Osher Lifelong Learning Institute, Winter 2022

Contemporary Economic Policy

Oklahoma State University
February-March, 2022

Jon Haveman, Ph.D.
National Economic Education Delegation

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Course Outline

- **Contemporary Economic Policy**
  - Week 2 (2/15): US Economy & Coronavirus Economics
  - Week 3 (2/22): Climate Change Economics (Simone Wegge, CUNY)
  - Week 4 (3/1): Immigration Economics (Roger White, Whittier College)
  - Week 5 (3/8): Infrastructure Economics (Mallika Pung, Univ. of New Mexico)
  - Week 5 (3/15): Trade and Globalization (Alan Deardorff, Univ. of Michigan)
  - **Week 6 (3/22): Monetary Policy (Geoffrey Woglom, Amherst College)**

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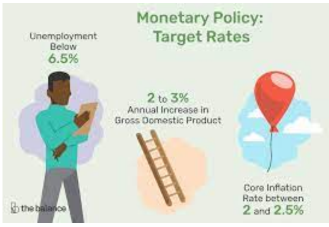
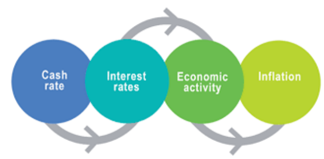


Monetary Policy

March 22, 2022

Geoffrey Woglom, Ph.D.
Amherst College



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Submitting Questions

- **Please submit questions of *clarification* in the chat.**
  - I will try to handle them as they come up
- **We will do a verbal Q&A once the material has been presented.**
- **OLLI allowing, we can stay beyond the end of class to have further discussion.**
- **Slides will be available on the NEED website tomorrow (www.NEEDelegation.org)**

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Outline for the Talk

1. **History of Central Banks and the Fed.**
2. **Institutional Structure of the Fed.**
3. **Monetary Policy Effects on Employment and Inflation.**
4. **The Conduct of Monetary Policy.**
5. **The Current Danger Posed by Persistent Inflation.**
6. **Quick Thoughts about the Ukraine conflict**

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Federal Reserve: The US *Central Bank*

- Central Banks are the government's banks and were typically established to manage currency [Riksbank (1668)] or to help governments to fund wars [Bank of England(1694)].
- First and Second Banks of the United States (1791) & (1816).
- Late 19th century financial crise culminating in the panic of 1907 leads to the creation of the Federal Reserve System in 1913 to act as a "lender of last resort."
- Now all developed economies have central banks .

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Federal Reserve Responsibilities

- Currency Issue.
- Fiscal Agent for the Treasury.
- Maintain and oversee "Payments System."
- Bank Regulation and Supervision.
- Lender of Last Resort.
- Monetary Policy.

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Three LOL Episodes

1. Great Depression.
2. Great Recession, September through December 2008.
3. March 2020.

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Monetary Policy at the Fed

The Federal Reserve System consists of:

- **Board of Governors** (7 members), located in Washington, DC
- **12 regional Fed banks**, located around the U.S.
- **Federal Open Market Committee (FOMC)**, includes the Bd of Govs and presidents of 5 of the regional Fed banks on a rotating basis

Jerome Powell
February 2018

- The FOMC has 8 scheduled meetings a year to set monetary policy. (most recently, 3/16)

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Congressionally Mandated Goals for the Fed

The "Dual Mandate:"

1. "Stable prices" which has been interpreted as a 2% rate of inflation in the Personal Consumption Price Index (which corresponds to about 2.5% inflation in the more well-known CPI).
2. "Maximum" employment is the highest level of employment (lowest unemployment rate) consistent with mandate 1.

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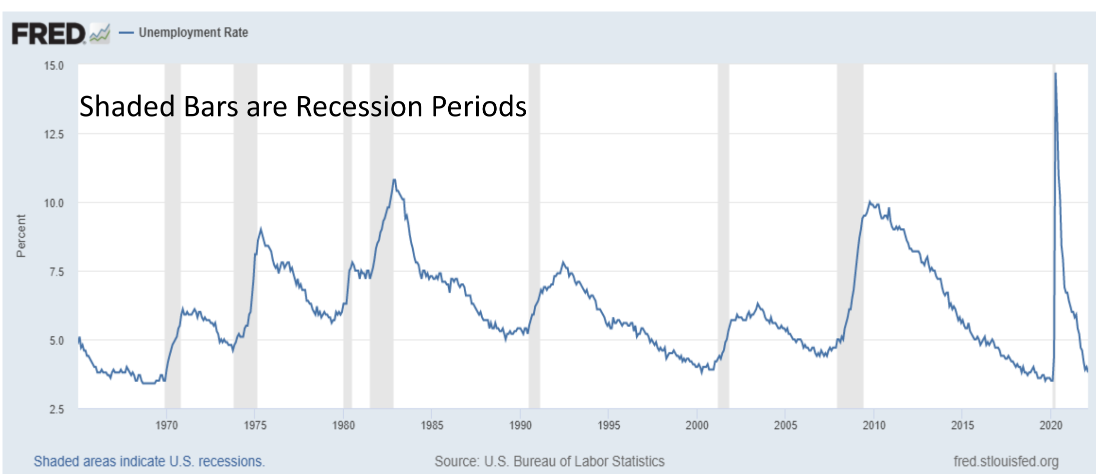
Track Record on Unemployment



