Appendix 1: Materials used by Messrs. Chung and Schlusche

Class I FOMC - Restricted Controlled (FR)

Material for Briefing on

Monetary Policy Options at the Effective Lower Bound: Assessing the Current Policy Toolkit

Hess Chung and Bernd Schlusche
Exhibits by Sofia Baig
July 31, 2018

Exhibit 1: Some Monetary Policy Options at the ELB

What is the probability of the ELB?

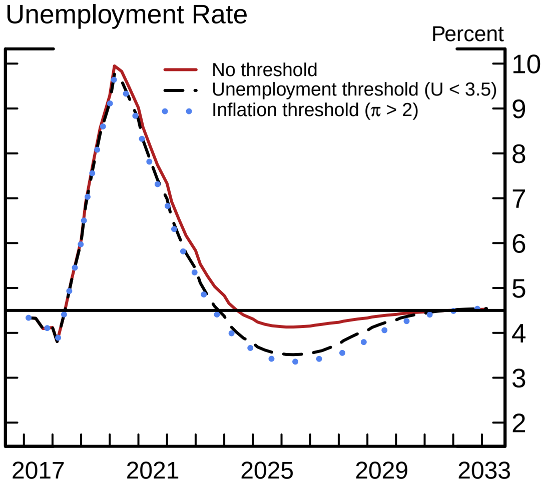
- Roughly 40 percent chance that the ELB will bind over the next 10 years (FRB/US, asymmetric rule).
- ELB binds around 15 percent of the time in the long run.

Can forward guidance provide additional policy accommodation at the ELB?

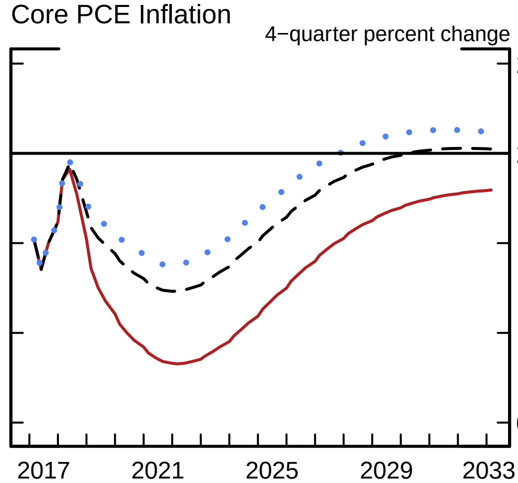
- An illustrative scenario depicting a severe recession.
- Implementing unemployment rate thresholds near or below the natural rate or inflation thresholds near or above target can speed up the recovery.
- These policies lower the median unemployment rate when the ELB binds by around 1/4 percentage point and raise the median inflation rate by as much as 40 basis points.

Macroeconomic outcomes in a recession scenario with thresholds

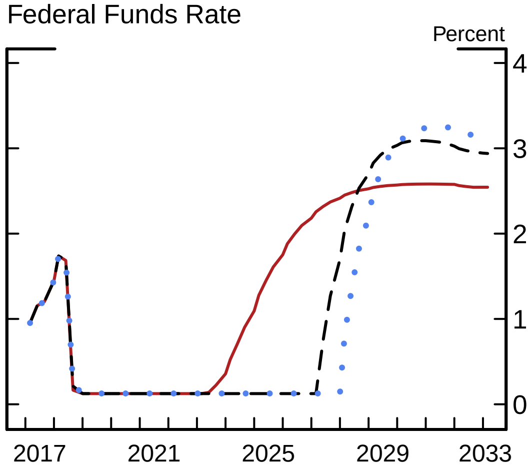
Unemployment Rate



Core PCE Inflation



Federal Funds Rate



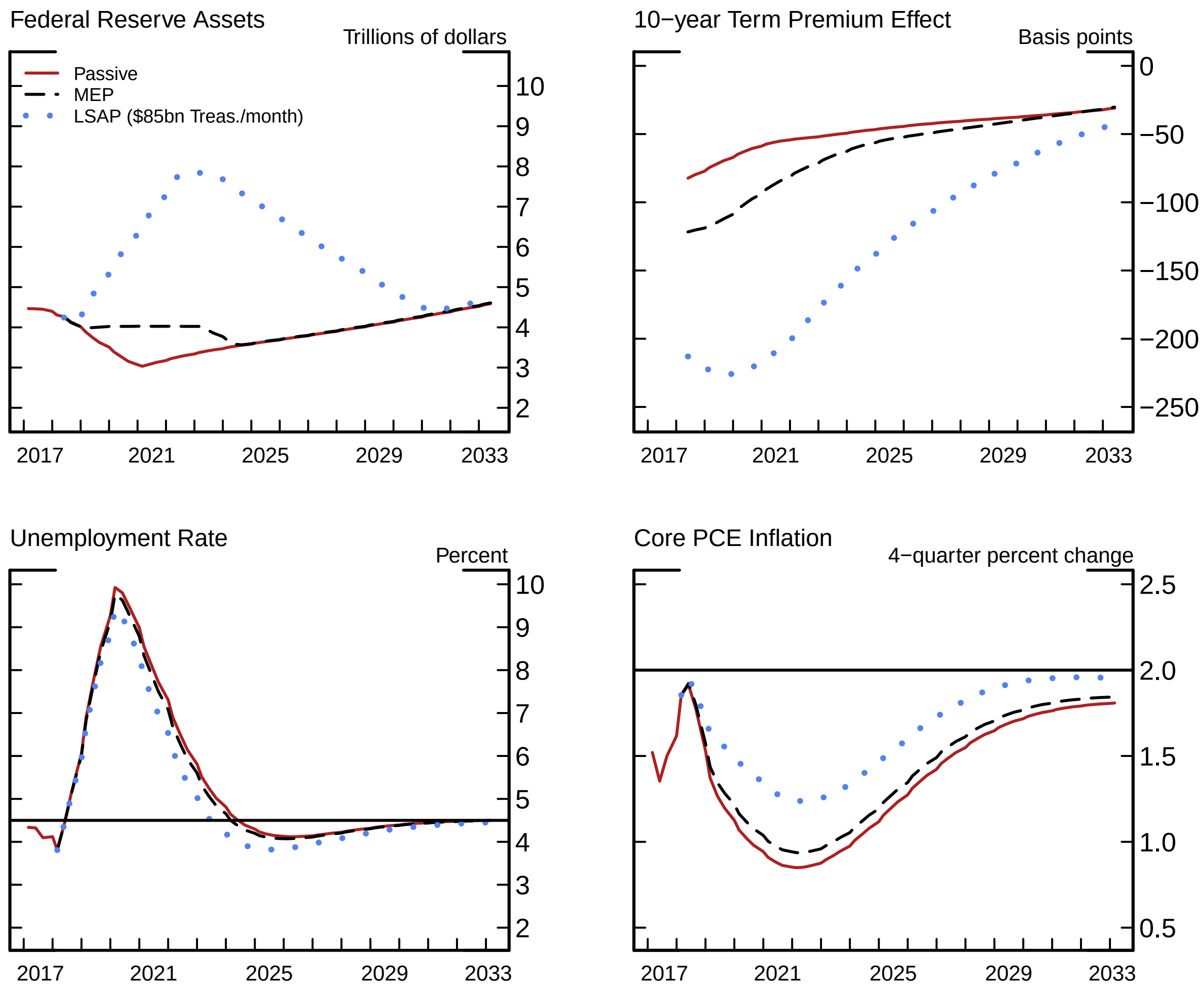
Class I FOMC − Restricted Controlled (FR)

Exhibit 2: Balance Sheet Policy Options at the ELB

Can balance sheet policies improve macroeconomic outcomes at the ELB?

- Examine two balance sheet policies: a maturity extension program (MEP) and an LSAP.
- Balance sheet measures can help support an economic recovery.
- Example: An LSAP program of $85 bn/month in Treasury securities reduces the median unemployment rate when the ELB binds by about 1/4 percentage point and raises the median inflation rate by about 20 basis points.

Macroeconomic outcomes in a recession scenario with balance sheet policies



Takeaways

- There is a material risk that the ELB will bind in the future.
- The current monetary policy toolkit can offset only some of the effects of a significant recession.
- Long lags in the transmission of policy imply that unconventional policies should be deployed rapidly in the event of an incipient recession.
- Estimates of the macroeconomic effects are subject to considerable uncertainty.

Class I FOMC − Restricted Controlled (FR)

Exhibit 3: Discussion Questions

- How concerned are you that the effective lower bound (ELB) could limit attainment of the Committee's maximum employment and price stability objectives in future economic downturns?
- In your view, how effective would forward guidance − explicit communication about the future path of the policy rate − and balance sheet policies of the type previously used by the Committee be in providing additional policy accommodation at the ELB? Are there other existing policy tools to be considered as options for dealing with the ELB? Should the Committee communicate in advance how it would intend to use its policy toolkit when and if the ELB constrains policy?
- Should the Committee evaluate alternative monetary policy strategies, i.e., strategies that would require changing the Committee's Statement on Longer−Run Goals and Monetary Policy Strategy, in order to address the risk that the ELB may prevent the attainment of its maximum employment and price stability objectives?

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

Class II FOMC - Restricted (FR)

Material for Briefing on

Financial Developments and Open Market Operations

Lorie Logan and Simon Potter
Exhibits by Ashley Rhodes
July 31, 2018

Class II FOMC – Restricted (FR)

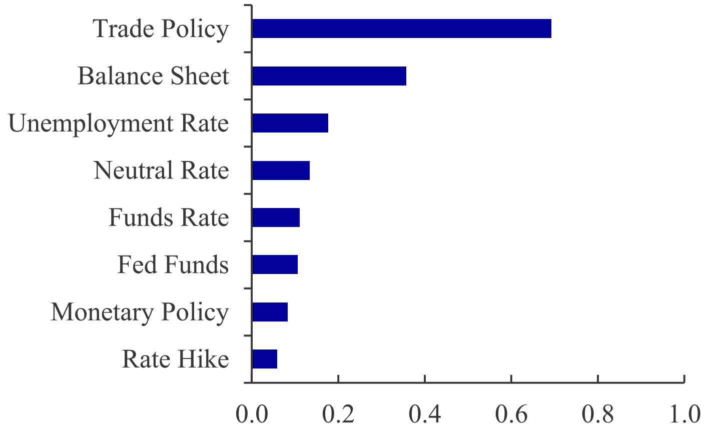
Exhibit 1

(1) Asset Price Changes

	Cumulative Trade Tension Days*	Intermeeting Period
Equities		
S&P 500	-2.5%	+1.1%
Industrials	-5.0%	-0.4%
Shanghai Composite	-6.6%	-6.7%
Rates		
2-Year Treasury	-0 bps	+13 bps
10-Year Treasury	-3 bps	-1 bps
10-Year Breakeven	-3 bps	-1 bps
Commodities		
Soybean Futures	-7.1%	-9.2%
Brent Crude	-8.3%	-1.8%
FX		
T.W. Dollar Index	+1.1%	+0.9%

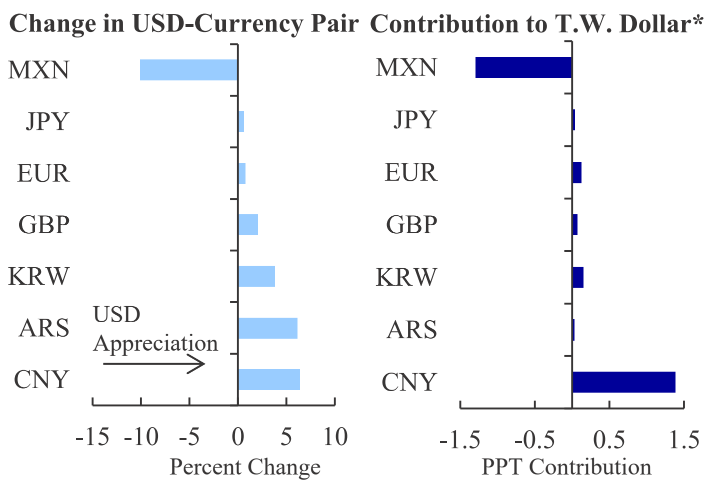
*Trade dates include days with negative headlines on U.S.-China trade relations: 6/19, 6/25, 7/11.
Source: Bloomberg, Desk Calculations

(2) Proportion of Two-Word Terms Used in "Uncertain" Context from Survey Results*



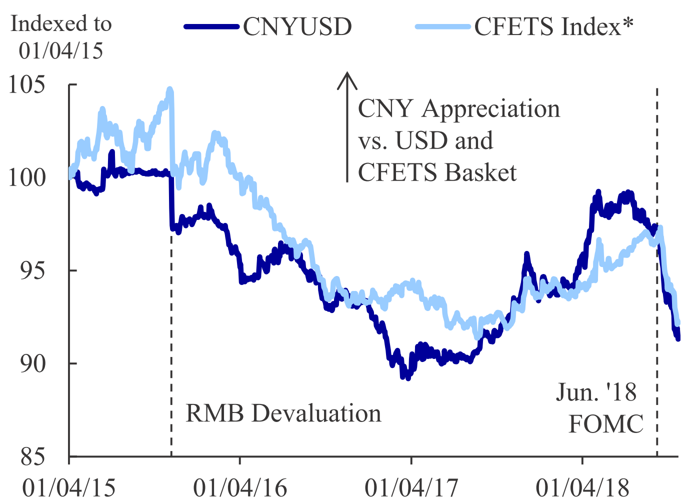
*Based on all responses to the Jul./Aug. Survey of Primary Dealers and Market Participants. Proportion of times the term appears in the same sentence as terms connoting uncertainty. Only terms appearing at least 10 times are shown.
Source: FRBNY

(3) U.S. Dollar Performance



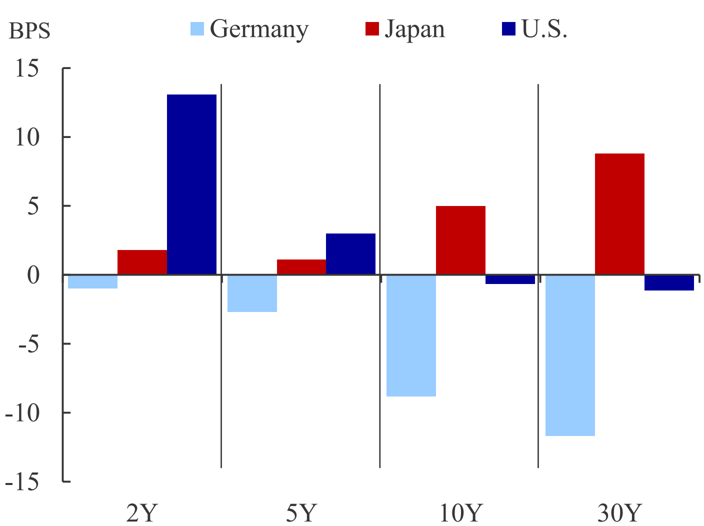
*Values shown indicate contribution to the Trade-Weighted Dollar Index's appreciation since 06/12/2018.
Source: Bloomberg, Desk Calculations

