Economics 442
The Financial System
(11/4/2020)

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Outline

- Review of Unconventional Monetary Policy
- Covid-19 and the Return to Unconventional Monetary Policy
- New Framework

Unconventional Policy Tools

1. 1. Quantitative easing (QE).

When the central bank supplies aggregate reserves beyond the quantity needed to lower the policy rate to zero.

2. Credit easing (CE).

When the central bank alters the mix of assets it holds on its balance sheet in order to change their relative prices in a way that stimulates economic activity.

3. A policy duration commitment.

This is when the central bank promises to keep interest rates low in the future, aka “forward guidance”

Interpreting UMP

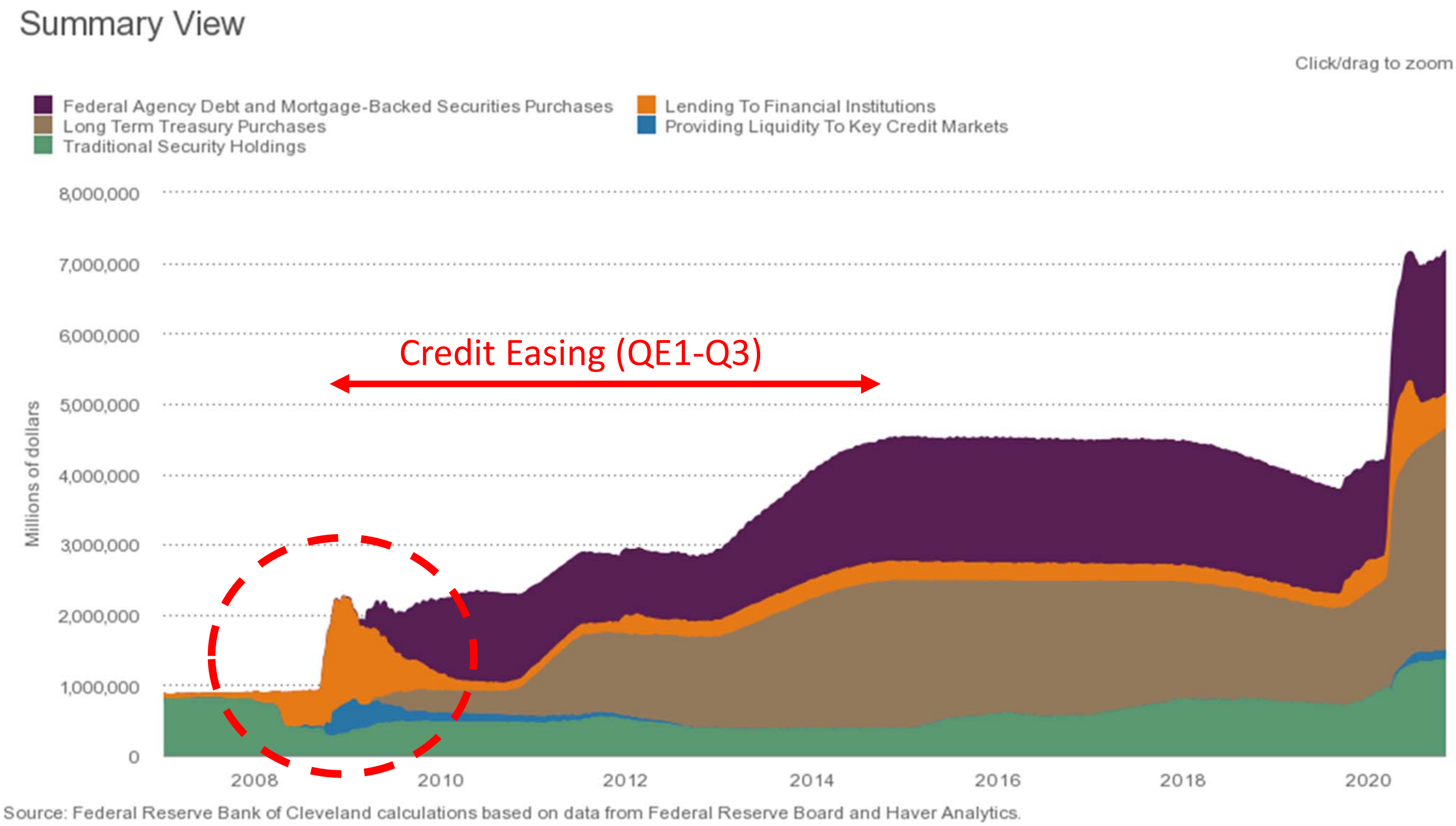
$$i_{nt} = \frac{(i_{1t} + i^{e}_{1t+1} + \ldots + i^{e}_{1t+n-1})}{n} + tp_{nt}$$

