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Corporate & Investment Banking

Quarterly State of Rates

June 23, 2021

Vanessa McMichael, CTP
Fixed Income Strategy

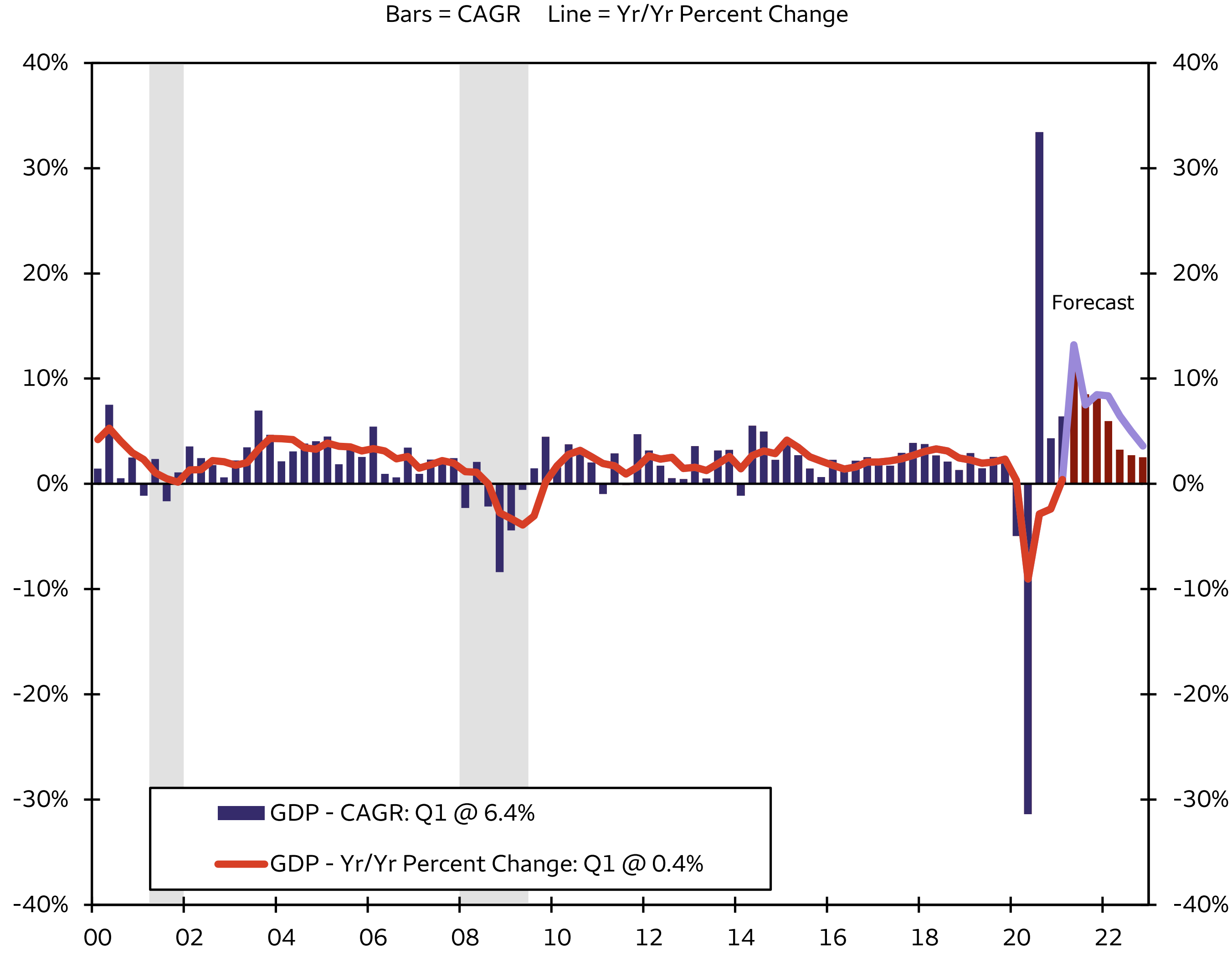
The U.S. Economy

U.S. Economic Growth

WF economists estimate GDP to grow by 7.3% by the end of 2021.

If this projection comes to fruition, this will be the *strongest year of growth since 1951.*

U.S. Real GDP Growth



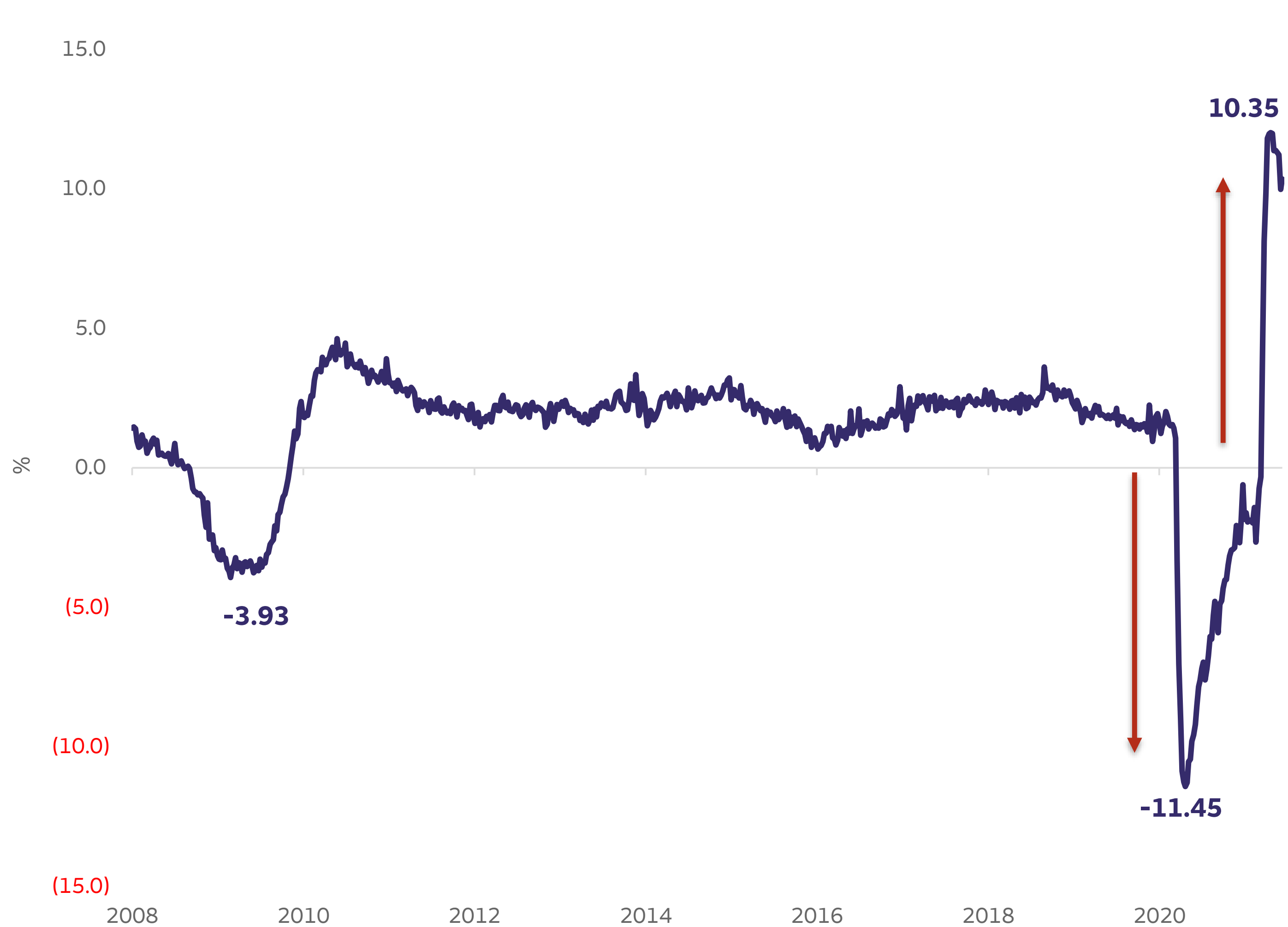
Source: U.S. Department of Commerce and Wells Fargo Securities (Economics)

U.S. Economic Activity

The WEI provides a signal of the state of the U.S. economy based on 10 daily/weekly indicators of real economic activity.

Represents consumer behavior, the labor market and production.

Fed Weekly Economic Index (WEI)



