Discussion of Cost-Benefit Analysis of Leaning Against the Wind: Are Costs Larger Also with Less Effective Macroprudential Policy?

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I benefitted greatly from comments from Tobias Adrian, Rochelle Edge, Luca Guerrieri, Michael Kiley, Andreas Lehnert, and David Rappoport. These views are mine and do not reflect the views of the staff or the Board of Governors.

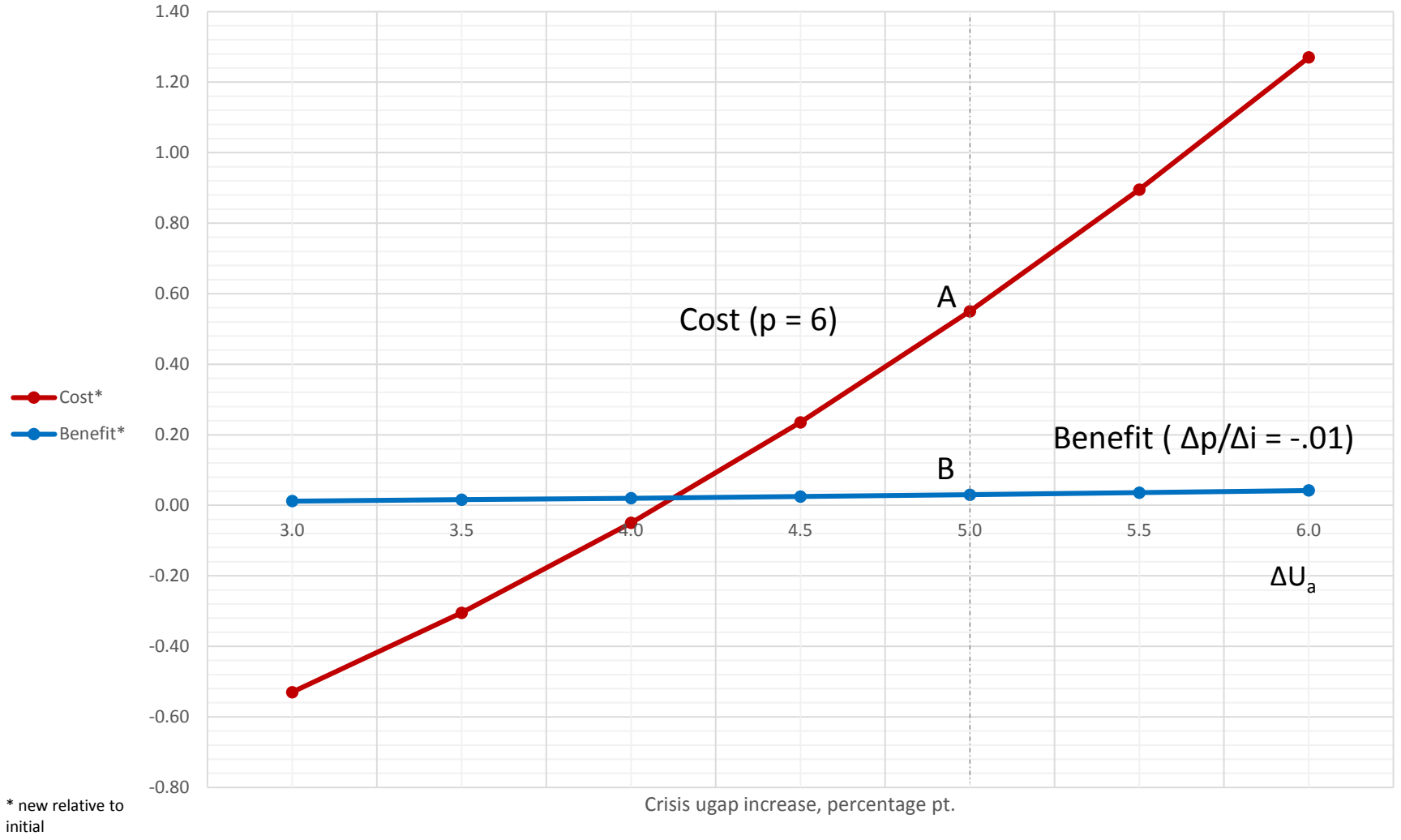
Summary of discussion

- Svensson key assumption: Credit affects the probability of a crisis, but not severity
- But credit is a vulnerability and affects severity
  - Reinhart and Rogoff; Jorda, Schularik, Taylor (2013); Mian and Sufi (2014); Aikman, Lehnert, Liang, Modugno (2016)
- Two other assumptions:
  - Probability of crisis is low
  - Elasticity of p to policy is low
- Reasonable alternative assumptions can overturn net cost-benefit

