SUERF Workshop:
The effectiveness of monetary policy in a low interest rate environment

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Expectations-driven liquidity traps: Implications for monetary and fiscal policy

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The views expressed in the presentation are our own and should not be interpreted as reflecting the views of the European Central Bank.

Motivation

- For most of the last decade, monetary policy in major parts of the industrialized world has been constrained by the interest-rate lower bound, and inflation rates have been hovering around levels below central banks' targets

- Macroeconomic stabilisation in the presence of the lower bound is (further) complicated by the fact that economies can follow many trajectories and policymakers may fail to influence which path the economy assumes, i.e. there may be multiple equilibria (Benhabib, Schmitt-Grohé and Uríbe, 2001)

  - Most academic studies focus on an equilibrium where inflation fluctuates around target and liquidity traps result solely from fundamental shocks

  - Much less work on other equilibria, including sunspot equilibria with expectations-driven liquidity traps

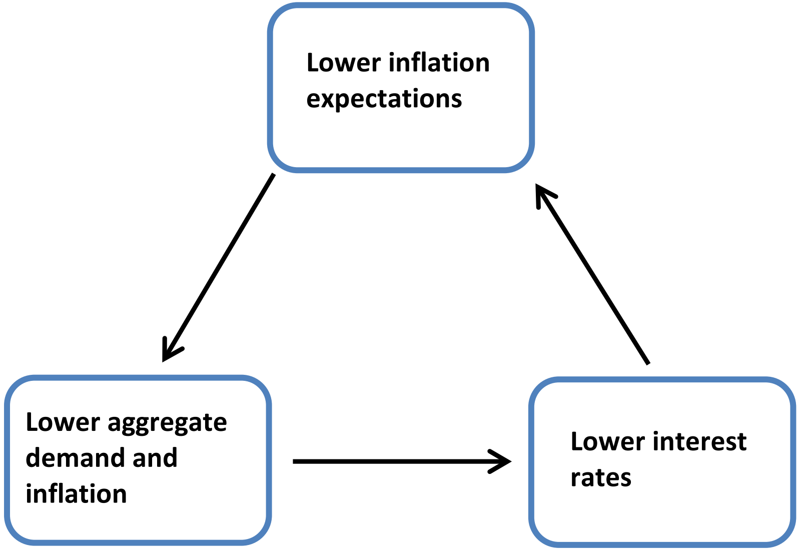
Expectations-driven liquidity traps (EDLTs)

- EDLTs arise from a self-fulfilling decline in people's confidence about the economic outlook rather than from a deterioration of economic fundamentals

- EDLTs are highly persistent

- The concept is often used to characterise Japan's prolonged period of close-to-zero nominal interest rates and very low inflation

- More recently, concerns have been raised that other jurisdictions, too, are in danger of getting caught in a Japanese-style liquidity trap (e.g. de Guindos 2019, Powell 2019)



Expectations-driven vs fundamental-driven liquidity traps

- Policies that improve macroeconomic stabilization in fundamental-driven liquidity traps may be ineffective or detrimental in EDLTs (Mertens and Ravn, 2014; Bilbiie 2019)

- We study optimal monetary and fiscal policy for an economy prone to EDLTs

- Two main questions:

    - Is there a foolproof way to improve stabilization outcomes and welfare by means of policy design, taking as given occasional EDLTs? No

