

Economic Analysis

# The Speed of Federal Funds Rate Normalization

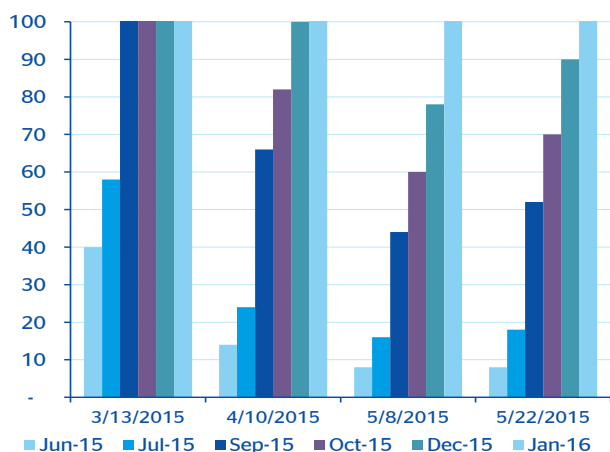
Shushanik Papanyan

- **The approaching liftoff in 2015 will signify policy normalization rather than tightening**
- **The initial rate hike and the subsequent policy firming is expected to proceed with equal 25 basis points incremental changes in the Fed funds rate**
- **The trajectory of the Fed funds rate path will incorporate 8 to 10 rate hikes by year-end 2017**

The Federal Reserve Open Market Committee (FOMC) communication underscores 2015 as the Fed funds rate (FFR) normalization year – the period in which to initiate the first rate hike after 7 years at the zero lower bound. While any monetary policy action is bound to have its economic consequences, the Federal Reserve’s ambition is to glide through the process of normalization with a “cap of Invisibility,” thereby not incurring any economic costs from the policy shift. Economic costs such as tightening of financial conditions, slowing growth and deflationary risks can arise from the misalignment between market expectations and the Fed’s actions as well as from a misjudgment of the economic recovery’s ability to withstand an increase in the Fed funds rate.

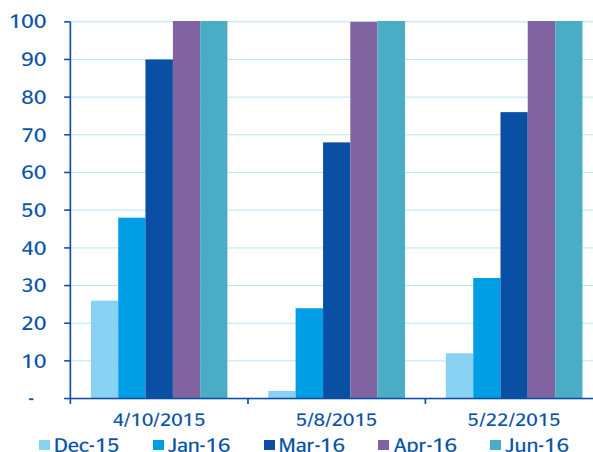
There are two critical questions to explore in order to best align our expectations with the FOMC policy actions and to evaluate potential risks: 1) Should we perceive the liftoff as policy normalization or tightening? 2) What will be the speed of normalization/tightening? By itself, the exact month in which the zero lower bound liftoff occurs is not relevant since the monetary policy will be only slightly less accommodative after liftoff than it was before. However, since the liftoff is a signal of a monetary policy regime shift, the robustness of economic growth at the time of liftoff and the post-liftoff expected Fed funds rate path are of greater importance. The financial markets’ expectations of the short-term interest rate trajectory will have a direct effect on borrowing costs, including the rates on commercial and industrial loans, corporate bonds, auto loans, and home mortgages, and consequently on the broader economy.

