

Liquidity Creation, Capital Requirements, and Regulatory Arbitrage

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This paper

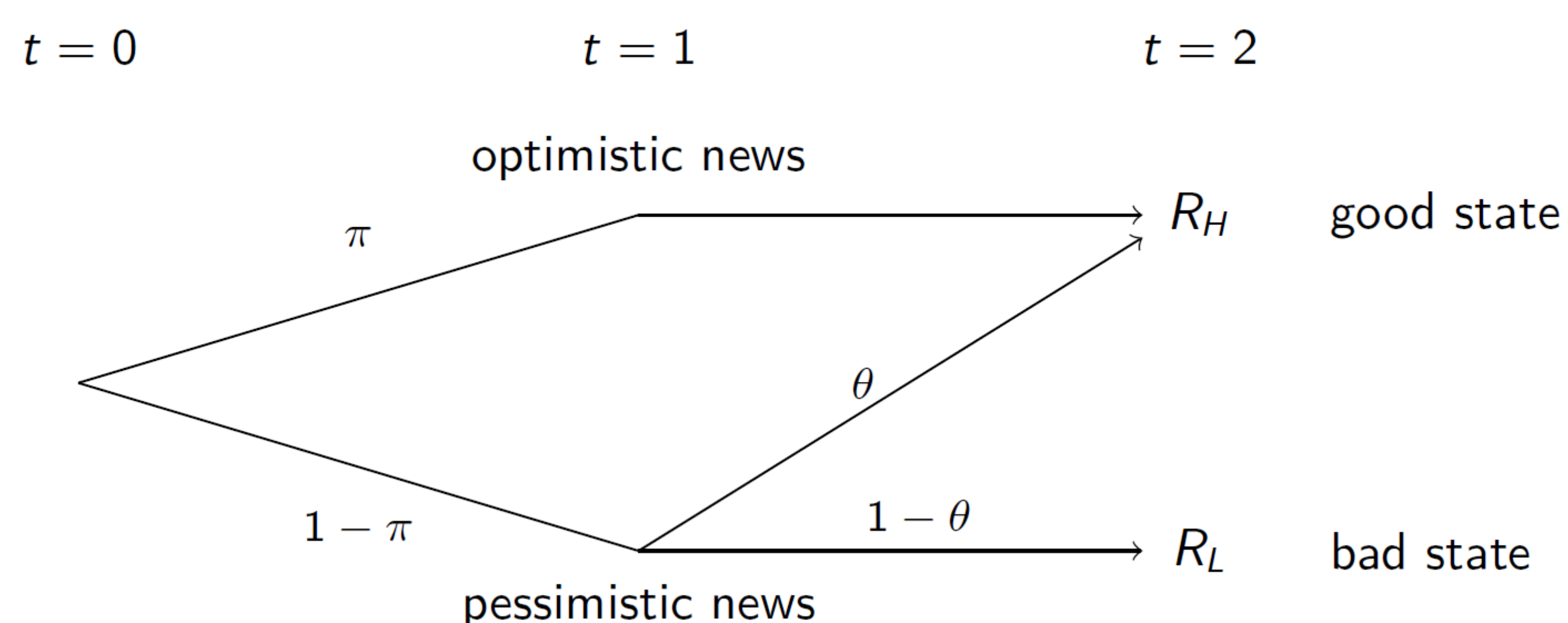
- Motivation: Liquidity creation vs. excessive leverage
- Banks can create liquidity (“money”) in two ways:
 - Issue equity and hold-to-maturity (traditional banking)
 - Market-based liquidity creation (shadow banking)
- Role for macroprudential regulation?
- What is the effect of regulatory arbitrage through shadow banking?

Findings

1. Fire-sale externality leads to *excessive* fire sales
 - **But:** *too much* or *too little* money creation
2. Macroprudential regulation
 - Limit asset sales with Pigouvian tax, or capital / liquidity requirements
3. Regulatory arbitrage undermines regulation
 - Shadow banking sector grows *too large*
 - Solution: Subsidy on bank equity

Mechanics

- Banks generate **Liquidity Benefits** (à la Stein 2012) by creating safe claims (“**Money**”)

