Towards a financial stability-oriented monetary policy framework?

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Theme and takeaways

- **Key question for central banking in times of change:**
  - Should monetary policy (MP) take financial stability into account?
  - If so, what would such a policy look like?

- **Takeaways**
  - A financial stability-oriented MP (FSOMP) can yield net benefits
  - But it would need to respond systematically...
    - ...during both booms and busts (whole financial cycle (FC))
    - Need to avoid being too far away from financial equilibrium (FE)
    - Occasional leaning against the wind (LAW) could backfire
Structure of the remarks

● Outline basic analytical approaches
  ▪ Similarities and differences

● Summarise main results of ongoing BIS research
  ▪ Two studies

● Draw some broader implications
  ▪ Caveats, reflections and conjectures
I – Basic analytical approaches

● Standard approach (Graph 1)
  - Standard interest rate/output/inflation model
  - Crisis module: add financial variables as leading indicators of crises
    - Credit growth is the chosen indicator
  - Adjust interest rate policy
  - Estimate cost/benefit

● A number of assumptions reduce the benefits of a FSOMP (Table)
  - Crises do not cause permanent output losses
  - In some cases, MP can “clean” at no cost
  - Leaning affects the crisis probability but not its cost
  - No possible benefits unless crises occur
  - Critically, risks do not grow over time
Costs and benefits of LAW: standard approach

Do benefits exceed costs?

- Crises tomorrow → output
- output today

**Standard model**
policy rate/output/inflation

**Crisis module**
policy rate → financial variable → crisis → output

**Evaluation**
one-off deviation from standard rule
optimal policy

LAW = leaning against the wind

(Graph 1)
## Costs and benefits of LAW: assumptions

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LAW = leaning against the wind
I - Basic analytical approaches (cont)

• Assumption that risks do not grow over time has big implications
  ▪ There is little or no cost to waiting
  ▪ Encourages narrow view of FSOMP
    - Follow a traditional policy most of the time
    - Deviate only when large financial imbalances emerge
    - Obvious risk of doing too little too late

• BIS work relaxes these assumptions: common features (Table)
  ▪ Risks build up over time during boom phase of FC
  ▪ MP has larger impact on probability and cost of financial busts
    - Crises are not necessary for benefits to arise
## Costs and benefits of LAW: assumptions

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LAW = leaning against the wind
II – BIS research: first study

● Main features
  ▪ Standard stylised economy...
  ▪ ...but with recurrent FCs in the crisis module
    - Based on credit/property prices/credit-to-GDP ratio (Graph 2)
  ▪ Estimated on US data

● Key results
  ▪ Generally desirable to lean against financial booms
  ▪ It pays to lean early: otherwise costs grow
    - Risks build over time if no action is taken...
    - ...in contrast to credit growth (variable in other studies) (Graph 2)
      • This returns quickly to the mean: no/little cost
    - Result would also hold with credit gap (Basel III): stock vs flow
  ▪ The larger the imbalance, the greater the benefit
    - Because the bust is larger
Two different processes: the financial cycle and credit growth

(Graph 2)

1 Bank credit to the private non-financial sector; year-on-year changes, in per cent. 2 Measured by frequency-based (bandpass) filters capturing medium-term cycles in real credit, credit-to-GDP ratio and real house prices.

Sources: BIS calculations; based on US data.
II – BIS research: second study

- Main feature: more granular estimated description of economy (US example)
- Three steps (Graph 3)
  1. Decompose FC into two key variables
     - debt service burden and leverage proxies
     - their deviations from long-run (gaps) drive economy and generate FC
       - Gaps measure deviations from FE
     - Can generate permanent output losses
       - Help trace the Great Recession out of sample
     - No separate crisis module
       - FC fully integrated in economy’s dynamics
  2. Use financial gaps to estimate the natural interest rate and output gap
     - Natural rate is intercept in reaction function (Taylor rule)...
     - ...but now needs to be consistent also with FE
  3. Carry out a counterfactual experiment (2003 onwards)
     - Based on augmented Taylor rule: includes FC proxy
Costs and benefits: an alternative approach

