MEKETA

INVESTMENT GROUP

Unwinding the Fed's Quantitative Easing: Will This Time Be Different?

GLOBAL MACROECONOMIC RESEARCH SERIES

SEPTEMBER 2021

ISSUE THIRTY-ONE

How did we get here, what tools were used, and why?

Why did markets have a "tantrum" in 2013?

Will this time be different?

What are the expected risks for the QE unwinding?

GLOBAL MACROECONOMIC INVESTMENT COMMITTEE

Richard O'Neill, Chair

Alison Adams

Tom Dunleavy

Nick Erickson

Tim Filla

Paola Nealon

Samuel Nunez

Orray Taft

Hayley Tran

Eric White

In this newsletter, we address the likelihood and potential market risks of the Federal Open Market Committee ("FOMC") of the Federal Reserve ("the Fed"), beginning to slowly remove monetary support through the scaling back of the respective security purchases as conducted through the quantitative easing program.

Using the 2013 "taper tantrum" as a reference, we briefly highlight the conditions that ultimately drove a repricing and tighter financial conditions during that period. We then focus on the forthcoming tapering of purchases and a few contextual factors that may make it different from the past tapering episode, hopefully in a manner that is less volatile and abrupt.

How did we get here, what tools were used, and why?

At the start of the pandemic, many governments, including the US, instituted economic lock-down measures. US capital markets suffered a severe sell-off in response to economic, COVID-related, and policy uncertainty. The sudden and sharp drop in commerce resulted in soaring unemployment, a collapse in private investment, and a disruption of global supply chains.

In response, both US fiscal and monetary policy officials took quick and bold actions to support financial markets and the economy. On the fiscal side, the US Congress implemented a number of spending packages, including direct support payments, expanding unemployment insurance, small business loans, and state budget support for social and medical programs. Total expenditures related to revenues reached multi-decade highs.

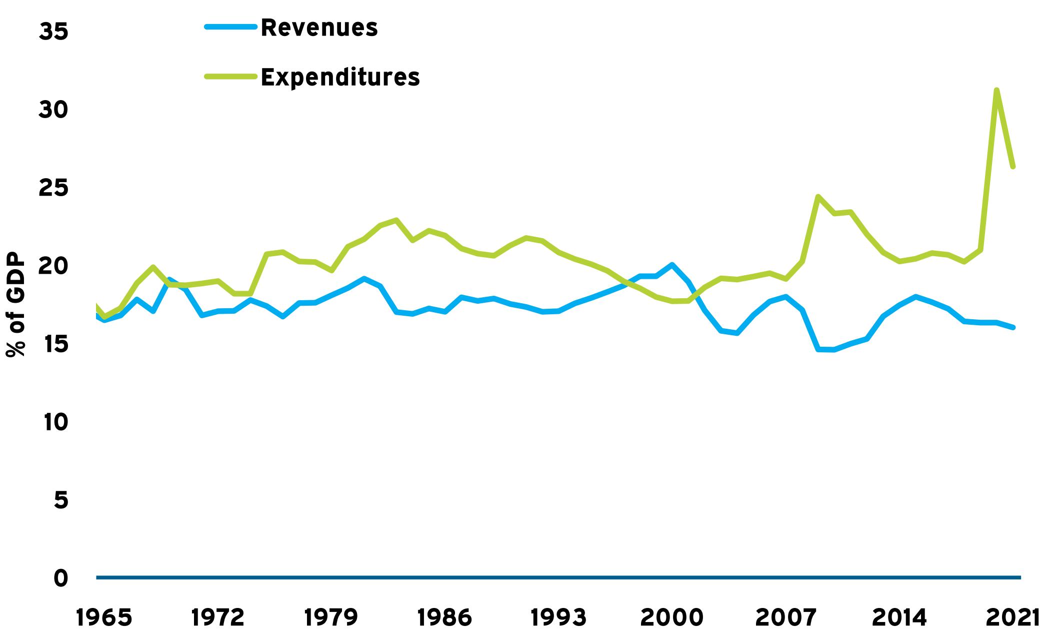


FIGURE 1
US Federal Revenues and Expenditures
Source: Congressional Budget Office.