Quantitative easing

Credit easing

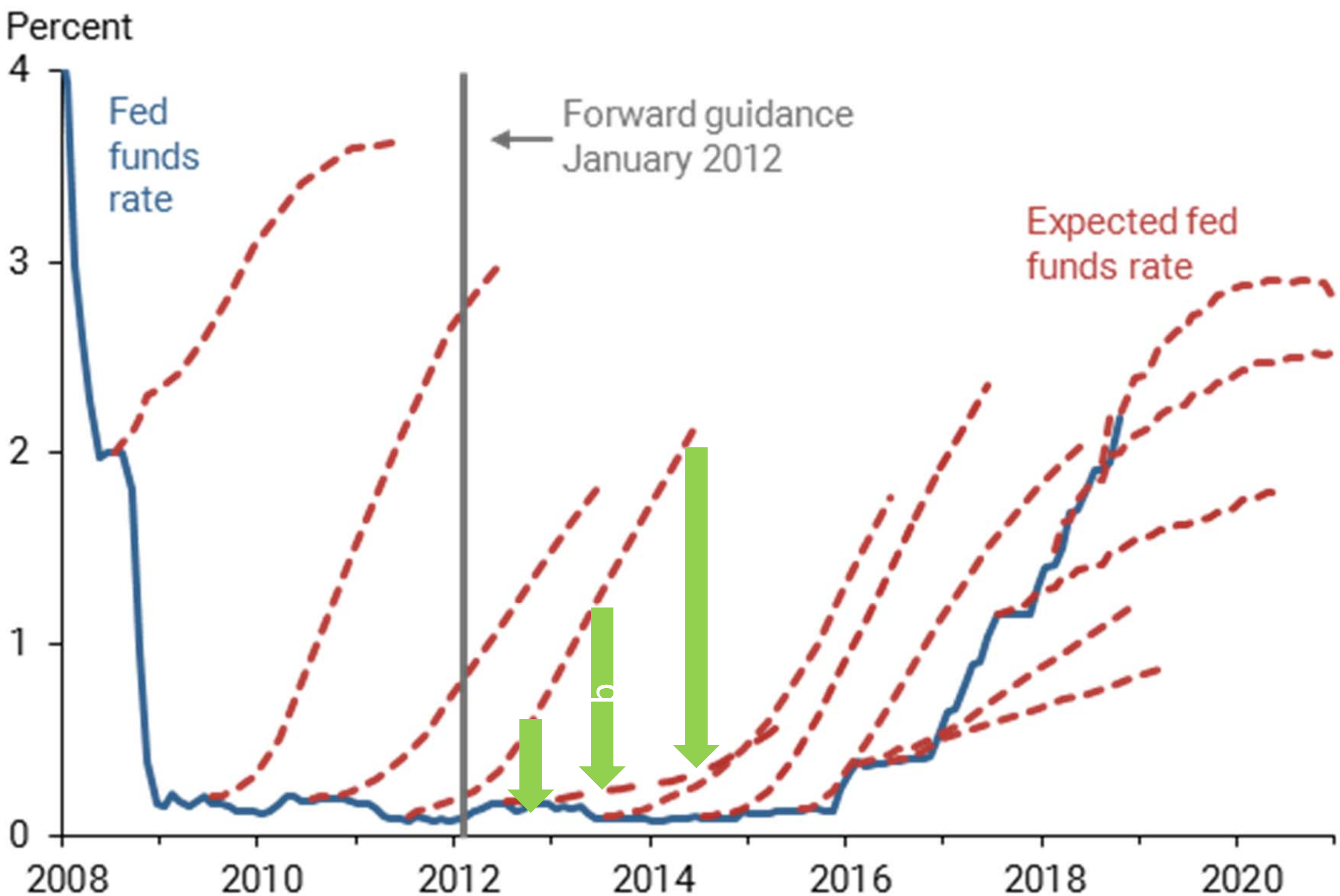
Policy Duration Commitment
aka “Forward Guidance”

Credit Easing via LSAPs



Source: Cleveland Fed https://www.clevelandfed.org/our-research/indicators-and-data/credit-easing.aspx

