

Appendix 1: Materials used by Mr. Potter and Ms. Logan

Class II FOMC – Restricted (FR)

Material for the Briefing on

**Financial Developments and
Open Market Operations**

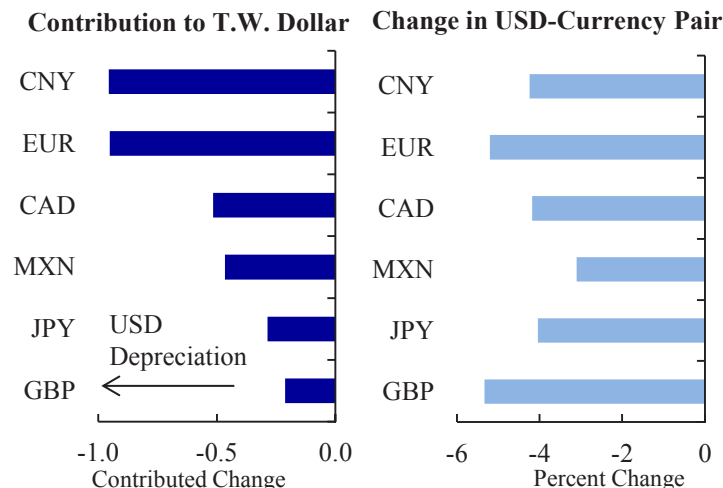
Simon Potter and Lorie Logan
January 30, 2018

(1) Asset Price Changes*

	Jan. '18 FOMC IMP	Dec. '17 FOMC IMP	Current Level
Goldman Sachs FCI	-0.6	-0.2	98.2
S&P 500 Index	+7.8%	+3.5%	2873
High-Yield Credit Spread	-33 bps	+6 bps	311 bps
10-Yr Nominal Treasury Yield	+26 bps	+2 bps	2.66%
10-Yr Real Treasury Yield	+8 bps	-1 bps	0.57%
U.S. Broad T.W. Dollar	-4.3%	-0.3%	115
MSCI World Index	+7.9%	+2.3%	2249
VIX Index	+1 ppts	-3 ppts	11

*Red indicates tightening of financial conditions, blue indicates loosening.
Source: Barclays, Bloomberg, Federal Reserve Board, Goldman Sachs, MSCI

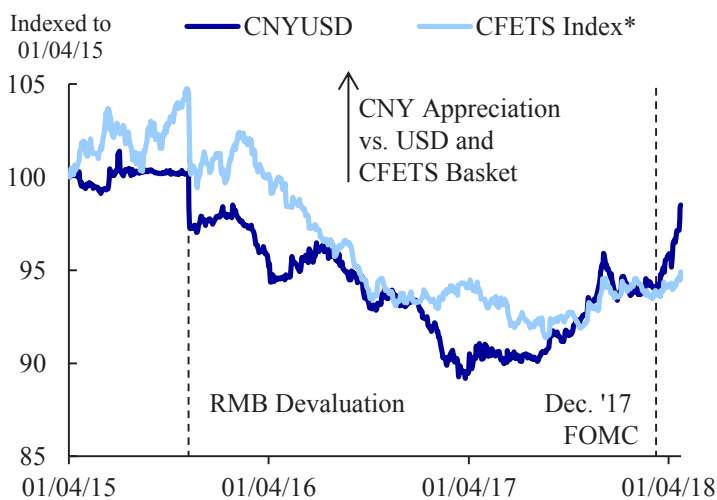
(2) U.S. Dollar Performance*



*Values shown indicate contribution to the Broad Trade-Weighted Dollar's 4.3% depreciation since 12/12/17.

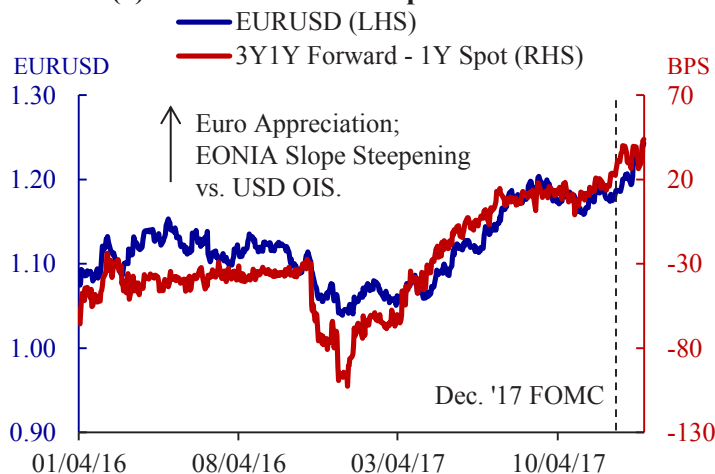
Source: Bloomberg, Desk Calculations, Federal Reserve Board

(3) Chinese Exchange Rate



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

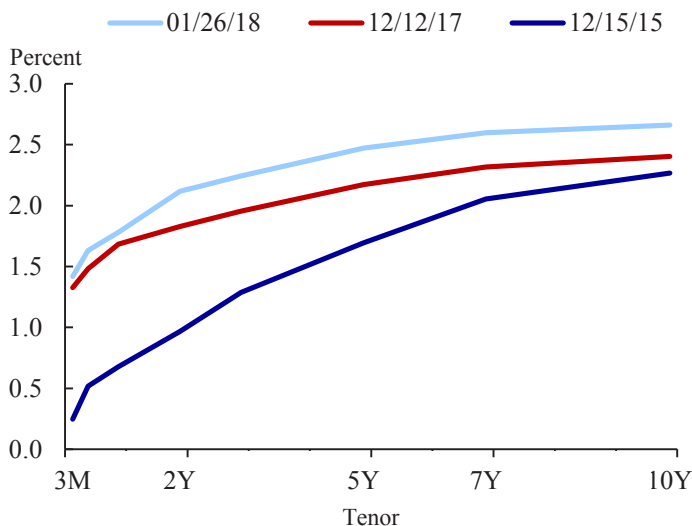
(4) Euro-Dollar and Slope Differentials*



*Slope differentials based on swaps: EONIA swap rate less U.S. dollar OIS rate.

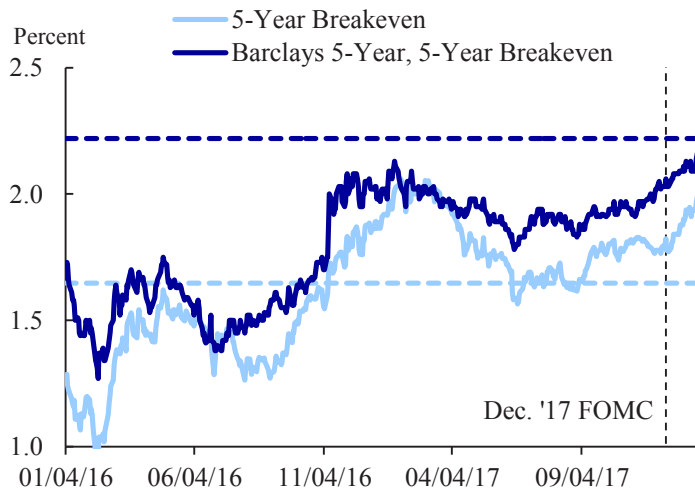
Source: Bloomberg, Desk Calculations

(5) Treasury Yield Curve



Source: Bloomberg

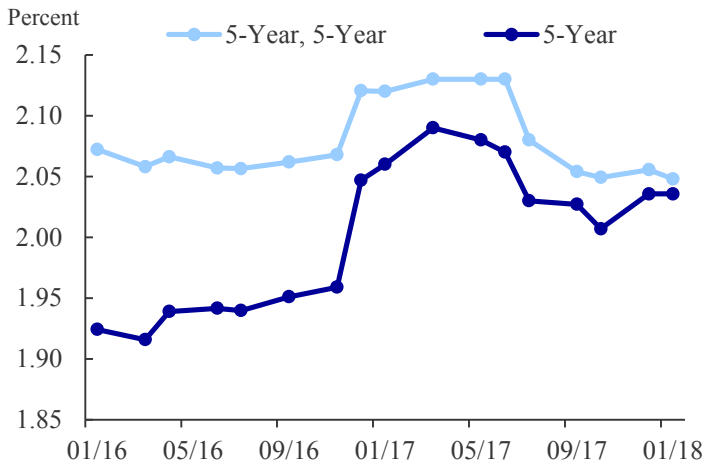
(6) U.S. Breakeven Inflation*



*Dashed horizontal lines indicate 10-year averages.

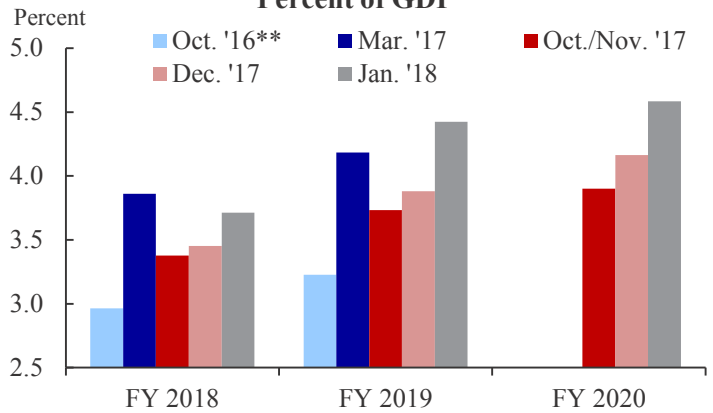
Source: Bloomberg, Barclays

(7) Average PDF-Implied Point Estimate of Annual Average CPI Inflation Rate*



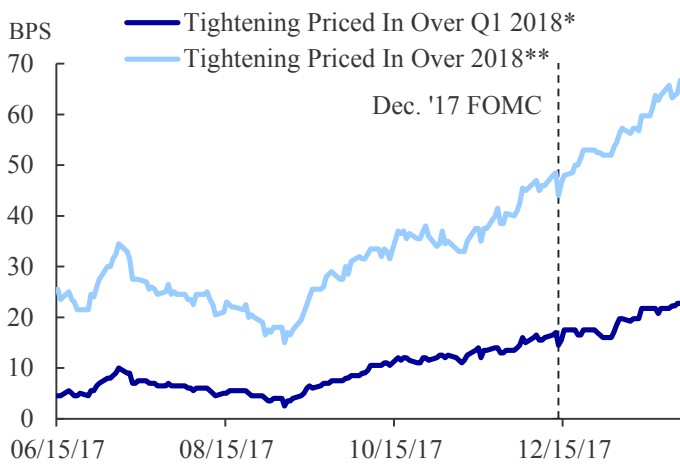
*Based on the average across all responses from the Surveys of Primary Dealers and Market Participants.
Source: FRBNY

(8) Average Estimate for U.S. Fiscal Deficit as a Percent of GDP*



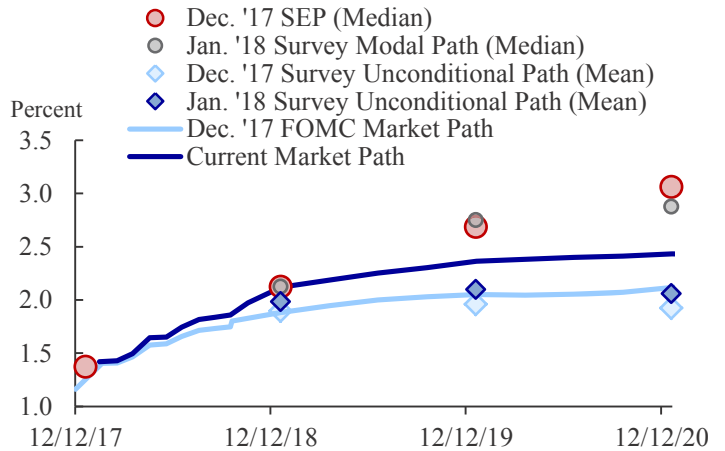
*Based on all responses from the Surveys of Primary Dealers and Market Participants.
**Oct. '16 levels are computed based on results from two questions in the Jan. '17 survey that ask about expectations of the level and change since Oct. '16.
Source: FRBNY

(9) Amount of Tightening Priced In



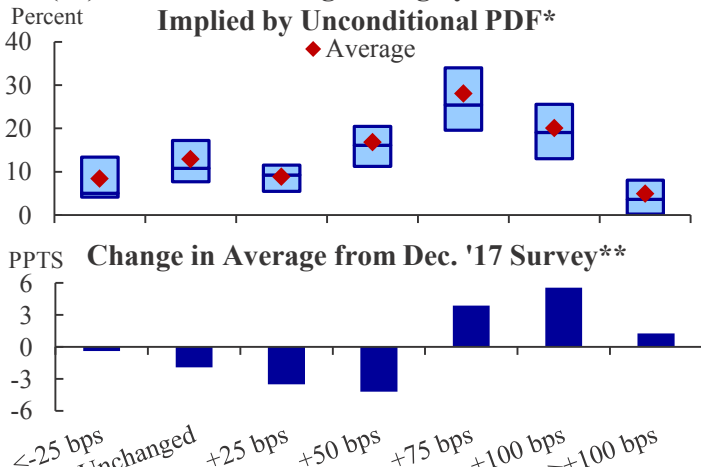
*Computed as Apr. '18 less Jan. '18 federal funds futures-implied rates.
**Computed as Jan. '19 less Jan. '18 federal funds futures-implied rates.
Source: Bloomberg

(10) Implied Path of the Policy Rate*



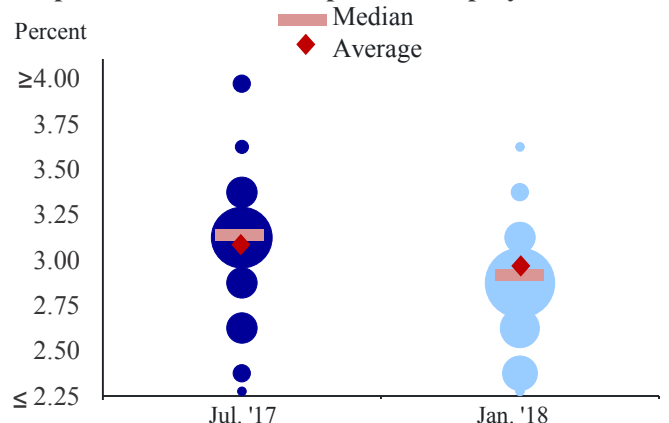
*Market-implied paths derived from federal funds and Eurodollar futures. Unconditional survey path is the average PDF-implied means from the Surveys of Primary Dealers and Market Participants.
Source: Bloomberg, Desk Calculations, Federal Reserve Board, FRBNY

(11) Basis Points of Tightening by Year-End 2018 Implied by Unconditional PDF*



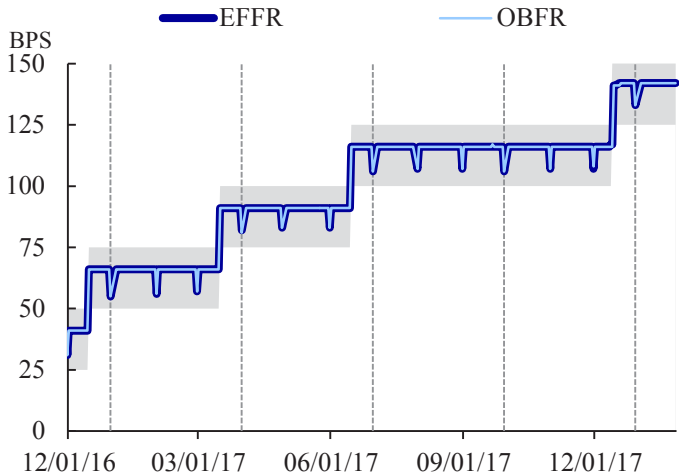
*Based on complete responses to the Jan. '18 Survey of Primary Dealers and Market Participants.
**Based on a matched sample from the Dec. '17 and Jan. '18 Surveys.
Source: FRBNY

(12) End-Q1 2019 Fed Funds Expectation Given +50 bps in Core PCE, -50 bps in Unemployment Rate*



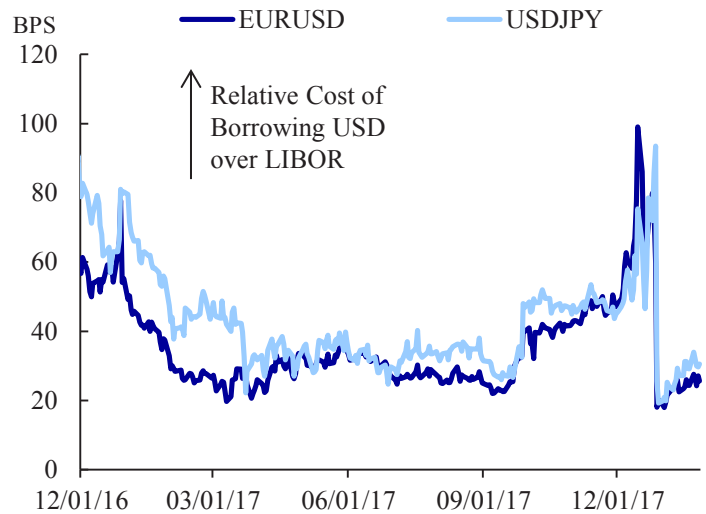
*Changes relative to the median SEP projections of core PCE inflation and the unemployment rate at the time. Based on all responses from the Surveys of Primary Dealers and Market Participants.
Source: FRBNY

