Annotated Bibliography: Dynamics of Monetary Policy Uncertainty and the Impact on the Macroeconomy

Nicholas Herro*
Department of Economics
University of Wisconsin - La Crosse

James Murray†
Department of Economics
University of Wisconsin - La Crosse

March 29, 2011

References

[1]Ben S. Bernanke. Speech: Cato Institute 25th Annual Monetary Conference, Washington, D.C., November 17, 2007.

Early in Bernanke's tenure as Chairman of the Federal Reserve, he discusses the importance of central bank transparency and credibility. He cites other central banks around the world taking steps toward transparency including explicitly stating inflation targets, timely release of meeting minutes, frequent public speeches, and regular publication of economic outlooks. He says it is important that monetary policy be conducted in such a manner because 'improving the public's understanding of the central bank's objectives and policy strategies reduces economic and financial uncertainty and thereby allows businesses and households to make more-informed decisions.'

[2]Ben S. Bernanke and Frederich S. Mishkin. Inflation targeting: A new framework for monetary policy? Journal of Economic Perspectives, 11:97–116, 1997.

The authors suggest the Fed should explicitly adopt an inflation-targeting policy most importantly for the benefits of reducing uncertainty regarding monetary policy. They argue the moderate macroeconomic volatility enjoyed since the early 1980s was due at least in part to an established monetary policy philosophy that put greatest emphasis on inflation targets and entertained output stabilization in the short-run but only when it did not conflict with long-run inflation stability.

Mailing address: 1725 State St., La Crosse, WI 54601. *Phone*: (608)785-8099. *E-mail*: herro.nich@uwlax.edu.

†*Mailing address*: 1725 State St., La Crosse, WI 54601. *Phone*: (608)406-4068. *E-mail*: murray.jame@uwlax.edu.

[3]Ales Bulir, Katerina Smidkova, Viktor Kotlan, and David Navartil. Inflation targeting and communication: It pays off to read inflation reports. IMF Working Paper No. 08/234, 2008.

I'm not sure we need to cite this paper. The authors look at six developing countries with explicit inflation-targeting policies and examine the consistency between central bank communication and eventual inflation outcomes. Central bank communications they examine include communicated inflation targets, inflation forecasts, and verbal assessments of the causes of inflation. Overwhelmingly, they find central bank communication is a good predictor of inflation outcomes, indicating these central banks exhibit transparent and credible policy. This provides evidence there are central banks around the world that do successfully implement transparent policy.

[4]Stephen G. Cecchetti and Michael Ehrmann. Does inflation targeting increase output volatility? an international comparison of policymakers' preferences and outcomes. In Norman Loayza and Klaus Schmidt-Hebbel, editors, Monetary policy: Rules and transmission mechanisms. Santiago, Chile, 2002.

I'm not sure we need to cite this paper. The authors compare output and inflation volatility in 23 countries during the relatively moderate period from 1985 through 1997. Of the 23 central banks, 9 explicitly target inflation. The authors hypothesize that central banks that explicitly target inflation will likely have lower inflation volatility, but possibly at the expense of higher output volatility. Looking at the data, they do not find this to be the case. Regardless of whether a central bank was an inflation-targeter or not, all categories of central banks were shown to increase their preference for inflation stabilization in the 1990s from the 1980s, and all categories of central banks' countries experienced lower inflation volatility and lower volatility of output growth. The empirical evidence suggests that inflation targeting may indeed be effective for limiting volatility of both output and inflation. One could argue this finding is consistent with Bernanke's (2007) hypothesis that inflation targeting reduces uncertainty and leads businesses and households to make better-informed decisions.

[5]Stephen G. Cecchetti, Alfonso Flores-Langunes, and Stefan Kruase. Has monetary policy become more efficient? a cross-country analysis. The Economic Journal, 116:408–433, 2006.

Like Cecchetti and Erhmann (2002), these authors also examine the relatively stable period since the mid-1980s for a number of countries and ask whether the reduction in inflation volatility and often reductions in output volatility are due to more efficient monetary policy (from a constructed optimal policy prescription found my minimizing a quadratic loss function) or due simply to having the good luck of getting fewer and smaller aggregate supply shocks. They find that for 20 of the 24 countries analyzed, 80% of the the reduction in macroeconomic volatility is explained by better monetary policy. The authors suggest that improved central bank credibility and transparency can account

for at least part of the improvement. It is worth citing this paper if only to show how other researchers have suggested how improved monetary policy has led to improved macroeconomic stability.

[6]Stephen G. Cecchetti and Stefan Krause. Central bank structure, policy efficiency, and macroeconomic performance: exploring empirical relationships. Federal Reserve Bank of St. Louis Review, pages 47–60, July/August 2002.

The authors use measures the degree of independence, accountability, transparency, and credibility for 60 central banks around the world and examine the extent to which these are associated with lower macroeconomic volatility and optimal monetary policy (like Cecchetti et. al. (2006) this is derived by minimizing a quadratic loss function). They find that monetary policy that has greater levels of transparency and credibility is associated with lower macroeconomic volatility and more efficient monetary policy. Independence and accountability seem to have little influence. This finding is consistent with the view that monetary policy actions that reduce uncertainty leads to improved macroeconomic stability.

[7]Richard Clarida, Jordi Gali, and Mark Gertler. Monetary policy rules and macroeconomic stability: Evidence and some theory. Quarterly Journal of Economics, 115:147–180, 2000.

