



THE POST-PANDEMIC RECOVERY AND THE BIFURCATION OF THE U.S. ECONOMY

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The Post-Pandemic Economy

The U.S. Labor Market

Federal Government Deficits and Debt

Inflation and Interest Rates

Is there any hope?

Return to Pessimism: the U.S. as a Global Safe Haven

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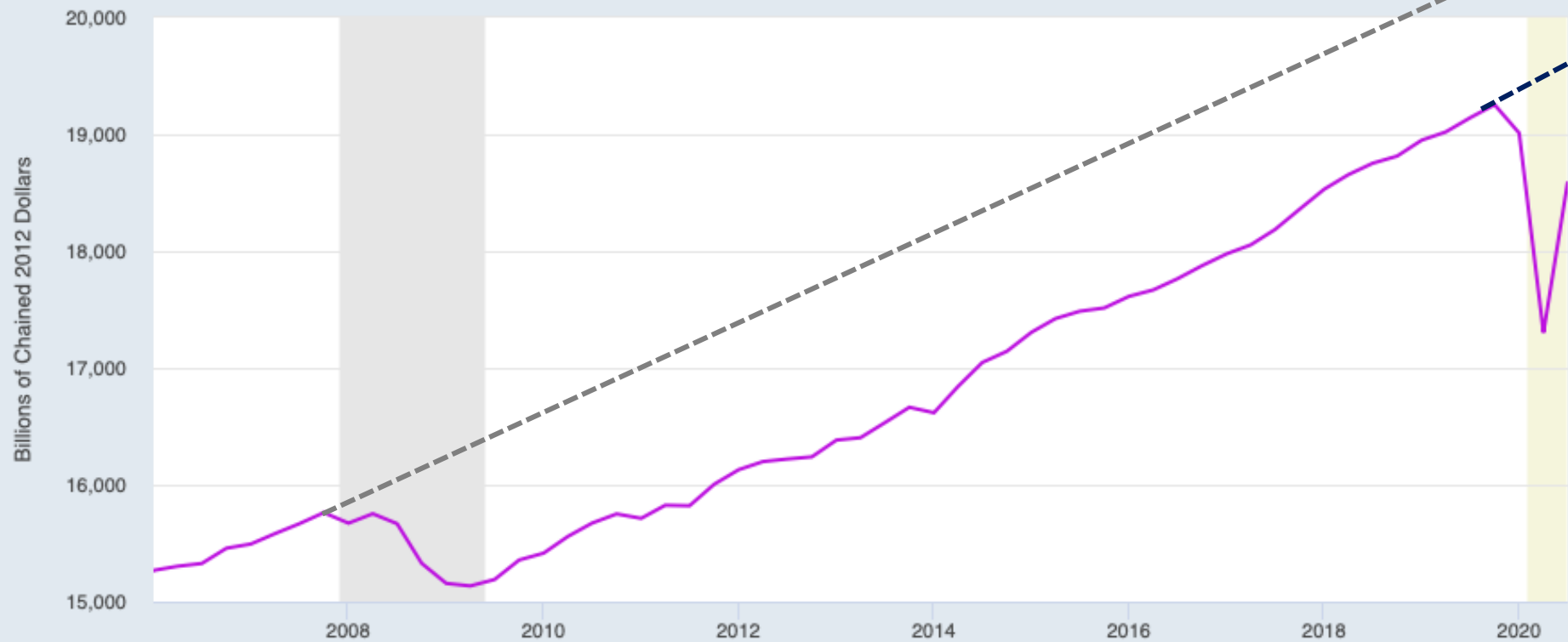
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U.S. Real GDP

