



BANK FOR INTERNATIONAL SETTLEMENTS

Towards a financial stability-oriented monetary policy? Some evidence

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Theme and takeaways

- One Annual Report theme:
 - 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

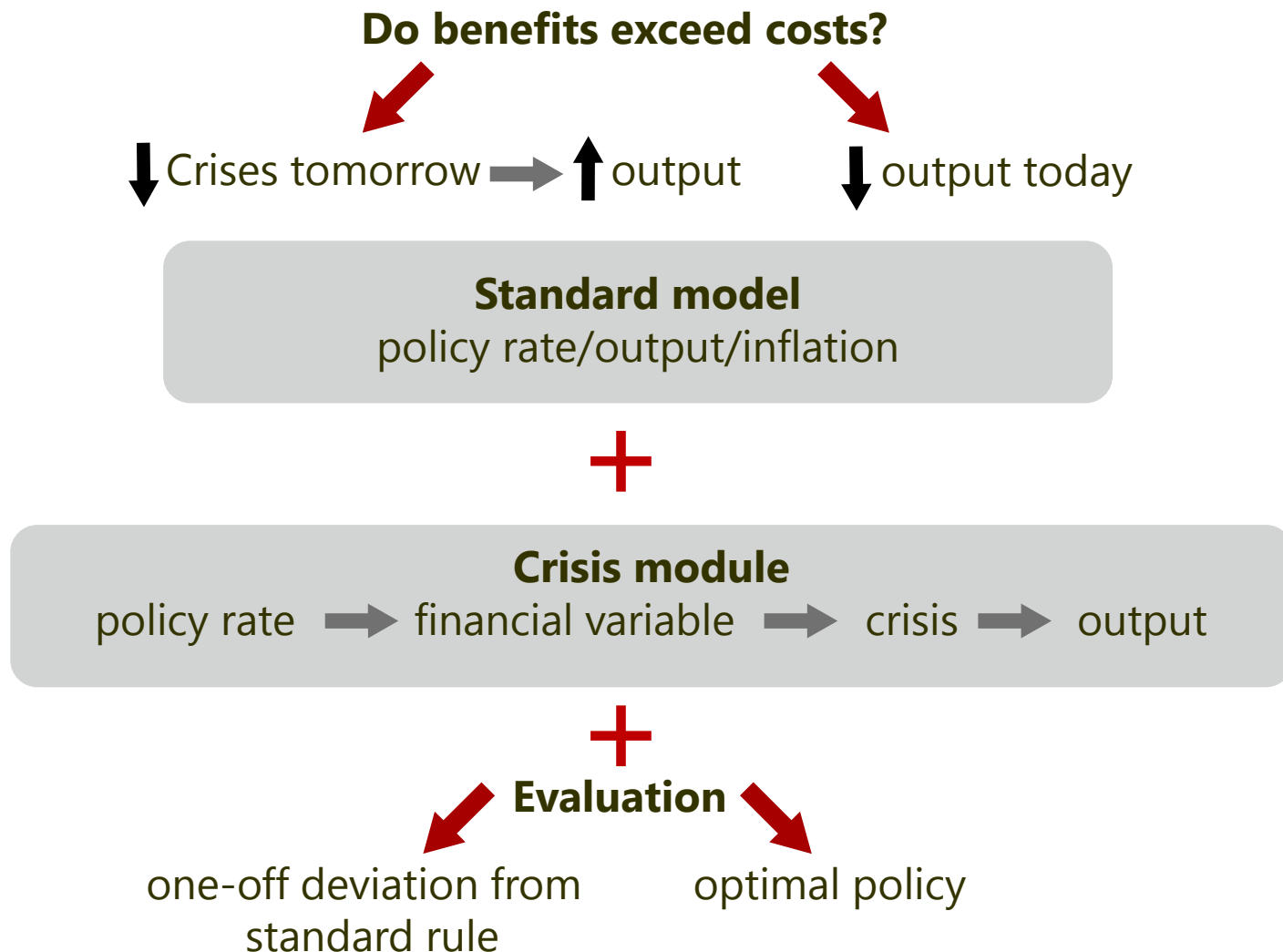
- Outline basic analytical approaches
 - Similarities and differences
- Summarise main results of ongoing BIS research
 - Two studies
- Draw some broader implications
 - Caveats and conjectures

