

# **PRMIA Presentation**

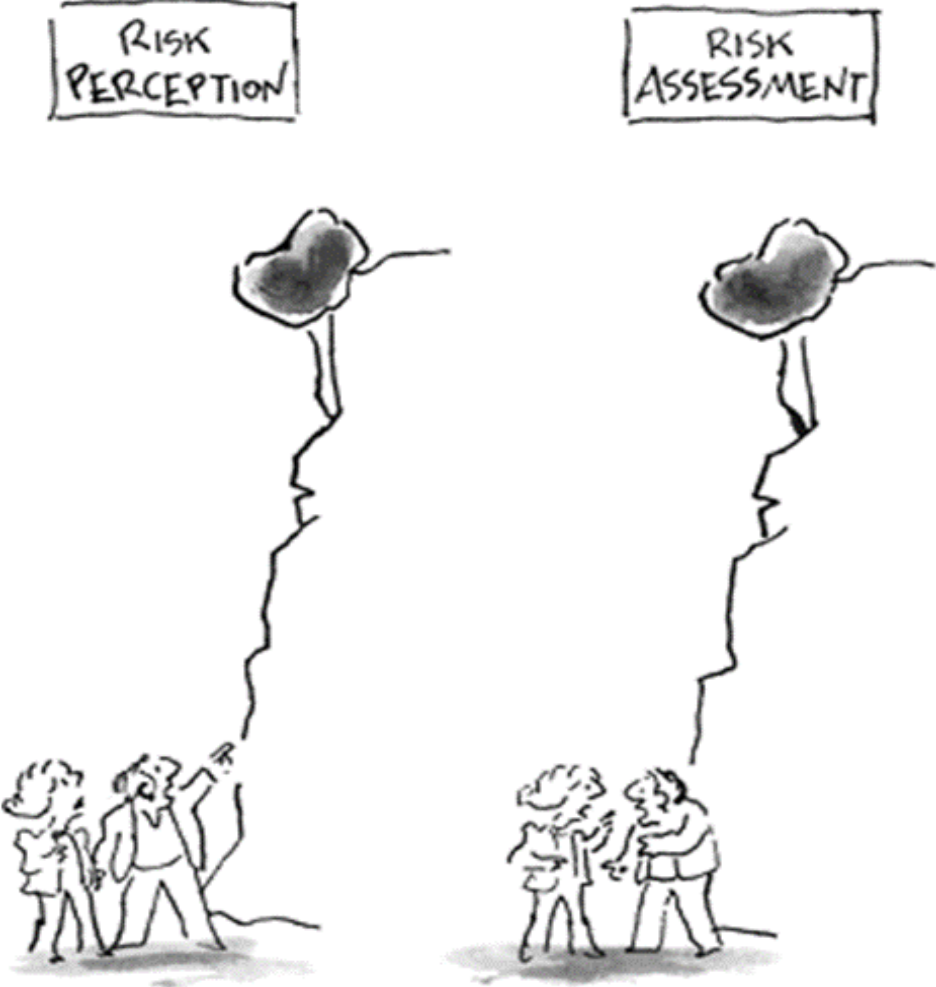
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June 2, 2011

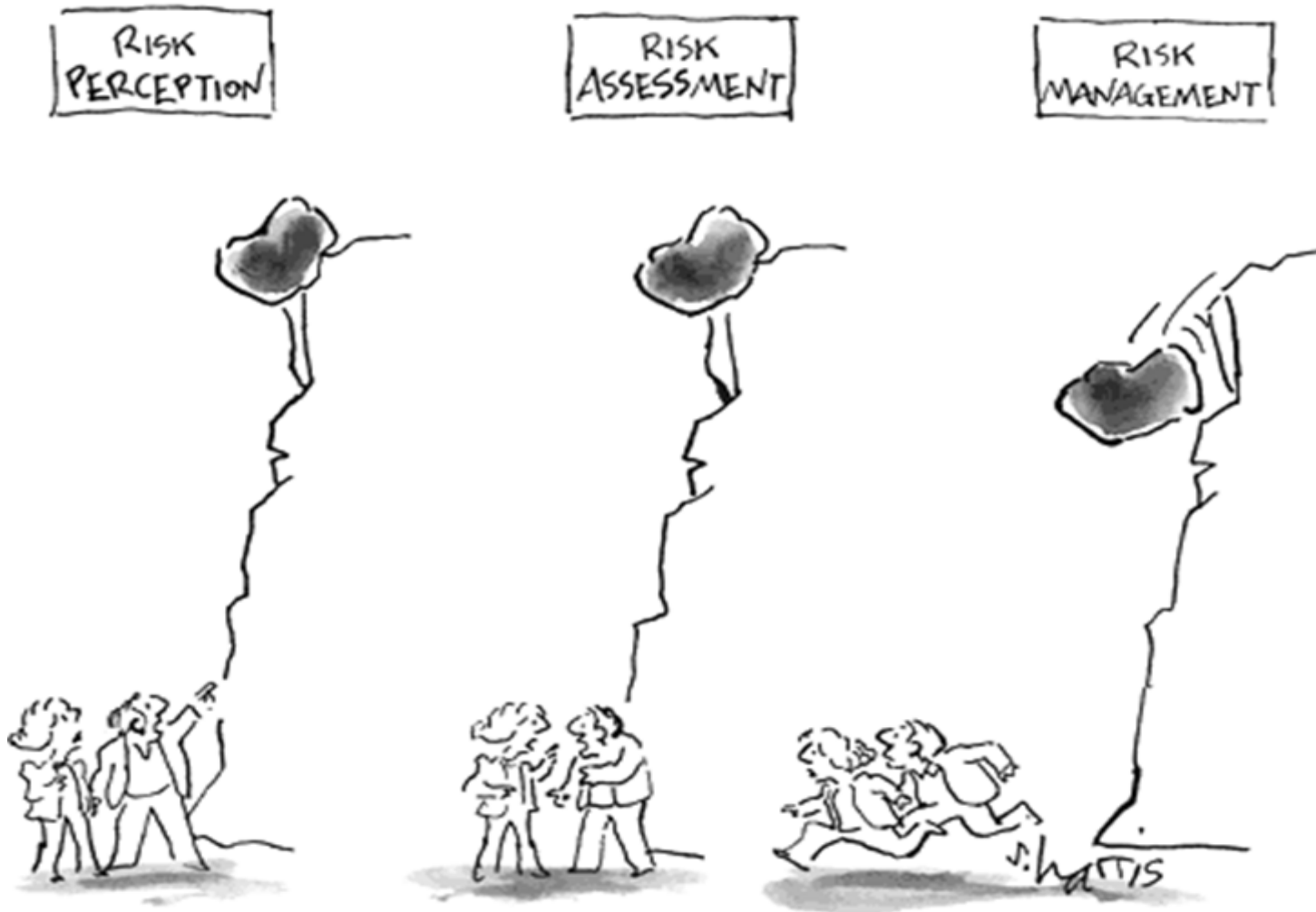
# Traditional Approach to Risk Management