The authors estimate a forward-looking Taylor rule and find substantial differences in the interest rate rule across different periods in post-war U.S. history and across different Federal Reserve chairmen. Specifically, they find the federal funds rate was more sensitive to changes in expected inflation during the Volcker-Greenspan period and show this policy has led to greater macroeconomic stability within the context of a rather simple New Keynesian model. These findings agree with others that when the central bank puts more weight on inflation movements (while not perhaps having an explicit inflation target) the country is able to maintain a greater degree of macroeconomic stability.

[8]George W. Evans and Seppo Honkapohja. Learning and expectations in macroeconomics. Princeton University Press, 2001.

Primary source for learning in monetary economics

[9]George W. Evans and Seppo Honkapohja. Expectations, learning and monetary policy: An overview of recent research. Centre for Dynamic Macroeconomic Analysis Working Paper CDMA08/02, January 2008.

Literature review for learning in monetary economics

[10]Stilianos Fountas. The relationship between inflation and inflation uncertainty in the uk: 1985-1998. Economic Letters, 74:77–83, 2001.

The author estimates ARCH/GARCH models and uses the (unpredictable) shock component of the heteroskesticity models as a proxy for the degree of inflation uncertainty in the economy. He shows that greater inflation

uncertainty in the UK is associated with high inflationary episodes in his sample. He suggests, but does not attempt to find statistical evidence, that greater inflation uncertainty leads to an inefficient allocation of resources and therefore lower output growth.

[11]Stilianos Fountas and Menelaos Karanasos. Inflation, output growth and nominal and real uncertainty: Empirical evidence for the g7. Journal of International Money and Finance, 26:229–250, 2007.

The authors again use a GARCH model to estimate the degree of uncertainty regarding inflation and output growth for the G7 countries. They find increases in inflation leads to higher inflation uncertainty. They find mixed evidence for the effect inflation uncertainty has on output growth. Higher inflation uncertainty does not necessarily detrimental to output growth. For the United States specifically, they find evidence for the negative impact of inflation uncertainty on output growth only when using the PPI to measure inflation, and not for the CPI. The authors also find little to no evidence that output growth uncertainty affects output growth or inflation, either positively or negatively. We could argue the authors findings are consistent with ours in that we do not find evidence that monetary policy uncertainty affects output growth or inflation.

[12]Stilianos Fountas, Menelaos Karanasos, and Jinki Kim. Inflation and output growth uncertainty and their relationship with inflation and output growth. Economic Letters, 75:293–301, 2002.

The authors use a GARCH model to estimate the degree of inflation uncertainty in the Japanese economy. They find evidence that higher inflation and higher inflation uncertainty both lead to lower output growth. The results support the prescription that price stability should be the primary objective for monetary policy.

[13]Stilianos Fountas, Menelaos Karanasos, and Jinki Kim. Inflation uncertainty, output growth uncertainty and macroeconomic performance. Oxford Bulletin of Economics and Statistics, 68:319–343, 2006.

The authors find, among other things, that higher inflation does lead to negative welfare effects when the increase in inflation leads to greater inflation uncertainty. The authors examine data from all the G7 countries, suggesting the results are robust across developed economies.

[14]Kevin B. Grier, Olan T. Henry, Nilss Olekalns, and Kalvinder Shields. The asymetric effects of uncertainty on inflation and output growth. Journal of Applied Econometrics, 19:551–565, 2004.

The authors use very general ARCH/GARCH models to measure uncertainty and find that higher inflation uncertainty leads to lower output growth and higher output uncertainty leads to higher output growth but has no significant effect on inflation.

[15]Kevin B. Grier and Mark J. Perry. The effects of real and nominal uncertainty on inflation and output growth: Some garch-m evidence. Journal of Applied Econometrics, 15:45–58, 2000.

The authors use a fancy GARCH-M model to estimate inflation uncertainty and output uncertainty in post-war United States. They find no evidence that inflation uncertainty or output uncertainty affects the inflation rate. They do find however, that inflation uncertainty leads to lower output growth.

[16]Fabio Milani. Expectations, learning and macroeconomic persistence. Journal of Monetary Economics, 54:2065–2082, 2007.

Estimates a learning gain in a New Keynesian model with learning.

[17]Athanasios Orphanides. Historical monetary policy analysis and the taylor rule. Journal of Monetary Economics, 50:983–1022, 2003.

The author finds the Taylor rule is a useful description of monetary policy in the United States both during the 1920s and since 1951. The author finds the weight the Federal Reserve has put on inflation stabilization versus output stabilization has changed over time, most notably targeting inflation more heavily since the early 1980s.

[18]Sergey Slobodyan and Raf Wouters. Learning in an estimated medium-sized dsge model. Working Paper, 2008.

Estimates a New Keynesian model with learning, including a learning gain. They generally find that the learning models with a realistic information set for agents (agents run VAR's with data observable to an econometrician) fits the data better than rational expectations and learning models with alternative information sets that have more information.

[19]John Taylor. Discretionary versus policy rules in practice. Carnegie-Rochester Conference Series on Public Policy, 39:195–214, 1993.

You have to cite this one, I mean, come on.

[20]John B. Taylor. A historical analysis of monetary policy rules. In John B. Taylor, editor, Monetary policy rules. University of Chicago Press, 1999.

Like Orphanides (2003), the author also finds the Taylor rule is a useful framework to examine U.S. monetary policy history. The author does find significant changes in the monetary policy rule over time, and that these changes are associated with dramatic changes in macroeconomic volatility. Moreover, he finds that changes in monetary policy have caused changes in macroeconomic outcomes rather than the reverse: monetary policy changes are responding to changes in the economy.