Chart 1  
**Fed Funds Implied Probabilities, First 25bp (%)**



Source: Bloomberg & BBVA Research

Chart 2  
**Fed Funds Implied Probabilities, Second 25bp (%)**

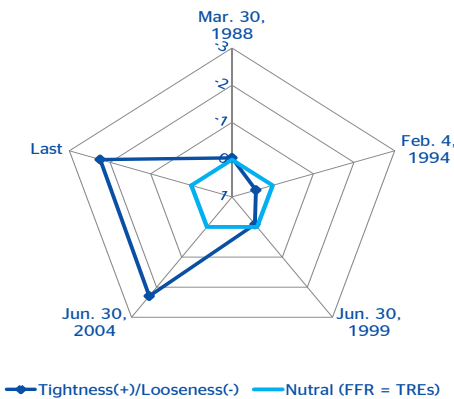


Source: Bloomberg & BBVA Research

### Normalization vs. Tightening

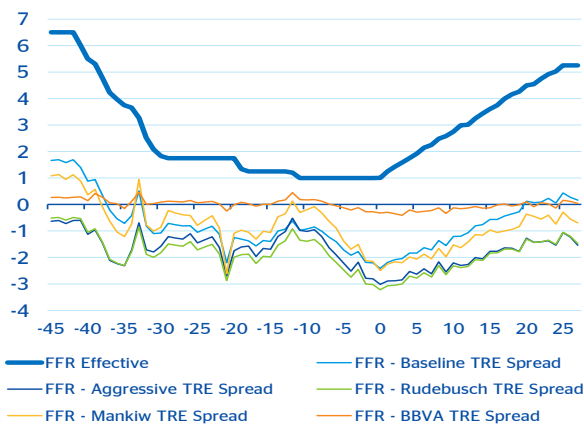
Fed officials including Chair Yellen use the terms “normalization” and “tightening” interchangeably when referring to the liftoff and the future path of Fed funds rate. However, if we use a Taylor Rule-like policy guideline,<sup>1</sup> monetary policy normalization vs. tightening will depend on the Fed funds rate at the time of the policy shift relative to where the economy is positioned in the relevant business cycle. In further discussion, "normalization" is defined as an increase in the Fed funds rate at a point when monetary policy could be assessed as loose. Thus the spread between the Fed funds rate and the Taylor Rule Estimated (TRE) policy rate would be negative. By contrast, "tightening" is defined as an increase in the Fed funds rate when monetary policy could be assessed as tight or neutral. Thus the spread between Fed funds rate and the TRE policy rate would be near zero or positive.

Chart 3  
**Policy Tightness Measure**  
(%, Policy Firming Initiation Dates )



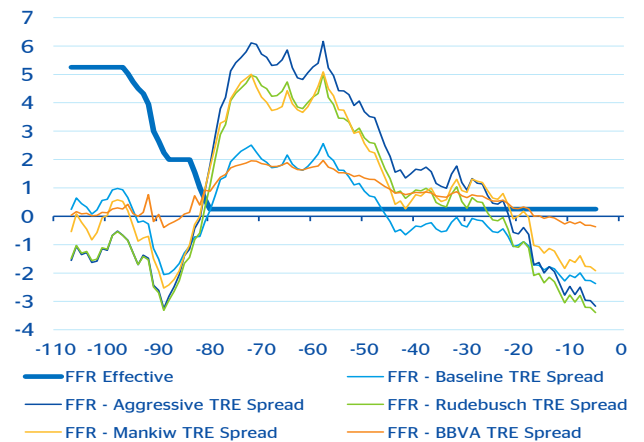
Source: BBVA Research

Chart 5  
**Fed Funds and Taylor-Rule Spreads: 2004 Cycle**  
(%, Policy Firming Initiation Date = 0)



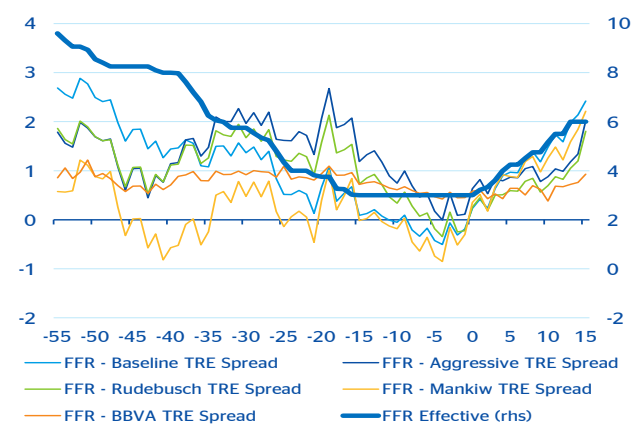
Source: FRB, Bloomberg & BBVA Research

Chart 4  
**Fed Funds and Taylor-Rule Spreads: Present Cycle**  
(%, Policy Firming Initiation Date = 0)