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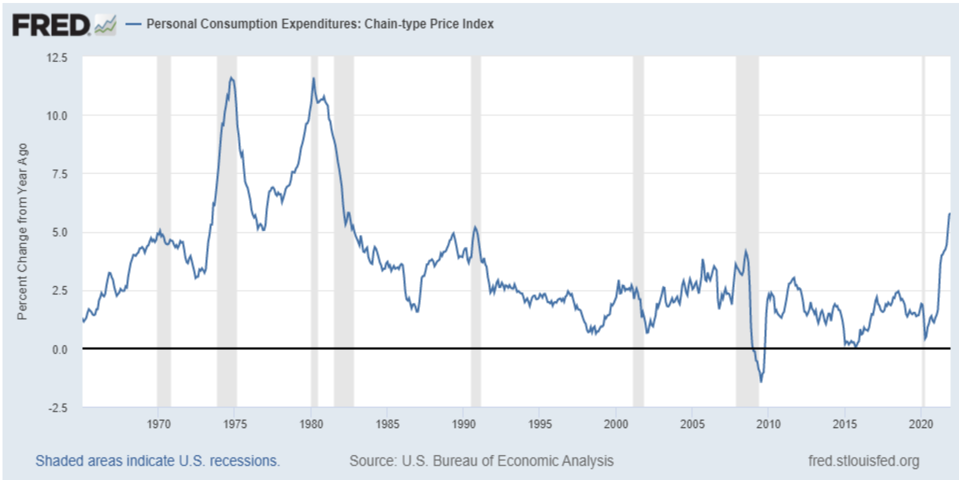
Track Record on "Price Stability"



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A Few Definitions

- GDP and inflation.

Total Spending or "Aggregate Demand."

- "Potential GDP" measures what the economy could produce at normal capacity.
- The "Natural Rate" of unemployment is the unemployment rate when the economy is at potential (the "full-employment," unemployment rate.)
- Short and Long runs

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Determinants of Unemployment & Inflation

Short run:

- **Unemployment: The higher the level of total spending the lower the unemployment rate.**
- **Inflation:**
  1. "Too much Spending:" Total spending above the economy's normal capacity ("potential output") tends to *increase* inflation.
  2. Increase in production costs (e.g., "supply chain bottlenecks.")
  3. Expectations of high inflation can cause inflation to be high.

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Determinants of Unemployment & Inflation

Long run:

- **Unemployment: Is determined by labor supply and demand and is independent of monetary policy; unemployment will be at the natural rate.**
- **Inflation is totally determined by the Fed!**

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Economic Determinants in FOMC Projections.

Economic Projections of the FOMC 12/2019					
Variable:	Central Tendency (excludes top and bottom 3)				
	2019	2020	2021	2022	Longer run
Unemployment rate	3.5-3.6	3.5-3.7	3.5-3.9	3.5-4.0	3.9-4.3
Inflation	1.4-1.5	1.8-1.9	2.0-2.1	2.0-2.1	2.0

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The Fed's Affects the Economy via Interest Rates

- Higher Interest rates discourage firms from buying new plant and equipment, households from buying new homes and tend to lower stock prices (!).
- Lower spending tends to raise unemployment and eventually lowers inflation.

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Become a Central Banker in One Slide!

- If you are more concerned that inflation is too high, raise interest rates.
- If you are more concerned that unemployment is too high, lower interest rates.
- Inflation and unemployment just right: keep rates the same.

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Fed Policymaking in Action

Economic Projections of the FOMC 12/2019					
	Central Tendency (excludes top and bottom 3)				
Variable:	2019	2020	2021	2022	Longer run
Unemployment rate	3.5-3.6	3.5-3.7	3.5-3.9	3.5-4.0	3.9-4.3
Inflation	1.4-1.5	1.8-1.9	2.0-2.1	2.0-2.1	2.0
Interest rate	1.6	1.6-1.9	1.6-2.1	1.9-2.6	2.4-2.8

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One Big Complication: Lags

- **Milton Friedman: Monetary Policy affects GDP and Inflation with Long and Variable (Unpredictable) Lags.**
- **Raising interest rate today does nothing to spending today nor to inflation.**
- **But over time spending slows and eventually inflation falls.**
- **Friedman believed that lags led to the Fed to "oversteering" the economy consistently.**

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What about Fiscal Policy (tax rates and govt spending)?

- **Fiscal Policy can also affect aggregate demand, but the Fed has been given primary responsibility:**
  - Fiscal Policy should focus on the government spending and tax rates that will allow the economy to function efficiently with equity.
  - The Fed has the necessary tools to achieve the dual mandate, except when it needs help in big recessions.
- Reasons:
  - The Fed can act more quickly and is apolitical.
  - In the *long run*, monetary policy does not affect the composition or level of GDP.

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A Closer Look at Interest Rate Control

- *Primary Tool*: the Fed targets the *federal funds rate* (or fed funds rate for short), the interest rate on overnight loans between banks.
- From the bank's perspective these loans are very close substitutes to other short-term, safe assets such as Treasury Bills.
- Therefore, controlling the fed funds rate gives the Fed close control over all safe, *short-term* interest rates.

