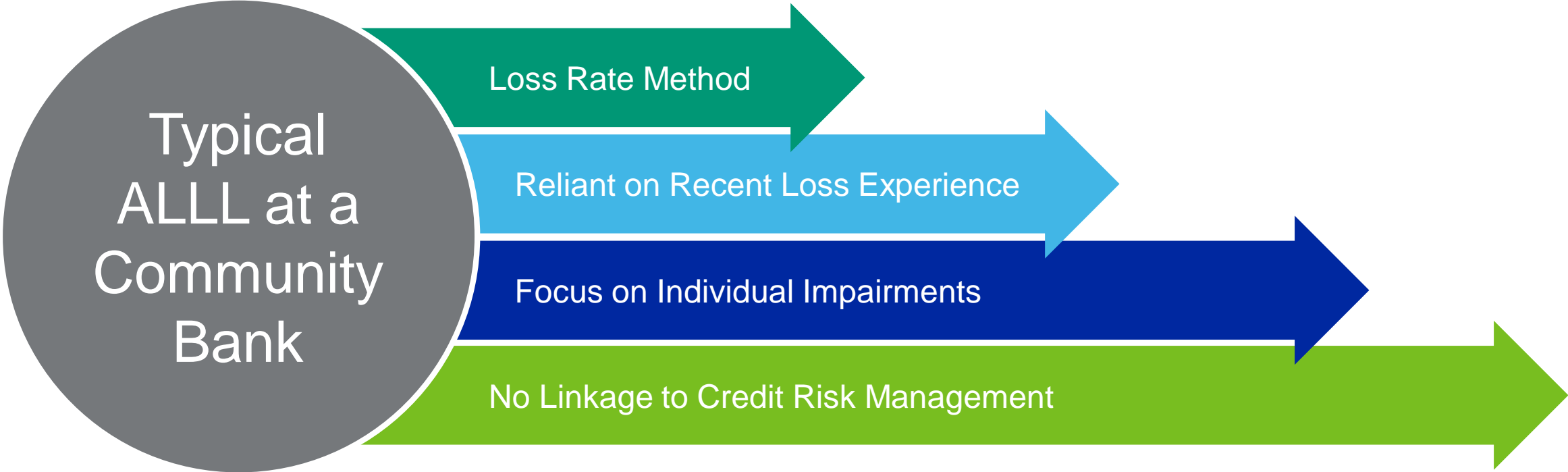


Simple But Not Simpler: Day 1 Modeling Approaches

A review of simple approaches available to community banks on the road to their CECL journey.

A Word on Incurred Loss Approach Today



Complexity Scaled to Sophistication....

“ Simplicity is always great until it gives you the wrong answer or someone asks a simple question you can't answer! When the “answer” drives decisions towards bonuses, dividends, and raising capital, the stakes can be high!

American Bankers Association

What is Loss Rate under CECL?



Credit Metrics That “Move” with ECL

Un-learn the meaning of the credit risk metrics under Incurred Loss

Allowance Attribution Factors

- » New Loans
- » Exits
- » Charge-offs
- » Aging Effects (Loss Curve Patterns)
- » Forecasts

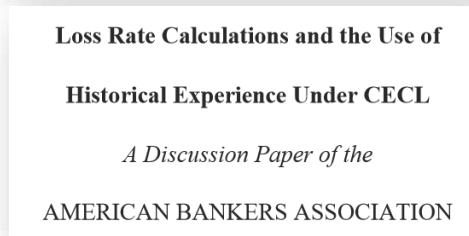
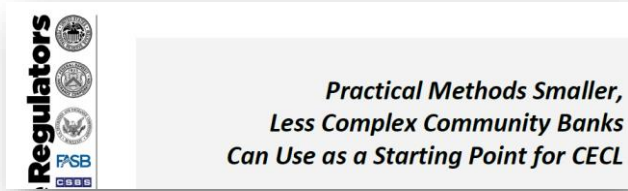
Simplest Way to Explain Levels of Credit Risk is by

“ analyzing the likelihood that a loan will go bad and then estimating the severity of the loss if it does go bad. In other words, probability of a default and loss given the default ”

