Credit Risk Solutions - CRE Assets

Western Independent Bankers
CFO & Risk Management Conference

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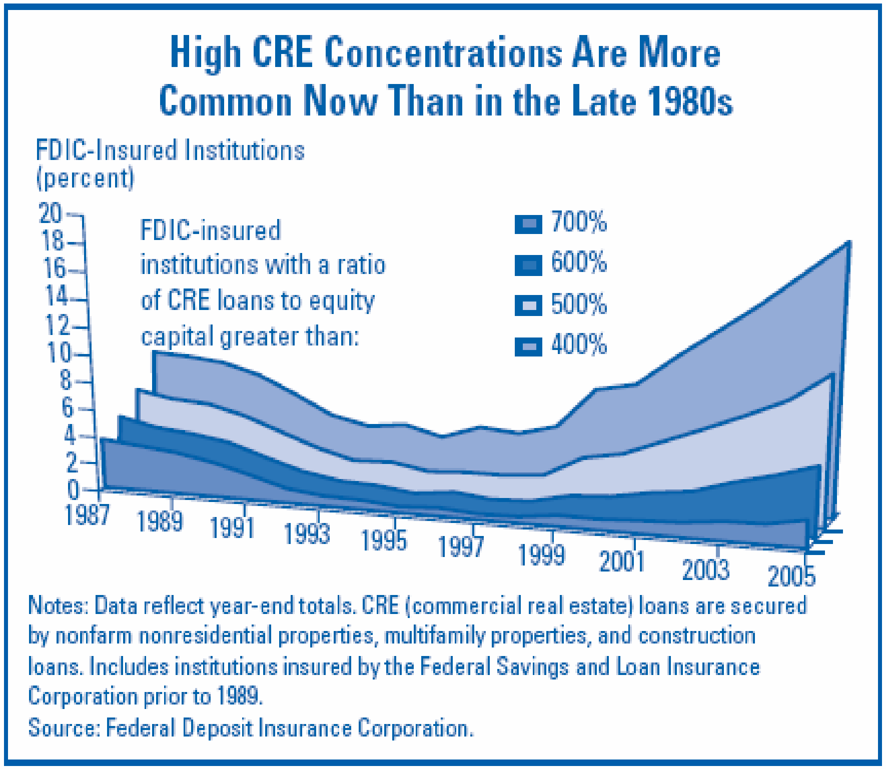
Robert Cunningham
Sr. VP - Client Services

415.992.3303
rcunningham@inmatrixinc.com

Agenda

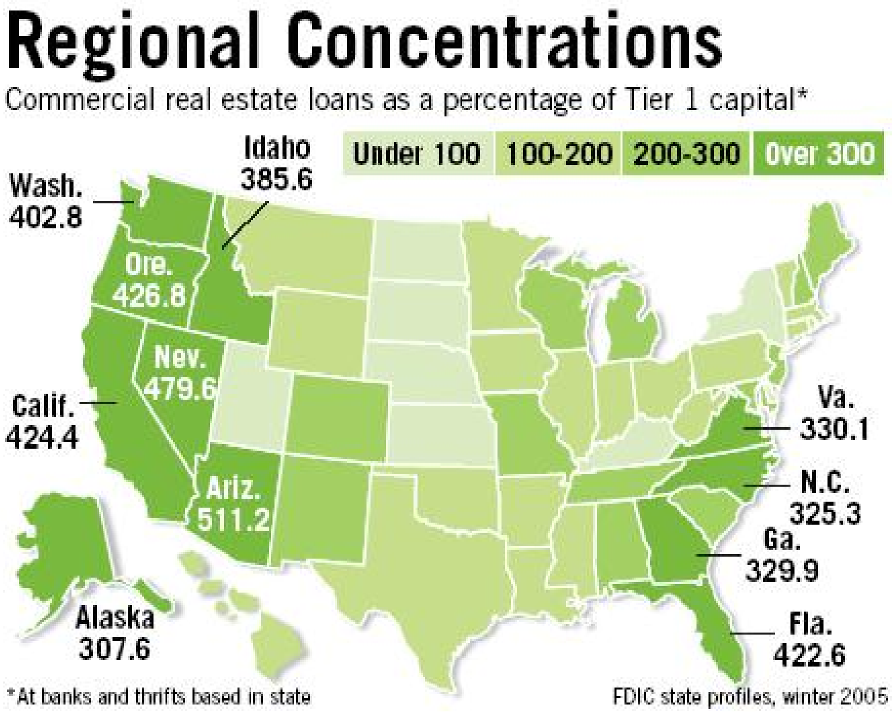
- *Review of Regulators' CRE Asset Concern*
- *Advanced Risk Concepts for CRE Portfolios*
- *Tools and Solutions for Managing CRE Risk*

