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Quantitative Easing Roll-Off (QERO)

The beginning of the end of the Fed's quantitative easing programs is measured, well-telegraphed and should not roil markets

What was Quantitative Easing (QE)?

After the financial crisis, the Federal Reserve (Fed) lowered the Federal Funds Rate—its main policy tool—to zero. To further stimulate the economy without lowering rates below zero, the Fed implemented several new programs. The "Large-scale Asset Purchase Programs (LSAP)" were some of the most significant. These programs included the purchase of U.S. Treasurys, U.S. Agency Debt and U.S. Mortgage-Backed Securities (MBS) on the open market, and are colloquially referred to as "quantitative easing." The LSAP programs ended in 2014.

Why was it called QE?

When adjusting the targeted Fed Funds rate, the Fed seeks to change the 'cost' of money, a *qualitative* factor. When buying securities, the Fed directly increases reserves in the banking system—a higher *quantity* of money. Similar to lowering rates, this is a form of monetary policy easing. Hence, these asset purchases are referred to as quantitative *easing*, distinguishing them from standard rate cuts.

If the LSAP Programs ended in 2014, how does QE still affect markets?

QE still affects markets today in two main ways. The first is the amount—or the stock—of securities on the Fed's balance sheet. By removing bonds from the market, the Fed effectively reduces the available supply, thus increasing their market prices and decreasing their yields. Second, in order to keep the stock of assets on their balance sheet constant, the Fed reinvests all coupon and principal payments back into the market. This reinvestment, or *flow* of payments, maintains the balance sheet at a constant size, and therefore neither tightens nor loosens monetary policy.

Most market participants believe that both lower interest rates and higher equity prices are two direct outcomes from QE that persist today because the stock of assets on the Fed's balance sheet is still quite high, and the *flow* keeps it that way.

What is Quantitative Easing Roll-off (QERO)?

QERO refers to the Fed gradually decreasing the reinvestment of coupon and principal payments. It reduces the flow of the Fed's payments back into the bond markets, allows the Fed's balance sheet to shrink slowly, and is a gradual tightening of monetary policy. It is part of the Fed's overall plan—referred to as Policy Normalization—to tighten monetary policy from the exceptionally accommodative stance of the post-financial crisis era.

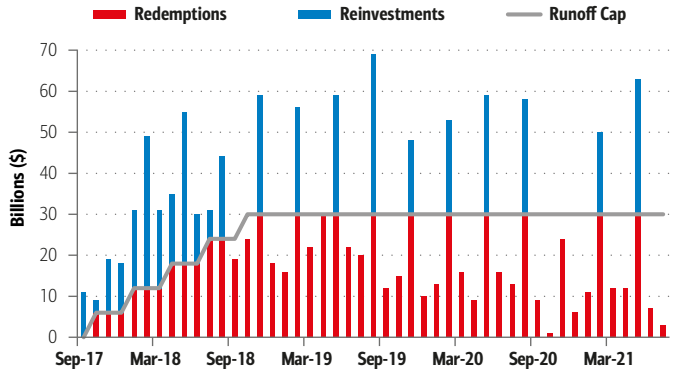
How is QERO expected to work?

The Fed will not cease reinvestments all at once; rather, we anticipate that it will do so gradually. Specifically, the Fed is expected to only reinvest proceeds greater than pre-defined limits, or "caps." The caps initially start at $6 billion (bn) per month for Treasurys and $4bn per month for Agency MBS.

For example, assume the Fed receives $20bn Treasury and $6bn MBS payments in the first month of QERO, for a total of $26bn. It reinvests $14bn into the Treasury market ($20bn minus the $6bn Treasury cap) and $2bn into the MBS market ($6bn minus the anticipated $4bn MBS cap). It only reinvests a total of $16bn into securities to be held on its balance sheet out of the $26bn available to be reinvested, so the balance sheet effectively shrinks by $10bn. It shrinks by the sum of both caps, and will continue to shrink monthly at that rate ***as long as reinvestment proceeds exceed the caps***. (As QERO continues, this will not be the case every month; sometimes reinvestment proceeds will be less than the caps.)

