Incentive Constraint

- Bank will choose 'no default' iff

$$\overbrace{(N+d)R^k - R^d d}^{\text{no default}} \quad \geq \quad \overbrace{\theta(N+d)R^k}^{\text{default}}$$

- Rewriting the above expression, the no default condition is equivalent to:

$$(1-\theta)(N+d)R^k \geq dR^d$$

  – i.e., banker doesn't default if defaulting implies the return for depositors goes up.

- Default will never be observed, because depositors would never put their money in a bank that violates the deposit condition.

Collapse in Net Worth

- No default condition:

$$\overbrace{(N+d)R^k - R^d d}^{\text{no default}} \quad \geq \quad \overbrace{\theta(N+d)R^k}^{\text{default}}$$

- When condition is non-binding, then $R^k = R^d$ and

$$NR^k \geq \theta(N+d)R^k.$$

- If *N* collapses, then constraint may be violated for *d* associated with $R^d = R^k$
  - Equilibrium requires lower value of *d*
  - Lower *d* requires a spread: $R^d < R^k$
  - Lower *d* is not efficient