

Appendix 1: Materials used by Ms. Senyuz

Class I FOMC - Restricted Controlled (FR)

Material for Briefing on

Balance Sheet Normalization Principles and Plans

Zeynep Senyuz

March 19, 2019

Options for Ending Balance Sheet Runoff

- Two options for ending the balance sheet runoff on September 30, 2019:

Continue redemptions at their current pace through September – No Taper	Reduce Treasury Cap to \$20B in April, to \$10B in July, and end in September – Taper
<ul style="list-style-type: none"> Projected reserve balances of \$1.2T, and a SOMA size of \$3.5T in September Simple approach 	<ul style="list-style-type: none"> Has a modest effect on projected reserve levels or balance sheet size (about \$55B difference in reserves) Consistent with previous changes in balance sheet policy

- Under both scenarios, continue to roll over principal payments from maturing Treasuries at auction (“above the cap” amount through September, “full” amount thereafter).

As of 9/30/19	No Taper	Taper
SOMA Holdings	\$3.51 trillion	\$3.56 trillion
Reserve Balances	\$1.20 trillion	\$1.25 trillion
Treasury Redemptions	\$146 billion	\$90 billion
Treasury Reinvestments	\$70 billion	\$126 billion

Reinvestment of MBS Principal Payments

- Interim approach for reinvesting MBS principal payments to allow the FOMC time to develop a long-run strategy
 - Reinvest MBS principal paydowns below the \$20B cap in Treasury securities in proportion to Treasury maturities outstanding
 - Continue to reinvest MBS principal payments in excess of the \$20B cap in agency MBS
- Proposed MBS reinvestment strategy would avoid having purchases disproportionately focused in any one sector and likely minimize signaling for the long-run.

REVISED DRAFT: Balance Sheet Normalization Principles and Plans

In light of its discussions at previous meetings and the progress in normalizing the size of the Federal Reserve's securities holdings and the level of reserves in the banking system, all participants agreed that it is appropriate at this time for the Committee to provide additional information regarding its plans for the size of its securities holdings and the transition to the longer-run operating regime. At its January meeting, the Committee stated that it intends to continue to implement monetary policy in a regime in which an ample supply of reserves ensures that control over the level of the federal funds rate and other short-term interest rates is exercised primarily through the setting of the Federal Reserve's administered rates and in which active management of the supply of reserves is not required. The Statement Regarding Monetary Policy Implementation and Balance Sheet Normalization released in January as well as the principles and plans listed below together revise and replace the Committee's earlier Policy Normalization Principles and Plans.

- To ensure a smooth transition to the longer-run level of reserves consistent with efficient and effective policy implementation, the Committee intends to slow the pace of the decline in reserves over coming quarters provided that the economy and money market conditions evolve about as expected.
 - [The Committee intends to slow the reduction of its holdings of Treasury securities by reducing the cap on monthly redemptions from the current level of \$30 billion to \$20 billion beginning in April, and to \$10 billion beginning in July.¹]
 - The Committee intends to conclude the reduction of its aggregate securities holdings in the System Open Market Account (SOMA) at the end of September 2019.
 - The Committee intends to continue to allow its holdings of agency debt and agency mortgage-backed securities (MBS) to decline, consistent with the aim of holding primarily Treasury securities in the longer run.
 - Beginning in October 2019, principal payments received from agency debt and agency MBS will be reinvested in Treasury securities subject to a maximum amount of \$20 billion per month; any principal payments in excess of that maximum will continue to be reinvested in agency MBS.
 - Principal payments from agency debt and agency MBS below the \$20 billion maximum will initially be invested in Treasury securities across a range of maturities to roughly match the maturity composition of Treasury securities outstanding; the Committee will revisit this reinvestment plan in

¹[At its March 2019 meeting, the Committee directed the Desk to roll over at auction the amount of principal payments from the Federal Reserve's holdings of Treasury securities maturing in each calendar month in excess of \$20 billion beginning in April.]

connection with its deliberations regarding the longer-run composition of the SOMA portfolio.

- It continues to be the Committee's view that limited sales of agency MBS might be warranted in the longer run to reduce or eliminate residual holdings. The timing and pace of any sales would be communicated to the public well in advance.
- The average level of reserves after the FOMC has concluded the reduction of its aggregate securities holdings at the end of September will likely still be somewhat above the level of reserves necessary to efficiently and effectively implement monetary policy.
 - In that case, the Committee currently anticipates that it will likely hold the size of the SOMA portfolio roughly constant for a time. During such a period, persistent gradual increases in currency and other non-reserve liabilities would be accompanied by corresponding gradual declines in reserve balances to a level consistent with efficient and effective implementation of monetary policy.
- When the Committee judges that reserve balances have declined to this level, the SOMA portfolio will hold no more securities than necessary for efficient and effective policy implementation. Once that point is reached, the Committee will begin increasing its securities holdings to keep pace with trend growth of the Federal Reserve's non-reserve liabilities and maintain an appropriate level of reserves in the system.

Appendix 2: Materials used by Mr. Potter and Ms. Logan

Class I FOMC - Restricted Controlled (FR)

Material for Briefing on

**Financial Developments and
Open Market Operations**

Lorie Logan and Simon Potter

Exhibits by Ashley Rhodes and Marcus Petersen

March 19, 2019

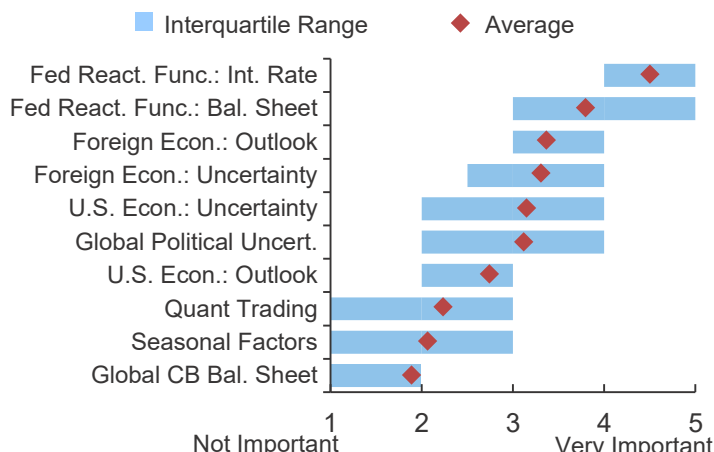
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Exhibit 1

(1) Asset Price Changes*

	Since Jan. FOMC	Since Dec. FOMC	Current Level
S&P 500 Index	+6.9%	+10.9%	2822
MSCI All World Index	+5.6%	+10.4%	509
HY Credit Spreads	-46 bps	-76 bps	388 bps
2-Year Nominal Treasury	-13 bps	-21 bps	2.44%
10-Year Nominal Treasury	-12 bps	-23 bps	2.59%
January 2020 Fed Funds	-13 bps	-20 bps	2.31%
January 2021 Fed Funds	-17 bps	-29 bps	2.11%

*Red indicates tightening in financial conditions, blue indicates loosening.
Source: Barclays, Bloomberg, MSCI

(2) Importance of Selected Factors in Driving Risk Asset Prices Year-to-Date*

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

(3) Expected Sensitivity of Policy Rate to Inflation and Unemployment Scenarios*

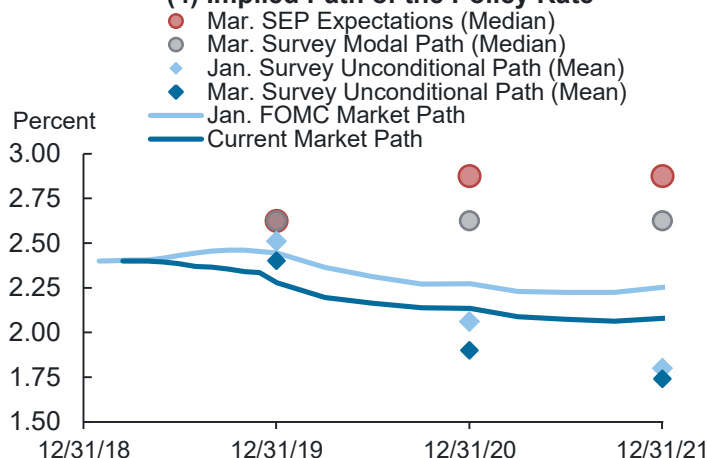
Mar. '19 Survey		Inflation**		
		-50 bps	2.0%	+50 bps
U-Rate**	-50 bps	-25	+25	+50
	3.5%	-25	--	+25
	+50 bps	-50	-25	+0

Jul./Aug. '18 Survey		Inflation**		
		-50 bps	2.1%	+50 bps
U-Rate**	-50 bps	-25	+25	+50
	3.5%	-25	--	+50
	+50 bps	-63	-25	+25

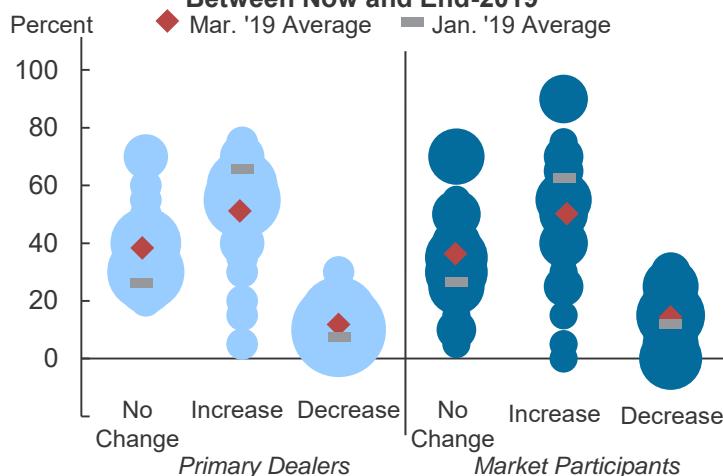
*Median difference from fed funds rate expected to prevail under median SEP inflation and unemployment rate projections. Based on a match sample of respondents to the Surveys of Primary Dealers and Market Participants.

**Inflation refers to 2019 Core PCE inflation (Q4/Q4), U-Rate refers to 2019 unemployment rate (Q4 average level).

Source: FRBNY

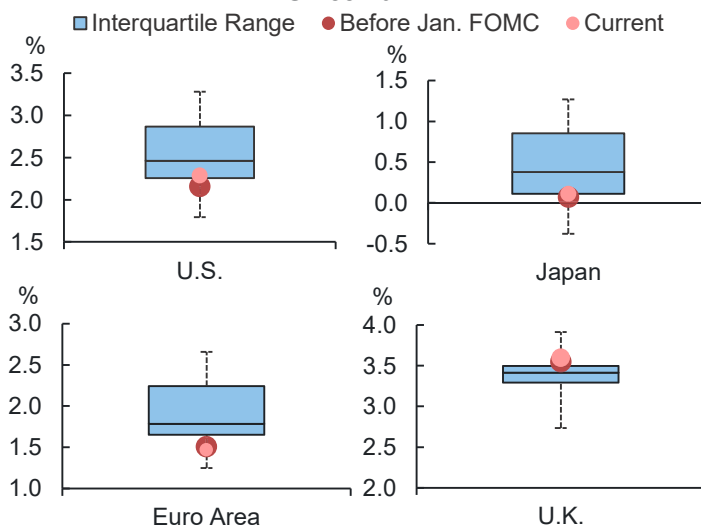
(4) Implied Path of the Policy Rate*

*Market-implied paths derived from fed funds and Eurodollar futures. Unconditional survey path is the average PDF-implied means from the Surveys of Primary Dealers and Market Participants.
Source: Bloomberg, Desk Calculations, Federal Reserve Board, FRBNY

(5) Expected Probability of Next Policy Action Between Now and End-2019*

*Based on all responses from the Surveys of Primary Dealers and Market Participants. Bubbles scaled by share of respondents.

Source: FRBNY

(6) Five-Year, Five-Year Forward Inflation Swaps Since 2011

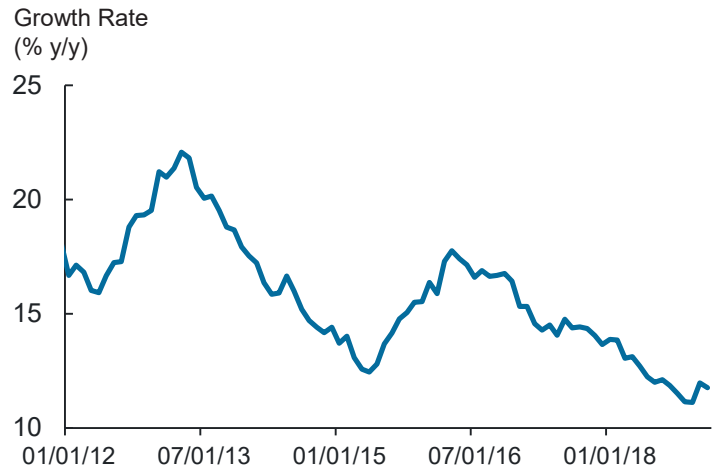
Source: Bloomberg

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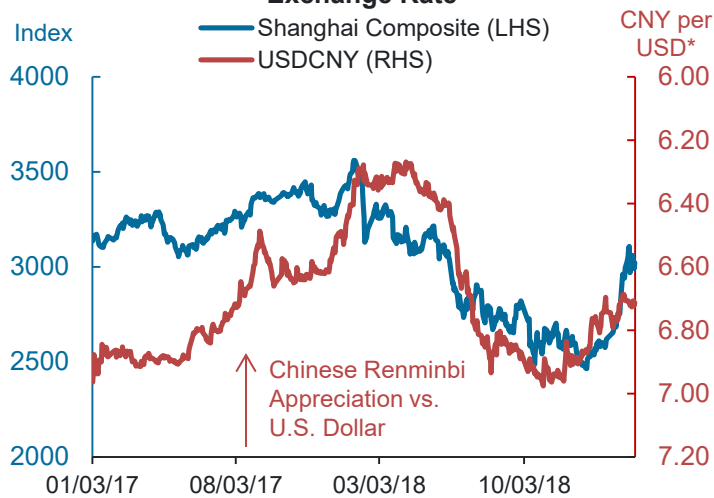
Exhibit 2

(7) Eurostoxx 50 and Eurostoxx Bank Indices

Source: Bloomberg

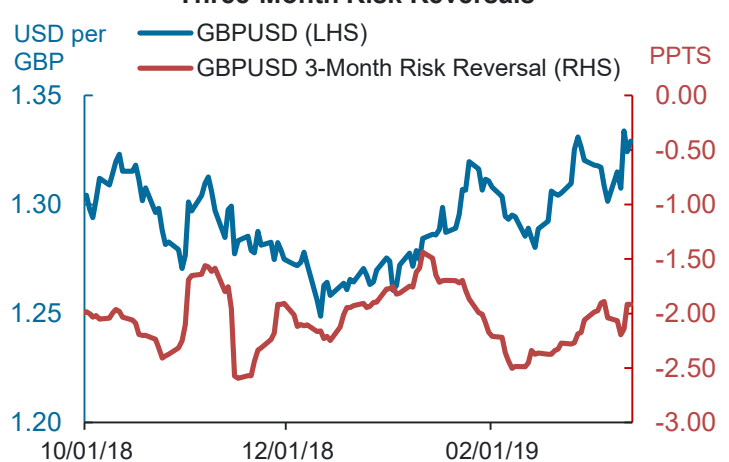
(8) Aggregate Chinese Credit Growth*

*Includes shadow finance and adjusted for local government bond swaps. Excludes equity and write-offs. Data is monthly through February 2019.
Source: CEIC, PBOC

(9) Shanghai Composite and U.S. Dollar-Renminbi Exchange Rate

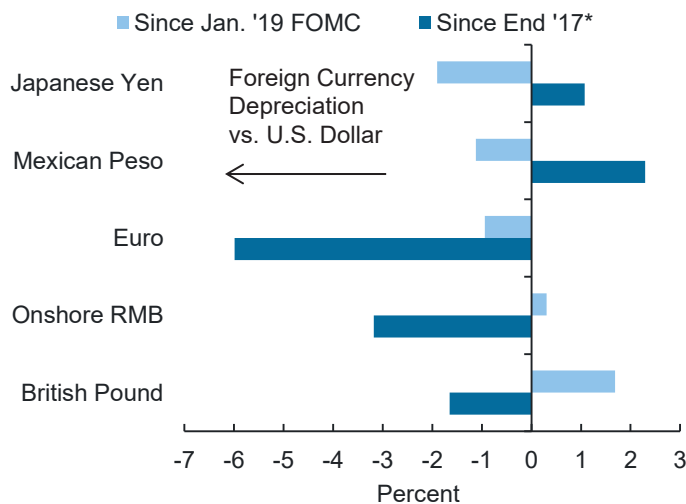
*Axis inverted.