Q 1 2006 – Q3 2020

FRED  Real Gross Domestic Product

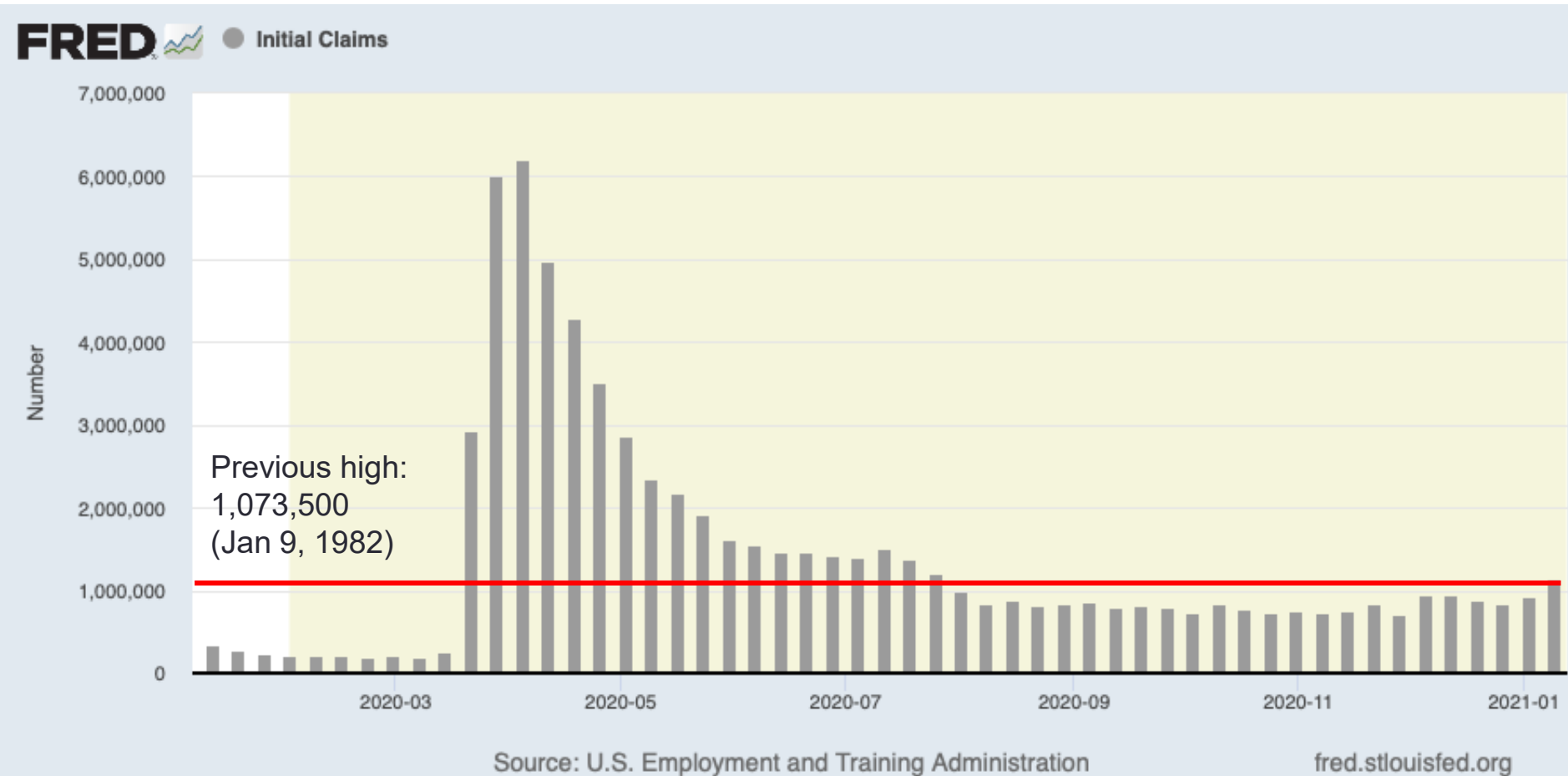


Source: U.S. Bureau of Economic Analysis

fred.stlouisfed.org

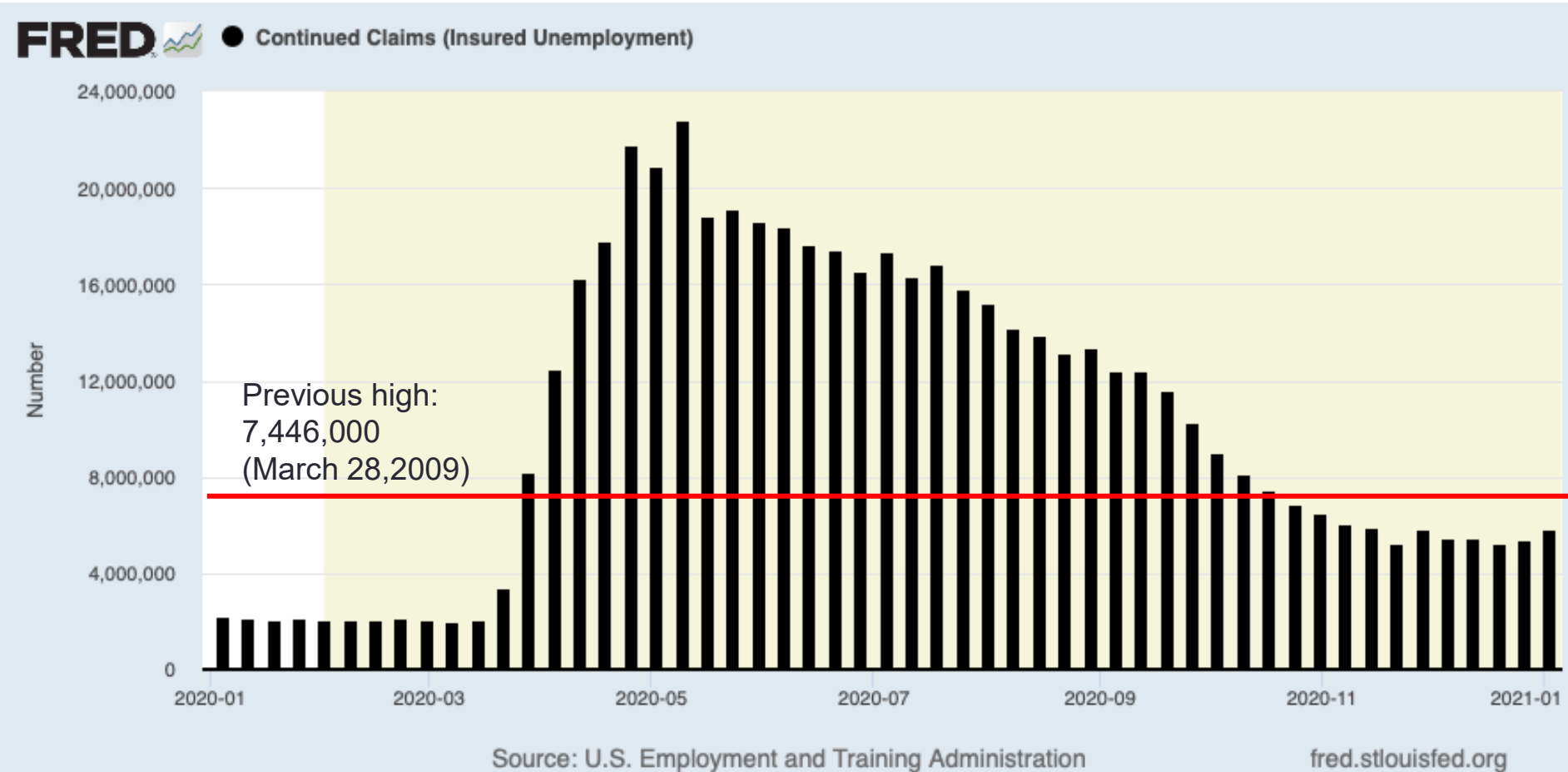
Weekly Initial Unemployment Claims

Jan 2020 – Jan 2021



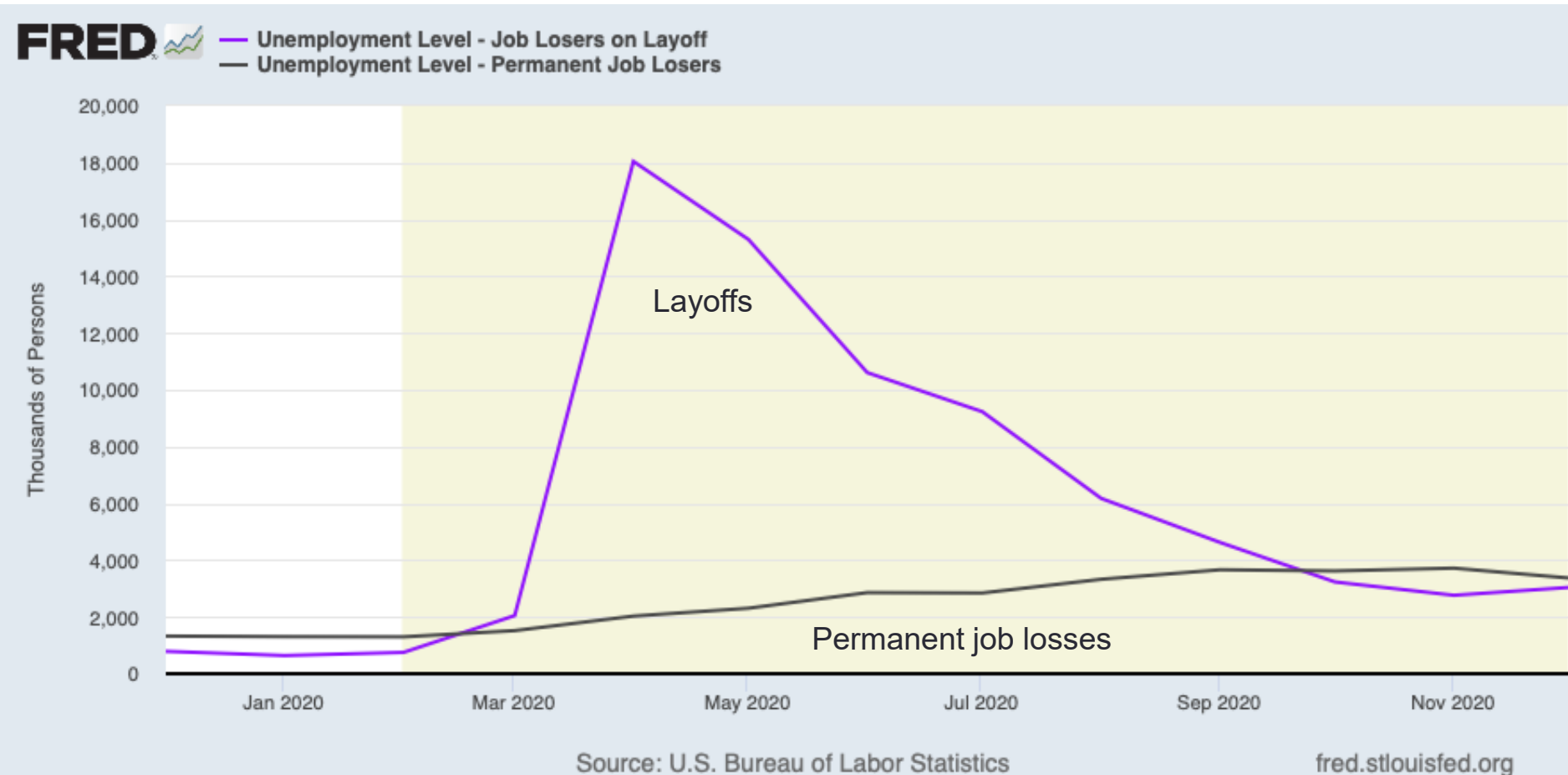
Weekly Continued Unemployment Claims

Jan 2020 – Jan 2021



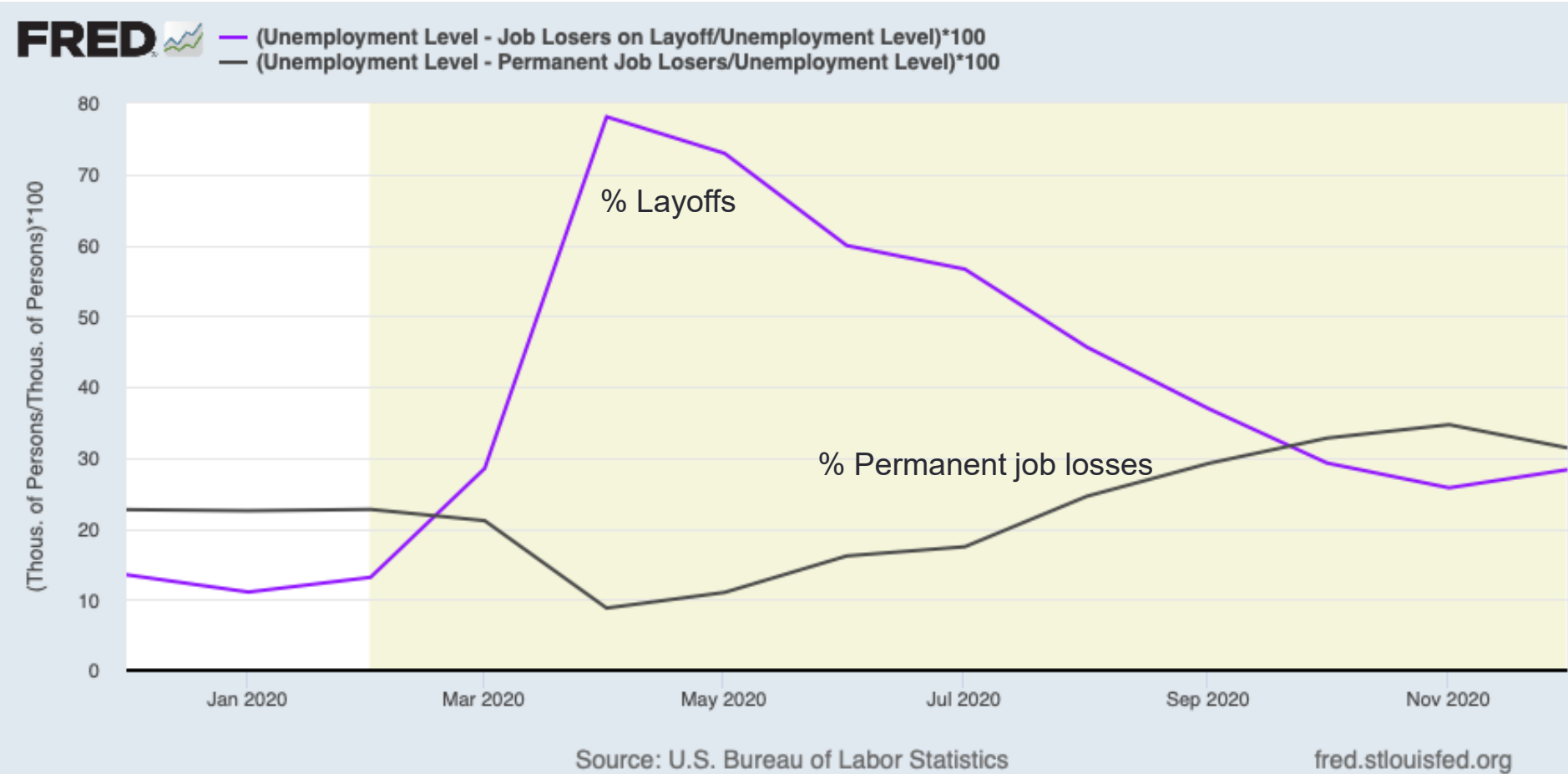
Permanent and Temporary Job Losses

Dec 2019 – Dec 2020



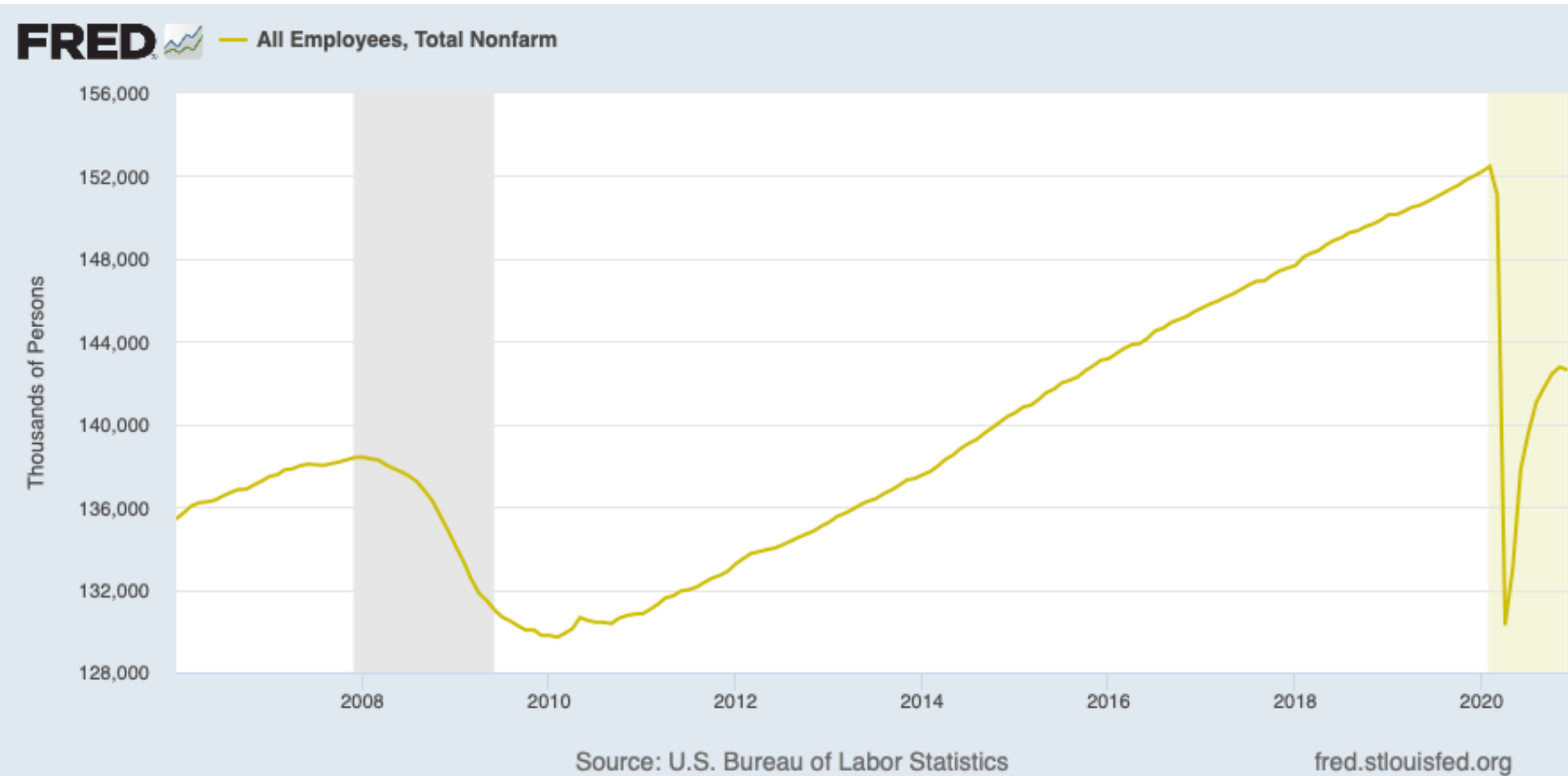
Percentage of Unemployed by Type

Dec 2019 – Dec 2020



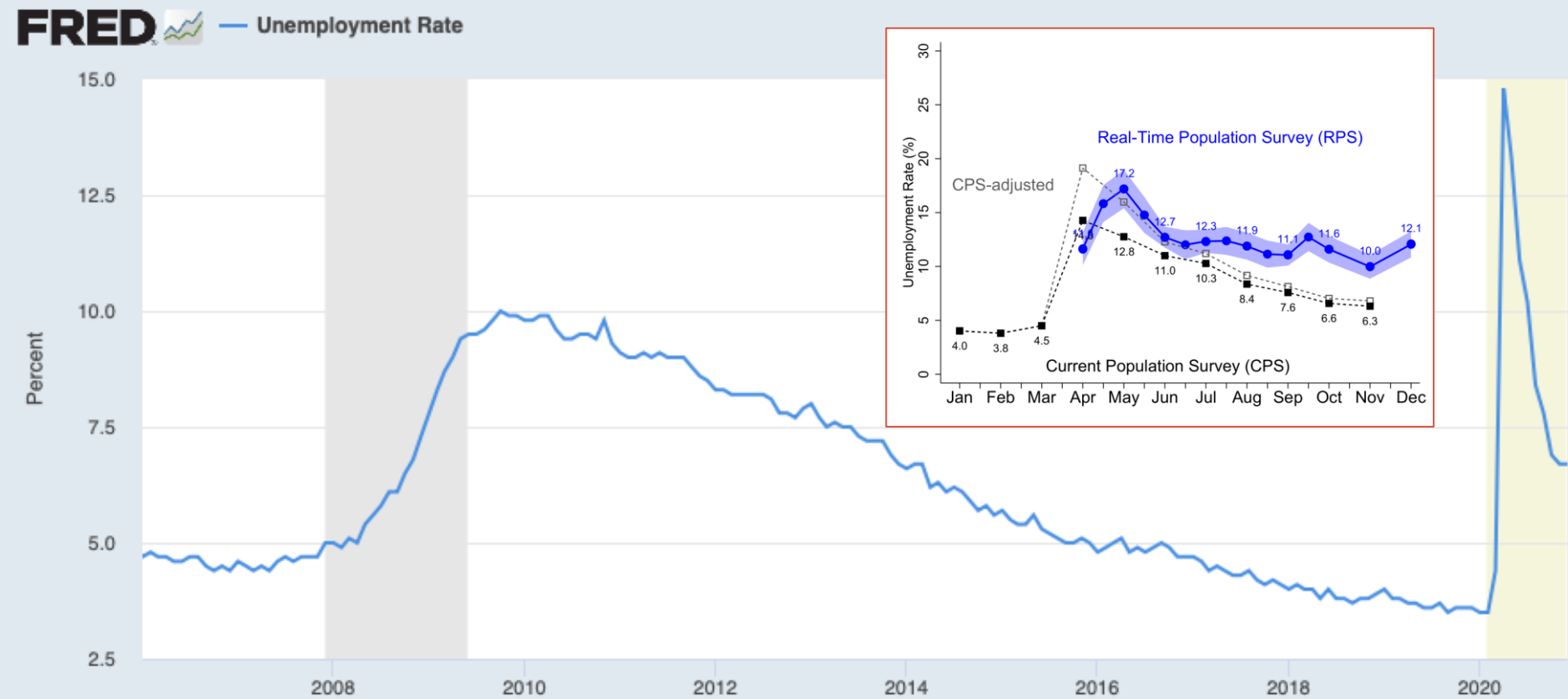
U.S. Payroll Employment

Jan 2006 – Dec 2020



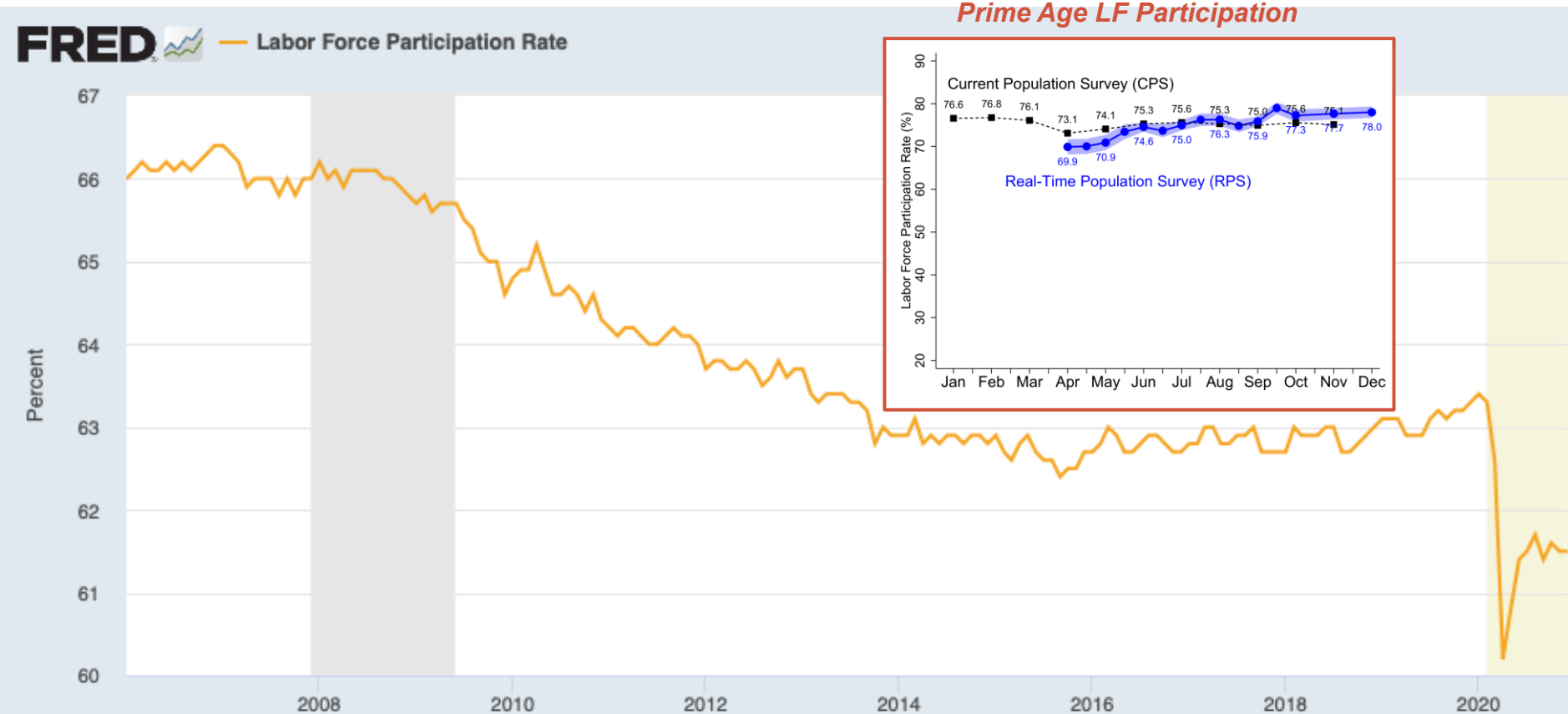
The U.S. Unemployment Rate

Jan 2006 – Dec 2020



The U.S. Labor Force Participation Rate

Jan 2006 – Dec 2020



Source: U.S. Bureau of Labor Statistics

fred.stlouisfed.org

U.S. “Non-Employment” Rate

	<i>E/Pop</i>	<i>LF/Pop</i>	<i>u</i>
Feb-21	61.1%	63.3%	3.5%
Dec-21	57.4%	61.5%	6.7%
No-nemployment Dec 21	57.4%	63.3%	9.3%

The unemployment rate can be decomposed into its two determinants

- The unemployment rate is increasing in the employment-population ratio and decreasing in the the labor force participation rate.