On the monetary side, policy makers offered immediate sweeping and record support for financial markets by slashing the federal funds rate to a range of 0.0% -0.25%, deploying targeted liquidity programs to support respective financial and monetary institutions, and launching direct asset purchase programs. This included a new program to purchase corporate debt, as well as the Large Scale Asset Purchase program ("LSAP"), also known as Quantitative Easing, or "QE". This program was originally developed and used to combat the Global Financial Crisis ("GFC") of 2007-2009. At the end of August 2021, the combination of QE purchases and other emergency programs had pushed the Federal Reserve's balance sheet to over $8.3 trillion.

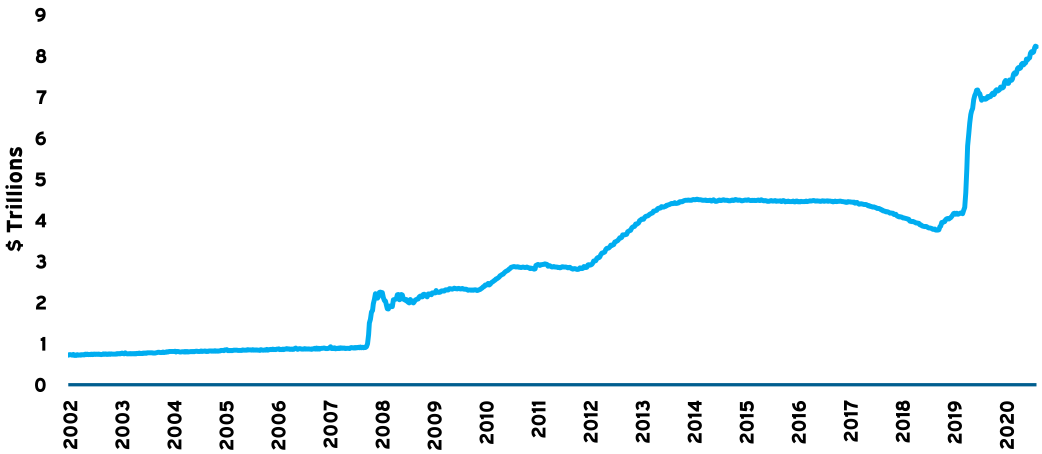


FIGURE 2
Federal Reserve Balance Sheet
Source: Bloomberg.

As of this note, the global economy is recovering and showing signs of continued improvement given the vaccine rollout and policy support. Naturally, in this context, both monetary and fiscal policy makers are beginning to consider the easing, or removal, of accommodative measures, and ultimately how best to do so without tightening financial conditions too abruptly at the expense of the still fragile economy. Understanding the factors that drove the "taper tantrum" in 2013 are important as we begin to consider the tapering that is likely on the horizon.

2013 Taper talk & tantrum: a quick review

With expectations for inflation and unemployment to continue improving, in late May 2013, then Federal Reserve Chair Bernanke testified before Congress that the FOMC was considering plans to begin exiting its QE program[1]. Largely unexpected by the market at the time, asset prices quickly repriced for a less accommodative Federal Reserve over the near future.

In the weeks and months following the Chair's statement, the market repriced its expectations for longer-run inflation to be lower (Figure 3) and economic growth to weaken. Treasury yields rose by nearly 1.0%, MBS spreads widened, equity markets declined by a modest 4.7%, and international markets (particularly emerging market stocks, which fell by nearly 14%) declined across both credit and equities.

[1] The QE program heading into 2013 was purchasing $45 billion per month in Treasury securities and $40 billion per month in agency mortgage-backed securities (MBS). It resulted in the Federal Reserve's balance sheet reaching a then record high of roughly $3.0 trillion.

