Voluntary Support and Ring-Fencing in Multinational Banks

Discussion by Ansgar Walther

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Outline

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A basic model

- Bank with two subsidiaries $i \in \{A, B\}$
  - Debt outstanding b_i
  - Asset values v_i with joint distribution $F(v_A, v_B)$

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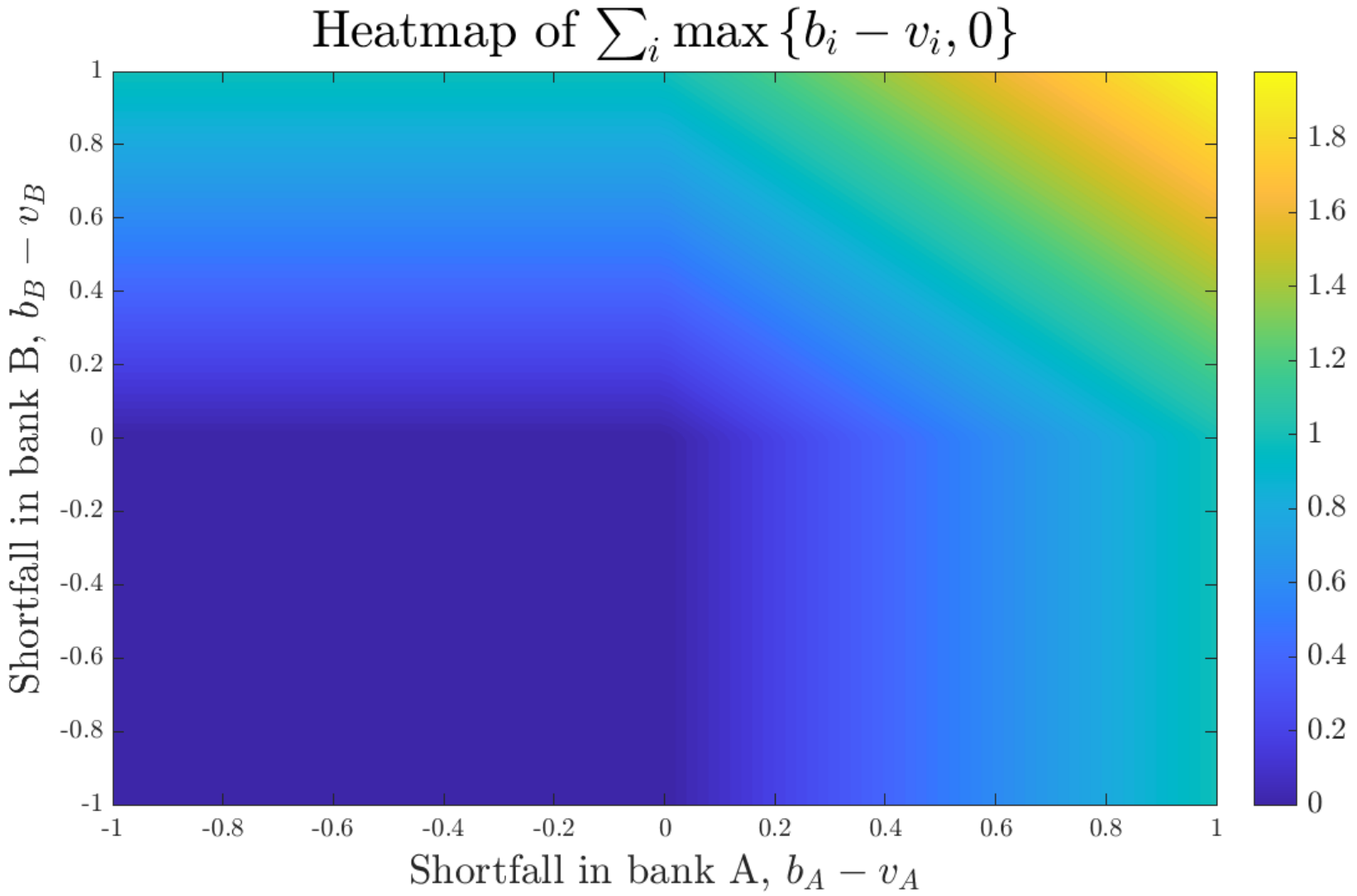
- Total loss without banking union