Svensson Framework for Costs and Benefits of LATW

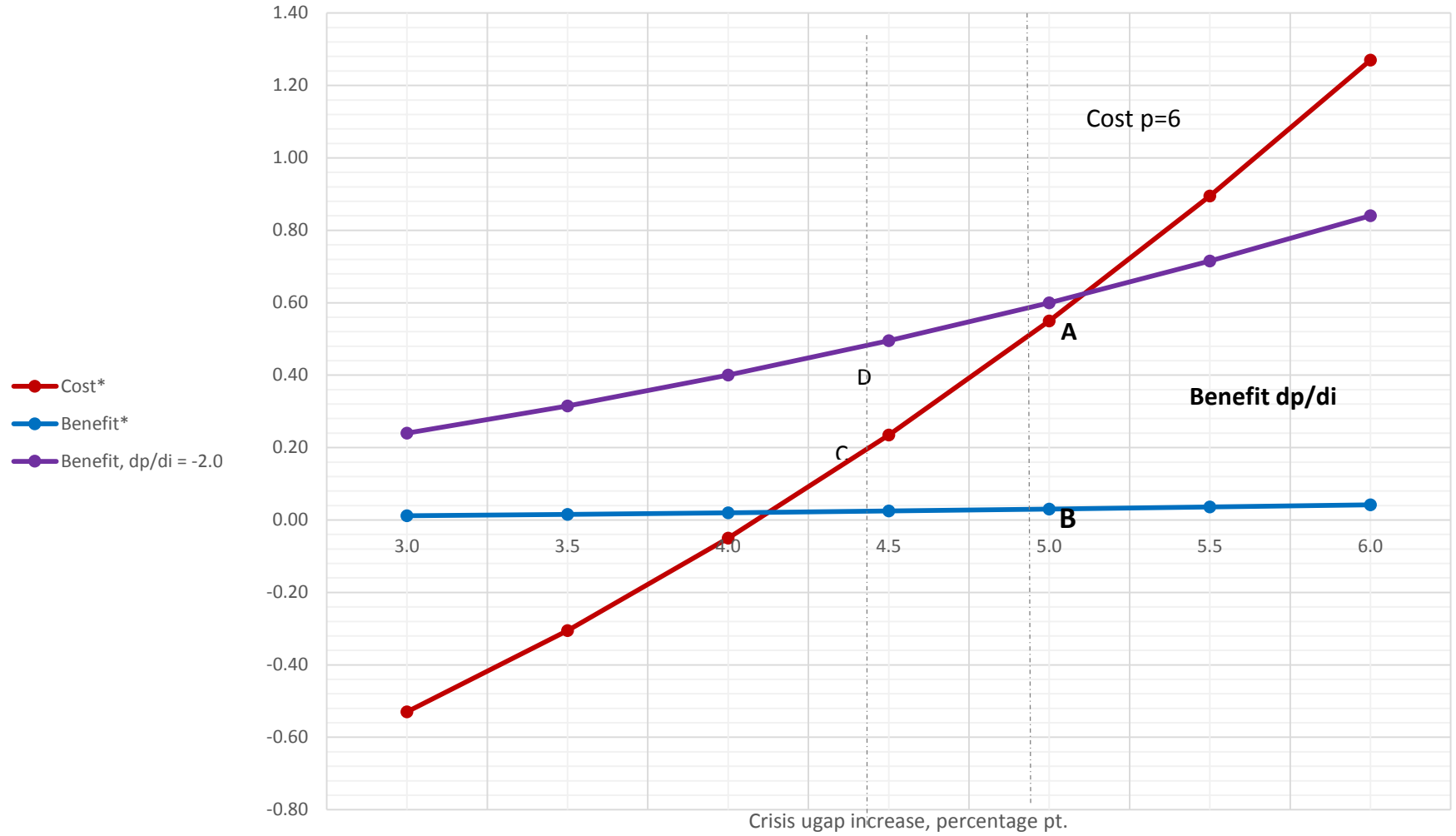
- Initial Expected Cost = p *ΔU
- Costs of LATW (relative to Initial): p, ΔU_i, ΔU_a
  - Key assumption: $\Delta U_i = \Delta U_a$
  - LATW does not reduce the increase in unemployment in a crisis
- Benefits of LATW (relative to Initial): $\Delta p/\Delta i$, ΔU_i, ΔU_a
  - LATW policy reduces $\Delta p/\Delta i$
- Welfare function is quadratic in ΔU
- Will show for a range of smaller ΔU_a , Benefits > Costs

Cost and Benefit of LATW relative to Initial ΔU_i =5, p=6, $\Delta p/\Delta i$ =-.01



