Demystifying the Federal Reserve

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Much is written in the press about Janet Yellen, Federal Reserve Chair, and the "Fed." But what does it mean and why should you care? This white paper will provide a brief history of the Federal Reserve, describe the make-up of the committees, and outline the mechanics of how it works. It will also provide information on the current challenges facing the FOMC and how its decisions can and will affect your investment returns.

The Federal Reserve System

Alexander Hamilton is known for many things, most notably his duel with Aaron Burr. As the first Secretary of the Treasury, Hamilton was the driving force behind creating a central bank. The goal was to stabilize and improve the nation's credit and the handling of the financial business of the United States government under the newly enacted constitution. His idea was met with resistance because the newly formed nation was distrustful of a strong centralized government.

A Brief History. There were two attempts at creating a central bank. The First Bank of the United States was created in 1791 with a 20-year charter that expired in 1811 with no renewal. After the War of 1812, there was a great deal of economic turmoil which again highlighted the need for a central bank. As a result, the Second Bank of the United States was established in 1816. It too received a 20-year charter that was not renewed in 1836. Public distaste for centralized power was the downfall of both banks. Eighty years later a decentralized banking system was designed as a compromise. The new entity was diversified politically, economically and geographically.

The blueprint to establish the current Federal Reserve System was started in 1910 in a meeting that took place on Jekyll Island, Georgia. The goal was to provide the nation with a safer, more flexible, and more stable monetary and financial system. This group was led by Senator Nelson Aldrich of Rhode Island and included Frank Vanderlip of National City (later Citibank), Henry Davison of Morgan Bank (morphed into JP Morgan) and Paul Warburg of Kuhn, Loeb Investment House (ultimately Lehman Brothers). On December 23, 1913, President Woodrow Wilson signed the Federal Reserve Act into law, creating one of the most powerful entities in the world—the Federal Reserve System which presides over the world's largest economy.

Responsibilities of the Federal Reserve. The Federal Reserve (Fed) serves as the central bank for the United States and has many functions. One of its functions is to provide financial services to depository institutions, the U.S. government, and foreign official institutions. It also plays a major role in operating the nation's payments system by facilitating the exchange of payments among regions and responding to local liquidity needs.

The U.S. Congress established three key objectives for the Fed: maximum employment (rough target is 5.0%-5.5%), stable prices, which includes an inflation target of 2%, and moderate long-term interest rates. The first two challenges are known as the "dual mandate." The third goal is a bit nebulous but a basic construct of the goal can be developed.

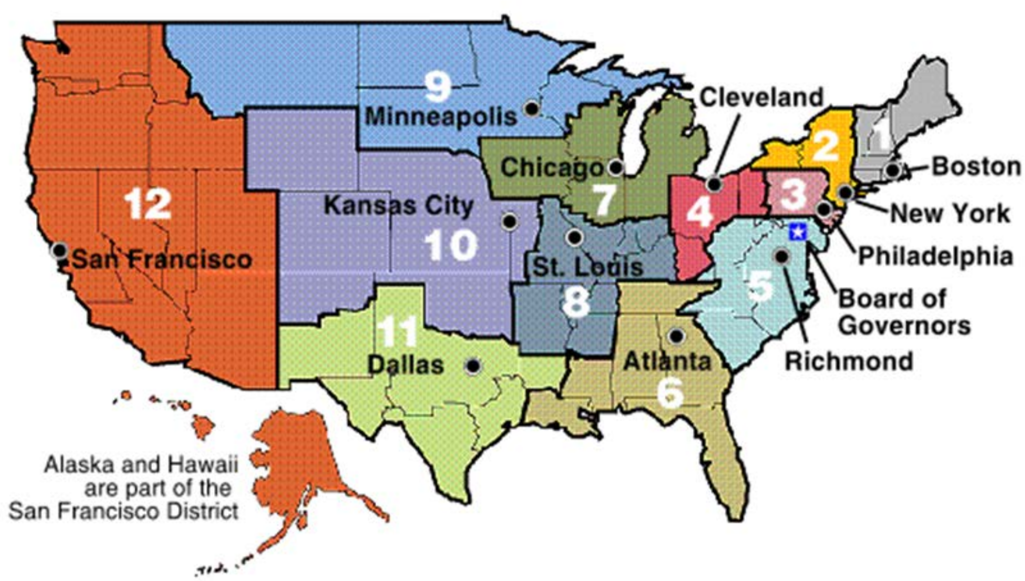
The 10-year Treasury note is a widely utilized benchmark for fixed income market participants. In normal market environments, the two components that make up the yield of the 10-year Treasury are growth and inflation. In the past 18 months, the average growth measure using GDP has been roughly 2.5% while the average inflation statistic has hovered around 1%. This would put the fair value of the 10-year Treasury note at 3.5%. However, the actual rate has fluctuated between 1.70% and 3.00%. This disconnect can be attributed to the unprecedented technicals in the market place, led by the quantitative easing efforts of the Fed since 2009.

