

Normalization Policy of the Fed and Conflicting US Economic Data

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Abstract—The data-based monetary policy of the Federal Reserve System, the US Central Bank, results from a two-day meeting held by the members of the Federal Open Market Committee (FOMC) eight times a year. The principal decision regards the target federal funds rate upon which monetary policy is set to work. This paper examines the status of the US economy as a ground based on which the Fed has already taken the “liftoff” step in the normalization process of its balance sheet. Following the FOMC decision at the December meeting of 2014, the Fed commenced its “liftoff” process by raising the federal funds rate range of 0.5 - 0.75 from 0.00 - 0.5 in December 2015. The decision was, primarily, backed by the expectation of the continual fall in the unemployment rate. However, the data-based approach can sometimes be misleading. The *numbers* in data can be partial in revealing the economic facts due to its method of calculation. As a result, the given data may portray a different picture of the state of the economy. Following an evidence-based approach, this paper intends to overhaul a host of current economic data on economic growth and the labor market to retrace the debates on the Fed’s normalization policy.

Index Terms—The Fed, Fed’s balance sheet, federal funds rate, normalization policy.

I. INTRODUCTION

The monetary policy of the Federal Reserve (the Fed) played a vital role in the US recovery from the Great Recession of 2008-09, which originated in the financial market and, then, spilled over into the rest of the economy. The challenge to stimulate the economy, however, commended an unprecedented courage due to the inefficiency of the traditional monetary policy. Thus, the Fed not only set the lower bound of the policy rate at zero but also boldly used an unconventional tool known as Quantitative Easing (QE) to boost the economy. In this process, the Fed was prudent enough to have a follow-up plan, an “exit strategy,” to deal with its swollen balance sheet in the aftermath of QE. During the five-year recovery period, the balance sheet of the Fed expanded more than five times, eventually reaching \$4.5 trillion.

All the Federal Open Market Committee (FOMC) minutes show that the *normalization* of the balance sheet was one of the focal issues in their meetings. However, the debates were never about the policy itself, but only about the timing of its commencement. The FOMC had finally agreed that the program should begin after the recovery period when the economy would grow at 3% and maintain an inflation rate of

2%. Although the unemployment rate continued to fall, personal consumption expenditure (PCE), the Fed’s preferred inflation rate, remained below the 2% target since 2012. This conflicting data puzzled Chair Janet Yellen, who called it “mysterious.” Despite this puzzling data, the FOMC, in its December meeting of 2014, voted for the commencement of the normalization program in the following year of 2015.

I designed this paper in the following five sections. I. To provide a historical background to the normalization program. II. To review the economic data essential in the determination of the state of the US economy. III. To revisit the “essential data” and critically reassess the *numbers*. IV. To examine the FOMC decisions on the implementation of the normalization policy. V. To conclude the analytical account of the Fed policy on the normalization of its balance sheet with my take on the program.