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

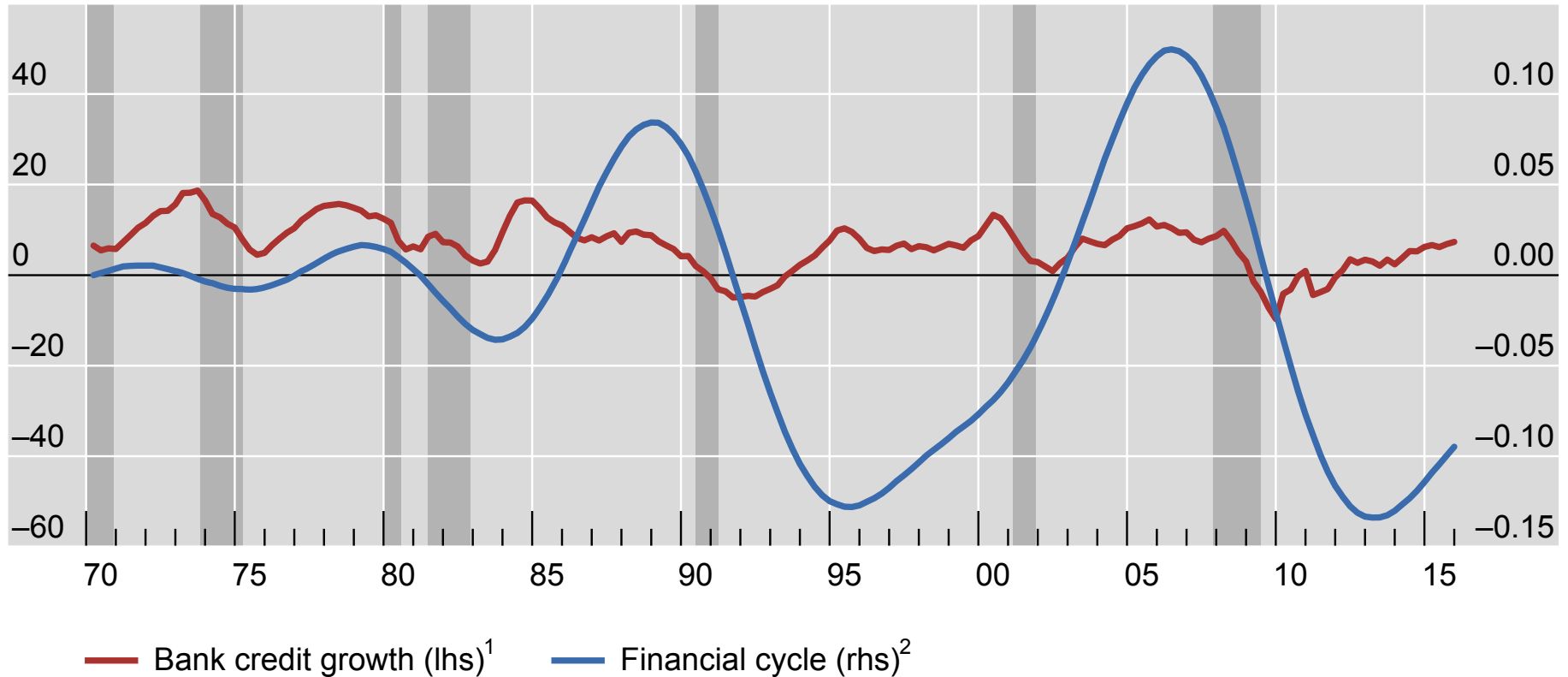
- Standard stylised economy...
- ...but with recurrent FCs in the crisis module
 - Based on credit/property prices/credit-to-GDP ratio (Graph 2)
- Estimated on US data