Source: FRB, Bloomberg & BBVA Research

Chart 6  
**Fed Funds and Taylor-Rule Spreads: 1994 Cycle**  
(%, Policy Firming Initiation Date = 0)



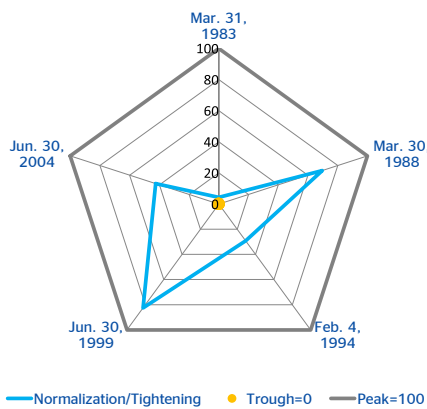
Source: FRB, Bloomberg & BBVA Research

<sup>1</sup> A monetary-policy rule that specifies how much nominal interest rate should change in response to changes in inflation and output.

Past experience illustrates that premature tightening when economic activity has not fully recovered from a recession, and thus the output gap is negative, carries high economic cost, as in the example of the Fed tightening policy in 1994. On the other hand, an overdue normalization of monetary policy can result in adverse consequences as well, such as over-leveraging of financial markets and asset price bubbles that resulted in the Great Recession that followed the most recent episode of policy firming in 2004.

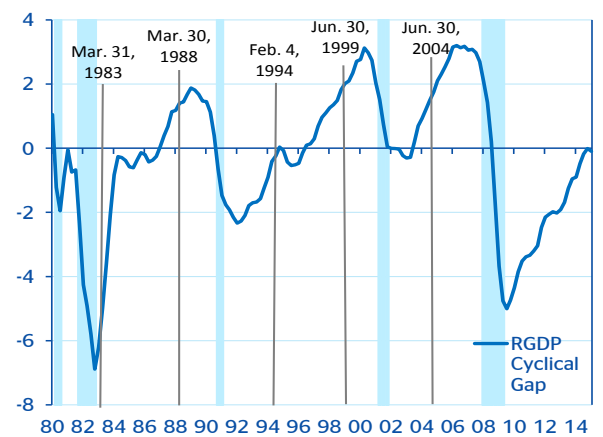
The approaching 2015 liftoff from the zero lower bound will represent policy normalization if we judge it by the spread between the Fed funds rate and the average of TRE policy rates. At the same time, relative to historic business cycles, the post-Great Recession recovery pace has been slow. The output gap is finally about to close, and employment should reach the full employment level in 2015 after nearly 6 years of recovery. As a consequence, there is some likelihood of policy normalization carrying economic costs, restricting growth and employment and depressing inflation. On the other hand, asset valuations in some markets suggest the existence of potential price misalignments which could imply that interest rates are too low.

Chart 7  
**Business Cycle Standpoint**  
(%, Policy Firming Initiation Dates)



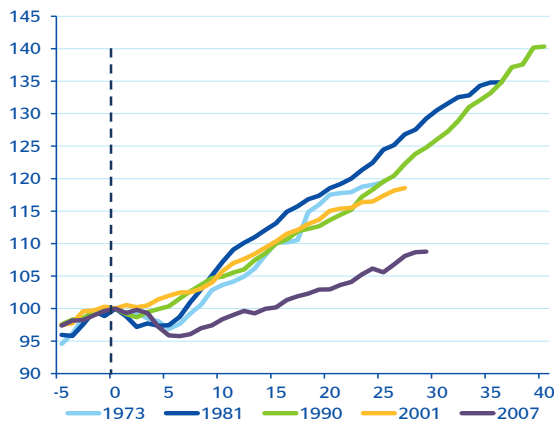
Source: BBVA Research

Chart 8  
**Output Gap (Actual-potential GDP, %, Policy Firming Initiation Dates)**