(13) Overnight Unsecured Rates*



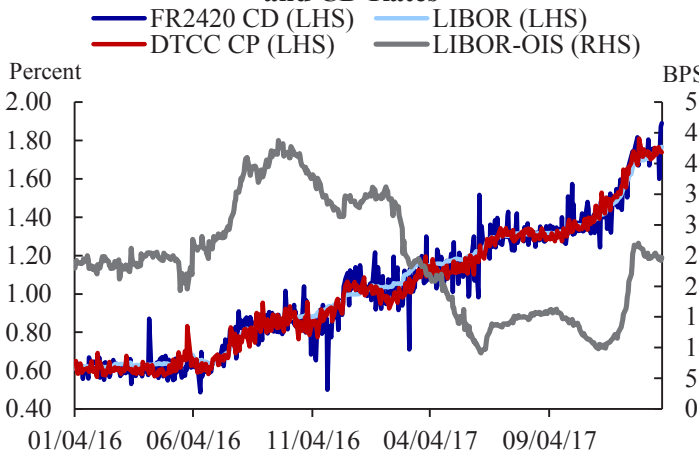
*Grey dashed line indicates quarter-end. Shaded band reflects target range for the federal funds rate.
Source: FRBNY

(14) Three-Month FX Swap-Implied Basis Spread



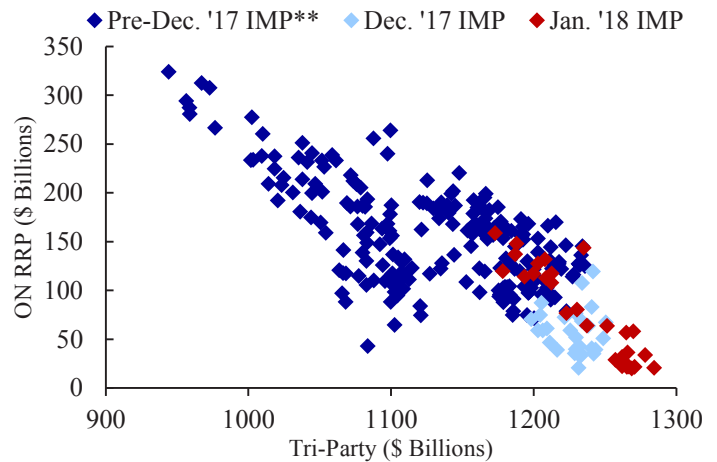
Source: Bloomberg

(15) Three-Month LIBOR and Trimmed Mean CP and CD Rates*



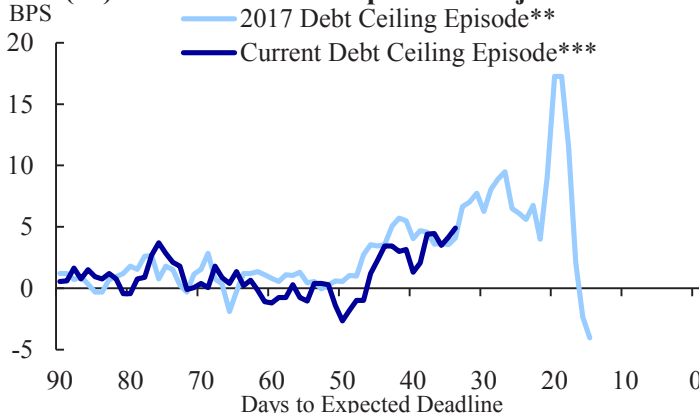
*CP/CD rates calculated based on a 5-day moving average. The bottom and top 24 percent of rates on a day are removed before calculating the average.
Source: Bloomberg, DTCC, FRBNY

(16) ON RRP Usage vs Tri-Party Volumes*



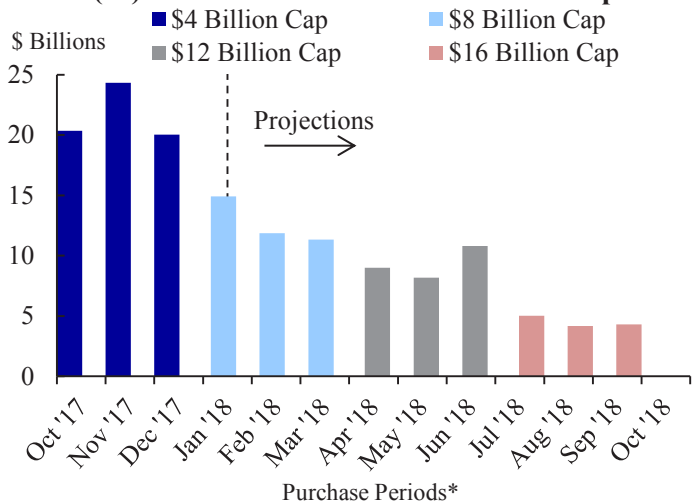
*Tri-party data includes all OMO-eligible collateral, overnight and term. Excludes month- and quarter- end dates.
**Pre-Dec. '17 IMP is from 12/01/16 to 10/31/17.
Source: BNYM, Desk Calculations, JPMC, FRBNY

(17) "At Risk" Bill Compared to Adjacent Bills*



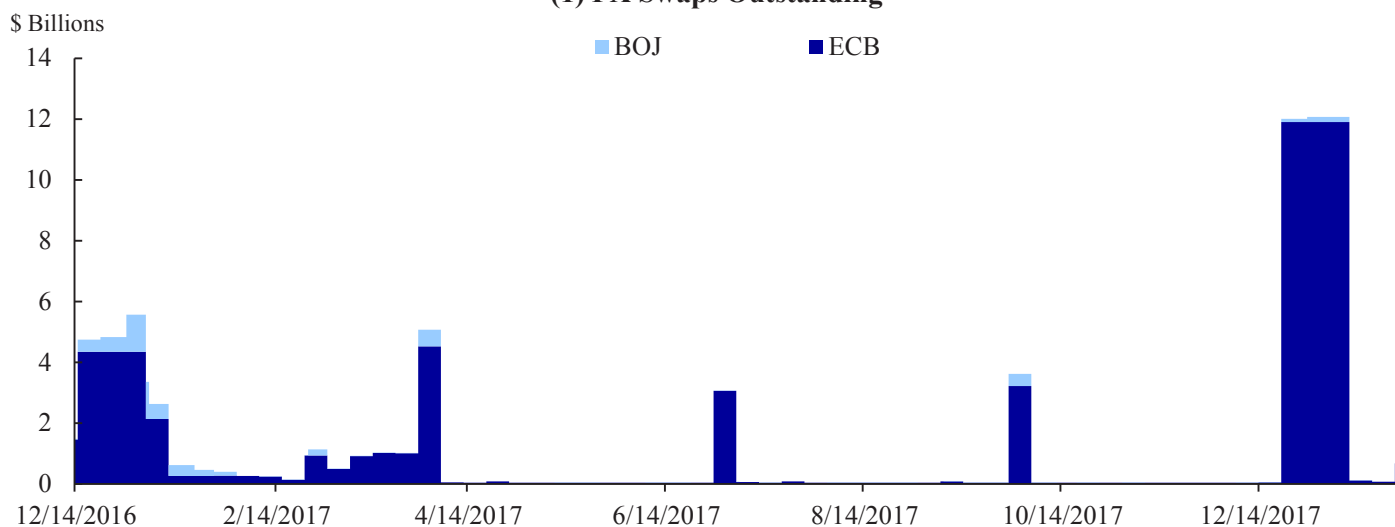
*Calculated as the "at risk" bill less average of bills maturing 1 week prior and 1 week after.
**Uses bill that matured on 10/05/17. Expected deadline was 09/29/17. Data shown through 09/08/17, when debt ceiling suspension was passed.
***Uses bill maturing on 03/01/18. Expected deadline is early March.
Source: Bloomberg

(18) MBS Reinvestments In Excess of Caps



*Purchase periods run from mid-month to mid-month.
Source: FRBNY, Desk Calculations

Appendix 1
(1) FX Swaps Outstanding



Source: FRBNY

(2) MBS Purchase Summary Since Cap Implementation Through January 26, 2018 (\$ Millions)

Purchase Period	Actual Paydowns	Cap	Actual Purchases	Net Deviation: Over (Under) Purchase	Cumulative Deviation
Oct 10/16/17 - 11/13/17	24,353	4,000	20,355	2	2
Nov* 11/14/17 - 12/13/17	28,316	4,000	24,327	11	13
Dec 12/14/17 - 01/12/18	24,032	4,000	20,038	6	19
Jan** 01/16/18 - 02/13/18	N/A	8,000	6,222	N/A	N/A

*November included agency debt maturity of \$2,366 million.

**Actual purchases ongoing, reflect data through 01/26/18. Target amount for January purchase period is \$14,909 million.

(3) FX Intervention

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

(4) Summary of Operational Testing

Summary of Operational Tests in prior period:

- None

Upcoming Operational Tests:

- Two tests scheduled under the Domestic Authorization
 - February 8: Treasury outright purchase of up to \$200 million par
 - February 14: Securities lending (utilizing a backup tool) for up to \$115 million
- Three tests scheduled under the Foreign Authorization
 - February 13: Euro-denominated repo with private counterparties for €1 million
 - March 12: Euro-denominated callable term deposit with an official institution for €1 million
 - March 19: Early liquidation of a euro-denominated callable term deposit with an official institution for €1 million

Appendix 2: Desk Operational Readiness Framework**(1) Planned small value exercises for 2018 authorized under the Domestic Authorization**

Operation Name	Anticipated Timeframe (H: Half)	Expected Approx. Value for Each Exercise (\$ millions) ¹	Approx. Value of 2017 Exercise (\$ millions)
<i>Outright operations</i>			
MBS outright sales	H1	300	156
	H2	200	168
Coupon swaps with unsettled MBS holdings	H1	25	20
	H2	25	20
Treasury outright purchases	H1	100-200	200
	H2	100-200	200
Treasury outright sales	H1	100-200	200
	H2	100-200	200
<i>Total expected value of outright operations</i>	-	\$950-1,350	\$1,164
<i>Authorization limit for outright operations</i>	-	\$5,000	\$5,000
<i>Temporary operations</i>			
Overnight repo	H1	75	62
	H2	75	66
Term repo	H1	75	62
	H2	75	65
Overnight reverse repo (agency MBS collateral)	H1	175	21
	H2	175	22
Term reverse repo	H1	175	112
	H2	175	109
<i>Total expected value of temporary operations</i> ²	-	\$1,000	\$519
<i>Authorization limit for temporary operations</i>	-	\$5,000	\$5,000

(2) Planned small value exercises for 2018 authorized under the Foreign Authorization

Operation Name	Anticipated Timeframe (H: Half) (number of exercises, if more than one)	Expected Approx. Value for Each Exercise ³ (in millions)	Approx. Value of 2017 Exercise (in millions)
Standing dollar and foreign currency liquidity swaps ⁴	H1 (3)	<\$1 each	H1 (3) <\$1 each
	H2 (3)	<\$1 each	H2 (3) <\$1 each
Euro-denominated repo with private counterparties	H1	€ 1	H1 (2) €1 each
	H2	€ 1	H2 (2) €1 each
Euro-denominated callable time deposits with official institutions	H1	€ 1	
Early liquidation of euro-denominated callable time deposits with official institutions	H1	€ 1	
Euro and yen-denominated sovereign debt sales	H1	€ 1	H1(2) €1
	H2	¥100	¥100
<i>Total expected value:</i>	-	\$12	\$9
<i>Authorization limit:</i>	-	\$2,500	\$2,500

¹Each exercise may consist of more than one transaction.²The total expected value of temporary operations simply aggregates the value of all operations planned over the year. The Authorization for Domestic Open Market Operations imposes a \$5 billion limit on the amount of temporary open market operations outstanding at any given time.³Each exercise may consist of more than one transaction.⁴These exercises involve the following currencies: British pound, Canadian dollar, euro, Japanese yen, and Swiss franc.

Appendix 2: Materials used by Ms. Peneva and Messrs. Clark and Fuhrer

Class II FOMC - Restricted (FR)

Material for Briefing on
Inflation Dynamics

Ekaterina Peneva, Todd E. Clark, and Jeff Fuhrer
January 30, 2018

A conceptual framework for inflation dynamics

Expectations-augmented Phillips curve:

$$\pi_t = \alpha\pi_{t-1} + (1 - \alpha)\pi_{t-1}^e + \beta GAP_t + \tau Z_t + \varepsilon_t, \quad (0 < \alpha < 1), \quad (1)$$

where:

π	core PCE inflation
π^e	inflation expectations relevant for wage and price setting
GAP	measure of resource utilization (e.g., the unemployment gap)
Z	set of supply shocks (relative energy and import prices)
ε	residual

In this framework:

- Permanent changes in expected inflation eventually pass through one-for-one into actual inflation.
- If expectations are perfectly anchored, transitory supply shocks and temporary changes in slack have only transitory effects on inflation.



A conceptual framework... (continued)

Accelerationist Phillips curve:

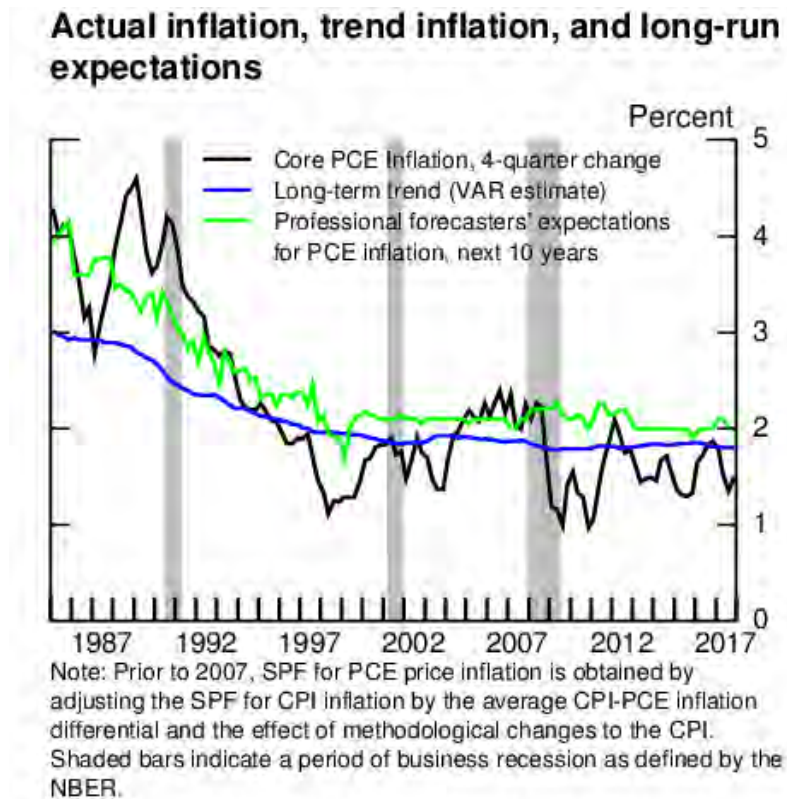
$$\pi_t = \sum_{i=1}^N \alpha_i \pi_{t-i} + \beta GAP_t + \tau Z_t + \varepsilon_t, \quad \sum_{i=1}^N \alpha_i = 1 \quad (2)$$

In an accelerationist model:

- Inflation expectations reflect actual past inflation.
- Assuming that the coefficients on lagged inflation sum to one implies that even *transitory* shocks have *permanent* effects on inflation.

Observed inflation and the staff framework

An anchored-expectations framework appears to better explain observed inflation dynamics in recent decades.



