

# Discussion of “Unconventional Monetary Policy and the Great Recession: Estimating the Macroeconomic Effects of a Spread Compression at the Zero Lower Bound”

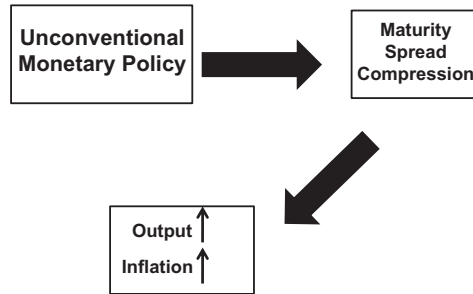
Márcio G. P. Garcia  
PUC-Rio – Brazil  
Visiting Scholar, Sloan School, MIT  
and NBER

This paper aims at quantitatively evaluating two questions:

- (i) How effective were central banks’ unconventional monetary policy actions at countering the recessionary shocks associated with the 2007–09 financial crisis? (Or how would output, inflation, and unemployment have evolved, had the asset purchase programs never existed?)
- (ii) How powerful are central bank interventions at the zero lower bound (ZLB), when the traditional instruments for conducting monetary policy are no longer available?

These are, indeed, two very relevant questions in the aftermath of the Second Great Contraction (Reinhart and Rogoff 2009). The implications for economic policy are many:

- Will the current monetary easing programs in the United States, United Kingdom, euro zone, and Japan be able to strengthen the world economy and reduce unemployment? Among other important effects, this is crucial for the euro to survive.
- What would the transmission channel(s) be? Is the maturity spread compression relevant?
- For emerging markets—and, more specifically, for my country, Brazil—there are possible unforeseen repercussions. The

**Figure 1. The Transmission Channel**

Brazilian finance minister has been justifying protectionist trade tariffs increases on the grounds that QE3 will be ineffective to boost output and will only generate a beggar-thy-neighbor effect, given the depreciation of the U.S. dollar. Therefore, if QE3 can be shown to have a good chance of boosting U.S. output, maybe less damage will be done to Brazilian productivity.

The transmission channel the authors have in mind is through the maturity spread compression, as highlighted in figure 1.

The method the authors adopt to answer the questions above is the estimation of a VAR (vector autoregression) with time-varying parameters: TVP-VAR. According to them, the great advantage of the TVP-VAR is that it may cope with changes in the underlying behavioral relationships that were probably caused by the Second Great Contraction.

Due to computational limitations, they use only four time series in the TVP-VAR: the short-term nominal interest rate, the spread between the ten-year Treasury-bond yield and the policy rate, inflation (GDP deflator), and GDP growth.

The empirical analysis leads to two main findings:

- (i) A compression in the long-term yield spread exerts a powerful effect on both output growth and inflation in the United States and in the United Kingdom at the ZLB.
- (ii) Conditional on consensus estimates of the impact of the Federal Reserve's and the Bank of England's asset purchase

programs on long-term government-bond yield spreads, the counterfactual simulations have indicated that, both in the United States and in the United Kingdom, unconventional monetary policy actions have been successful at mitigating significant risks both of deflation and of larger output collapses.

Let me start my comments by stating that, no longer being a time-series econometrician, I may not do justice to the very sophisticated technique used: TVP-VAR. With such caveat in mind, my doubts regarding the usefulness of such technique to the problem at hand are the following:

- Does the data availability really allow the TVP-VAR to capture the change in the underlying behavioral relationships?
- What is the actual gain of TVP-VAR? How would the results compare with a VAR estimated only with the recent data?
- Is there some sort of omitted-variable-like bias? After all, since the concern is with the effects of policy, can fiscal policy be left out of the estimation? Would the exclusion of a fiscal policy variable bias the results or would it only cause loss of efficiency to the estimation?

In a paper that hinges on counterfactuals, Lucas critique is a big issue. Two ways are used to answer the second question (How powerful is a compression in the maturity yield spread at the ZLB?):

- (i) “zeroing out” the structural interest rate rule (keeping the short-term interest rate at zero for eight quarters); and
- (ii) “constant interest rate” projection (imposing a sequence of monetary policy shocks that exactly neutralizes the systematic component of monetary policy, which would require raising the short-term rate in response to higher inflation and real output growth triggered by the spread compression, thereby keeping the short-term interest rate constant for eight quarters).

Do these techniques duly account for the Lucas critique?

For the first technique (“zeroing out” the structural interest rate rule), the authors are ambivalent: “Even though Benati and Surico (2009) and Benati (2010) have shown based on estimated DSGE

models that results produced by such counterfactuals may turn out to be misleading, the extent to which the Lucas critique matters is an empirical question and has to be judged on a case-by-case basis.” It is not clear why the authors think that the Lucas critique may not apply to this specific case.

For the second technique (constant interest rate projections), the authors assume that the “public will not revise the model it uses to forecast the future path of the nominal interest rate despite the fact that the policy rate is repeatedly deviating in the same direction [downwards] from the path that would be implied by the systematic component of monetary policy” as a result of “a sequence of interest rate ‘surprises’ *all of the same—negative—sign*. . . . In the present case, it is not evidently unreasonable to presume that the public will not readily uncover such a systematic pattern given that the unanticipated changes in the policy rate last for a comparatively short period.” The problem is that the zero rate policy was announced by the Federal Reserve. Therefore, to “presume that the public will not readily uncover such systematic pattern” is tantamount to assuming that the communication of the Federal Reserve was completely ineffective.

The authors highlight that the effect of the spread increased throughout the sample, becoming strongest during the period of large-scale asset purchases. This may be due to the fact that the zero rate policy that was implemented at the end of the sample may have biased toward zero the estimated coefficient of the short-term interest rate on the TVP-VARs structural equations. In a simple OLS framework, if one variable barely moves in sample, its estimated coefficient will be biased toward zero. Such intuition may carry over to the TVP-VAR. But, if this is the case, the stronger effects attributed to the decrease in the term spread may be mostly attributed to a mistaken econometric identification.

Regarding the effects of the implemented policy, the authors state that “based on the median estimates [if the spread were 60 bp higher], macroeconomic performance would clearly have been worse, with inflation slipping 1 percentage point below zero and output growth reaching a trough of  $-10$  percent in the first quarter of 2009. . . . What is especially noteworthy in the top panel of figure 3 . . . are the risks associated with such projections as measured by the probability of falling into the tails of the posterior distribution.” It

would be instructive to have a distribution generated with the spread at the actual level, through some sort of simulation with several samples of the estimated errors, so that we could assess whether the tail was in fact much higher because of the spread increase or because the errors are large.

In summary, this is a very interesting paper that tackles an extremely important question. It would be nice to have further efforts dedicated at dealing with the question of whether or not the compression of the maturity spread is the best policy to prop up activity. Krishnamurthy and Vissing-Jorgensen (2011) find that the spread compression effect is very “local,” affecting mostly the asset that was purchased, via clientele effect. During the conference, we also heard Hall’s (1977, 2011) misgivings regarding the importance of long-term maturity spreads for igniting aggregate demand. Therefore, this is a very fruitful avenue for research, which merits much more effort, like this paper.

## References

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