Source: Bloomberg

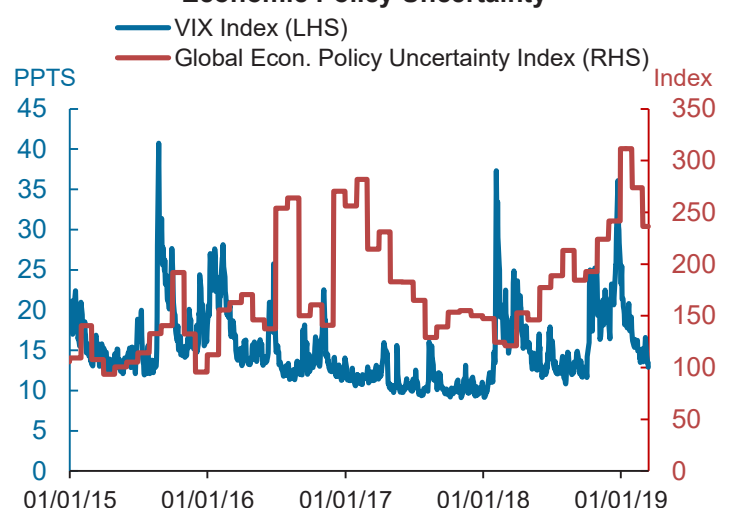
(10) British Pound-U.S. Dollar Exchange Rate and Three-Month Risk Reversals*

*Risk reversal is defined as the implied volatility for 25 delta call options less the implied volatility for 25 delta put options on the GBP-USD.

Source: Bloomberg

(11) U.S. Dollar Performance Against Other Currencies

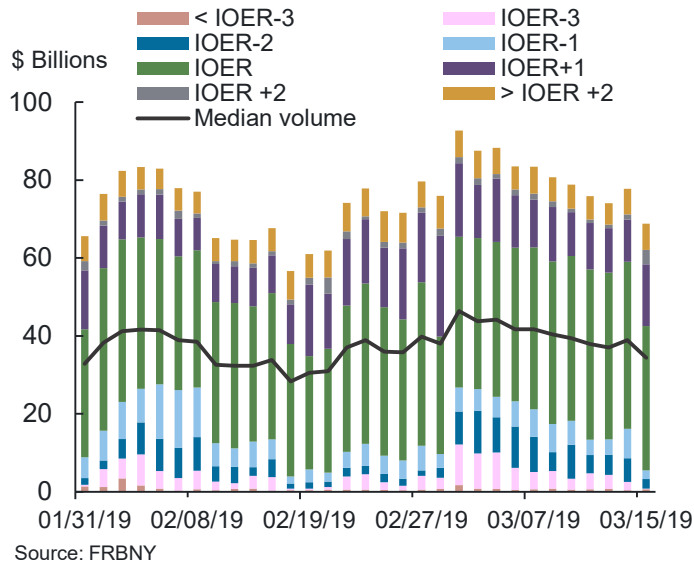
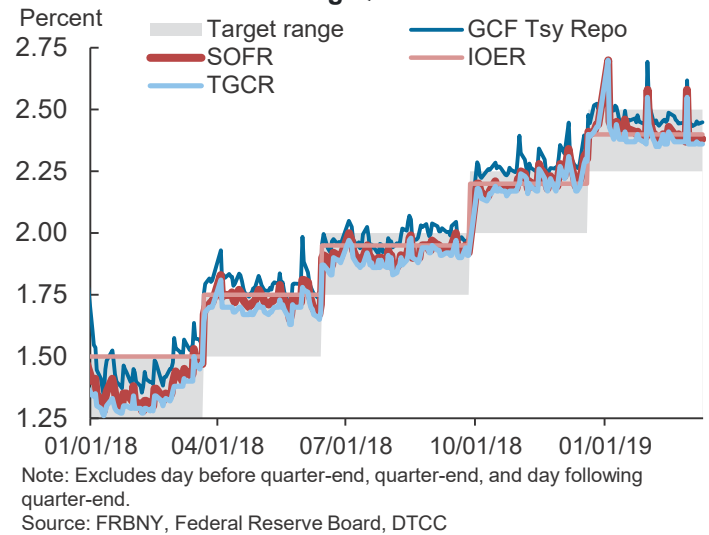
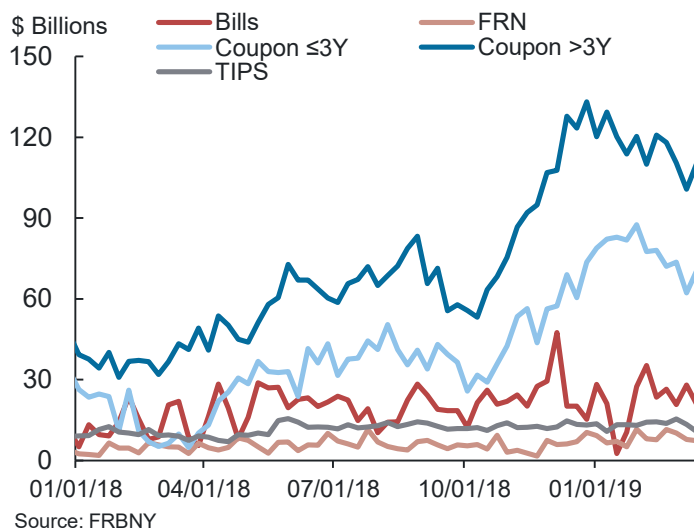
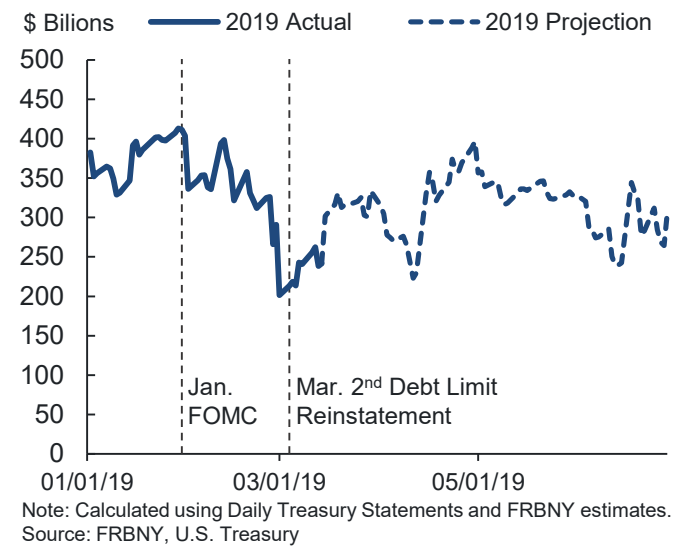
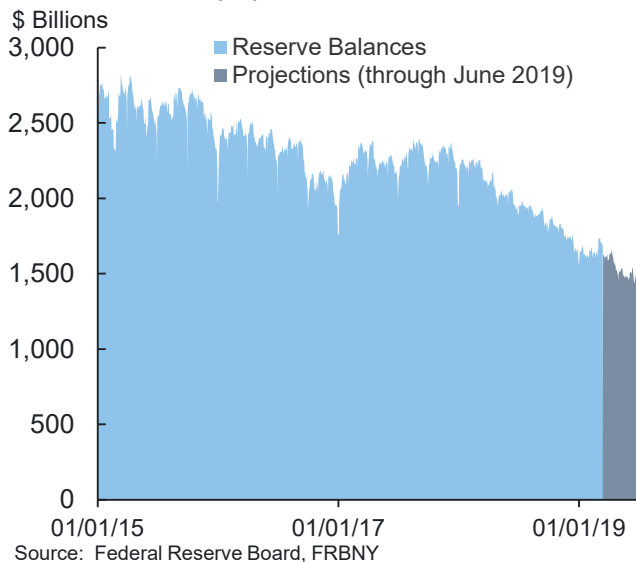
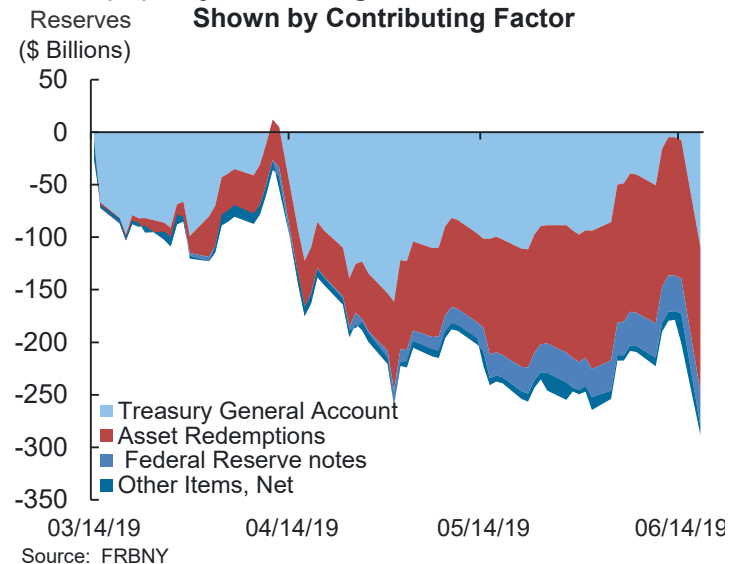
*Change since 12/29/2017.

(12) Equity Market Implied Volatility and Global Economic Policy Uncertainty

Source: Baker, Bloom and Davis; Bloomberg

Class I FOMC – Restricted Controlled (FR)

Exhibit 3

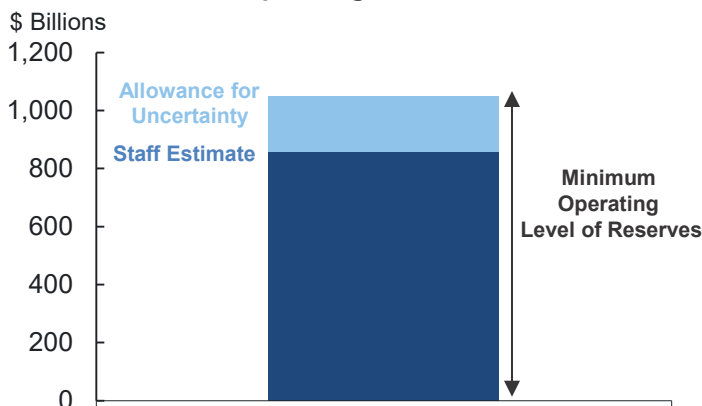
(13) Fed Funds Volume Rate Distribution**(14) Overnight Treasury Repo Rates Excluding Quarter-Ends****(15) Primary Dealer Net Positioning in Treasury Securities****(16) Daily Level of Treasury General Account (TGA)****(17) Reserve Balances****(18) Projected Changes in Reserve Balances Shown by Contributing Factor**

Class I FOMC – Restricted Controlled (FR)

Exhibit 4

(19) Transition to the Long-Run Implementation Framework

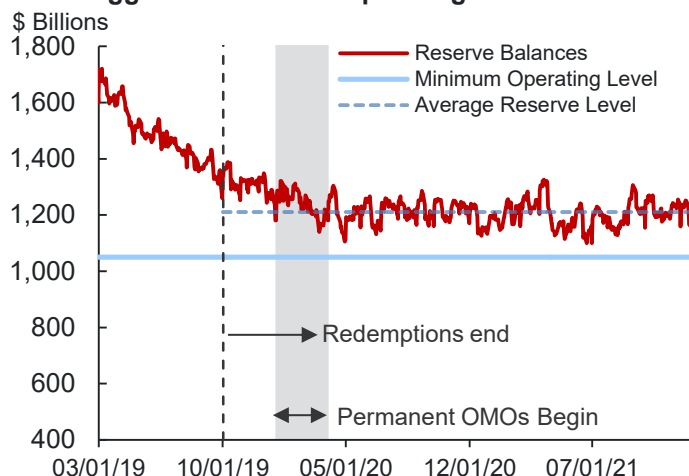
- *Shift from asset-driven to liability-driven framework*
 - Understand reserve demand
 - Forecast non-reserve liabilities
- *Understand path of liabilities to plan asset growth*
 - Higher reserve level → less precise forecasts
 - Lower reserve level → more precise forecasts
- *Recommend setting minimum operating level, if prefer lower reserve level*
 - Provides transparency to financial institutions
 - Ability to move minimum level lower over time

(20) Estimate of Reserve Demand and Minimum Operating Level of Reserves

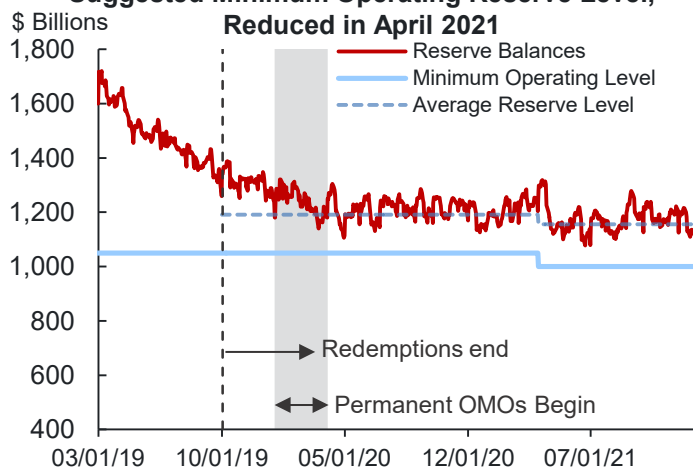
Note: Staff's current point estimate of banks' minimum demand is \$860 billion. Staff's proposed initial minimum operating level also includes an allowance for uncertainty and consideration of distributional frictions.
Source: Federal Reserve Board, FRBNY

