Equity and fixed income markets barely budged following the Federal Reserve’s Open Market Committee meeting last week, suggesting that investors had fully anticipated the quarter-point hike in the Fed Funds rate. Markets were equally unconcerned about the Fed’s initial framework for reducing its holdings of Treasury bonds and mortgages, taking Chair Janet Yellen at her word that this “quantitative tightening” (QT) process will be “about as exciting as watching paint dry.”

The two programs are at opposite ends of the yield curve, but they are closely linked, as shown in Chart 1. In this chart, the purple line shows the level of interest rates today for maturities ranging from overnight to 30 years, while the dotted orange line shows where they “should” be, given the current state of the economy.¹

On the left side of the chart, the Fed directly controls short-term interest rates, and the central bank clearly wants to raise these rates to levels commensurate with the economy’s current strength. On the right side of the chart, market forces determine the level of longer-term interest rates; market demand for long-term Treasury bonds remains exceptionally strong, so long-term interest rates remain far below their theoretical level.

The linkage between short-term and long-term interest rates – between the Fed Funds rate and the prospect of “quantitative tightening” – is seen in the slope of the yield curve; a positive slope (up and to the right) suggests that investors demand higher interest rates in exchange for longer maturities, which is the normal state of affairs. A negative slope, in which short-term rates are higher than long-term rates, has rightly been considered a harbinger of bear markets and recessions. Indeed, the record since World War II is perfect: Every “inverted” yield curve in the postwar era has been followed by a recession within a year or so.

¹ This theoretical level is predicated on the notion that the 10-year Treasury note yield has historically been approximately equal to the sum of GDP growth and inflation rates, which today would be about 4%. Similar relationships among growth, inflation, and interest rates exist for other maturities, which can then be strung together into the orange line shown in Chart 1.
The correlation with the stock market is weaker but still notable. Chart 2 shows the slope of the yield curve over the past 20 years, in comparison to the S&P 500 index. The slope (purple line) is shown here as the difference in yield between the 10-year and 2-year Treasury notes; when this line is high, the slope is steeply positive, and when this line is below the horizontal axis, the yield curve is inverted. The areas shown in yellow denote periods from the onset of inversion until the bottom of the ensuing market downturn. In each case, the stock market peaked not long after the curve inverted, and then fell between 15% and 55%.

Source: FactSet

In the face of this historical record, the Fed dearly wants to avoid inverting the yield curve now. This is the crux of the central bank’s dilemma: Many current indicators point to the need for higher short-term interest rates, but market forces are keeping long-term rates uncomfortably low. To understand why, consider the choices that global sovereign bond investors can consider: A 10-year U.S. Treasury note pays 2.2%, while comparable debt from Germany pays 0.4%, the U.K. 1.0%, and Japan a barely perceptible 0.05%. Weaker credits like Italy and Canada pay 2.1% and 1.4% respectively. In other words, American sovereign debt offers a combination of price and quality unmatched anywhere in the world. As long as Europe and Japan keep their own QE programs in place, global interest rates will remain low, and U.S. Treasury debt will remain in high demand. Absent Fed intervention, the long-term end of the yield curve will remain low, keeping the curve much flatter than the Fed wants.

2 For example, the unemployment rate is currently 4.3%, a level it has only touched briefly a small handful of times in the past half-century; every one of those occasions was followed by a recession as prices surged and demand dried up. In the current instance, wages haven’t risen especially quickly despite the tight labor market; that’s mainly a function of a mismatch between what employers need (highly specialized and advanced skills) and what workers can offer (“old economy” capabilities). Although wage rates and overall inflation are quiescent, housing prices are rising about 6%, and health care costs are rising even faster. The Fed can feel entirely justified in wanting to raise short-term interest rates to head off a potential inflationary spiral.
If the Fed wants to avoid “flipping” the yield curve, it has very little maneuvering room. Its best option is to attempt to push long-term rates higher, i.e., to drive the price of long-term bonds lower. As is true for any other commodity, the most powerful way to drive down prices is to flood the market.

In this respect, the Fed is well prepared: It already owns a gigantic stash of long-term bonds it can sell. Prior to the 2007-09 recession, the Fed’s securities holdings were about $900 billion; today, after three rounds of asset purchases, they have swelled to $4.6 trillion. Chart 3 shows the types of assets and their maturities. Although the Fed stopped adding to its portfolio in late 2015, the central bank continues to reinvest proceeds from maturing bonds and mortgages into new issues; this has kept the balance sheet steady for almost two years.

At its monetary policy meeting this week, however, the Open Market Committee acknowledged that a change to its reinvestment policy would likely be appropriate later this year. The most direct way to accomplish the goal of raising long-term interest rates would have been to sell some of the bank’s longest maturities, but Chart 3 shows that those consist mostly of mortgages. If the Fed were to begin to liquidate its longer-duration mortgage holdings, yields on mortgages would likely increase due to a jump in supply. Money would then likely flow out of Treasuries (sending yields higher) and into mortgages as investors look to capture higher returns.

Liquidating mortgage securities would therefore have been effective in steepening the yield curve, giving the Fed its desired flexibility to raise short-term rates. The one drawback – and it’s a big one – is that mortgage rates would likely rise along with Treasury yields. The collateral damage to the mortgage and housing markets could be steep, effectively precluding the option of selling long-duration mortgages into the market.

