EUROPEAN CENTRAL BANK

EUROSYSTEM

Mandatory disclosure, voluntary disclosure, and stock market liquidity: evidence from the EU bank stress tests

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Take-away

- Mandatory disclosure of information encourages voluntary disclosure.
- Banks with positive information have more incentives to disclose. Leads banks with slightly less good news to disclose...
- $\Rightarrow$ stress-tests can trigger an unraveling of private information. Tool to promote transparency/market discipline?

- Large increase in spreads for banks that do not voluntarily disclose information.
- No impact for the others.

Timely and provoking: is more disclosure necessarily a good thing?

Disclosure - Methodology

My only methodological point.

- Ex. disclosure of maturities around the July 2011 stress-tests.
- Treated group, post-pre event $= 0.69 - 0.21 = +0.48$.
- Control group, post-pre event $= 0.15 - 0.03 = +0.12$.
- DiD: $+0.36$. DiDiD controls for trends.
- Same analysis in %: treated $+229\%$, control $+400\%$, DiD -171%.
- Differences in pre-stress-tests level not an issue, but need to check the common trends assumption, and whether it holds in logs or in levels $\Rightarrow$ more periods, graphs.
- Actually, is DiD necessary at all? Changes quite clear, do we suspect other factors to significantly affect disclosure incentives in this period?

Disclosure - Economic mechanisms

- Unraveling theorem: banks with risk $\tilde{\theta} \in [0,1]$, profit $\pi(\hat{\theta}_-, \theta_-)$.
- No disclosure $\Rightarrow \hat{\theta}_0 = \mathbb{E}(\tilde{\theta}) \Rightarrow$ types with $\theta < \hat{\theta}_0$ disclose
  $\Rightarrow \hat{\theta}_1 = \mathbb{E}(\tilde{\theta}|\theta > \hat{\theta}_0)$
  $\Rightarrow$ types with $\hat{\theta}_0 < \theta < \hat{\theta}_1$ also disclose and so on...
- Not exactly the case here: disclosing has a cost c (maybe $c(\theta)$?). In equilibrium a bank with type θ does not disclose if:

$$\pi(\mathbb{E}(\tilde{\theta}|\text{no disclosure}), \theta) - \pi(\theta, \theta) < c(\theta)$$

- Costs and benefits from disclosing?

Costs

- Operational cost. Big for exposure to sovereign risk? Maybe concave in the exposure?
  $\Rightarrow$ more disclosure for banks with large and simple exposures (compare 2010/dec. 2011 with CDS).
- Bank-run: depositors/speculators may coordinate on the release of public information.
- Front-running: revealing that one has a large chunk of Greek debt to sell exposes to manipulation.
  $\Rightarrow$ less disclosure by banks with large and unbalanced positions.
- Politics: a bank may not want to reveal that it sold a lot of the debt of its own sovereign.
  $\Rightarrow$ less disclosure by banks with decreased exposure to *their own* sovereign, compared to others.

Benefits

- Mandatory disclosure reveals a high exposure to Greece $\Rightarrow$ strong incentives to sell and disclose voluntarily.
- If little exposure to start with, why would a bank disclose anything afterwards?
- "Good news" variables, smart use of the next mandatory disclosure. Good news increase disclosure.
- Good news about the absolute EAD vs. change in EAD.
  Both variables quite correlated?
- Good news about absolute EAD but not in terms of change may be no news at all (but no news is news...).
  I'm not sure how to interpret the impact of this variable.
- I would expect a stronger effect from high prior exposure interacted with good news about the change.

Spreads

Very interesting result on how stress-tests should be designed!