(21) Methods to Estimate Reserve Demand

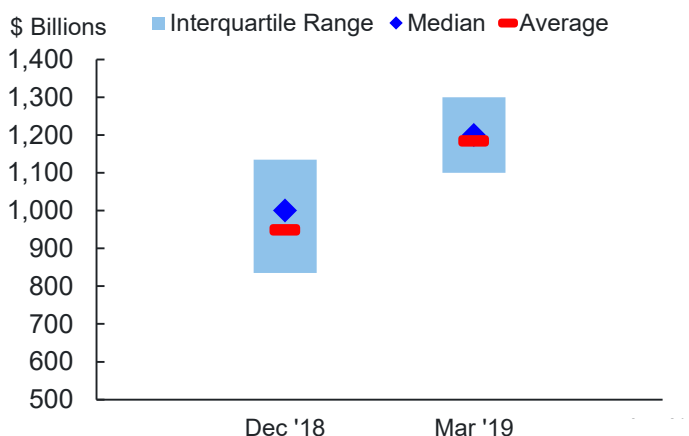
- High frequency micro level bank reserves data
- Structured outreach with banks
- Market monitoring of banks' money market behavior
- Senior Financial Officer Survey
- Desk Survey of Primary Dealers and Market Participants

(22) Forecast of Reserve Balances with Suggested Minimum Operating Reserve Level

Note: Assumes September end to redemptions, with Treasury redemption caps reduced in \$20 billion in April, and \$10 billion in July.
Source: FRBNY

(23) Forecast of Reserve Balances with Suggested Minimum Operating Reserve Level, Reduced in April 2021

Note: Assumes September end to redemptions, with Treasury redemption caps reduced in \$20 billion in April, and \$10 billion in July.
Source: FRBNY

(24) Lowest Expected Weekly Average Level of Reserves Conditional on No Return to ZLB

Note: Based on all responses to the Surveys of Primary Dealers and Market Participants. ZLB: zero or effective lower bound.
Source: FRBNY

Appendix 1

(1) Summary of Operational Testing

Summary of Operational Tests in prior period:

- Domestic Authorization
 - February 1 to March 11: Outright MBS TBA purchase for a total of \$415 million
 - March 7: Securities lending (using the backup tool) for \$75 million
- Foreign Authorization
 - February 5: Euro-denominated repo with private counterparties for €1 million
 - February 14: Euro liquidity swap for €51,000

Upcoming Operational Tests:

- Five tests scheduled under the Domestic Authorization
 - March 18 to March 25: Outright MBS TBA purchases for up to \$141 million*
 - April 2 and 3: MBS dollar roll sales for \$20 million, total
 - April 4: Outright UMBS Purchase for up to \$13 million**
 - April 24: Treasury bill purchase for up to \$100 million
- Two tests scheduled under the Foreign Authorization
 - April 9: Euro-denominated sovereign debt sale to private counterparties for €1 million
 - April 16: Yen-denominated sovereign debt sale to private counterparties for ¥100 million

*For monthly Agency MBS reinvestment periods where principal receipts are below the cap, the Desk will conduct up to \$300 million of small value outright purchases, though due to our operational planning timeline, some or all purchases for the next intermeeting period might not be scheduled as this point. Monthly reinvestment periods run from the 10th business day of the current month to the 9th business day of the following month.

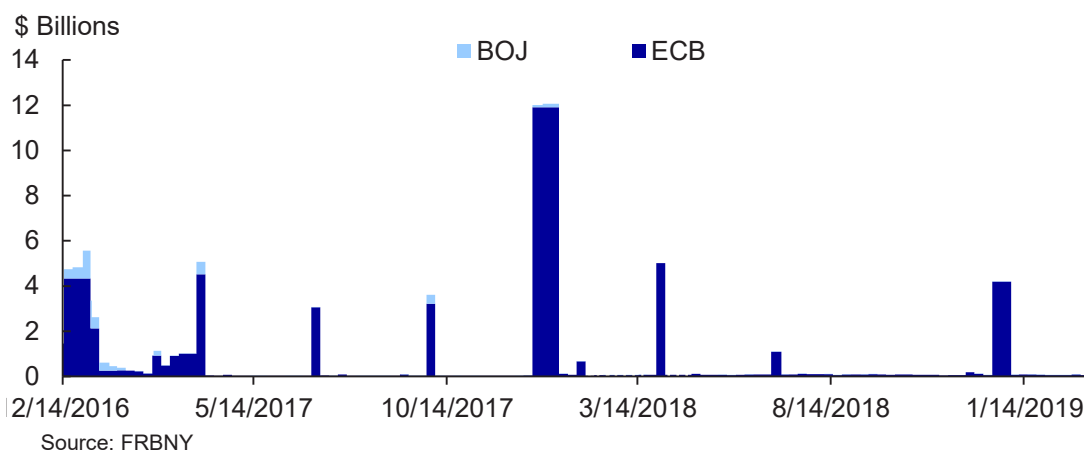
**The Desk will be conducting a purchase of the new Single Security UMBS TBA contract for June settlement. This operation will be done separately from the regular monthly small value agency MBS purchases.

Appendix 2

(1) MBS Purchase Summary Since Cap Implementation (\$ Millions)

Period	Cumulative Actual Paydowns	Cumulative Reinvestment Purchases	Cumulative Net Deviations
Oct. 2017 - Sep. 2018	272,235	152,295	60

(2) FX Swaps Outstanding



(3) FX Intervention

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

Appendix 3: Materials used by Ms. Tevlin

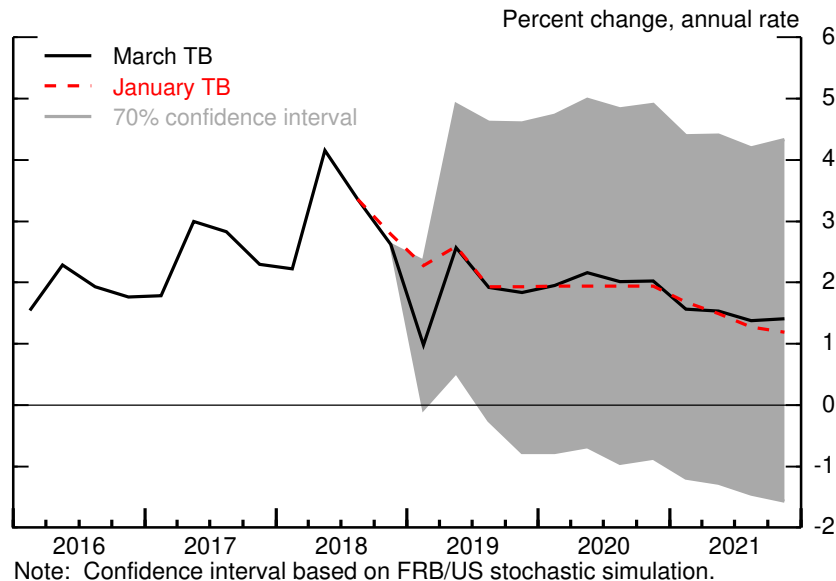
Class II FOMC - Restricted (FR)

Material for Briefing on
The U.S. Outlook

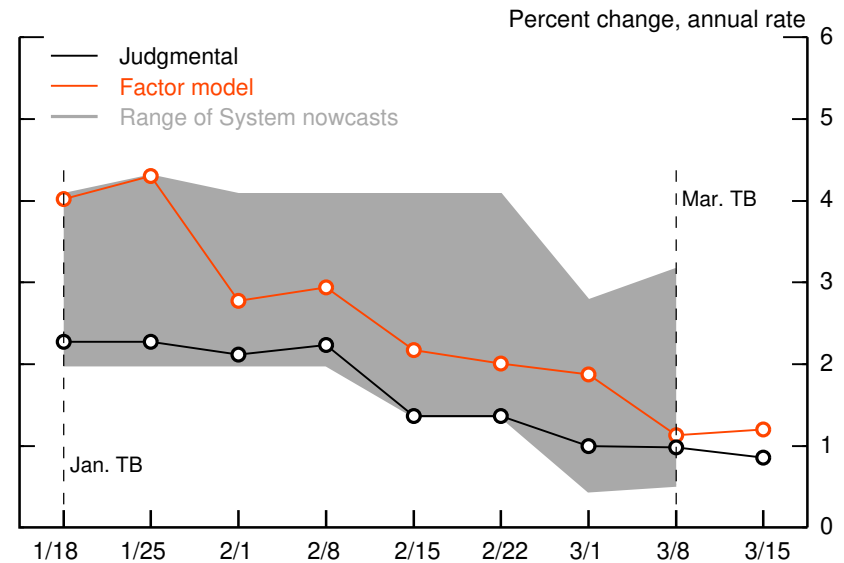
Stacey Tevlin
Exhibits by Bo Yeon Jang and Rosemary Rhodes
March 19, 2019

Slowing Growth

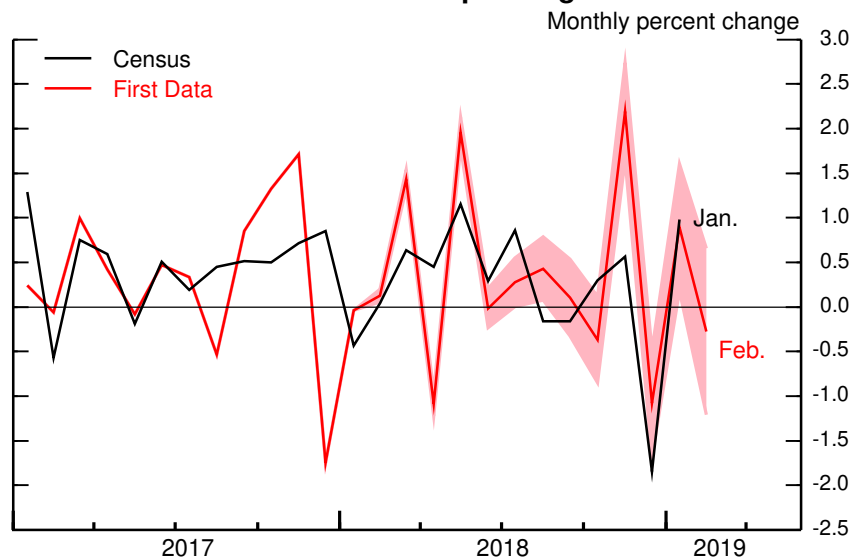
1. Real GDP



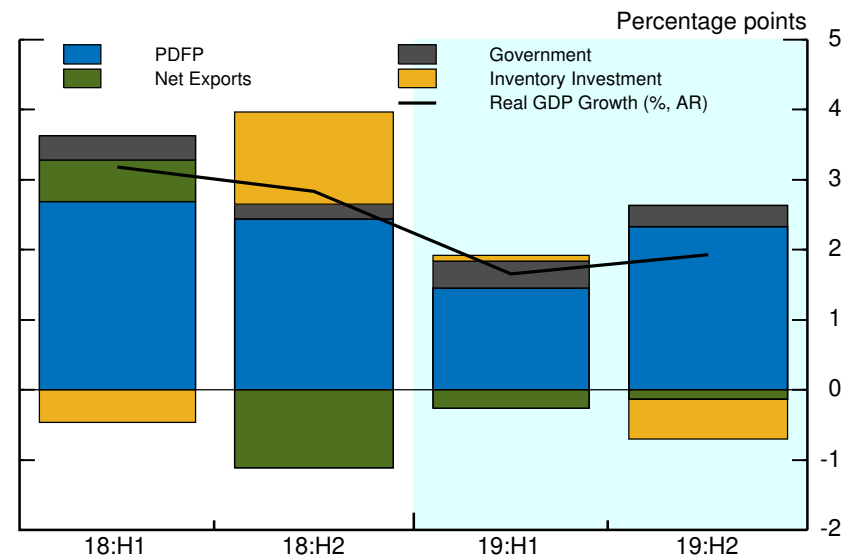
2. Evolution of 2019:Q1 GDP Growth Nowcasts



3. Estimates of Nominal Retail Spending



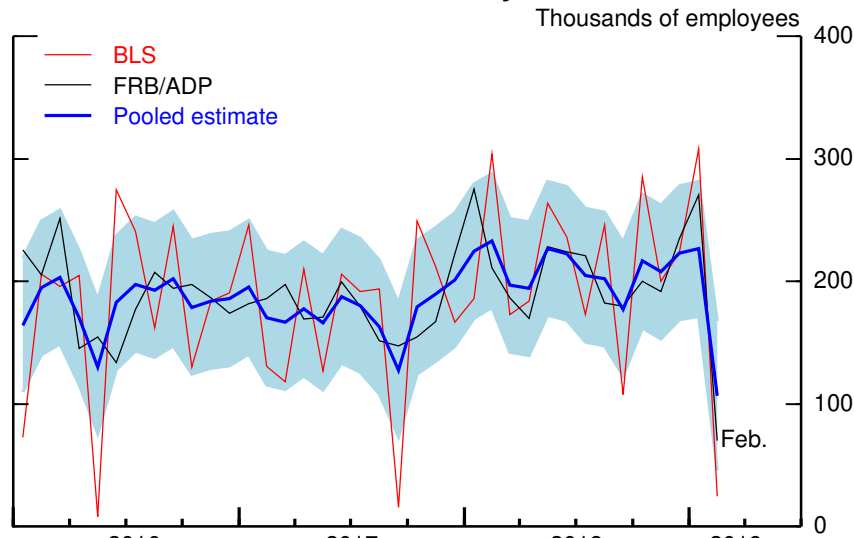
4. Contributions to Real GDP Growth*



*Contributions to annualized percent change in real GDP over period shown. Shaded region indicates forecast period.

