

Lecture 5 – Bank Risk Management & Market Discipline

1. The Simple Balance-Sheet Toolkit

- **Leverage (funding side):**
 - $(E/A \uparrow \rightarrow \text{default risk} \downarrow)$
 - Equity adjusts slowly (new issues, retained earnings).
 - Deposits move quickly and reflect depositor discipline.
 - **Asset mix (asset side):**
 - $(\text{Cash/Assets} \uparrow \rightarrow \text{asset risk} \downarrow)$
 - Cutting new lending and holding more reserves/T-bills reduces fragility.
 - **Public info channel:**
 - Bank examiners audit → **balance sheets published in newspapers.**
 - Market interprets → depositors reward or punish banks.
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2. Visualizing Default Risk (Intuition)

- Plot **Equity/Assets (E/A)** vs. **asset risk** (proxied by loan risk \times Loans/Assets).
 - **Iso-risk curves:**
 - Moving *down/right* = higher default risk.
 - Moving *up/left* = safer.
 - Depositors are **risk-intolerant:**
 - Withdraw when risk rises.
 - Remaining (risk-tolerant) depositors demand higher interest rates.
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3. Great Depression Case Study

- **1929 NYC banks (Point X):**

- E/A \approx 35% (very high by today's standards).
 - Cash \approx 25% of assets.
 - Very low default risk (\approx 1 bp).
 - **Shock hits (1929–33):**
 - Loan values fall \rightarrow equity absorbs losses \rightarrow E/A falls.
 - Perceived loan risk rises \rightarrow banks shift rightward on graph.
 - Depositors begin withdrawing \rightarrow shift from banks to postal savings & Canadian banks.
 - **Adaptation (Point Z):**
 - Banks respond by cutting loans and holding more cash.
 - By 1940: loans = $0.3 \times$ cash (\approx 75% of assets in cash).
 - None of these NYC banks failed, showing **market discipline works**.
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4. Evidence of Market Discipline

- **Chicago (1931–32):**
 - Banks that failed in 1932 were already riskier in 1931:
 - Paid 1% higher deposit rates.
 - Had more wholesale deposits (12% vs. 2%).
 - Lost more deposits well before failures.
 - **Argentina (1990s):**
 - Failing banks paid higher deposit rates (13% vs. 9.5%).
 - Risky banks lost retail deposits, relying on wholesale funding.
 - **Mexico (1996):**
 - Even with de jure 100% deposit insurance, political uncertainty made depositors skeptical.
 - Banamex paid 17% vs. Serfin's 29% \rightarrow reflected perceived insolvency risk.
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5. Lessons from Market Discipline

- Depositors can and do monitor banks.

- Risk-intolerant depositors **exit early**, while risk-tolerant depositors **demand higher returns**.
 - Observable indicators:
 - Deposit outflows.
 - Rising deposit interest rates.
 - Balance sheet shifts (cash vs. loans, equity vs. deposits).
 - **Government stats** (like loan quality) can be distorted.
 - **Deposit flows and pricing** are more reliable signals of market discipline.
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6. Implications

- Crises are not purely “panic.” Failures are usually tied to **fundamental weakness**.
 - Market discipline is a real force shaping bank behavior.
 - Regulatory credibility (audits, transparency) amplifies depositor discipline.
 - Structural fragility (unit banking, pyramiding of reserves) magnifies risks.
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