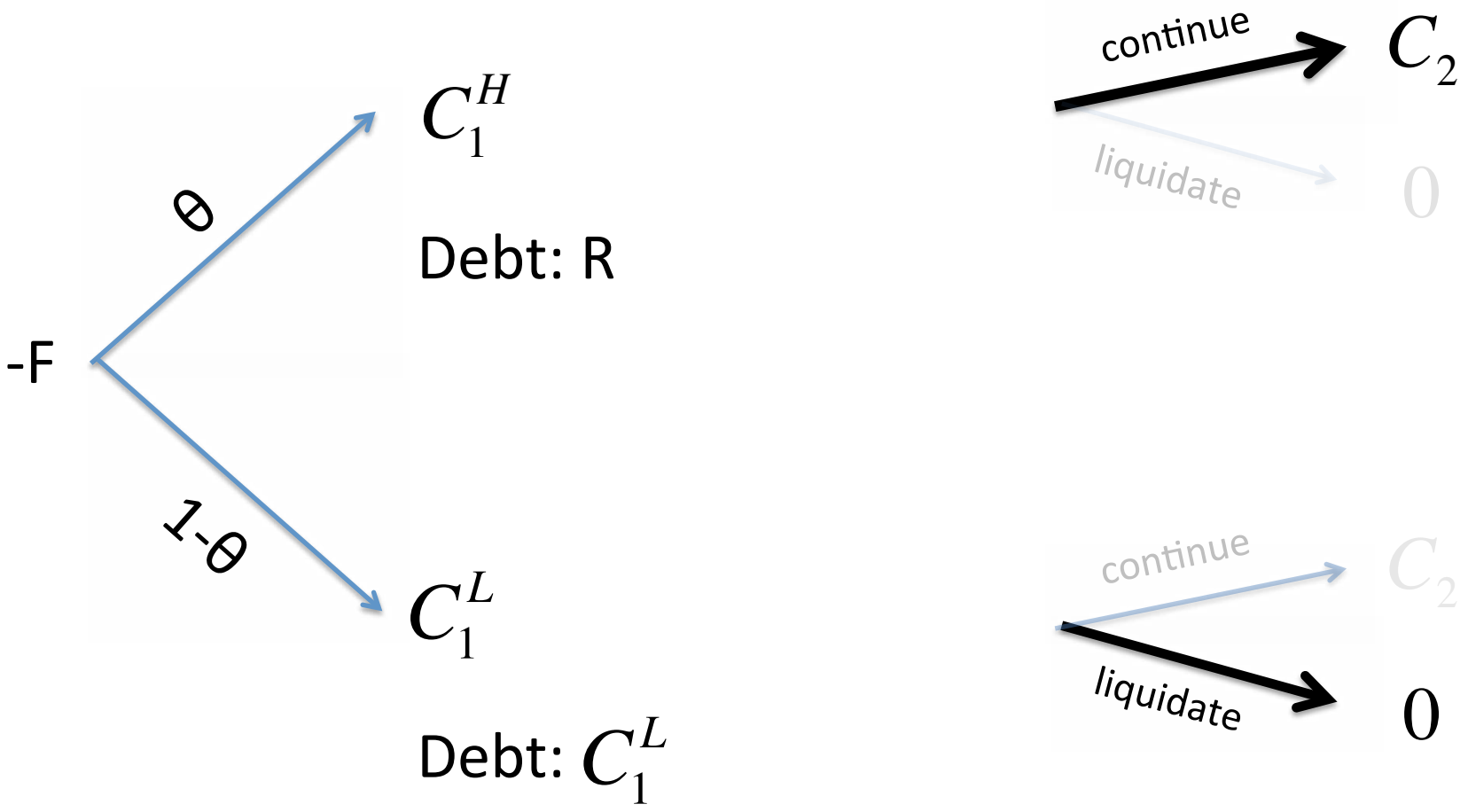
Should Derivatives be Senior?