CRE Concentration is Dramatic



- Cyclical increase in CRE loans;
- CRE lending = 75%+ asset growth each year since 2001;
- Substantial number of institutions with high concentrations;
- Concentrations well above prior peaks (late ’80’s).

Western Region Especially High



CRE Lenders Face Added Scrutiny

- **Bank regulators' new guidance requires banks with concentrations in CRE to tighten risk management practices;**
- **Threshold related to total Tier 1 Capital;**
  - **C&D at 100% or more;**
  - **CRE at 300% or more;**
  - **ALLL must be explicitly considered;**
- **Most community banks to be affected;**
- **New regulatory guidance does *not* require limits on CRE lending;**
- ***Best Practices* in Risk Management *are* now expected.**

Best Practices for CRE Risk Management

- **Management must demonstrate an effective framework for monitoring and managing risk;**
  - ***Understand* the concentrations in the portfolio;**
  - ***Define* the risks in the portfolio;**
  - ***Demonstrate* proactive management;**
    - ✓ **Risk assessment at origination;**
    - ✓ **Monitoring and anticipating "shocks";**
- **"Effective Framework" requires:**
  - ***Measuring* the CRE risk;**
  - **Stress-testing the loan portfolio;**
    - ✓ **Model "shock" scenarios to measure Capital Adequacy.**

Measuring CRE Credit Risk

- **Quantitative risk measurement tools are the first step in measuring CRE credit risk;**
- **Requires a Dual Risk approach;**
  - **Estimate of *Probability of Default* (PD) for *obligor;***
  - **Estimate of *Loss Given Default* (LGD) for *facility*;**
- **Enables calculation of *Expected Loss* (EL) for obligor;**
- **EL is the basis for a quantitative, objective, transparent and consistent measure of *provisioning, i.e.*, determination of ALLL.**

Measuring CRE Credit Risk (cont.)

- **PD models incorporate:**
  - **Financial data, ratios;**
  - **Industry economic data;**
  - **Macroeconomic factors;**
- **Resulting estimate of default probability is highly *predictive;***
  - **Financial ratios are historical; *market* data are *forward-looking;***
- **Inmatrix partners with Standard & Poor's;**
- **S & P Credit Risk Tracker (CRT™) is best performing model for *non-public* middle market obligors.**

Calculating Risk Provisioning and Pricing

- ***Expected Loss*** **= PD x Exposure at Default (EAD) x LGD;**
  - **Example: .625% x 100 x 50% = 31.25 bpts**
    - ✓ **PD equivalent to a BB+/BB public debt rating;**
- **EL is the quantitative input to Management determination of ALLL;**
- **EL is also critical to proper *risk-based pricing;***
  - **EL is a *cost* that *must* be covered by spread;**
  - **Consistently and accurately prices risk by obligor and facility;**
  - **More granular than typical internal risk ratings;**
  - **Objective, transparent and predictive compared to RR systems.**