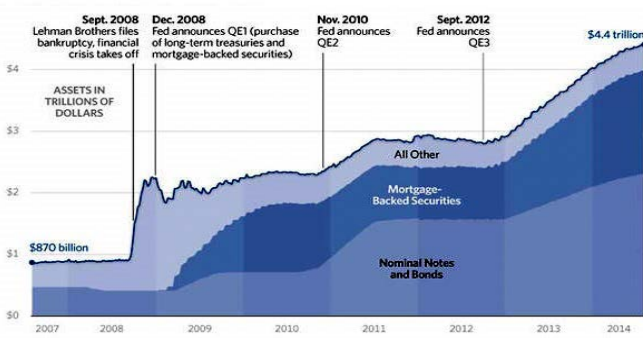
II. HISTORICAL BACKGROUND

The Great Recession had the most extended recovery period in the US economy since the Great Depression of the 1930s [1]. In fact, it was not until 2014 that the US economy recovered the 8.7 million jobs that it had lost during 2008-09 [2]. With the crisis at its height and the policy target at zero level, the Fed was already stuck in a “liquidity trap.” In other words, the Fed found itself in a position where the zero-target rate could not be lowered any further to provide enough help to reverse the recessionary trend of the economy. Therefore, to come out of the trap and stimulate the economy, the Fed adopted an unconventional monetary policy, known as quantitative easing (QE) or large-scale asset purchases [3]. This expansionary policy coupled with the zero-target rate was designed to inject money into the quickly deteriorating economy as a result of the financial crisis. To this end, the Fed launched its QE1 by purchasing \$1.25 trillion in MBS and \$175 billion of agency debt between November 25, 2008 and March 31, 2010. Using QE as its main tool to fight back the crisis, the Fed moved on to its next large-scale asset purchases or QE2 by the purchasing \$600 billion in Treasury securities during November 3, 2010 and June 30, 2011 [4].

In September 2011, the Fed introduced a Twist to its purchase policy by launching a program known as “Operation Twist” [5]. As the Twist was designed to boost the sluggish housing market, the Fed decided to lower the long-term interest rate. So unlike the past, with the sale of its matured short term Treasuries, the Fed began to purchase the long term instead of the short term securities. Finally, the Fed launched its QE3 on September 13, 2012, by buying \$40

billion in MBS per month as well as \$45 billion longer-term Treasury securities per month (Operation Twist). This accommodative program ended on October 29, 2014 [6]. However, while the implementation of QE helped to boost the economy, it also dramatically increased the reserves on the Fed's balance sheet [Fig. 1]

As Fig. 1 shows, the Fed's assets continued to increase until it reached 4.48 Trillion in October 2014 from its roughly 850 billion before the crisis in 2007. Moreover, the Fed also switched from its "channel" or "corridor" system to a "floor" system in 2008 to accommodate the new policy of its reserve management. The Congress had already authorized the Fed to pay interest on the bank's required as well as excess reserves [7].



Source: Federal Reserve Board

Fig. 1. Federal reserve assets: key dates.

With the economic recovery in 2014, and the Fed's decision to "conclude its asset purchase program", the FOMC took one step more and outlined the plans of its normalization program in the December meeting of the same year [8]. They agreed that "liftoff" should commence in the following year pending the continual improvement of the labor market. In the December meeting of 2015, the FOMC judged that "there has been considerable improvement in labor market conditions," and thus, following the "forward guidance" of 2014, the Fed voted to increase the target range for the federal funds rate to 1/4-1/2 percent from 0.00-1/4 percent [9]. This decision marked the first step taken by the Fed on the path of its long-awaited plan to normalize its balance sheet.

III. A GLIMPSE OF OFFICIAL DATA ON THE CURRENT US ECONOMY

The US economy grew at 2.4% in 2015 but for the last three months of that year, economic activities slowed down due to decreasing global economic growth. In an age of globalization, slowing global economic growth would significantly impact any fragile economy recovering from the crisis, and the US economy was not an exception as it had been hit in 2015. The slowdown of global economic growth had been steady until it hit the trough of 3.1% in 2015 [10]. Following that year, US economic growth, however, continued to pick up gradually from the second quarter in 2016 [Fig. 2]. It reached the Fed's targeted 3% annual rate in the second quarter (3.1%) and the third quarter. This trend of economic growth, as expected, was backed by related economic data such as the Purchasing Management Index

(PMI) and the falling unemployment rate.

PMI is an indicator of the well-being of industrial sector. The PMI benchmark is 50. That is, a PMI reading below 50 indicates a weakening economy whereas a reading above 50 indicates a strengthening one. If it hits 60 and above for a few months, then it means the economy is overheating and the Fed will most likely increase the target for the federal funds rate. As the Fig. 3 shows, PMI slightly crossed 60 in September 2017 but soon fell and readjusted itself at 58.7 in October. Currently, the index for the manufacturing sector is substantially above 50 and within the warranted upper limit, indicating a strengthening of the industrial economy.

As for the labor market, the unemployment rate continued to fall after the recovery period, and it was one of the main reasons for the FOMC to decide to set the details of its plan for shrinking the Fed's balance sheet. Although the headline unemployment rate may not show the *actual* strength of the labor market, the fall in unemployment rate as a *relative percentage*, would still prove to be important data. Whether or not the economy is at full employment, the recent unemployment rate of 4.1% marks significant improvement from the 2012 unemployment rate of over 8%. Overall, the US labor market has come a long and painstaking way to reach where it is now [Fig. 4].