- Increases in labor force participation, holding the employment-population ratio fixed, will increase the unemployment rate
- Both have fallen, but if the labor force participation rate actually fell more than the employment-population ratio, the unemployment rate during the pandemic would have gone UP!
- If the U.S. economy had the same participation rate as it did prior to the pandemic, i.e., if so many people had not dropped out of the labor force (stopped looking for work), then the current unemployment rate would be 9.3%.

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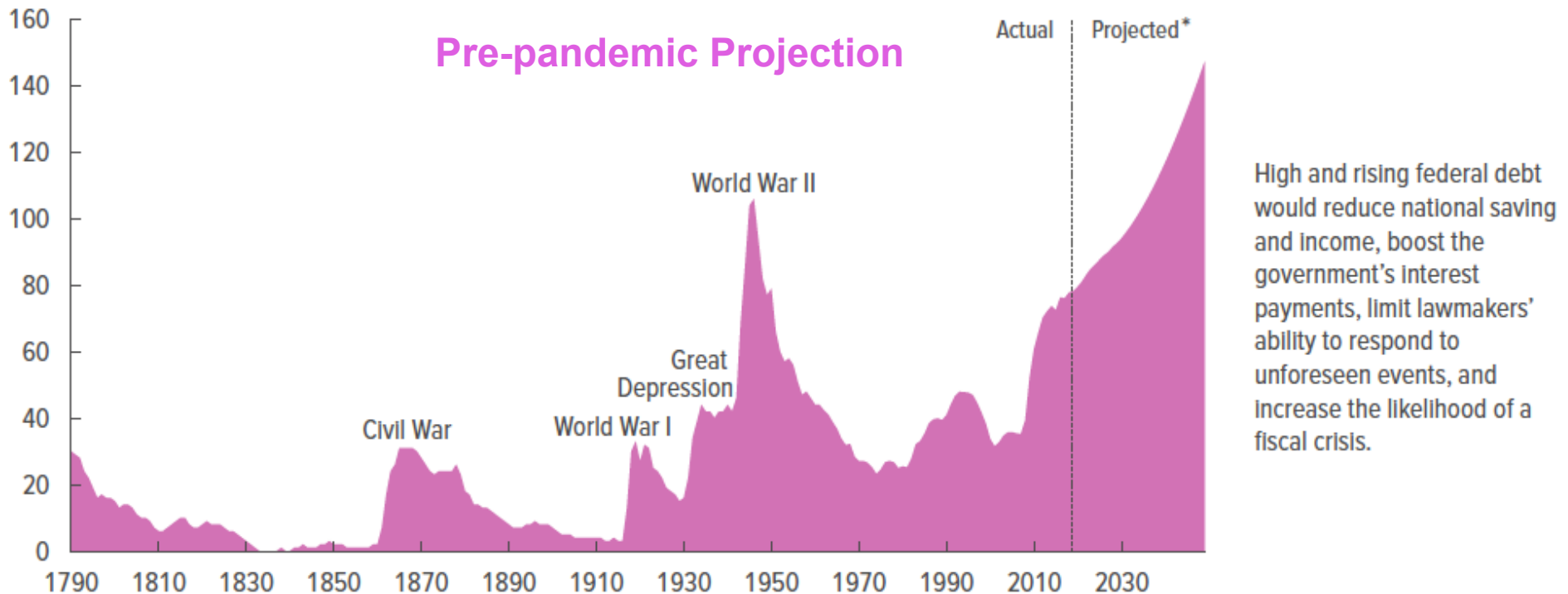
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U.S. Federal Government Debt/GDP Ratio

Federal Debt Held by the Public

Percentage of Gross Domestic Product



Source: Congressional Budget Office.

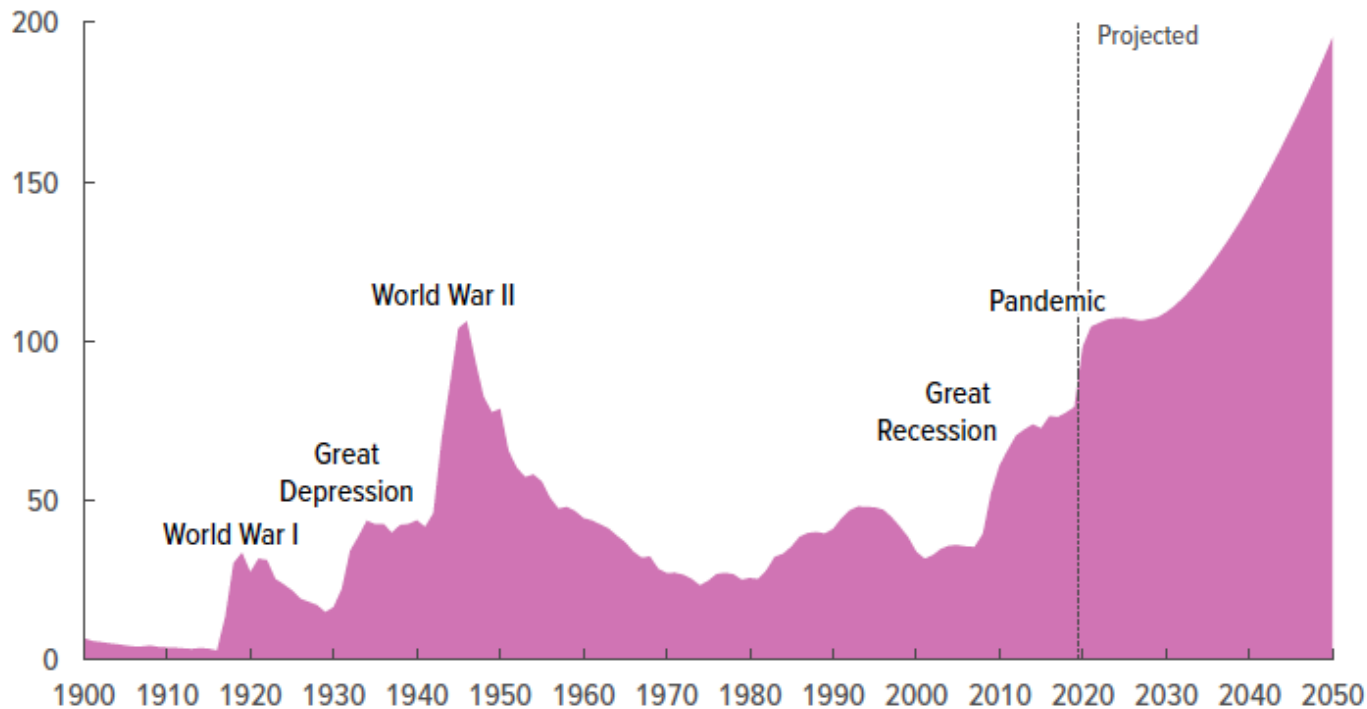
The extended baseline generally reflects current law, following CBO's 10-year baseline budget projections through 2029 and then extending most of the concepts underlying those baseline projections for the rest of the long-term period (in this case, through 2049).