Model: basic structure
Decompose the financial cycle
- debt service burden
- leverage

Model: policy rule
Estimate financial cycle-adjusted inputs
- output gap
- natural interest rate

Counterfactual experiment
New policy rule:
output gap, inflation and financial cycle proxy
II – BIS research: second study (cont)

● Key results
  ▪ Gaps are key in estimates of output gaps and natural interest rate
  ▪ New reaction function leads to output gains at no inflation cost (Graph 4)
  ▪ Important to lean early and respond systematically to the FC (Graph 5)
    - Allows faster normalisation of policy
  ▪ Gains arise because the policy smooths the FC (Graph 6)
  ▪ The earlier the counterfactual begins, the larger the gains
  ▪ The natural interest rate (Graph 7)...
    - ...is higher than commonly estimated
    - ...falls by less when the central bank responds to the FC
  ▪ Sizeable deviations of policy rate from natural rate may be needed
    - Larger than in standard Taylor rule
An illustrative experiment: higher output and similar inflation

(Graph 4)

Sources: M Juselius, C Borio, P Disyatat and M Drehmann, "Monetary policy, the financial cycle and ultra-low interest rates", BIS, mimeo, 2016; based on US data.
An illustrative experiment: output and interest rate paths

(Graph 5)

Sources: M Juselius, C Borio, P Disyatat and M Drehmann, "Monetary policy, the financial cycle and ultra-low interest rates", BIS, mimeo, 2016; based on US data.
An illustrative experiment: smoothing the financial cycle

(Graph 6)

Asset prices

Real credit

Credit/GDP

Sources: M Juselius, C Borio, P Disyatat and M Drehmann, "Monetary policy, the financial cycle and ultra-low interest rates", BIS, mimeo, 2016; based on US data.
Comparing interest rates: standard and financial cycle-adjusted

(Graph 7)

Sources: M Juselius, C Borio, P Disyatat and M Drehmann, "Monetary policy, the financial cycle and ultra-low interest rates", BIS, mimeo, 2016; based on US data.
III – Broader policy considerations: caveats

- Studies not sufficient to form a judgment on these issues
  - All such exercises face serious analytical/econometric challenges
  - Many considerations excluded from the analysis
    - Use of alternative policies (e.g. prudential)
    - Richer characterisation of the economy and uncertainty
      - Eg no explicit treatment of the exchange rate
  - Work is just one contribution to the bigger debate

- But argued elsewhere that
  - (Macro-) prudential policy cannot address the FC on its own
  - Typical objections to complementary role of MP are not fully convincing
III – Broader policy considerations: role of inflation

- Need for greater tolerance for persistent deviations from target
  - Paradox: risk of turning benign into malign disinflation
    - Failure to fight build-up of FIs changes its nature

- Understanding disinflation/deflation drivers and costs is essential
  - Historical record suggests that deflation is often benign
    - Probably reflection of positive supply-side factors
      - Eg, globalisation and technology
  - *What if* impact of MP on inflation is more temporary as a result?
    - Risk of driving real policy rates ever lower

- Implications for adjustments to MP frameworks
  - Exploit available flexibility to the full
  - If necessary, revise mandates as last resort (and with care)
Conclusion

- Two studies presented are just one contribution to broader debate

- But two conjectures are expected to survive further scrutiny
  - There are likely to be potential gains from a more FSOMP
  - Any such policy would need to respond systematically to FC
    - In both good and bad times
    - Need to avoid being too far away for too long from FE
    - Policy of “selective attention” would fall short of the mark

- Suggest adjustments to current MP frameworks
  - Greater role in benchmark responses for financial variables
  - Stronger medium-term orientation
  - Greater tolerance for persistent deviations of inflation from targets