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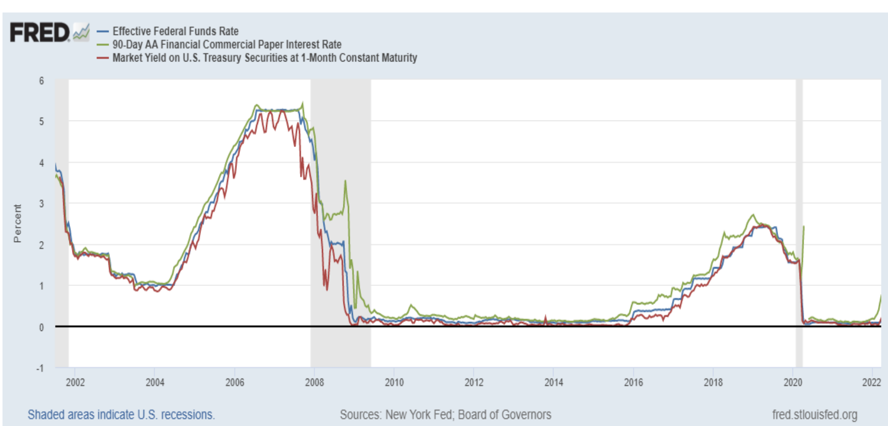
The Fed and Short-term Interest Rates



Blue is the rate on fed funds.
Green is the rate on 3-month commercial paper
Red is the rate on 1 month Treasuries

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What about the Money Supply?

Notice the absence of the money supply. The Fed does not believe there is a reliable, short-run link between the money supply and total spending or inflation.

The Minutes of the 1/26/2022 FOMC Meeting mentions:

- Money Supply, M1, M2 – 0 times
- Federal funds rate – 22 times

"Don't Listen to This Nonsense"

Robert Bartley, Editor of the Editorial page of the *Wall Street Journal* in the 1980s (paraphrased):

"Ronald Reagan proved that economists know nothing about inflation and unemployment. During his first term he was able to do what economists said was impossible: simultaneously reducing inflation and unemployment."

You will probably not be surprised that I disagree. What do you think I would say?

Two Secondary Tools to affect Interest Rates

1. **Forward Guidance: Communicating the Fed's intentions for the future path of short-term interest rates.**
2. **Long-term Asset Purchases better known as quantitative easing or QE.**

Both of these tools also affect interest rates, and thereby aggregate demand. But their effect is on interest rates on longer term and riskier assets.

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Long-Term Interest Rates

- **Interest rates on longer term assets (e.g., 10-yr Treasury bond) and on risky assets (e.g., corporate bond rates, home mortgages) have a stronger effect on spending and aggregate demand.**
- **Unfortunately, the current fed funds rate has much less influence on these interest rates.**
- **Instead, long-term interest rates depend on two factors**
  1. The average of expected, future short-term rates over the life of the long-term bond.
  2. "Risk" premia that reflect the possibility of unexpected changes in interest rates and the possibility of default.
- **The Secondary Tools are aimed at affecting these factors.**

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Forward Guidance

The Fed "guides" financial market participants about what they intend to do in the future. From the 3/16/22 Policy Statement announced at 2PM:

> In support of these goals, the Committee decided to raise the target range for the federal funds rate to 1/4 to 1/2 percent and anticipates that ongoing increases in the target range will be appropriate.

By telling markets that they intend to raise the fed funds rate a number of more times, they hope to raise expectations of future short-term rates, thereby raising long-term interest rates immediately.

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When Jay Powell Talks, People Listen

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Asset Purchases or QE

- **The Fed since 2009 has purchased long-term (e.g, 10-year Treasury bonds) and risky securities (e.g., Mortgage-backed securities) to directly affect longer-term and risky interest rates.**
- **The Fed purchases of these securities raises the total market demand and thereby lowers the required interest rates that these securities need to offer.**

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QE Was a Big Deal

- **Initially, $80 billion per month in longer-term Treasuries and $40 billion per month in mortgage-backed securities**
- **As of 3/16/22, the Fed holds over:**
  - $5.8 trillion in US Treasury Bonds, which is almost 25 percent of the total Federal debt held by the public.
  - $2.7 trillion in mortgage-backed securities, about 15 percent of total mortgages outstanding

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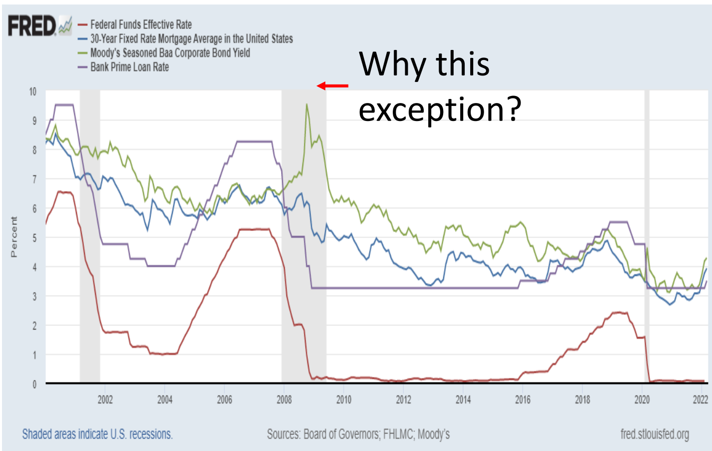
Interest Rates that the Fed Cares About



Why this exception?