(4) Chinese Exchange Rate



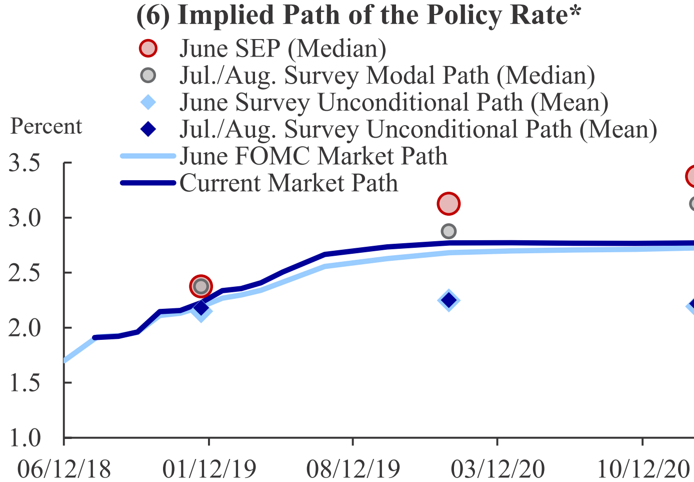
*An estimation from Standard Chartered of the CFETS EER basket.
Source: Bloomberg, Standard Chartered

(5) Intermeeting Changes in Global Sovereign Bond



Source: Bloomberg

(6) Implied Path of the Policy Rate*



*Market-implied paths derived from federal 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

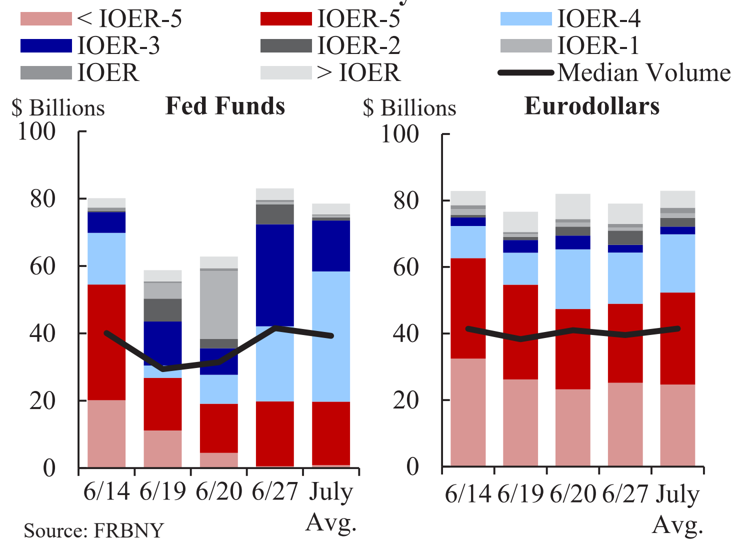
Class II FOMC – Restricted (FR) Exhibit 2

(7) EFFR Level, Spread, and Changes on Select Days Over the Intermeeting Period

	EFFR Level	EFFR-IOER Spread	One-Day Change
6/14/2018	1.90%	-5 bps	+20 bps
6/19/2018	1.91%	-4 bps	+1 bps
6/20/2018	1.92%	-3 bps	+1 bps
6/27/2018	1.91%	-4 bps	-1 bps
July Avg.	1.91%	-4 bps	Unchanged

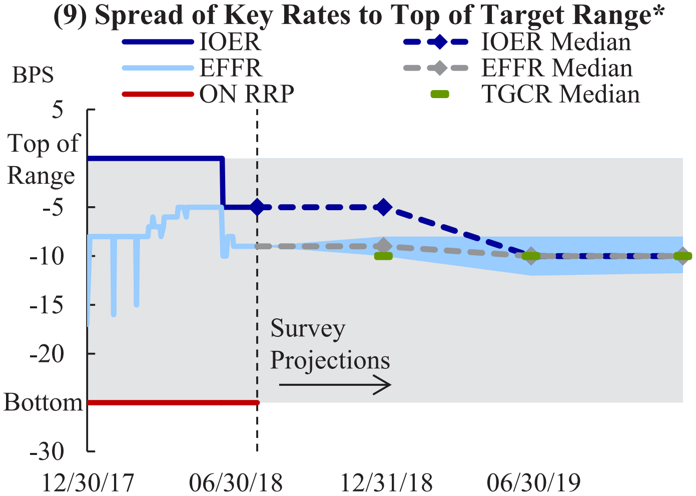
Source: FRBNY

(8) Distribution of Fed Funds and Eurodollar Volumes By Rate



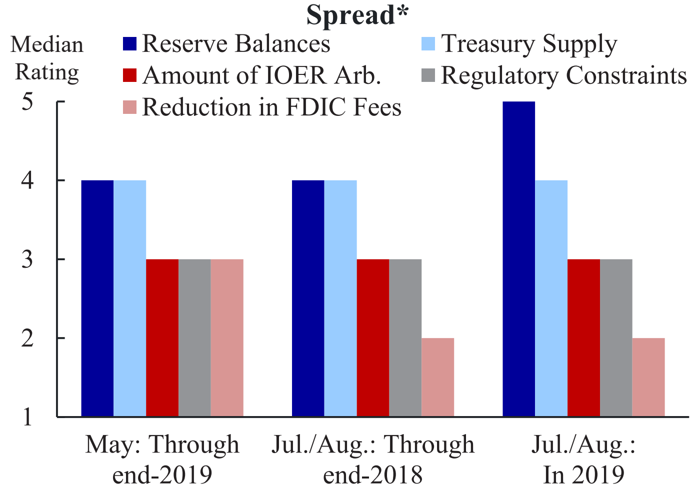
Source: FRBNY

(9) Spread of Key Rates to Top of Target Range*



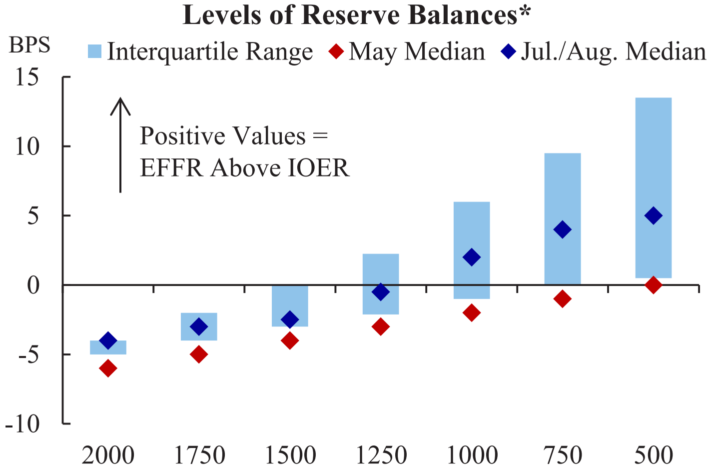
*Projections based on all responses from the Surveys of Primary Dealers and Market Participants. Blue shaded area represents 25th and 75th percentiles of expectations for the EFFR.
Source: Federal Reserve Board, FRBNY

(10) Importance of Factors Influencing EFFR-IOER Spread*



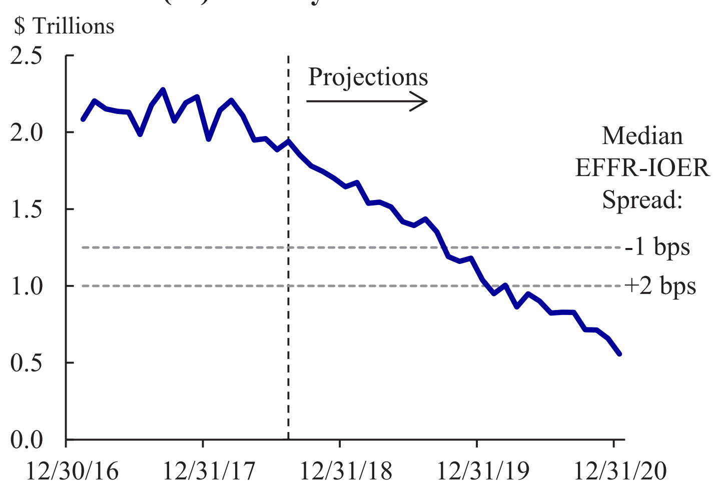
*Based on a matched sample of respondents to the Jul./Aug. and May Surveys of Primary Dealers and Market Participants.
Source: FRBNY

(11) EFFR-IOER Spread, Conditional on Various Levels of Reserve Balances*



*Based on a matched sample of respondents to the Jul./Aug. and May Surveys of Primary Dealers and Market Participants.
Source: FRBNY

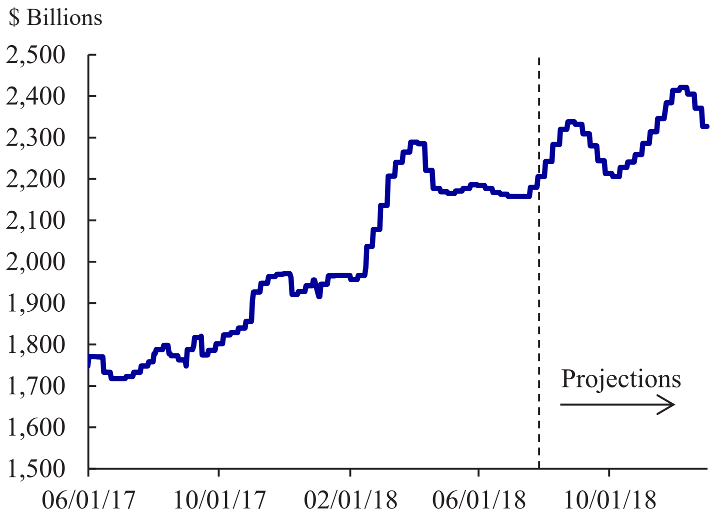
(12) Monthly Reserve Balances*



*Median EFFR-IOER Spread based on a matched sample of respondents to the Surveys of Primary Dealers and Market Participants.
Source: Desk Calculations, FRBNY

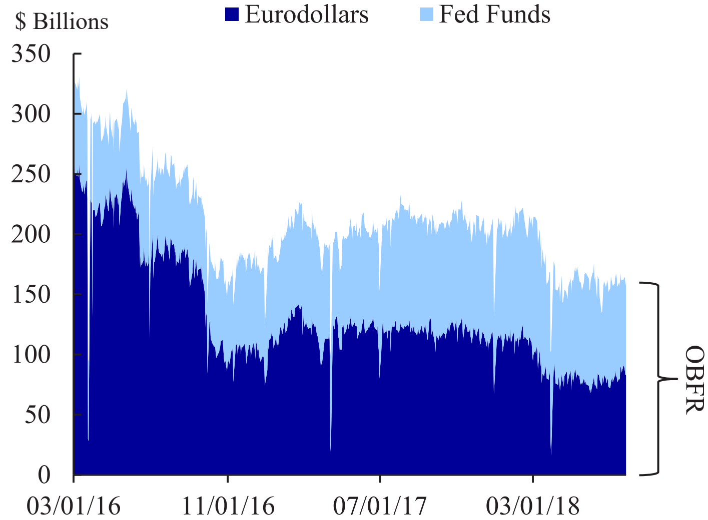
Class II FOMC – Restricted (FR) Exhibit 3

(13) Treasury Bills Outstanding



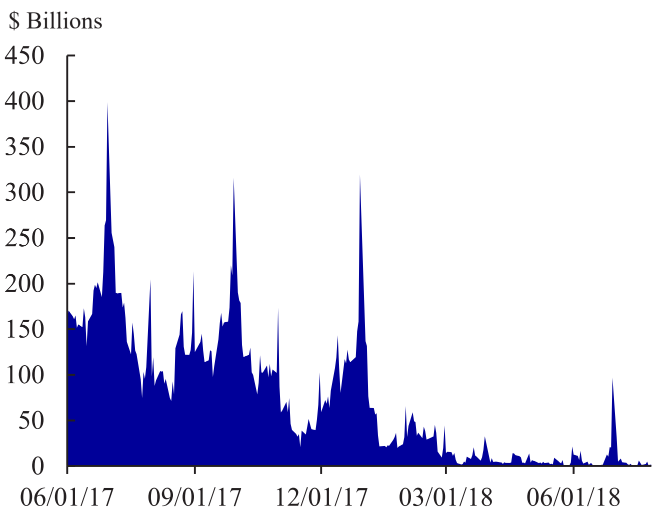
Source: U.S. Treasury, Desk Calculations

(14) Overnight Unsecured Trading Volumes



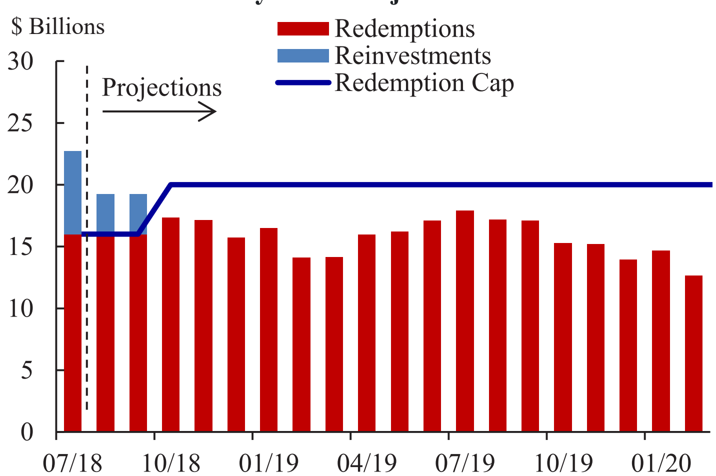
Source: FRBNY

(15) ON RRP Take-Up



Source: Bloomberg, FRBNY

(16) Upcoming SOMA Agency Debt and MBS Paydown Projections*



*Paydowns are estimated using Desk model and market-implied rates.
Source: Blackrock, FRBNY

Appendix 1

(1) Summary of Operational Testing

Summary of Operational Tests in prior period:

- Domestic Authorization
    - None
- Foreign Authorization
    - July 10: Euro-denominated repo with private counterparties for €1 million

Upcoming Operational Tests:

- Two tests scheduled under the Domestic Authorization
    - August 16: Treasury outright purchase of up to $100 million
    - August 20 and 21: Coupon swaps with unsettled agency MBS holdings for approximately $20 million, total
- Three additional tests tentatively scheduled under the Domestic Authorization[1]
    - Treasury rollover
    - Treasury maturity
    - Treasury outright sale
- No tests scheduled under the Foreign Authorization

[1] The timing of these additional tests will depend upon the maturity of the securities purchased in the August 16 operation.

