"*The Two Faces of Information*"

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An Efficiency vs Liquidity Trade-off

Motivation:

- *Information is known to improve the allocation of resources...*
- *But also to decrease the liquidity of financial markets*
- *"The Two Faces of (Financial) Information"*

Question: *But how do these opposing forces interact?*
And if so, is the provision of information efficient?

This paper: Proposes a novel *information acquisition externality*

Shows how this *externality produces inefficient equilibria*

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Big Picture: Information Strikes Back

Allocative Efficiency vs Price Stability:

- Common view of *the Great Financial Recession...*
- Caused by complex, opaque financial products
- Near-universal call for *more transparency and information*

But *why did investors not ask any questions?*

$\Longrightarrow$ information decreases liquidity in secondary markets

Gaetano and Guillermo show how this decrease in liquidity creates *complementarities in information acquisition*

$\Rightarrow$ *multiple equilibria in financial markets*

$\Rightarrow$ *result in excessive or insufficient information*

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A Reductionist's Model

Simple Prediction Game:

$$W = -\mathbb{E}\left[\theta - \mathbb{E}_i(\theta)\right]^2 - \alpha\mathbb{E}\left[\bar{\mathbb{E}}(\theta) - \mathbb{E}_i\bar{\mathbb{E}}(\theta)\right]^2, \quad \alpha > 0$$

- *Ex-ante welfare of person* $i \in (0, 1)$
- *Fundamental vs higher-order uncertainty*
- *Information acquisition:* $x_i = \theta + \varepsilon_i$, $\theta \sim N(0, 1)$, $\varepsilon_i \sim N\left(0, \tau^{-1}\right)$

Symmetric Equilibria:

1. *Everyone acquires* x_i*:* $\quad W_{1|1} - W_{0|1} > c \quad c < \frac{\tau}{1+\tau}\left[1 + \alpha\tau^2(1+\tau)^{-2}\right]$
2. *Nobody acquires* x_i*:* $\quad W_{1|0} - W_{0|0} < c \quad c > \frac{\tau}{1+\tau}$

Multiple Symmetric Equilibria!

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Multiple Symmetric Equilibria!

Efficient Information Acquisition?

Social Optimum:

$$\max_{\tau_p \in \{0,\tau\}} W$$

1. *With costless information:* $W^{\star}_{1|1} = \frac{1}{1+\tau}\left[1+\alpha\tau^2(1+\tau)^{-2}\right]$
2. *Without costless information:* $W^{\star}_{0|0} = 1$

Optimal Information Provision: $\alpha \lessgtr \frac{1+\tau^2}{\tau}$

Equilibrium Comparison:

- *Welfare consequences of multiplicity are serious*
- *Cause excessive or insufficient information in equilibrium*

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A Bird's Eye View

Model Setup:

- Continuum of consumer-producers
- Purchase information to *(i)* pre-set labor and *(ii)* trade capital
- *Allocative (i) vs liquidity value (ii) of information*

Information Externality:

Efficiency vs liquidity trade-off through R

$\Longrightarrow$ *knowledge of fundamental vs knowledge of higher-order beliefs*

Comments:

1. *Stability Breeds Instability?*
2. *Symmetric Information: Another Candidate?*
3. *A Macroeconomist's Laundry List*

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Stability Breeds Instability

Liquidity and Information:

- *Liquidity = no questions asked*
- *Can persistent ignorance be bliss?*

Financial Crises: *... opaque systems expand liquidity ex-ante, but increase risks of financial crises (Holmstrom, 2012)*

A Dynamic Trade-Off

$$W_\star = W_1 + \beta \left[\delta W_2^c + (1 - \delta) W_2^{nc} \right]$$

- *Information about systemic risks hidden*
- *Stability breeds instability (Minsky, 1986)*