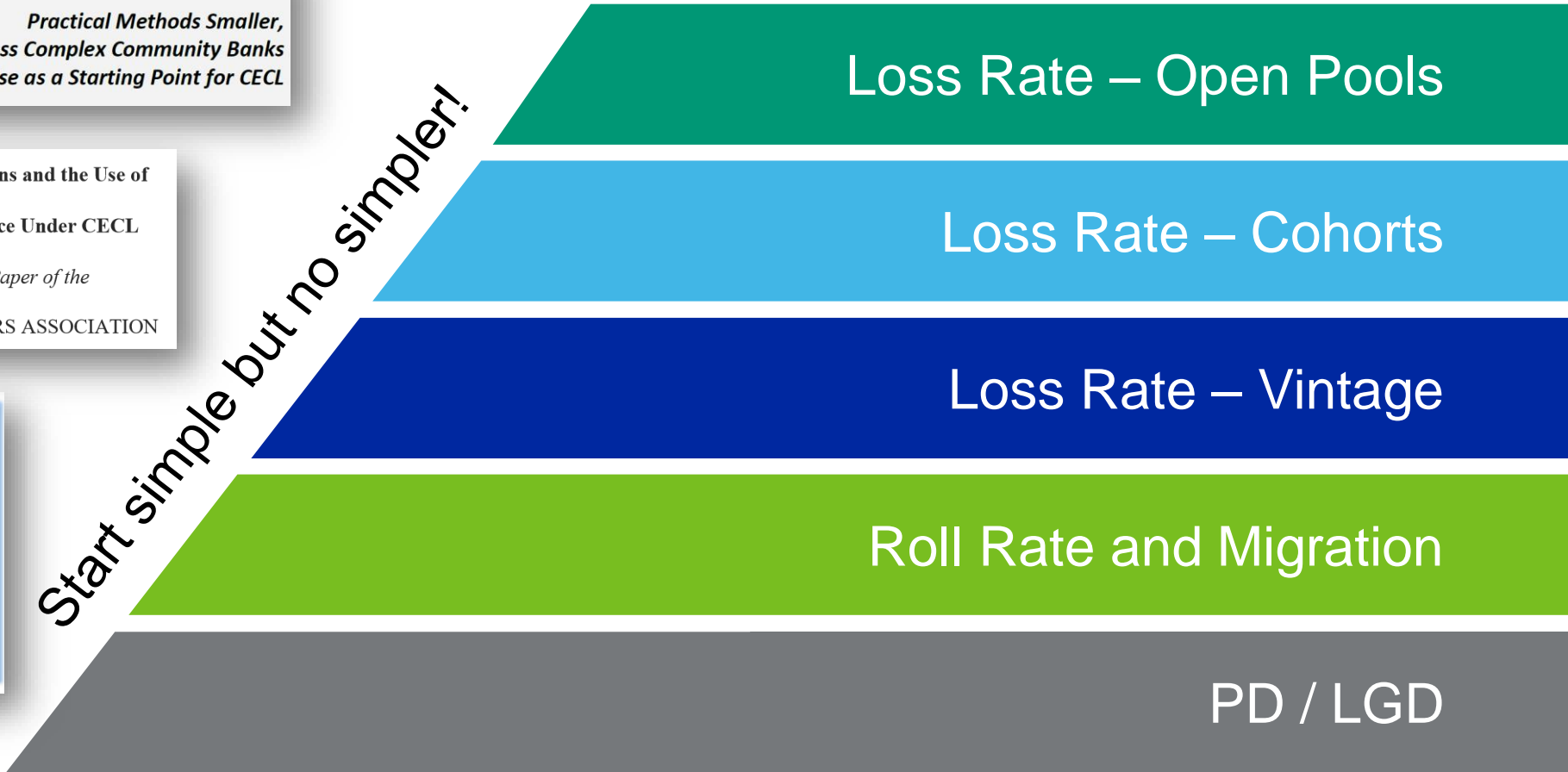
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Our destination...

Emphasizing Simplicity



Start simple but no simpler!