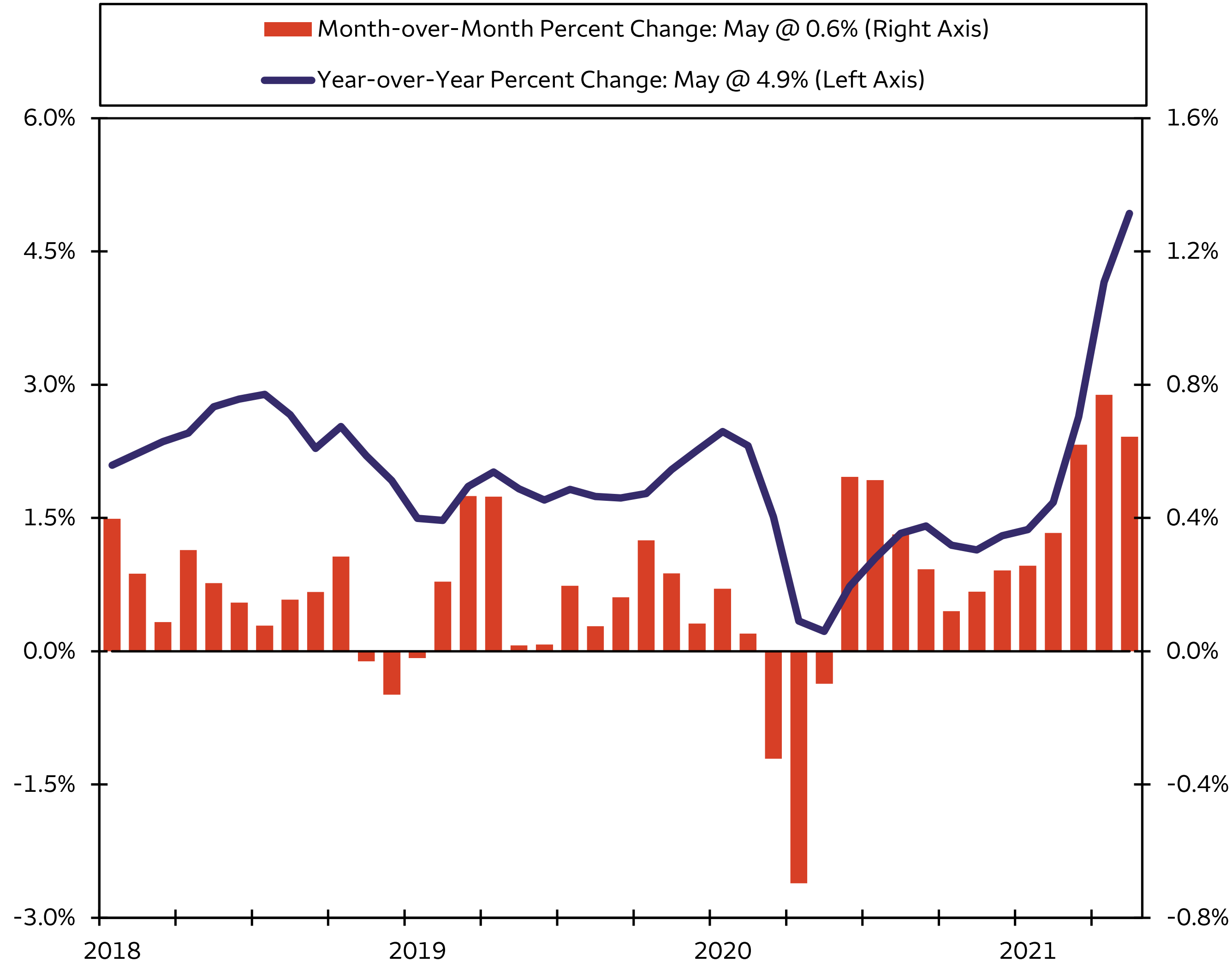
Source: Federal Reserve and Wells Fargo Securities

Measures of Inflation: CPI

Inflationary pressures have risen on the heels of strong economic growth and supply-side challenges…

Supply bottlenecks should ease over the course of the next year or so, but evidence is quickly accumulating that inflationary pressures might be greater and longer lasting than previously thought.

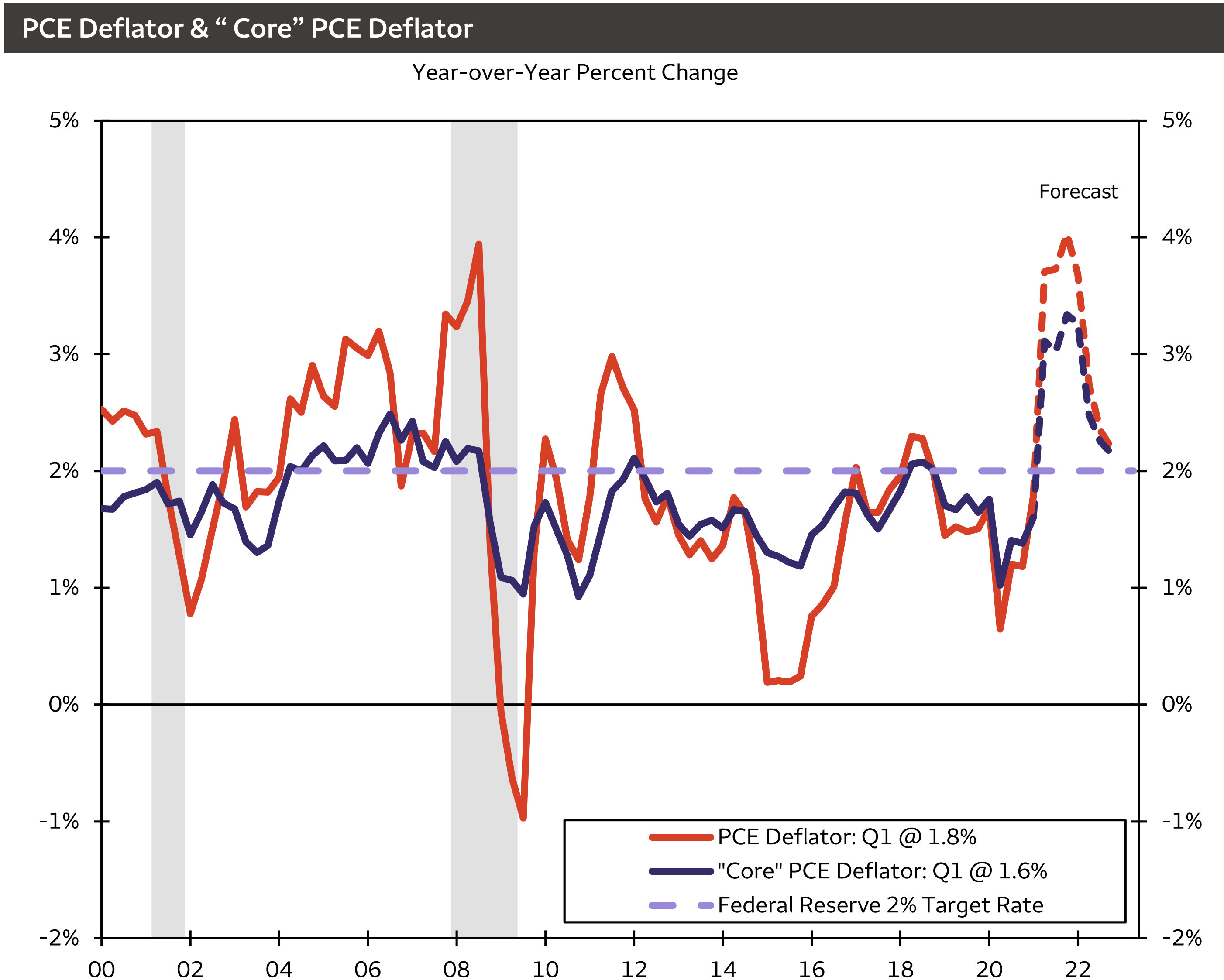
Headline Consumer Price Index (SA)



Source: U.S. Department of Labor and Wells Fargo Securities (Economics)

The Fed's Preferred Measure of Inflation: PCE

The Fed appears willing to tolerate higher inflation until there is clear evidence of "substantial further progress" in the labor market recovery.



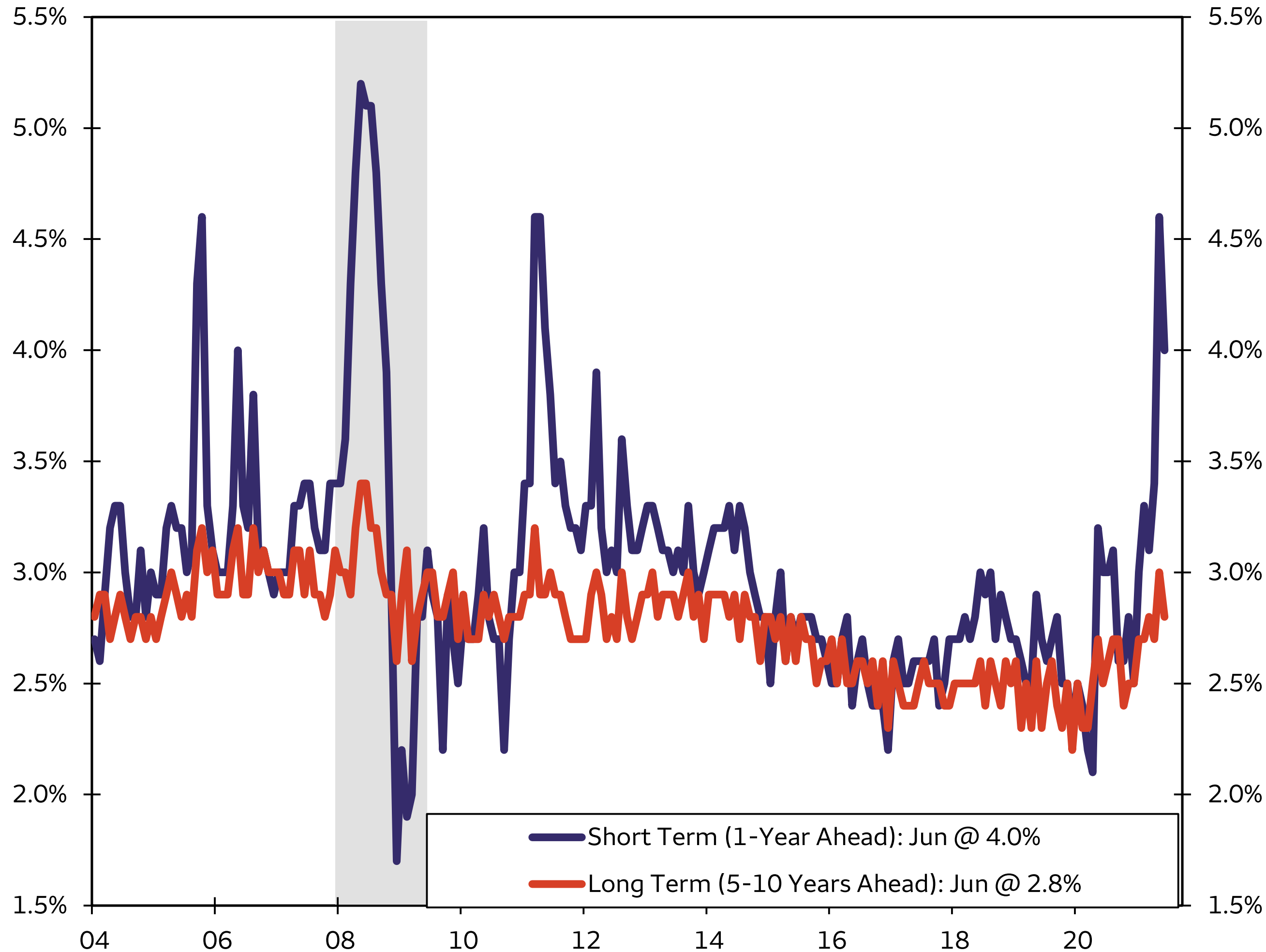
Source: U.S. Department of Commerce and Wells Fargo Securities (Economics)

Inflation Expectations

Inflation expectations continue to run hotter in the near-term as the Fed maintains its "patience" with strong inflation data.