(2) MBS Purchases Summary Since Cap Implementation Through 07/27/18 ($ Millions)

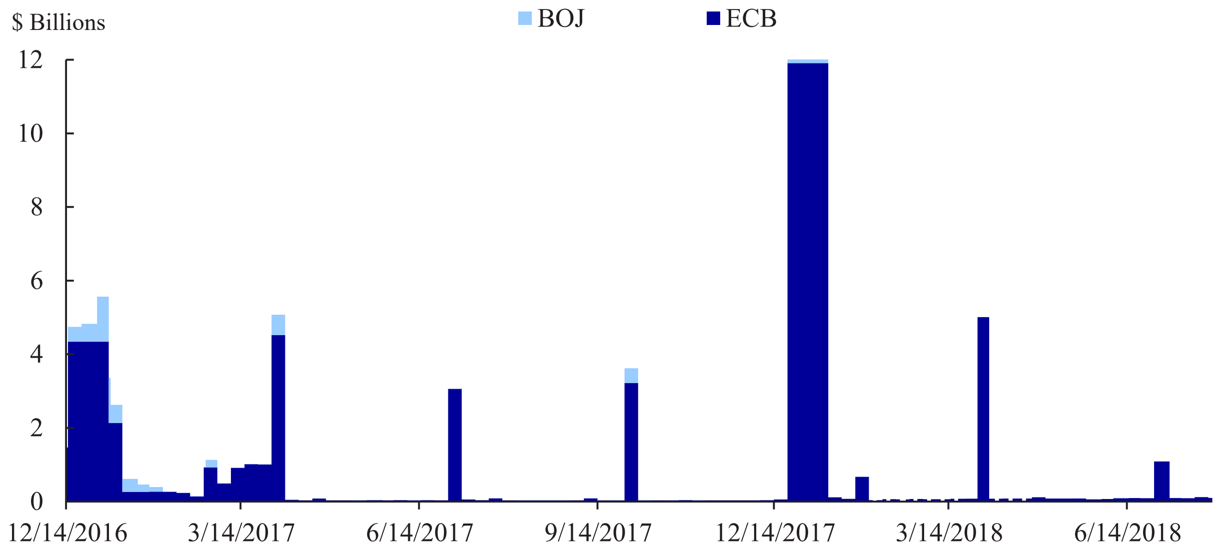
Purchase Period				Actual Paydowns	Cap	Actual Purchases	Net Deviation	Cumulative Deviation
Oct-17	10/16/17	-	11/13/17	24,353	4,000	20,355	2	2
Nov-17 *	11/14/17	-	12/13/17	28,316	4,000	24,327	11	13
Dec-17	12/14/17	-	01/12/18	24,032	4,000	20,038	6	19
Jan-18	01/16/18	-	02/13/18	22,909	8,000	14,921	12	31
Feb-18	02/14/18	-	03/13/18	20,689	8,000	12,684	(5)	26
Mar-18	03/14/18	-	04/12/18	19,294	8,000	11,308	14	40
Apr-18	04/13/18	-	05/11/18	21,233	12,000	9,234	1	41
May-18	05/14/18	-	06/13/18	20,793	12,000	8,807	14	55
Jun-18 *	06/14/18	-	07/13/18	24,526	12,000	12,534	8	63
Jul-18 **	07/16/18	-	08/13/18	N/A	16,000	3,202		

*Actual paydowns include agency debt maturity. Nov-17: $2,366 million; Jun-18: $1,982 million.

**Actual purchases ongoing, reflect data through 07/27/18. Target amount for July purchase period is $6,729 million.

Appendix 2

(1) FX Swaps Outstanding



Source: FRBNY

(2) FX Intervention

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

Appendix 3: Materials used by Mr. Wilcox

Class II FOMC – Restricted (FR)

Material for Briefing on

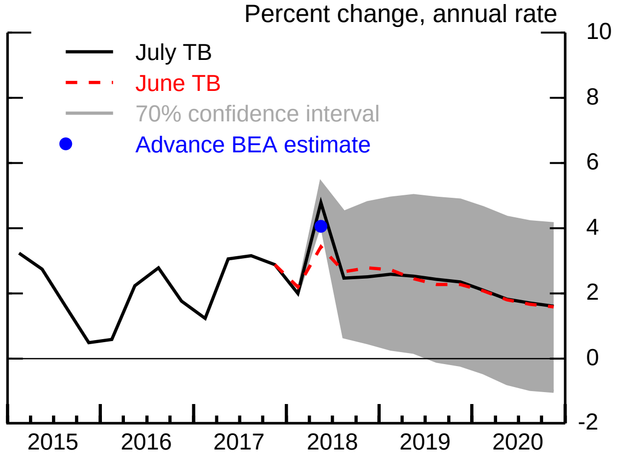
The U.S. Outlook

David W. Wilcox
Exhibits by Bo Yeon Jung
July 31, 2018

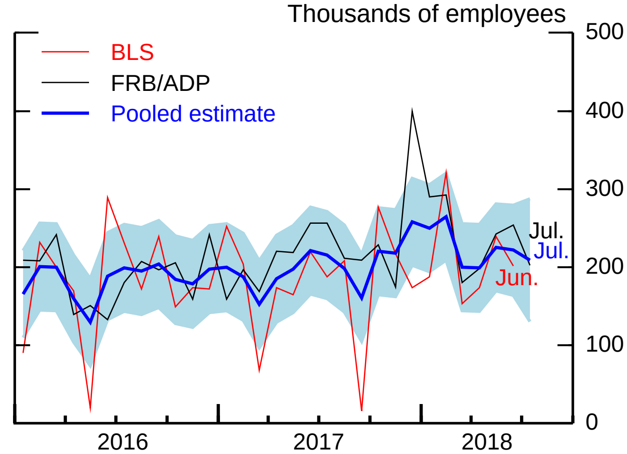
Forecast Summary

Confidence Intervals for Panels 1, 5, 10, and 11 Based on FRB/US Stochastic Simulations

1. Real GDP

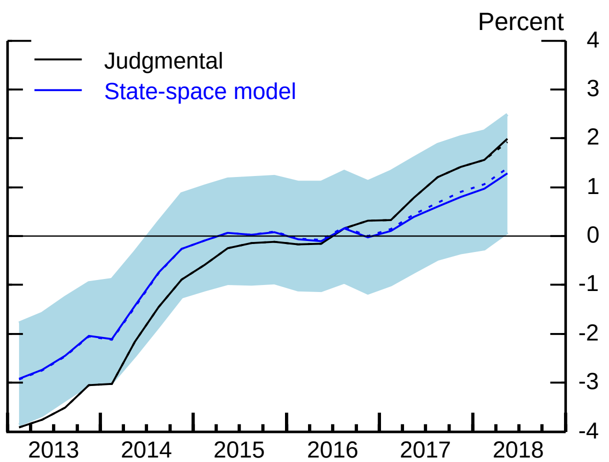


2. Estimates of Private Nonfarm Payroll Gains



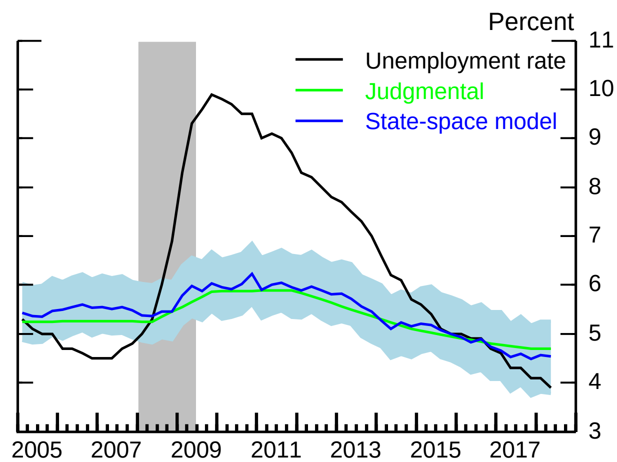
Note: Shaded region denotes 90 percent confidence interval for pooled estimate. July FRB/ADP value includes data through 7/21; July pooled estimate treats July BLS observation as missing.

3. Output Gap Estimates



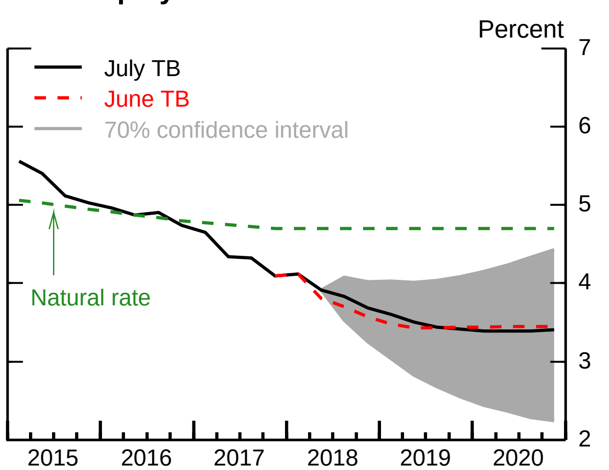
Note: Solid lines are July TB estimates; dotted lines are June TB estimates. Shaded region denotes 70 percent confidence interval around July TB model estimate.

4. Natural Rate Estimates

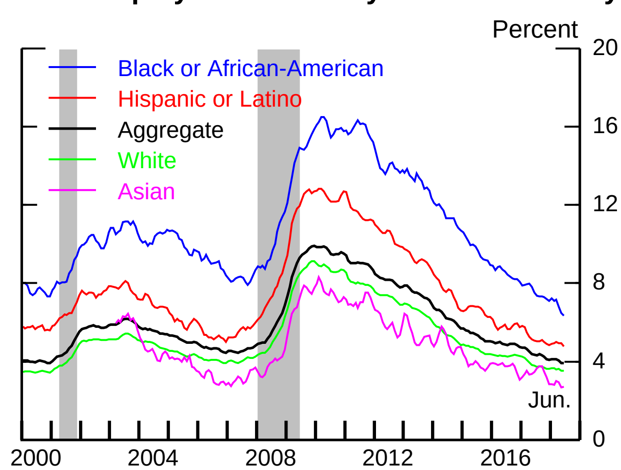


Note: Blue shaded region denotes 70 percent confidence interval around model estimate. Gray shaded bar indicates a period of business recession as defined by the NBER.

5. Unemployment Rate

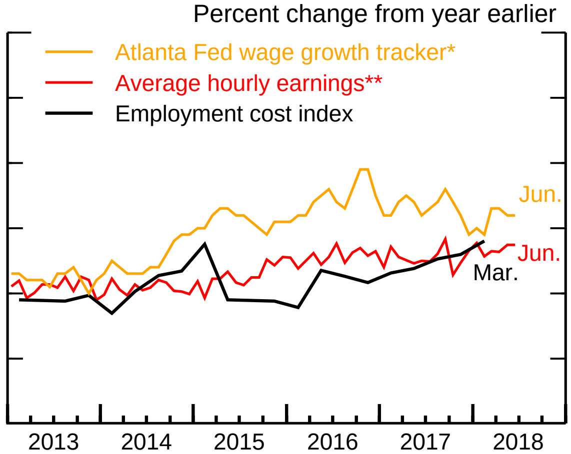


6. Unemployment Rates by Race or Ethnicity



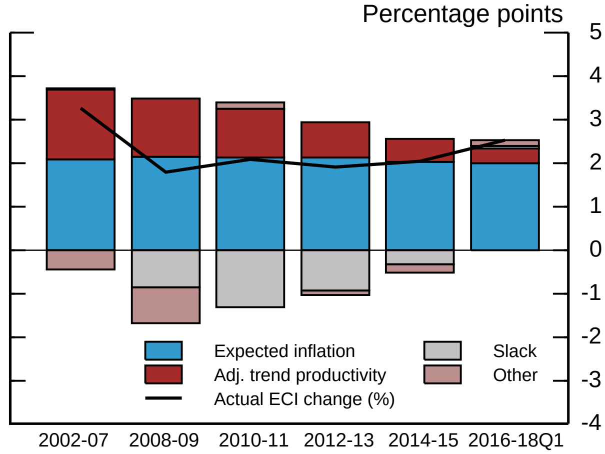
Note: Three-month moving averages. Shaded bars indicate a period of business recession as defined by the NBER.

7. Measures of Labor Compensation



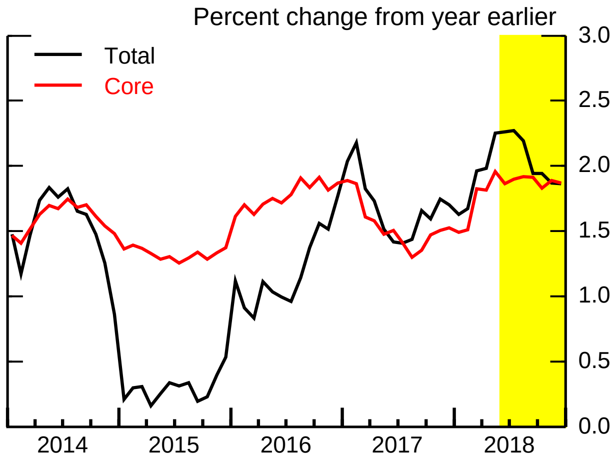
*Three-month moving average. **All employees.

8. Model-Based Decomposition of Annualized ECI Change



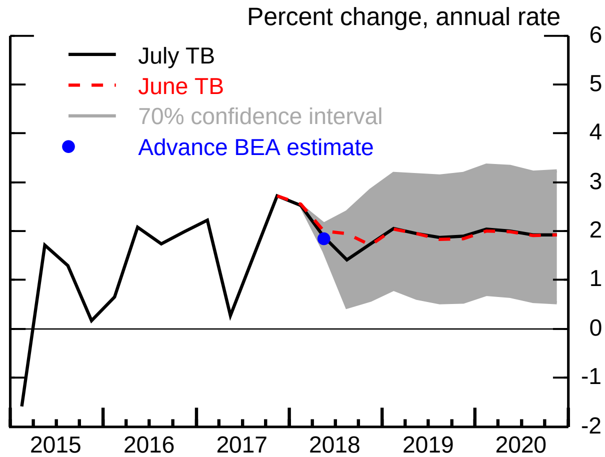
Note: Contributions to annualized log difference; trend productivity contribution includes the model's constant term. Model estimation period is 1988:Q1 to 2009:Q4.

9. Monthly PCE Price Inflation

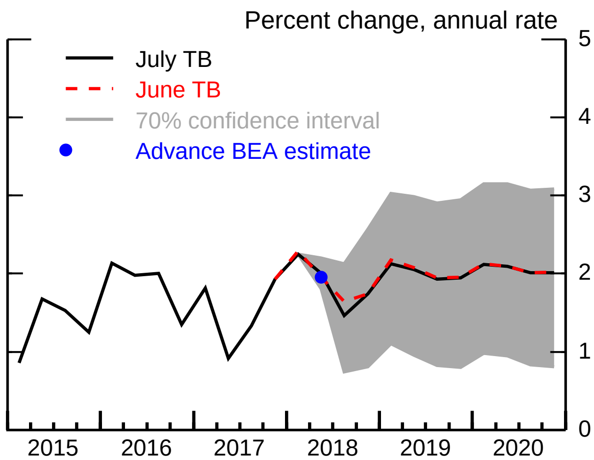


Note: Shaded yellow region indicates forecast period.

