

# Single Family Strategies for Determining Appropriate Loss Reserves

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# Overview

- Industry Approaches to Forecasting Credit Losses
- Concerns Regarding Nontraditional Mortgage Products
- Allowance Balancing Act
- Loss Emergence Concepts
- Unallocated Allowances

# Industry Approaches to Forecasting Credit Losses

Forecasting accuracy is as much a function of the data availability and selection as the model design. Companies are striving to move further back on the timeline to predictive characteristics of default and incurred loss rather than waiting for delinquency or charge-off

Leading

Lagging

Origination Characteristics

Behavioral / Market Characteristics

Late stage delinquency

Charge-off

Characteristics

- Origination FICO
- Origination LTV
- Loan size
- Geography
- Product Type
- Fraud Score

Characteristics

- Bureau Refresh
- Behavioral Score
- Early stage delinquency
- MTM LTV
- Seasonality
- Interest Rates
- QC Findings

Characteristics

- Serious Delinquency
- Appraised Value
- Foreclosure / Write-off
- Repurchase demands

Characteristics

- Actual write-offs
- Repurchase events/losses
- Recoveries

Used in combination

# Industry Approaches to Forecasting Credit Losses

There are a broad range of modeling techniques applied in the industry to quantifying losses in support of allowance estimation.



## *Historical Charge-offs*

### Model Characteristics

- Simple average of historical net charge-offs (or gross c/o adjusted for average recovery)
- Might include lag to address dampening from growth or trend functions to capture recent experience

### Considerations

- Significant lag
- No explicit link to root cause

## *Serious Delinquency*

### Model Characteristics

- Vintage based
- Roll-rate
- Product / characteristic segmentation

### Considerations

- Recognition of age / seasoning
- Somewhat lagging since still based on serious delinquency
- No explicit consideration of certain characteristics such as appreciation / equity

## *Enhanced Entry Rate*

### Model Characteristics

- Entry rate default probability reflecting FICO refresh, behavior score and/or other characteristics such as MTM LTV
- LGD reflecting current market conditions

### Considerations

- Linked to business loss forecasting reconciled for GAAP consistency
- Fraud often modeled separately from credit risk

## *PD/LGD or Econometric*

### Model Characteristics

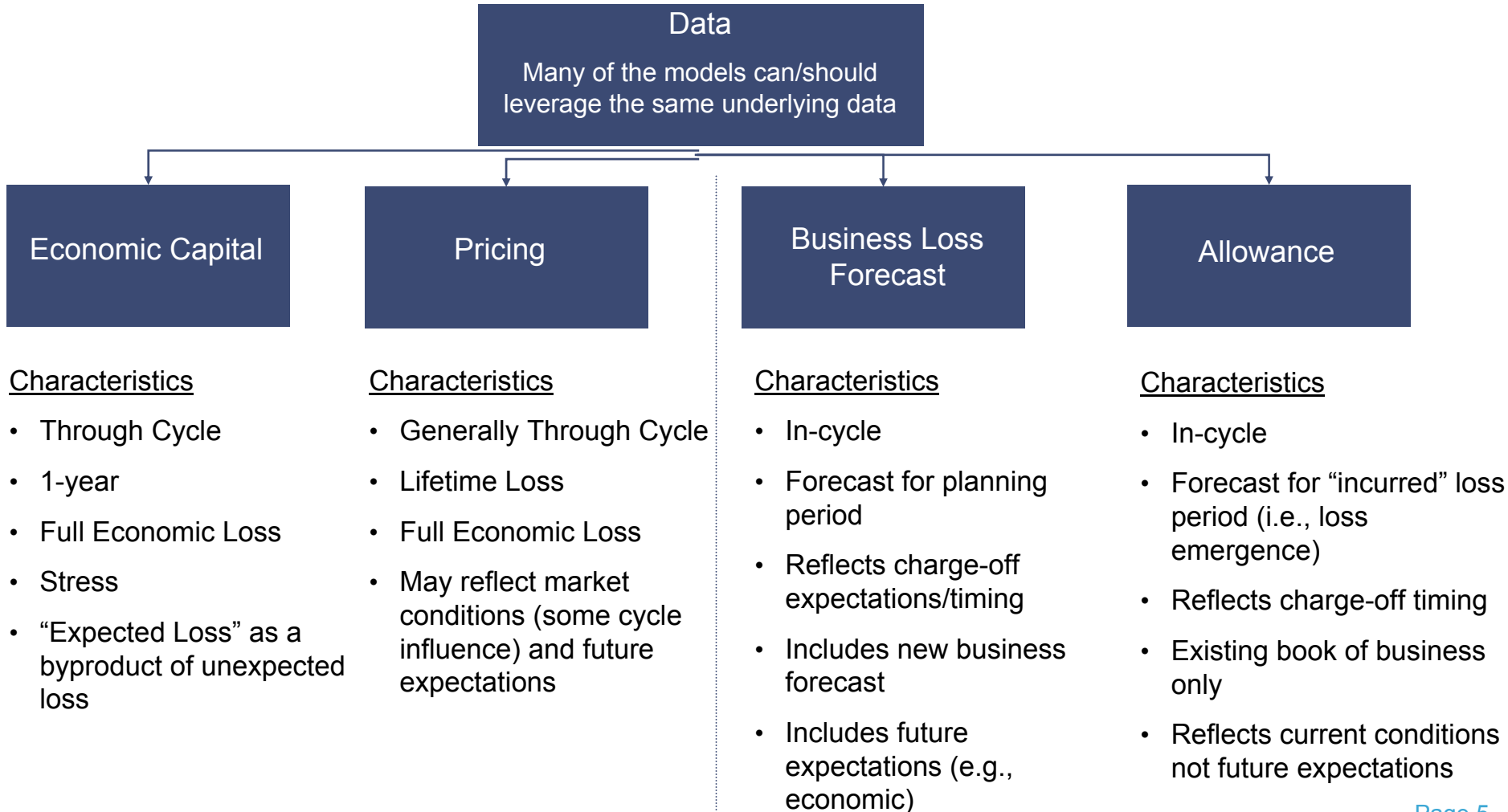
- Basel PD/LGD/EAD approach
- Econometric/characteristic based