The Federal Reserve's responsibilities have expanded since the financial crisis. The Dodd-Frank Act was the primary driver of these additional duties. The two main parts of the legislation were the Wall Street Reform Act and the Consumer Protection Act. The goal of this legislation was to increase supervisory and regulatory duties over the banking system as well as protecting the credit rights of the consumer. The Fed also must proactively problem-solve banking panics, including acting as lender of last resort. This aids in maintaining the stability of the financial system and containing systemic risk in financial markets. Lastly, the Fed helps operate the nation's payment system.

The Structure of the Fed. The Federal Reserve System consists of three parts:

- The Federal Reserve Banks
- The Board of Governors
- The Federal Open Market Committee

Federal Reserve Banks are divided into 12 numbered districts. The Atlanta district has 5 branches; San Francisco and Kansas City each have 4 districts, while the St. Louis and Dallas branches each have 3 districts, as shown below.



Source: The Federal Reserve System, www.federalreserve.gov.

The Board of Governors is composed of seven members that are nominated by the President and must be confirmed by the U.S. Senate to serve a term of 14 years. The length of the term is intended to insulate the Board from day-to-day political pressures. Appointments are staggered so that one term expires on January 31 of each even-numbered year. A governor who has served a full term cannot be reappointed or removed from office for his/her policy views. In addition, no two governors may come from the same Federal Reserve District. The chair and vice chair serve four-year terms and may be reappointed to those roles and serve until their terms as governors expire. Congress sets the salaries of the Board members.

For 2014, the chair's annual salary was $201,700 while the other Board members (including the vice chair) received $181,500.

Board of Governors as of September 1, 2015		
Governor	**Entered Office**	**Term expires**
Janet Yellen (Chair)	2/3/2014 (as Chair)	2/3/2018 (as Chair), 1/31/2020 (as Governor)
Stanley Fischer (Vice Chair)	6/16/2014 (as Vice Chair)	6/12/2018 (as Vice Chair), 1/31/2020 (as Governor)
Daniel Tarullo	1/28/2009	1/31/2022
Jerome Powell	5/25/2012	1/31/2028
Lael Brainard	6/6/2014	1/31/2026
Vacant		
Vacant		

Federal Open Market Committee (FOMC). The Federal Open Market Committee (FOMC) was formed by the Banking Act of 1933 and is the monetary policymaking body of the Federal Reserve System. The FOMC consists of 12 members – the seven members of the Board of Governors who have a 14-year term, five of the 12 Reserve Bank presidents (the New York president serves continuously; others serve one-year terms), and rotating seats filled with one bank president from each of the four following groups as shown in the rotation schedule below.

Federal Reserve Bank Rotation

Federal Reserve Bank Rotation on the FOMC			
	2016	**2017**	**2018**
	New York	New York	New York
	Cleveland	Chicago	Cleveland
Members	Boston	Philadelphia	Richmond
	St. Louis	Dallas	Atlanta
	Kansas City	Minneapolis	San Francisco
	New York†	New York†	New York†
Alternate Members	Chicago	Cleveland	Chicago
	Philadelphia	Richmond	Boston
	Dallas	Atlanta	St. Louis
	Minneapolis	San Francisco	Kansas City

†For the Federal Reserve Bank of New York, the First Vice President is the alternate for the President.

Committee membership changes at the first regularly scheduled meeting of the year.

Source: The Federal Reserve System, www.federalreserve.gov.

The chair of the Board of Governors serves as the chair of the FOMC. The current chair is Janet Yellen, who was appointed in 2014 and is the first female chair and first vice chair to be appointed chair. Current members are listed below:

FOMC Members as of September 1, 2015	
Members	**Alternate Members**
Janet L. Yellen, Board of Governors, Chair	James Bullard, St. Louis
William C. Dudley, New York, Vice Chairman	Esther L. George, Kansas City
Lael Brainard, Board of Governors	Loretta J. Mester, Cleveland
Charles L. Evans, Chicago	Eric Rosengren, Boston
Stanley Fischer, Board of Governors	Christine M. Cumming, First Vice President, New York
Jeffrey M. Lacker, Richmond	
Dennis P. Lockhart, Atlanta	
Jerome H. Powell, Board of Governors	
Daniel K. Tarullo, Board of Governors	
John C. Williams, San Francisco	
Vacant	
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Tools of Monetary Policy

The FOMC is responsible for **Open Market Operations**, which includes buying and selling Treasury bills, notes and bonds. To promote economic growth (an expansionary mode) the FOMC purchases securities from banks, thereby increasing the money supply. Banks have more money to make loans to individuals and/or businesses. More competition in the market for lending will lower rates and lower rates lead to greater investment. This will often stimulate the overall economy.