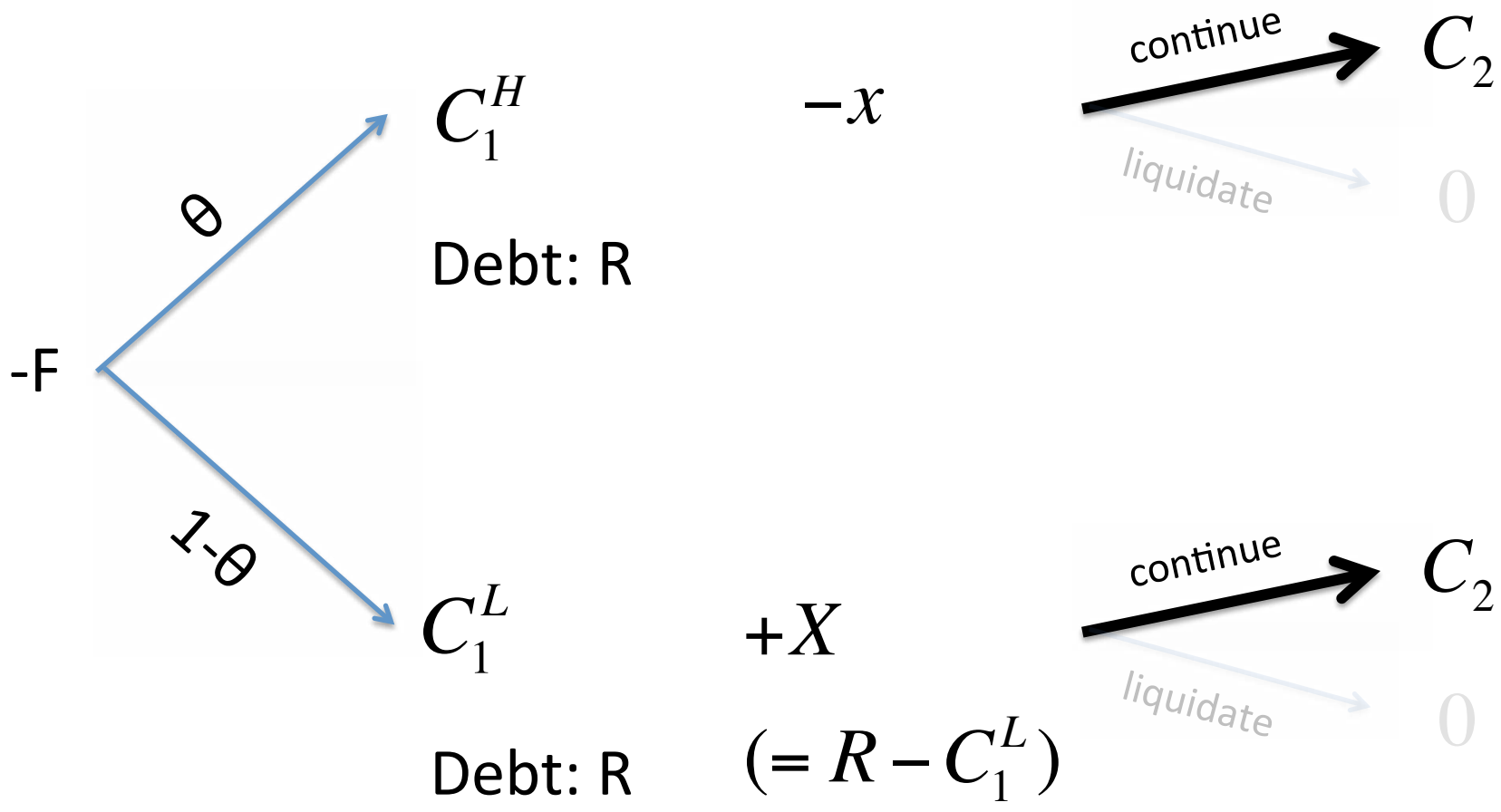
Discussion by Ulf Axelson, LSE

- Story:
  - Derivatives can help increase debt capacity (avoid costs of financial distress) and hence efficiency
  - In practice, derivatives are effectively senior to debt
  - This can have two negative effects:
    - Increases face value of debt, which increases derivative position necessary for avoiding bankruptcy, which increases transaction costs
    - "Standard" risk shifting / dilution problem when derivatives entered into ex post
- Nice clean paper that seems empirically plausible and relevant