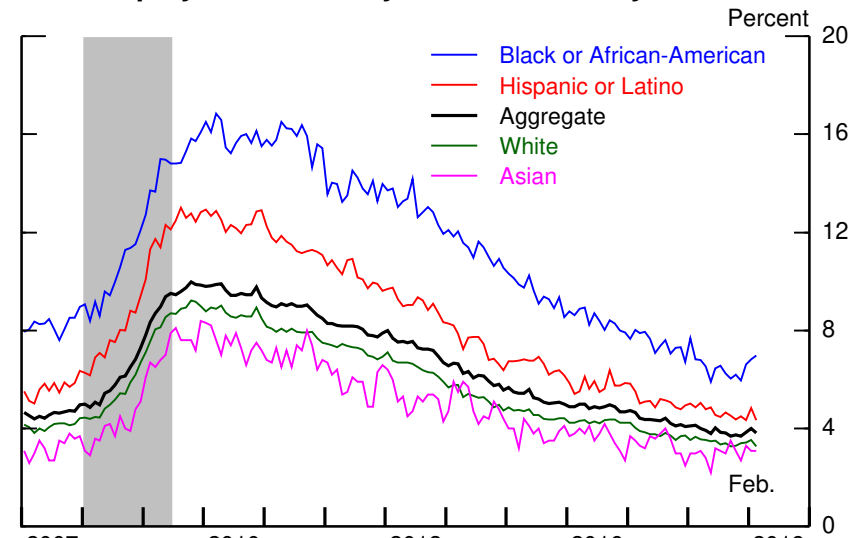
Strong Labor Market

5. Estimates of Private Nonfarm Payroll Gains



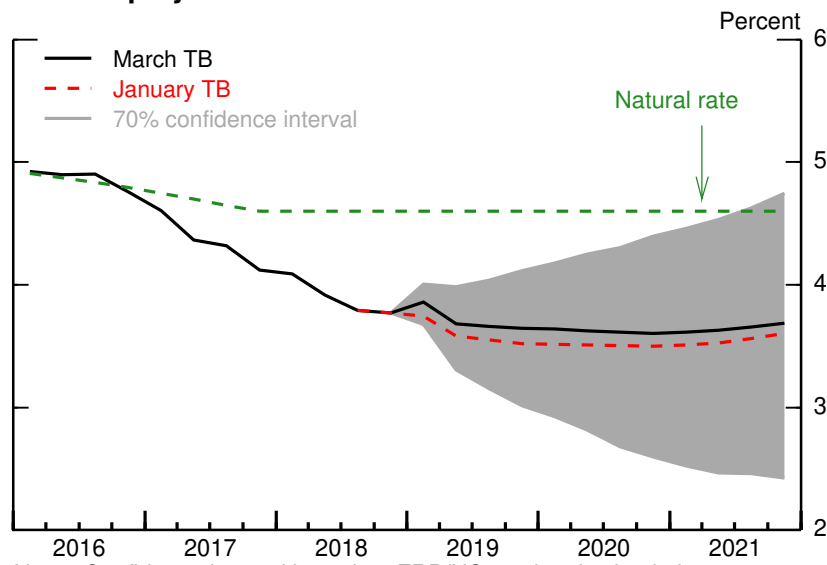
Note: Shaded region denotes 90% confidence interval for pooled estimate.

6. Unemployment Rates by Race or Ethnicity



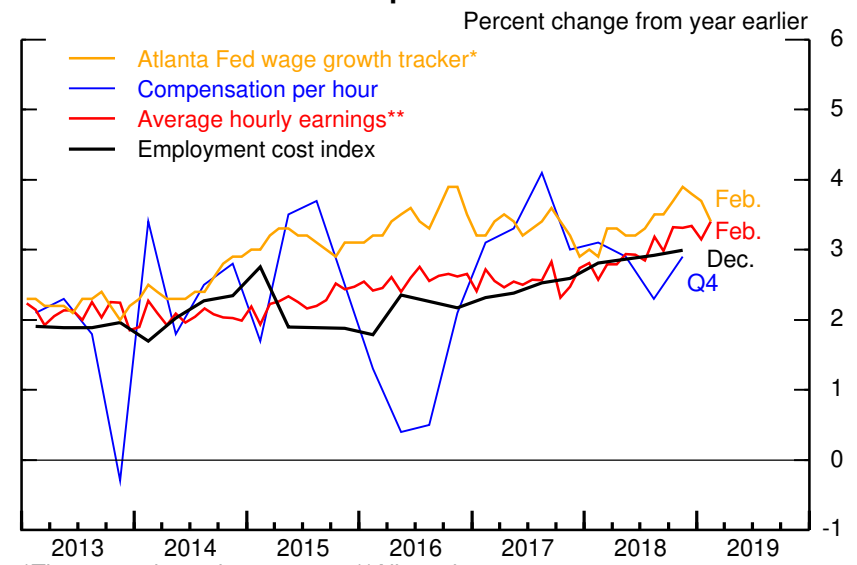
Note: Shaded bar indicates a period of business recession as defined by the NBER.

7. Unemployment Rate



Note: Confidence interval based on FRB/US stochastic simulation.

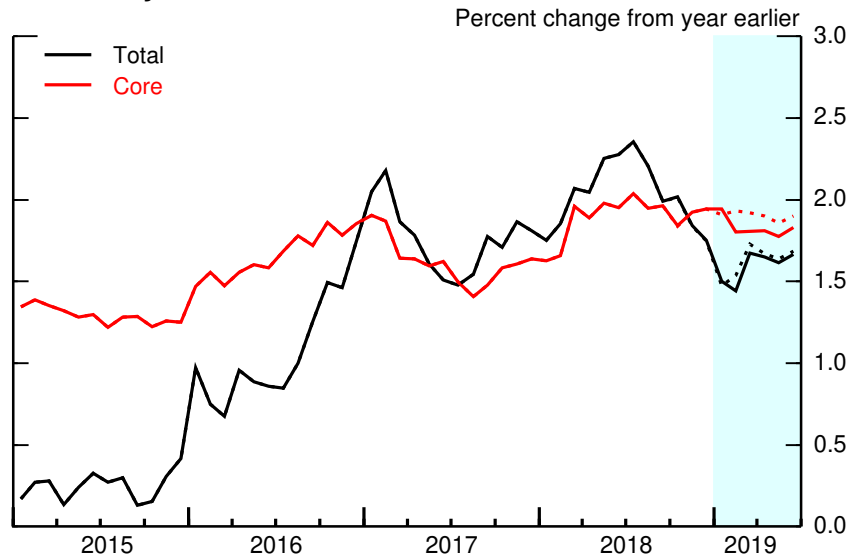
8. Measures of Labor Compensation



*Three-month moving average. **All employees.

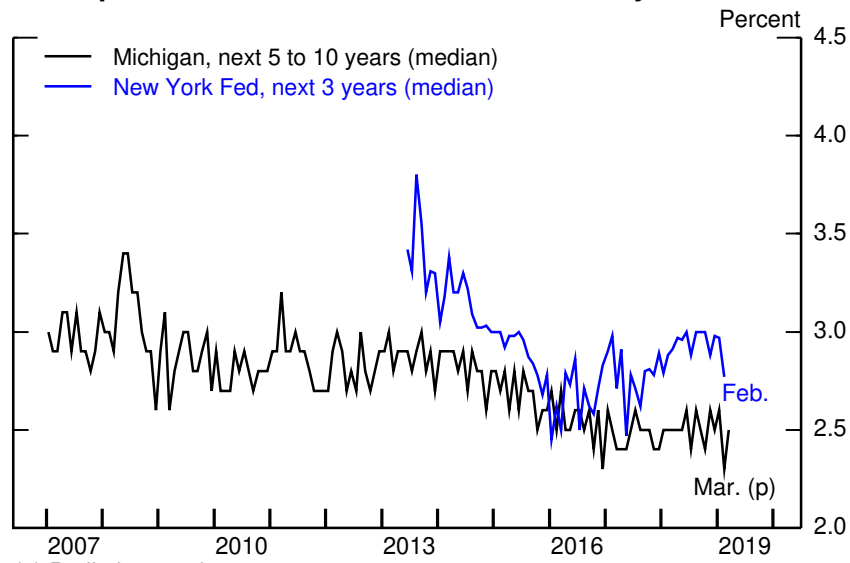
Subdued Inflation

9. Monthly PCE Price Inflation



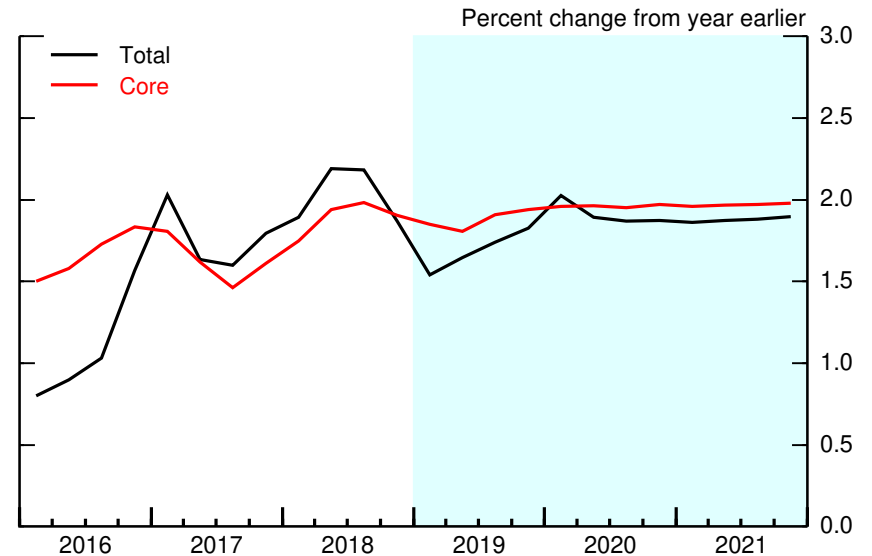
Note: Data from October 2018 through February 2019 are staff estimates. Dotted lines are March TB projections; solid lines are current projections.

11. Expected Inflation from Consumer Surveys



(p) Preliminary value.

10. Medium-Term PCE Price Inflation



Note: Current projections.

12. Changing the Tealbook's Policy Rule

- The staff's current federal funds rate path is well above the SEP.
- This is partly due to greater tailwinds.
- The rule is not serving the FOMC well.
- We will aim to introduce a simple rule that roughly mimics FOMC behavior.
- We plan to re-evaluate the rule regularly.

Appendix 4: Materials used by Mr. Gruber

Class II FOMC - Restricted (FR)

Material for Briefing on

The International Outlook

Joseph Gruber

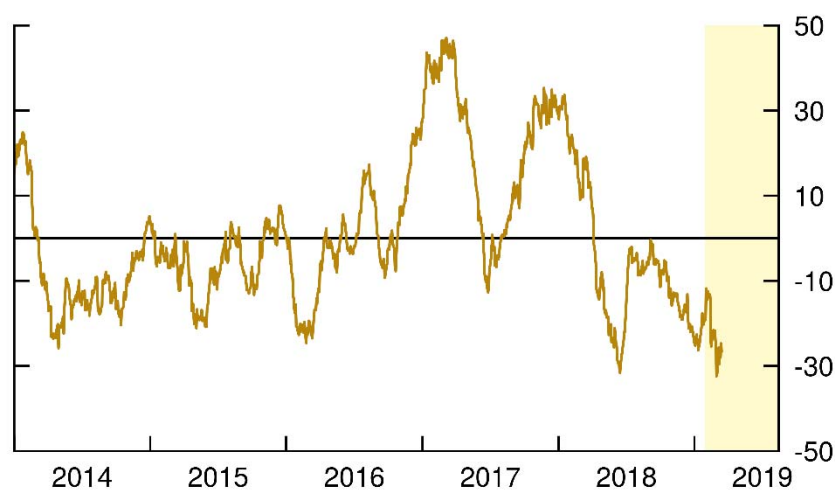
Exhibits by Noah Mathews

March 19, 2019

Foreign growth momentum continues to slow

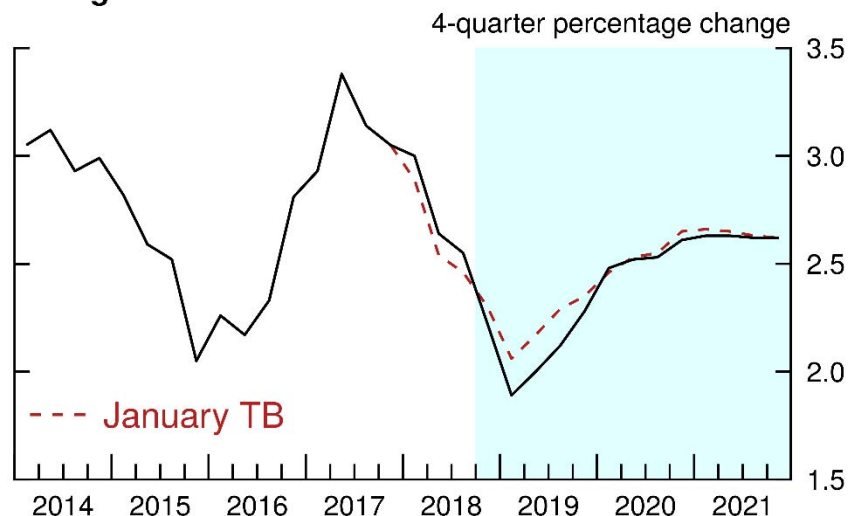
- Economic data have continued to disappoint.
- We have revised down our outlook, particularly in the near term.
- Still expect a pick up to potential as temporary headwinds fade and supported by accommodative policy.

Global Economic Surprise Index



Source: Citigroup.

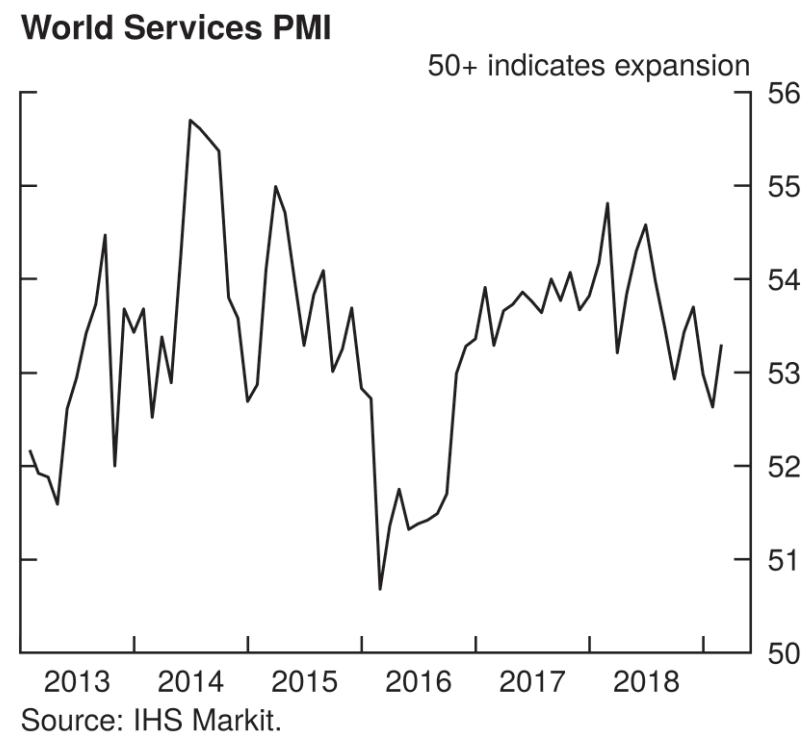
Foreign GDP



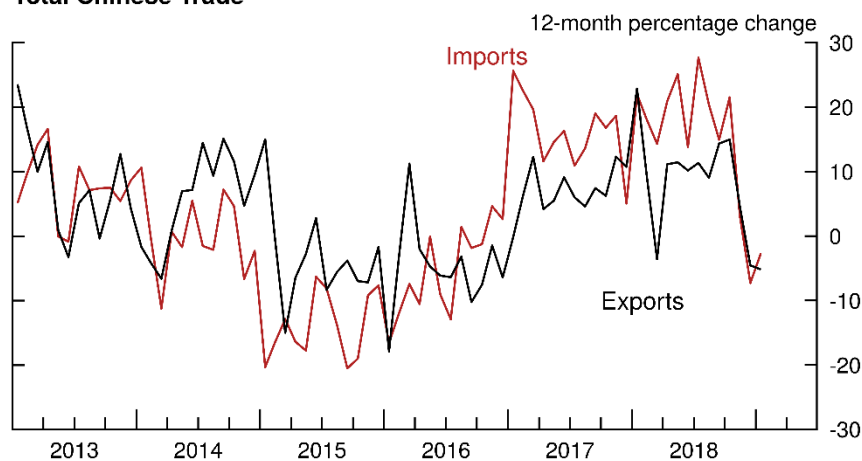
Source: Staff estimates.