To slow economic growth (a contractionary mode) the FOMC will sell securities to banks, decreasing the money supply. Banks have less money to make loans to individuals and/or businesses. Less competition in the market for lending will cause rates to rise. Higher rates lead to lower investment and will often cause the overall economy to contract.

Federal Funds Rate. There are two federal funds rates: the effective rate and the target rate. The federal funds target rate, commonly referred to as the fed funds rate, is set by the FOMC and is currently 0 – 0.25%. While both rates are closely correlated, the fed funds effective rate is calculated using the daily weighted average of all the intra-bank loans. In order to promote economic growth during periods of slow growth, the FOMC will decrease the fed funds target rate, making it less expensive for banks to borrow. This will increase the money supply, resulting in more loans and investments. When the Fed wants to slow the pace of growth and defend against inflation, the FOMC will increase the fed funds target rate which will make borrowing more expensive for banks. The money supply will decrease, causing a decrease in loans for investment.

Discount Rate (from the Discount Window). Setting the discount rate is the responsibility of the Board of Governors of the Federal Reserve System. The discount rate is the rate that the Fed charges banks for short-term loans to meet their liquidity needs. In order to promote economic expansion, the Fed will decrease the discount rate, which increases money supply, making it less expensive for banks to borrow and thereby causing an increase in loans and investment. To slow economic growth, a contractionary move, the Fed will increase the discount rate, which decreases the money supply, and makes it more expensive for banks to borrow which, in turn, causes a decrease in loans and investment.

If the discount rate is lower than the fed funds rate, banks will borrow from the Federal Reserve when they need short-term loans, putting downward pressure on the fed funds rate. If the discount rate is higher than the fed funds rate, banks will borrow from each other rather than from the Federal Reserve, putting downward pressure on the discount rate. There are three discount window programs institutions can access:

- *Primary* – These are very short term loans (usually overnight) to eligible depository institutions with sound financial condition.
- *Secondary* - Depository institutions that are not eligible for primary credit may apply for secondary credit to meet short-term liquidity needs or to resolve severe financial difficulties.
- *Seasonal* - extended to relatively small depository institutions that have recurring intra-year fluctuations in funding needs.

Reserve Requirements. The Board of Governors and the Reserve Banks Board of Directors share the responsibility for setting the reserve rate. Banks are required to hold reserves against liabilities to combat a "run on the bank." The reserve requirement is based off of a percentage of a bank's total interest-bearing and non-interest-bearing checking account deposits (which currently range from 3% to 10%). To promote economic growth, the governors and directors will decrease the reserve rate, which allows banks to increase lending. To curb economic growth, governors and directors will increase the reserve rate, which limits the ability for banks to loan.

Quantitative Easing. Quantitative easing (QE) is a type of monetary policy used by central banks to stimulate the economy when standard monetary policy has become ineffective. A central bank implements QE by buying specified amounts of securities from commercial banks and other private institutions, thus raising the prices of those financial assets and lowering their yield, while simultaneously increasing the monetary base. This process differs from the more usual policy of buying or selling Treasury securities in order to keep interbank interest rates at a specified target value. The initial goal of QE was to stabilize the banking system by taking bad assets off bank balance sheets and providing liquidity. The secondary goal of QE was to promote growth by lowering long-term interest rates and increasing asset values.

Interestingly, the Fed held between $700 billion and $800 billion of Treasury notes on its balance sheet before the Recession of 2008. As part of the first quantitative easing program (QE1), the Fed started buying $600 billion in mortgage-backed securities (MBS). By March 2009, the Fed held $1.75 trillion of bank debt, MBS and Treasury notes. Holdings peaked at $2.1 trillion in June 2010, and the Fed halted further purchases because the economy started to show signs of improvement. However, purchases resumed in August 2010 when the economy started to slow. The Fed set a revised goal of $2.054 trillion and bought $30 billion in 2- and 10-year Treasury notes every month to maintain that level. The Fed announced the second round of quantitative easing (QE2) in November 2010, which focused on purchasing Treasury securities. By the end of the second quarter in 2011, the Fed had purchased an additional $600 billion of Treasury securities. In September 2012, the Fed launched a new $40 billion per month, open-ended MBS purchasing program known as QE3. At the same time, the FOMC announced that it would likely maintain the fed funds rate near zero "at least through 2015." As a further stimulus, the Fed increased the amount of purchases to $80 billion per month in December 2012. QE3 ended in October 2014, but the reinvestment of coupons and interest continues today.

