

Comment on Bennett T. McCallum's Should Central Banks Raise their Inflation Targets?

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McCallum's answers his question by saying that raising this target is a "sophisticated but predominantly bad idea" and the paper gives eight reasons for this conclusion. The first is that inflation is a particularly distortionary tax. The second is that, with sticky prices, inflation can lead to inefficient changes in relative prices. The third is that, based on the analysis of Schmitt-Grohé and Uribe (2010), even a somewhat negative target inflation rate allows interest rates to be set optimally while avoiding the zero lower bound (ZLB) most of the time. The fourth is that, even when the ZLB is hit, interventions in long term bond markets and foreign exchange markets should be quite helpful in stabilizing output. Fifth, McCallum suggests that an attractive change in institutions, namely the abolition of currency, would allow the central bank to set negative rates and thereby dispense with the ZLB. Sixth, McCallum notes that the admission that raising the average inflation rate would limit ZLB problems would be tantamount to accepting that there is a long run tradeoff between inflation and unemployment. McCallum fears that recognizing this would reduce central bank independence and thereby raise inflation too much. Seventh, McCallum notes that an average inflation rate of 4% since 1792 would have resulted in a substantially higher level of prices at present. This echoes one of the arguments against inflation articulated by Summers (1991), namely that high inflation erodes the dollar as a standard of measurement. Lastly, McCallum expresses the fear that inflation would lead the government to engage in additional deficit finance, which he regards with dismay.

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The first three of these arguments are strongly anchored in the academic literature, and McCallum relates them by quoting extensively from Schmitt-Grohé and Uribe's (2010) survey. The others are not, and McCallum deserves strong praise for considering such a broad range of arguments. I applaud McCallum's willingness to make his case in part by noting failures of standard models, by bringing in psychological considerations and by speculating about the political consequences of different inflation targets.

To my mind, however, McCallum, (like Blanchard *et al* 2010 to whom his paper is a partial response) almost leaves out the main reason to be opposed to inflation. This is that people hate it. Gallup opinion data showing this has been discussed on several occasions, notably by Fischer and Huizinga (1982). These data show that more than 50% of Americans saw inflation as the nation's most important problem in much of the 1970's. More importantly, even the modest increase in PCE inflation from 1.4% in 1965 to 2.4% in 1966 led the percentage of people who thought the "cost of living" was the most important problem to jump from 6 to 16%.

Different, but equally compelling for the negative welfare effects of inflation is provided by DiTella *et al.* (2001), which shows that people's reported life satisfaction is lower in environments with higher inflation. My guess is that this evident negative welfare effect of inflation is not well captured by existing models. (In sticky price models, for example, the variability of relative prices induced by inflation is actually good for people and inflation reduces welfare only through its negative effect on total real income. It seems unlikely that people see through this logical chain of events and hate inflation because of its real income effect.)

In previous work, I have argued that this dislike of inflation may be due to the regret that people experience every time they see a price increase (this is the regret of not having purchased storable goods earlier). A possibility that fits more closely with McCallum's arguments is that this dislike stems from people's desire to have currency units be a more

constant measure of value. In any event, answering the policy question of how high the inflation target should be would be immensely helped by further study of the mechanism that lead people to dislike inflation. With a better understanding of this mechanism, one would know whether this dislike can be mitigated or not.

I now consider some of McCallum's arguments in more detail.

1 Inflation as a “bad” tax

Blanchard, DellAricca and Mauro (2010) say: “The inflation tax is clearly distortionary, but so are the other, alternative, taxes.” I would have preferred it if they had recognized the literature surveyed in Schmitt-Grohé and Uribe (2010), which demonstrates that there are important cases where the optimal tax on monetary services is zero even when the government is forced to use other distortionary taxes to raise revenue. The reason is that taxes on monetary services can be viewed as a tax on “intermediate goods” and it is generally more efficient to tax either income or final consumption. Moreover, government revenue from seignorage is generally paltry, and this is particularly true if the central bank pays interest on reserves.