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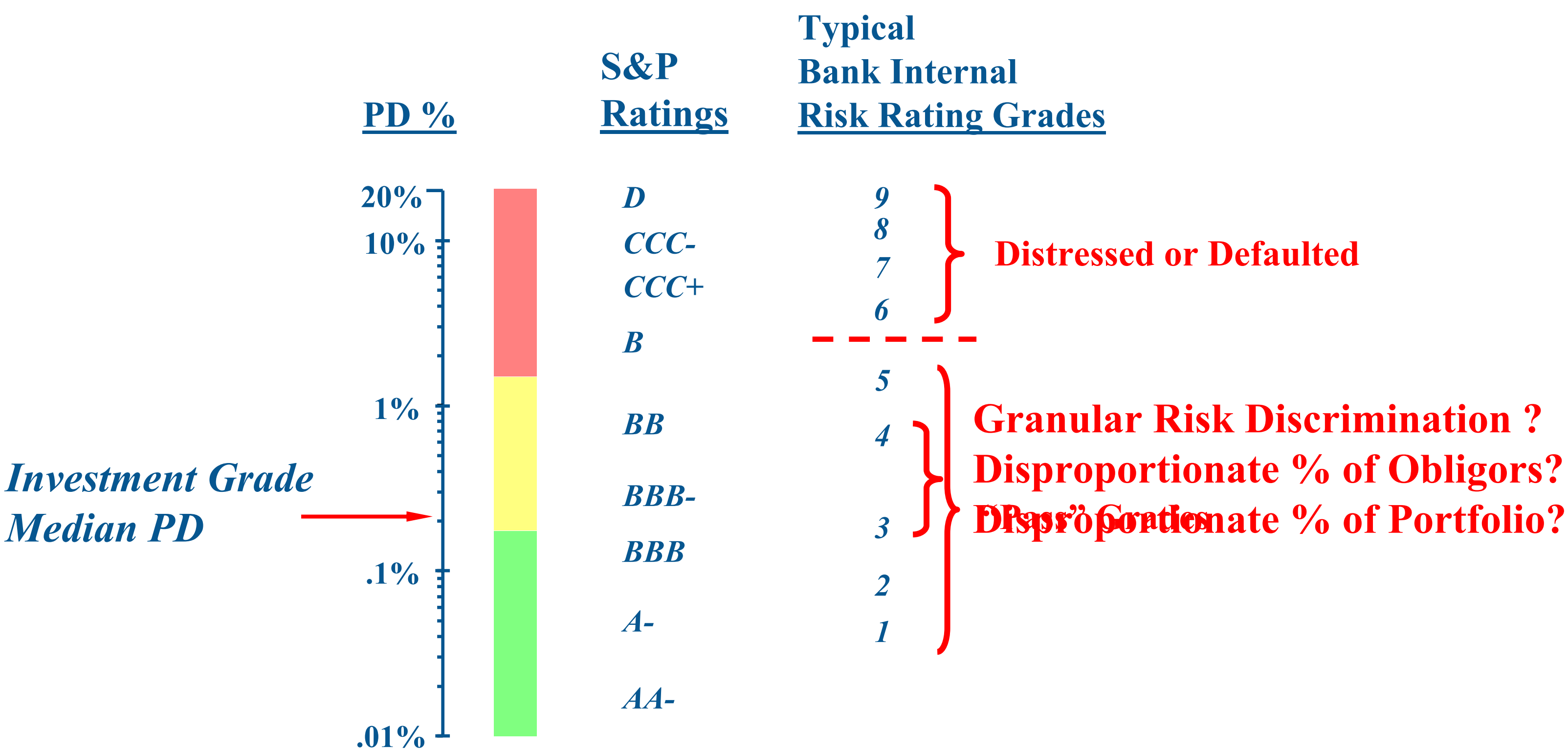