● 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

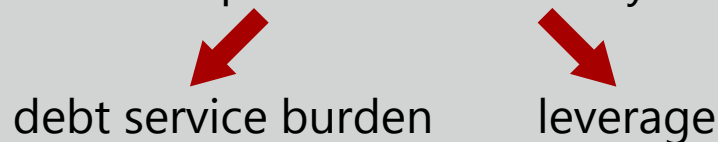
- Main feature: more granular estimated description of economy (US example)
- Three steps (Graph 3)
 - 1. Decompose FC into two key variables
 - debt service burden and leverage proxies
 - their deviations from long-run (gaps) drive economy and generate FC
 - Gaps measure deviations from FE
 - Help trace the Great Depression out of sample
 - Can generate permanent output losses
 - 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

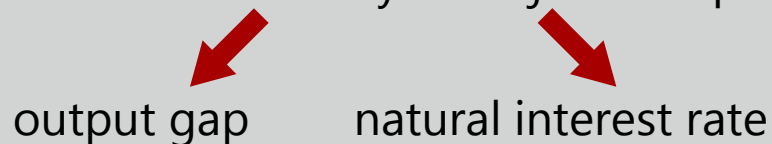
Decompose the financial cycle



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Model: policy rule

Estimate financial cycle-adjusted inputs



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Counterfactual experiment

New policy rule:

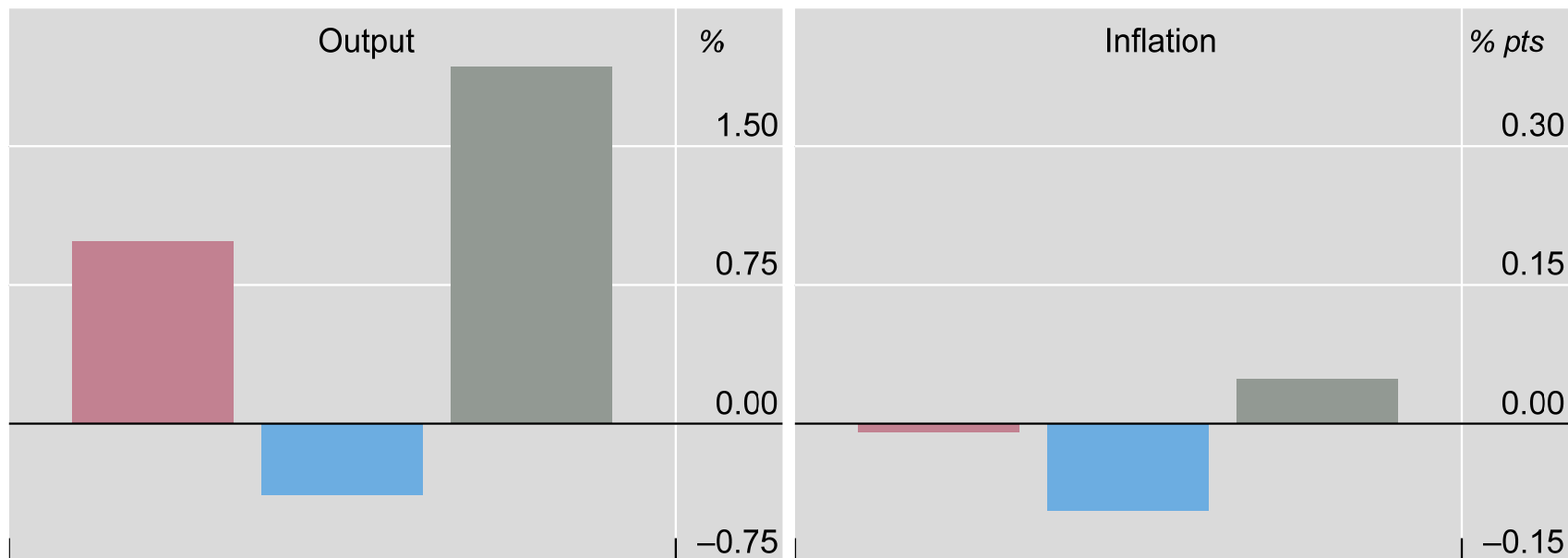
output gap, inflation and **financial cycle proxy**