Policy Duration Commitment

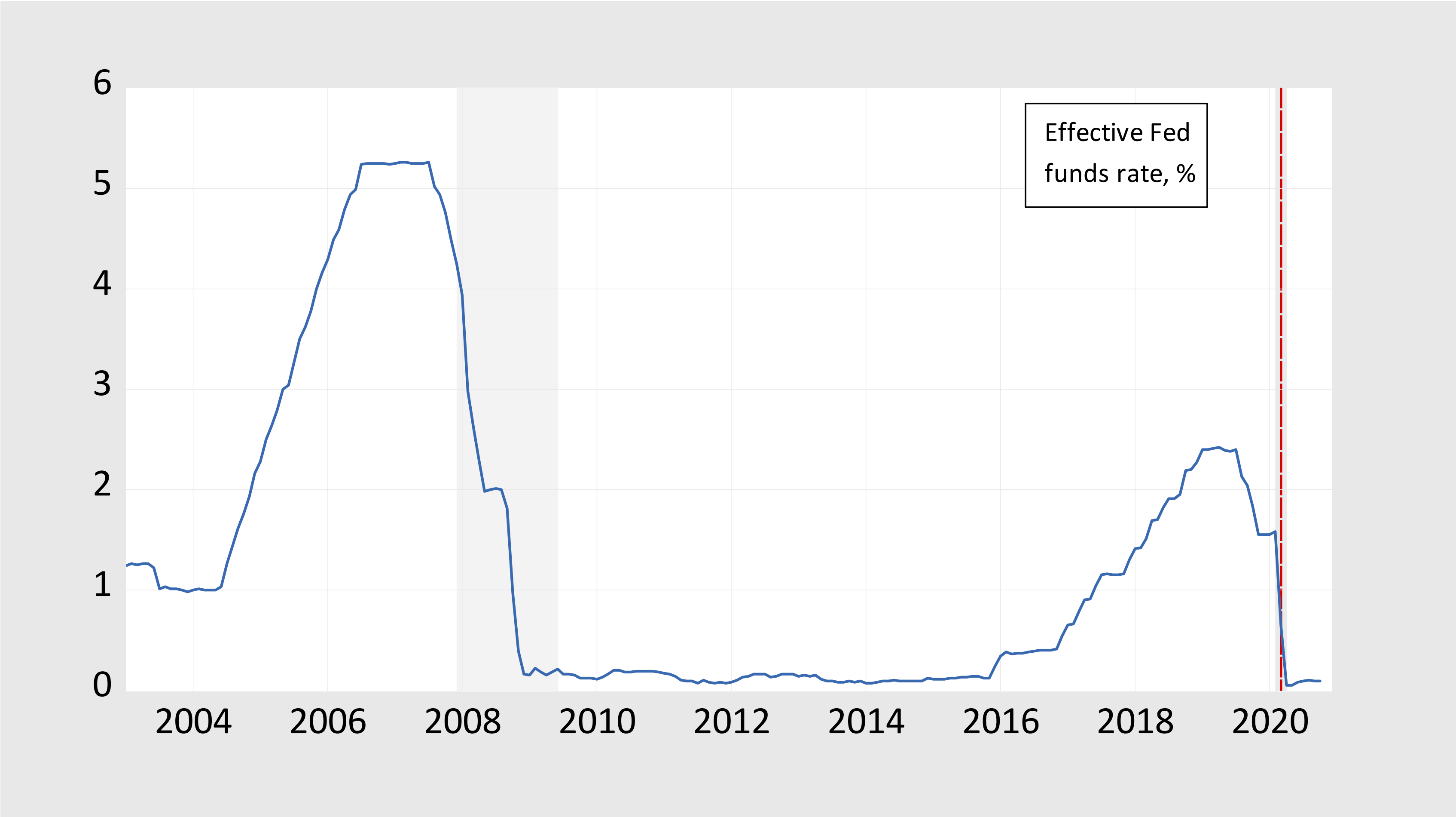


Covid-19 and the Return to Unconventional Monetary Policy

Monetary Policy Actions Taken

1. Lowering the policy rate and keeping it low
2. Stabilizing financial markets
3. Supporting the flow of credit in the economy

Fed Funds to Zero



Stabilizing Financial Markets

- Emergency lending to financial institutions and markets
- Return of several emergency measures implemented in Global Financial Crisis of 2007-09

Measures Then, Now

Table 18.2 Some Unconventional Policy Tools

Policy Tool	Description	
Term Auction Facility (TAF)	The Fed auctions a fixed volume of funds at maturities less than three months against collateral to depository institutions.	
Primary Dealer Credit Facility (PDCF)	The Fed lends overnight to primary dealers (including nonbanks) against a broad range of collateral.	
Term Securities Lending Facility (TSLF)	The Fed provides Treasury securities in exchange for a broad range of collateral in order to promote market liquidity.	Restarted
Asset-backed Commercial Paper (ABCP) Money-Market Mutual Fund (MMMF) Liquidity Facility	The Fed lends to depositories and bank holding companies to finance purchases of ABCP from MMMFs.	Restarted
Commercial Paper Funding Facility (CPFF)	The Federal Reserve Bank (FRB) of New York finances the purchase of commercial paper from eligible issuers via primary dealers.	Restarted
Money-Market Investor Funding Facility (MMIFF)	The FRB New York funds investment vehicles that purchase assets from MMMFs.	
Term Asset-Backed Securities Loan Facility (TALF)	The FRB New York lends to holders of high-rated newly issued asset-backed securities (ABS), using the ABS as collateral.	Restarted
Large Scale Asset Purchases	Purchases of long-dated Treasurys, Agency debt	Restarted

Stabilizing Financial Markets

- Dodd-Frank requires that Treasury OK Fed emergency measures, back up financially

