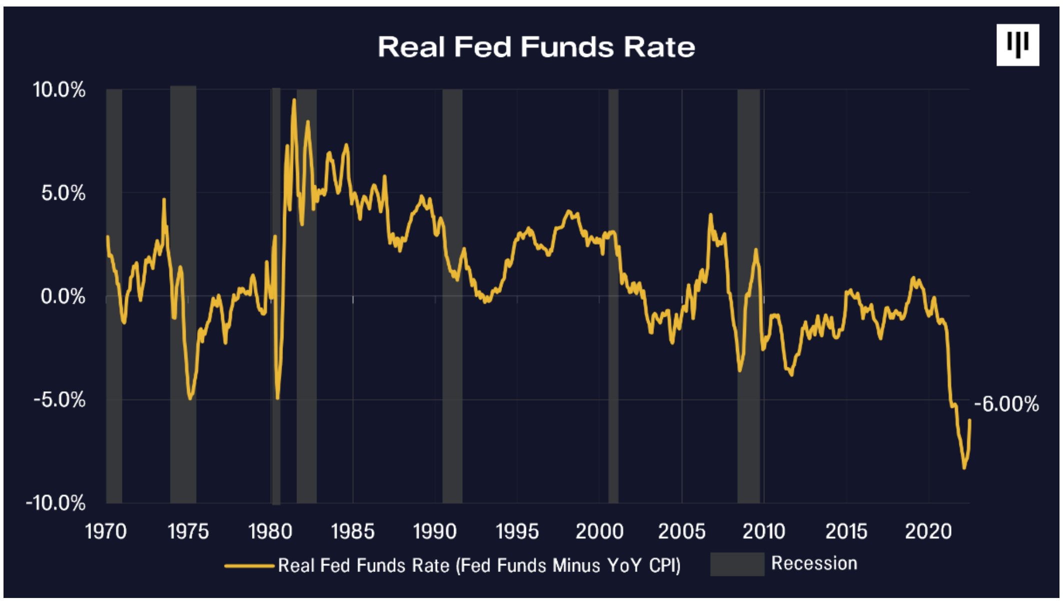
BOND BUBBLE

August 24, 2022

THE FED HASN'T TIGHTENED MUCH

The Fed hasn't really tightened financial conditions yet. Over the past few years, inflation has gone up much more than the fed funds rate. It is equally important that the Fed has not undone any of their manipulation of the government bond and mortgage markets.

Real rates – the rate an investor receives after inflation – are near the worst they've ever been.



We'll discuss it at greater length later in the letter, but the obvious point is: you can't tame runaway inflation with fed funds 600 basis points LOWER than inflation. The Fed will be forced to tighten much more than the markets currently forecast.

It was well over a year ago that real fed funds broke the negative all-time record set in February 1975. In the 70's, we had YoY inflation just a touch higher – at 11.2%, but the Fed was really fighting it – with fed funds at 6.24%. So the real fed funds rate was -4.96%.

This Fed cruised right through that milestone. Going all the way to -8.30% in March 2022 when they finally began removing that massively accommodative policy. By the time they began tightening, YoY CPI was already 8.5%. Unbelievable.

As the table below shows, we are still 7.77 percentage points below the 50-year average real fed funds rate. Another 75 bps won't do it. The Fed will ultimately have to tighten several hundred basis points more.

I still believe that fed funds will not stop rising until they are at least 4-5%.

Real Fed Funds Record Negative

	50-Year Average, Pre-Quantitative Easing	July 2022	Change From 50-Year Average
YoY CPI	4.10%	8.50%	+4.40pp
Unemployment Rate	5.83%	3.60%	-2.23pp
10-Year Treasury Yield	4.12%	2.65%	-1.47pp
Real Rate (10yr Treasury-CPI)	2.63%	-5.85%	-8.48pp
Fed Funds	5.88%	2.50%	-3.38pp
Real Fed Funds Rate	1.77%	-6.00%	-7.77pp

I love this line:

> *"The whole point of 75-basis-point increases is to tighten financial conditions. Each time Jay Powell has raised rates, ironically, he has eased financial conditions because of his unwillingness to acknowledge the Fed is prepared to take the country into a recession in order to eliminate the inflation scourge."*
>
> – Bill Ackman, Founder & CEO of Pershing Square Capital Management, *Twitter*, July 27, 2022