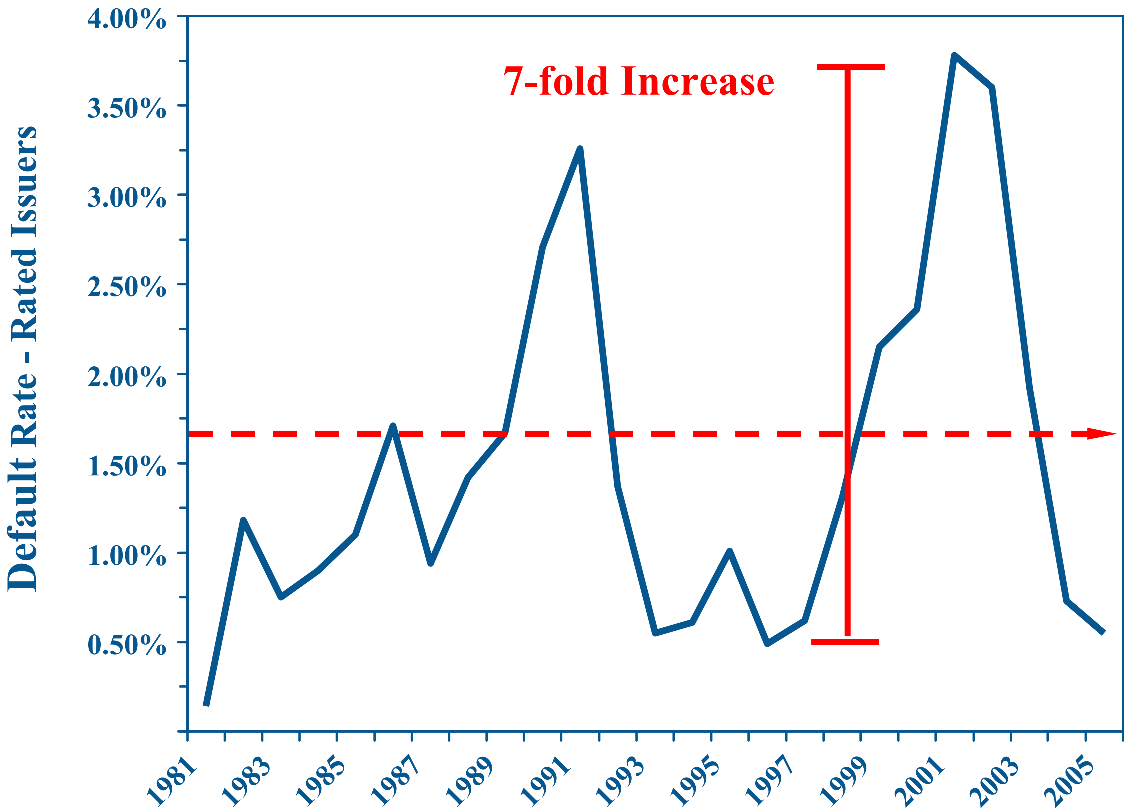
Comparison of Risk Ratings