Table 1. Federal Reserve COVID-19 Emergency Programs Backed by CARES Act Funding

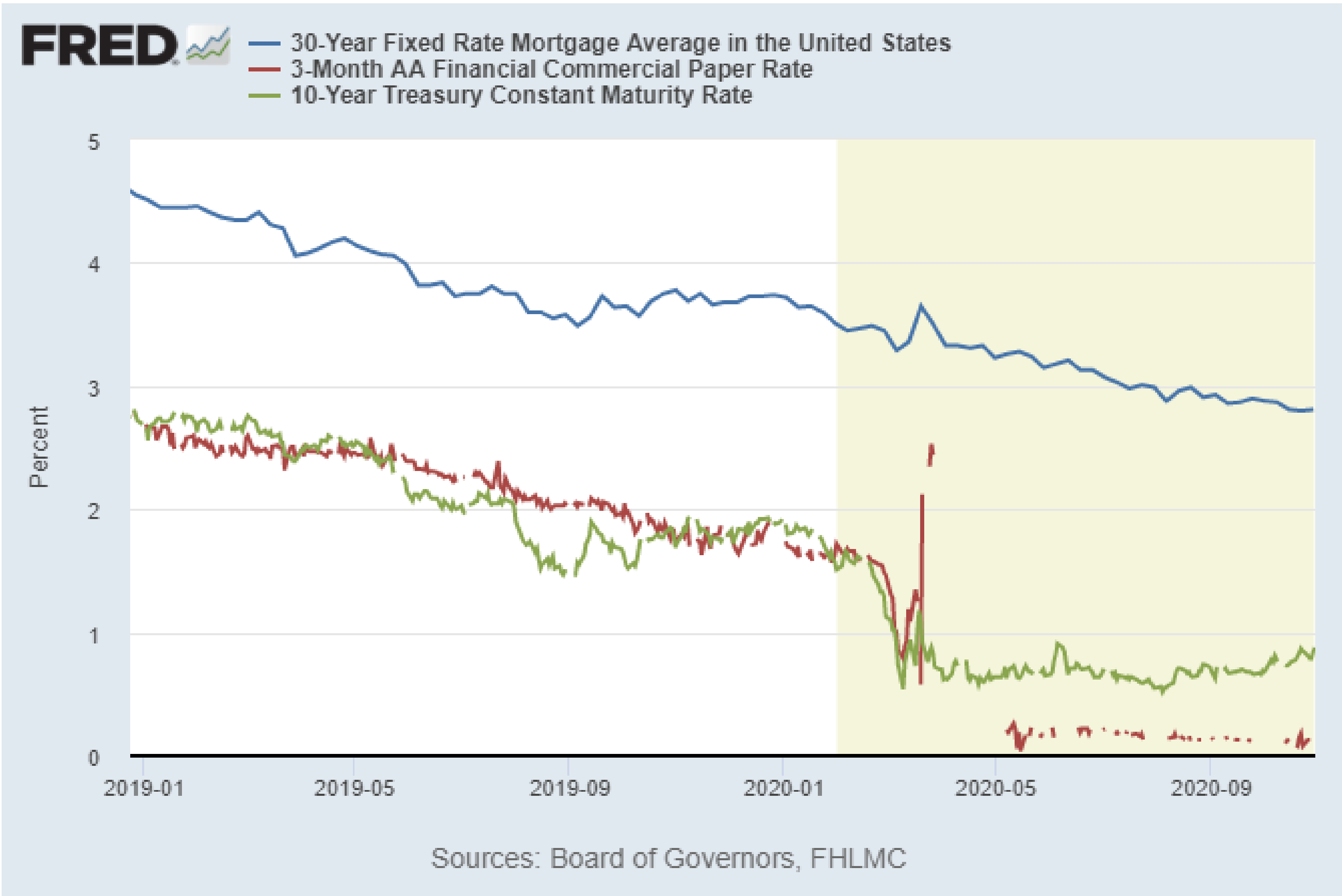
(billions of dollars)

	Announced Size Limit	ESF Funds Pledged	Chair Powell Identified as CARES Act?
Facilities Created Prior to Enactment of CARES Act			
Commercial Paper Funding Facility	n/a	$10	N
Money Market Fund Liquidity Facility	n/a	$10	N
Primary Market Corporate Credit Facility/Secondary Market Corporate Credit Facility	$750	$75	Y
Term Asset-Backed Securities Loan Facility	$100	$10	Y
Facilities Created Since Enactment of CARES Act			
Main Street Lending Program	$600	$75	Y
Municipal Liquidity Facility	$500	$35	Y
Total	**n/a**	**$215**	**$195**

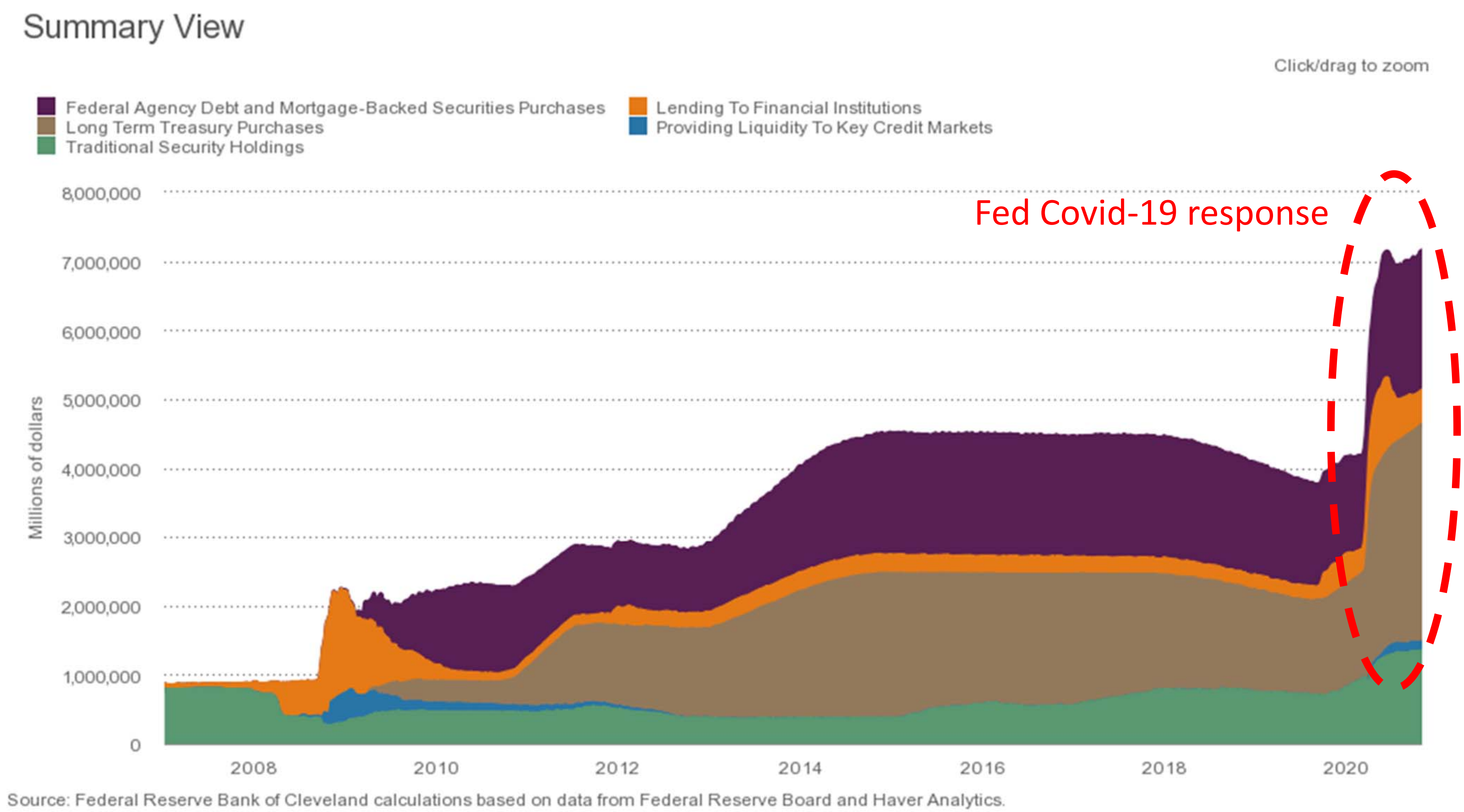
Source: Congressional Research Service (CRS).