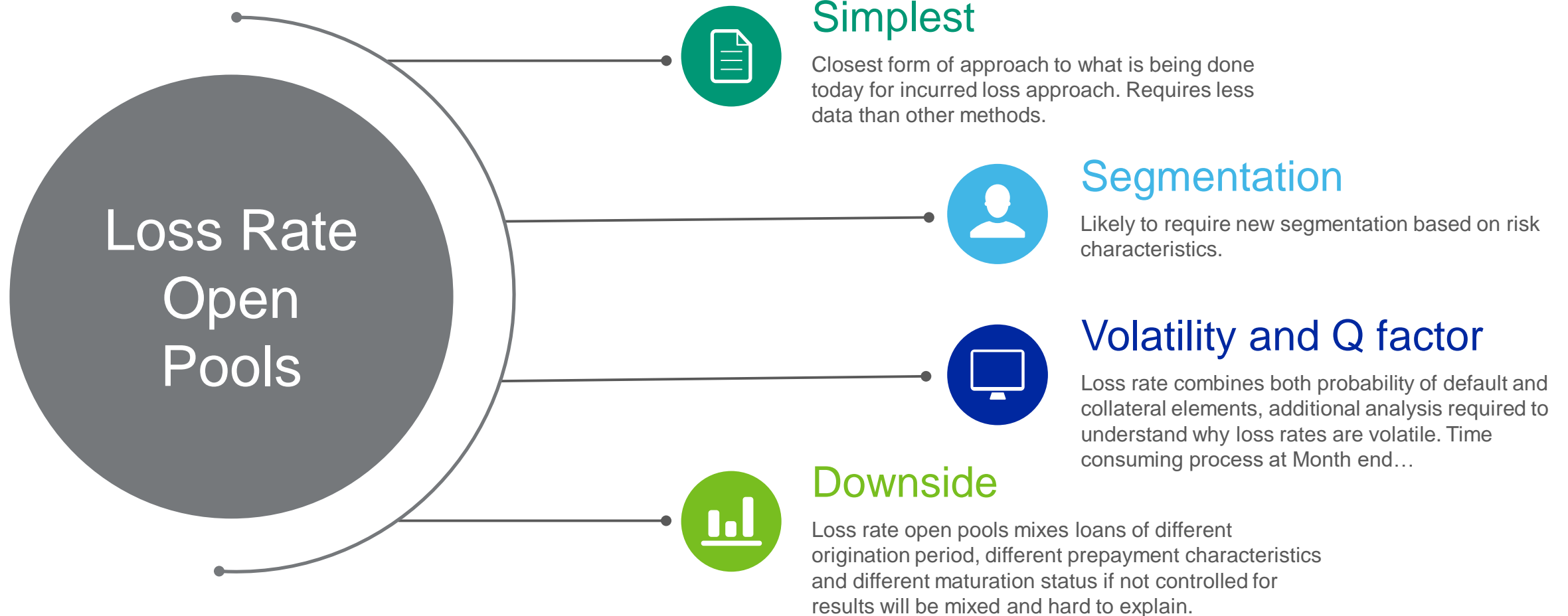


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CECL Day 1 Methodologies

Loss rate – Open Pools Methods

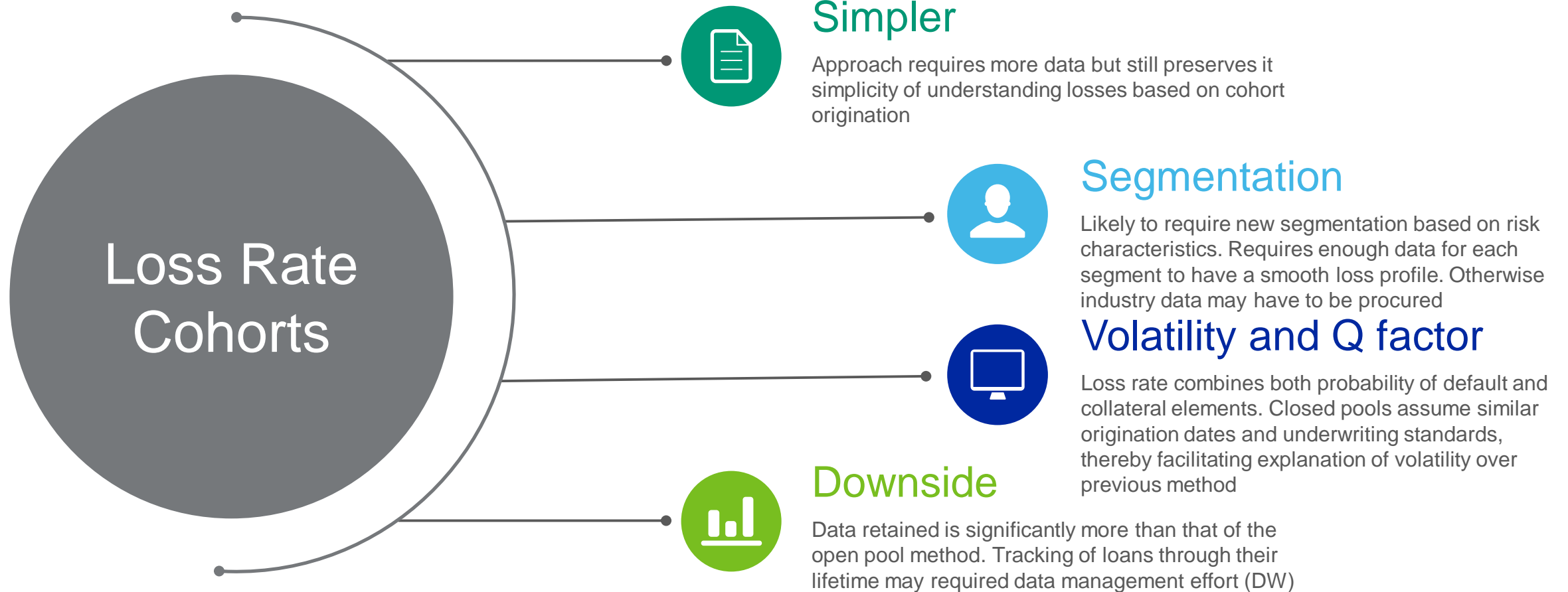
The Process: Identify all net charge-offs (both charge-offs and recoveries) recorded during a lifetime period (segmented loans) and divide by the average amortized cost balance during that lifetime period.



CECL Day 1 Methodologies

Loss rate – Cohort Method (Closed Pools)

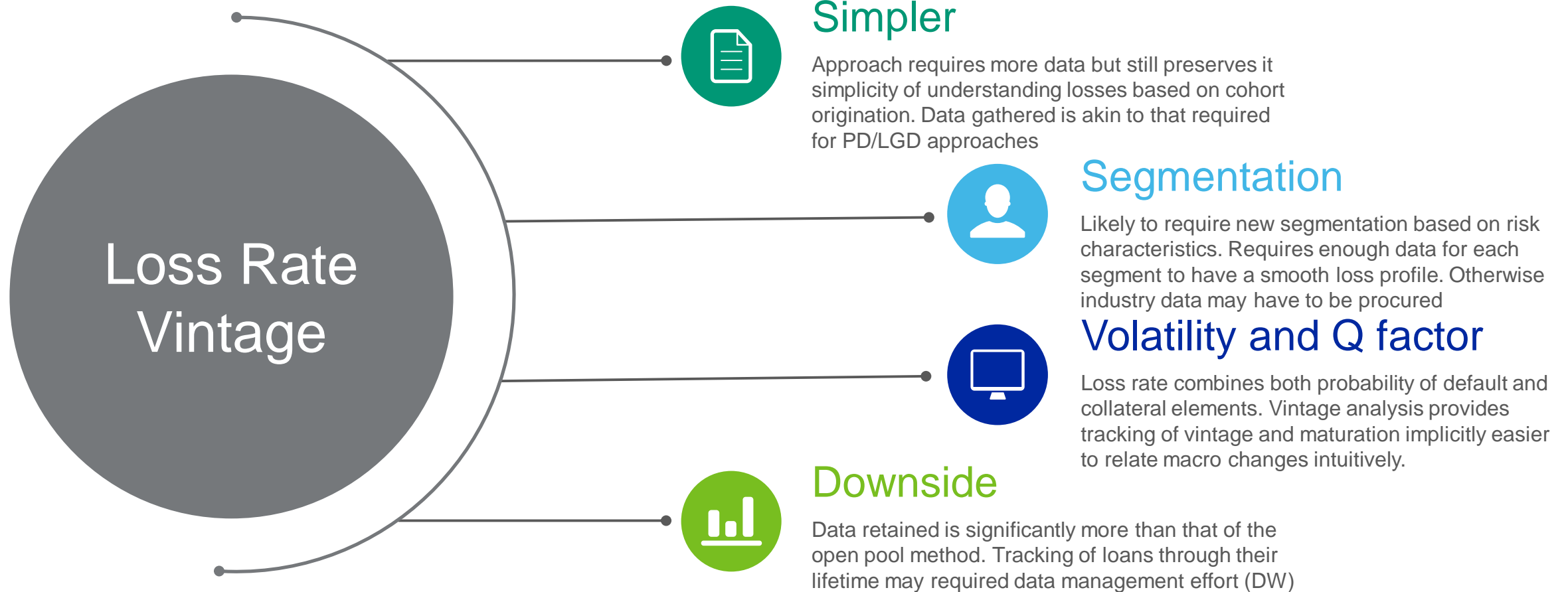
The Process: All loans are identified as of a specified date and subsequent net charge-offs (both charge-offs and recoveries) in future periods relating to those specific loans are identified and accumulated until final resolution of each of the related loans. Accumulated net charge-offs are then divided by the beginning amortized cost to arrive at a loss rate for the pool.