If the Fed had instead decided to sell some of its longest Treasury bond holdings, the sudden flip from buying to selling would undoubtedly drive long-term bond prices down and steepen the yield curve. Such a move could even stimulate near-term economic activity if consumers were to try to borrow at low rates in fear that borrowing costs may trend higher. The steeper yield curve would also result in higher net interest margins for banks. Despite these benefits, however, the perception of a stark reversal in Fed policy could still lead to worries that a quick move to higher rates might shock the economy into recession.
Instead, the Fed has opted last week to take a more indirect course, namely to phase out its current practice of reinvesting maturing assets. Late this year, the Fed will slow its reinvestment of maturing Treasury bonds by $6 billion per month, and of maturing mortgages by $4 billion per month. Every quarter thereafter through the end of 2018, the Fed will taper by a further $6 billion of Treasury debt and $4 billion of mortgages.3

Especially under the leadership of Ben Bernanke and Janet Yellen, the Fed has been focused on minimizing potential market disruptions. Dr. Yellen emphasized that goal in her press conference last week. Chart 4 shows the pace of paint drying: Under the program she announced last week, it would take until late 2021 to cut the Fed’s balance sheet roughly in half.4 If the Fed does as it now says – if it refrains from taking the more aggressive approach of selling individual securities in the secondary market, and instead lets holdings mature with decreasing reinvestment of proceeds – then the impact on the market may indeed be minimal.

Indeed, the stock market’s immediate response was almost imperceptible, as equities finished the week almost exactly unchanged: The S&P 500 lost 0.06% on the week. Likewise, bond yields were virtually unchanged last week. The reaction was so muted, in fact, that the Fed might be wondering whether “watching paint dry” is the right way to steepen the yield curve and thereby create headroom for higher short-term interest rates. For one thing, the strategy only works indirectly: By choosing only to reduce its reinvestment of proceeds from maturing investments, the Fed is acting only at the extreme short end of the yield curve.

3 A quick look at Chart 3 shows that nearly all of the mortgages held by the Fed have maturities greater than ten years; as of last week, the Fed reported a total of $581 million in maturities within five years, and not even a single dollar of maturities within one year. So how can they say they will reduce their mortgage reinvestment by $4 billion per month? We haven’t seen any official response, but we think that prepayments (from home sales or refinancing) could generate sufficient cash proceeds to square the numbers.

4 That’s about as far as the Fed would want to go. Commercial banks currently have over $2 trillion of regulatory and excess reserves deposited with the Fed (see Appendix), so the central bank needs to maintain about as much on the asset side of its balance sheet.
The only way that the tapering of reinvestment affects long-term rates is the degree to which the Fed’s reduced appetite affects the price of newly issued securities. The effectiveness of the Fed strategy thus depends in large part on the Treasury’s decisions regarding amounts and maturities of future bond auctions; in recent years, the Obama administration consistently issued bonds with shorter (mostly 5- and 7-year) maturities. If the Trump administration does the same, the Fed’s new strategy won’t affect long-term rates at all – and by extension, Dr. Yellen and her colleagues will have failed in their effort to create room for higher short-term rates as well.

We think the Fed probably will still raise short-term rates once more this year, likely in December. After that, the “quantitative tightening” regime will likely take precedence as the Fed works on reducing its portfolio of Treasury bonds and mortgages. That will undoubtedly drain excess liquidity from the monetary system, but it may not drive long-term yields higher.

Dr. Yellen prides herself on being “data-driven.” If she is true to that approach, then in the first year of the just-announced QT program (essentially through year-end 2018), we may not see any additional short-term rate hikes, as the Fed evaluates the evolving shape of the yield curve. On the other hand, Dr. Yellen’s term expires in January 2018, which will give President Trump an opportunity to appoint both a new Fed Chair and a new Vice Chair by then. As with many other things in Washington, the impact of those choices is impossible to predict today.

None of these concerns are lost on the investment community; the recent tech selloff and the persistently low long-term bond rates both suggest that investors are still worried that the Fed might overstep with a rate hike too far, or too much quantitative tightening. The market’s surface calm and internal angst almost seem as if investors were channeling CSNY’s contemplation of adapting to an uncertain future:

_The fortunes of fables are able to sing the song._
_Where are you going now, my Fed?
Where will you be tomorrow?
Will you bring me happiness?
Will you bring me sorrow?
Questions of a thousand schemes,
What you do and what you see,
Janet, can you talk to me?

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Appendix:
How and Why the Fed Amassed a $4.6 Trillion Balance Sheet

In the past decade, the Federal Reserve has executed three rounds of “quantitative easing” (QE), purchasing government bonds and private-sector mortgages from commercial banks. Fed officials had hoped these market interventions would push bond prices up and long-term interest rates down, and thereby stimulate borrowing and investing. The QE episodes injected trillions of dollars of investable cash into the commercial banks that sold the bonds and mortgages to the Fed. The effects of these QE programs are evident in Charts 5 and 6:

Using the 10-year Treasury yield as a proxy for long-term interest rates, Chart 5 shows that the Fed’s three QE programs (highlighted in green) succeeded in driving interest rates lower. Indeed, the 10-year Treasury yield hit its lowest level in history last June, at 1.36%, and the 30-year Treasury bond followed with an all-time low last July at 2.10%.

When the Fed purchased these securities, it effectively “printed” new money to do so, resulting in the doubling of the total money supply shown in Chart 6. Yet when commercial banks received this newly created money for selling the securities, they didn’t recycle it into economically productive loans. For the most part, they simply redeposited it into accounts at the Fed itself, represented by the green section of Chart 6. About half of these deposits were required by regulation to shore up their capital bases in anticipation of any future economic shocks that might occur, but the remainder could have been used to spur economic growth; it wasn’t.

In retrospect, the QE programs could be considered partially successful. They did drive asset prices higher, which helped Americans feel wealthier; but they also were highly inefficient, flooding the markets with liquidity that currently sits unused. Excess liquidity can easily become excess lending and spending, so the Fed recognizes that its treatment of the money supply requires as much care as that of an electric utility’s handling of nuclear fuel. Hence the desire to drain the money supply slowly and carefully through the new quantitative tightening program.