



QT is a Nothingburger

- The negative expectations shock associated with QE exit was absorbed in 2014-15
- IOER increases render the size of the Fed's balance sheet largely irrelevant
- There is not a "fixed pool" of cash available to purchase Treasuries
- Any "flow effect" of reduced Fed holdings should be limited and fully priced in

As detailed in ["Jay Powell: Scared Straight"](#) (Dec 27), the Macrolens view has been that the predominant driver of the Q4 sell-off was a Fed messaging error that was easily fixable: the Fed needed to stop playing traffic cop on GDP growth. With rate-hikes a non-issue for now, let's dive into another key pillar of the bullish call: that *widespread market fears of the Fed balance sheet reduction policy (hereafter "QT") are wildly overblown.*

There are two common strains of QT paranoia: some worry that the Fed is "withdrawing liquidity" while others fret about the Fed potentially pushing up bond yields. These concerns are contradictory. Other things equal, a withdrawal of liquidity is bullish for bonds (bearish for inflation). So are we supposed to be worried about yields going up or down?

The fact is, it could be either. A non-central bank purchase of Treasury bonds involves an exchange of cash for bonds from one market participant to another, leaving the system-wide supply of both cash and bonds unchanged. But because Fed purchases *alter the supply of monetary liquidity in the system, their effect bond prices is ambiguous.*

The notion that "more bond supply = higher yields = tighter monetary conditions" is an erroneous oversimplification.

There are in fact three channels for Fed asset purchases to effect asset prices that require investigation:

- The potential for a change in inflation expectations stemming from the implicit forward guidance that QE/QT entail
- The potential for changes in inflation and nominal asset values stemming from an increase in monetary liquidity
- The potential for a change in bond yields stemming from an altered supply of marketable Treasuries

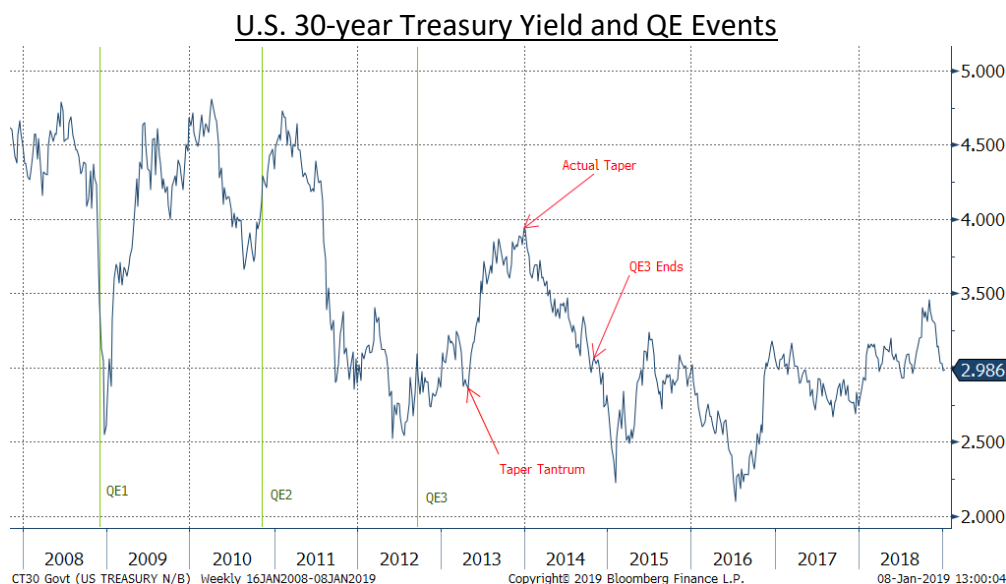
The Expectations Channel

The foundational theory on the expectations effect of QE is Krugman’s [“credible commitment to irresponsibility.”](#)

*in a country with poor long-run growth prospects - for example, because of unfavorable demographic trends - the short-term real interest rate that would be needed to match saving and investment may well be negative; since nominal interest rates cannot be negative, **the country therefore "needs" expected inflation.** If prices were perfectly flexible, the economy would get the inflation it needs, regardless of monetary policy - if necessary by deflating now so that prices can rise in the future. But if current prices are not downwardly flexible, **and the public expects price stability in the long run**, the economy cannot get the expected inflation it needs; and in that situation the economy finds itself in a slump against which short-run monetary expansion, no matter how large, is ineffective.*

