Appendix 1: Materials used by Ms. Meade

Class I FOMC – Restricted Controlled (FR)

Material for Briefing on

Draft Statement on Longer-Run Goals and Monetary Policy Strategy

Ellen E. Meade

July 28, 2020

7/15/2020

Statement on Longer-Run Goals and Monetary Policy Strategy

Adopted effective January 24, 2012; as amended effective ~~January 29, 2019~~ **[date]**

The Federal Open Market Committee (FOMC) is firmly committed to fulfilling its statutory mandate from the Congress of promoting maximum employment, stable prices, and moderate long-term interest rates. The Committee seeks to explain its monetary policy decisions to the public as clearly as possible. Such clarity facilitates well-informed decisionmaking by households and businesses, reduces economic and financial uncertainty, increases the effectiveness of monetary policy, and enhances transparency and accountability, which are essential in a democratic society.

Inflation, employment, and long-term interest rates fluctuate over time in response to economic and financial disturbances. Monetary policy plays an important role in stabilizing the economy in response to these disturbances. The Committee's primary means of adjusting the stance of monetary policy is through changes in the target range for the federal funds rate. The Committee judges that the level of the federal funds rate consistent with maximum employment and price stability over the longer run has declined relative to its historical average. Therefore, the federal funds rate is likely to be constrained by its effective lower bound more frequently than in the past. Owing in part to the proximity of interest rates to the effective lower bound, the Committee judges that downward risks to employment and inflation have increased.

The maximum level of employment is a broad-based and inclusive goal that is not directly measurable and changes over time owing largely to nonmonetary factors that affect the structure and dynamics of the labor market. Consequently, it would not be appropriate to specify a fixed goal for employment; rather, the Committee's policy decisions must be informed by assessments of the shortfalls of employment from its maximum level, recognizing that such assessments are necessarily uncertain and subject to revision. The Committee considers a wide range of indicators in making these assessments.

The inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee has the ability to specify a longer-run goal for inflation. The Committee reaffirms its judgment that inflation at the rate of 2 percent, as measured by the annual change in the price index for personal consumption expenditures, is most consistent over the longer run with the Federal Reserve's statutory mandate. The Committee judges that inflation expectations that are well anchored at 2 percent foster price stability and moderate long-term interest rates and enhance the Committee's ability to promote maximum employment in the face of significant economic disturbances. In order to anchor inflation expectations at this level, the Committee seeks to achieve inflation that averages 2 percent over time, and therefore judges that, following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time.

The Committee is prepared to use its full range of tools to achieve its maximum employment and price stability goals. Monetary policy actions tend to influence economic activity, employment, and prices with a lag. In setting monetary policy, the Committee seeks over time to mitigate shortfalls of employment from the Committee's assessments of its maximum level and deviations of inflation from its longer-run goal. Moreover, sustainably achieving maximum employment and price stability depends on a stable financial system. Therefore, the Committee's policy decisions reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks, including risks to the financial system that could impede the attainment of the Committee's goals.

The Committee's employment and inflation objectives are generally complementary. However, under circumstances in which the Committee judges that the objectives are not complementary, it takes into account the employment shortfalls and inflation deviations and the potentially different time horizons over which employment and inflation are projected to return to levels judged consistent with its mandate.

The Committee intends to review these principles and to make adjustments as appropriate at its annual organizational meeting each January, and to undertake [roughly] every 5 years a thorough public review of its monetary policy strategy, tools, and communication practices.

7/15/2020
Change from Jan 2019

Statement on Longer-Run Goals and Monetary Policy Strategy

Adopted effective January 24, 2012; as amended effective ~~January 29, 2019~~ **[date]**

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1. The Federal Open Market Committee (FOMC) is firmly committed to fulfilling its statutory mandate from the Congress of promoting maximum employment, stable prices, and moderate long-term interest rates. The Committee seeks to explain its monetary policy decisions to the public as clearly as possible. Such clarity facilitates well-informed decisionmaking by households and businesses, reduces economic and financial uncertainty, increases the effectiveness of monetary policy, and enhances transparency and accountability, which are essential in a democratic society.

2. Inflation, employment, and long-term interest rates fluctuate over time in response to economic and financial disturbances. **Monetary policy plays an important role in stabilizing the economy in response to these disturbances. The Committee's primary means of adjusting the stance of monetary policy is through changes in the target range for the federal funds rate. The Committee judges that the level of the federal funds rate consistent with maximum employment and price stability over the longer run has declined relative to its historical average. Therefore, the federal funds rate is likely to be constrained by its effective lower bound more frequently than in the past. Owing in part to the proximity of interest rates to the effective lower bound, the Committee judges that downward risks to employment and inflation have increased.** ~~Moreover, monetary policy actions tend to influence economic activity and prices with a lag. Therefore, the Committee's policy decisions reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks, including risks to the financial system that could impede the attainment of the Committee's goals.~~

~~4.~~ **3.** The maximum level of employment is **a broad-based and inclusive goal that is not directly measurable and changes over time owing** largely **to** ~~determined by~~ nonmonetary factors that affect the structure and dynamics of the labor market. ~~These factors may change over time and may not be directly measurable.~~ Consequently, it would not be appropriate to specify a fixed goal for employment; rather, the Committee's policy decisions must be informed by assessments of the **shortfalls of employment from its** maximum level ~~of employment~~, recognizing that such assessments are necessarily uncertain and subject to revision. The Committee considers a wide range of indicators in making these assessments. ~~Information about Committee participants' estimates of the longer-run normal rates of output growth and unemployment is published four times per year in the FOMC's Summary of Economic Projections. For example, in the most recent projections, the median of FOMC participants' estimates of the longer-run normal rate of unemployment was 4.4 percent.~~

~~3.~~ **4.** The inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee has the ability to specify a longer-run goal for inflation. The Committee reaffirms its judgment that inflation at the rate of 2 percent, as measured by the annual change in the price index for personal consumption expenditures, is most consistent over the longer run with the Federal Reserve's statutory mandate. The Committee **judges that** ~~would be concerned if inflation were running persistently above or below this objective. Communicating this symmetric inflation goal clearly to the public helps keep longer-term~~ inflation expectations **that are well** ~~firmly~~ anchored **at 2 percent**~~, thereby~~ foster~~ing~~ price stability and moderate long-term interest rates and **enhance** ~~enhancing~~ the Committee's ability to promote maximum employment in the face of significant economic disturbances. **In order to anchor inflation expectations at this level, the Committee seeks to achieve inflation that averages 2 percent over time, and therefore judges that, following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time.**

5. **The Committee is prepared to use its full range of tools to achieve its maximum employment and price stability goals. Monetary policy actions tend to influence economic activity, employment, and prices with a lag.** In setting monetary policy, the Committee seeks **over time** to mitigate **shortfalls of employment from the Committee's assessment of its maximum level and** deviations of inflation from its longer-run goal ~~and deviations of employment from the Committee's assessments of its maximum level~~. **Moreover, sustainably achieving maximum employment and price stability depends on a stable financial system. Therefore, the Committee's**

7/15/2020
Change from Jan 2019

policy decisions reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks, including risks to the financial system that could impede the attainment of the Committee's goals.

6. ~~These~~ **The Committee's employment and inflation** objectives are generally complementary. However, under circumstances in which the Committee judges that the objectives are not complementary, it ~~follows a balanced approach in promoting them, taking~~ **takes** into account the ~~magnitude of the~~ **employment shortfalls and inflation** deviations and the potentially different time horizons over which employment and inflation are projected to return to levels judged consistent with its mandate.

7. The Committee intends to ~~reaffirm~~ **review** these principles and to make adjustments as appropriate at its annual organizational meeting each January**, and to undertake [roughly] every 5 years a thorough public review of its monetary policy strategy, tools, and communication practices**.

Statement on Longer-Run Goals and Monetary Policy Strategy

Adopted effective January 24, 2012; as amended effective January 29, 2019

The Federal Open Market Committee (FOMC) is firmly committed to fulfilling its statutory mandate from the Congress of promoting maximum employment, stable prices, and moderate long-term interest rates. The Committee seeks to explain its monetary policy decisions to the public as clearly as possible. Such clarity facilitates well-informed decisionmaking by households and businesses, reduces economic and financial uncertainty, increases the effectiveness of monetary policy, and enhances transparency and accountability, which are essential in a democratic society.

Inflation, employment, and long-term interest rates fluctuate over time in response to economic and financial disturbances. Moreover, monetary policy actions tend to influence economic activity and prices with a lag. Therefore, the Committee's policy decisions reflect its longer-run goals, its medium-term outlook, and its assessments of the balance of risks, including risks to the financial system that could impede the attainment of the Committee's goals.

The inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee has the ability to specify a longer-run goal for inflation. The Committee reaffirms its judgment that inflation at the rate of 2 percent, as measured by the annual change in the price index for personal consumption expenditures, is most consistent over the longer run with the Federal Reserve's statutory mandate. The Committee would be concerned if inflation were running persistently above or below this objective. Communicating this symmetric inflation goal clearly to the public helps keep longer-term inflation expectations firmly anchored, thereby fostering price stability and moderate long-term interest rates and enhancing the Committee's ability to promote maximum employment in the face of significant economic disturbances. The maximum level of employment is largely determined by nonmonetary factors that affect the structure and dynamics of the labor market. These factors may change over time and may not be directly measurable. Consequently, it would not be appropriate to specify a fixed goal for employment; rather, the Committee's policy decisions must be informed by assessments of the maximum level of employment, recognizing that such assessments are necessarily uncertain and subject to revision. The Committee considers a wide range of indicators in making these assessments. Information about Committee participants' estimates of the longer-run normal rates of output growth and unemployment is published four times per year in the FOMC's Summary of Economic Projections. For example, in the most recent projections, the median of FOMC participants' estimates of the longer-run normal rate of unemployment was 4.4 percent.

In setting monetary policy, the Committee seeks to mitigate deviations of inflation from its longer-run goal and deviations of employment from the Committee's assessments of its maximum level. These objectives are generally complementary. However, under circumstances in which the Committee judges that the objectives are not complementary, it follows a balanced approach in promoting them, taking into account the magnitude of the deviations and the potentially different time horizons over which employment and inflation are projected to return to levels judged consistent with its mandate.

The Committee intends to reaffirm these principles and to make adjustments as appropriate at its annual organizational meeting each January.

Question for Discussion on the
Draft Statement on Longer-Run Goals and Monetary Policy Strategy

In light of the changes in the economy in recent decades and the lessons learned since the Committee first adopted its Statement on Longer-Run Goals and Monetary Policy Strategy in 2012, does the new draft statement adequately reflect the challenges that monetary policymakers face and better position the Committee to achieve its dual mandate goals?

Appendix 2: 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, Marcus Petersen, and Ashley Rhodes
July 28, 2020

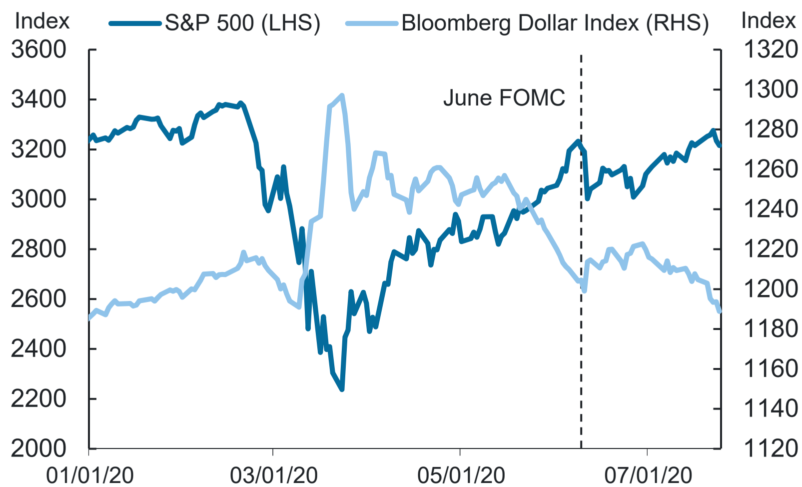
Financial Conditions Ease Slightly

(1) Asset Price Table

	Since June FOMC	YTD	Current Level
S&P 500 Index	+0.3%	-0.5%	3216
MSCI World ex-U.S.	+0.5%	-8.8%	1856
IG Credit Spread	-17 bps	+38 bps	131 bps
10Y Treasury Yield	-24 bps	-133 bps	0.59%
10Y German Bund	-14 bps	-26 bps	-0.45%
Bloomberg Dollar Index	-1.3%	+0.3%	1189
VIX Index	-2 ppts	+12 ppts	26 ppts

Note: Current level pricing as of 07/24/20.
Source: Bloomberg

(2) S&P 500 and the Bloomberg Dollar Index



Source: Bloomberg

Three Key Questions

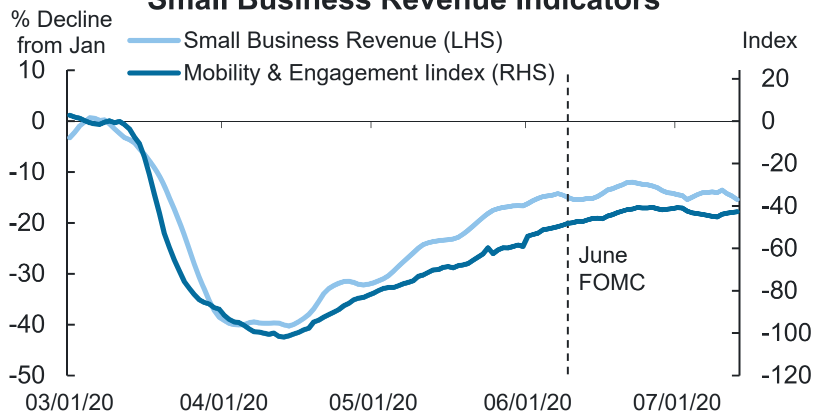
1. Amid the resurgence in COVID-19, how have market participants' economic outlooks changed, and how have key asset prices responded?

2. How have monetary policy expectations evolved, particularly in the context of the strategic framework review?

3. How has improved market functioning impacted Fed operations and facilities, and what are some considerations that lie ahead?

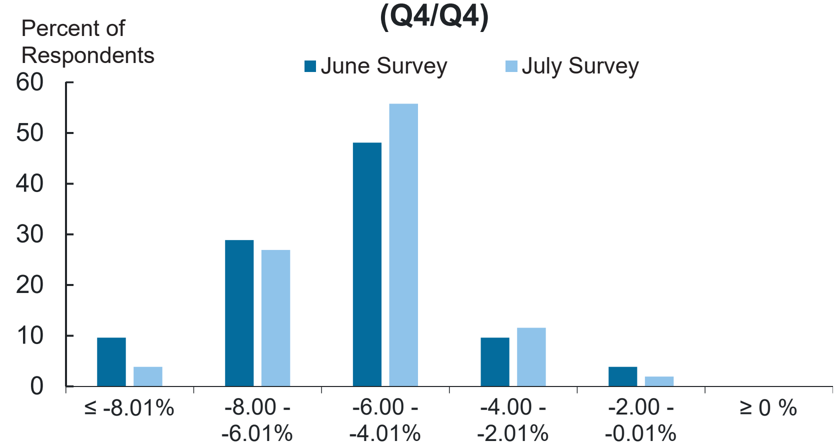
Cross Currents Affect Economic Outlook

(3) Real-Time Mobility and Small Business Revenue Indicators



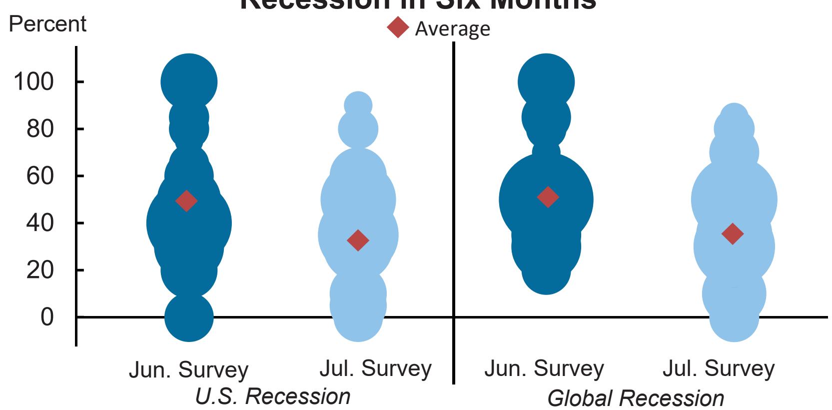
Note: Both measures are 7-day moving averages. The National Mobility & Engagement index is scaled to average zero over Jan.-Feb. and -100 for the week ended April 11. Small business revenue data is from an aggregator of credit card processor data.
Source: Federal Reserve Bank of Dallas, Opportunity Insights, Womply

(4) Expectations for 2020 U.S. Real GDP Growth (Q4/Q4)



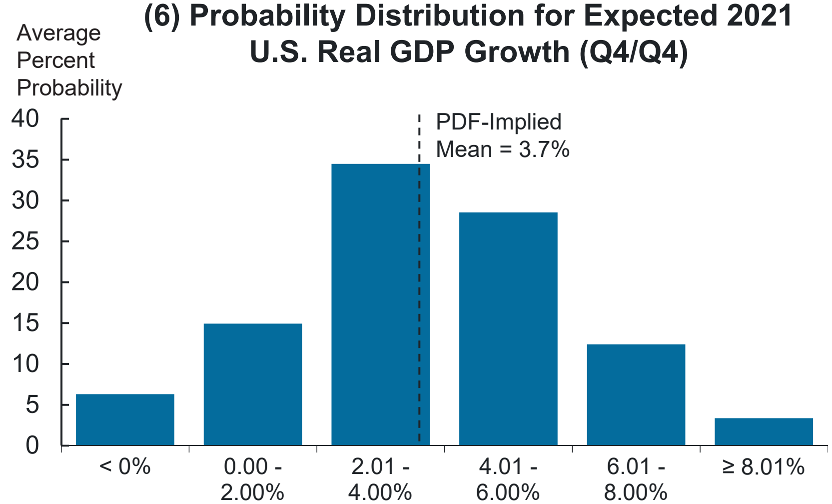
Note: Based on all responses from the Surveys of Primary Dealers and Market Participants. Constructed for each respondent as the implied mean from their PDF for 2020 growth.
Source: FRBNY

(5) Probability of U.S. Recession and Global Recession in Six Months



Note: Based on all responses to the Surveys of Primary Dealers and Market Participants. NBER defined recession for U.S., IMF staff work defined recession for Global. Dots scaled by percent of respondents.
Source: FRBNY

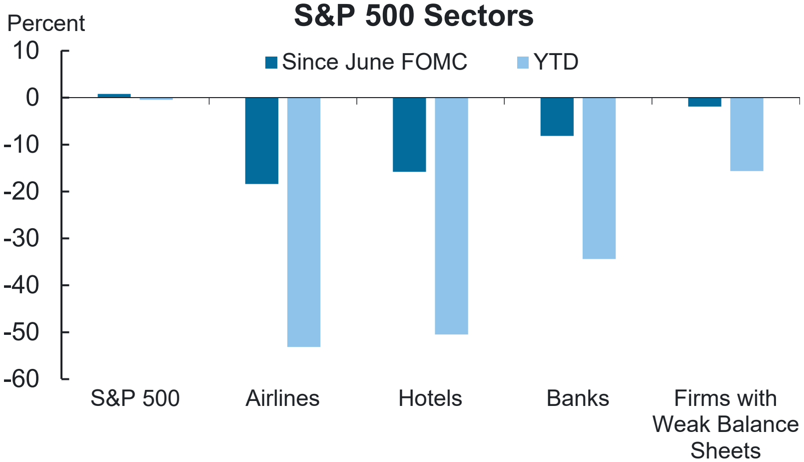
(6) Probability Distribution for Expected 2021 U.S. Real GDP Growth (Q4/Q4)