10. Total PCE Prices



11. PCE Prices Excluding Food and Energy



Appendix 4: Materials used by Mr. Kamin

Class II FOMC - Internal (FR)

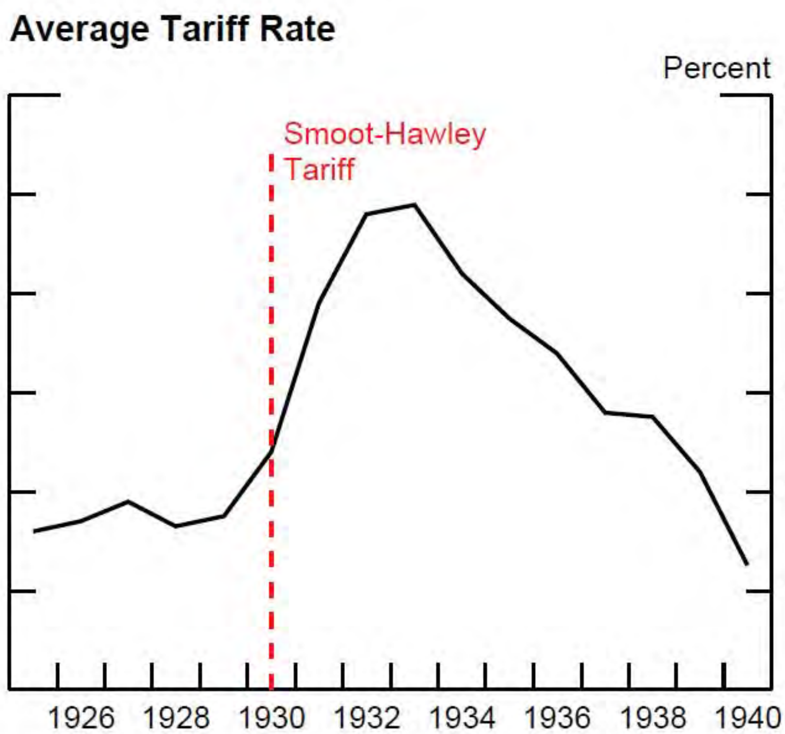
Material for Briefing on

The International Outlook

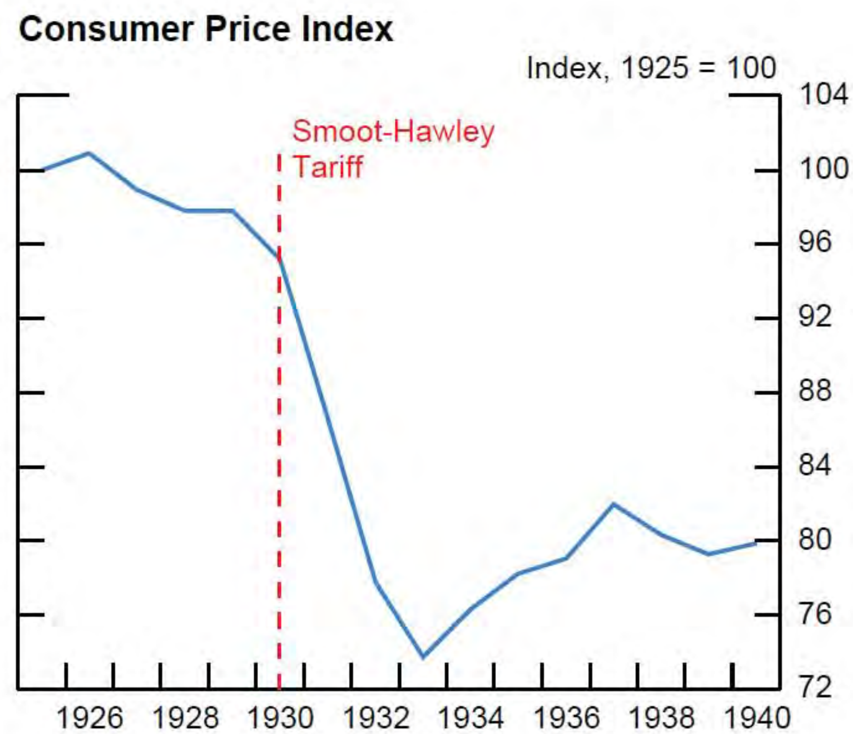
Steve Kamin
Exhibits by Mandy Bowers
July 31, 2018

The Smoot-Hawley Tariff of 1930: overrated!

- Boosted average tariff rate only 2 percentage points.
- Most of upswing between 1929 and 1933 due to price deflation.

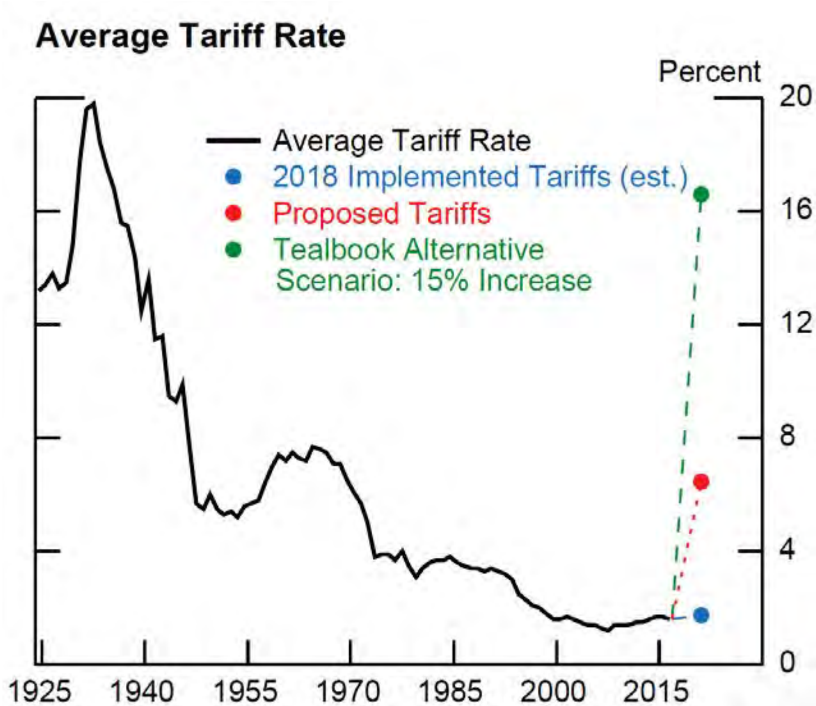


Source: U.S. Census Bureau.

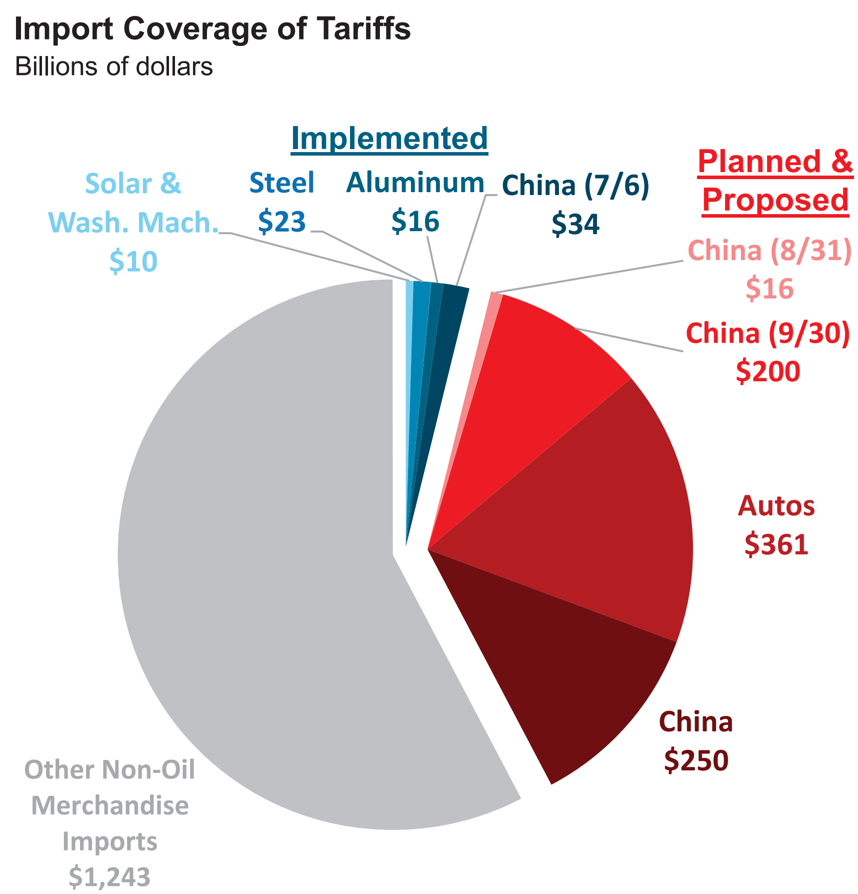


Source: Bureau of Labor Statistics, Haver Analytics.

Contemplated tariff hikes could be larger and more consequential

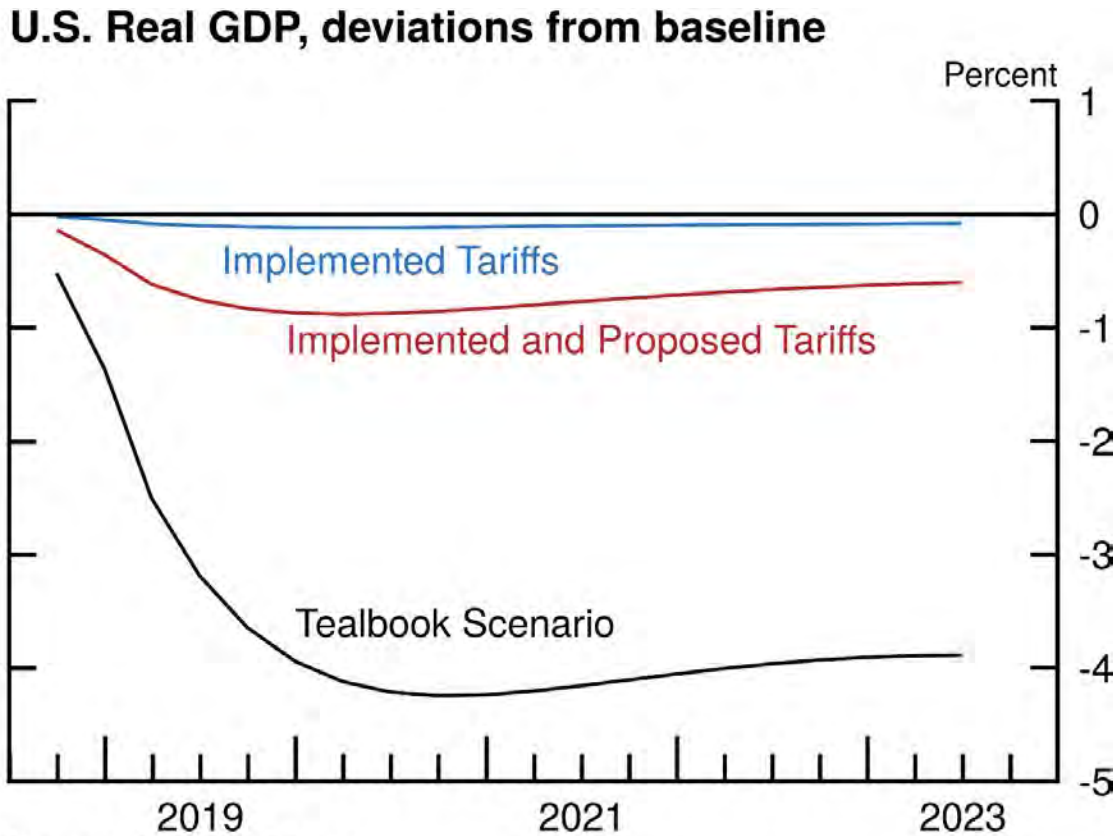


Source: U.S. Census Bureau, staff calculations using NIPA data.



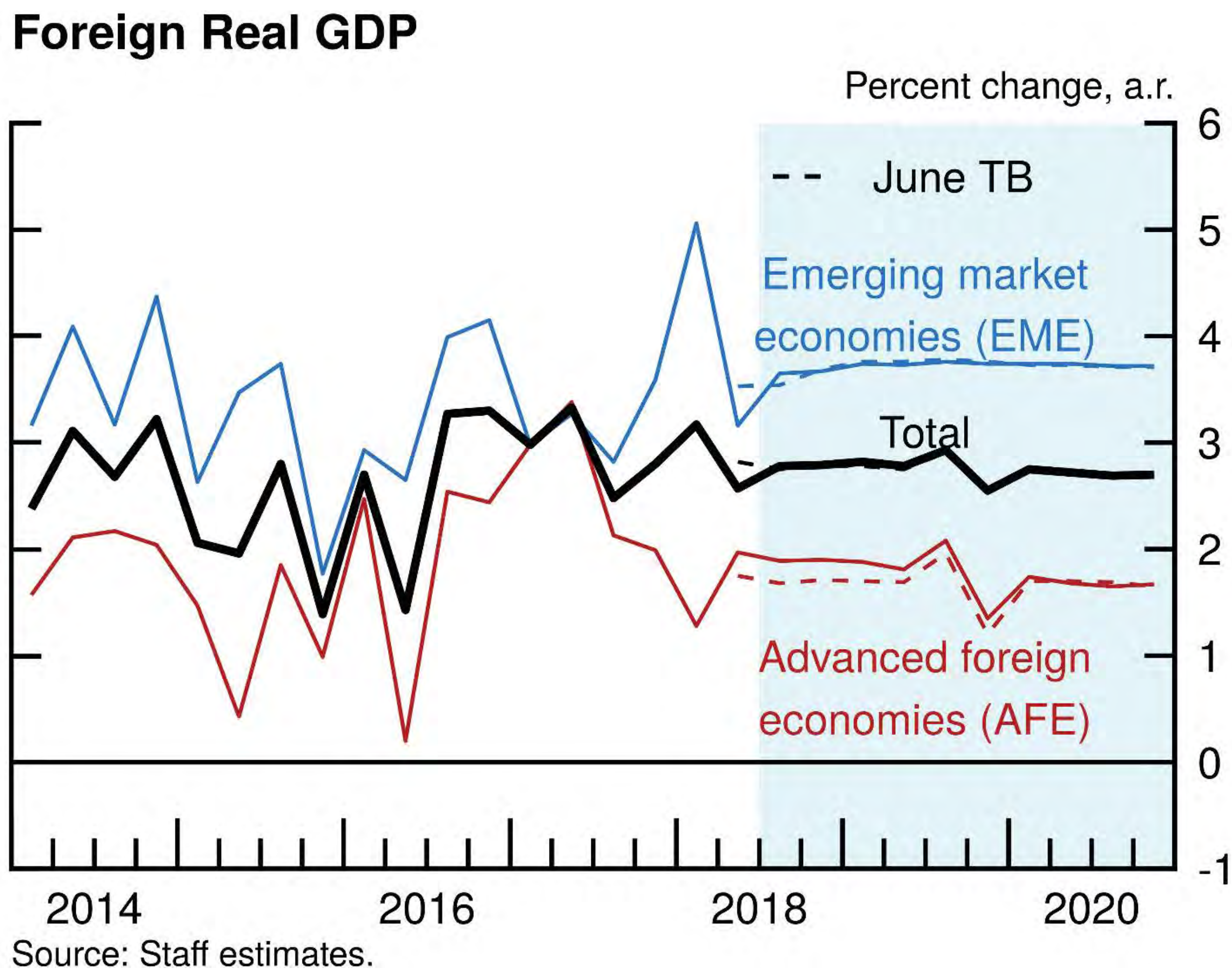
Source: Staff calculations.

