

## **Appendix 1: Materials used by Ms. Logan**

**Class II FOMC - Restricted (FR)**

*Material for Briefing on*

# **Financial Developments and Open Market Operations**

**Lorie Logan**

**Exhibits by Nathan Dodge**

**September 15, 2020**

## Three Key Questions

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1. What were the factors behind the improvement in risk sentiment and easing in financial conditions over the intermeeting period?
2. How did the strategic review affect market expectations for Fed policy?
3. How are market participants assessing and positioning for near-term risks?

# Financial Conditions Eased Modestly

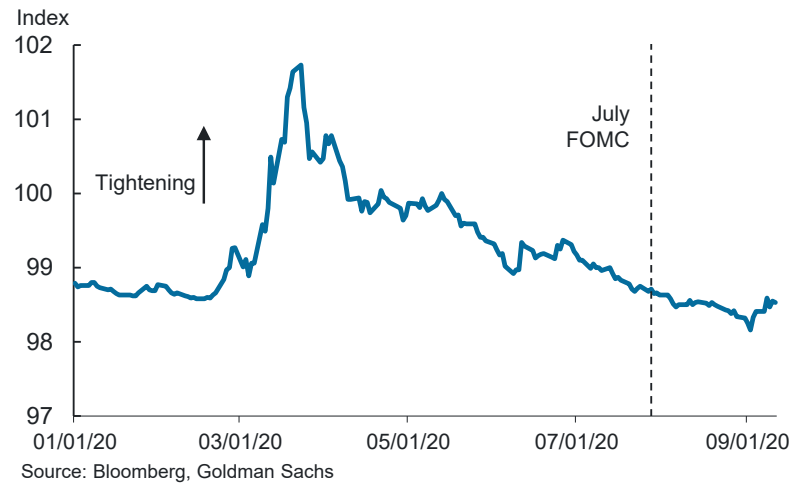
**(1) Asset Price Table**

	Since July FOMC	YTD	Current Level
S&P 500 Index	+3.8%	3.4%	3341
NASDAQ 100 Index	+5.3%	+27.0%	11087
U.S. TW Dollar	-1.1%	1.5%	116
IG Credit Spread	-1 bps	+38 bps	131 bps
HY Credit Spread	-9 bps	+160 bps	496 bps
10Y Treasury Yield	+9 bps	-125 bps	0.67%
10Y TIPS Real Yield	-8 bps	-113 bps	-1.00%

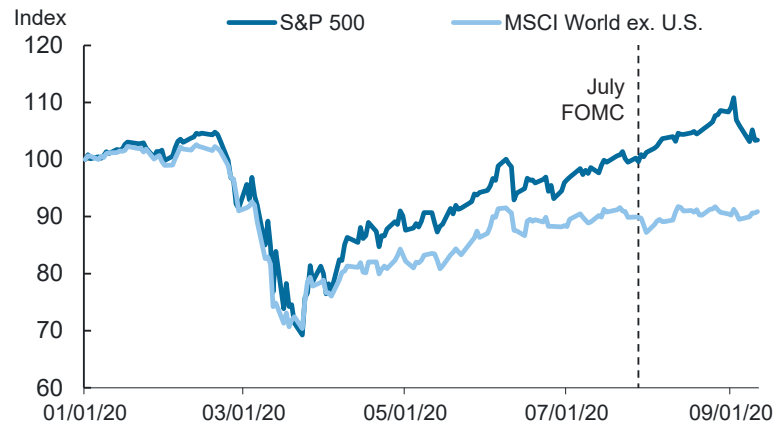
Note: Current level pricing as of 09/11/20.

Source: Bloomberg

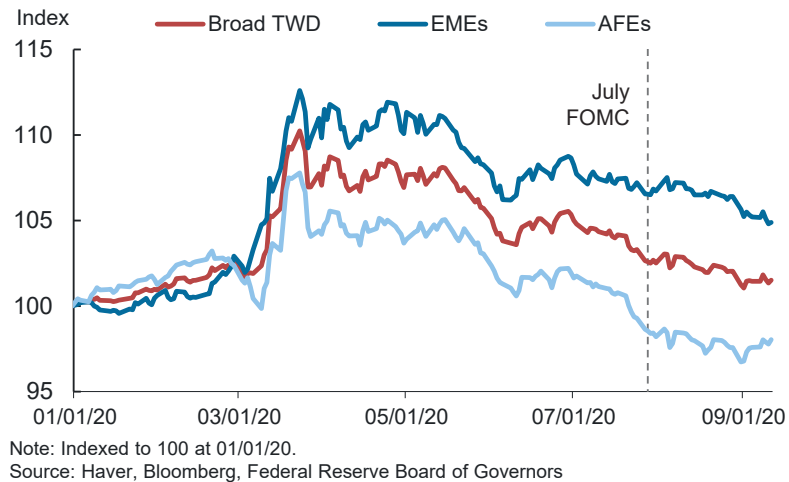
**(2) Financial Conditions Index**



**(3) Local Currency Equity Returns**

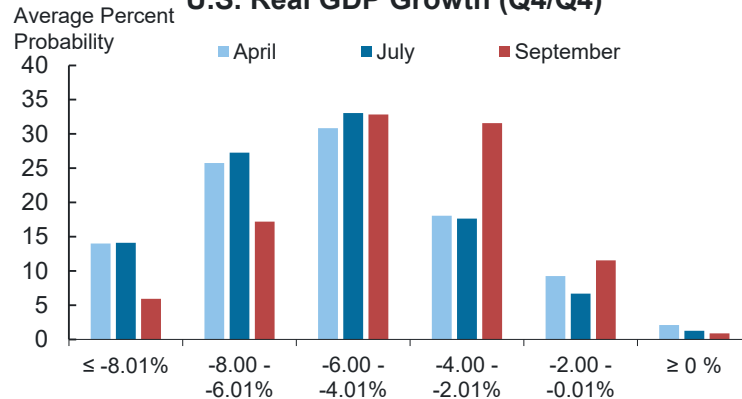


**(4) Trade-Weighted Dollar**



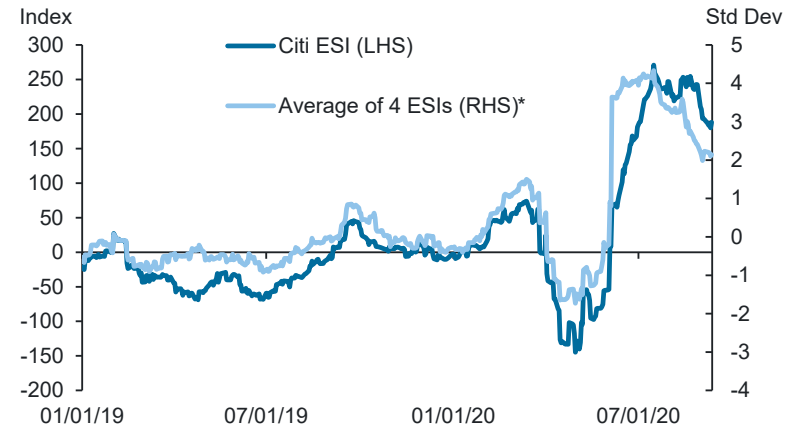
# Economic, Health and Earnings Developments Drove Markets

**(5) Probability Distribution for Expected 2020 U.S. Real GDP Growth (Q4/Q4)**



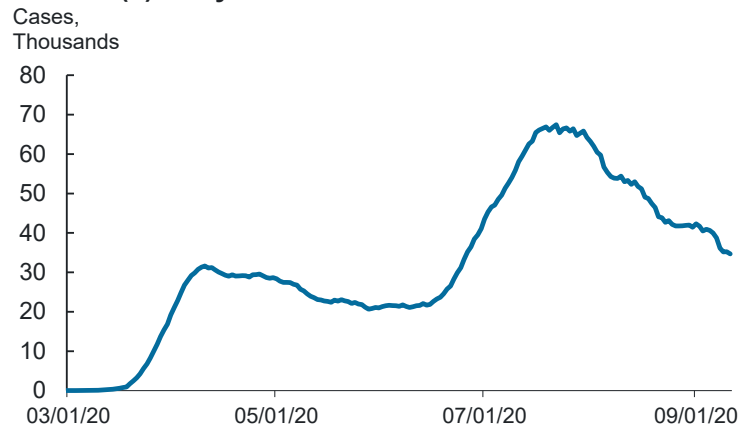
Note: Based on all responses to the Surveys of Primary Dealers and Market Participants.  
Source: FRBNY

**(6) Economic Surprise Indexes**



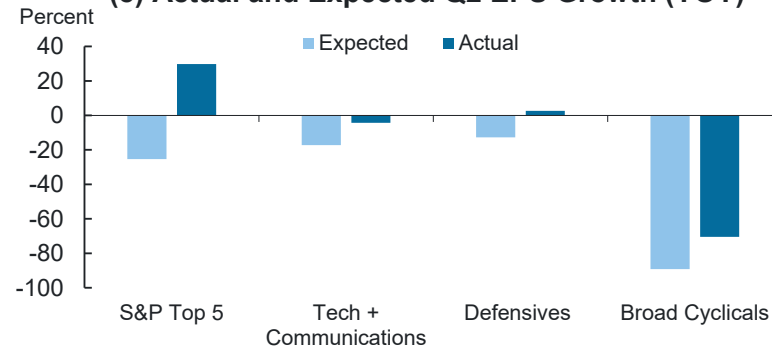
Note: \*Average of Bloomberg, Citi, Goldman Sachs and JPMorgan ESIs, normalized.  
Source: Bloomberg

**(7) Daily Increase in U.S. COVID-19 Cases**



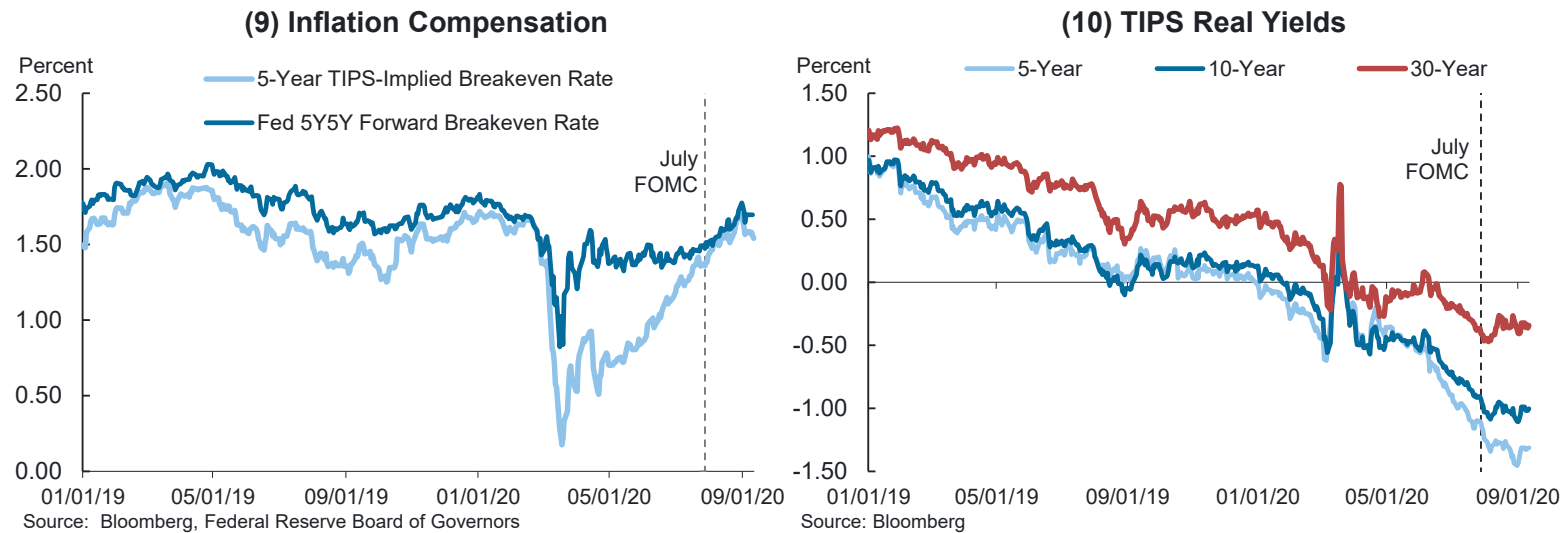
Note: One-week moving average.  
Source: Bloomberg, Johns Hopkins University

**(8) Actual and Expected Q2 EPS Growth (YOY)**



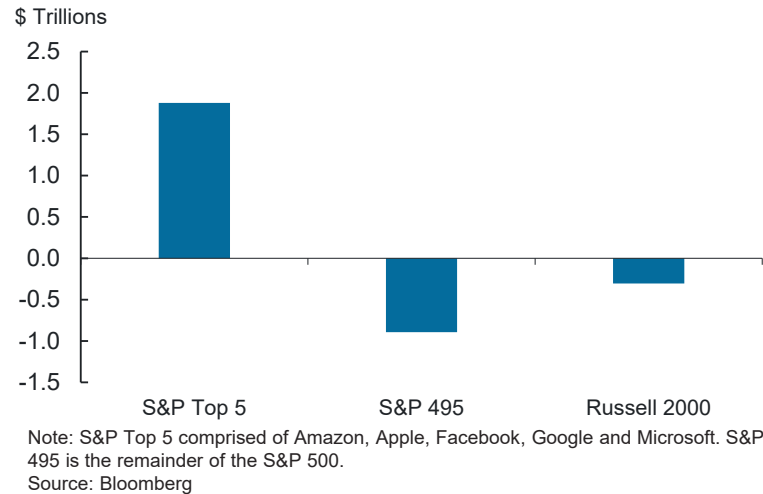
Note: Market capitalization weighted. S&P Top 5 comprises Amazon, Apple, Facebook, Google and Microsoft. Tech+ and Communications includes Information Technology and Communication Services stocks. Defensives includes Utilities, Healthcare, Consumer Staples, and Real Estate stocks. Broad cyclical includes Materials, Industrials, Financials, Consumer Discretionary, and Energy stocks.  
Source: Factset, Refinitiv, Bloomberg

# Inflation Compensation Continued to Rise, while Real Yields Remained Near Historical Lows

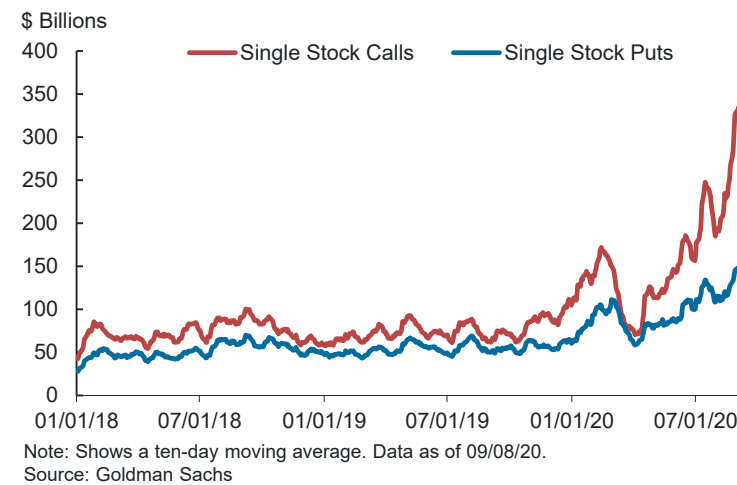


# However, Concerns about Valuations Increased

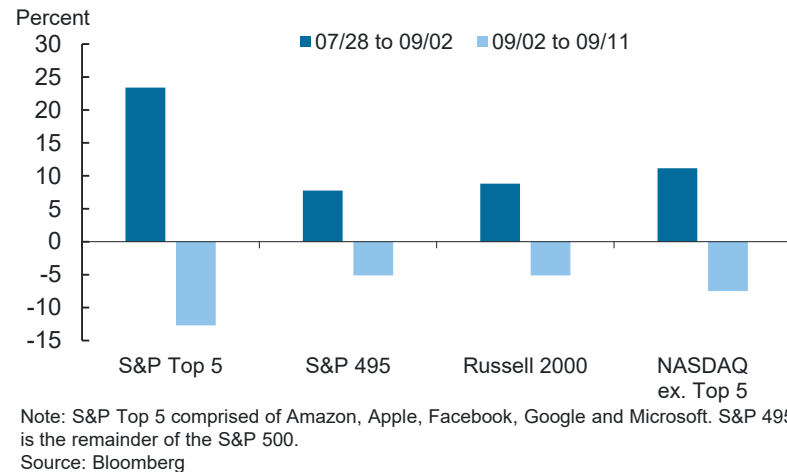
**(11) YTD Changes in Market Capitalization**