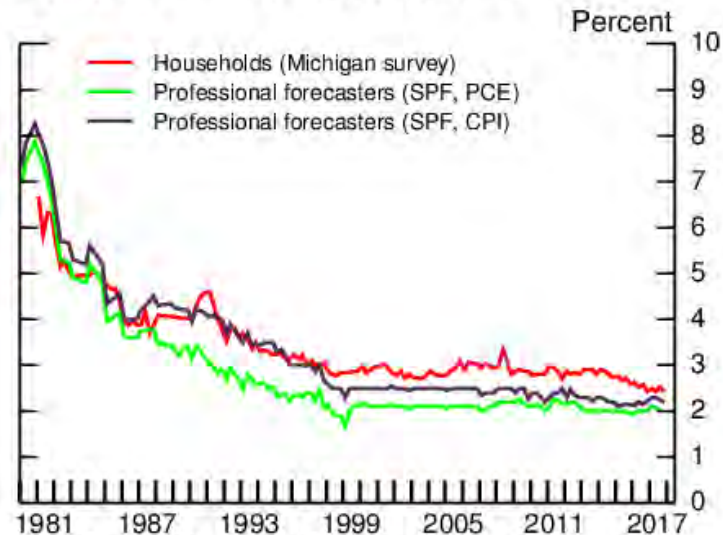
- Since the mid-1990s, core inflation has been well characterized empirically in terms of transitory fluctuations around a stable long-run trend.
- The Great Recession appears to have left little, if any, permanent imprint on inflation trend.
- Movements in long-run expected inflation roughly parallel those in inflation's long-run trend.

Issues associated with the staff framework

The role of inflation expectations and how they are formed

- Evidence that long-run inflation expectations drive inflation is largely circumstantial; the idea also has weak theoretical support.
- Not clear which inflation expectations should be most informative for inflation.
- Constructing a meaningful empirical model of expectations has become essentially impossible.

Long-run inflation expectations



Note: Prior to 2007, SPF for PCE price inflation is obtained by adjusting the SPF for CPI inflation by the average CPI-PCE inflation differential and the effect of methodological changes to the CPI.

The staff *assumes* that inflation's trend, ultimately determined by expectations, has been stable for many years at a little below 2 percent and that it will edge up over the medium term.

Issues associated with the staff framework (cont'd)

The effect of slack on inflation

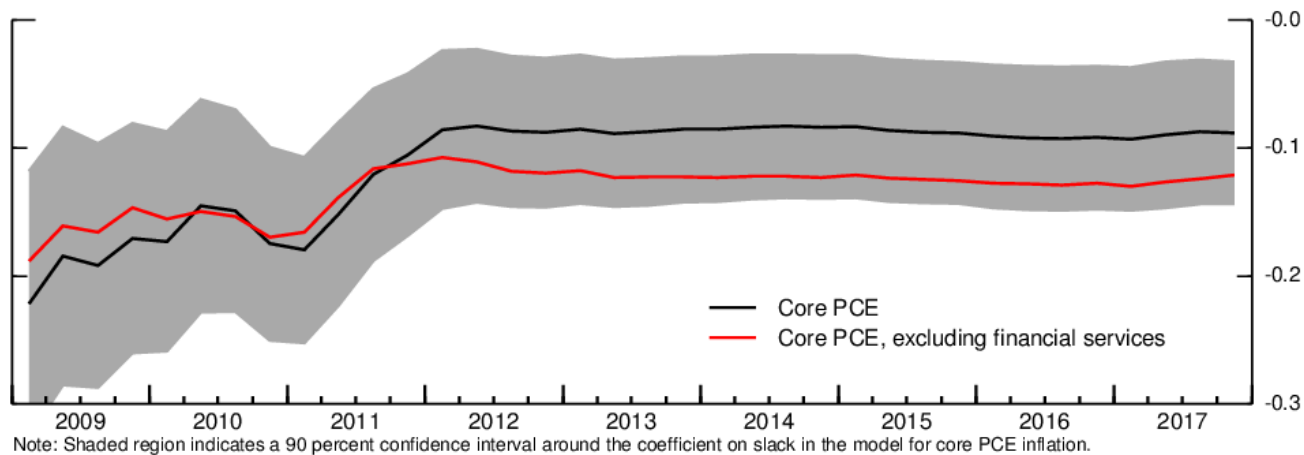
- The Phillips curve appears relatively flat at present; hence, inflation is not very informative about resource utilization.
- The staff could be mismeasuring slack.
- The staff could be wrong about the current or prospective effect of slack on inflation.

Issues associated with the staff framework (cont'd)

Coefficient stability

- Given the short sample the staff uses for our empirical inflation models, influential observations can importantly affect the models' estimated coefficients.
- One example: the effect of the PCE price index for financial services.

Coefficient on labor market slack from two specifications




Issues associated with the staff framework (cont'd)

The role of wages

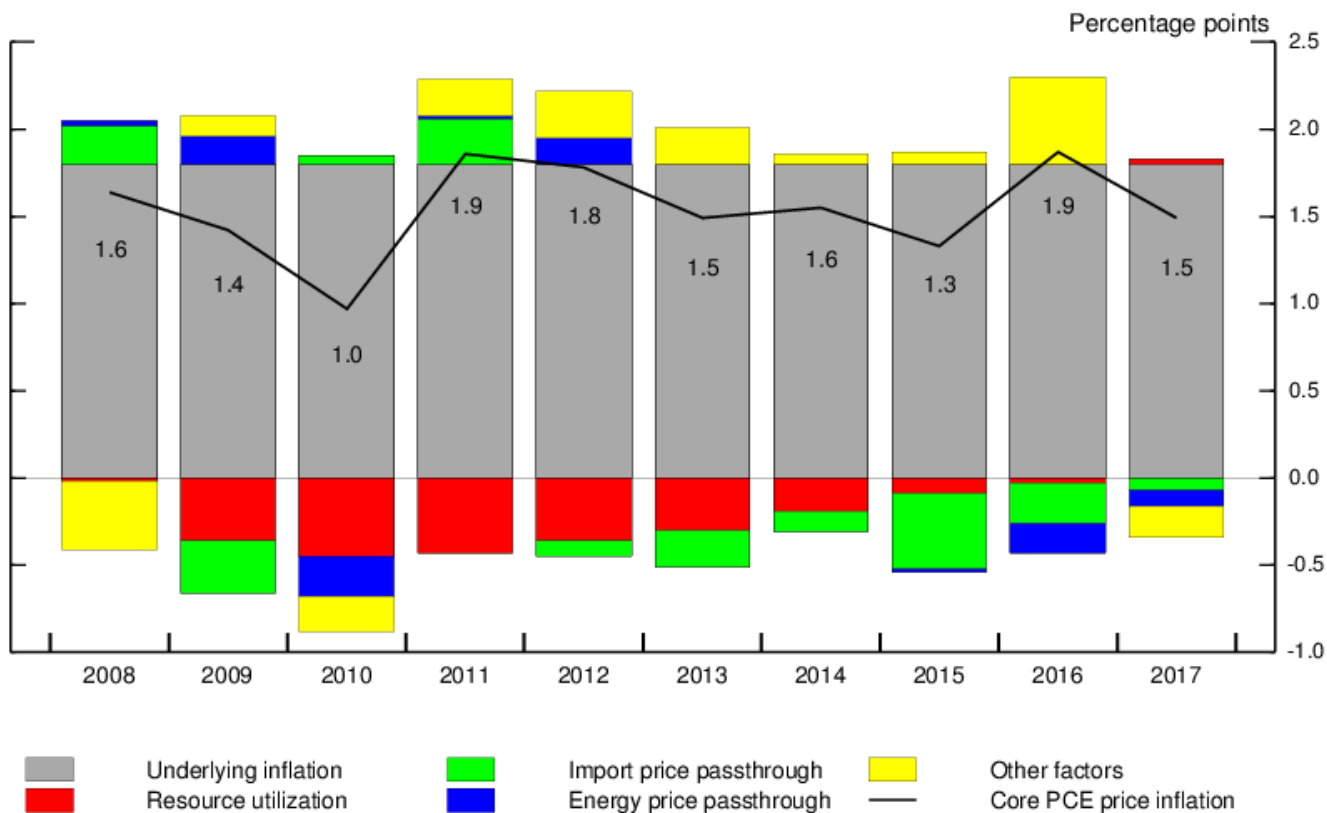
- Labor costs are likely very important for firms' pricing decisions.
- Empirically, we find little evidence that *independent* movements in average labor costs have had a material influence on aggregate price inflation in recent years.

Interpreting unexplained movements in inflation

- They might reflect an incorrect assessment of the effects of fundamental factors.
 - They might reflect a missing fundamental factor.
 - They might reflect idiosyncratic price shocks or simple noise.
- 

A model-based decomposition of core PCE price inflation

Contributions to core PCE inflation



Alternative explanations for recent low inflation

- Greater competition.
- Foreign slack and other global factors might be putting downward pressure on domestic prices beyond what is already captured in the staff framework through exchange rates and import prices.
- PCE medical services prices have been held down by budgetary pressures at both the federal and state levels.

General forecasting model and established findings

Common specification:

$$\pi_t - \pi_t^* = \alpha(\pi_{t-1} - \pi_{t-1}^*) + \beta' X_{t-1} + \varepsilon_t, \quad (1)$$

where π_t = inflation, π_t^* = measure of trend, X_{t-1} contains the set of economic drivers, and ε_t is the residual

- ▶ Basic idea: Inflation contains a slow-moving trend component and a cyclical component

Historically, forecast errors have been sizable

- ▶ But forecasts have been more accurate since 1990 than for most of the 1970s and 1980s

The variation of inflation explained by the model has fallen over time

General model and established findings: economic drivers

Many studies have examined the efficacy of output gaps, unemployment gaps, and other indicators for forecasting inflation

Body of evidence in the forecasting literature indicates that including economic drivers typically harms forecast accuracy

- ▶ Drivers are sometimes, but not consistently, helpful
- ▶ One possible explanation: Phillips curve relationship exists but is weak enough to be difficult to consistently see in forecast comparisons

General model and established findings: trend inflation

One common approach measures trend inflation with a long-run inflation expectation from a survey

- ▶ Consistent with a common econometric definition of trend as a long-horizon forecast

The other common approach treats the trend as unobserved and estimates it as part of a combined model for actual and trend inflation:

$$\pi_t - \pi_t^* = \alpha(\pi_{t-1} - \pi_{t-1}^*) + \beta'X_{t-1} + \varepsilon_t \quad (2)$$

$$\pi_t^* = \pi_{t-1}^* + n_t \quad (3)$$

- ▶ Some studies add other indicators — e.g., survey-based long-run inflation expectations or bond yields

Specific estimate of trend inflation

Flexible model to assess the relationships among inflation, its trend, and long-run expectations:

$$\pi_t - \pi_t^* = \alpha_t(\pi_{t-1} - \pi_{t-1}^*) + \varepsilon_t \quad (4)$$

$$\pi_t^* = \pi_{t-1}^* + n_t \quad (5)$$

$$\text{SPF 10-year}_t = \delta_{0,t} + \delta_{1,t}\pi_t^* + u_t \quad (6)$$

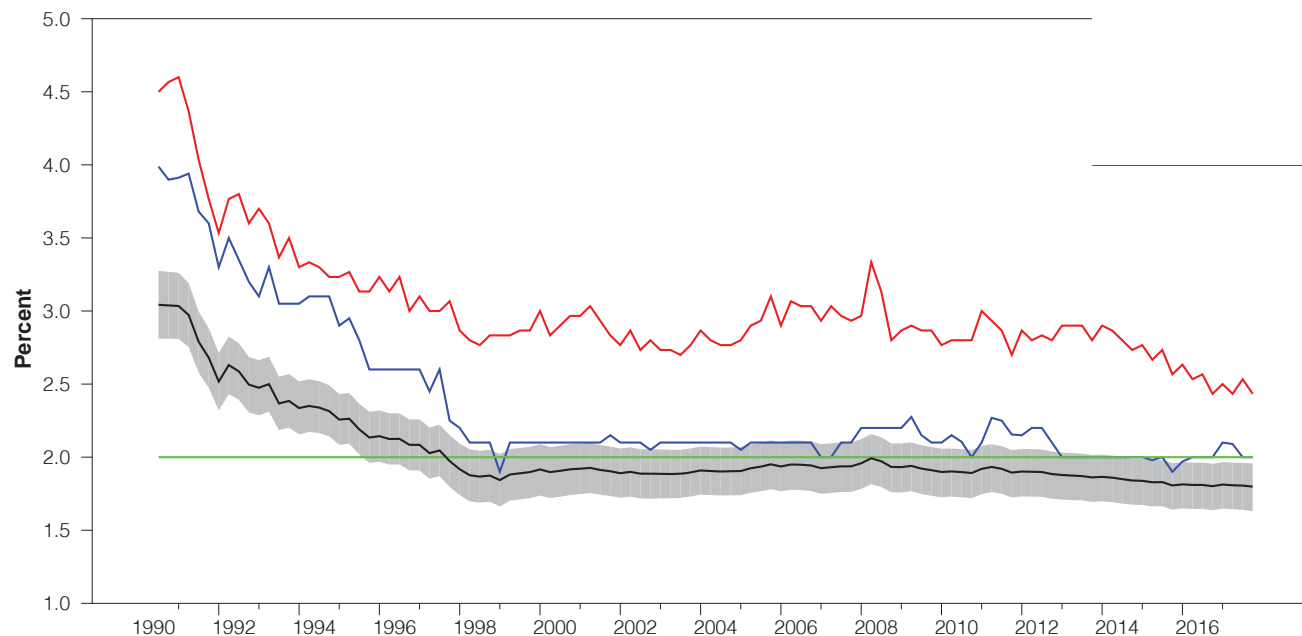
$$\text{Michigan 5-10-year}_t = \gamma_{0,t} + \gamma_{1,t}\pi_t^* + v_t \quad (7)$$

- ▶ Inflation and inflation expectations can provide useful information on trend inflation
- ▶ Not a structural model of inflation or inflation expectations

Historical estimates from Chan, Clark, and Koop study:

- ▶ Survey expectations improve model fit and trend precision
- ▶ Expectations commonly exceed trend
- ▶ Forecasting performance comparable to literature benchmarks

Specific estimate of trend inflation: current PCE inflation



- ▶ Current point estimate of trend is 1.8 percent
- ▶ Survey expectations exceed trend
- ▶ Estimated trend edged down from 2008 to 2015 and has since remained stable
- ▶ Model forecasts 1.8 percent inflation in 2019-20, with 68 percent confidence interval of 1.0 percent to 2.6 percent

Model uncertainty

Model-based forecast confidence bands capture uncertainty associated with parameter estimation and the model's error term

Additional uncertainty surrounding the model choice is considerable

- ▶ Choice of any economic drivers: models including them have a fairly poor track record, and many indicators perform comparably
- ▶ Specification of trend: selected econometric trends and survey expectations perform comparably on average, but can yield very different forecasts at a point in time
 - ▶ Updated Stock-Watson model forecast of PCE inflation in 2019-20: 1.6 percent
 - ▶ Updated Faust-Wright model forecast in 2019-20: 2 percent

Summary

Recent challenges in forecasting inflation are not unusual

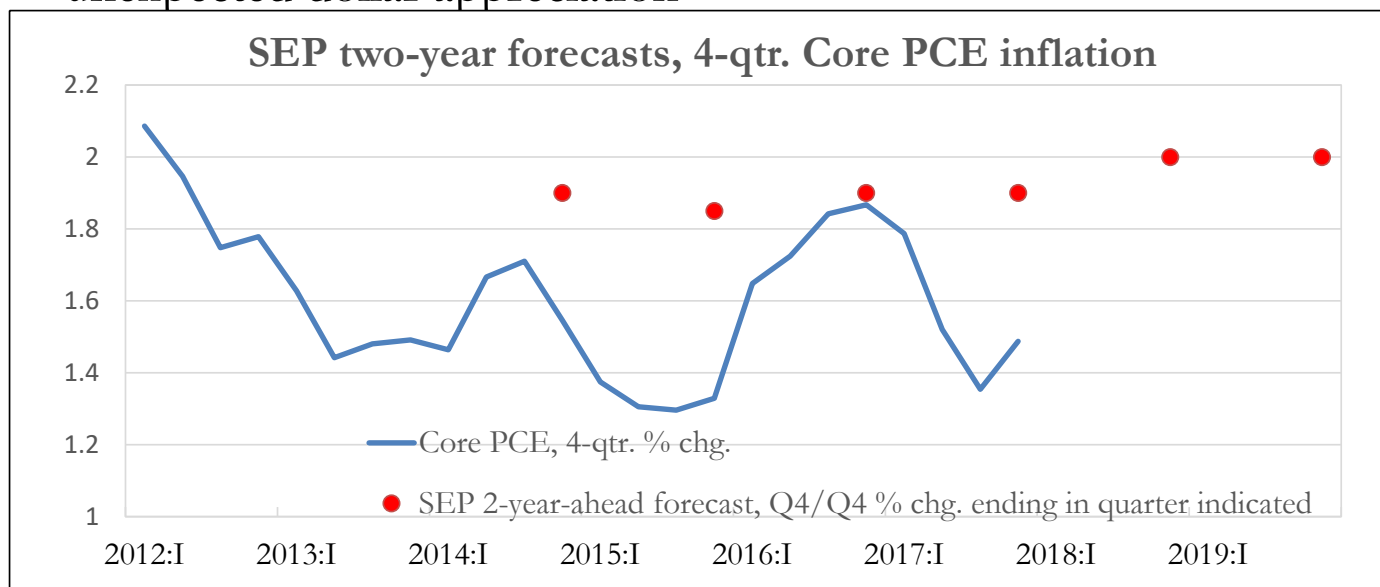
- ▶ Forecast uncertainty remains sizable and consistent with historical norms