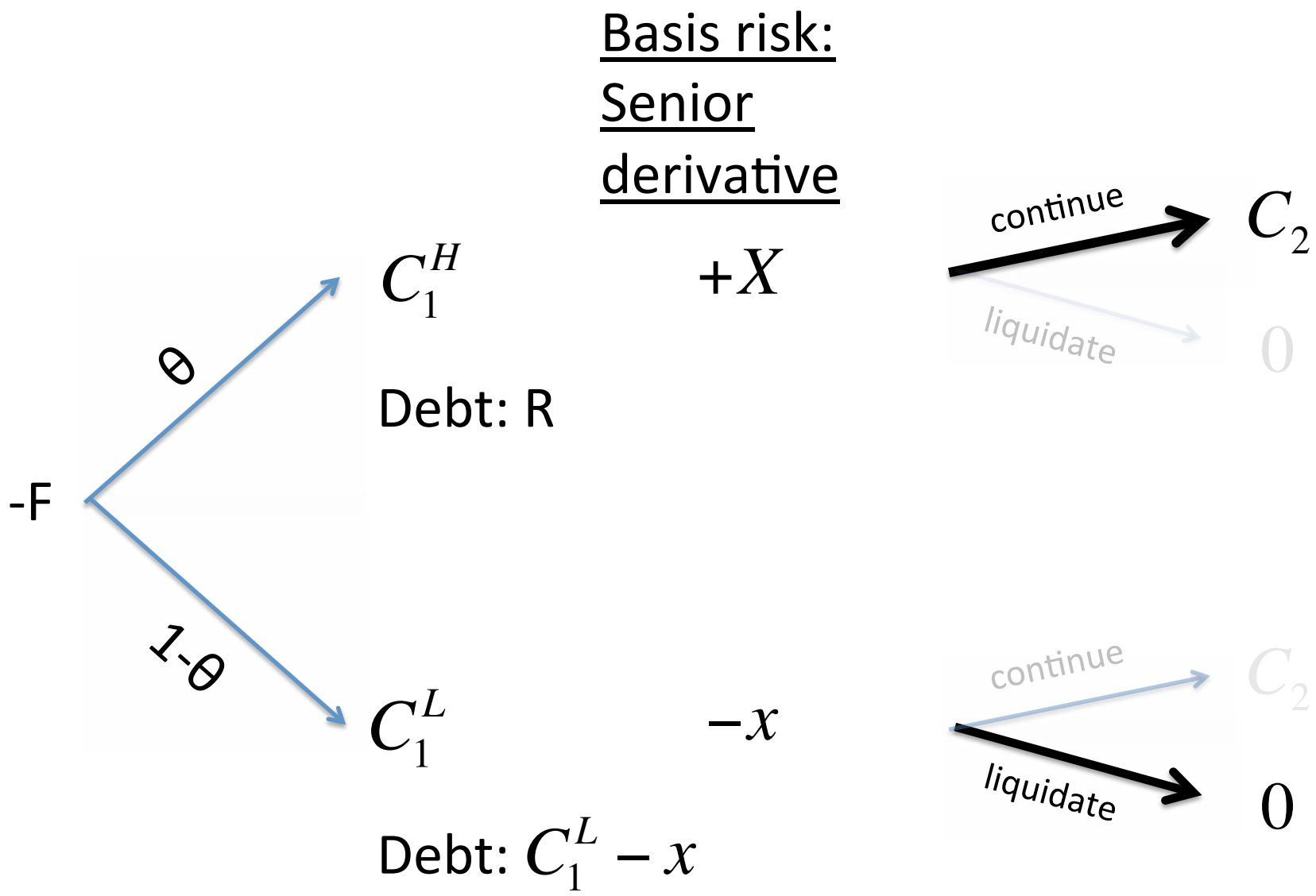
Model

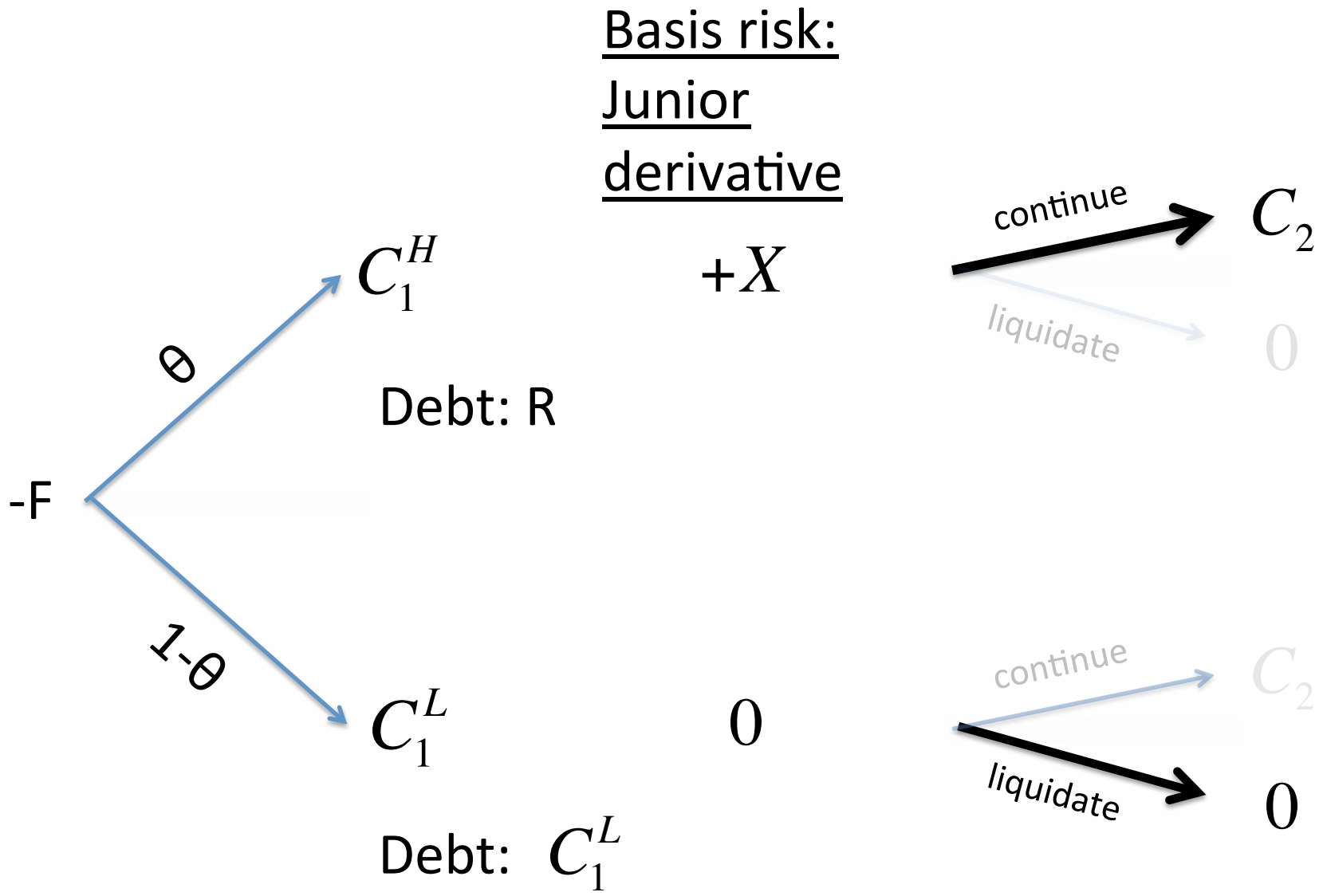

-F
θ
1-θ
C_1^H
Debt: R
C_1^L
Debt: C_1^L
continue
C_2
liquidate
0
continue
C_2
liquidate
0

Hedge works



Transaction cost $\rho(X)$


Basis risk:
Senior
derivative
-F
θ
1-θ
C_1^H
$+X$
Debt: R
C_1^L
$-x$
Debt: $C_1^L - x$
continue
liquidate
C_2
0
continue
liquidate
C_2
0



- R goes down so X goes down so ρ(X) goes down

1. Why is transaction cost on X?

- Main result follows since transaction cost only increases with notional X, not with promised premium x
  - More reasonable that variance of derivative position matters?
  - In fact, difference btw. high and low pay-off for counterparty might well increase when derivative junior (X +x)
- More generally, junior claimant may incur monitoring / information costs that debt holders are better placed to bear
  - Derivative markets should almost by nature be less “firm specific” to induce liquidity

2. Hedging might be sub-optimal vs. doubling up

- When high state is not so high, may be optimal to give up on low state and transfer as much as possible to high
  - Cf. Froot-Scharfstein-Stein
- This is easier with senior derivatives

3. Are derivatives senior to debt?

- Paper seems to classify repos as derivatives
  - Works more as debt
- In bank case, can't depositors always front run?