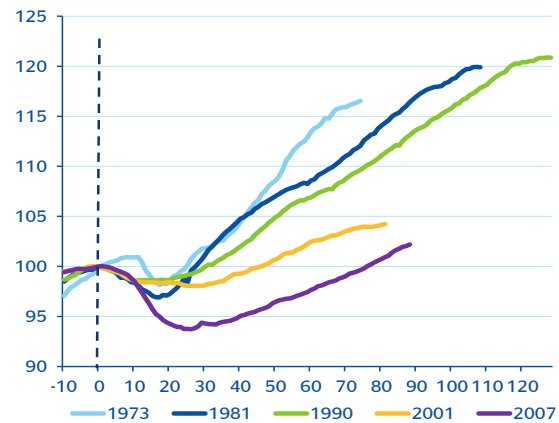
Source: BBVA Research

Chart 9  
**Real GDP Cycles (Normalized to Start of Recession=100, Start of Recession Date= 0)**



Source: BBVA Research

Chart 10  
**Nonfarm Payroll Cycles (Normalized to Start of Recession=100, Start of Recession Date= 0)**



Source: BBVA Research

Table 1

**Tightening Cycles vs. Business Cycles**

FOMC Announcement Date	1 Month Prior to Tightening			1 Quarter Prior to Tightening			
	CPI Inflation (%)	Nonfarm Payroll Change (6M MA, K)	Unemployment Rate (%)	NAIRU* (BBVA)	NAIRU* (CBO)	Output Gap (BBVA)	Output Gap (CBO)
						% remaining to close (-) OG or % passed zero OG (-100%) - OG trough and (100%) - OG peak	
March 31, 1983	3.5	-74	10.4	7.2	6.1	-100	-100
March 30, 1988	3.9	299	5.7	6.3	6.0	0.6	12
February 4, 1994	2.5	255	6.6	5.9	5.5	-53	-68
June 30, 1999	2.1	263	4.2	5.4	5.0	0.7	53
June 30, 2004	2.9	203	5.6	5.8	5.0	-100	-100
Average for 2015**	0.6	208	5.3	5.1	5.4	-1.7	-34

\* NAIRU stands for non-accelerating inflation rate of unemployment, and refers to a level of unemployment below which inflation rises

\*\* forecasts

Source: BBVA Research

## The Speed of Policy Rate Normalization

There are two distinct objectives for the path of the Fed funds rate that the FOMC would like to pursue after the initial rate increase. First, the FOMC would like to reinforce that policy firming is data-dependent such that “the actual path of policy will evolve as economic conditions evolve, and policy tightening could speed up, slow down, pause, or even reverse course depending on actual and expected developments in real activity and inflation” – as stated by Yellen on March 27, 2015. Second, the FOMC would like to avoid market surprises, such as displays of “taper-tantrum”-like episodes of rapid increases in long-term interest rates, due to misalignment between financial markets’ policy expectations and the FOMC’s actions.

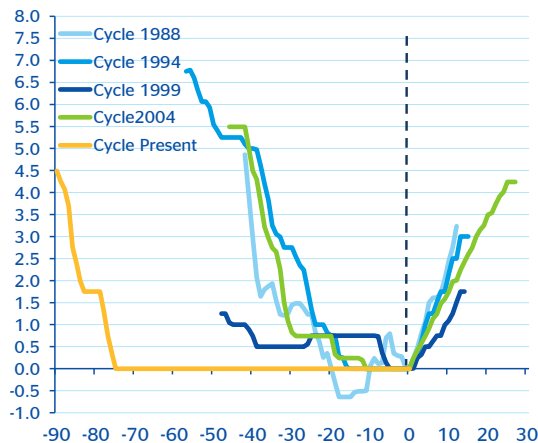
These two objectives can go hand in hand if the economy continues to grow at the current moderate pace or at an even more upbeat pace, with labor slack further diminishing and inflation stabilizing at the Fed’s 2% target rate. Under these circumstances, it is safe to conclude that the trajectory of the Fed funds rate will correspond closely to the mean of policy firming projections reported by the FOMC in March, where the Fed will move at a speed of 4 to 5 Fed funds rate increases per year over the next two years with equal increments of change at 25bp. A similar Fed funds rate path can be inferred from the Dealers Survey April results. This implies a Fed fund rate of around 2% by year-end 2016 and 2.9%-3% by year-end 2017. However, if economic conditions do not show a clear and robust direction, the FOMC will have a hard time aligning expectations. Markets are currently positioned for a much more gradual and cautious Fed funds rate increase in comparison to the FOMC March projections. For example, the Fed funds futures contract for May 2015 implies 1.1% and 1.7% Fed funds rates respectively by the year-end 2016 and year-end 2017

