Monetary and Fiscal Policies: Optimal Policies

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The Normative Literature

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- applications to the more complex (e.g., central bank) models often compare the welfare properties of simple rules within a model
- or, look for "robust" rules with desirable welfare properties across different models
Contributions to the normative literature involve different assumptions about steady-state distortions (like the monopoly markup) transactions frictions that motivate the Friedman Rule distortions arising from nominal rigidities. Early research on the NK model abstracted from transactions frictions and ...cal policy eliminates steady-state distortions. The models imply a distinction between "efficient" and "inefficient" shocks. Efficient shocks affect natural output (the level that would prevail under flexible prices) and efficient (optimal) output in the same way. Inefficient shocks affect the wedge between natural and efficient output.
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But departures from price stability, if any, are typically small in calibrated NK models.
The optimal policy maximizing household utility can be approximated by minimization of a familiar loss function involving inflation and the output gap.

In Benigno’s (2012) model, the quadratic approximation to welfare (household utility) is

\[
\frac{1}{2} \left(y - y^e\right)^2 + \theta^2 \kappa \left(p - p^e\right)^2
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where \(\theta\) is an elasticity parameter and \(\kappa\) is the slope of the Phillips curve.

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The optimal targeting rule is often presented as a prescription for "flexible inflation targeting"
The NK emphasis on price stability is in contrast to implications of Ramsey policy, maximizing household utility, in models with flexible prices and distortionary taxation; the latter typically make a case for the Friedman Rule (setting the nominal interest rate equal to zero) and its deflationary implication in inflation volatility and tax smoothing. Chari, Christiano, and Kehoe (1991) make these points using a model with cash and credit goods; they find the Friedman Rule is optimal, the optimal tax rate on labor income does not fluctuate much over time and in response to shocks (i.e., the model makes a case for tax smoothing), and the calibrated model implies very high inflation volatility (20% p.a.) under optimal policy.
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- unexpected inflation serves as a lump-sum tax in Chari, Christiano, and Kehoe (1991);
- it makes the real return on nominal government bonds state contingent, and this saves the Ramsey planner the welfare cost of varying distortionary taxes.
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Inflation and Interest Rates with a Wage Tax
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Inflation, Interest Rate, and Wage Tax Volatility
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  - Angeletos, Collard, Dellas, and Diba (2012) consider a model in which government bonds serve as collateral and argue that there is an optimal liquidity provision aspect missing from the standard Ramsey model
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- unconventional monetary policy (direct central bank lending) can be a component of optimal policy when the costs of private intermediation are sufficiently high
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2. Optimal interest-rate policy and targeting rule
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Optimal Policy in 3D

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  - Optimal policy pays interest on bank reserves essentially (i.e., setting aside some real-world frictions that are not present in the model) at the same rate as its target for the policy rate. This is a substitute for the deflationary path implied by the Friedman Rule and serves the same purpose.
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  - For example, in the aftermath of a deflationary episode, optimal policy commits to enough inflation to return the price level to the target path.
- There is no role for pure quantitative easing, as long as the commitment to the targeting rule is credible.
- There is, however, an aspect of credit easing: the central bank makes direct loans to the borrowers in the model when the costs of private intermediation are sufficient.
- This unconventional dimension of policy is particularly important when the policy rate is at the zero bound.
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Welfare losses from an ad-hoc simple rules are measured as foregone household utility relative to the utility attained under the optimal targeting rule.

Simple rules that respond to the credit spread may perform better than the standard Taylor rule (with no spread adjustment) but the optimal spread adjustment depends on the source of movements in the credit spread, and it may not be large.
Curdia and Woodford (2011) also cite their earlier paper on the welfare implications of alternative rules for setting the policy rate. Welfare losses from an ad-hoc simple rules are measured as foregone household utility relative to the utility attained under the optimal targeting rule. Simple rules that respond to the credit spread may perform better than the standard Taylor rule (with no spread adjustment) but the optimal spread adjustment depends on the source of movements in the credit spread, and it may not be large. Simple rules that respond to the volume of credit have the same problem and actually seem inferior to rules with a spread adjustment.