How Much Financial Stability Do We Need Really?

A Comment on “Payment Systems and Bank Systemic Risk” presented by Nico Lauridsen (U. of Bologna) and “Payment Delay and Liquidity Crunches” presented by James Sanders (Bank of England)

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Summary

- Both papers provide insightful analyses of systemic risk;
  - Nico Lauridsen: Banks that are central nodes of the payment system are more vulnerable to economic shocks. So, shocks increase overall systemic risk through their impact upon central node banks;
  - James Saunders: Careful design/policy can significantly dampen shock propagation through a payment system;
- Policy:
  - Both papers implicitly or explicitly treat systemic risk as a bad thing and so draw lessons for how to reduce it;
  - But creating systemic risk by making illiquid loans (etc.) is what a banking system is for;
  - The goal of policy should be to design a regulatory framework that maximizes the amount of systemic risk that the financial system can handle while letting banks do their thing.

Payment Systems and Bank Systemic Risk

Payment Systems and Systemic Risk

- Banks connect to the real economy, and interbank markets mediated through payment systems connect banks;
- So, banks that are central nodes of the payment system are inevitably in harm's way when a significant shock hits the real economy and propagates through the payment system;
- Hypothesis: Shocks that hit the real economy increase systemic risk (the risk that the financial system fails to provide financial services to the real economy) through their impact upon these node banks;
- Of course, node banks and regulators are aware of this exposures and so take steps to protect themselves (the banks) and the system (the regulators);

Method and Results

- Method: A Diff-In-Diff comparing the impact of the Covid shock upon Node banks (as defined by the ECB) and Non-Node banks, using measures of bank contribution to systemic risk as the dependent variable;
- Results:
    - Node banks significantly increase their relative contribution to overall systemic risk during the Covid shock;
    - Banks that depend upon short-term funding are more exposed to shock risk, while banks that depend more upon wholesale and/or interbank funding are less exposed;
    - These results are probably in line with our intuition, but it is always good to have intuition backed by rigorous empirical analysis!

Suggestions

- Systemic Risk measures are very very noisy, so it would be good to also use a directly observable variable as a measure of systemic risk (for example, change in lending, government bailout, etc.) to confirm the Systemic Risk measure results;
    - Danielsson, James, Valenzuela, and Zer (2016), “Model Risk of Risk Models”, *Journal of Financial Stability*
    - Danielsson, James, Valenzuela, and Zer (2016), “Can We Prove a Bank Guilty of Creating Systemic Risk? A Minority Report”, *Journal of Money, Credit, and Banking*
- Node bank response: Since the banks know that they are in harm’s way, it might be interesting to see if Node banks take preemptive precautions to deal with this exposure. That is, can one predict important aspects of bank behavior before the shock based upon the increase in SysRisk that a bank experiences during the shock;

Payment Delays and Liquidity Crunches In the UK Context

Hypothesis

- A liquidity shock to banks will cause a delay in intra-day payments in the payment system;
- A liquidity shock will create a spike in Repo rates;
- So, intra-day payment delays will provide a useful measure of a liquidity crunch;
- The payment delay/Repo rate spike works in the US…
- …So it should work in the UK (CHAPS Sterling) too!

Method and Results

- Estimate the relationship between Payment Delays and SONIA Bank Rate Spread;
  - Payment Delay: The time taken for the largest universal banks to receive 50% of their payments (by value) for the day;
- Results: There are no significant payment delays in the UK, so the minimal payment delays don't have any effect on the SONIA Bank Rate spread;
- Basically, CHAPS sterling does not experience liquidity crunches;
- Why?
  - Banks post reserves ample enough to keep CHAPS functioning smoothly;
  - BofE rules economize on reserves required while pushing banks to settle payment obligations quickly (or: to avoid hoarding liquidity);
  - Reputation: CHAPS participants face a reputational cost if they delay processing customer payments.

Suggestions

- Reserves exceed what is required to ensure that CHAPS functions smoothly, but by how much?
- Simulations (holding payment transactions fixed) with lower levels of reserves could give some idea of just how ample CHAP participant bank reserves are;
- Simulations could also provide insight into how significant the Liquidity Saving Mechanism is.