Blue: 30-yr mortgage rate
Green: corporate bond rate
Purple: Prime Loan Rate
Red: fed funds rate

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A Policy Strategy: Stabilize Expectations of Inflation

- **Monetary Policy is much easier if the people believe that the Fed will achieve its inflation target.**

Ben Bernanke (2007):

"…if inflation expectations respond less than previously to variations in economic activity, then inflation itself will become relatively more insensitive to the level of activity…"

- **In central bank jargon, stable expectations are "well anchored."**

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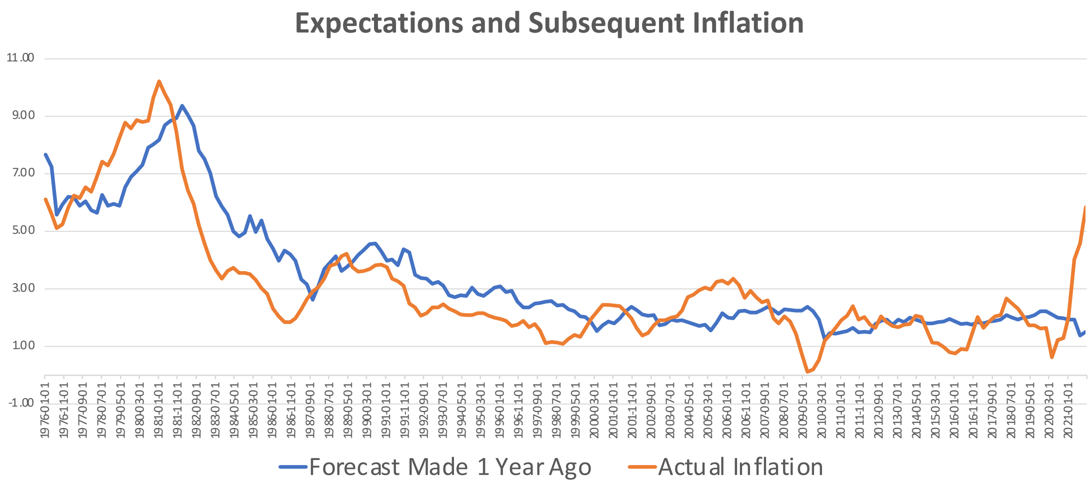
"Anchoring" Inflation Expectations



Forecasts: Philadelphia Fed, "Survey of Professional Forecasters"

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Anchoring Requires Credibility

Credibility, the public believes that the Fed will achieve its goals.

- **Requirements for Credibility**
  1. Transparency (Communication)
  2. Accountability (Performance)
  3. Political Independence

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We (Economist) Take Credit for Policy Strategy!

- We convinced Paul Volcker in 1982 of the importance of inflationary expectations.
- Reducing and stabilizing expectations of inflation was very costly, but led to the "Great Moderation," 1990-2008.

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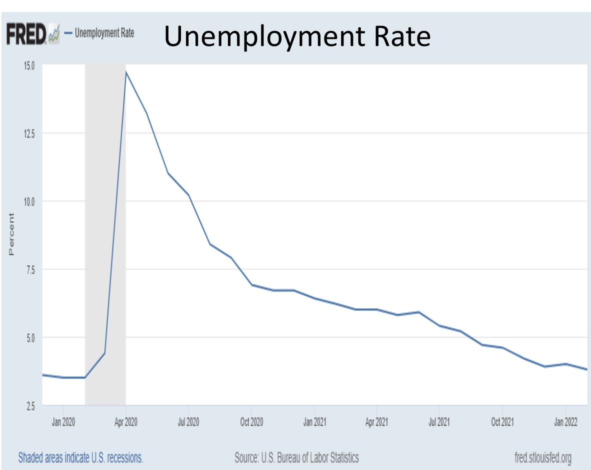
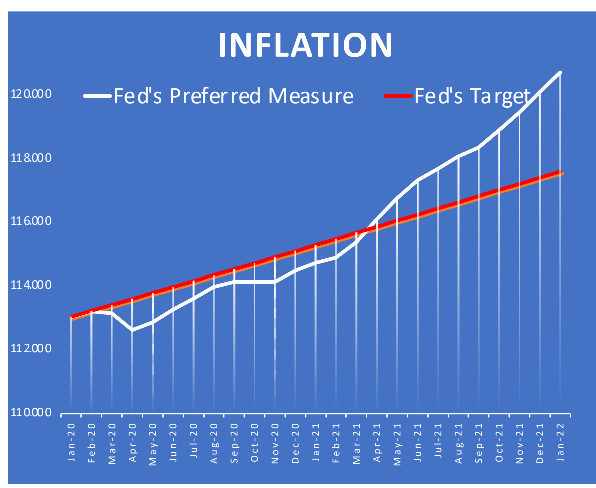
A Closer Look Has the Fed Been Doing Recently?