Note: See the "Federal Reserve Emergency Facilities Backed by the ESF" section for details.

Stabilizing Financial Markets



Stabilizing Financial Markets



Source: Cleveland Fed https://www.clevelandfed.org/our-research/indicators-and-data/credit-easing.aspx

Supporting Flow of Credit to Firms

Two of the commonly discussed facilities are:

- The Paycheck Protection Program Liquidity Facility, established to help small businesses so they can keep their workers on the payroll; supports the related Paycheck Protection Program (PPP) administered by Small Business Association (SBA).
- The Main Street Lending Program (a set of five facilities), established to support lending to both small and midsized businesses and nonprofit organizations.

Supporting the Flow of Credit to Firms

Main Street Lending Programs:

"…Federal Reserve Bank of Boston has set up a special purpose vehicle (SPV) to purchase participations in loans originated by eligible lenders. Lenders will retain a percentage of the loans. U.S. businesses & nonprofit organizations may be eligible for loans if they meet the criteria … Loans issued would have a five year maturity, deferral of principal payments for two years, and deferral of interest payments for one year."

https://www.federalreserve.gov/monetarypolicy/mainstreetlending.htm

Supporting the Flow of Credit to Firms

The [Main Street] program was announced in April revised twice... It opened for business in July, but as of mid-September 2020 had extended less than $2 billion of loans. Domestic borrowers with fewer than 15,000 employees and less than $5 billion in 2019 revenue are eligible to apply for loans under the program. Loans are made by banks, and the banks retain 5 percent of the loan and sell the remaining 95 percent to one of three Main Street facilities—the New Loan Facility, the Priority Loan Facility, and the Expanded Loan Facility

English, Liang, “Designing the Main Street Lending Program: Challenges and Options,” J. Fin. Crises (2020)

https://elischolar.library.yale.edu/cgi/viewcontent.cgi?article=1099&context=journal-of-financial-crises

Supporting the Flow of Credit to Governments

Municipal Liquidity Facility

To help state and local governments better manage cash flow pressures in order to continue to serve households and businesses in their communities …will purchase up to $500 billion of short term notes directly from U.S. states, U.S. counties with a pop. of at least 500,000 residents, & U.S. cities with a pop. of at least 250,000 residents.

Supporting the Flow of Credit To Governments

Table 1. New Municipal Issuance Volume, 2020

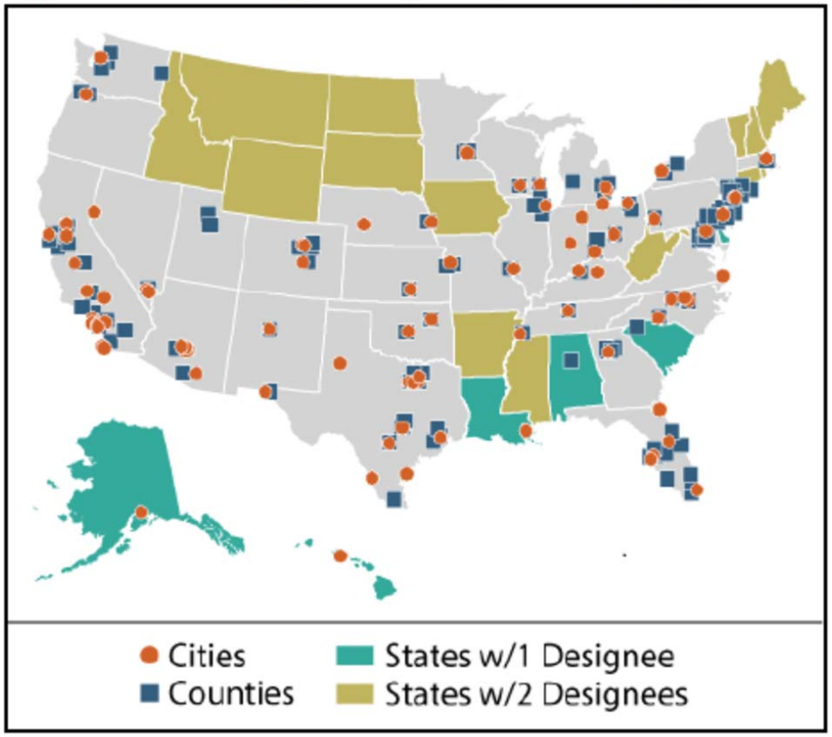
Month	New Issuance Volume (in billions)	Change from 2019
January 2020	32.9	+16%
February 2020	41.7	+55%
March 2020	19.5	-31%
April 2020	28.7	-4%
May 2020	30.0	-1%
June 2020	60.6	+34%
July 2020	52.9	+54%
Year to Date 2020	**266.3**	**+19%**