Source: Congressional Budget Office, *The Budget and Economic Outlook: 2019 to 2029* (April 2019)

U.S. Federal Government Debt/GDP Ratio

Federal Debt Held by the Public, 1900 to 2050

Percentage of Gross Domestic Product



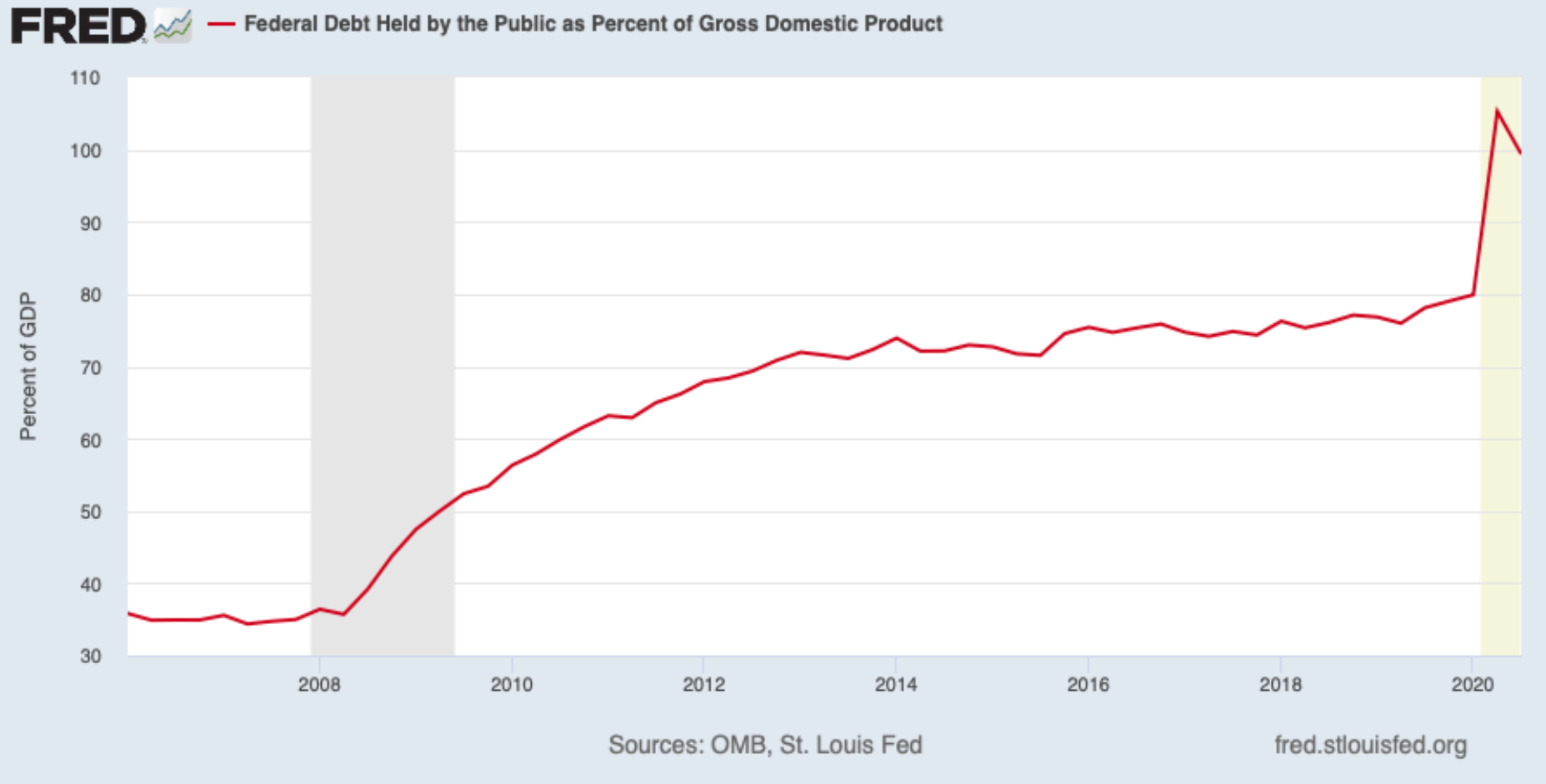
Growing deficits are projected to drive federal debt held by the public to unprecedented levels over the next 30 years. By 2050, debt is projected to reach 195 percent of gross domestic product.

Source: Congressional Budget Office.

Source: Congressional Budget Office, *The 2020 Long Term Budget Outlook* (Sept 2020)

U.S. Government Debt-to-GDP Ratio

2006 - 2020



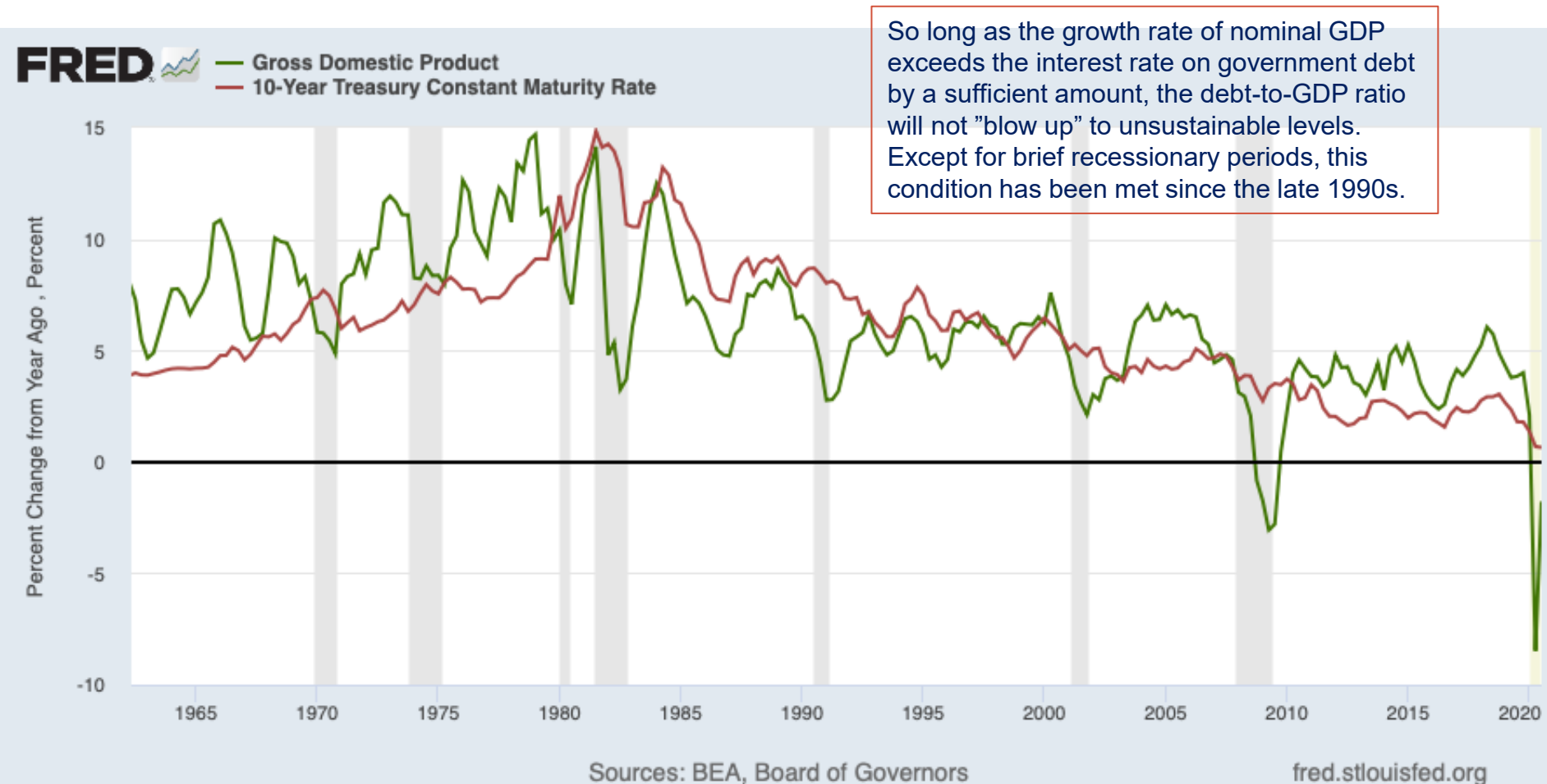
The Sustainability of Government Debt

- The U.S. economy, and many other countries, run budget deficits every year.
 - This means that new government debt (Treasury securities), is issued every year.
 - Is this sustainable?
 - More fundamentally, can a government run a deficit every year, as we do, without government debt “blowing up,” requiring growing interest payments that the government cannot afford?
 - And when this happens, won’t we experience a “sovereign debt crisis,” as so many countries around the world have experienced, most recently Greece, Portugal, Italy and Spain during the “European Debt Crisis” that started in 2009?
 - Once investors get the idea that a government cannot pay back the debt they owe, that debt will fall in value, and interest rates for further borrowing will increase, sometimes dramatically.
 - This leads to a crisis whereby the country is essentially bankrupt, and to pay back its debt, it will need some sort of a “bailout” in the form of loans from international organizations like the IMF with low interest rates and favorable loan terms. This will allow them to pay back the debt they owe to private investors, but it always comes with conditions mandated by the agency offering the bailout (again, normally the IMF).
 - Won’t that happen here, eventually, since we run deficits every year?

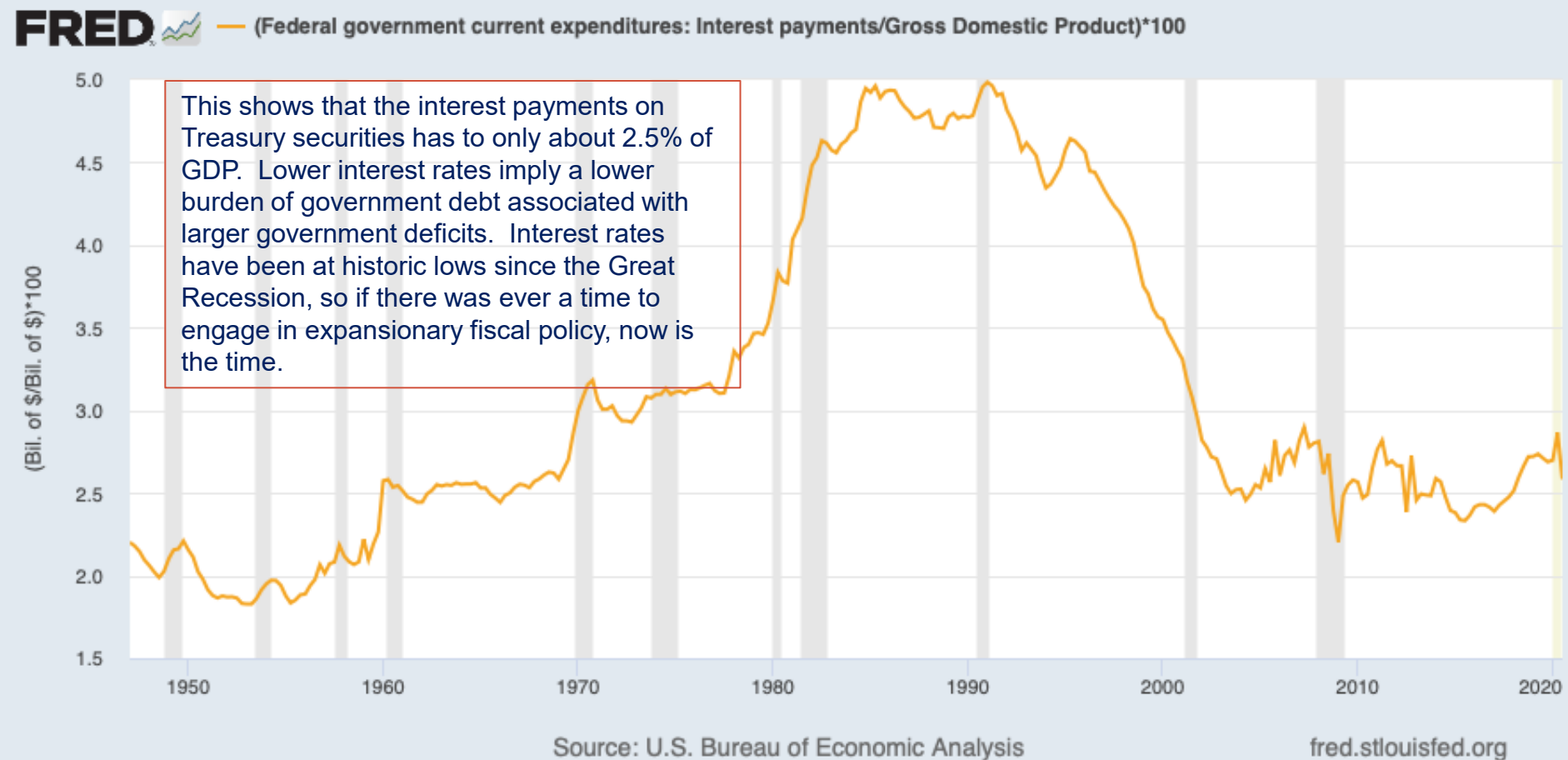
The Sustainability of Government Debt

- What do we need to know to answer this question?
- Key Question: Do tax revenues grow at least as fast as the interest obligation on previously issued government debt.
 - If so, then the federal government will always be able to meet its obligations to investors that own Treasury securities.
 - Tax revenues are a function of nominal GDP
 - At the end of the year, you get a W-2 form from the IRS that tells you how much you earned that year. For the whole country, that is nominal GDP.
 - Taxes are a percentage of those earnings.
 - So the growth rate of nominal GDP tells us how fast tax revenues change.
 - Interest on government debt represents the government's obligation to those who own Treasury securities.
- ***So long as the growth rate of nominal GDP exceeds the interest rate paid on outstanding government debt (Treasury securities) by a sufficient amount, then government debt is sustainable.***
 - Even if the debt-to-GDP ratio is increasing over time due to increasing government deficits (as it is now in the U.S. and just about every other country due to the pandemic), that debt is still sustainable (won't blow up to infinity) so long as this condition is met.