It seems premature to conclude that something has gone wrong with all our models

- ▶ Models are no more limited now than before
- ▶ Better models would help, but developing them remains a challenge

The inflation puzzle: Maintaining perspective

- We have missed our target on the low side for several years
 - Although some of those years featured elevated unemployment, which would imply below-target inflation, other things equal
- The SEP has over-predicted inflation for several years
 - Perhaps due to a higher natural rate assumption, and some unexpected dollar appreciation



Explanations for low inflation

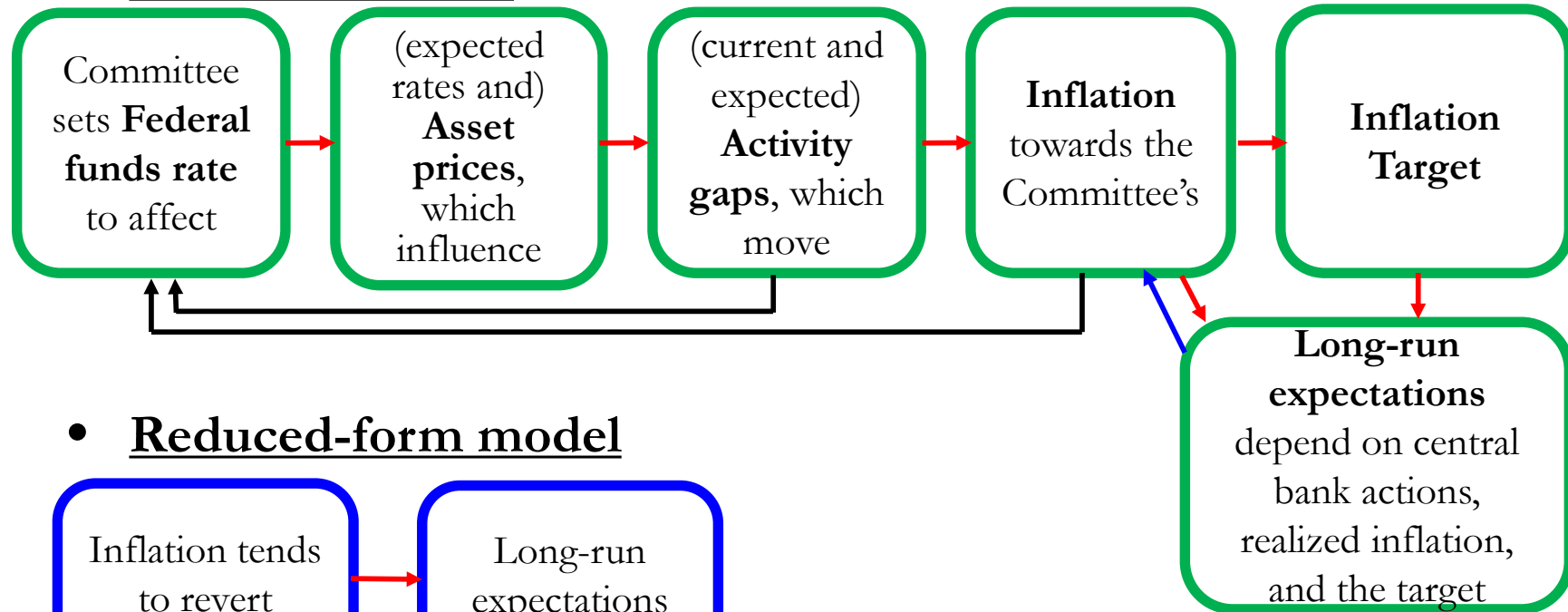
- Temporary factors (cell phone services, import prices, etc.)
 - Centered in spring 2017; if temporary, should have faded by now in high-frequency data.
- Small or zero Phillips Curve slope
- Very low natural rate of unemployment
- Unanchored long-run expectations
- A change in the mark-up of prices over unit labor costs?

What is our model of inflation?

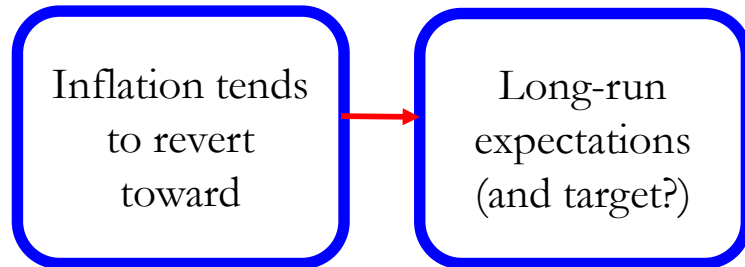
Model	Description	Inflation Implication
Accelerationist	Current and lagged gaps affect <u>change</u> in inflation	Inflation should have started <u>rising</u> in 2017
New Keynesian Phillips Curve (NKPC) model	Current and expected future gaps affect <u>level</u> of inflation relative to trend; Short-run expectations stand for the effect of expected future gaps	Inflation should have reached target in 2017 as gap closed (unless trend no longer = target)
Anchored expectations model	Current and lagged gaps affect <u>level</u> of inflation, relative to long-run expectations (= target?)	Inflation should have reached target in 2017 as gap closed (unless long-run expectations no longer = target)

Structural versus reduced-form models of inflation

- Structural model



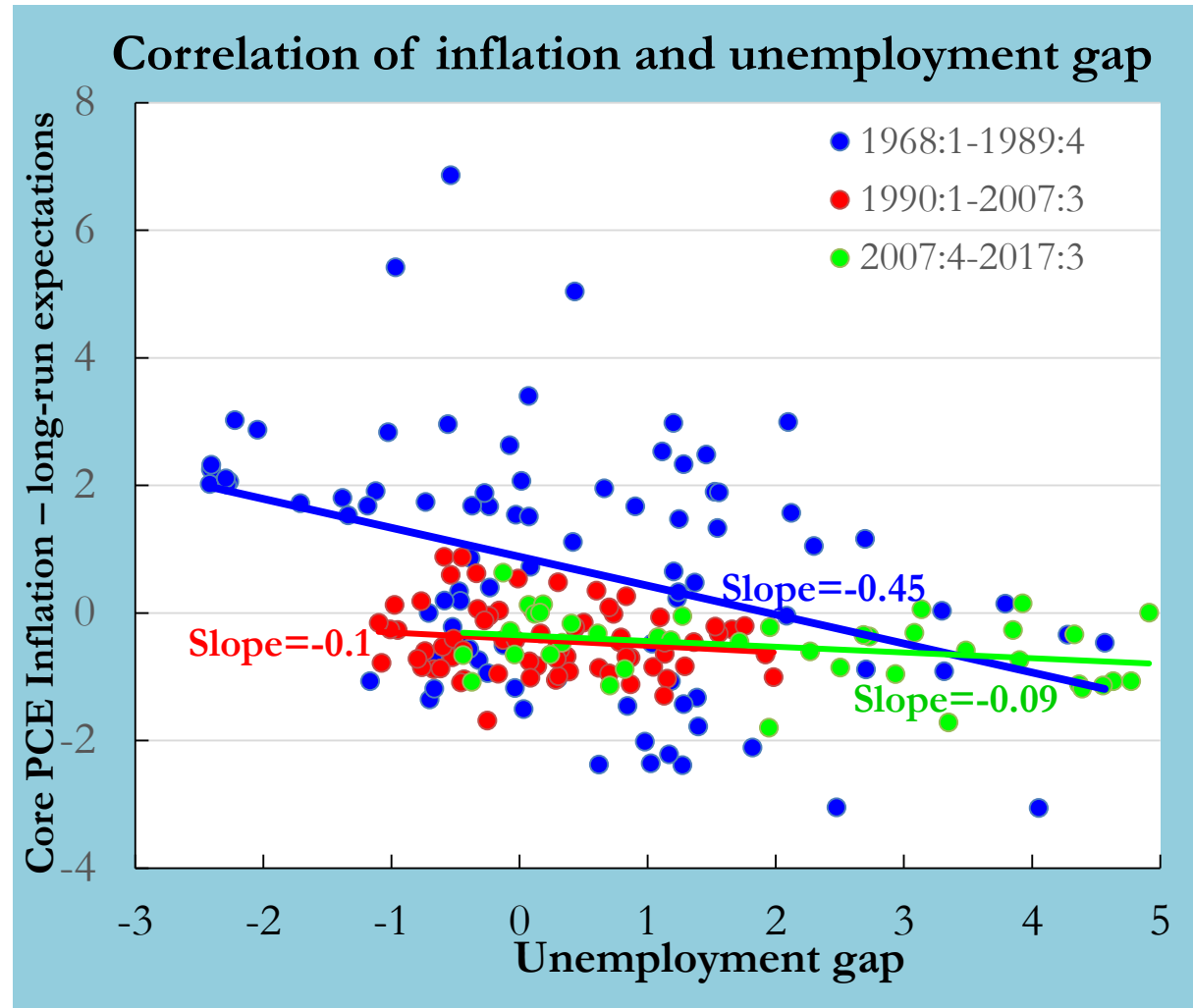
- Reduced-form model



- This reduced-form model describes the data reasonably well
- But it doesn't tell monetary policymakers what to do to achieve their desired outcome

A shallower Phillips curve?

- Effect of gaps on inflation is not easy to discern in the data
- Coefficient small (-0.1?), but probably not zero



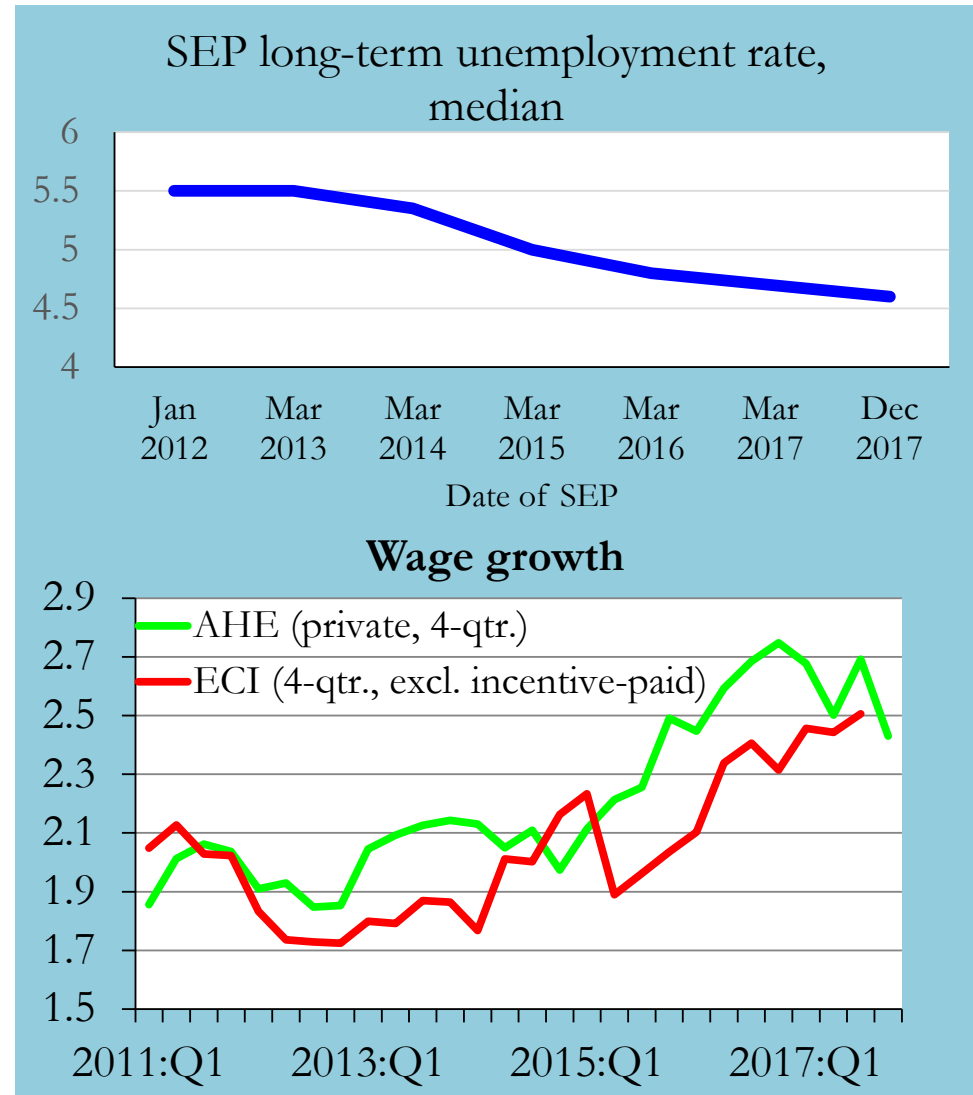
What if there's no role for gaps?

An expectations-only inflation model?

- Suppose the true gap coefficient is zero
- Only expectations matter? $\pi_t = E\pi_t^{LR}$
- What determines inflation expectations? How does monetary policy influence expectations?
- Is it reasonable to assume a full de-coupling of inflation from the real economy?
 - I think it's premature to conclude this
 - But if so, what are the alternatives?
 - Pure monetarist model? Set money growth = k%
 - Neo-Fisherian model? Funds rate = real rate + inflation

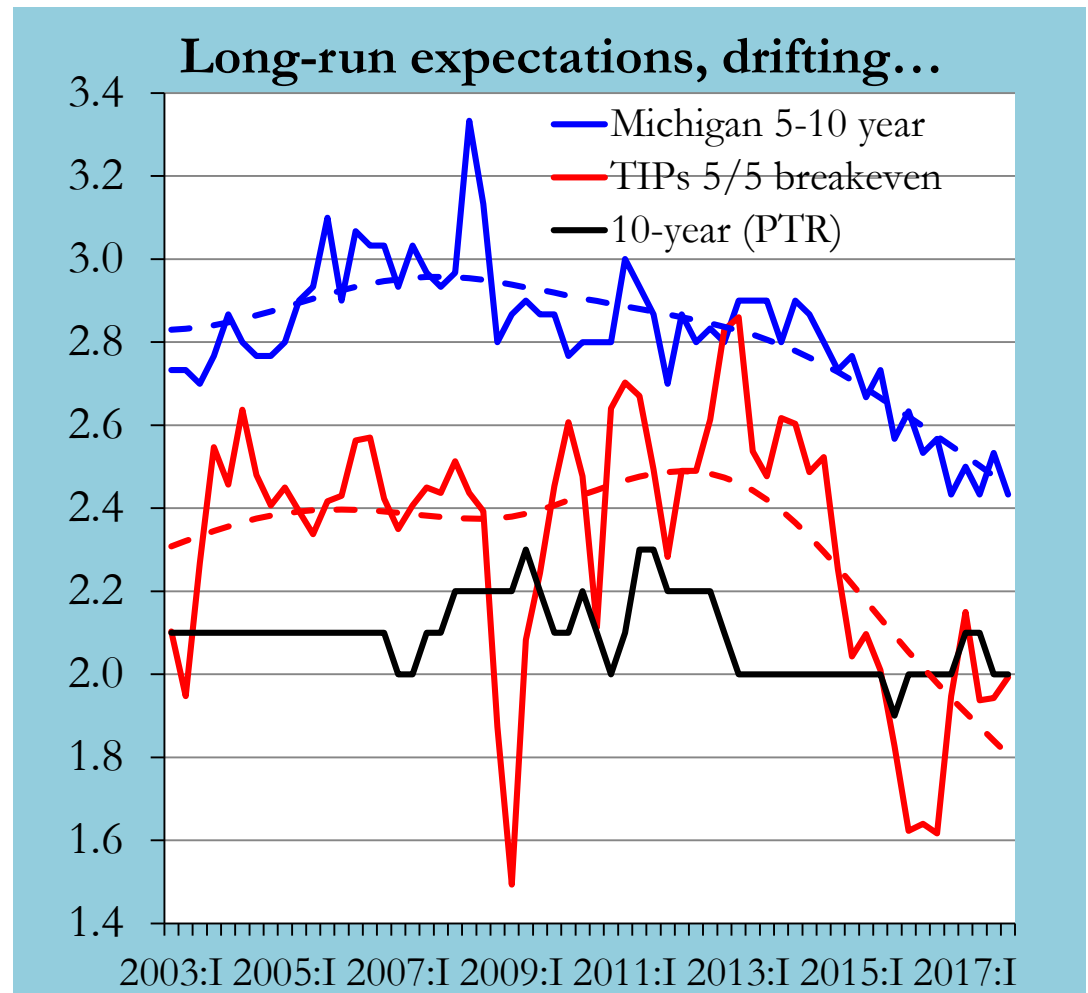
How low can the natural rate go?