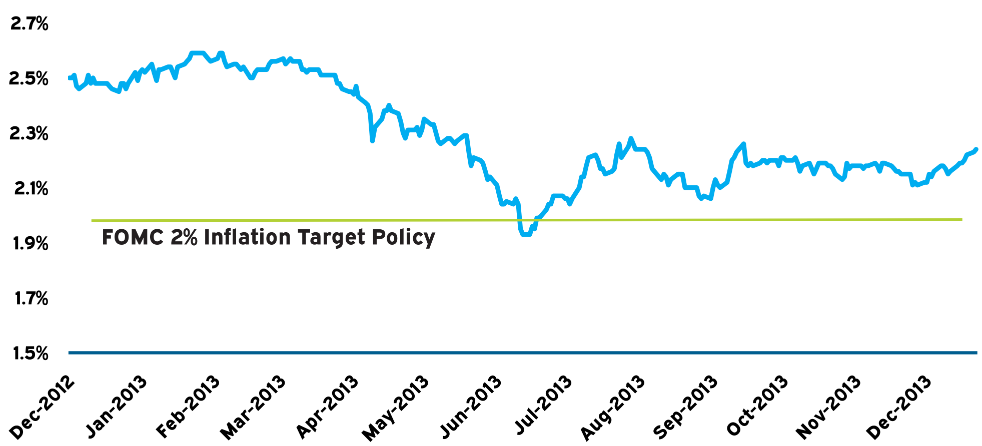
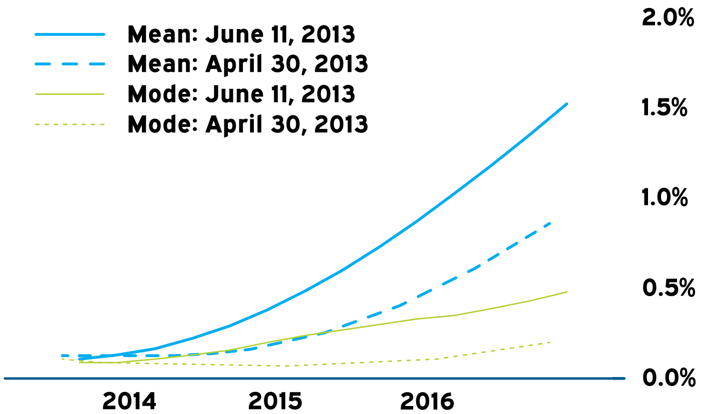


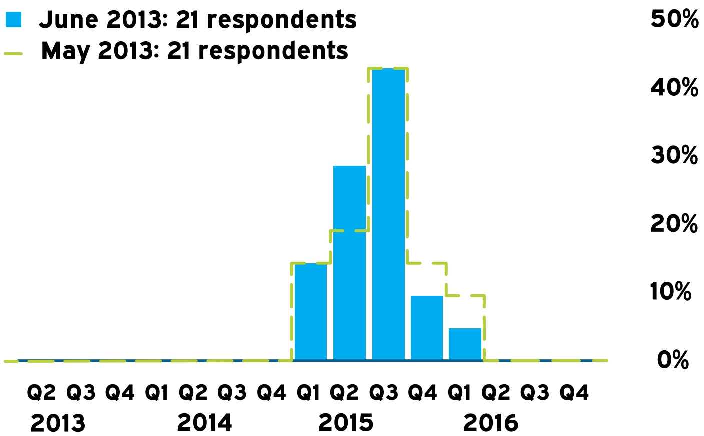
FIGURE 3
Breakeven Inflation Rates
Source: Bloomberg.

At the same time, expectations for short-term interest rates, as shown in the following charts from the June 2013 Federal Reserve Teal Book A[2], and as expressed through short-dated yields and futures markets, increased notably out through 2016.

[2] The Federal Reserve's Teal Book A provides the FOMC with an update of economic and financial conditions ahead of each FOMC meeting.



Implied Federal Funds Rate



Distribution of Modal Timing of First Rate Increase from the Desk's Dealer Survey

FIGURE 4

Expectations for Federal Funds Rate

Source: https://www.federalreserve.gov/monetarypolicy/files/FOMC20130619tealbooka20130612.pdf

Note: In the top chart, the repricing of policy expectations is expressed by the change in chart lines from the dotted lines, to the solid lines, for both mean and mode measures. In the bottom chart, the repricing is best seen by the difference in Q2 2015 from the green dotted line to the height of the blue bar line, and the decline in the blue bar lines for Q4 2015 and Q1 2016 versus the green dotted line above the respective bars.