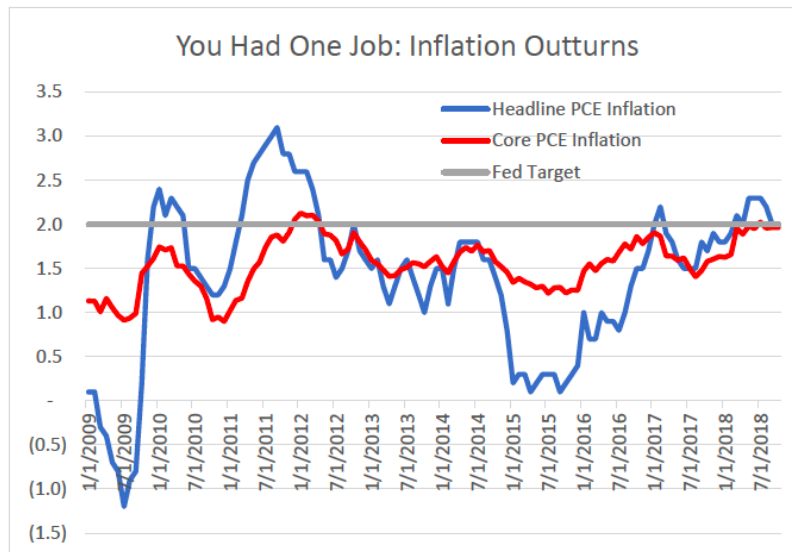
*...the simplest way out of the slump is to give the economy the inflationary expectations it needs. This means that **the central bank must make a credible commitment to engage in what would in other contexts be regarded as irresponsible monetary policy - that is, convince the private sector that it will not reverse its current monetary expansion when prices begin to rise!***

This was the unspoken commitment the Fed made with each iteration of QE (often coupled with explicit forward guidance): to run strongly accommodative policy until the inflation target was achieved in a symmetrical manner. And the effect was visible in long-Treasury yields, which generally moved *higher* with QE announcements.



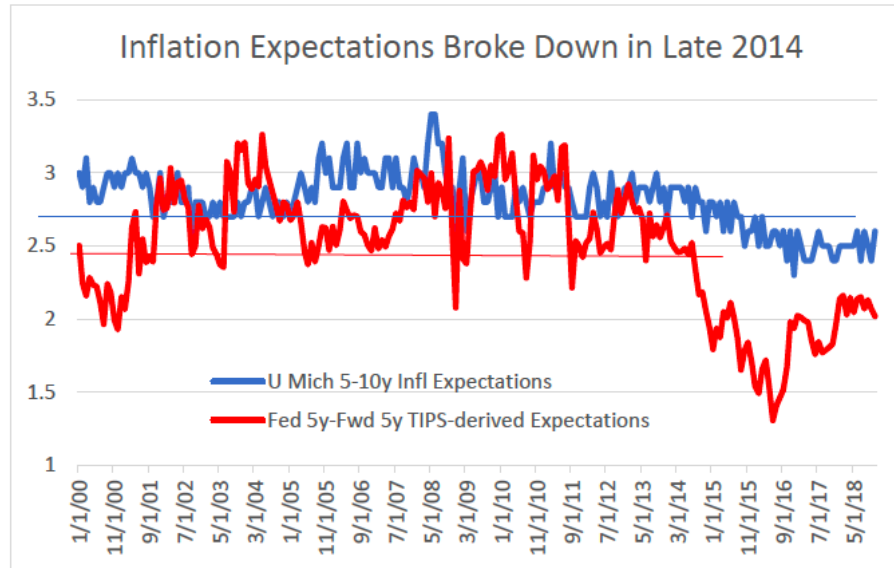
Consider the importance of the “credible commitment to irresponsibility” from the perspective of a market participant deciding whether to use the excess funding provided by QE to buy risky assets. Would they do so if they thought the Fed was going to pull the plug as soon as the party - i.e. the nominal lift to goods, services and asset prices - got started?

As it stands, *the Fed didn't follow through*. As detailed in [“Fed Memo: You Had One Job”](#) (12/18/18), the Fed began to exit QE in 2014 *with inflation still well below target*. They broke their “commitment to be irresponsible.”



Source: BEA

The result was a breakdown in inflation expectations and a sharp tightening of monetary conditions as the Dollar rallied sharply, commodity prices collapsed, and the yield curve began an incessant flattening:



Source: Federal Reserve, University of Michigan

Ancient History: There was a considerable negative expectations shock resulting from QE exit - but that hit has already been taken back in 2014-15.