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)



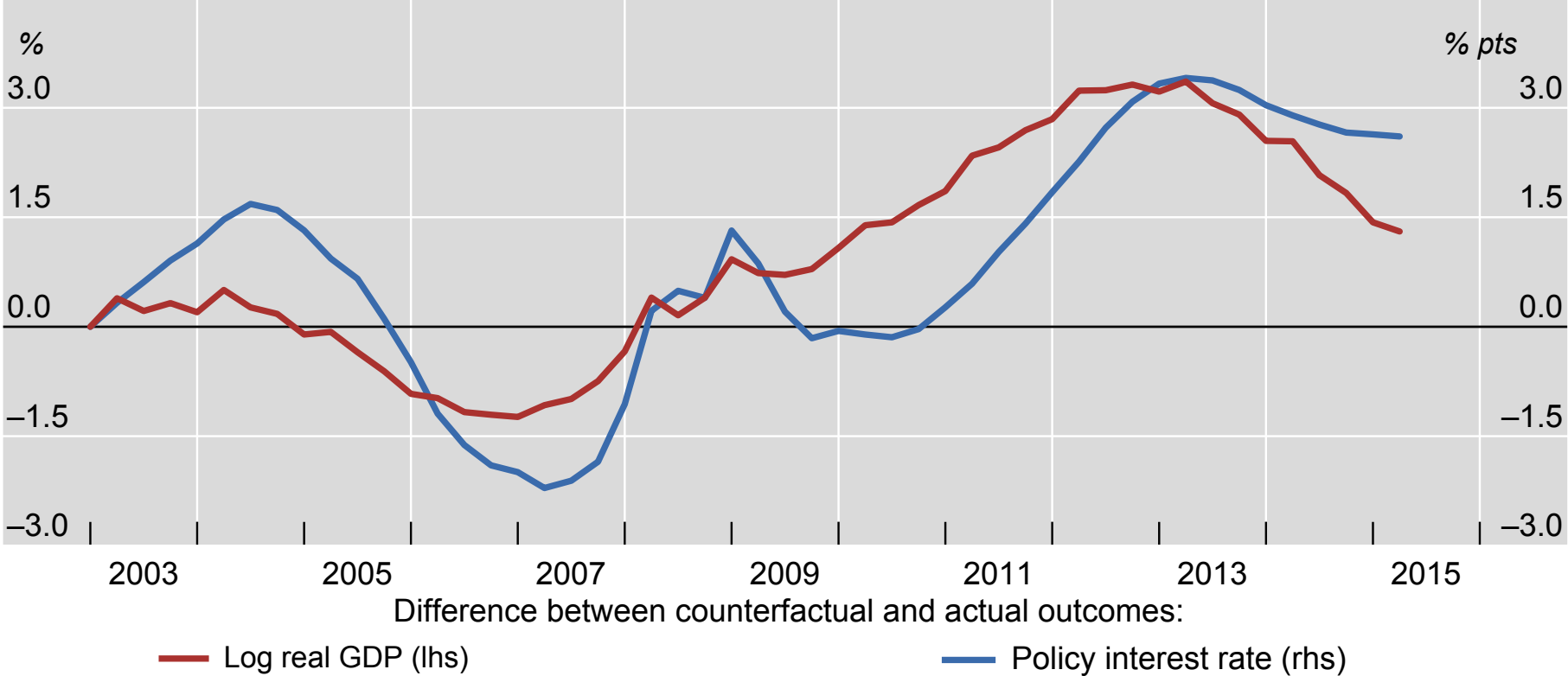
Difference between counterfactual and actual outcomes; yearly average