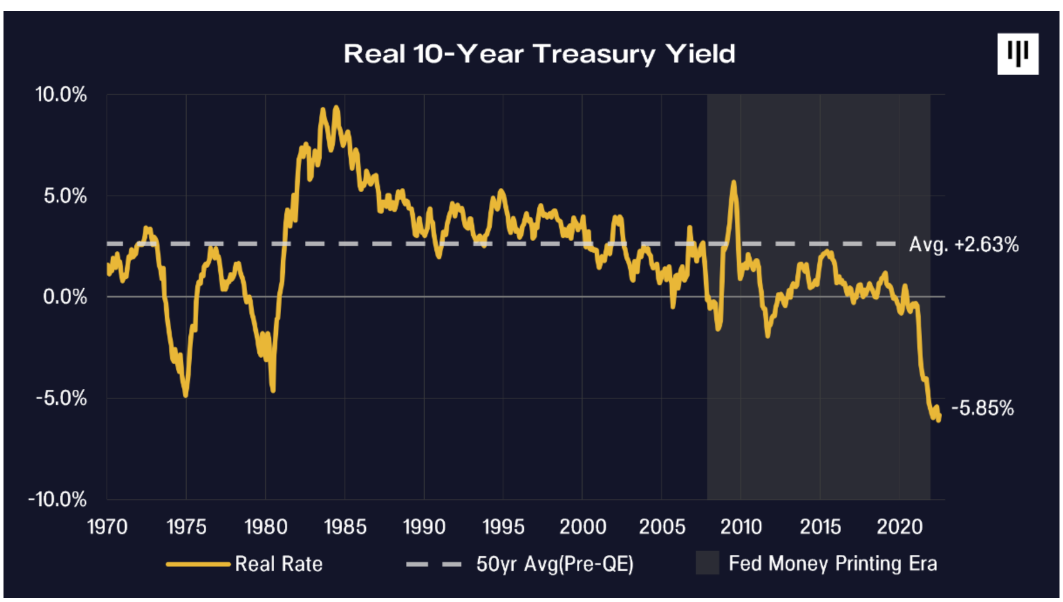
BOND REAL RATES ALSO MASSIVELY NEGATIVE

While is it now consensus that the Fed allowing inflation to get 830 bps above their overnight policy rate was a huge failure, few are addressing the equally important and continued policy error – pushing the long-term government and mortgage bond yields well below free-market levels.

As Bill Ackman said so well, the Chair of the Fed refuses to allow long rates to adjust to a fair-market level (much higher). With this, the Fed is still providing massive stimulus to interest rate-sensitive sectors like housing and motor vehicles.

The real rate of return is the yield a bond investor receives after inflation. For U.S. 10-year notes, the average real rate over the fifty years before Quantitative Easing (1957-2007) is +2.63%.

The Fed's decision to print half of our country's GDP and use it to push up the price of bonds has forced the real rate to negative 5.85%.



The gray area is our brave new world of unlimited bond purchases. We are now an incredible 8.48 percentage points below average.

No economically-rational investor would buy something guaranteed to lose 585 bps every year. That's why the Fed bought bonds equivalent to 200% of all mortgage issuance in 2020 and 2021. No rational actor would do that.

TAYLOR RULE

According to a June Fed report, the economist John Taylor's rule-based nominal rate target today is 6.92%, about double current expectations.

I think the robot knows better than humans.

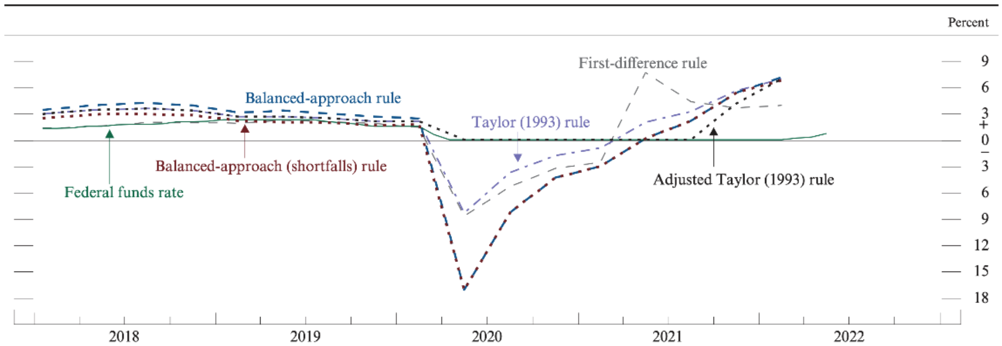
The rate will end up closer to the Taylor Rule than current forecasts.

