

## Useful Bloomberg Functions for ECO431 Project

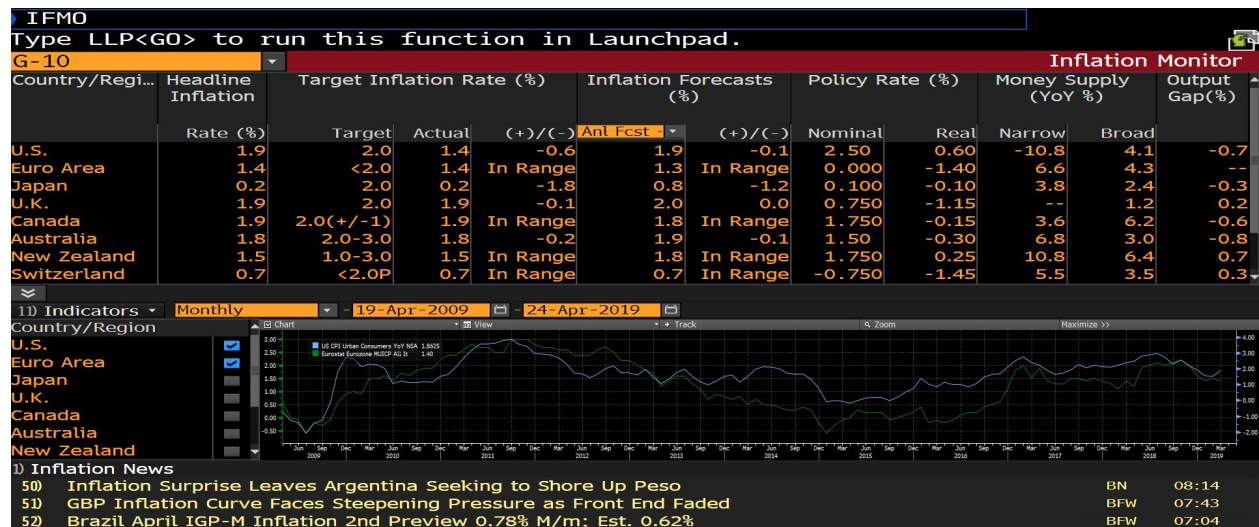
### Chapter 3: Central Bank

#### Note for Central Bank

- 1) Central Bank Mandates
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  - Inflation
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### 1. Central Bank Mandates

#### 1) IFMO: Inflation Monitor



2) **GEW**: Global Economy Watch

99) Export To Excel										Global Economy Watch			
	Annual GDP (BLN USD)	GDP		Surplus/Def		CPI		Jobless					
		%YoY	Month	% GDP	Month	%YoY	Month	Rate	Month				
1) Americas													
11) United States	19,390.60	3.00	12/18	-4.20	3/19	1.90	3/19	3.80	3/19				
12) Brazil	2,055.51	1.07	12/18	-6.95	2/19	4.58	3/19	8.20	2/16				
13) Canada	1,653.04	1.60	1/19	-0.41	12/20	1.90	3/19	5.80	3/19				
14) Mexico	1,150.89	1.71	12/18	-1.35	9/18	4.00	3/19	3.30	2/19				
15) Argentina	637.43	-6.20	12/18	-0.81	12/18	54.13	3/19	9.10	12/18				
2) Europe/Africa/ME													
21) Eurozone	12,589.88	1.20	12/18	-1.00	12/17	1.40	3/19	7.80	2/19				
22) Germany	3,677.44	0.60	12/18	1.00	12/17	1.30	3/19	4.90	3/19				
23) United Kingdom	2,622.43	1.40	12/18	-1.80	12/17	1.90	3/19	3.90	2/19				
24) France	2,582.50	1.00	12/18	-2.70	12/17	1.10	3/19	8.80	12/18				
25) Italy	1,934.80	0.03	12/18	-2.40	12/17	1.00	3/19	10.58	12/18				
3) Asia/Pacific													
31) China	12,237.70	6.40	3/19	-3.69	12/17	2.30	3/19	3.80	12/18				
32) Japan	4,872.14	0.30	12/18	-2.63	12/20	0.20	2/19	2.30	2/19				
33) India	2,600.82	6.60	12/18	-3.94	12/17	2.86	3/19	8.50	12/17				
34) S.Korea	1,530.75	3.10	12/18	1.63	12/20	0.40	3/19	3.80	3/19				
35) Australia	1,323.42	2.30	12/18	0.49	12/20	1.80	12/18	4.90	2/19				
36) Indonesia	1,015.54	5.18	12/18	-1.76	12/12	2.48	3/19	5.34	8/18				
4) World													

Investors who fear rising inflation may buy Treasury Inflation Protected Securities (TIPS). How do TIPS shield lenders from inflation?