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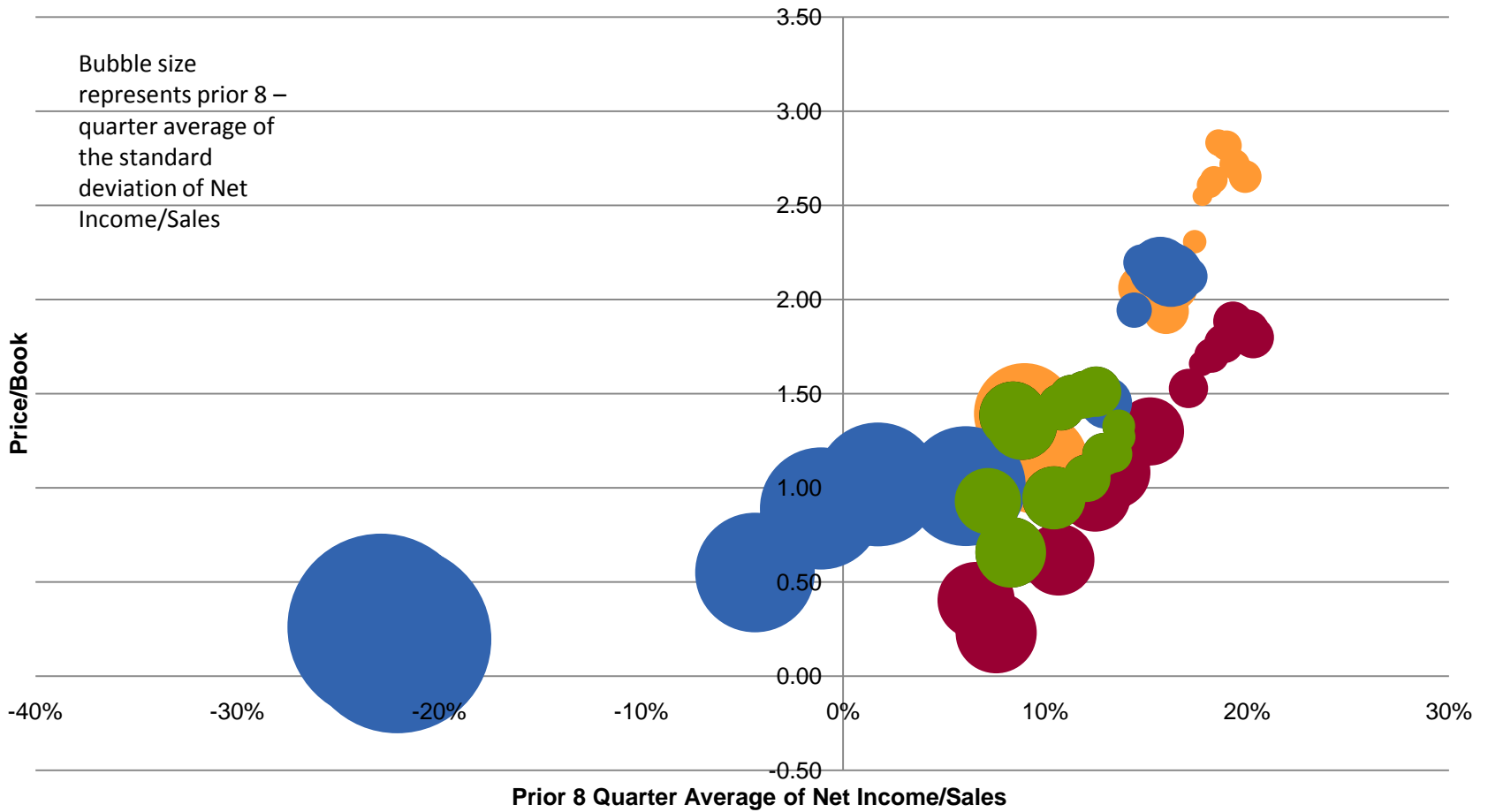