Buffeted by the market's reaction and aggressive repricing (particularly the acceleration of policy rate expectations), over the next several months Chair Bernanke and the FOMC worked to soothe US and international investor concerns. Between May and December of 2013, a number of policy officials aggressively communicated to market participants about the expected sequencing and pace of the QE exit. They also provided further guidance as to the conditional and dependent nature of the tapering strategy.

Officials also made efforts to explicitly guide the markets that the tapering of the QE program and the increase in policy rates should be considered independently. To further clarify this point, which ultimately was one of the biggest unknowns at the time and a principal factor driving the uncertainty and repricing, in July 2013, FOMC voting member and Vice Chair Dudley went so far as to openly state that "a rise in short-term rates is very likely to be a long way off".

Markets stabilized over the latter half of 2013, and ultimately, in December 2013, the FOMC announced that the Fed would scale back its bond purchases from $85 billion a month to $75 billion a month, with additional language that linked economic progress to further reductions in bond purchases. Market reaction to the announcement was limited, as it was largely expected by that point.

But WHY did markets have a "tantrum"?

The tantrum's market volatility appears to have been linked to several factors.

First, markets were still recovering from the worst financial crisis in decades and economic uncertainty remained elevated. Concerns about the strength of the economy and the ability for it to continue to perform well under tighter financial conditions weighed on sentiment. Unemployment at the time was at roughly 7.9%, well above the natural rate estimate of approximately 4.0%, which suggested a notable degree of slack in labor markets.

Also, inflation expectations (a key factor driving policy, and highlighted in Figure 3 on page 3), while elevated versus recent history, were not so high as to lead to a significant level of concern by market participants. Realized measures of inflation, including Core PCE and Core CPI (Figure 5), were also low and showing signs of disinflationary pressures. Uncertainty about the money supply, and specifically how supply dynamics may or may not have changed in the new elevated bank reserve environment, was a further concern.

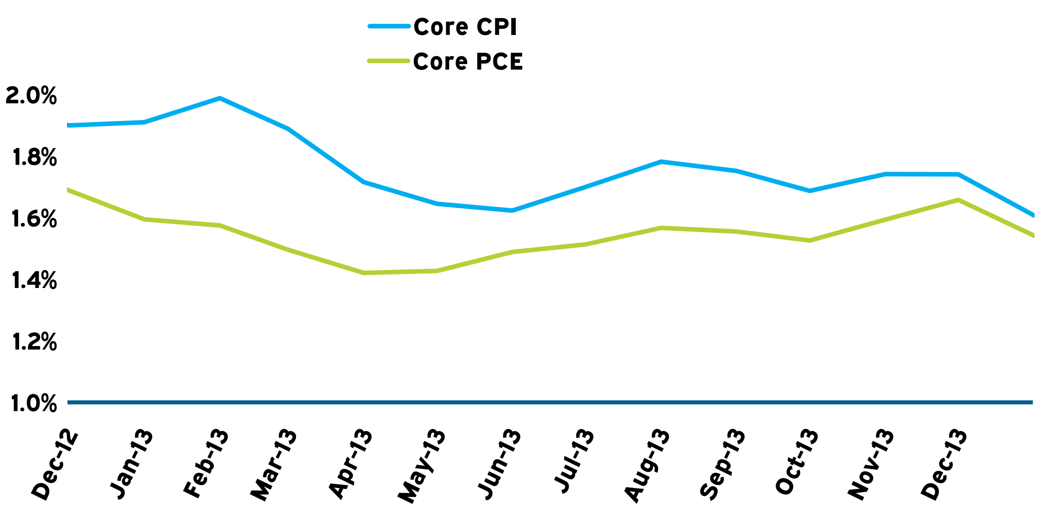


FIGURE 5
Core CPI and Core PCE
Source: St. Louis Fed (FRED).

Second, the market was still receiving accommodative policy messages from the FOMC. The most recent formal communication by the Fed, a January 2013 FOMC meeting statement, did not signal a potential change in policy. The Committee acknowledged concerns about slowing business investment, an elevated unemployment rate, and inflation running below the longer-run objective. They also explicitly noted that unless the outlook for the labor market improved "substantially", the Committee would continue its quantitative easing purchases, and even consider employing other tools if necessary. Between the January meeting and the Chair's testimony in May, economic fundamentals had not improved to a degree that the market considered meeting the threshold for easing the stance of monetary policy.

