AUG
15
2016

Featured G

The Fed’s New Reaction Function

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Some profound shifts have taken place in the Federal Reserve’s (Fed’s) attitude towards interest rate hikes since late last year, when the central bank raised the federal funds rate by 25 basis points. In her testimony at that time Chair Yellen cited *“further improvement in the labor market and reasonable confidence that inflation would move back to its 2 percent over the medium term”* as the catalyst for the rate increase. Vice-Chair Stanley Fischer reaffirmed this viewpoint in January of this year when he told CNBC that the Federal Open Market Committee (FOMC) felt rates were too low, suggesting that four rate hikes this year were *“in the ballpark.”* In short, the December 2015 rate increase was clearly seen as the launch point for an extended and significant period of interest rate “renormalization” long anticipated by the Fed—ever since April 2013 with former Fed Chairman Bernanke’s taper tantrum.

The reaction function or the conceptual framework which motivated the Fed to make its move was the Phillips Curve. This theory is based on the idea that an economy operating above full capacity is associated with rising inflation. The Fed has more or less relied on this framework to execute its dual mandate of maximum employment and stable prices for a long time. As the unemployment rate converged on median estimates of the full employment level, Federal Reserve Board members last year became increasingly uncomfortable with what was perceived as an overly “accommodative” stance of policy and low interest rates. Policymakers were concerned that a tightening labor market could drive wage inflation higher and ultimately push price inflation toward its target. Furthermore, they thought that the effects of low oil prices and the lagged strength of the dollar were believed to explain why prevailing inflation was so low and were expected to dissipate with time.

However, the Fed has begun to change its thinking since January. The central bank has clearly balked at further rate increases and the “dot plots” have shifted lower despite the fact that the unemployment rate is even lower relative to median estimates of full employment, unit labor costs have been moving upward long past the time when the Fed usually raises rates, and both wage and price inflation are higher than they were in December. This has left the Fed clearly behind the curve based on the same metrics it used to justify the December rate increase.

Recent statements, testimony, and rhetoric underscore this change in how the Fed views policy. Chair Yellen has repeatedly stressed of late that the *“equilibrium”* or neutral rate of interest may be a lot lower than the FOMC originally thought, an open admission that monetary policy may not be as accommodative as they thought. This echoes what Milton Friedman reminded us of long ago: to not confuse the level of interest rates with the stance of monetary policy.

Even more significant were the recent comments from Vice-Chair William Dudley about the dollar. He stated *“if the economic outlook abroad deteriorates and this causes foreign countries to pursue a more accommodative set of monetary policies, then the dollar would likely appreciate—other things equal—reflecting expectations of lower interest rates abroad relative to U.S. interest rates. In this case, the U.S. may need to adjust its own monetary path. If the FOMC did not make this adjustment, the stronger dollar could result in an undesired tightening of U.S. financial conditions.”* Dudley’s statement is a dramatic and revealing turnabout by the central bank. Historically, the Fed has never minded the dollar’s moves and the central bank’s only interest in the dollar has been through its indirect effects on domestic inflation and employment. Today, the currency seemingly plays a more direct component of the Fed’s new reaction function. And the shift has been noticed by investors who have been more willing to take on risk since mid-February when the Fed started to lower its dot plots.

Why has the Fed shifted its stance? What does the new reaction function look like? What should we conclude from looking at the data, as the Fed advises? What does it imply for the timing of future policy changes on the part of the Fed and the interest rate outlook?