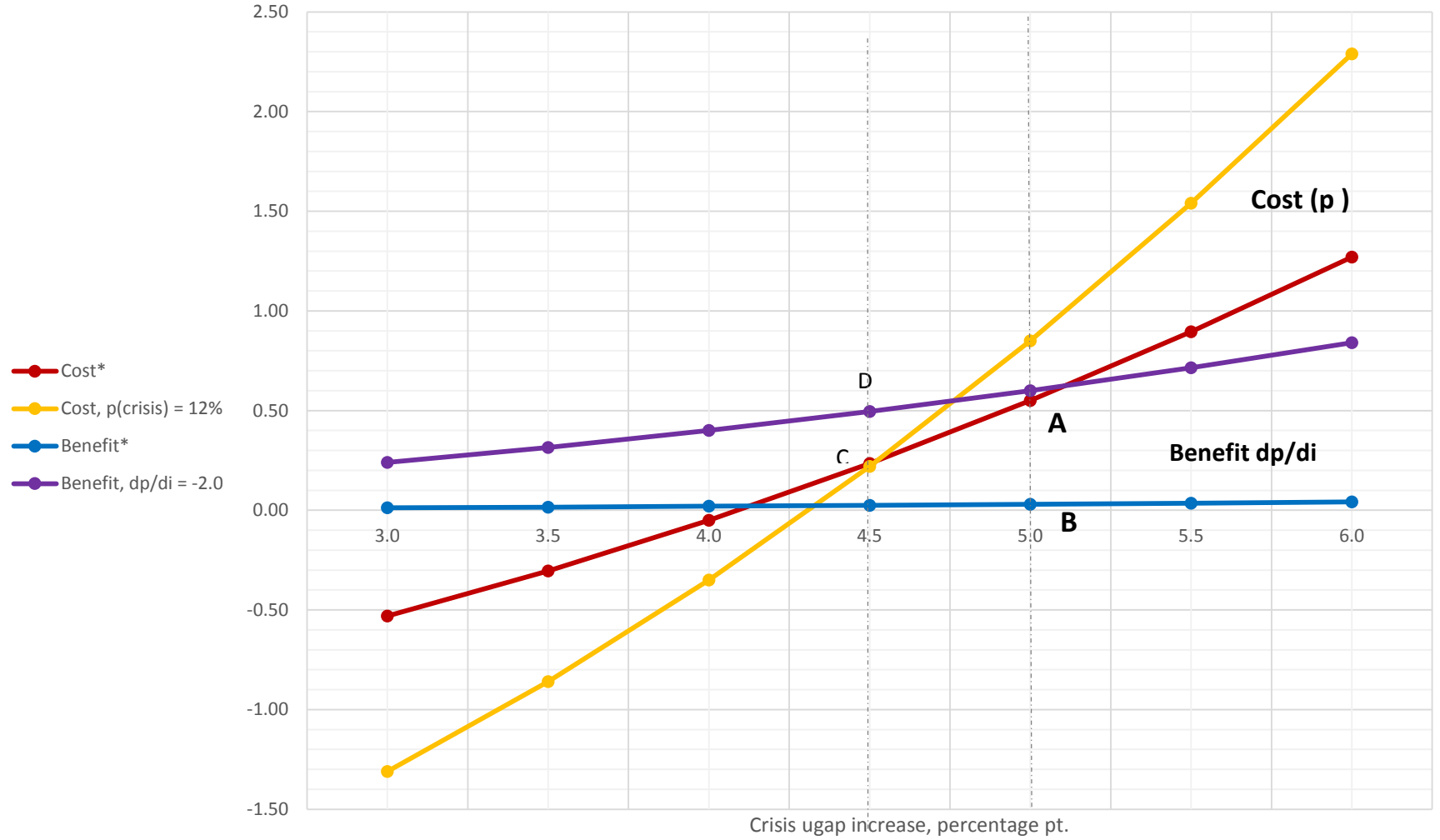
* new relative to initial

Cost and benefit of LATW relative to Initial, for higher dp/di



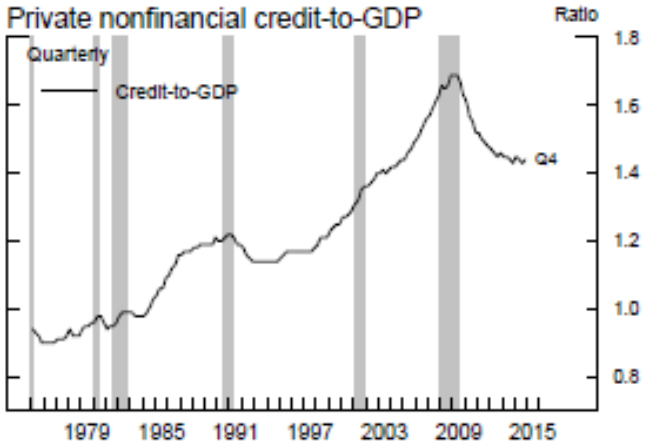
* new relative to initial

Cost and benefit of LATW relative to Initial, for higher dp/di and p

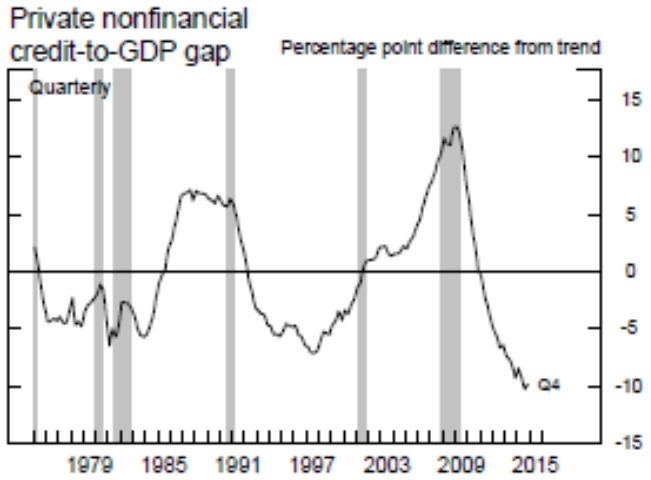


* new relative to initial

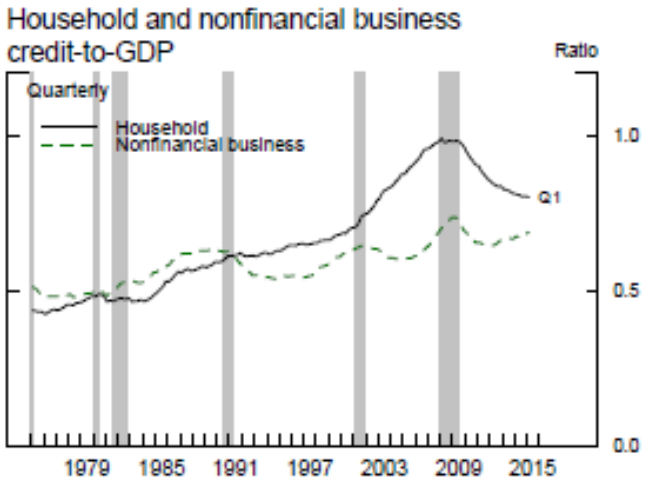