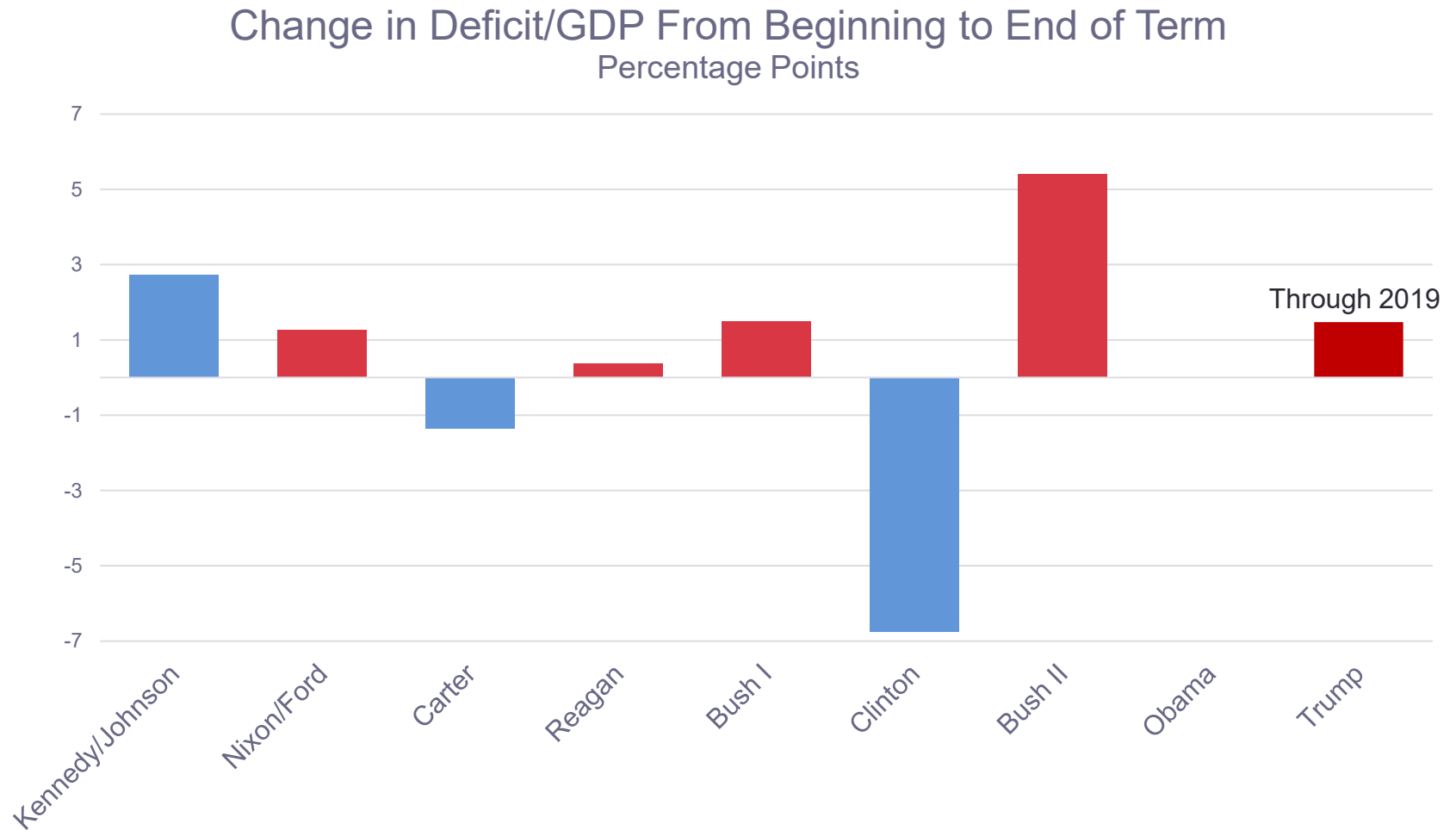
Debt Sustainability Condition



Government Interest Payments/GDP



Change in Deficit/GDP by Admin



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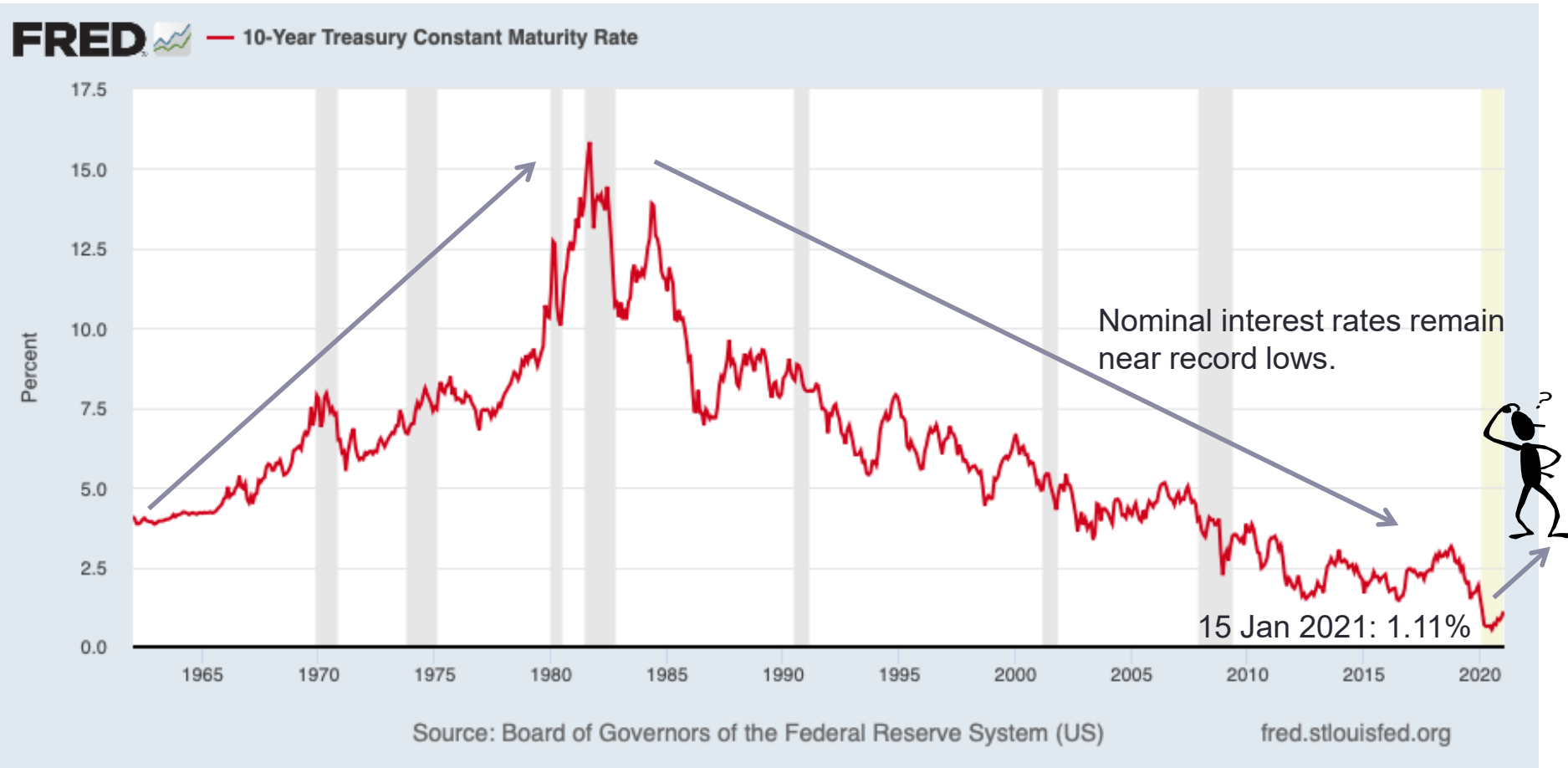
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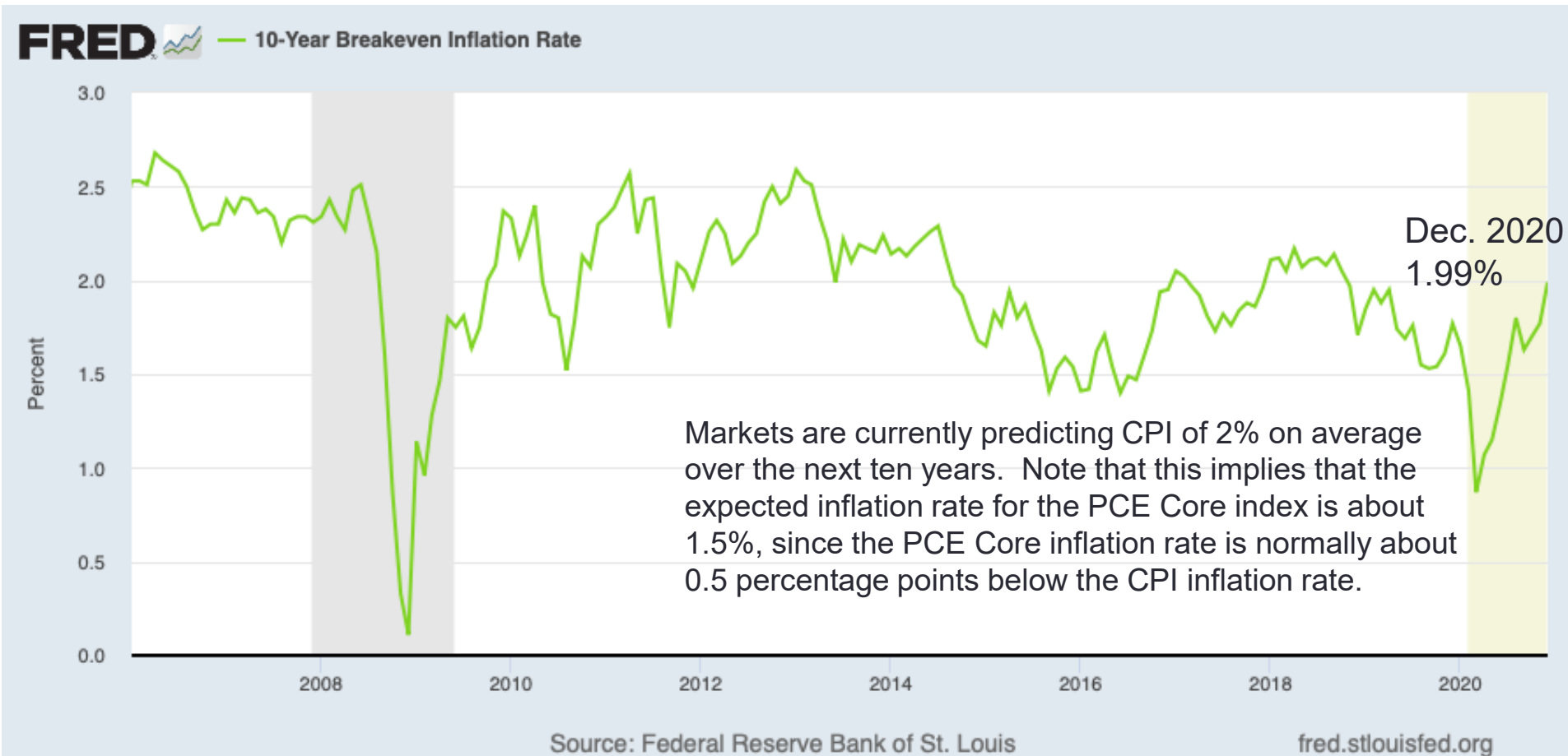
10-Year Treasury Nominal Yield