Answer) TIPS compensate the lender in the event of inflation using CPI as a guide.

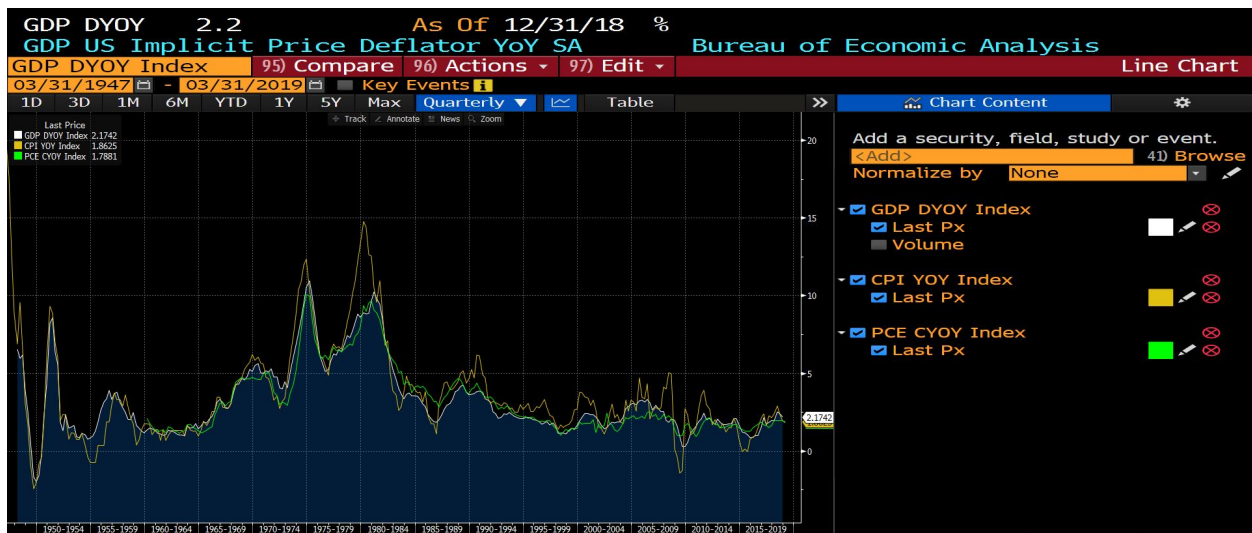
2. Central Bank Decision-Making

1) Inflation measures

- GDP deflator: **GDP DYOY Index**

- CPI: **CPI YOY Index**

- Core Personal Consumer Expenditure (Core PCE): **PCE CYOY Index**



Core personal consumption expenditure is the favorite inflation gauge of the Federal Reserve. The Consumer Price index and the GDP deflator are both affected by volatile food and energy prices and are therefore de-emphasized. Household income is not in itself an inflation gauge.

## 2) ECFC: Economic Forecasts

Investment Bank analysts estimate future CPI for many countries.

## 3) ILBE: World Inflation Breakeven Rates

Term	All	Country/Region	All	Type	Nominal Bond v Inflation Bond
Period	Now	Pricing Status	Actives		
<b>Largest Breakevens</b>					
		1) South Africa Breakeven 20 Year			6.27
		2) South Africa Breakeven 15 Year			6.14
		3) Greece Generic Inflation Break			6.00
		4) South Africa Breakeven 10 Year			5.68
		5) South Africa Breakeven 5 Year			4.99
		6) Brazil Breakeven 10 Year			4.55
		7) Mexico Breakeven 30 Year			4.53
		8) Brazil Breakeven 20 Year			4.44
<b>Smallest Breakevens</b>					
		73) Italy Breakeven 5 Year			0.83
		74) Italy Breakeven 10 Year			0.77
		75) Italy Breakeven 2 Year			0.60
		76) Japan Breakeven 5 Year			0.22
		77) Japan Breakeven 6 Year			0.21
		78) Japan Breakeven 10 Year			0.20
		79) Japan Breakeven 7 Year			0.17
		80) Mexico Breakeven 1 Year			-1.85