Credit-to-GDP



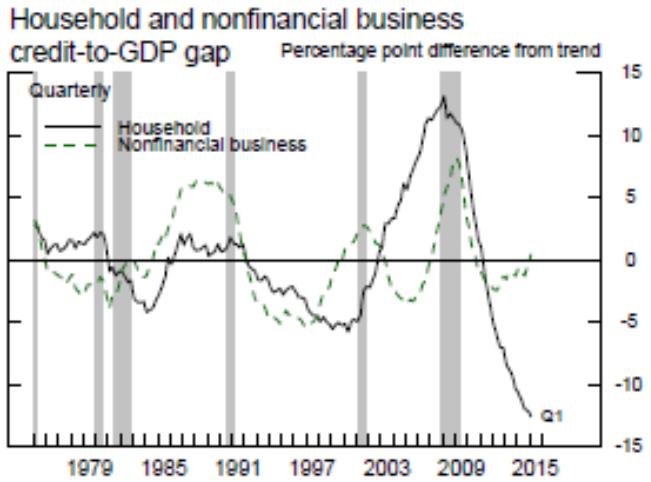
Source: Financial Accounts of the United States, and authors' calculations.



Note: Trend calculated using an HP filter with lambda = 400,000.
Source: Financial Accounts of the United States, and authors' calculations.



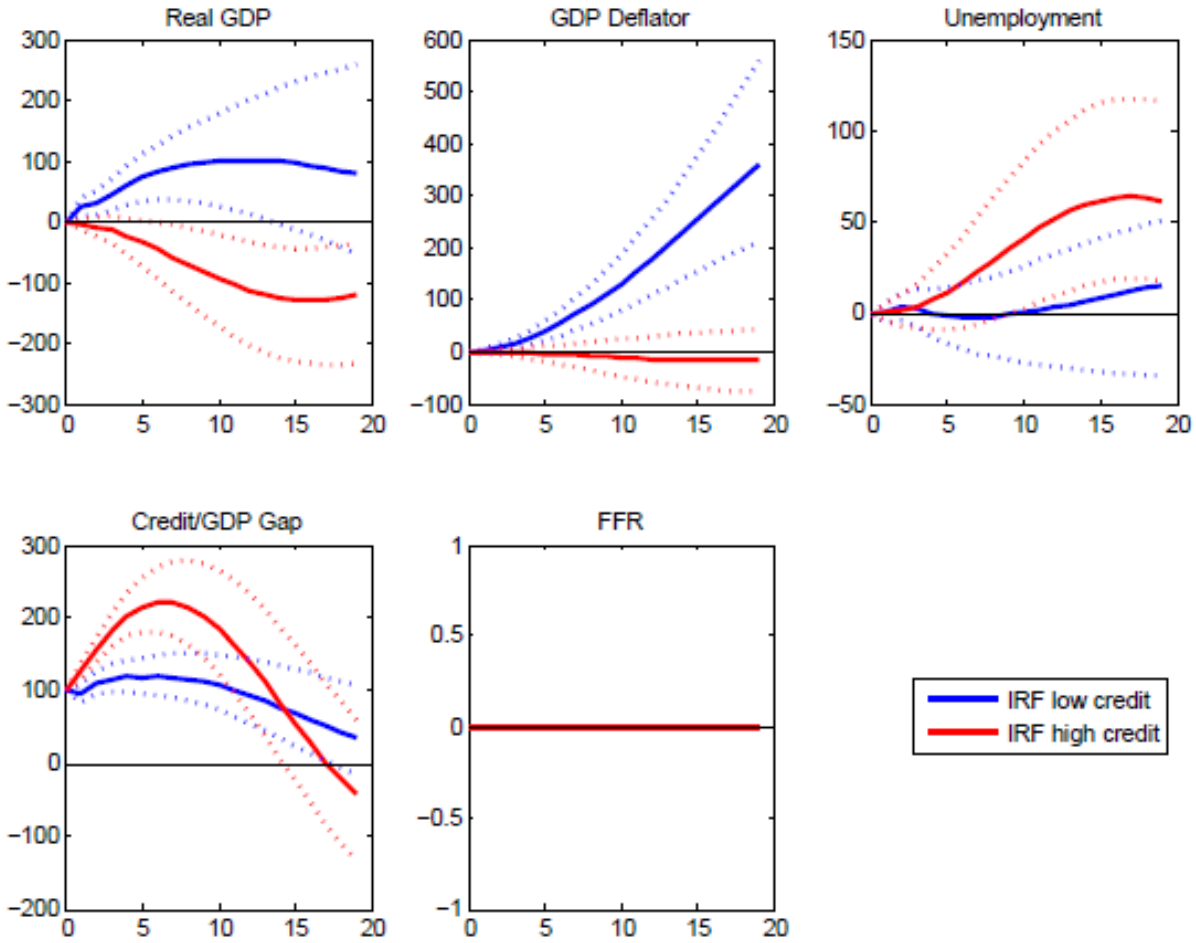
Source: Financial Accounts of the United States.



