Monetary Policy

Lutz Hendricks

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UNC Chapel Hill

Introduction

How does the Fed operate in reality?

It complicated...

Traditional Monetary Policy

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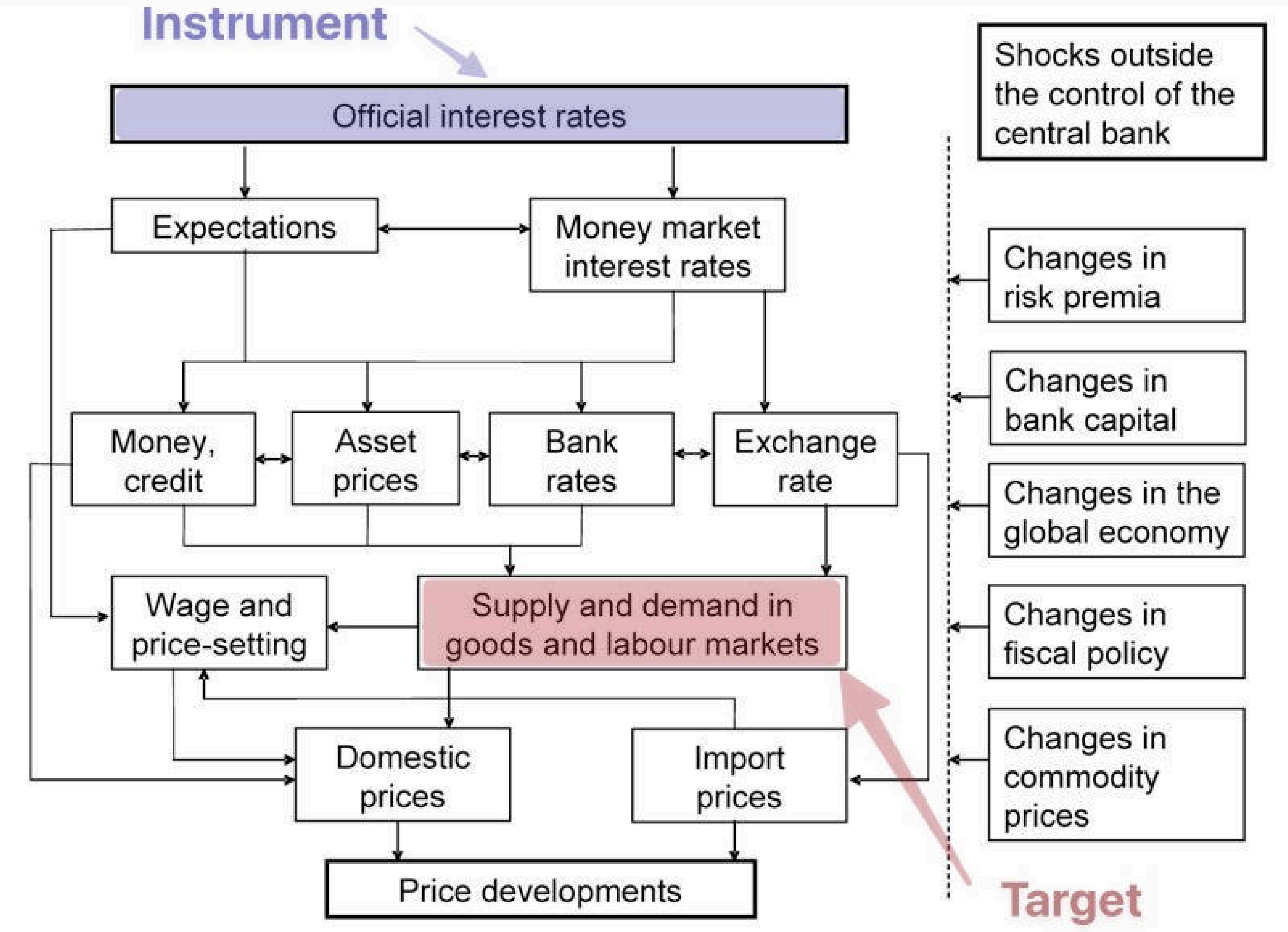


Monetary transmission illustrated

Source: ECB, Transmission mechanism of monetary policy

Traditionally, the Fed's main policy tool is the **Federal Funds Rate** (FFR).

