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When Quantitative Tightening Is Not Quantitative Tightening

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2019 U.S. Monetary Policy Forum
The Future of the Federal Reserve's Balance Sheet

Feb. 22, 2019
New York, N.Y.

*Any opinions expressed here are my own and do not necessarily reflect those of the
Federal Open Market Committee.*

Introduction

The quantitative tightening debate

- The Federal Open Market Committee (FOMC) has raised the policy rate and simultaneously reduced the size of the Federal Reserve's balance sheet since late 2017.
- Many have argued that the balance sheet reduction could operate in the background with relatively small macroeconomic effects.
- Others argue that balance sheet reduction should have equal and opposite effects relative to balance sheet expansion (i.e., quantitative easing) and, accordingly, that there may be relatively large macroeconomic effects.
- This latter view has sometimes been called “quantitative tightening,” or QT, in global financial markets.
- Which view is more accurate?

The case for small effects from QT

- I will argue that the case for relatively small macroeconomic effects of balance sheet reduction is more accurate.
- My argument has three parts:
 - A baseline neutrality theory suggests temporarily increasing the Fed's balance sheet size beyond the minimal level needed to implement monetary policy has no macroeconomic effect at all when the policy rate is well above the zero lower bound.
 - While the policy rate was near zero, the Fed's balance sheet policy nevertheless had an important macroeconomic impact through a signaling channel—bond purchases signaled “lower for longer.”
 - With the policy rate now well above zero, this signaling channel is no longer operative, and the baseline neutrality theory again applies.

Policy implications

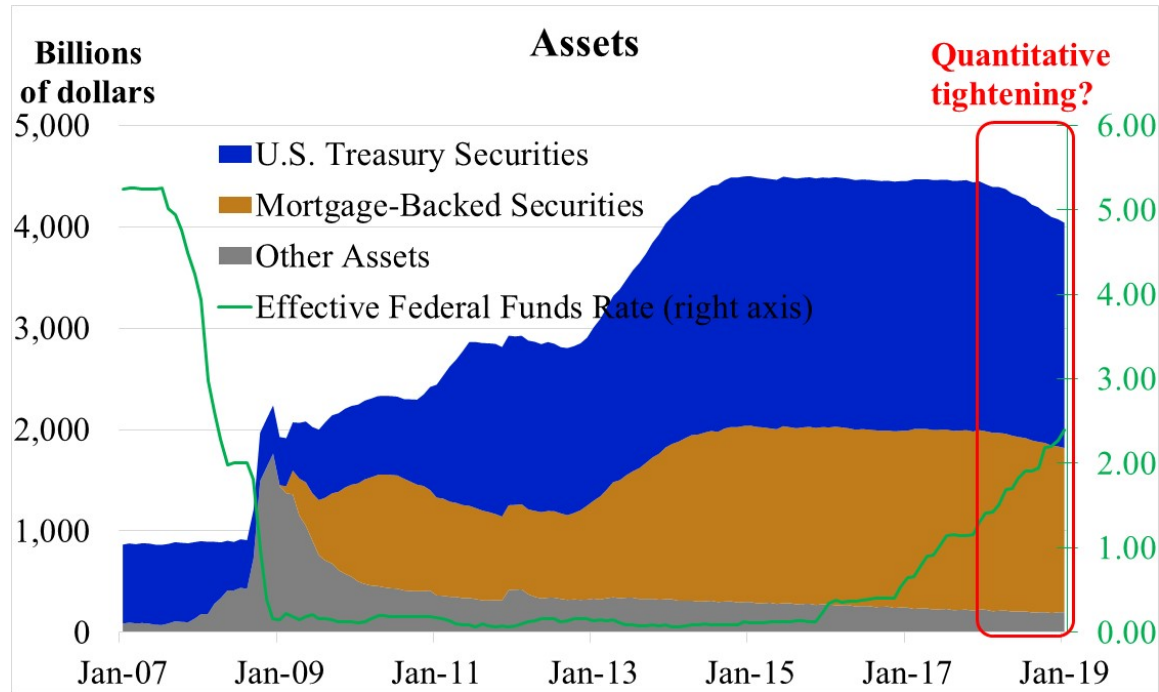
- My argument suggests that it is indeed possible to view quantitative easing as having an important influence on the macroeconomy, and simultaneously view the macroeconomic effects of unwinding the balance sheet as relatively minor.
- This may be one reason why the FOMC's balance sheet reduction policy beginning in the fall of 2017 seemed to have only minor effects in financial markets.
- The balance sheet reduction has arguably been significant—the Fed has been able to reduce reserve balances by about 40 percent from the peak.

