Coordinating Monetary and Fiscal Policy to Exit the Zero Lower Bound

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April 14, 2015
Plan of the talk

- 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.
The monetarist view thinks of velocity, $V$, as fairly stable and of $M$, the money stock as under the control of policy.
The demise of \( MV = PY \)

- The monetarist view thinks of velocity, \( V \) as fairly stable and of \( M \), the money stock as under the control of policy.
- 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.
Why this no longer works: everything pays interest

- In the simple monetarist models, $M$ is non-interest-bearing government-issued currency.
- In slightly more sophisticated ones it includes bank-created money whose amount is controlled by the quantity of non-interest-bearing, government-created “high-powered” money.
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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, $\rho$ is the real interest rate, and $\tau_t$ is the primary surplus: government revenue minus expenditures + interest expense.

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- If there are non-interest-bearing liabilities (cash), \(\tau\) 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.
It *could* certainly lead to inflation. A steady increase in $B_t$ — i.e. steady nominal deficits — while future $\tau_{t+s}$ remain stable, and are believed by market participants to remain stable — will produce inflation.
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- Not by holding $M$ constant, or by raising nominal interest rates in an attempt to halt fiscally generated inflation.
- When primary surpluses are rigid, raising interest rates simply increases the rate of issue of nominal debt.
- With such fiscal policy, interest rate rises are inflationary, not contractionary.
In order for the $B/P = \tau/\rho$ relationship to “determine” the price level, we must think of policy as determining $B$, via current nominal deficits, and being committed to a stable future path of $\tau$ as $B$ varies. Or vice versa.
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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.
Resolving indeterminacy, while preserving conventional thinking about “normal” policy

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- 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:

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

- With this fiscal rule, and active monetary policy (e.g. a Taylor rule with coefficient on inflation greater than one, or fixed \( M \)), unstable paths with inflation exploding upward are ruled out, so long as \( \phi_2 > 0 \).
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- Furthermore, Inflation is determined entirely by monetary policy: Neither the value of \( \phi_2 \) nor the fiscal shocks \( \epsilon_t \) 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.
Fiscal backing at high inflation rates

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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.
A “simple” prescription: If we approach the ZLB, we run deficits, and promise they will not be offset by higher primary surpluses in the future.
Policy to get off the ZLB

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- 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.
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- 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.
Fiscal pessimism

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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.
In the EMU it is even worse

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- What is needed is a commitment to expansion of aggregate EMU debt, combined with all of it being equivalent (no default premia).

- No individual country can help matters much by running its own deficit.
Expanding the theoretical framework to discuss Europe

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Implications for Europe

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- Every monetary policy action has fiscal implications. That a commitment by the ECB to thwart speculative runs on EMU sovereign debt creates fiscal risk, via a potential need for capital injection into the ECB, has become evident.
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- The EMU was set up with the mistaken idea that it was possible to completely separate monetary and fiscal policy.
- Every monetary policy action has fiscal implications. That a commitment by the ECB to thwart speculative runs on EMU sovereign debt creates fiscal risk, via a potential need for capital injection into the ECB, has become evident.
- 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.
The outlook for the EMU

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- Without fiscal backing, combating a speculative attack could put the ECB’s balance sheet at risk, which could in extreme cases limit its ability to control inflation.
- 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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▶ 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.
Conclusion about Europe

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- What is the alternative?
Questions