- Banks borrow from each other over night
  - moving excess liquidity around
  - the FFR is the interest rate charged for this borrowing
- The Fed controls the FFR by adjusting the liquidity available to banks
  - e.g., by buying and selling bonds in exchange for reserves held with the Fed

Key point:

The Fed directly only controls a very short term (overnight) interest rate.

Monetary transmission simplified

Main tool: Federal Funds Rate
$\downarrow$
Short rates: money market, etc.
$\downarrow$
Longer rates: bonds, bank loans
$\downarrow$
AD: $C + I$
$\downarrow$
Output Y
$\downarrow$
Price level

Monetary Transmission

Aggregate demand depends on **long-term** interest rates

- mortgages and consumer loans
- bank loans to firms

The Fed has **no direct control** over these rates.

Monetary transmission means:

- How do Fed actions (e.g., changes in the FFR) translate into changes in aggregate demand?

There are several channels.

Monetary Transmission: Channels

Higher FFR works through these channels:

1. **Interest rates**
   Investors hold more short term reserves $\Longrightarrow$ sell long-term bonds $\Longrightarrow$ **bond interest rates** rise

2. **Asset prices** Kower stock prices $\Longrightarrow$wealth effects reduce consumption
   Higher return on competing assets
   Higher cost of capital $\Longrightarrow$ lower **investment**

3. **Credit supply**
   Higher cost of funds for banks $\Longrightarrow$ less credit creation

4. **Inflation expectations**
   Lower expected inflation $\Longrightarrow$ higher real interest rates