# Traditional Approach to Risk Management



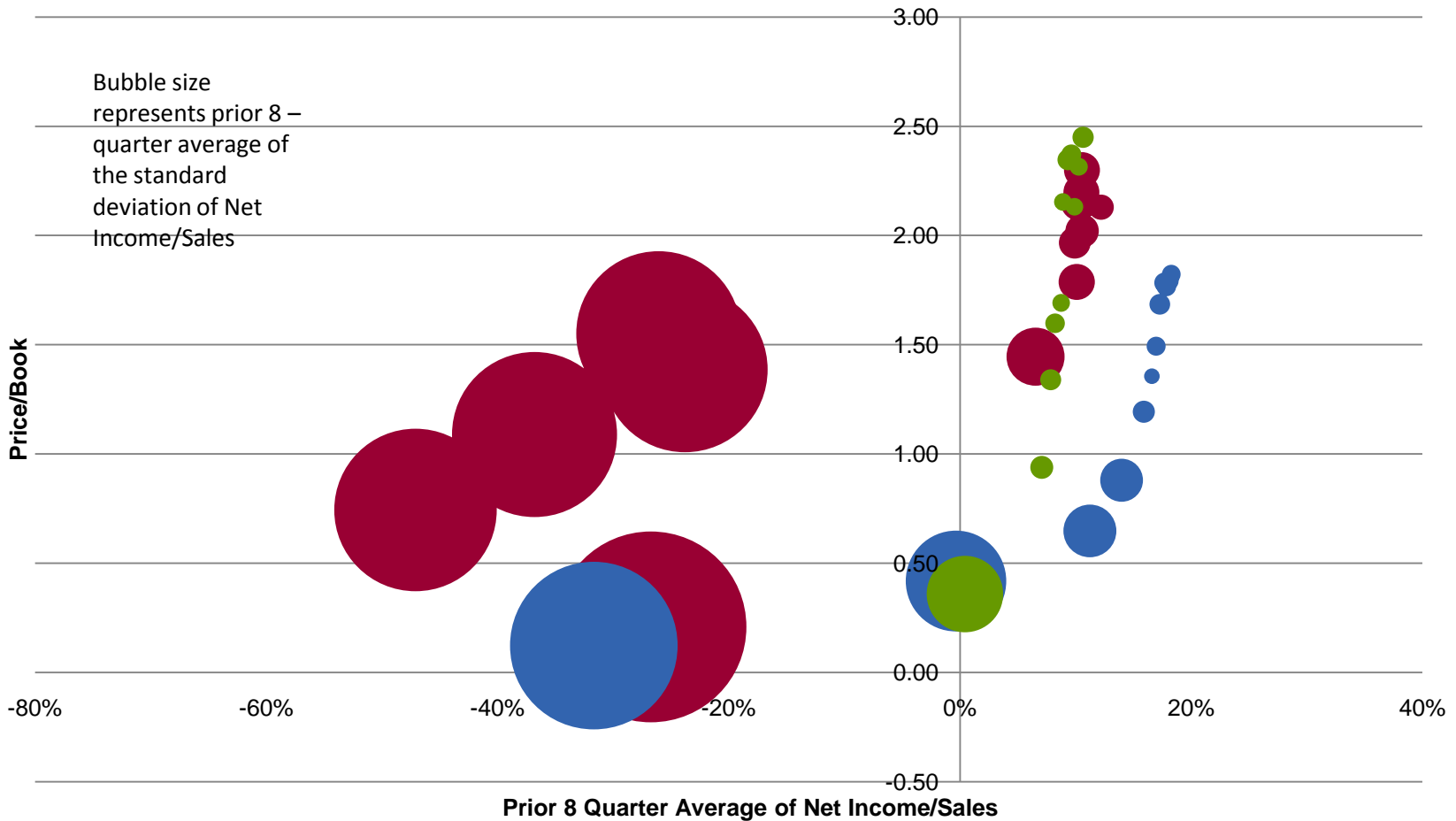
# Impact of Growth vs. Volatility on Valuation: Banks that Survived