Consumer Inflation Expectations

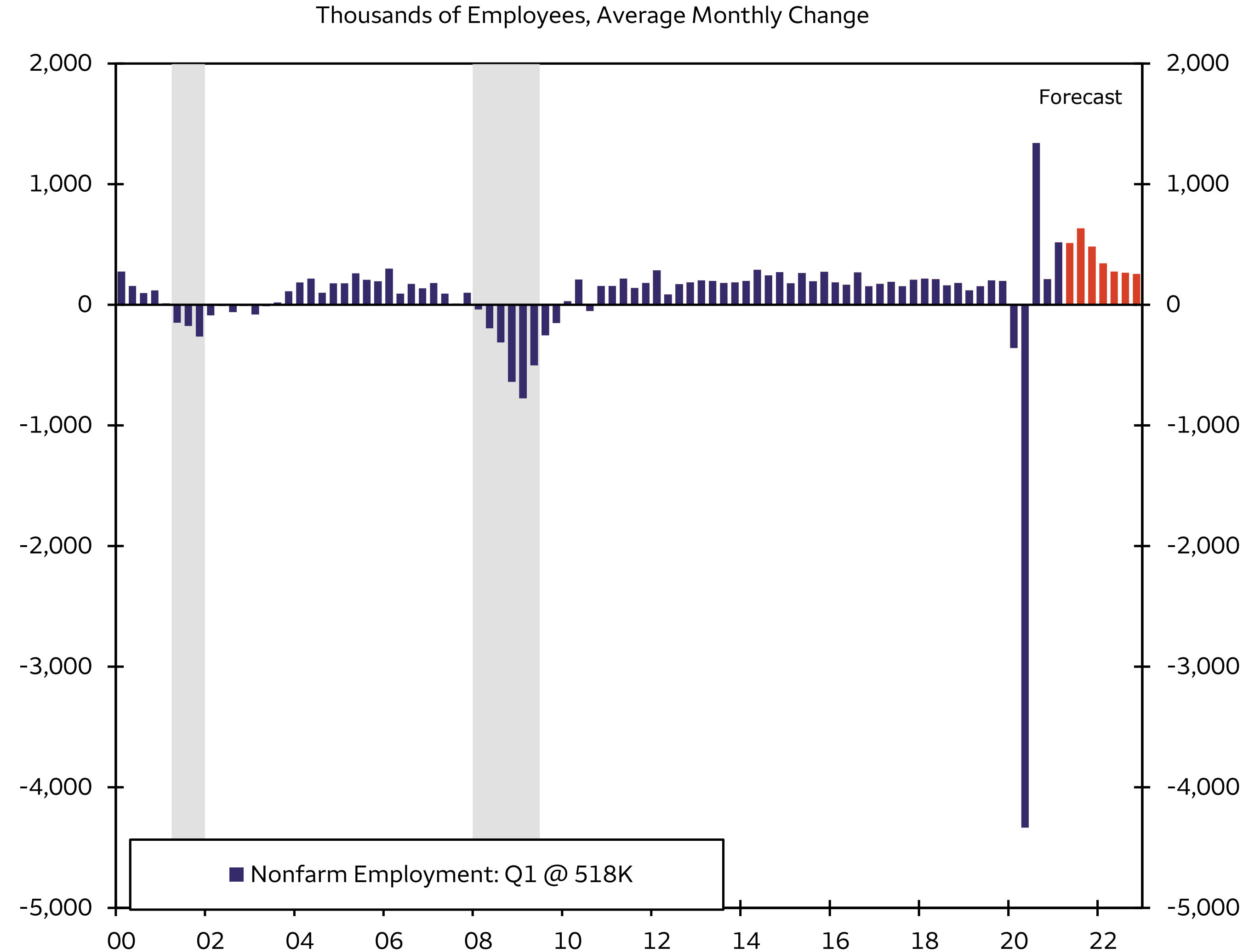
University of Michigan Consumer Sentiment



Source: University of Michigan and Wells Fargo Securities (Economics)

Nonfarm payroll data has been spotty year-to-date.

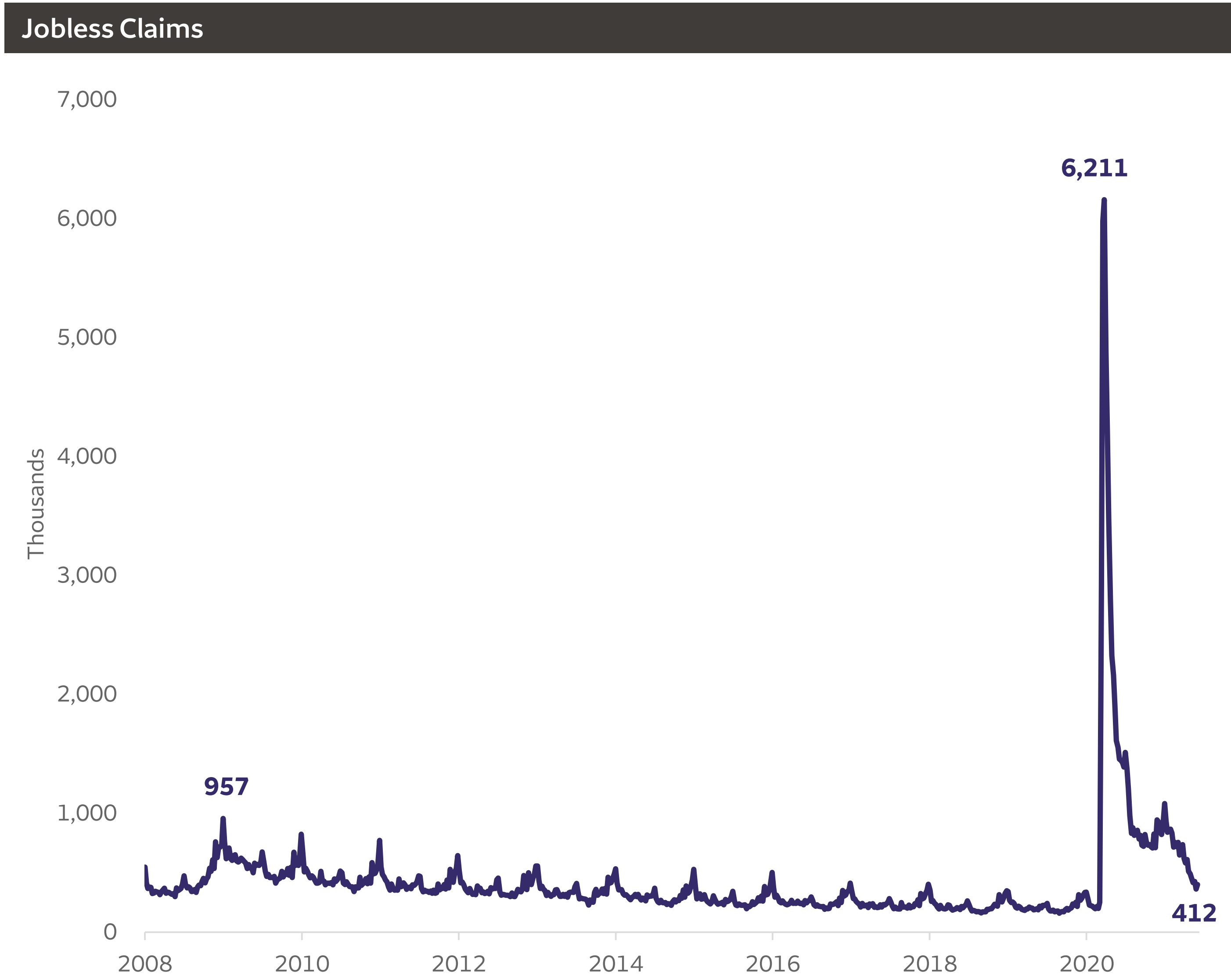
Nonfarm Employment



Source: U.S. Department of Labor and Wells Fargo Securities (Economics)

Labor Market: Weekly Jobless Claims

Jobless claims have trended lower so far in 2021 although there are still almost 15 million Americans without jobs, according to continuing claims data.



Source: U.S. Department of Labor and Wells Fargo Securities

Labor Market: Continuing Claims

There are still almost 15 million Americans without a job and the labor market recovery remains very uneven across sectors.

