EUROPEAN CENTRAL BANK

EUROSYSTEM

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ECB and CEPR

An incentive theory of counterparty risk, margins, and CCP design

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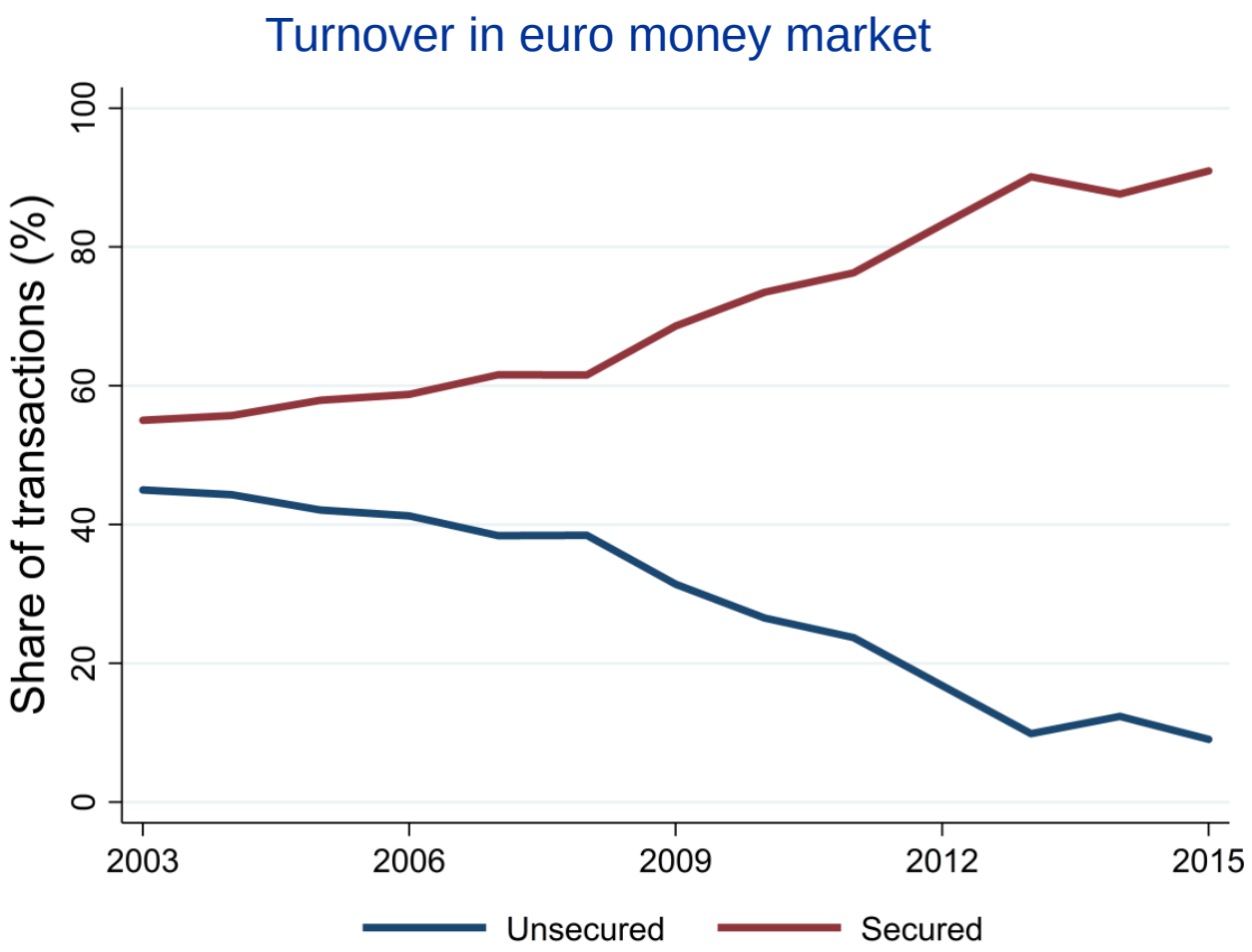
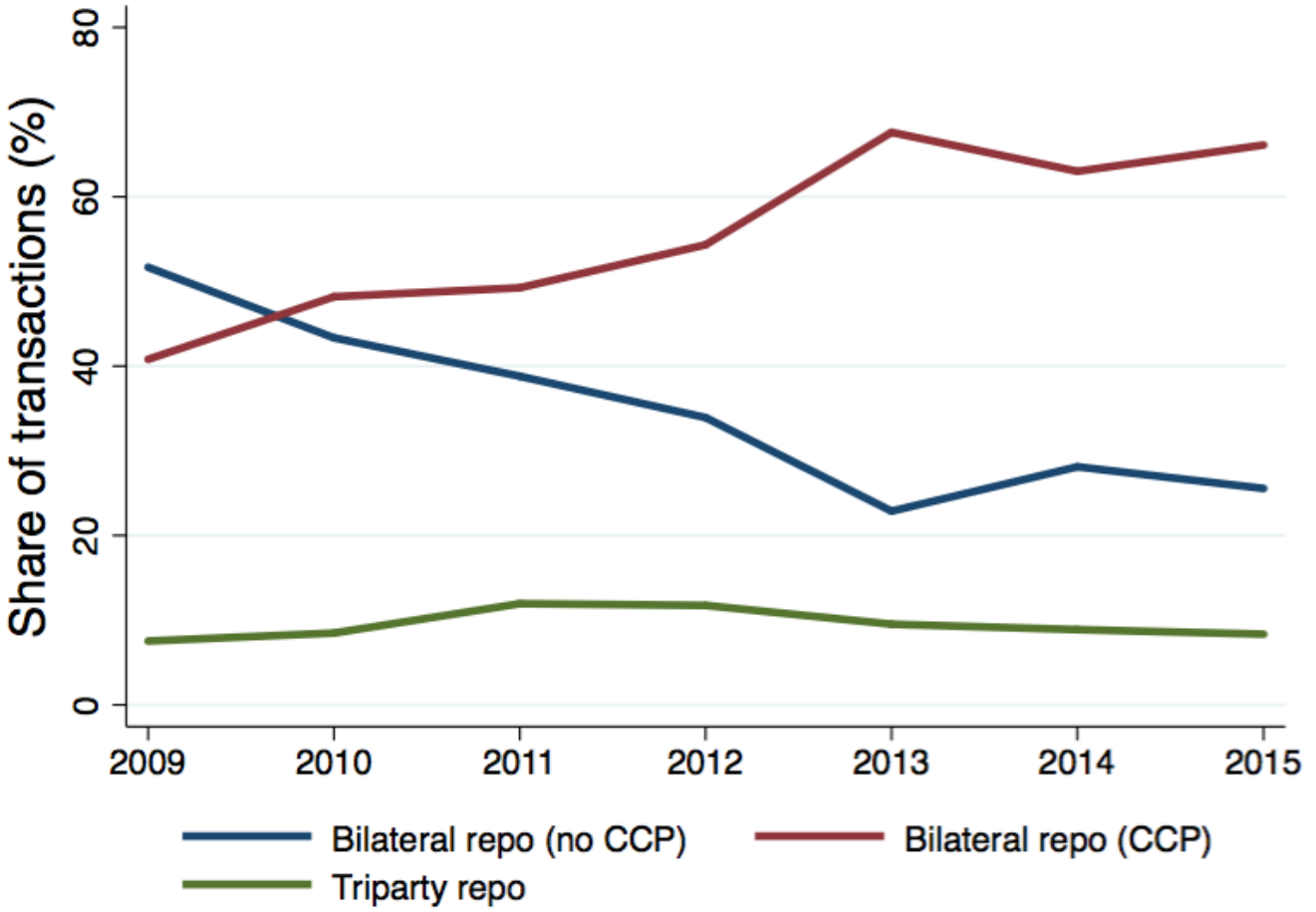
Increasing role of secured transactions