Problems

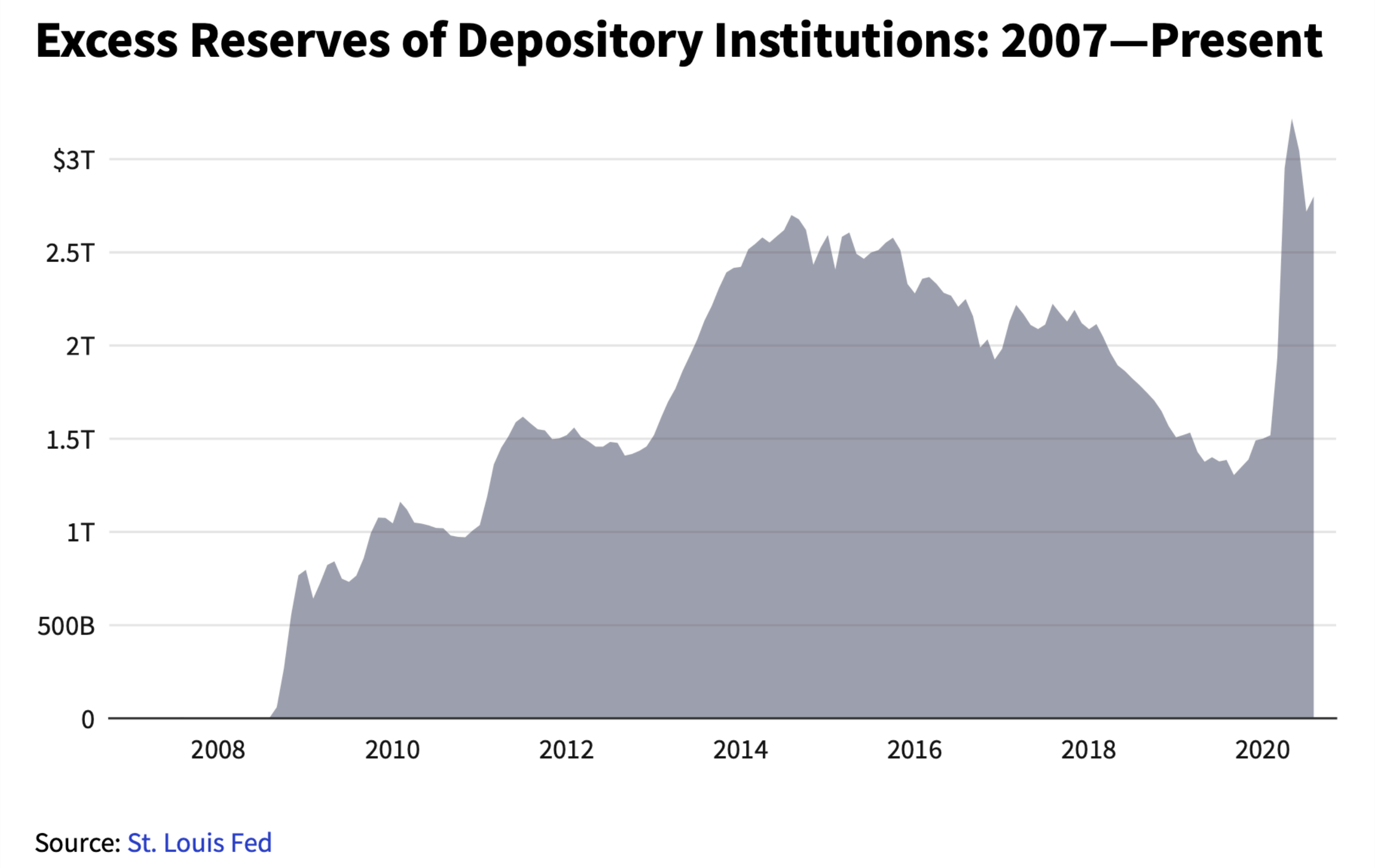
Transmission is quite **indirect**

- The Fed directly controls only the FFR
- Aggregate demand depends on longer interest rates
- Long rates may not move as expected

This is the key **difficulty of monetary policy**:

- long and variable lags
- it typically takes about **a year** for the real effects of a monetary stimulus to take full effect

Example: The Great Financial Crisis



Banks soaked up all of the liquidity generated by the Fed as excess reserves.

Essentially **no credit creation**.

Digression: How do Banks Work?

The main function of commercial banks:

- take in deposits
- give out loans (to finance investment and consumption)

Profit: the spread between loan rates and deposit rates.

Fed reserves:

- banks must hold a certain fraction of their deposits in low interest Fed accounts
  (reserve requirement – abolished in 2020)
- when banks fear uncertainty, they hold **excess reserves** instead of giving out loans

Excess reserves indicate that banks do not lend as much.

Unconventional Monetary Policy

Unconventional Monetary Policy

What we described so far is “conventional” monetary policy.

- what the Fed has been doing for decades

Recently, conventional monetary policy has stopped working.