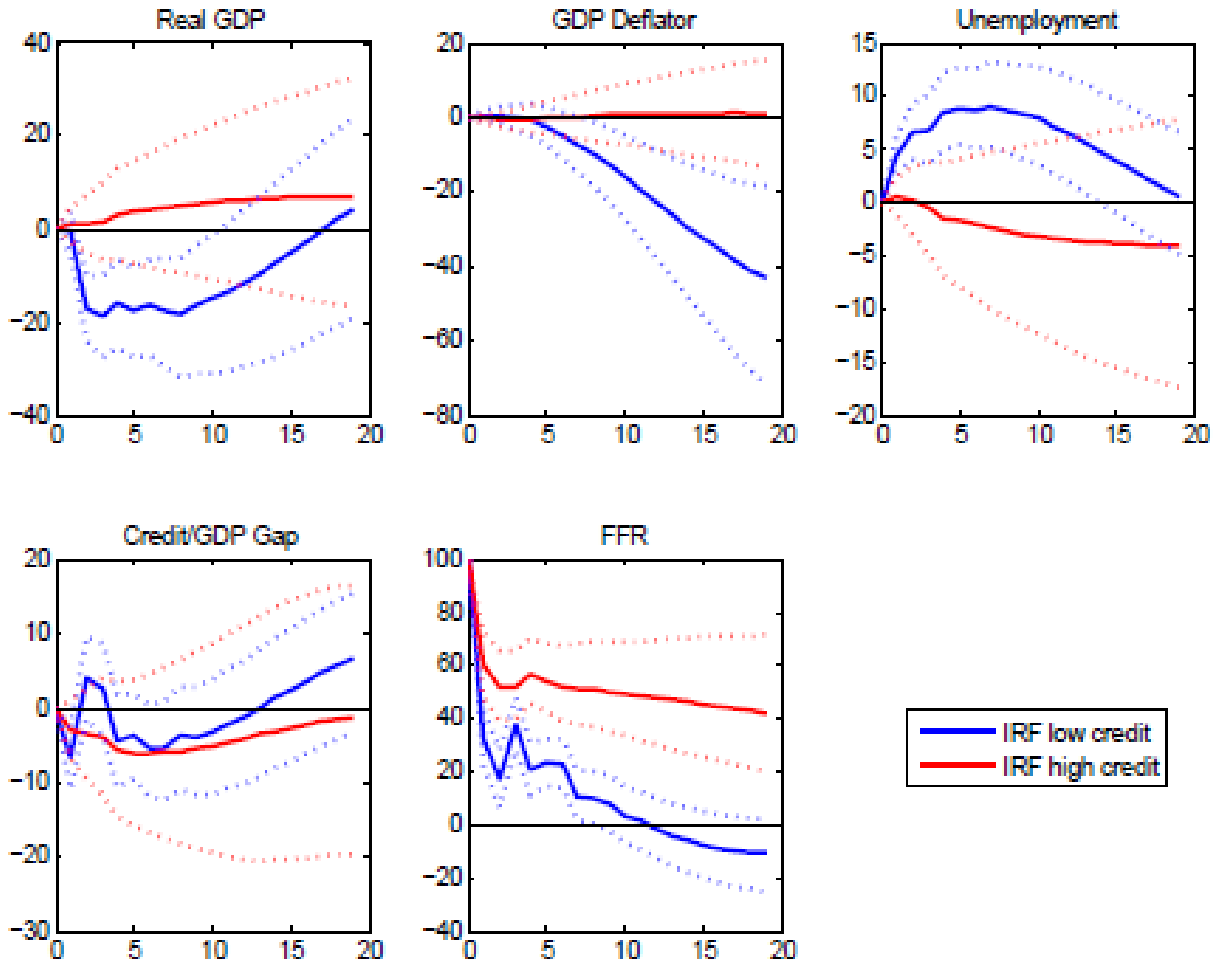
Note: Gaps calculated using an HP filter with lambda = 400,000.
Source: Financial Accounts of the United States, and authors' calculations.

Credit-to-GDP gap is a vulnerability - leads to contraction

Aikman, Lehnert, Liang, and Modugno (2016)