$$L_0 = \sum_i \max\{b_i - v_i, 0\}$$

Social loss without banking union



Banking union

- Uninhibited transfers of capital from $A \leftrightarrow B$
  - When A has a shortfall, B can help
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- Value of a banking union is

$$L_0 - L_1$$

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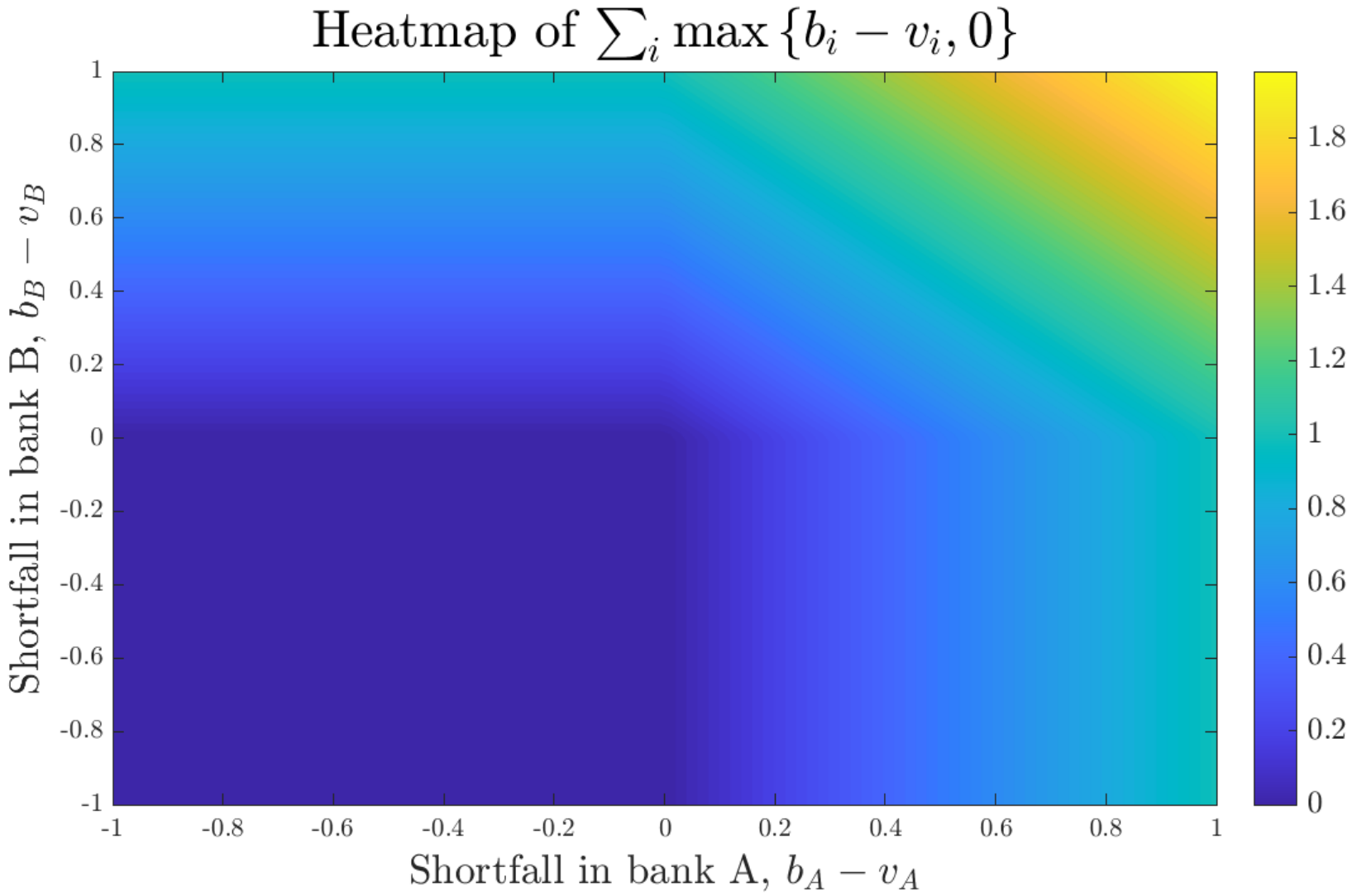
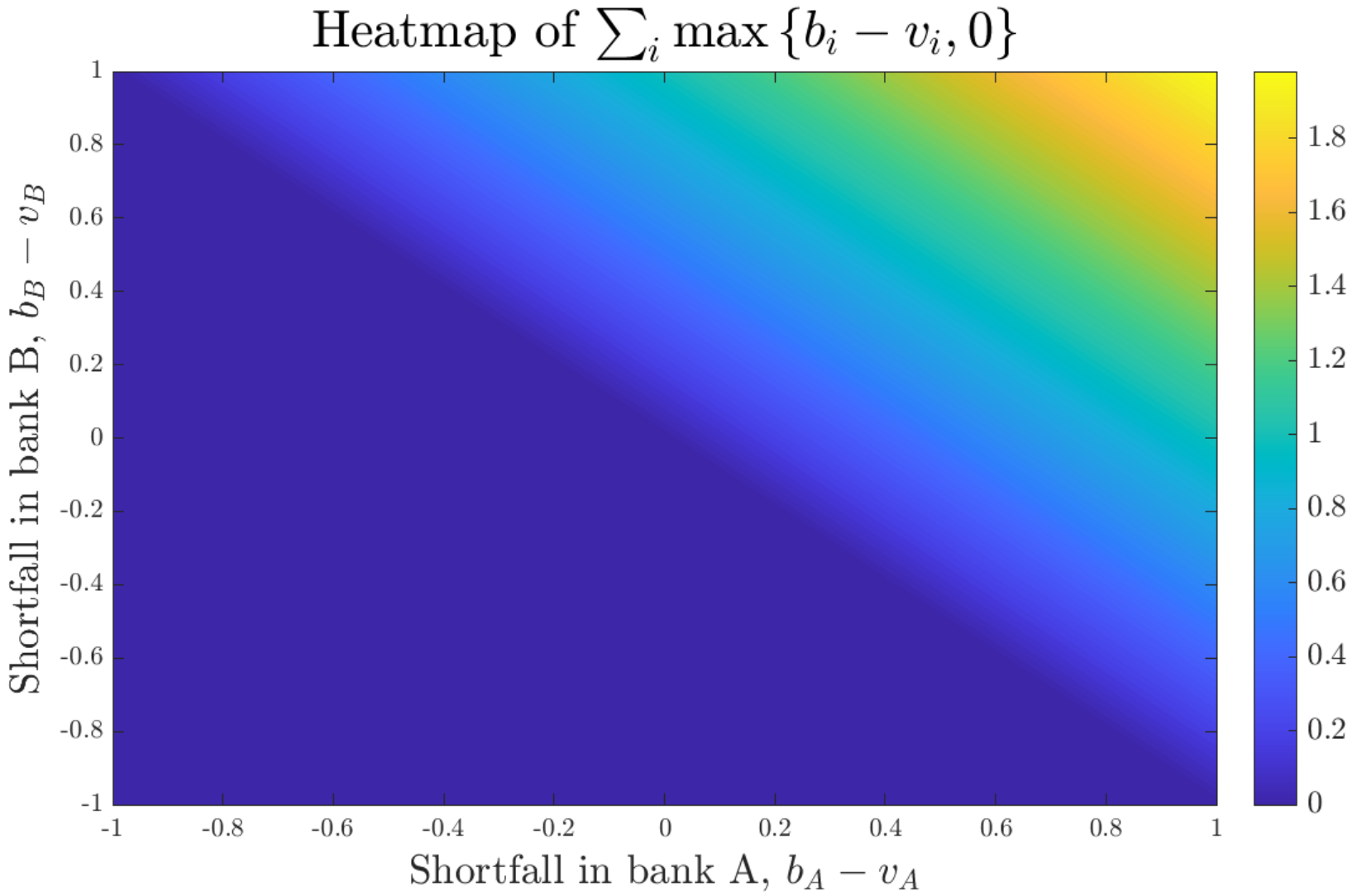
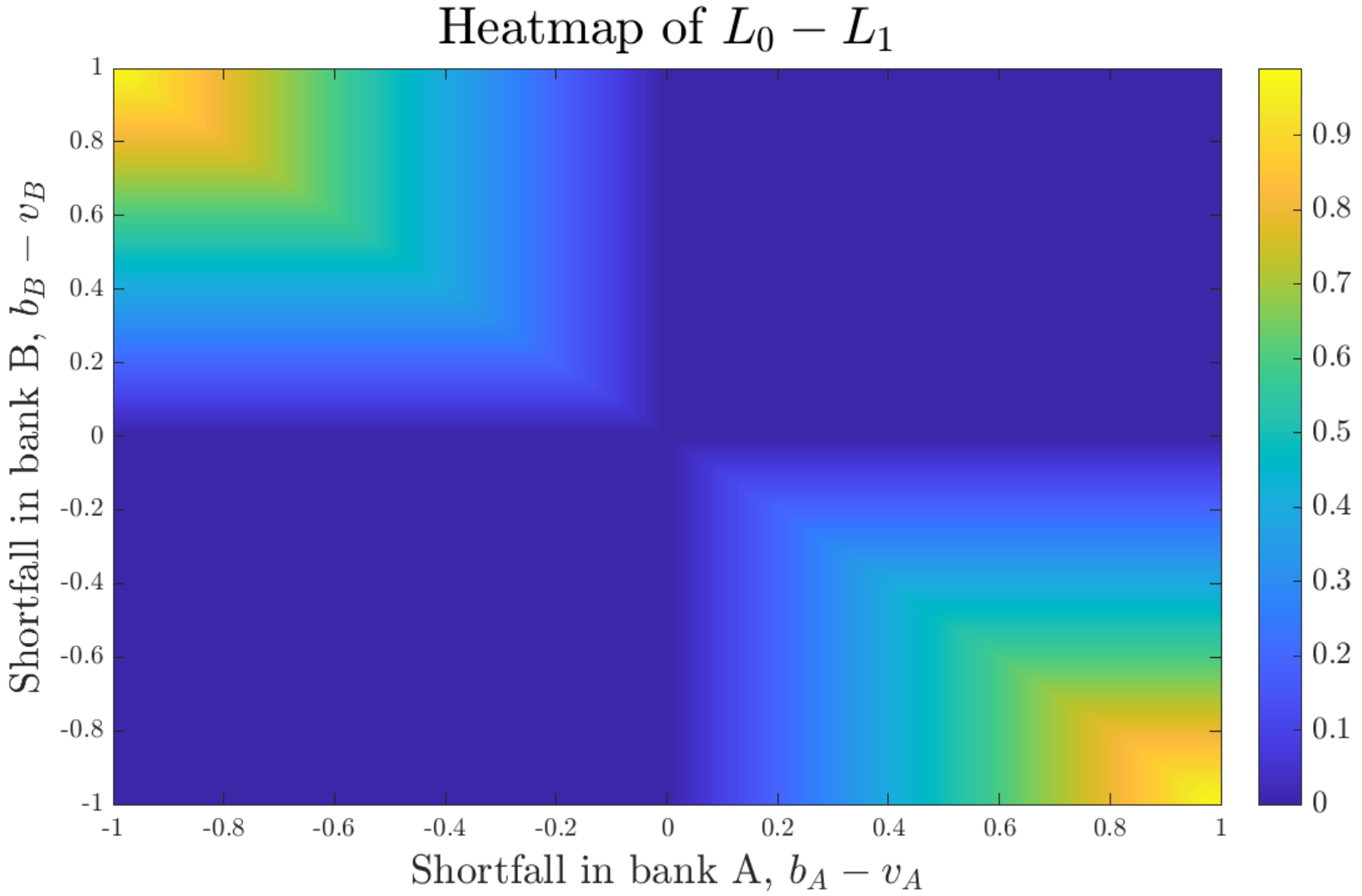


