Debortoli, Galí and Gambetti - “On the Empirical (Ir)Relevance of the Zero Lower Bound Constraint”

General Discussion

Mark Gertler and Martin Eichenbaum followed up on comments made by one of the discussants, Ben Bernanke. Gertler noted that the zero lower bound on the nominal interest rate (ZLB) might have played its biggest role from late 2008 to 2010, before quantitative easing and forward guidance produced their full effects. This period was also characterized by a rise in aggregate uncertainty, he argued, which might have interacted with the binding ZLB. Gertler identified two channels through which increased uncertainty could have operated. First, increased precautionary savings further reduce the neutral interest rate, bringing it closer to the ZLB. Second, higher uncertainty raises the spread between short-term and long-term interest rates, since the ZLB creates an option value by putting a lower bound on future short-term rates. Gertler encouraged the authors to quantify these channels using their model. Eichenbaum pointed out that the binding ZLB took place during a period of large changes in fiscal spending. According to the Hutchins Center Fiscal Impact Measure, fiscal policy was strongly expansionary until 2011, he argued, before turning very contractionary until 2014. Eichenbaum wondered whether the authors could investigate the interplay between fiscal policy and the ZLB by repeating their empirical exercise using the pre- and post-2011 subsamples. He admitted that there might be power issues with such a short sample. The authors acknowledged that strongly countercyclical fiscal policy could in theory explain the empirical irrelevance of the ZLB that they document in the paper. However, this explanation is hard to reconcile with their evidence on the response of long-term interest rates. Fiscal policy alone couldn’t explain why the behavior of these rates did not change during the ZLB period, they argued. This is suggestive of a dominant role for monetary policy in the form of quantitative easing and forward guidance, according to the authors.

The rest of the discussion focused on three topics: the role of deflation, the open economy implications of a binding ZLB, and the ability of monetary policy to offset shocks using unconventional monetary policy instruments.

On the first topic, Benjamin Friedman noted that deflation might be the major risk associated to the ZLB. He argued that neither the standard New Keynesian model, nor the FRB/US model used by one of the discussants, Ben Bernanke, creates room for strong deflationary effects. The authors agreed that the incidence of deflation depends on the specifics of the model. In particular, they argued that their New Keynesian model is more forward-looking than the models used by Bernanke in his discussion, namely the FRB/US model and the one of Chung et al. (2019). This could explain some of the discrepancies between Bernanke’s simulations and the authors’, particularly when it comes to the response of long-term interest rates, they suggested. Bernanke clarified that price and wage setting are forward-looking in the model of Chung et al. (2019), and so are financial markets. On the contrary, consumption and investment are backward-looking. Friedman offered a second comment. The paper’s findings suggest that unconventional monetary policy instruments had a powerful effect and helped mitigate the importance of the ZLB, he reminded. This raises the possibility that these instruments could be used as a substitute for the federal funds rate even when the ZLB doesn’t bind, he argued.
Laura Veldkamp emphasized the role of expectations about inflation and the duration of the ZLB episode. Survey evidence and bond-implied inflation risk premia reveal that agents expected this episode to be short-lived and inflation to take off, she mentioned. Veldkamp suggested that these expectations could have mitigated the effect of the binding ZLB. The authors shared Veldkamp’s view. They used their model to explore the effect of expectations about the duration of the ZLB episode. The authors noted that these expectations are key for the response to shocks, especially when it comes to movements in long-term rates. They clarified that their baseline simulation assumes that the ZLB is binding for three quarters in expectation. The authors noted that the actual ZLB episode lasted for 28 quarters, and that such a long duration was arguably unexpected. A version of their model calibrated with an expected duration of 28 quarters produces unrealistically large responses to shocks. This exercise suggests that expectations about the duration of the ZLB episode play a crucial role, they argued. Thomas Philippon followed up briefly on Veldkamp’s comment. He noted that the case of Japan is interesting in that the expected duration of the ZLB episode was much longer than in the U.S. This could allow the authors to verify some of their predictions, he suggested.

Turning to the second topic, Philippon emphasized that the authors adopted a closed economy framework. He noted that a binding ZLB typically modulates the exchange rate response to shocks in the class of models that the authors work with. Philippon wondered whether this prediction is verified in the data. They responded by referring to existing work of theirs. In Galí (2019), they found that the exchange rate response to expected changes in interest rates is muted when the ZLB binds, which suggests that the effect of monetary policy is dampened.

Christopher Erceg suggested decomposing the impulse response for output in terms of each component of aggregate demand. A binding ZLB might not affect the response of output to shocks, he argued, but it could affect its composition and the international spillovers. In particular, accommodative monetary policy should mostly operate through domestic demand if the exchange rate response is dampened at the ZLB - as the authors suggested.

On the third topic, Erceg reminded the audience that the issue of the ZLB is not specific to the U.S. He agreed with the authors’ assessment that quantitative easing had been effective in the U.S. On the contrary, Erceg noted that the effects of unconventional monetary policy might be more limited in economies where interest rates are low across all maturities, as in Germany. The authors were in agreement with Erceg’s comment. They emphasized that the paper doesn’t claim that the ZLB itself is irrelevant. Rather, it concludes that policy was conducted in such a way that the ZLB was effectively irrelevant, they added.

Gabriel Chodorow-Reich nuanced the authors’ conclusions on the effect of a binding ZLB. Two types of shocks can hit an economy, he argued: diffusion shocks and jump shocks. Chodorow-Reich agreed that the monetary authority might be able to offset small diffusion shocks, even when the ZLB binds. However, central banks might lack the proper tools to respond to large jump shocks, he noted. The authors responded that they found that large shocks actually took place when the ZLB was binding. The corresponding responses of inflation, output and long-term interest rate are still proportional to those obtained for the pre-ZLB period, which suggests that monetary policy was able to mitigate the effect of a binding ZLB despite large shocks.
Mark Gertler agreed with the authors’ overall conclusion, arguing that policy largely circumvented the ZLB constraint from 2010 on. However, the ZLB might have been more constraining during the 2008-2009 period, according to Gertler. He noted that the decrease in nominal interest rates during the Great Recession relative to the decrease in output was similar to previous recessions. The decrease in nominal interest rates should have been much larger to compensate for the increase in credit costs due to the financial crisis, he argued. This suggests that the ZLB might have played a significant role in the aftermath of the financial crisis, according to Gertler. The authors suggested that they could use long-term rates in their VAR specifications, instead of 10-year government bonds, to investigate this point.

The participants concluded the general discussion with a more informal exchange on the experiences of Europe and Japan at the ZLB. Martin Eichenbaum noted that the European Central Bank’s response was less aggressive than that of the Federal Reserve. He wondered whether this was responsible for more volatility in Europe. Ben Bernanke and Valerie Ramey pointed out that sovereign debt crises and different fiscal responses in Europe might be confounding factors. Frederic Mishkin argued that the ECB’s response was actually as aggressive as the Fed’s before 2010, but was more timid afterwards. The authors cited the case of Japan as having larger responses to aggregate shocks during the ZLB episode compared to the U.S. They suggested that the Bank of Japan was less accommodative than the Fed, which could explain the higher volatility of aggregate variables.

References