CECL Day 1 Methodologies

Loss rate – Vintage Method (Closed Pools)

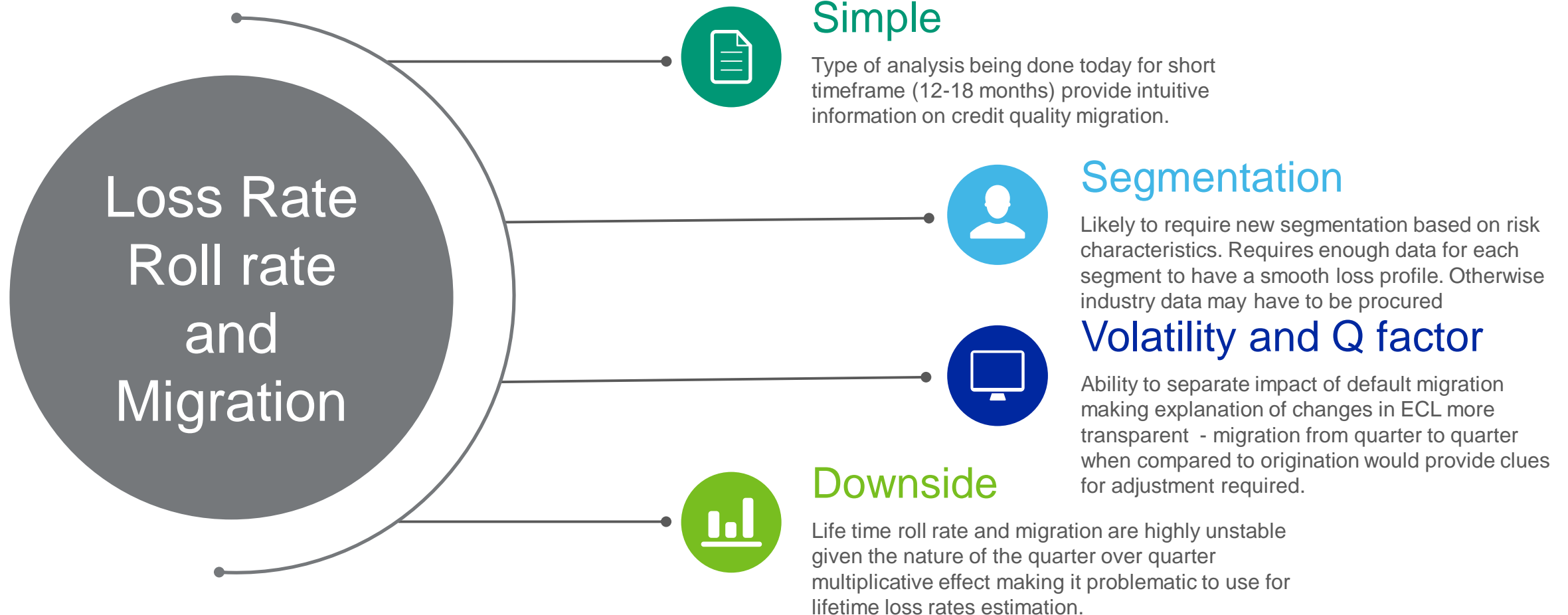
The Process: Identify all loans originated during each period and then identify all future charge-offs that relate to those loans. Vintage loss rates are also often analyzed within distinctive matrices, such as the matrix shown in paragraph 326-20-55-30 of the CECL standard's guidance.



CECL Day 1 Methodologies

Loss rate – Roll rate and Migration Methods

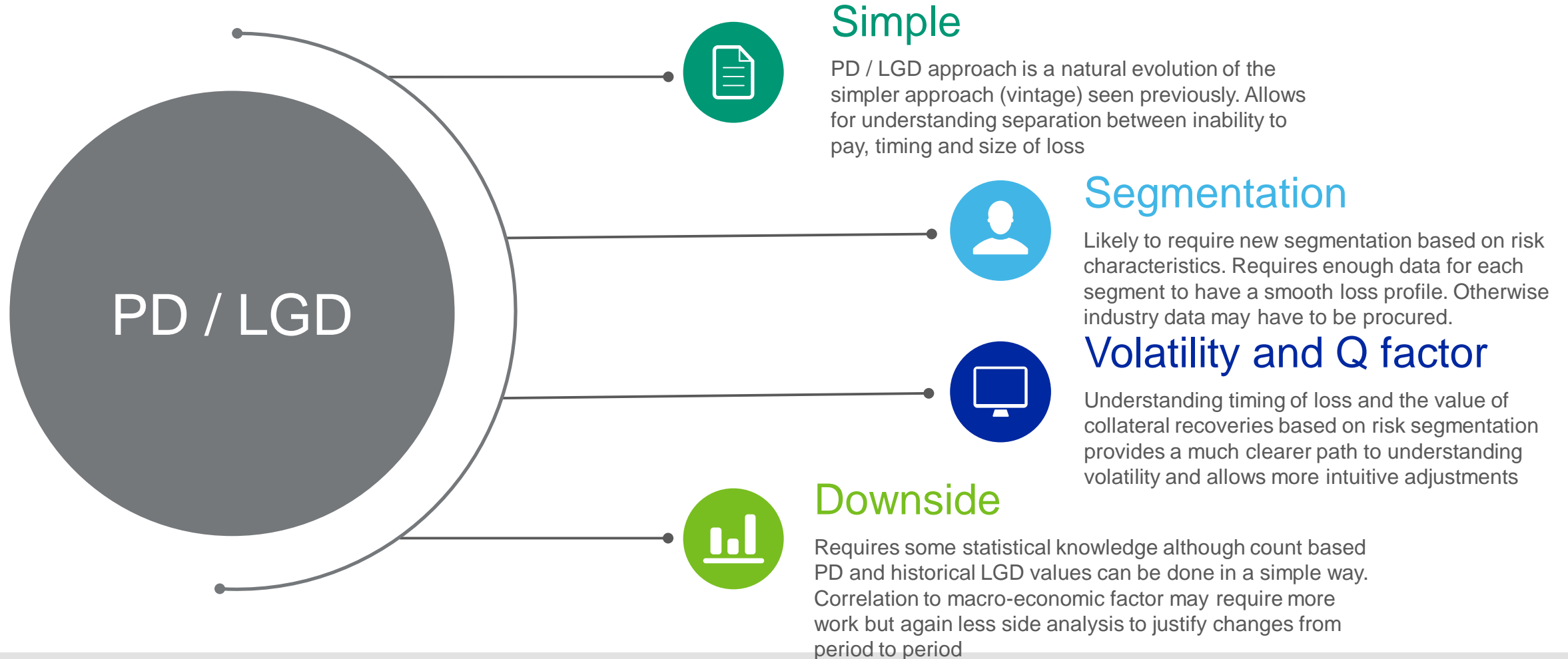
The Process: Calculate the migration rates of loans from different segments (by risk rating, by delinquency status, etc.), and determine the percentage of borrowers that “roll” into the probable loss and/or default categories.