Social loss with banking union



Value of a banking union



Union is always valuable

Proposition

For any distribution $F(v_A, v_B)$, banking union is valuable:

$$E[L_0 - L_1] \geq 0$$

Proof: Jensen

$$L_0 - L_1 = \underbrace{\sum_i \max\{b_i - v_i, 0\}}_{\text{sum of convex functions}} - \underbrace{\max\left\{\sum_i (b_i - v_i), 0\right\}}_{\text{convex function of sum}} \geq 0$$

Correlation decreases the value of union

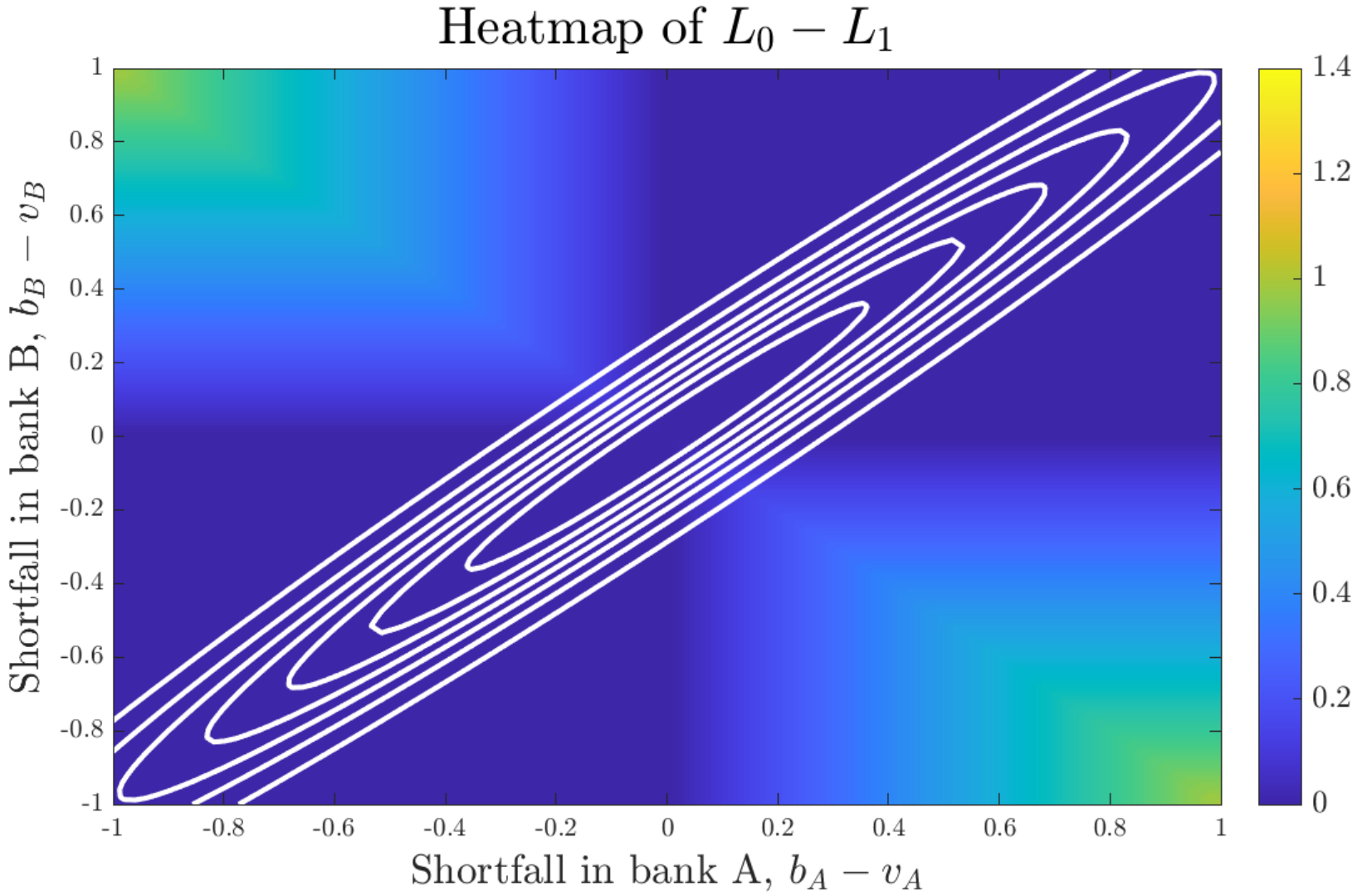
Proposition

When (v_A, v_B) *become more correlated,* $E[L_0 - L_1]$ *decreases*

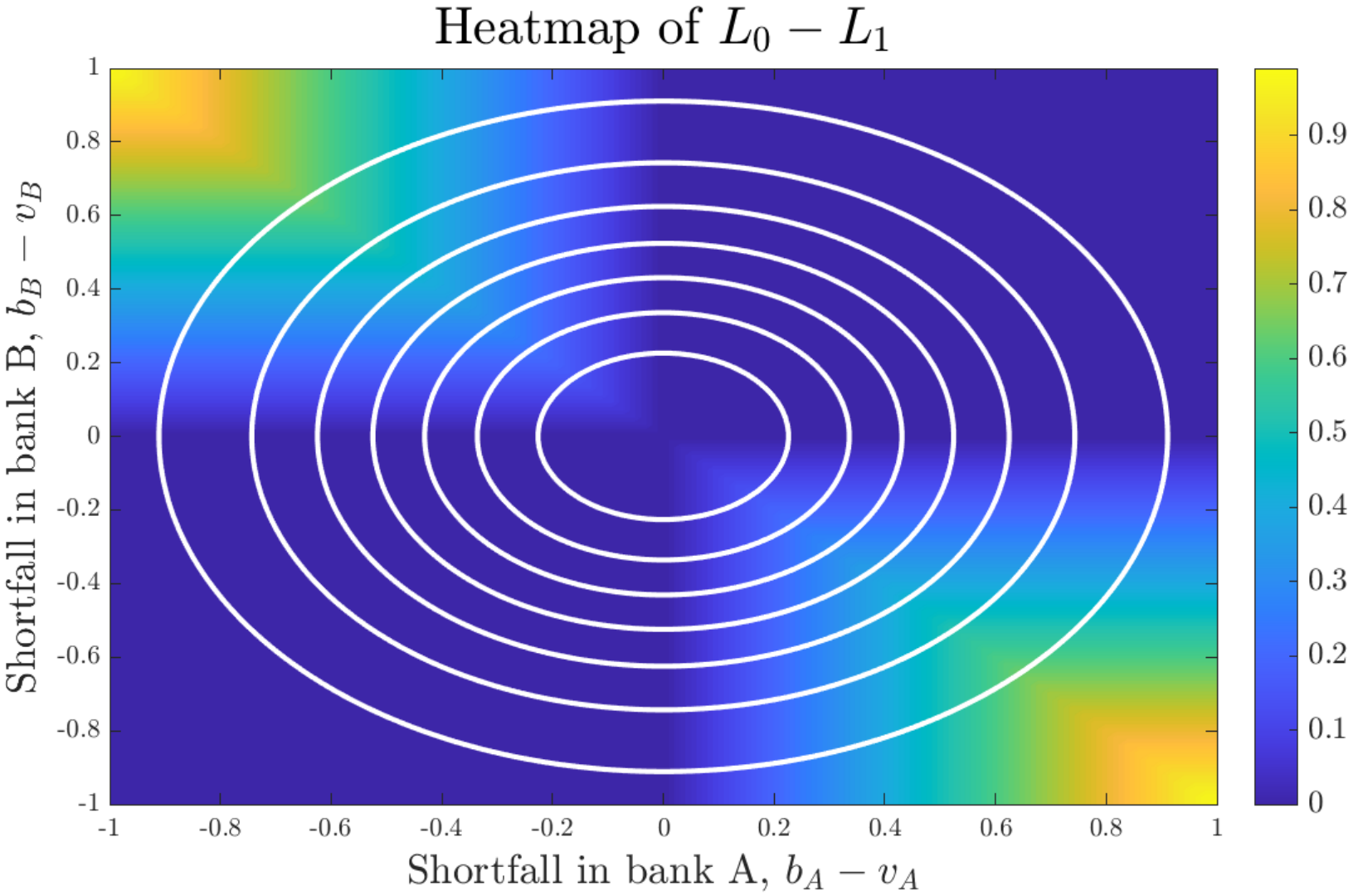
Proof: Meyer-Strulovici "supermodular stochastic ordering"