$$\text{South Africa} = (100\% - 5.68\%)^{20} * 1\text{million} = \$310,510$$

$$\text{Japan} = (100\% - 0.20\%)^{20} * 1\text{million} = \$960,750$$

## 3) The Output gap

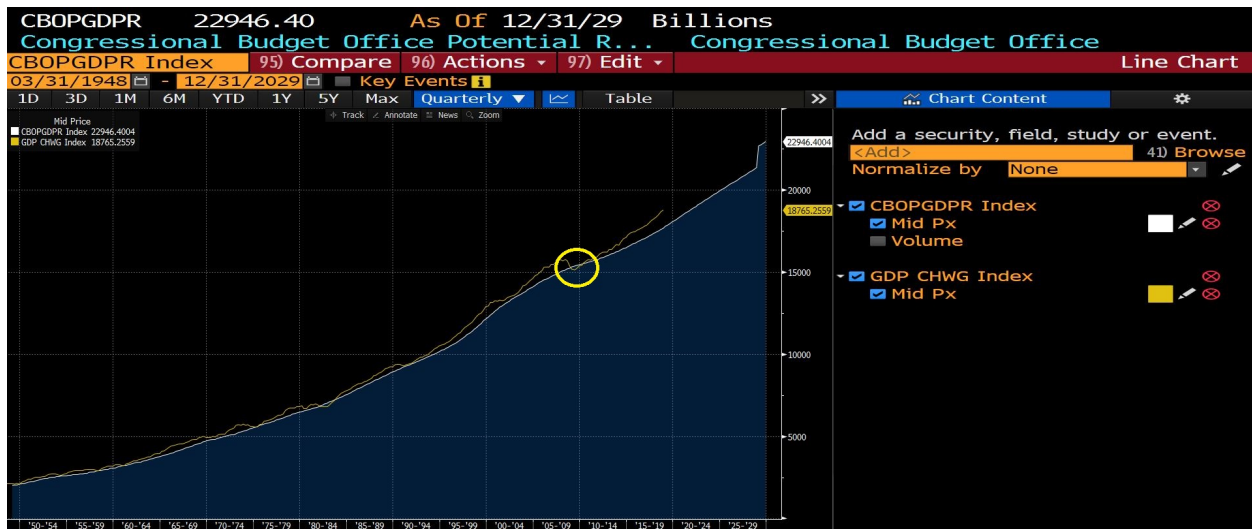
U.S. potential GDP: CBOPGDPR Index

U.S. actual GDP: GDP CHWG Index

Output gap % = (actual output – potential output) / potential output