Source: Municipal Securities Rulemaking Board.

https://crsreports.congress.gov/product/pdf/IF/IF11621

Supporting the Flow of Credit To Governments

Figure 1. MLF Designees by State and Locality



Source: CRS, based on information from the Federal Reserve.
The MLF became operational on May 26. The Fed has publicly disclosed users on a monthly basis. In its first two months of operation, one issuer (Illinois) used the facility. The MLF is currently scheduled to stop purchasing debt at the end of 2020.

https://crsreports.congress.gov/product/pdf/IF/IF11621

Supporting the Flow of Credit To Governments

"The MLF was announced as a $500 billion program. It purchases newly issued debt from eligible issuers, which is backed by anticipated taxes , bonds, or revenues and matures within three years."

Treasury provides $35 billion to protect taxpayers

https://crsreports.congress.gov/product/pdf/IF/IF11621

New Monetary Policy Strategy, Tools, Communication

Components/Implications

- From full employment to maximum employment
- From inflation target to (quasi-) price level target
- Implies generally looser monetary policy

From Full Employment to Maximum Employment

The maximum level of employment is a broad-based and inclusive goal that is not directly measurable and changes over time owing largely determined by nonmonetary factors that affect the structure and dynamics of the labor market.

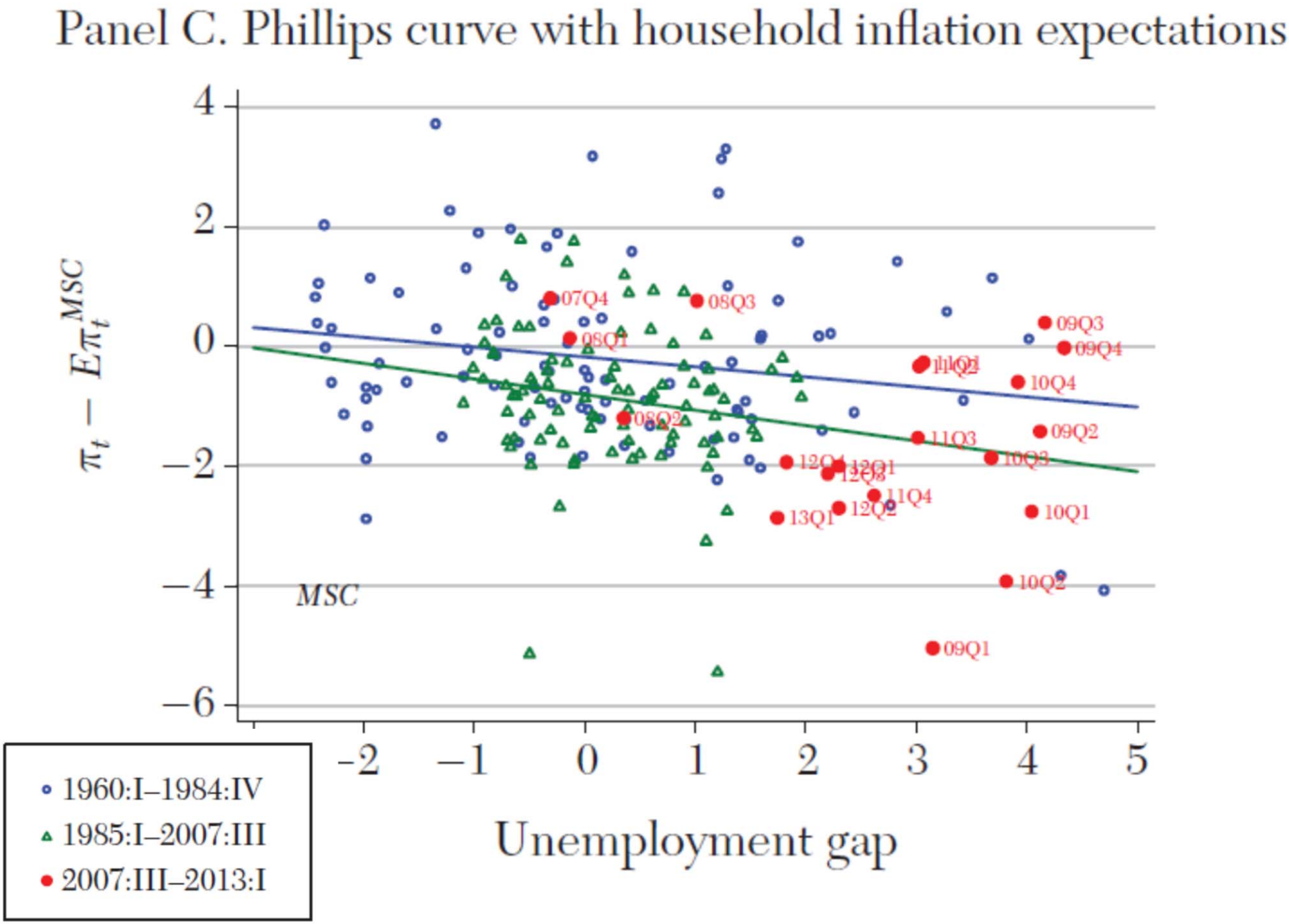
https://www.federalreserve.gov/monetarypolicy/guide-to-changes-in-statement-on-longer-run-goals-monetary-policy-strategy.htm