### Considerations

- PD/LGD typical for **commercial** but not always well linked to business levers and loss forecasting for consumer
- GAAP consistency (economic vs. accounting)
- Transparency and model stability, particularly with econometric models

# Industry Approaches to Forecasting Credit Losses

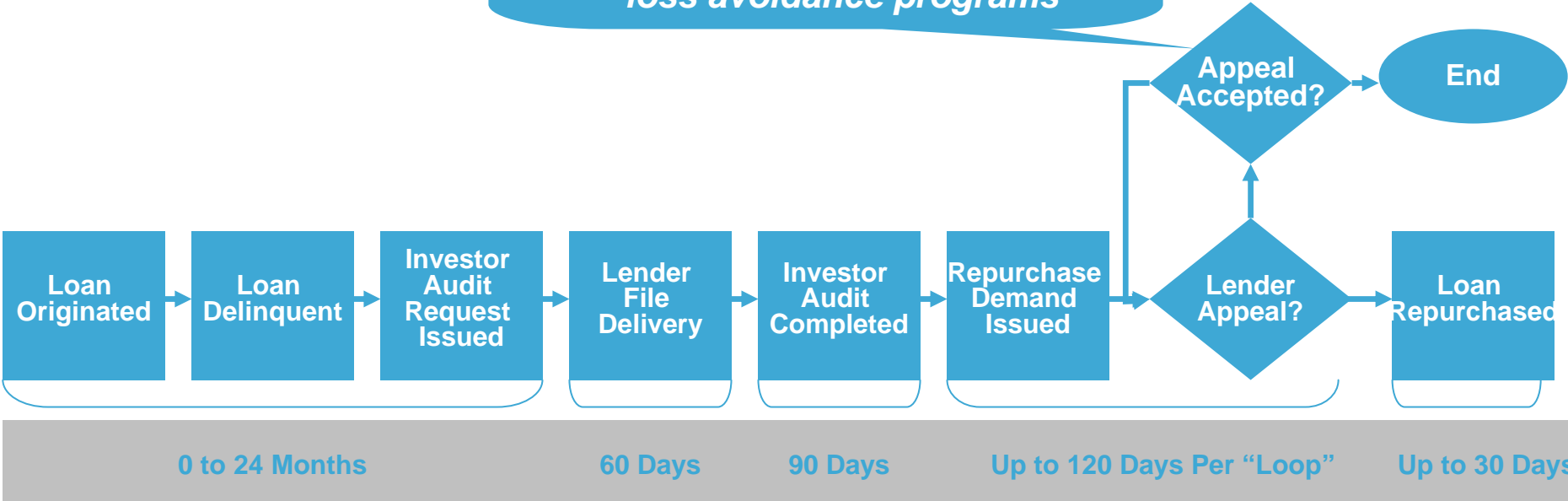
Companies should consider reconciling methodological concepts across Economic Capital, Pricing, Business Loss Forecasting and Allowance Forecasting to 1) best leverage opportunities for consistency while 2) recognizing necessary distinctions