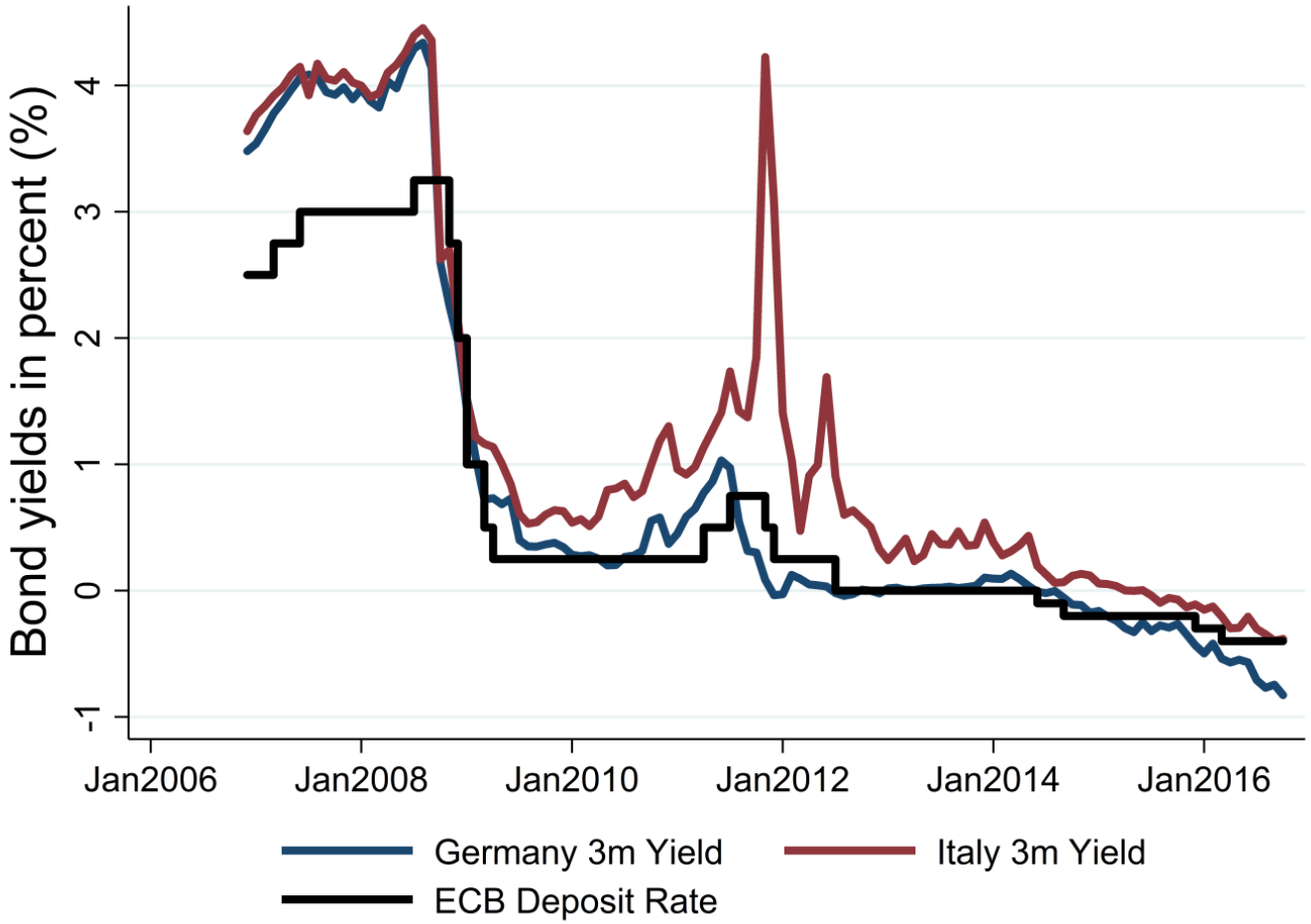
Increased role of cleared secured transactions