    - Is it possible to prevent the economy from falling into EDLTs? Yes

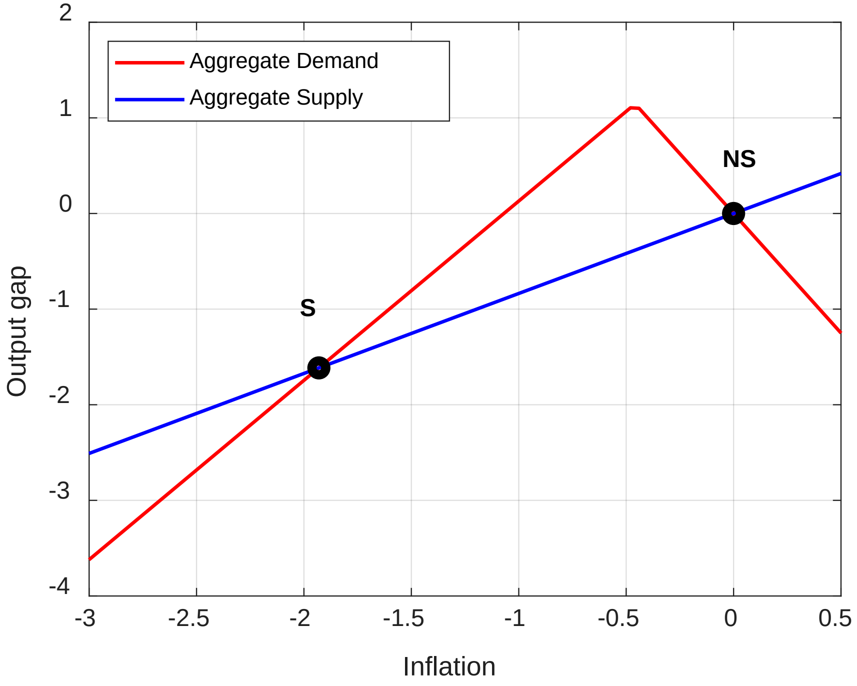
Analytical setup

- Standard business-cycle model with nominal rigidities and interest-rate lower bound
- Central bank sets short-term nominal interest rate
- Fiscal authority controls level of government spending and levies non-distortionary taxes
- Both policy authorities periodically re-optimise their decisions (‘discretion’) according to their stabilisation objectives
- Fiscal policy is Ricardian, i.e. fiscal surpluses adjust so that the government’s intertemporal budget constraint is always satisfied

Consider a sunspot equilibrium with recurring shifts in people’s confidence, where the lower bound is binding when confidence is low, and slack when confidence is high

A simple graphical representation

Aggregate demand and supply schedules in the low-confidence state

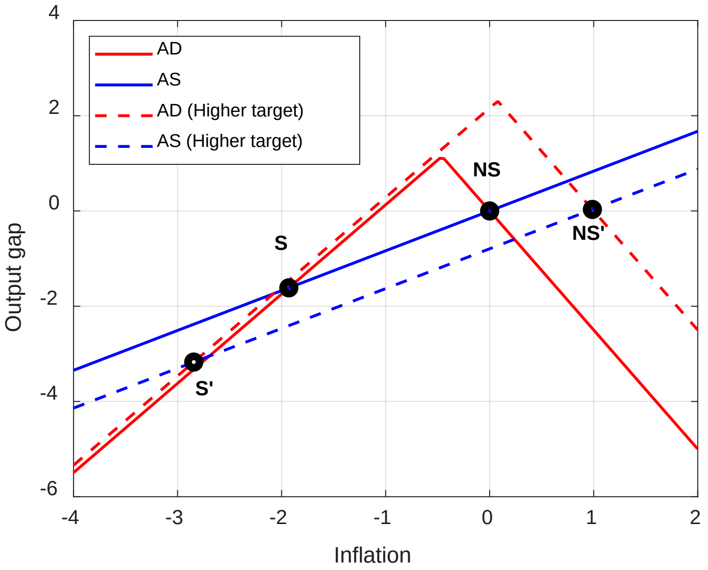


Raising the inflation target does not rule out EDLTs, and may heighten disinflationary pressures

A higher inflation target increases inflation in high-confidence states where the lower bound constraint is slack…

…but further reduces inflation in the low-confidence states where the lower bound is binding

- All else equal, households' desired consumption out of their current income increases
- To restore equilibrium, the relative price of current consumption has to rise
- The increase in the real interest rate, leads to lower aggregate demand and lower inflation



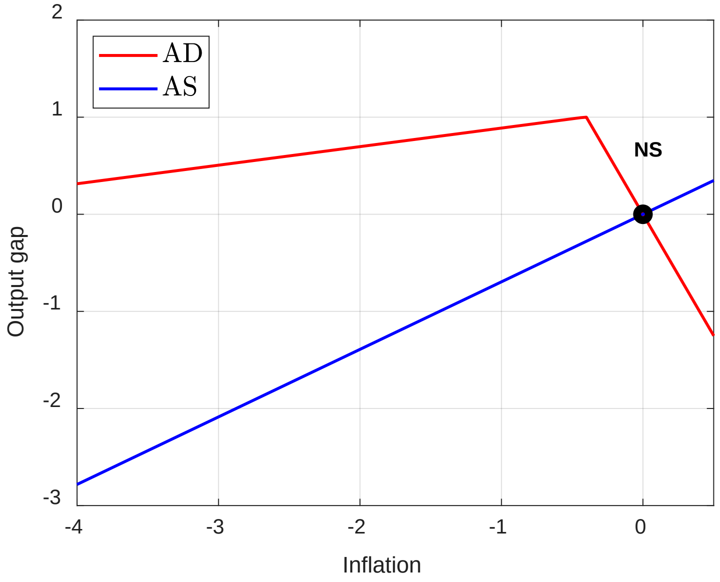
A fiscal authority geared towards macroeconomic stabilisation can prevent EDLTs