There are numerous reasons for the Fed to think its policy stance may not be as accommodative as it assumed previously:

- **First, nominal gross domestic product (GDP) growth and profits should be strong if policy is overly accommodative. This has not been the case. Nominal GDP growth was 2.4% during the second quarter and there has been no profit growth for several years. In past cycles these growth rates qualified as recession levels which may have prompted the Fed to ease policy.**
- **Second, in a zero bound world the level of nominal interest rates is an unreliable measure of the monetary stance of a central bank. A better measure might be a quantity variable like the growth rate in the balance sheet of the Federal Reserve shown in Chart 1. The growth rate in that particular measure has slowed to a level normally associated with economic recession. By this metric, policy tightened when the Fed balance sheet stopped growing. Similarly, monetary base growth shows no acceleration implying no pickup in nominal GDP growth, at least based on its relationship since 2008. See Chart 2. Rounding out the picture is the relentless decline in the velocity of money.**

Chart 1: Fed Balance Sheet Growth at Recession Levels

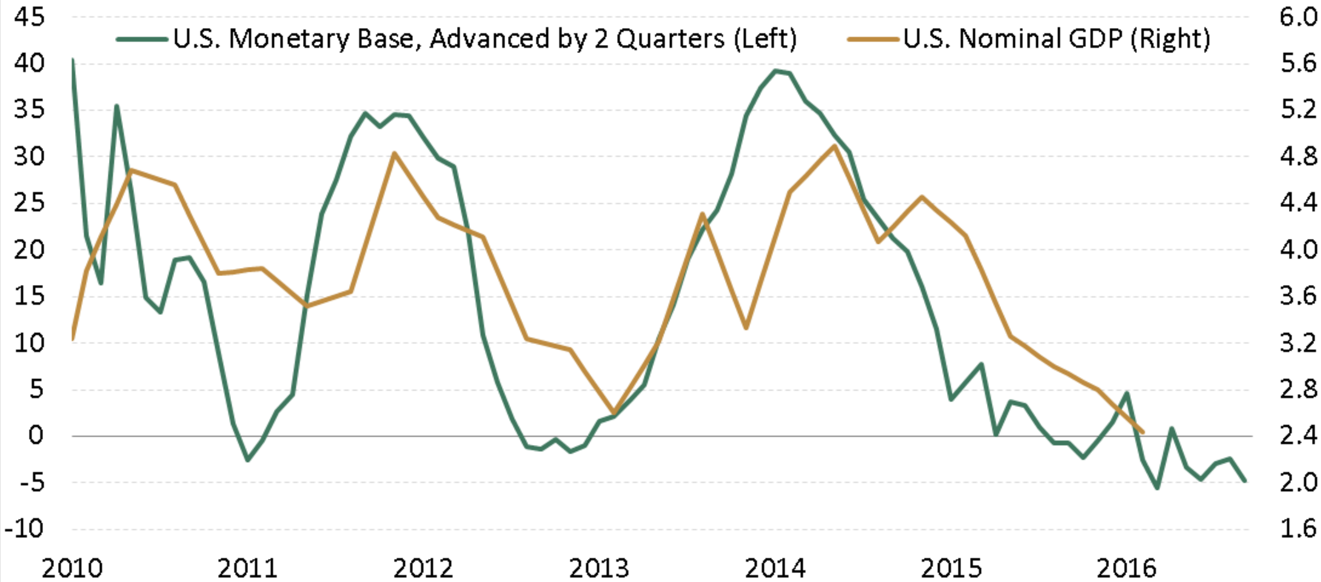
Total Fed Assets Plus Government Securities Held by Fed for Foreign Central Banks (%); As of 8/3/2016*