**(12) Stock Options: Notional Volume Traded**



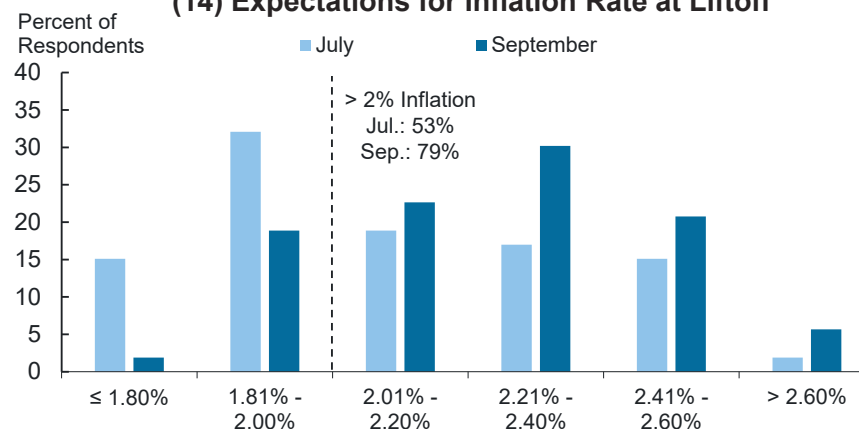
**(13) Intermeeting Changes in Market Capitalization**



# Amid Completion of Strategic Review, Perceptions of FOMC Reaction Function Shifted

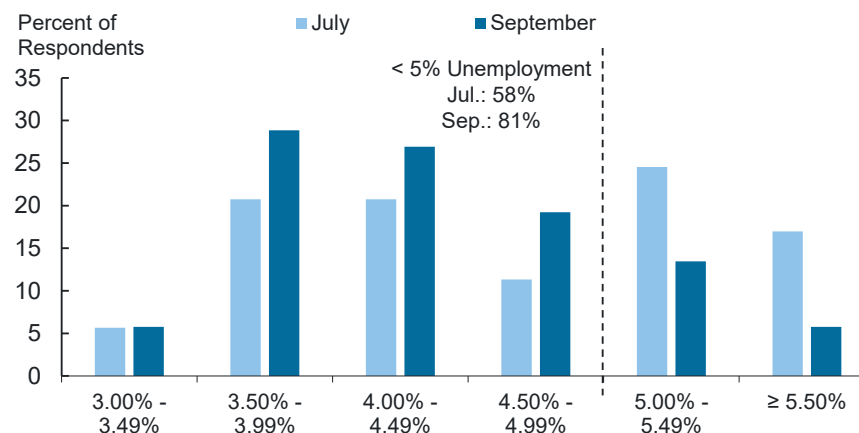
- Relatively limited immediate reaction to the revised consensus statement
- Outcome seen as well-telegraphed in FOMC communications
- But building expectations for AIT seen as impacting markets and policy expectations over recent months
- Desk survey results suggest meaningful shifts in expectations

**(14) Expectations for Inflation Rate at Liftoff**



Note: The survey asked for headline 12-month PCE inflation rate estimates. Based on all responses to the Surveys of Primary Dealers and Market Participants.  
Source: FRBNY

**(15) Expectations for Unemployment Rate at Liftoff**

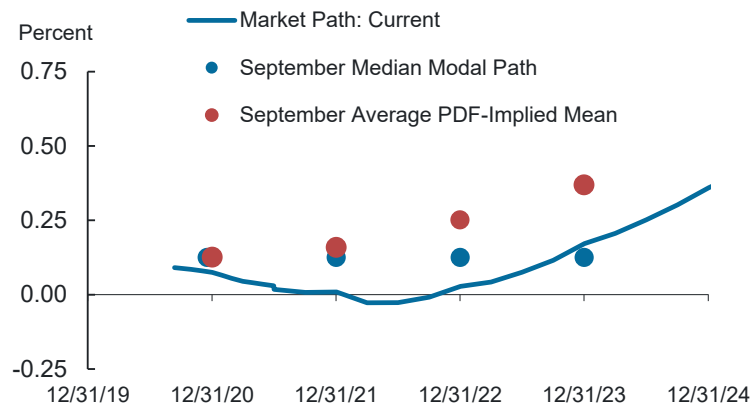


Note: Based on all responses to the Surveys of Primary Dealers and Market Participants.  
Source: FRBNY



# Expectations for Liftoff Shifted Out; Timing for Forward Guidance Less Certain

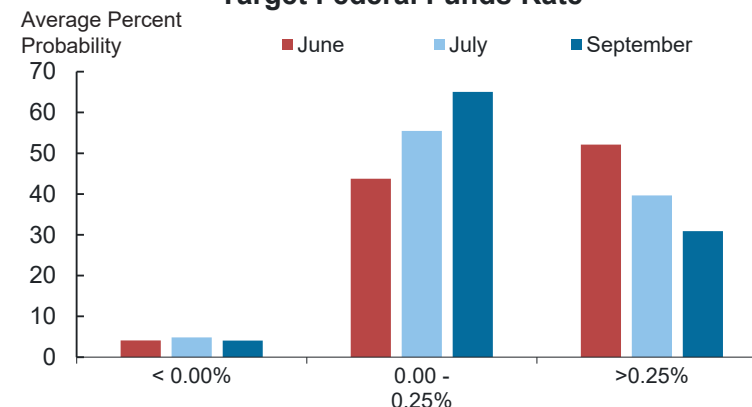
**(16) Market- and Survey-Implied Paths of Policy**



Note: Based on all responses to the Surveys of Primary Dealers and Market Participants.

Source: Bloomberg, Staff Calculations, FRBNY

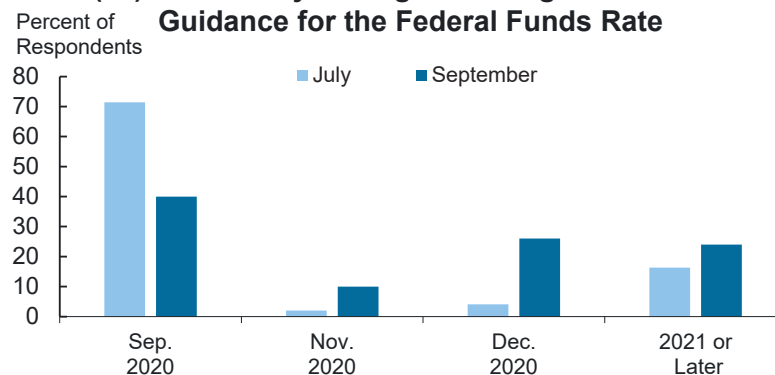
**(17) Probability Distribution for Expected Year-End 2022 Target Federal Funds Rate**



Note: Based on all responses to the Surveys of Primary Dealers and Market Participants.

Source: FRBNY

**(18) Most Likely Timing for Change in Forward Guidance for the Federal Funds Rate**



Note: The chart does not display the 3 respondents that expected a change in forward guidance at the July FOMC in the July Desk Surveys. Also excludes firms that selected N/A. Based on all responses from the Surveys of Primary Dealers and Market Participants.

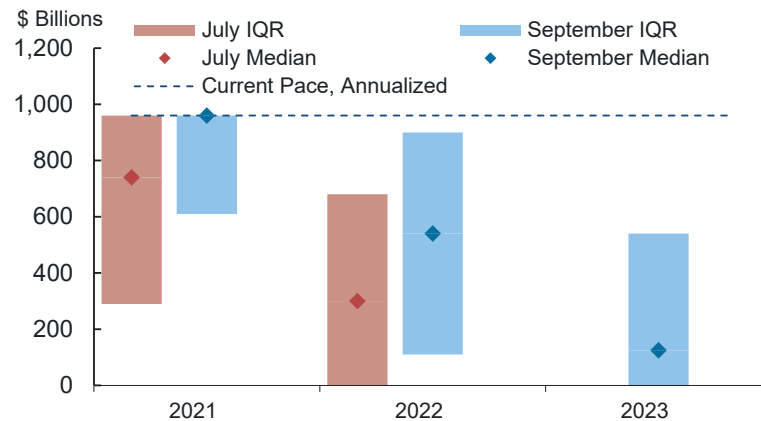
Source: FRBNY

## Forward Guidance Expectations

- Most continue to expect outcome-based guidance linked to inflation
  - Some think employment measures could feature as well
- No discernable expectations for time-based guidance

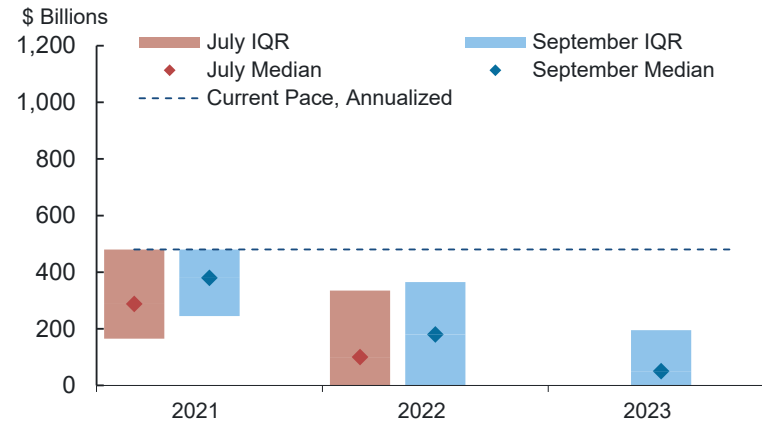
# Expectations for Asset Purchases Increased

**(19) Expected Net Treasury Purchases**



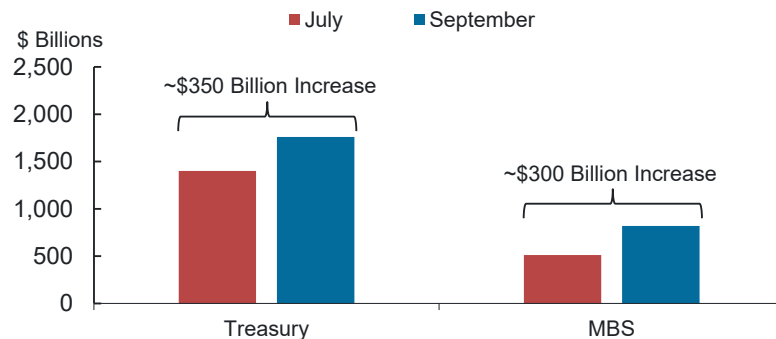
Note: 2023 was not asked in the July survey. Based on all responses to the Surveys of Primary Dealers and Market Participants.  
Source: FRBNY

**(20) Expected Net MBS Purchases**



Note: 2023 was not asked in the July survey. Based on all responses to the Surveys of Primary Dealers and Market Participants.  
Source: FRBNY

**(21) Median Expectations for Total Future Asset Purchases 2020 - 2022**



Note: For each asset class and survey, calculated as the median of individual survey respondents' expectations for total purchases over the period September 2020 to year-end 2022. Based on all responses to the Surveys of Primary Dealers and Market Participants.  
Source: FRBNY

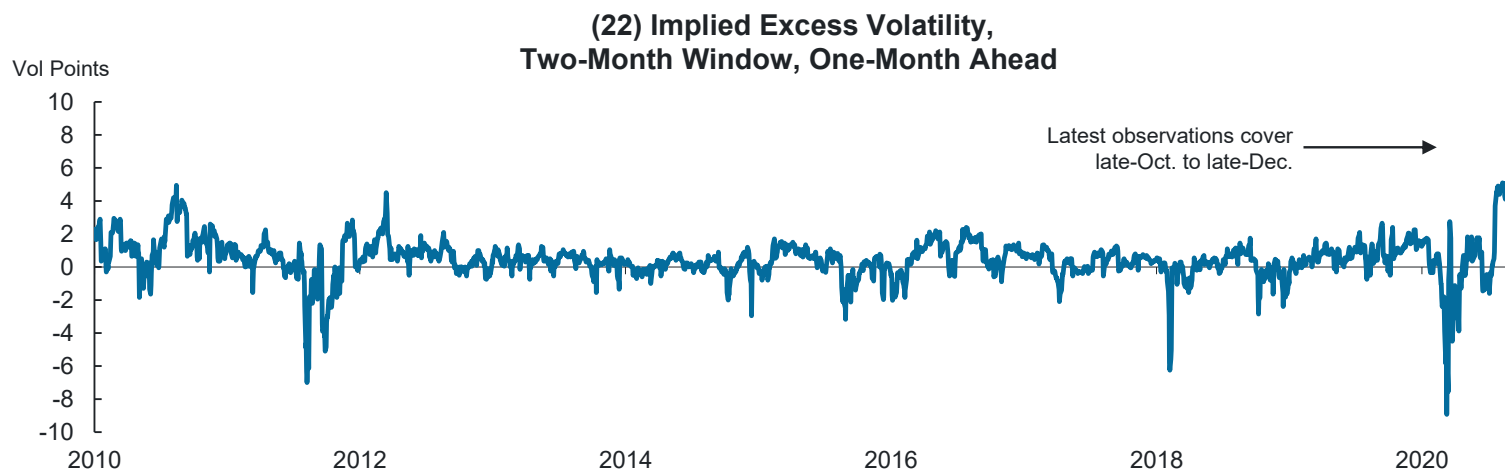
## Asset Purchase Expectations

- Communications
  - Many expect expanded motivation to include policy accommodation at some point
  - Several survey respondents expect outcome-based guidance eventually
- Composition
  - Some speculation regarding a shift towards longer-duration securities

# Markets Imply Higher Volatility on Key Risk Events

## Recently Highlighted Risks:

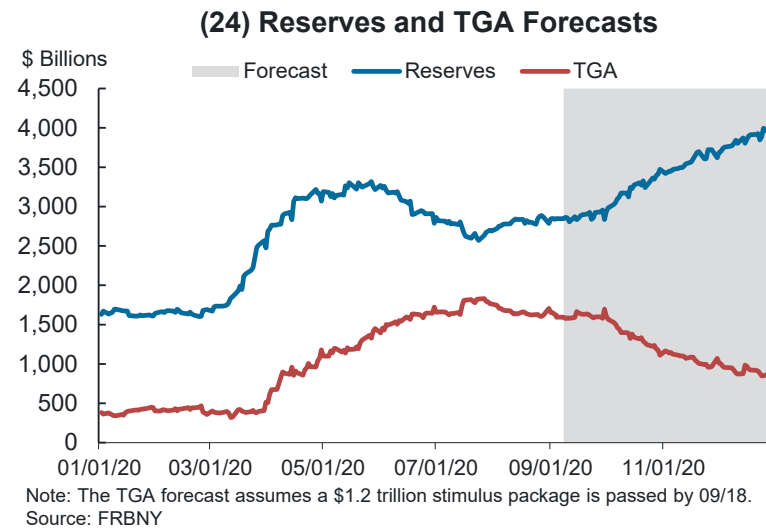
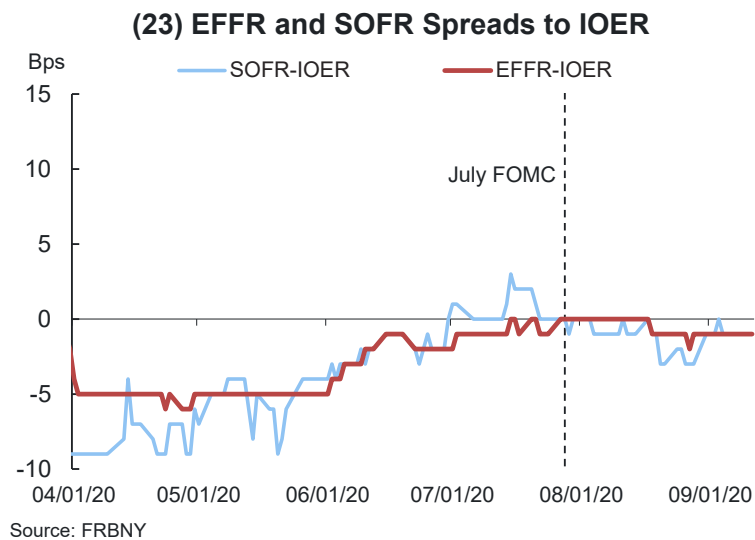
- Contested presidential election outcome
- No-deal Brexit
- Uncertain fiscal package



Note: The implied vol premium calculated on a rolling basis as the average implied vol of the second and third month ahead VIX futures contracts minus the average implied vol on the first and fourth month ahead contracts. Vol points refers to percentage points of the annualized standard deviation of the return on S&P 500. Data excludes VIX futures roll dates.