Lastly, a notable level of uncertainty regarding the new monetary policy framework existed at that time. Simply put, the market had no experience with the messaging strategy as it pertained to the dynamic between the removal of accommodation through the slowing of the asset purchases and the ultimate increase in policy rates.

Said another way, market participants and the Committee had a different understanding and expectations regarding how the removal of monetary accommodation would ultimately unfold. This is what eventually drove the aggressive public outreach in the weeks following Chair Bernanke's congressional testimony, including a direct clarification at the June 2013 press conference and vice chair Dudley's aforementioned message in July.

Relatedly, the Committee had also failed to provide a more detailed road map for how the FOMC would execute policy in a post-GFC environment, including the degree to which the new policy "floor structure[3]" and abundant reserves framework would be considered. While some information had been released about the tapering and long-run balance sheet strategy, there was insufficient signaling regarding how the FOMC was thinking about managing the System Open Market Account ("SOMA") in the future, leading to a broad misalignment of expectations.

More significantly, clarity[4] was lacking regarding the actual tapering strategy[5], including the pace of the monthly purchases, the composition and balance between Treasuries and MBSs, and the reinvestment strategy of securities that would be maturing at the same time as the taper. Further, the ultimate long-run composition of the Fed's balance sheet, the type of metrics being monitored that might provide insight into the decision process, and the degree to which outright sales of Treasuries and MBSs were (or were not) being considered were also largely unknown.

Will this time be different?

As market participants consider the potential tapering of purchases for the current QE program, we see a few differences that potentially mitigate the risk of a dramatic repricing as the strategy becomes clearer.

The market knows how the tapering is likely to be executed. With the value of hindsight and the experience of observing a tapering program unfold and ultimately completed at the end of 2014, as well as explicit commentary by Fed officials that this tapering is likely to be similar to the prior, markets have a reasonably solid base of expectations.

This generally encompasses the expectation for a gradual slowing in the pace of purchases, with dollar amounts across Treasuries and MBSs likely declining in a pro-rata fashion so as not to meaningfully disrupt the basis between the two assets. Markets also understand how the reinvestment of maturing SOMA securities is likely to be managed, and that the eventual end of the tapering does not immediately suggest an increase in policy rates.

[3] In a "floor system', banks have excess reserves and the Fed pays interest on those reserves at a rate termed interest on excess reserves (IOER). The IOER "floor" keeps the policy rate (the federal funds rate) from declining below that level. https://www.federalreserve.gov/econres/notes/feds-notes/federal-funds-rate-control-with-voluntary-reserve-targets-20190826.htm.

[4] The FOMC did alter its communication strategy in the post GFC years, including issuing a policy and general principles on how the FOMC and Fed staff would communicate with external parties. This includes direct procedures to share expectations for policy with the broad public across direct speeches, interviews with press regarding policy makers personal views on monetary policy, and other related items to include a statement on the longer-run goals and policy strategy (see policy statements: https://www.federalreserve.gov/monetarypolicy.htm, and https://www.federalreserve.gov/newsevents/pressreleases/monetary20120125c.htm).

[5] A review of FOMC materials released in the years following the meeting, highlight this, as primary dealers expectations suggested the tapering of the balance sheet was not expected until late 2014.

Markets have greater clarity regarding the management of the Fed's balance sheet in the long run. This includes how they consider the execution of policy in the previously noted "floor structure" and with ample reserves, and that the outright sales of SOMA securities is an unlikely strategy over the near-term. Formal policies and frameworks, including the revised "*Statement on Longer-Run Goals and Monetary Policy Strategy*"[6], also help anchor the expectations for how policy will be applied going forward.

Market participants are benefiting from a more direct communication strategy from policy makers. Over the last few months, as data and sentiment about the virus and the economy have continued to improve, policy makers have been openly addressing how those improvements should be considered in the context of meeting the threshold for the beginning of the taper program.