- L_1 *is supermodular in* (v_A, v_B)
- $F(v_A, v_B)$ *more interdependent* $\Rightarrow \uparrow E[L_0 - L_1]$

High correlation



Low correlation



Outline

Current state of EU banking

REUTERS®

World Business Legal Markets Breakingviews Technology Investigations Sports

June 24, 2021
7:27 PM BST
Last Updated 4 months ago

Business

EU leaders to commit to finishing banking union ... one day

3 minute read

By Francesco Guarascio and Jan Strupczewski

Ring-fencing incentives

- National authorities can still block capital transfers ex post
- My prior: Strong incentive to do this
  - The healthy want to walk away from insurance

Ring-fencing incentives

- National authorities can still block capital transfers ex post
- My prior: Strong incentive to do this
  - The healthy want to walk away from insurance
- Puzzle: This is **not true** in the basic model

Incentive compatibility in the basic model

Proposition

There exist transfers $t_{A\to B}(v_A, v_B)$ *and* $t_{B\to A}(v_A, v_B)$ *that implement* L_1 *but never take any subsidiary from solvency to bankruptcy*

- *Proof: Online appendix*
  - *Intuition: Failing* A *to save* B *does not increase surplus*

- Implication
  - The costs of the optimal transfers from A to B from perspective of A's deposit insurer is zero ex post
  - No commitment issues

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- **This paper**: Incentive issues return with one natural friction
  - Takes all of the above as read

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  - Transfers happen at an interim date
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- A transfer from strong A to weak B increases A's losses if it fails
  - Incentive to walk away
- IC binds more if A and B are highly correlated
  - Weak B becomes a signal that both are likely to fail

Comments on interpretation

- Limited commitment binds
  - Why it binds here is most interesting
  - Residual uncertainty in dynamic models

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- Limited commitment binds
  - Why it binds here is most interesting
  - Residual uncertainty in dynamic models
- When banking unions are valuable, they work!
  - Valuable = high correlation
  - High correlation = weak incentives to walk away

Possible extensions

- Fear of future failure makes A quit the insurance scheme
  - Counterintuitive
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- Fear of future failure makes A quit the insurance scheme
  - Counterintuitive
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- Extension: Presence of strong players can resolve the tension
  - Super-strong A has very small probability of future failure
  - Strong B worries about failure but knows it can always get bailed out by A
    - Happy to help
  - Weak C needs help

Additional contribution

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  - No: Work harder because insurance protects from inefficient wipe-out
- Fascinating topic
  - Moral hazard in teams (Holmstrom)
  - Twist: A *cooperative* team within a corporation
- Insight not necessarily supermodular in (commitment, MH)