Notable slowdown in trade and manufacturing

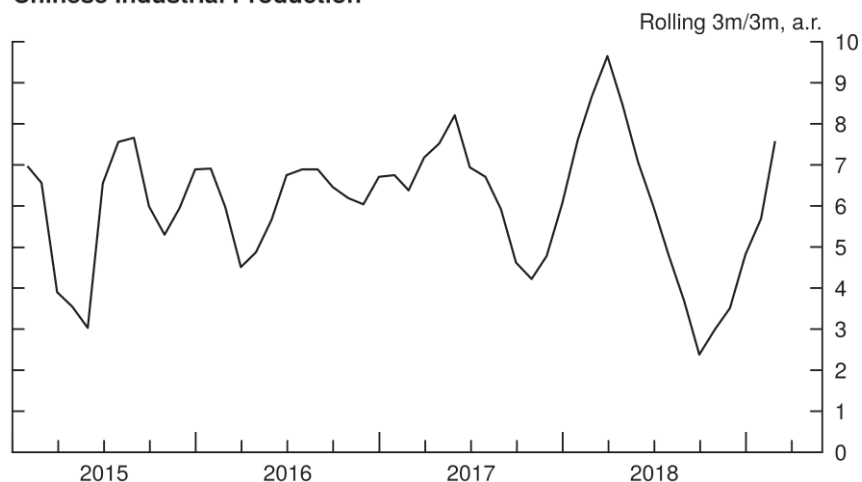
- Trade and manufacturing have been soft even as other sectors have held up.



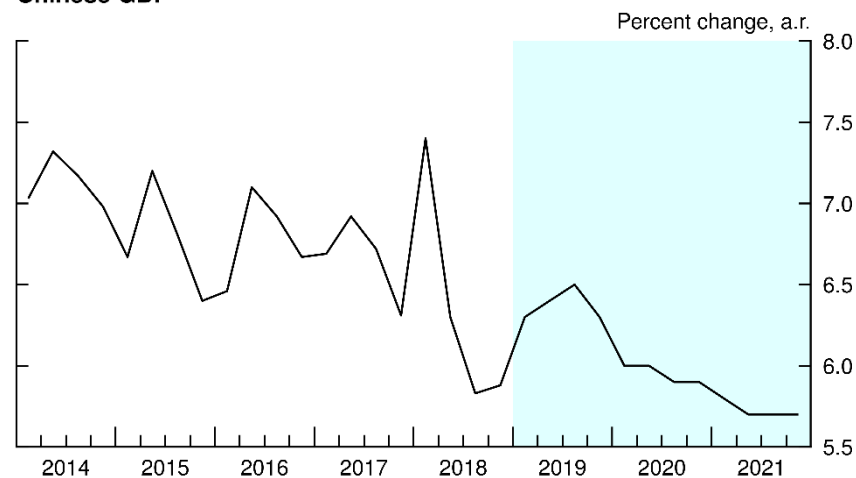
China: Drag on global growth?

Total Chinese Trade

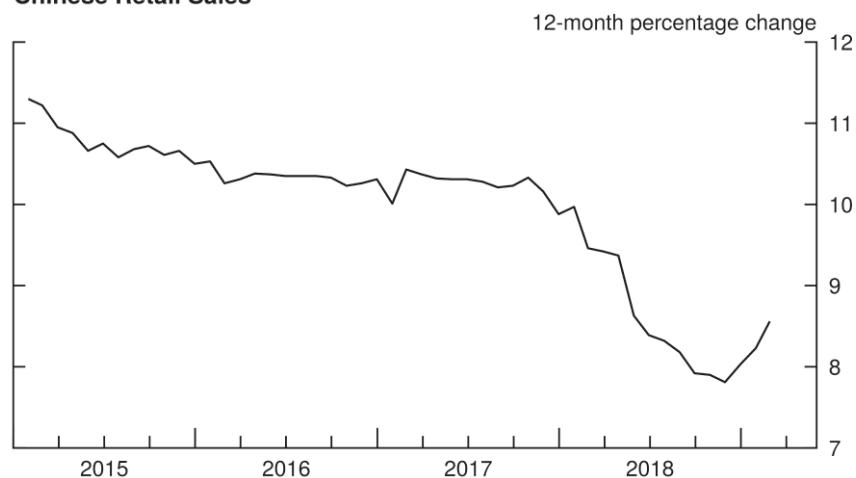
Note: The underlying level series for January/February of each year is the sum of those months' trade. Source: Haver Analytics.

Chinese Industrial Production

Source: Haver Analytics, NBS, and staff calculations.

Chinese GDP

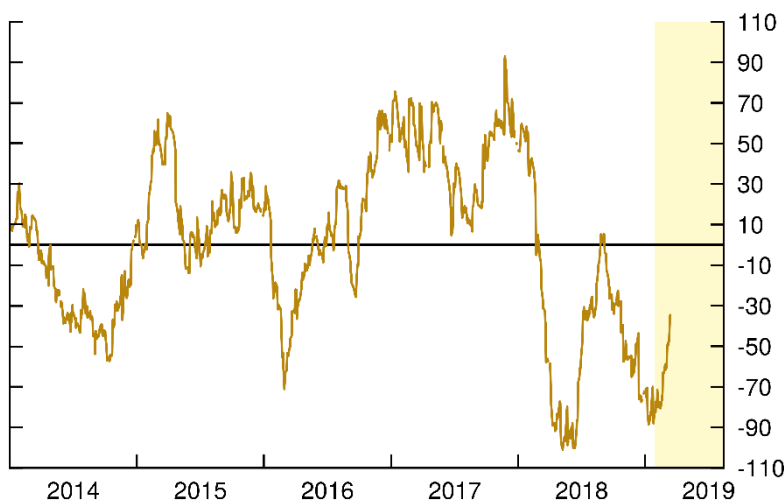
Source: Staff estimates.

Chinese Retail Sales

Source: Haver Analytics, NBS, and staff calculations.

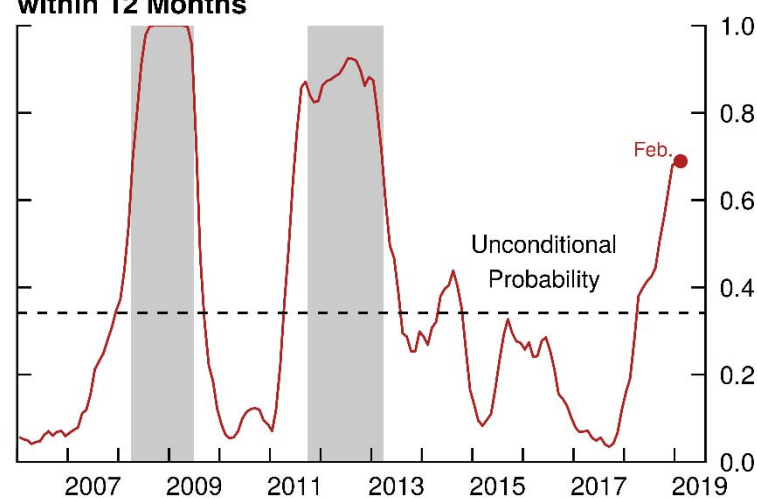
Euro area: Entering Recession?

Euro Area Economic Surprise Index



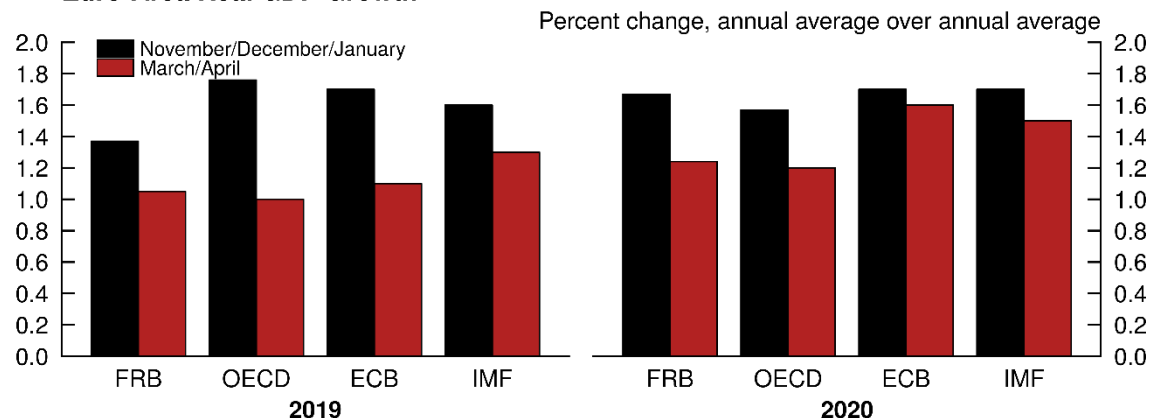
Source: Citigroup.

Estimated Probability of Recession in the Euro Area within 12 Months



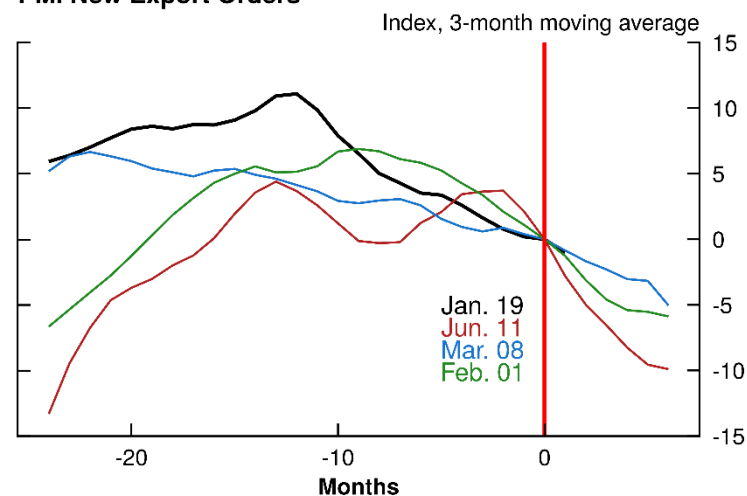
Source: Staff calculations.

Euro-Area Real GDP Growth

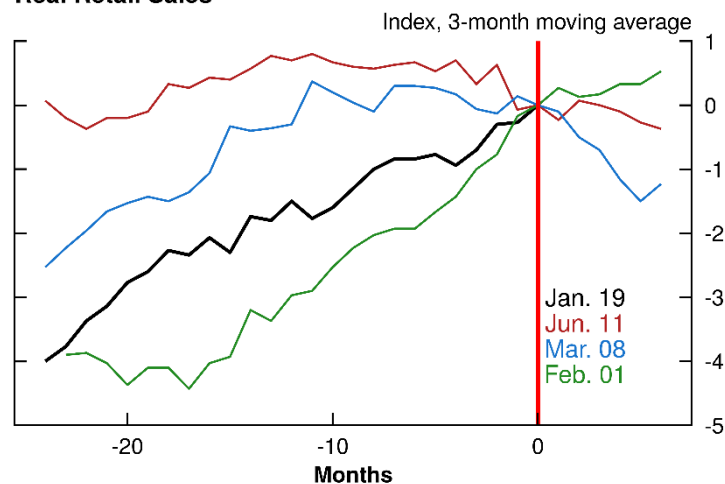


Source: IMF WEO, ECB, OECD, and staff estimates.

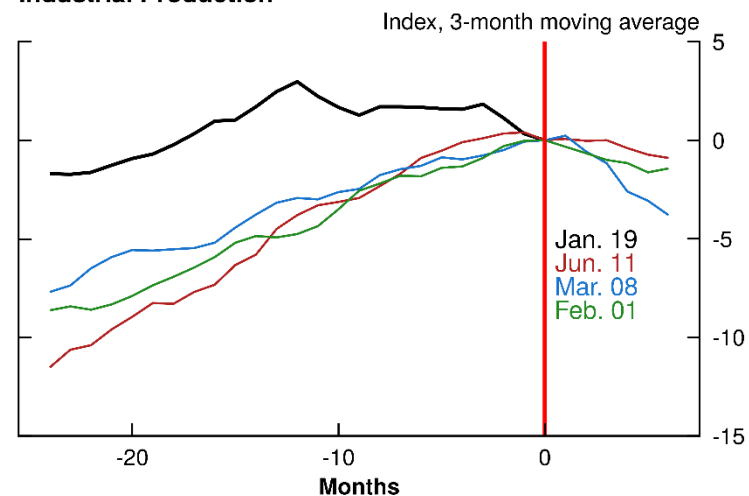
Euro area: Is a recession likely?

PMI New Export Orders**Real Retail Sales**

Source: IHS Markit.



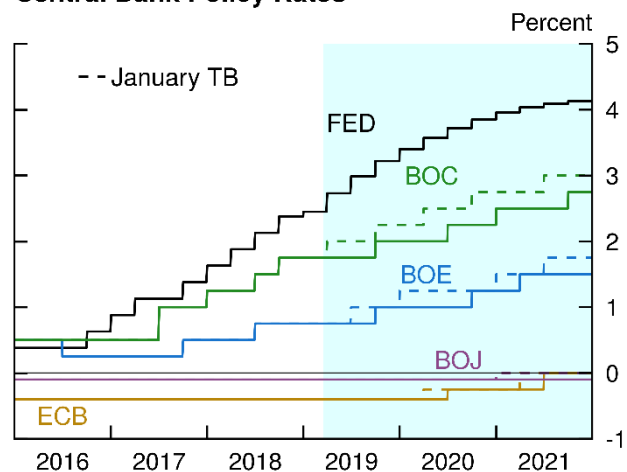
Source: Statistical Office of the European Communities.

Industrial Production

Source: Statistical Office of the European Communities.

