Integration of Stress Testing Processes in the Banking Book

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Puzzle Pieces

The art of simplicity is a puzzle of complexity.

-- Douglas Horton

- Stress testing requires coordination among many moving parts

- Full integration across the firm is one of the most difficult aspects of stress testing

  - Need consistent assumptions

  - Need consistent and continuous communication, governance

Integration across:

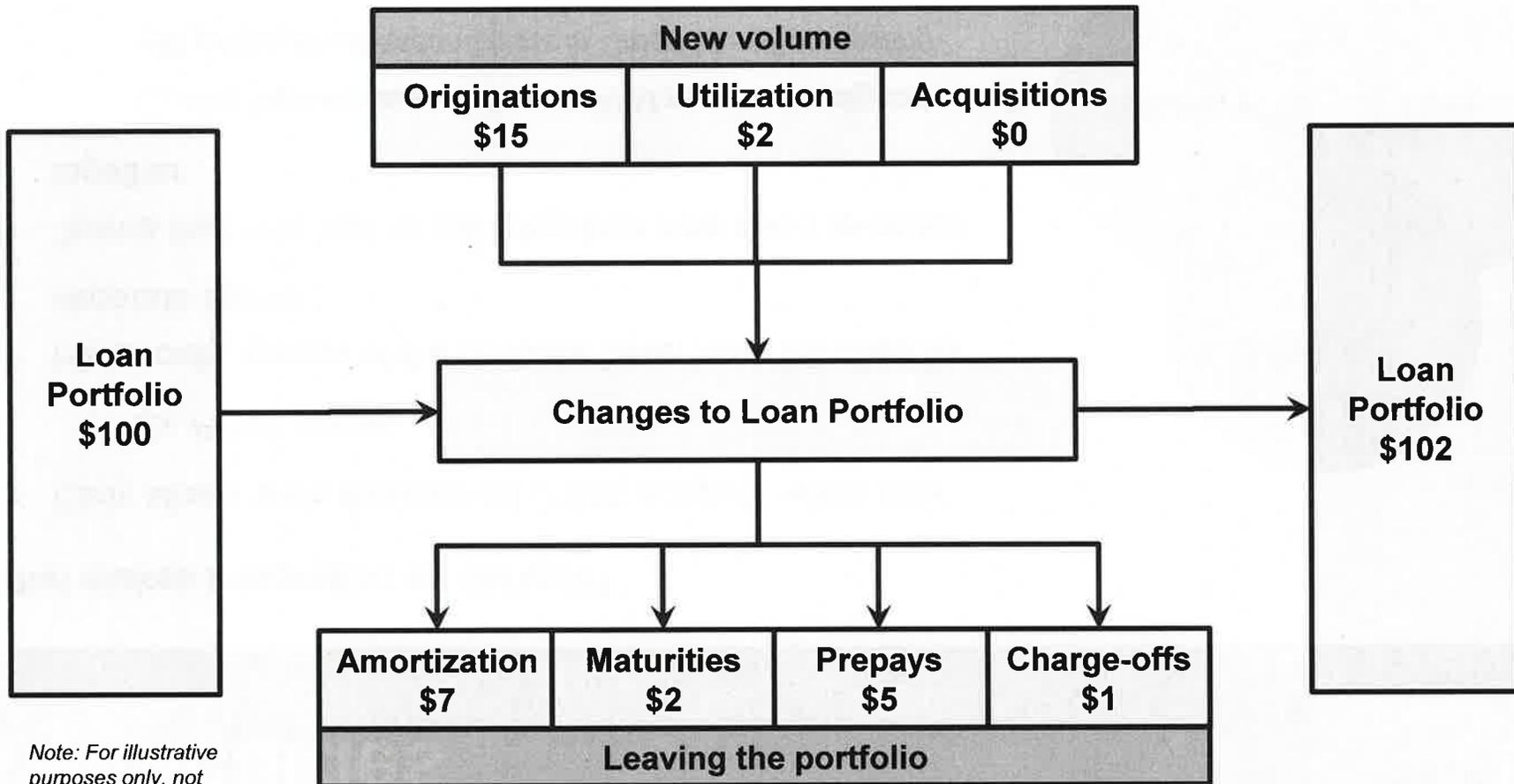|		
Lines of Business	Risk Management	Data Management
Credit Models	Operational Risk	Sr. Management
Revenue Models	Market Risk	Finance
Spread Models	Prepayment Models	Treasury
Loan Balance Projections	Utilization Models	Tax
Capital Planning	Origination Models	Board of Directors
Validation	Technology	Audit