Baseline Neutrality

Quantitative easing

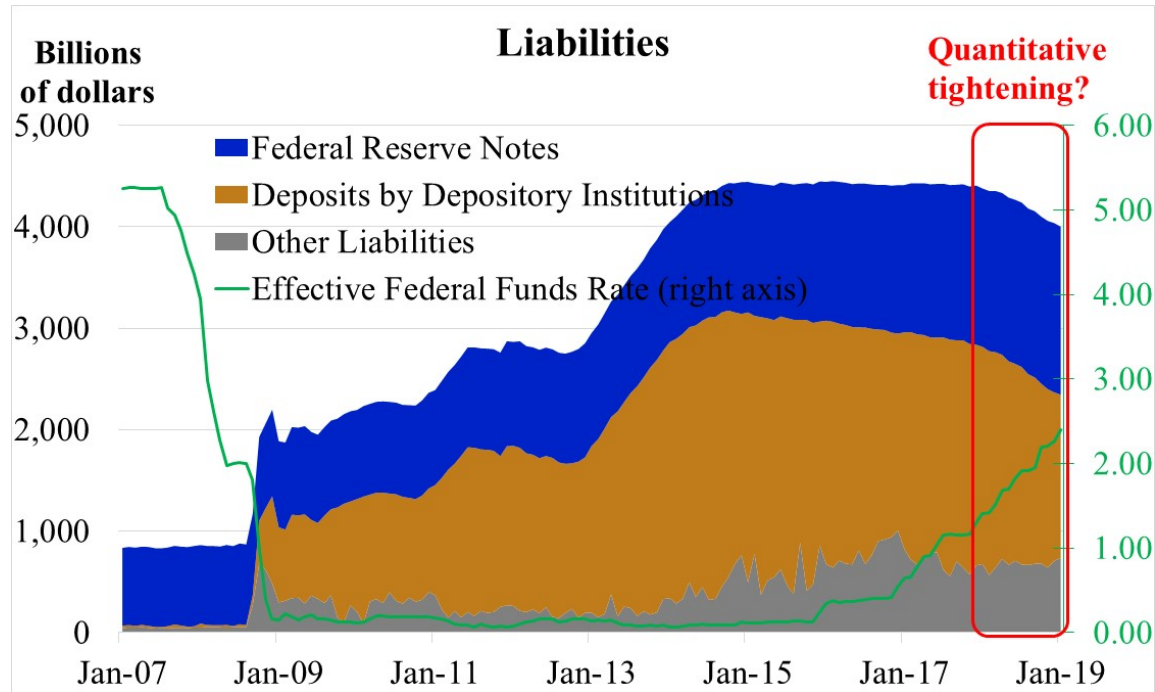
- The FOMC increased the size of the Fed's balance sheet—often called quantitative easing or QE—after the policy rate was lowered to near zero.
- Many have argued that QE had important beneficial effects in aiding the economic recovery following the 2007-2009 recession.
- The FOMC allowed the balance sheet to begin shrinking in nominal terms in the second half of 2017.
- The balance sheet was shrinking relative to the size of the economy well before that.

The Fed's balance sheet



Sources: Federal Reserve Board and author's calculations. Last observation: January 2019.

The Fed's balance sheet



Sources: Federal Reserve Board and author's calculations. Last observation: January 2019.

A neutrality proposition

- Cúrdia and Woodford (2010) analyzed a standard New Keynesian model with financial intermediation and bank reserves.*
- They argued that in situations where financial markets are functioning properly, temporarily expanding the level of reserves beyond the satiation point for banks would have no direct effect on the economy.
- This is one way to formulate a neutrality theorem for the size of the Fed's balance sheet in ordinary times.
- We can take “ordinary times” to mean that the policy rate is well above the zero (or effective) lower bound.

* V. Cúrdia and M. Woodford, “[Conventional and Unconventional Monetary Policy](#),” *Federal Reserve Bank of St. Louis Review*, July/August 2010, 229-64.