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

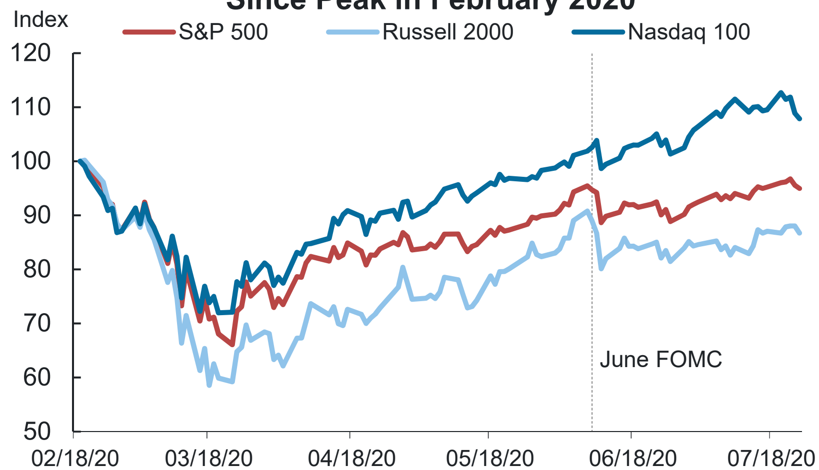
Equity Markets Show COVID-19 Divergence

(7) Performance of Selected Virus-Sensitive S&P 500 Sectors



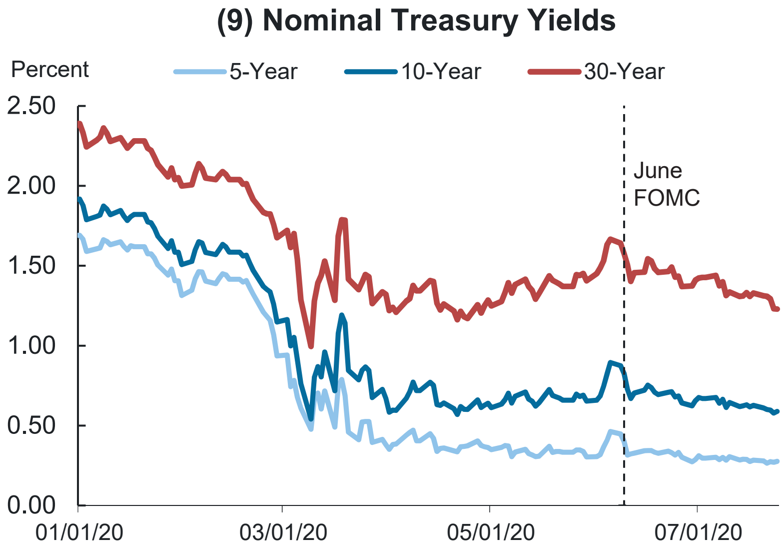
Note: Weak balance sheet basket identifies 50 S&P 500 companies with weak balance sheets measured using profitability, leverage, liquidity, solvency, and activity ratios.
Source: Bloomberg, Goldman Sachs

(8) Selected U.S. Equity Indices Since Peak in February 2020

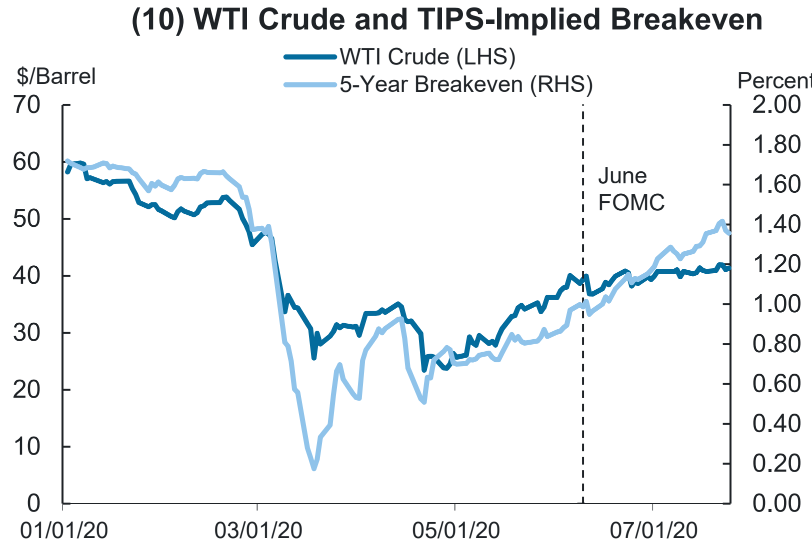


Note: All series indexed to 100 at 2/19/20.
Source: Bloomberg

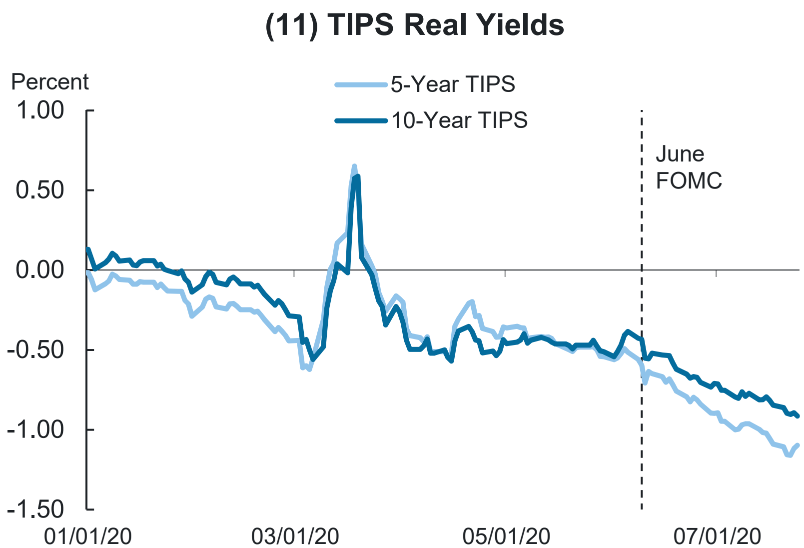
Yields Fall, Dollar Weakens on Policy Expectations and Outlook



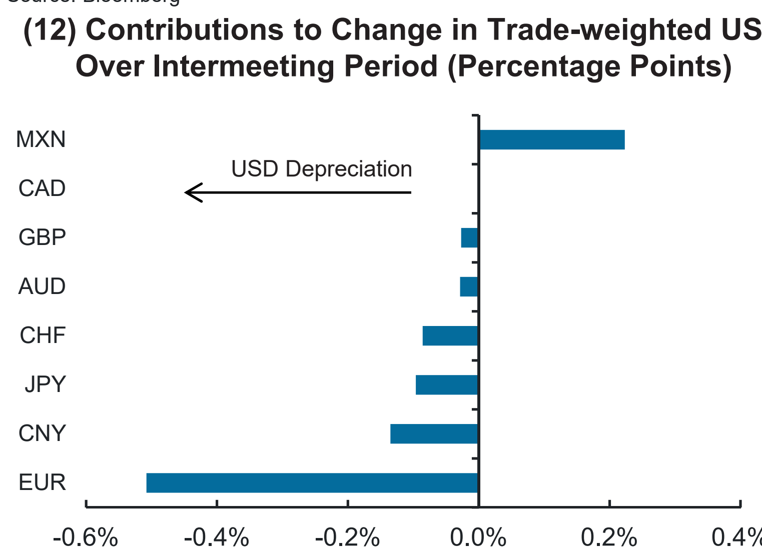
Source: Bloomberg



Source: Bloomberg

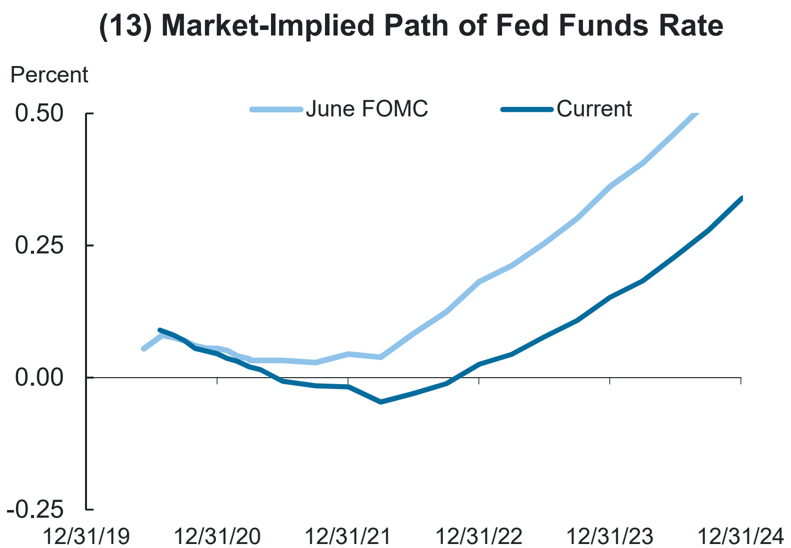


Source:Bloomberg

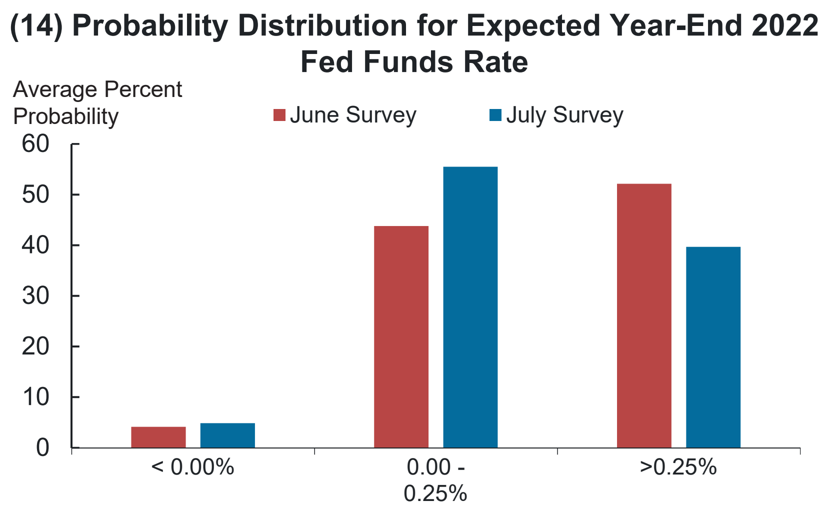


Source: Bloomberg, Staff Calculations

Fed Funds Rate Expectations Shift Down



Source: Bloomberg, Staff Calculations



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

Framework Review is Shaping Expectations

(15) Key Points

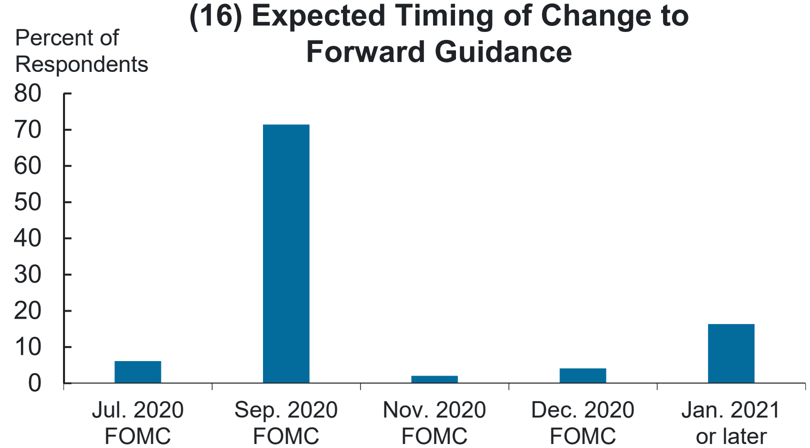
Framework Review

- Most survey respondents indicated they expect some form of AIT

Forward Guidance

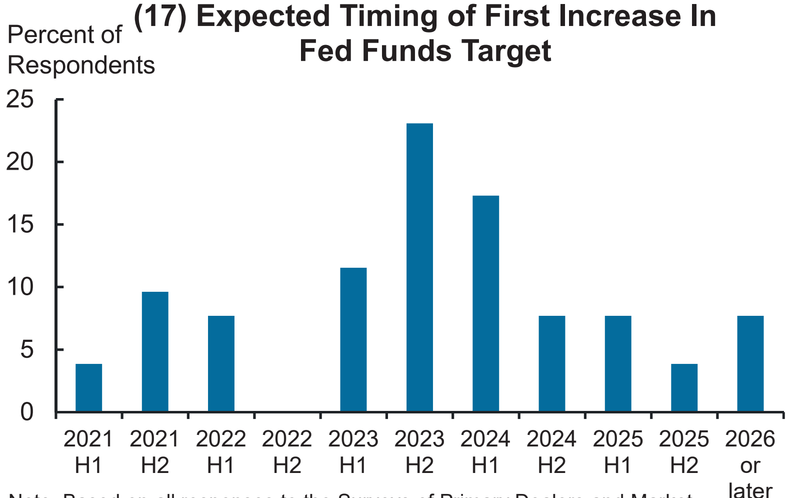
- Nearly all expect this to be updated this year
- Two-thirds expect outcome-based FG, of which
  - Majority expect this to be tied to inflation
  - Some also expect an employment objective

(16) Expected Timing of Change to Forward Guidance



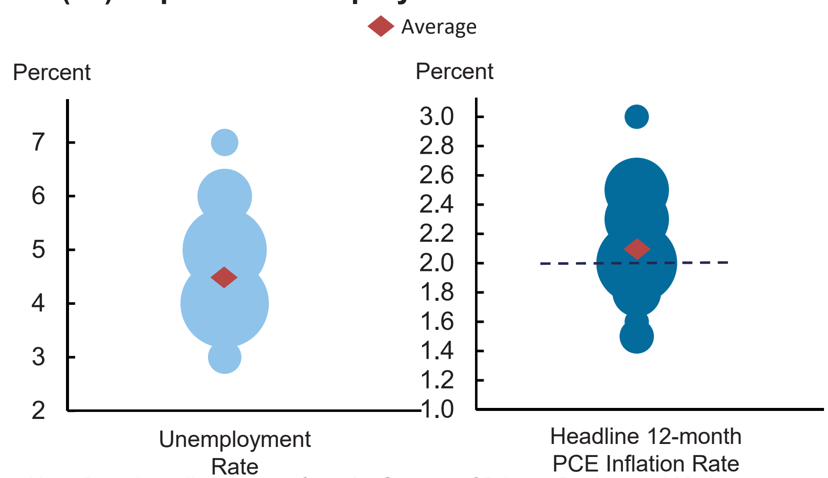
Note: Based on all responses to the Surveys of Primary Dealers and Market Participants. Excludes 4 firms that indicated they do not expect a change in forward guidance.
Source: FRBNY

(17) Expected Timing of First Increase In Fed Funds Target



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

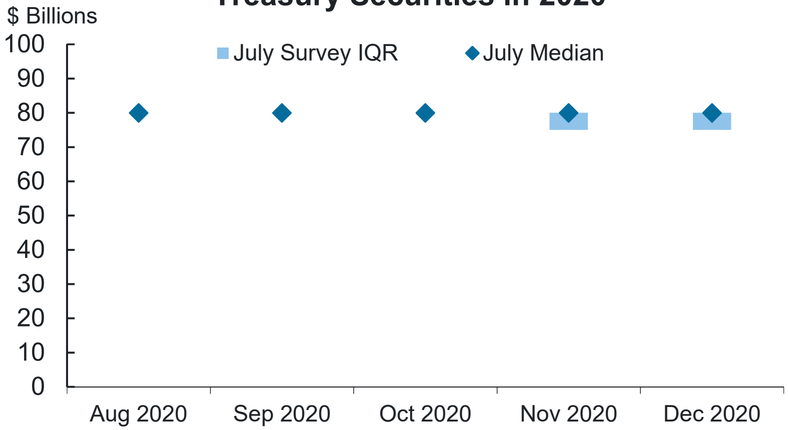
(18) Expected Unemployment and Inflation at Liftoff



Note: Based on all responses from the Surveys of Primary Dealers and Market Participants. Dots scaled by percent of respondents.
Source: FRBNY

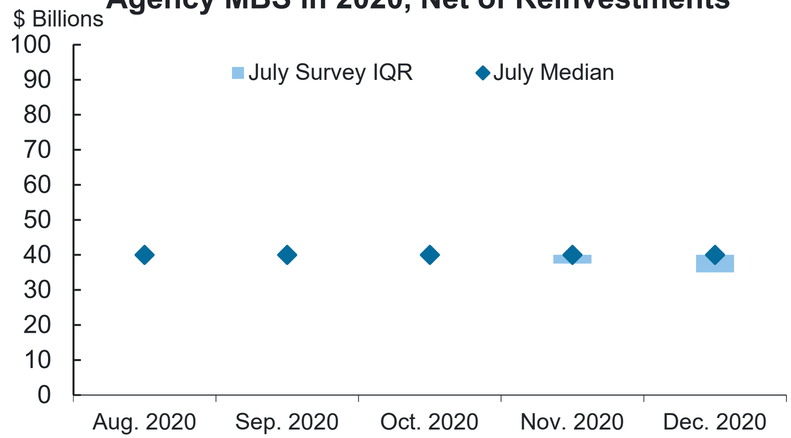
Market Participants Expect Ongoing Asset Purchases

(19) Expected Monthly Purchases of Treasury Securities in 2020



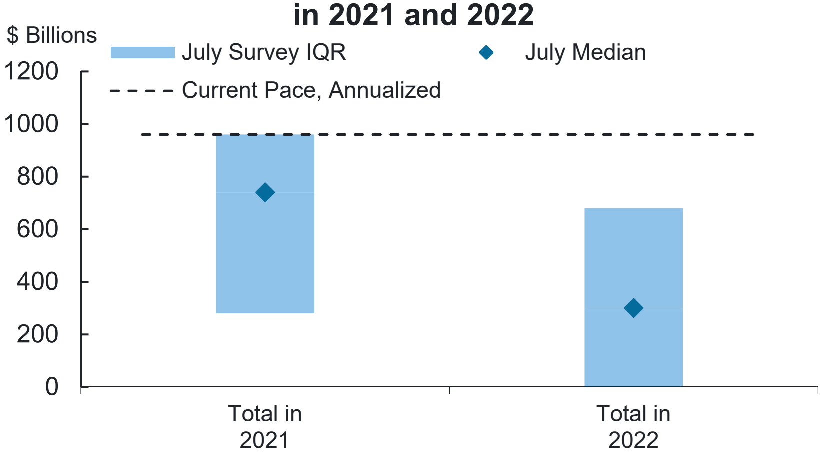
Note: Based on all responses to the Surveys of Primary Dealers and Market Participants.
Source: FRBNY

(20) Expected Monthly Purchases of Agency MBS in 2020, Net of Reinvestments



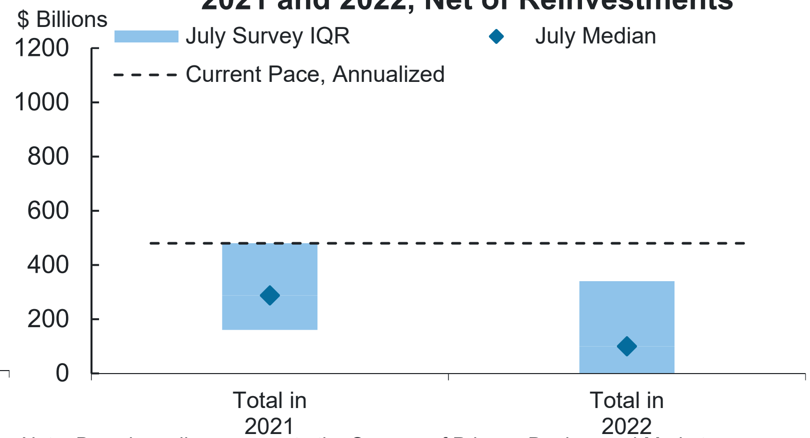
Note: Based on all responses to the Surveys of Primary Dealers and Market Participants.
Source: FRBNY

(21) Expected Total Purchases of Treasury Securities in 2021 and 2022



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

(22) Expected Total Purchases of Agency MBS in 2021 and 2022, Net of Reinvestments



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

Foreign Central Bank Communications on Asset Purchases are Transitioning

Framing of crisis policies, early in crisis

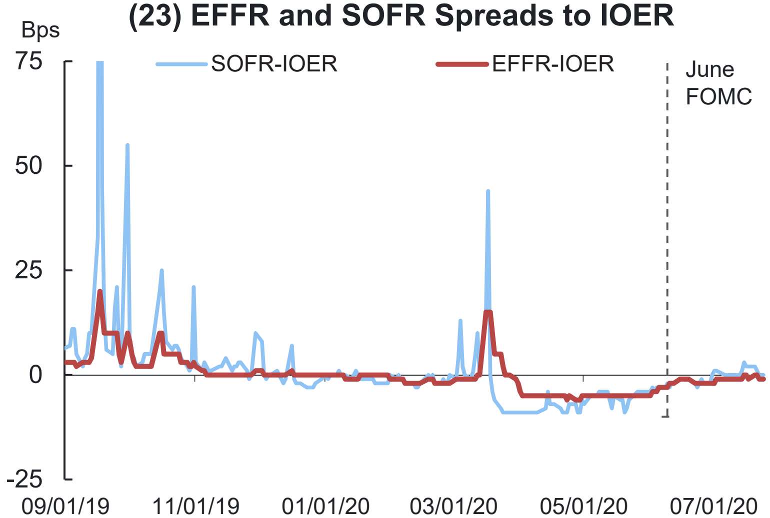
BOC, BOE   RBA   ECB, BOJ   RBNZ, Riksbank