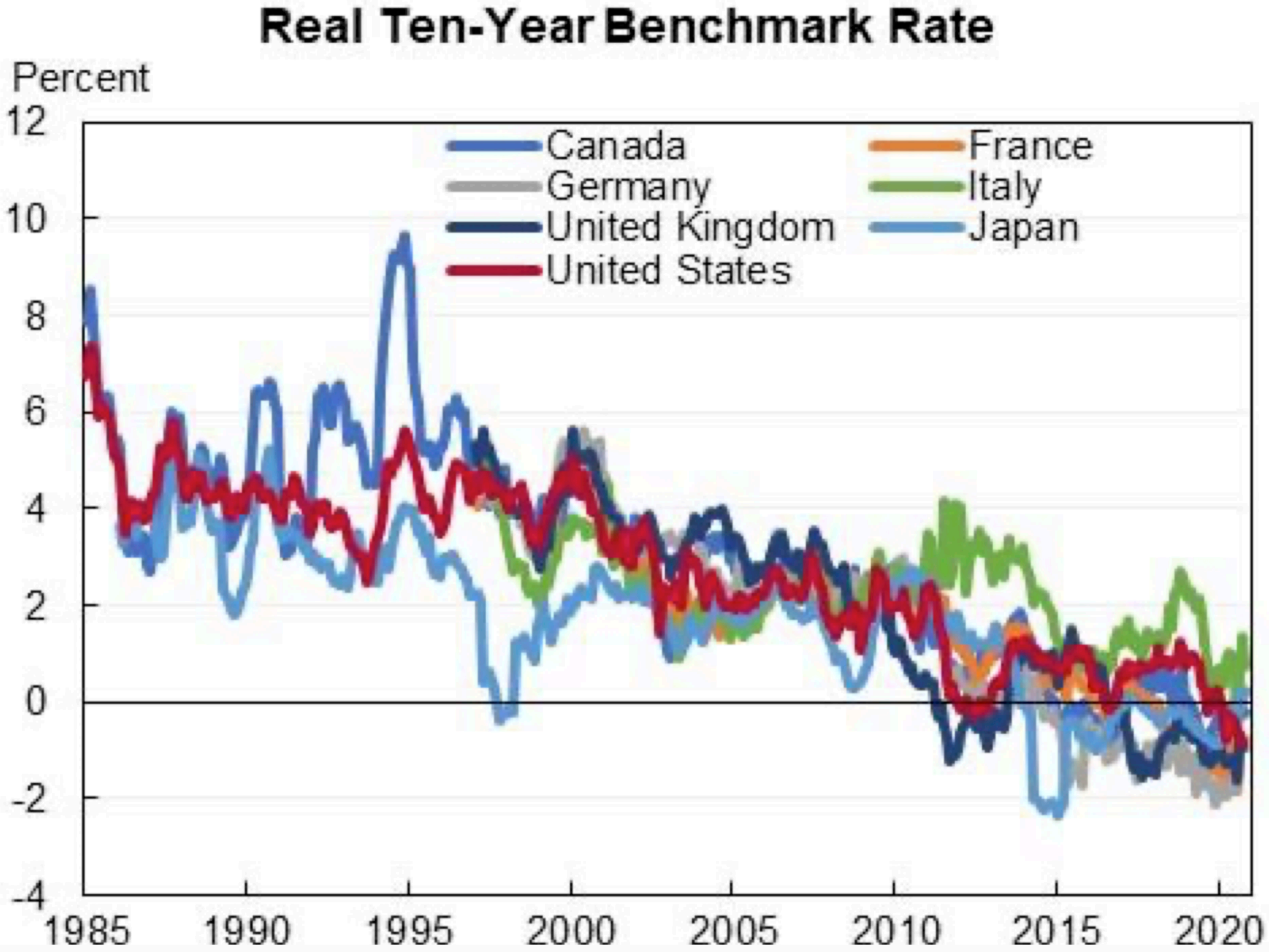
- even zero interest rates are no longer low enough

Since the Great Financial Crisis of 2009, the Fed has used “unconventional” tools