## P/B Valuations: Growth/Vol Contributions

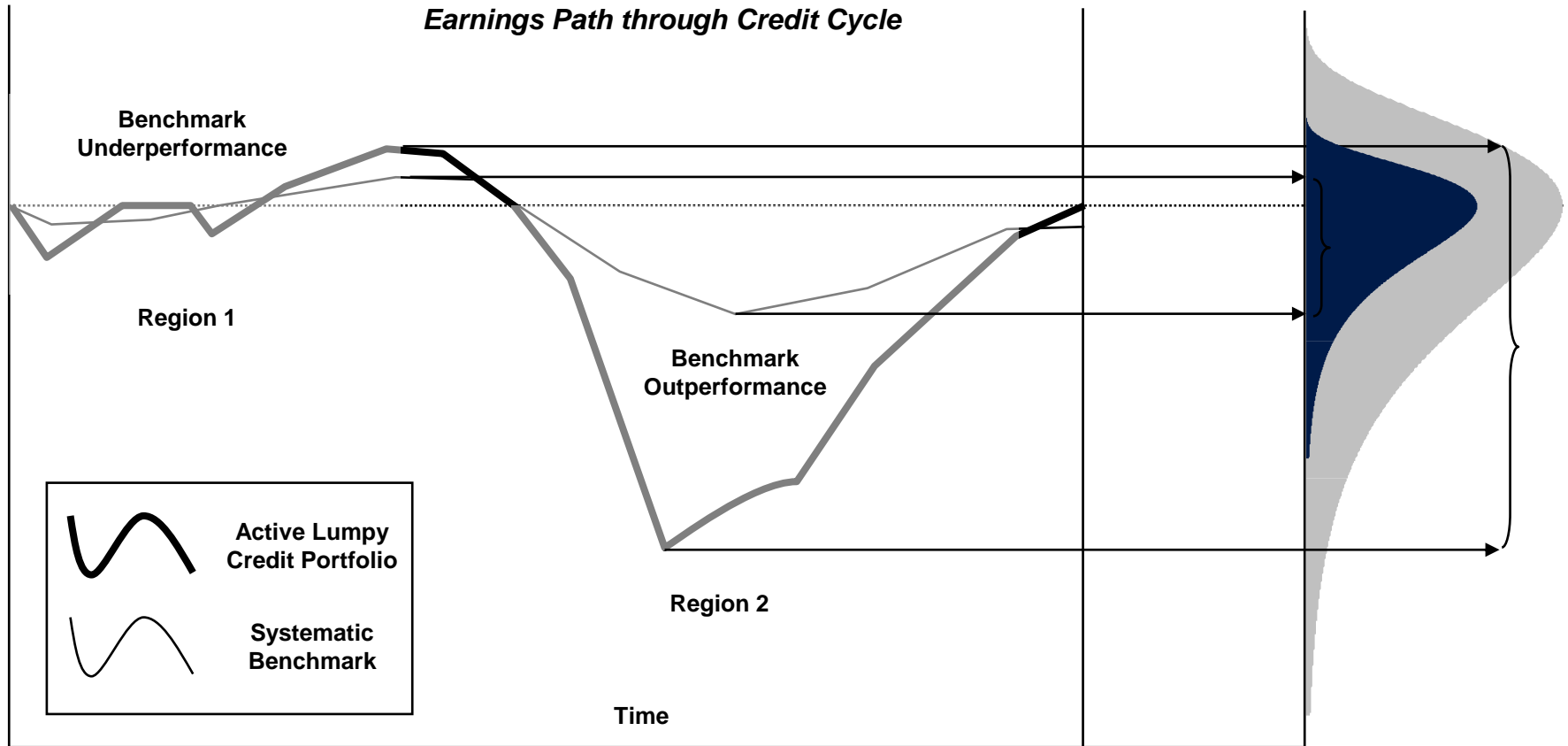


# Impact of Growth vs. Volatility on Valuation: Banks that Failed

## P/B Valuations: Growth/Vol Contributions



# Attributes of a Desirable Benchmark through the Credit Cycle



Question to Consider:

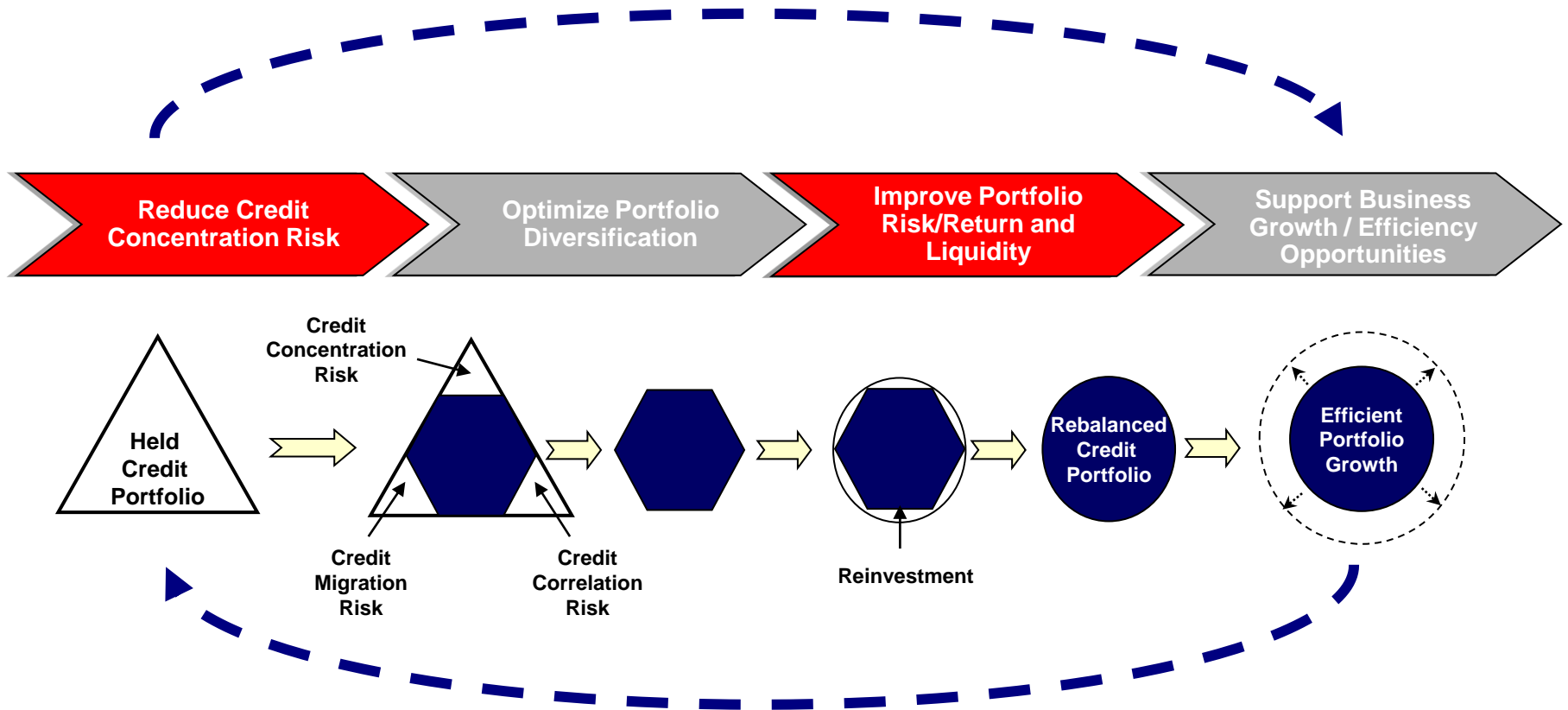
Which underperformance region is worse for the stock price and PE multiple? Region 1 or Region 2