Speeches from Fed governors, reserve bank presidents, the discussion at the July FOMC meeting as revealed in the respective FOMC minutes[7], and most recently, the message from Chair Powell at the August 27 Jackson Hole Symposium[8], have provided timely updates regarding economic thresholds for starting the taper. They have also provided an expectation for an announcement over the coming months, with a program start likely later this year or the beginning of next year. Ultimately, this greater transparency on policy expectations has allowed markets to "price in" the likelihood and extent of tapering over the coming quarters.

The economic situation now is also a dynamic that may make this tapering different and less likely to drive investors to push back on the timing of accommodation removal. As laid out in Figure 6 (on the following page), economic fundamentals are in most cases on more stable ground now than in 2013, particularly as they relate to the Fed's dual mandate[9] of price stability and maximum sustainable employment.

Specifically, realized PCE is running notably above the 2.0% target, and longer-dated breakevens are suggesting a degree of potential persistence for inflation to exceed recent averages. This was not the case in 2013.

Further, unemployment is about 2.8% lower than levels experienced in 2013, and it is expected to continue improving with support by fiscal and monetary authorities. Economic growth expectations are also more robust than during 2013, with estimates of around 4% next year and the output gap expected to exceed potential through 2026.

Still, this is not to suggest everything is looking positive for US fundamentals going forward, particularly in the context of the significant rise of US debt as a percent of GDP and the federal government's budget deficit. While vaccination efforts are progressing, new COVID-19 variants and concerns regarding the long-term efficacy of vaccines could prompt further restrictions or other public health measures which could delay full economic recovery.

[6] https://www.federalreserve.gov/monetarypolicy/files/fomc_longerrungoals.pdf.

[7] https://www.federalreserve.gov/monetarypolicy/files/fomcminutes20210728.pdf.

[8] https://www.federalreserve.gov/newsevents/speech/powell20210827a.htm.

[9] In 1977, Congress amended the Federal Reserve Act, directing the Board of Governors of the Federal Reserve System and the Federal Open Market Committee to, "maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates."

FIGURE 6

Comparison of Economic Fundamentals

	2013	2021
Inflation	Inflation at 1.5%; 10-year breakevens with inflation close to target	Annual CPI 5.4%; 10-year breakevens with inflation close to target
Government Fiscal Stimulus	Debt ceiling; govt sequester; expiring payroll tax, and govt spending falling y-o-y	Govt fiscal stimulus; $1.9T American Rescue Plan in 2021; Eviction and student loan forbearance schemes; Debt ceiling
Unemployment	8.0% Unemployment; 10.8 million unemployed	5.2% Unemployment, 8.4 million unemployed
GDP	Annual rate of 2.4%; 2014 est. 2.5% GDP	Federal Reserve est. 7.0%; 2022 est. 4% GDP
Housing Market	While still far below pre-crisis levels housing prices posted strong gains with Case-Shiller Home Price index up 13.6%; 3.3 million home loans 90-day delinquent	Some market weakness after very strong bull market 2020 and 1H2021; Mid-year new home sales to pre-pandemic low
Projected Output Gap	Output gap projected to close by 2017; with 2013 output estimated at 6.0% of GDP	CBO forecast that Real GDP to exceed potential GDP through 2026 delivering a positive output gap
Debt to GDP	CBO estimated debt to GDP above 73%	Debt expected to rise to 102% of GDP in 2021 as Federal Budget Deficit reached $2.7T in 2021
Corporate Debt	$6.8T outstanding as of Q1 2013	$11.0T+ outstanding as of Q1 2021
Credit Spreads	IG Debt at 130-140 bps in Jan 2013 HY Debt at 450-500- bps in Jan 2013	IG Debt at 80-90 bps in Aug 2021 HY Debt 290-310 bps in Aug 2021
US Public Markets	Record highs for S&P and Dow; S&P 500 returned 30% best annual return since 1997	Decade - plus bull market for US equities with record highs in 2021
Global Pandemic	N/A	COVID pandemic, Delta and other variants; potential for more lockdowns and booster vaccinations

What are the risks to expectations?

We are generally optimistic that the tapering announcement and execution will be delivered with minimal disruption. However, we also suggest a few new nuances in policy that could cause issues and, potentially, price volatility.

