

# Stress Testing

Webinar: Dodd Frank Act Stress Test (DFAST)  
for \$10-\$50 billion banks

**John Lankenau**  
Vice President, Product Management



## John Lankenau Vice President of Product Management, Primatics Financial

John is currently the product head for valuation and accounting solutions in Evolv. He has extensive financial services industry experience, with an emphasis on the implementation, testing and use of complex models for financial reporting and business purposes. Prior to joining Primatics Financial, John was a Director of Financial Engineering at Fannie Mae where he was the business owner of the application used to determine the fair value of Fannie Mae's guaranty business, as well as the impairment amounts for loans under FAS 114 and SOP 03-03. John holds his MS from the University of Michigan, Ann Arbor in Industrial and Operations Engineering (Operations Research), and his BA from Carleton College in Mathematics and Economics.



## Agenda

### 1. Stress Testing Background:

- History of CCAR / CapPR / DFAST
- Regulatory Definitions of Stress Testing
- Dodd-Frank Requirements

### 2. Stress Testing Challenges:

- Common Bank challenges
- Template Requirements
- Meeting needs of Dodd Frank stress tests
- Importance of the Right Models

### 3. Primatics' Stress Testing Approach:

- Recommended Approach – 'Dry Run'
- Evolv product demo

### 4. Q & A

## History of CCAR / CapPR / Dodd Frank Stress Tests

- Supervisory Capital Assessment Program (SCAP) – early 2009 done by regulators for very biggest banks to calm markets. Led to mandated capital increases of about \$75 billion
- Comprehensive Capital Plan and Review (CCAR) and Capital Plan Review (CapPR) – review of capital plan for banks above \$50 billion in assets; includes a stress test
- Dodd Frank Mandated Stress Tests – banks above \$50 billion had to do last year, upcoming is first time for banks from \$10-\$50 billion



## Definition of Stress Testing

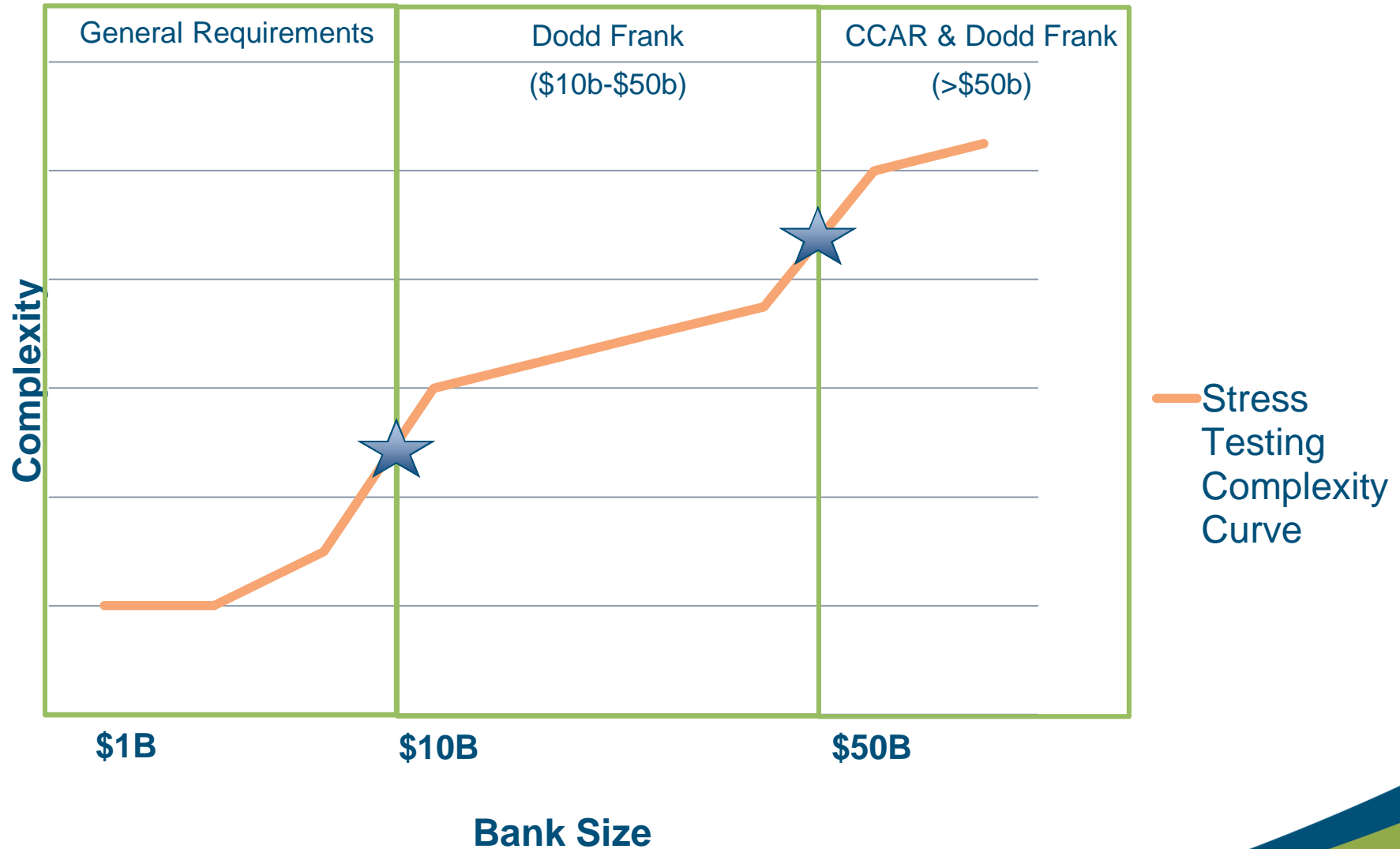
*“Stress testing refers to exercises used to conduct a forward-looking assessment of the potential impact of various adverse events and circumstances on a banking organization.”*