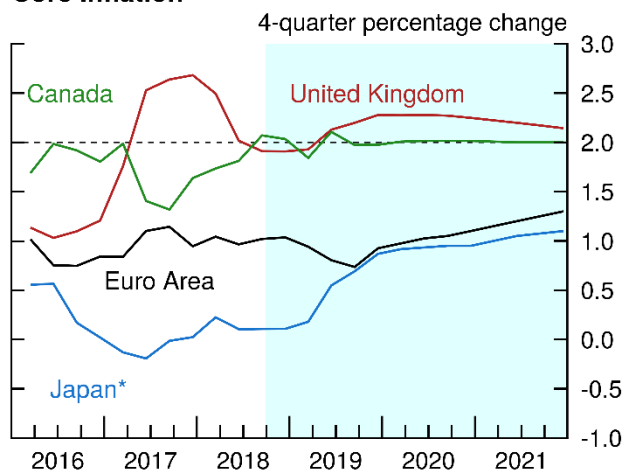
Monetary Policy, Inflation, and the Dollar

Central Bank Policy Rates



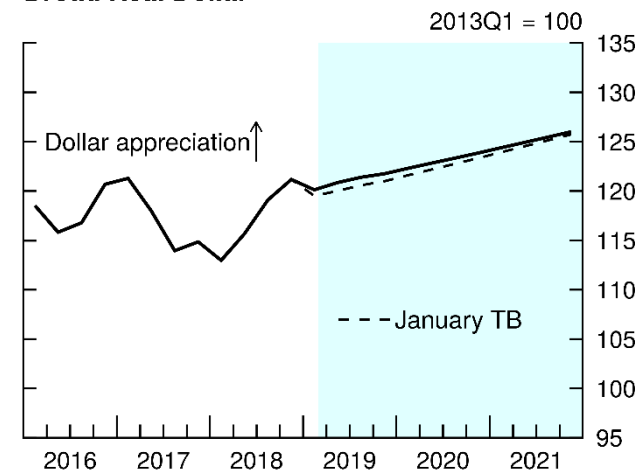
Source: Staff estimates, Bloomberg, and Haver Analytics.

Core Inflation



Note: Dashed line indicates target. Source: Haver Analytics and staff estimates. *Excludes effect of consumption taxes.

Broad Real Dollar



Source: Staff estimates.

Risks: Brexit and Trade

Brexit:

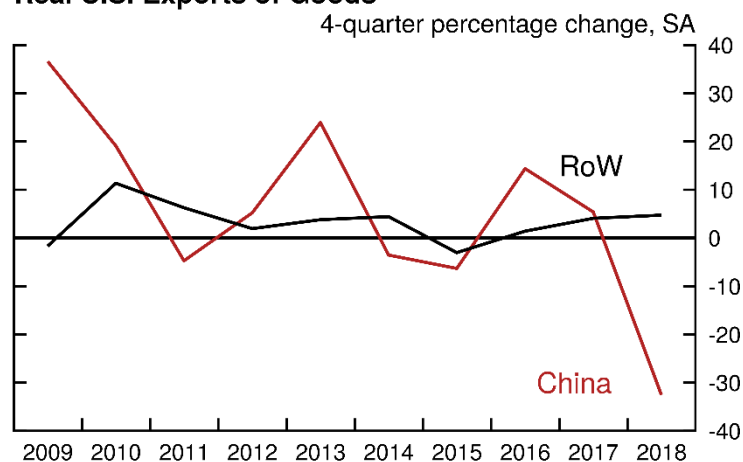
- UK to request extension past March 29 deadline.
- Length of extension depends on possible vote on Prime Minister May's twice-rejected exit plan.
- Extension requires EU approval.

Trade Policy:

- Administration delayed next round of tariffs on imports from China.
- Markets highly reactive to trade policy news. Could be disappointed if:
 1. Tensions escalate.
 2. Or removal of tariffs does not boost activity.

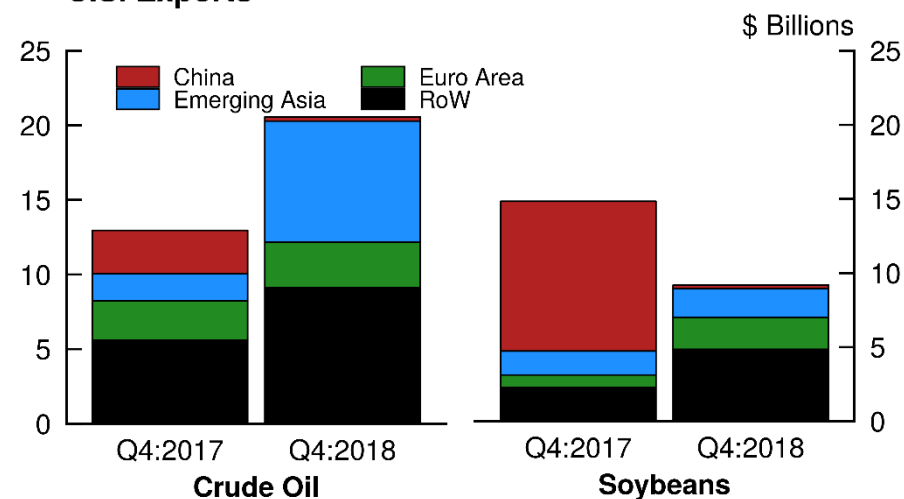
Have retaliatory tariffs hurt U.S. exports?

Real U.S. Exports of Goods



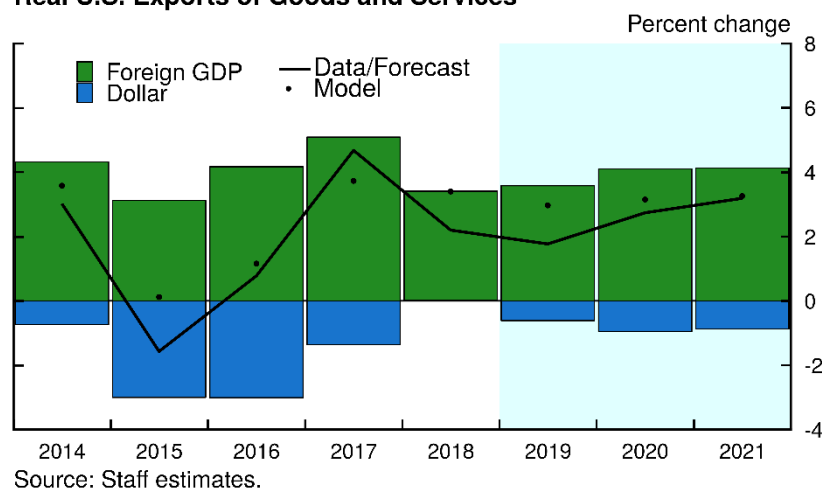
Source: BEA.

U.S. Exports



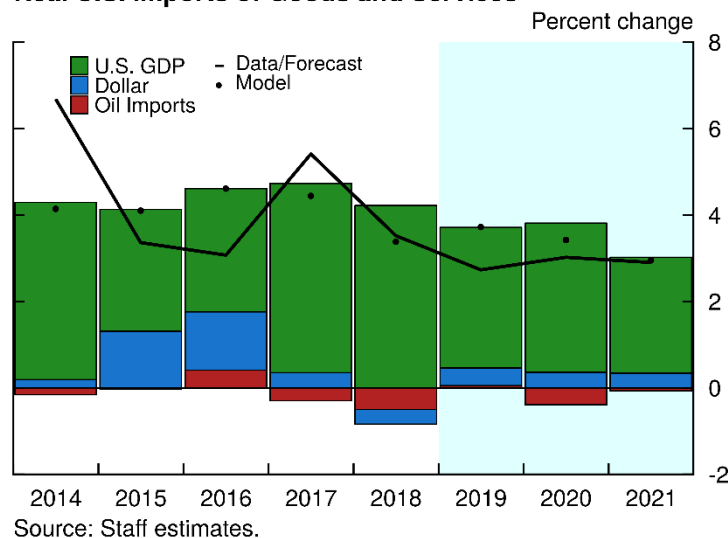
Source: BEA.

Real U.S. Exports of Goods and Services

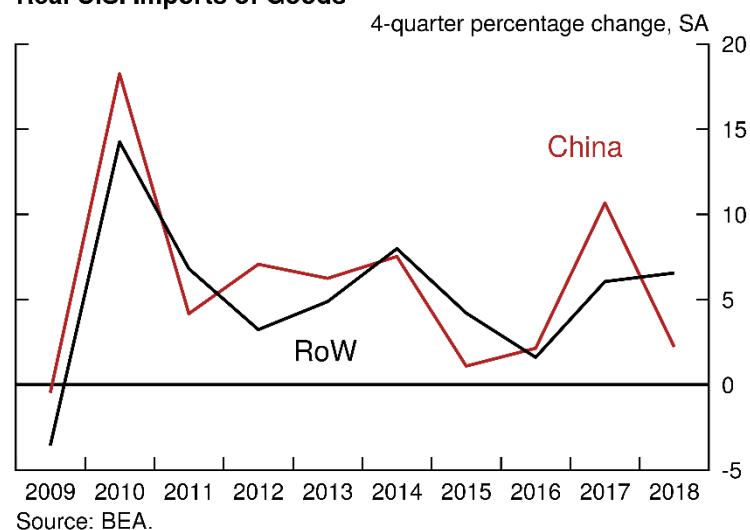


Have tariffs depressed U.S. imports?

Real U.S. Imports of Goods and Services



Real U.S. Imports of Goods

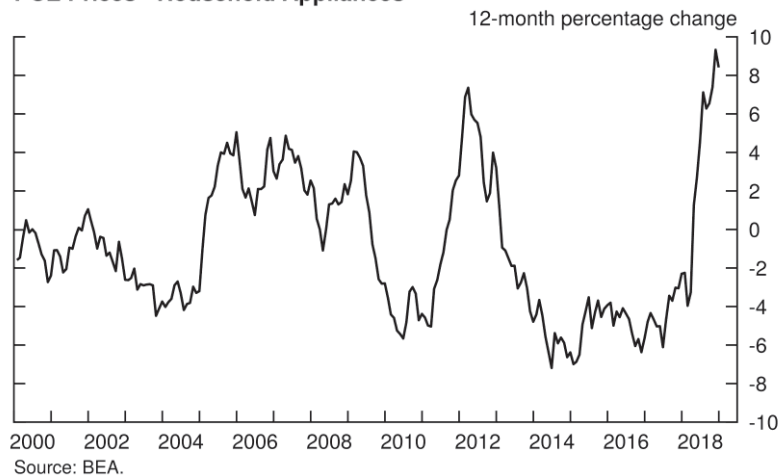


U.S. Imports of Goods (2018H2/2017H2 Percent)

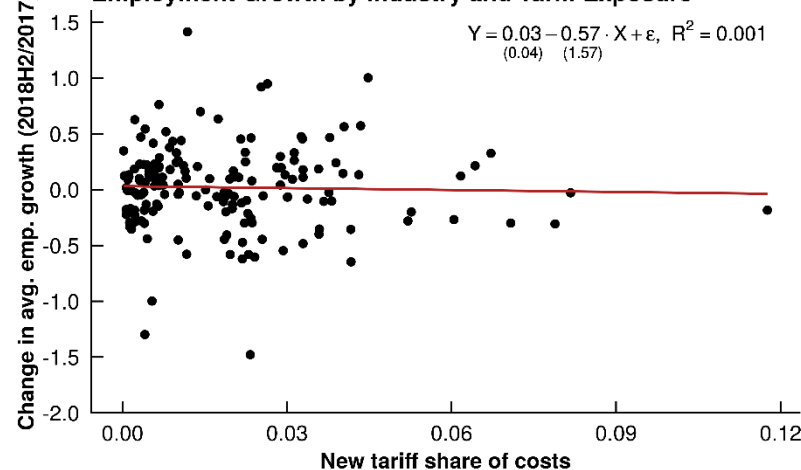
	Goods unaffected by tariffs	25% tariff on 7/6/18	25% tariff on 8/23/18	10% tariff on 9/24/18
1. World	7.1	3.8	4.3	12.3
2. China	2.9	-20.1	-3.2	13.1
3. Mexico	2.9	13.1	20.5	13.1
4. EME Asia ex China	6.2	6.1	1.5	13.7
5. Euro Area	17.2	5.0	-0.9	9.1
6. Japan	10.6	1.6	1.8	4.7

Have tariffs increased prices or depressed activity?

PCE Prices - Household Appliances

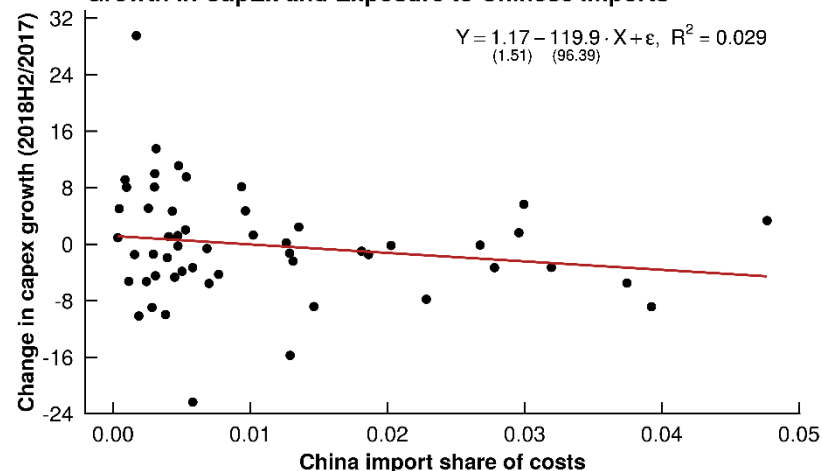


Employment Growth by Industry and Tariff Exposure



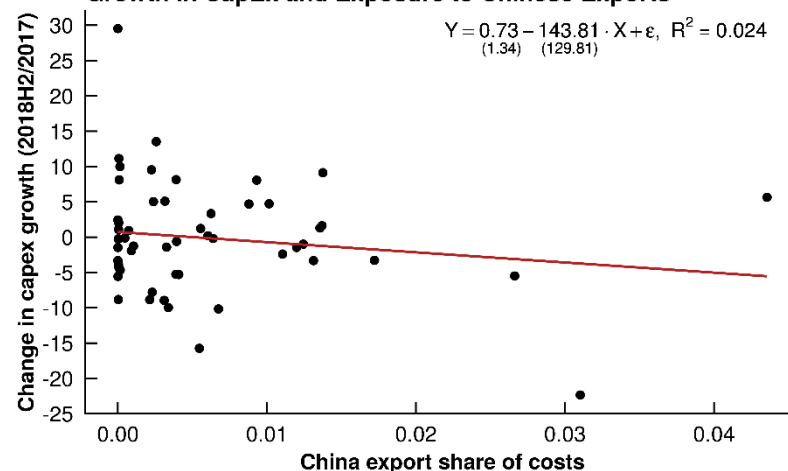
Source: BLS, BEA, and staff calculations.