Framing of crisis policies, recent communications

ECB, BOJ   BOC, BOE, RBA
RBNZ, Riksbank

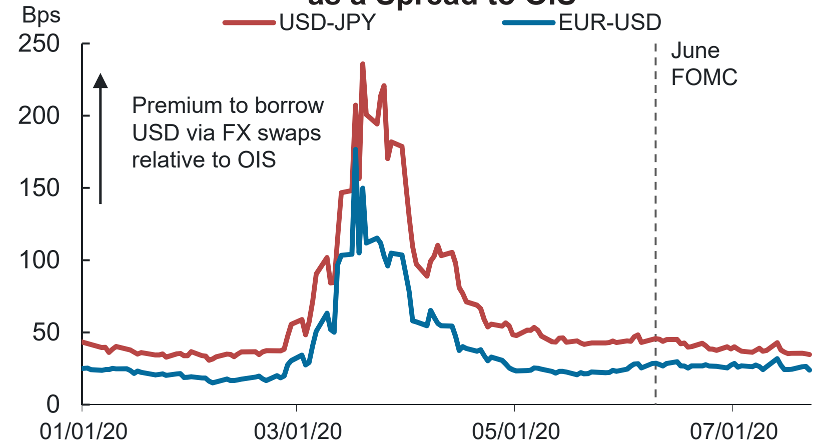
Market Functioning Remains Stable at Significantly Improved Levels…

(23) EFFR and SOFR Spreads to IOER



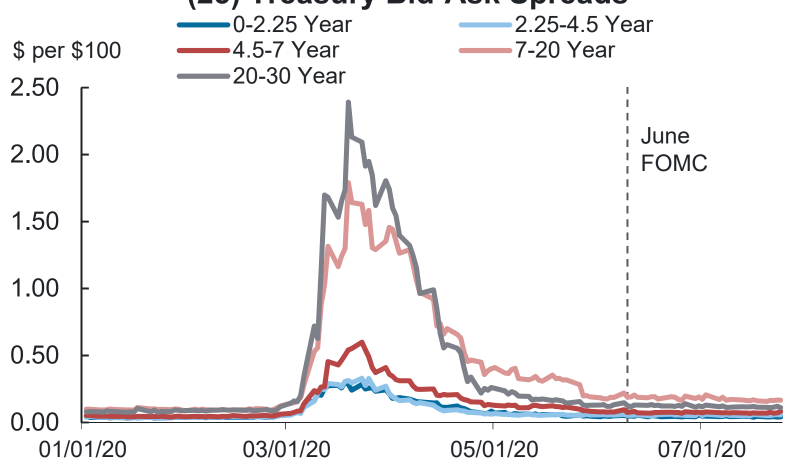
Note: The SOFR-IOER spread printed at 315 bps on 09/17/20.
Source: FRBNY

(24) Three-Month FX-Swap Implied Rate, as a Spread to OIS



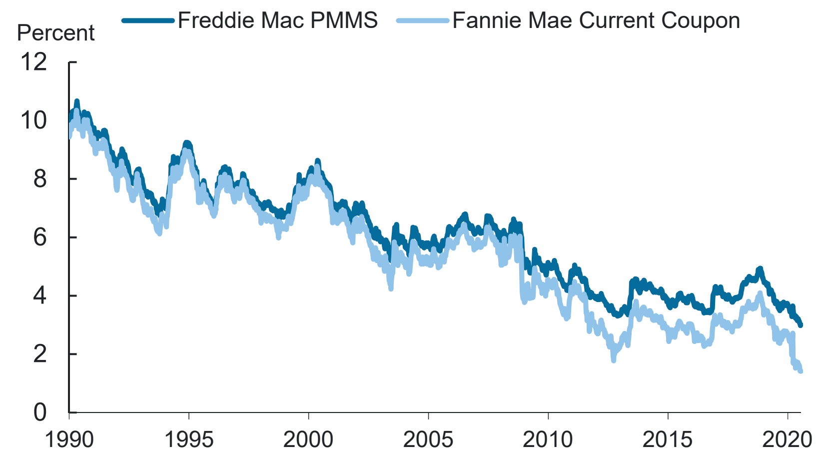
Note: Based on OIS.
Source: Bloomberg, Desk Calculations

(25) Treasury Bid-Ask Spreads



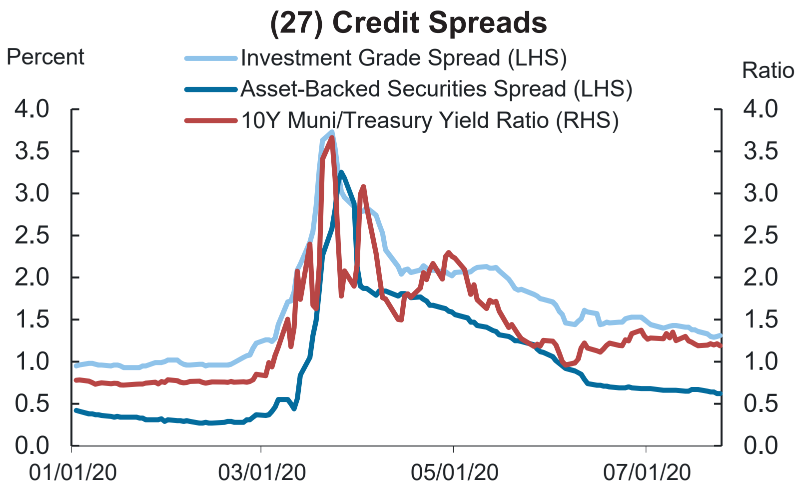
Note: Average bid-ask spreads for nominal Treasury coupon securities. Excludes on-the-run securities.
Source: FRBNY

(26) 30-Year Primary Mortgage and MBS Rates

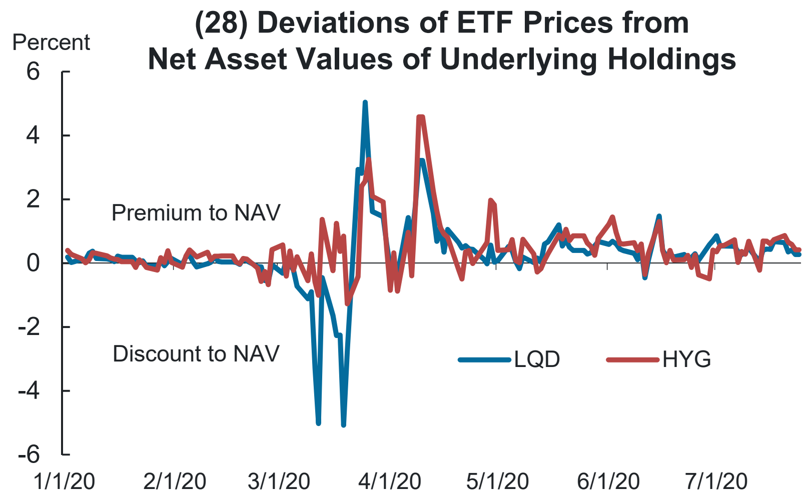


Note: Freddie Mac PMMS incorporates survey of primarily 30-year fixed rate mortgages.
Source: Bloomberg, Freddie Mac

…Including in Credit Markets

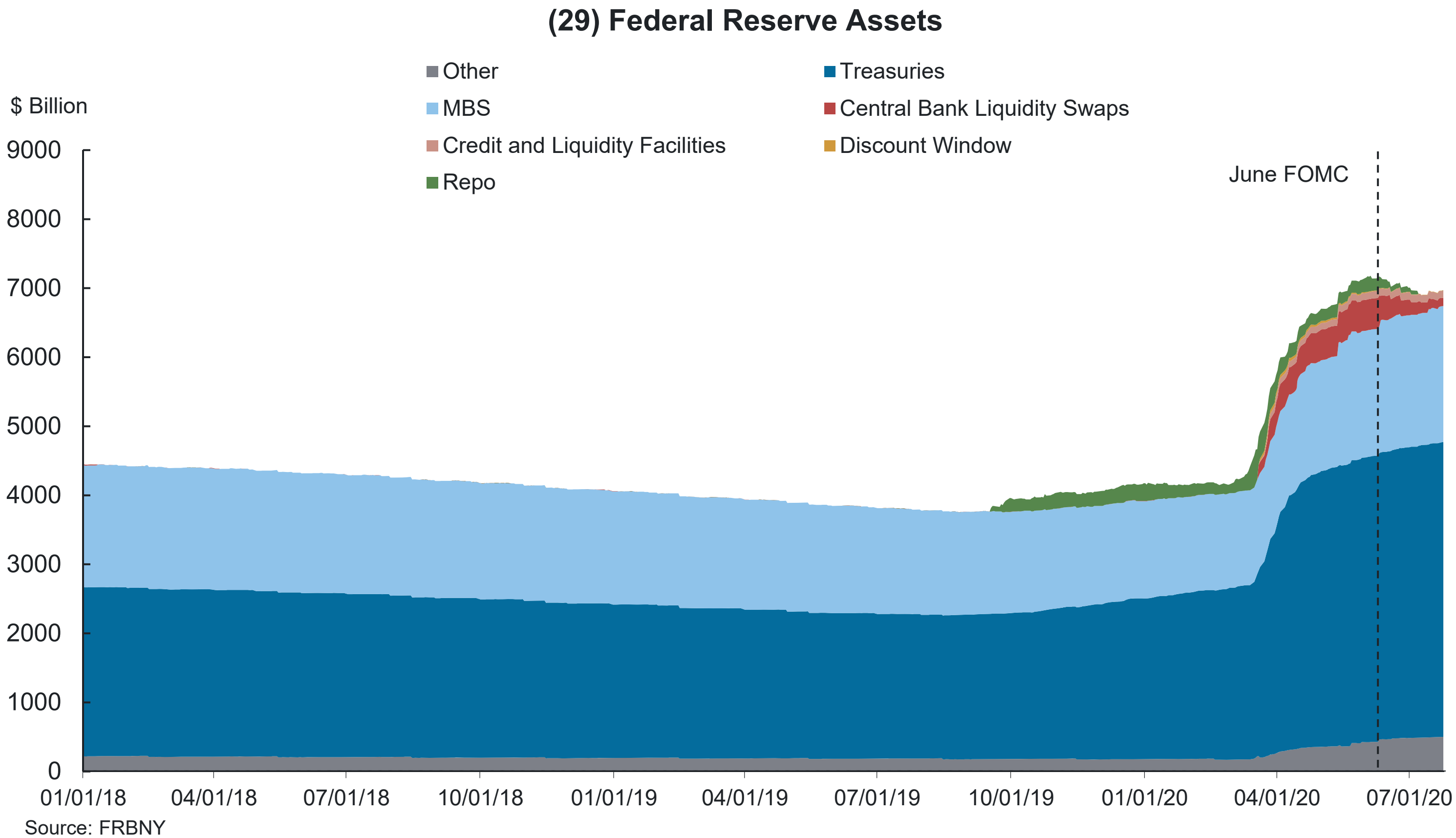


Note: IG option-adjusted spread calculated for the Barclays Agg benchmark index relative to Treasury securities. ABS option-adjusted spreads calculated as a spread to USD swap curve. Municipal debt ratio is the 10Y municipal bond yield as a ratio to the 10Y Treasury yield.
Source: Bloomberg, Barclays

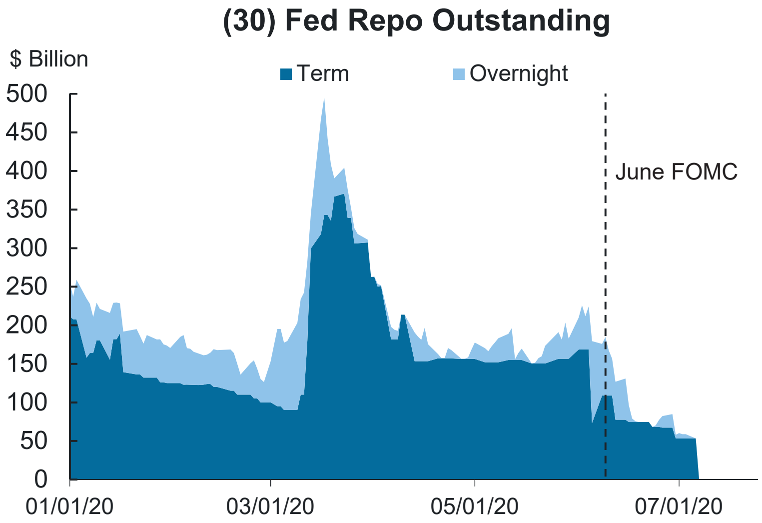


Note: LQD and HYG are the largest benchmark ETFs for investment grade and high yield credit, respectively.
Source: Bloomberg

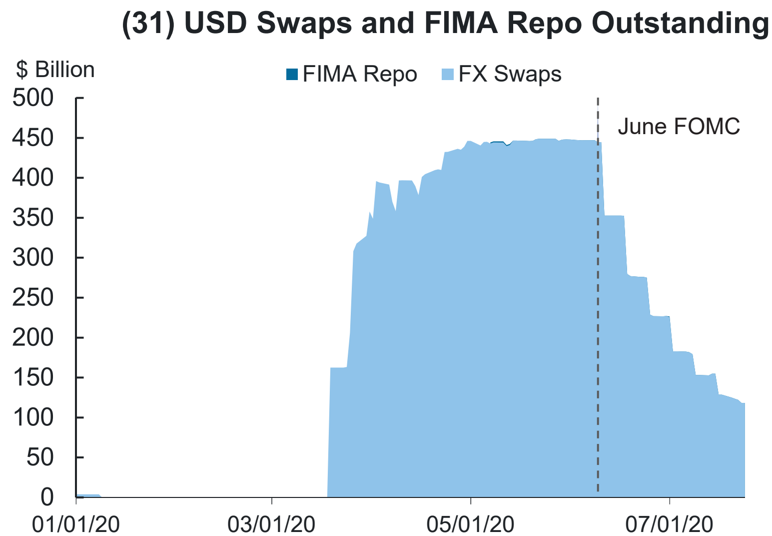
Balance Sheet Declines Over the Period...



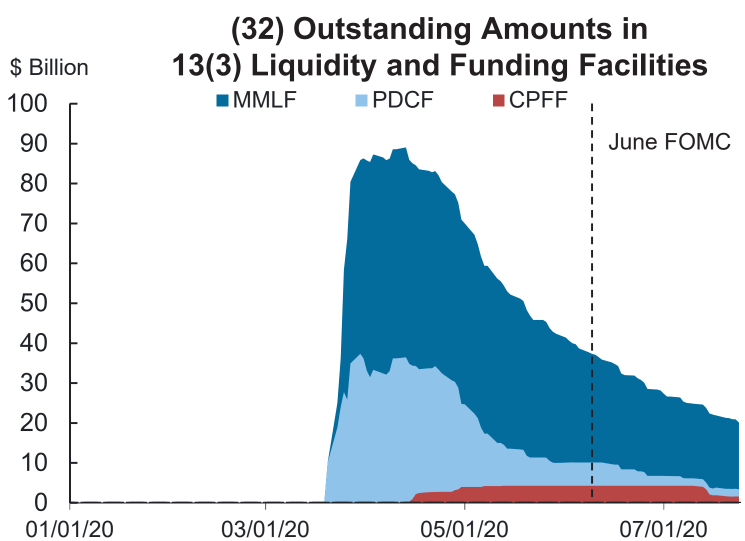
… As Activity in Desk Operations and Facilities Falls



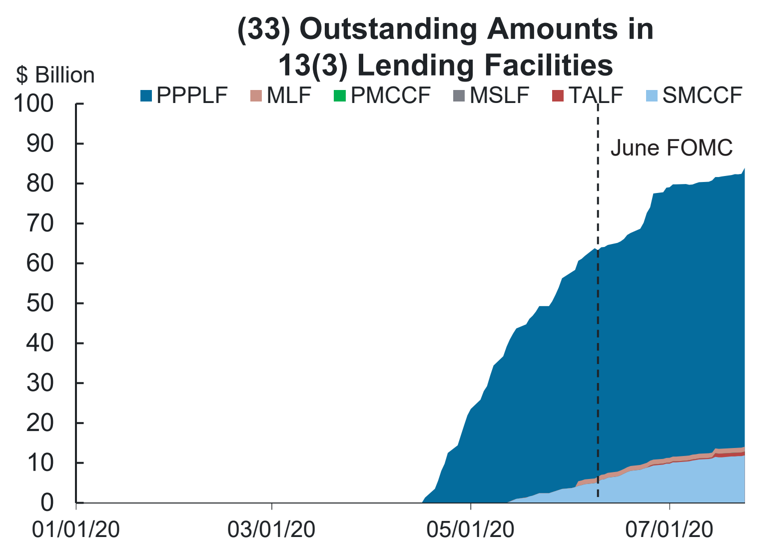
Source: FRBNY



Source: FRBNY

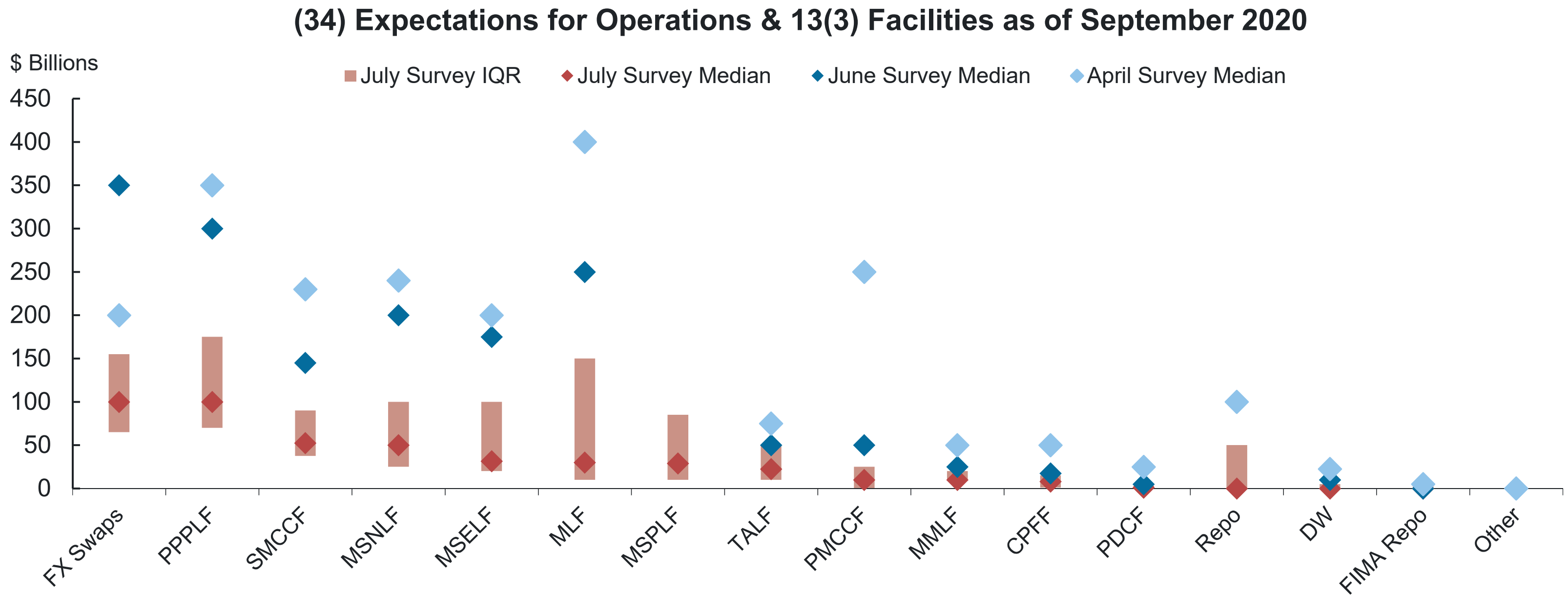


Source: Bloomberg



Source: FRBNY

Expectations for Facilities Usage are Low…



Note: Based on all responses to the Surveys of Primary Dealers and Market Participants. MSPLF was not asked in June Survey.
Source: FRBNY

…But Risks of Renewed Stress Remain, Facilities Seen as Important Backstops

- Path of virus and economic impact
- Fiscal Cliff
- Geopolitical tensions
- U.S. election
- Pace of Treasury issuance

Draft Federal Reserve Statement

FEDERAL RESERVE press release

For release at 2 p.m. EDT July 29, 2020

The Federal Reserve on Wednesday announced the extensions of its temporary U.S. dollar liquidity swap lines and the temporary repurchase agreement facility for foreign and international monetary authorities (FIMA repo facility) through March 31, 2021. These facilities were established in March 2020 to ease strains in global dollar funding markets resulting from the COVID-19 shock and mitigate the effect of such strains on the supply of credit to households and businesses, both domestically and abroad. The extensions of these facilities will help sustain recent improvements in global U.S. dollar funding markets by maintaining these important liquidity backstops. In addition, the FIMA repo facility will help support the smooth functioning of the U.S. Treasury market by providing an alternative temporary source of U.S. dollars other than sales of securities in the open market.