**52-WEEK ROC.*

Source: Thomson DataStream

Chart 2: No Acceleration in Nominal GDP Growth Based on the Monetary Base

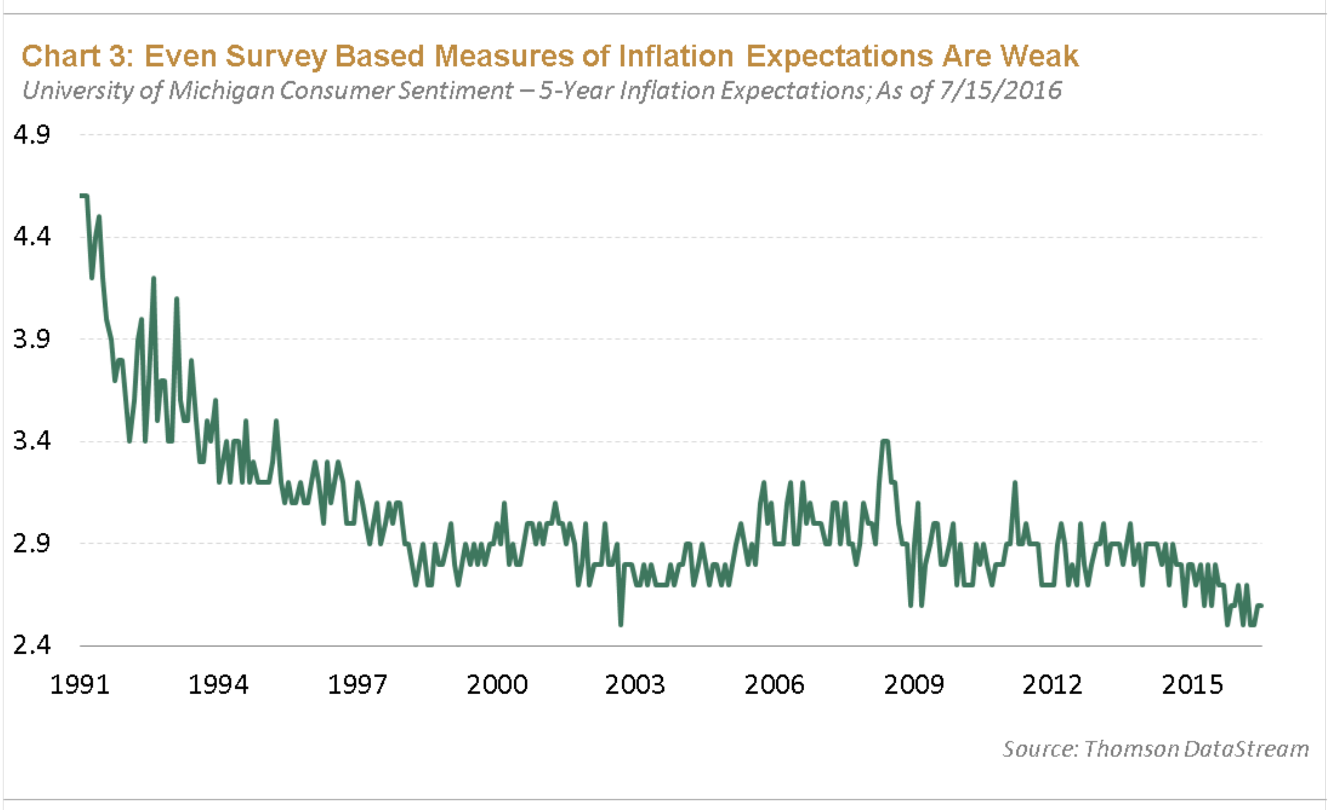
Annual % Change; As of 7/31/2016



Source: Thomson DataStream

- **Third, the Fed's own Senior Loan Officer Survey continues to report banks tightening lending standards across a wide range of loan categories, a fact that refutes the idea of easy money and credit conditions.**

- **Fourth, inflation expectations have melted. Chair Yellen rarely issues a policy decree without commenting on how anchored inflation expectations have been. The Fed's focus in this respect is the survey data, not market-based expectations which are viewed as unreliable. But even the survey data have been weak lately, see Chart 3.**