CECL Day 1 Methodologies

PD / LGD – Wholly grail?

The Process: PD requires a history of default count through time which can be used to define the probability of an obligor to default over time based on a definition of default (usually 90 days). LGD can be derived from average loss intensity experience through time. These PD/LGD methods can range from simple to very complex. Industry data can be used to supplement internal data.



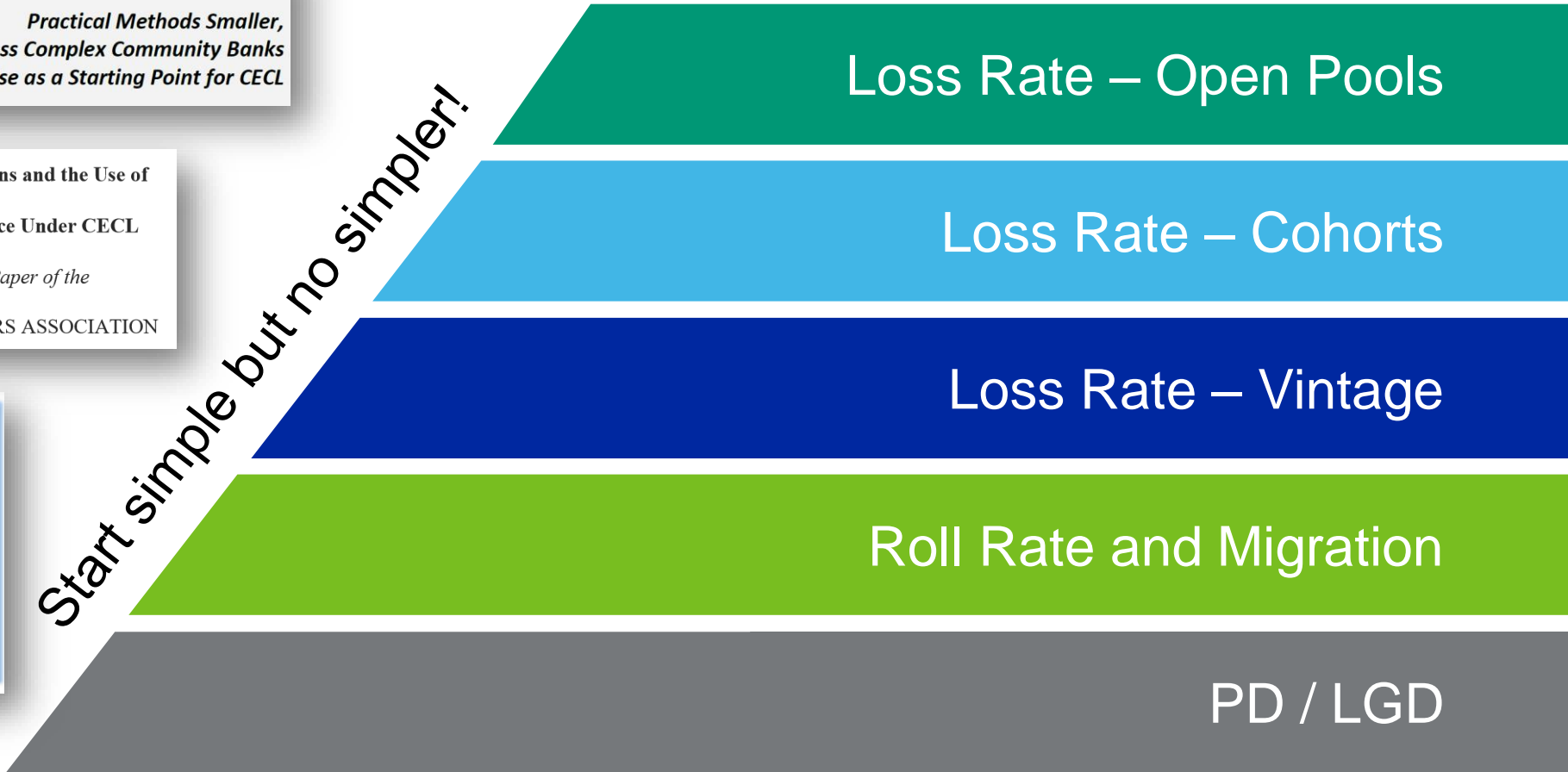
Emphasizing Simplicity



*Practical Methods Smaller,
Less Complex Community Banks
Can Use as a Starting Point for CECL*

**Loss Rate Calculations and the Use of
Historical Experience Under CECL**
A Discussion Paper of the
AMERICAN BANKERS ASSOCIATION

Start simple but no simpler!