# Industry Approaches to Forecasting Credit Losses

Forecasting repurchases can be complicated by the long lag between the “event” that gives rise to the repurchase and the repurchase event (commonly exceeding 240 days)

*Aggressive management of the loan appeal process is imperative in loss avoidance programs*



Managing timelines is critical to mitigating losses--in many cases additional investor penalties may be applied for aged repurchase demands, further compounding losses

# Industry Approaches to Forecasting Credit Losses

Other issues that make repurchase forecasting difficult:

- Data availability—Sufficient characteristic and performance data may not have been captured historically
- Characteristic transparency—Characteristics leading to repurchases are not readily available (e.g., fraud, value inflation, underwriting errors)
- Optionality—Even with the data, Agency / Investor repurchase claims may be driven by strategic business considerations such as relationships and probability of loss on the loan

# Concerns Regarding Non-Traditional Mortgage Products

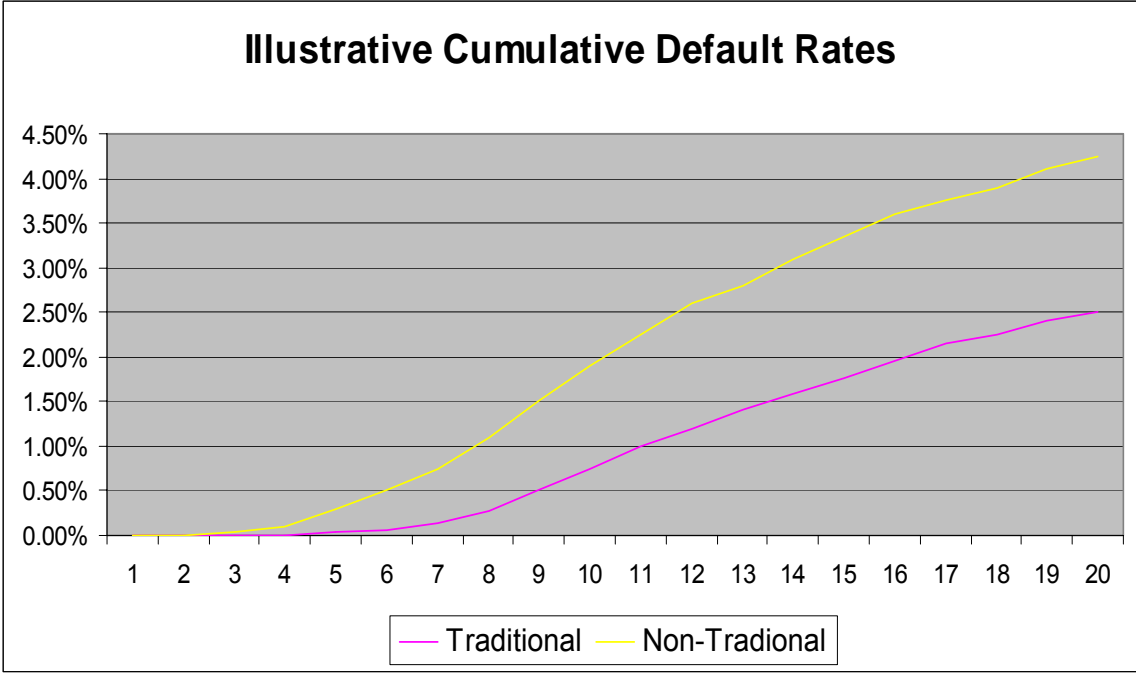
- Includes:
  - Interest-Only Mortgages
  - Payment Option ARMs
- Concerns:
  - Payment Shock
  - Collateral Dependency
  - Risk Layering (low doc, simultaneous 2<sup>nd</sup>)
  - Lack of Consumer Understanding
- Interagency Guidance (Oct. 2006) Requires:
  - Ensure loan terms and underwriting standards are consistent with prudent lending practices, including consideration of borrower's repayment capacity
  - Recognize that these products, particularly with risk-layering features, are untested in a stressed environment and therefore warrant strong risk management standards, capital commensurate with the risk, and appropriate allowances
  - Ensure consumers have sufficient information to clearly understand the loan terms and risks
  - Not meant to discourage the use of these products for qualifying borrowers