Inflation rate gap	
Current inflation rate	9.1 %
Target inflation rate	2 %
Inflation rate gap	7.10 %
Output gap	
Current GDP	19,681.26 $
Long-run GDP	36,527 $
Output gap	-0.27 %
Real interest rate	
Nominal interest rate	3.5 %
Real interest rate	-5.60 %
Federal funds target rate	
Federal funds target rate	6.92 %

> *"The Taylor rule is one type of targeting monetary policy used by central banks. The rule was proposed by American economist John B. Taylor, economic adviser in the presidential administrations of Gerald Ford and George H. W. Bush, in 1992 as a central bank technique to stabilize economic activity by setting an interest rate.*
>
> *"The rule is based on three main indicators: the federal funds rate, the price level and the changes in real income. The Taylor rule prescribes economic activity regulation by choosing the federal funds rate based on the inflation gap between the desired (targeted) inflation rate and the actual inflation rate; and the output gap between the actual and natural level.*
>
> *"According to Taylor, a central bank implements a stabilizing monetary policy when it raises the nominal interest rate by more than an increase in inflation. In other words, the Taylor rule prescribes a relatively high interest rate in the situation when actual inflation is higher than targeted. The main advantage of a general targeting rule is that a central bank gains the discretion to apply multiple means to achieve the set target."*
>
> – *Wikipedia*

Monetary Policy Rules in the Current Environment *(continued)*

B. Historical federal funds rate prescriptions from simple policy rules



NOTE: The rules use historical values of core personal consumption expenditures inflation, the unemployment rate, and, where applicable, historical values of the midpoint of the target range for the federal funds rate. Quarterly projections of longer-run values for the federal funds rate and the unemployment rate used in the computation of the rules' prescriptions are derived through interpolations of biannual projections from Blue Chip Economic Indicators. The longer-run value for inflation is set to 2 percent. The rules data are quarterly, and the federal funds rate data are the monthly average of the daily midpoint of the target range for the federal funds rate.

SOURCE: Federal Reserve Bank of Philadelphia; Wolters Kluwer, Blue Chip Economic Indicators; Federal Reserve Board staff calculations.

RECESSION PROBABILITY

I find is surprising that economists still only think a recession is a 45% chance. But then, economists are notoriously late in forecasting downturns – they missed negative growth in the first and second quarters of this year.

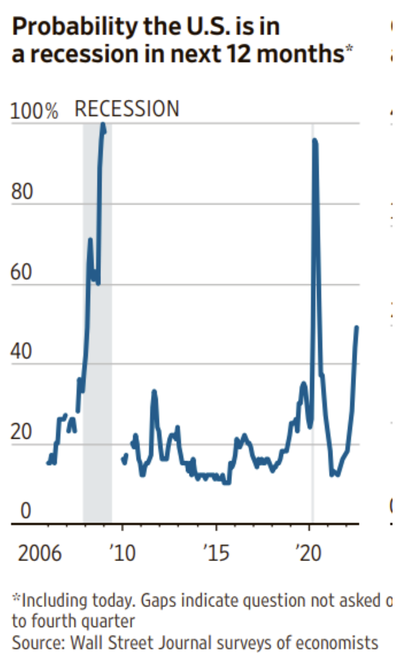
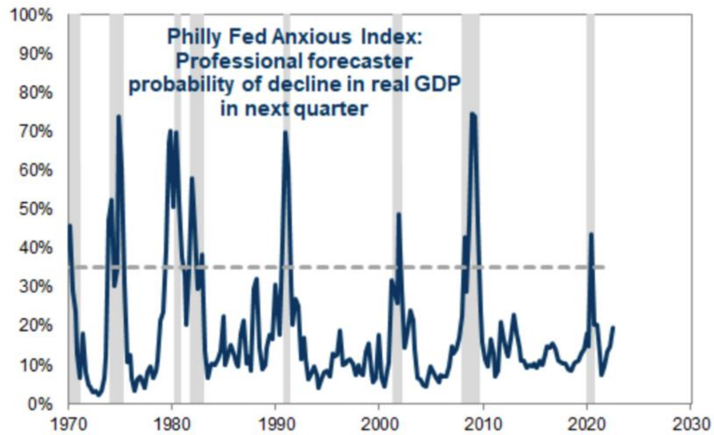