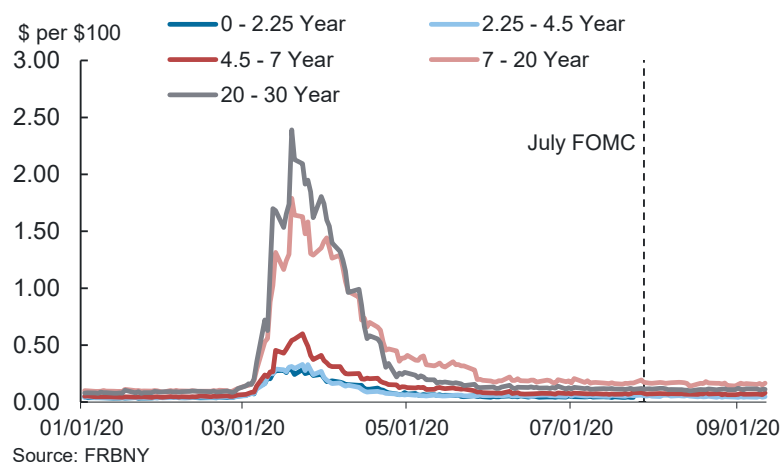
Source: Bloomberg

## Funding Markets Remained Calm

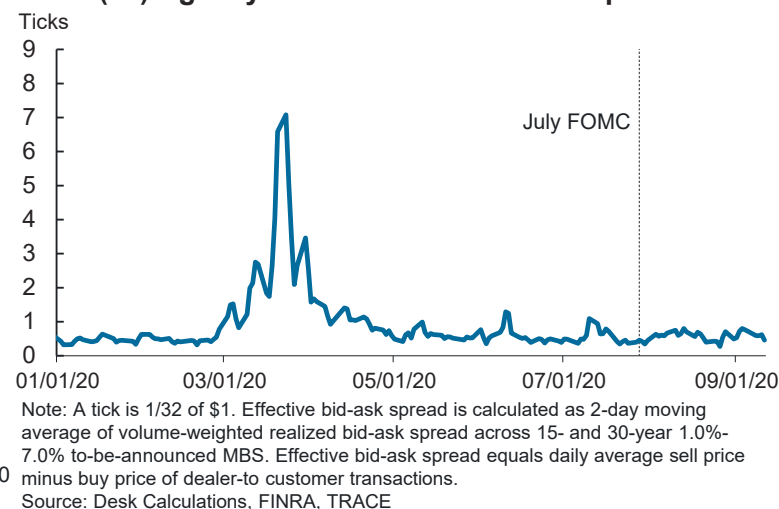


# Market Functioning was Stable at Improved Levels

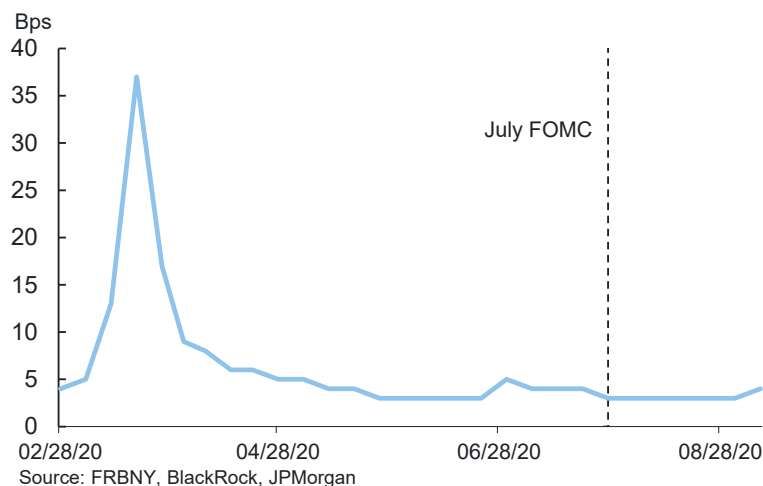
**(25) Average Bid-Ask Spreads for Nominal Treasury Coupons by Purchase Sector**



**(26) Agency MBS Effective Bid-Ask Spreads**



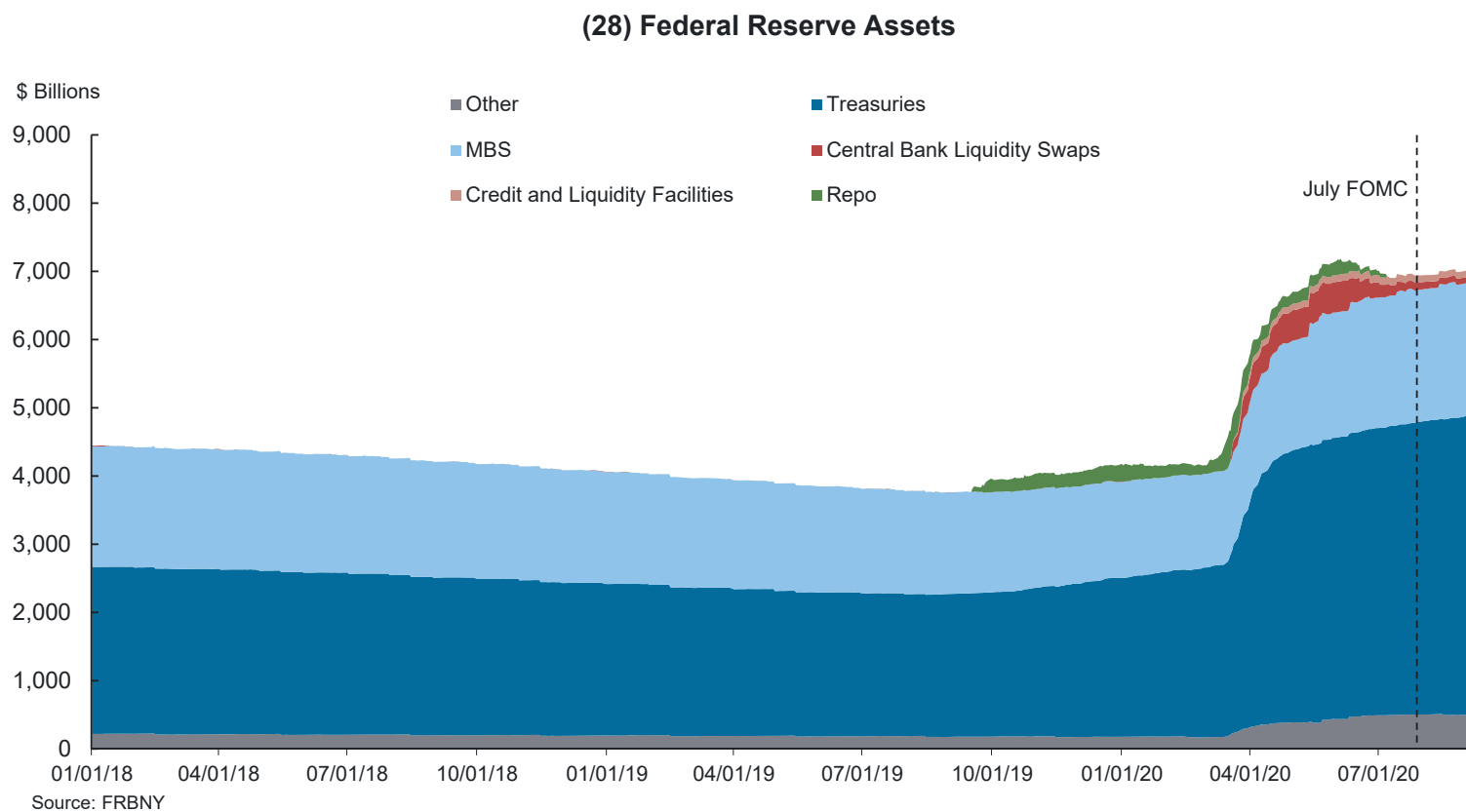
**(27) Agency CMBS Bid-Ask Spread Estimates**



## CMBS Proposal

- Purchase CMBS as needed to sustain market functioning
- Conclude reinvestments after September meeting
  - August principal payments to roll off
  - Finished reinvesting July principal payments on 9/10
- Continue operations for time being

## Balance Sheet Grew Modestly



# Annual Investment Review of Foreign Currency Holdings

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## ***Euro portfolio recommendations***

- Maintain conditional value at risk unchanged at 3 percent, which is expected to result in a target maturity allocation similar to last year

## ***Yen portfolio recommendations***

- Continue to place balances up to Tier 1 threshold in BoJ deposit account which has a more favorable rate
- Invest funds above the Tier 1 threshold in short-term sovereign instruments when market yields are higher

## ***Other recommendations:***

- Add BIS investment option to eligible investments
- Modify constraint on diversification of securities holdings across issuers for the euro portfolio

## ***Next Steps***

- Desk will seek instructions from the FX Subcommittee and Treasury to incorporate recommendations
- Desk will share final euro portfolio allocation with Subcommittee in late-September and begin to rebalance over next few months
- Desk will begin purchasing short-dated Japanese sovereign securities in line with Desk recommendations

# Appendix

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# Appendix I

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## (1) Summary of Operational Tests in prior period:

- Foreign Authorization
  - August 4: Euro-denominated sovereign debt purchase from private counterparties for €1.1 million
  - August 11: Euro-denominated sovereign debt sale to private counterparties for €1.1 million

## (2) Upcoming Operational Tests:

- 3 tests scheduled under the Domestic Authorization
  - October 7: Outright UMBS purchase for early settlement for up to \$13 million\*
  - October 7: Overnight repo (using the back-up tool) for up to \$75 million
  - October 15: Securities lending (using the back-up tool) for up to \$240 million
- 3 tests scheduled under the Foreign Authorization
  - September 29: US dollar liquidity swap for USD 51,000 with the BoC and SNB
  - September 29: US dollar rollover swap for USD 60,000 with the ECB and BoE\*\*
  - October 22: Canadian dollar liquidity swap for CAD 51,000

## (3) FX Intervention:

- There were no intervention operations in foreign currencies for the System's account during the intermeeting period

\*The Desk will be conducting this transaction to validate the end-to-end connectivity of internal systems following a middle office vendor change taking place in late September. This operation is being settled on October 8, ahead of large SOMA settlement volumes starting on October 14.

\*\* The Desk will be conducting a rollover swap as a small value exercise for the first time to ensure preparedness to execute this variation of a liquidity swap. This operation is intended to provide a swap line central bank an additional day to remediate failure to repay any amount of an outstanding swap transaction at maturity.

## Appendix II

### (4) Treasury Purchase Summary since June 12, 2020 (\$ Millions)

Purchase Period	New Purchase Target	Actual Purchases	Net Deviation	Cumulative Deviation Since 6/20
20-Jun	80,000	80,013	13	13
20-Jul	80,000	80,006	6	19
20-Aug	80,000	80,004	4	23

Note: The Desk purchased \$1,590.28 billion between 3/16/20 and 6/11/20.

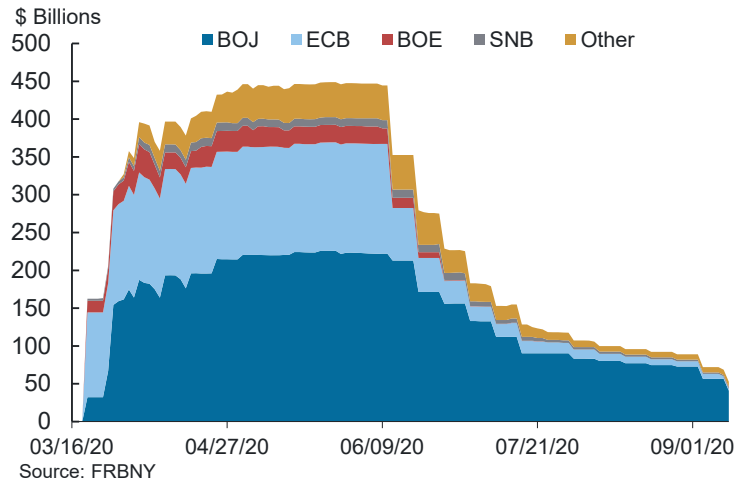
### (5) MBS Purchase Summary since June 12, 2020 (\$ Millions)

Purchase Period	New Purchase Target	Paydowns	Actual Purchases	Net Deviation	Cumulative Deviation Since 6/20
Jun-20	40,000	55,976	95,895	-81	-81
Jul-20	40,000	69,382	109,407	25	-56
Aug-20	40,000	70,319	110,343	24	-32

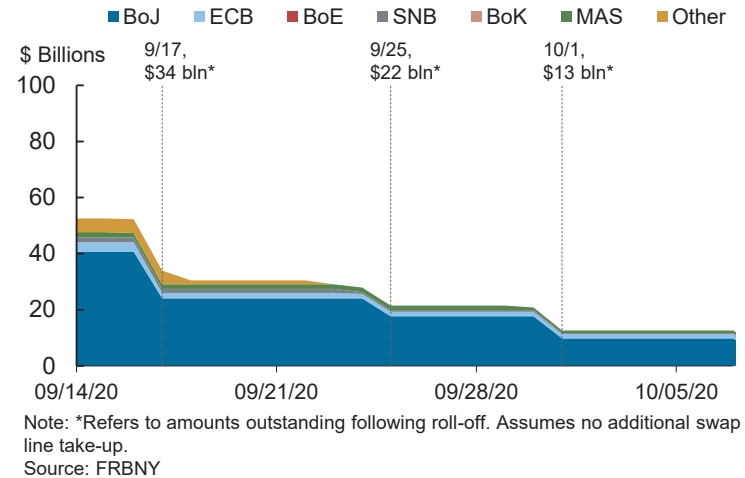
Note: The Desk purchased \$728 billion between 3/16/20 and 6/11/20 of which \$108 billion were reinvestments.