# Concerns Regarding Non-Traditional Mortgage Products

- Underwriting Standards
  - Analysis of repayment capacity should include evaluation of ability to repay the debt by final maturity at the fully indexed rate, assuming a fully amortizing repayment schedule
    - A “credible” market rate should be used
    - Amortization schedule based on term of the loan
  - For products with negative amortization, repayment analysis should include the balance increase that may accrue
  - Avoid practices that heighten the need for borrower to rely on sale or refinancing once amortization begins
  - As risk-layering occurs, agencies expect more diligent verification and documentation of borrower’s income and debt reduction capacity
- Robust Risk Management Practices
  - Appropriately manage concentrations
  - Monitor early warning signs
  - Establish appropriate allowance levels
  - Maintain capital levels that reflect stressed economic conditions (interest rates, housing value fluctuations, employment levels, etc.)

# Concerns Regarding Non-Traditional Mortgage Products

A primary concern is that the Company recognize early on, particularly with limited history, potential for different loss experience in these products



### Illustrative Example:

- Rapid growth but relatively small percentage of overall portfolio
- Clear differentiation in cumulative default rates early in product life
- Disproportionate contribution to overall defaults
- Average size of defaulting loan different than average loan size in portfolio

### Bottom Line:

- Model / Forecast failed to recognize changing dynamics

# Allowance Balancing Act

## Regulatory Agencies / Analysts

- General concern about easing underwriting standards
- Emphasis on maintaining “strong” loan loss reserves
- Allowance is the “cornerstone of safety and soundness”

## SEC / Auditors

- Concerns about “Cookie Jar” reserves and smoothing earnings
- Focus on directional consistency
- Well supported in the context of current conditions and observable data



# Loss Emergence Concept

- A key principle expressed in accounting guidance (e.g., SFAS No. 5 paragraph 1, question #10 in Exhibit D-80A of EITF Topic D-80 ) is that an estimated loss contingency shall be accrued by a charge to income if both of the following conditions are met:
  - Information available prior to the issuance of the financial statements indicates that it is probable that an asset had been impaired or a liability had been **incurred** at the date of the financial statements. It is implicit in this condition that it must be probable that one or more future events will occur confirming the fact of the loss.
  - The amount of the loss can be reasonably estimated.
- AICPA SOP on Allowance for Loan Loss (June 2003 – Never Formalized)
  - Clarified that the ALLL is not a “life of loan” concept
  - Introduced the concept of “loss confirmation period”
  - Acknowledged it is difficult to identify any single “event” that made the loan uncollectible
  - Creditor’s should make reasonable assumptions about the period over which incurred losses are confirmed

# Loss Emergence Concept

- Many industry participants are beginning to use the concept of “loss emergence”
- Loss Emergence can be thought of as two distinct timeframes

*Event* → *Discovery* → *Confirmation*

- “Confirmation” is usually charge-off and is defined by policy (e.g., 180 days for mortgage, 120 days for closed-end consumer credit, etc.)
- “Discovery” is somewhat subjective but may be defined by:
  - First occurrence of severe delinquency
  - A pattern of missed payments in a payment window
  - A shift in a FICO refresh or behavioral score combined with delinquency
  - Bankruptcy
  - Loan modification or restructuring
- Time between “Event” and discovery is very subjective as:
  - Data identifying the event is typically not available to the financial institution
  - Different customer segments may have more or less ability to weather financial difficulties

# Loss Emergence Concept

- Companies that have performed analysis have discovered a hierarchy of default
  - Store card and private label credit cards
  - Recreational vehicle/boat related loans
  - Unsecured Credit Cards
  - Auto Loans
  - Mortgage and Home Equity loans
- Consumer's will often:
  - Default on or restructure non-residential secured loans to protect their home
  - Utilize the equity in their homes to consolidate debt and improve cash flow, which in effect extends the emergence period for mortgage secured loans
- Many companies have found that incorporating loss emergence concepts has helped strike a balance between GAAP consistency and safety and soundness concerns