Broad-based, reciprocated tariffs could substantially depress U.S. GDP



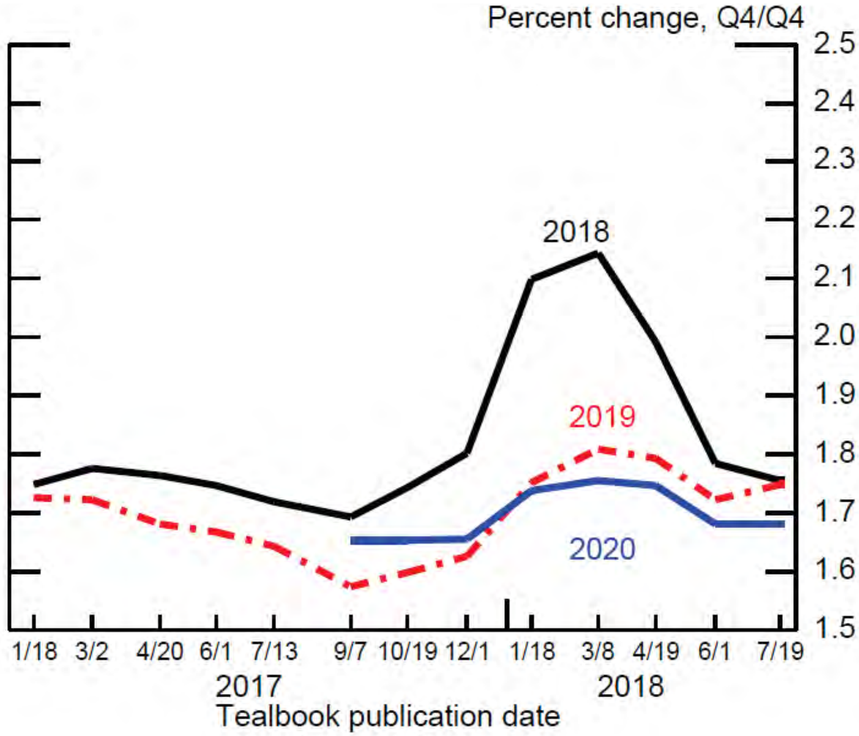
Source: Staff calculations.

Foreign Outlook: steady as she goes

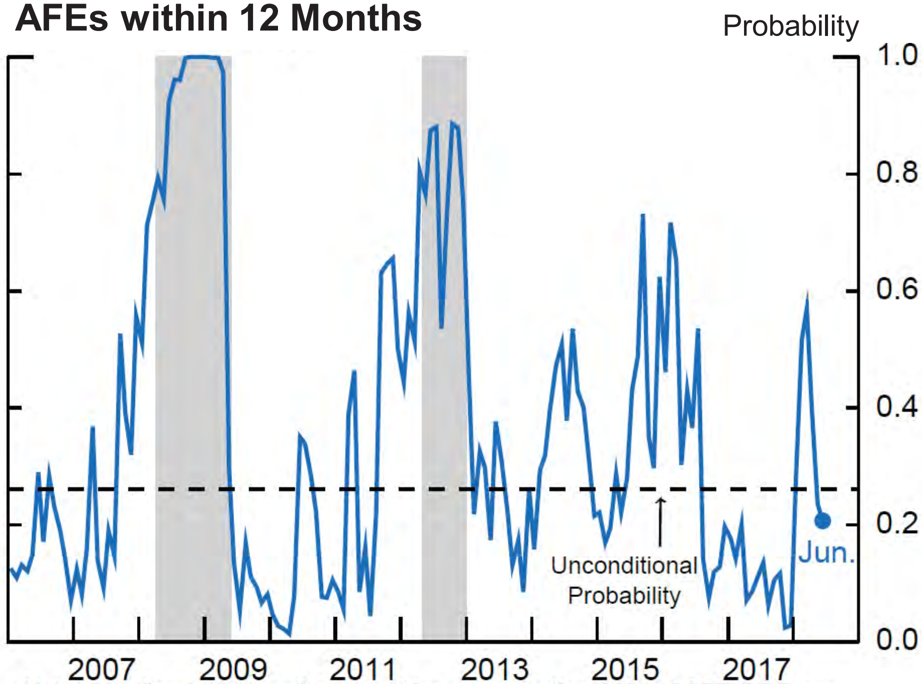


AFE Growth: downward revisions have been small

Evolution of Staff's AFE GDP Forecasts

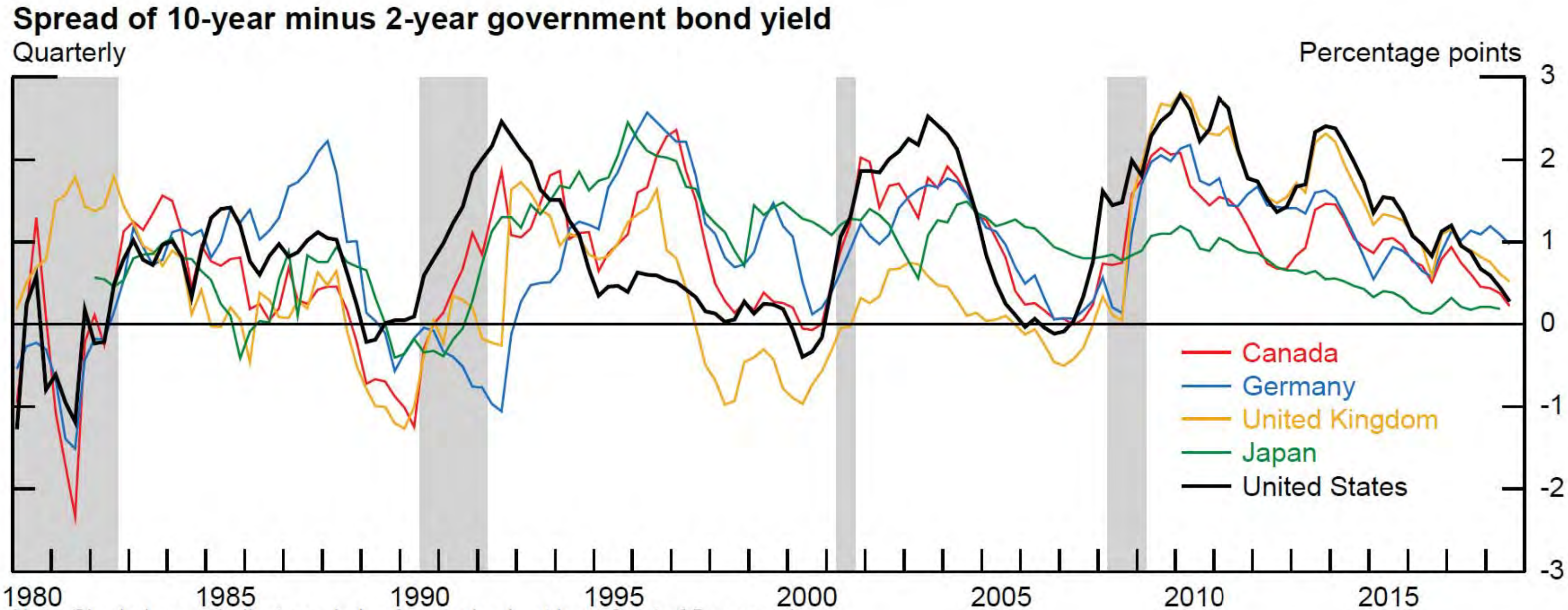


Estimated Probability of Recession in AFEs within 12 Months



Note: Shading indicates that countries representing 66% of AFE GDP are classified as in recession. Source: Staff calculations.

Long-term Slope of the Yield Curve

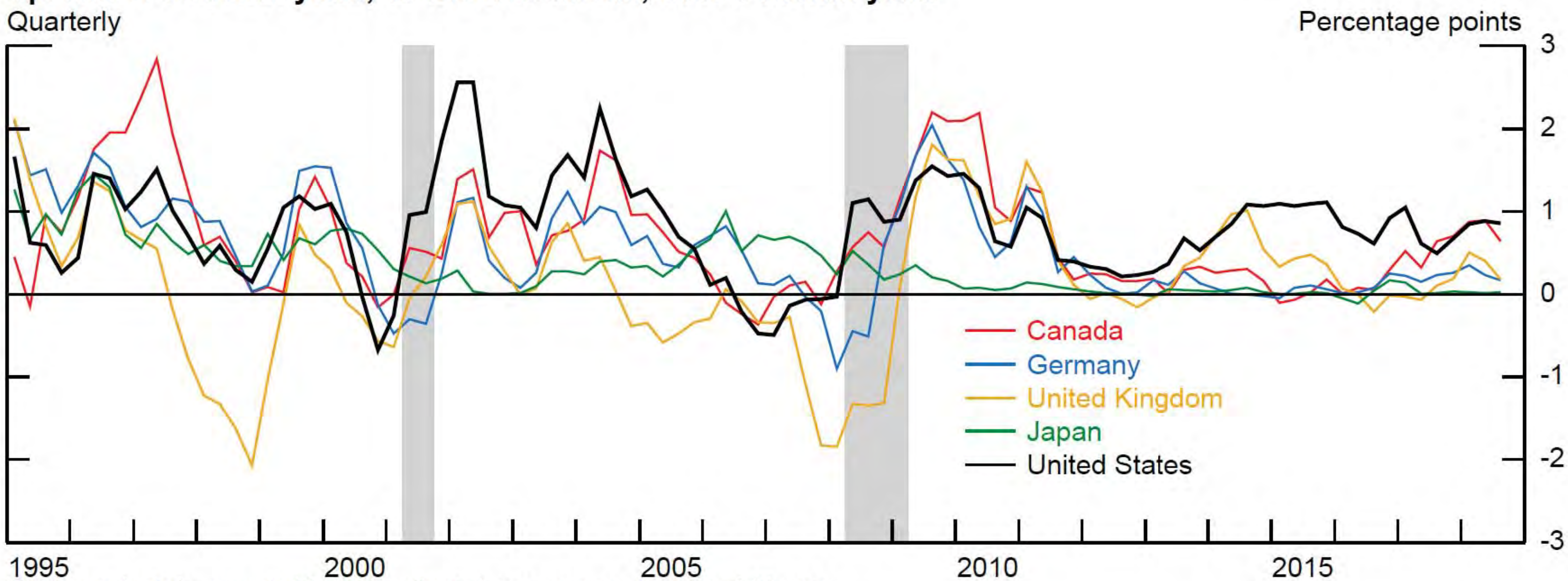


Note: Shaded areas indicate periods of recession in at least 3 out of 5 economies.

- Low spreads not strong indication of recession abroad.
  - Spreads a less reliable indicator of foreign recessions.
  - Spreads being depressed by QE, heightened demand for safe assets.

Near-term Slope of the Yield Curve

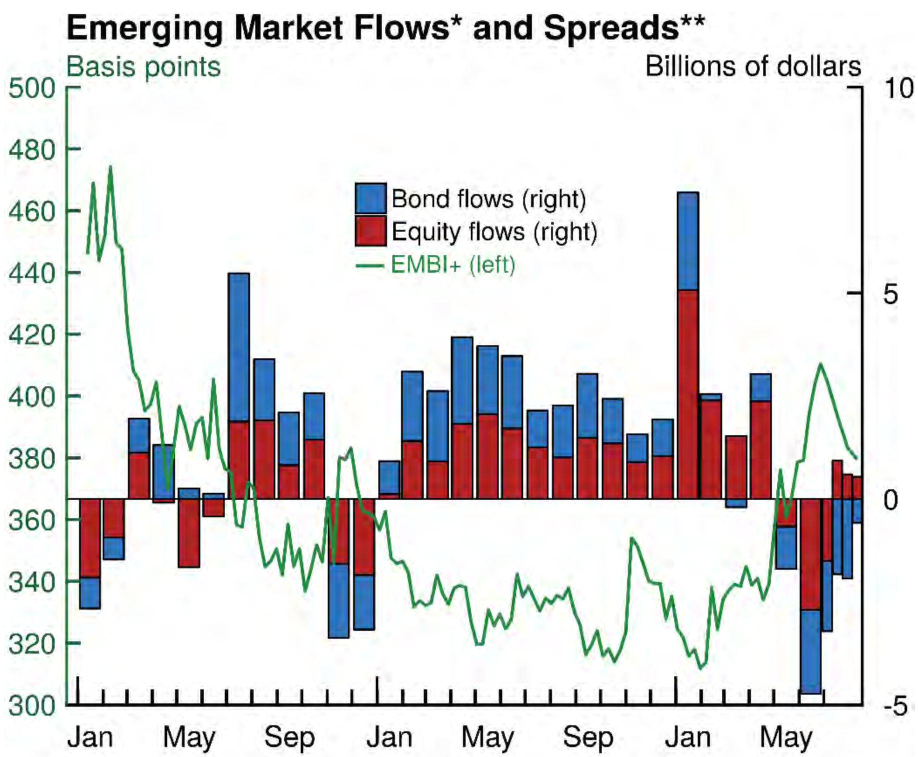
Spread of 3-month yield, 18 months ahead, over 3-month yield



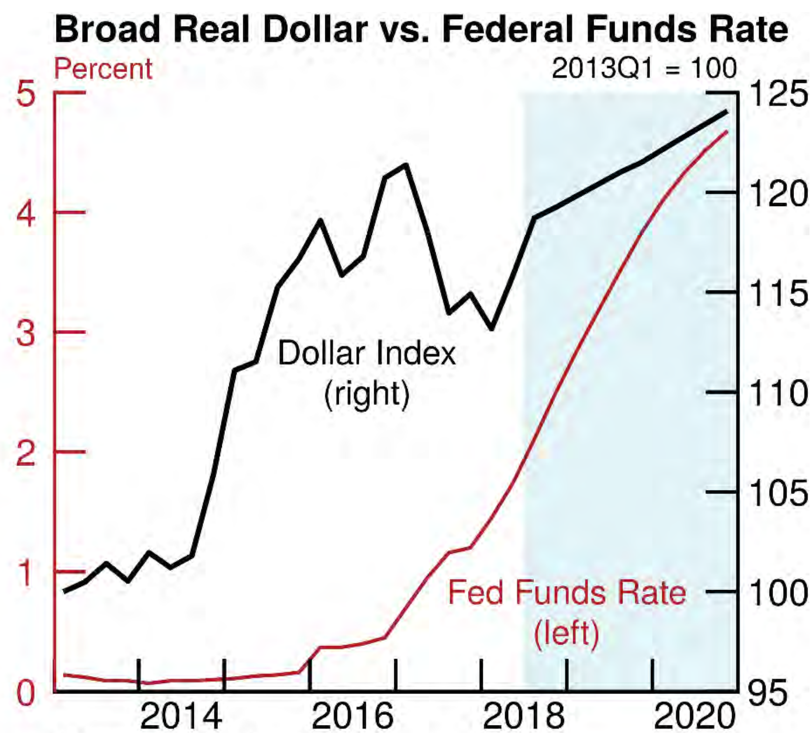
The forward rate is computed from an estimated zero coupon sovereign yield curve.
Note: Shaded areas indicate periods of recession in at least 3 out of 5 economies.
Source: Bloomberg and Global Financial Data. Staff calculations.