## Appendix III

(6) FX Swaps Outstanding by Counterparty



(7) FX Swaps Upcoming Maturity Schedule



(8) Total Amount Outstanding by Central Bank (\$ Billions)

	Current Amount Outstanding	Coronavirus Peak Outstanding	GFC Peak Outstanding
Bank of Japan	40.73	225.84	127.57
European Central Bank	3.32	144.98	313.81
Bank of England	0.00	37.70	95.00
Swiss National Bank	1.70	11.40	31.06
Reserve Bank of Australia	0.00	1.17	26.67
Denmark Nationalbank	0.00	5.29	15.00
Norges Bank	0.00	5.40	8.95
Monetary Authority of Singapore	1.90	10.03	0.00
Bank of Korea	0.00	18.79	16.35
Banco de Mexico	4.91	6.59	3.22
Riksbank	0.00	0.00	25.00
<b>Total</b>	<b>52.55</b>	<b>448.95</b>	<b>586.12</b>

Source: FRBNY

**CLASS I FOMC - RESTRICTED CONTROLLED FR****Statement Regarding Treasury Securities, Agency Mortgage-Backed Securities, and Agency Commercial Mortgage-Backed Securities Operations****September 16, 2020**

Effective September 16, 2020, the Federal Open Market Committee (FOMC) directed the Open Market Trading Desk (the Desk) at the Federal Reserve Bank of New York to continue to increase the System Open Market Account (SOMA) holdings of Treasury securities and agency mortgage-backed securities (MBS) at the current pace. The FOMC also directed the Desk to increase holdings of Treasury securities and agency MBS by additional amounts and purchase agency commercial mortgage-backed securities (CMBS) as needed to sustain smooth functioning of markets for these securities.

Consistent with this directive, the Desk plans to continue to increase SOMA holdings of Treasury securities by approximately \$80 billion per month. Treasury purchases will continue to be conducted across a range of maturities and security types. The Desk will continue to roll over at auction all principal payments from SOMA holdings of maturing Treasury securities. Information on purchase amounts and schedules can be found on the [Treasury Securities Operational Details](#) page.

Similarly, the Desk plans to continue to increase SOMA holdings of agency MBS by approximately \$40 billion per month. Agency MBS purchases will continue to generally be concentrated in recently produced coupons in 30-year and 15-year fixed rate agency MBS in the To-Be-Announced market. The Desk will continue to reinvest principal payments from agency MBS and agency debt in agency MBS. Total monthly purchase amounts can be found on the [Agency MBS Historical Operational Results and Planned Purchase Amounts](#) page and operational schedules can be found on the [Agency MBS Operation Schedule](#) page.

In addition, the Desk plans to continue to conduct agency CMBS operations to sustain smooth functioning of the agency CMBS market. Purchases will continue to be secured primarily by multifamily home mortgages that are guaranteed fully as to principal and interest by Fannie Mae, Freddie Mac, and Ginnie Mae and that the Desk has determined are suitable for purchase. The amounts purchased will depend on the reasonableness of the prices offered. Agency CMBS principal payments will no longer be reinvested. Information on purchase amounts and schedules can be found on the [Agency CMBS Operation Schedule](#) page.

Additional information on Treasury, agency MBS, and agency CMBS purchases can be found in the following locations:

[FAQs: Treasury Purchases »](#)

[FAQs: Agency MBS Purchases »](#)

[FAQs: Agency CMBS Purchases »](#)

## **Appendix 2: Materials used by Ms. Tevlin**

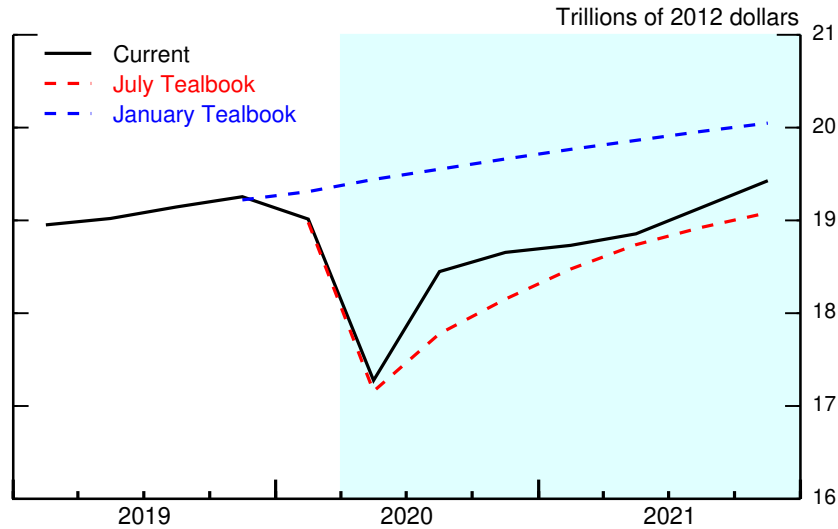
**Class II FOMC - Restricted (FR)**

*Material for Briefing on*  
**The U.S. Outlook**

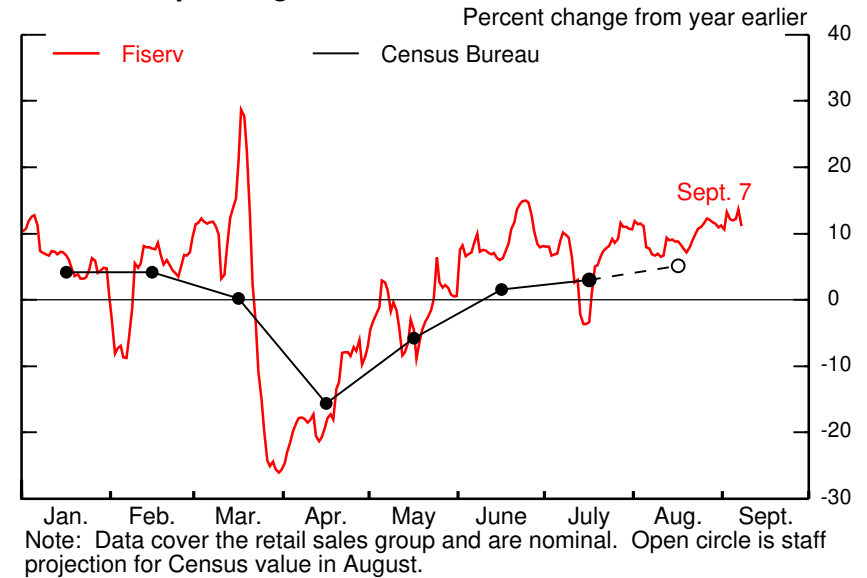
**Stacey Tevlin**  
**Exhibits by Rosemary Rhodes and Ashley Sexton**  
**September 15, 2020**

# Recovery on Firmer Footing

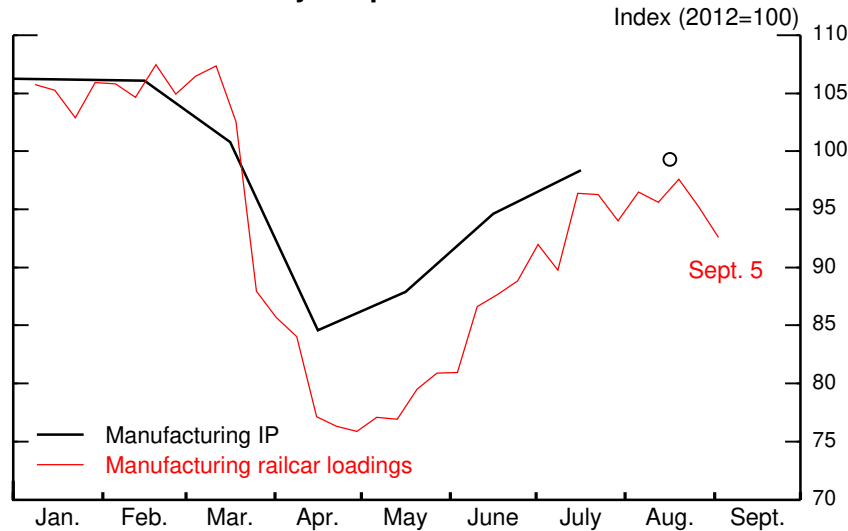
## 1. Level of Real GDP



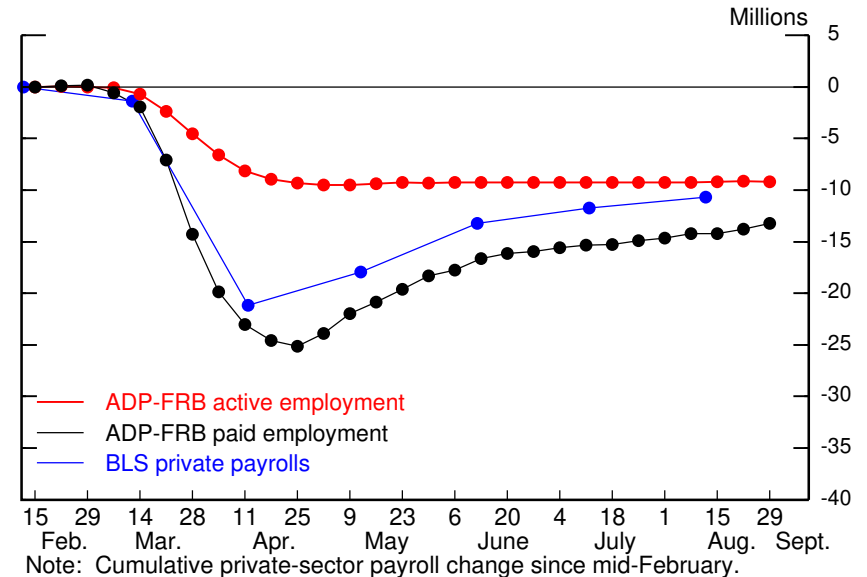
## 2. Goods Spending Continues to Advance...



## 3. ... As Does Factory Output

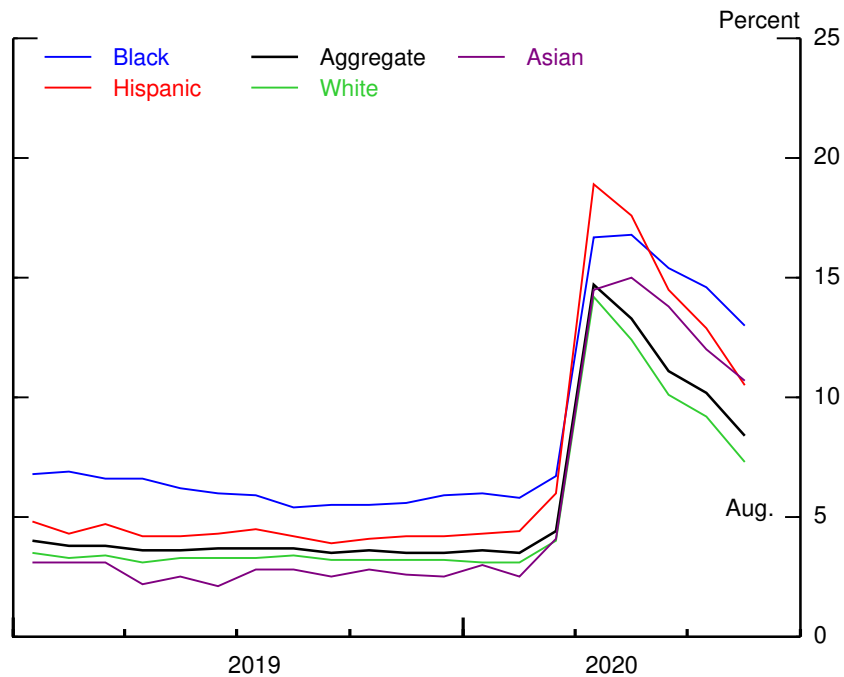


## 4. Labor Market Still Improving, Though at a Slower Pace



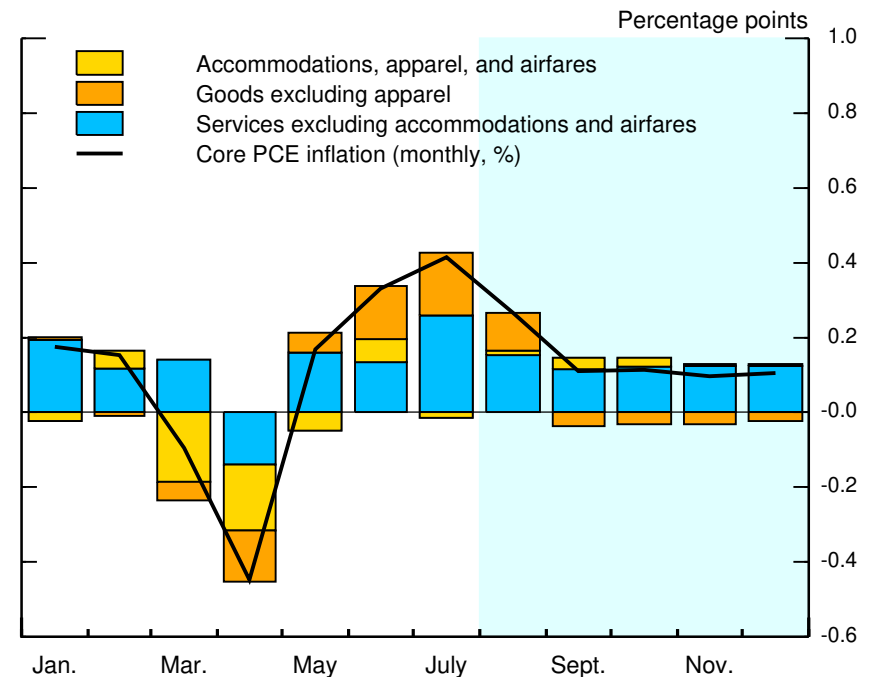
# Unemployment Declining and Inflation Rising

## 5. Unemployment Improved Since the Spring



Note: Categories are not mutually exclusive, as "Hispanic" may include people of any race.

## 6. Pandemic Has Left an Imprint on Prices

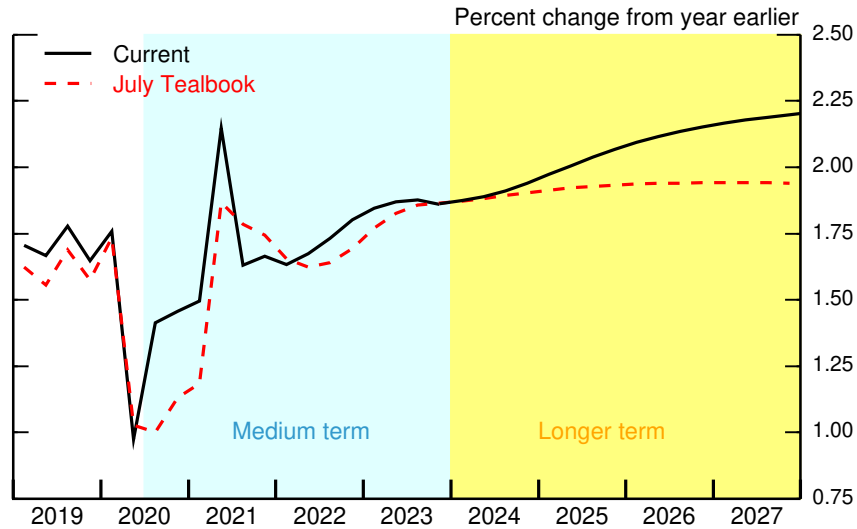


Note: Bars show contributions of specified categories to overall core PCE price inflation.