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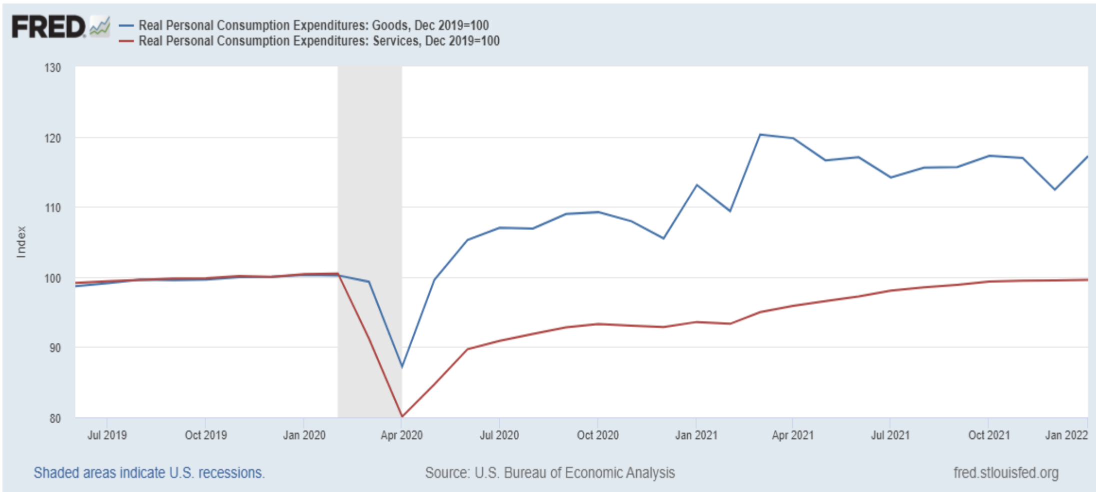
What about Supply Chain Disruptions?



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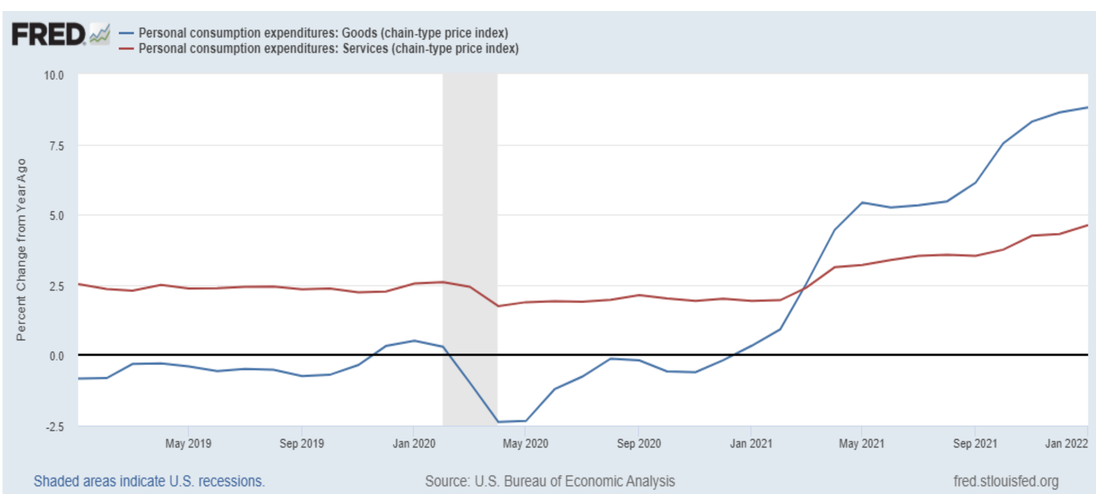
Macro Imbalances & Inflation



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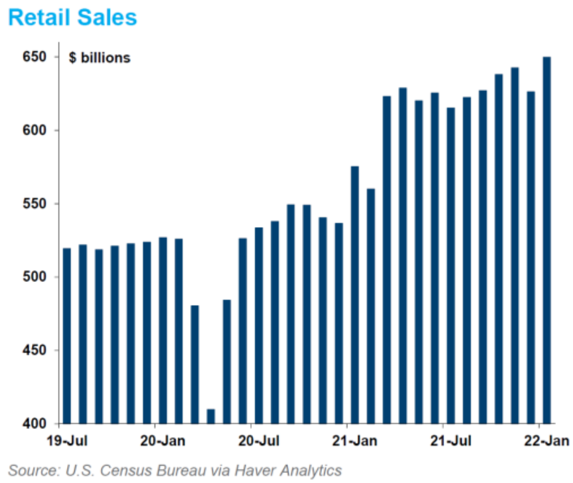
Consumer Demand is Still Strong



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My Diagnosis for the Uptick in Inflation

- Yes, there were supply chain issues that affected some areas in particular (e.g., computer chips).
- But there is too much total spending and in the absence of bold Fed actions is likely to continue.
- Fiscal stimulus led households to increase saving over 2021 by more than $2 trillion and today's strong retail sales numbers suggest they are prepared to spend it.
- Whose to Blame: ARP probably too big, but the Fed could have acted sooner.

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What Have They Done So Far?

- Since November, they have slowed the rate of QE (slowed the rate at which they are adding stimulus!)
- At the January meeting, they recognized that, "the Committee expects it will soon be appropriate to raise … the federal funds rate."
- Stop QE in March!
- March meeting they raised the fed funds rate by ¼ of a percentage point

Pretty Tough stuff?