Portfolio Management of CRE Risks

- **Default rates vary greatly over the cycle:**
  - **Doubling or tripling for mid-market firms;**
  - **Increasing 6 to 7-fold for rated firms;**
- **LGD also varies with the cycle;**
- **Economic distress is reflected differently for different indicators:**
  - **Small changes in financial variables, ratios but typically LARGE changes in PD;**
  - **For CRE sub-portfolios probably means relatively LARGE change in LGD as well.**

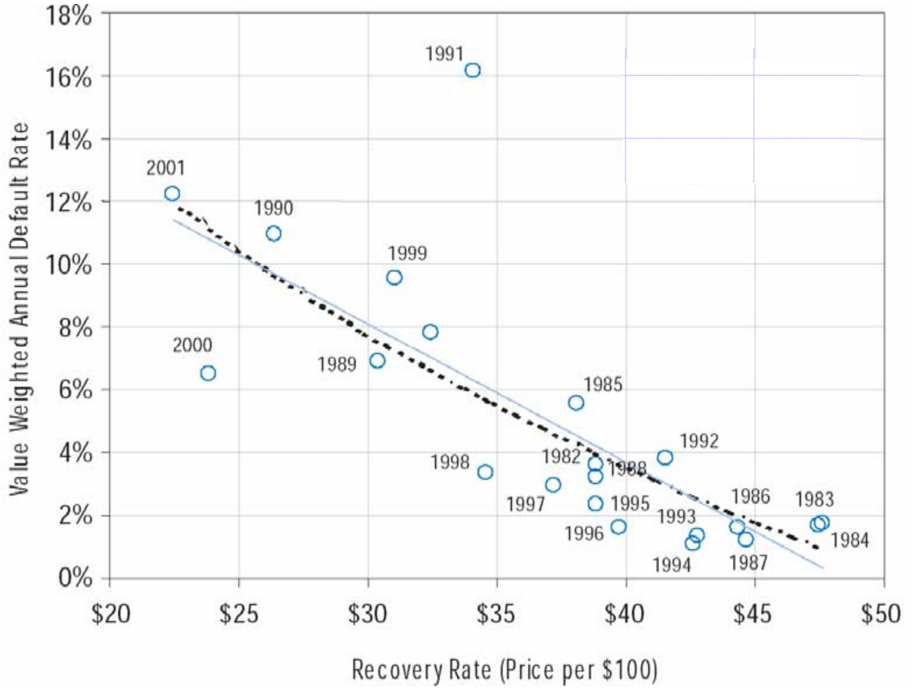
Credit Cycle



Mean Default Rate through the Cycle

Source: Standard & Poor's

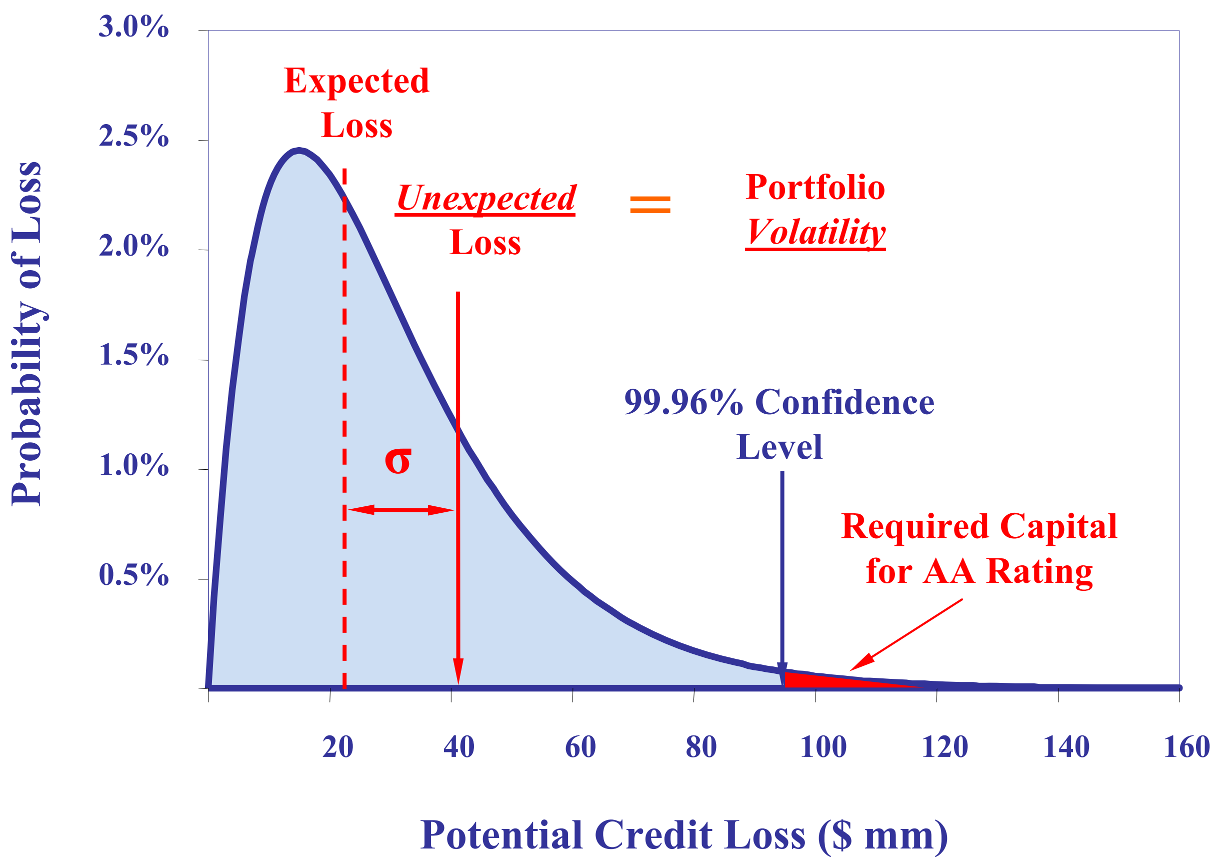
LGD Cycle



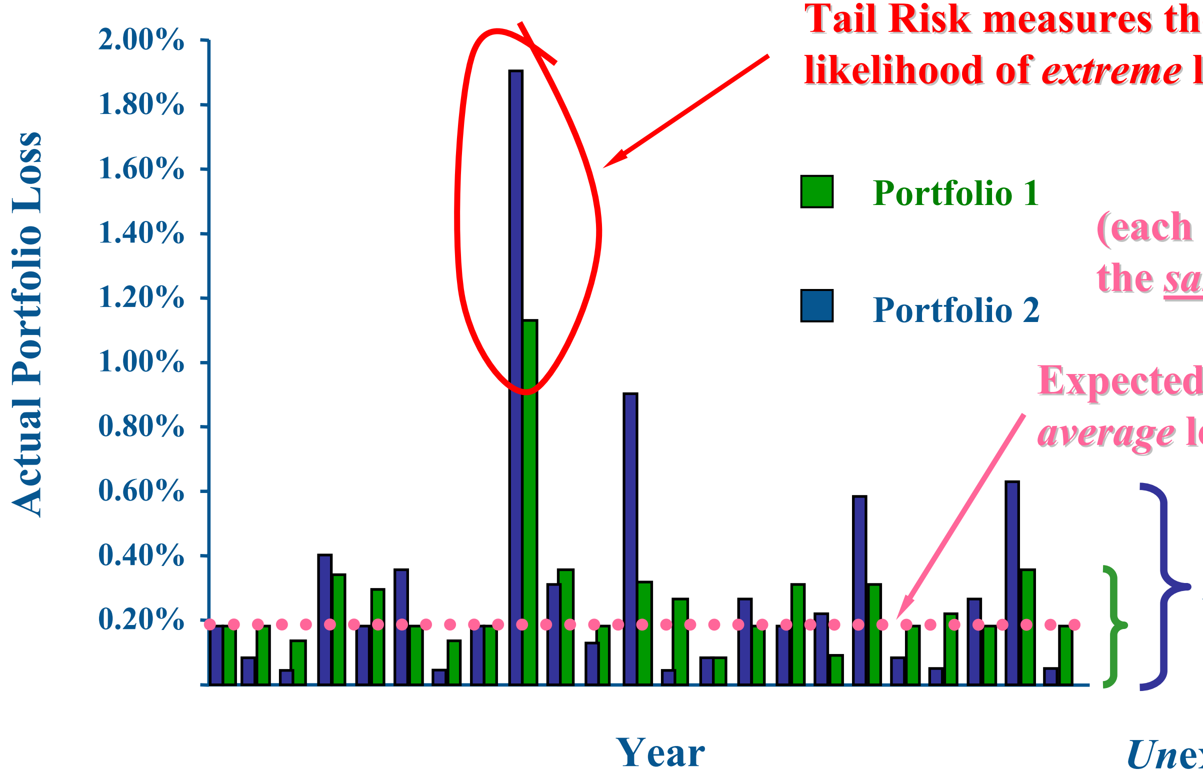
- **LGD is *INVERSELY* related to default rates;**
- **As default rate increases, recoveries decrease;**
- **Effect may be especially pronounced in CRE sub-portfolios.**

Source: www.moody's.com

Portfolio Risk Characteristics



Portfolio Risk Characteristics (cont.)