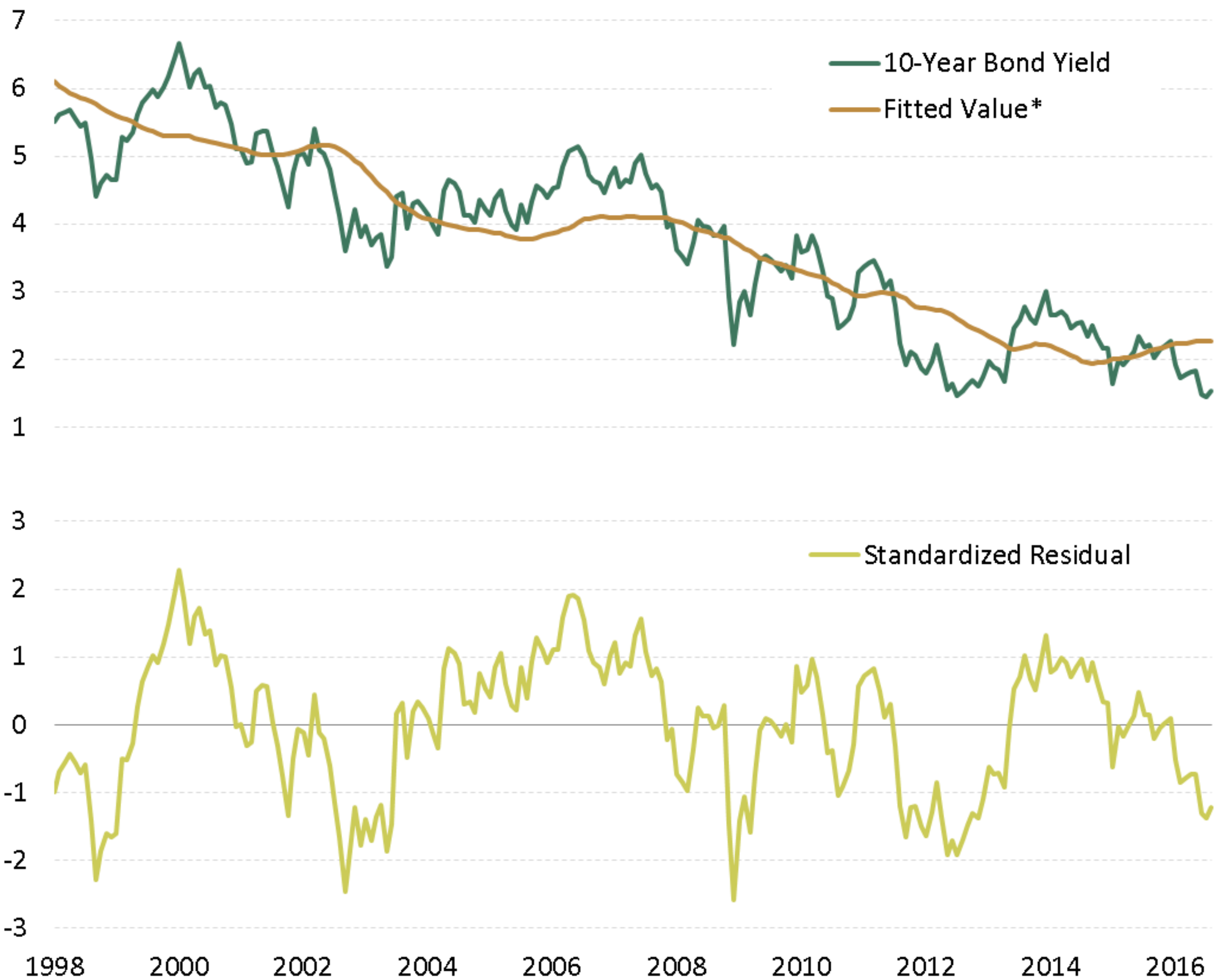


- **Last but not least, the financial market has been unequivocal in its view that policy conditions are more restrictive than generally perceived. Earlier this year, corporate credit spreads blew out to levels usually associated with recession. They have narrowed since the Fed backed down but the U.S. yield curve has been flattening fairly steadily over the past year, a classic sign of slower nominal growth ahead. The absolute level of Treasury yields paints a similar picture of economic pessimism.**

- **Yields on the 10-year Treasury are significantly below nominal GDP growth rates and bond prices seem to be very overvalued based on our models, see Chart 4, as they are for most safe-haven bond markets. On the contrary, emerging market (EM) bonds of a large number of countries are trading at discounts to their intrinsic values based on our research. Pessimism and anxiety is global, which is consistent with an unusually high cash position held by fiduciaries according to a Bank of America Merrill Lynch survey.**