The extension of the temporary swap lines applies to all nine central banks previously announced on March 19, 2020. These swap lines allow the provision of U.S. dollar liquidity in amounts up to $60 billion each for the Reserve Bank of Australia, the Banco Central do Brasil, the Bank of Korea, the Banco de Mexico, the Monetary Authority of Singapore, and the Sveriges Riksbank (Sweden). They allow the provision of U.S. dollar liquidity in amounts up to $30 billion each for the Danmarks Nationalbank (Denmark), the Norges Bank (Norway), and the Reserve Bank of New Zealand.

The FIMA repo facility was originally announced on March 31, 2020. Its extension will allow approved FIMA account holders to continue to temporarily exchange their U.S. Treasury securities held with the Federal Reserve for U.S. dollars, which can then be made available to institutions in their jurisdictions.

Appendix

Appendix I

FIMA Desk Resolution

Approved July 28, 2020

The Federal Open Market Committee (Committee) directs the Federal Reserve Bank of New York (the Selected Bank), for the System Open Market Account (SOMA), to purchase U.S. Treasury securities subject to an agreement to resell ("repo transactions") with foreign central bank and international accounts maintained at a Federal Reserve Bank (the "Foreign Accounts"). The repo transactions hereby directed shall (i) include only U.S. Treasury securities; (ii) be conducted with Foreign Accounts approved in advance by the Foreign Currency Subcommittee (Subcommittee); (iii) be conducted at an offering rate of IOER + 25 bps.; (iv) be offered on an overnight basis (except that the Selected Bank may extend the term for longer than an overnight term to accommodate weekend, holiday, and similar trading conventions); and (v) be subject to per-counterparty limits per day set by the Subcommittee. The Subcommittee may approve changes in the offering rate, the maturity of the transactions, and counterparty limits. These transactions shall be undertaken by the Selected Bank through March 31, 2021, unless otherwise determined by the Committee.

Appendix II

(1) Summary of Operational Testing

Summary of Operational Tests in prior period:

- Domestic Authorization
  - June 16: Treasury outright sale for $25 million
  - June 17: Overnight repo (with back up tool) for $53 million
  - June 23 and 25: MBS specified pool sale for up to $167 million, total
- Foreign Authorization
  - June 16: Euro-denominated sovereign debt purchase from private counterparties for €1.1 million*
  - June 23: Euro-denominated sovereign debt sale to private counterparties for €1.1 million*

Upcoming Operational Tests:

- 2 tests scheduled under the 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.

* The euro-denominated purchase and sale operation sizes were reduced by €100,000 as one counterparty narrowed the number of sovereign issuers it trades on the electronic platform used for this exercise.

(2) FX Intervention

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

Appendix III

(1) MBS Purchase Summary Since June 12, 2020 ($ Millions)

Purchase Period	New Purchase Target	Paydowns	Actual Purchases	Net Deviation	Cumulative Deviation Since 6/2020
Jun-20	40,000	55,976	95,895	-81	-81
Jul-20	40,000	69,382	-		

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

(2) Treasury Purchase Summary Since June 12, 2020 ($ Millions)

Purchase Period	New Purchase Target	Actual Purchases	Net Deviation	Cumulative Deviation Since 6/2020
Jun-20	80,000	80,013	13	13
Jul-20	80,000	-	-	-

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

Appendix 3: Materials used by Mr. Engen

Class II FOMC - Restricted (FR)

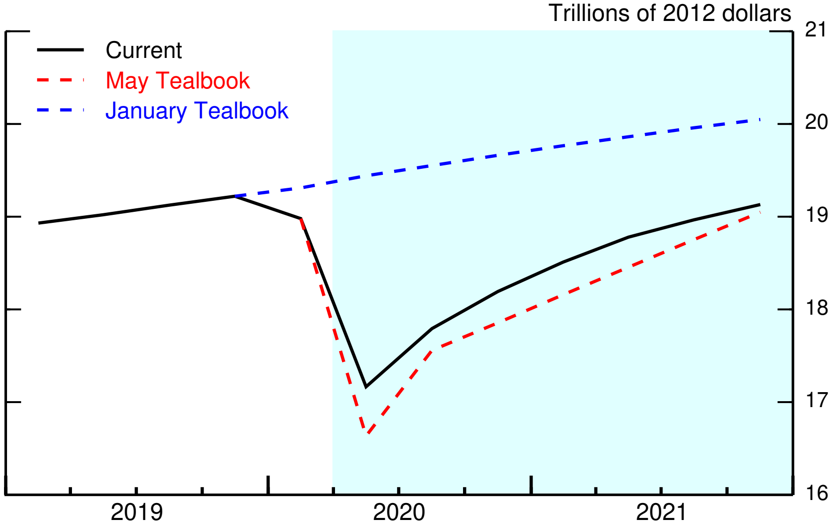
Material for Briefing on

The U.S. Outlook

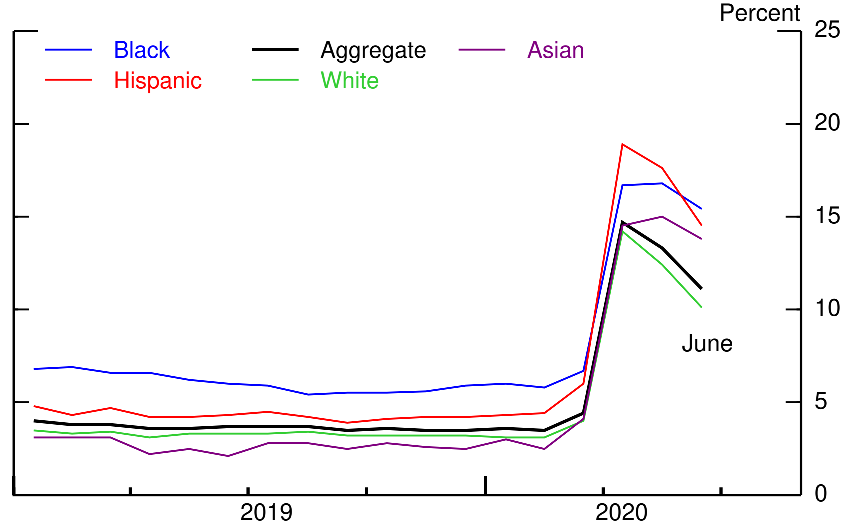
Eric M. Engen
Exhibits by Rosemary Rhodes and Ashley Sexton
July 28, 2020

Recovery Extended into June, But Activity Still Subdued

1. Level of GDP

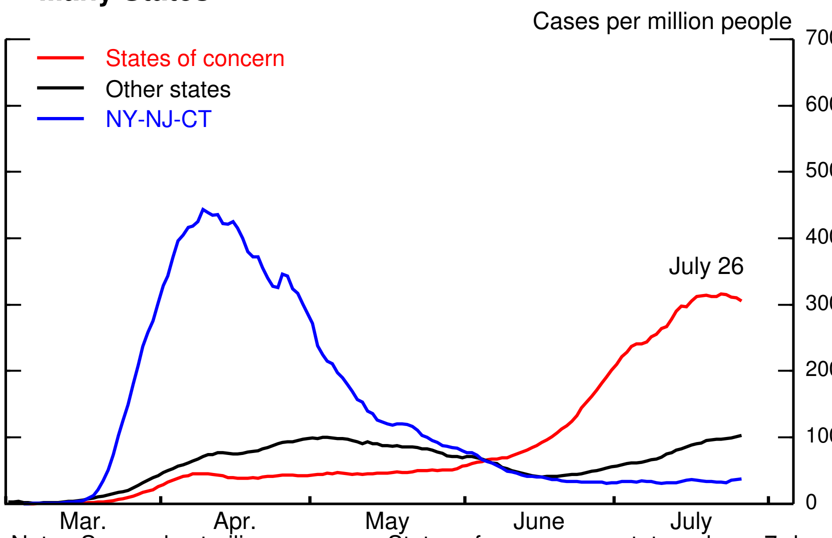


2. Unemployment Rates by Race or Ethnicity



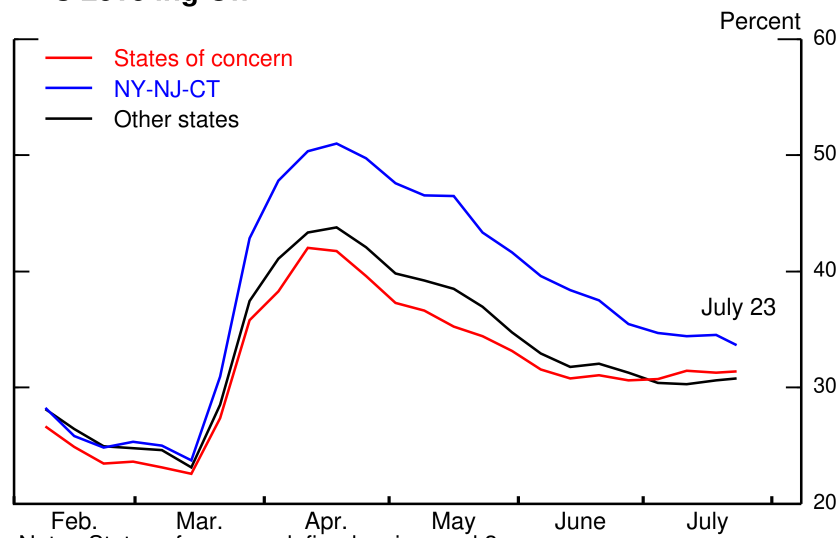
Note: Categories are not mutually exclusive, as "Hispanic" may include people of any race.

3. New Cases of Covid-19 Have Increased in Many States



Note: Seven-day trailing averages. States of concern are states whose 7-day trailing average of new Covid-19 cases per capita has been above the national average and increasing since June 15. States include AL, AR, AZ, CA, FL, GA, IA, ID, LA, MS, NC, NV, OK, SC, SD, TN, TX, and UT.

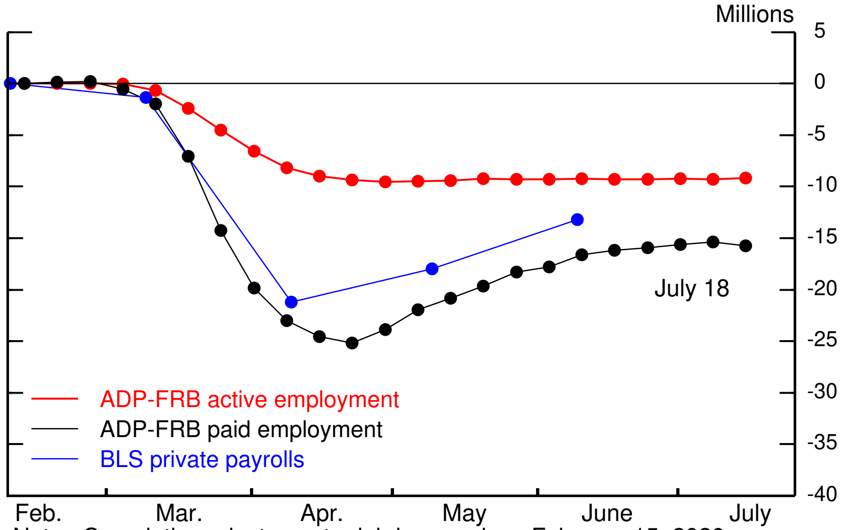
4. Share of the Population Staying at Home Is Leveling Off



Note: States of concern defined as in panel 3.
Source: SafeGraph, using cell phone geo-location data.

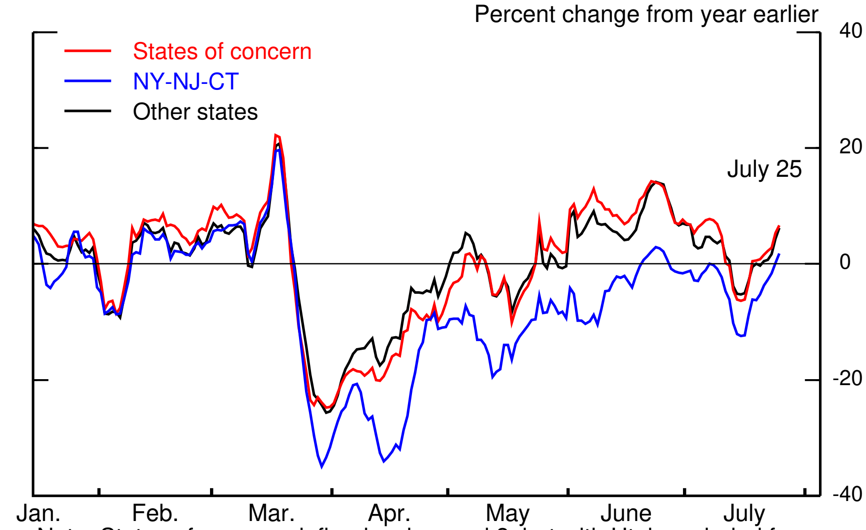
Economic Indicators are Sending Mixed Signals

5. Labor Market Recovery Has Slowed



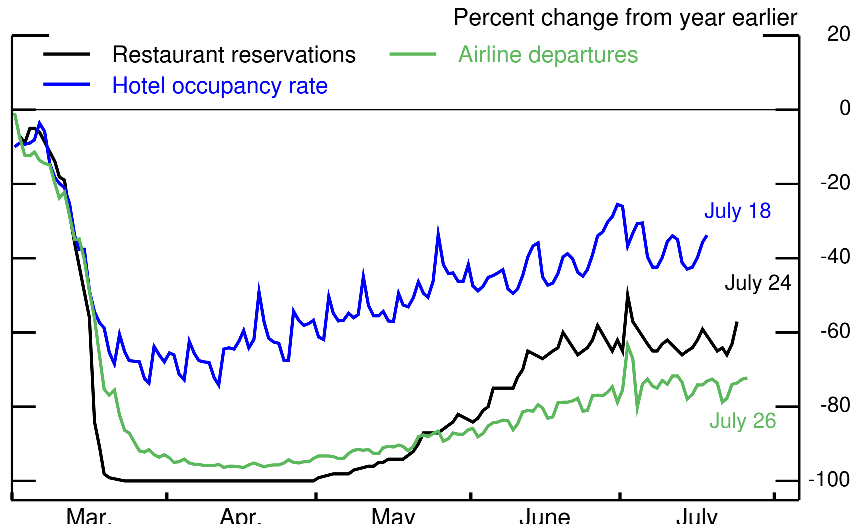
Note: Cumulative private-sector job losses since February 15, 2020.

6. Retail Sales Spending for Goods around Year-Ago Levels



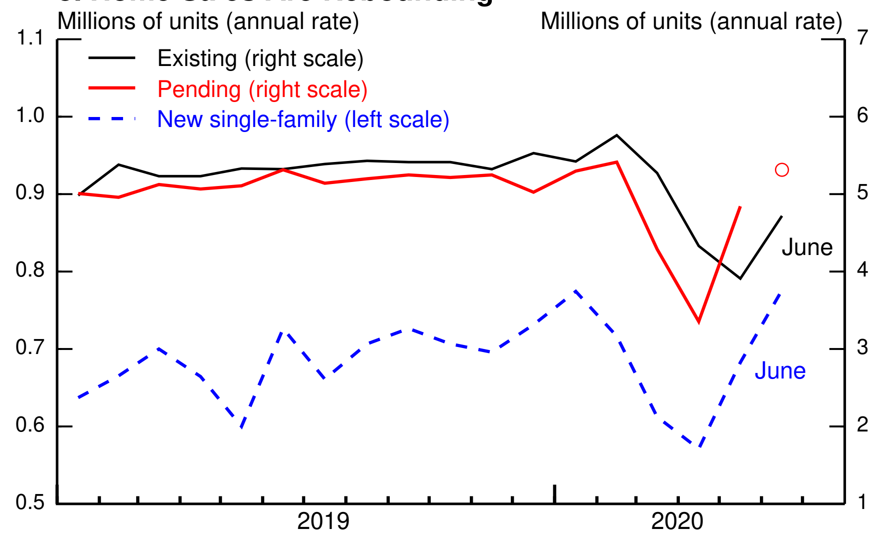
Note: States of concern defined as in panel 3, but with Utah excluded for confidentiality reasons.
Source: Fiserv.

7. Indicators of Consumer Services Spending Are Still Subdued



Source: OpenTable.com accessed through Haver; occupancy rates from STR; Transportation Security Administration.

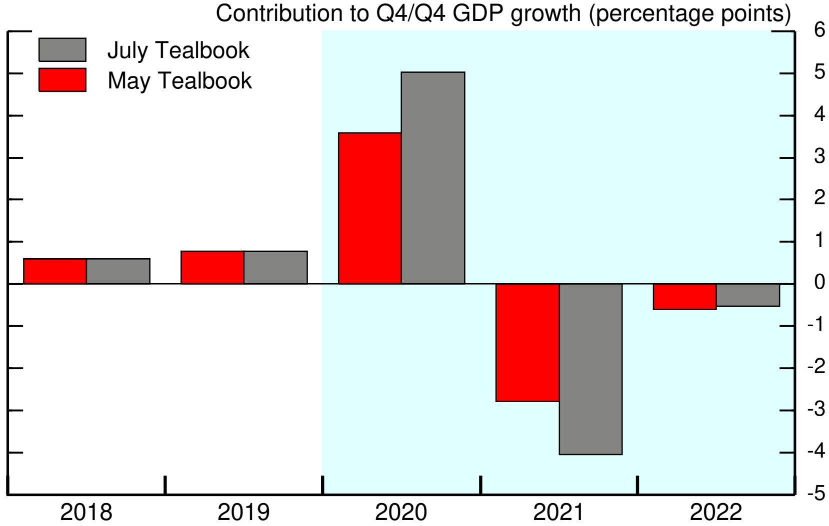
8. Home Sales Are Rebounding



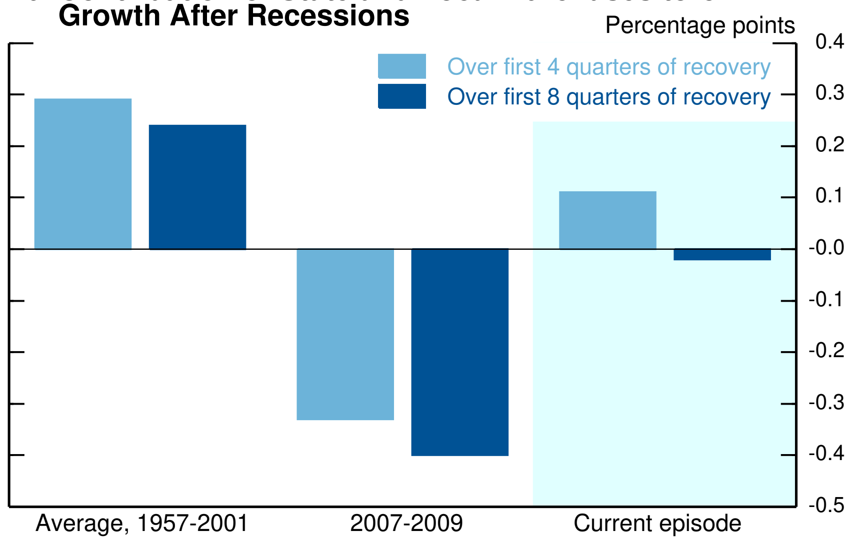
Note: Pending home sales scaled to have same long-run mean as existing home sales. Open circle is a forecast for June pending sales based on weekly Redfin data.