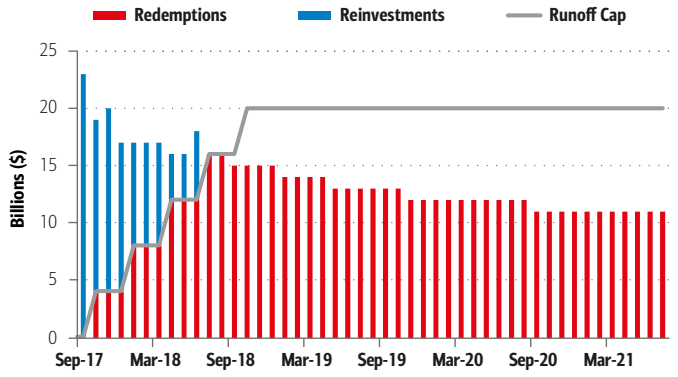
Based on the Fed's current policy, the caps should gradually increase for a period of time. The Treasury cap increases in $6bn increments every three months over a 12-month period until it reaches $30bn per month. The MBS cap increase in $4bn increments every three months over a 12-month period until it reaches $20bn per month.

Exhibit 1: Pace of expected Fed Treausry redemptions ($bn)



Source: Federal Reserve Bank of New York as of July 13, 2017

Exhibit 2: Pace of expected Fed MBS redemptions ($bn)



Source: Federal Reserve Bank of New York as of July 13, 2017

Will QERO have a significant effect on markets?

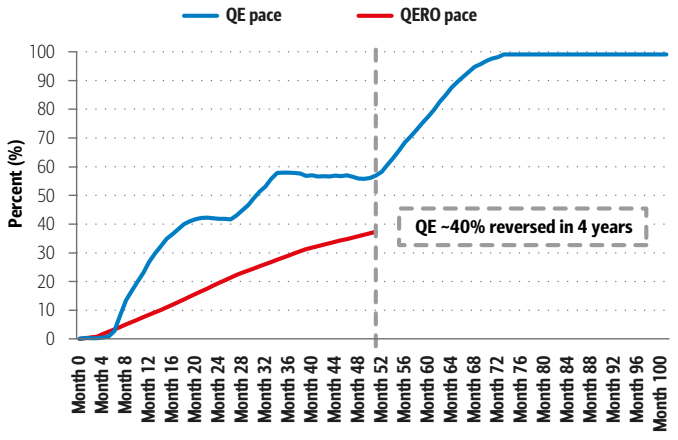
Most market participants agree that QE lowered interest rates and helped increase stock market prices. Fed Chair Janet Yellen, for example, highlighted in a recent press conference that QE may have lowered long-term interest rates by about 1%. Some investors are concerned, therefore, that QERO will have an equal and opposite effect—significantly higher rates and lower equity prices. While we caution that there are many unknowns—this is the first time the market has gone through this process—we are not overly concerned, and do not expect hugely significant market moves.

For one, the pace and amount of QERO is not commensurate with QE. As of August 2017[1], the Fed had $4.2 trillion (trn) of securities on its balance sheet. This was an increase of $3.7trn from December 2008, before the advent of QE. We anticipate that QERO will effectively reduce the Fed's balance sheet by approximately $32bn per month. That equates to ~$400bn a year, or ~$1.2trn over three years. While it is a significant amount, it is only a third of the total QE programs, and works out to effectively a ~10% reduction in QE per year—a very manageable pace, and significantly slower than the introduction of QE.