First, the FOMC adopted a new inflation targeting policy. In 2013, policy changes and the adjustment to the balance sheet were based heavily on expectations (e.g., inflation expectations, employment expectations). This time, with policy makers explicitly noting their intention to focus more heavily on realized data (including the change to an average inflation target regime) for the tapering threshold, realized inflation, growth, and employment could have a more meaningful impact on yields than policy. In this context, the FOMC could find themselves late from a policy standpoint, which could increase market uncertainty and drive volatility higher.

Second, the FOMC is taking a different approach as it relates to full employment. The Committee has openly noted their intention to not immediately react to headline improvements in labor markets. Instead, they are broadening their view to also consider underlying employment sectors, and even demographics, in their policy decisions. This could include taking a more aggressive stance on unemployment in traditionally underserved or disproportionately unemployed segments of labor markets. Ultimately, this stance could result in unemployment declining notably below the threshold of the non-accelerating inflation rate of unemployment, or NAIRU, where very low levels of unemployment could cause a wage-inflation spiral.

Overall, the degree to which markets have not seen this change in a real world setting increases the risk of volatility as employment data continues to improve and markets grow concerned about a potentially overheating economy.

Lastly, and admittedly less clear than policy changes on inflation and employment, the FOMC has expressed that it will be more aggressive in monitoring economic developments and will thus change the tapering strategy if necessary. While this was also the message during the last tapering program, anecdotal feedback from market participants suggests the threshold for changing the pace of the taper in this next program is expected to be lower than the prior program. This is largely a reflection of the notable amount of uncertainty regarding developments with the pandemic and the potential impacts on the economy. Under this expectation, each policy meeting could carry a greater level of policy risk, and with that an increase in market volatility.

Conclusion

It is our expectation that due to the aggressive communication strategy by policy makers to date, and the "learning" by market participants that occurred across the prior tapering program and how it ultimately fits in the broader context of the monetary policy normalization strategy, markets are unlikely to face another "taper tantrum" event. In fact, at this point, we have not seen any meaningful market reaction since the signaling began in earnest earlier this year. We expect this lack of reaction to continue as the program unfolds and ultimately concludes. Further, as of the release of this newsletter, market expectations (including ours) are for the FOMC to announce the tapering program at either the November or December 2021 FOMC meeting. The ultimate pace of the taper will likely occur over 2022, pending any meaningful economic developments that drive policy makers to change course.

We note, however, risks exist that could prompt us to alter this expectation. The FOMC's new approach to managing inflation and employment-related policies, introduces a degree of market uncertainty that could result in heighted volatility. Additionally, and relatedly, with the path of the virus still largely uncertain, the risk exists that market and policy expectations could adjust abruptly (both positively and negatively) with pandemic developments.

As always, we will continue to remain diligent in our efforts to stay abreast of these developments, and will provide our clients with timely and appropriate updates accordingly. Should you have additional questions, please reach out to your Meketa client team directly and they will be happy to assist.

Disclaimers

This document is for general information and educational purposes only, and must not be considered investment advice or a recommendation that the reader is to engage in, or refrain from taking, a particular investment-related course of action. Any such advice or recommendation must be tailored to your situation and objectives. You should consult all available information, investment, legal, tax and accounting professionals, before making or executing any investment strategy. You must exercise your own independent judgment when making any investment decision.

All information contained in this document is provided "as is," without any representations or warranties of any kind. We disclaim all express and implied warranties including those with respect to accuracy, completeness, timeliness, or fitness for a particular purpose. We assume no responsibility for any losses, whether direct, indirect, special or consequential, which arise out of the use of this presentation.

All investments involve risk. There can be no guarantee that the strategies, tactics, and methods discussed in this document will be successful.

Data contained in this document may be obtained from a variety of sources and may be subject to change. We disclaim any and all liability for such data, including without limitation, any express or implied representations or warranties for information or errors contained in, or omissions from, the information. We shall not be liable for any loss or liability suffered by you resulting from the provision to you of such data or your use or reliance in any way thereon.

Nothing in this document should be interpreted to state or imply that past results are an indication of future performance. Investing involves substantial risk. It is highly unlikely that the past will repeat itself. Selecting an advisor, fund, or strategy based solely on past returns is a poor investment strategy. Past performance does not guarantee future results.