Factors Influencing GDP over the Medium Term

9. Fiscal Impetus

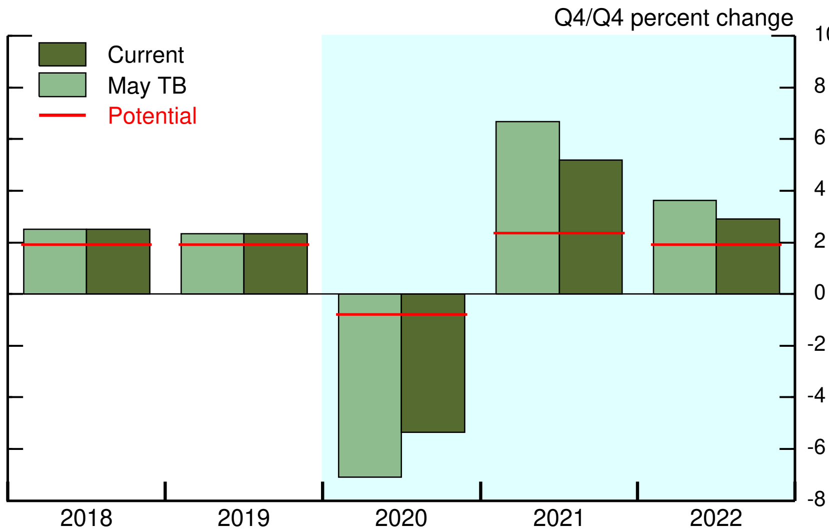


10. Contribution of State and Local Purchases to GDP Growth After Recessions

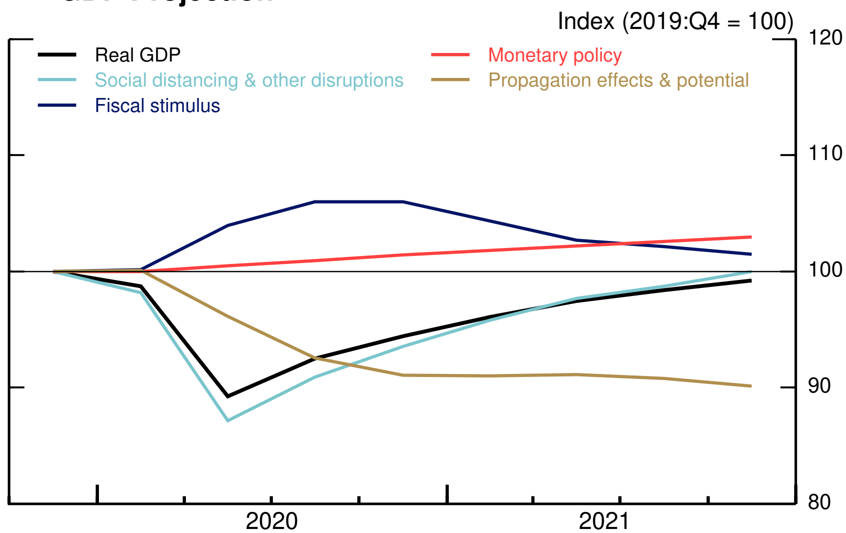


Note: "Current episode" assumes business-cycle trough is in 2020:Q2.

11. Medium-Term GDP Outlook



12. Factors Influencing the Contour of the GDP Projection

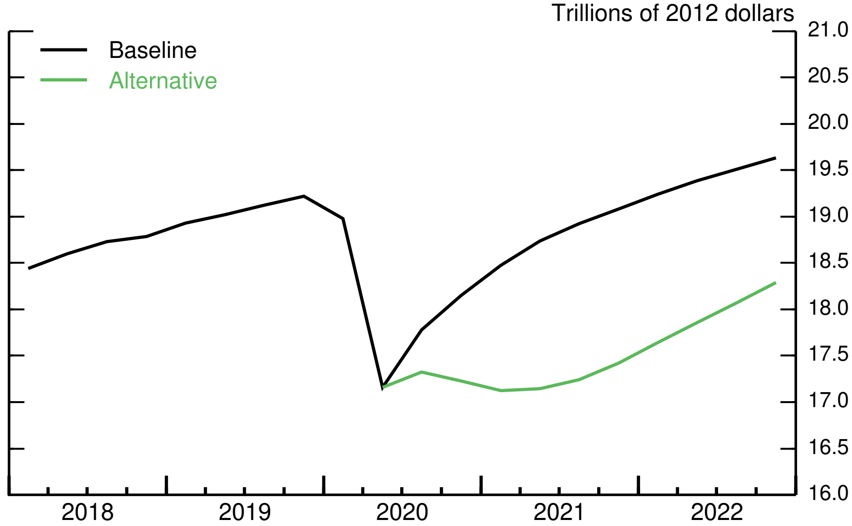


We Still See a "Second Waves" Scenario As Equally Plausible

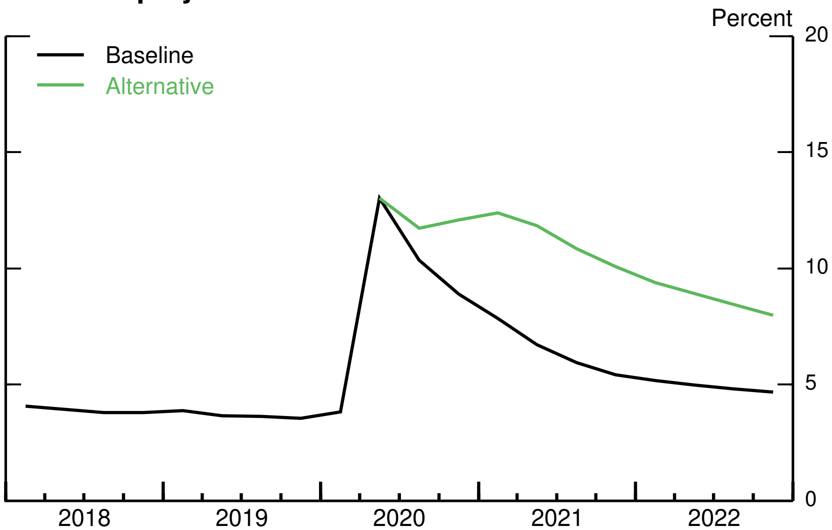
13. A Second Wave Might Be Underway

- The social distancing assumed in the baseline might not be enough to check the pandemic.
- If so, more-intense and more-widespread social distancing could resume.
- The "second waves" scenario assumes:
  - Intense social distancing resumes this quarter until early next year.
  - More labor market damage than in the baseline.
  - Inflation expectations drift down slightly.

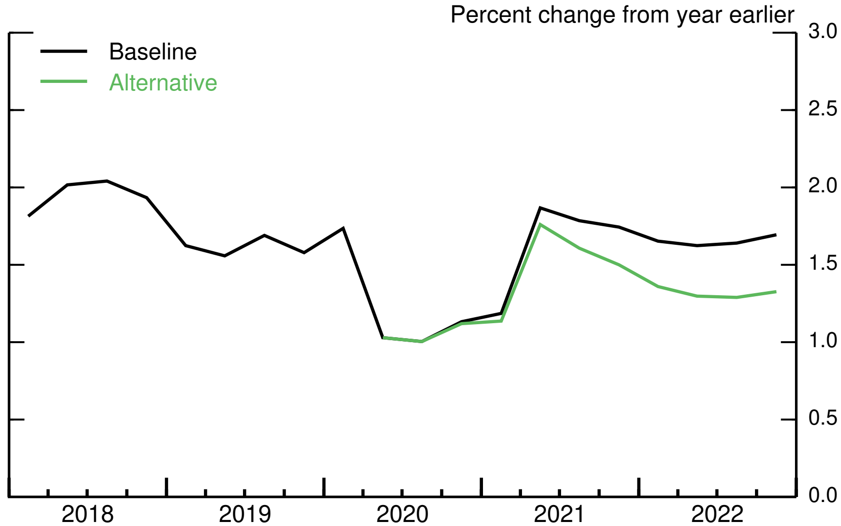
14. Level of GDP



15. Unemployment Rate



16. Core PCE Prices

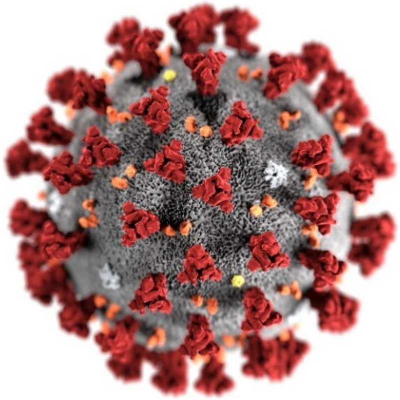


Appendix 4: Materials used by Ms. Wilson

Class II FOMC - Restricted (FR)

Material for Briefing on

The International Outlook

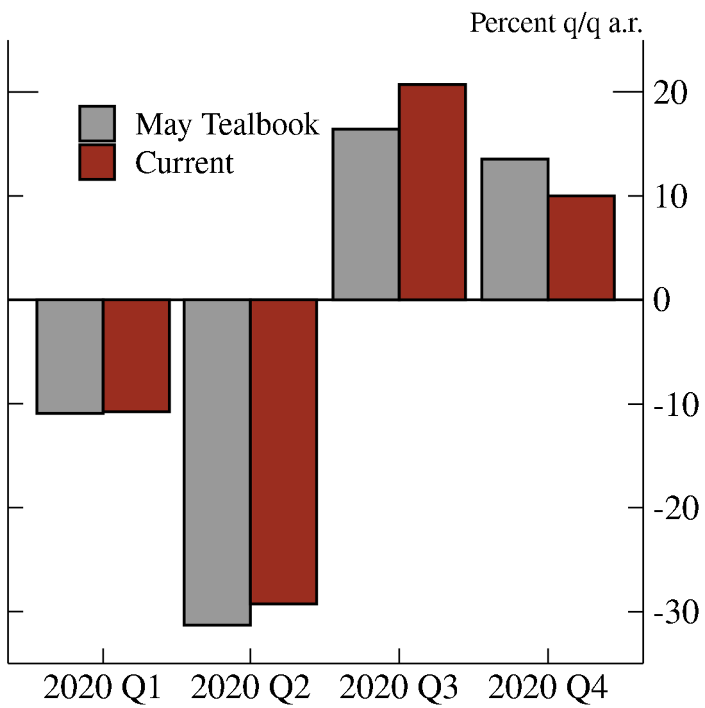


Beth Anne Wilson
Exhibits by Matthew Deininger
July 28, 2020

Synchronized Global Shock

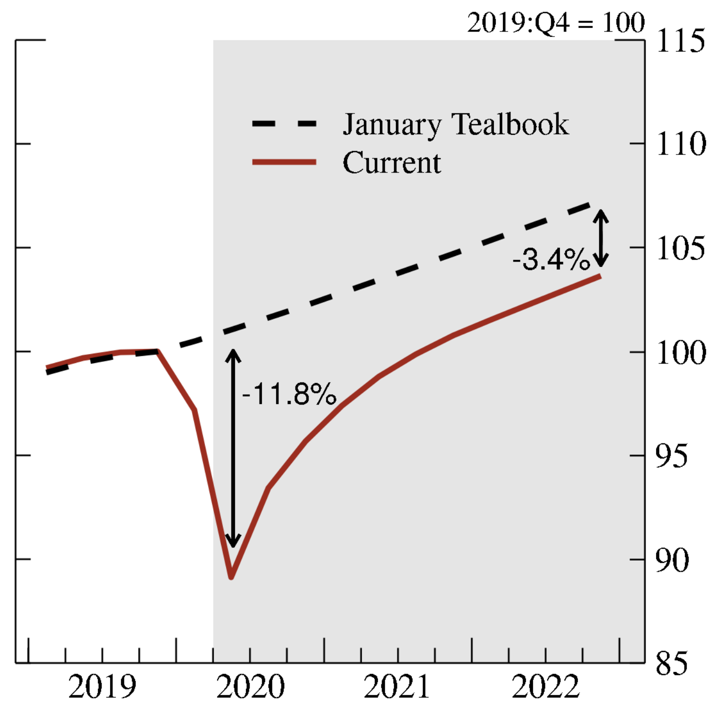
- Deep decline in the global economy in the first half of the year.
- Incoming indicators support a bounceback in the second half.
- But, level of output well below pre-COVID path for years to come.

Foreign Real GDP Growth



Source: Staff calculations.

Foreign GDP Level

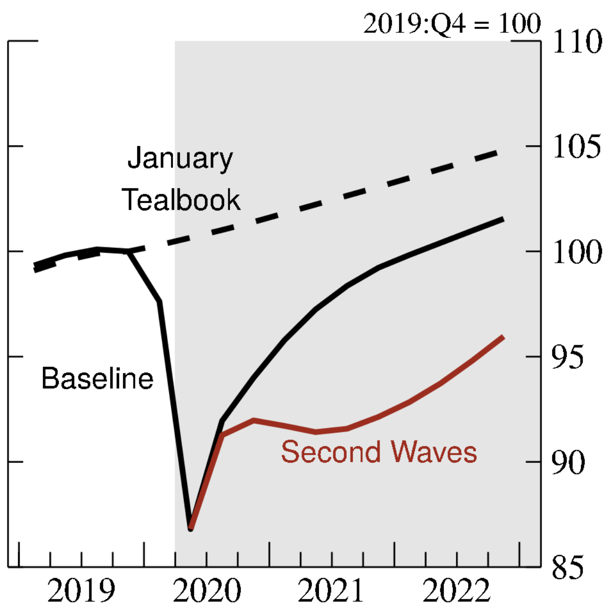


Source: Staff calculations.

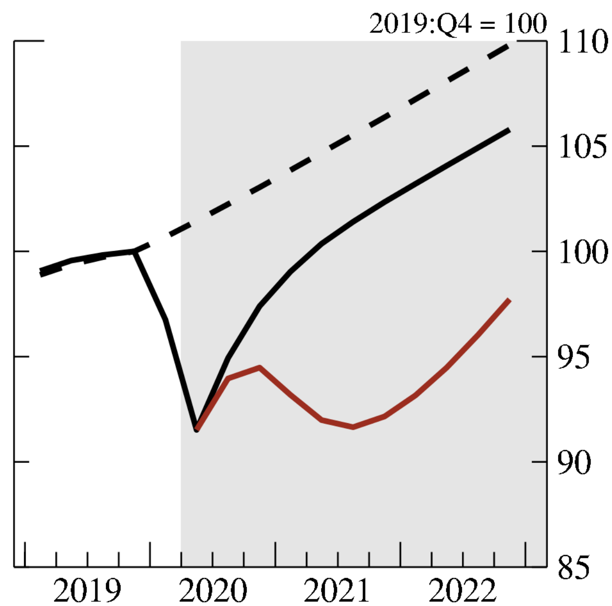
And Could be Worse

- Second waves of the virus result in widespread shutdowns.
- Slower recovery in the advanced foreign and emerging market economies.
- Key is how real shock transmits to foreign financial system and how vulnerable this system has become.

AFE GDP Level



EME GDP Level

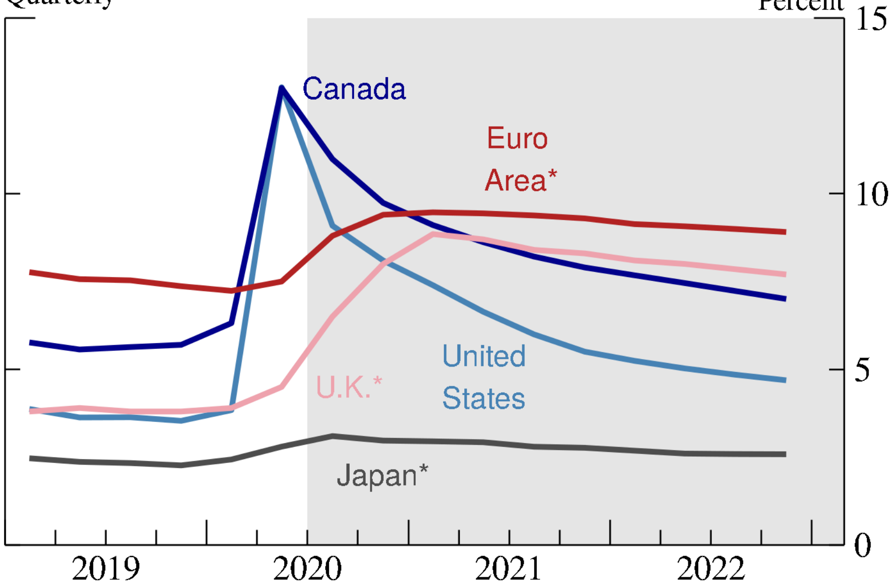


Source: Staff calculations.

Shock to the Household Sector

- Basic measure of impact of COVID on households is unemployment.
- To date, effect on unemployment rates abroad has been mixed.
- But as unemployment rises or stays elevated, nonperforming loans will increase, and countries with high household debt will be more vulnerable.

Advanced Economies Unemployment Rate



Source: Haver, Staff calculations.
* Data for the euro area, Japan, and U.K. are through May 2020.

Household Credit-to-GDP (percent)

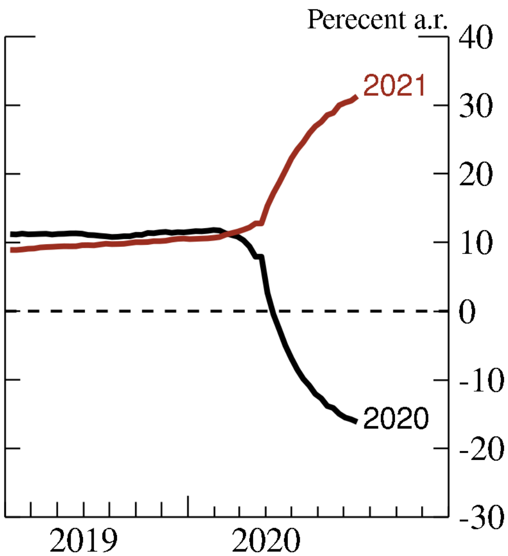
Switzerland	**132**
Canada	**101**
United Kingdom	**84**
France	62
Japan	59
Germany	55
Italy	41
South Korea	**96**
Hong Kong	**81**
China	55
Brazil	30
Mexico	16
Turkey	15

Source: BIS.
Notes: Latest value 2019Q4.

Shock to the Corporate Sector

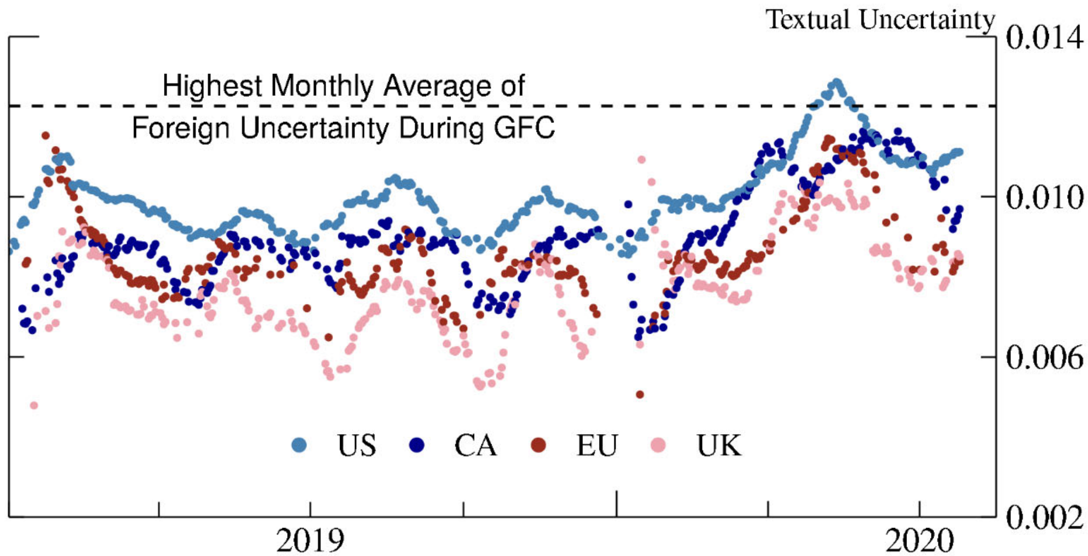
- Profits collapsed in the first quarter and expectations for annual earnings for the year fell precipitously and have continued to decline.
- Firms are unclear about current and future prospects.

Foreign Expected Growth in Earnings per Share



Source: Institutional Brokers' Estimate System (IBES). Staff calculations.