Stability Breeds Instability

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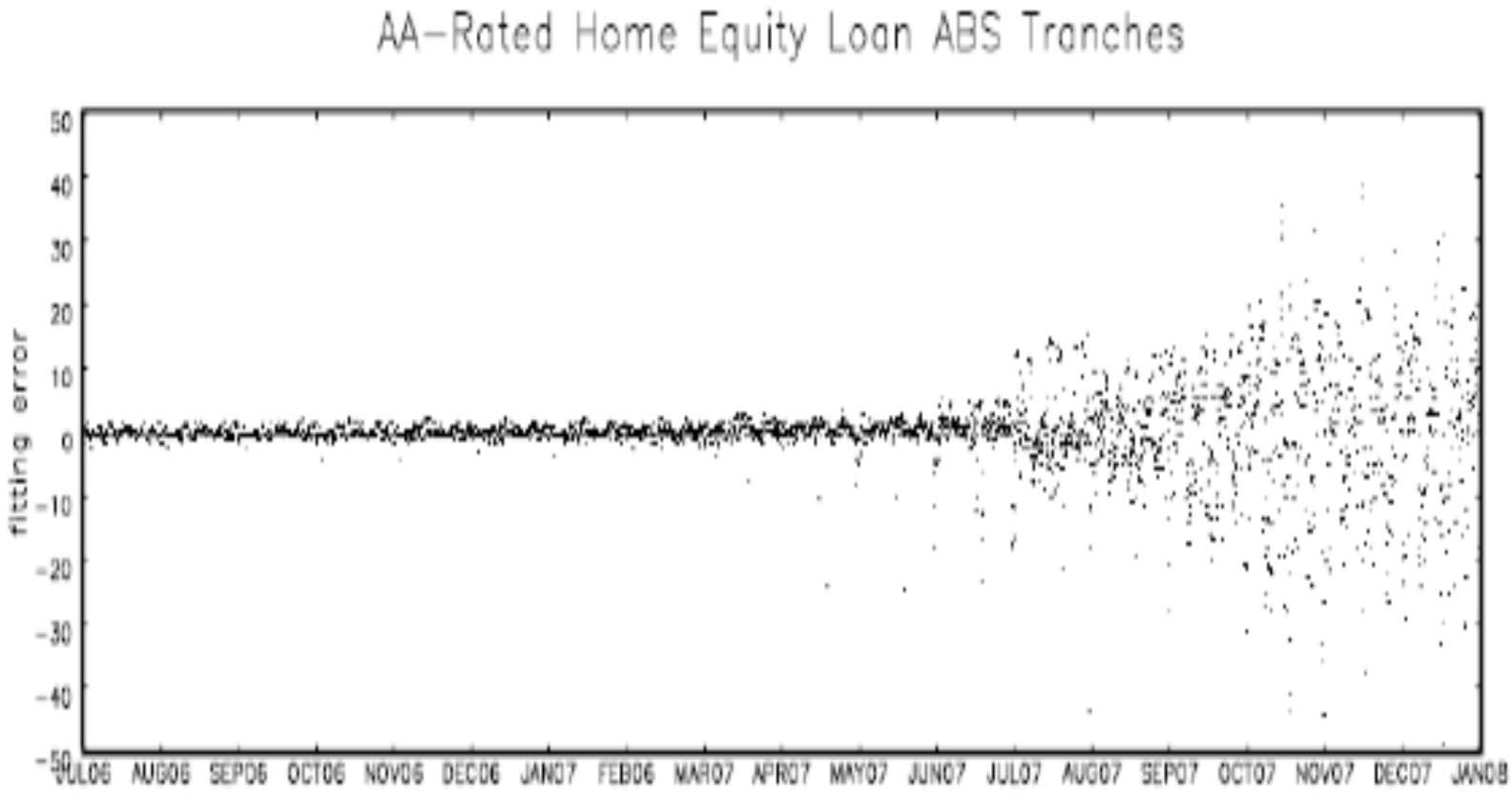
Trapped Information?



Peraudin and Wu (2008)

Trapped Information Release and Welfare

A Macroeconomist's Laundry List

Simple Framework:

- Tractable, clear exposition
- ... but ultimately a basic representation

Strategic Compl. and Inefficient Disturbances?

A Macroeconomist's Extension:

- *Equilibrium vs socially efficient use*
- *Efficient use vs efficient acquistion*

A Unified Take-Away Message?

Symmetric Information

Infinitesimally Small Traders?

Final Remarks

Conclusion:

- Since the **Great Financial Recessision** an almost universal call for **more** transparency and **information** in financial markets
- Yet, the mere presence of **additional information** creates volatility in secondary market prices, which **decreases liquidity**
- **Gaetano and Guillermo** turn our attention to how this decrease in liquidity can **counteract** the allocative **benefits of information**
- **.... Massive upside potential**

Holmstrom (2012): *Transparency* $\neq$ *liquidity*

Thank you for your time and attention!