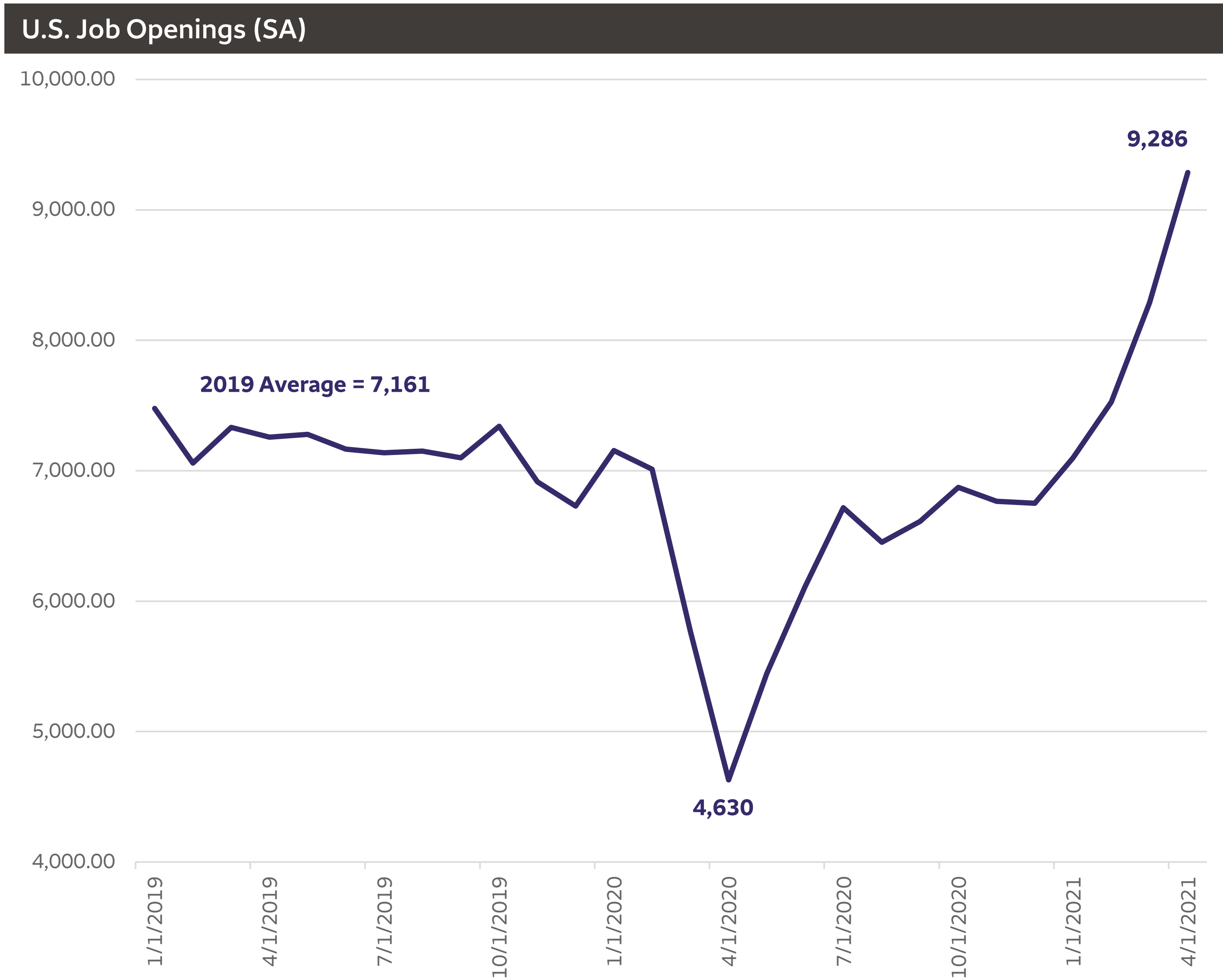
Unemployment Programs

	May 29th	One Year Ago
Regular State	3,308,699	19,039,121
Federal Employees	11,040	15,519
Newly Discharged Veterans	6,349	11,905
Pandemic Unemployment Assistance	6,120,596	9,726,314
Pandemic Emergency UC	5,157,445	1,143,411
Extended Benefits	143,081	2,714
State Additional Benefits	1,501	2,508
STC / Workshare	80,239	228,733
Total	**14,828,950**	**30,170,225**

Source: U.S. Department of Labor and Wells Fargo Securities

Labor Market: Job Openings

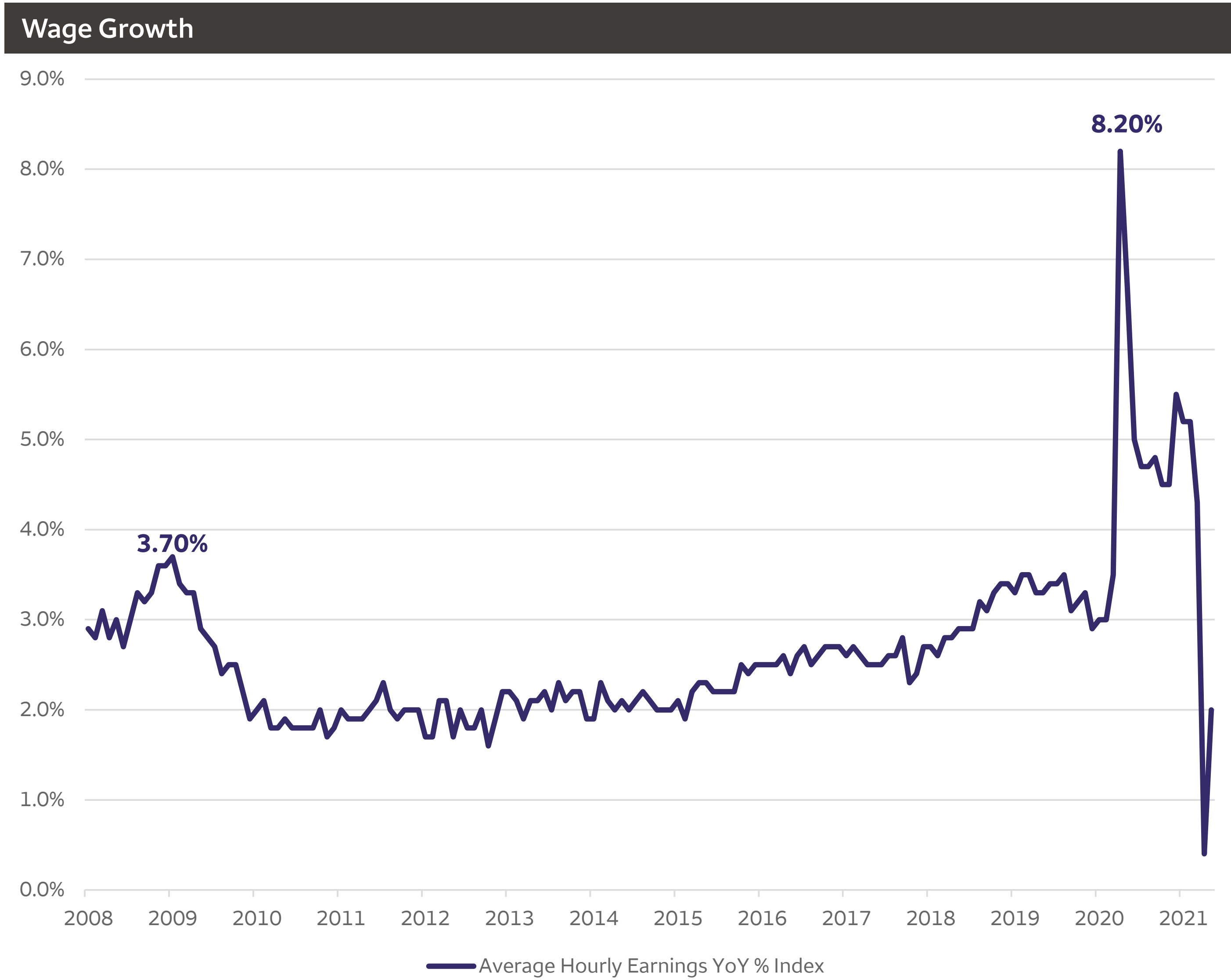
At the same time that some labor metrics have improved, job openings have surged to new all-time records highs.



Source: U.S. Department of Labor and Wells Fargo Securities

Labor Market: Wages

Wage growth is beginning to normalize, although it is still not near pre-COVID levels.



Source: U.S. Department of Labor and Wells Fargo Securities

Fixed Income Markets

Front-end Rates

The past year has been painful for front-end investors.

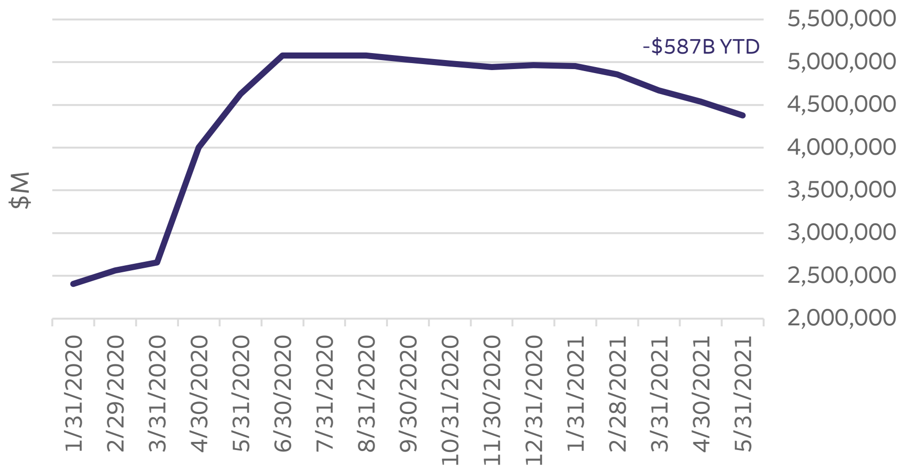
Rate Snapshot			
Type	**Current Rate**	**Rate Before COVID (March 2nd, 2020)**	**YTD Range**
Government MMF	1bp	1.38%	1 – 2bps
Prime MMF	3bps	1.50%	3 – 5bps
Fed effective	10bps	1.59%	5 – 10bps
SOFR	5bps	1.59%	1 – 11bps
ON USD LIBOR	8bps	1.57%	7 – 14bps
ON BSBY	6bps	1.57%	5 – 8bps
4-Week t-bill	4bps	1.44%	0 – 8.5bps
2-Year Treasury Note	25bps	90bps	10 – 25bps
30D Tier-1 Fin CP	5bps	1.40%	4 - 13bps
30D Tier-1 Nfin CP	2bps	1.47%	3 – 10bps
30D Tier-2 Nfin CP	19bps	1.60%	12 – 49bps

