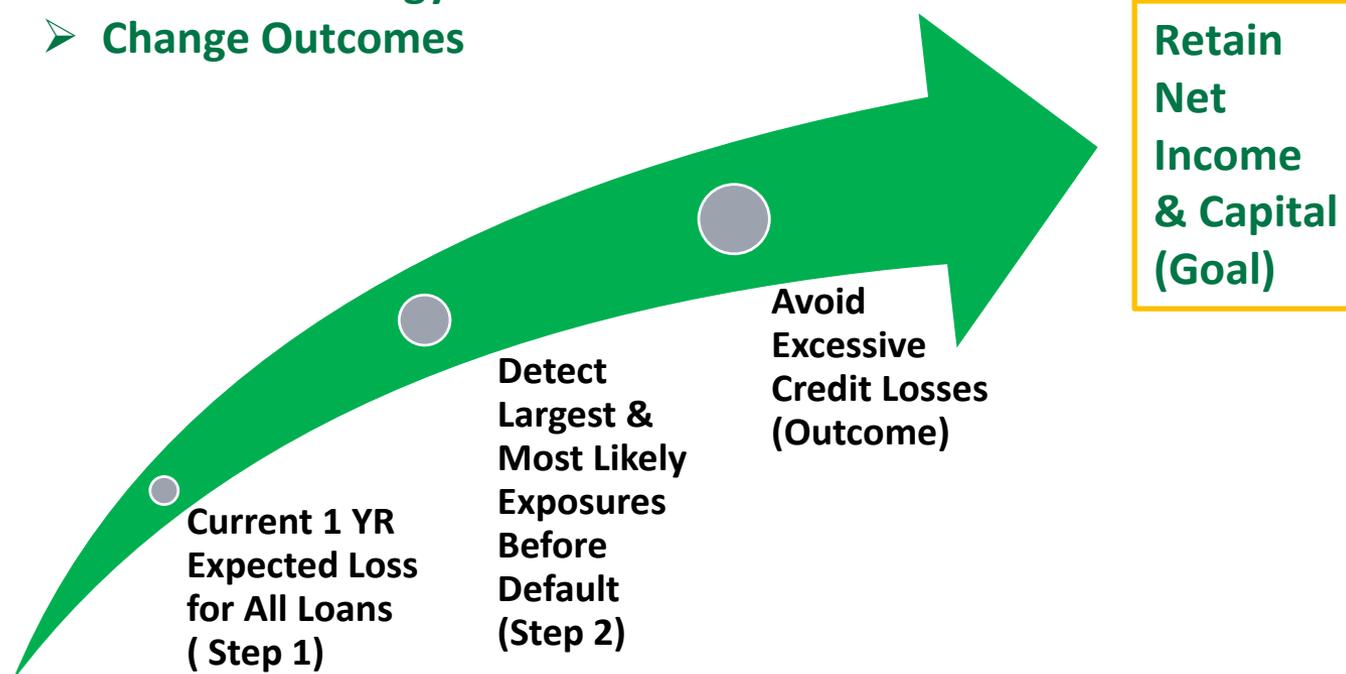
- Worst 25% of banks charged off an average of 1.40%
- Median 50% of banks charged off an average of .55%
- Best 25% of banks charged off less than .20%