Negative output gap: actual output < potential output

Positive output gap: actual output > potential output



### 3. Central Bank Toolkit

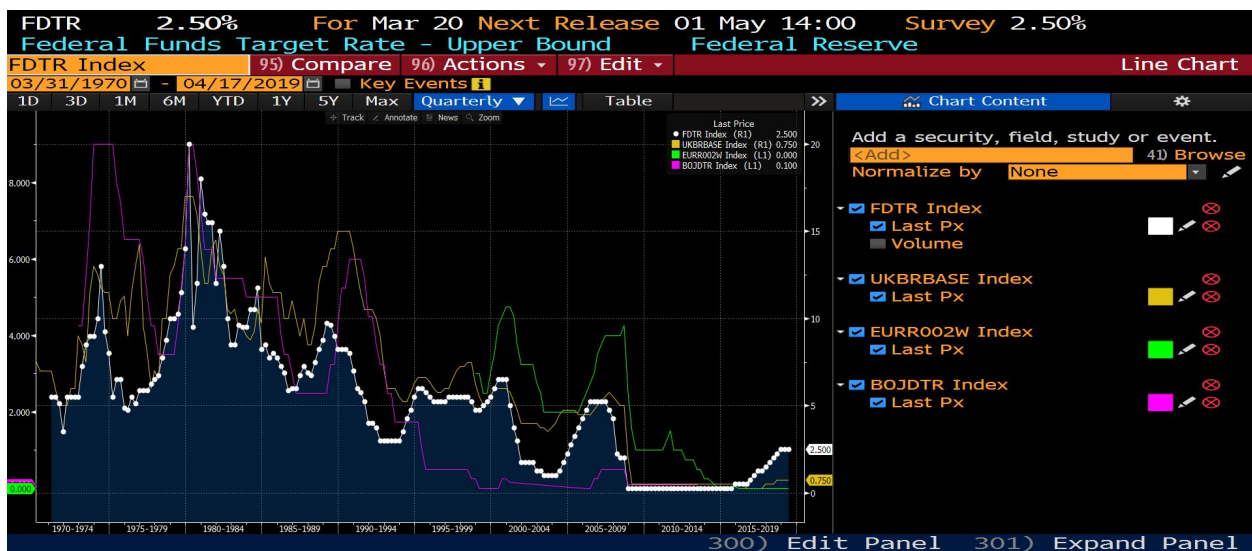
#### 1) Short-term Interest rates

**FDTR Index:** Federal Funds Target Rate – Upper Bound

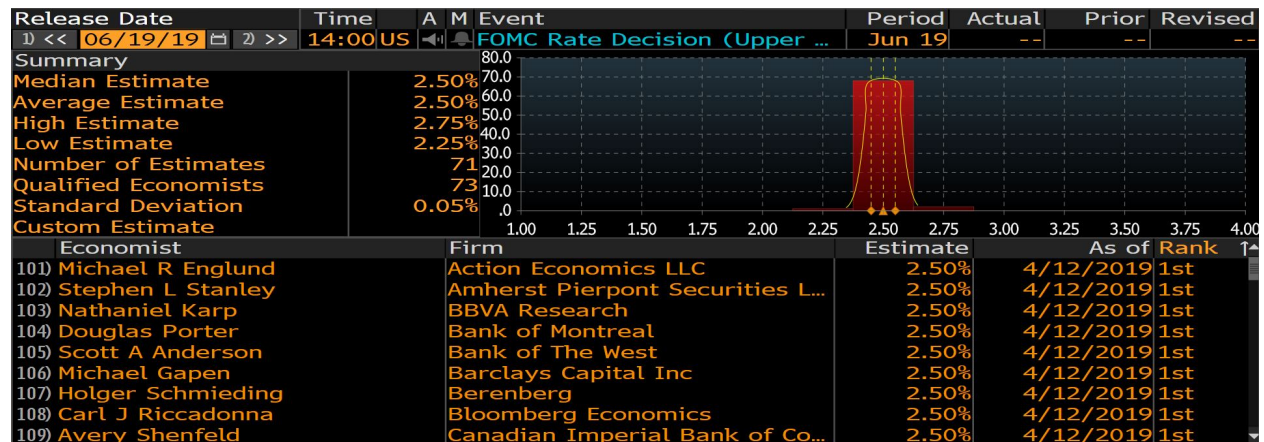
**UKBRBASE Index:** UK Bank of England Official Bank Rate