- Lower near-term spreads signal slower monetary tightening abroad than in U.S.
- Does this imply greater likelihood of recession abroad than in U.S.?
  - Yes: Reflects more fragile foreign expansion.
  - No: Slow tightening abroad may reflect below-target inflation, not weak activity.

Will rising U.S. interest rates trigger EME crisis?

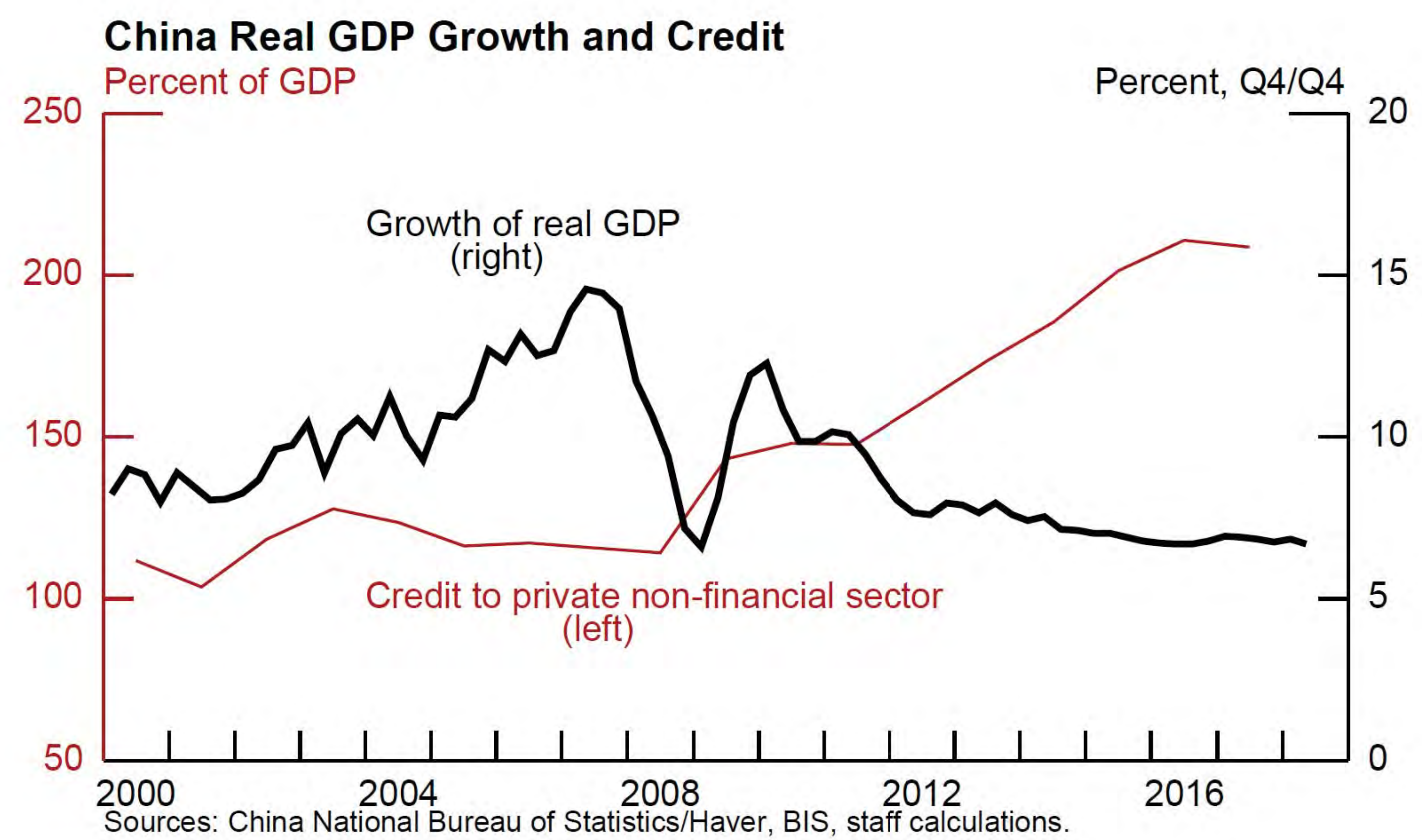


* Monthly averages through June 2018 and weekly data thereafter. Source: EPFR. Excludes intra-China flows.
**EMBI+: EME Bond spreads over zero-coupon sovereign securities.



Source: Staff estimates.

Risks from China -- discussed in latest QS report



Class II FOMC - Internal (FR)

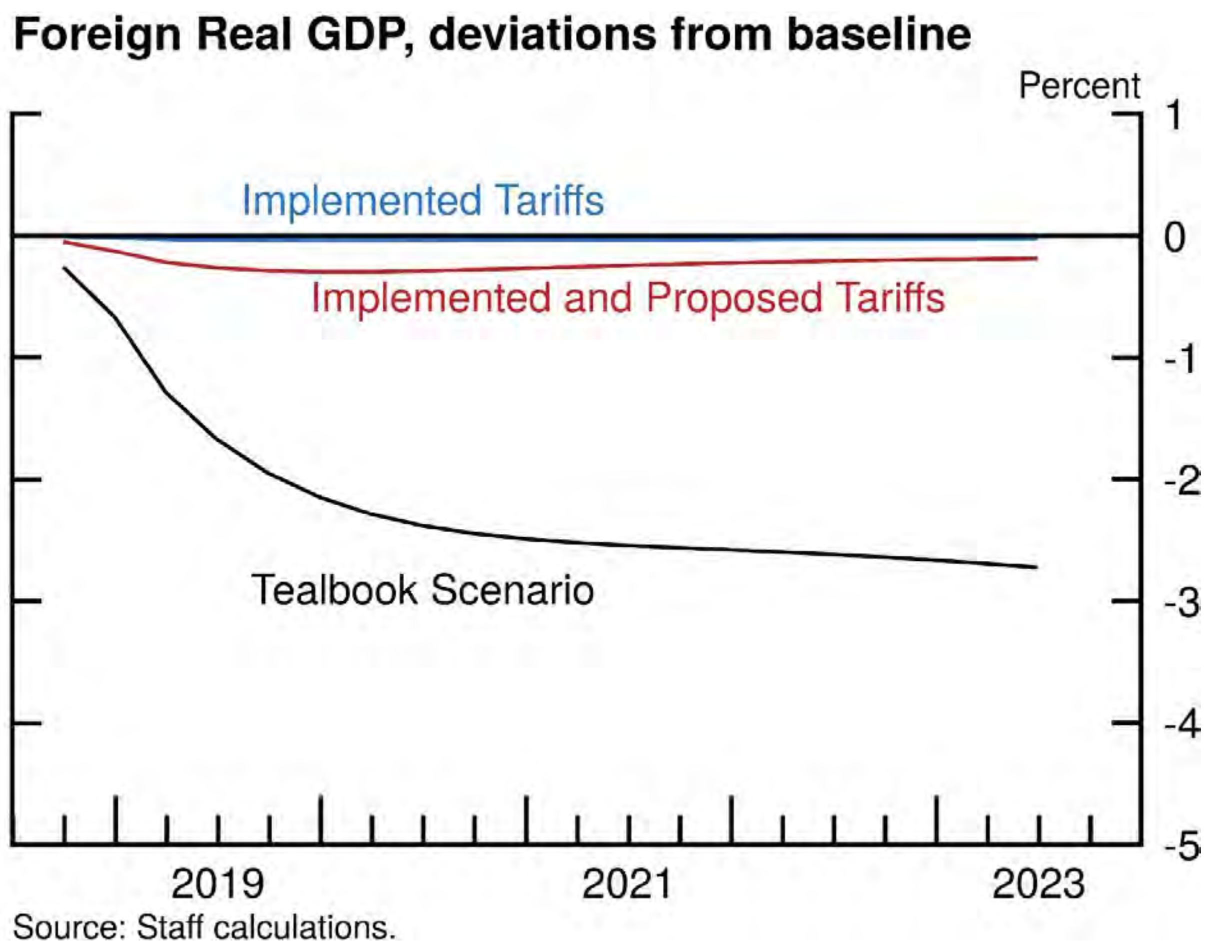
Material for Briefing on

The International Outlook

Appendix

Steve Kamin
Exhibits by Mandy Bowers
July 31, 2018

Foreign GDP Effects



Appendix 5: Materials used by Ms. Edge

Class II FOMC – Restricted (FR)

Material for Briefing on

Financial Stability Developments

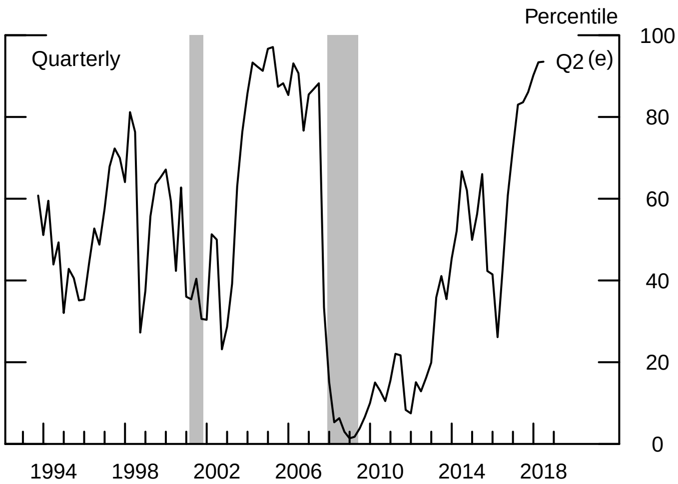
Rochelle M. Edge
Exhibits by Matthew Carl and Femi Ogunrinu
July 31, 2018

Class II FOMC - Restricted FR

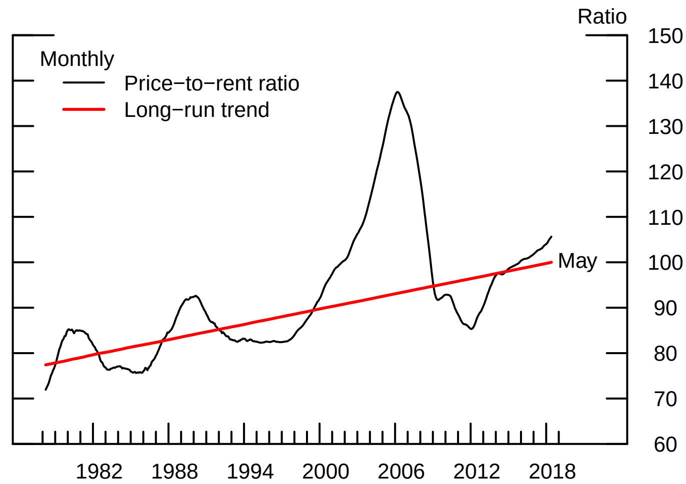
Exhibit 1: Valuation Pressures and Nonfinancial-sector Leverage

July 31, 2018

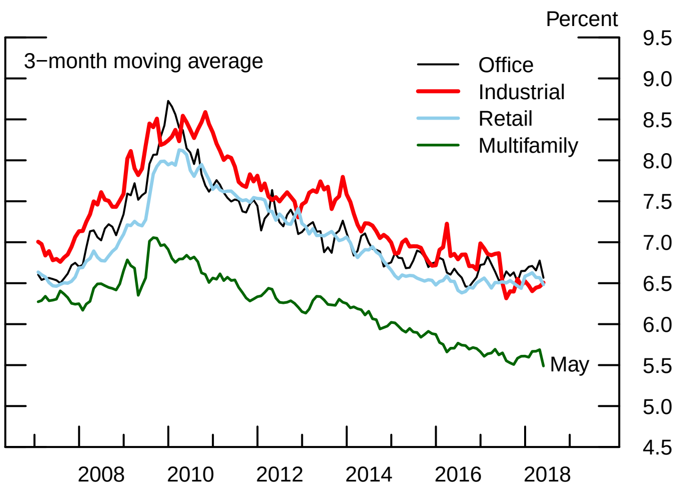
1−1: Summary Measure of Valuation Pressures and Risk Appetite



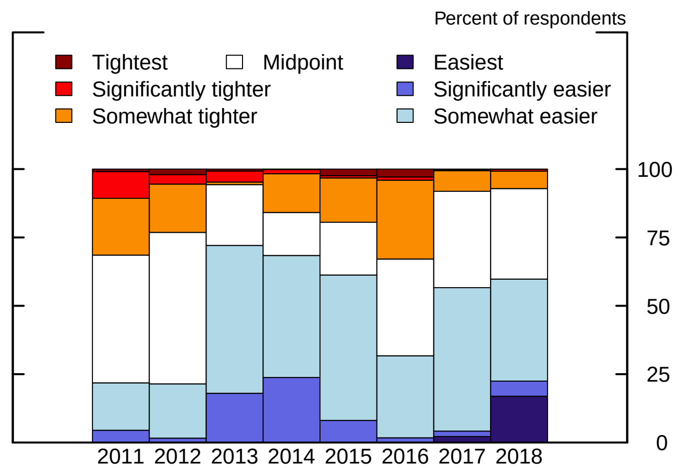
1−2: Aggregate House Price−to−rent Ratio



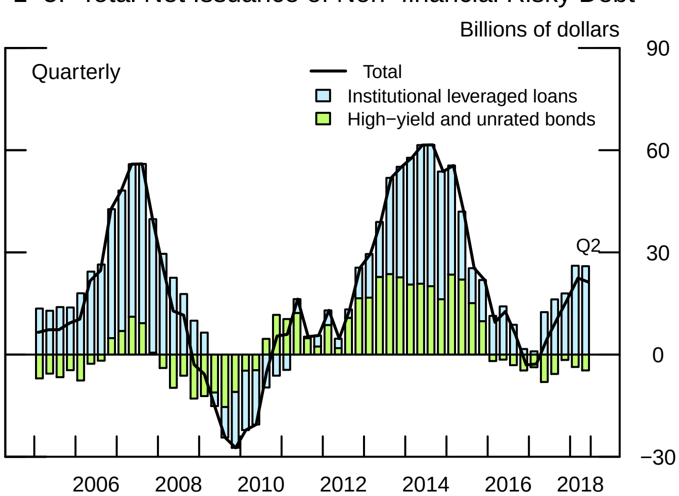
1−3: Capitalization Rate at Origination for Commercial Real Estate Loans



