
A discussion

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The views expressed in this presentation are my own and do not necessarily reflect those of the ESRB or its member institutions.
The paper – overview

• Two parts:
  1. Banking stress-testing scenario generation (a la Breuer & Csiszár 2013)
  2. Second-round effects (fire sales) resulting from deleveraging triggered by leverage ratio breaches (a la Cont & Schaanning 2016)

• Contribution:
  1. Apply generalised scenario approach to a subset of the risk factors in EBA 2016 ST – worst case scenario
  2. Discuss potential second-round effects for both the EBA adverse and worst case scenarios
The paper – general comments

• Deals with very important topics

• Presents a very interesting and relevant application for both policy and research audiences

• Very elegant setup with well-defined mathematical criteria for scenario selection

• At the same time, illustrates well the challenges encountered in this area of policymaking and research
The setup – scenario generalisation

Scenario design

- All scenarios
- Plausible enough scenarios
  \[ Q : D(Q|P_0) \leq k \]
- Worst case scenario

Portfolio Valuation

Objective Function

- Outcome 1
- Outcome 2
- Outcome 3
- ... (ellipses)
- Outcome M

\[ X \] indicates the worst case scenario
The setup – scenario generalisation

- The authors suggest setting $k$ based on risk factor distributions observed during crises.

- Adverse scenarios tend to be designed around an economic narrative based on risk assessment. How can the setup best accommodate this?

- Any advice to policymakers on how to communicate such scenarios?
  - Could it be the case that the worst case scenario is fundamentally different (from an economic perspective) for key risk factors compared to the crises distributions?
The setup – scenario generalisation

- The setup is flexible to allow for a wide range of objective functions – comes in handy as stress tests can also have a wide range of purposes

- For macropru STs: how difficult can the curse of complexity be in this context?
  - Since the paper dedicates (and rightly so) its second part to amplification effects, further discussion on this point would be appreciated
The setup – deleveraging-induced fire sales

**Exogenous risk**
- Scenario
- First-round losses
- Banks’ leverage ratio targets breached

**Endogenous risk**
- Sale of assets
- Market impact of asset sales
  \[ \Psi(q) = \frac{q}{D} \]
The setup – deleveraging-induced fire sales

Exogenous risk

- Scenario

- First-round losses

- Banks’ leverage ratio targets breached

Endogenous risk

- Behavioural assumptions on asset selection

- Assumptions on price impact function

- Market impact of asset sales

\[ \Psi(q) = \frac{q}{D} \]
Thank you for your attention

jose.fique@esrb.europa.eu