1953 - 2020



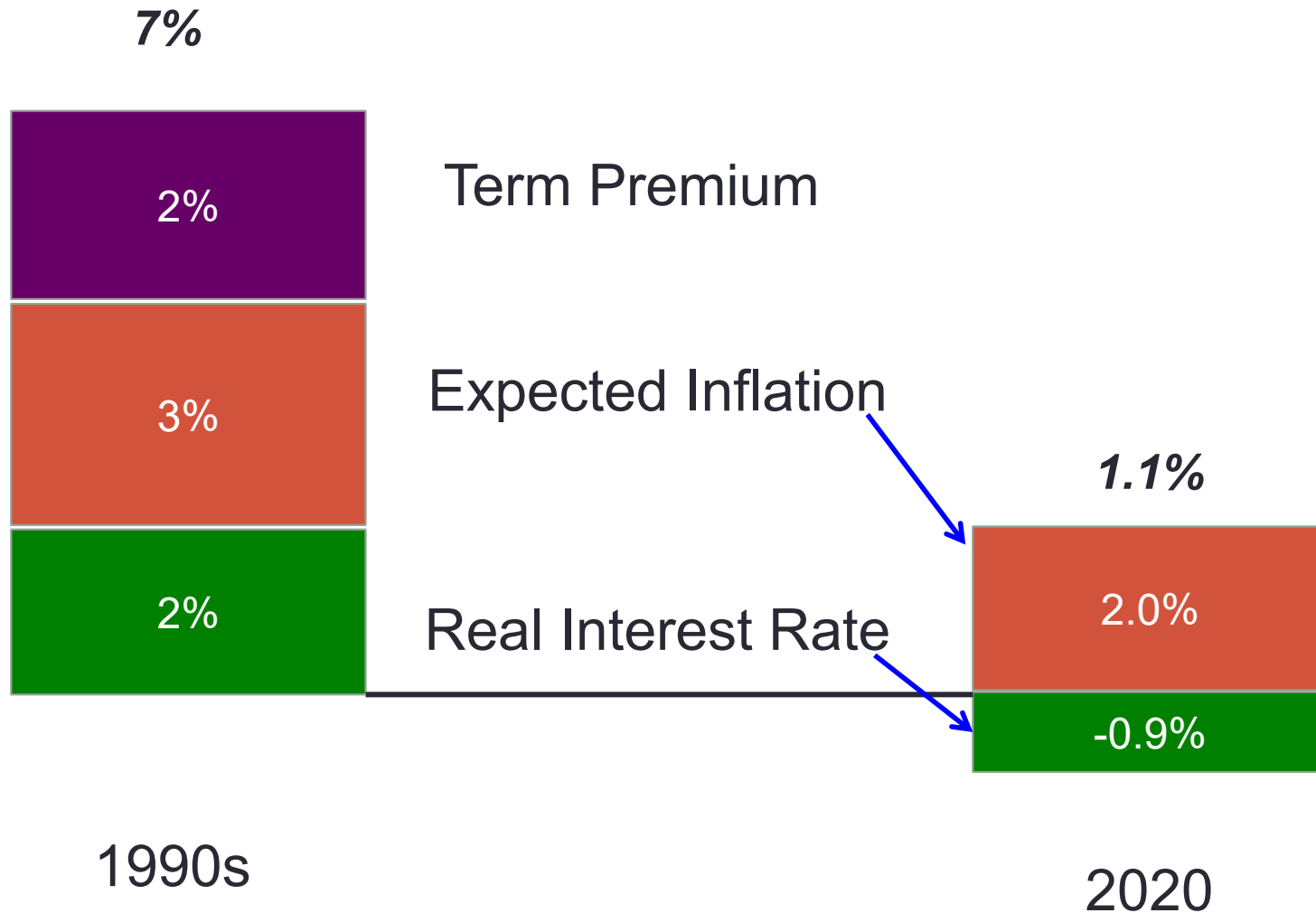
Expected Inflation

10-Year Breakeven Inflation 2006 - 2020



The 10-Year Breakeven Inflation Rate is the difference in yield between the 10-Year Treasury yield and the 10-Year TIPS yield. It gives the market's expectation of the average annual inflation rate over the next ten years.

Determinants of the 10-year Yield



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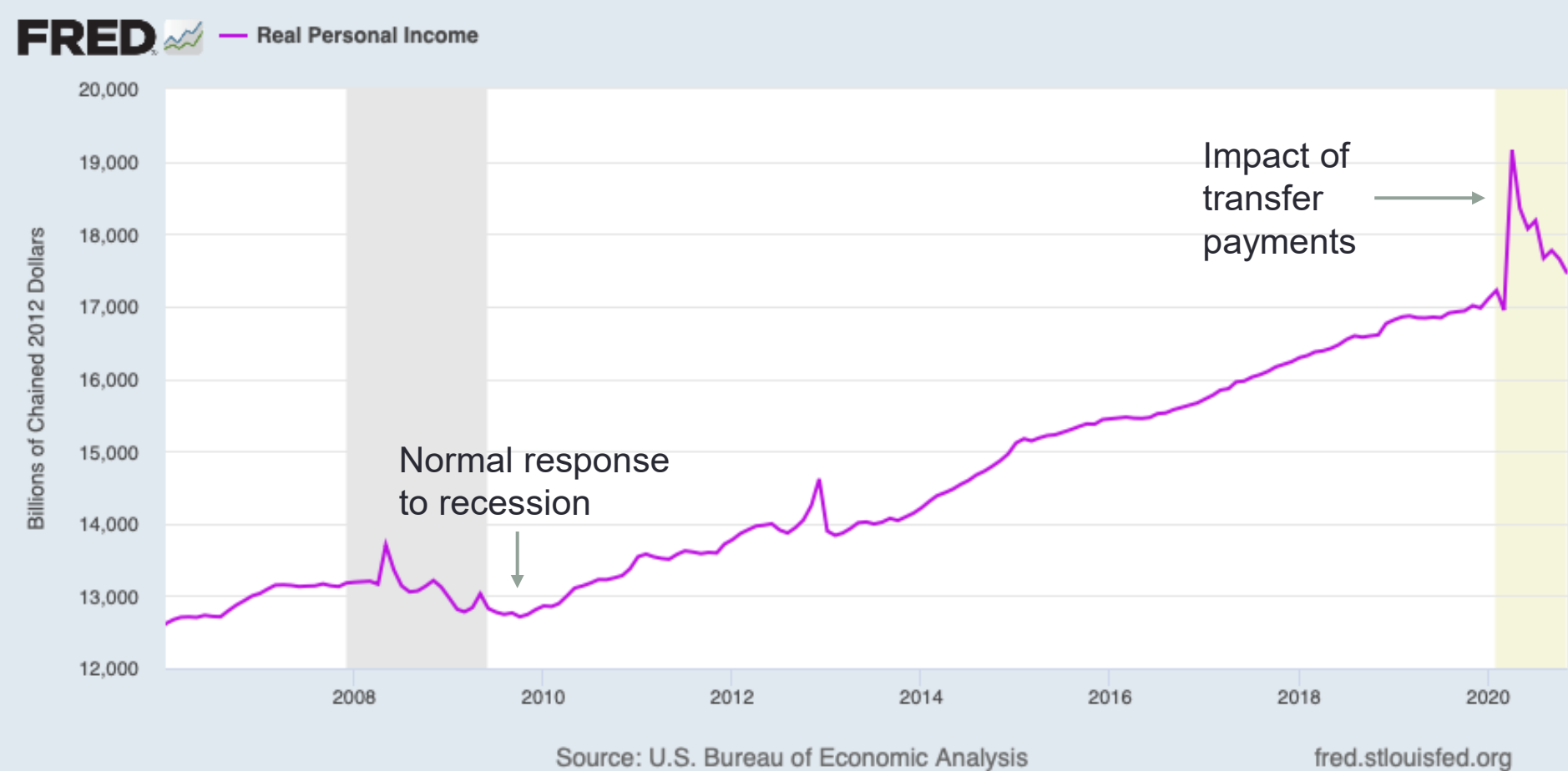
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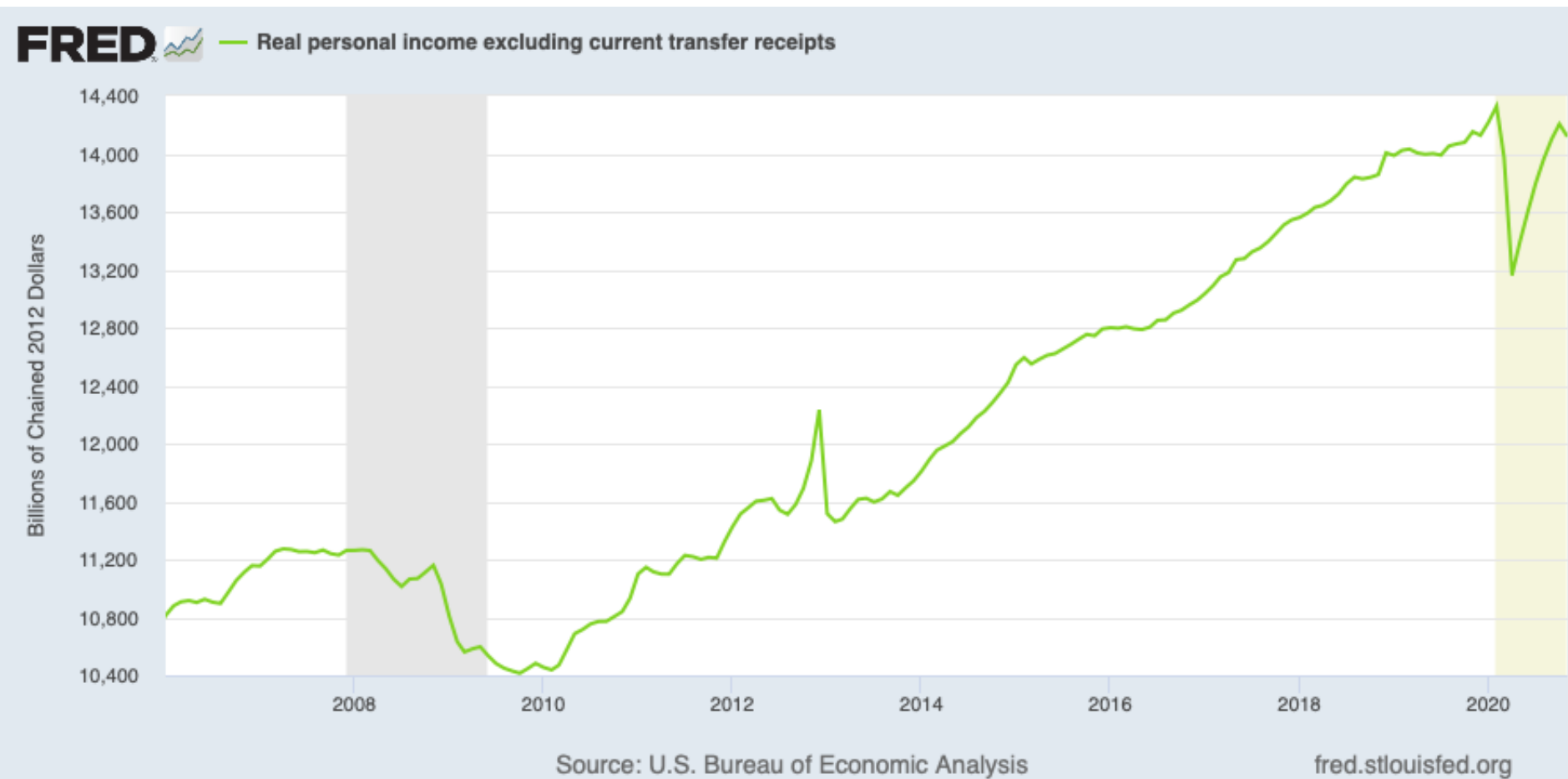
U.S. Real Personal Income