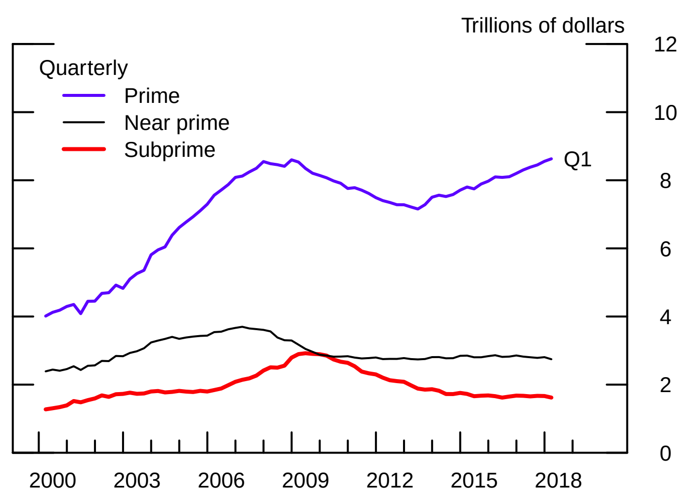
1−4: Level of Standards on Syndicated Non−investment Grade C&I Loans at Domestic Banks



1−5: Total Net Issuance of Non−financial Risky Debt



1−6: Real Household Debt Balances

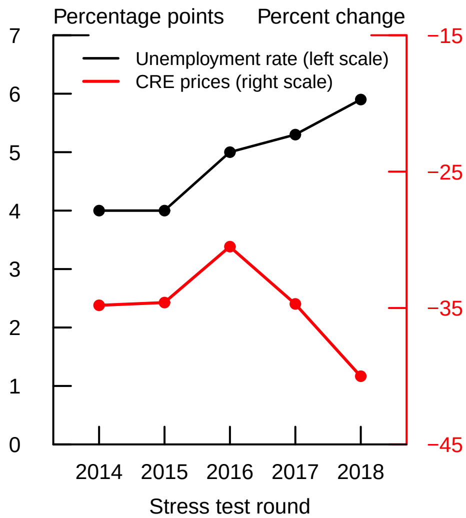


Class II FOMC - Restricted FR

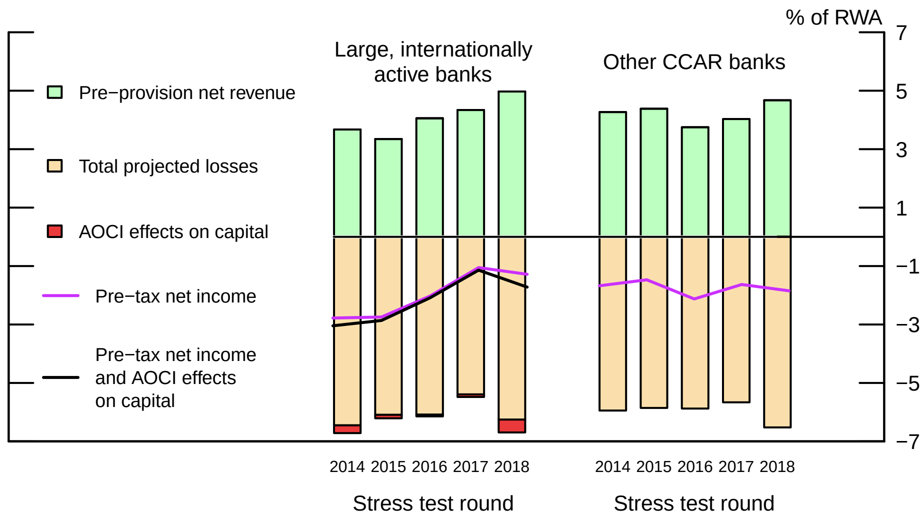
Exhibit 2: Financial-sector Leverage and Maturity and Liquidity Transformation

July 31, 2018

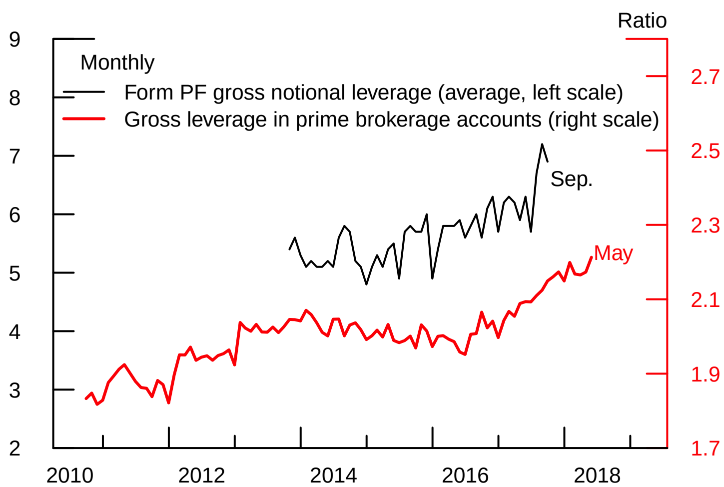
2−1: Maximum Change in the Unemployment Rate and CRE Prices



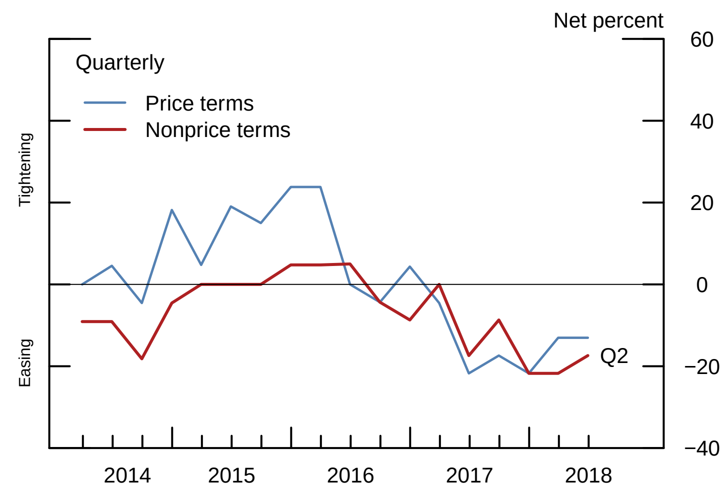
2−2: Summary of Supervisory Stress Test Results



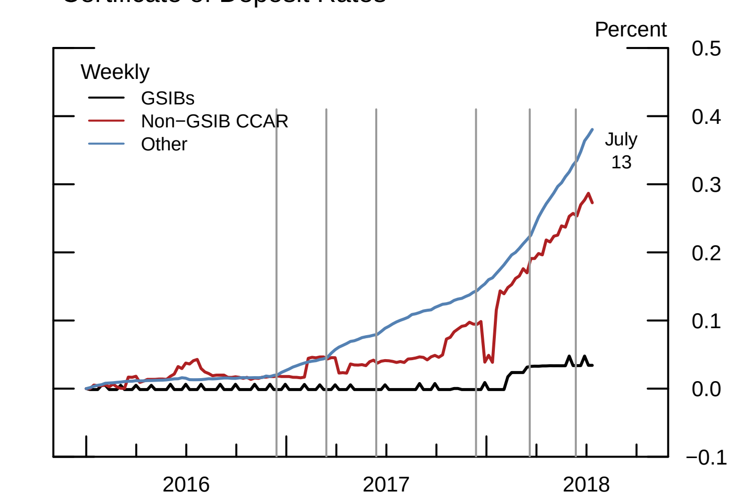
2−3: Hedge Fund Leverage



2−4: Terms on Leverage Extended to Hedge Funds



2−5: Cumulative Changes in Average 12−month Certificate of Deposit Rates



2−6: Assets in Potential MMF Substitutes

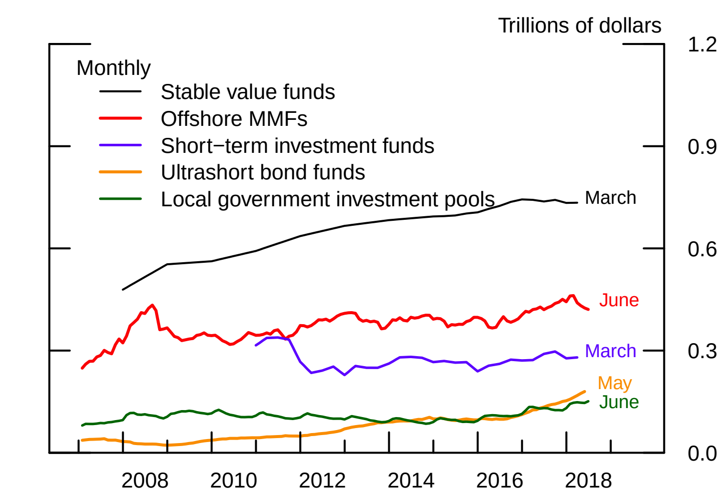


Exhibit 3: Staff Judgment on Levels of Vulnerabilities: July 2014 to July 2018

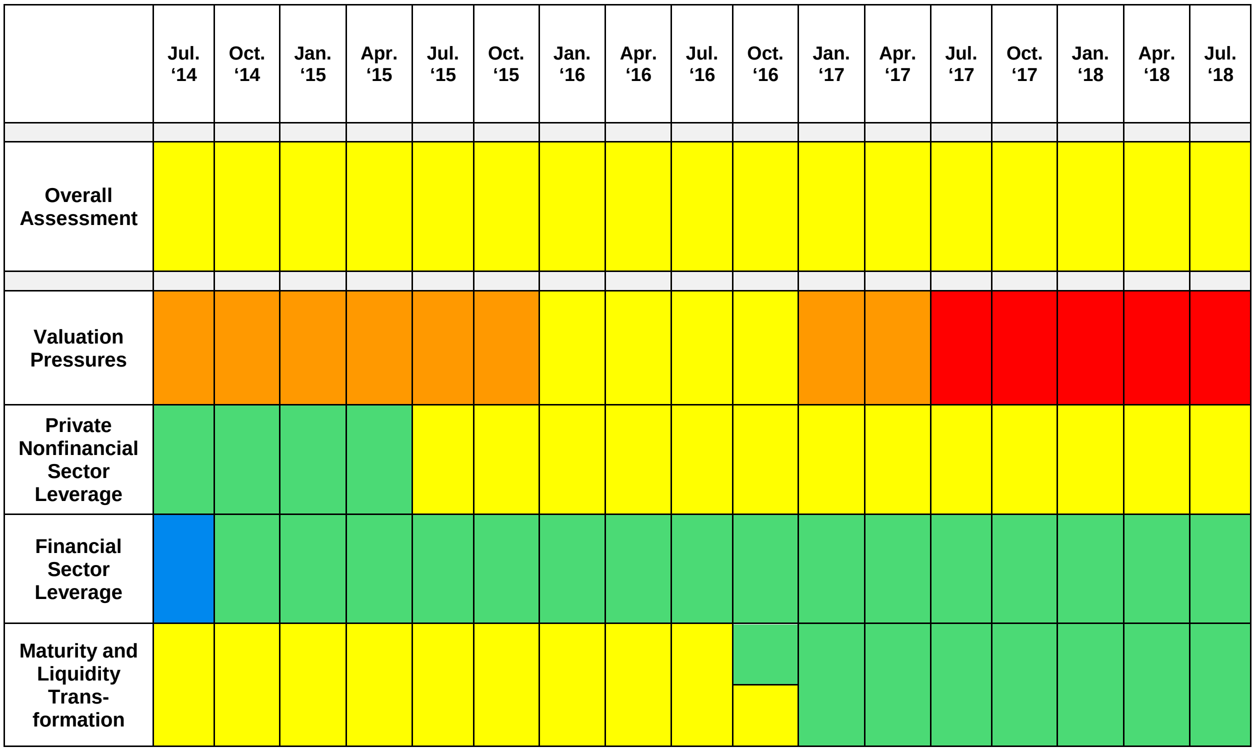


Exhibit 4: Staff Judgment on Levels of Vulnerabilities

Key: Extremely subdued Low Moderate Notable Elevated

Notes: Heat map color assignments were made by <u>staff judgment</u>. In the absence of significant structural changes, we would expect vulnerabilities to spend roughly equal proportions of time in each of the colored risk buckets.

	July 2017	April 2018	July 2018
Valuation Pressures	• The equity price-to-earnings ratio is near its highest value outside of the dot-com era. • High-yield corporate bond spreads to Treasury yields have decreased further, while issuance of bonds and leveraged loans has been robust. • CRE prices are at historic highs, and capitalization rates are historically low and declining. • Treasury term premiums remain subdued. Asset valuations appear less excessive, but still stretched, when compared to the current low Treasury yields.	• Valuations are still stretched despite a reduction in pressures in equity and corporate bond markets. • Treasury term premiums rebounded from previous lows, but remain subdued. • Valuations in leveraged loan and CRE markets increased further from already stretched conditions.	• Valuation pressures remain elevated across most markets. • House prices have accelerated over the past year, pushing their ratio to rents further above their estimated historical trend. • Valuation pressures in CRE markets continued to increase from already stretched conditions.
Private Nonfinancial Sector Leverage	• Leverage in the nonfinancial corporate sector remains elevated. • The growth of corporate debt is contributing to slight increases in the credit-to-GDP ratio. • However, overall nonfinancial sector leverage continues to be well below trend by most estimates	• Leverage in the nonfinancial corporate sector remains high and risky debt growth has picked up. • The household sector appears resilient, with modest new borrowing concentrated among prime-rated borrowers.	• In the nonfinancial corporate sector, debt owed by highly-levered and lower-rated firms remains elevated. • The household sector appears resilient. The amount of debt owed by borrowers with near-prime and subprime credit scores is flat and well below pre-crisis levels.
Financial Sector Leverage	• Capital positions at banks and insurance companies remain at high levels. • Available indicators of leverage at other nonbank financial institutions are little changed.	• Capital positions at banks and insurance companies remain at high levels. • Some measures of hedge fund leverage have increased notably.	• Capital positions at banks and insurance companies remain at high levels. • Some measures of hedge fund leverage remain high.
Maturity and Liquidity Trans-formation	• Large BHCs' holdings of liquid assets remain at high levels. • There has been little growth outside of government funds in potential substitutes for prime money market funds. • Insurance companies have seen growth in nontraditional liabilities and their securities lending programs.	• Large BHCs' holdings of liquid assets remain at high levels. • Banks' core deposit funding remains high, while short-term funding remains low. • The growth in potential substitutes for MMFs remains limited.	• Large BHCs' holdings of liquid assets remain at high levels. • Banks' core deposit funding remains high, while short-term funding remains near historical lows. • The growth in potential substitutes for prime MMFs remains limited.
Overall Assessment			

Exhibit 1:

1: Note: The indicator plotted is an aggregate of valuation measures from equity, volatility, housing, corporate debt, and commercial real estate markets and of indicators of standards or risk characteristics in these markets. The values are percentiles of the historical distribution for this composite over the time period shown. Shaded bars indicate periods of recession as defined by the National Bureau of Economic Research. Data for 2018:Q2 is generated with available data and staff estimates. Source: Aikman et al. (2015).