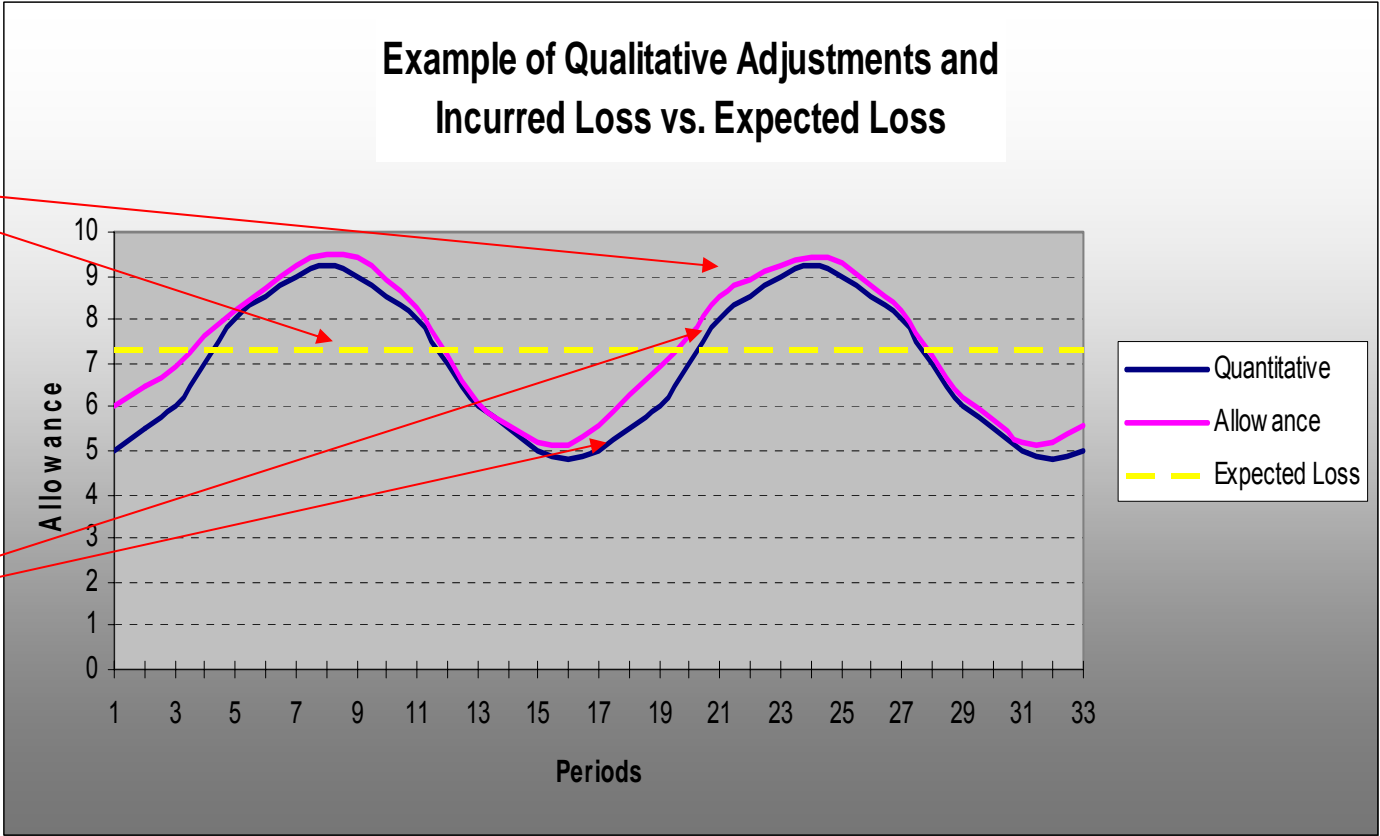
# Unallocated Allowances

- Fewer organizations are reporting “Unallocated Allowances”
- However, in many cases this simply reflects re-labeling
  - Economic adjustments
  - Model imprecision
- Regulatory Agencies and the SEC have not ruled out the permissibility of an unallocated allowance, but strongly encourage linkage to observable data
- Greatest need for qualitative adjustments is at inflections points in a credit cycle
- Best practices include:
  - Start with known and accepted model limitations
  - Focus monitoring / metrics on those things the model might miss or lag
  - Layer additional models and/or use complementary models to augment analysis
  - Recognize that some adjustments will be judgmental
  - Introduce discipline of “fresh start” and directional consistency
  - Only provide top-side, overall qualitative adjustments for those things that cannot be pushed down to a segment level

# Unallocated Allowances

Illustration of:

- Through Cycle Expected Loss vs. In-Cycle Incurred Loss
- Directional Consistency in Qualitative Adjustments



*Through Cycle  
“Expected Loss” vs.  
In-Cycle “Incurred  
Loss”*

*Qualitative Adjustment  
at the beginning of the  
cycle – absorbed by  
models as cycle  
progresses*