Having said this, it is difficult to be impressed by the size of the conventional welfare gains that result from lowering inflation from moderate levels to the Friedman rule. Partly, this is an almost immediate consequence of the budget constraint. Suppose that A_t represents an individual's total financial assets at the beginning of t and that all these assets except a monetary component pay interest equal to i . Then, the evolution of A must satisfy

$$A_{t+1} = (A_t - P_t C_t + Y_t - M_t)(1 + i) + M_t$$

where M_t are the holdings of the noninterest bearing monetary asset at t , C_t is real consumption, P_t is its price and Y_t is non-asset net income. If the consumer sets the ratio of the marginal utility of consumption to the marginal utility of monetary services equal to

the ratio of their relative costs, an additional dollar of money must give as much utility as $i/(1+i)$ dollars of additional consumer expenditure.

One small advantage of finding ourselves at the ZLB (and of having moved there with great speed) is that we can gauge by how much the demand for non-interest bearing money rose in the process. For this purpose, Figure 2 displays the ratio of the currency component of M1 to GDP and the Federal Funds rate for the recent period. The two lines move opposite one another and the decline in the Federal Funds rate from 5.25% in 2007:2 to nearly zero in 2009:2 seems to have raised the ratio of currency to GDP by about .6% of GDP, or about \$87 billion current dollars.

Since the marginal utility of currency must be declining in currency, an upper bound to the consumer expenditure equivalent of the resulting welfare gains is $.025 \times 87$, or \$4.6 billion. Suppose instead that the marginal utility of currency declines in such a way that interest rate that rationalizes a given holding of M is locally linear in M so that

$$i = .0525(1 - M/87)$$

for M between 0 (its 2007:2 position) and \$87 billion. The consumer expenditure equivalent the gain in utility from the increase in M is then

$$\int_0^{87} \frac{i}{1+i} dM,$$

which is about \$2.2 billion.

2 The interest cushion needed to conduct monetary policy

In their masterful survey, Schmitt-Grohé and Uribe (2010) conclude that a target inflation rate of -.4% very seldom runs into ZLB problems in a calibrated model with sticky prices. They suppose that the monetary authority uses an optimal policy, and this leads the interest

rate to have a standard deviation of .9% at annual rates. Since they assume log preferences, a growth rate of 1.8% and a minimum discount rate of 1% (their baseline is 3%), their real interest rate is at least 2.8% so that their nominal interest rate cushion is 2.4%, over three times the standard deviation of interest rates at the optimal policy.

These results are broadly consistent with earlier simulations by Reifschneider and Williams (2000), who used the FRB-US model. Still, there are two causes for concern. The first is that actual monetary authorities are unlikely to always choose interest rates optimally. When they fail to do so, they will later want to change interest rates to correct their mistakes. This will require a larger interest rate cushion.

Brilli (2010) examines a particular deviation from optimality by studying the effect of having a central bank (with a “taste” for a particular inflation rate) that cannot commit to a reaction function. In his simulations, this lack of commitment justifies appointing a central banker that sets an average inflation rate of 17%.

Second, there is the question of whether one can really count on an underlying safe real rate of interest of 2.8%. While this is surprising in light of standard assumptions regarding growth and preferences, Figure 3 shows that, *ex post* real rates have often been much lower, and for extended periods of time. This observation lay behind Summers (1991) endorsement of a significantly positive inflation target. As he noted, there would be essentially no room for interest rate policy in a zero inflation environment with a “natural” real rate of interest of zero.

3 Intervening in exchange rate and long term bond markets remains possible

I agree with McCallum that the standard models where these interventions have no effect are likely to be flawed. Indeed, as Greenwood, Hanson and Stein (2010) show, the maturity composition of the outstanding government debt matters. The question remains, however,

whether these effects are “large.” Changes in exchange rates are likely to have large effects but deliberate changes in the exchange rate raise other concerns.

Foreign countries care about the exchange rate too and, given these foreign policy implications, policies to overtly manage the exchange rate cannot be entrusted to an independent central bank. One illustration of the sensitivities involved is the worry about “currency wars” that has flowered in response to recent exchange rate changes. The precise meaning of this term is unclear, but since there are fewer independent exchange rates than countries, one clear danger is that countries that are unable to affect their exchange rates will impose tariffs instead.

4 With modified institutions, interest rates can be negative

McCallum is drawn to the Buiters (2009) idea of eliminating government-provided currency. People would then have to conduct their payments using personalized accounts, and these could earn negative interest if the central bank wanted this. Among other things this would require that the central bank pay negative interest to commercial banks that hold deposits at the central bank. As McCallum says, it would also require everyone to have some sort of account with which to make purchases.