Chart 4: Overvaluation in the Treasury bond market a sign of economic pessimism

%; As of 8/1/2016



The Fed appears to have come around to the view that there has been a regime change which reduces the need to renormalize rates any time soon. Increasingly, the view is being accepted that low interest rates are a symptom of insufficient demand in the world to absorb all the savings available in the global economy. This perspective implies that rates are not held down by financial repression or central bank purchases. They are a by-product of an imbalanced world economy where demand falls short of supply and savings exceed desired investment.

There are many theories for a possible regime change. But it is helpful to draw attention to some of the biggest differences in the environment pre- and post- the Great Financial Crisis. The collapse of the U.S. household debt supercycle in 2008 essentially torpedoed the pre-existing balancing act between the high spending/low savings/deeply indebted U.S. household sector and the excess savings/prodigiously over-producing Chinese manufacturing sector. This balancing act supported high nominal and real global GDP growth. Consequently, the U.S. housing bust drove a hole in global spending which the G20 initially tried to prop up with coordinated stimulus, much of it concentrated in China.

Another hit came with the European sovereign debt crisis in 2011. But the third and possibly last slam came when the Chinese finally moved to consolidate excess productive capacity, driving their nominal economic growth from over 20% to below 6% late last year. In effect, the global economy has taken 8 years to adjust to a deleveraging in the U.S. household sector and a disinvesting Chinese corporate sector, the two most important sources of demand in the world. Total debt-to-GDP has grown in both countries throughout this period of time but most of that has been in the public sector and has been counter-cyclical in nature.

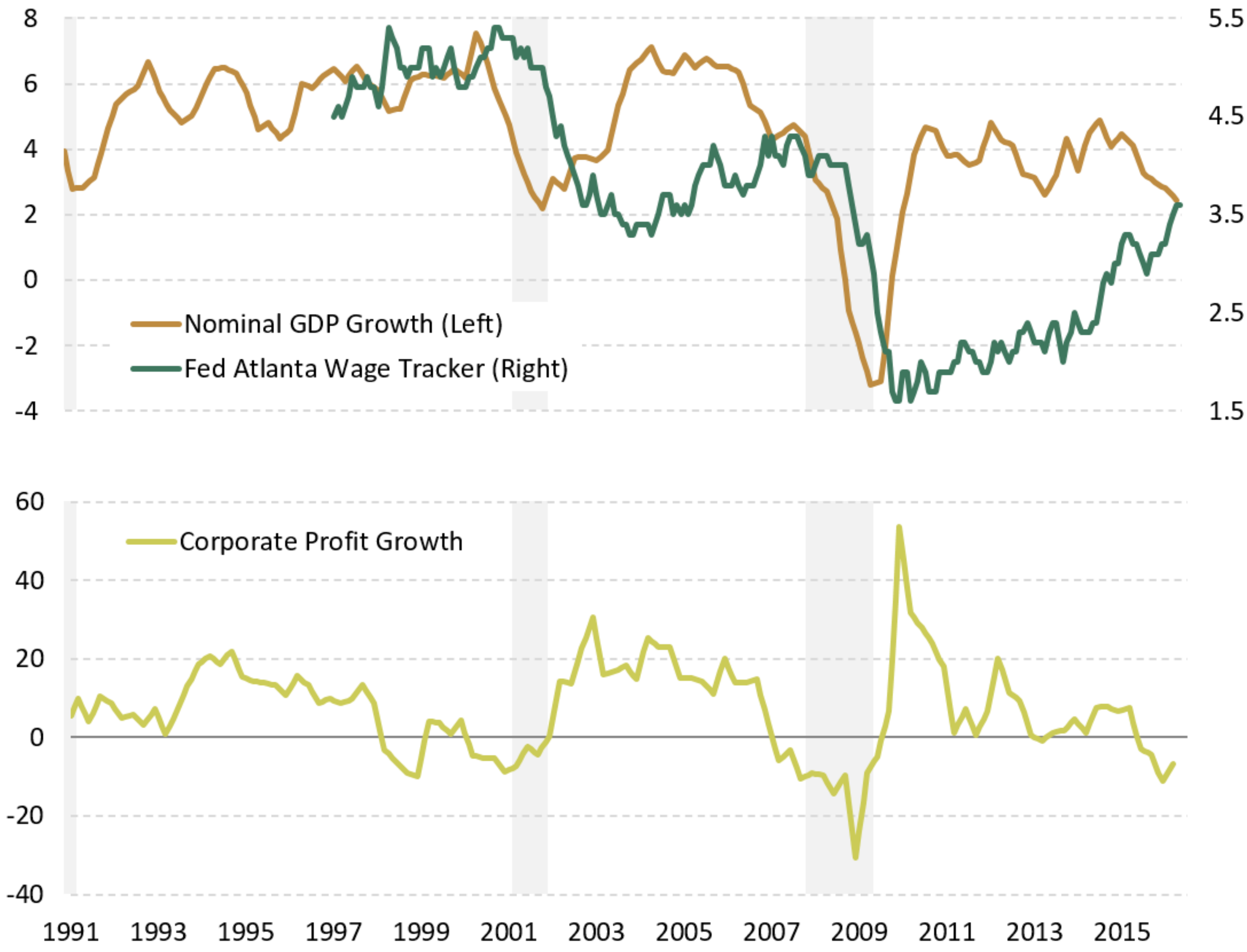
The world in many ways has transitioned from the pre-crisis, debt-fueled, over-consumption economic cycle to one driven by unlevered, but slower income growth. The high multiples in the U.S. stock market suggest that investors believe the U.S. has successfully made this transition—at least for now—without falling into deflation or creating inflation. It would imply that the global structure of interest rates, even if overdone in the near term, is likely to remain low for some time.

