

Discussion of “Leaning against the wind: an empirical cost-benefit analysis”

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What this paper does and finds

In a nutshell:

- The authors use the now-fashionable GDP-at-Risk methodology to examine whether central bank policy can be used to ameliorate the effects of a change in financial conditions on the distribution of future growth (and inflation)
- They find a loosening in financial conditions creates an intertemporal trade-off: better growth prospects in the near term, but larger downside risk further out
- They find evidence that macroprudential policy ameliorates this trade-off by reducing downside risk over the medium-term
- Tightening monetary policy doesn't have this benefit
- Their evidence suggests “borrower-based” macroprudential policies, such as LTV and LTI limits, are most effective, especially when applied against a backdrop of high leverage

What this paper does and finds

A little more detail on the method:

- The authors estimate quantile regressions linking financial conditions and policy variables to quantiles of GDP growth (specifically the change in the output gap)
- They estimate policy reaction functions for macropru, monetary policy and other policy instruments and label the residuals of these regressions “policy shocks”
- To evaluate outcomes, they first fit the empirical conditional quantiles to a skewed Normal distribution. They then feed these distributions into a quadratic loss function and compare outcomes “with and without policy actions”

High-level assessment

- This is an important, highly ambitious paper
- It's vital that we develop richer tools to inform macroprudential policy actions
 - Hitherto the literature has focused on the effects of macropru on credit and house prices, ignoring their main aim of boosting overall resilience
- Such tools can be important from an accountability perspective:
 - Articulating the counterfactual is useful as a communication device
 - Over time, could help build some constraints into a policymaking process that has up to now been almost entirely discretionary

My comments

1. Methodology and approach
2. Findings
3. Policy implications
4. Thoughts on other approaches

Methodology and approach

Loss function

The paper adopts the typical loss function used in the monopol literature:

$$l_t = \omega_y (y_{t+h} - \bar{y}_{t+h})^2 + \omega_\pi \pi_{t+h}^2,$$

Questions this raises:

- Statutory mandates focus on tail risk rather than quadratic deviations (eg UK FPC)
- Why focus on deviation of output from trend? Macropru is unlikely to be neutral wrt the trend
- Why should inflation appear in the macroprudential loss function? Can't monetary policy offset any impact?

- Cf Carney (2020) specification $\min_{\rho_t} \mathcal{L} \equiv E_t \left\{ \sum_{i=0}^T \beta^i [f(G@R_{t+i}) - \phi y_{t+i}] \right\}$

Policy rules

The authors estimate policy rules to isolate policy shifts that are orthogonal to the systematic component of policy

Thoughts on this:

- I'm sceptical that a reaction function exists for macroprudential policy – in the sense of a predictable policy reaction to data news
- The policy rule regressions in the paper corroborate this – very low explanatory power
- In practice, many macroprudential policies are flagged in advance – sometimes formally (eg CCyB), others via central bank communications. Not the same as a predictable reaction to data news
- Others in the iMaPP database are phased in according to an agreed timetable (eg CCoB) – doesn't fit the reaction function specification

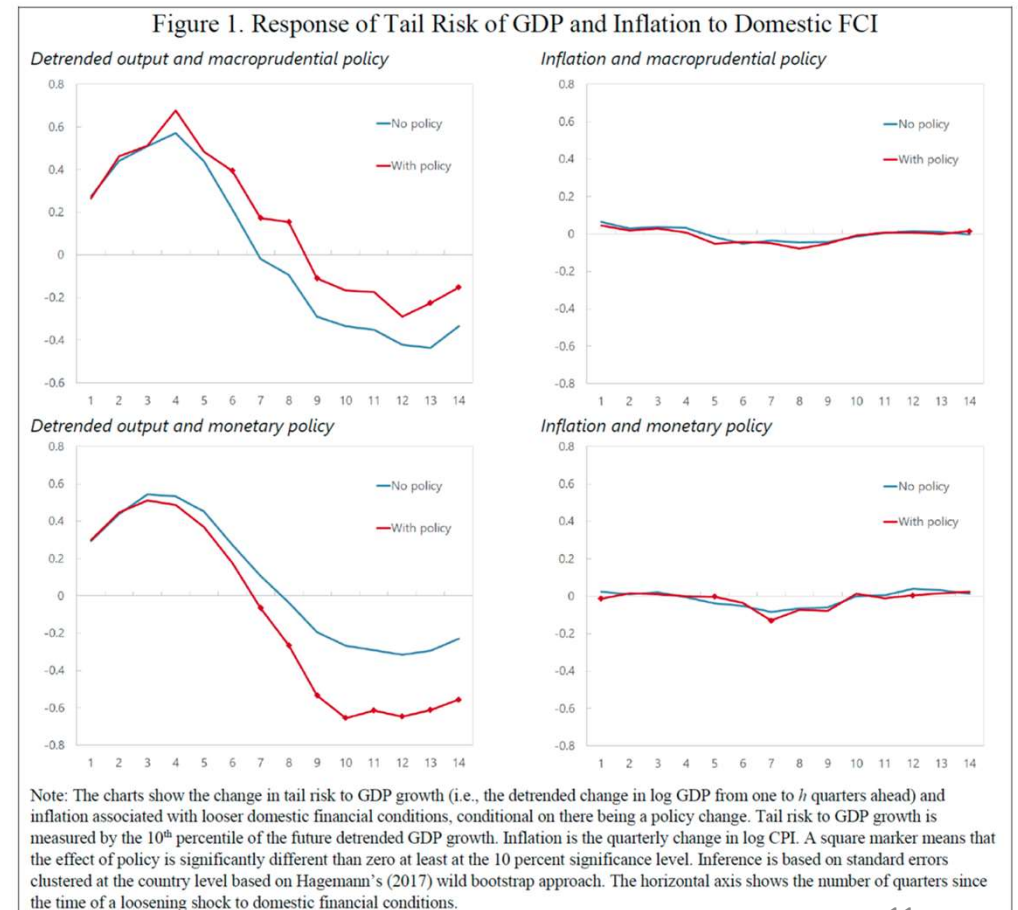
Policy rules (cont.)