- Overall period (2003–15)
- Before 2008
- After 2008

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)

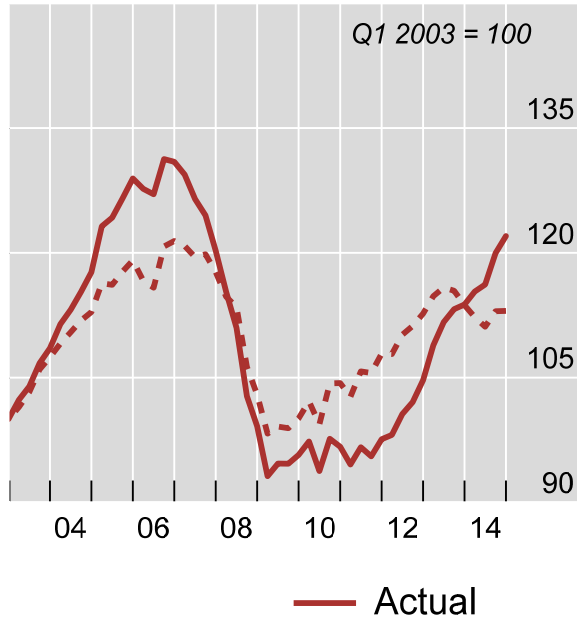


Sources: M Juselius, C Borio, P Disyatat and M Drehmann, "Monetary policy, the financial cycle and ultra-low interest rates", BIS, mimeo, 2016; based on US data.

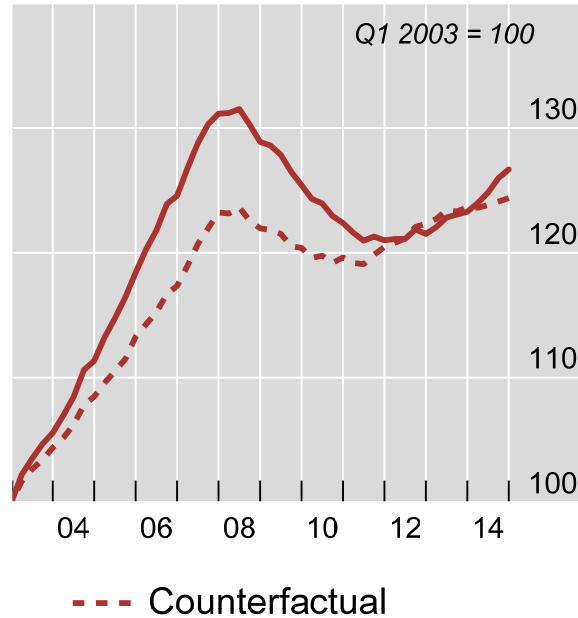
An illustrative experiment: smoothing the financial cycle

(Graph 6)