- It appears to be lower than we had earlier estimated
 - SEP estimates have dropped significantly over the past five years
- Still, compensation growth has risen modestly over that period, suggesting we may be a bit below the natural rate
- How much lower could the natural rate be?
 - Below 4%?



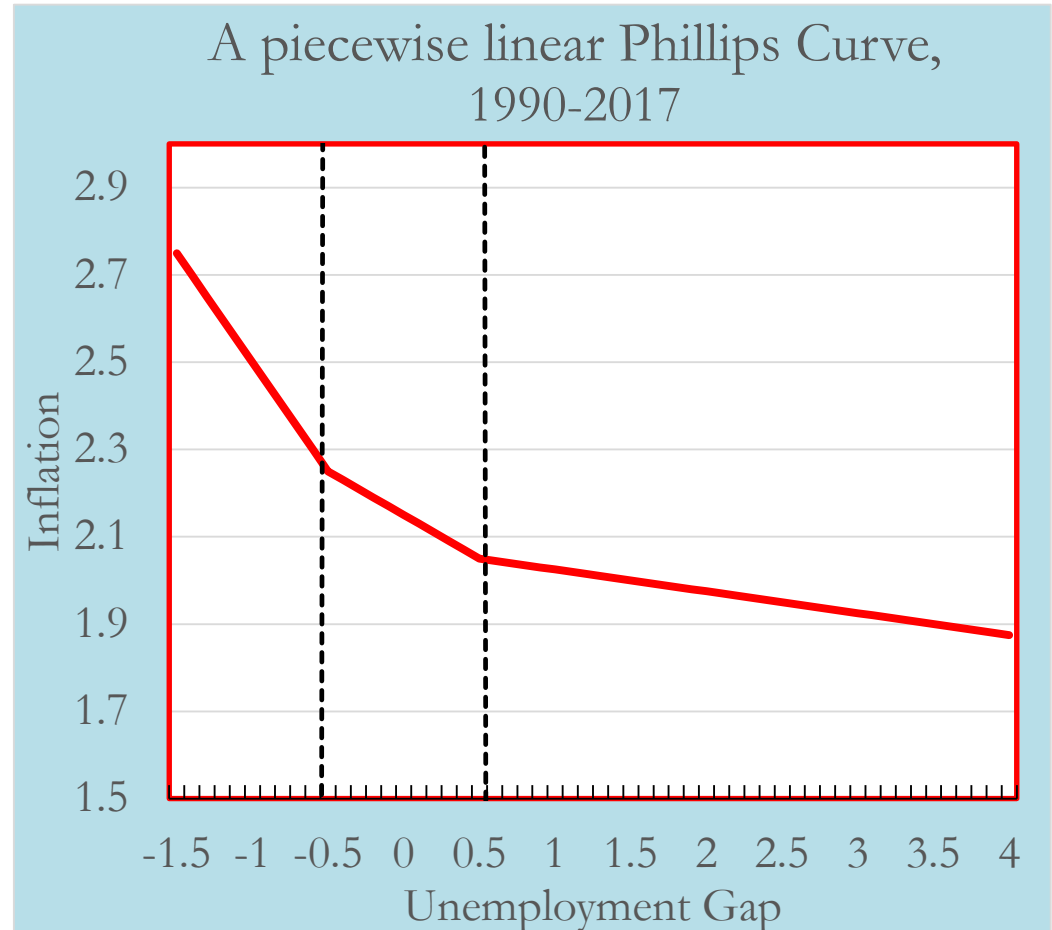
Dragging the expectations anchor?

- Some measures of long-run expectations have declined recently
- Empirical evidence suggests that the marginal predictive power of any of these LR expectations measures is quite small in recent years
 - Thus it is not apparent that LR expectations have dragged inflation down of late



Nonlinearities in the response of inflation to gaps?

- Several Fed authors have suggested that the Phillips curve slope differs for low, high, and near-zero gaps
- Evidence:
 - For 1990-2017, magnitude of slope decreases as gap goes from negative to near-zero to positive
 - Risk: Response of inflation may increase as unemployment falls further



Conclusions

- Recent low inflation does not rank terribly high in the Ripley's Believe-it-or-Not of Economic Puzzles
 - And it may be too difficult to control inflation to within a few tenths of a percentage point of our goal
- Critically: Inflation is probably still linked to real activity
 - Coefficient small-ish, but could be larger for low unemployment
 - Significant risk to assuming that inflation is decoupled from the real economy if it is not
- Policy implications:
 - Inflation likely to rise as unemployment remains low/falls further
 - If so, continued removal of accommodation will likely be appropriate

Questions Regarding Inflation Dynamics

1. Do you subscribe to a Phillips Curve type of inflation framework? Why or why not?
 - a. If the answer to (1) is “yes,” then why do you think inflation has not increased in recent quarters?
 - b. If the answer to (1) is “no,” then what inflation framework do you use for monetary policy purposes? How does monetary policy influence inflation in this framework? Does the framework better explain recent inflation data?

 2. In your view, what role do short-run and long-run inflation expectations play in the wage and price setting process? How are those expectations formed, and how does monetary policy influence them? What is your current assessment of inflation expectations?
-

Appendix 3: Materials used by Mr. Wilcox

Class II FOMC – Restricted (FR)

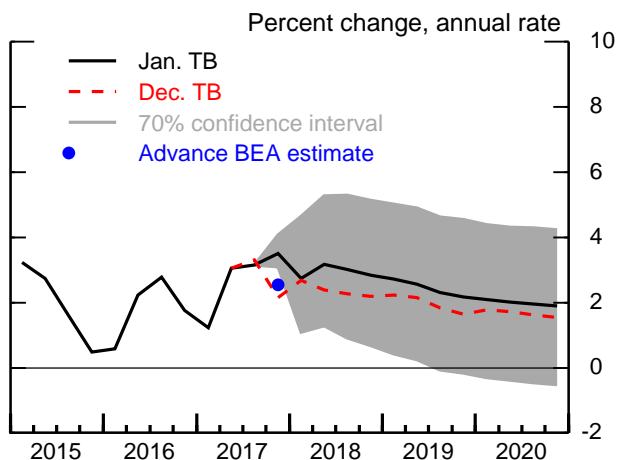
Material for Briefing on
The U.S. Outlook

David W. Wilcox
January 30, 2018

Forecast Summary

Confidence Intervals for Panels 1, 3, 5, and 6 Based on FRB/US Stochastic Simulations

1. Real GDP



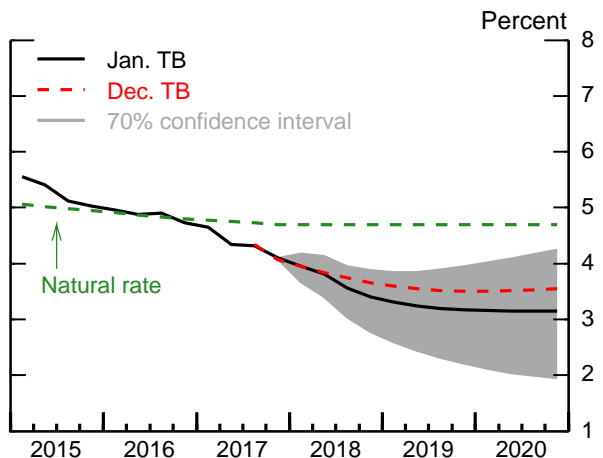
2. Projected Effect of the TCJA on Real GDP

Cumulative effect on level of real GDP in 2020 (percent)

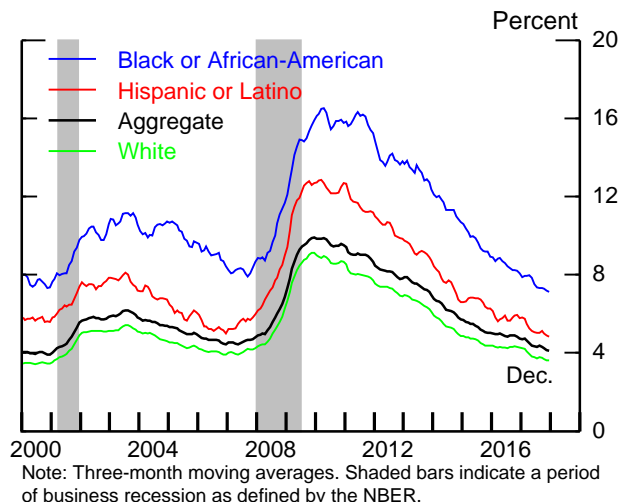
1. Total*	1.25
2. Aggregate demand (direct)	.95
3. Multiplier	.35
4. Potential output	.35
5. Financial offsets	-.45
<i>6. Total effect, Dec. 7 memo</i>	<i>1.05</i>
<i>7. Total effect, December TB</i>	<i>.40</i>
<i>Memo:</i>	
8. Effect on output gap**	.90

*Detail may not sum to total because of rounding. **Effect on output gap in 2020:Q4 (in percentage points).

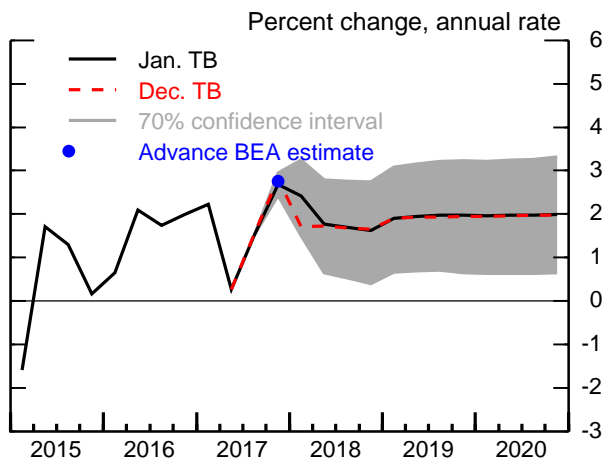
3. Unemployment Rate



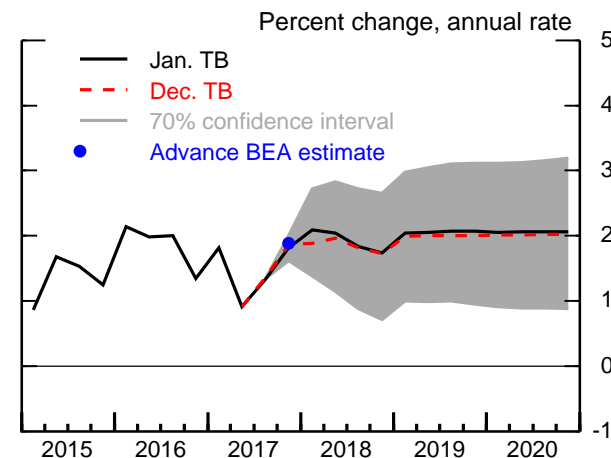
4. Unemployment Rates by Race or Ethnicity



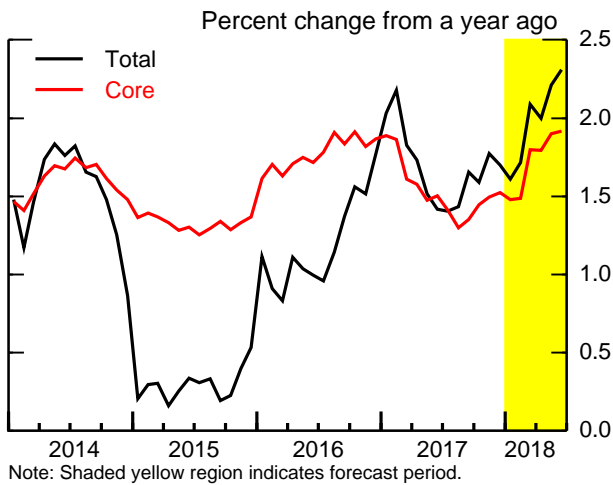
5. Total PCE Prices



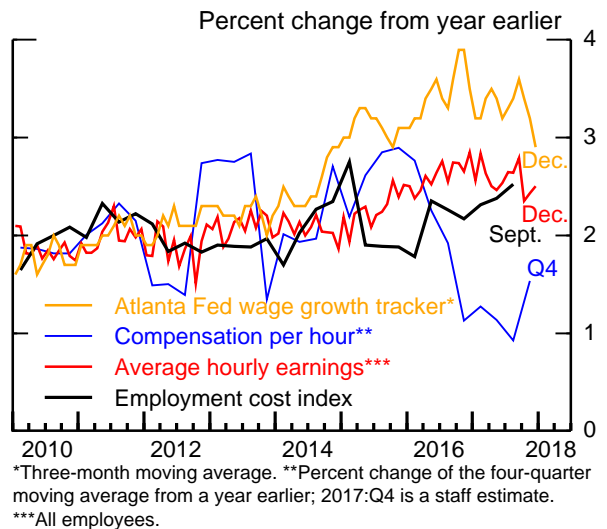
6. PCE Prices Excluding Food and Energy



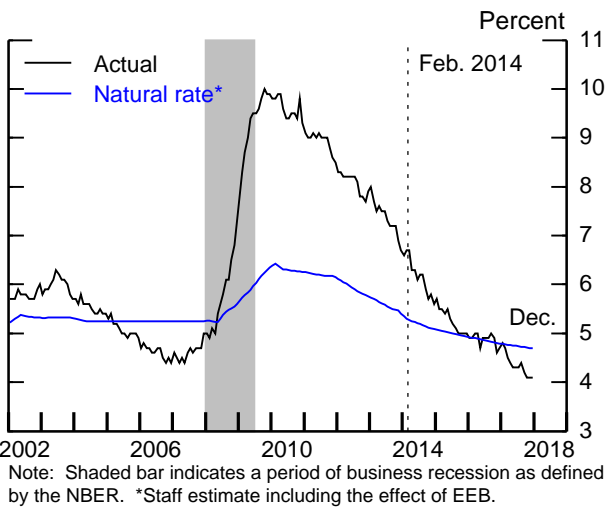
7. Monthly PCE Price Inflation



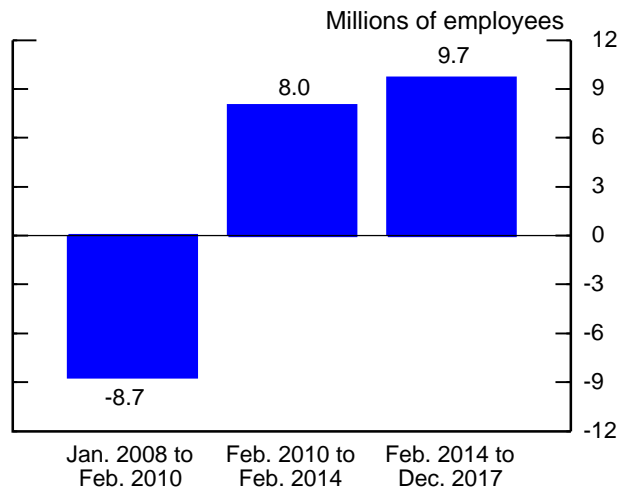
8. Measures of Labor Compensation



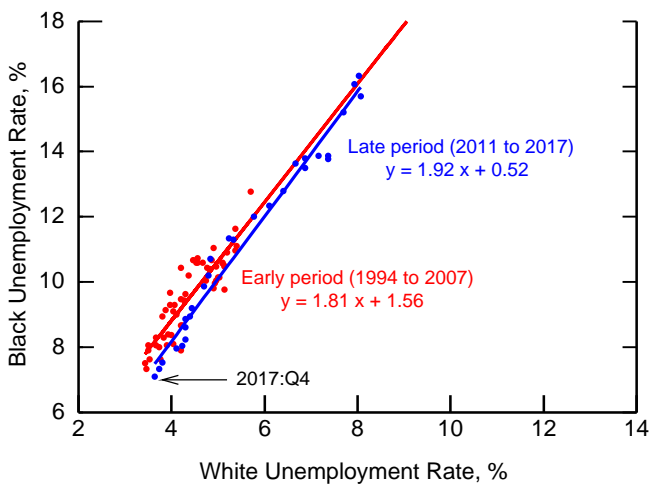
9. Unemployment Rate



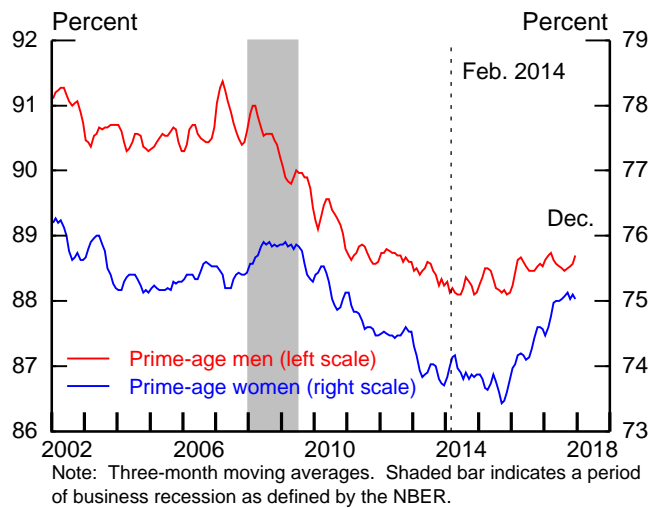
10. Cumulative Changes in Nonfarm Payrolls