Turnover in secured euro money market



Collateral availability matters, esp. in times of stress

Govt. bond yields relative to storage at central bank



CCPs help to make efficient use of collateral

Netting benefits

- Duffie and Zhu (2011), Duffie, Scheicher & Vuillemey (2015)

Better information

- Addresses externality from non-exclusive contracting (Leitner, 2012; Acharya & Bisin, 2014)

Improve on margin setting

- Pooling of risk reduces need for collateral (Biais, Heider & Hoerova, 2012)
- Can design and implement the “optimal contract” (Biais, Heider& Hoerova, 2016)

Economics of (variation) margins (Biais, Heider, Hoerova, 2016)

Agents trade to share risk

Basic friction: unobservable risk management

If position becomes an expected liability $\rightarrow$ incentive to shirk on risk management

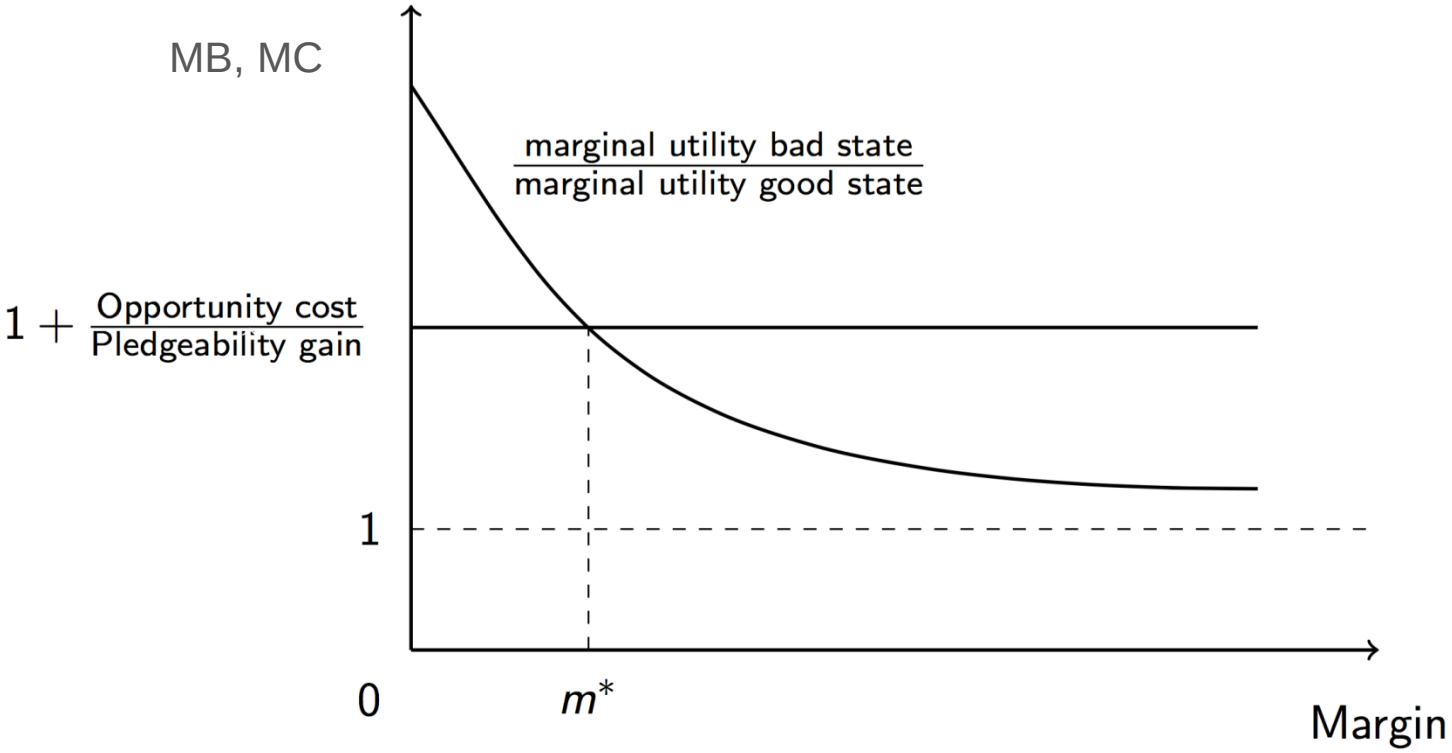
To realign incentives $\rightarrow$ margin call (post cash)