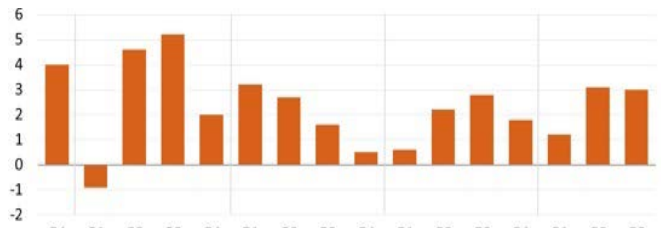
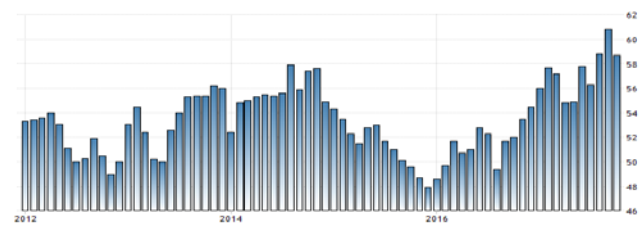
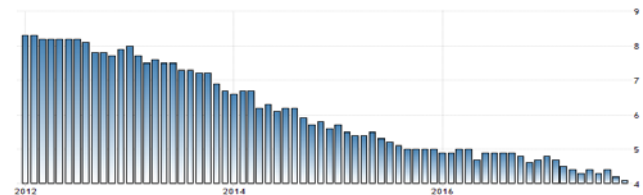


Fig. 2. Source: U.S. Bureau of Economic Analysis - Seasonally Adjusted Annual Rate.



Source: Trading Economics

Fig. 3. U.S. ISM Purchasing Managers Index (PMI).



Source: U.S. Bureau of Labor Statistics

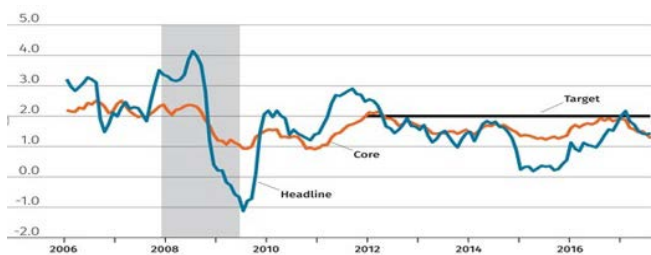
Fig. 4. United states unemployment rate.

IV. REASSESSING THE OFFICIAL DATA ON THE CURRENT US ECONOMY

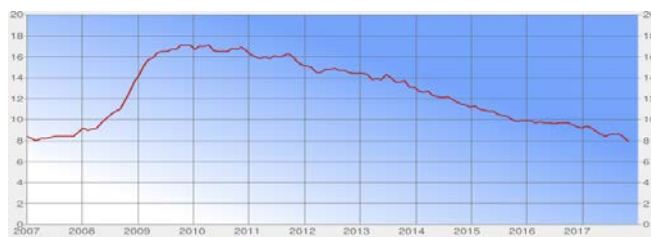
Although the US economy continued to improve following the five years of its recovery period, the inflation rate remained below the Fed target of 2% [Fig. 5]. This

underlying data is oddly mismatching with the data, specifically, of the labor market and it is why Chair Yellen has called it a “mystery” [11].

An *evidence approach* rather than a *data-based analysis* may help to explain this new economic “mystery.” Relying more on numbers rather than concerning about the principles and limitations of the methods of their calculation, can be misleading most of the time. For instance, in this current case, the low inflation rate requires a closer look at the labor market. Even though the headline unemployment rate is low enough to be considered the natural rate of unemployment, an indication of the full employment, the actual unemployment rate is almost double [Fig. 6]. The official unemployment rate (U3) excludes marginally attached and discouraged workers and those who work “part-time for economic reasons” from the labor force, whereas U6 includes them, and thus provides a more realistic picture of the labor market. The relative highness of U6 may indicate that the labor market is not as strong as the U3 shows it to be, which would help explain the relatively low inflation rate. Furthermore, the difference between U6 and U3 was even higher than prerecession levels by 1.1% [12], which is an indication of a wider labor slack in the current labor market. This “slack” is one of the contributing factors in reducing the pressure on price rise in the labor market as well as in the product market through its adverse effect on the aggregate demand, i.e., the actual demand for goods and services.