Uncertainty in Earnings Call Transcripts

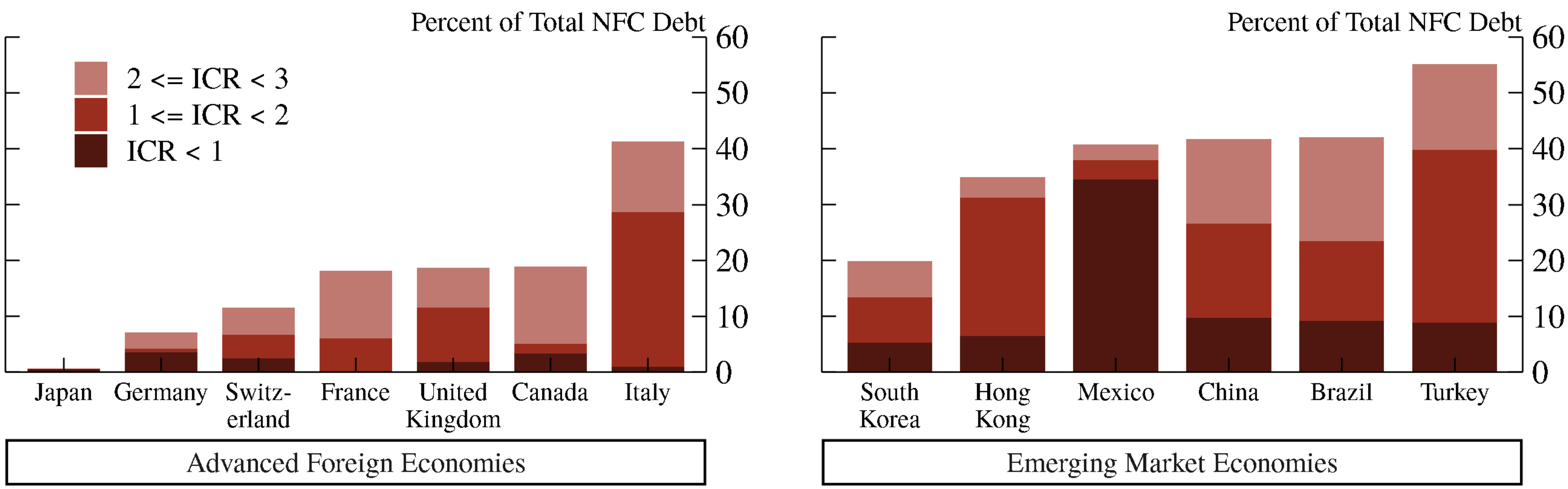


Source: S&P. Staff (Hedi Benamar) calculations.
Notes: We apply dictionary-based textual tools to extract a measure of uncertainty from each transcript in the data. Textual uncertainty for a given transcript is the total number of uncertainty words in transcript divided by number of total words in that transcript. Data are aggregated by day and region and shown as 30 day rolling averages.

Business-Sector Vulnerability

- Calculate interest coverage ratios (ICR)
  - Ratio of earnings (EBIDTA) over interest expenses
  - For non-financial corporates by country
  - Scale by total non-financial corporate (NFC) debt
- Highlights the potential for sizable losses, especially from EMEs.

Share of Firm Debt as Percent of Total NFC Debt, by Interest Coverage Ratio (ICR)

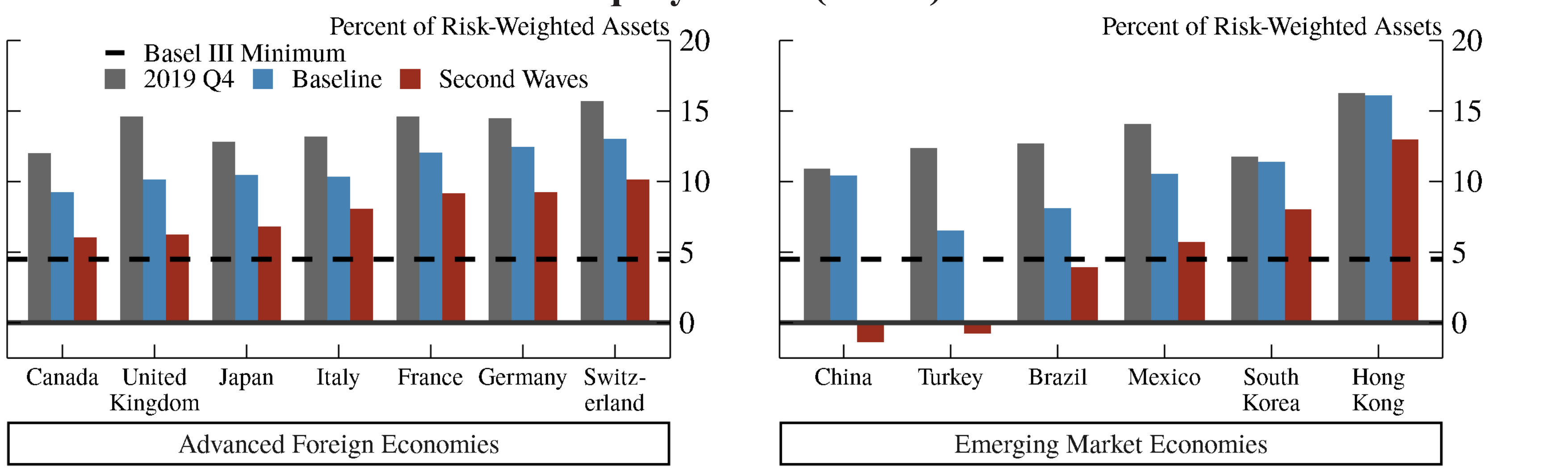


Source: Capital IQ, BIS, Staff (Edith Liu) calculations.
Notes: Data are as of 2019Q4. The dark red bars show outstanding debt by firms with ICRs less than 1 as a percent of total NFC debt. The red and pink bars show outstanding debt by firms with ICRs between 1 and 2, and 2 and 3 as a percent of total NFC debt, respectively.

Potential Blow to Banking System

- Calculate crisis effect on banking system capital using baseline/second waves projections and elasticities of capital to GDP declines from foreign stress tests.
- Banking systems CET1 ratios remain above the Basel III minimum in baseline.
- Banking systems look vulnerable and will likely pull back on lending as capital levels drop.

Common Equity Tier 1 (CET1) Ratio

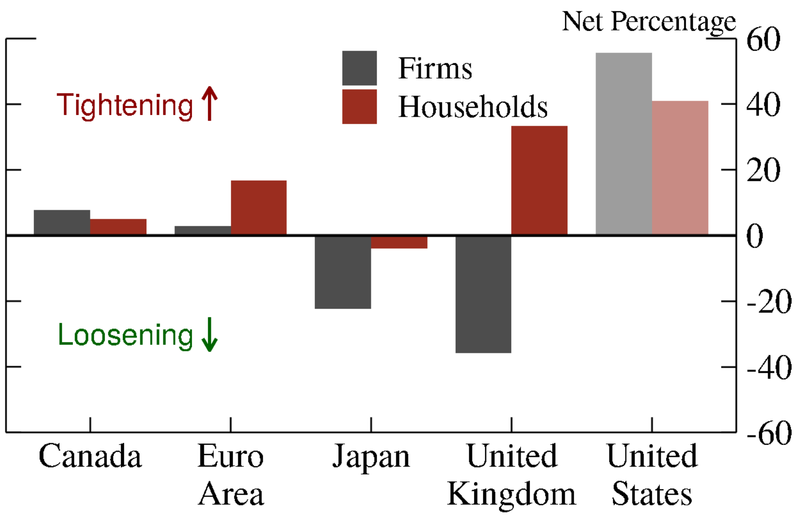


Source: Bank stress test results, S&P Global Market Intelligence, Staff forecasts, Staff (Daniel Dias and Viktors Stebunovs) calculations.
Notes: Grey bars report average CET1 ratio at country level as of 2019Q4. Blue and red bars report projected average CET1 ratios at country level at end-2021 in our baseline forecast and "Second Waves" alt sim, respectively. Projections are based on the elasticity of GDP growth and capital depletion from foreign stress test results and the difference in GDP outcomes between our current baseline or "Second Waves" alt sim and the Jan. Tealbook.

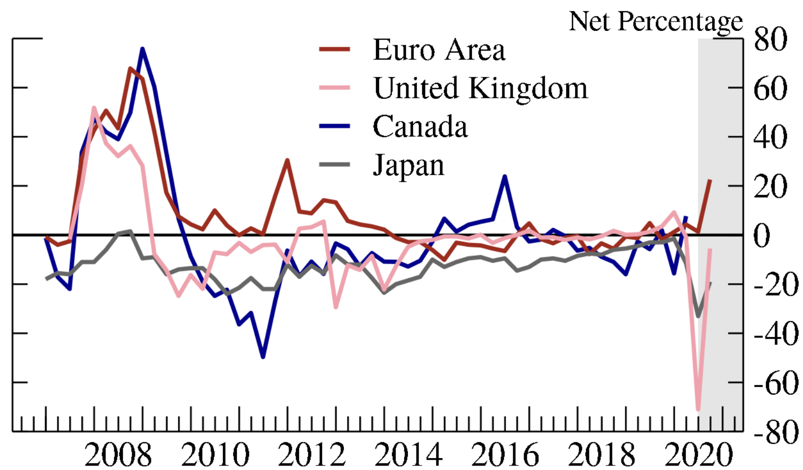
Lending Holding up but Worse to Come

- Aside from U.K., banks reported modest tightening in standards for households, and mild tightening to significant loosening for firms.
- Measures to incentivize lending have enabled banks to support economy.
- But the hit to real side has yet to fully manifest in financial sector, and government support may roll off.

2020H1 Changes in Lending Standards



Changes in Lending Standards for Firms



Source: Haver, ECB Bank Lending Survey, FRB SLOOS, Bank of England, Staff (Hannah Firestone and Viktors Stebunovs) calculations.
Note: Net percentages across the countries may not be perfectly comparable because of differences in the lending surveys. The left panel shows net percentages averaged over 2020:Q1 and Q2, except for Canada where only 2020:Q1 data are available. Grey shading indicates loan officers' expectations for Q3.

International Financial Stability Assessment

- **Notable** vulnerability → medium-sized shock likely triggers financial stresses abroad that spill over meaningfully to the US.

Overall Assessment	Notable

	Advanced Foreign Economies							Emerging Market Economies					
	Canada	France	Germany	Italy	Japan	Switzerland	U.K.	Brazil	China	Hong Kong	Korea	Mexico	Turkey
Overall Assessment	M	N	L	E	M	M	N	E	N	N	M	E	E
Nonfinancial	E	E	M	N	L	N	E	E	E	E	N	E	E
Financial	N	E	N	E	E	N	E	E	E	M	N	N	E
Sovereign	M	N	L	E	M	E S	M	E	M	E S	L	N	E
External	L	M	E S	L	L	E S	M	N	M	M	E S	N	E
Valuation	N	N	N	N	L	N	N	N	M	M	M	N	L
Institutions	Pos.	Pos.	Pos.	Neutral	Pos.	Pos.	Neutral	Neg.	Neutral	Neutral	Pos.	Neg.	Neg.
Prominence of Risks	Med.	Med.	Med.	High	Med.	Med.	High	High	High	High	Med.	High	High

Key: Extremely Subdued, Low, Moderate, Notable, Elevated

Appendix 5: Materials used by Mr. Guerrieri

Class II FOMC - Restricted (FR)

Material for Briefing on

Financial Stability

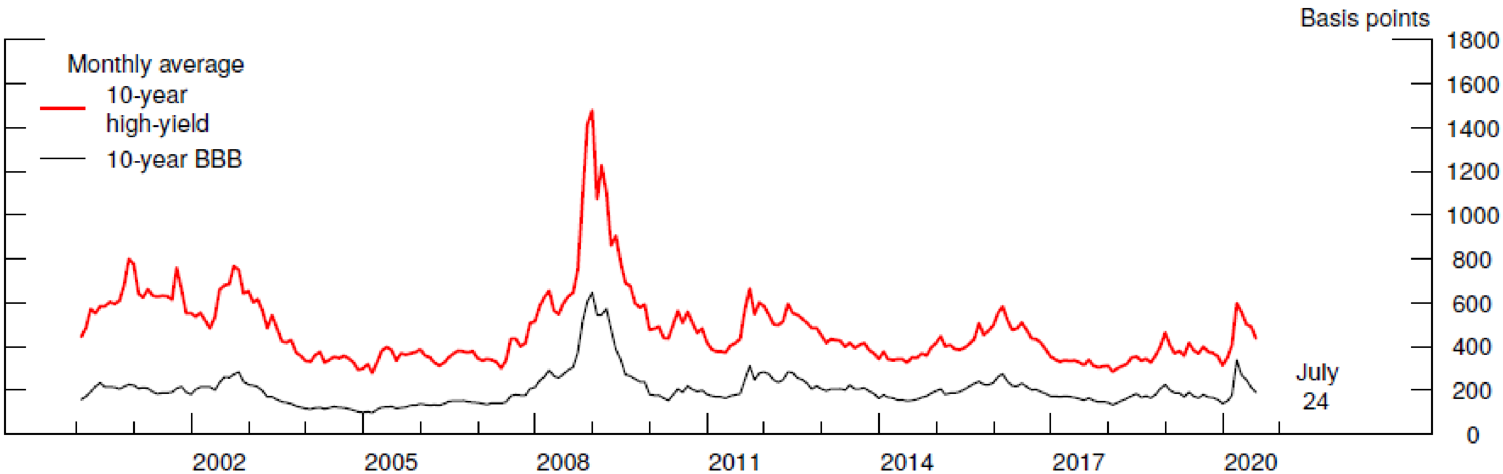
Luca Guerrieri
Exhibits by Morgan Elliott
July 28, 2020

Asset Valuations

Class II FOMC - Restricted (FR)

Spreads are now within historical norms, significantly wider across the credit spectrum relative to their exceptionally low January levels

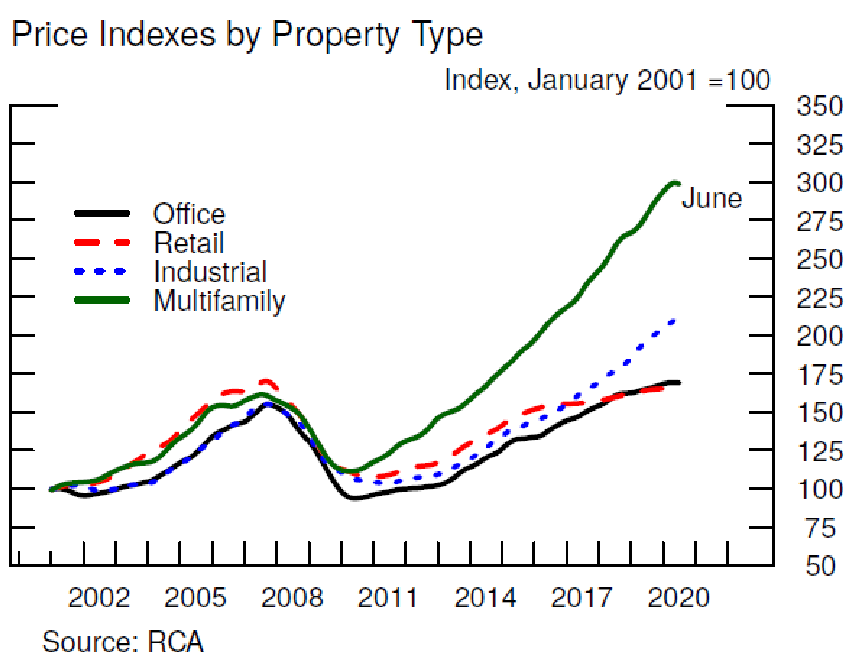
10-Year Corporate Bond Spreads

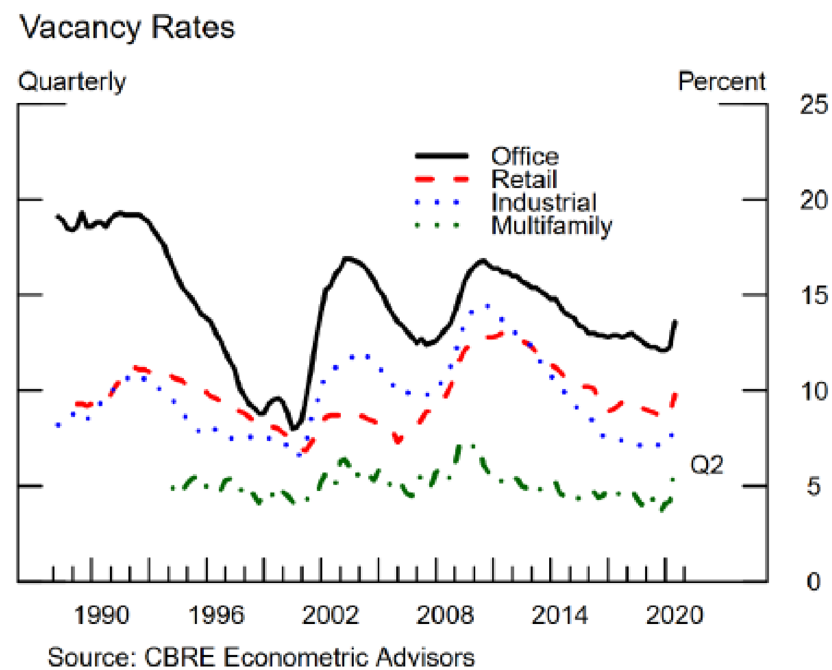


Source: Staff estimates of smoothed corporate yield curves based on Merrill Lynch data and smoothed Treasury yield curve.

Class II FOMC - Restricted (FR)

CRE prices have continued to grow amid deteriorating fundamentals



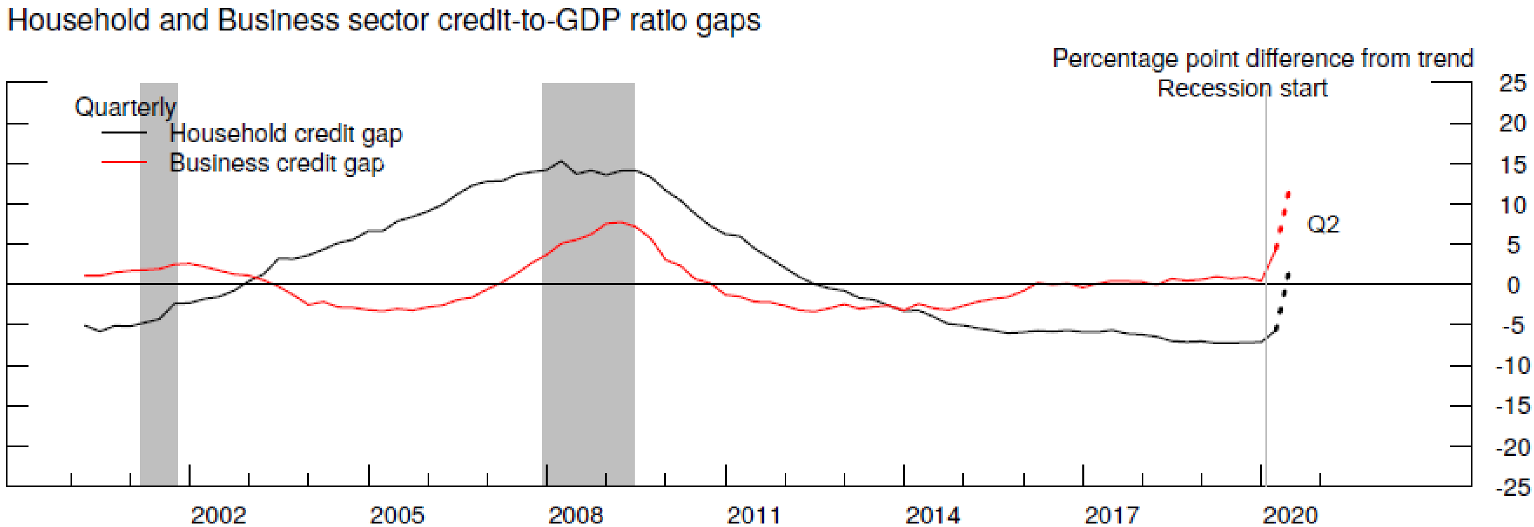


Class II FOMC - Restricted (FR)

Household and Business Borrowing

Class II FOMC - Restricted (FR)

Credit-to-GDP gaps have opened up as income has fallen, pointing to less resilient borrowers

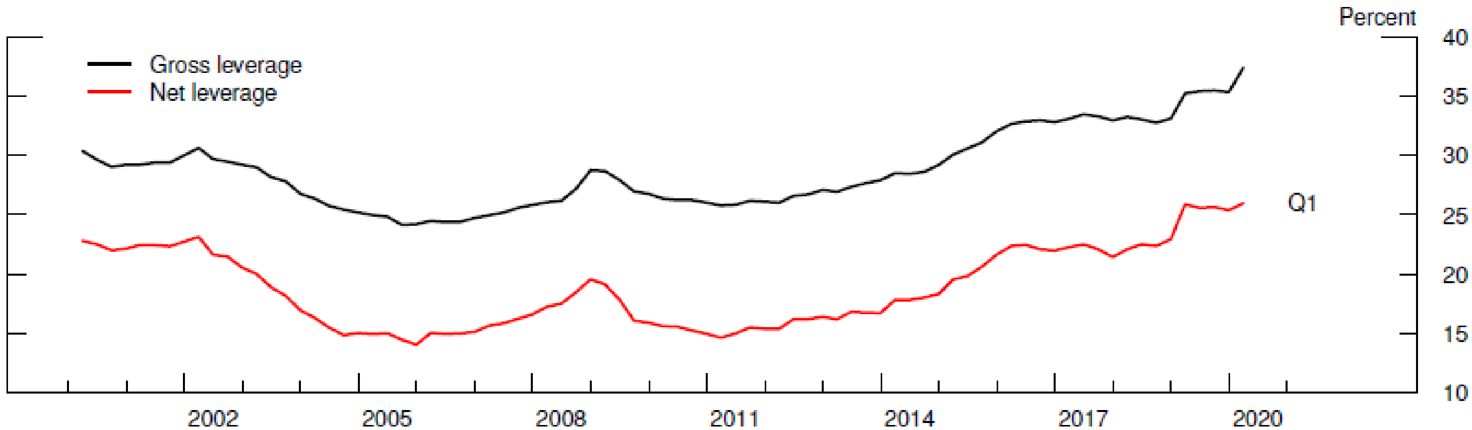


Source: Financial Accounts of the United States, NIPA, and staff calculations.