- which are, by now, pretty conventional

Falling Interest Rates

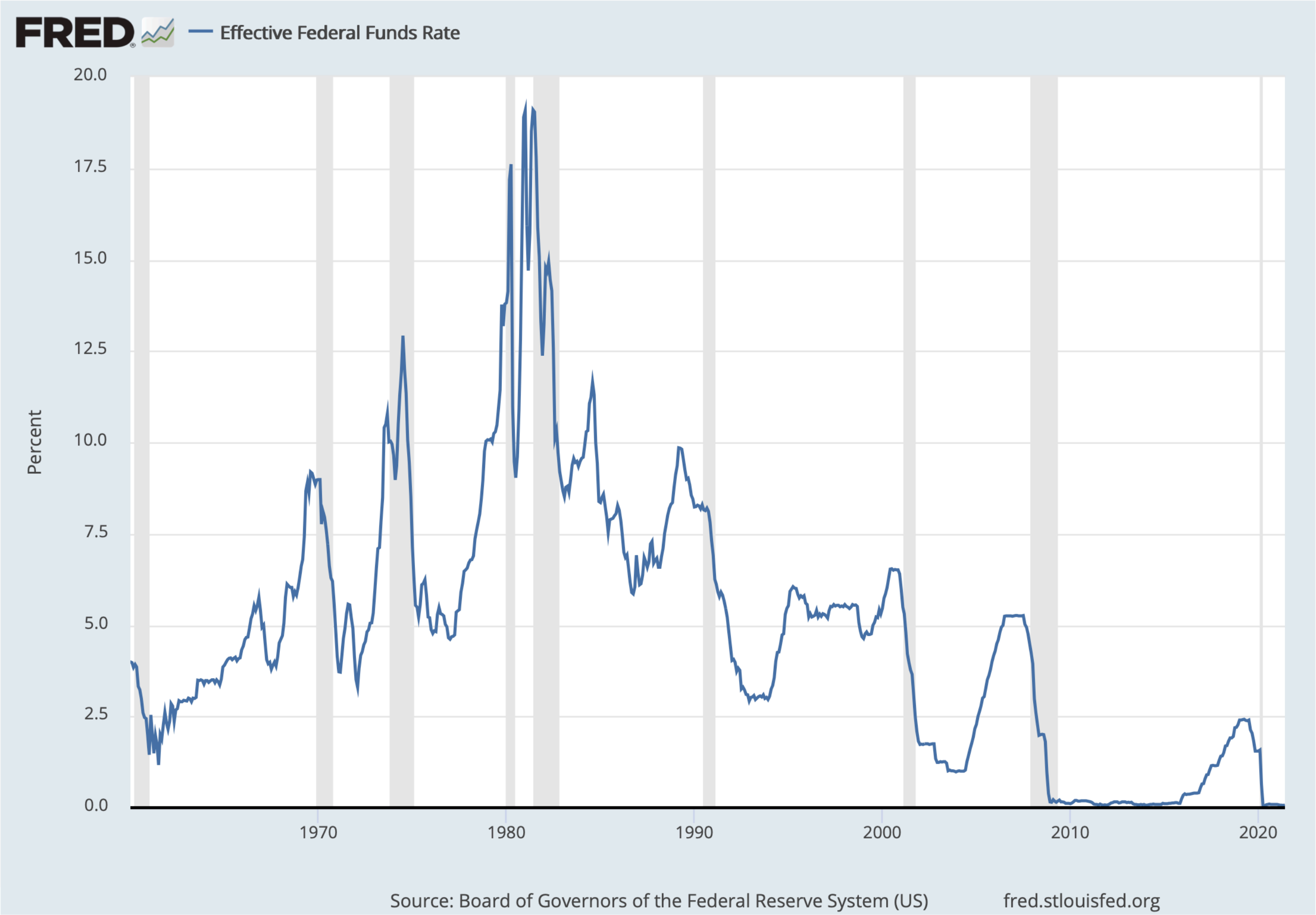
Figure 1



Real interest rates have been falling (not clear why).

Source: Furman & Summers, 2020

The Zero-Lower Bound



The FFR has trended down.

In recessions, it hits the zero lower bound – now what?