Benefit: no risk management problem with cash

Cost: not investing the cash

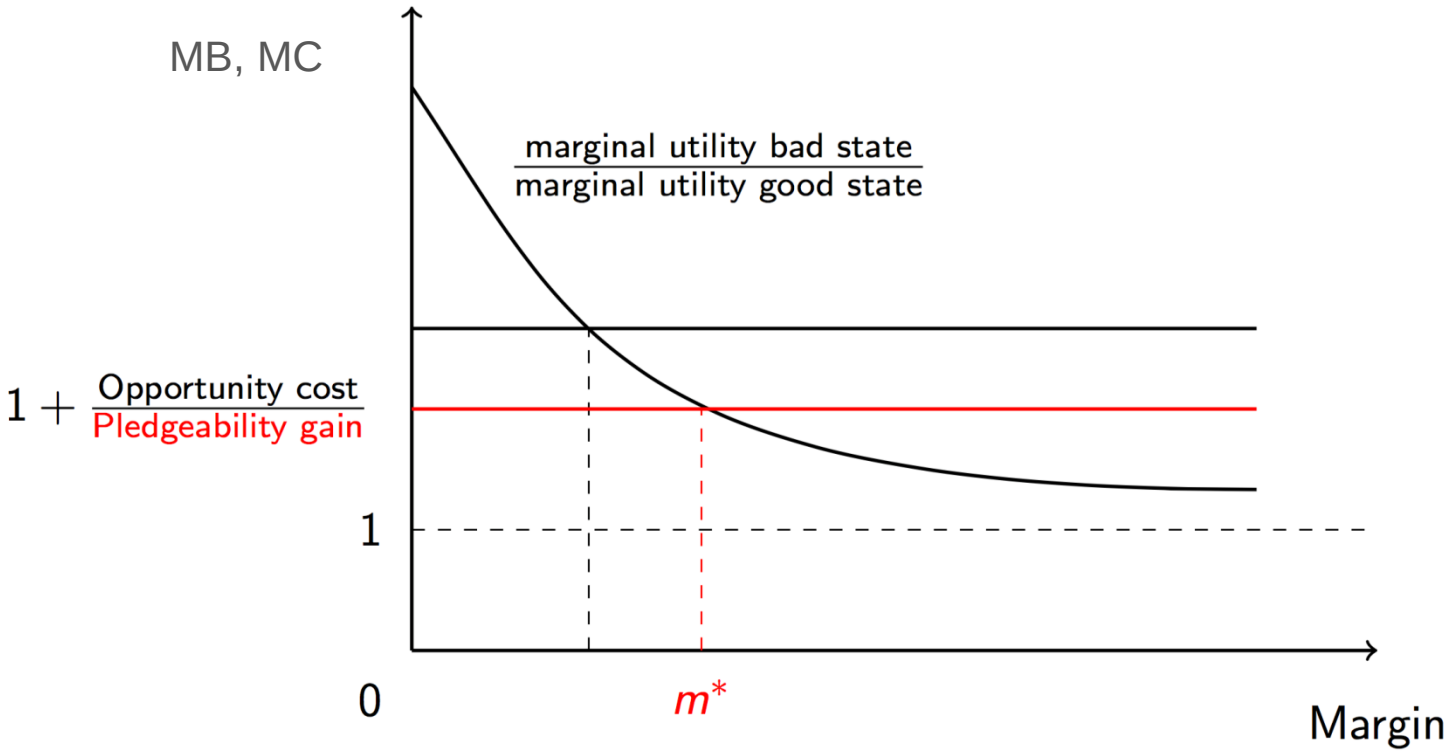
Optimal margin trades off

- Benefit of more incentive-compatible risk-sharing
- Opportunity cost per unit gain of pledgeable return