*A stress test is:*

- *“a process to assess the potential impact... of economic and financial conditions (scenarios)...*
- ***on the consolidated earnings, losses and capital of the company...***
- *over a set planning horizon...*
- *taking into account the current condition of the company...*
- *and the company’s risks, exposures, business strategies, and activities.”*

*The accounting view has become a **necessary** component of stress testing for banks >\$10 B*

## Spectrum of Stress Testing



## Dodd-Frank Requirements for \$10-\$50 Billion banks

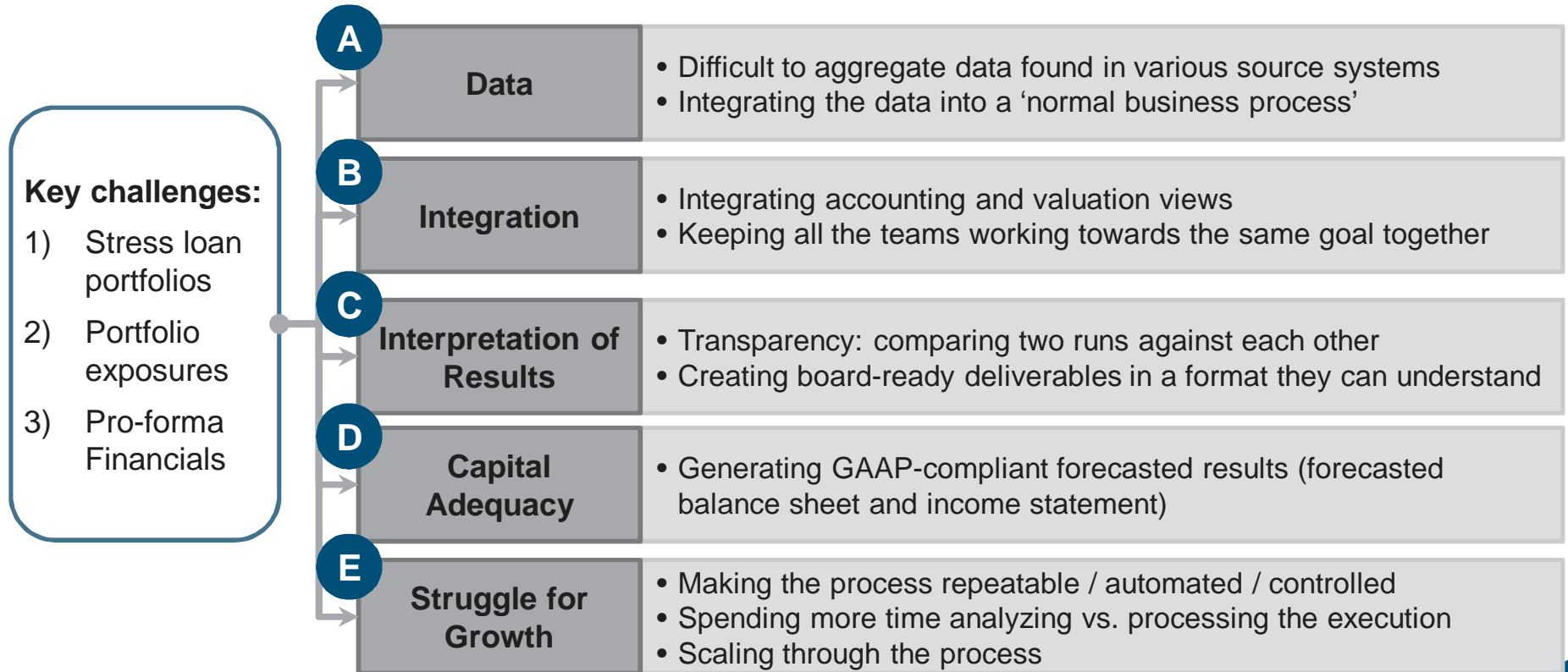
Required to fill in OCC form DFAST 10-50 (quantitative templates) and/or Fed template FR Y-16 and provide:

- 1) GAAP-compliant income statement for base and 2 adverse scenarios for 9 quarters
- 2) GAAP-compliant balance sheet for base and 2 adverse scenarios for 9 quarters
- 3) Capital ratios derived from forecast balance sheets and capital plans
- 4) Qualitative report explaining risks included in the stress test, methodology, and an explanation of most significant causes of change in capital ratios



## Common Pain Points at Banks

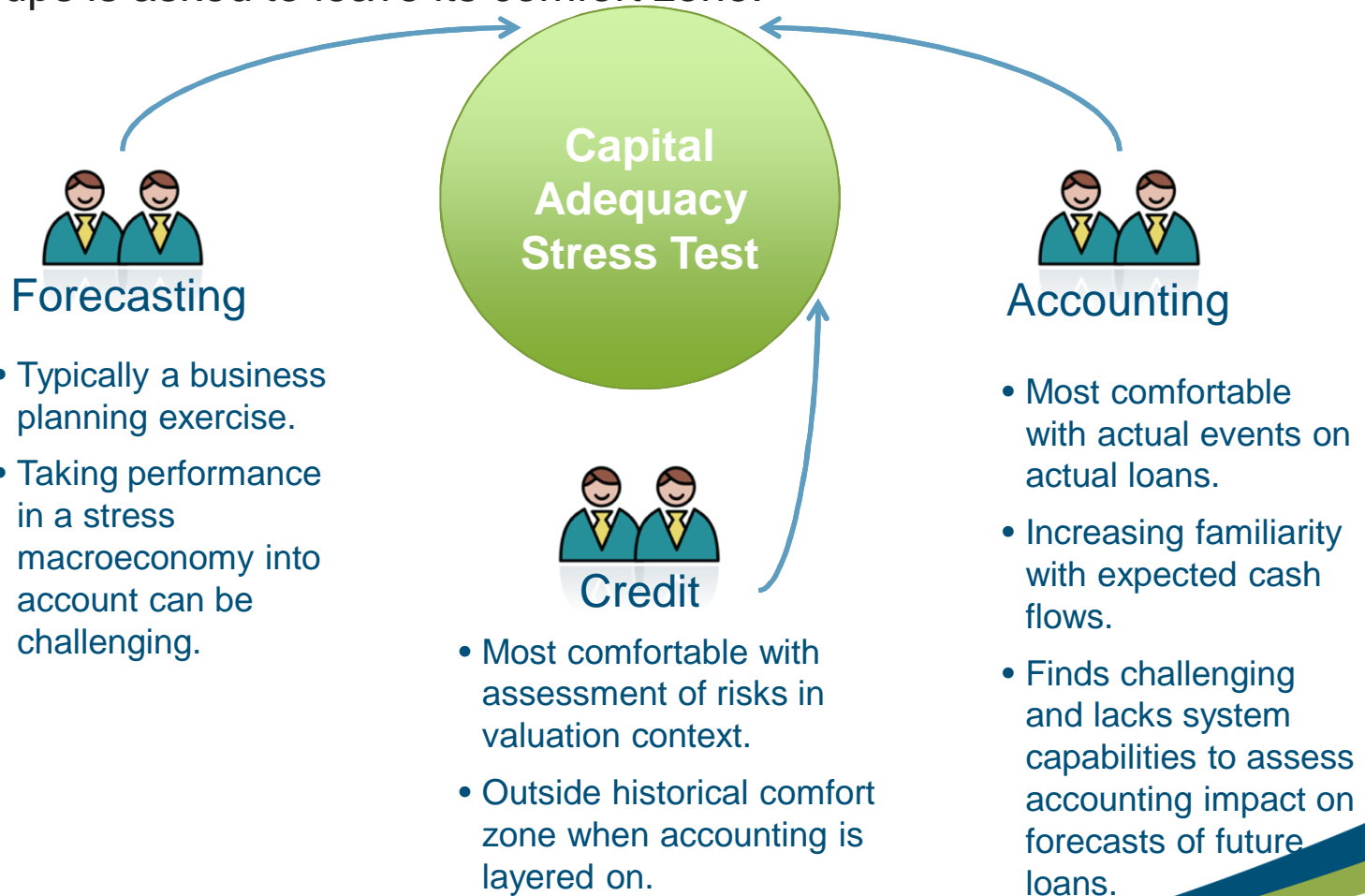
Based on our experience working with leading banks, we have discovered the following challenges and questions that need to be addressed for Enterprise Wide Stress Tests.