Rationale

- The natural rate of unemployment is imprecisely estimated
- The Phillips curve is apparently very flat

$$\pi_t = \beta E_t \pi_{t+1} + \kappa X_t + shock_t \tag{1}$$

where π_t is the rate of inflation at time t, $E_t \pi_{t+1}$ is the mathematical (FIRE) expectation of inflation at time $t+1$ given information available at time t, β is the discount factor, X_t is the output gap (more generally, a measure of slack in the economy), κ measures the slope of the Phillips curve and is a function of structural parameters, and $shock_t$ is a "cost-push" shock.[13] Note that this for-



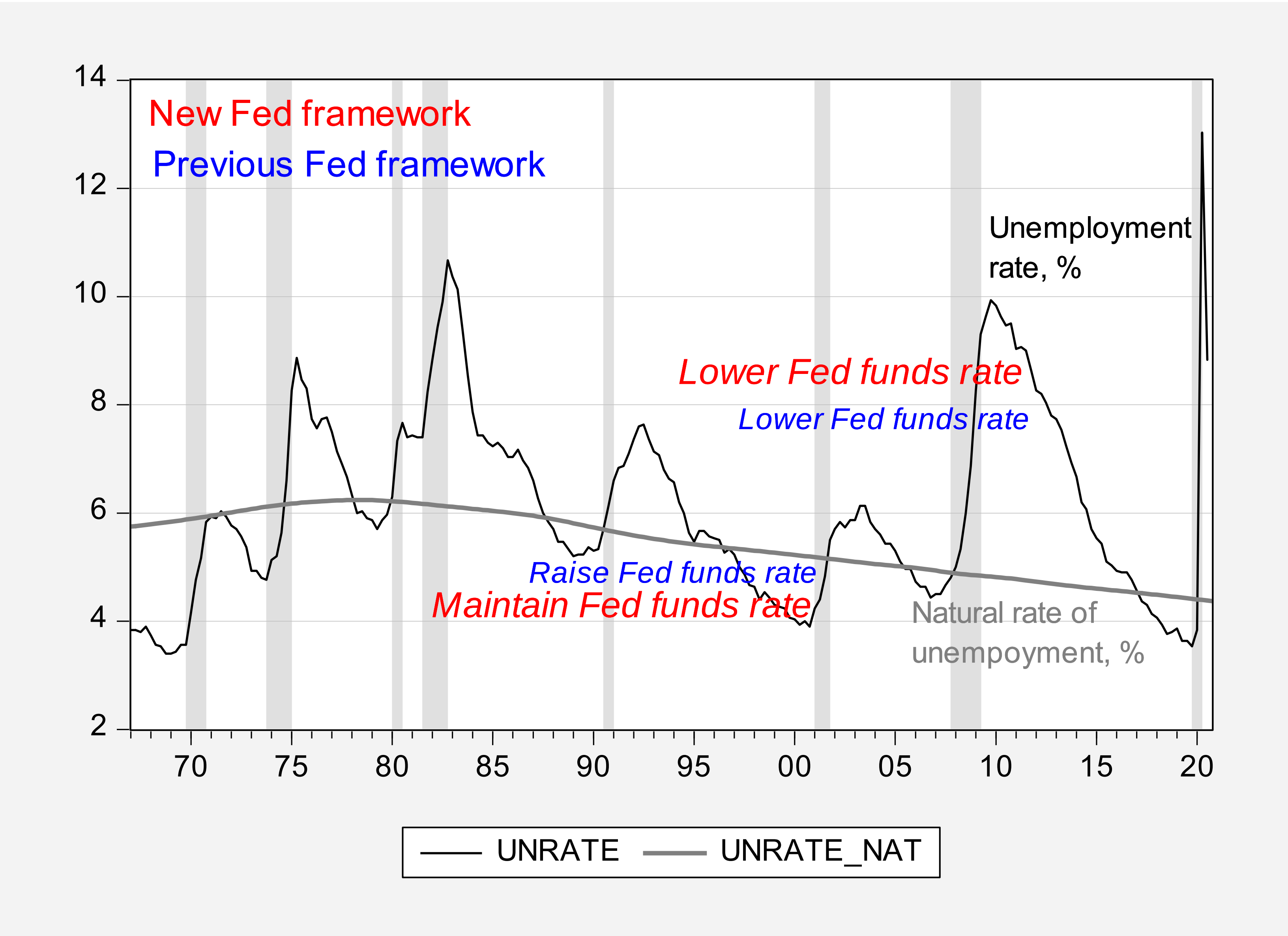
https://www.ssc.wisc.edu/~mchinn/Coibion_jel.20171300.pdf