# Excess Concentration Management - Goals

- ❑ **Portfolio Alignment**  
Alignment of credit risk into portfolio that is consistent with risk distribution strategy.
- ❑ **Market Value Transparency**  
Quantifies the opportunity cost associated with originating/renewing transactions relative to comparable risk available in market.
- ❑ **Efficient use of Credit Risk Capital**  
Ensure sufficient relationship value to justify concentration risk and cost of hedging.
- ❑ **Governance**  
Leadership review and approval of transactions with significant opportunity costs.
- ❑ **Accountability**  
Opportunity costs are captured and tracked as a component of overall client relationship value and included in performance measurement processes.

# Excess Concentration Management – Conceptual Framework

Reduce commercial credit portfolio concentration risk using quantitative analytics and risk distribution strategies on an end-to-end basis.



# Credit Portfolio Modeling

## A Quantitative Link of Expected Returns and Risk Appetite

- **Portfolio Modeling** methods provide a **quantitative framework** to assess the value of the current credit portfolio composition against other alternatives, consistent with bank management's risk appetite, and other business objectives
- The framework **measures and improves understanding of the risk return tradeoff** associated with managing credit portfolios over a variety of holding horizons
- The framework formally **links return and risk measures prospectively**, and helps to reveal the tradeoffs against a targeted investment universe.
- Analysis of optimal portfolios **augments and challenges our intuition** when formulating risk management strategies