Source: Federal Reserve Bank of Minneapolis
Fig. 5. PCE inflation: 12-month percent change.



Source: portalseven.com/employment/unemployment_rate_u6.jsp
Fig. 6. Unemployment rate - U6 (2007-2017).



Source: FRED-Federal Reserve Bank of St. Louis
Fig. 7. Inventories to sales ratio.

There has not been a broad-based increase in wages/salaries to moderately promote a higher PCE. However, the slow growth of wages/salaries as a contributing

factor to the low inflation rate is not limited to the market forces. Wages are also determined by labor movements and institutional forces such as the labor unions. For instance, the US labor unions have been losing their membership in the private sector on a steady basis since 1983. It has fallen to 6.4% in 2016 from 7.5% in 2007 and 16.8% in 1983 [13]. The US economy needs a wage growth of 3.5- 4% to hit the 2% inflation rate of the Fed target. But since the recovery date in June 2009, wages have been growing only at 2.4%, and on a quite unequal basis. The wage growth for the first percentile was 0.4%, and the 50th was 5.3% compared to 10.6% for the 90th percentile [14]. Such a low wage growth strains the economy by creating a disproportional growth in aggregate demand and an accumulation of excess inventories, and thus results in less pressure on prices. This unwanted process, at times, can even create an early market panic as it did in 2016 when the curve of Inventories to Sales Ratio (I/S Ratio) took a sharp uprising shape similar to the one during the Great Recession [Fig. 7].

It is true that the global economic slowdown contributed to the slower economic growth rate and thus to the low rate of inflation in the US economy as pointed out by the Fed governor Lael Brainard [15]. But the slow wage growth, in being the largest component of US gross domestic product, played a critical role in the slow growth of the market prices. Another contributing factor to the low inflation rate is the Fed’s policy, itself, as argued by the President of the Federal Reserve Bank of Minneapolis, Neel Kashkari [16]. It began in 2013 with the Fed giving up its accommodative policy. Ben Bernanke, the former Chair of the Fed, initiated the Fed tapering program (reducing QE) in that year and the following years, his successor, Janet Yellen, increased the federal funds rate four times. Such policies of the Fed reinforced the suppressing factors for keeping the inflation rate below its own-set target.

V. NORMALIZATION POLICY

The Federal Reserve’s dual mandate, high employment and price stability, requires a set of challenging, and often contradictory, policies to achieve its goals. When the unemployment rate keeps on falling, it is a signal to the Fed that its first goal is not far off. But, the joy of achievement, either of the first goal or the second, always gives the Fed a mixed feeling. For achieving the one is at the cost of the latter since the high employment raises the inflation rate above the target, and low employment keeps the inflation at a low rate. Thus, it is a real challenge for the Fed to maintain a balance between the components of its dual mandate.

When the Great Recession hit the economy in 2008, the Fed’s priority was to boost the economy and adopt a monetary policy that helps recover lost jobs, which counted for as high as 8.7 million by the official end of the crisis in June 2009. Once the Fed achieved its goal of recovering the 8.7 million lost jobs in 2014, it feared rising inflation in the aftermath of its QE program. The Fed’s balance sheet had already been expanded to over \$ 4.5 trillion on December 22, 2014, from its less than \$900 billion on December 24, 2007 [17]. A year after, the FOMC in its December 2015 meeting decided to commence the normalization process of its balance sheet and voted to raise “the target range for the

federal funds rate, the first change since December 2008” [18].