The Liquidity Channel

Fed asset purchases are unique in that they alter the level of “monetary liquidity” in the system (“monetary liquidity as distinct from “market liquidity”). In the modern financial system there is no fine line between money and non-money.

We can all agree that c-note in your pocket is “money.” It is a zero-interest government obligation of zero maturity, redeemable at par. You can exchange it for the equivalent of \$100 in “stuff” on demand.

A 1-month T-Bill is not “money” per se, but it’s pretty darn close. You can redeem it in one month at par, and if you want to redeem it earlier the price will be very close to par. In reward for that sliver of par-value uncertainty you get paid a sliver of interest.

A 30-year T-bond is considerably less “money-like.” You aren’t guaranteed redemption at par until 30 years hence. While the bond enjoys excellent “market liquidity,” its long duration presents the potential for wide price swings around its par value. Unlike the c-note in your pocket, if you get into a pinch and need to turn that 30-year T-bond into “stuff” you are subject to a high degree of uncertainty as to how much “stuff” it will bring in return.

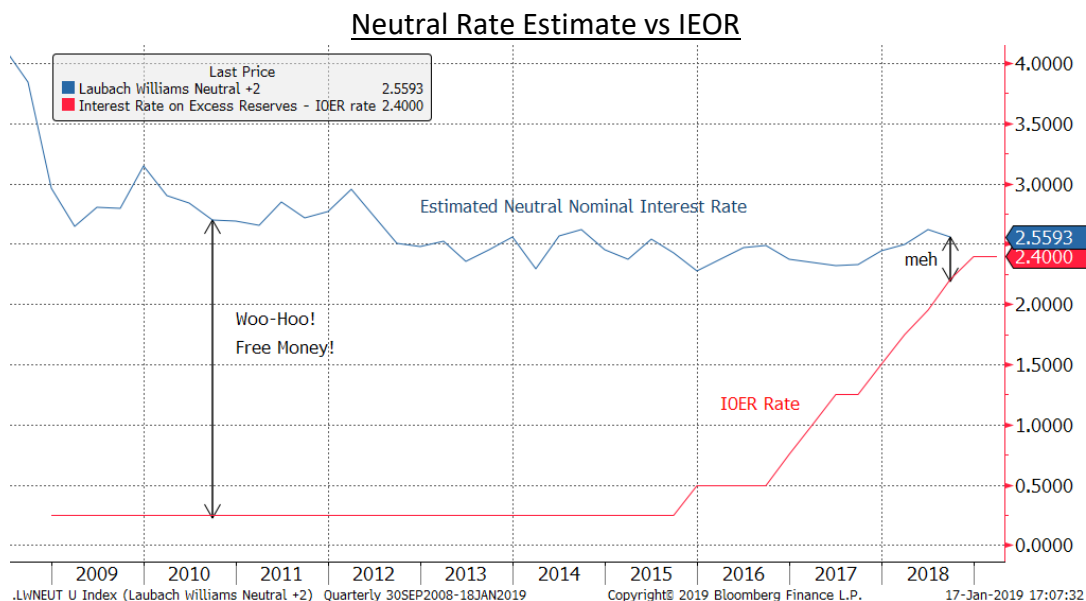
We should think of “money supply” not as a discrete variable but as an amorphous concept, with the pool of assets providing various degrees of “monetary liquidity” along a continuum from cash to bills to bonds to listed equity to PE and real estate.

In this framework, QE – the Fed’s withdrawal of a bond from the system in exchange for bank reserves – would increase the degree of monetary liquidity in the system. But since the onset of “interest on reserves” the Fed doesn’t actually buy assets with “cash.” They buy assets in exchange for bank reserves: 1-day maturity obligations *which pay interest*.

The payment of interest distinguishes today’s bank reserves from true “money” and – this is key – *the more interest they pay the less money-like the reserves*. Imagine if the Fed paid 20% interest on reserves. *They would become perfectly illiquid* – holders would sit on them endlessly and no one would ever use them.

By raising IOER towards the “neutral” rate, the pool of excess reserves has been “neutralized” (or “sterilized” in the parlance). *This renders the size of the pool of reserves irrelevant to liquidity conditions and asset prices*.

As an example, if I stuff you with funds at a yield of zero when the neutral interest rate is 2.5% you’re likely to go out and take risk with those funds in pursuit of more yield. You’ve effectively been given a 2.5% “cushion.” But if I stuff you with funds at 2.5% while the neutral rate is 2.5%, you’re attitude towards that transaction will pretty “neutral,” won’t it?