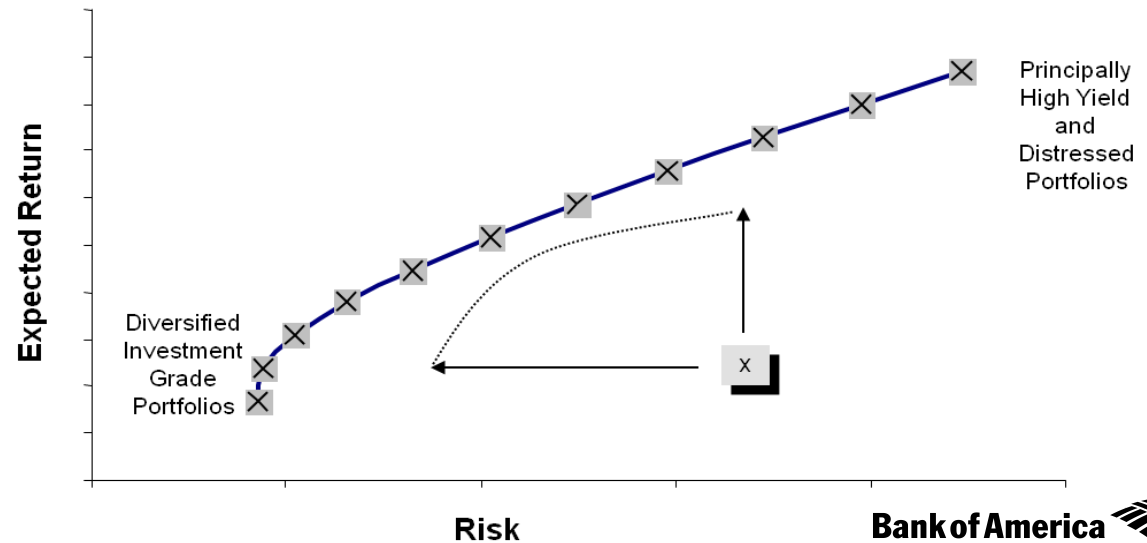


### Finding Balance with Practical Business Reality

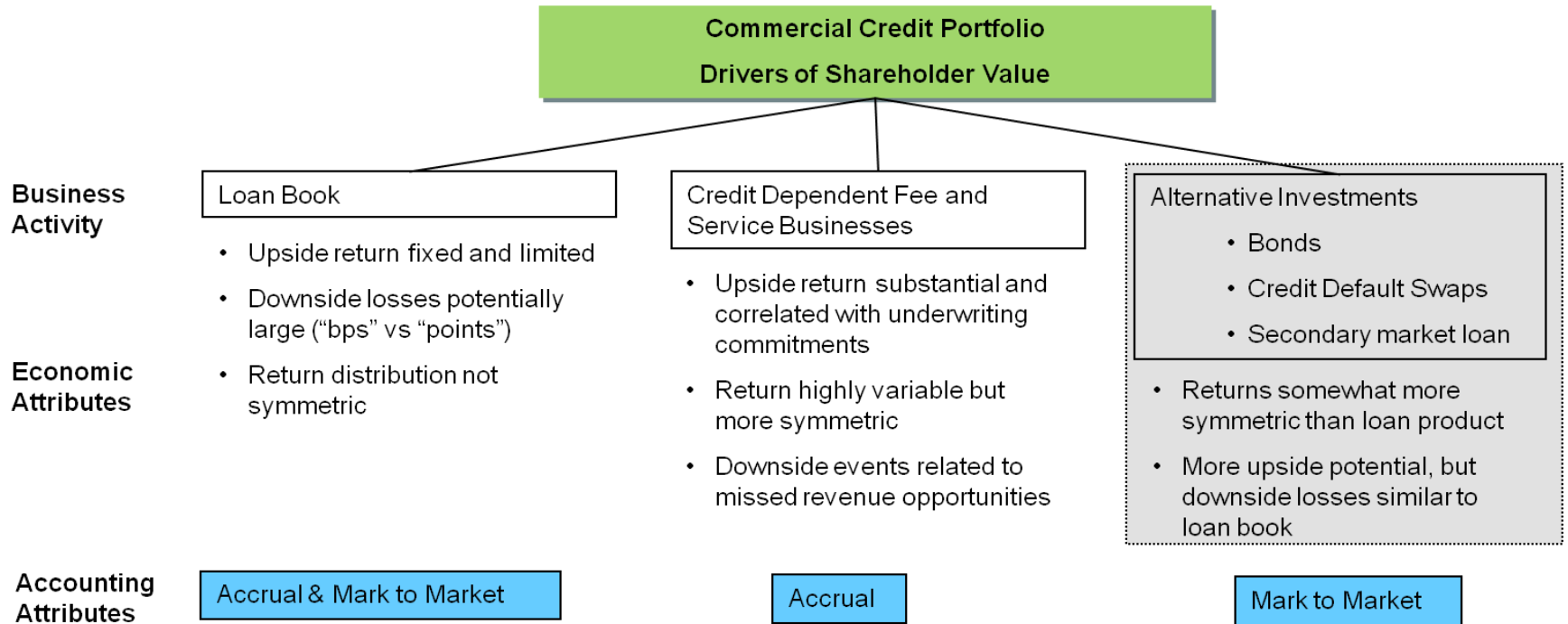
- Fully unconstrained optimal portfolios are interesting, but generally don't align well with business realities
- Must address business model and prudential constraints, without dictating the solution

### Basic Optimization Problem Formulation

- Maximize Returns subject to Risk Constraint and Other Constraints
- Minimize Risk subject to Return Constraint and Other Constraints



# Business Model Considerations for Credit Portfolio Models



## Portfolio Construction Balance

- Limit exposure to large credit losses (risk appetite)
- Book sufficient exposure size to realize material fee revenues; about 70-80 percent of total revenues (returns)
- Address the accounting asymmetry
- Satisfy asset quality standards, internal policy limits, and other prudential business constraints
- Consider the Context: *Optimal solutions need to consider expected economic and industry environment*



# Credit Portfolio Characteristics

## How Do We Measure Returns?

### Expected Returns

- ❑ **Book Return**

Expected return at investment horizon on an accruals basis for the portfolio. Measures include: net interest margin, risk adjusted net interest margin, net interest income plus fee revenues.

- ❑ **Mark to Market Return**

Expected mark to market return for specified investment horizon. Incorporates accrual return plus mark to market effects due to credit migration or default. Can be expressed as excess return relative to risk free return.

