



## Management Challenge: A benchmark for CECL estimates

## Today's Speakers



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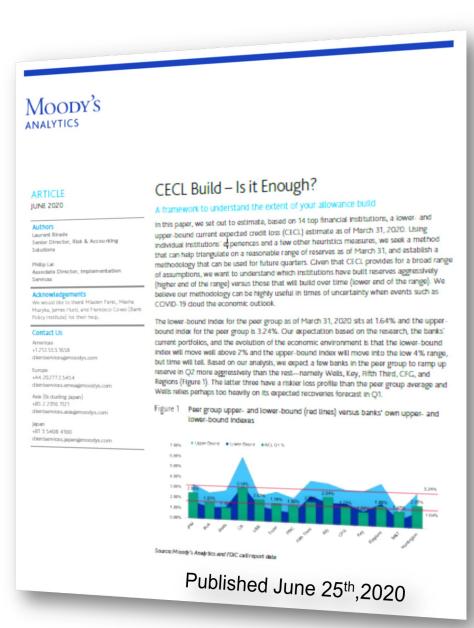
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## Discussion

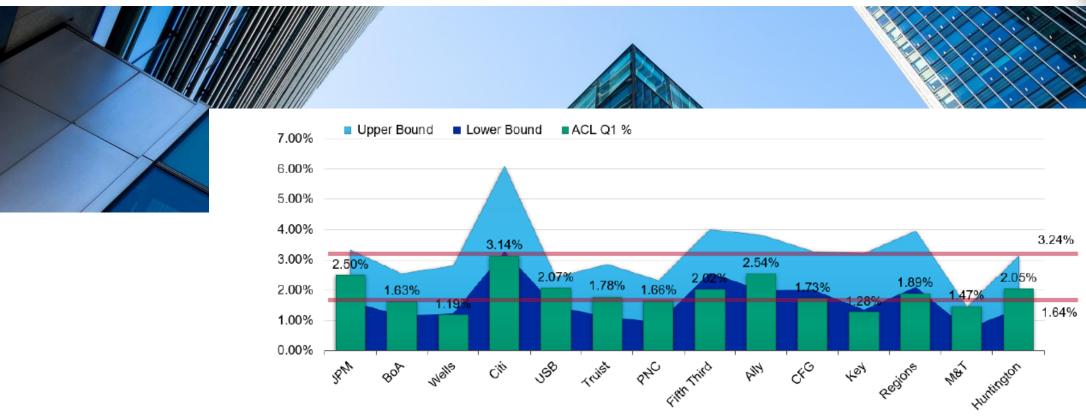
- »Benchmarking research
- »Q2 results overview
- »Interactive Q&A





## **Initial Results**





Source: Moody's Analytics and FDIC call report data

\*Peer group weighted average – 1.98%

## **Triangulation Index Creation**

STEP 01

#### Gather data.

Define peer group and gather historical call report data and DFAST estimates. Review data for any anomalies and potential outlier issuers.

STEP 02

## Review each methodology and Assumptions.

Select methodology and assumptions for each such that they reflect peer group realities and idiosyncrasies

STEP 04

#### Establish Index and weights.

Based on method selected assign weights to upper and lower bound metrics and determine which scaling factor to apply to make it a true range. STEP 03

#### Determine which metrics to use.

Define which metrics would be used as quantitative metrics and which would serve best as qualitative and select what time period and scenarios to use.

STEP 05

## Review results and apply qualitative judgment.

Review results, and define in the context of qualitative metrics which banks may be reserved appropriately and which may need to do more build. Review in context of next quarter's expected environment.



## Framework Description - Triangulation



#### **DFAST Stress testing results.**

Gather stress testing results from customer and use peer group available or DFAST results averages.



#### NCO averages 2007-2010.

Customer and peers NCO during the financial crisis (GFC) period to derive coverage based on average and maximum loss experience.



#### NCO based scenario assumptions.

Historical NCO based scenario analysis (base and S4) to derive estimate of lifetime losses based on pure historical experience and high level assumptions



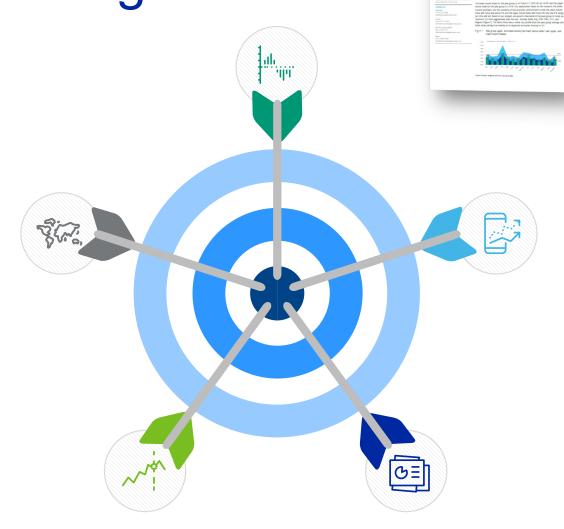
#### Historical CECL - full foresight.