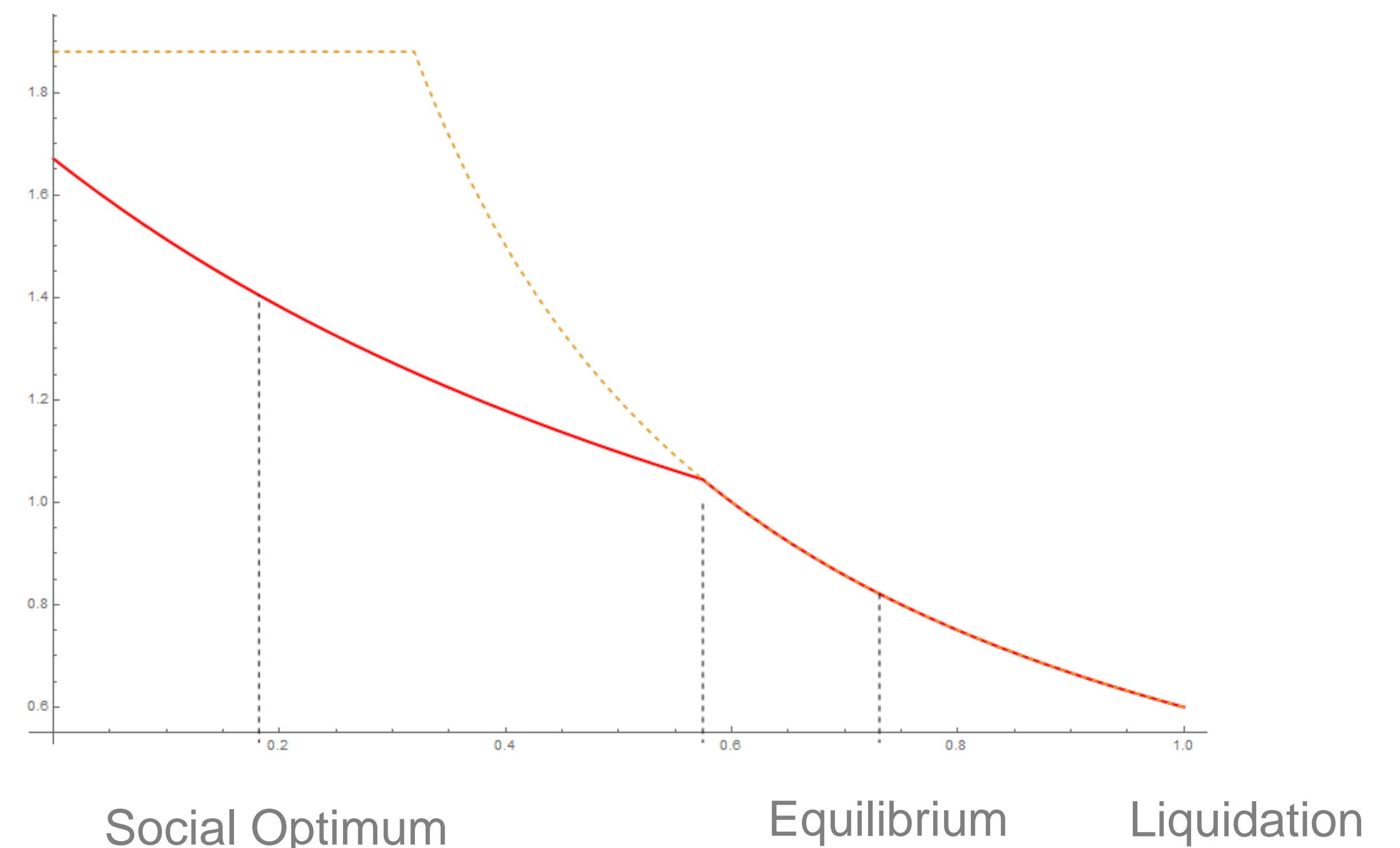


- Late investors have endowment W and productive technology g ; can buy assets after pessimistic news
- **Friction:** Financing terms are non-contractable, effect on collateral constraint through fire-sale price not internalized
- Asset sales do not only create liquidity, they can also destroy it

