Friedman rule

Friedman Rule

There is some terminological variety, and hence confusion, in the academic literature and the economics profession regarding "the Friedman rule", which should rather read "the Friedman rules". Indeed, there are at least three distinct meanings, or versions, of what has been referred to as the "Friedman rule" (or "Friedman's rule"). These three versions basically correspond to the evolution of Milton Friedman's own ideas on the appropriate rules to govern monetary (and fiscal) policy. He himself admits the contradictory prescriptions to policy makers embodied in his earlier and later work, for instance in the heading and content of his concluding section, "A final schizophrenic note", of one of his major essays (Friedman, 1969, pp. 1–50).

To clarify this conceptual confusion, we denote the three rules Friedman has recommended at different stages of his scholarship as follows: (i) first Friedman rule, or exogenous bond (stock) growth rule, or still original Friedman rule (Friedman, 1948); (ii) second Friedman rule, or constant (*k* per cent) money (stock) growth rule, or still monetarist rule (Friedman, 1960); (iii) third Friedman rule, or Friedman rule for the optimum quantity of money, or still final Friedman rule (Friedman, 1969). We next summarize these rules in reverse chronological order – equivalently, also in decreasing order of their perceived importance in the subsequent theoretical monetary literature – with minimal reference to studies confirming or challenging them.

Friedman states his third rule as follows: "Our *final rule for the optimum quantity of money is that it will be attained by a rate of price deflation that makes the nominal rate of interest equal to zero*" (Friedman, 1969, p. 34, italics in original). He originally formulated this rule in a model of a "hypothetical simple society" based on 13 listed assumptions (ibid., pp. 2–3). But the rule has more generally emerged as a rather robust result in a core literature on monetary economics that could be denoted as "theory of monetary policy". It assigns to the optimal (monetary–fiscal) policy the equalization of the return on money and other assets by setting the nominal interest rate to zero and aiming at a mild deflation, thus guaranteeing a positive real interest rate. This third Friedman rule has subsequently been derived in various environments of a specific class of general equilibrium macroeconomic models where certain frictions (also known as "shortcuts") rationalize a positive value of money (see Arestis and Mihailov, 2011, for a survey). Most commonly, either transaction-technology costs have been invoked, such as a "cash-in-advance" (CiA) constraint (Clower, 1967), or real money balances have directly been embedded in the utility function ("money-in-the-utility-function" (MiUF) approach) (Sidrauski, 1967). The early CiA or overlapping-generations (OLG) set-ups with money assume only net lump-sum transfers (or taxes) available as "the policy instrument" and find this Friedman rule Pareto optimal. Phelps (1973) noted, though, that its optimality may hinge exactly on this restrictive assumption. Chari et al. (1996) show that it remains optimal in extensions allowing for distortionary taxes in the absence of lump-sum transfers. Assuming full commitment under a benevolent social planner and sticky prices, Khan et al. (2003) find support for the Friedman prescription of deflation, but with a low positive nominal interest rate because of price rigidity. More recently, da Costa and Werning (2008) show that the optimum quantity Friedman rule is

Pareto efficient when combined with a non-decreasing labour income tax in an economy with heterogeneous agents subject to nonlinear taxation of labour income.

Nevertheless, the third Friedman rule has not been uncontroversial (see Bewley, 1980; Woodford, 1990). Positive inflation is found optimal by Weiss (1980) but zero inflation by Freeman (1993) in similar OLG set-ups. Last but not least, the optimum quantity Friedman rule has remained just a theoretical curiosity. Central bankers have never embraced it, by achieving a weak deflation on average, in their real-world monetary policies. The diversity of results on it is due to the differences implied by key model assumptions, for instance between infinitely-lived representative agent (ILRA) and OLG set-ups, as well as between CiA and MiUF assumptions (Gahvari, 2007).

The second Friedman rule has been at the centre of monetarism. However, Brunner and Meltzer, the other two major figures within this school of thought, have not always been affirmative of a constant (say, 2, or 5, or *k* per cent per year) growth rate for the money stock, or money supply (Nelson, 2008). In Friedman's words, this second rule is defined as "increasing the quantity of money at a steady rate designed to keep final product prices constant, a rate I have estimated to be something like 4 to 5 per cent per year for the U.S. for a monetary total defined to include currency outside of banks and all deposits of commercial banks, demand and time" (Friedman, 1969, p. 47). Friedman's main justification for such a *k* per cent rule is to induce stability in the business cycle by the predictability of monetary policy.

Such an idea, however, obviously ignores any feedback to the state of the economy, and has naturally been criticized both within mainstream monetary policy theory (see, for instance, McCallum, 1981, and the well-known New Keynesian literature) and heterodox approaches (see Davidson, 1972; Moore, 1988; Rochon and Vernengo, 2003). In the mainstream, monetary policy reaction functions include a systematic (deterministic or feedback) component as well as a monetary shock (stochastic or money surprise) component. Beyond the closed-loop, mathematically solvable systems describing a macroeconomic model in the mainstream, heterodox approaches commonly stress "endogenous money" arising from the needs of the economy, with the central bank accommodating money and credit demand within the limitations of its objectives. The heterodox approaches highlight, in essence, the role of "inside money" created by the banking system and financial instability in the macroeconomy from an evolutionary, open-ended perspective that is less technical but arguably more general. Whereas the *k* per cent rule has led to theories and central bank practices of monetary targeting in the 1970s and 1980s, though with changing targets for the money growth on a yearly or quarterly basis, these have been replaced gradually over the 1990s and the 2000s with explicit or implicit inflation targeting strategies.

The original, first, Friedman rule envisaged bond – not money – stock growth to be exogenous to cyclical economic activity (McCallum, 1981). It has rarely been mentioned, though, in the subsequent literature, and has stayed far from the overwhelming influence in monetary policy debates in academia and central banks that the other two Friedman rule versions have enjoyed. While McCallum (1981) does not

see much merit in the constant money growth, monetarist rule of Friedman, he considers the original rule worth further investigation.

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See also:

Endogenous money; Inflation targeting; Monetarism; Monetary targeting; Money supply; Rules versus discretion.

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