"Current Rate" as of June 18th

Source: Bloomberg, Investment Company Institute, Federal Reserve, Crane Data and Wells Fargo Securities

Supply

Outstanding U.S. Treasury t-bills



U.S. Agencies

- The big U.S. GSE's have significantly pulled back on issuance this year as COVID caused a big ramp up in funding last year

	2020 Par Amount	2020 Issues	2021 Par Amount	2021 Issues
Fannie Mae	$15.5B	4	$0	0
Freddie Mac	$14.5B	4	$0	0
Federal Home Loan Bank	$5B	4	$2.0B	2

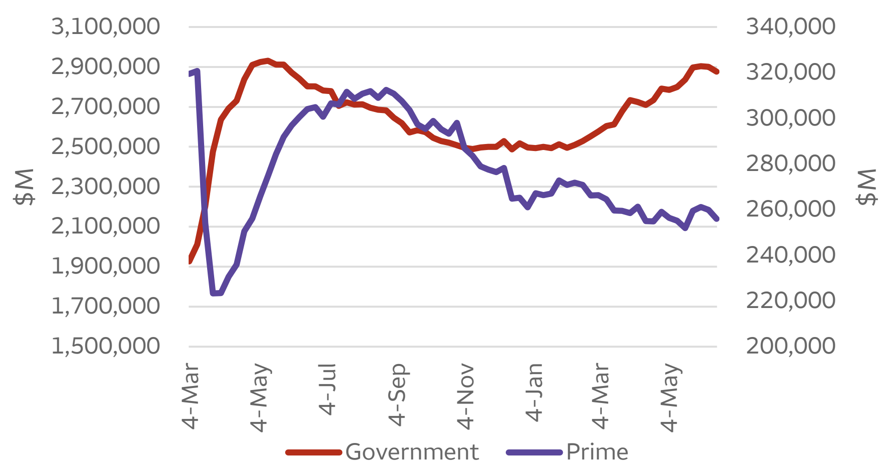
January through June

Credit

IG YTD Issuance YOY		
	2020	**2021**
Jan	140.4	135.2
Feb	89.9	119.8
Mar	260.5	199.6
Apr	292.0	114.2
May	250.1	137.7
June	133.0	82.3
Total	**3,185.9**	**2,809.8**

SA CP Outstanding YTD		
	YTD Change	Current Total
Non-financial	-$11.8	$212.8B
Financial	+$170.7B	$719.9B

Money Market Funds (March 2020 – Current)



Source: Bloomberg, Investment Company Institute and Wells Fargo Securities

State of Money Markets

A lot of cash and not enough front-end investment options are the theme of 2021.

- Cash continues to build in the face of ongoing supply challenges.
- Treasury bill buyers are going to continue to experience compressed rates in the near-term until another suspension of the debt ceiling is enacted. (Debt ceiling suspension expires end of July)
- U.S. Agencies, particularly the 3 big GSE's have been absent from term markets and limited in front-end markets
- Money market funds are operating with very tiny margins, with most many waiving fees and concerns of even more consolidation due to extremely low rates.
- Credit spreads have fallen to all-time tights but with inflation (and inflation expectations) rising, spreads could begin to widen, particularly if the Fed announces tapering
  - But spreads could also remain range-bound if the economy continues to strengthen and the Fed remains accommodative, at the same time

The Federal Reserve

FOMC Policy Update

At its most recent meeting, the FOMC left the Fed funds target range and asset purchases unchanged, but increased its administered rates by 5bps and adjusted its SEP to indicate an expectation for a strengthening economy.

Fed Funds Target range

- The **Fed fund rate** represents the rate paid for unsecured U.S. dollars loaned between depository institutions and GSEs.
- The Fed establishes a “target range” for its effective rate which is an average of Fed funds traded for the prior day
- The current Fed funds target range is 0 to 25 bps
  - **Unchanged at the June meeting**

Administered Policy Rates

IORB – Interest on Reserve Balances
RRP – Reverse Repo Facility

- The Fed adjusted both IORB and RRP higher by 5 basis points
  - **IORB = 15bps**
  - **RRP = 5bps**

Asset Purchases

Quantitative easing

- Buying securities and expanding the size its balance sheet

Tapering

- Reducing the pace of purchases and contracting the size of its balance sheet
- Fed is keeping pace of $80 billion USTs and $40 billion MBS/CMBS intact
- Beginning to talk about taper timing…

Summary of Economic Projections

- Released quarterly. **There was a notable change in projections from March to June.**

GDP - YE 2021 at 7.0% vs 6.5% in March
Unemployment Rate – Unchanged vs March at 4.5%
PCE - Higher at 3.4% vs 2.4% in March
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Dot Plot – Unchanged in 2021 but 2 hikes by YE 2023

Source: Federal Reserve and Wells Fargo Securities (Economics)

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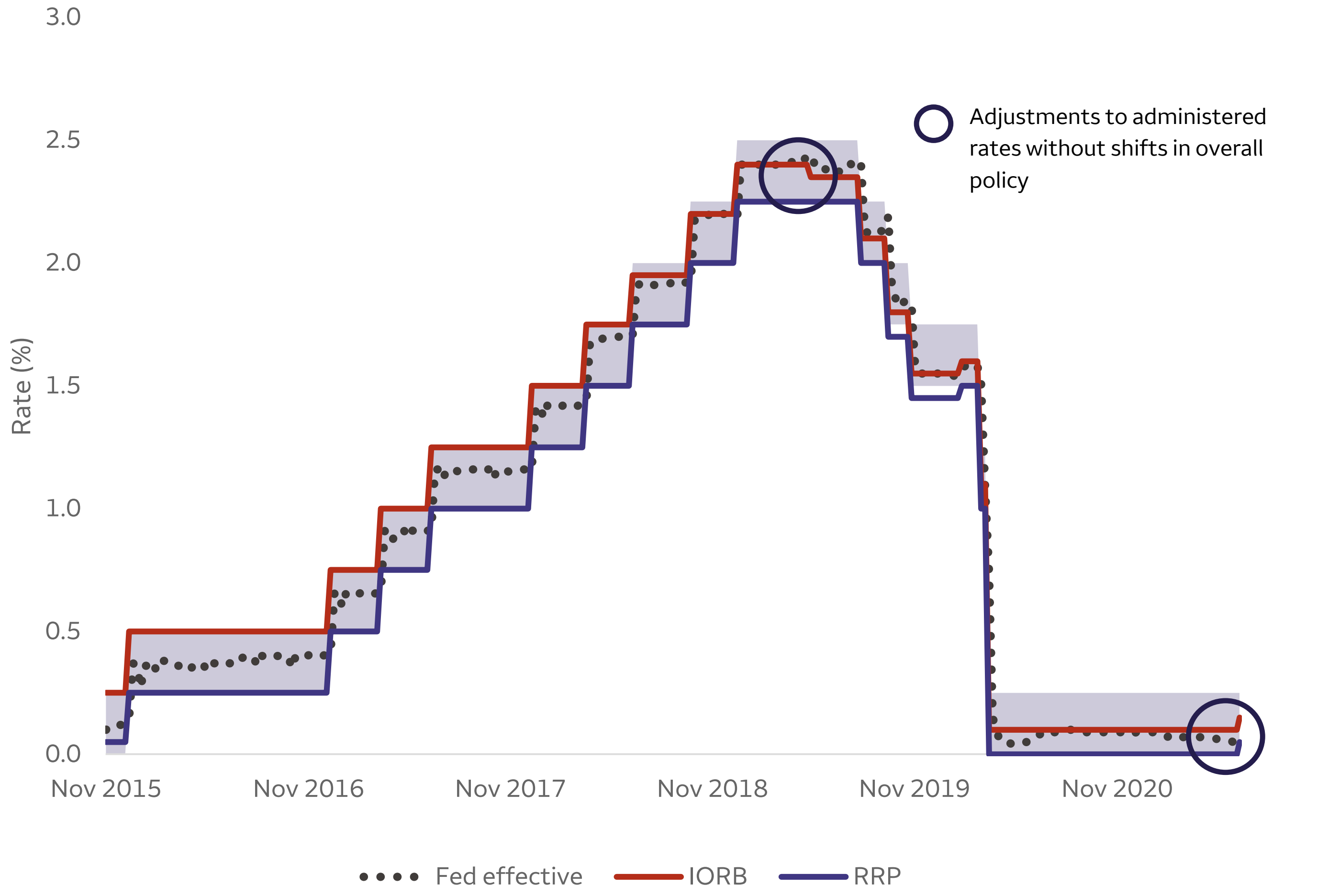
Fed funds

The Fed targets a "range" for Fed funds.

- The Fed aims to keep Fed funds within its "target range"
  - Current range is 0 – 25 basis points



Source: Bloomberg and Wells Fargo Securities

FOMC Administered Rates

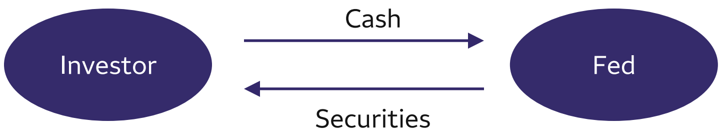
The Fed uses its two administered rates to maintain a desired Fed funds target range.