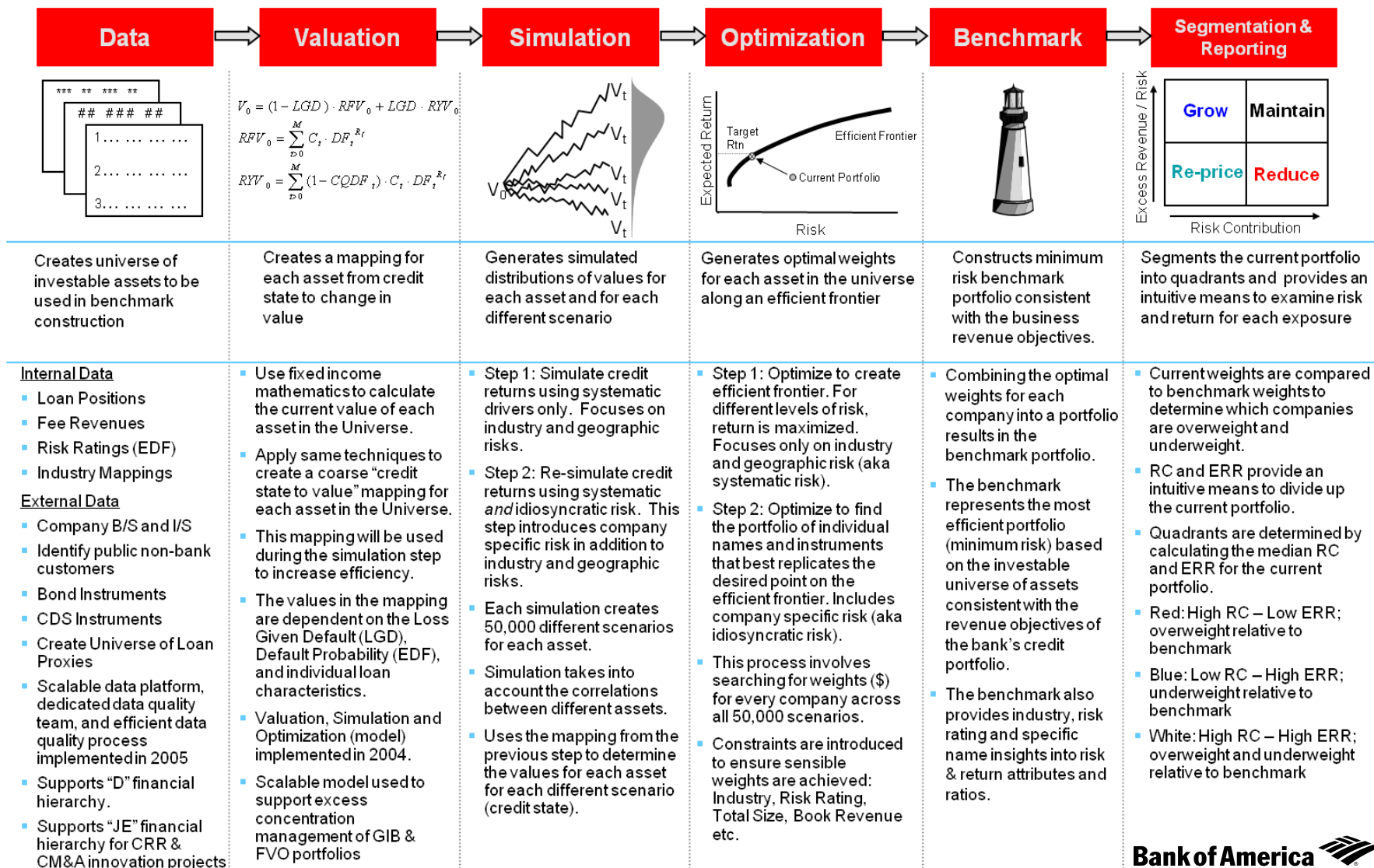
- ❑ **Par Spread**

The fair price (returns par value today) of a credit with respect to the default probability, correlation to the market, the market risk premium, expected recovery, and maturity.

- ❑ **Fees**

Expected relationship revenues that would not be present if sufficient credit were not extended in primary lending markets.

# Putting It All Together Portfolio Modeling Process Overview

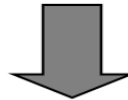


# Applications

## The Quantitative Commercial Portfolio Optimization Value Proposition

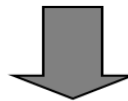
### Value Proposition

- Construct forward-looking optimal credit portfolios to guide rebalancing actions through the credit cycle
- Actions
  - Reduce event and concentration risks that drive earnings volatility
  - Improve credit portfolio risk-return
  - Are consistent with growth, revenue, and asset quality plans



### Optimization methods address fundamental strategic portfolio rebalancing questions:

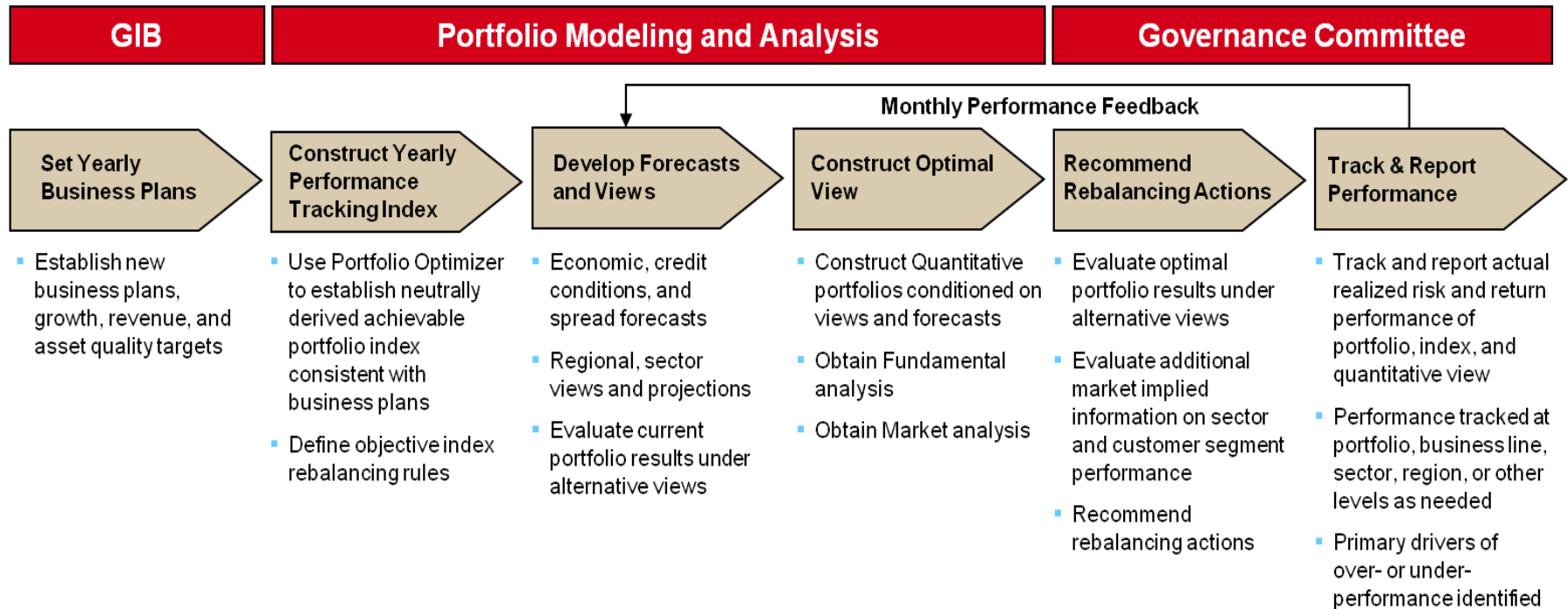
- *How much* should we increase or reduce exposure to a sector or customer?
- *What are the best* rebalancing or re-pricing opportunities?
- How do we *manage the P&L volatility* associated with hedging activities?
- What's the prospective *cumulative impact* of rebalancing, hedging, or re-pricing actions?
- How are we doing? *Compared* to what?