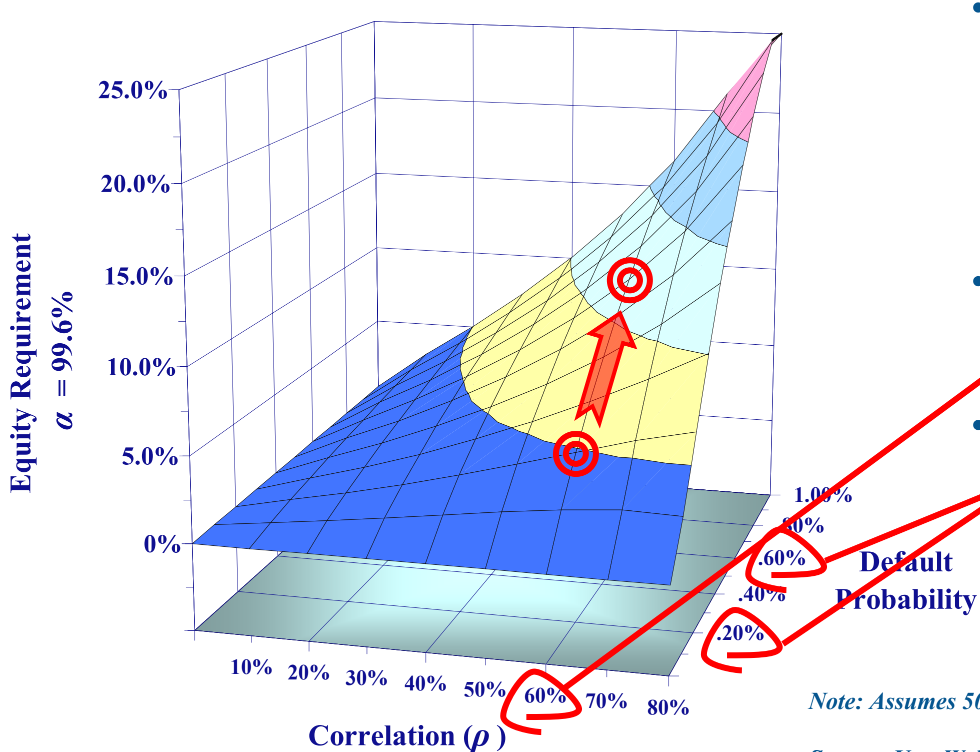
Tail Risk measures the likelihood of *extreme* losses

(each portfolio has the *same* Expected Loss)

Expected Loss is the *average* loss

Unexpected Loss measures the *variability* around the Expected Loss (one SD)

How Portfolios Behave



- Sub-portfolios may be relatively homogenous;
  - Obligors with same PD's;
  - Facilities with same LGD;
- CRE portfolios may be highly correlated;
- For such portfolios, as PD increases, portfolio equity requirement can increase dramatically.

Note: Assumes 50% LGD.

Source: Uwe Wehrspohn, "Credit Risk Evaluation", Center for Risk & Evaluation GmbH & Co. KG, 2002, pp.109 – 112.

Stress Testing the CRE Portfolio

- **Modeling and stress testing required at the obligor and portfolio levels;**
  - **Confirm Capital Adequacy, identify problems and indicators;**
- **Predictive market measures of distress like PD can greatly improve Portfolio Management stress testing;**
  - **Early indication of obligor distress;**
  - **Identifies sub-portfolios of obligors to test;**
- **Sensitivity analysis:**
  - **"What if?"….scenario modeling;**
  - **Goal-seeking, *i.e.*., specifying a target value for a critical variable.**

Portfolio Stress Testing Requirements

- **Import financial data from spreading systems, data warehouse or core systems;**
- **Define Portfolio by wide range of financial & non-financial attributes;**
- **Perform sensitivity analysis on the portfolio and projected data;**
  - **"What if?"…(*e.g.*, interest rates increase by 100 bpts);**
  - **Goal-seek, *e.g.*, changes in KPI's to achieve a target DSC.**
- **Watch-list and exception reporting;**
- **Model capital and provisioning;**
- **Model Risk Migration; "drill down" to obligor sensitivity;**
- **Extensive reports and graphs for management, BOD and regulators.**

Conclusion

- **CRE loans are a strategic imperative for community banks;**
  - **Major contributor to growth;**
  - **"Local knowledge" competitive advantage;**
  - **Profitable revenue streams;**
- **Regulators will *require* "best practices" risk management of CRE concentration risk;**
- **Best practices require:**
  - ***Measuring* the CRE risk;**
  - **Stress-testing the loan portfolio;**
  - **More quantitative and analytical tools;**
- **New requirements actually a strategic opportunity.**