In line with past economic cycles that highlight the latest recovery as the slowest on record, the approaching policy firming is expected to be the slowest in comparison to historic tightening cycles. Additionally, the expectation of 25bp increment movements by the Fed would make firming similar but more gradual in comparison to the last tightening cycle. Raising the increments of changes in the Fed funds rate to 50bp and 75bp, similar to the tightening cycles of 1994 and 1999, would serve to speed up policy firming and is highly unlikely. Thus under favorable circumstances pauses in normalization would be expected, which would effectively slow down the pace of normalization, but speeding up the pace of normalization or reversing course would be unlikely.

The Fed continues to favor discretionary policy over rule-based policy. Thus, deviations from the Fed's baseline economic projections will make it more difficult for the FOMC to balance a surprise-free, clear communication strategy by taking preemptive actions when necessary. The Fed will have to make a choice between prompt action to accommodate adverse economic news, and risk surprising markets, or acting slowly to allow ample prior communication to explain the policy change. While the probability of the downside risks to the Fed's exit strategy is low, examples of extreme events that can disturb the gradual course of policy firming would be an unexpected rise in inflation - which would speed up the pace of normalization - or a substantial, recession-like decline in output growth and employment - which would cause a reverse in course of normalization.

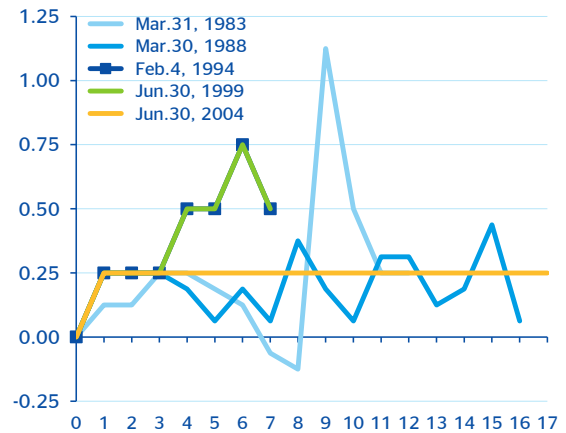
*"A simple rule can provide the starting point for the decisions made by the FOMC, but in reaching their interest rate decision, members of the Committee will always have to use their judgment to identify the special circumstances confronting the economy, and how to react to them."* Fischer, Vice Chairman, FRB, March 23, 2015

Chart 11  
**Fed Funds Cycles**  
(%, Policy Firming Initiation Date = 0)



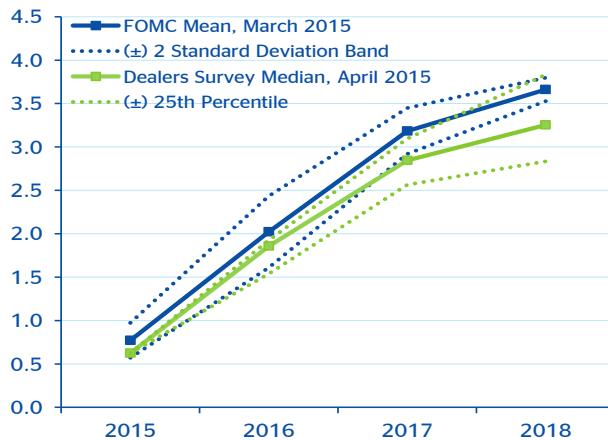
Source: FRB & BBVA Research

Chart 12  
**Changes In the Expected Fed Funds Rate**  
(%, Policy Firming Initiation Date = 0)