## Functions Challenged by Stress Testing at Bank

The assessment of credit risk in enterprise wide capital stress testing requires coordination of forecasting, accounting and credit assessment groups. Each of these groups is asked to leave its comfort zone.



## DFAST: Template Requirements for 2014

### Requirements – Income Statement

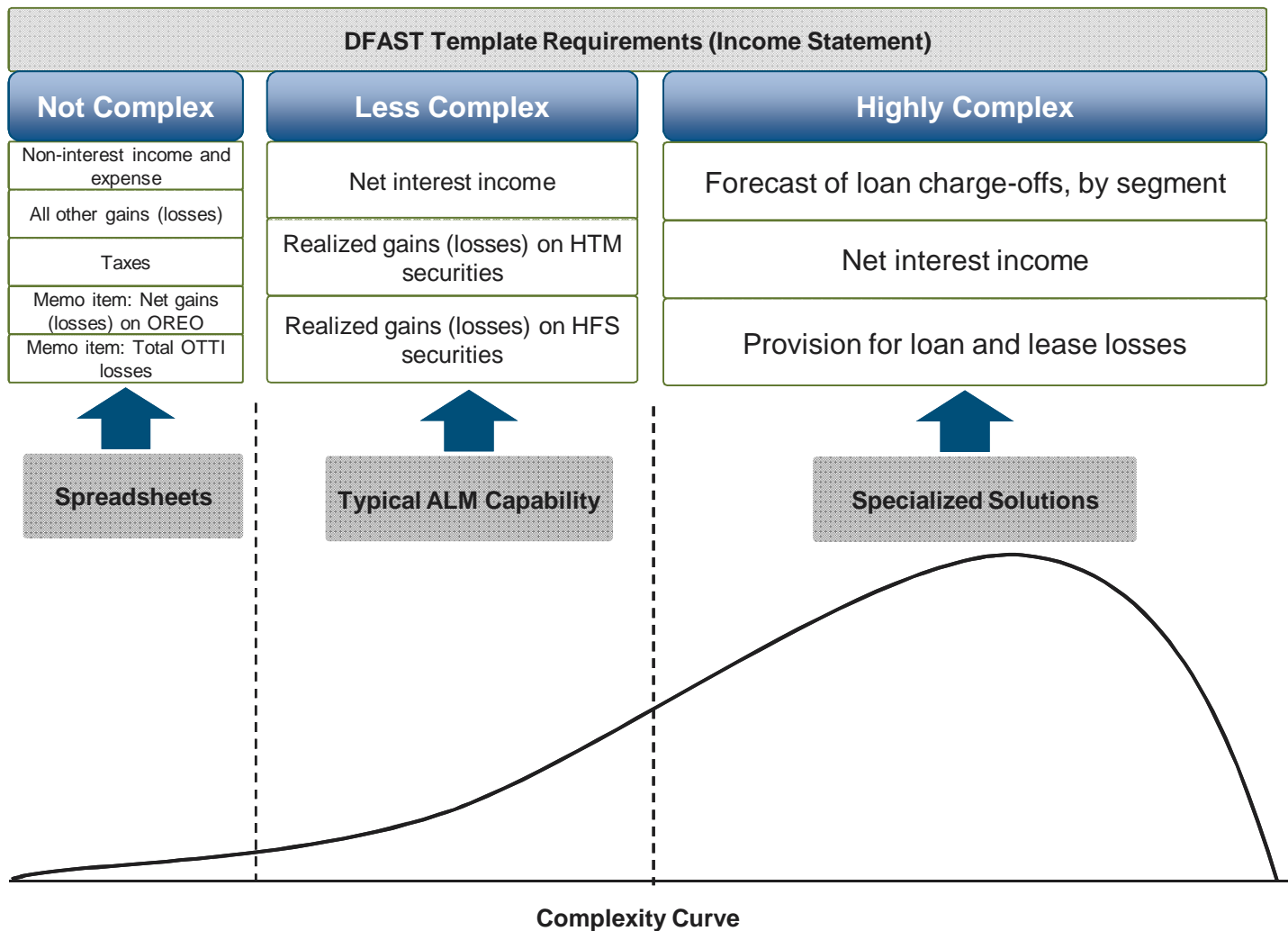
1. Forecast of loan charge-offs, by segment
2. Net interest income
3. Non-interest income and expense
4. Provision for loan and lease losses
5. Realized gains (losses) on HTM securities
6. Realized gains (losses) on HFS securities
7. All other gains (losses)
8. Taxes
9. Memo item: Net gains (losses) on OREO
10. Memo item: Total OTTI losses