Policy Implications

- Look at shortfalls from natural rate
- Asymmetric response
- If unemployment exceeds natural rate, lower the policy rate
- If unemployment is less than the natural rate, don’t raise policy rate

https://www.brookings.edu/blog/up-front/2020/08/28/a-more-inclusive-employment-mandate/

Implied Policy Action

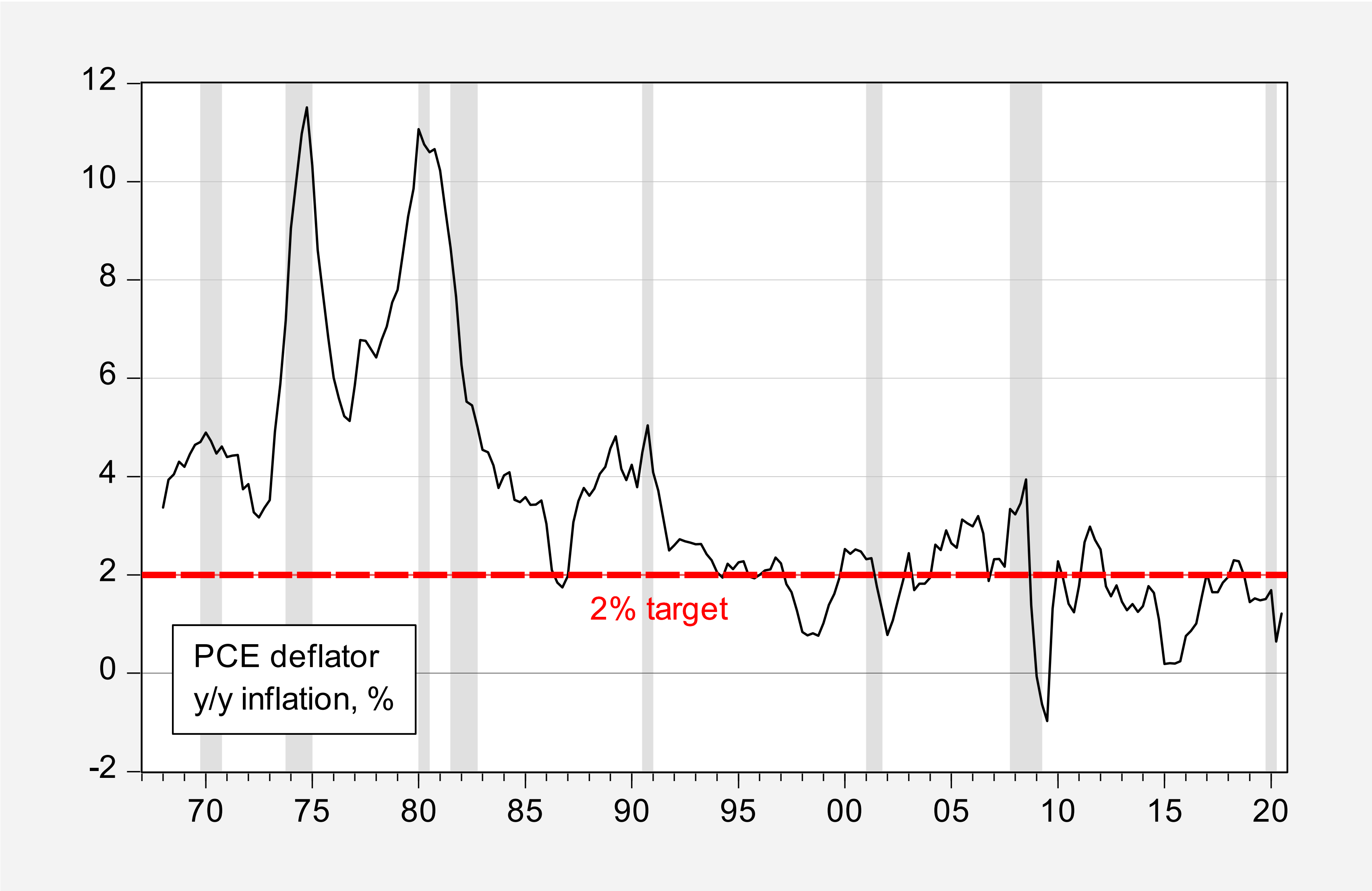


From Inflation Targeting to (Quasi-) Price Level Targeting

In order to anchor longer-term inflation expectations at this level, the Committee seeks to achieve inflation that averages 2 percent over time, and therefore judges that, following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time.

https://www.federalreserve.gov/monetarypolicy/guide-to-changes-in-statement-on-longer-run-goals-monetary-policy-strategy.htm

The Inflation Record



Graphical Interpretation

Policy paths

Hypothetical price level moves and estimated level of macroeconomic variables under different monetary policies

Policy Implications

- Inflation target shortfalls will not be "forgotten"
- Undershooting inflation target implies subsequent overshooting
- Give US has been undershooting inflation target for years, implies looser monetary policy in near future