**EURR002W Index:** ECB Main Refinancing Operations Announcement Rate

**BOJDTR Index:** Bank of Japan Unsecured Overnight Call Rate Expected



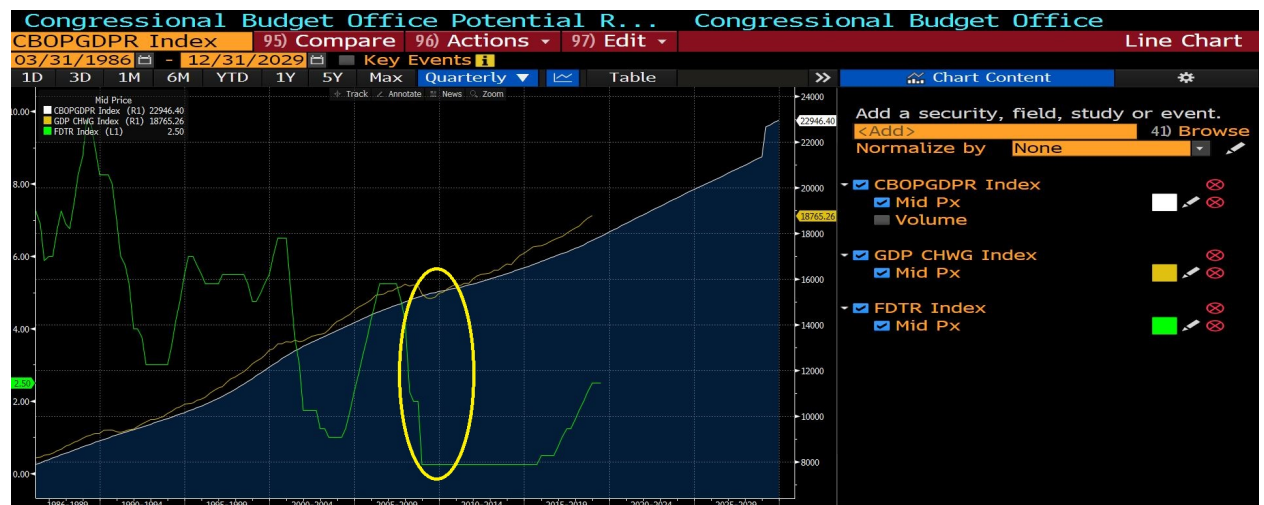
**FOMC:** FOMC Activities



**NH:** News: All Sources



From the following graph, we can get some idea when and why Fed changed short-term interest rate. E.g. when an actual output is less than a potential output, Federal Reserve decreases a short-term interest rate as shown on the following graph below.



2) Statements

**STNI FOMC SIDEBYSIDE:** Suggested News Filter

We can pull up the comparison between successes of FOMC statements.

STNI FOMC SIDEBYSIDE					See What's New: AI News Themes			
<Back> to Return								
Search News		Actions		Custom Searches	Translate	Key Themes	Page 1	News
[FOMC/SIDE BY SIDE/F...						All Dates	Time	
1)	U.S. Federal Open Market Committee Statements Comparison				BN	03/20		
2)	U.S. Federal Open Market Committee Statements Comparison				BN	01/30		
3)	U.S. Federal Open Market Committee Statements Comparison				BN	12/19		
4)	U.S. Federal Open Market Committee Statements Comparison				BN	11/08		
5)	U.S. Federal Open Market Committee Statements Comparison				BN	09/26		
6)	U.S. Federal Open Market Committee Statements Comparison				BN	08/01		
7)	U.S. Federal Open Market Committee Statements Comparison				BN	06/13		
8)	U.S. Federal Open Market Committee Statements Comparison				BN	05/02		
9)	U.S. Federal Open Market Committee Statements Comparison				BN	03/18		
10)	U.S. Federal Open Market Committee Statements Comparison				BN	01/18		
11)	U.S. Federal Open Market Committee Statements Comparison				BN	12/17		
12)	U.S. Federal Open Market Committee Statements Comparison				BN	11/17		
13)	U.S. Federal Open Market Committee Statements Comparison				BN	09/17		
14)	U.S. Federal Open Market Committee Statements Comparison				BN	07/17		
15)	U.S. Federal Open Market Committee Statements Comparison				BN	06/17		
16)	U.S. Federal Open Market Committee Statements Comparison				BN	05/17		
17)	U.S. Federal Open Market Committee Statements Comparison				BN	03/17		
18)	U.S. Federal Open Market Committee Statements Comparison				BN	02/17		
19)	U.S. Federal Open Market Committee Statements Comparison				BN	12/16		
20)	U.S. Federal Open Market Committee Statements Comparison				BN	11/16		
21)	U.S. Federal Open Market Committee Statements Comparison				BN	09/16		

**USGG10YR Index:** US Generic Govt. 10 year yield which indicates long term time series of 10 year yields.



#### 4. Short-term Interest Rate Estimates

We can observe what the market expects FOMC to do next

**WIRP:** World Interest rate probability



#### Summary

1. Most central banks have a mandate to present inflation and deflation.
2. As inflation hurts the value of bonds, investors for fixed income keep an eye on any signs of inflation and deflation.
3. Central banks observe inflation expectations and output gap between actual and potential output when Central bankers make rate decisions.
4. By changing interest rates or interest rate expectations, Central banks contain inflation and deflation.
5. Short-term interest rates have been used to steer economies over the last few decades.