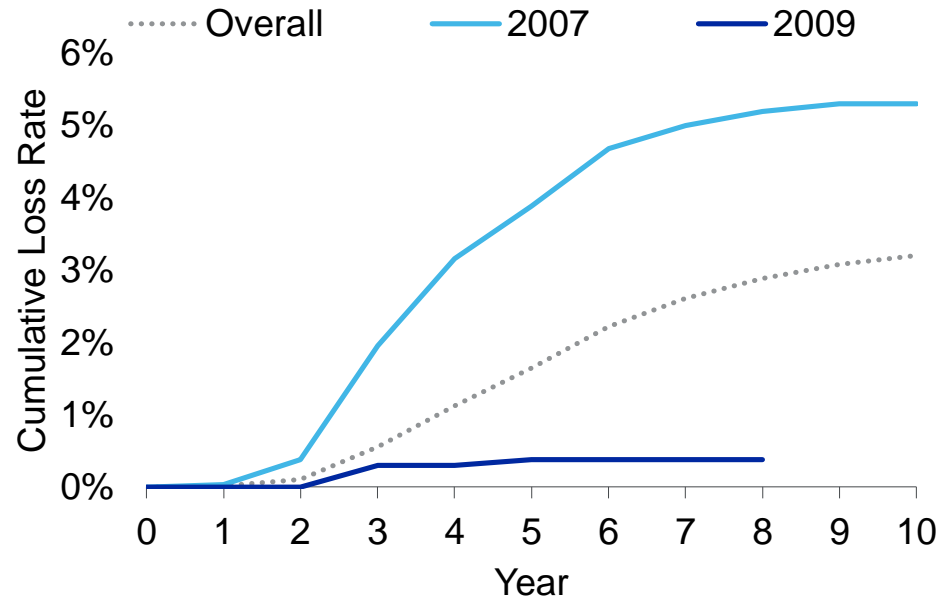
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Asset- specific Discussion

CRE Loss Rate Model Research

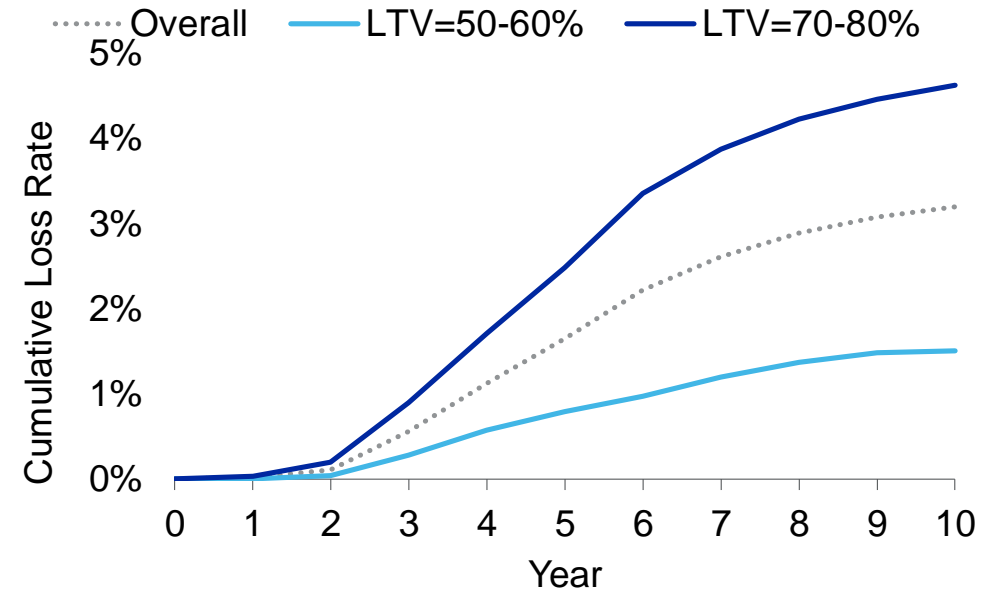
Historical CRE Loss Experience Is Correlated with Loan Characteristics