Need for Forward-Looking Insight to Credit Quality

Two Step Strategic Approach to Challenges

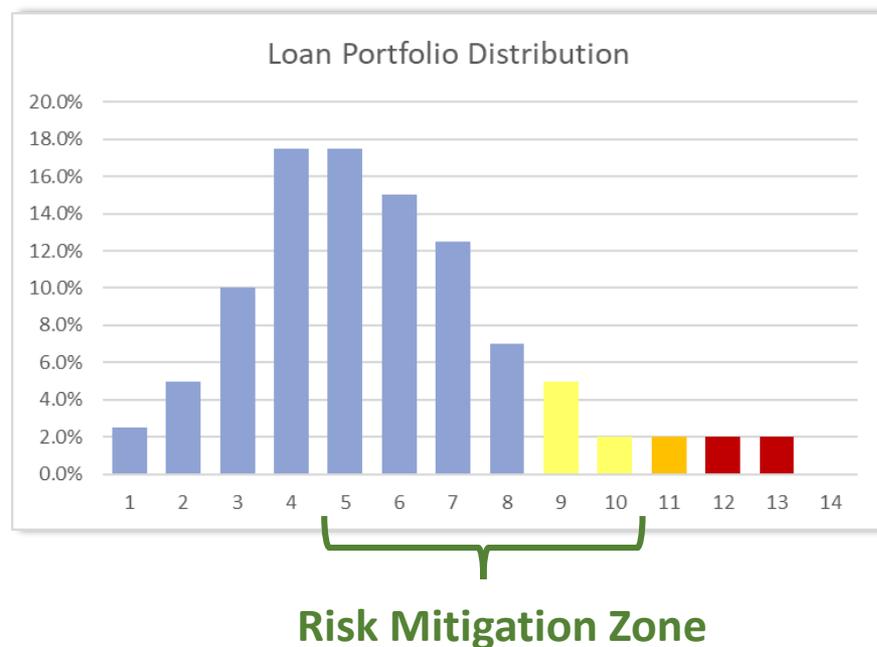
- Enhance Strategy
- Change Outcomes



Gaining Forward Looking Strategic Visibility – Step 1

The first step to gain strategic visibility is to quantify the amount of projected expected loss 1 year in the future based on rigorous statistical analysis.

- Calculate 1 Year Forward Expected Loss for each loan based on the likelihood of default and collateral coverage
- **Identify deteriorating loans up to 1 year before default**
- See loans with the highest potential credit exposure
- **Broaden risk mitigation efforts should be focused**
- Find loans that are mispriced on a risk-adjusted basis



Gaining Strategic Visibility – Step 2

The next step in gaining strategic visibility is to **stress test** the portfolio to produce a forward looking **2 year view** of how it will perform under various economic stress circumstances.

- Model **3 - COVID 19 scenarios** plus custom bank-specific scenarios as needed
- Identify vulnerable loans and segments of the portfolio
- Assess the possible outcomes and develop a mitigation plan
- Quantify the amount of capital needed related to credit risk

Model Changes in Macroeconomic Variables



Employment



GDP



Treasury Yields



Oil/Gas Prices

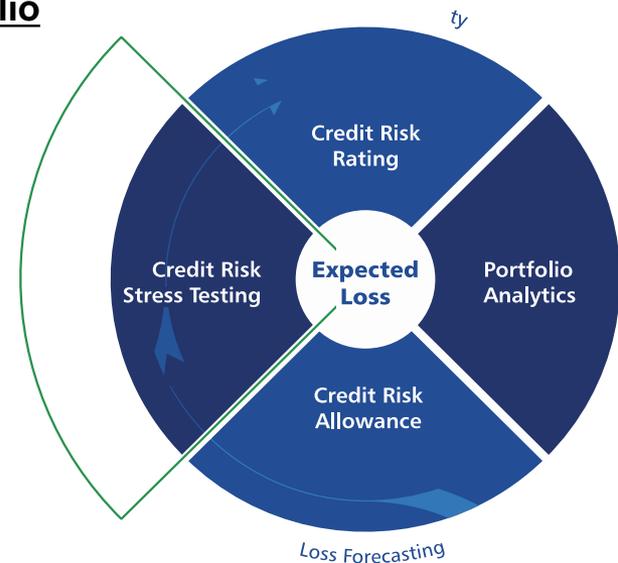
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Rapid Loan Portfolio Stress Testing Service

Step 2 - Expected Loss Stress Testing of Entire Loan Portfolio

- Correlation of Expected Loss of loan portfolio to economic variables
- Scenario Stress Cases - 3 Levels of severity
- 2 Year Stress Test of the entire loan portfolio
- Management Report & Action Plan