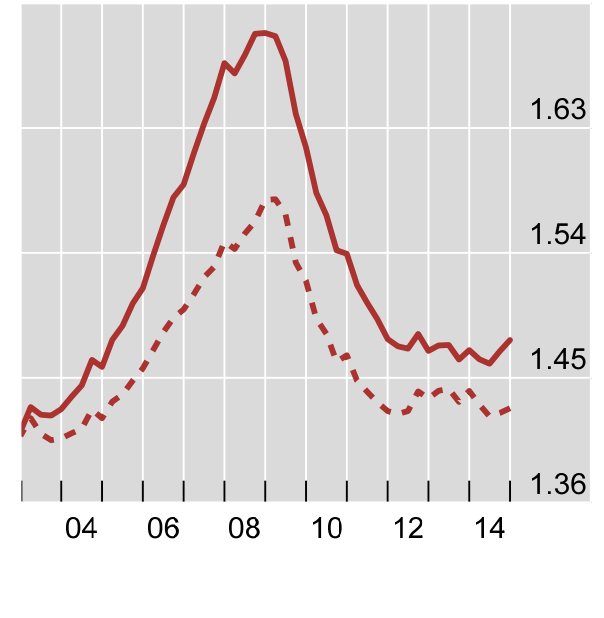
Asset prices



Real credit



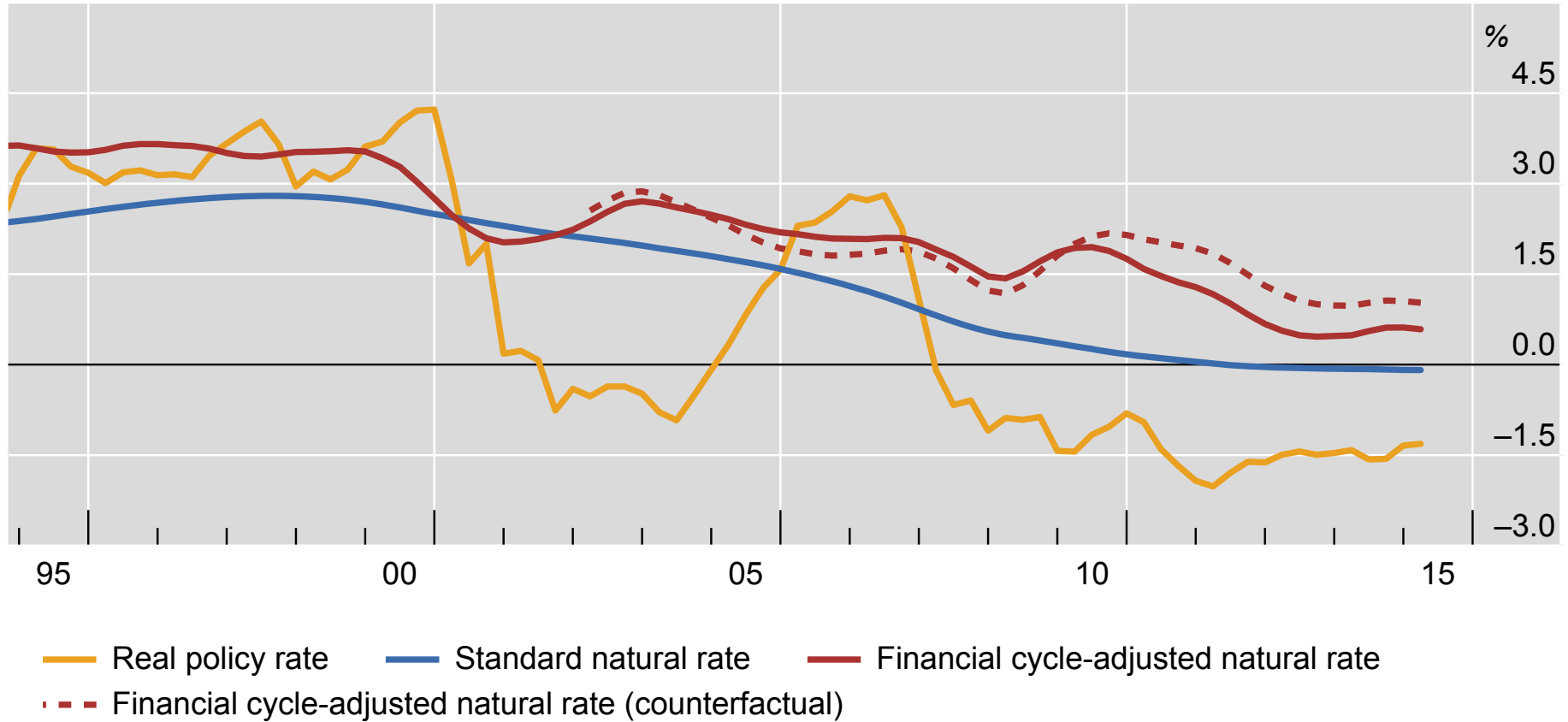
Credit/GDP



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

- Important to stress
 - 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 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