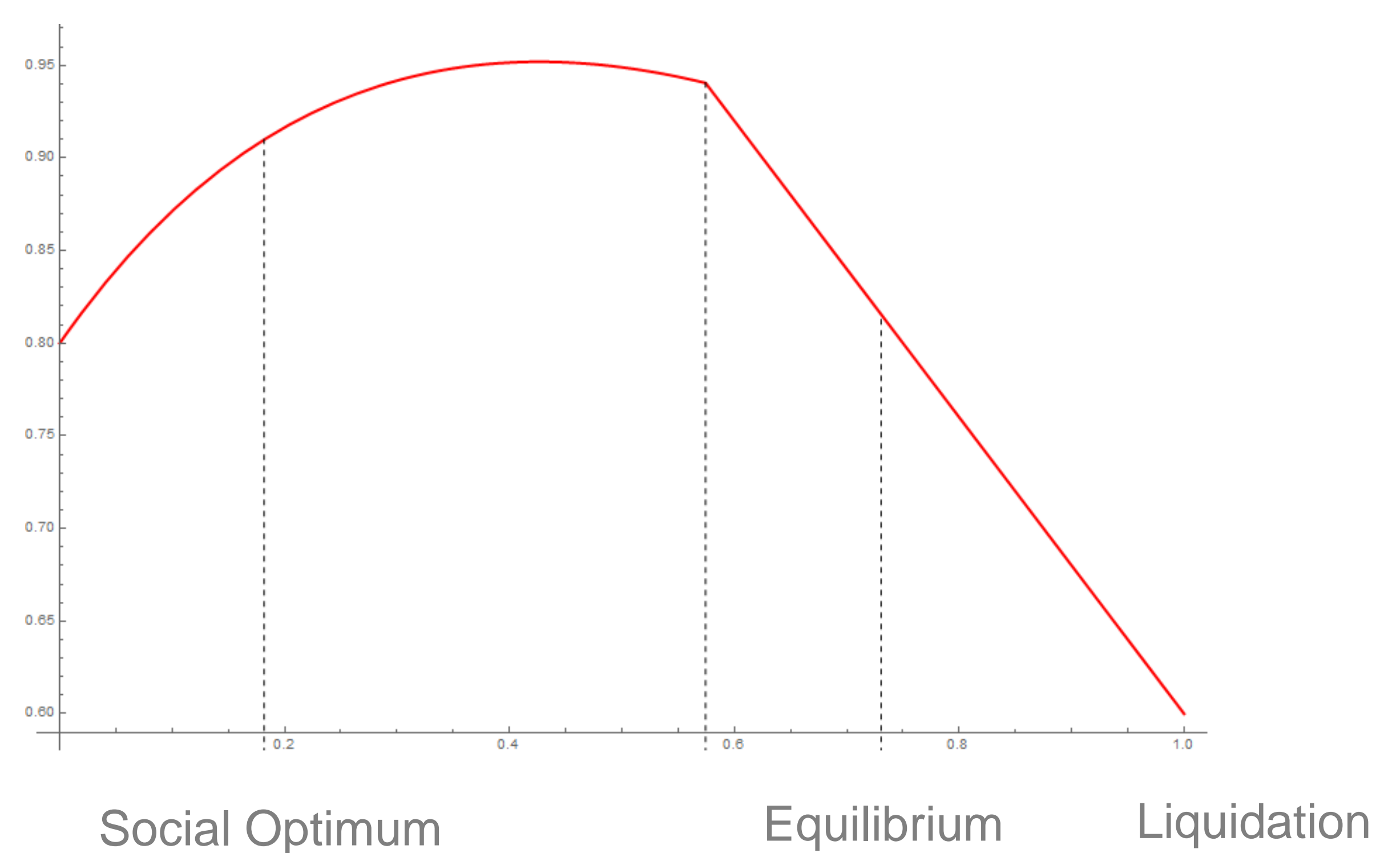
$$M(\eta) = (1 - \eta)R_L + \eta \min\left[\frac{R_1}{g'}, W\right]$$

- Result:
 - **Equilibrium asset sales are always excessive**
 - **But: Leverage can be too high or too low**

Fire sale pricing



„Money creation“ is non-monotonic in asset sales



Regulation & Regulatory Arbitrage

- Targeting asset sales directly (Pigou)
- Effective if not regulatory arbitrage possible
- Otherwise: Shadow banks operate outside the regulatory perimeter
- High leverage: Shadow banks engage only in market-based liquidity creation
- **Shadow banking sector grows too large;** macroprudential policy is offset completely
- Solution: **Subsidy on bank equity**
- Low leverage: constrained efficient not attained

Optimal and equilibrium size of shadow banking as a function of R_1

