BANK FOR INTERNATIONAL SETTLEMENTS

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

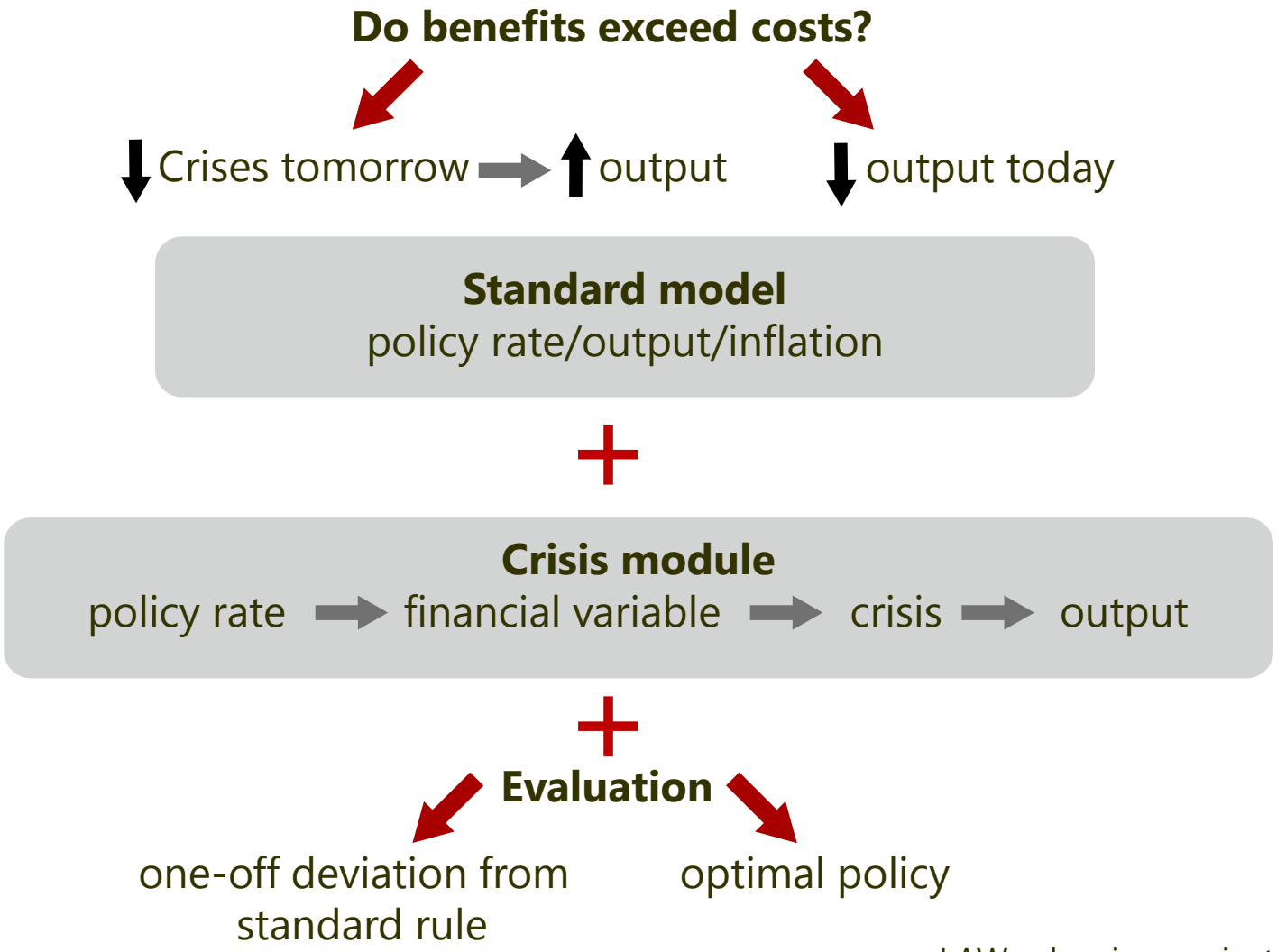
- Outline basic analytical approaches
  - Similarities and differences
- Summarise main results of ongoing BIS research
  - Two studies
- Draw some broader implications
  - Caveats, reflections and conjectures

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

(Graph 1)



LAW = leaning against the wind

Costs and benefits of LAW: assumptions

	Standard
Permanent output losses	NO
Cleaning is costly	NO/YES
LAW reduces crisis costs	NO
Benefits possible without crises	NO
Risks build up	NO