QT would have had a much more powerful negative effect if the Fed had sequenced it BEFORE hiking IOER to neutral. But then they would have had no way to calibrate the pace and degree of tightening. That's why they decided to "neutralize" the balance sheet before dramatically shrinking the pool of excess reserves.

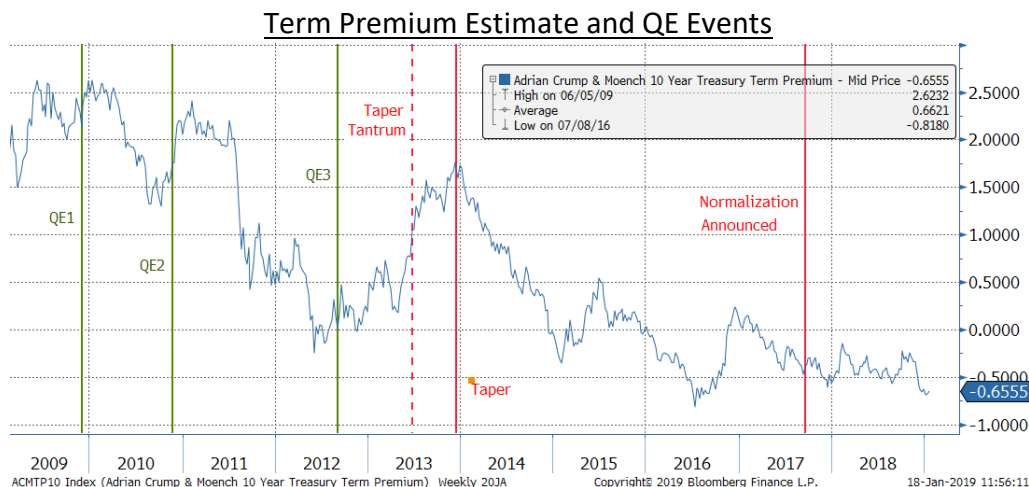
No double-whammy: The "liquidity tightening" was affected by raising the interest rate on excess reserves towards neutral. With excess reserves thereby "neutralized" there will be no further liquidity effect felt from the shrinkage of that pool of reserves.

The "Bond Supply Channel"

My issues with the notion that we should be concerned about bond yields being pushed up are several:

- There is no sign of upward pressure on the term premium
- Any supply-effect should be embedded in current market prices
- The fallacy of a "fixed pool of cash"

Any supply effect on Treasury yields would work through changes in the [term premium](#). Insofar as common estimates of the term premium are in fact accurate depictions thereof, they show no consistent effect from fluctuations in Fed purchase or sale activity. As of yet, with the term premium at generational lows, there is no sign of the Fed's balance sheet reduction putting upward pressure on yields.





Furthermore, given the clarity of the Fed's intentions, shouldn't any supply effect be fully embedded in prices already? Let's imagine that China announced they were going to sell \$1.2bn 10y note equivalents (about what the Fed is doing) in regular intervals over the next 36 months. What would happen?

Most likely, the long end would sell off by a few of points on the headline. And that would be pretty much it. Would we be obsessing about it for the ensuing three years? Would we get short in front of every auction through 2022? No. The news would be fully embedded in market expectations in the hours and days following the announcement.

Perhaps supply fears are exaggerated as a result of a fallacy about how modern financial markets operate. *There is not a fixed pool of cash in the marketplace available for the purchase of bonds.*

Treasury bonds are easily lever-able. If the 10-year yield gets pushed well above levels implied by my estimate of the future path of short rates (ie the term premium rises) I can borrow funds at the current short rate in an attempt to capture that premium. The cash to affect that trade does not come from a fixed pool – *it is created by the bank that provides my repo financing.*

In this way, increased Treasury supply need not “crowd out” demand for other assets. Any supply effect on the term premium will eventually attract arbitrageurs who will source newly-created liquidity and apply it to capping yields.

The market is seeing supply ghosts: *The pool of cash available for market participants is not fixed – it can expand with speculator demand. QE has had no discernible effect on the term premium thus far.*

Conclusions

- The negative expectations shock associated with QE exit is ancient history
- Because the Fed has “neutralized” excess reserves their shrinking quantity is irrelevant
- The supply of cash available to buy Treasuries is elastic, limiting the degree to which supply disruption can sustainably alter yields

Don't sweat QT. It's a nothingburger.