Jan 2006 – Nov 2020



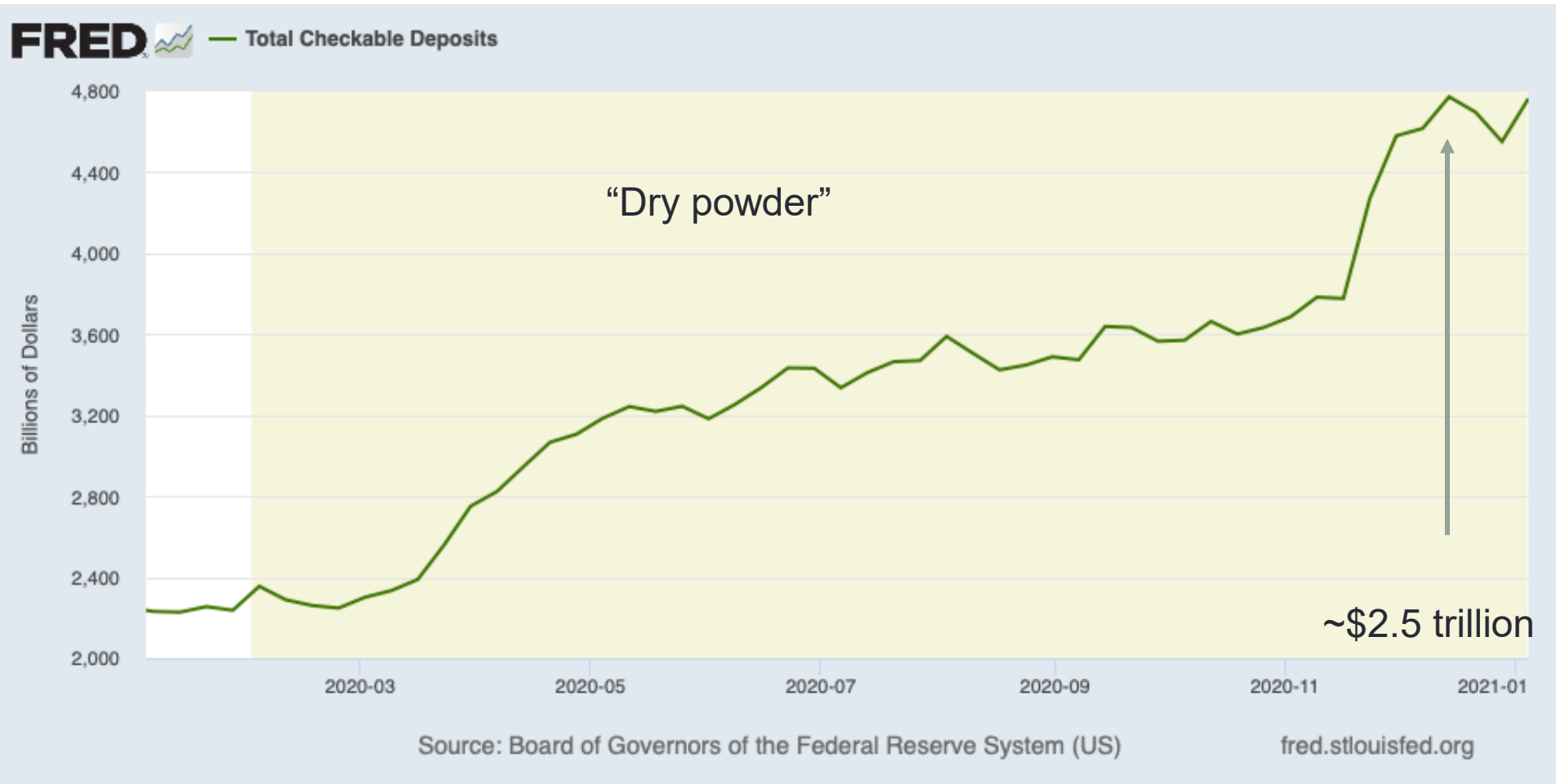
U.S. Real Personal Income Ex Transfers

Jan 2006 – Nov 2020



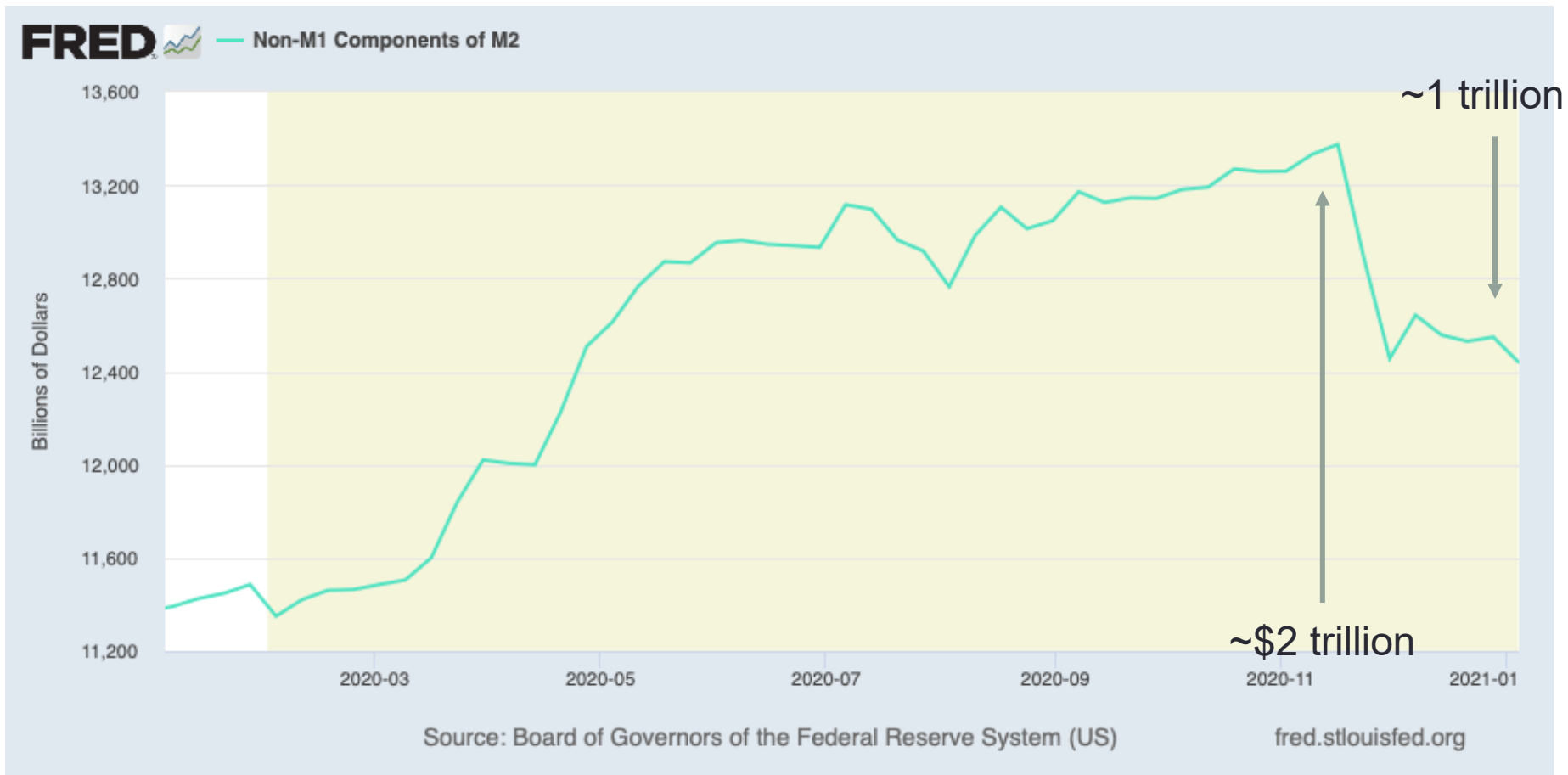
Deposits in Checking Accounts

2020



Non M1 Components of M2

2020



M1 and M2 are measures of the money supply. Non-M1 components of M2 are savings accounts, money market deposit accounts, and money market mutual funds.

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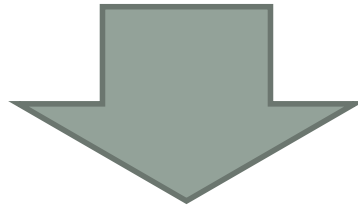
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Return to Pessimism: the U.S. as a Global Safe Haven

Short-Term Prospects (This Year)

- One word characterizes our current global situation:
UNCERTAINTY.
- The U.S. is a horrible place to invest right now ... ***except for all the others!***



- This may no longer be true (except the uncertainty part).
 - Increases in U.S. stocks have been driven largely by retail investors.
 - Institutional money is looking elsewhere.
 - How do we know?

Trade Weighted Dollar Index

2020



Yuan per Dollar

2020



Dollars per Euro

2020



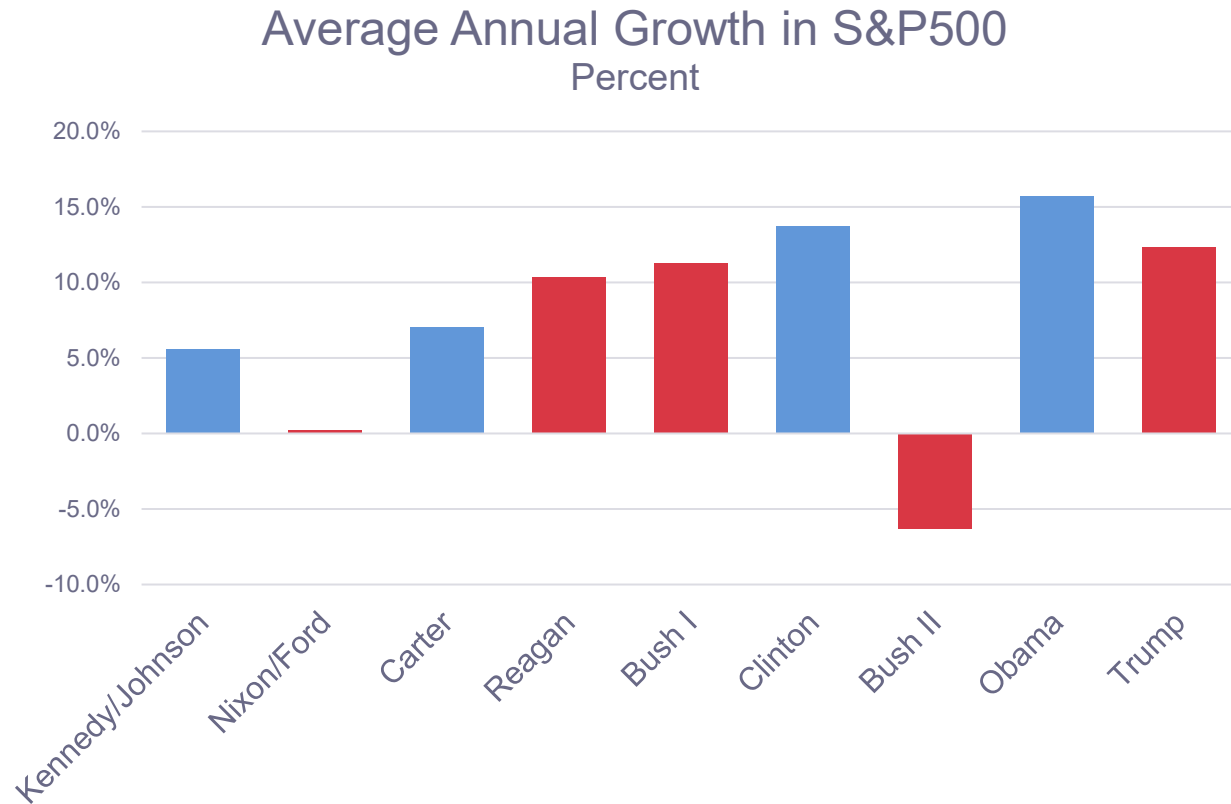
Takeaways

- The pandemic has disrupted the economy substantially, and there is vast uncertainty regarding the future trajectory of the economy.
- The prospects for many Americans appear dim in the short run, but many others are poised to increase spending once the coast is clear. How these dynamics play out is the most significant source of uncertainty.
- There is a considerable amount of pent-up spending power that could fuel a significant short term recovery.
- But, the forces of secular stagnation that imply diminished economic performance are still present. We still have a long-term issue to contend with even beyond the impacts of the pandemic.

EXTRA MATERIAL

... just in case ...

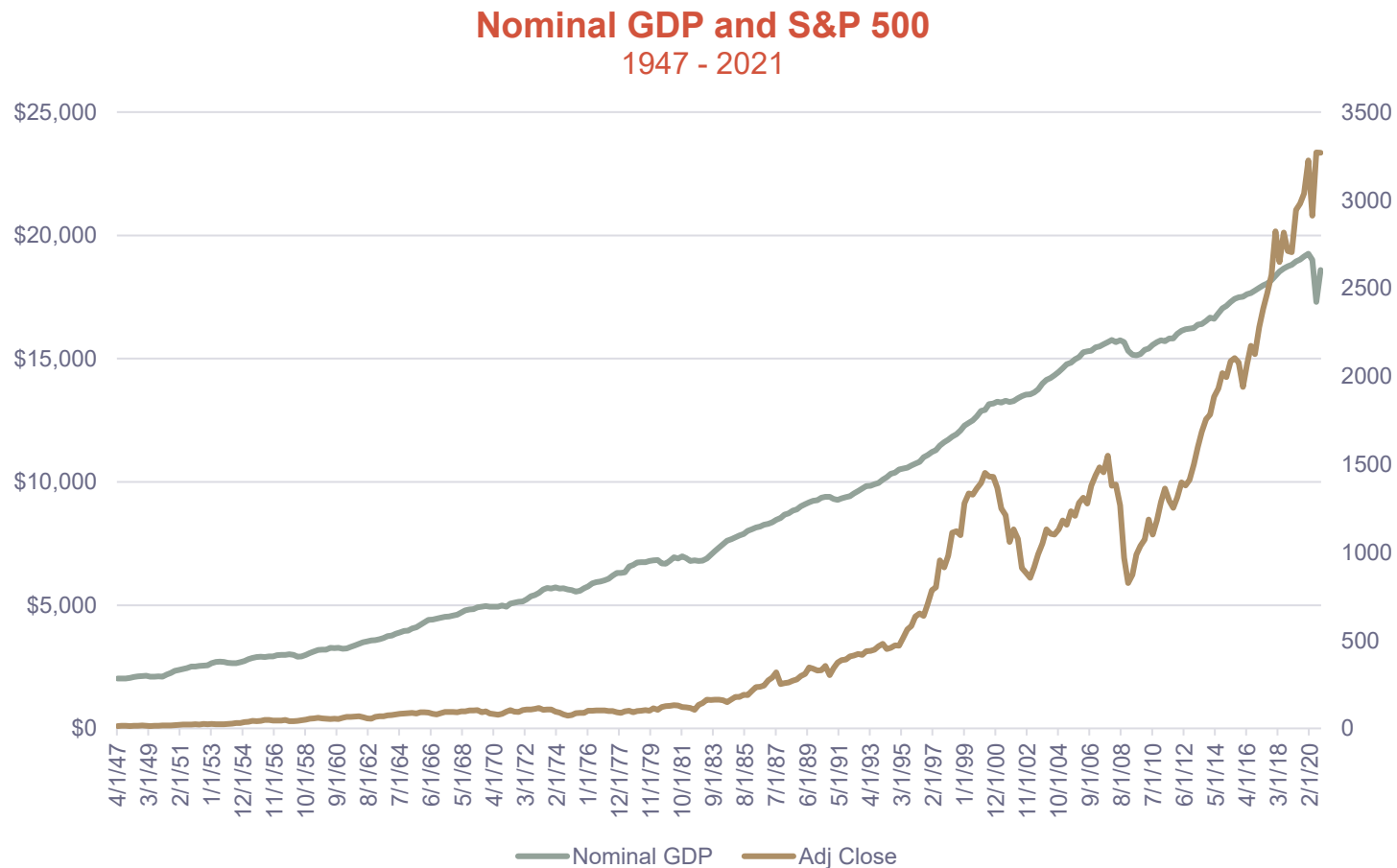
Stock Market Returns by Administration



	Years	Term	Begin	End	% Change	Average
Kennedy/Johnson	1961 - 1968	8	63.44	98.13	54.7%	5.6%
Nixon/Ford	1969 - 1976	8	98.13	99.82	1.7%	0.2%
Carter	1977 - 1980	4	99.82	131.27	31.5%	7.1%
Reagan	1981 - 1988	8	131.27	288.86	120.1%	10.4%
Bush I	1989 - 1992	4	288.86	443.38	53.5%	11.3%
Clinton	1993 - 2000	8	443.38	1239.94	179.7%	13.7%
Bush II	2001 - 2008	8	1239.94	735.09	-40.7%	-6.3%
Obama	2009 - 2016	8	735.09	2363.64	221.5%	15.7%
Trump	2017 - 2021	4	2363.64	3768.25	59.4%	12.4%