Interest on Reserve Balances - IORB

- Primary policy tool
- This is the rate earned by banks on reserve balances (both required and excess).
- IORB will place upward pressure on short-term rates because banks will have little incentive to lend funds below this rate.
- Investors that can earn interest on reserve balances include depository institutions, branches/agencies of foreign banks, trust companies and Edge Act and agreement corporations.

Fed Overnight Reverse Repo Facility - RRP

- Overnight Reverse Repo Agreements exchange cash for securities, and then at maturity, return the securities for cash + applicable interest.



- RRP is the lower rate offered, setting the floor for short-term rates.
- The most active investors in overnight markets participate at the Feds' RRP, including but not limited to, money market funds.

Source: Federal Reserve and Wells Fargo Securities (Economics)

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What is an ample reserves framework and how does it impact monetary policy in the U.S.?

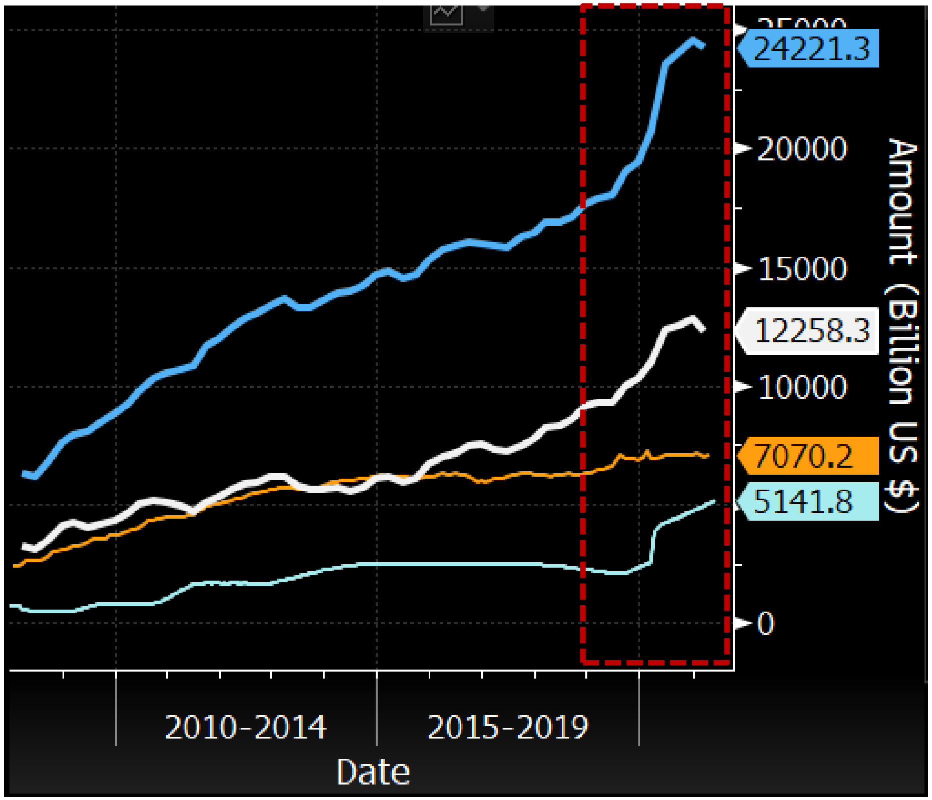
- **Prior to the global financial crisis in 2008**, the Fed used temporary open market operations via repo markets to **adjust the Fed funds rate by incrementally shifting reserve balances.**
  - Open market operations would increase or decrease the level of bank reserves. This would adjust the Fed funds rate, broader short-term interest rates, and eventually longer-term financial conditions. This was know as a scarce reserves policy framework.
- **After the financial crisis**, due to the aggregate level of excess reserves in the banking system, the supply/demand equilibrium for reserves no longer functioned as a tool to control short-term interest rates (e.g., Fed funds). Thus an ample reserves framework was born.
  - In an ample reserves framework, the Fed introduced two new policy tools that would set a floor (due to the large amount of cash) on short-term interest rates by paying banks and other large money market participants (e.g. money market funds and GSEs) to park their cash at the Fed. This has the effect of creating a lower-bound or floor, on front-end interest rates.

Source: Federal Reserve and Wells Fargo Securities

U.S. Treasury Holdings by Investor Type

The growth of the Federal Reserve's Treasury holdings and the reserves created from them, influenced the Fed into adopting an ample reserve's policy framework.

Total U.S. Debt Holders ($B)			
	January 2008	**January 2021**	**Change**
US Debt	6,333.1	24,2221.3	282.5%
Other Holders	3,197.8	12,258.3	283.3%
Foreign Holders	2,399.4	7,070.2	194.7%
Federal Reserve	740.6	5,141.8	594.3%



Source: Bloomberg and Wells Fargo Securities

Factors Affecting Reserve Balances

The Fed's H.4 report details weekly changes to its balance sheet, which directly impact reserve balances.

1. Factors Affecting Reserve Balances of Depository Institutions
Millions of dollars

Reserve Bank credit, related items, and reserve balances of depository institutions at Federal Reserve Banks	Averages of daily figures: Week ended Jun 16, 2021	Change from week ended Jun 9, 2021	Change from week ended Jun 17, 2020	Wednesday Jun 16, 2021
Reserve Bank credit	7,964,723	+ 59,338	+ 879,556	8,025,033
Securities held outright (1)	7,425,364	+ 54,198	+1,346,739	7,484,242
U.S. Treasury securities	5,141,849	+ 17,300	+ 978,579	5,153,771
Bills (2)	326,044	0	0	326,044
Notes and bonds, nominal (2)	4,416,857	+ 14,404	+ 878,632	4,427,372
Notes and bonds, inflation-indexed (2)	346,229	+ 1,886	+ 83,535	347,259
Inflation compensation (3)	52,719	+ 1,009	+ 16,412	53,096
Federal agency debt securities (2)	2,347	0	0	2,347
Mortgage-backed securities (4)	2,281,168	+ 36,898	+ 368,160	2,328,124
Unamortized premiums on securities held outright (5)	350,516	+ 1,132	+ 40,163	351,548
Unamortized discounts on securities held outright (5)	-13,947	- 207	- 8,539	-13,941
Repurchase agreements (6)	0	0	- 120,429	0
Foreign official	0	0	0	0
Others	0	0	- 120,429	0
Loans	87,843	+ 1,334	- 8,559	87,185
Primary credit	510	+ 24	- 7,429	584
Secondary credit	0	0	0	0
Seasonal credit	9	0	- 3	9
Primary Dealer Credit Facility	0	0	- 5,621	0
Money Market Mutual Fund Liquidity Facility	0	0	- 25,604	0
Paycheck Protection Program Liquidity Facility	87,324	+ 1,310	+ 30,098	86,591
Other credit extensions	0	0	0	0
Net portfolio holdings of Commercial Paper Funding Facility II LLC (7)	8,554	0	- 4,242	8,554
Net portfolio holdings of Corporate Credit Facilities LLC (7)	25,854	- 52	- 12,256	25,844
Net portfolio holdings of MS Facilities LLC (Main Street Lending Program) (7)	30,561	- 8	- 1,314	30,529
Net portfolio holdings of Municipal Liquidity Facility LLC (7)	10,734	- 83	- 5,344	10,736
Net portfolio holdings of TALF II LLC (7)	4,762	+ 1	+ 4,762	4,762
Float	-125	- 16	+ 104	-95
Central bank liquidity swaps (8)	500	- 16	- 352,084	500
Other Federal Reserve assets (9)	34,107	+ 3,056	+ 554	35,168
Foreign currency denominated assets (10)	21,596	- 78	+ 673	21,589
Gold stock	11,041	0	0	11,041
Special drawing rights certificate account	5,200	0	0	5,200
Treasury currency outstanding (11)	50,684	+ 14	+ 442	50,684
Total factors supplying reserve funds	8,053,243	+ 59,273	+ 880,670	8,113,547