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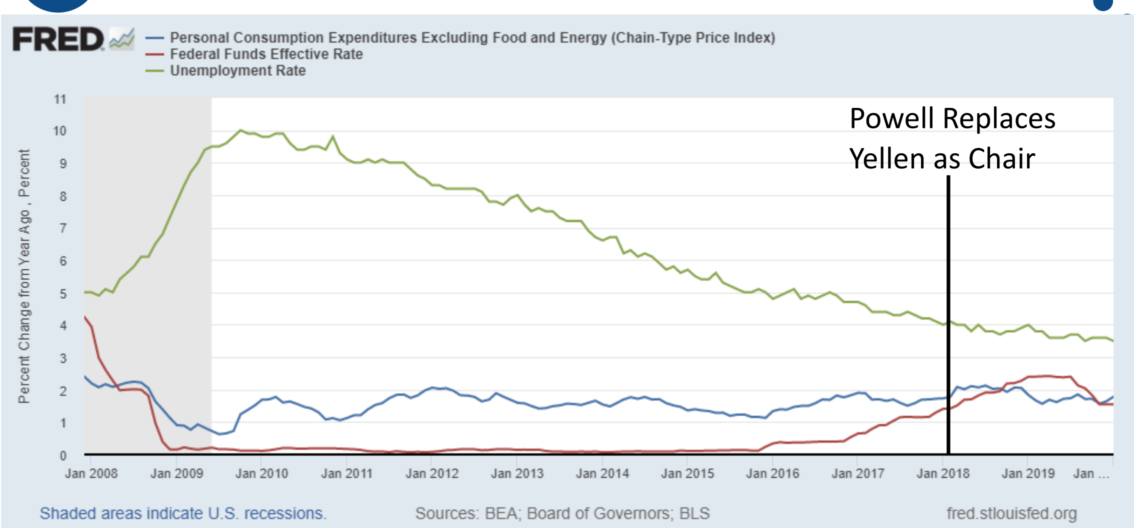
Why Did Powell Do It?



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Policy Changes under Powell

- In the Fed's dual mandate put more emphasis on the employment goal relative to the inflation goal.
- Inflation goal switched from targeting forecasted *future* inflation to trying to achieve average *realized* inflation of 2%

Have they forgotten about Lags!

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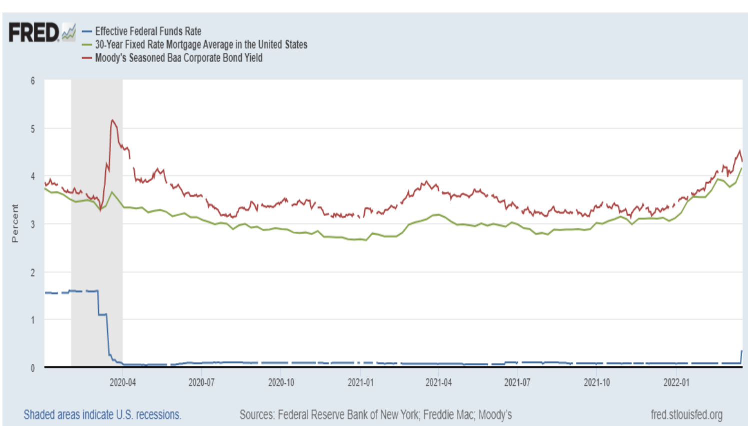
Interest Rates During the Pandemic



Blue: fed funds rate
Green: 30-yr mortgage
Red: corporate bond rate

When did markets believe the Fed would deal with inflation?

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Fed Policy Statement, 3/16/2022

The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. With appropriate firming in the stance of monetary policy, the Committee expects inflation to return to its 2 percent objective and the labor market to remain strong. In support of these goals, the Committee decided to raise the target range for the federal funds rate to 1/4 to 1/2 percent and anticipates that ongoing increases in the target range will be appropriate. In addition, the Committee expects to begin reducing its holdings of Treasury securities and agency debt and agency mortgage-backed securities at a coming meeting.

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So Far Inflationary Expectations Look Stable

- Professional forecasters, financial markets and the Fed itself think that inflation in 2023 will be in the 2.5-3.3%, range

Economic Projections of the FOMC, March 2022*

	2022	2023	2024	Longer Run
Change in Real GDP	2.8	2.2	2.0	1.8
December projection	4.0	2.2	2.0	1.8
Unemployment Rate	3.5	3.5	3.6	4.0
December projection	3.5	3.5	3.5	4.0
PCE Inflation	4.3	2.7	2.3	2.0
December projection	2.6	2.3	2.1	2.0
Core PCE Inflation	4.1	2.6	2.3	--
December projection	2.7	2.3	2.1	--
Federal Funds Rate	1.9	2.8	2.8	2.4
December projection	0.9	1.6	2.1	2.5

* Median projections

Source: Federal Open Market Committee, Summary of Economic Projections, March 2022

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Good Luck with these Forecasts!

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What's at Stake: Inflationary Expectations

Jay Powell, yesterday (3/21):

"Our monetary policy framework, as embodied in our Statement on Longer-Run Goals and Monetary Policy Strategy, emphasizes that having longer-term inflation expectations anchored at our longer-run objective of 2 percent helps us achieve both our dual-mandate objectives…."