- Government spending has an effect on economic activity and inflation at a given level of interest rates (‘Keynesian multiplier’)
- Government spending (backed by future surpluses) is not constrained by an upper bound in the way interest-rate policy is constrained by a lower bound
- Benevolent fiscal authority finds it optimal to raise government spending when the lower bound is binding, and size of increase depends positively on severity of economic downturn and inflation shortfall (state dependence)

- To rule out the EDLT equilibrium, the fiscal response has to be sufficiently elastic (-> design of fiscal objective)

- In the model, though most likely not in practice, the mere presence of a fiscal authority of this type is enough to anchor expectations, so that no actual intervention is needed

- A fiscal authority of this type also improves stabilization outcomes and welfare in fundamental-driven liquidity trap equilibria (Schmidt, 2017)



Conclusion

- Ongoing secular changes in the global economy suggest that central banks will continue to operate in a low-interest rate environment
- Private sector may thus become more perceptive of the risk that interest rates are constrained by a lower bound, rendering economies prone to self-fulfilling declines in inflation expectations
- This equilibrium multiplicity may complicate monetary stabilization policy
- Fiscal policy can play an important role in avoiding undesirable equilibria, and in improving macroeconomic stabilization outcomes in fundamental-driven liquidity traps
- Empirical work crucial to understand type of liquidity trap an economy is experiencing (Aruoba, Cuba-Borda and Schorfheide 2018; Cuba-Borda and Singh, 2020)

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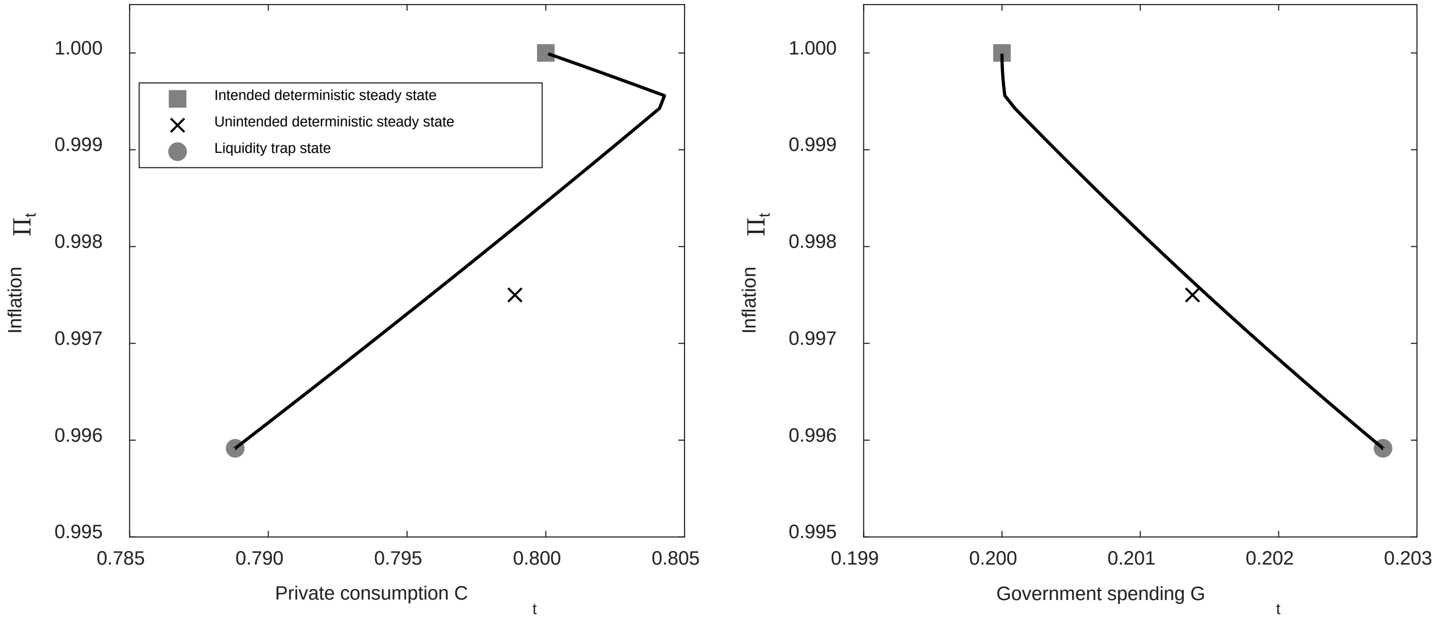
Background slides

EDLTs with richer transition dynamics in a fully non-linear model



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