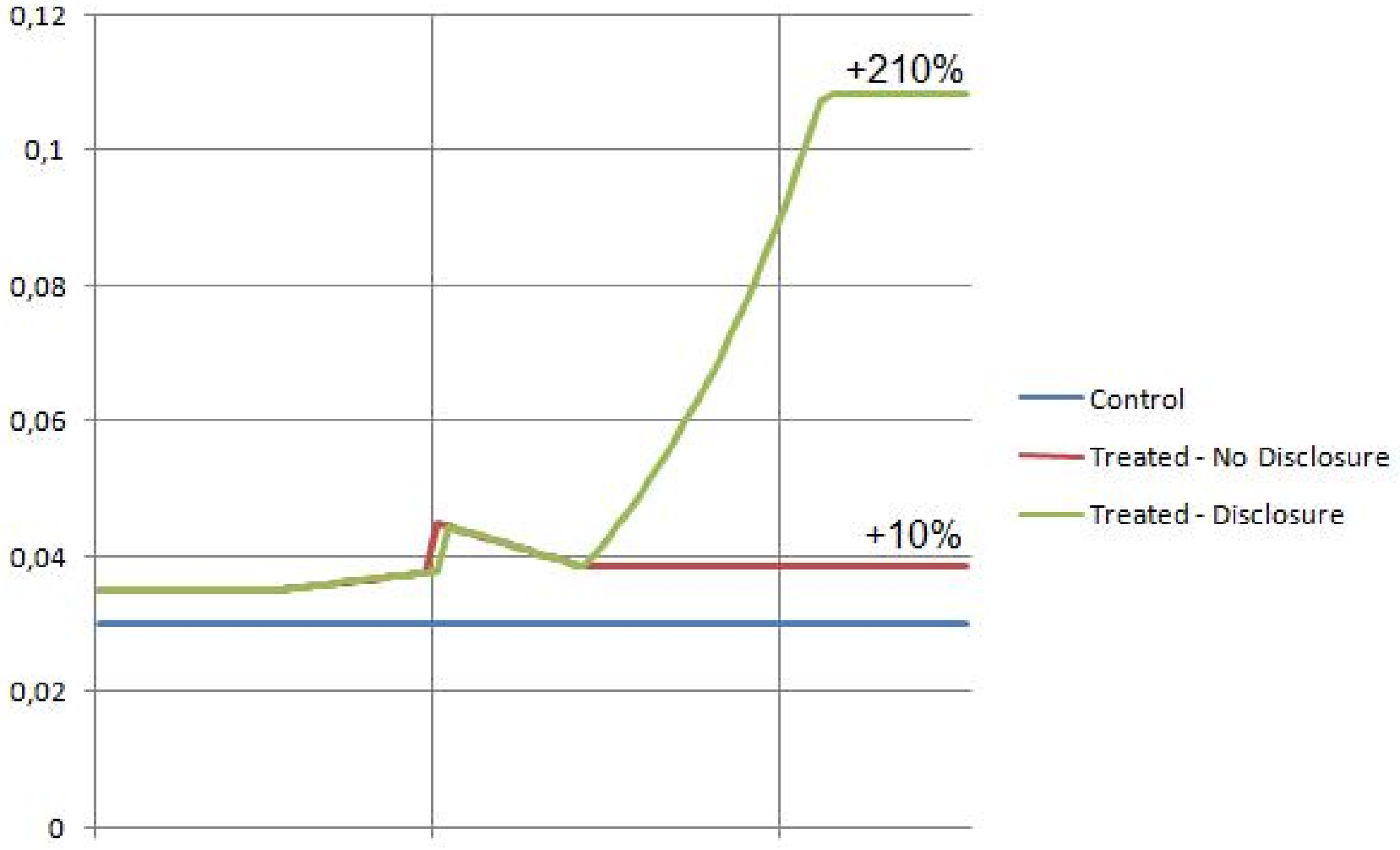
- July 2010: Soft information. No impact.
- July 2011: Hard information. $\ln spread + 0.092$ if voluntary disclosure, and $+1.129$ otherwise.
  In other words: $+10\%$ and $+210\%$!
- Does not lead to a lot of optimism about disclosure as a way to reduce opacity though...

- Interpretation similar to earnings announcements?

  Hard information is difficult to digest, asymmetric information between investors with the expertise to process the disclosed figures and the others? cf. e.g. Krinsky and Lee, 1996.

My dream graph

Pb.: are we sure the effect lasts for so long? One can do better than comparing 2010 : $Q3$ and $2012 - Q2$.
Why not daily observations for spreads? Even intradaily on the announcement date.



Spread decomposition

- Lack of information $\Rightarrow$ $V(\tilde{\rho}|\mathcal{F}_t)$ high, intermediation risky and the stock is illiquid.
  This component decreases on average after a stress-test as $V(\tilde{\rho}|\mathcal{F}_t) > E(V(\tilde{\rho}|\mathcal{F}_{t+1}))$, but increases for negative results.
- Mandatory stress-test $\Rightarrow$ adverse selection, insiders may know what the stress-tests are going to show.
  Should increase spreads before the disclosure.
- Disclosed results $\Rightarrow$ adverse selection if some investors have better information about sovereigns.
  Illiquidity contagion from sovereigns to banks, can be tested.
- Choice not to disclose $\Rightarrow$ more risk, more type 1 adverse selection, less type 2 adverse selection.

Future research?

- Why spreads? Is it such a good measure of opacity in the time series?
- Impact on stock prices? Allows to see what is good news, i.e. a surprise and not only an exposure below median.
- Impact on CDS spreads when available?
- Analysts' disagreement?
- Volatility? Reaction to news about the sovereign debt crisis?

Conclusion - 1

Question to think about: why mandatory disclosure?

- Benefit: info. for investors (hard? soft? then persuasion game cf. Gick and Pausch, 2012).
- Cost: manipulation, runs (Shapiro and Skeie, 2012).
- Where is the wedge between private and social incentives to disclose? Where is the market failure?
  Higher spreads $\Rightarrow$ maybe wrong cost-benefit analysis!
- With bail-out anticipations, opacity $\Rightarrow$ sovereign debt more risky. Feedback loop between bank and sovereign crises not internalized by banks.
- But then there is a new signaling game: not running stress-tests means the supervisor has negative information...
  $\Rightarrow$ credible commitment on the periodicity important.

Conclusion - 2

- Interesting and timely paper, a lot of data and attention to institutional details.
- Asks relevant questions, surprising results.
- But I want to know even more!

My take on the results on spreads:

One should be careful before organizing a market-wide signaling game, the devil is in the details.

Cf. Goldstein and Sapra 2012, Goldstein and Leitner 2012, Spargoli 2012...