Monetary policy ineffective when credit gap is high – Debt overhang

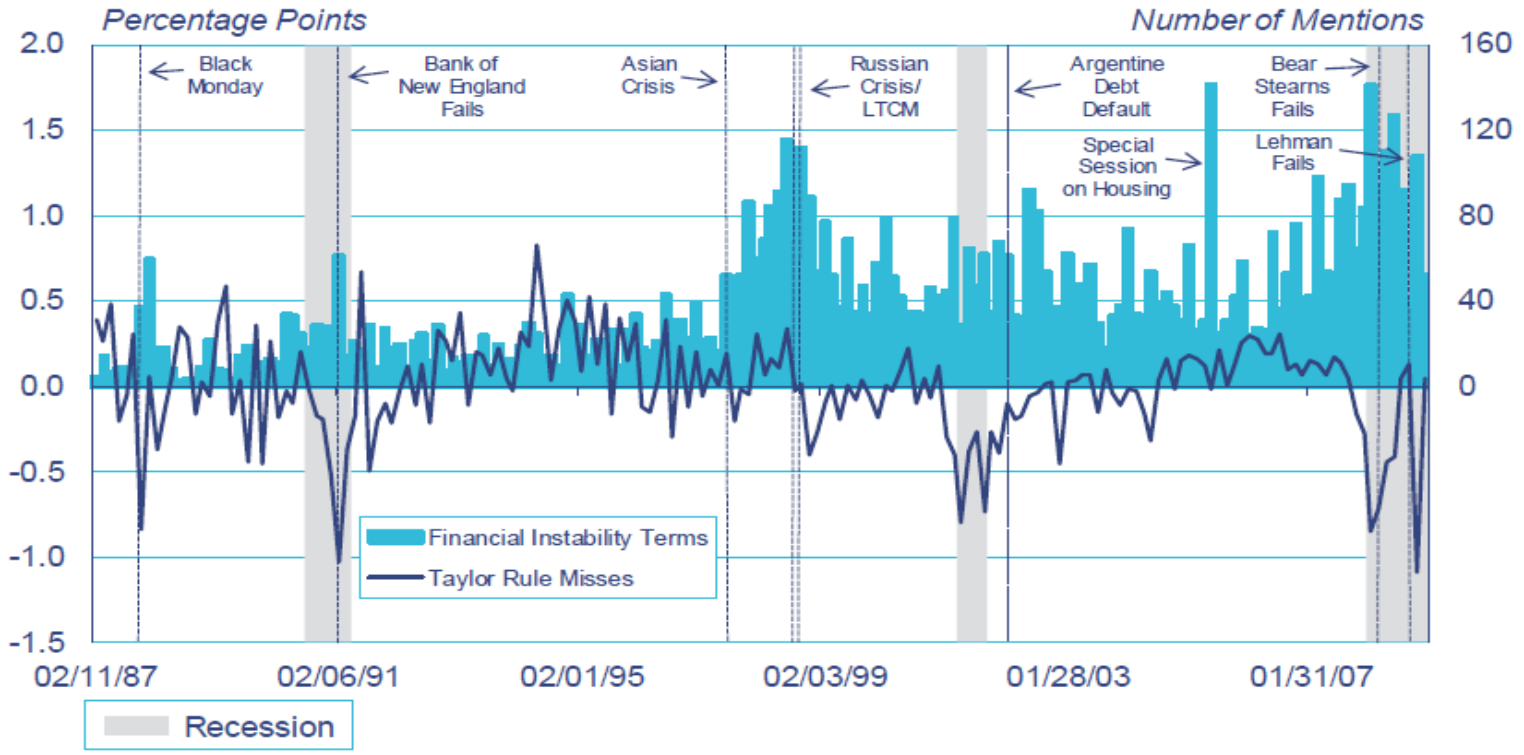


Probability of a crisis is greater than crisis realizations

Peek, Rosengren, and Tootell (2015)

Figure 2: Taylor Rule Misses and Count of Financial Instability Terms in FOMC Meeting Transcripts

FOMC Meetings, February 11, 1987 – December 15, 2008



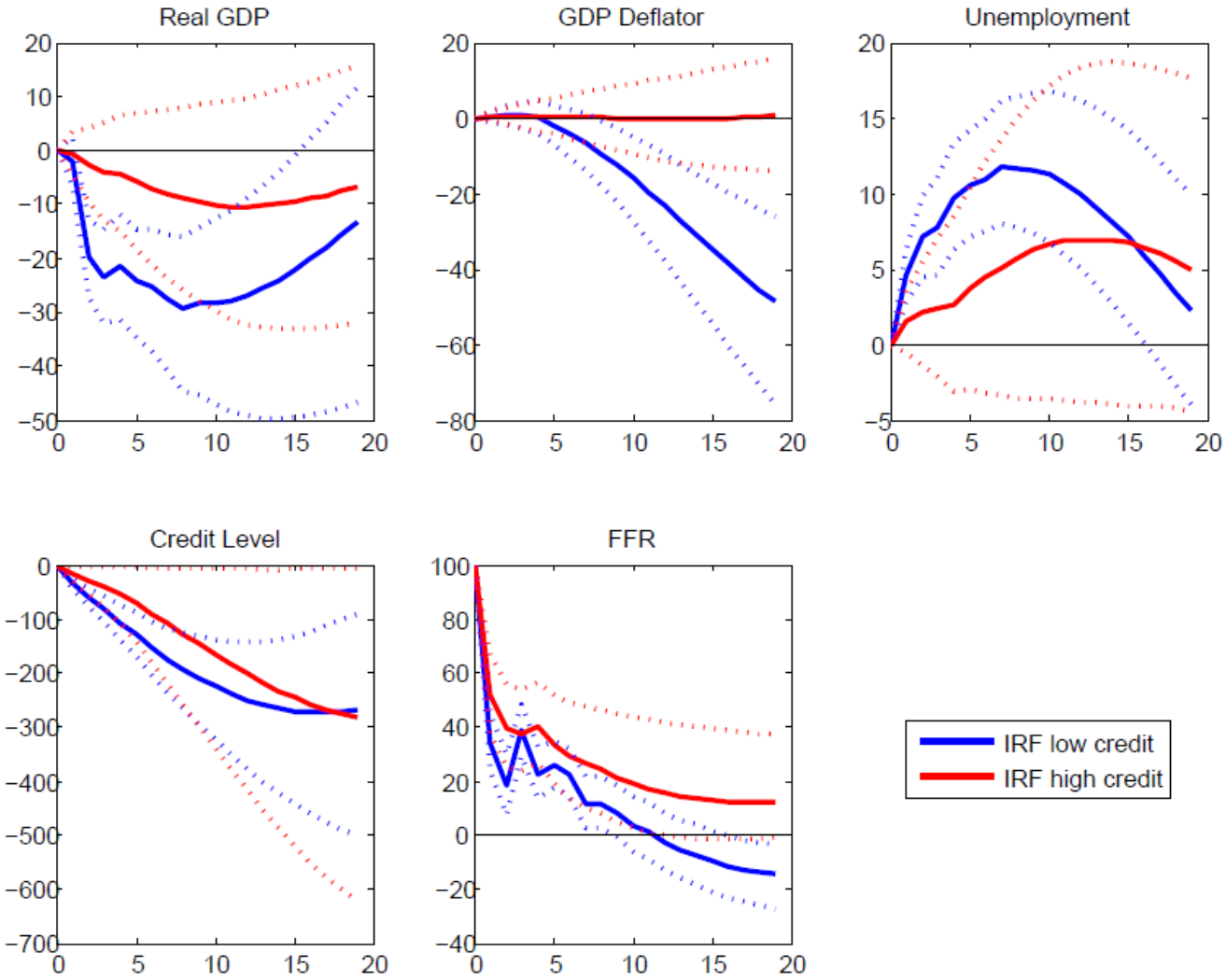
Note: Taylor Rules Misses are the Federal Funds Rate minus the fitted value generated by the Taylor Rule.