Growth in CapEx and Exposure to Chinese Imports



Source: BEA, Census, and staff calculations from Compustat.

Growth in CapEx and Exposure to Chinese Exports



Source: BEA, Census, and staff calculations from Compustat.

Appendix 5: Materials used by Mr. Priebisch

Class I FOMC - Restricted Controlled (FR)

Material for Briefing on

Summary of Economic Projections

Marcel Priebisch

Exhibits and support by Erik Larsson and Courtney Wiegand

March 19, 2019

Exhibit 1. Economic projections for 2019–21 and over the longer run (percent)

Change in real GDP				
	2019	2020	2021	Longer run
Median	2.1	1.9	1.8	1.9
December projection	2.3	2.0	1.8	1.9
Range	1.6 – 2.4	1.7 – 2.2	1.5 – 2.2	1.7 – 2.2
December projection	2.0 – 2.7	1.5 – 2.2	1.4 – 2.1	1.7 – 2.2
Memo: Tealbook	1.8	2.0	1.5	1.7
December projection	2.4	2.0	1.4	1.7

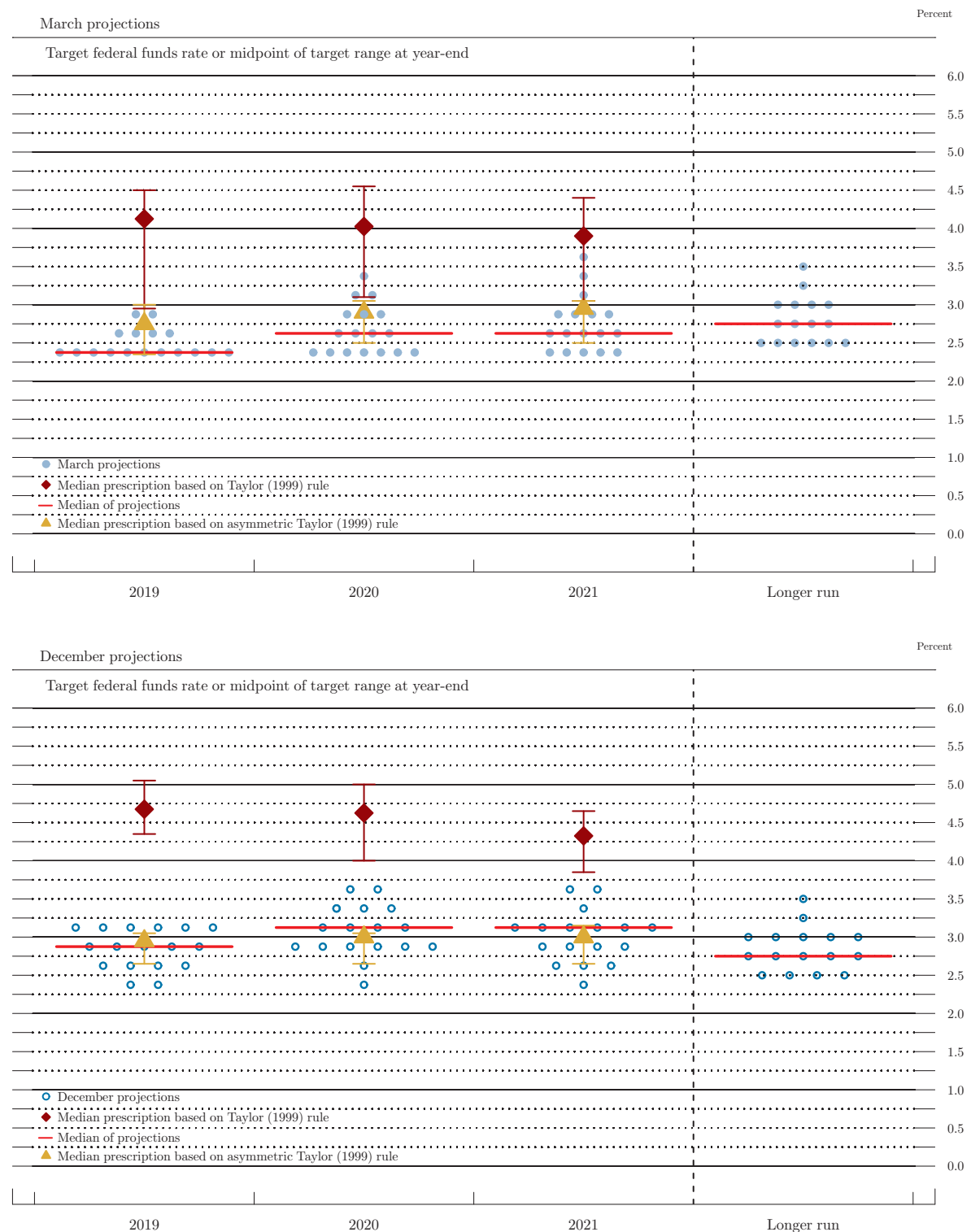
Unemployment rate				
	2019	2020	2021	Longer run
Median	3.7	3.8	3.9	4.3
December projection	3.5	3.6	3.8	4.4
Range	3.5 – 4.0	3.4 – 4.1	3.4 – 4.2	4.0 – 4.6
December projection	3.4 – 4.0	3.4 – 4.3	3.4 – 4.2	4.0 – 4.6
Memo: Tealbook	3.6	3.6	3.7	4.6
December projection	3.4	3.4	3.5	4.6

PCE inflation				
	2019	2020	2021	Longer run
Median	1.8	2.0	2.0	2.0
December projection	1.9	2.1	2.1	2.0
Range	1.6 – 2.1	1.9 – 2.2	2.0 – 2.2	2.0
December projection	1.8 – 2.2	2.0 – 2.2	2.0 – 2.3	2.0
Memo: Tealbook	1.8	1.9	1.9	2.0
December projection	1.8	2.0	2.0	2.0

Core PCE inflation			
	2019	2020	2021
Median	2.0	2.0	2.0
December projection	2.0	2.0	2.0
Range	1.8 – 2.2	1.8 – 2.2	1.9 – 2.2
December projection	1.9 – 2.2	2.0 – 2.2	2.0 – 2.3
Memo: Tealbook	1.9	2.0	2.0
December projection	2.0	2.0	2.0

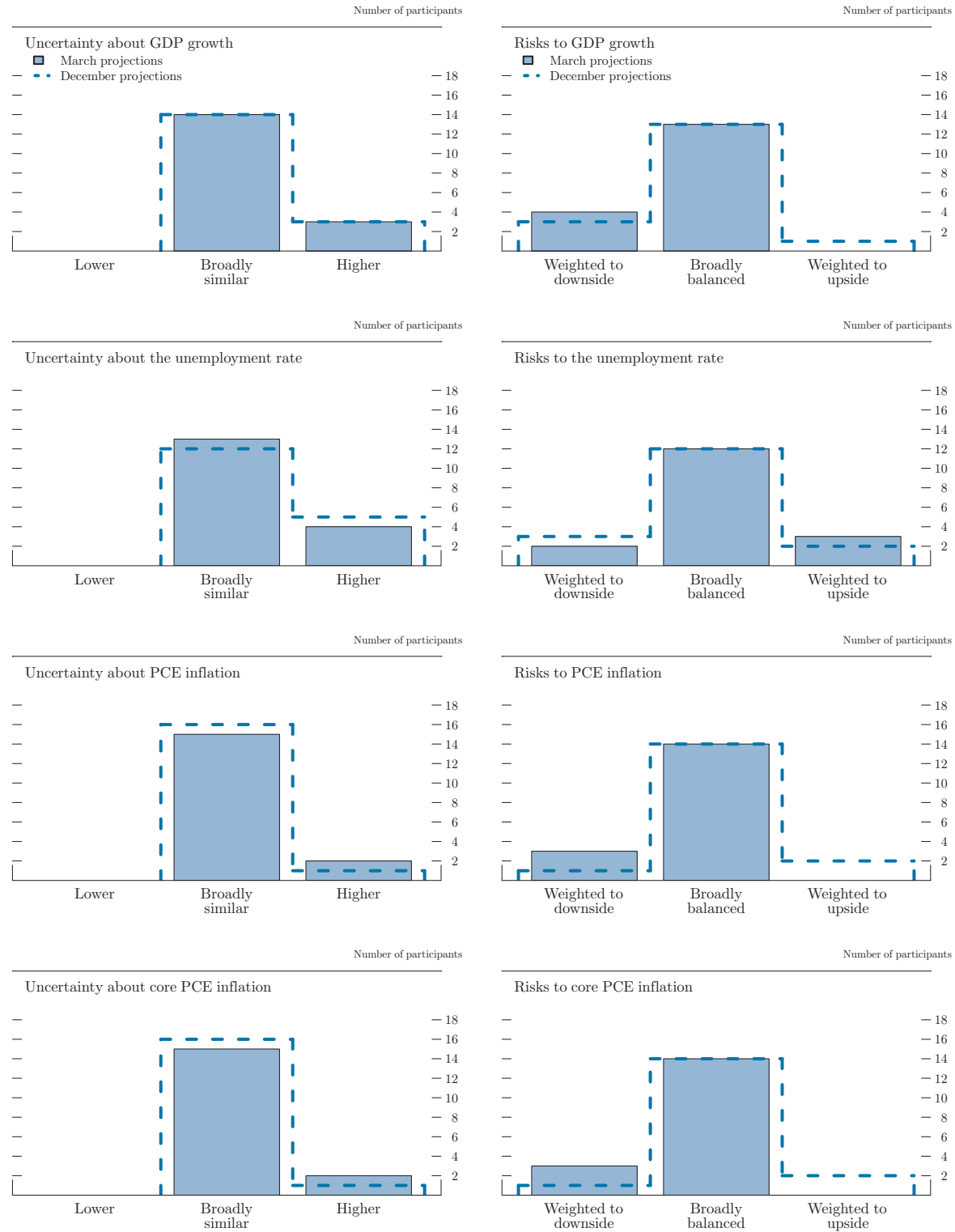
NOTE: Updated March Tealbook values are reported. The percent changes in real GDP and inflation are measured Q4/Q4. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. One participant did not submit longer-run projections for the change in real GDP, the unemployment rate, or the federal funds rate in conjunction with the December 18–19, 2018, meeting, and one participant did not submit such projections in conjunction with the March 19–20, 2019, 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 $1/8$ 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. Each red diamond is the median value, for the indicated year, of the set of prescriptions for the federal funds rate that are generated by inserting into the Taylor (1999) rule each participant's projections of core PCE inflation and the unemployment rate along with the participant's projections of the longer-run nominal federal funds rate and longer-run unemployment rate. The golden triangles are the medians of prescriptions generated using the asymmetric Taylor (1999) rule. The red and golden whiskers show the central tendency, for each year, of the prescriptions that result from using the Taylor (1999) rule and the asymmetric Taylor (1999) rule, respectively. One participant did not submit longer-run projections for the federal funds rate or unemployment rate.

Exhibit 3. Uncertainty and risks in economic projections



Appendix 6: Materials used by Mr. Laubach

Class I FOMC – Restricted Controlled (FR)

Material for the Briefing on

Monetary Policy Alternatives

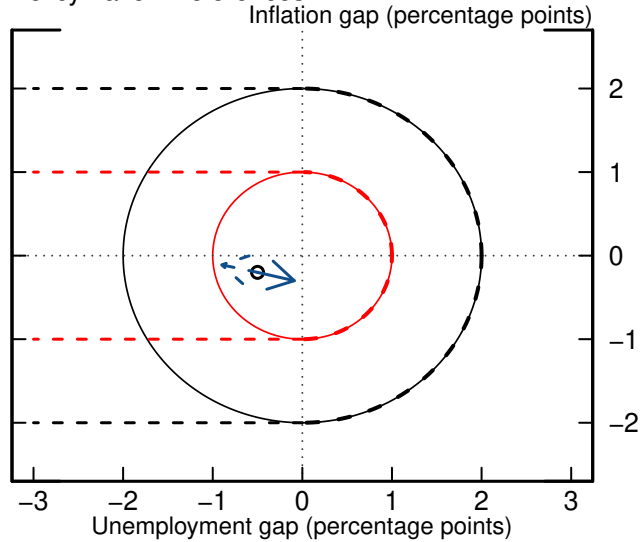
Thomas Laubach

Exhibits by Gurubala Kotta

March 19-20, 2019

Monetary Policy Considerations

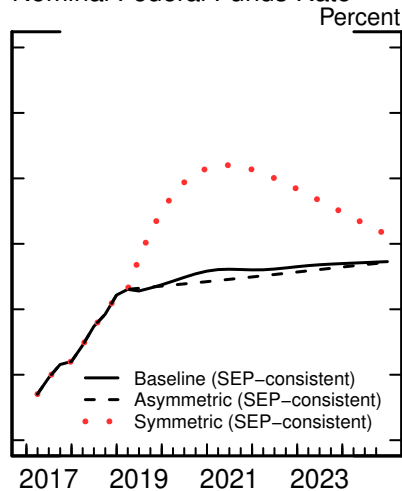
Policymaker Preferences



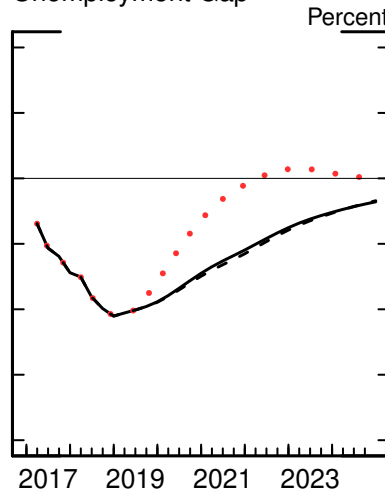
Two Loss Functions

- Solid: Unemployment gaps and inflation gaps that are equivalent under symmetric loss function.
- Dashed: Outcomes equivalent under asymmetric loss. When $u < u^*$, only inflation outcomes matter.
- Symmetric: Bring unemployment back to u^* at the cost of lower inflation.
- Asymmetric: Return inflation to 2 percent even if unemployment falls further.

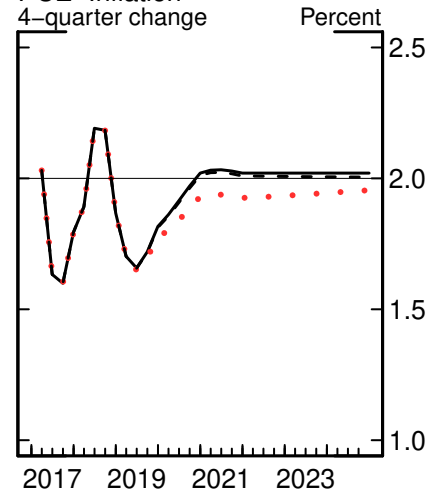
Nominal Federal Funds Rate



Unemployment Gap



PCE-Inflation 4-quarter change



Optimal Policy under Asymmetric Loss

- Policymakers may see no intrinsic costs, potential benefits from tight labor market.
 - Evaluate possible side effects over appropriately long horizon.
 - Asymmetric behavior might result in upward inflation bias.
- When ELB is important, following asymmetric policy might offset downward bias to inflation due to ELB constraint.

