EUROPEAN CENTRAL BANK

EUROSYSTEM

Jérôme HENRY
DG-Macroprudential Policy and Financial Stability
European Central Bank

Comments on: **“Taking regulation seriously: fire sales under solvency and liquidity constraints”**

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1 The framework employed

- **Regulation: 3 constraints, in terms of liquidity (LCR) and solvency (Leverage and Capital ratios)** in the spirit of *Cecchetti and Kashyap*

- **Solvency and liquidity:** shocks and their impacts from / on both sides

- **X-transmission:** liquidity and solvency conditions affect each other

- **Focus on Price effects:** “fire sale” mechanisms (externalities), a valuable and rich extension of *Cont and Schanning*

- **Optimisation-based approach**: derive optimal *deleveraging* strategies, for each individual banks, assess the systemic impacts

- **Experiments:** liquidity and solvency stress, *separately and jointly*

2 Main results

- **Optimisation –** “deleveraging” strategies are ratio-target dependent

2 configurations, hierarchy / “pecking-order”: Leverage vs RWA + LCR

- **Shock on Solvency => limited MTM losses** (BoE ST scenario)
- **Shock on Liquidity => larger MTM losses** (LCR outflow scenario)

***Intuition*: Solvency not helped when selling all assets (losses)**

- **Shocks on Solvency *and* Liquidity => less than sum of the two** (“crisis” scenario); “complementarity”

S-Loss + L-Loss > S+L-Loss > max (S-Loss, L-Loss)

3 Looking back – from *Eisenberg and Noe* to now… additional pieces

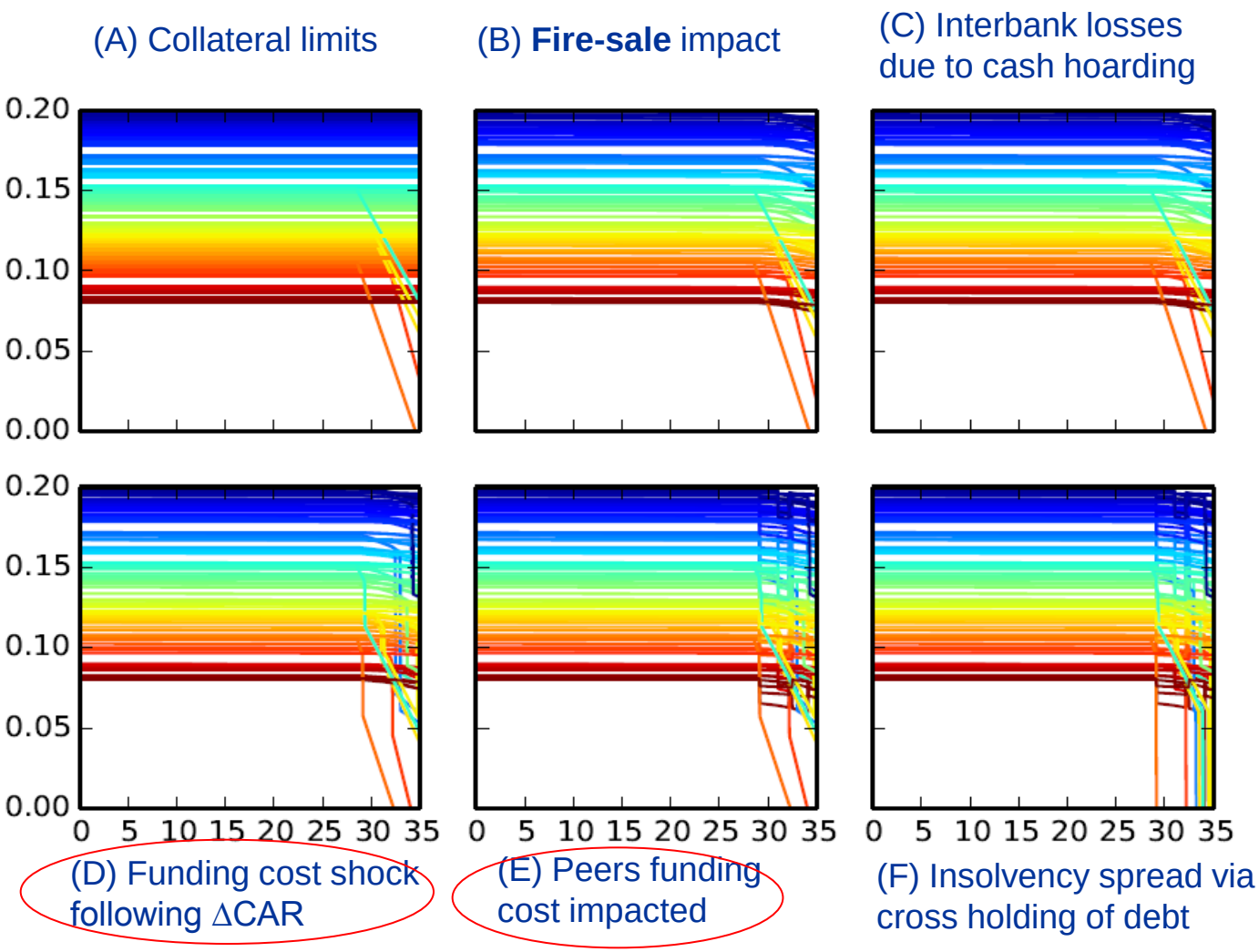
From a pure quantity-based cascade of defaults on Interbank loans

- **Distress vs defaults -** thresholds, hurdle rates — **IN reg vs market**
- **Asset changes** beyond IB — **IN optimal**
- **Liability changes** beyond IB — **IN exogenous**
- **Price channel – fire sales** (MTM impacts) — **IN**

- **Herding behaviour** (dry out, collateral run, sov.)
- **Central Bank regular (non-ELA) facilities**
- **CBC – collateral use and haircuts**
- **Liquidity and Solvency** x-impacts (funding costs, NII)
- **Non-banks shock absorber / generator**

4 Systemic LST – illustrative impact of some of these key channels

Individual banks CAR vs. Shock to outflow of corporate deposits (pp)



Halaj G. and J. Henry (2017), "Sketching a roadmap for Systemic Liquidity Stress Tests (SLST)" *Journal of Risk Management in Financial Institutions*

5 Assumptions / mechanisms / robustness

A1 **Haircuts** endogenous vs. set at a given (initial) market shock ?

A2 **No "game" –** some (larger) banks perhaps can estimate impacts ?

A3 Pure market shock **no loan responses –** short-horizon "crisis" mode OK for liquidity ST; less consistent with solvency ST impacts ?

1. **Varying hurdle rates –** non-linearities ? RST ? Market view ?

2. **Implementation shortfall –** impact of the mechanism critical ?

Results apparently bank-shock-PF specific – degree of generality ?

Robustness: Optimisation criteria – Sequence of moves – Price path post deleveraging – Collateral pool + use – funding costs…

6 Further (broader) considerations

- **Systemic Liquidity ST and Systemic Solvency ST** - *Jointly or not ?*
- **Complex endeavour,** not necessarily always relevant

Time dimensions matter – reactions / channels / frequency / horizon

Market ST vs extended scope ST, ie beyond MR – CR, IRR…

Loans key element of deleveraging esp from a macro 2nd round long-lasting point of view, real-financial feedback post-crisis key + protracted…

Other data sources – EMIR and also SFTDS

Other tools – SWST (BoE-ECB) and Large Exposures CoMap (IMF-ECB)