- Risk-Return Decomposition and Direction
- Best Revenue Enhancement – Risk Reduction Opportunities
  - Hedge Construction and Performance Analysis
    - What-if and Sensitivity Analysis
- Actual Performance Tracking and Feedback

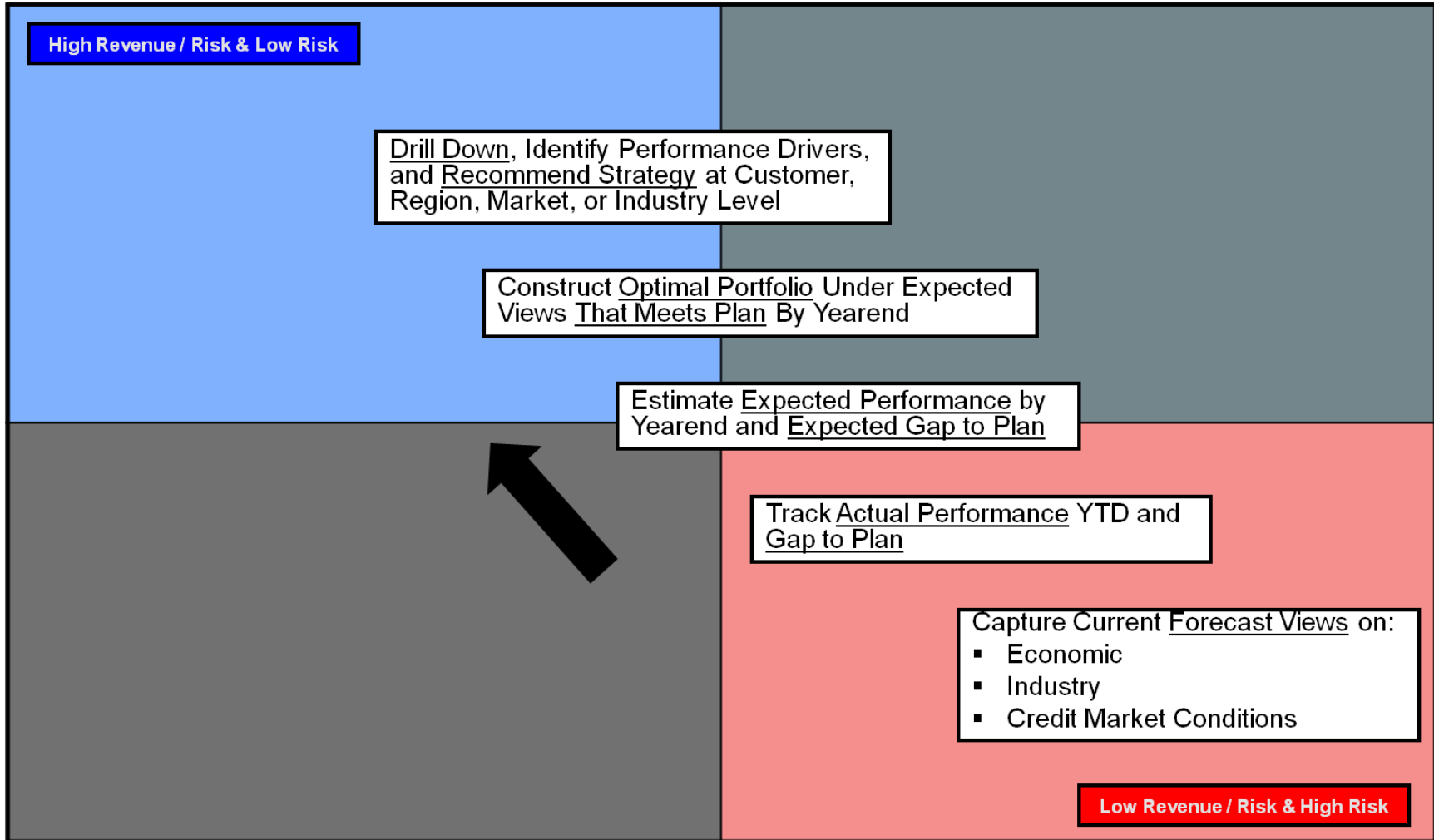
# Commercial Credit Portfolio Management Process Framework

A repeatable portfolio management process that integrates with the yearly business planning, incorporates monthly fundamental, market and quantitative analysis and is managed by a governing committees.



# Application

## Commercial Portfolio Risk – Return Analytics & Strategy



# We cannot direct the wind, but we can adjust the sails

*Pirates of the Optimization*



**Our leader looks to the investment horizon**