Gaining Strategic Visibility – Step 2

Great Recession 2008 – 2009	Moody's COVID 19 Upside	Moody's COVID 19 Baseline	Moody's COVID19 Downside	JPMorgan Economic Forecast
<ul style="list-style-type: none"> • Peak-to-trough real GDP of -4.2% over 3 quarters • Peak Unemployment 10% • Return to full unemployment over the next 7 years • 20% decline in home prices over 2 years 	<ul style="list-style-type: none"> • Milder recession in 2020Q1 and Q2, stronger recovery in 2020Q3 and after • Peak unemployment 8% in 2020Q2 • Peak-to-trough real GDP of -4% • Return to full employment by 2022 	<ul style="list-style-type: none"> • Recession in 2020 Q1 and Q2 • Peak unemployment rate near 9% in 2020 Q2 • Peak-to-trough real GDP of almost -6% • Partial bounce back 2020 Q3, then slow growth • Acceleration later in 2021 • Return to full employment by 2023 	<ul style="list-style-type: none"> • Deeper recession in 2020Q1 and Q2, modest rebound in 2020Q3 • Peak unemployment 13% in 2020Q2 • Peak-to-trough real GDP of - 9% • Return to full employment by 2025 	<ul style="list-style-type: none"> • Deeper recession in 2020Q1 and Q2, sharp rebound in 2020Q3 • Peak unemployment 20% in 2020Q2 • Peak-to-trough real GDP of - 40%

*Select 3 – additional scenarios available for additional fee

Rapid Loan Portfolio Stress Testing Service

Expected Loss Stress Testing of Entire Loan Portfolio

Financial Impacts by Scenario

- Loan Level
- Segment Level
- Call Report Code
- Expected Losses/Charge Offs
- Provisions
- Capital Impact



Management Reports



Action Plan



Key Outcome: See credit risk exposures that currently exist or may emerge in the next 24 months

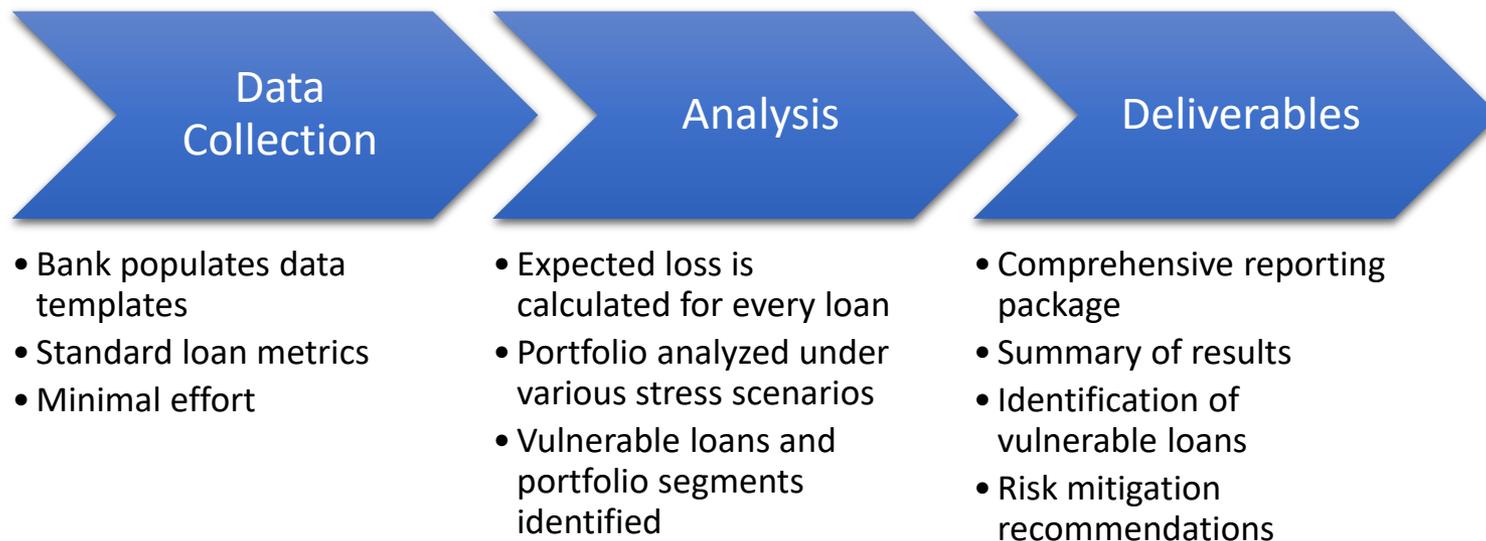
Rapid Loan Portfolio Stress Testing Service

Bank Data and Resource Requirements

- Approximately 11 to 16 loan level data elements common to all loans and underwriting programs
- Bank Resources Needed:
 - Data Gathering – 8 Hours
 - Review Outcomes – 8 Hours

Project Overview

Allow our team of experts to analyze your portfolio and give your executives the strategic visibility they need.