## Some Consequences of Our New Policy Rule

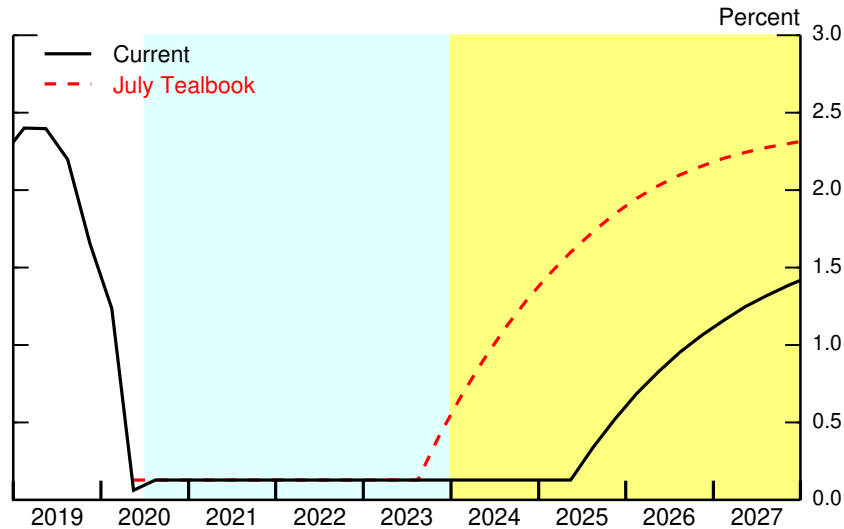
### 7. Core PCE Prices



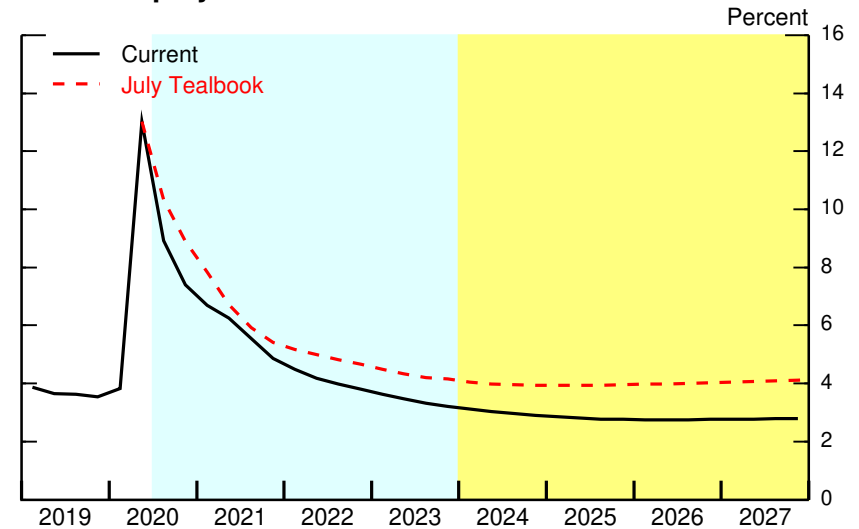
### 8. A New Funds Rate Rule

- Puts zero weight on a positive output gap
- Remains at ELB until inflation = 2%
- Has a notably lower intercept temporarily

### 9. Federal Funds Rate

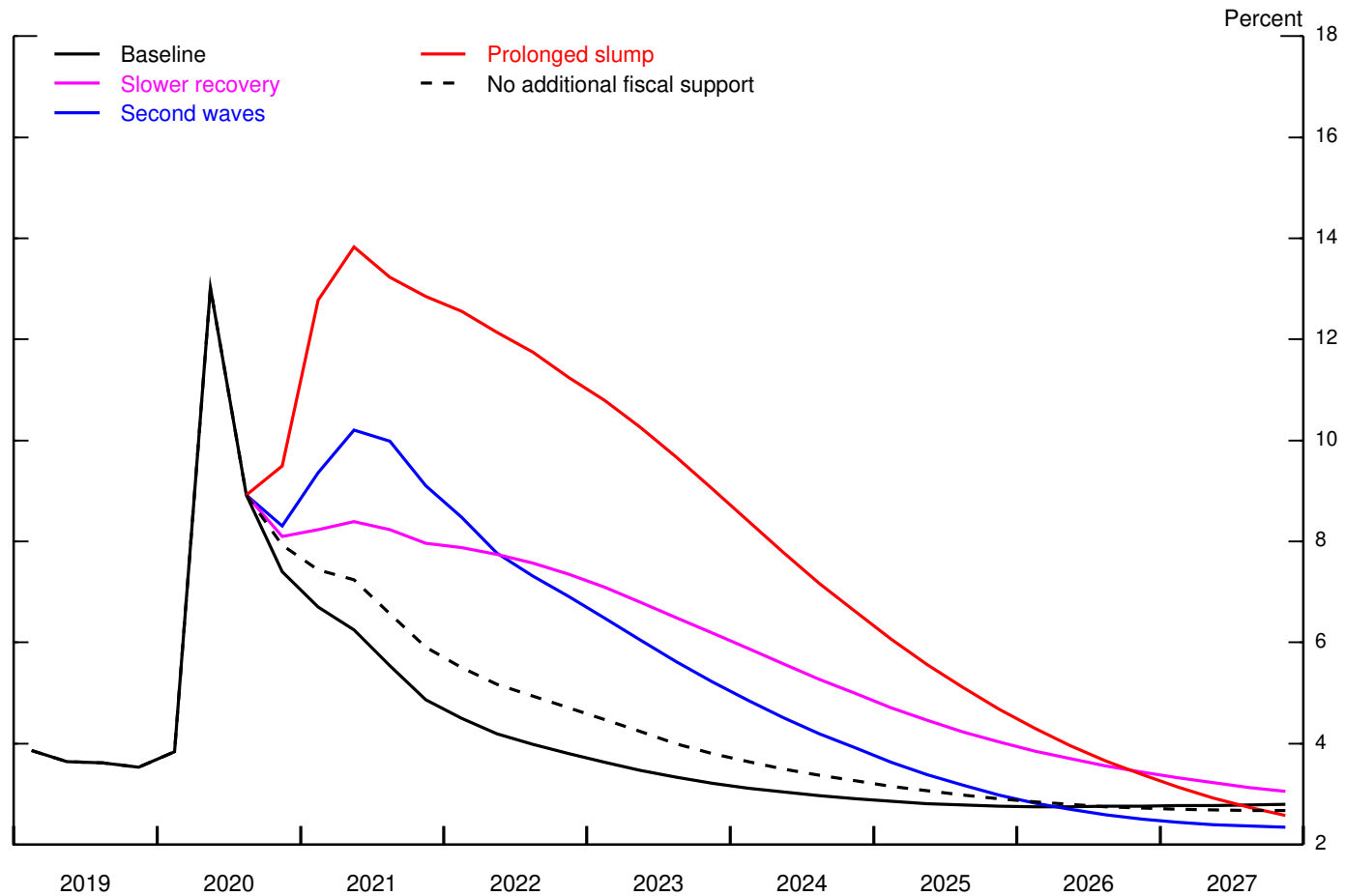


### 10. Unemployment Rate



## Many Other Outcomes Possible

### 11. Alternative Scenarios for the Unemployment Rate



### **Appendix 3: Materials used by Ms. Wilson**

**Class II FOMC - Restricted (FR)**

*Material for Briefing on*

## **The International Outlook**

**Beth Anne Wilson**

Exhibits by Matthew Deininger

September 15, 2020



## *Taking Stock – Six Months Later*

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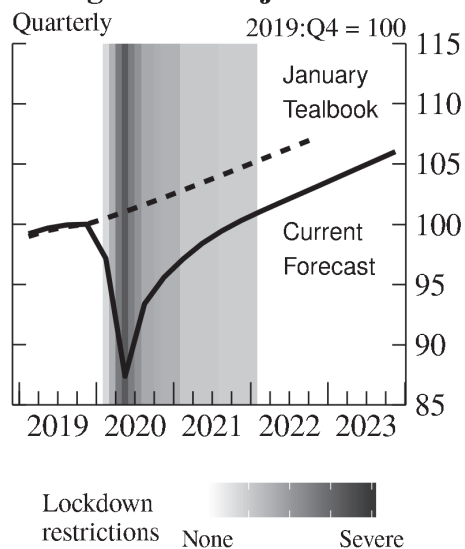
- March 15 – Factors weighing on the international outlook
  - (1) Rapid spread of virus and draconian containment measures
  - (2) Sharp deterioration in financial conditions and plummeting commodity prices
  - (3) Precipitous drop in external demand
- September 15 – Stocktaking
  - How these factors have played out
  - What we have learned
  - What worries us going forward

## (1) Virus and Containment Measures

- COVID-19 and measures to contain it still dominate our outlook.
- But our perspective on its effects is now more nuanced.

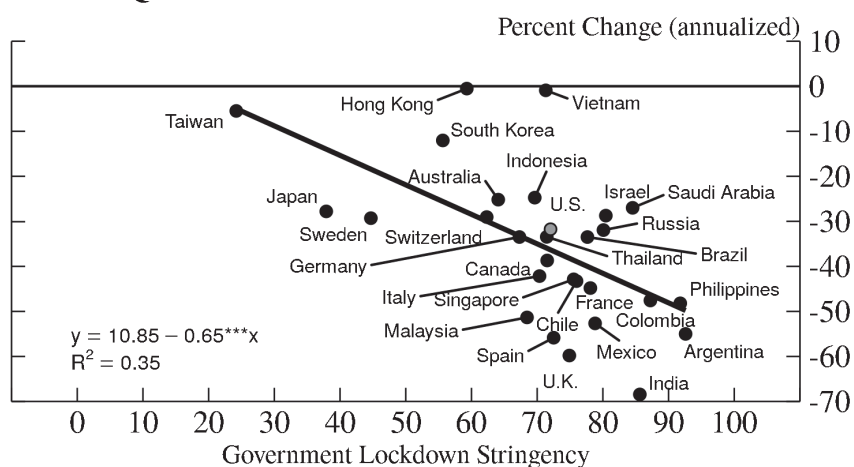
### Foreign Output and Lockdown Stringency

**Foreign GDP Projections**



Source: Staff calculations.

**Second-Quarter GDP Growth**

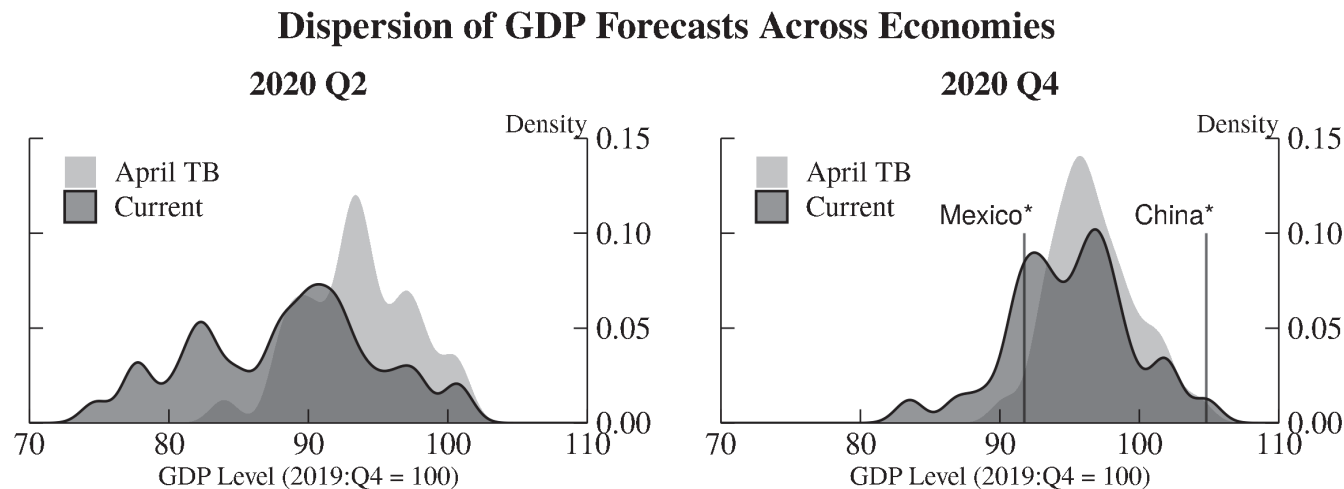


Source: Oxford University Blavatnik School of Government & staff calculations.  
Note: Government lockdown stringency is measured as the average level of the Oxford COVID-19 Government Response Tracker.

\*\*\* Denotes statistical significance at the 1 percent level.

## (1) Virus and Containment Measures

- Nuance 1 - Range of forecasted outcomes has increased.
- Range of data and current projections for the level of output abroad is wider than in April.



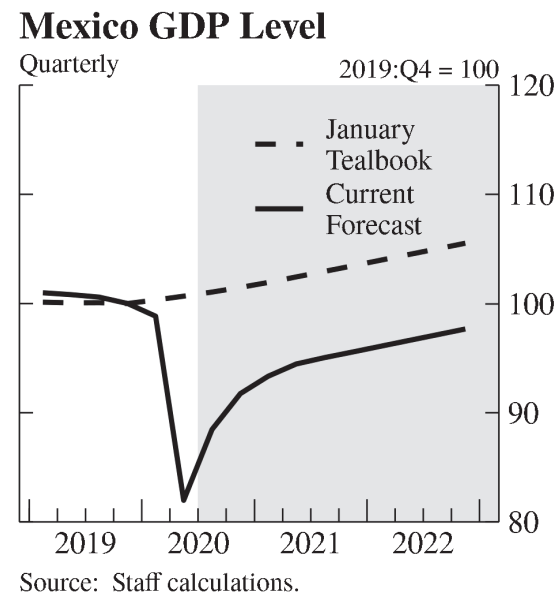
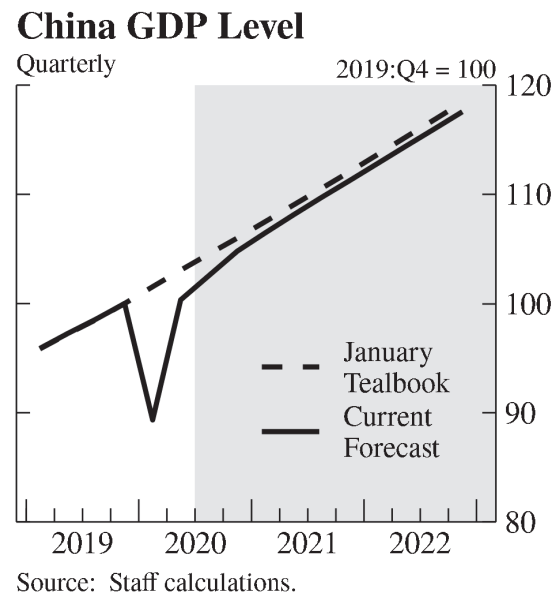
Source: Staff calculations.

Note: The figure plots the variation across foreign economies of the level of GDP according to the current and April Tealbook staff forecasts. The shaded areas are calculated using a Gaussian kernel applied to staff's Tealbook forecasts for 37 foreign economies (18 AFEs; 19 EMEs).

\*Mexico and China lines show the current forecast.