Source: Federal Reserve and Wells Fargo Securities

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Millions of dollars

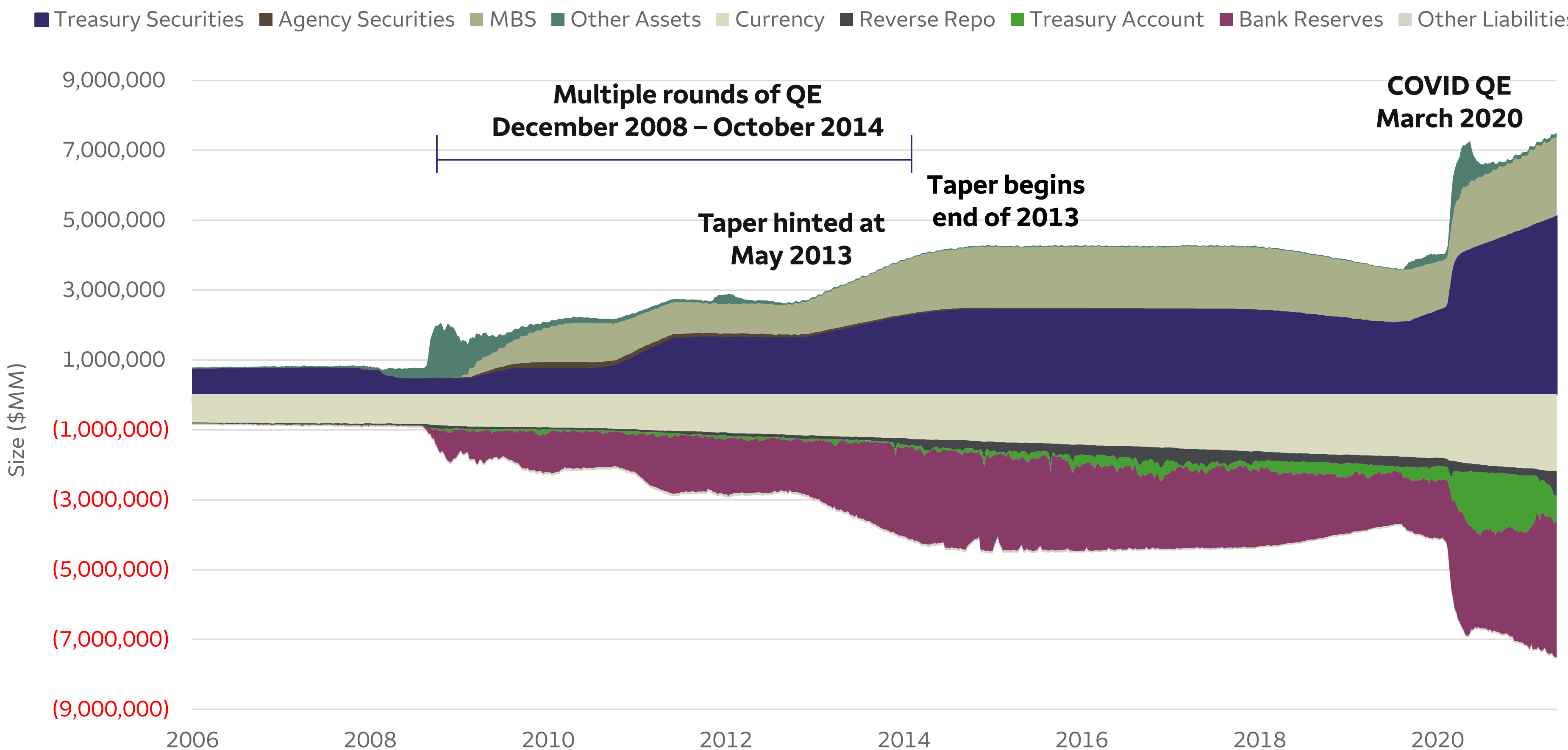
Reserve Bank credit, related items, and reserve balances of depository institutions at Federal Reserve Banks	Averages of daily figures: Week ended Jun 16, 2021	Change from week ended Jun 9, 2021	Change from week ended Jun 17, 2020	Wednesday Jun 16, 2021
Currency in circulation (11)	2,178,607	- 1,485	+ 221,811	2,178,952
Reverse repurchase agreements (12)	761,281	+ 50,771	+ 528,316	743,760
Foreign official and international accounts	219,458	- 3,112	- 12,882	222,818
Others	541,823	+ 53,883	+ 541,197	520,942
Treasury cash holdings	43	+ 5	- 70	43
Deposits with F.R. Banks, other than reserve balances	1,068,651	- 58,119	- 677,825	1,184,041
Term deposits held by depository institutions	0	0	0	0
U.S. Treasury, General Account	653,889	- 76,346	- 906,961	765,114
Foreign official	27,160	- 228	+ 10,910	26,955
Other (13)	387,602	+ 18,455	+ 218,226	391,972
Treasury contributions to credit facilities (14)	50,278	0	- 56,579	50,278
Other liabilities and capital (15)	54,345	+ 2,435	+ 3,470	50,738
Total factors, other than reserve balances, absorbing reserve funds	4,113,205	- 6,394	+ 19,123	4,207,812
Reserve balances with Federal Reserve Banks	3,940,038	+ 65,667	+ 861,547	3,905,735

Source: Federal Reserve and Wells Fargo Securities

Federal Reserve Balance Sheet

The Fed can increase or decrease the amount and scope of assets or liabilities on its balance sheet, which in turn, increases or decreases the money supply within the economy.

During economic crises, the Fed can expand its balance sheet by buying more assets, such as bonds—called quantitative easing (QE). During an expansionary period, the Fed will taper its asset purchases.



Source: Federal Reserve, Bloomberg and Wells Fargo Securities

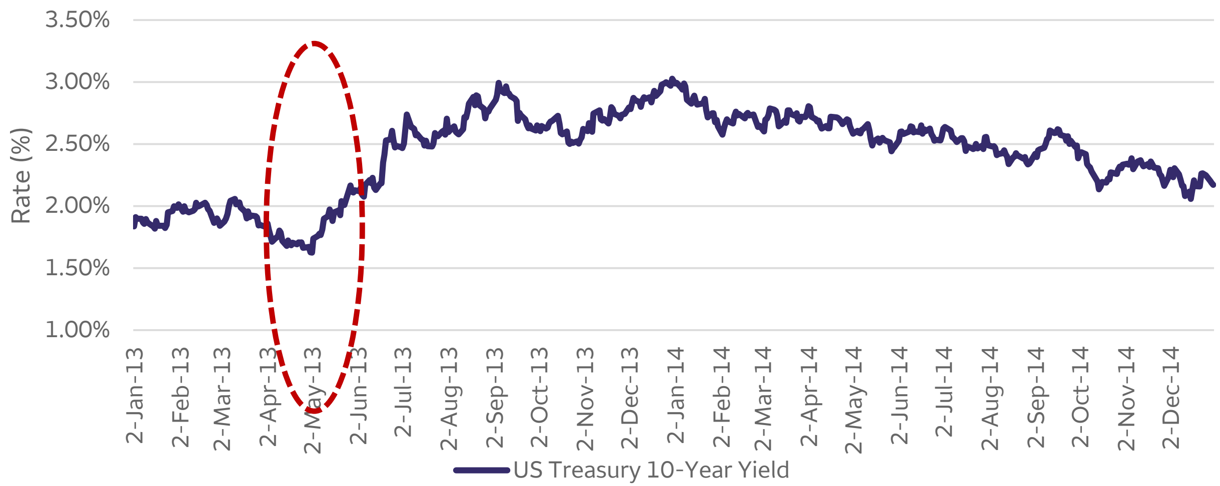
What happened the last time the Fed tapered?

Lookback: Market Reaction to Prior Fed Tapering

The Fed announced mid-2013 that it would begin tapering its asset purchase program by the end of the year.

- The announcement of tapering asset purchases caused a **"taper tantrum"**
  - Equity markets were volatile and Treasury yields surged higher

10-Year UST Treasury Yield



- The U.S. economy was not "robust" when the Chair Bernanke announced its intent to taper [see next slide]

- déjà vu: political drama
  - Debt ceiling was suspended from February through May 2013 (extraordinary measures put in place because debt ceiling was not temporarily suspended again until October 2013)
  - During this period, U.S. t-bill supply diminished and bills traded very technical
  - Furthermore, the government also temporarily shut down in October 2013.

- Fed continued its QE program through October 2014.

- The Fed raised Fed funds almost 2 years after tapering began- December 2015

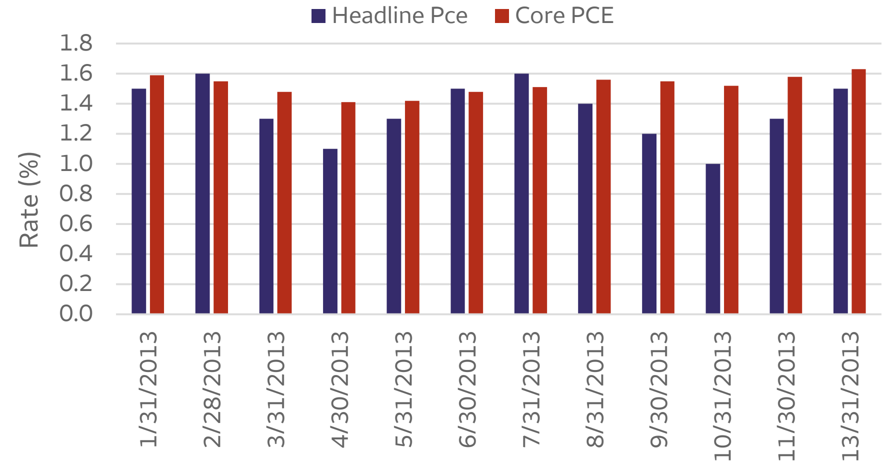
Source: Bloomberg and Wells Fargo Securities

2013 U.S. Economic Snapshot – Weaker than 2021

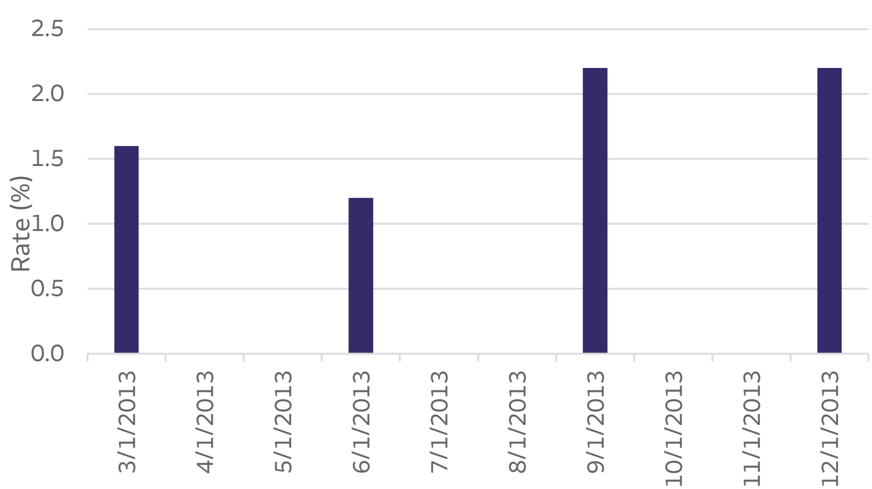
Today, the U.S. economy is in a much different place than where it was when taper was first announced in 2013.

If the Fed is going to "taper", that is an indication that the accommodation is not needed. Thus one would expect to see consistent growth, low employment and stable inflation around the Fed's 2.0% objective.