- » CRE loan performance depends critically on origination vintage



Based on CMM development dataset

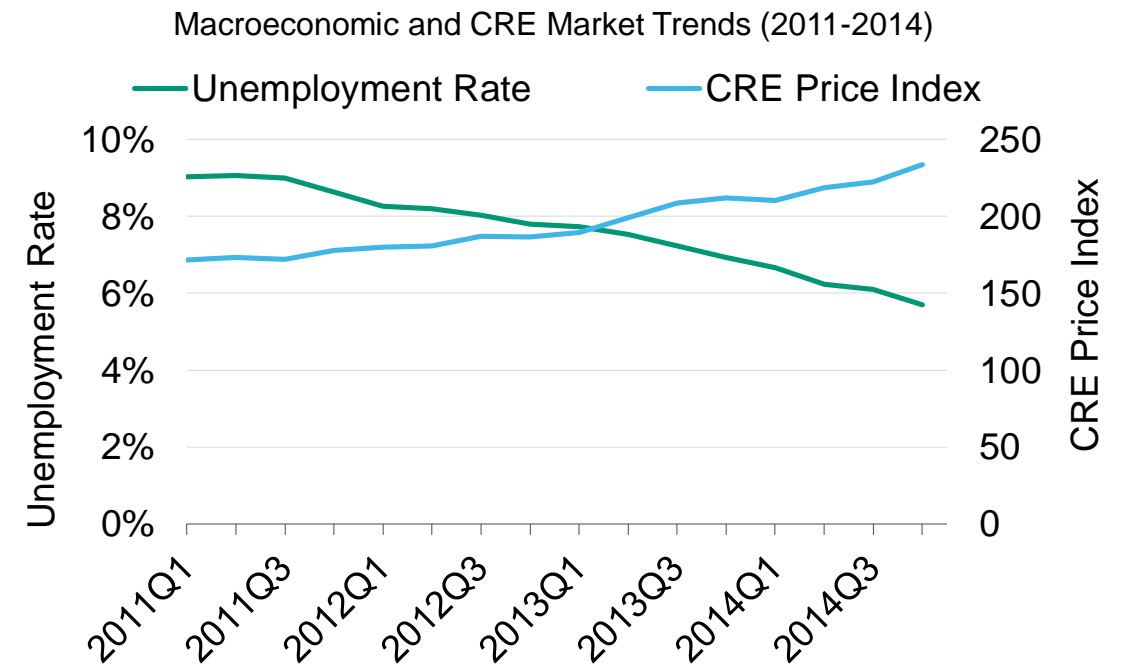
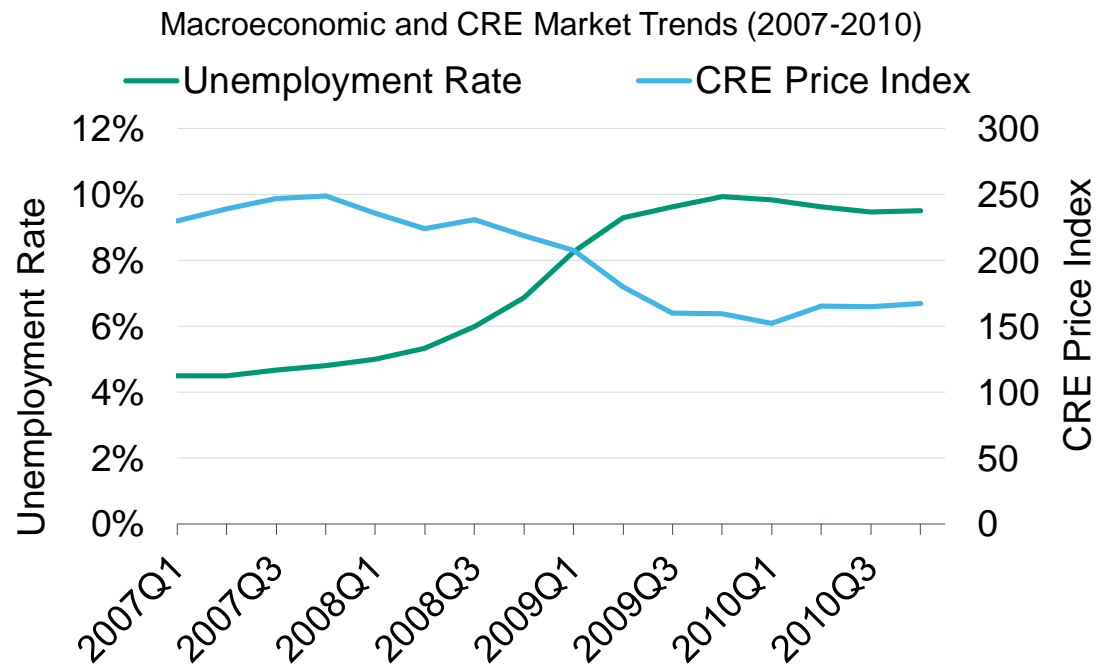
- » Origination LTV is a major risk driver for CRE loans



Based on CMM development dataset

CRE Loss Is Also Driven By Macroeconomic and Market Conditions

- » Historical CRE loss is closely tied to historical macroeconomic and CRE market trends
- » A reliable CRE loss estimate depends on reasonable and supportable forecasts of future economic and CRE market conditions



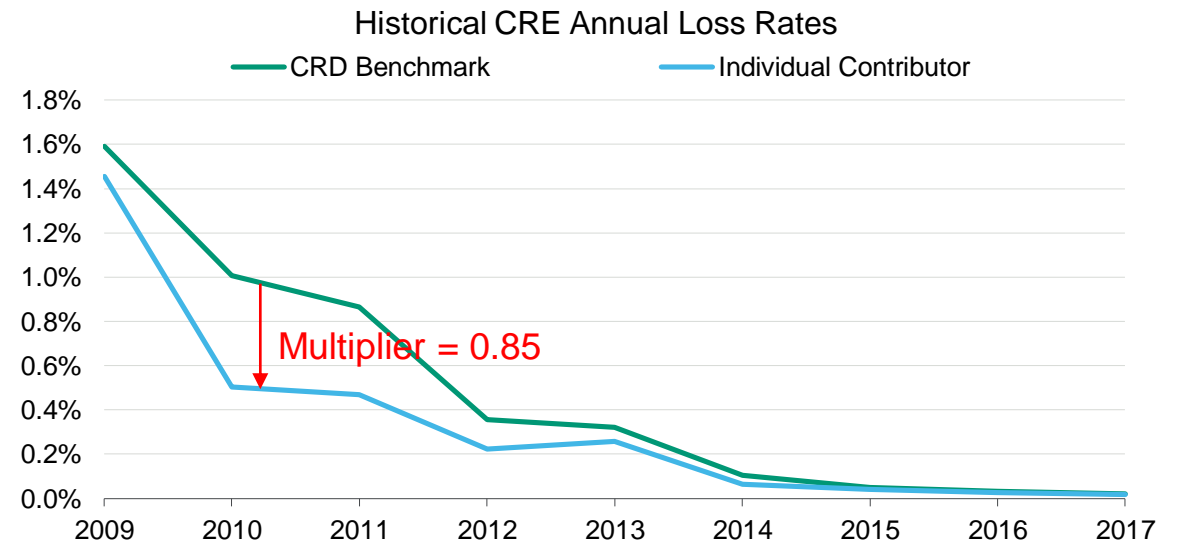
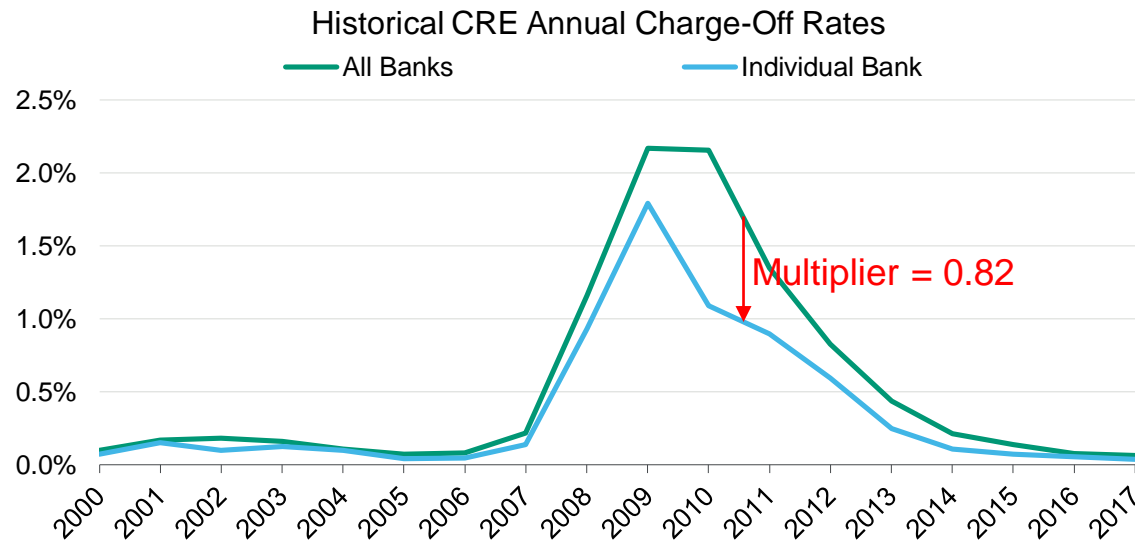
CRE Loss Rate Model Combines Industry Data with Bank Experience