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

	Standard	BIS
Permanent output losses	NO	NO/YES
Cleaning is costly	NO/YES	YES
LAW reduces crisis costs	NO	YES
Benefits possible without crises	NO	YES
Risks build up	NO	YES

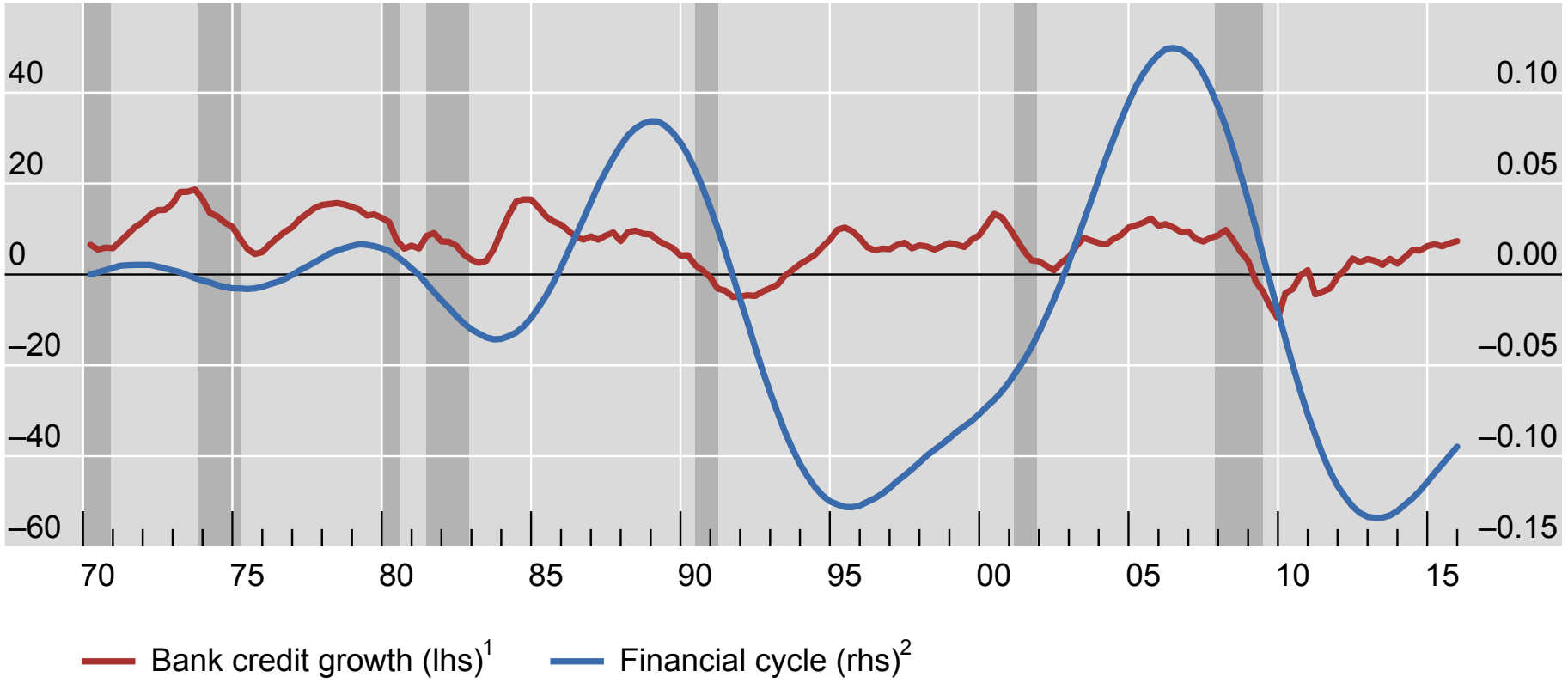
LAW = leaning against the wind

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 (Graph 3)

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:

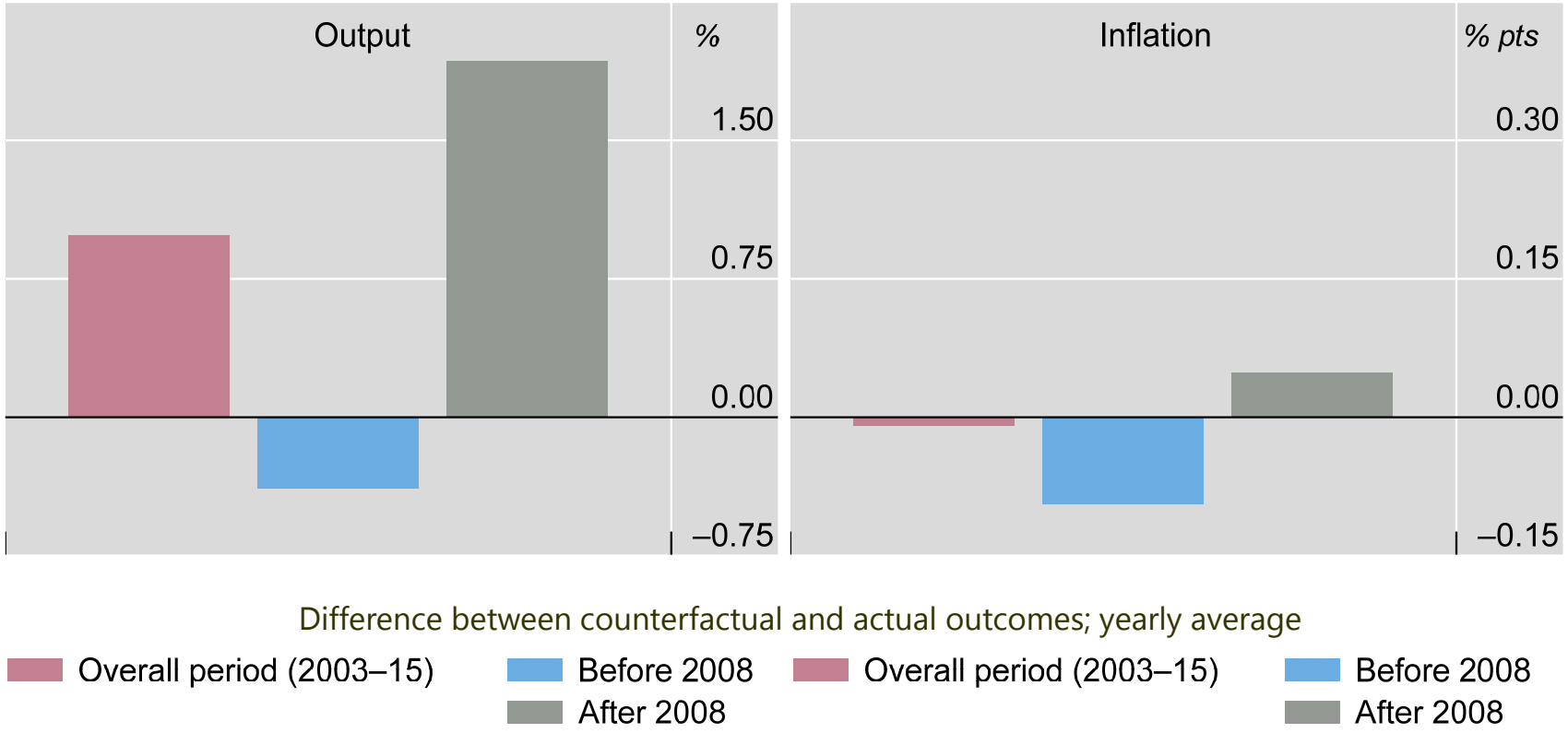
output gap, inflation and **financial cycle proxy**