Exhibit 4 : Professional forecasters still see a below average probability of contraction next quarter
as of July 30, 2022



Source: Haver Analytics, Goldman Sachs Global Investment Research

The U.S. economy has experienced twelve recessions since World War II. Each one included two features: economic output contracted and unemployment rose.

A RECESSION ALMOST CERTAINLY ALREADY STARTED

We have already had two consecutive quarters of negative GDP growth, -1.6% in Q1 2022 and -0.9% in Q2 2022. While not the BEA's defining criterion, it's a strong sign we're in a recession now. Unfortunately, the Fed's policy mandate is not *"Keep tightening until you cause a recession."* It's to aim for maximum employment and price stability. That will take a ton more tightening.

As we mentioned last month, we are very likely already in a recession.

FOMC

Larry Summers has been right all along. The Fed can't stop until inflation – which is literally out of control – is brought back to 2%. That almost certainly will include a recession.

> *"If the economy looks like it's slowing, it will be tempting to stop raising interest rates, and indeed, people in the market are expecting that interest rates will come down, beginning in December or January. I think that would be a serious error.*
>
> *"I think we are unlikely to restore inflation to target levels in scenarios that don't involve a recession at some point."*

– Larry Summers, Former Treasury Secretary, *Yahoo! Finance*, August 3, 2022

Summers says he thinks inflation will be with us for some time given strong economic growth last year, along with supply-chain issues, unless we have a recession.

July 12, 2022

PERFORMANCE-ENHANCED?

We've been chronicling the similarities between today and the 70's. Here's a wild new one!

Over the past month President Biden has frequently stated that the U.S. economy is growing faster than China's – for the first time since our beloved 70's.

> *"The GDP numbers for my first year show that we are finally building an American economy for the 21st Century, with the fastest economic growth in nearly four decades, along with the greatest year of job growth in American history. And, for the first time in 20 years, our economy grew faster than China's."*

– President Biden, *Statement on First Year GDP Growth*, January 27, 2022

> *"America is in a stronger economic position today than just about any other country in the world. Independent experts have projected that the U.S. economy could grow faster than China's economy this year. That hasn't happened since 1976, nearly one-half century ago."*

– President Biden, *Remarks on the May Jobs Report*, Rehoboth Beach Convention Center, Delaware, June 3, 2022

Not sure we should be proud that Congress and the Fed have overheated our economy so severely that it is growing faster than an incredibly dynamic emerging market country.

That's borrowed growth. No chance it's sustainable.

It's like a sugar high. Unfortunately, the sugar withdrawal crash is almost inevitable.

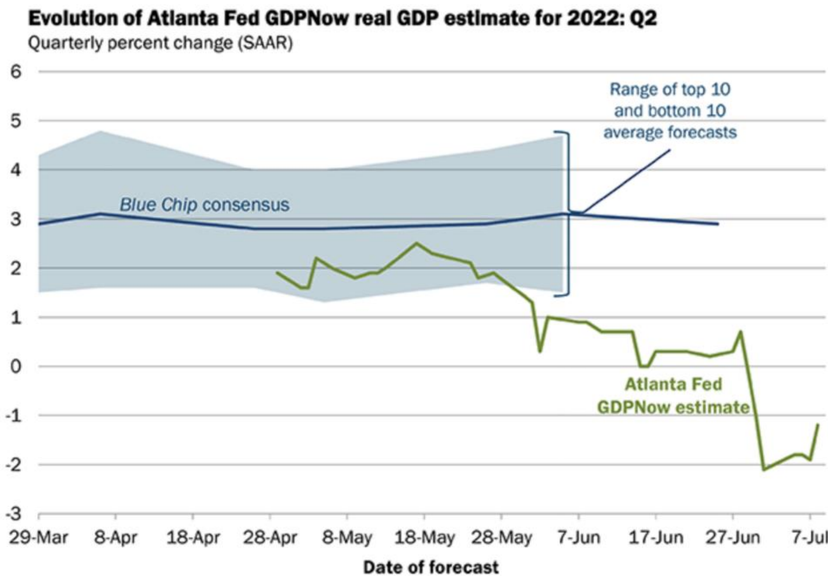
In our August letter we'll dive into the stats that show the U.S. is likely already in recession. Q1 2022 had -1.6% GDP growth. Real-time indicators of Q2 are negative.