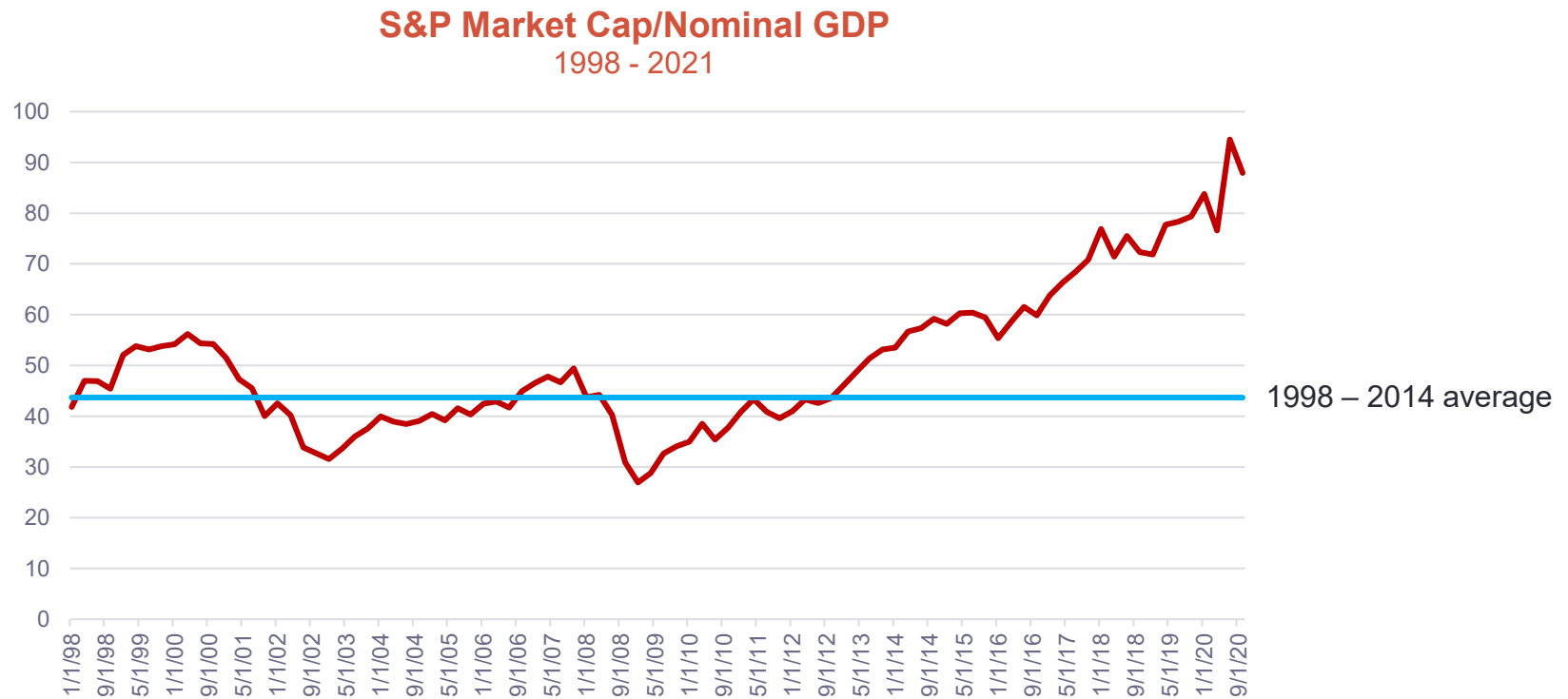
	Totals	Years in Office	Average Annual Change
Dems	487.4%	28	17.4%
GOP	194.0%	32	6.1%

“Buffet’s Law”



Correlation coefficient = .91

The Buffet Indicator



The Fed's Asset Purchase Programs

- Fed has ramped up Treasury and MBS purchases, once again.
- Fed purchases corporate bonds to facilitate the “smooth operation” of the corporate bond market.
- But this is essentially the same thing as QE, just with novel assets involved, and then Fed taking on significantly more credit risk than at any other time in history.
 - Fed leverages Treasury equity at 10-to-1 ratio for investment grade purchases
 - 7-to-1 for junk
- “Announcement Effect” was real and powerful
 - Prior to these plans being implemented, corporate bond markets were “frozen” due to problems of asymmetric information
 - Just the announcement of the Fed's planned intervention thawed markets and active trading resumed.

The Fed's Asset Purchase Programs

- ***Primary Market Credit Facility***

- Fed purchases ***newly issued (!) corporate bonds*** to facilitate the “smooth operation” of the corporate bond market.
 - Treasury provided \$50 million backstop to protect Fed against defaults
 - The Fed has opened this facility, but it has not been used.
-
- “The PMCCF provides companies access to credit by (i) purchasing qualifying bonds as the sole investor in a bond issuance, or (ii) purchasing portions of syndicated loans or bonds at issuance.”

The Fed's Asset Purchase Programs

- ***Secondary Market Credit Facility***

- Fed plans to purchase “seasoned” corporate bonds trading in secondary markets
 - Treasury provided \$25 million backstop
- As of Oct 8, Fed held bonds of 798 issuers (including Apple, Anheuser-Busch, Expedia, Verizon and AT&T
 - These can be held directly or through ETFs that include these issuers.

- “The SMCCF may purchase in the secondary market

- (i) corporate bonds issued by investment-grade U.S. companies;
- (ii) corporate bonds issued by companies that were investment-grade rated as of March 22, 2020, and that remain rated at least BB-/Ba3 at the time of purchase;
- (iii) U.S.-listed ETFs whose investment objective is to provide broad exposure to the market for U.S. investment-grade corporate bonds; and
- (iv) U.S.-listed ETFs whose primary investment objective is exposure to U.S. high-yield corporate bonds.”

The Fed's Asset Purchase Programs

- Originally, only investment-grade bonds were eligible to be purchased by the Fed, but subsequently extended to junk.
- Problem: firms that are junk-rated were on the brink of bankruptcy and default before the pandemic.
 - Now, the Fed has created artificial demand for their bonds, reducing their borrowing costs and lowering their burden of debt.
 - Now these companies are free to go their merry way and lose more money/get into financial distress
- ***Zombie Companies***: companies that don't generate sufficient cash flow to pay debt, so are continually at the mercy of creditors just to say afloat.
 - Japan is full of Zombie companies, and their economy has been largely stagnant for 3 decades.
 - Now the Fed seems to be interested in creating more here, as well.

The Fed's Asset Purchase Programs

- ***Commercial Paper Funding Facility***
 - Fed purchases eligible commercial paper (short term borrowings by financial and non-financial companies)
 - Very important source of working capital for many firms
 - Fed purchases keeps the market from freezing
 - Backstopped by Treasury
- Has not been used this time around, although it was during the Fed response to the financial crisis.

The Fed's Asset Purchase Programs

- ***Main Street Lending Program***

- Banks make loans that are then purchased by the Fed
 - Eligible businesses have 15,000 employees or fewer or had revenues of \$5 billion or less.
 - Loans have terms of 2 years
 - Interest is adjustable at LIBOR + 3% (LIBOR + 300bp)
- Three facilities
 1. *Main Street New Loan Facility*
 - Minimum loan size is \$500,000
 - Banks retain 5% of principle (“skin in the game”)
 2. *Main Street Priority Loan Facility*
 - Min loan size is \$500,000
 - Banks retain 15% of principle
 3. *Main Street Expanded Loan Facility*
 - Borrowers can have their other loans “upsized” and extended
 - Min loan size is \$10 million
 - Banks retain 5% of principle
- Has not been utilized anywhere to the extent it was funded.

The Fed's Emergency Lending Programs

- ***Municipal Liquidity Facility***

- “The MLF, which has been authorized under Section 13(3) of the Federal Reserve Act, will support lending to
 - U.S. states (including the District of Columbia),
 - U.S. counties with a population of more than 500,000 residents,
 - U.S. cities with a population of more than 250,000 residents,
 - and Multi-State Entities.
- Under the MLF, the Federal Reserve Bank of New York will commit to lend to a special purpose vehicle (SPV) on a recourse basis. The SPV will purchase eligible notes directly from Eligible Issuers at the time of issuance. The New York Fed will be secured by all the assets of the SPV. The Department of the Treasury, using funds appropriated to the Exchange Stabilization Fund under section 4027 of the Coronavirus Aid, Relief, and Economic Security Act, will make an initial equity investment of \$35 billion in the SPV in connection with the Facility. The SPV will have the ability to purchase up to \$500 billion of Eligible Notes.”
- Only two eligible issuers have used this facility
 - Terms are not attractive and are substantially more restrictive than other Fed asset purchase programs.

The Fed's Asset Purchase Programs

- ***Municipal Liquidity Facility***
 - Direct purchases municipal debt by Fed
 - Eligible counties must have at least 500,000 residents; eligible cities must have 250,000.
 - On June 5, smaller states were allowed to designate the largest city or county to be eligible, regardless of population
 - Also added “Revenue Bond Issuers,” such as utilities, toll roads, and airports.
- Purchases can reach up to \$500 billion.
 - Backstopped with \$35 billion from Treasury
- Intended to free up frozen municipal debt markets, but due to onerous terms, only 2 municipalities have actually used it.
 - Municipalities face reductions in their tax base that could lead to an acute funding crisis and distress in municipal bond markets.
 - This is the rationale for increased Federal grants to cities to help weather the pandemic, which has been an element of the Democratic proposals in Congress for the next stimulus package.

The Fed's Emergency Lending Programs

The Fed is also lending directly to certain entities.

- The Discount Window is back!
 - Banks are borrowing from the Fed. Loan maturities have been extended from overnight to 90 days.
- Primary Dealer Credit Facility
 - Open originally during the Great Recession
 - Lending to the 24 large financial institutions that are Primary Dealers at low interest rates
 - They play an outsized role in keeping credit markets functioning, so lending to them in crisis can keep them in the game.
- Money Market Liquidity Facility
 - Open originally during the Great Recession
 - Lending to money market funds at low interest rate
 - Money markets are important for the operation of credit markets.
- Term Asset Backed Securities Loan
 - Open originally during the Great Recession
 - Loans to financial firms that securitize consumer loans
 - Intended to free up consumer credit markets

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The Fed's Emergency Lending Programs

- Paycheck Protection Program (PPP)
- I think almost everyone is familiar with this one, because it has been the most transparent and the most in the news
 - There has been something of a “witch hunt” to shame borrowers
- Information Problems (Asymmetric Information)
 - Adverse selection
 - Program was supposedly intended to help small businesses in trouble.
 - Many larger businesses have found a way in, and they have taken a large fraction of the loans.
 - Many of the small businesses that the program was intended for have found themselves frozen out by banks, who administer the loan program
 - The adverse selection problem has been with banks giving preferential treatment to preferred clients.
 - These companies have access to public capital markets where they are able to raise funds. They have found a way into the program anyway, due to the lack of effective screening mechanism (and because banks are serving preferred clients).
 - In one way, they are mitigating the traditional adverse selection problem in loan markets by serving preferred, private banking customers first. They know them well.
 - But this was clearly not the intent of the policy, as many members of Congress have indicated. The loans are guaranteed, so the risk is not with the bank.
 - Moral Hazard
 - Companies must use ~~75%~~ 60% of loan for payroll and rehire all workers by ~~June 30, 2020~~ December 31, 2020 or they will have to pay back the loan in 2 years at 1% interest.
 - How is this being monitored? How many firms will be audited? Aren't there ways to game this?