FOMC Meetings and Communications

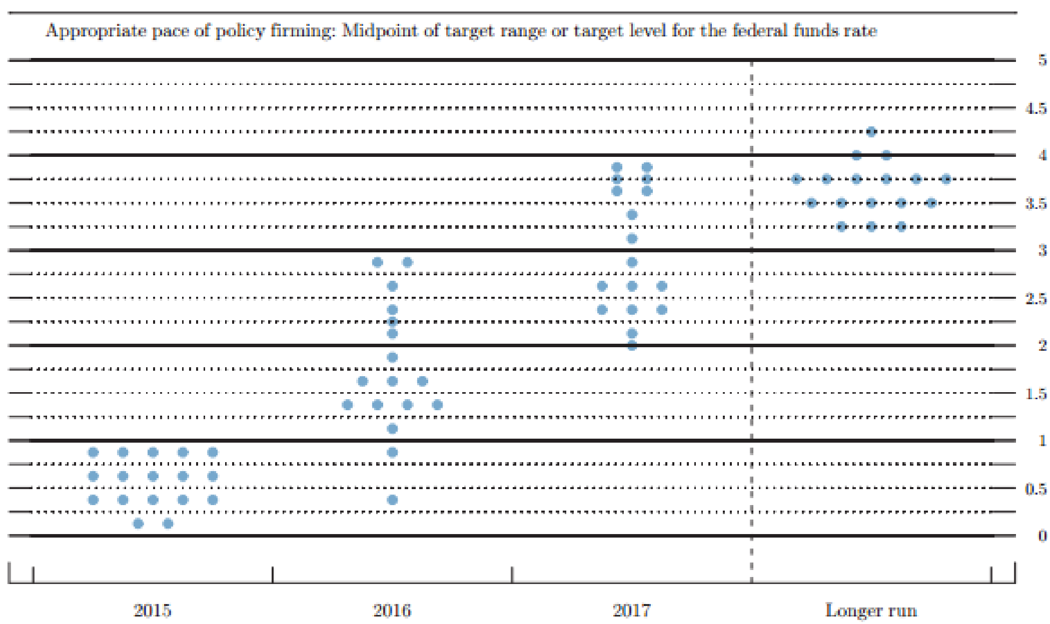
The FOMC has eight scheduled meetings per year and occasional unscheduled meetings. A policy statement is issued after each meeting which summarizes the economic outlook and policy decisions. There are four annual press briefings by the Chair which include the FOMC's economic projections and provide context for policy decisions. Factors considered during meetings include:

- Trends in prices and wages
- Employment and production
- Consumer income and spending
- Residential and commercial construction
- Business investment and inventories
- Foreign exchange markets
- Global interest rates
- Money and credit aggregates
- Fiscal policy

Each Committee member expresses views on the current/future economy as well as policy recommendations. A consensus must be reached within the Committee regarding:

- Objectives for long-term growth
- Policy guidance as it relates to future easing or tightening
- Expectations of short-term rates

Transparency and Communication. During his term as Fed Chair, Ben Bernanke implemented changes in communication and provided increased transparency. FOMC statements and press conferences are more revealing than the minutes released weeks later. One of the changes implemented is the Dot Plot (#dotplot), which shows the anonymous expectations of each FOMC member on where they believe the central bank's overnight lending rate will be in the future, as shown below.



Source: The Federal Reserve System, www.federalreserve.gov.

Each dot shows where a Fed official expects the rate to be by the end of the calendar year. Each member is responsible for developing and discussing his/her economic expectations in both short-term and longer-term perspectives. The members will reveal how they will vote on future rates decisions based upon their viewpoints. Finally, the group will collaborate to develop a consensus on their future interest rate outlook.

The Fed releases other formal reports on a regular basis such as the Monetary Policy Report and the Beige Book which are published eight times per year, as well as a quarterly report on the Fed's balance sheet.

Current challenges of the FOMC include:

- Reducing the $4.5 trillion balance sheet
- Moving off of the zero interest rate policy
- Managing inflation
- Maintaining a target employment rate
- Determining the right amount of transparency

How will a FOMC Tightening Initiative Affect Treasury Management?

The Fed has not raised short-term interest rates in nearly a decade. After a long period of zero interest rates and highly accommodative monetary policy, a shift by the Fed will impact all investors and issuers. The FOMC meets September 16 – 17 to discuss its outlook and announce its much anticipated decision. If the FOMC votes to tighten, how will this move affect treasury management? Treasury managers should consider the following in managing their investment programs:

- Opportunities to earn more than currently offered by money market sweep vehicles
- Ability to hold securities with unrealized losses (OTTI – Other Than Temporary Impairment)
- Ability to take gains or losses in a security if liquidity needs arise (impact on excess reserves versus liquidity needs)

Summary. The anticipated future volatility can be an opportunity as well as a concern. To discuss what these changes may mean for you, please contact Longfellow Investment Management. Our investment team is happy to help you make sense of the markets and discuss how you can position your portfolio effectively.

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Disclosures