### Requirements – Balance Sheet

1. Forecast loan balances, by segment (break out FDIC loss share)
2. ALLL
3. HTM securities by type
4. AFS securities by type
5. Retail funding (core deposits)
6. Wholesale funding
7. Trading liabilities
8. Other liabilities
9. Forecast equity capital components
10. Memo item:
11. Memo item: Forecast cash dividends on stock
12. Memo item: TDR balances
13. Memo item: loans in foreclosure
14. Memo items: Avg. rates on loans, deposits, funding, securities, liabilities

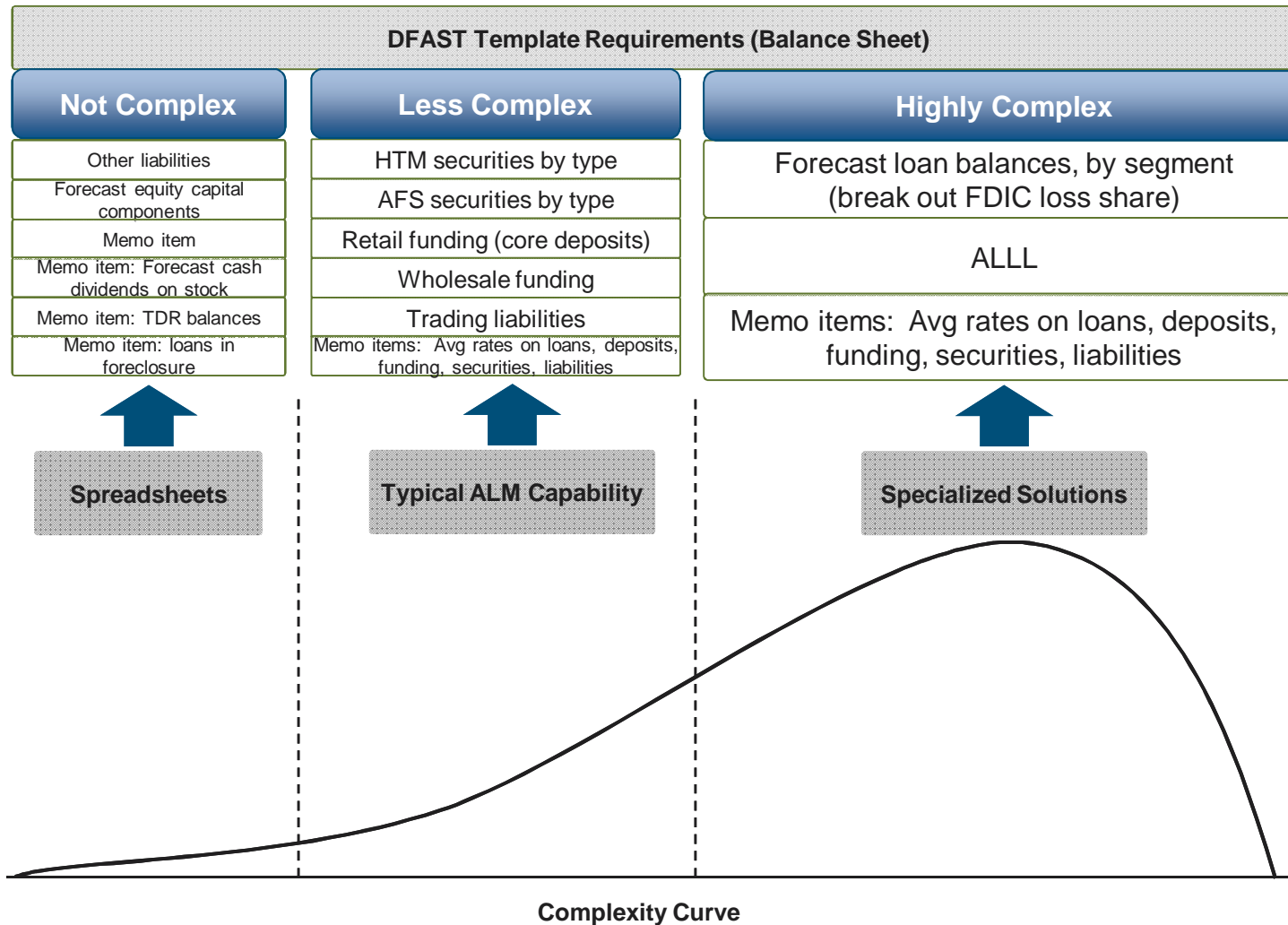
# DFAST Activities / Output

## Income Statement



# DFAST Activities / Output

## Balance Sheet



## Loan Modeling Approaches for a “Stress Test”



Stress test requires evaluating impact of adverse conditions on loan performance.

Institutions often have and want to apply for stress testing:

- Historical roll rates/moving averages – ***Not sufficient***
- Adjusting roll rates/moving averages using management intuition – ***Usually not sufficient and only as good as management intuition and cannot be validated / difficult to defend***

Real, Forward-Looking Models are Required

## Modeling Approaches for a “Stress Test”

### Top Down

- Portfolio / Asset Class Level
- Can be pushed down to more granular levels



Regulators

- Likely sufficient for entire portfolio for banks below the CCAR threshold
- Expect demands to increase as bank asset size increases

### Bottom Up

- Detailed loan level build up



Regulators

- More common with CCAR banks, although some do still leverage top down for part of their portfolio

## How to Apply Models in Dodd Frank Stress Test

### All Loans Must be Stressed



- Regardless of whether top down models or more granular models are used, they should reflect the **national** macroeconomic conditions provided.
- This is **not** an exercise to figure out concentrations or perform granular risk management.
- This **is** an institution-level exercise to show regulators you can survive an adverse economy.
- The regulatory exercise here is **not** to stress different books (industry / geography) separately.

## Stress Testing for Risk Management Beyond Dodd Frank

Useful risk management exercises use stress testing to answer more complex risk management questions (these can be part of the multiple approaches the regulators expect).

- For a bank with multiple identifiable books, (different regions or industries) what happens if the economic shock causes one book to be very bad while others do ok and perhaps others are not stressed?
- For a bank that is booming due to regional conditions (oil a classic example), identify and stress oil-related loans. Have you bet your bank on a regional boom?