## (1) Virus and Containment Measures

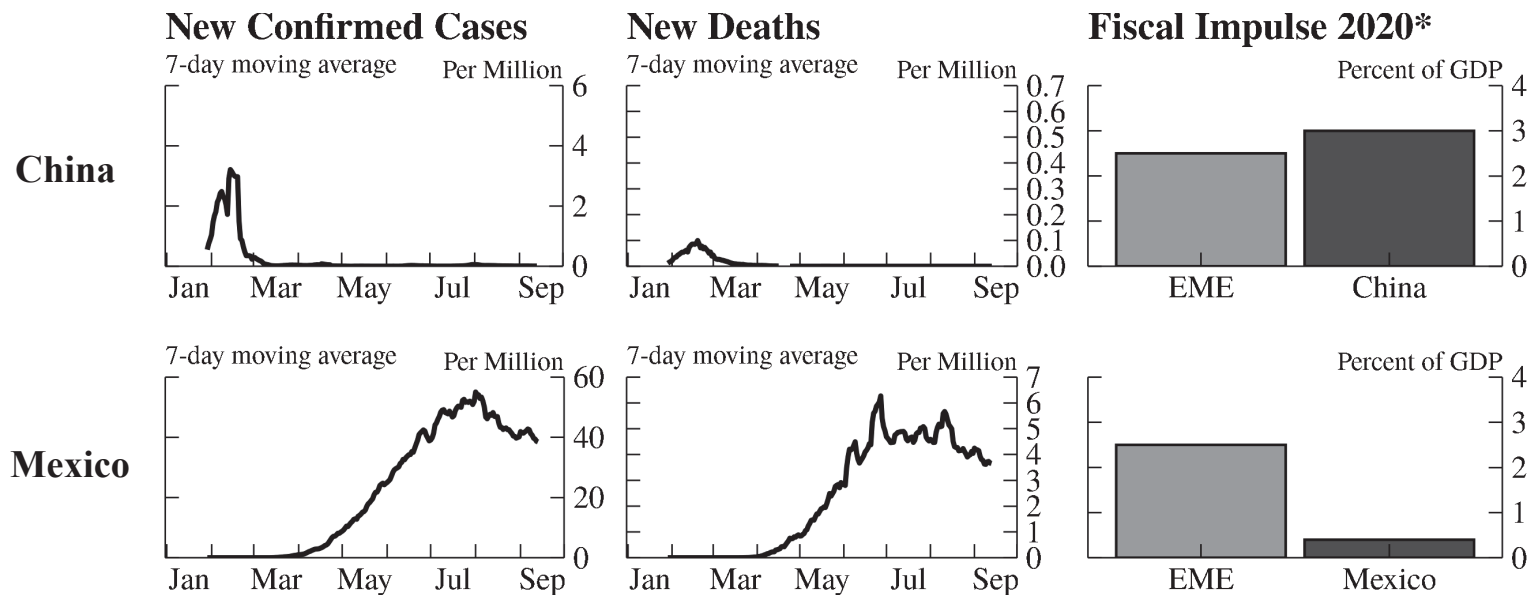
- To illustrate why the range is wide, compare experiences of China and Mexico.
- Fall in China's GDP is nearly half that projected for Mexico.
- Chinese economy already bounced back; Mexico's recovery is anticipated to be weaker and incomplete.





## (1) Virus and Containment Measures

- Reasons for divergence across countries:
  - Path of the virus
  - Policy support

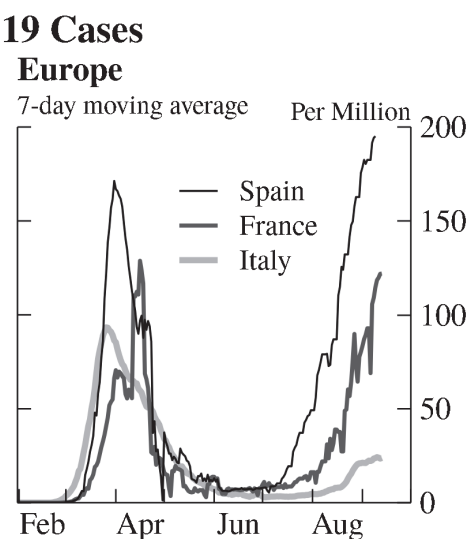
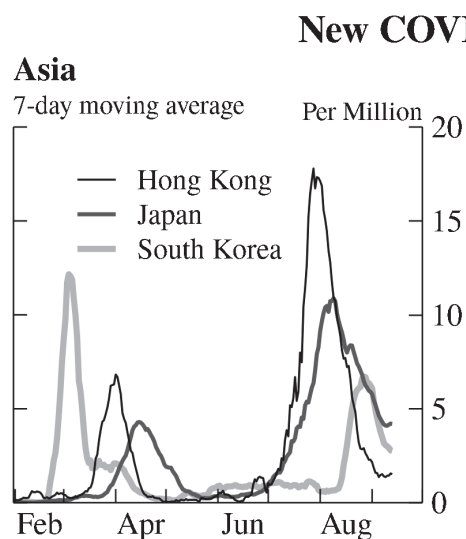


Source: Johns Hopkins Center for Systems Science and Engineering & staff calculations.

\*Fiscal impulse reflects the GDP effect of discretionary government policies designed to boost GDP growth taking into account our fiscal multiplier assumptions.

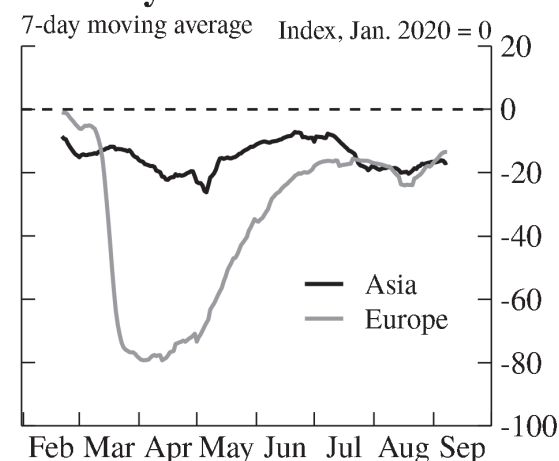
## (1) Virus and Containment Measures

- Nuance 2 - Risks are more bounded, but economic drag remains
- No longer fear a Spanish Flu-like outbreak nor hope for a short SARs-like episode.
- Fully containing virus is hard, combatting flare-ups likely less costly.



Source: Johns Hopkins Center for Systems Science and Engineering.

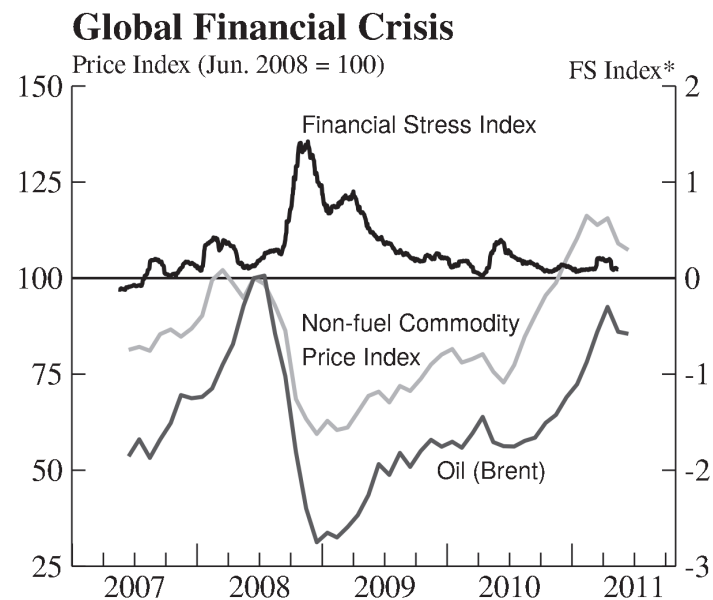
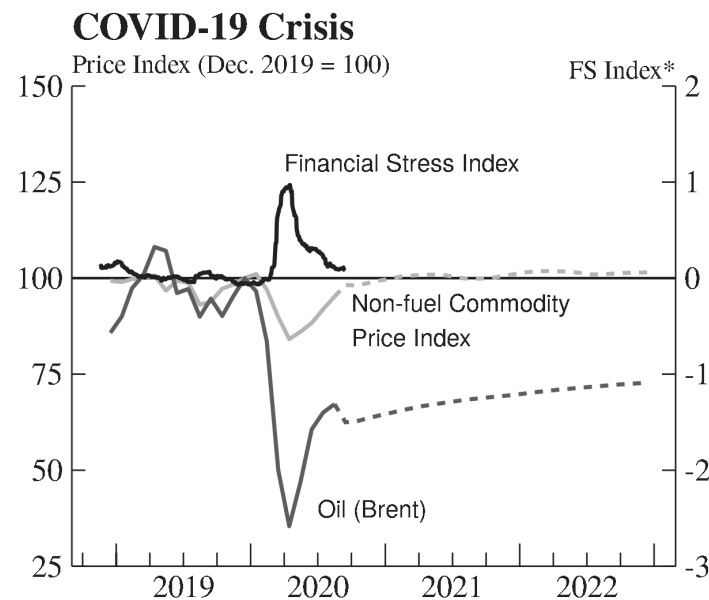
### Mobility Index



Source: Google Community Mobility Reports.  
Note: The mobility index averages across the European and Asian countries charted to the left.

## *(2) Sharp Deterioration in Financial Markets*

- Policy proved highly effective in short-circuiting financial amplification.
- Diminishes the risks of extreme negative outcomes.



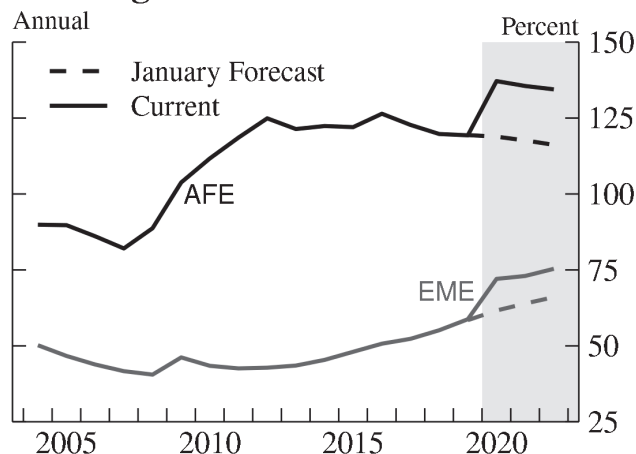
Source: S&P GSCI, Bloomberg, and staff calculations.

\* The Financial Stress Index is constructed such that 0 is the level in 2007 and 1 is the value during the Lehman collapse.

## *(2) Sharp Deterioration in Financial Markets*

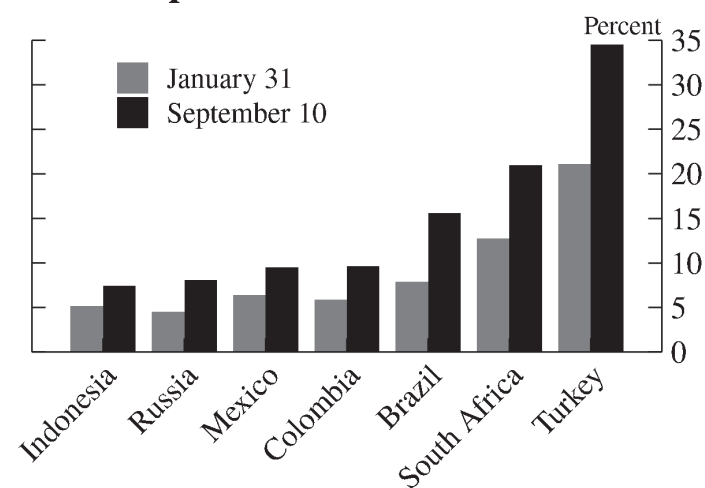
- Policy response has come at a cost.
  - Rising debt levels raise risk of sovereign default and limit response capacity.
  - If employment and output do not quickly and fully recover, market dynamics could turn more negative.

### Sovereign Debt-to-GDP



Source: Haver Analytics and staff calculations.  
Note: Series are weighted by nominal GDP at market exchange rates.

### CDS-Implied Default Probabilities

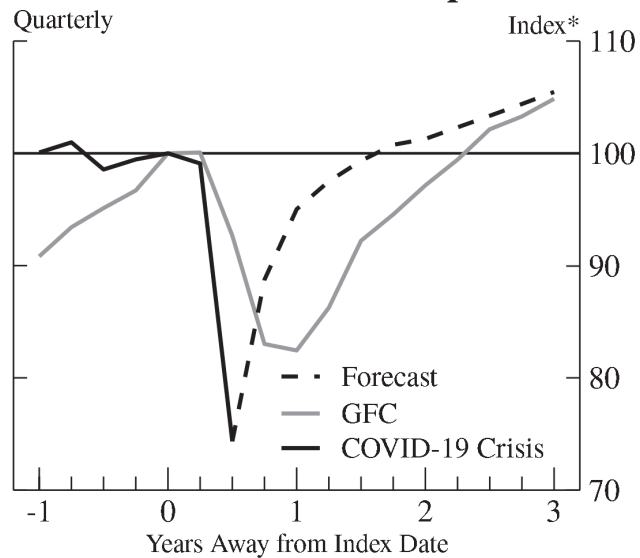


Source: Markit and staff calculations.  
Note: Default probabilities assume a recovery rate of 40%.

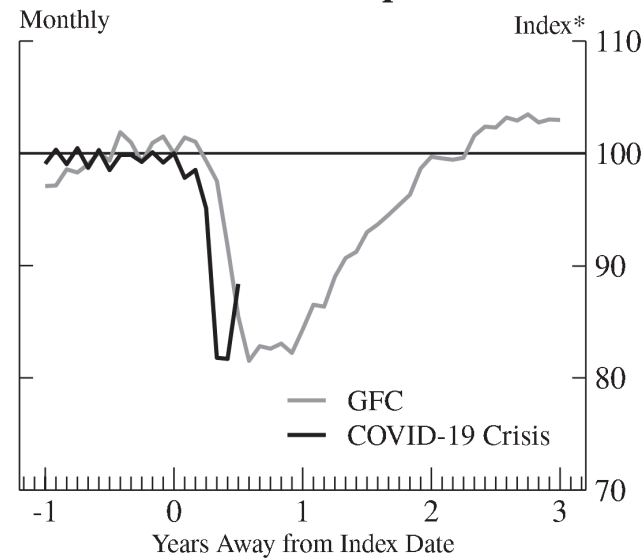
### *(3) Precipitous Drop in External Demand*

- Global trade has plunged but much swifter recovery than in the GFC.
- Rapid rebound in many key exporting countries in Asia.
- Unique service-sector oriented nature of the shock.
- Rebound in global trade should serve as a tailwind to recovery.

**U.S. Core Goods: Real Exports**



**World Trade: Real Exports**



Source: Haver Analytics and staff calculations.

\* GFC data is indexed to 2008 Q:2; COVID-19 Crisis data is indexed to 2019 Q:4.