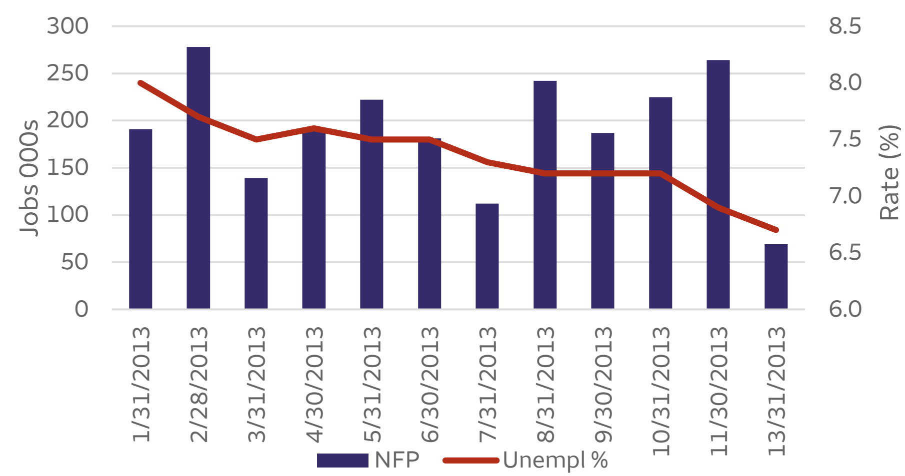
PCE



U.S. GDP



Headline Unemployment Rate and Nonfarm Payrolls



Source: Bloomberg and Wells Fargo Securities

The Next Taper Decision

The Current Taper Debate

The Fed has only recently announced that it is starting to talk about taper timing.

Known

- The Fed is operating with extreme caution when it comes to communicating any intentions about tapering. There is a strong desire to steer clear of a taper tantrum 2.0.
- *We will taper when we feel the economy has made substantial progress and we will communicate it well in advance.* – Chair Powell
- *Asset purchases are the focus of the Fed's thinking in the near term, not rates.* – Chair Powell
- **Lessons learned from prior taper:**
  - Tapering of asset purchases will take place long before the Fed funds target rate is changed **IF** inflation does not spiral out of control
  - There is an expectation that Fed funds will rise by the end of 2023 thus, tapering will likely start sometime between end of 2021 and some time in 2023
  - The Fed will continue to be an active participant in the market due to the level of bank reserves, even after tapering (reinvestments)
  - As long as the Treasury has massive funding needs, the Fed can comfortably continue its asset purchases

Unknown

- If COVID is really going away?
- The exact timing and pace of tapering?
- The reliability of the shift in Fed dots?
- How transitory or sticky is inflation and will it remain transitory or sticky in the near-term?
  - If Inflation ends up more sticky than transitory, this could force the Fed to raise Fed funds before it initially intended.
- Timing of debt ceiling resolve?

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Asset Purchases

Quantitative easing

- Buying securities and expanding the size its balance sheet

Tapering

- Reducing the pace of purchases and contracting the size of its balance sheet

- Fed is keeping pace of $80 billion USTs and $40 billion MBS/CMBS intact
- Beginning to talk about taper timing…

Summary of Economic Projections

- Released quarterly. **There was a notable change in projections from March to June.**

GDP - YE 2021 at 7.0% vs 6.5% in March
Unemployment Rate – Unchanged vs March at 4.5%
PCE - Higher at 3.4% vs 2.4% in March
Core PCE –Higher at 3.0% vs 2.2% in March
Dot Plot – Unchanged in 2021 but 2 hikes by YE 2023

Source: Federal Reserve and Wells Fargo Securities (Economics)

The Fed's June projections indicate a sharp strengthening of the economy in 2021 but then call for the economy to *normalize* over the next two years.

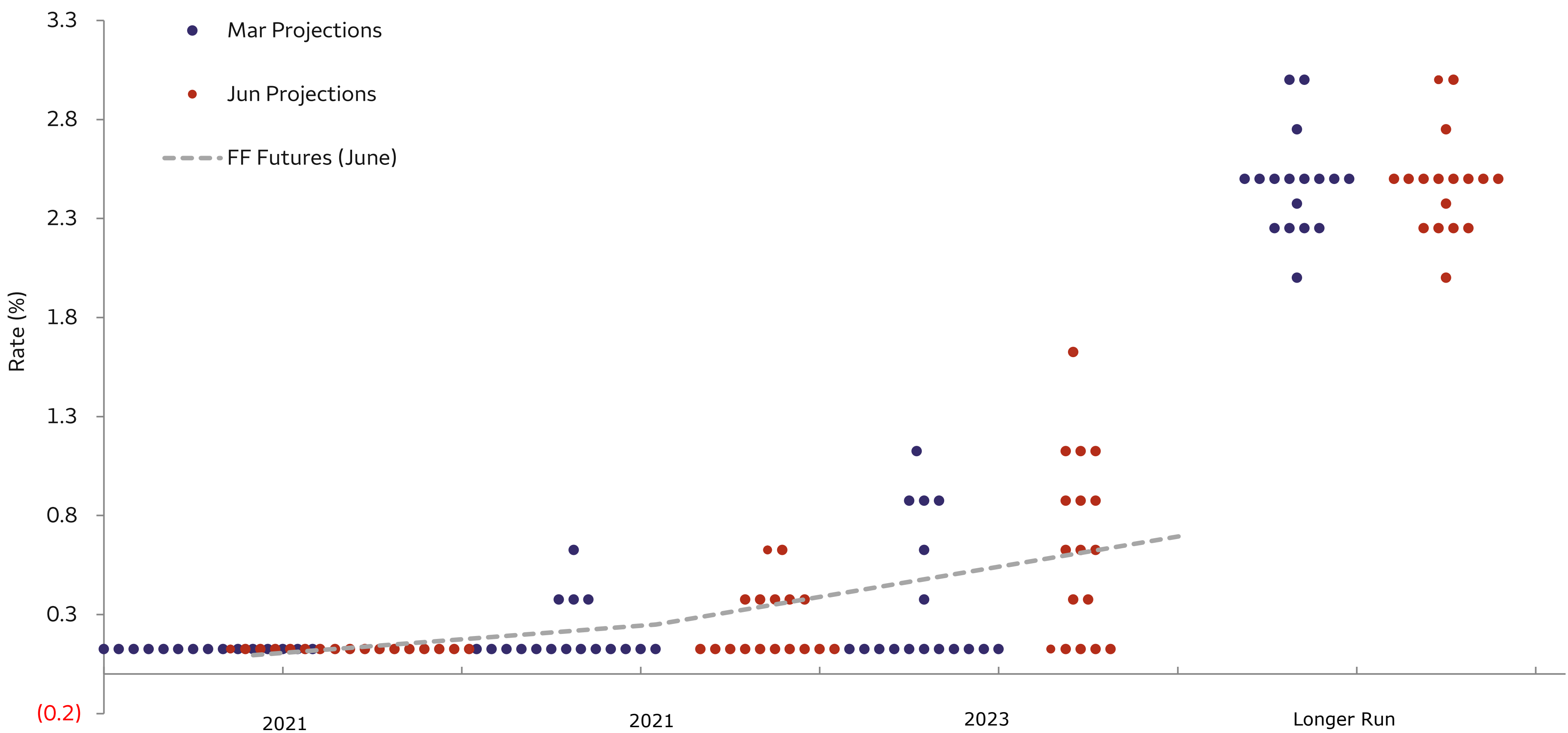
	Median				Central Tendency*			
	2021	2022	2023	Longer Run	2021	2022	2023	Longer Run
Change in real GDP	**7.0** ↑	**3.3**	**2.4** ↑	**1.8**	**6.8-7.3**	**2.8-3.8**	**2.0-2.5**	**1.8-2.0**
March	6.5	3.3	2.2	1.8	5.8-6.6	3.0-3.8	2.0-2.5	1.8-2.0
Unemployment Rate	**4.5**	**3.8** ↓	**3.5**	**4.0**	**4.4-4.8**	**3.5-4.0**	**3.2-3.8**	**3.8-4.3**
March	4.5	3.9	3.5	4.0	4.2-4.7	3.6-4.0	3.2-3.8	3.8-4.3
PCE Inflation	**3.4** ↑	**2.1** ↑	**2.2** ↑	**2.0**	**3.1-3.5**	**1.9-2.3**	**2.0-2.2**	**2.0**
March	2.4	2.0	2.1	2.0	2.2-2.4	1.8-2.1	2.0-2.2	2.0
Core PCE Inflation	**3.0** ↑	**2.1** ↑	**2.1**	**-**	**2.9-3.1**	**1.9-2.3**	**2.0-2.2**	**-**
March	2.2	2.0	2.1	-	2.0-2.3	1.9-2.1	2.0-2.0	-

*The central tendency excludes the three highest and three lowest projections for each variable in each year

FOMC Dot Plot for Fed Funds Target Range

The dot plot represents individual Committee member year-end Fed fund expectations.

11 Committee members expected Fed funds to remain at 0-25bps through 2023 in March but only 5 still hold that view today.



March FF futures were a straight line through the 0-25 bps for 2021, 2022, and 2023

Source: Federal Reserve and Wells Fargo Securities

Fixed Income Markets Going Forward

What's Next for Fixed Income Markets?

Rates are trending higher for the front-end and belly of the curve.

Inflation is going to impact an investor's near-term strategy, whether it is indeed transitory <u>or</u> sticky.

- Very short, front-end rates will likely remain lower as some portion of the enormous cash build up, is likely to remain sticky, thus keeping demand for front-end products elevated.
- The Fed will remain accommodative for the foreseeable future. The QE program during COVID was significantly larger than after the 2008 financial crisis
- Even when the U.S. debt ceiling issue is resolved, government supply will remain somewhat limited because of the lack of issuance from the BIG GSEs.
  - T-bill supply will be impacted the most by the debt ceiling situation.
- Rates on the 2yr – 5yr part of the curve have risen and are likely to remain relatively elevated as long as inflation continues to track at the higher-end.

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