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

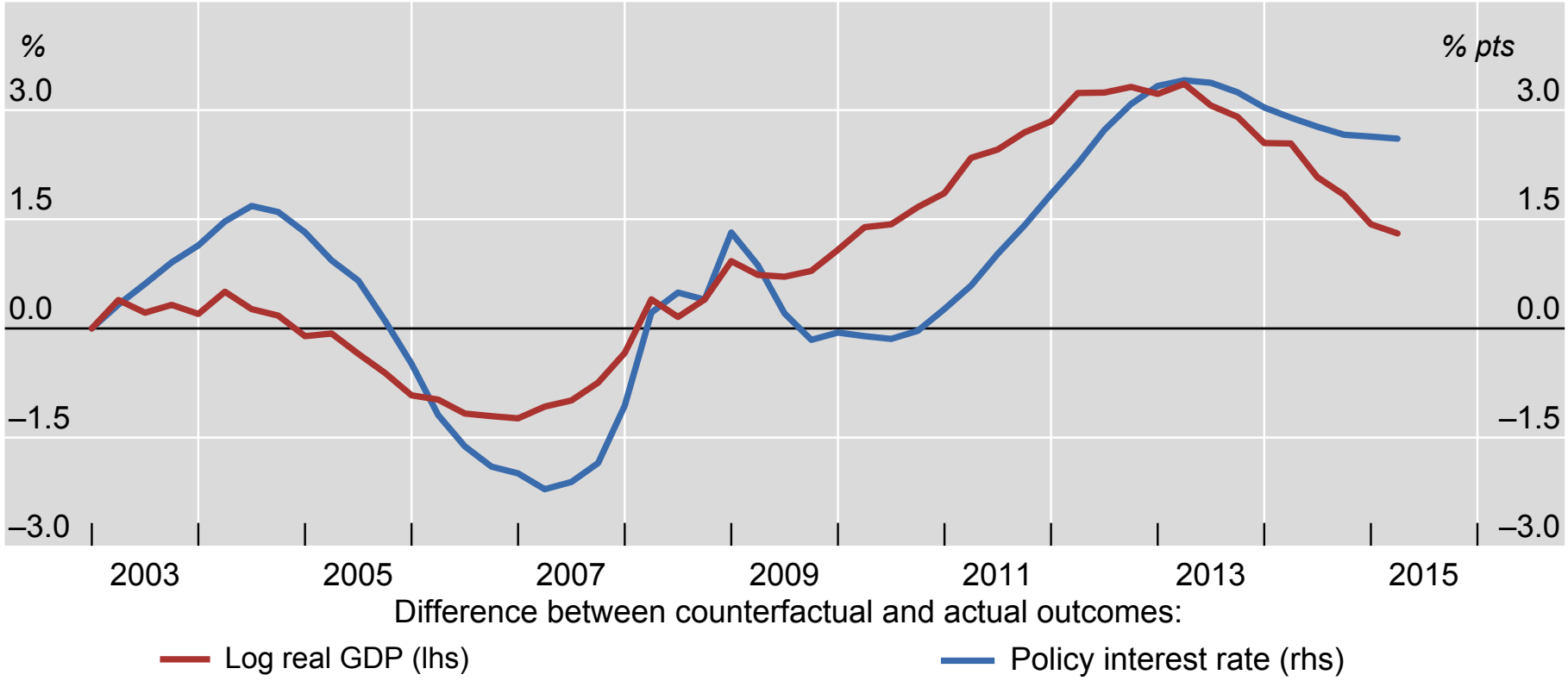
(Graph 4)



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

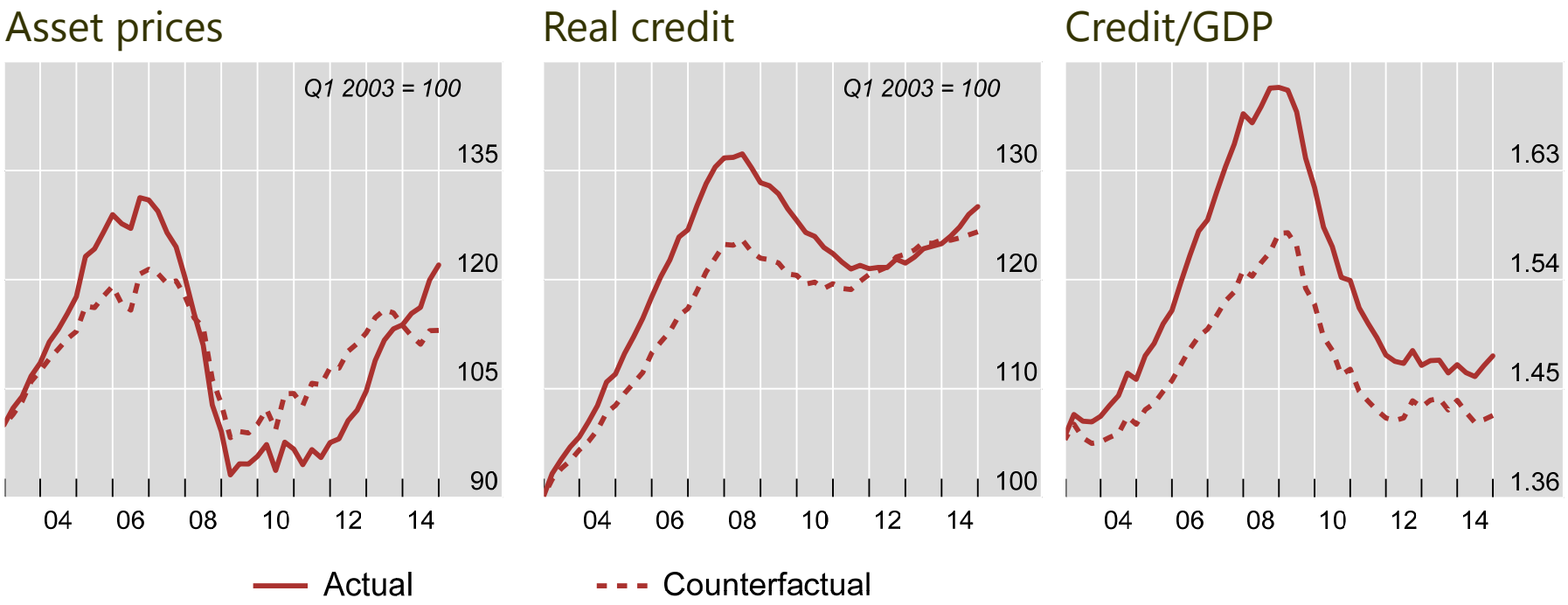
(Graph 5)