- One consequence of the policy rule residuals approach is the existence of shocks in periods when policy isn't changed
- What does the time series of the shocks look like? How different is it to the raw policy measures series?
- What is the implied systematic response of macropru (and monetary policy) to the FCI shock?
- Is there any evidence macropru responds to the implied GaR? That monetary policy responds to the FCI (absent from the regression)?

Findings

The impact of macropru on tail risk

- A key finding is that a macropru tightening shock ameliorates the impact of a loosening in FCI on medium term tail risk
- Where does this effect come from? What real-world historical experience is this picking up?



FCI shocks

- I'm sceptical about the literal implication of the paper that macropru authorities should deploy borrower-based macropru measures to offset the effects of FCI fluctuations
- FCI changes happen at high frequency – they are distinct from the low-frequency build up of a financial cycle
- The authors find that LTVs and LTIs are the best macropru tools for addressing FCI loosening
 - Do FCI loosening manifest themselves as frothiness in household debt markets?
In recent years, the effects have been seen in leveraged finance markets especially
 - Can the authors condition on where easy financial conditions manifests itself?

Policy implications and other approaches

Policy implications

- The analytical set-up is designed to look at cyclical policy changes
- This jars with the approach to implementing borrower-based measures in many countries, which is more structural in nature – ie one-off introduction of mortgage debt limits with unchanged calibration
- Can the framework inform the calibration of structural measures like this? (I think so)

Other approaches

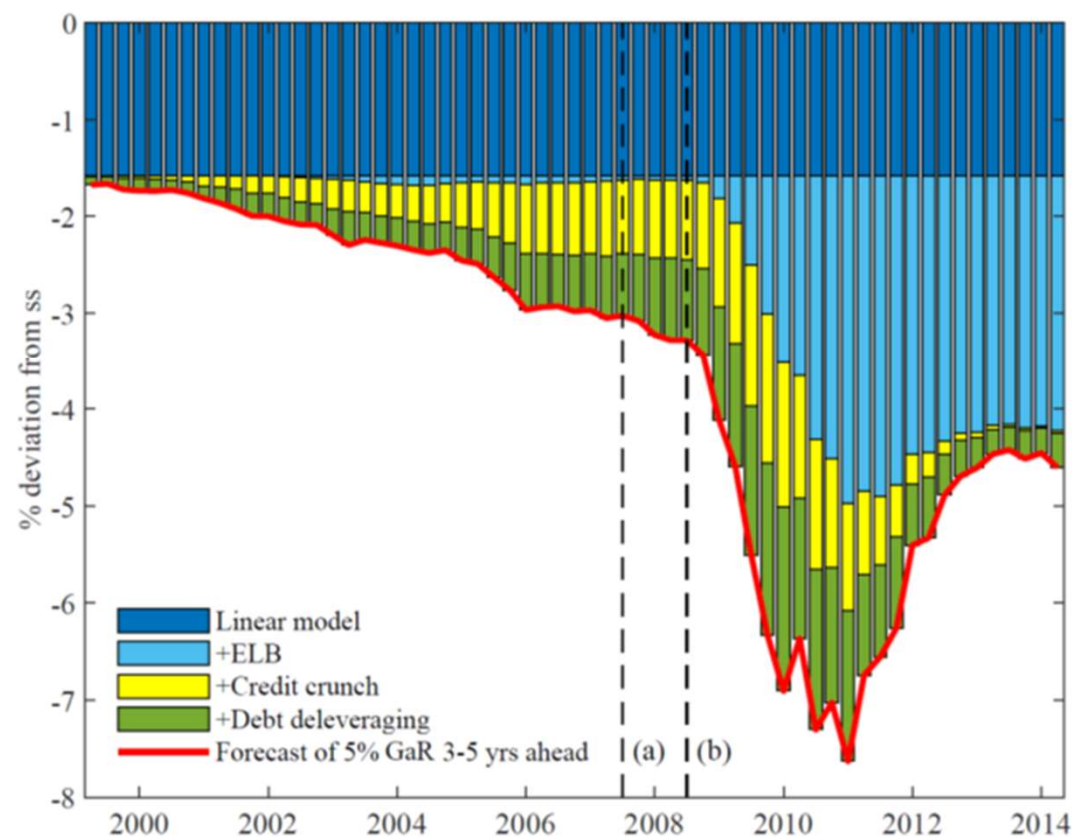
We need complementary work on structural economic models of GaR