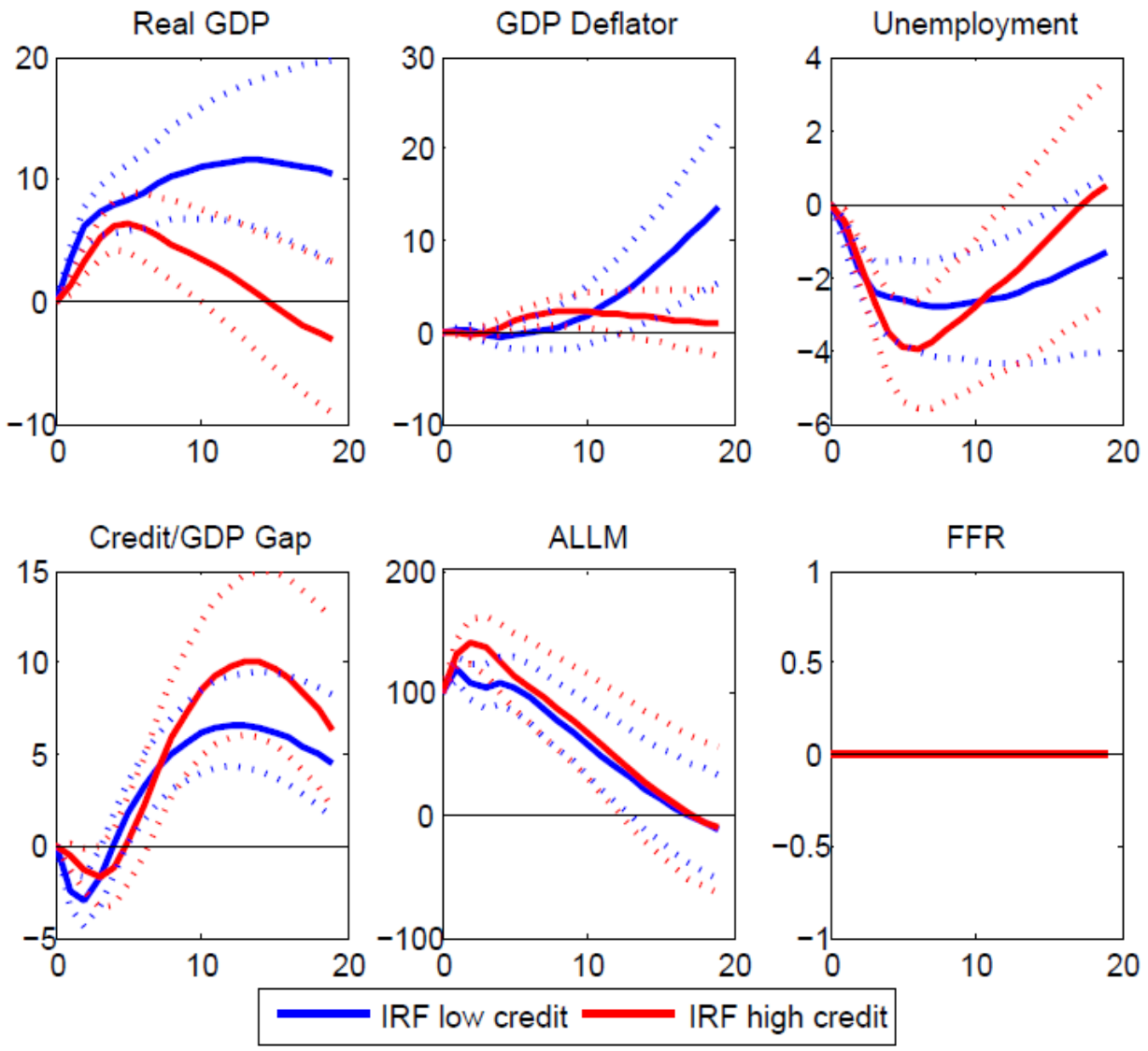
Sources: Federal Reserve Board, FOMC, NBER, Haver Analytics