» Model specification: $EL = f(\text{Loan Factors}, \text{Macro Factors}, \text{Market Factors})$



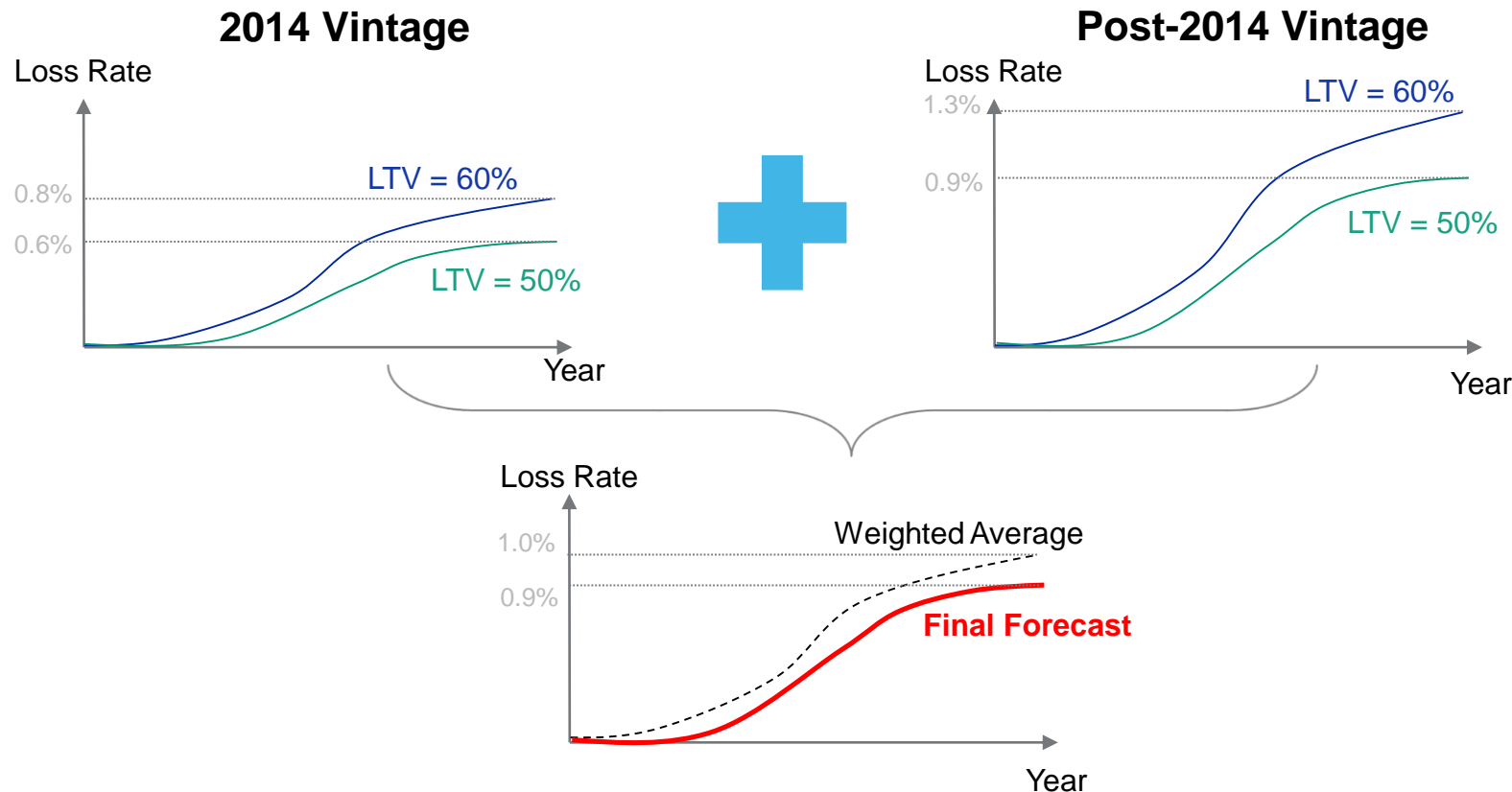
» Final loss estimate can be calibrated to individual bank experience based on call reports

» Alternatively, it can be calibrated to historical loss rate for banks with sufficient historical loss data



CRE Loss Rate Forecast: An Example

- » Suppose that a bank always originates CRE loans at 50% or 60% LTV
- » Currently, 20% of its CRE loans were originated in 2014 and the rest were originated after 2014
- » Historically, its CRE charge-off rate is 10% lower than that of its peers on average



The image features a low-angle, upward-looking perspective of a modern glass skyscraper against a clear blue sky. The building's facade is composed of a grid of white metal frames and large glass panels, creating a strong geometric pattern. A solid blue horizontal band is overlaid across the middle of the image, serving as a background for the contact information.

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