Class II FOMC - Restricted (FR)

Net leverage of publicly traded firms increased less than gross leverage as firms made draws from credit lines but held on to cash

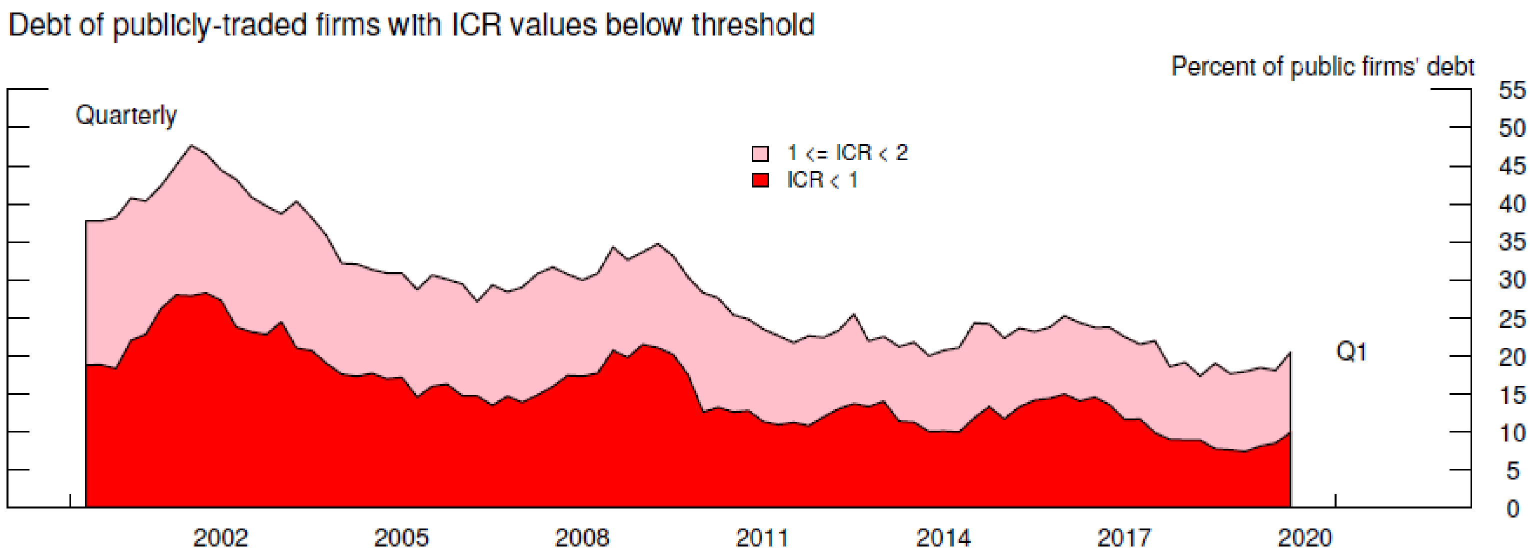
Leverage of public firms



Source: Compustat. Note: Gross leverage is the ratio of the book value of total debt to the book value of total assets. Net leverage is the ratio of the book value of total debt minus cash and cash equivalents to the book value of total assets.

Class II FOMC - Restricted (FR)

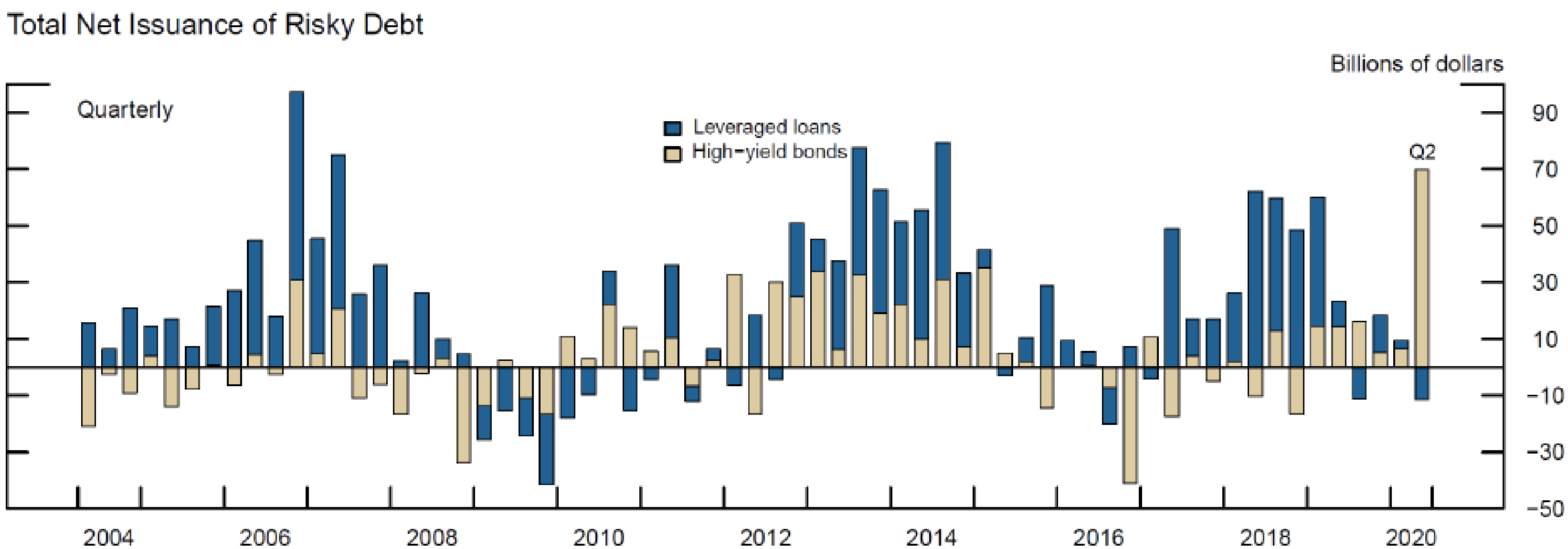
By historical norms, debt at risk for publicly traded firms was low at the end of the first quarter



Source: Compustat.

Class II FOMC - Restricted (FR)

The issuance of high-yield bonds has bounced back

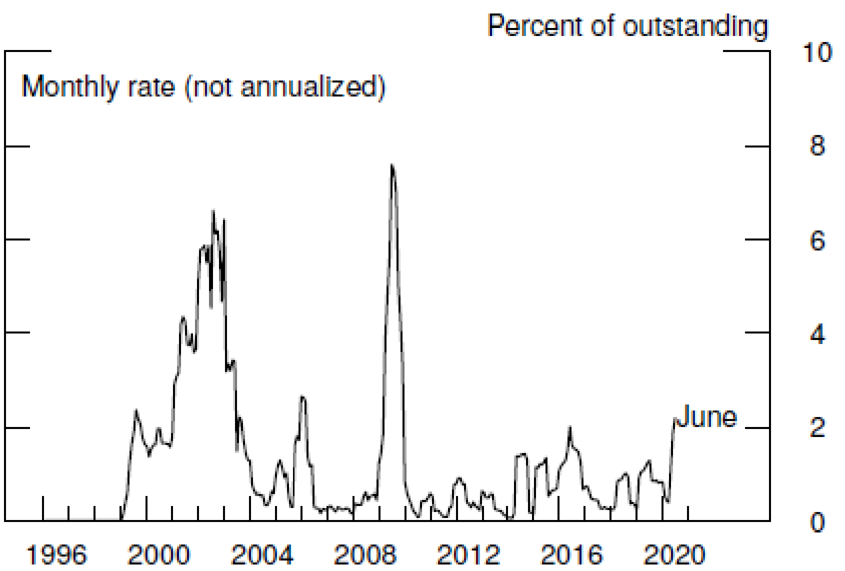


Source: Mergent, Fixed Income Securities Database; S&P Global, Leveraged Commentary & Data.

Class II FOMC - Restricted (FR)

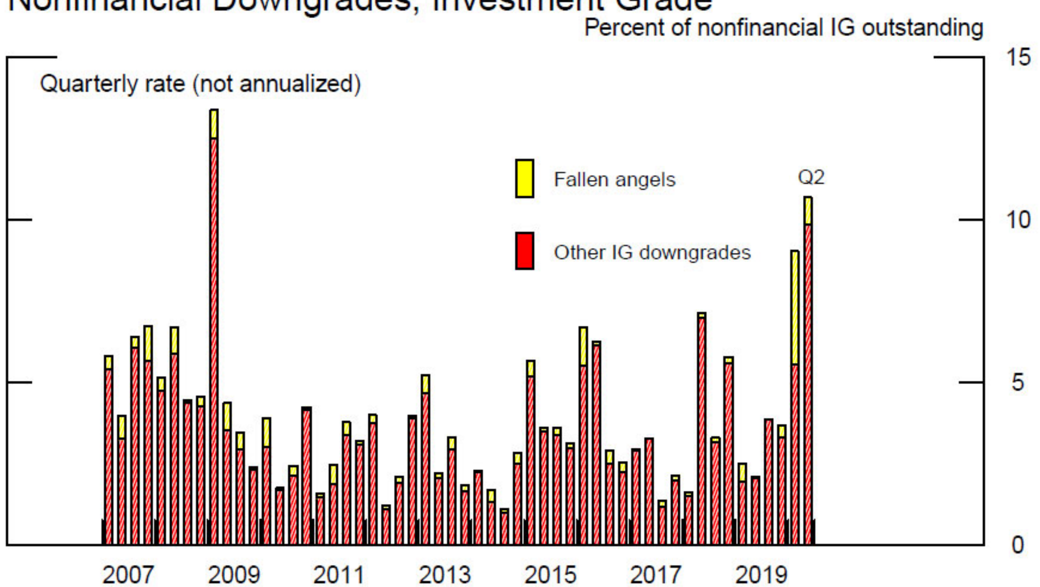
The volume of bond default rates and downgrades are elevated

Realized Nonfinancial Bond Default Rates



Source:Moody's Investors Service.

Nonfinancial Downgrades, Investment Grade



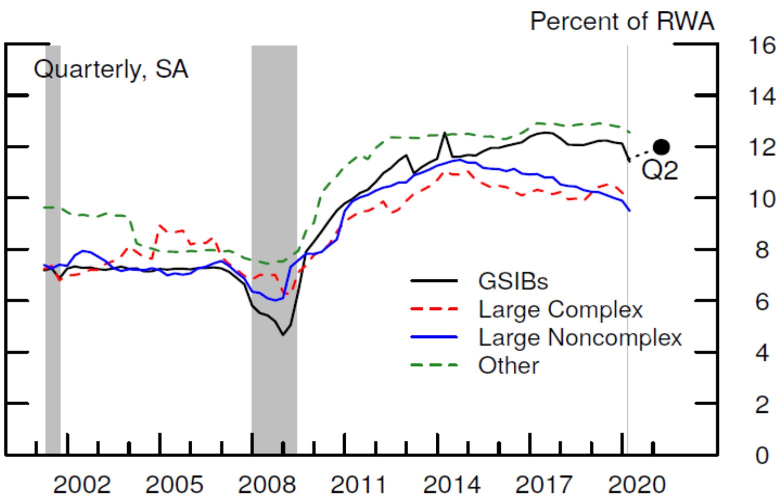
Source: Board staff calculations using composite ratings from Mergent Fixed Income Securities Database.

Financial Sector Leverage

Class II FOMC - Restricted (FR)

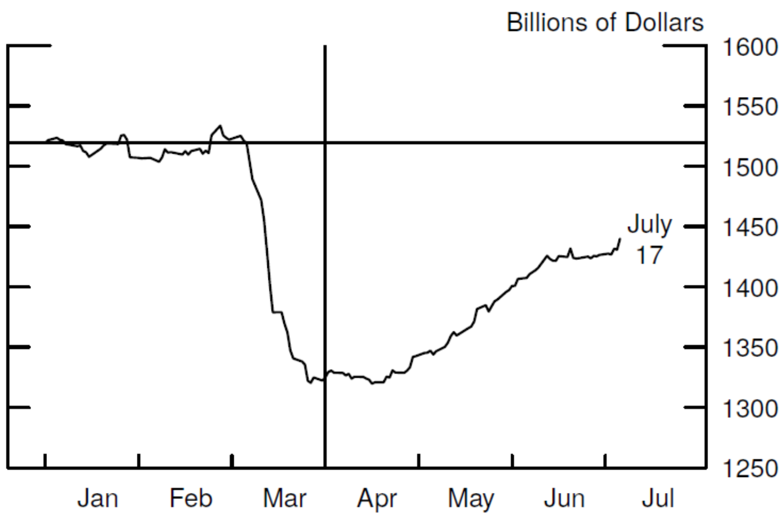
Banks' CET1 declines in Q1 were driven by lower net income and credit lines drawdowns, partly reversed in Q2

Common Equity Tier 1 Ratio, by BHC type



Note: Since 2014:Q1, the numerator is CET1 capital (2015:Q1 for non-advance approach BHCs). Prior, the numerator was Tier 1 common capital. The denominator is risk-weighted assets (RWA). Shaded areas are NBER Recessions. 2020:Q2 value based on earnings calls is shown for U.S. GSIBs.
Source: FR Y-9C.

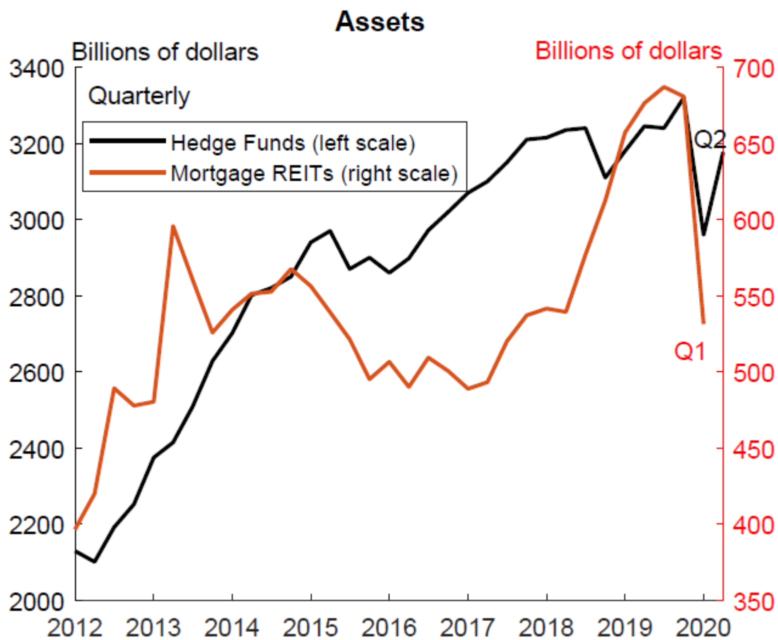
Undrawn Commitments to Nonfinancial Borrowers



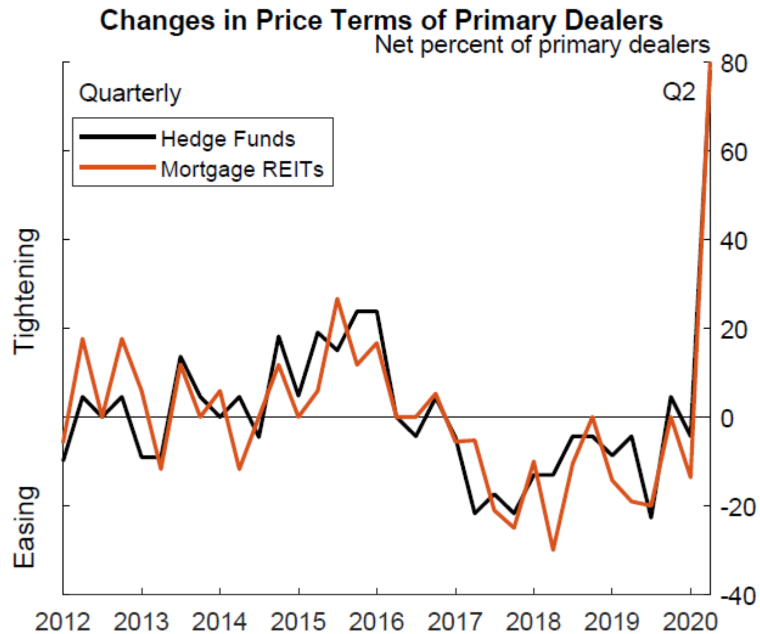
Note: Data are daily for all U.S. GSIBs. Horizontal line is at the level of the data series on January 1, 2020.
Source: FR 2052a

Class II FOMC - Restricted (FR)

Vulnerabilities stemming from leverage at hedge funds and mortgage REITs are high



Source: Hedge Fund Research and Financial Accounts of the United States



Source: Senior Credit Officer Opinion Survey (SCOOS)

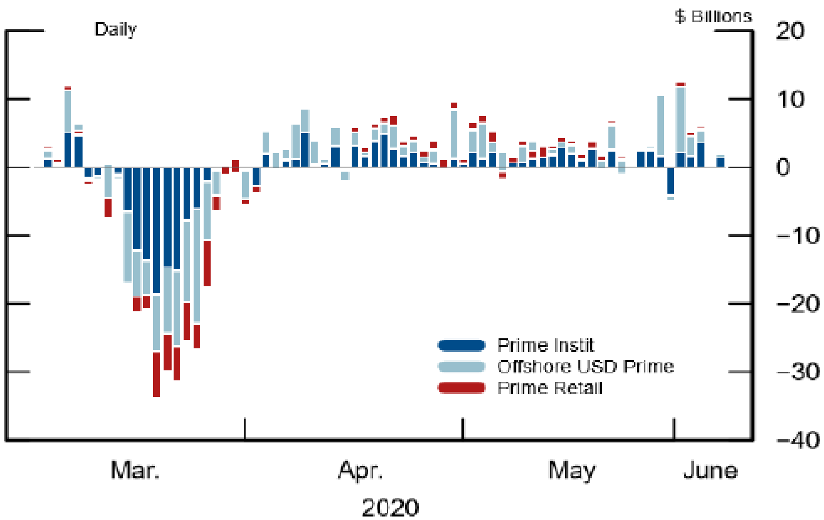
Class II FOMC - Restricted (FR)

Maturity and Liquidity Transformation

Class II FOMC - Restricted (FR)

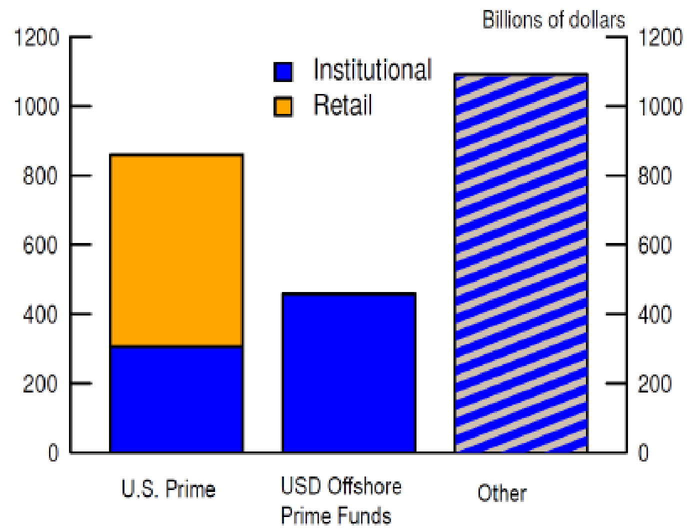
The MMLF stabilized redemptions at prime MMFs, but other funds with similar characteristics are not covered by the facility

Daily U.S. Prime and Offshore USD Prime MMF Flows



Source: iMoneyNet

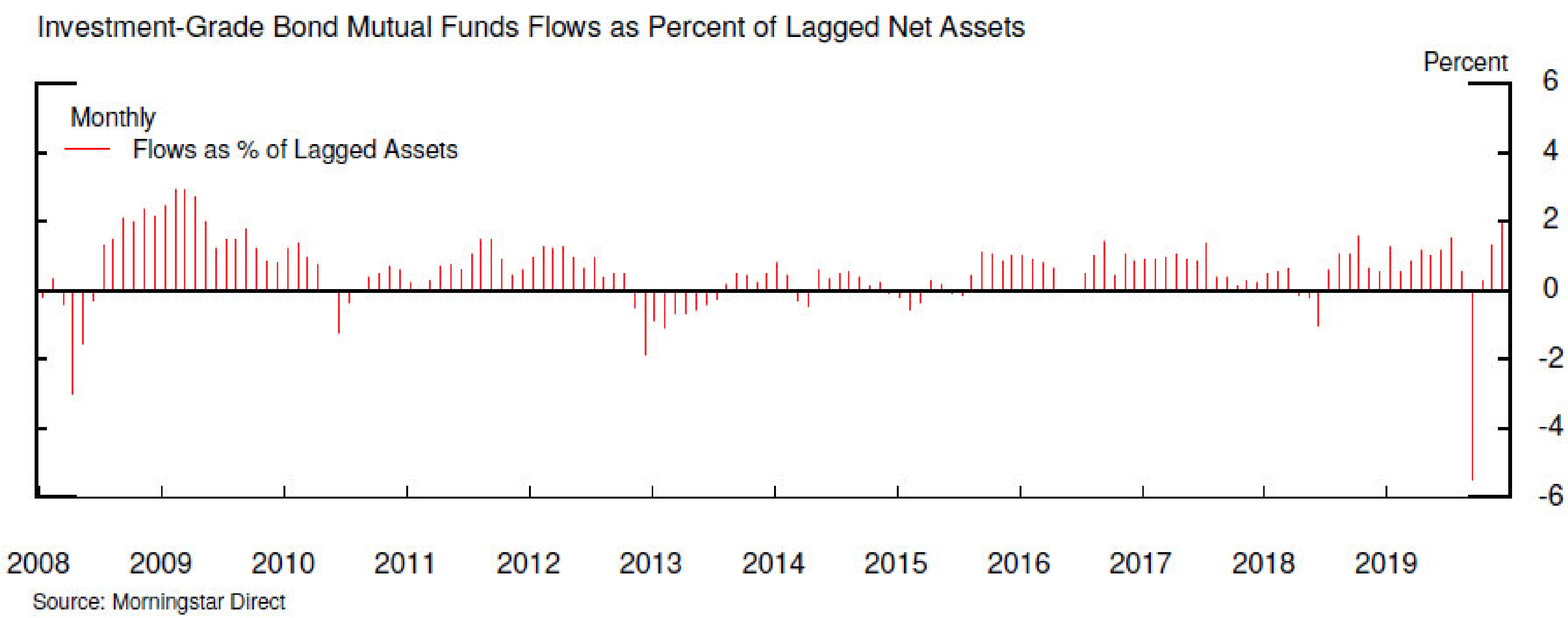
U.S. Prime Funds and Alternatives



Note: Other includes LGIP, Ultrashort, STIF and Private liquidity funds.