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

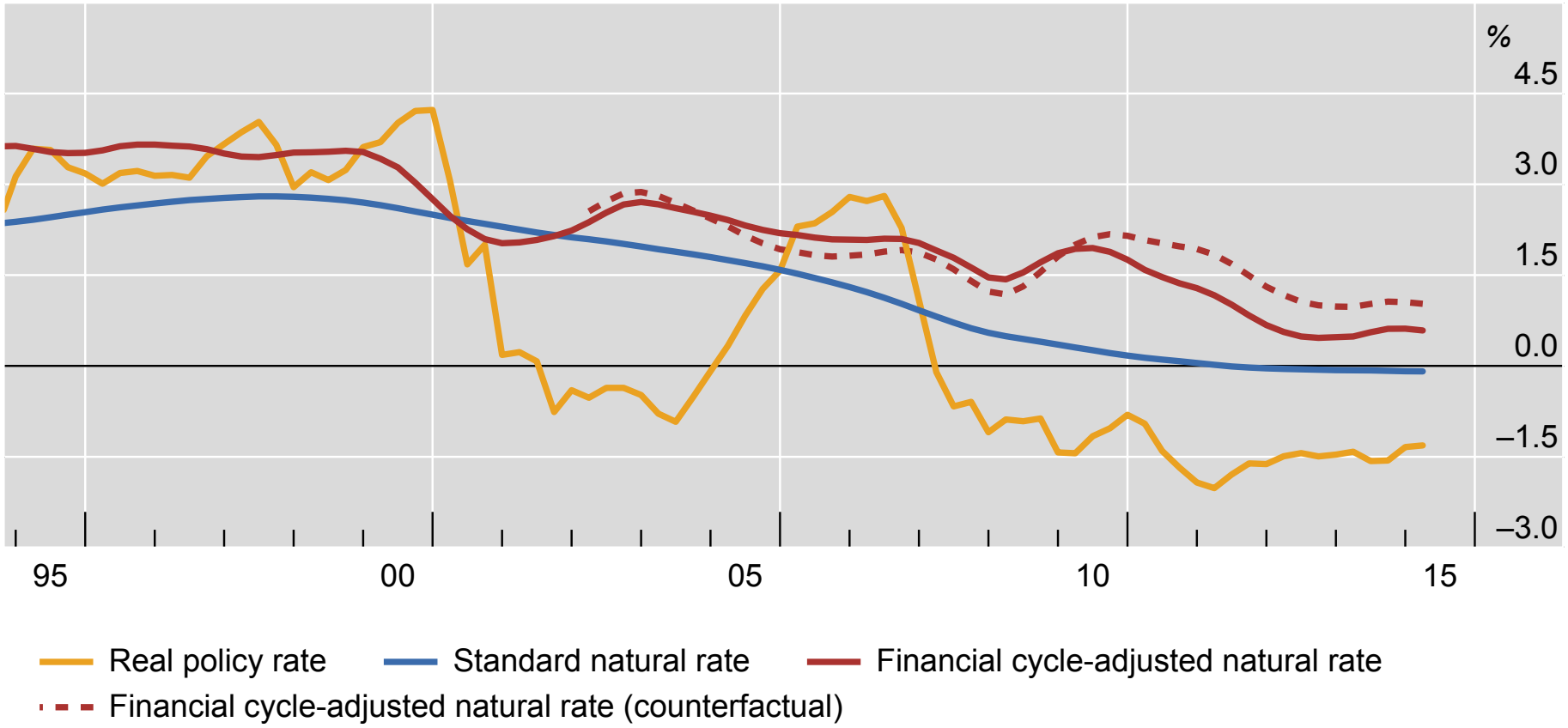
(Graph 6)



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 (eg 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