While there is probably scope for improving the institutions governing retail payments in the United States, the proposal to eliminate currency poses problems of implementation and may not be politically viable. According to the 2007 Survey of Consumer Finances (see Bucks *et al.* 2009) about 10% of U.S. families do not have any sort of bank account. Many of these families allege that the reason for this is that checking accounts are too costly for them relative to the benefits that they would derive from them. One obvious issue is how McCallum intends to ease the transition of these families. While government issuance of currency suggests that the government has a role in this area, my guess is that

financial service providers would prefer not to see government competition in the market for transactions vehicles.

A second difficulty is that the U.S. Constitution gives Congress the power to “coin money,” so that Congress would have to decide not to take advantage of this right. The issue, then, is whether voters and their representatives would want to eliminate currency. I somehow doubt that voters would be impressed by the argument that this is a good idea because it would allow the government to reduce the yield on their savings.

5 Recognizing a tradeoff between inflation and unemployment would create political pressure for inflation

McCallum suggests that a professional “consensus” among economists that there “exists no usable long-run tradeoff between inflation and unemployment” was important both for reducing inflation and for giving central banks the independence that was necessary for reducing inflation. While this freedom of action was attractive, I would not suppress opinions regarding inflation neutrality in order to maintain it. In any event, I would give the “natural rate” idea less credit for the taming of inflation in the 1980’s. An important proximate cause was President Jimmy Carter’s appointment of Paul Volcker and the reasons for him making this appointment may never be known. I am inclined to believe, though, that polls suggesting that Americans disliked inflation may have played a role.[†]

Which of these interpretations is right matters because it bears on the issue of whether raising the average inflation rate to 4% is unstable and would lead to even more inflation down the line. Insofar as a 4% inflation rate leads to expressions of unhappiness, as the evidence alluded to earlier appears to indicate, the pressure not to increase it further may be significant.

[†]Carter gave a speech on inflation, in which he declared it to be a “serious problem,” on October 24, 1978.

6 Higher inflation would lead governments to higher deficits

An increase in inflation would be accompanied by somewhat higher seignorage and, unlike the revenue from other taxes, this would count as “deficit spending.” Since seignorage is likely to remain modest in any event, this effect on “the deficit” should be small. The issue, then, is whether there is once again an “instability” where a small amount of seignorage finance leads to pressures for more.

If one finds deficits distasteful, one might be inclined towards more rather than less inflation, as this should reduce the odds of hitting the ZLB. Recent history indicates that many countries that reach the ZLB increase their deficits substantially, perhaps egged on by the low interest rates that they have to pay on their newly minted debts.

7 A tentative “search for yield argument for some inflation

Before concluding, I want to hazard a somewhat different argument for increasing the target rate of inflation. This argument is closely related to Rajan’s (2005) observation that low interest rates prompt financial market participants to “search for yield.” This “search” can take the form of ignoring the riskiness of certain asset classes on the ground that the yield on safe assets has become unacceptable low. The exact psychological and institutional underpinnings for this “irrationality” remain open for exploration, and so this section is extremely tentative. One reason to explore this issue is that it provides a link between the low interest rate policy of the 2000’s and the excessive risk taking by private actors that McCallum deplors (and holds partly responsible for the crisis itself).

As Rajan indicates (2005), one manifestation of this “search” would be a narrowing of spreads between risky and safe assets. To analyze this issue, Figure 4 plots the spread

between the yield on Moody's BAA corporate bonds and Moody's AAA bonds. This spread is quite cyclical, and the issues considered here are not. I therefore extracted a smooth trend of this spread using the technique of Rotemberg (2003), which minimizes fluctuations that last 16 quarters. The Figure also shows the PCE inflation rate with its equivalently derived trend. Lastly, the two trends are shown one on top of the other. The correlation between these series is .78. As expected under the "search for yield" hypothesis, these credit spreads narrow when inflation (and yields) are low.

It is possible, of course, that the true riskiness of BAA bonds falls relative to that of AAA bonds when inflation is low. Studying whether this is the case requires that one look at longer term returns, as in Greenwood and Hanson (2010), whose study of related issues is much more sophisticated than the current analysis. Still, there is also the alternative explanation that private investors ignore risks that they should take into account when inflation is low. Their actions would then imperil the financial system and the economy in general.[‡] A potentially desirable effect of inflation would then be to curb this risk-taking.