The “liftoff” happened when inflation was still below the 2% target. Moreover, the Fed had already developed a new system to combat the expected inflationary impact of its quantitative easing program by delinking the supply of reserves to the target rate. Having had the permission of the Congress to give interest on the bank reserves in 2008, the Fed seized the opportunity to switch to the “floor system” from its “corridor system.” The floor system enabled the Fed to function efficiently with large reserves by setting the target for the federal funds rate equal to the “interest on reserves” and created a *floor* for the federal funds rate while keeping its discount rate as the ceiling [Fig. 8]. Since the banks receive interest on their reserves, the demand for reserves will be highly sensitive to changes in the interest rate within the floor system as the demand for reserves will fall on the *elastic* portion of its demand curve [Fig. 8 right]. Whereas, in the Corridor system with the much smaller reserves, the demand for reserves will sharply fall after meeting the required reserves. Hence, the banks demand in the corridor system will fall into the relatively inelastic portion of the demand curve, and therefore, demand for reserves in this system remains relatively insensitive to the interest rate [Fig. 8, left].

The normalization program is not, therefore, a matter of the recent decision; it is as old as the twin of its own cause, the quantitative easing program. However, the FOMC, to some degree, miscalculated the date of its “liftoff” as the Committee “overestimated inflation and underestimated how long it would take to return to (the) 2 percent target” [16]. The “hawkish forward guidance” of the FOMC in its December 2014 meeting, which projected a series of hikes in the federal funds rates, had to retreat itself significantly to respond to the economic realities [Fig. 9]. Although the normalization program is useful as far as it creates “headroom” for monetary policy in case of economic crisis, the timing of its “liftoff” is critical to the health of the economy. Although the Chair Janet Yellen is *prudently* seeking to prevent the economy from overheating; it seems she is “prudent” at a time that the economy is just warming up to grow [19].

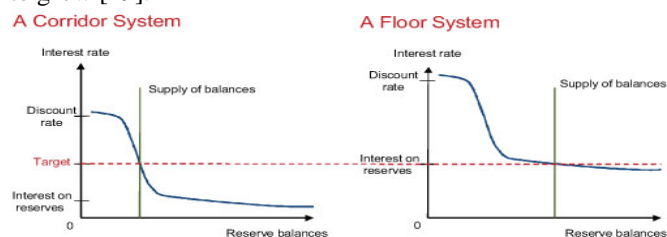


Fig. 8. Source: Federal Reserve Bank of New York.

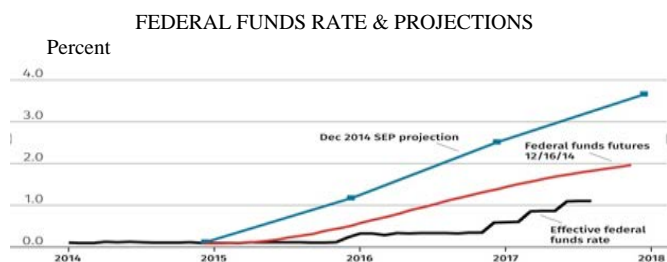


Fig. 9. Source: Federal Reserve Board.

VI. CONCLUSION

The FOMC in its December 2014 meeting voted for the “liftoff” in the following year with a “hawkish forward guidance” for its implementation. The reason for such a rush was to curb the anticipated inflation, whereas, the inflation rate was “mysteriously” below the target. Facing the economic conditions, the hikes of the federal funds rate fell short of the projected plan. It is vital to take lessons from the past “hawkish forward guidance” and move forward based on economic evidence, rather than numbers, alone. It is not anymore, a “mystery” that the neutral interest rate, a rate at which the economy is neither overheating nor slowing down, is historically low due to various global and national economic factors. The low interest rate is so persistent now that it is believed to be the “new normal” [20]. For instance, the Bank of Japan (BOJ) holds a balance sheet equal to 92% of its GDP, and still, it maintains its accommodative policy. Furthermore, the European Central Bank (ECB) keeps its negative benchmark interest rate, despite having a balance sheet of 39% of its GDP. The Fed, however, has comparatively a much smaller balance sheet, only 23% of the US GDP [21]. If the Fed has its own reasons to ignore the “new normal” and plans to go forward with its hikes, the Fed does not seem to have any good reasons to ignore its own preset target of 2% inflation before lifting off its federal funds rate any more. Or to be more practical, maybe the FOMC should think of revising its *target* to a lower rate to set its own “new normal.”

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