Signaling

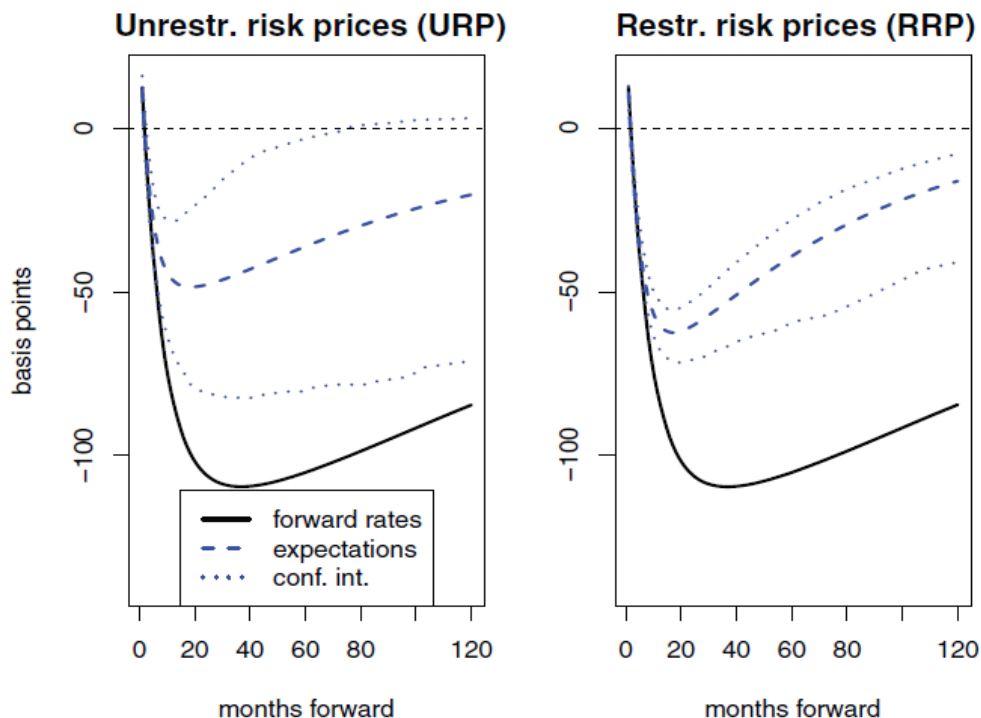
Actual effects from QE

- The actual effects of QE appear to be far from neutral.*
- There are many ideas about why this may be so.
- One leading candidate theory is that QE did not have direct effects but did send a credible signal about how long the FOMC intended to keep the policy rate near zero.
- The following chart from Bauer and Rudebusch (2014) shows one set of estimates from the literature documenting important signaling effects from QE.**

* See S. Bhattacharai and C.J. Neely, "[*An Analysis of the Literature on International Unconventional Monetary Policy*](#)," Federal Reserve Bank of St. Louis Working Paper No. 2016-021C, October 2018.

** M.D. Bauer and G.D. Rudebusch, "[*The Signaling Channel for Federal Reserve Bond Purchases*](#)," International Journal of Central Banking, September 2014, 10(3), 233-90.

Empirical signaling effects



Source: Bauer and Rudebusch (2010), 265, fig. 3.

Note: The figure illustrates the effect of QE announcements on forward rates. A sizable part of the effect is due to expectations for future policy. Imposing no-arbitrage restrictions (right panel) delivers more precise estimates.

QE is effective via signaling

- The signaling argument seems to work reasonably well if the policy rate is near zero.
- In that situation, the FOMC may wish to signal convincingly that it will keep the policy rate near zero “for longer”—i.e., beyond the time that an ordinary approach to monetary policy would call for rising rates.
- QE may have been a good approach to accomplish this objective.

Signaling effects dissipate

- The FOMC has normalized the policy rate to a considerable extent during 2017 and 2018.
- Once the policy rate rose above the lower bound, balance sheet movements no longer provided a valuable signal about the future direction of monetary policy.
- This means that the Cúrdia-Woodford neutrality theorem would again apply and that the size of the balance sheet could be reduced without important macroeconomic consequences.
- Thus, the balance sheet reduction could occur “in the background.”

Asymmetric effects

- In summary, the financial and macroeconomic impact of the FOMC's balance sheet policy may well be asymmetric.
- With the policy rate near zero, the effects of QE may have been substantial due to signaling effects.
- Now, with the policy rate well above zero, any signaling effects from balance sheet changes have dissipated.
- This means balance sheet shrinkage—"QT"—does not have equal and opposite effects from QE. Indeed, one may view the effects of unwinding the balance sheet as relatively minor.

Caveats

Crosscurrents

- There are many theories of unconventional monetary policy, and I have emphasized just one that may be important.
- Nevertheless, this theory has some empirical support and seems to be consistent with observed large impacts on financial markets from unanticipated announcements of QE policy actions documented by Bhattarai and Neely (2018), but also consistent with the seemingly small observed impacts from unanticipated announcements of QT policy actions during 2017.

Conclusion

Conclusion

- I have presented an argument for why we might expect asymmetric effects of Fed balance sheet policy.
- When the policy rate was near zero, the FOMC wished to signal “lower for longer,” and QE provided a way to credibly provide that signal.
- Once the policy rate moved well above the lower bound, the size of the balance sheet no longer provided any signal for the future direction of monetary policy.
- This provides one rationale for why balance sheet policy may be less important today than it was during the heyday of QE.



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