## *Stocktaking of Risks*

---

- *(1) Rapid spread of virus and draconian containment measures*
  - Learned: Policy response matters, virus control hard, less weight on tail outcomes.
  - **Risk: Flare-ups, second waves, or lack of vaccine derail recovery.**
- *(2) Sharp deterioration in financial markets and plummeting commodity prices*
  - Learned: Short-circuited outcome due to unprecedented policy response.
  - **Risk: Adverse virus developments and limited policy space lead to losses large enough to trigger adverse market reactions that amplify shock.**
- *(3) Precipitous drop in external demand*
  - Learned: Sharp decline but rapid recovery, as manufacturing hit less hard.
  - **Risk: Return of lockdowns or further erosion of globalization.**



#### **Appendix 4: Materials used by Ms. Ionescu**



**Class I FOMC - Restricted Controlled (FR)**

*Material for Briefing on*

**Summary of Economic Projections**

**Felicia Ionescu**

**Exhibits and support by Erik Larsson and Andrew Castro**

**September 15, 2020**

Exhibit 1. Economic projections for 2020–23 and over the longer run (percent)

Change in real GDP					
	2020	2021	2022	2023	Longer run
<b>Median</b>	-3.7	4.0	3.0	2.5	1.9
June projection	-6.5	5.0	3.5	n.a.	1.8
<b>Range</b>	-5.5–1.0	0.0–5.5	2.0–4.5	2.0–4.0	1.6–2.2
June projection	-10.0–-4.2	-1.0–7.0	2.0–6.0	n.a.	1.6–2.2
<b>Memo: Tealbook</b>	-3.1	4.1	3.1	2.7	1.7
June projection	-7.1	6.7	3.6	n.a.	1.7

Unemployment rate					
	2020	2021	2022	2023	Longer run
<b>Median</b>	7.6	5.5	4.6	4.0	4.1
June projection	9.3	6.5	5.5	n.a.	4.1
<b>Range</b>	6.5–8.0	4.0–8.0	3.5–7.5	3.5–6.0	3.5–4.7
June projection	7.0–14.0	4.5–12.0	4.0–8.0	n.a.	3.5–4.7
<b>Memo: Tealbook</b>	7.4	4.9	3.9	3.3	4.3
June projection	9.3	5.7	4.5	n.a.	4.3

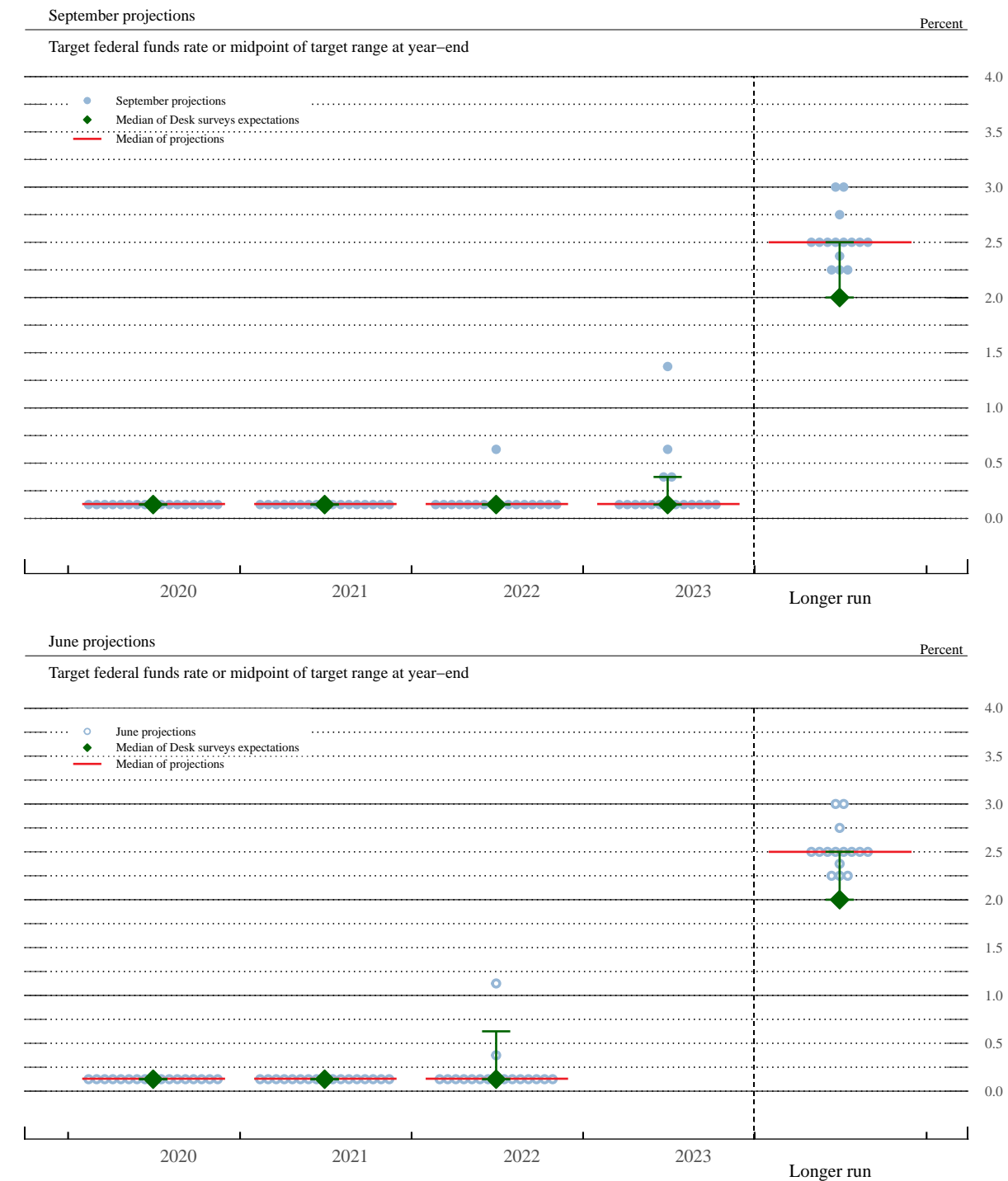
PCE inflation					
	2020	2021	2022	2023	Longer run
<b>Median</b>	1.2	1.7	1.8	2.0	2.0
June projection	0.8	1.6	1.7	n.a.	2.0
<b>Range</b>	1.0–1.5	1.3–2.4	1.5–2.2	1.7–2.1	2.0
June projection	0.5–1.2	1.1–2.0	1.4–2.2	n.a.	2.0
<b>Memo: Tealbook</b>	1.1	1.7	1.8	1.9	2.0
June projection	0.8	1.6	1.7	n.a.	2.0

Core PCE inflation				
	2020	2021	2022	2023
<b>Median</b>	1.5	1.7	1.8	2.0
June projection	1.0	1.5	1.7	n.a.
<b>Range</b>	1.2–1.6	1.5–2.4	1.6–2.2	1.7–2.1
June projection	0.7–1.3	1.2–2.0	1.2–2.2	n.a.
<b>Memo: Tealbook</b>	1.5	1.7	1.8	1.9
June projection	1.1	1.6	1.7	n.a.

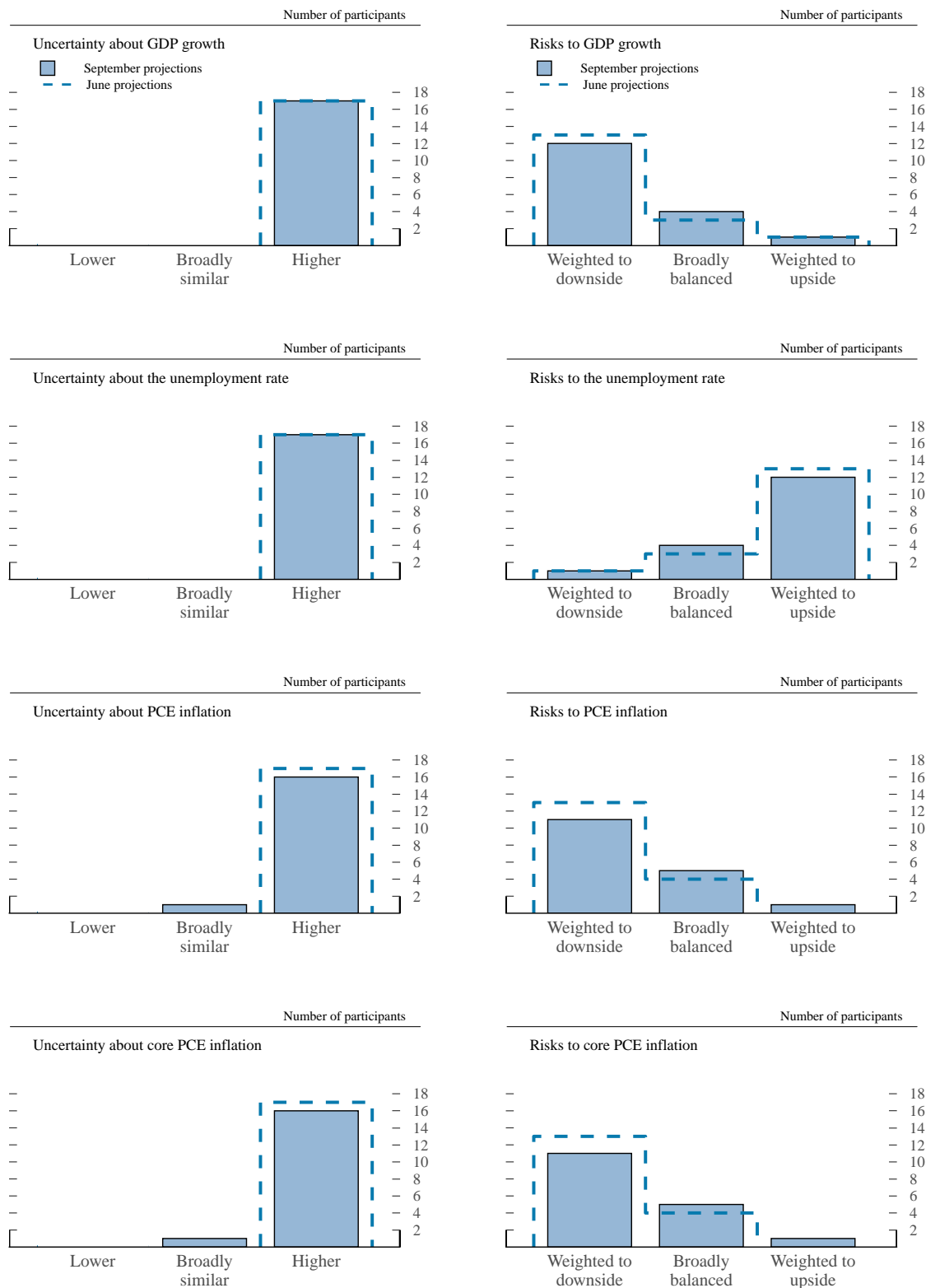
Note: Updated September Tealbook values are reported. The percent changes in real GDP and inflation are measured Q4/Q4. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. One participant did not submit longer run projections for the change in real GDP, the unemployment rate, or the federal funds rate in conjunction with the June 9–10, 2020, meeting, and one participant did not submit such projections in conjunction with the September 15–16, 2020, meeting.

Exhibit 2. Overview of FOMC participants' assessments of appropriate monetary policy



Note: In these two panels, each blue dot indicates the value (rounded to  $\frac{1}{8}$  percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate, or the appropriate target level for that rate, at the end of the specified year or over the longer run. One participant did not submit longer-run projections for the federal funds rate. Each green diamond represents the most likely outcomes reported by the median respondent to the Desk's surveys of Primary Dealers and Market Participants for the last surveyed time period of the indicated year. The green whiskers show, for each time period, the interquartile range of the distribution of most likely outcomes reported in the Desk surveys.

Exhibit 3. Uncertainty and risks in economic projections



**Appendix 5: Materials used by Mr. Reeve**

**Class I FOMC – Restricted Controlled (FR)**

*Material for the Briefing on*

**Monetary Policy Alternatives**

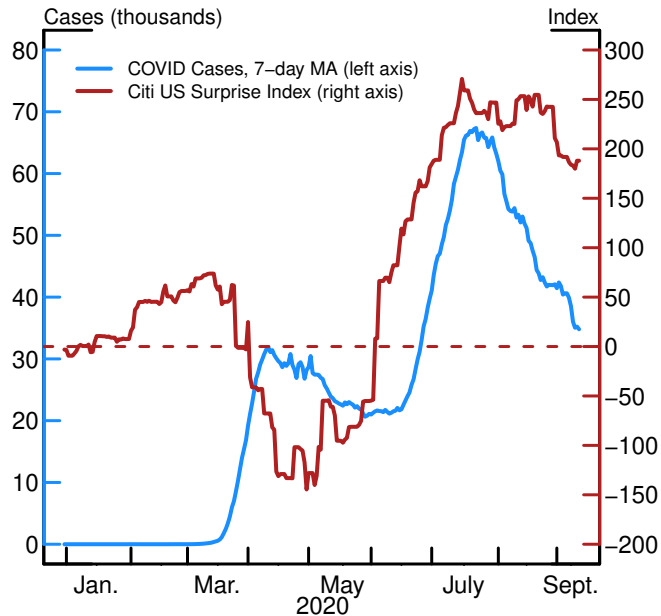
**Trevor A. Reeve**

**Exhibits by Luke Morgan**

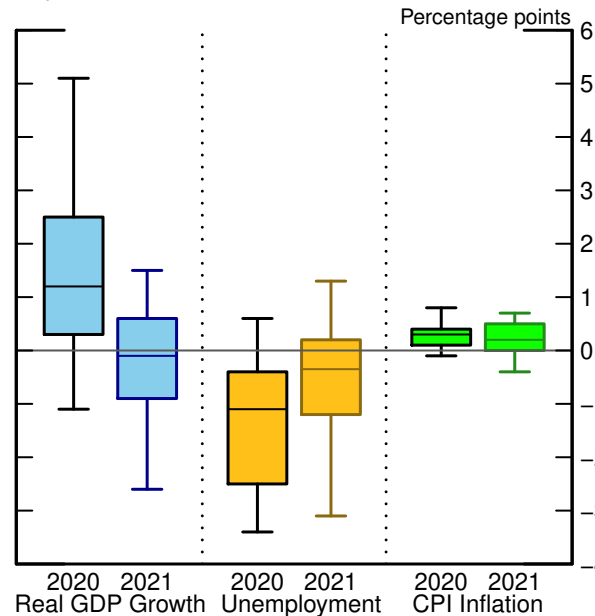
**September 15-16, 2020**

## Monetary Policy Considerations

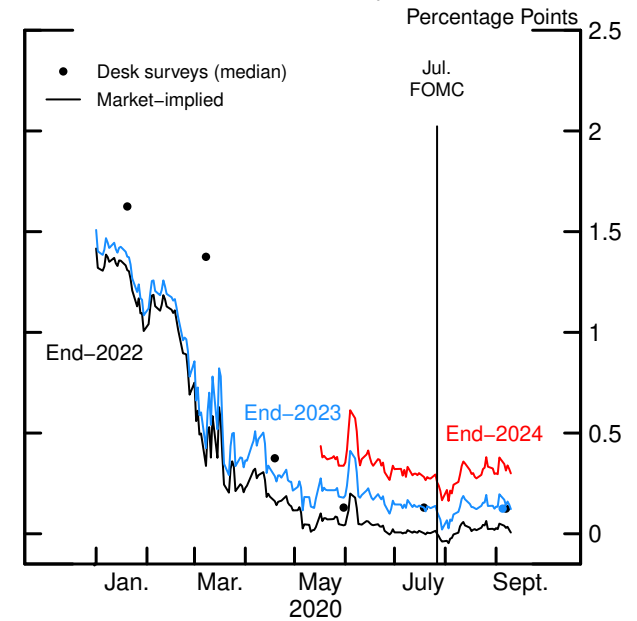
U.S. Economic Data Surprises and New COVID-19 Cases