Source: FRED

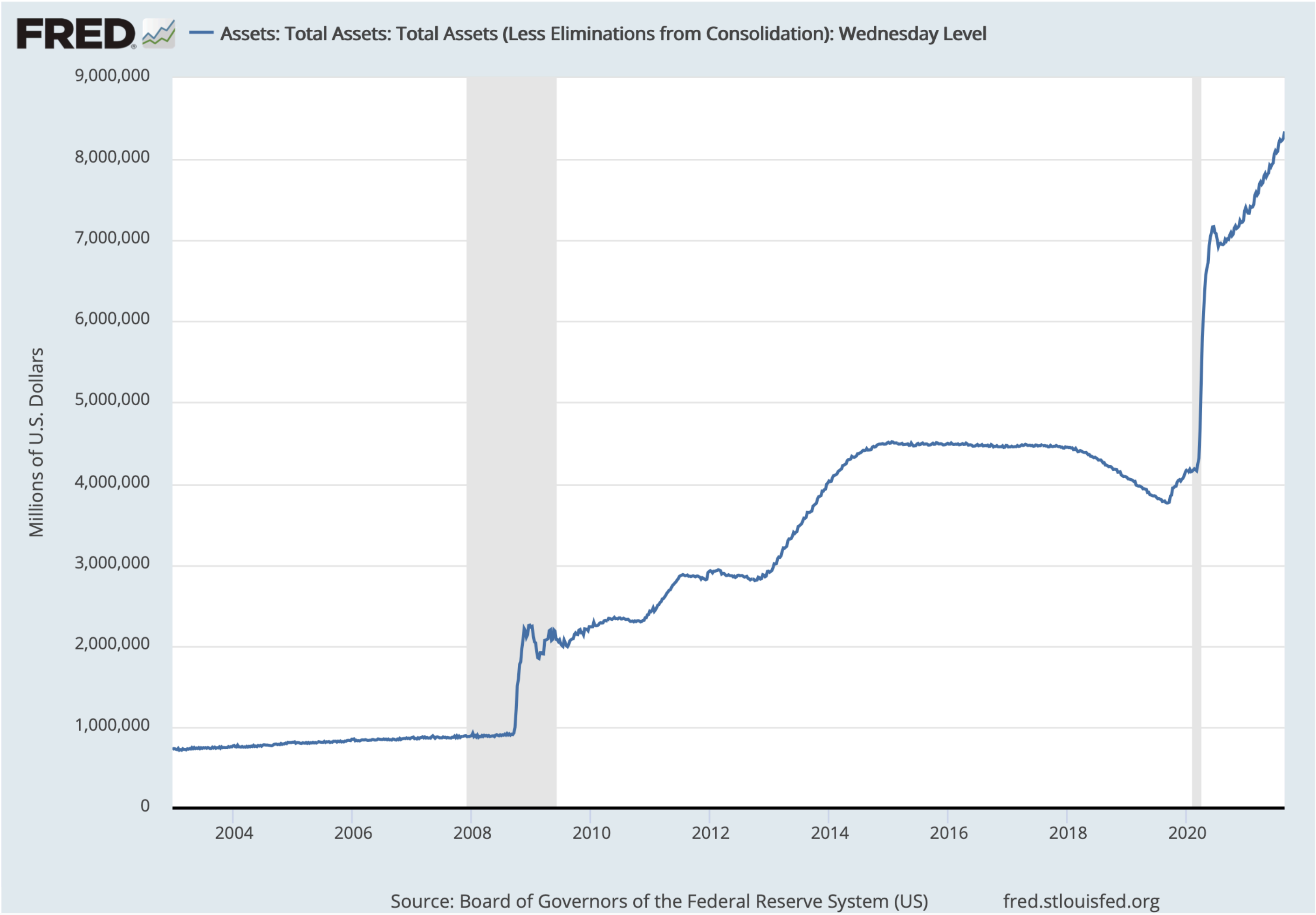
Quantitative Easing

The Fed directly changes long-term interest rate by buying **long-term bonds**.

How does it work?

1. **Liquidity** (similar to traditional monetary policy)
2. Inflation **expectations** $\Longrightarrow$ lower real interest rates
3. Policy **signaling**: the Fed is serious about keeping interest rates low for a while
   because it takes time to unwind QE
   so liquidity will stay in the system for a long time

QE: How Big is it?



The Fed's balance sheet has expanded dramatically.

Source: FRED

QE Risks

1. Inflation may rise (lots of liquidity in the system)
2. At some point, the Fed has to unwind its asset positions.
   This causes demand contraction.
3. Distributional effects; see NY Times Opinion, July 12, 2021

Summary & Review

1. Does the Fed control the interest rate?
2. How can the Fed use expectations to stimulate the economy?
3. The main challenge for the Fed: long and variable lags.

Reading

- Investopedia article on the Federal Reserve.
- ECB article on the “Transmission Mechanism of Monetary Policy”
- Johnson, Manuel (2002). “Federal Reserve System.” The Library of Economics and Liberty: a very brief overview of how the Fed operates.
- Monetary Policy Basics: a brief summary of fed operations.