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Integration in the Banking Book

t = 0   Time   t = 1

New volume		
Originations $15	Utilization $2	Acquisitions $0

Loan Portfolio $100

Changes to Loan Portfolio

Loan Portfolio $102

| Amortization $7	Maturities $2	Prepays $5	Charge-offs $1
Leaving the portfolio			

Note: For illustrative purposes only, not an actual portfolio

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Difficulties

What makes integration so difficult?

- Early stress tests focused on credit; scope is wider now

    Ex. PPNR models

- Historically, pieces of the process have been handled by separate teams

- Teams that only had to walk together now need to dance together

    Ex. Prepayment assumptions in ALM need to be aligned with prepayment assumptions in Credit Loss Forecasting

- Legacy processes and inertia – moving away from ingrained processes; disparate systems need to be able to interact

- Deep understanding, at multiple levels of the organization, of what needs to change

Stress testing "sweet spot"

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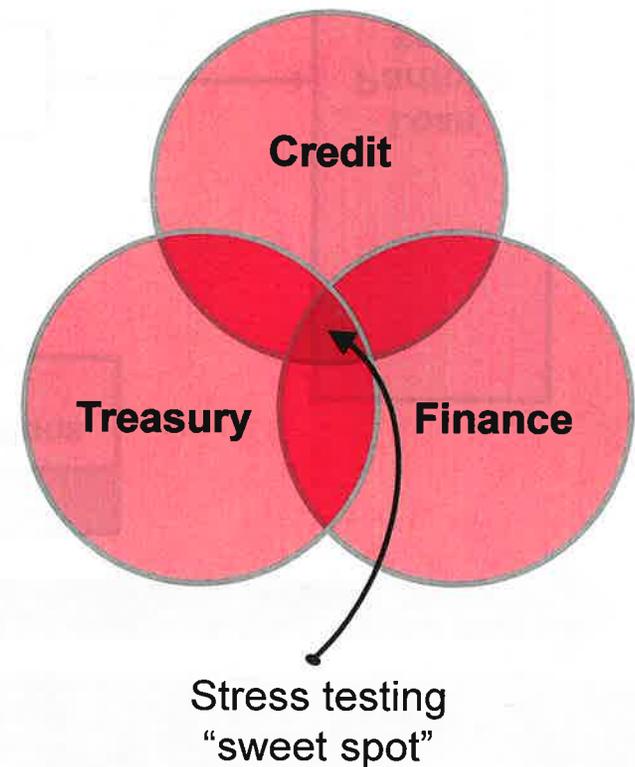
Approaches

Many different modeling options for the system

- Each component in isolation

  Separate models for each component (i.e. loss models, utilization models, origination models, etc.) — Issues: Integration, consistency

- Holistic: The "Uber" Model

  One model made up of multiple components that interact with one another, a feedback loop — Issues: Ownership, complexity
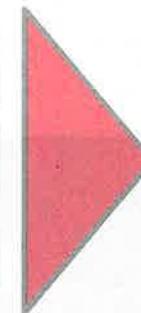
Historical Modeling Practices

Modeling practices relatively mature

Modeling practices relatively new

Credit

Treasury

Finance

Stress Testing (CCAR/DFAST)

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How to Achieve Integration

Governance

- Governance is not just about the numbers

- Strong governance over assumptions and limitations is required for full integration

- Focus on the intersection of all the functions, the stress testing "sweet spot"

Communication

- Strong governance should enhance communication

- Consistent and clear messages to committees, management , and staff

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