"However, the risk is rising that an extended period of high inflation could push longer-term expectations uncomfortably higher, which underscores the need for the Committee to move expeditiously as I have described."

- **Paul Volcker put the world into a costly and deep recession in 1982 to bring down inflation and to "anchor" inflationary expectations. Could we be on the verge of losing these hard-won gains?**

If Expectations Start to Increase

The Fed will have a very difficult choice

a) Raise interest rates a lot (in an election year) to slow inflation

1. stalling the recovery.
2. disrupting financial markets.

b) Raise interest rates slowly and moderately to cushion the effect on employment

1. avoids a recession (maybe).
2. inflationary expectations become unanchored

The Conflict in Ukraine and the US Economy

- **Short run**
  - Uncertainty
  - Increase in Cost of Food and Fuel
- **Long run**
  - Decrease in Globalization
  - The Role of the Dollar as a International Reserve Currency.

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The Fear Index

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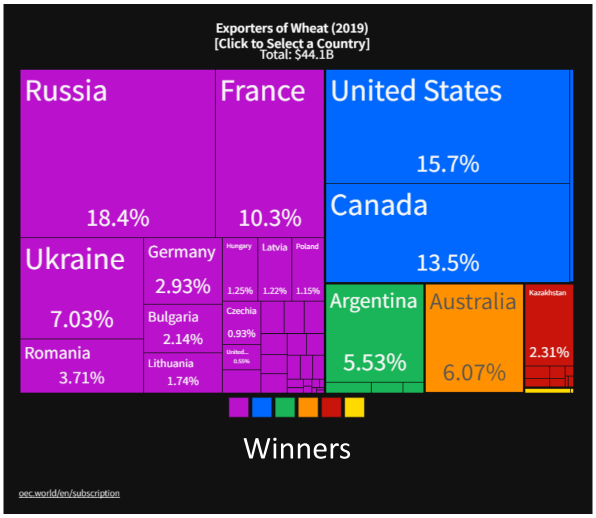
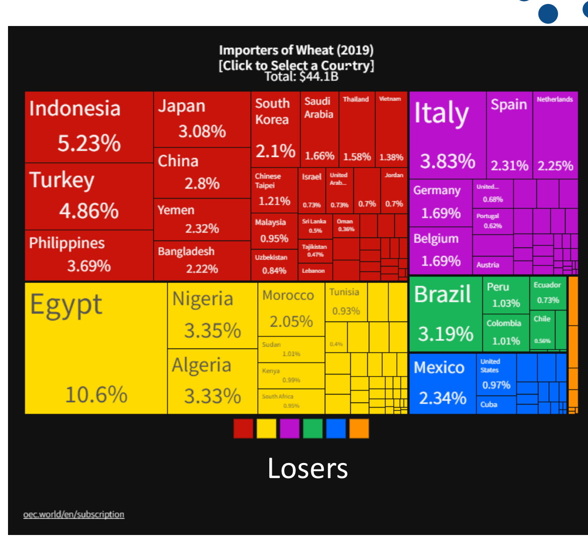
The Price of Wheat is Likely to Rise (further)





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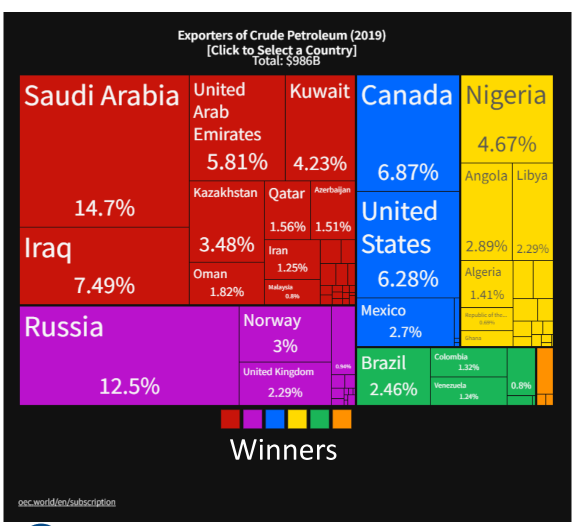
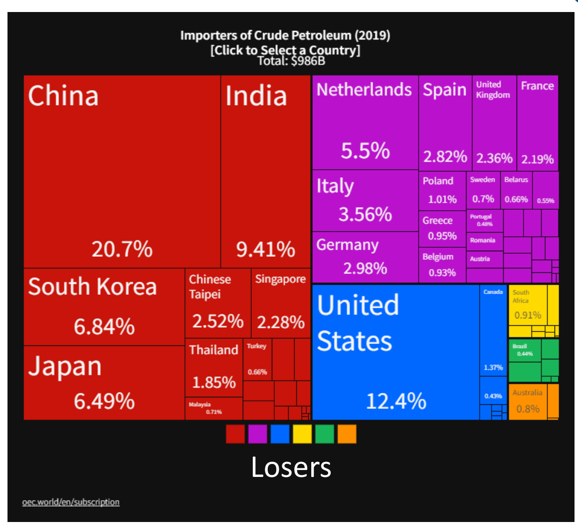
The Price of Oil is Likely to Rise (further)