Considerations for Future Communications

- Could communicate that, as long as inflation and expectations don't rise much above 2 percent, strengthening outlook leaves you patient.
- In simulations, public understands upside bias from policy preferences, downside bias from ELB.
 - In practice, clear communications important.

JANUARY 2019 FOMC STATEMENT

1. Information received since the Federal Open Market Committee met in December indicates that the labor market has continued to strengthen and that economic activity has been rising at a solid rate. Job gains have been strong, on average, in recent months, and the unemployment rate has remained low. Household spending has continued to grow strongly, while growth of business fixed investment has moderated from its rapid pace earlier last year. On a 12-month basis, both overall inflation and inflation for items other than food and energy remain near 2 percent. Although market-based measures of inflation compensation have moved lower in recent months, survey-based measures of longer-term inflation expectations are little changed.
2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. In support of these goals, the Committee decided to maintain the target range for the federal funds rate at 2-1/4 to 2-1/2 percent. The Committee continues to view sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective as the most likely outcomes. In light of global economic and financial developments and muted inflation pressures, the Committee will be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate to support these outcomes.
3. In determining the timing and size of future adjustments to the target range for the federal funds rate, 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.

ALTERNATIVE A FOR MARCH 2019

1. Information received since the Federal Open Market Committee met in ~~December~~ January indicates that the labor market ~~has continued to strengthen and~~ remains strong but that growth of economic activity has ~~been rising at a~~ slowed from its solid rate in the fourth quarter. Payroll employment was little changed in February, but job gains have been ~~strong~~ solid, on average, in recent months, and the unemployment rate has remained low. Recent indicators point to slower growth of household spending ~~has continued to grow strongly, while growth of~~ and business fixed investment ~~has moderated from its rapid pace earlier last year~~ in the first quarter. On a 12-month basis, ~~both~~ overall inflation has declined, largely as a result of lower energy prices; and inflation for items other than food and energy remains near 2 percent. ~~Although~~ Market-based measures of inflation compensation ~~have moved lower in recent months~~ remain low, and some survey-based measures of longer-term inflation expectations ~~are little changed~~ have declined.
2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. In support of these goals, the Committee decided to maintain the target range for the federal funds rate at 2-1/4 to 2-1/2 percent. The Committee continues to view sustained expansion of economic activity; and strong labor market conditions; ~~and inflation near the Committee's symmetric 2 percent objective~~ as the most likely outcomes. Inflation is expected to run below the Committee's symmetric 2 percent objective in the near term and then rise gradually toward 2 percent as labor market strength continues and the transitory effects of recent energy price declines dissipate. In light of global economic and financial developments ~~and muted inflation pressures~~ and to support a sustained return to 2 percent inflation, the Committee will be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate ~~to support these outcomes~~.
3. In determining the timing and size of future adjustments to the target range for the federal funds rate, 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.

ALTERNATIVE B FOR MARCH 2019

1. Information received since the Federal Open Market Committee met in ~~December~~ January indicates that the labor market ~~has continued to strengthen and~~ remains strong but that growth of economic activity has ~~been rising at a~~ slowed from its solid rate in the fourth quarter. Payroll employment was little changed in February, but job gains have been ~~strong~~ solid, on average, in recent months, and the unemployment rate has remained low. Recent indicators point to slower growth of household spending ~~has continued to grow strongly, while~~ growth of and business fixed investment ~~has moderated from its rapid pace earlier last year~~ in the first quarter. On a 12-month basis, ~~both~~ overall inflation has declined, largely as a result of lower energy prices; and inflation for items other than food and energy remains near 2 percent. ~~Although~~ On balance, market-based measures of inflation compensation have ~~moved lower~~ remained low in recent months, and survey-based measures of longer-term inflation expectations are little changed.
2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. In support of these goals, the Committee decided to maintain the target range for the federal funds rate at 2-1/4 to 2-1/2 percent. The Committee continues to view sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective as the most likely outcomes. In light of global economic and financial developments and muted inflation pressures, the Committee will be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate to support these outcomes.
3. In determining the timing and size of future adjustments to the target range for the federal funds rate, 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.

ALTERNATIVE C FOR MARCH 2019

1. Information received since the Federal Open Market Committee met in...
2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. In support of these goals, the Committee decided to maintain the target range for the federal funds rate at 2-1/4 to 2-1/2 percent. The Committee continues to view sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective as the most likely outcomes. ~~In light of global economic and financial developments and muted inflation pressures, the Committee will be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate to support these outcomes.~~ **[The Committee anticipates that some further policy firming may become appropriate to support these outcomes.]**
3. In determining the timing and size of future adjustments to the target range for the federal funds rate, 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.

Implementation Note for March 2019 (all Alternatives)

Release Date: March 20, 2019

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 ~~January 30, 2019~~ **March 20, 2019**:

- The Board of Governors of the Federal Reserve System voted [unanimously] to maintain the interest rate paid on required and excess reserve balances at 2.40 percent, effective ~~January 31, 2019~~ **March 21, 2019**.
- 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 ~~January 31, 2019~~ **March 21, 2019**, 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 2-1/4 to 2-1/2 percent, including overnight reverse repurchase operations (and reverse repurchase operations with maturities of more than one day when necessary to accommodate weekend, holiday, or similar trading conventions) at an offering rate of 2.25 percent, in amounts limited only by the value of Treasury securities held outright in the System Open Market Account that are available for such operations and by a per-counterparty limit of \$30 billion per day.

The Committee directs the Desk to continue rolling over at auction the amount of principal payments from the Federal Reserve’s holdings of Treasury securities maturing during each calendar month that exceeds \$30 billion, and to continue reinvesting in agency mortgage-backed securities the amount of principal payments from the Federal Reserve’s holdings of agency debt and agency mortgage-backed securities received during each calendar month that exceeds \$20 billion. Small deviations from these amounts for operational reasons are acceptable.

**** OR ****

The Committee directs the Desk to continue rolling over at auction the amount of principal payments from the Federal Reserve’s holdings of Treasury securities maturing during ~~each calendar month~~ **March** that exceeds \$30 billion; **effective in April, the Committee directs the Desk to roll over at auction the amount of principal payments from the Federal Reserve’s holdings of Treasury securities maturing during**

each calendar month that exceeds \$20 billion. ~~and~~ **The Committee directs the Desk** to continue reinvesting in agency mortgage-backed securities the amount of principal payments from the Federal Reserve's holdings of agency debt and agency mortgage-backed securities received during each calendar month that exceeds \$20 billion. Small deviations from these amounts for operational reasons are acceptable.

The Committee also directs the Desk to engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency mortgage-backed securities 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 3.00 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 SystemPotential Board actions associated with FOMC Alternatives A, B, or C

Interest on required and excess reserve balances

Leave the interest rates paid on required and excess reserve balances unchanged at 2.40 percent.

Establishment of the primary, secondary, and seasonal credit rates

Approve establishment of the primary credit rate at the existing rate of 3.00 percent and establishment of the rates for secondary and seasonal credit under the existing formulas specified in the staff's March 15, 2019, memo to the Board.

Appendix 7: Materials used by Mr. Potter

Class I FOMC - Restricted Controlled (FR)

Material for Briefing on

Balance Sheet Normalization Principles and Plans

Simon Potter

March 20, 2019

Class I FOMC - Restricted-Controlled (FR)

Treasury Redemptions and Reinvestments from April 2019 – September 2019

	No Taper	April Taper *	May Taper **
Treasury Redemptions	\$146 billion	\$90 billion	\$103 billion
Treasury Reinvestments	\$70 billion	\$126 billion	\$113 billion

*Treasury cap changes to \$20 billion in April and \$10 billion in July; cap is removed and reinvestments begin in October.

** Treasury cap changes to \$15 billion in May; cap is removed and reinvestments begin in October.

Appendix 8: Materials used by Mr. Potter

Class I FOMC - Restricted Controlled (FR)

Material for Briefing on

**Desk Statement Regarding Reinvestment in Treasury
Securities and Agency MBS**

Simon Potter

March 20, 2019

Class I FOMC – Restricted Controlled (FR)

Statement Regarding Reinvestment in Treasury Securities and Agency Mortgage-Backed Securities

March 20, 2019

On March 20, 2019, the Federal Open Market Committee (FOMC) provided additional information regarding plans for its securities holdings via its [Balance Sheet Normalization Principles and Plans](#). Specifically, the Committee intends to slow the reduction of the Federal Reserve's holdings of Treasury securities by lowering the cap on monthly Treasury redemptions beginning in May. The Desk will continue to reinvest each month's principal payments from Treasury securities, agency debt, and agency mortgage-backed securities (MBS) only to the extent that such payments exceed the corresponding monthly cap amounts. Additionally, starting in October, the first \$20 billion per month of any agency principal payments received will be reinvested in Treasury securities; any additional agency principal payments above \$20 billion will be reinvested in agency MBS. As noted in the Principles and Plans, the Committee intends to adjust the monthly caps as follows:

MONTHLY CAPS ON SOMA SECURITIES REDUCTIONS		
	TREASURY SECURITIES	AGENCY SECURITIES*
Oct 2018 – Apr 2019	\$30 billion	\$20 billion
May 2019 – Sep 2019	\$15 billion	\$20 billion
From Oct 2019	\$0 billion	\$20 billion**

*Applies to combined principal payments of agency debt and agency MBS.

** The first \$20 billion of any agency principal payments received will be reinvested in Treasury securities. Any additional agency principal payments above \$20 billion will be reinvested in agency MBS.

Consistent with current practice for Treasury securities, the Desk will roll over at auction the principal payments from the Federal Reserve's holdings of Treasury securities maturing during each calendar month that exceed the cap amount for that month. The Desk will allocate that rollover amount across the month's maturity dates in proportion to the amount of System Open Market Account (SOMA) Treasury holdings maturing on each of those dates. Rollovers will continue to be accomplished by placing non-competitive bids at Treasury auctions; the bids will be allocated across the securities being issued in proportion to their announced offering amounts. The final redemption cap will be applied to the September scheduled maturities, which occur on September 30.

Consistent with current practice for agency securities, the Desk will reinvest in agency MBS any principal payments from SOMA holdings of agency debt and agency MBS received during each calendar month that exceed the cap amount for that month. The Desk's reinvestment purchases, if any, will be concentrated in newly-issued agency MBS in the To-Be-Announced (TBA) market. The planned amount of reinvestments in agency MBS that is anticipated to take place over each monthly

Class I FOMC – Restricted Controlled (FR)

period will be announced on or around the ninth business day of the month and will generally be conducted over the subsequent one-month period until the next announcement.

Additionally, in the March 2019 Principles and Plans, the Committee announced the planned conclusion of the reduction in aggregate securities holdings in the SOMA at the end of September 2019. Beginning in October 2019, principal payments received from agency debt and agency MBS holdings will be reinvested in Treasury securities via secondary market purchases subject to a maximum amount of \$20 billion per month; any principal payments in excess of \$20 billion will continue to be reinvested in agency MBS in a manner consistent with current practices. The Treasury securities purchases will initially be conducted across a range of maturities to roughly match the maturity composition of Treasury securities outstanding. The Desk will provide more details on these operations in May.

Additional information on Treasury rollovers and agency MBS reinvestments can be found in Frequently Asked Questions in the following locations:

[*FAQs: Treasury Rollovers »*](#)

[*FAQs: Agency MBS Reinvestment Purchases »*](#)

Appendix 9: Materials used by Mr. Potter

Class I FOMC - Restricted Controlled (FR)

Draft Press Release on

Balance Sheet Normalization Principles and Plans

March 20, 2019

FEDERAL RESERVE press release



For release at 2 p.m. EDT

March 20, 2019

Balance Sheet Normalization Principles and Plans

In light of its discussions at previous meetings and the progress in normalizing the size of the Federal Reserve's securities holdings and the level of reserves in the banking system, all participants agreed that it is appropriate at this time for the Committee to provide additional information regarding its plans for the size of its securities holdings and the transition to the longer-run operating regime. At its January meeting, the Committee stated that it intends to continue to implement monetary policy in a regime in which an ample supply of reserves ensures that control over the level of the federal funds rate and other short-term interest rates is exercised primarily through the setting of the Federal Reserve's administered rates and in which active management of the supply of reserves is not required. The Statement Regarding Monetary Policy Implementation and Balance Sheet Normalization released in January as well as the principles and plans listed below together revise and replace the Committee's earlier Policy Normalization Principles and Plans.

- To ensure a smooth transition to the longer-run level of reserves consistent with efficient and effective policy implementation, the Committee intends to slow the pace of the decline in reserves over coming quarters provided that the economy and money market conditions evolve about as expected.
 - The Committee intends to slow the reduction of its holdings of Treasury securities by reducing the cap on monthly redemptions from the current level of \$30 billion to \$15 billion beginning in May 2019.
 - The Committee intends to conclude the reduction of its aggregate securities holdings in the System Open Market Account (SOMA) at the end of September 2019.
 - The Committee intends to continue to allow its holdings of agency debt and agency mortgage-backed securities (MBS) to decline, consistent with the aim of holding primarily Treasury securities in the longer run.
 - Beginning in October 2019, principal payments received from agency debt and agency MBS will be reinvested in Treasury securities subject to a maximum amount of \$20 billion per month; any principal payments in excess of that maximum will continue to be reinvested in agency MBS.
 - Principal payments from agency debt and agency MBS below the \$20 billion maximum will initially be invested in Treasury securities across a range of maturities to roughly match the maturity composition of Treasury securities outstanding; the Committee will revisit this reinvestment plan in connection with its deliberations regarding the longer-run composition of the SOMA portfolio.

- 2 -

- It continues to be the Committee's view that limited sales of agency MBS might be warranted in the longer run to reduce or eliminate residual holdings. The timing and pace of any sales would be communicated to the public well in advance.
- The average level of reserves after the FOMC has concluded the reduction of its aggregate securities holdings at the end of September will likely still be somewhat above the level of reserves necessary to efficiently and effectively implement monetary policy.
 - In that case, the Committee currently anticipates that it will likely hold the size of the SOMA portfolio roughly constant for a time. During such a period, persistent gradual increases in currency and other non-reserve liabilities would be accompanied by corresponding gradual declines in reserve balances to a level consistent with efficient and effective implementation of monetary policy.
- When the Committee judges that reserve balances have declined to this level, the SOMA portfolio will hold no more securities than necessary for efficient and effective policy implementation. Once that point is reached, the Committee will begin increasing its securities holdings to keep pace with trend growth of the Federal Reserve's non-reserve liabilities and maintain an appropriate level of reserves in the system.

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