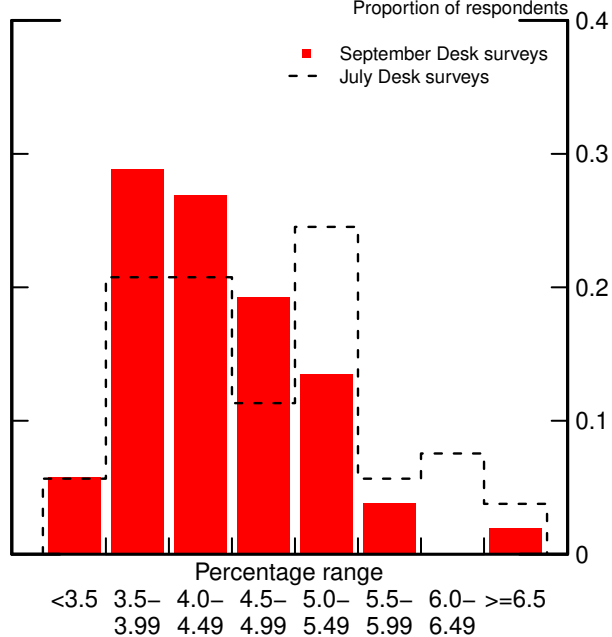
Blue Chip Forecast Revisions  
September 2020 vs. June 2020



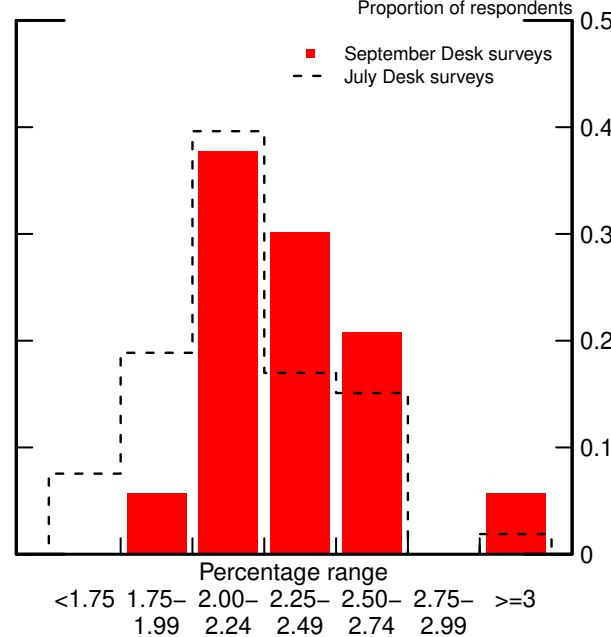
Historical Federal Funds Rate Expectations



Respondents' Estimates of the Unemployment Rate at First Federal Funds Rate Increase



Respondents' Estimates of Inflation at First Federal Funds Rate Increase



Monetary Policy Alternatives

- All three alternatives incorporate elements of your new consensus statement.
- The alternatives differ with regard to the guidance they provide for the federal funds rate.
  - Alternatives A and B offer more explicit guidance.
  - Alternative C maintains previous guidance.
- All three alternatives update and streamline the language on asset purchases.

### Exhibit Notes

**Exhibit 1:**Top-left panel:

New COVID-19 cases are daily numbers. Data updated through September 12. Source: Bloomberg, Johns Hopkins University.

Top-middle panel:

Source: June and September editions of Blue Chip Economic Indicators.

Top-right panel:

Desk surveys median is the median of the respondents' modal forecast for the federal funds rate. The end-2023 observation from the September 2020 surveys is offset by two days so that the marker does not overlap with the end-2022 observation. Market-implied path is estimated using overnight index swap quotes with a spline approach and no term premium adjustment.

Source: Bloomberg, FRBNY, Federal Reserve Board staff estimates.

Bottom-left panel:

Based on responses to the Desk surveys. Respondents were asked for their estimates of the unemployment rate at the time of the first federal funds rate increase. Source: FRBNY, Board staff calculations.

Bottom-middle panel:

Based on responses to the Desk surveys. Respondents were asked for their estimates of the 12-month Headline PCE inflation rate at the time of the first federal funds rate increase. Source: FRBNY, Board staff calculations.



**JULY 2020 FOMC STATEMENT**

1. The Federal Reserve is committed to using its full range of tools to support the U.S. economy in this challenging time, thereby promoting its maximum employment and price stability goals.
2. The coronavirus outbreak is causing tremendous human and economic hardship across the United States and around the world. Following sharp declines, economic activity and employment have picked up somewhat in recent months but remain well below their levels at the beginning of the year. Weaker demand and significantly lower oil prices are holding down consumer price inflation. Overall financial conditions have improved in recent months, in part reflecting policy measures to support the economy and the flow of credit to U.S. households and businesses.
3. The path of the economy will depend significantly on the course of the virus. The ongoing public health crisis will weigh heavily on economic activity, employment, and inflation in the near term, and poses considerable risks to the economic outlook over the medium term. In light of these developments, the Committee decided to maintain the target range for the federal funds rate at 0 to 1/4 percent. The Committee expects to maintain this target range until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals.
4. The Committee will continue to monitor the implications of incoming information for the economic outlook, including information related to public health, as well as global developments and muted inflation pressures, and will use its tools and act as appropriate to support the economy. In determining the timing and size of future adjustments to the stance of monetary policy, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.
5. To support the flow of credit to households and businesses, over coming months the Federal Reserve will increase its holdings of Treasury securities and agency residential and commercial mortgage-backed securities at least at the current pace to sustain smooth market functioning, thereby fostering effective transmission of monetary policy to broader financial conditions. In addition, the Open Market Desk will continue to offer large-scale overnight and term repurchase agreement operations. The Committee will closely monitor developments and is prepared to adjust its plans as appropriate.

**ALTERNATIVE A FOR SEPTEMBER 2020**

1. The Federal Reserve is committed to using its full range of tools to support the U.S. economy in this challenging time, thereby promoting its maximum employment and price stability goals.
2. The ~~coronavirus outbreak~~ **COVID-19 pandemic** is causing tremendous human and economic hardship across the United States and around the world. ~~Following sharp declines,~~ Economic activity and employment have picked up ~~some~~ in recent months but remain well below their levels at the beginning of the year. Weaker demand and significantly lower oil prices are holding down consumer price inflation. Overall financial conditions have improved in recent months, in part reflecting policy measures to support the economy and the flow of credit to U.S. households and businesses.
3. The path of the economy will depend significantly on the course of the virus. The ongoing public health crisis will **continue to** weigh ~~heavily~~ on economic activity, employment, and inflation in the near term, and poses considerable risks to the economic outlook over the medium term. ~~In light of these developments, the Committee decided to maintain the target range for the federal funds rate at 0 to 1/4 percent. The Committee expects to maintain this target range until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals.~~
4. **The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. With inflation running persistently below this longer-run goal, the Committee will aim to achieve inflation moderately above 2 percent for some time so that inflation averages 2 percent over time and longer-term inflation expectations remain well anchored at 2 percent. In support of these goals, the Committee decided to keep the target range for the federal funds rate at 0 to 1/4 percent and anticipates that this target range will remain appropriate until shortfalls of employment from assessments of its maximum level have been eliminated and inflation on a 12-month basis has moderately exceeded 2 percent for some time.** ~~To support the flow of credit to households and businesses~~ **In addition,** over coming months the Federal Reserve will increase its holdings of Treasury securities and agency residential and commercial mortgage-backed securities at least at the current pace to sustain smooth market functioning, ~~thereby fostering effective transmission of monetary policy to broader~~ **and help foster accommodative** financial conditions, **thereby supporting the flow of credit to households and businesses.** ~~In addition, the Open Market Desk will continue to offer large scale overnight and term repurchase agreement operations. The Committee will closely monitor developments and is prepared to adjust its plans as appropriate.~~

5. **In assessing the appropriate stance of monetary policy,** the Committee will continue to monitor the implications of incoming information for the economic outlook, ~~including information related to public health, as well as global developments and muted inflation pressures, and will use its tools and act as appropriate to support the economy. In determining the timing and size of future adjustments to the stance of monetary policy, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This~~ **The Committee's** assessments will take into account a wide range of information, including measures of **readings on public health,** labor market conditions, ~~indicators of inflation pressures and inflation expectations, and readings on financial and international developments.~~

**ALTERNATIVE B FOR SEPTEMBER 2020**

1. The Federal Reserve is committed to using its full range of tools to support the U.S. economy in this challenging time, thereby promoting its maximum employment and price stability goals.
2. The ~~coronavirus outbreak~~ **COVID-19 pandemic** is causing tremendous human and economic hardship across the United States and around the world. ~~Following sharp declines,~~ Economic activity and employment have picked up ~~somewhat~~ in recent months but remain well below their levels at the beginning of the year. Weaker demand and significantly lower oil prices are holding down consumer price inflation. Overall financial conditions have improved in recent months, in part reflecting policy measures to support the economy and the flow of credit to U.S. households and businesses.
3. The path of the economy will depend significantly on the course of the virus. The ongoing public health crisis will **continue to** weigh ~~heavily~~ on economic activity, employment, and inflation in the near term, and poses considerable risks to the economic outlook over the medium term. ~~In light of these developments, the Committee decided to maintain the target range for the federal funds rate at 0 to 1/4 percent. The Committee expects to maintain this target range until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals.~~
4. **The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. With inflation running persistently below this longer-run goal, the Committee will aim to achieve inflation moderately above 2 percent for some time so that inflation averages 2 percent over time and longer-term inflation expectations remain well anchored at 2 percent. The Committee expects to maintain an accommodative stance of monetary policy until these outcomes are achieved. The Committee decided to keep the target range for the federal funds rate at 0 to 1/4 percent and expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time.** ~~To support the flow of credit to households and businesses~~ **In addition,** over coming months the Federal Reserve will increase its holdings of Treasury securities and agency ~~residential and commercial mortgage-backed securities~~ at least at the current pace to sustain smooth market functioning, ~~thereby fostering effective transmission of monetary policy to broader~~ **and help foster accommodative** financial conditions, **thereby supporting the flow of credit to households and businesses.** ~~In addition, the Open Market Desk will continue to offer large-scale overnight and term repurchase agreement operations. The Committee will closely monitor developments and is prepared to adjust its plans as appropriate.~~
5. **In assessing the appropriate stance of monetary policy,** the Committee will continue to monitor the implications of incoming information for the economic outlook, ~~including information related to public health, as well as global developments and muted inflation pressures,~~ and will use its tools and act as appropriate to support the economy. ~~In determining the timing and size of~~

future adjustments to the stance of monetary policy, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This The Committee would be prepared to adjust the stance of monetary policy as appropriate if risks emerge that could impede the attainment of the Committee's goals. The Committee's assessments will take into account a wide range of information, including measures of readings on public health, labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.

## ALTERNATIVE C FOR SEPTEMBER 2020

1. The Federal Reserve is committed to using its full range of tools to support the U.S. economy in this challenging time, thereby promoting its maximum employment and price stability goals.
2. The ~~coronavirus outbreak~~ **COVID-19 pandemic** is causing tremendous human and economic hardship across the United States and around the world. ~~Following sharp declines,~~ Economic activity and employment have picked up ~~somewhat~~ in recent months but remain well below their levels at the beginning of the year. Weaker demand and significantly lower oil prices are holding down consumer price inflation. Overall financial conditions have improved in recent months, in part reflecting policy measures to support the economy and the flow of credit to U.S. households and businesses.
3. The path of the economy will depend significantly on the course of the virus. The ongoing public health crisis will **continue to** weigh ~~heavily~~ on economic activity, employment, and inflation in the near term, and poses considerable risks to the economic outlook over the medium term.
4. **The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. With inflation running persistently below this longer-run goal, the Committee will aim to achieve inflation moderately above 2 percent for some time so that inflation averages 2 percent over time and longer-term inflation expectations remain well anchored at 2 percent.** ~~In light of these developments~~ **support of these goals**, the Committee decided to maintain the target range for the federal funds rate at 0 to 1/4 percent. The Committee expects to maintain this target range until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals. ~~To support the flow of credit to households and businesses~~ **In addition**, over coming months the Federal Reserve will increase its holdings of Treasury securities and agency ~~residential and commercial~~ mortgage-backed securities at least at the current pace to sustain smooth market functioning, ~~thereby fostering effective transmission of monetary policy to broader~~ **and help foster accommodative** financial conditions, **thereby supporting the flow of credit to households and businesses**. ~~In addition, the Open Market Desk will continue to offer large-scale overnight and term repurchase agreement operations. The Committee will closely monitor developments and is prepared to adjust its plans as appropriate.~~
5. **In assessing the appropriate stance of monetary policy,** the Committee will continue to monitor the implications of incoming information for the economic outlook, ~~including information related to public health, as well as global developments and muted inflation pressures,~~ and will use its tools and act as appropriate to support the economy. ~~In determining the timing and size of future adjustments to the stance of monetary policy, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This~~ **The Committee would be prepared to adjust the stance of monetary policy as appropriate if risks emerge that could impede the attainment of the Committee's goals. The Committee's** assessments will take into account a wide range of information, including ~~measures of~~

readings on public health, labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.

## Implementation Note for September 2020, All Alternatives

*Release Date: September 16, 2020*

### Decisions Regarding Monetary Policy Implementation

The Federal Reserve has made the following decisions to implement the monetary policy stance announced by the Federal Open Market Committee in its [statement](#) on ~~July 29~~ **September 16**, 2020:

- The Board of Governors of the Federal Reserve System voted **[ unanimously ]** to maintain the interest rate paid on required and excess reserve balances at 0.10 percent, effective ~~July 30~~ **September 17**, 2020.
- As part of its policy decision, the Federal Open Market Committee voted to authorize and direct the Open Market Desk at the Federal Reserve Bank of New York, until instructed otherwise, to execute transactions in the System Open Market Account in accordance with the following domestic policy directive:
  - “Effective ~~July 30~~ **September 17**, 2020, the Federal Open Market Committee directs the Desk to:
    - Undertake open market operations as necessary to maintain the federal funds rate in a target range of 0 to 1/4 percent.
    - Increase the System Open Market Account holdings of Treasury securities, **and** agency mortgage-backed securities (MBS), ~~and agency commercial mortgage-backed securities (CMBS) at least at the current pace.~~ **Increase holdings of Treasury securities and agency MBS by additional amounts and purchase agency commercial mortgage-backed securities (CMBS) as needed** to sustain smooth functioning of markets for these securities, ~~thereby fostering effective transmission of monetary policy to broader financial conditions.~~
    - Conduct term and overnight repurchase agreement operations to support effective policy implementation and the smooth functioning of short-term U.S. dollar funding markets.
    - Conduct overnight reverse repurchase agreement operations at an offering rate of 0.00 percent and with a per-counterparty limit of \$30 billion per day; the per-counterparty limit can be temporarily increased at the discretion of the Chair.
    - Roll over at auction all principal payments from the Federal Reserve's holdings of Treasury securities and reinvest all principal payments from the Federal Reserve's holdings of agency debt and agency MBS in agency MBS ~~and all principal payments from holdings of agency CMBS in agency CMBS.~~
    - Allow modest deviations from stated amounts for purchases and reinvestments, if needed for operational reasons.
    - Engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions.”



- In a related action, the Board of Governors of the Federal Reserve System voted [ unanimously ] to approve the establishment of the primary credit rate at the existing level of 0.25 percent.

This information will be updated as appropriate to reflect decisions of the Federal Open Market Committee or the Board of Governors regarding details of the Federal Reserve's operational tools and approach used to implement monetary policy.

More information regarding open market operations and reinvestments may be found on the Federal Reserve Bank of New York's [website](#).

**Potential actions of the Board of Governors of the Federal Reserve System**

## Interest on required and excess reserve balances

Leave the interest rate paid on required and excess reserve balances unchanged at 0.10 percent.

## Establishment of the primary, secondary, and seasonal credit rates

Approve establishment of the primary credit rate at the existing rate of 0.25 percent and establishment of the rates for secondary and seasonal credit under the existing formulas specified in the staff's September 11, 2020, memo to the Board.