Alternative Framework

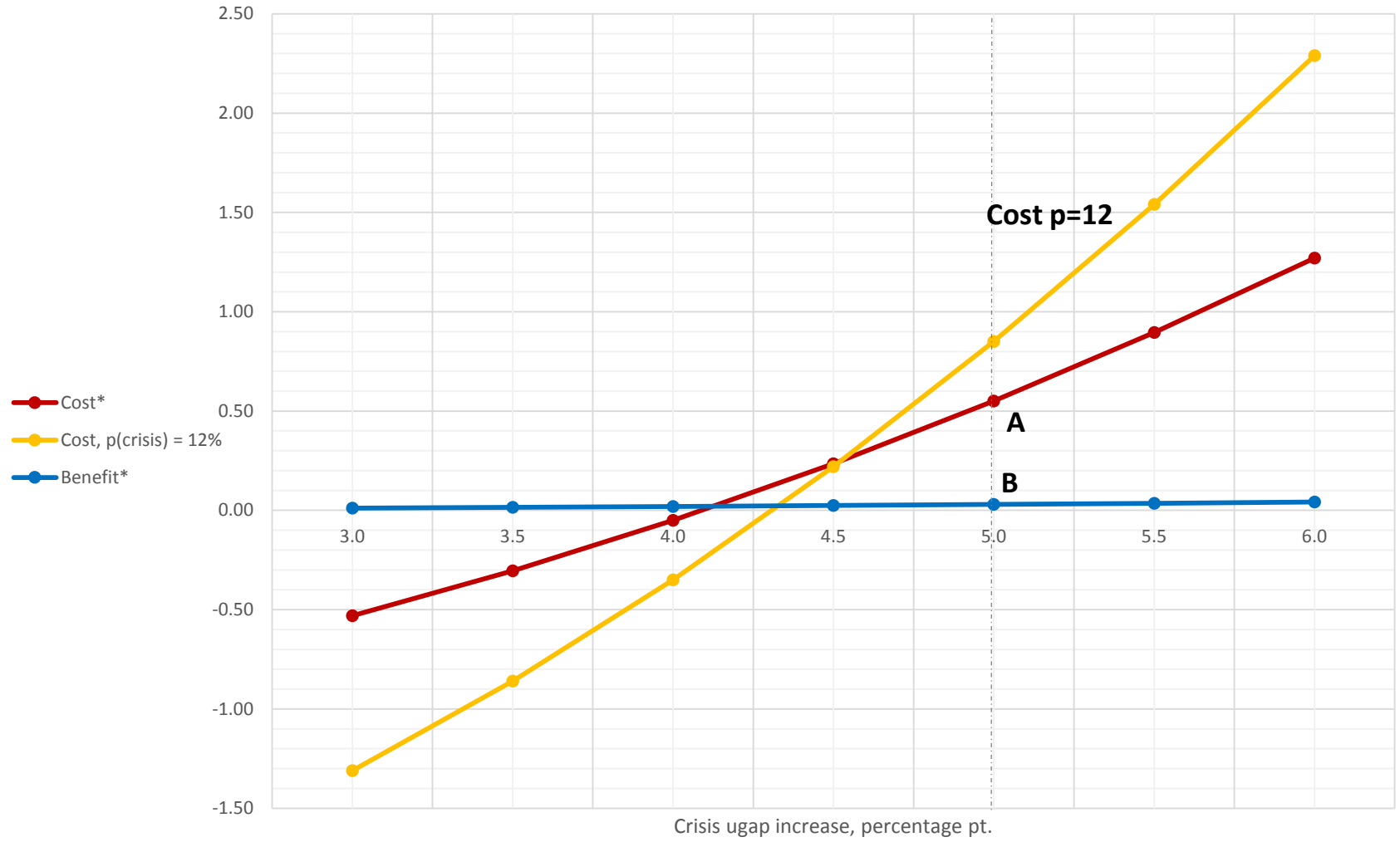
- Credit is a financial vulnerability, affects the severity of a recession
- Other possible vulnerabilities that monetary policy affects:
  - Asset prices: Bernanke and Gertler (1989); Lopez-Salido, Stein, Zakrajsek (2015); Jorda, Schularik and Taylor (2015)
  - Financial intermediation: Rajan (2005), Adrian and Shin (2010); Krishnamurthy and Vissing-Jorgensen (2015)
- Too early to conclude that monetary policy and financial stability objectives and tools should be separate

END


Real GDP
GDP Deflator
Unemployment
Credit Level
FFR
IRF low credit
IRF high credit


Real GDP
GDP Deflator
Unemployment
Credit/GDP Gap
ALLM
FFR
IRF low credit
IRF high credit

Cost and benefit of LATW relative to initial, for p=6 and p=12



* new relative to initial