Against this broad backdrop, many have called on central banks to pursue a nominal GDP target. Sounds great but how do central banks create inflation and boost nominal GDP growth if interest rates are already at zero and currency policy in a zero-bound world is a zero-sum game as Vice-Chair Dudley points out? The answer seems to be support employment growth long enough for wage inflation to boost spending and price inflation. In the U.S., this transmission mechanism has reached a critical stage.

By some measures, U.S. wage inflation currently exceeds nominal GDP growth. Median wage inflation is running at 3.6% based on the Atlanta Fed Wage tracker and 2.6% based on average hourly earnings, see Chart 5. A nominal GDP target would imply the Fed allows wage inflation to run hot enough to give domestic spending a chance to lift nominal GDP, which in turn would help corporate top line growth and profitability. If the central bank is premature in raising rates it could provoke a very sharp “double squeeze” on corporate margins and trigger a sudden risk-off period and eventually lead to rising unemployment. This likely was the cause of the volatility in early January when Vice-Chair Fischer gave some guidance on the prospect for further rate hikes.

Chart 5: One Measure of Wage Inflation Running Faster Than Nominal GDP Growth

%; As of 7/31/2016



Source: Bloomberg (© 2016, Bloomberg Finance LP)

All of this suggests that the front end of the curve could stay lower for longer and then rise quickly if and when nominal GDP begins to lift. In other words, if the Fed is behaving as if its new reaction function is a target level for nominal GDP growth, it needs to hold back on any monetary tightening measures until there is clear evidence that rising domestic wage growth is lifting top line corporate revenues, nominal GDP growth, and profits.

Summary

The U.S. appears to have successfully transited a deleveraging of its household sector over the course of the last 8 years. Corresponding to this regime shift, the central bank seems to be moving away from a Phillips curve-type operating framework more toward a de facto nominal GDP target. The implication of the latter is that there is only a small chance of another rate increase this year in view of the probability that nominal GDP growth does not pick up much. The risk to the economic and financial outlook is whether the Fed gets nervous

too soon over rising wage inflation.

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