Policy

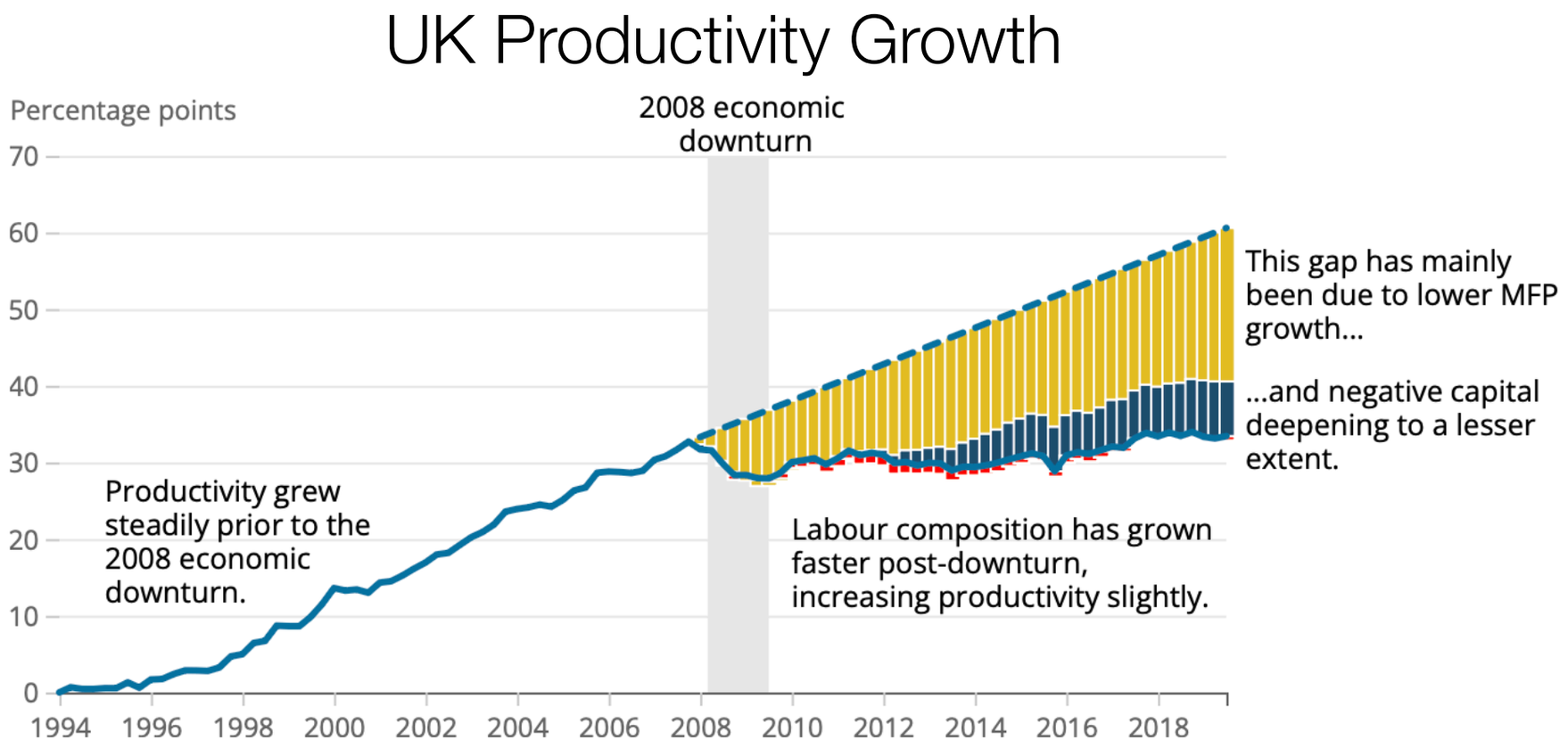
Systemic Risk Is A Bad Thing

- Cardillo, Lauridsen, and Torluccio: “Our findings imply that banks… should enhance their resilience against future crises by strengthening capital buffers and maintaining higher liquidity buffers”;
- Sanders: Banks hold “ample” reserves rather than “excessive” reserves;
- The Bank of England Mission: “The BofE’s financial stability objective is to protect and enhance the stability of the financial system…the Financial Policy Committee (FPC) is responsible for identifying, monitoring, and taking action to **remove** or **reduce systemic risks**”;
- But banks add value by precisely by creating systemic risk (taking liquid assets and turning them into value creating illiquid assets);
- Consequently, capital/liquidity requirements, excess reserves, tight supervision, etc. etc. all create real costs;
- So, logically, central banks should be getting systemic risk to the “right” level, increasing or reducing systemic risk as required.

The Right Level of Systemic Risk

- Systemic Risk adds value by increasing growth while imposing costs by increasing the probability of a value destroying crisis;
- So, given the regulatory framework as it is, there is some optimal point;
- But the regulatory framework is not fixed;
- It follows that regulators should aim to design a regulatory framework that maximizes the amount of systemic risk that the financial system can handle;
- For example, central banks regard having to engage in Lender of Last Resort operations as a failure. Consequently, they impose extremely costly capital and liquidity requirements to minimize the probability that they have to do that;
- This is crazy: central banks can create liquidity for free. A rational LoLR policy would lead to lower capital/liquidity requirements.

The Real Crisis Facing the UK



Source: Office for National Statistics

- UK Productivity has been flat since 2008;
- If productivity remains flat for another decade, the UK will face (IMHO) an economic, political, and social catastrophe;
- Hammering the financial system with excessive regulation isn't helping. Systemic Risk is **too low.**

Conclusion

Conclusion

- Both papers do an excellent job shedding light on payment systems and different aspects of systemic risk;
- But reducing systemic risk is very costly;
- So, given that reducing systemic risk is costly, it can be too high or too low;
- Thus, it would be useful to build upon the insights offered by these papers to think about regulatory design that gets us to the right level of systemic risk in an efficient manner.

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