Coordinating Monetary and Fiscal Policy to Exit the Zero Lower Bound

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- The demise of $MV = PY$.
- Price level determination in general equilibrium.
- How to exit the ZLB: single country, single currency case
- Why the EMU case is more difficult.
- Minimum criteria for a sustainable EMU.

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- This implies a simple unidirectional causal model: money growth determines the growth of nominal output PY, and since it can have no long run effect on output, it alone determines inflation in the long run.

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- In rich economies today, nearly all deposits in principle pay interest, including checking accounts and reserve deposits at central banks.

- Only currency is left as non-interest-bearing government paper, and currency is not M.

Why this no longer works: nothing pays interest

- While central bank reserve deposits pay interest, the rate is at the moment very low in many countries, including the US and the Euro area.

- Short-term government debt also returns very low interest — less than reserve deposits in the US.

- This has led to banks' willingness to hold reserve deposits far in excess of required reserve ratios, completely undoing the "money multiplier" that used to connect M to the amount of high-powered money.

- Reserves are interest-bearing government debt, not much different from treasury bills.

Another way to think about determination of the price level

$$\frac{B_t}{P_t} = E_t \left[\sum_{s=1}^{\infty} \rho^{-s} \tau_{t+s} \right].$$

- B_t is the current market value of nominal government debt, P_t is the price level, ρ is the real interest rate, and τ_t is the primary surplus: government revenue minus expenditures + interest expense.
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- If there are non-interest-bearing liabilities (cash), τ includes seigniorage revenue.

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- If the debt is not one-period debt, changes in long rates — i.e. expectations of future central bank policy rates — affect current B, not just current nominal deficits.
- In contrast to $MV = PY$, this equation depends on market expectations of *future* policy actions as well as actions today.

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- With such fiscal policy, interest rate rises are inflationary, not contractionary.

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- Monetary policy then is free to set the level and time path of prices without reference to details of fiscal policy, resolving the indeterminacy.

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- Cochrane pointed out that explosive upward inflationary spirals generally cannot be ruled out as equilibria under active money, passive fiscal (AM/PF) policy configurations, implying indeterminacy.

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Resolving indeterminacy, while preserving conventional thinking about "normal" policy

- Cochrane thinks that treating the price level as determined by a standard AM/PF policy combination is a fundamental mistake, invalidating (among other things) all New Keynesian models.

- While I agree with his view that price level determinacy is always dependent on fiscal backing, I think he's mistaken in thinking that the usual AM/PF analysis of price level determinacy cannot be rescued *as a description of how the economy works in "normal" times*.

Fiscal policy rule:

$$\tau_t = -\phi_0 + \phi_1 \frac{B_t}{P_t} + \phi_2 \frac{\dot{P}}{P} + \varepsilon_t \;.$$

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Consequences of a fiscal response to inflation

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- Furthermore, Inflation is determined entirely by monetary policy: Neither the value of ϕ_2 nor the fiscal shocks ε_t have any influence on the path of inflation.
- Does require credible commitment, but the commitment is likely to be supported by data, policy-maker preferences.

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- ▶ It is quite plausible that, seeing accelerating inflation and deficits, while money growth was slower than inflation and interest rates rapidly rising, people would conclude that large deficits are a driving force for the inflation, and reduce them.

- ▶ This would eliminate the explosive behavior, and if foreseen would completely rule out this type of indeterminacy.

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- Yet we could equally well eliminate the upward explosive paths by a fiscal rule that responds only to inflation above some threshold — so it becomes a "switch" to "another policy" at high inflation, and that seems to be what Cochrane thinks implausible.

- Both policies act through an easily understood mechanism: agents understand that high future inflation implies higher future primary surpluses, raising the current real value of debt, therefore putting downward pressure on current prices that forces the economy back to the stable path.

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- Also no solution: Negative interest rates. If there were no cash, or it were taxed appropriately, there might be no lower bound on r. Standard passive fiscal policy would then allow an unbounded downward spiral in inflation. $\phi_2 > 0$ would work.

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Policy to get off the ZLB

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- We have successfully communicated contingent monetary policy — interest rates will rise when the state of the economy, measured by inflation and labor market indicators, makes it reasonable to do so.
- What's needed at the ZLB: Contingent fiscal policy: Increased deficit (reduced primary surplus), with no cuts in spending or increases in taxes until inflation has returned to the target level.
- You'd think this was easy — why wouldn't politicians almost automatically run increased deficits when the economy is depressed?
- Problem is, they don't. Surpluses do vary cyclically, but this means that at the low point of the cycle they are expected to rise.

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- With these beliefs, deficits that seem to arise out of crisis and political gridlock increase uncertainty about who will be affected by future fiscal adjustments and may increase rather than decrease pessimism about future taxes and benefits.

- In other words, the standard assumption that increased current deficits draw forth future taxes or benefit cuts likely characterizes current beliefs in these countries.

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In the EMU it is even worse

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- ▶ No individual country can help matters much by running its own deficit.

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Expanding the theoretical framework to discuss Europe

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- Such a government need never default, so the theory ignores default.
- European fiscal authorities do not issue debt in a currency they control.
- Their sovereign debt has defaulted recently, and is still considered defaultable by markets.

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- But even ordinary monetary policy actions, raising and lowering interest rates to control inflation in normal times, create implicit fiscal transfers: highly indebted countries gain relative to less indebted countries from interest rate declines, for example.

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- ▶ No single government in the EMU can make the kind of expansionary fiscal commitment needed to exit a ZLB trap.
- ▶ So a combination of fear of inflation and an incomplete set of fiscal institutions could leave Europe in an environment of low inflation or deflation for a long time.

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Policy suggestions

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- A Eurobond-issuing institution would be making fiscal policy decisions. It would require democratic legitimacy. It would require either taxing power or substantial initial capitalization.
- Since EMU countries are effectively issuing real, and hence defaultable, debt, it should be possible for them to default in an orderly way, without raising questions about whether this entails leaving the EMU.

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- ▶ Is this totally unrealistic?
- ▶ What is the alternative?