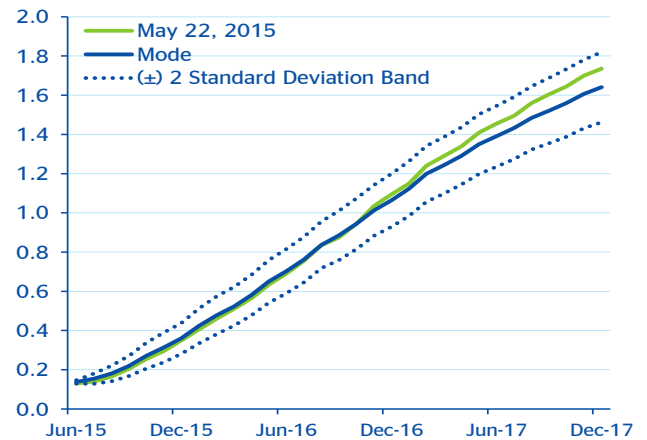
Source: FRB & BBVA Research

Chart 13  
**Projected Pace of Policy Firming (%)**



Source: FRB, FRBNY & BBVA Research

Chart 14  
**Fed Funds Futures (%)** (Mode: April 3 to May 22, 2015)



Source: Bloomberg & BBVA Research

Table 2

**Policy Firming of Past Tightening Cycles (BP=Basis Points; M=Months)**

FOMC Announcement Date	Prior Length of Low Rate (M)	Tightening Period (M)	Tightening Speed (Avr. BP/M)	Effective FFR change (BP)
March 31, 1983	--	18	17	313
March 30, 1988	--	13	25	173
February 4, 1994	16	13	23	300
June 30, 1999	6	12	15	177
June 30, 2004	12	25	17	421
FOMC Projections, March 2015	81-85	34	10.4	354

Source: BBVA Research

**Bottom Line: Predictable normalization with stop-and-go 25bp increment change**

Taylor-Rule estimates prompt that the policy normalization is timely if not overdue. However, taking into consideration the anemic post-recession economic recovery, anything but cautious and gradual normalization can tighten financial conditions and carry significant economic costs. The costs can become high in the current financial environment in which the term premium on long-term bonds have shrunk due to quantitative easing programs implemented in the U.S. and overseas, and market reactions to the Fed policy changes are not fully understood. Thus, moving away from conducting rule-based policy, the FOMC will rely heavily on clear communication and policy transparency to align financial markets with expected policy rate trajectory. The gap between FOMC trajectory of Fed funds rate and the futures implied path for Fed funds rate, suggests that Fed communication so far has not been effective as market expectations differ significantly from FOMC projections regardless of the actual liftoff date. Thus we expect the Fed to reinforce or even change its communication strategy to reduce these misalignments.

Yellen has highlighted the data dependency of the normalization process: “the actual course of policy will be determined by incoming data and what that reveals about the economy. We have no intention of embarking on a preset course of increases in the Fed funds rate after the initial increase,” May 22, 2015. However, we foresee that the trajectory of Fed funds rate increases will be predictable with stop-and-go 25bp increment change. Given the expected trajectory of the Fed funds rate path incorporates 8 to 10 rate hikes by year-end 2017, the 2015-2016 policy rate increases will likely occur at meetings followed by the press-conference.

Table 3

**Policy Firming: Market Reaction (% , BP=Basis Points)**

FOMC Announcement Date	Eff. FFR Tightening Period change (BP)	10Y TN Yield 1st M change (BP)	Slope 10Y-2Y TN Yield 1st M change (BP)	10Y TN Yield 6M change (BP)	Slope 10Y-2Y TN Yield 6M change (BP)	S&P500 6M change (%)	USD/Major Currencies 6M change (%)
March 31, 1983	79	-33	26	114	1	10.1	4.1
March 30, 1988	173	37	2	61	-58	0.8	5.6
February 4, 1994	300	44	-2	155	-44	-4.6	-5.6
June 30, 1999	177	11	-1	38	-10	8.0	-2.7
June 30, 2004	421	-14	-10	-50	-75	5.9	-8.5

Source: BBVA Research

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