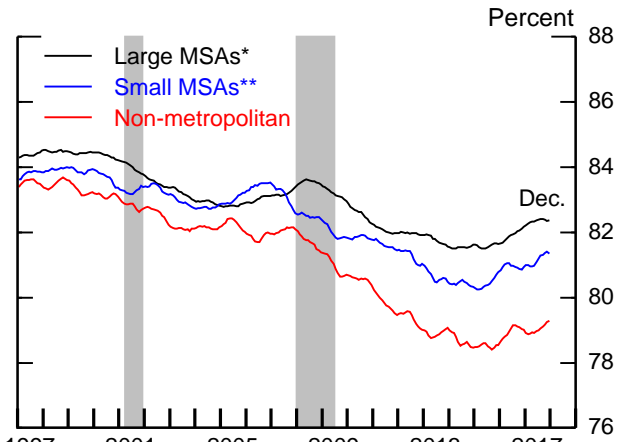
11. Black Unemployment Rates Compared to Those of Whites



12. Labor Force Participation Rates

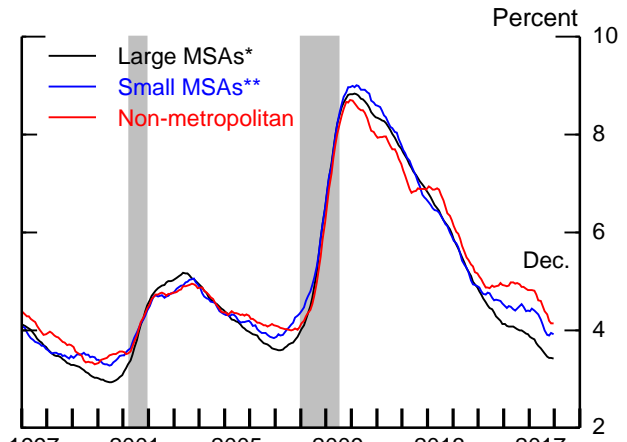


13. Prime-Age Participation Rates by Metropolitan Status



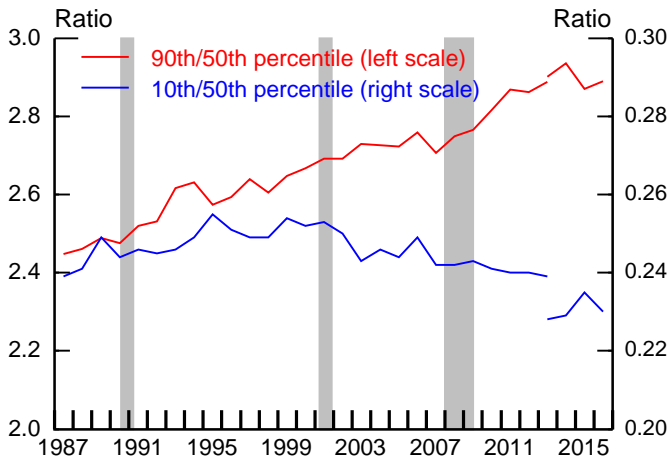
Note: 12-month centered moving averages. Shaded bars indicate a period of business recession as defined by the NBER. * More than 500,000 inhabitants. ** 100,000 to 500,000 inhabitants.

14. Prime-Age Unemployment Rates by Metropolitan Status



Note: 12-month centered moving averages. Shaded bars indicate a period of business recession as defined by the NBER. * More than 500,000 inhabitants. ** 100,000 to 500,000 inhabitants.

15. Household Income Ratios*



Note: Shaded bars indicate a period of business recession as defined by the NBER. *2013-2016 data reflect survey redesign.

16. Labor Force Participation Rates for Prime-Age Women in OECD Countries

Country	1990		2010		2016	
	Level (%)	Rank	Level (%)	Rank	Level (%)	Rank
Australia	66.8	13	75.1	18	76.8	18
Austria	71.6	10	82.4	7	84.9	4
Belgium	60.8	16	80.4	12	79.8	16
Canada	75.5	5	82.3	8	82.2	11
Denmark	87.8	2	85.3	2	83.8	6
Finland	86.4	3	84.4	5	82.8	8
France	72.9	9	83.4	6	83.1	7
Germany	63.4	15	81.3	11	82.7	9
Greece	51.5	19	72.4	19	77.7	17
Ireland	45.4	22	71.9	20	73.7	21
Italy	53.9	18	64.5	22	66.8	22
Japan	64.2	14	71.6	21	76.3	19
Luxembourg	49.7	20	76.4	16	81.1	13
Netherlands	58.5	17	82.3	9	82.2	12
New Zealand	69.0	11	76.8	15	80.5	14
Norway	79.2	4	84.4	4	83.9	5
Portugal	68.0	12	84.9	3	86.6	2
Spain	46.9	21	78.8	13	82.3	10
Sweden	90.7	1	86.6	1	88.4	1
Switzerland	73.7	7	81.9	10	85.5	3
United Kingdom	73.0	8	78.6	14	80.1	15
United States	74.0	6	75.2	17	74.3	20

Source: OECD.Stat database.

Note: Data for Austria in 1990 columns refer to 1994; data for Switzerland in 1990 columns refer to 1991.

17. Labor Force Participation Rates for Prime-Age Men in OECD Countries

Country	1990		2010		2016	
	Level (%)	Rank	Level (%)	Rank	Level (%)	Rank
Australia	93.3	15	90.6	18	90.2	17
Austria	93.1	17	91.9	13	91.8	12
Belgium	92.2	20	92.2	11	90.4	16
Canada	93.1	16	90.6	17	90.9	14
Denmark	94.5	7	92.0	12	90.8	15
Finland	92.9	18	90.6	16	89.7	18
France	95.4	3	94.2	4	92.7	7
Germany	90.2	22	93.1	7	92.0	10
Greece	94.3	9	94.2	5	93.2	4
Ireland	91.8	21	89.9	20	89.2	19
Italy	94.1	10	89.4	21	88.2	22
Japan	97.5	2	96.2	1	95.5	2
Luxembourg	95.0	4	94.8	2	93.1	5
Netherlands	93.4	12	93.3	6	91.7	13
New Zealand	93.3	14	91.8	14	92.9	6
Norway	92.3	19	90.2	19	88.9	20
Portugal	94.0	11	92.7	9	91.9	11
Spain	94.4	8	92.4	10	92.5	8
Sweden	94.7	6	92.9	8	93.3	3
Switzerland	97.8	1	94.6	3	95.5	1
United Kingdom	94.8	5	91.4	15	92.3	9
United States	93.4	13	89.3	22	88.5	21

Source: OECD.Stat database.

Note: Data for Austria in 1990 columns refer to 1994; data for Switzerland in 1990 columns refer to 1991.

Appendix 4: Materials used by Mr. Kamin

Class II FOMC – Restricted (FR)

Material for Briefing on

The International Outlook

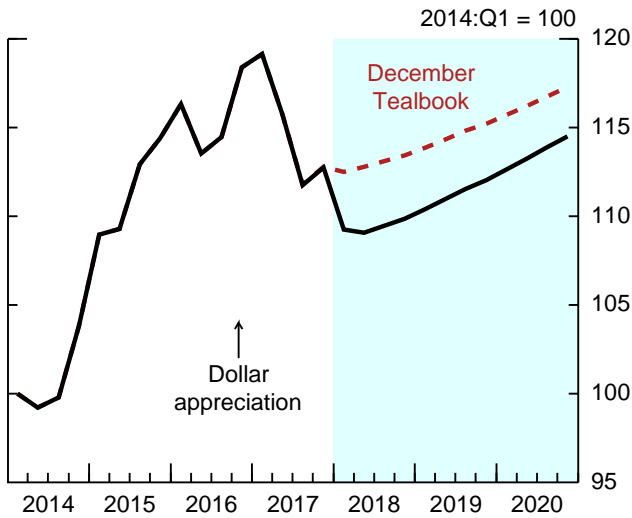
Steven B. Kamin

Exhibits by Meghan Letendre and Kaede Johnson

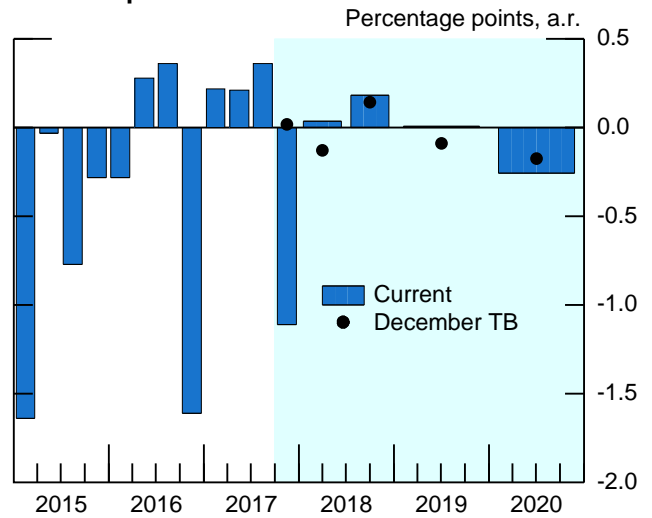
January 30, 2018

The International Outlook

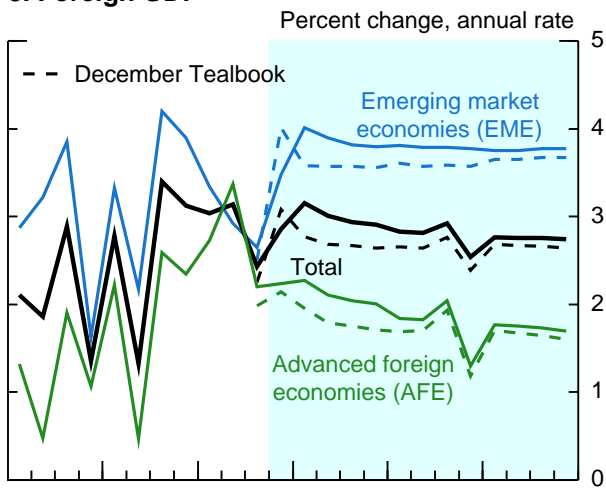
1. Broad Real Dollar



2. Net Export Contribution to U.S. GDP Growth

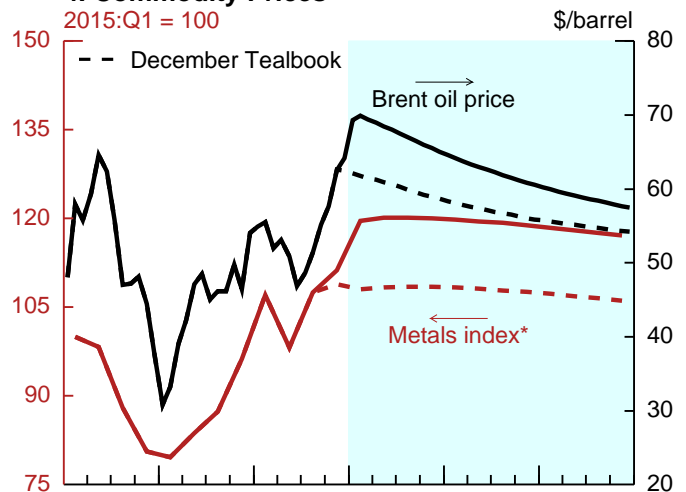


3. Foreign GDP*



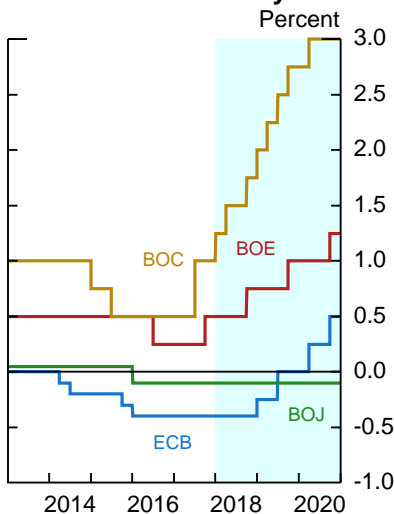
* Weighted by bilateral shares in U.S. merchandise exports.

4. Commodity Prices

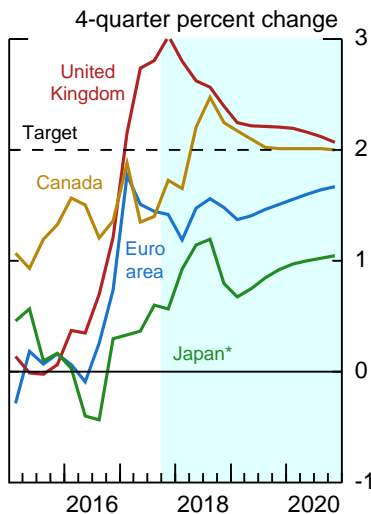


* Metals index is comprised of Copper, Aluminum, Tin, Nickel, Zinc, Lead, Iron Ore, and Uranium (based on IMF base metals index).

5. Central Bank Policy Rates

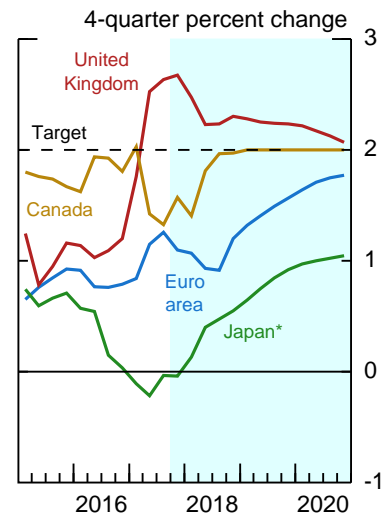


6. Headline Inflation



* Excludes the effects of consumption taxes in Japan.

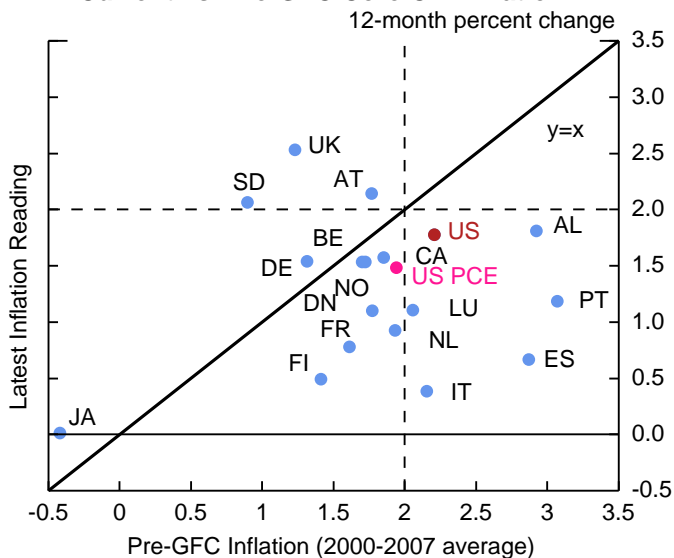
7. Core Inflation



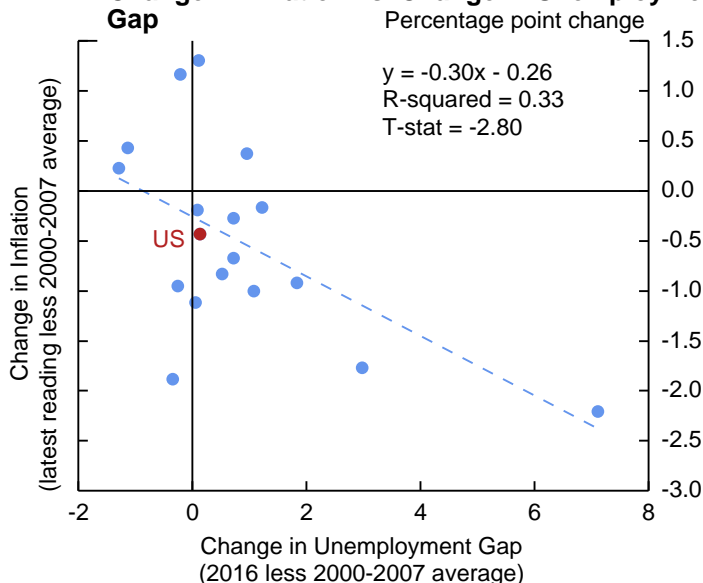
* Excludes the effects of consumption taxes in Japan.