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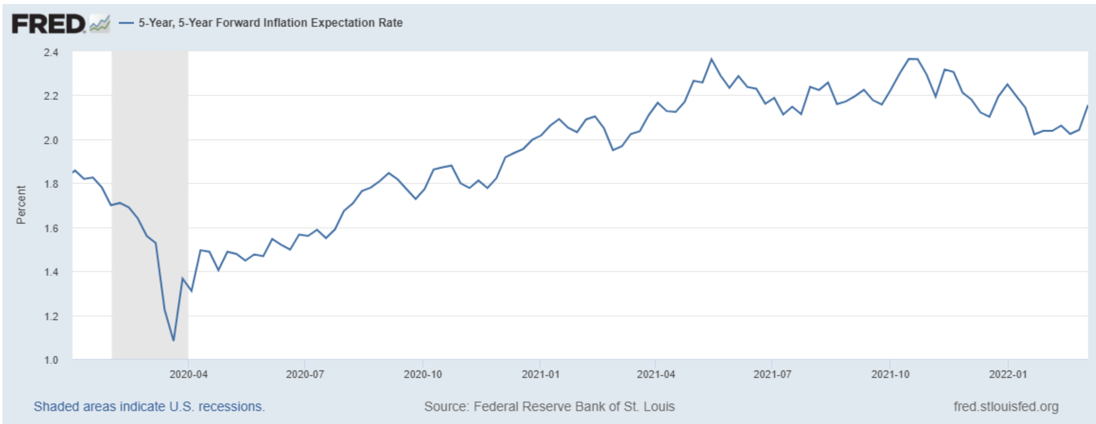
Inflationary Expectations Still Stable



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Long-run Effects

- **Deglobalization to Protect Supply Chains.**
- **New Developments to avoid-US imposed financial wars.**
  - China's alternative to SWIFT
  - Rise of crypto currencies
- **Role of the Dollar as the International Reserve Currency**

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Let's Hear from You!

www.NEEDelegation.org
Geoffrey Woglom
grwoglom@amherst.edu

Contact NEED: Info@NEEDelegation.org

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Monetary Policy Glossary

- *Gross Domestic Product* (GDP): the *value* of national production during the course of year.
- *Real Gross Domestic Product* (RGDP): GDP adjusted for inflation. RGDP measures the *quantity* of national production.
- *Potential GDP:* What RGDP would be if the economy was operating at normal, full capacity.
- *Inflation*: The average percentage change in prices. The most popular measure is the Consumer Price Index or CPI rate of inflation.
- *Natural Rate of Unemployment*: What the unemployment rate would be if RGDP was equal to potential.
- *Short run*: The current situation of the economy and its prospects over the next year or so. The business cycle reflects the short run
- *Long run:* The average behavior of the economy over a complete business cycle.

Monetary Policy Glossary

- *Aggregate Demand*: Total domestic spending by households, firms and government on newly produced goods.
- *Interest Rates*: The cost of borrowing by government (Treasury bonds), by firms (corporate bonds and bank loans), by households (mortgages) and by others.
- *Short-term interest rates* the interest rate on bonds and loans of 1 year or less.
- *Long-term interest rates:* more than 1 year.
- *Risky interest rates*: on bonds and loans that may not be paid back (Corporate bonds, Bank Loans)
- *Federal Funds rate*: The interest rate of overnight loans between banks. It is the primary policy instrument of the Fed.
- *Political Independence*: The extent to which the Fed's decisions are affected by politics.
- *Credibility*: Explaining what actions you are taking and why.

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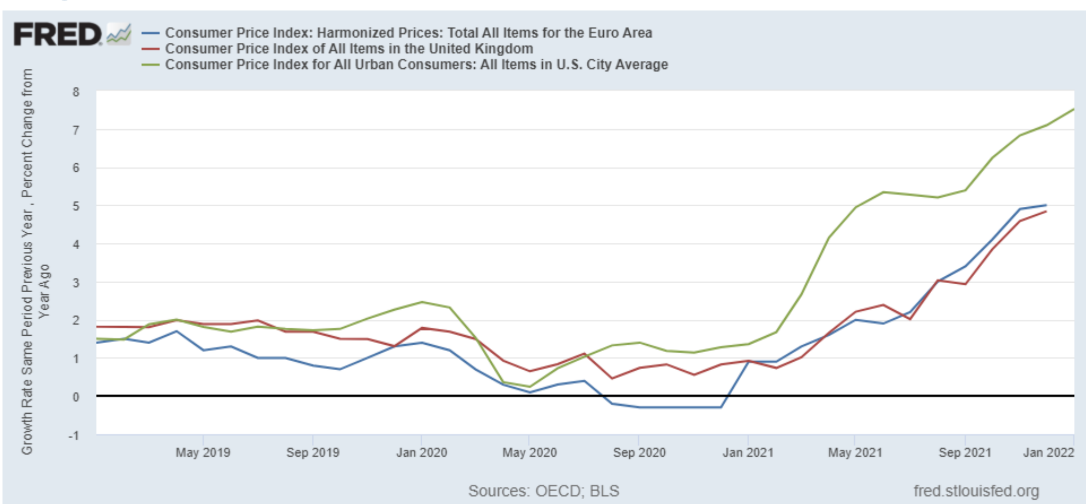
Inflation in 3 Areas



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The Bond Market's Take on Inflation

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