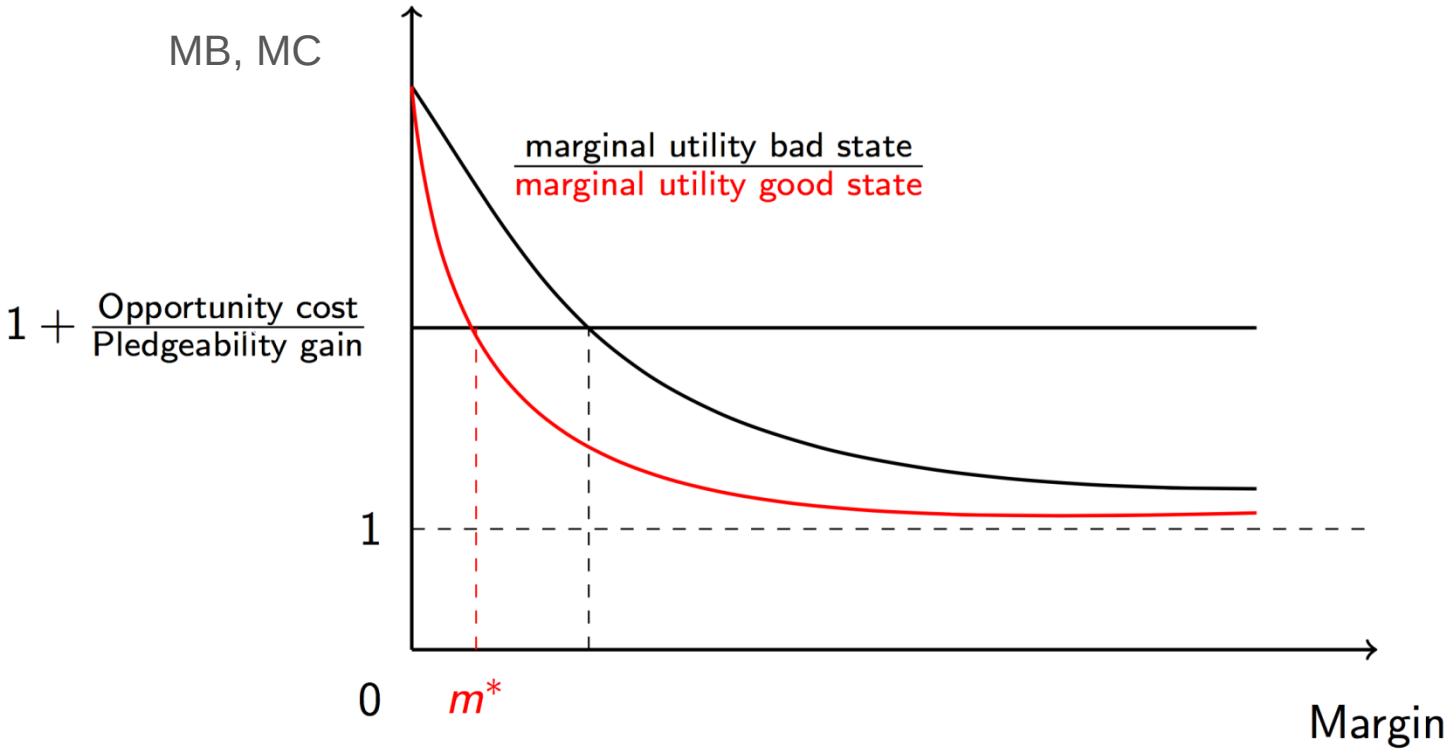
Comparative statics: Counterparty characteristics

Worse governance of counterparty $\rightarrow$ larger pledgeability gain $\rightarrow$ larger margin