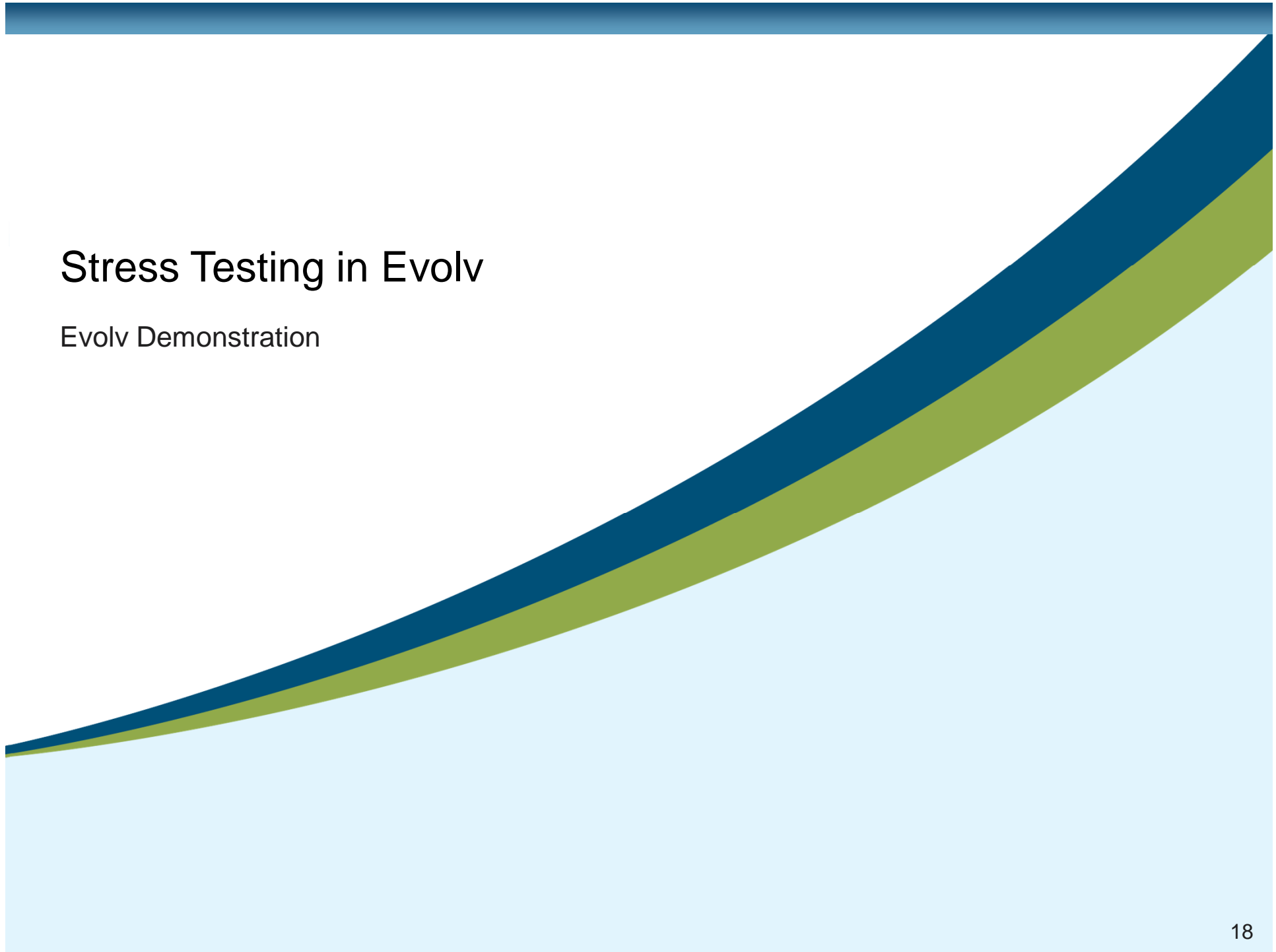


## Are you prepared?

- Some aspects of the DFAST process are relatively easy to produce, via spreadsheets and/or ALM tools
- Several components are very complex to produce, and require specialty solutions
- We recommend performing a Dry Run of the stress testing process; use the dry run to identify gaps and/or process improvement needs
- Primatics can perform a dry run on the loan portfolio within 4-6 weeks, while offering a platform that can be a long-term sustainable solution

# Stress Testing in Evolv

Evolv Demonstration



## Q&A

## Contact

**John Lankenau**

Vice President, Product Management

8401 Greensboro Drive, Suite 300

McLean, VA 22102

(703) 942-8309

jlankenau@primaticsfincial.com