After four years, the Fed's securities holdings should be down to an estimated $2.8trn. Many economists believe that the Fed's balance sheet will not actually decrease back to its pre-crisis level, and the Fed may actually operate with approximately $3trn of securities in its new steady-state. Furthermore, given the growth of the economy and the increased demand for currency over the last 10 years, the Fed's balance sheet *should* be higher than pre-crisis, otherwise monetary policy would have been significantly tighter. By keeping the balance sheet constant for the past several years, the Fed has actually masked the need to effectively grow its balance sheet had they not embarked on QE. For these reasons, we are not concerned about significant market effects.

Exhibit 3: QE vs QERO

QERO is a decidedly more modest pace than QE



Source: Federal Reserve, Bloomberg, US Trust as of September 22, 2017

[1] Quarterly Report on Federal Reserve Balance Sheet Developments. Board of Governors of the Federal Reserve System, August 2017.

How should QERO affect Treasury and MBS markets?

QERO will act similar to a tightening of monetary policy. At the current pace, some market participants and former Fed officials estimate that it will work out to approximately a 25 basis points (bps) Fed hike per year, or an increase in 10-year rates of 10–15 bps per annum more than would normally occur.[2] However, given that QE in the U.S. has only been a fraction of global central bank activity, and given that—as the Fed estimates—it has effectively reduced rates by 1%, a full reversal of that magnitude is possible, so a range of 50–100 bps is a reasonable estimate.

Furthermore, given that we expect other significant changes over the coming years—changes in economic growth and inflation both here and abroad, tighter monetary policy in other developed nations, higher Treasury note issuance—it will be difficult to determine exactly how much each factor individually affects rates, but we remain steadfast in our view that the trend in long-term rates is higher. In terms of Agency MBS, our Chief Investment Office estimates a widening in spreads, with about half of it already priced in. On balance, we believe that QERO should lead to a slightly steeper curve than standard Fed rate hikes, since it affects longer-dated assets and hence longer-dated rates.

What is QERO's impact on the banking sector?

QE resulted in the Fed injecting large amounts of liquidity into the banking system in the form of excess reserves, which supported deposit growth. QERO will slowly unwind this, and cash may shift out of the banking system. Fortunately, banks generally appear to be in a strong position to handle expected outflows with modest impact to credit quality, as the sector has built excess liquidity for years mainly as a result of post-crisis regulatory reform. For example, the total stock of unencumbered high-quality, liquid assets among the eight largest U.S. banks is over $2.4 trillion.[3] We believe the 2016 money market reforms implemented by the Securities and Exchange Commission provides a good case study for the sector. While banks had significant funding exposure to money market funds, they handled the roughly $1 trillion exodus from prime money market funds through various measures including tapping unsecured debt markets with minimal market impact as long-term bank credit spreads tightened throughout this process.

Are there longer-term risks to the banking system?

QERO may drain ~$1.2 trillion of excess reserves from the banking system over the next few years. One impact may be higher funding costs—if banks aim to keep a similar amount of deposits, they may compete by offering higher rates, at least partially negating the benefit of higher interest rates on their asset portfolios and higher net interest margins. In addition, banks may also have to replenish liquidity portfolios at some point, requiring them to seek alternative sources of funding including tapping long-term debt markets. That said, we do not believe this represents a significant risk to the sector. Deposit growth rates are healthy, and pricing power has been more robust during this most recent rate hike cycle compared to past experiences.

Are there any potential benefits to bank earnings and credit profiles?

We believe that bank earnings should benefit from higher interest rates on their assets, combined with fewer excess reserves (which only yield 1.25% currently). If volatility picks up, a boost in trading and capital markets income may result. Lastly, while liquidity levels could initially deteriorate, banks would expect to see a modest degree of capital relief given the direct impact QE had on the size of banking system assets. As the Fed drains excess reserves, bank assets and liabilities are likely to shrink—all things being equal—which would improve leverage profiles: assets and liabilities decline, with no change in equity. More capital flexibility could set the stage for the deployment of additional balance sheet resources into lending or market making activities, which could also improve earnings over time.

[2] Bernanke Speech September 27 2017

[3] BofAML Global Research, calculated based on individual company disclosures.

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