8 Conclusions

One aspect of McCallum's paper that is to be welcomed is that he broadens the question of how high the long run inflation rate should be by considering the political economy (and marketing) consequences of this decision. We differ somewhat in how we see the economic and political forces at play. I am more optimistic that political forces, particularly the popular dislike of inflation, will help central banks raise interest rates to keep inflation in check. I am less optimistic that economic welfare can blossom with a low inflation target.

[‡]It is worth noting that it is generally more difficult to unwind a "credit bubble" than a "stock market bubble" because the former effectively requires the government to reallocate property rights.

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Figure 1:

Currency in the hands of the public and the federal funds rate

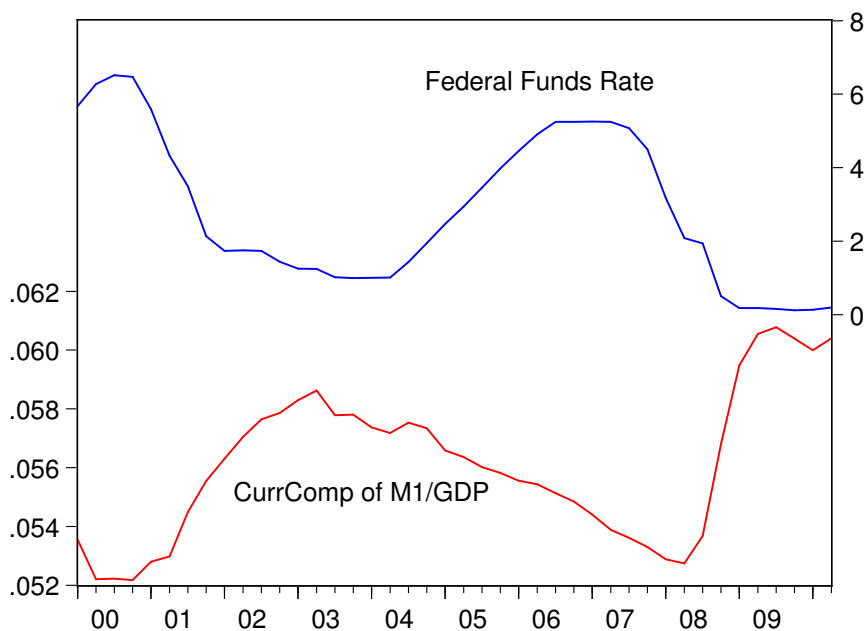


Figure 2:

Realized FedFunds-PCE real rate (annualized percentage points)

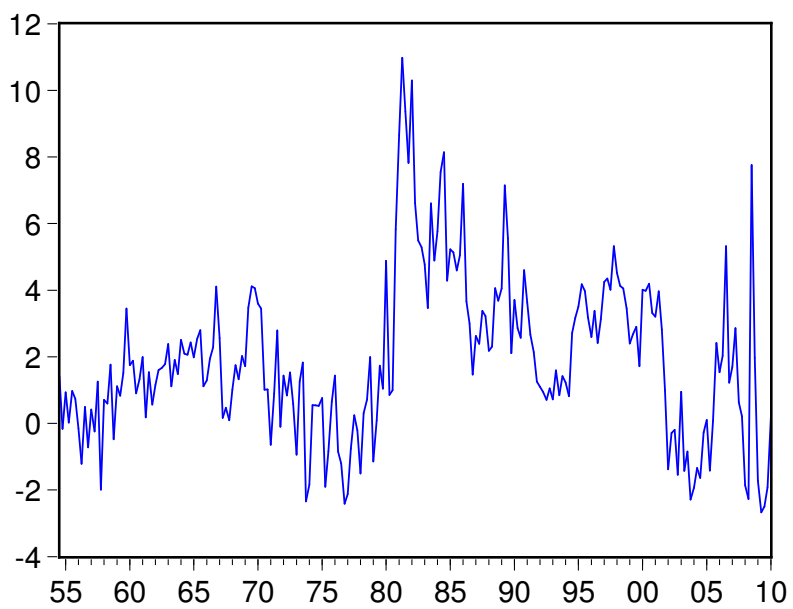


Figure 3: Credit Spreads and Inflation