2: Note: Trend equals 100 at the last observation. The long-run trend is estimated using data from 1978-2001 and includes the effect of carrying costs on the expected price-rent ratio. Source: CoreLogic, BLS.

3: Source: Real Capital Analytics.

4: Note: Banks were asked to describe their current level of standards in relation to the midpoint of the range of standards at their bank between 2005 and the present. Responses are weighted by survey respondents' holdings of relevant loan types, as reported on the Q1 Call Reports from 2011 to 2018 where relevant. Source: Senior Loan Officer Opinion Survey.

5: Note: Total net issuance of risky debt is the sum of the net issuance of speculative grade and unrated bonds and institutional leveraged loans. Data are four-quarter moving averages. Source: S&P LCD; Mergent-FISD.

6: Note: Household debt is measured as total debt for all consumers, by credit score. Near prime is between 620 and 719, prime is greater than 719. Scores are measured contemporaneously. Student loan balances prior to 2004 were estimated. Source: Federal Reserve Bank of New York CCP/Equifax.

Exhibit 2:

1: Source: Dodd-Frank Act Stress Tests 2018, 2017, 2016, 2015, 2014: Supervisory Stress Methodology and Results.

2: Source: Dodd-Frank Act Stress Tests 2018: Supervisory Stress Methodology and Results.

3: Note: Gross leverage in prime brokerage accounts is calculated as total market value in prime broker (PB) clients' accounts (long plus short) divided by clients' total equity. Form PF gross notional leverage is computed as the ratio of hedge funds' gross notional exposure to net asset value, including derivative notional exposure and short positions. Source: Federal Reserve Bank of New York. SEC Form PF.

4: Source: Senior Credit Office Opinion Survey (SCOOS).

5: Note: Event lines denote Federal Funds Rate midpoint increases. Other banks are those with less than $50 billion in total assets. Source: Ratewatch.

6. Note: Local government investment pools are rated “AAAm” or “AAm.” The date of the last observation varies by series. Stable value funds ends in March, offshore MMFs ends in June, short-term investment funds ends in March, ultrashort bonds funds ends in May, and local government investing pools ends in June. Source: S&P.

Exhibit 3:

Note: Heat map color assignments were made by staff judgment. In the absence of significant structural changes, we would expect vulnerabilities to spend roughly equal proportions of time in each of the colored risk buckets. Source: July 2014 to July 2018 QS reports.

Exhibit 4:

Note: See note for Exhibit 3. Source: July 2018 QS report.

Appendix 6: Materials used by Mr. Laubach

Material for the Briefing on

Monetary Policy Alternatives

Thomas Laubach
Exhibits by Gurubala Kotta
July 31-August 1, 2018

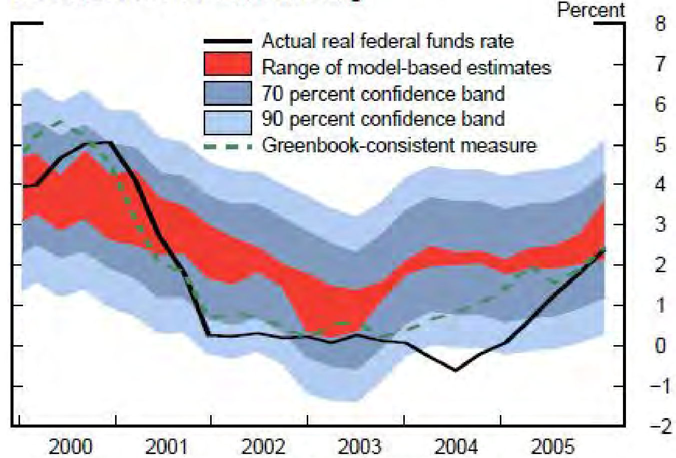
Monetary Policy Considerations

Economic Conditions at November 2005 FOMC Meeting

	Q1	Q2	Q3	Q4
Core PCE Inflation (YoY)	2.16	1.97	1.94	1.91
Output Gap	−0.71	−0.65	−0.61	−0.50
Unemployment Gap	0.25	0.11	0.02	0.05

Note: Data and staff projections as reported in the November 2005 Greenbook.

Equilibrium Real Federal Funds Rate December 2005 FOMC Meeting

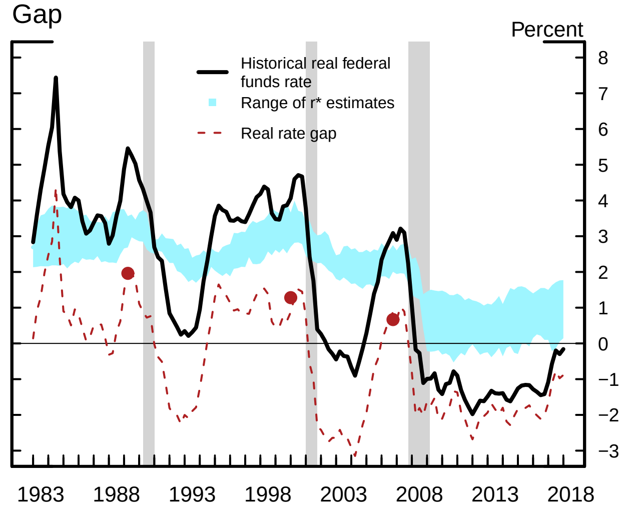


Note: Staff estimates as reported in December 2005 Bluebook.

Policy Considerations: 2005 and Now

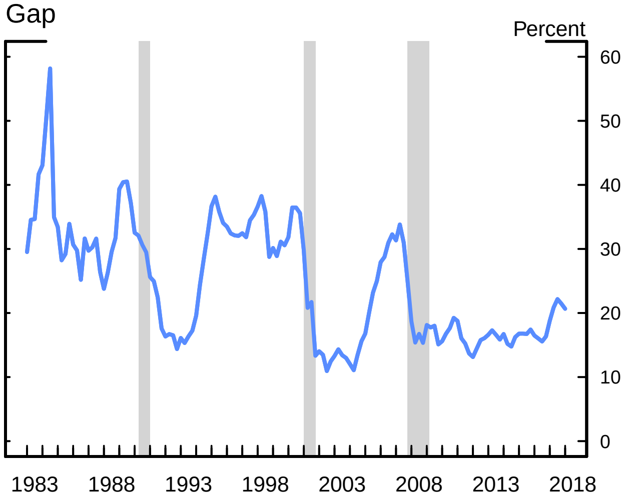
- 2005: All gaps appeared to be closing but signs of upside inflation pressures
  - Committee signaled "some further measured policy firming" likely needed
- Today: Inflation and real rate gap closing, but unemployment well below longer−run rate
  - May wish to raise rates above neutral
  - Balance risks to price and financial stability against risks of recession or persistently lower inflation

Real Federal Funds Rate and Real Rate Gap



Note: Real rate gap is the difference between the real funds rate and the mean of the r* estimates from the following five models using current data: HLW, JM, K, LVG, and LW. The red data points indicate the level of the real rate gap four quarters before the onset of a recession.
Source: FRBNY; BEA; various papers on r* referenced in the March 2018 Monetary Policy Strategies section of Tealbook A.

Recession Probability Based on Real Rate Gap



Note: Recession probability from a probit model using the real rate gap estimated over the period of 1960 Q1 to 2018 Q1. Real rate gap is the difference between the real funds rate and the mean of the r* estimates from the five models shown in the middle right panel.
Source: Board staff calculations.

Policy Communications

- How far might funds rate be raised without increasing vulnerability of the economy?
- In 2005, "some further measured policy firming"
- Today, "further gradual increases in the target range"
  - How much longer is this language consistent with your intentions?
  - How to modify as approach end of tightening cycle?

June 2018 FOMC Statement

1. Information received since the Federal Open Market Committee met in May 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 declined. Recent data suggest that growth of household spending has picked up, while business fixed investment has continued to grow strongly. On a 12-month basis, both overall inflation and inflation for items other than food and energy have moved close to 2 percent. Indicators of longer-term inflation expectations are little changed, on balance.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that further gradual increases in the target range for the federal funds rate will be consistent with sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective over the medium term. Risks to the economic outlook appear roughly balanced.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to raise the target range for the federal funds rate to 1-3/4 to 2 percent. The stance of monetary policy remains accommodative, thereby supporting strong labor market conditions and a sustained return to 2 percent inflation.

4. 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 JULY/AUGUST 2018

1. Information received since the Federal Open Market Committee met in ~~May~~ **June** indicates that the labor market has continued to strengthen and that economic activity has been rising at a ~~solid~~ **strong** rate. Job gains have been strong, on average, in recent months, and the unemployment rate has ~~declined~~ **stayed low**. ~~Recent data suggest that growth of~~ Household spending ~~has picked up, while~~ **and** business fixed investment ~~has continued to grow~~ **have grown** strongly. On a 12-month basis, both overall inflation and inflation for items other than food and energy have moved close to 2 percent. Indicators of longer-term inflation expectations ~~are little changed, on balance~~ **remain low**.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that ~~further gradual increases in the target range for the federal funds rate~~ **the current stance of monetary policy** will be consistent with sustained expansion of economic activity~~,~~ **and** strong labor market conditions~~,~~**.** ~~and~~ Inflation **is expected to move modestly above 2 percent for a time and then run** near the Committee's symmetric 2 percent objective ~~over the medium term~~. Risks to the economic outlook appear roughly balanced.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to ~~raise~~ **maintain** the target range for the federal funds rate ~~to~~ **at** 1-3/4 to 2 percent. The stance of monetary policy remains accommodative, thereby supporting strong labor market conditions and a ~~sustained return to~~ **period of inflation modestly above** 2 percent ~~inflation~~. **This inflation outcome should help ensure that longer-term inflation expectations are consistent with the Committee's symmetric objective of 2 percent inflation.**

4. 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 JULY/AUGUST 2018

1. Information received since the Federal Open Market Committee met in ~~May~~ **June** indicates that the labor market has continued to strengthen and that economic activity has been rising at a ~~solid~~ **strong** rate. Job gains have been strong, on average, in recent months, and the unemployment rate has ~~declined~~ **stayed low**. ~~Recent data suggest that growth of~~ Household spending ~~has picked up, while~~ **and** business fixed investment ~~has continued to grow~~ **have grown** strongly. On a 12-month basis, both overall inflation and inflation for items other than food and energy ~~have moved close to~~ **remain near** 2 percent. Indicators of longer-term inflation expectations are little changed, on balance.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that further gradual increases in the target range for the federal funds rate will be consistent with sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective over the medium term. Risks to the economic outlook appear roughly balanced.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to ~~raise~~ **maintain** the target range for the federal funds rate ~~to~~ **at** 1-3/4 to 2 percent. The stance of monetary policy remains accommodative, thereby supporting strong labor market conditions and a sustained return to 2 percent inflation.

4. 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 JULY/AUGUST 2018

1. Information received since the Federal Open Market Committee met in ~~May~~ **June** indicates that the labor market has continued to strengthen and that economic activity has been rising at a ~~solid~~ **strong** rate. Job gains have been strong, on average, in recent months, and the unemployment rate has ~~declined~~ **stayed low**. ~~Recent data suggest that growth of~~ Household spending ~~has picked up, while~~ **and** business fixed investment ~~has continued to grow~~ **have grown** strongly. On a 12-month basis, both overall inflation and inflation for items other than food and energy ~~have moved close to~~ **remain near** 2 percent. Indicators of longer-term inflation expectations are little changed, on balance.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that further ~~gradual~~ increases in the target range for the federal funds rate will be ~~consistent with sustained~~ **warranted to achieve a sustainable** expansion of economic activity, **maintain** strong labor market conditions, and **keep** inflation near the Committee's symmetric 2 percent objective over the medium term. Risks to the economic outlook appear roughly balanced**, but the Committee is closely monitoring the economic and financial implications of high levels of resource utilization**.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to raise the target range for the federal funds rate to ~~1-3/4 to~~ 2 **to 2-1/4** percent. The stance of monetary policy remains accommodative~~, thereby supporting strong labor market conditions and a sustained return to 2 percent inflation~~.

4. 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 July/August 2018 Alternatives A and B

Release Date: August 1, 2018

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 (FOMC) in its statement on ~~June 13~~ **August 1**, 2018:

- The Board of Governors of the Federal Reserve System voted **[** unanimously **]** to ~~raise~~ **maintain** the interest rate paid on required and excess reserve balances ~~to~~ **at** 1.95 percent, effective ~~June 14~~ **August 2**, 2018. ~~Setting the interest rate paid on required and excess reserve balances 5 basis points below the top of the target range for the federal funds rate is intended to foster trading in the federal funds market at rates well within the FOMC's target range.~~
- 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 14~~ **August 2**, 2018, 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 1-3/4 to 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 1.75 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 June that exceeds $18 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 June that exceeds $12 billion. Effective in July, 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 $24 billion, and to reinvest 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 $16 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 ~~a 1/4 percentage point increase in~~ **the establishment of** the primary credit rate ~~to~~ **at the existing level of** 2.50 percent~~, effective June 14, 2018. In taking this action, the Board approved requests to establish that rate submitted by the Boards of Directors of the Federal Reserve Banks of ...~~.

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.

Implementation Note for July/August 2018 Alternative C

Release Date: August 1, 2018

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 (FOMC) in its statement on ~~June 13~~ **August 1**, 2018:

- The Board of Governors of the Federal Reserve System voted **[** unanimously **]** to raise the interest rate paid on required and excess reserve balances to ~~1.95~~ **2.20** percent, effective ~~June 14~~ **August 2**, 2018. ~~Setting the interest rate paid on required and excess reserve balances 5 basis points below the top of the target range for the federal funds rate is intended to foster trading in the federal funds market at rates well within the FOMC's target range.~~

- 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 14~~ **August 2**, 2018, 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 ~~1-3/4 to~~ 2 **to 2- 1/4** 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 ~~1.75~~ **2** 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 June that exceeds $18 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 June that exceeds $12 billion. Effective in July, 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 $24 billion, and to reinvest 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 $16 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 a 1/4 percentage point increase in the primary credit rate to ~~2.50~~ **2.75** percent, effective ~~June 14~~ **August 2**, 2018. In taking this action, the Board approved requests to establish that rate submitted by the Boards of Directors of the Federal Reserve Banks of . . .

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