Class II FOMC - Restricted (FR)

Emergency actions stopped outflows at bond mutual funds



What other shoes can drop?

Class II FOMC - Restricted (FR)

What else could go wrong?

Three clusters of issues:

1. The full effects of the severe income shock incurred by businesses and households could lead to widespread defaults
    - Large-scale corporate distress poses spillovers to mutual funds and ETFs, life insurers, banks that hold business debt
2. The second set of issues relates to heightened volatility connected to an intensification of the pandemic and a worsening of economic outcomes
    - The U.S. Treasury and other financial markets may come again under stress
3. A novel set of issues connected to
    - Heightened cyber risk
    - The invocation of “force majeure”

Class II FOMC - Restricted (FR)

Status of 13(3) facilities

Facility	Initial Authorized Date	Potential Size as Announced	Peak Outstanding ($bn)	Current Outstanding ($bn)
Primary Dealer Credit Facility	3/17/2020		$ 37.3	$ 1.9
Money Market Mutual Fund Liquidity Facility	3/18/2020		$ 54.1	$ 17.5
Commercial Paper Funding Facility	3/17/2020		$ 4.3	$ 1.5
Paycheck Protection Program Lending Facility	4/9/2020		$ 68.7	$ 68.7
Primary and Secondary Market Corporate Credit Facilities	3/23/2020	$ 750	$ 11.8	$ 11.8
Main Street Lending Program	4/9/2020	$ 600	$ 0.1	$ 0.1
Municipal Liquidity Facility	4/9/2020	$ 500	$ 1.2	$ 1.2
Term Asset-Backed Securities Loan Facility	3/23/2020	$ 100	$ 0.9	$ 0.9

Appendix 6: Materials used by Ms. Edge

Class I FOMC – Restricted Controlled (FR)

Material for the Briefing on

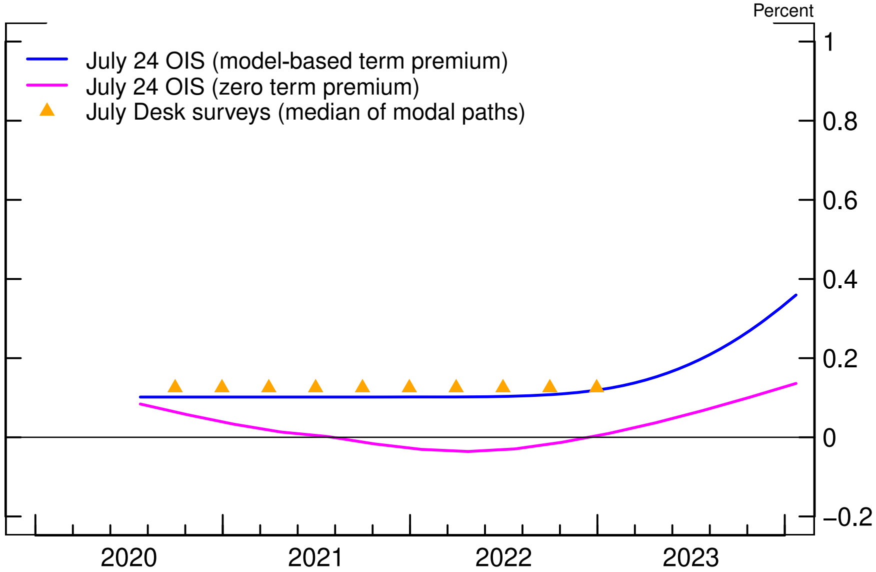
Monetary Policy Alternatives

Rochelle M. Edge
Exhibits by Luke Morgan
July 28-29, 2020

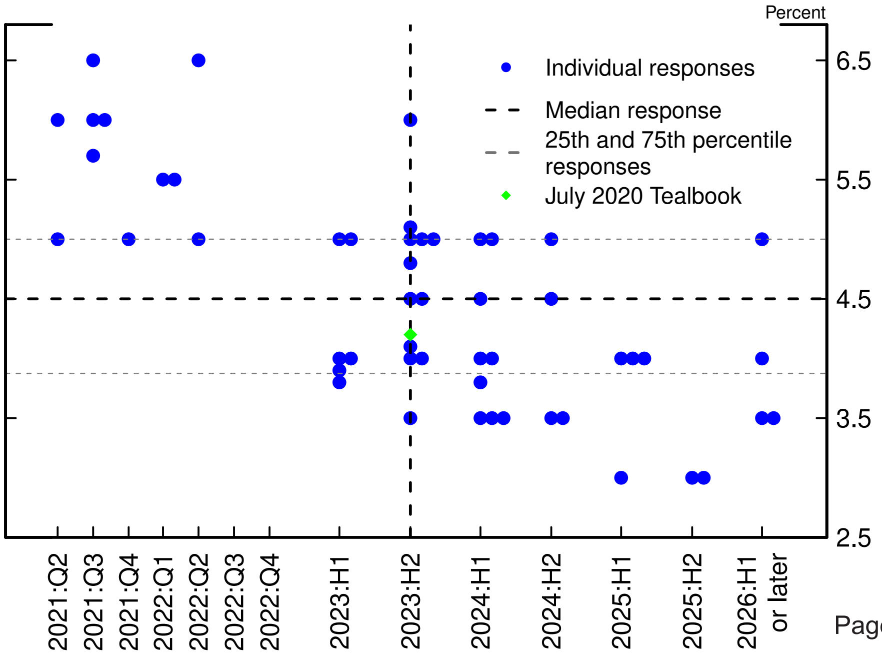
Monetary Policy Considerations

Neutral and Projected Real Federal Funds Rate from Desk Surveys

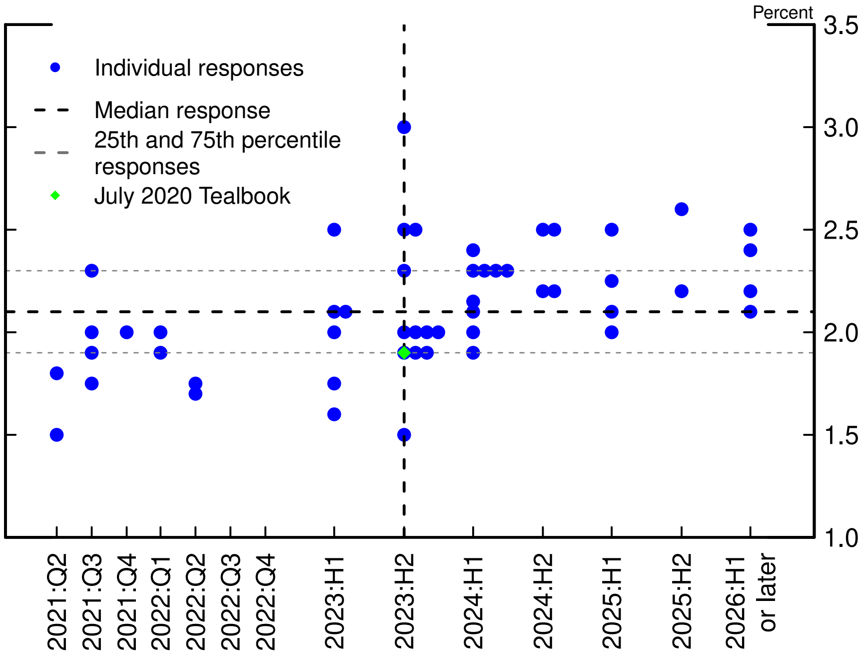
Nominal Federal Funds Rate Paths



Most Likely Timing of and Unemployment Rate at First Policy Rate Increase

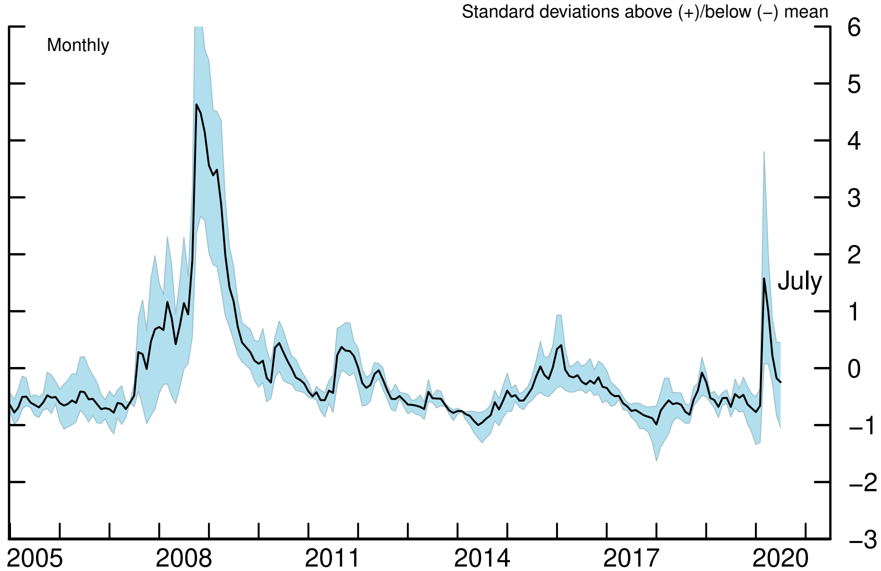


Most Likely Timing of and PCE Inflation Rate at First Policy Rate Increase

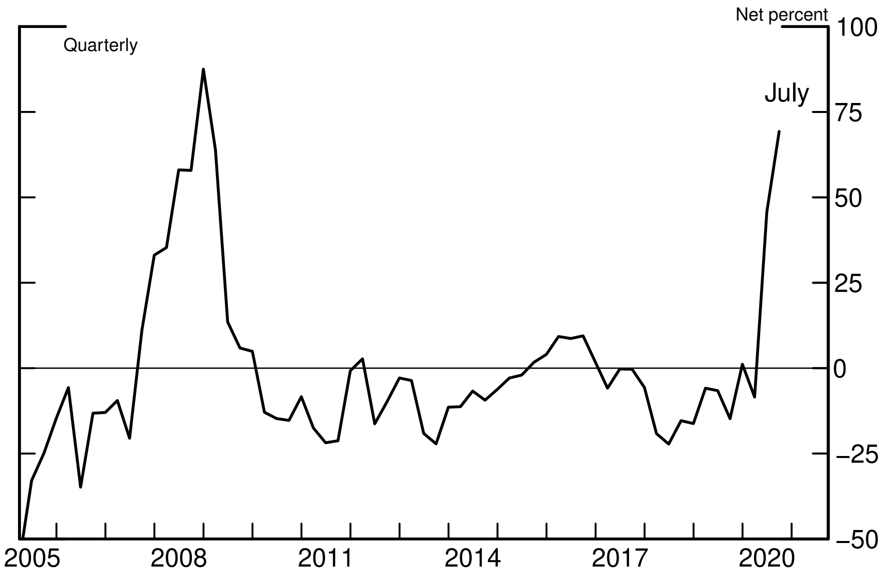


Monetary Policy Considerations (continued)

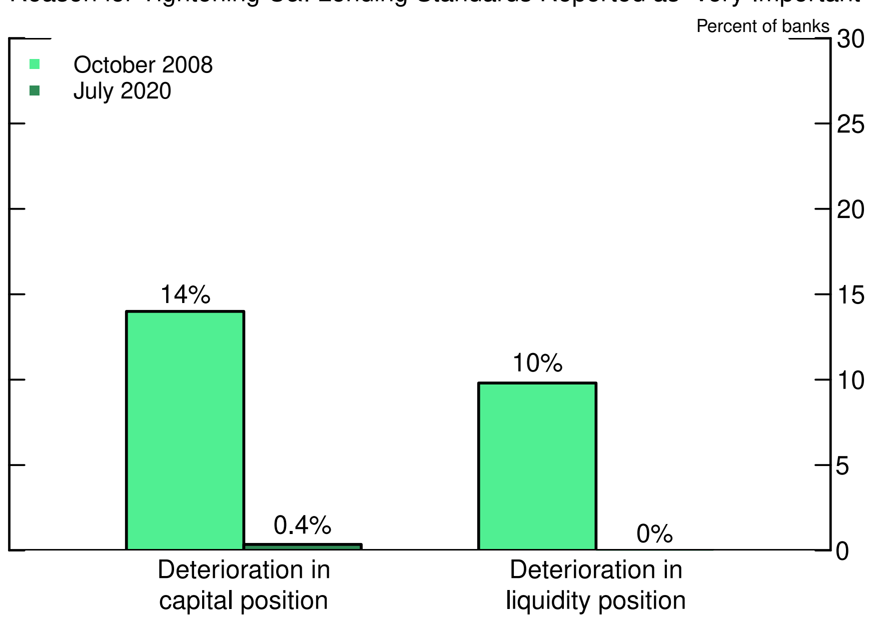
Mean and Range of Four Financial Conditions Indexes



Net Share of Banks Tightening C&I Lending Standards



Reason for Tightening C&I Lending Standards Reported as 'Very Important'



Reason for Tightening C&I Lending Standards Reported as 'Very Important'

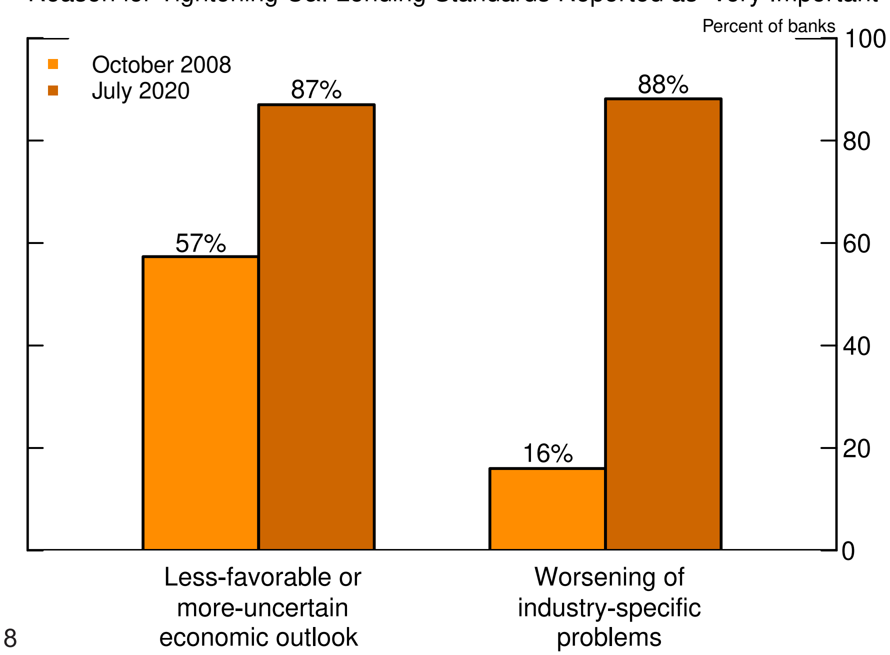


Exhibit Notes

Exhibit 1:
Top-left panel:
Neutral real federal funds rates based on all responses from the January 2020 and July 2020 Desk surveys. Projected real federal funds rates equal to the median estimate across primary dealers of the difference between their nominal federal funds rate modal forecast and their core PCE inflation rate modal forecast. Source: FRBNY.
Top-right panel:
OIS with model-based term premium uses a term-structure model based on Priebsch (2017). OIS with zero term premium is estimated using overnight index swap quotes with a spline approach and a term premium of zero basis points. Desk surveys values are calculated as the median of respondents' modal paths for the federal funds rate. Source: Bloomberg; Board staff calculations; FRBNY.
Bottom-left panel:
Individual responses and median responses based on responses from the July 2020 Desk surveys. Respondents were asked for their modal expectations regarding the timing of the first increase in the federal funds rate, as well as their estimate of the unemployment rate at the time of the first increase. When multiple data points coincide, some are offset slightly along the date axis to ensure they are individually visible. Source: FRBNY; Board staff calculations.
Bottom-right panel:
Individual responses and median responses based on responses from the July 2020 Desk surveys. Respondents were asked for their modal expectations regarding the timing of the first increase in the federal funds rate, as well as their estimate of the 12-month change in total PCE prices at the time of the first increase. When multiple data points coincide, some are offset slightly along the date axis to ensure they are all visible. Source: FRBNY; Board staff calculations.
Exhibit 2:
Top-left panel:
Mean financial conditions index (FCI) is the average of four FCIs developed by Goldman Sachs and the Federal Reserve Banks of Chicago, St. Louis, and Kansas City. The blue shaded region gives the range of these four standardized FCIs. Source: Bloomberg; Federal Reserve Banks of Chicago, St. Louis, and Kansas City.
Top right panel:
Series shown refers to lending to large/middle-market firms. Individual bank responses have been weighted by the outstanding amount of the relevant loan category on their balance sheets at the end of the previous quarter. Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.
Bottom-left and bottom-right panels:
Individual bank responses have been weighted by the outstanding amount of the relevant loan category on their balance sheets at the end of the previous quarter. Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

June 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. The virus and the measures taken to protect public health have induced sharp declines in economic activity and a surge in job losses. Weaker demand and significantly lower oil prices are holding down consumer price inflation. Financial conditions have improved, in part reflecting policy measures to support the economy and the flow of credit to U.S. households and businesses.

3. 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.

Draft of 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. ~~The virus and the measures taken to protect public health have induced sharp declines in economic activity and a surge in job losses.~~ **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.

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Implementation Note for July 2020

Release Date: July 29, 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 ~~June 10~~ **July 29**, 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 ~~June 11~~ **July 30**, 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 ~~June 11~~ **July 30**, 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, agency mortgage-backed securities (MBS), and agency commercial mortgage-backed securities (CMBS) at least at the current pace 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 July 24, 2020, memo to the Board.