The International Outlook

1. Current vs. Pre-GFC Core CPI Inflation

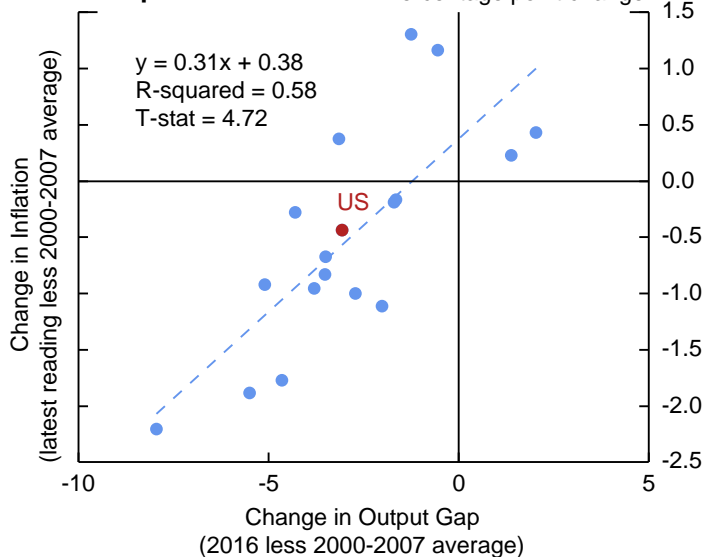


2. Change in Inflation vs. Change in Unemployment Gap



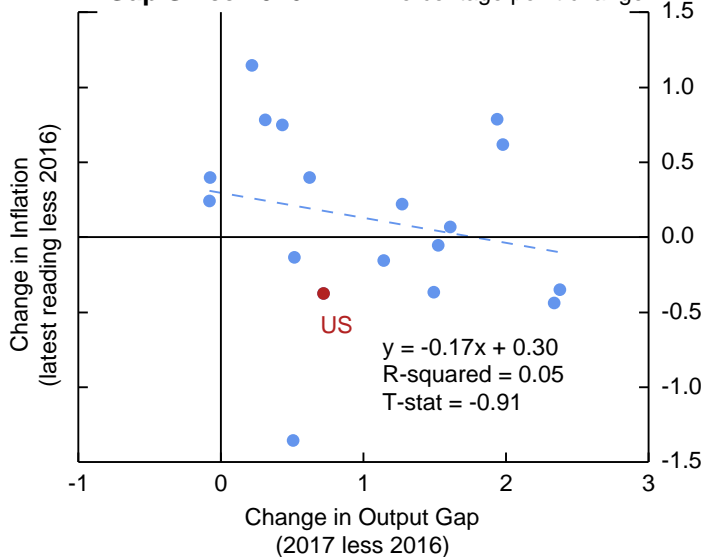
Note: Unemployment Gap= UE minus NAIRU.
Source: OECD.

3. Change in Inflation vs. Change in Output Gap Since Pre-GFC



Note: Output Gap= 100 * [GDP minus potential GDP] / potential GDP.
Source: OECD.

4. Change in Inflation vs. Change in Output Gap Since 2016



Note: Output Gap= 100 * [GDP minus potential GDP] / potential GDP.
Source: OECD.

Country Code Key

AL = Australia	DE = Germany	FR = France	NL = Netherlands	UK = United Kingdom
AT = Austria	DN = Denmark	IT = Italy	NO = Norway	US = United States
BE = Belgium	ES = Spain	JA = Japan	PT = Portugal	
CA = Canada	FI = Finland	LU = Luxembourg	SD = Sweden	

Appendix 5: Materials used by Mr. Lehnert

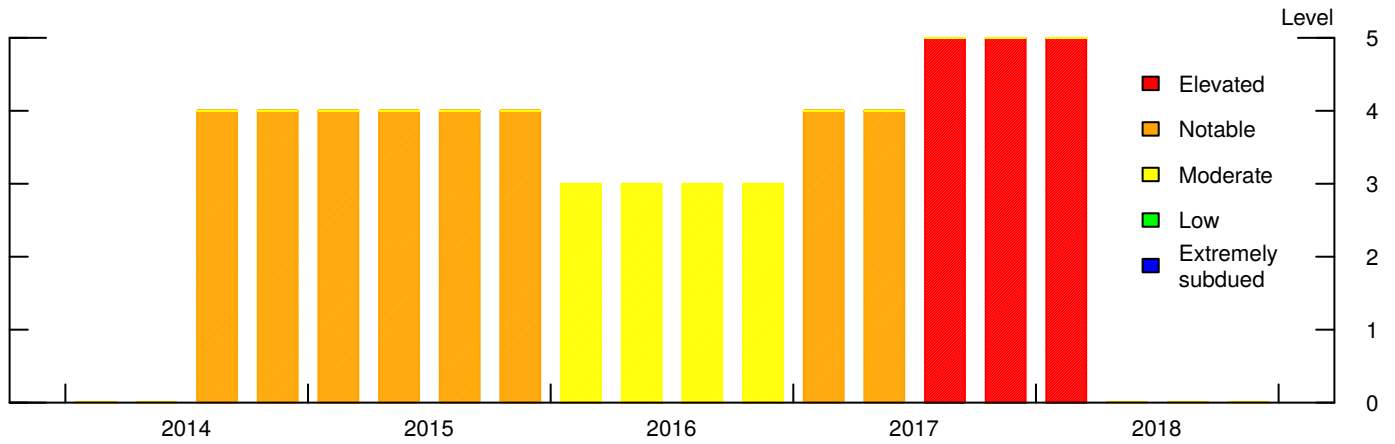
Class II FOMC - Restricted (FR)

Material for Briefing on

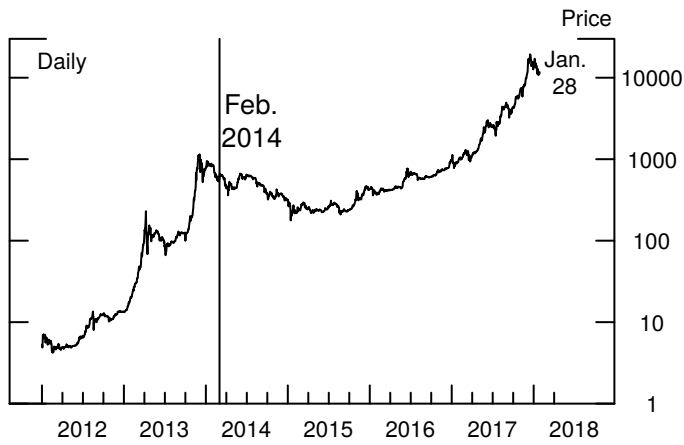
Financial Stability Developments

Andreas Lehnert
January 30, 2018

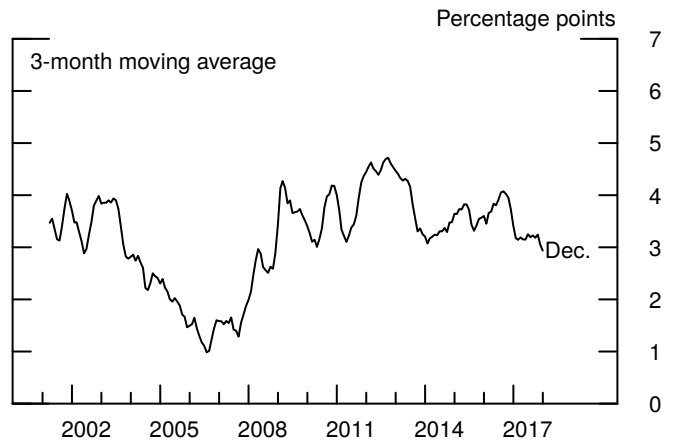
1. QS Assessment of Valuation Pressures



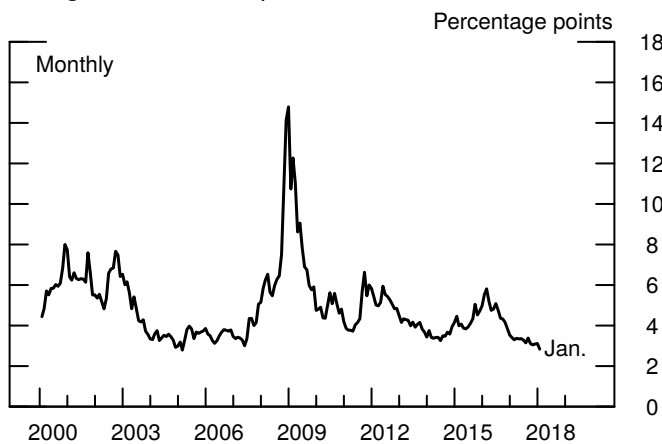
2. Price of Bitcoin



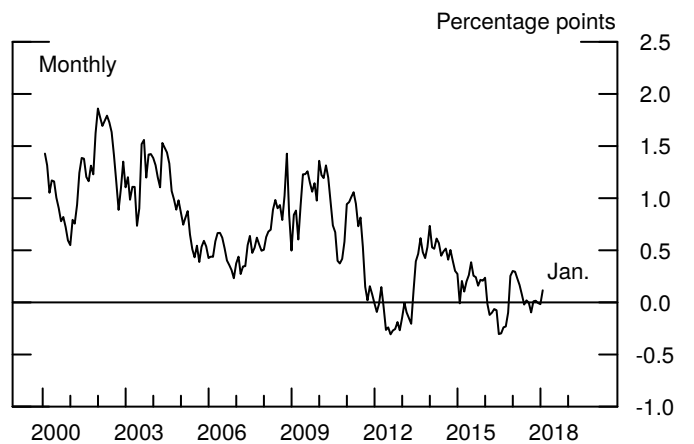
3. Capitalization Rate Spreads - Multifamily Buildings



4. High Yield Bond Spread

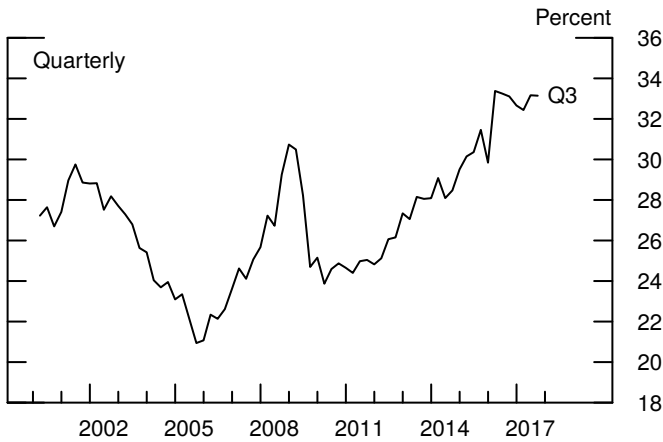


5. Ten-Year Nominal Term Premium

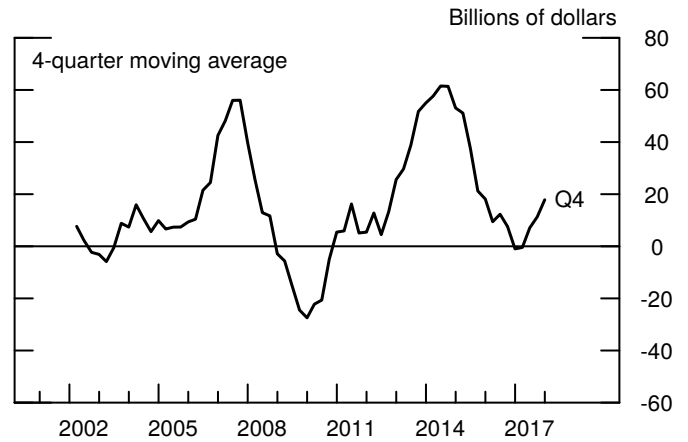


Leverage and Maturity Transformation

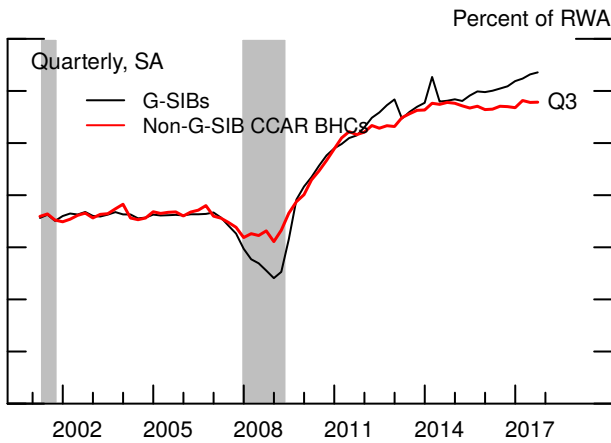
1. Net Leverage of Risky Firms



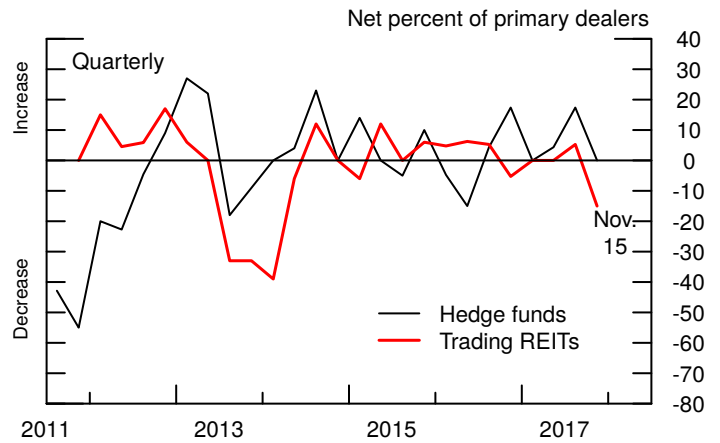
2. Total Net Issuance of Risky Debt



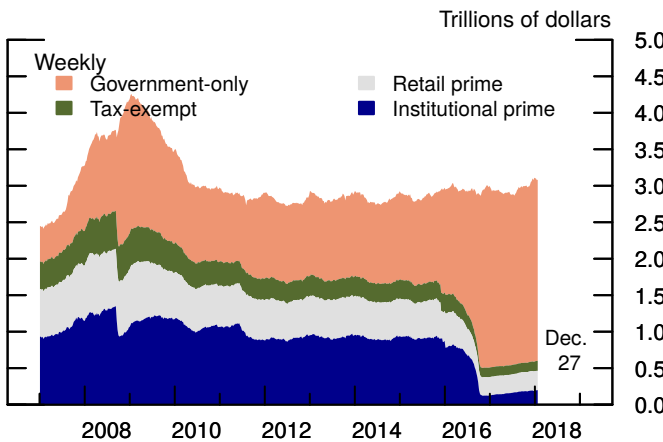
3. Common Equity Tier 1 Ratio, Selected Banks