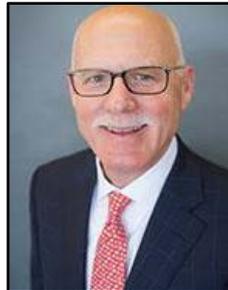
Project Delivered 7 Days after receipt of Required Data



Aaron Taylor,
CPA, CFA
President
Sola Analytics

Aaron has over 19 years of banking industry experience with an emphasis on stress testing, enterprise risk management, and financial reporting and analysis.

Before forming Sola Analytics, Aaron spent 10 years at a regional financial institution based in Dallas, TX. In the role of Executive Vice President, Director of Capital Planning, Aaron oversaw the development of the Dodd Frank Act Stress Testing (DFAST) program and managed the financial reporting, budgeting, and forecasting system used for all internal, regulatory, and SEC reporting.



John Drew
President
OnPoint Risk Advisors

John is a 37-year veteran in the financial services/banking industry. John is President & CEO of OnPoint Risk Advisors Founded in 2007, a Risk Management advisory firm that provides strategically aligned risk management programs and content Including Credit Risk Management practices and leveraging Expected Loss Scorecards.

Prior to founding OnPoint John was EVP/Chief Credit & Risk Officer of Amegy Bank, John was responsible for Enterprise Wide Risk Management including governance, credit, operations and market risks and served as the liaison to the Board of Directors and the OCC for the risk management and regulatory oversight of the bank.



Walt Boyer
Finance. Risk. Unified.
Strategic Partner

As a Finance.Risk.Unified strategic partner, Walt brings nearly 40 years of Financial Services industry experience in strategic planning and business expansion leadership and is a proven leader in Financial Risk & Capital Risk and Operations Risk.

Prior to Finance. Risk. Unified, Walt was the CEO of Mundial Financial Group, LLC, a start up broker dealer. Walt was a managing director at Alvarez & Marsal (2012 to 2016) and Keefe, Bruyette & Woods (2006 to 2012). Walt holds FINRA 7, 24, 63 and 79 licenses. In addition, Walt has 26 years of commercial banking experience, most recently with Amegy Bank (1997 to 2005).

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is a transformational technology for banks that integrates leading finance and risk management processes for unprecedented strategic visibility.

Services include advisory, content and methodology solutions that focus on assisting financial institutions with critical and often neglected optimization of their strategic plans.

The FRU team includes experienced banking professionals who take disciplined FRU practices to a strategic art form. Our advisors have strong expertise in Financial & Capital Management, ERM, Credit, Operations, Market, Internal Audit, Compliance, and Technology risk management that are enabled through a unified technology platform.

We fully understand the challenges that today's bankers face in the competitive marketplace and we take a straight-forward approach to each client with comprehensive application to their business culture and objectives. We also understand demands on time, resources, and pressures bankers face to deliver results.

FRUs Digital Enterprise allows for the kind of local delivery that ensures a high-touch collaboration effort.

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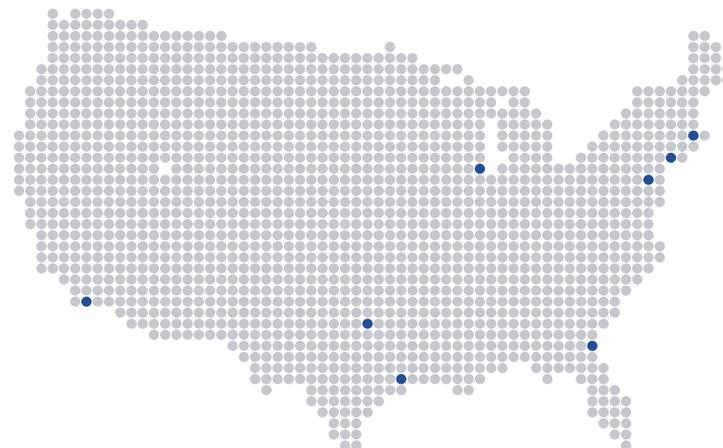
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Strategic Resources Nationwide

Local Delivery is achieved through our Digital Enterprise