- “What if” scenarios
- To inform policy decisions

My paper with Kristina Bluwstein and Sudipto Karmakar (BoE) augments a simple NK model with 3 occasionally-binding constraints

- ZLB
- Bank capital constraint
- DSR constraint

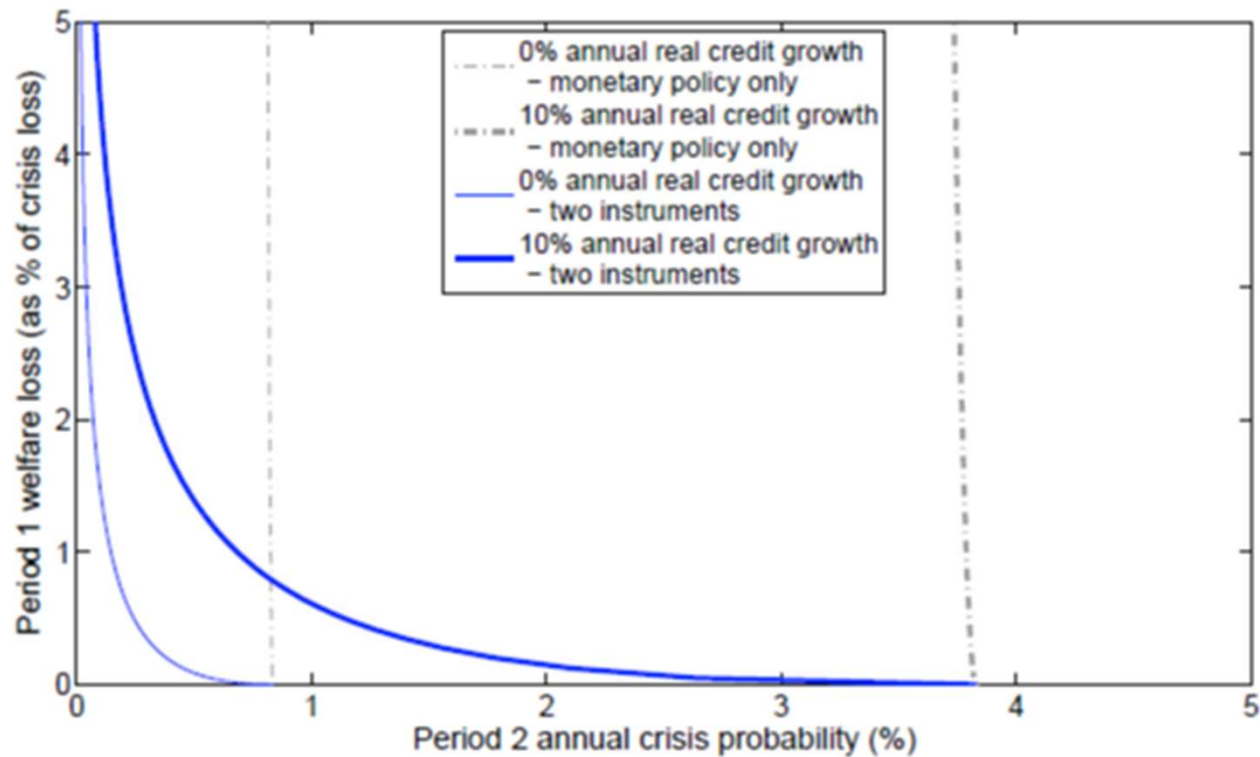
Figure 5: Historical decomposition of GDP-at-Risk for the United Kingdom, 1999-2014



From Aikman et al. (2021), “A tale of 3 occasionally-binding constraints”, BoE WP

Macropru can ameliorate the intertemporal trade-off created by financial cycle upswings

From Aikman et al. (2018), "Targeting financial stability: macroprudential versus monetary policy", IJCB



Other approaches to doing this

The Central Bank of Ireland have considered using a framework such as this to inform the calibration of their LTI limits

Requires an approach that links continuous values of the LTI to tail risk

2-step approach:

- Use cross-country quantile regression to inform relationship between credit, house prices, FCI and GaR
- Use country-specific information to estimate a fine-tuned relationship between local macropru settings and these variables