4. Use of Financial Leverage



5. Money Market Fund Assets



6. Assets in Potential MMF Substitutes

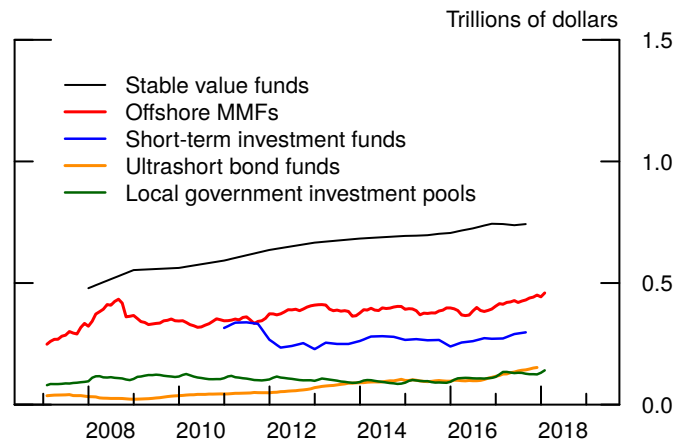


Exhibit 3
Staff Judgment on Levels of Vulnerabilities

Key:  Extremely subdued  Low  Moderate  Notable  Elevated

	January 2017	October 2017	January 2018
Valuation Pressures	<ul style="list-style-type: none"> Risky corporate bond spreads and forward price-to-earnings ratios now stand in the second and fifth quintiles of their respective historical distributions CRE and residential prices rose further; valuation measures stand above their historical averages. Treasury term premiums increased but remain below the historical average 	<ul style="list-style-type: none"> The equity price-to-earnings ratio is near its highest value outside the dot-com era and has edged up further Corporate bond spreads to Treasury yields have compressed a little further, while standards and terms on leveraged loans have deteriorated over the last year CRE prices have continued to rise, although bank lending standards for CRE loans have tightened somewhat Asset valuations appear less excessive, but still stretched, when compared to current low Treasury yields 	<ul style="list-style-type: none"> The equity price-to-earnings ratio is near its highest value outside the dot-com era and has edged up further Corporate bond yields remain near historical lows Spreads on leveraged loans stayed compressed while nonprice terms loosened CRE prices remain near historic highs Asset valuations are still stretched after the current low Treasury yields are taken into account
Private Nonfinancial Sector Leverage	<ul style="list-style-type: none"> Leverage for the nonfinancial corporate sector, particularly among speculative-grade firms stayed elevated Outstanding risky corporate debt edged lower in 2016 The debt-to-income ratio of households continued to inch down 	<ul style="list-style-type: none"> Leverage in the nonfinancial corporate sector remains elevated, but risky debt outstanding has edged down Household borrowing has moved up mainly for prime borrowers Overall nonfinancial sector leverage continues to be below trend by most estimates 	<ul style="list-style-type: none"> Leverage in the nonfinancial corporate sector remains high and risky debt growth has picked up The ratio of household debt to GDP remains near its recent trough Overall nonfinancial sector leverage continues to be below trend by most estimates
Financial Sector Leverage	<ul style="list-style-type: none"> Regulatory capital ratios for banks and insurance companies remain at high levels Measures of leverage in the nonbank are about unchanged Risks associated with spillovers from troubled Italian banks appear low as U.S. and European banks have limited exposures these banks 	<ul style="list-style-type: none"> Capital positions at banks and insurance companies remain at high levels Available indicators of leverage at other nonbank financial institutions are mostly little changed, though there are some signs of leverage increasing 	<ul style="list-style-type: none"> Regulatory capital ratios at banks and insurance companies remain at high levels Most indicators of leverage at other nonbank financial institutions are unchanged, though margin credit for equity investors continues to inch up
Maturity and Liquidity Transformation	<ul style="list-style-type: none"> Large BHCs' holdings of liquid assets remain at high levels Reforms have made prime MMFs less prone to runs; AUM at prime MMFs declined and stand at low levels Some caution remains with regard to the use of FHLB advances and the potential growth of alternative and fragile short-term funding vehicles 	<ul style="list-style-type: none"> 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 continue to grow their nontraditional liabilities, albeit at a slower pace in most categories 	<ul style="list-style-type: none"> Large BHCs' holdings of liquid assets are well above regulatory requirements There has been little growth outside of government funds in potential substitutes for prime money market funds Overall issuance of securitized products remains well below pre-crisis levels Life insurance companies continue to grow their nontraditional liabilities from low levels
Overall Assessment			

Notes to Exhibits

Exhibit 1:

1: Source: July 2014 through January 2018 QS reports.

2: Source: CoinDesk.com. Vertical line indicates February 2014, when the Mt. Gox hack was discovered.

3: Source: Real Capital Analytics.

4: Spreads over 10-year Treasury yield. Source: Staff estimates of smoothed corporate yield curves based on Merrill Lynch data and smoothed Treasury yield curve.

5: Term premiums are estimated by a three-factor term structure model combining Treasury yields with Blue Chip interest rate forecasts. Source: Board staff estimates.

Exhibit 2:

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

2: Data are a four-quarter moving average. Total net issuance of risky debt is the sum of the net issuance of speculative grade and unrated bonds and leveraged loans. Source: Mergent Fixed Investment Securities Database, S&P.

3: Series comprised of a balanced panel as of 2017:Q3. Prior to 2014:Q1, the numerator of the common equity tier 1 ratio is tier 1 common capital. Beginning in 2014:Q1 for advanced approaches Bank Holding Companies (BHC) and in 2015:Q1 for all other BHCs, the numerator is common equity tier 1 capital. Shaded bars represent periods of recession as defined by the National Bureau of Economic Research. Source: FR Y-9C.

4: Data are collected in the middle of each quarter. REITs are real estate investment trusts. Source: Senior Credit Officer Opinion Survey (SCOOS).

5: Source: Investment Company Institute.

6: Last observations: Stable value funds, 2017:Q3, Offshore MMFs, Jan. 19, 2018; Short-term investment funds, 2017:Q3, Ultrashort bond funds, Dec. 2017; Local government investment pools, Jan. 12, 2018. MMFs are money market funds. Local government investment pools are rated “AAAm” or “AAm.” Source: S&P.

Exhibit 3:

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: January 2018 QS report.

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 Laurie Khalfan
January 30-31, 2018

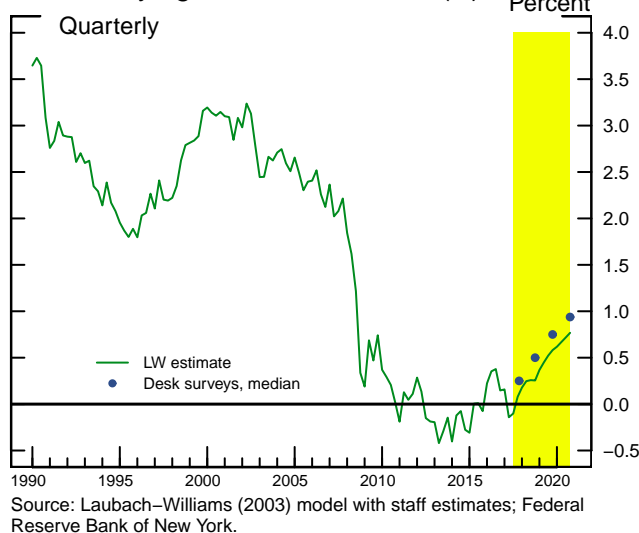
Financial Conditions and Policy Considerations

Changes in Indicators of Financial Conditions

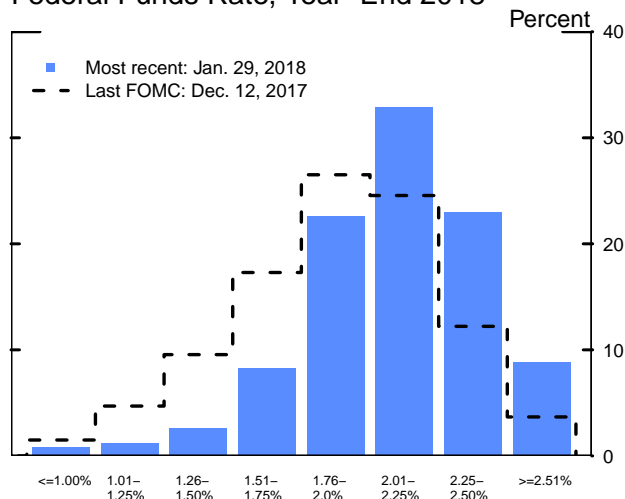
	Since Dec. 2017 FOMC Meeting	Since Dec. 2015 FOMC Meeting
<i>--basis points--</i>		
10-Year Treasury Rate	+28	+33
High-Yield Bond Spread	-30	-232
Equity Risk Premium*	-21	-147
<i>--percent change--</i>		
S&P 500, Index	+7.1	+39.6
Broad Nominal Dollar	-4	-5.1

Note: Calculated from Dec. 17, 2017 and Dec. 15, 2015 as of Jan. 29, 2018; Equity Risk Premium is monthly, calculated to the staff estimate for Jan. 18, 2018.

Time-Varying Neutral Real Rate (r*)

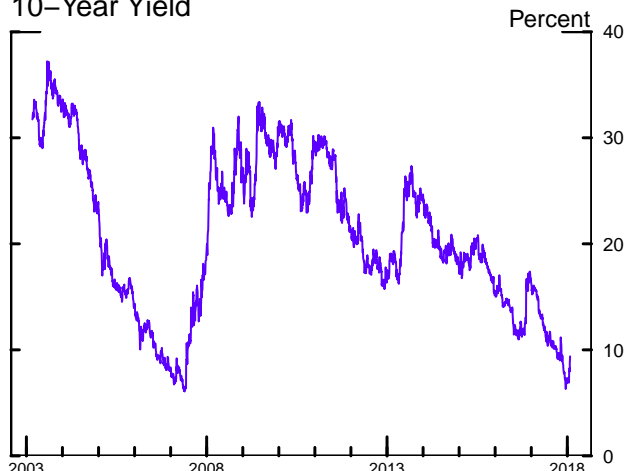


Market-Implied Probability Distribution of the Federal Funds Rate, Year-End 2018



Note: Estimated from Eurodollar futures options, accounting for the differences in the levels and option-implied volatilities of LIBOR and the federal funds rate, but not adjusted for term premiums.
Source: CME Group; staff estimates.

Probability of a Large Increase in the 10-Year Yield



Note: Swaption-implied probabilities that the 10-year swap rate will be 100 basis points above its current level 1 year from now.
Source: JP Morgan, staff calculations.

Uncertainties

- Investors could rapidly reprice inflation risk.
- Spillovers to the U.S. from policy normalization abroad could be greater than anticipated.
- High leverage in the nonfinancial corporate sector risks a rapid rise in interest-expense ratios.

Policy Considerations

- B: Recognition of strong data and the likelihood of a somewhat steeper policy rate path.
- C: Greater urgency to move growth in economic activity and employment to sustainable rates.
- A: Principal concern is the persistent shortfall in inflation, and policy needs to remain accommodative.

Class I FOMC – Restricted Controlled (FR)

DECEMBER 2017 FOMC STATEMENT

1. Information received since the Federal Open Market Committee met in November indicates that the labor market has continued to strengthen and that economic activity has been rising at a solid rate. Averaging through hurricane-related fluctuations, job gains have been solid, and the unemployment rate declined further. Household spending has been expanding at a moderate rate, and growth in business fixed investment has picked up in recent quarters. On a 12-month basis, both overall inflation and inflation for items other than food and energy have declined this year and are running below 2 percent. Market-based measures of inflation compensation remain low; survey-based measures 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. Hurricane-related disruptions and rebuilding have affected economic activity, employment, and inflation in recent months but have not materially altered the outlook for the national economy. Consequently, the Committee continues to expect that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace and labor market conditions will remain strong. Inflation on a 12-month basis is expected to remain somewhat below 2 percent in the near term but to stabilize around the Committee's 2 percent objective over the medium term. Near-term risks to the economic outlook appear roughly balanced, but the Committee is monitoring inflation developments closely.
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 1-1/4 to 1-1/2 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 objectives of maximum employment and 2 percent inflation. 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. The Committee will carefully monitor actual and expected inflation developments relative to its symmetric inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.

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ALTERNATIVE A FOR JANUARY 2018

1. Information received since the Federal Open Market Committee met in ~~November~~ **December** indicates that the labor market has ~~continued to strengthen~~ **remained strong** and that economic activity has been rising at a solid rate. ~~Averaging through hurricane-related fluctuations, job~~ Gains **in employment, household spending, and business fixed investment** have been solid, and the unemployment rate ~~declined further~~ **has stayed low**. Household spending has been expanding at a moderate rate, and growth in business fixed investment has ~~picked up in recent quarters~~. On a 12-month basis, both overall inflation and inflation for items other than food and energy have declined this **last** year and are running below 2 percent. Market-based measures of inflation compensation remain low; survey-based measures 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. ~~Hurricane-related disruptions and rebuilding have affected economic activity, employment, and inflation in recent months but have not materially altered the outlook for the national economy. Consequently, The Committee continues to expect~~ that, with gradual adjustments in the stance of **appropriately accommodative** monetary policy, **inflation will gradually rise to the Committee's 2 percent objective over the medium term**, economic activity will expand at a moderate pace, and labor market conditions will remain strong. ~~Inflation on a 12-month basis is expected to remain somewhat below 2 percent in the near term but to stabilize around the Committee's 2 percent objective over the medium term.~~ Near-term risks to the economic outlook appear roughly balanced, but the Committee is monitoring inflation developments closely.
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** 1-1/4 to 1-1/2 percent **while continuing to assess incoming information that bears on the outlook for inflation**. 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~~ **whether to** adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its objectives of maximum employment and 2 percent inflation. 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. The Committee will carefully monitor actual and expected inflation developments relative to its symmetric inflation goal. ~~The Committee expects that economic conditions will evolve in a manner that will warrant~~

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~~gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.~~

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ALTERNATIVE B FOR JANUARY 2018

1. Information received since the Federal Open Market Committee met in ~~November~~ **December** indicates that the labor market has continued to strengthen and that economic activity has been rising at a solid rate. ~~Averaging through hurricane-related fluctuations, job~~ Gains **in employment, household spending, and business fixed investment** have been solid, and the unemployment rate ~~declined further~~ **has stayed low**. Household spending has been expanding at a moderate rate, and growth in business fixed investment has picked up in recent quarters. On a 12-month basis, both overall inflation and inflation for items other than food and energy have ~~declined this year and are~~ **continued to** running below 2 percent. Market-based measures of inflation compensation **[have increased in recent months but]** remain low; survey-based measures 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. ~~Hurricane-related disruptions and rebuilding have affected economic activity, employment, and inflation in recent months but have not materially altered the outlook for the national economy. Consequently,~~ The Committee ~~continues to expect~~s that, with **further** gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace and labor market conditions will remain strong. Inflation on a 12-month basis is expected to ~~remain somewhat below 2 percent in the near term but~~ **move up this year and** to stabilize around the Committee's 2 percent objective over the medium term. Near-term risks to the economic outlook appear roughly balanced, but the Committee is monitoring inflation developments closely.
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** 1-1/4 to 1-1/2 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 objectives of maximum employment and 2 percent inflation. 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. The Committee will carefully monitor actual and expected inflation developments relative to its symmetric inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant **further** gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer

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run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.

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ALTERNATIVE C FOR JANUARY 2018

1. Information received since the Federal Open Market Committee met in ~~November~~ **December** indicates that the labor market has continued to strengthen and that economic activity has been rising at a solid rate. ~~Averaging through hurricane-related fluctuations,~~ job Gains **in employment, household spending, and business fixed investment** have been solid, and the unemployment rate declined further **has stayed low**. Household spending has been expanding at a moderate rate, and growth in business fixed investment has picked up in recent quarters. On a 12-month basis, both overall inflation and inflation for items other than food and energy have ~~declined this year and are~~ **continued to** running below 2 percent **but have increased since last summer**. Market-based measures of inflation compensation ~~remain low~~ **have increased in recent months**; survey-based measures 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. ~~Hurricane-related disruptions and rebuilding have affected economic activity, employment, and inflation in recent months but have not materially altered the outlook for the national economy. Consequently,~~ The Committee ~~continues to expect~~s that, with **further** gradual adjustments in the stance of monetary policy, economic activity **and employment** will expand at a moderate pace and labor market conditions will remain strong **sustainable rates over the medium term**. Inflation on a 12-month basis is expected to ~~remain somewhat below 2 percent in the near term but~~ **move up this year and** to stabilize around the Committee's 2 percent objective over the medium term. Near-term risks to the economic outlook **for economic activity** appear roughly balanced, **tilted to the upside** ~~but the Committee is monitoring inflation developments closely.~~
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 ~~1-1/4 to 1-1/2~~ **to 1-3/4** 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 objectives of maximum employment and 2 percent inflation. 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. The Committee will carefully monitor actual and expected inflation developments relative to its symmetric inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant **further** gradual increases in the federal funds rate; ~~the federal funds rate is likely~~

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~~to remain, for some time, below levels that are expected to prevail in the longer run.~~ However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.

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Implementation Note for January 2018 Alternatives A and B

Release Date: January 31, 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 in its [statement](#) on ~~December 13, 2017~~ **January 31, 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** 1.50 percent, effective ~~December 14, 2017~~ **February 1, 2018**.
- 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 ~~December 14, 2017~~ **February 1, 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 1-1/4 to 1-1/2 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 1.25 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 December that exceeds \$6 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 December that exceeds \$4 billion. Effective in January, 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 \$12 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 \$8 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.”

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- 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** 2.00 percent, effective December 14, 2017. 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](#).

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Implementation Note for January 2018 Alternative C

Release Date: January 31, 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 in its [statement](#) on ~~December 13, 2017~~ **January 31, 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 ~~1.50~~ **1.75** percent, effective ~~December 14, 2017~~ **February 1, 2018**.
- 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 ~~December 14, 2017~~ **February 1, 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 ~~1-1/4 to 1-1/2~~ **to 1-3/4** 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 ~~1.25~~ **1.50** 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 December that exceeds \$6 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 December that exceeds \$4 billion.~~ Effective in January, 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 \$12 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 \$8 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.”

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- 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 ~~2.00~~ **2.25** percent, effective ~~December 14, 2017~~ **February 1, 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](#).