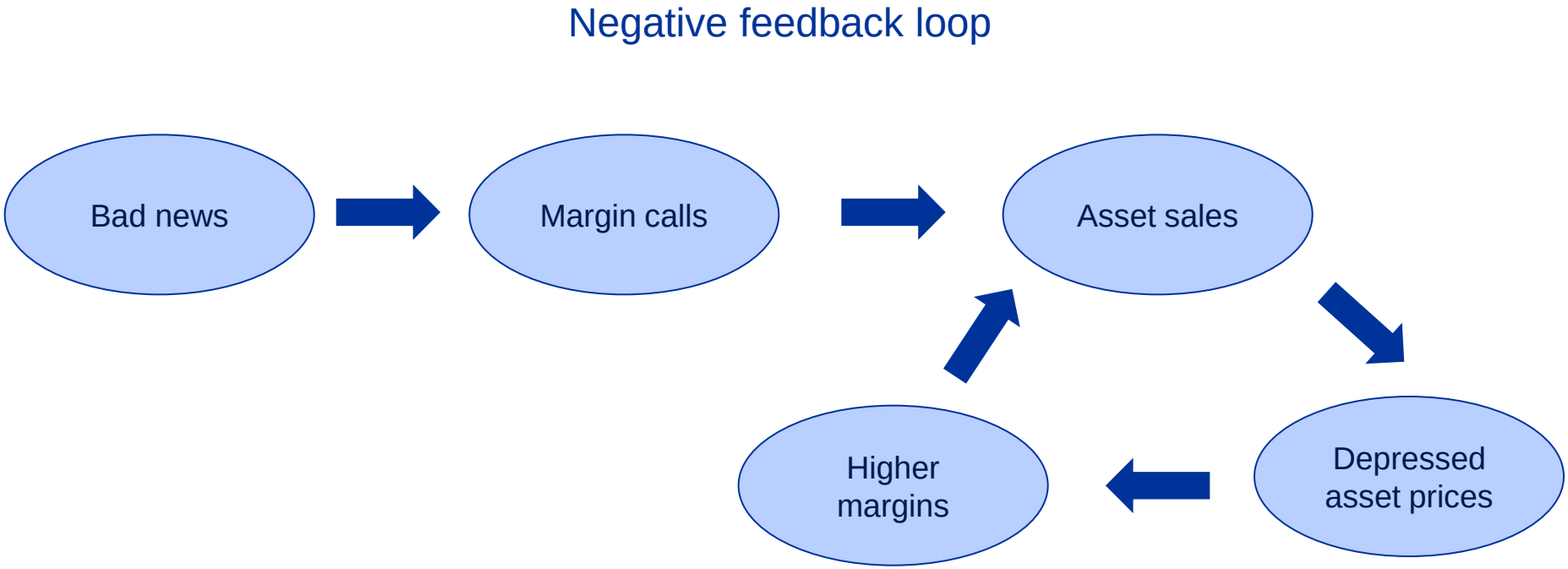


Comparative statics: Contract characteristics

Less consumption in good state $\rightarrow$ higher marginal utility in good state $\rightarrow$ smaller need for risk sharing $\rightarrow$ smaller margin



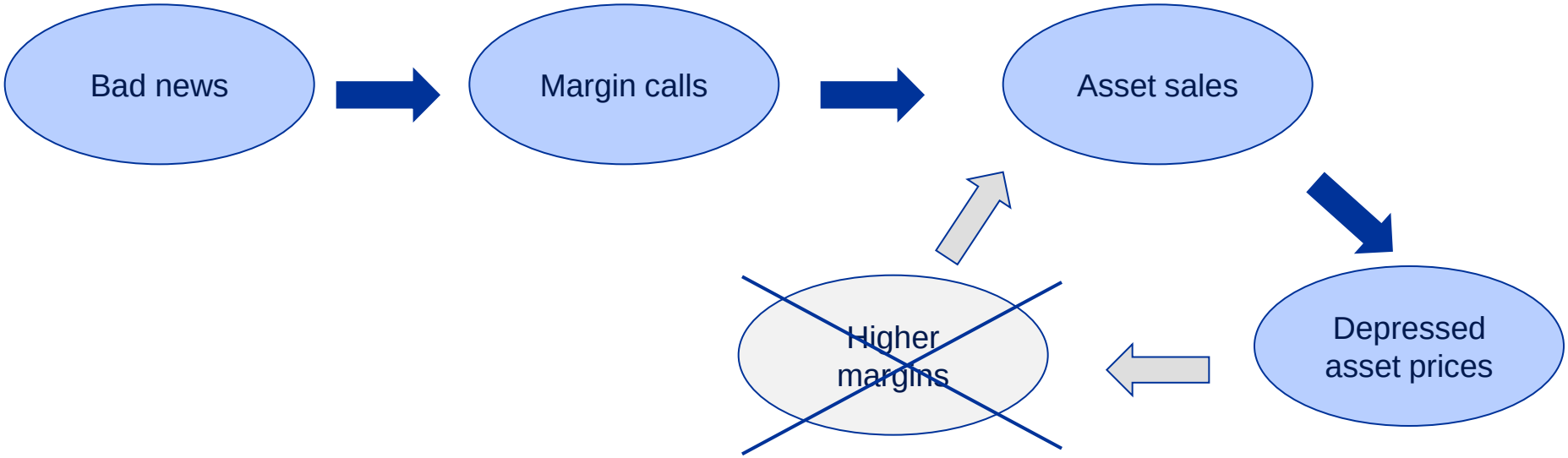
The case for regulating margins



Fire-sale externality (Biais, Heider & Hoerova, 2015)

- Can be amplified by marking positions to market (Brunnermeier & Pedersen, 2009)
- Affects both cost and benefit → multiple equilibria (financial instability)

The case for regulating margins



Regulator can internalize the fire-sale externality

- Margin cap (position limits) to reduce excessive margining
- Like leverage ratio or counter-cyclical capital (Lorenzoni, 2008; Geanakoplos, 2010)

Conclusion and open issues

A lot of progress on making CCPs more resilient

- PFMI, EMIR, CCP colleges, CPMI-IOSCO stress testing

But as often in regulation, little emphasis on incentive issues

Open issues

- What is the optimal governance of CCPs?
- What is their optimal scope?
- How should they interact with the central bank?
  - Access to central bank lending
  - Access to central bank storage