Estimate derived using Historical Loss Analyzer based calculations for every historical quarter during the 2007-2010 period, could be extended to cover other period based on business cycle.



#### Top down CECL forecaster methodology.

Applying Capital Risk Analyzer CECL forecaster methodology to derive forecast estimate based on baseline and S4 scenario.



## Framework Description - Weights

### Establishing weights for each measure

ARATTICS

CECL Build — Isit Enough?

Farmer and the second of the second

- Expert Judgment
- » Lower bound metrics
- » Upper bound metrics
- » Rational based on favored measures
- » Idiosyncrasies

|                             | Sample Set        |         |             |       |         |          |           |
|-----------------------------|-------------------|---------|-------------|-------|---------|----------|-----------|
| ECL Range Indicators        | Weighted Averages | Weights | Upper Bound |       | Weights | Lov      | ver Bound |
| Macro UER Baseline March V2 | 2.11%             |         |             |       |         | 30.00%   | 0.639     |
| CECLFcst V1 base            | 2.49%             |         |             |       |         | 30.00%   | 0.699     |
| CECLFcst V2 base            | 2.48%             |         |             |       |         | 30.00%   | 0.719     |
| CECLFcst Avg 3y V1 base     | 2.09%             |         |             |       |         | 5.00%    | 0.099     |
| CECLFcst Avg 3y V2 base     | 2.04%             |         |             |       |         | 5.00%    | 0.129     |
| Macro UER S3 March V2       | 4.31%             | 1       | 0.00%       | 0.43% |         |          |           |
| Macro UER S4 March V2       | 4.65%             | 1       | 0.00%       | 0.47% |         |          |           |
| CECLFcst V1 S4              | 5.92%             | 1       | 0.00%       | 0.59% |         |          |           |
| CECLFcst V2 S4              | 4.78%             | 1       | 0.00%       | 0.48% |         |          |           |
| CECLFcst Avg 3y V2 S4       | 2.82%             | 1       | 0.00%       | 0.28% |         |          |           |
| CECLFcst Avg 3y V1 S4       | 4.10%             | 1       | 0.00%       | 0.41% |         |          |           |
| HLLA AVG only %             | 5.34%             | 1       | 0.00%       | 0.53% |         |          |           |
| HLLA Min %                  | 3.48%             | 1       | 0.00%       | 0.35% |         |          |           |
| HLLA MAX only %             | 6.30%             | 1       | 0.00%       | 0.63% |         |          |           |
| DFAST % Loss                | 5.63%             | 1       | 0.00%       | 0.56% |         |          |           |
|                             |                   | Upper B | ound*       | 3.24% | Lowe    | r Bound* | 1.649     |

Lower- and upper-bound index weighting

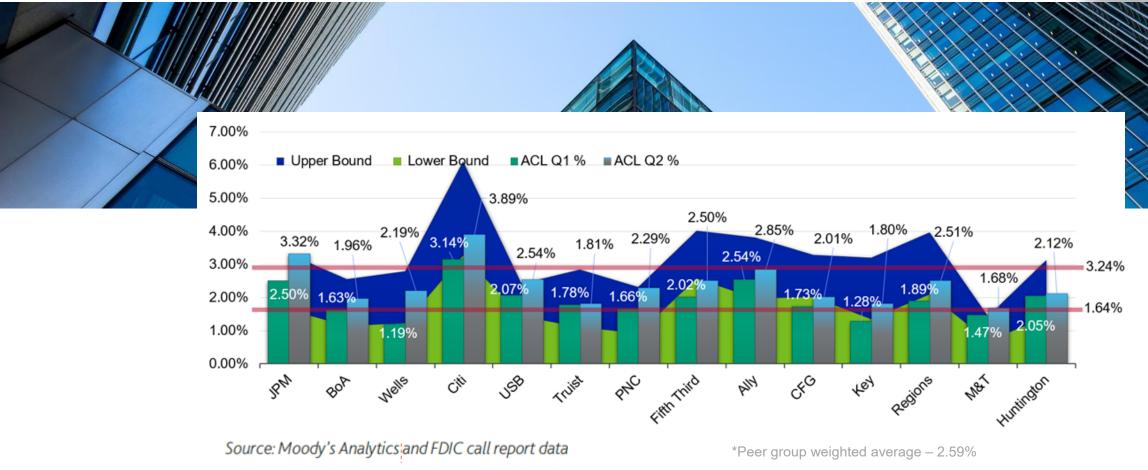
Source: Moody's Analytics

Figure 26

## Q2 Results

#### Discussion and remarks





## Management Challenge Benchmark for CECL

As a service or do it yourself...

The analysis presented today provides an overview of the Moody's Analytics view benchmarks to evaluate CECL estimates

- » Integrated tools to facilitate analysis
- » Key components:
  - Historical performance analysis
  - 5 top down methodologies
  - Incorporates idiosyncratic assumptions
  - Qualitative metrics for interpretation
  - Peer group benchmark and triangulation index









# Questions and Answers

Management Challenge: A benchmark for CECL estimates







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