ATLANTA FED'S GDPNOW

The first release of Q2 GDP won't come out until July 28. Fortunately the Federal Reserve Bank of Atlanta has a model that estimates economic output in real-time.

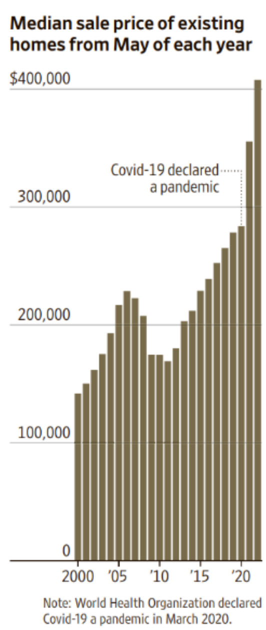
> *"The growth rate of real gross domestic product (GDP) is a key indicator of economic activity, but the official estimate is released with a delay. Our GDPNow forecasting model provides a "nowcast" of the official estimate prior to its release by estimating GDP growth using a methodology similar to the one used by the U.S. Bureau of Economic Analysis...*
>
> *"The GDPNow model estimate for real GDP growth (seasonally adjusted annual rate) in the second quarter of 2022 is -1.2 percent..."*

– Federal Reserve Bank of Atlanta, July 8, 2022

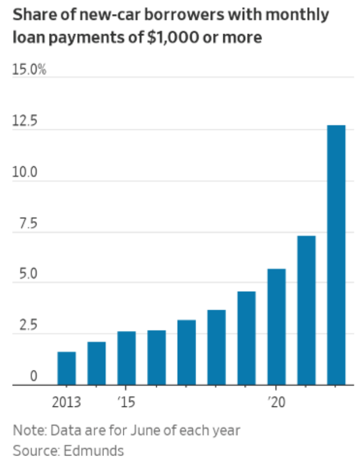


IT'S GONNA TAKE AN ELEPHANT GUN

The ironic thing is that Congress and the Fed have created such a bonfire of buying demand it's going to take an elephant gun to stop inflation. The Fed's been ruminating on "the taper" for nine months and look at how strong the inflation-generating sectors still are. Housing is off-the-charts.



This is one of my favorite signs there's too much paper money chasing too few things. The percentage of new-car borrowers willing – and this is the key point, able – to pay $1,000 a month has tripled since before the post-pandemic policy changes.



Unfortunately a few basis points here and there will not stop inflation. Fed funds will ultimately go to something like 4-5%.

FED RESPONSE TO A RECEESSION

Market participants have been trying to get their head around all this. There's now a view that since we're close to or in a recession, we're close to the end of tightening.

Unfortunately it doesn't work that way. The Fed's mandate is not *"Keep tightening until you cause a recession."* The Fed has a dual mandate – full employment and stable prices. It's way off on both. The labor market is way too hot. For the first time in history there are two job openings for each person looking for a job. 11.3 million job openings and only 5.9 million unemployed people willing to work.

I wish it were, but a recession is not a *Get Out Of Jail Free* card. The Fed will have to keep tightening until the housing and labor markets come off their intensely hot highs.

> *"This is not a time for tremendously nuanced readings of inflation. We need to see inflation coming down in a convincing way. Until we do, we'll keep going."*
>
> – Fed Chair Powell, *Wall Street Journal,* May 17, 2022

June 29, 2022

THE FED'S TWIN POLICY ERRORS

The Fed has really created a self-inflicted disaster here. It's the two worst policy mistakes I've seen in thirty-five years of investing. There are two separate policy mistakes – only one of which the Fed seems to have belatedly realized. They seem to not understand the larger one.

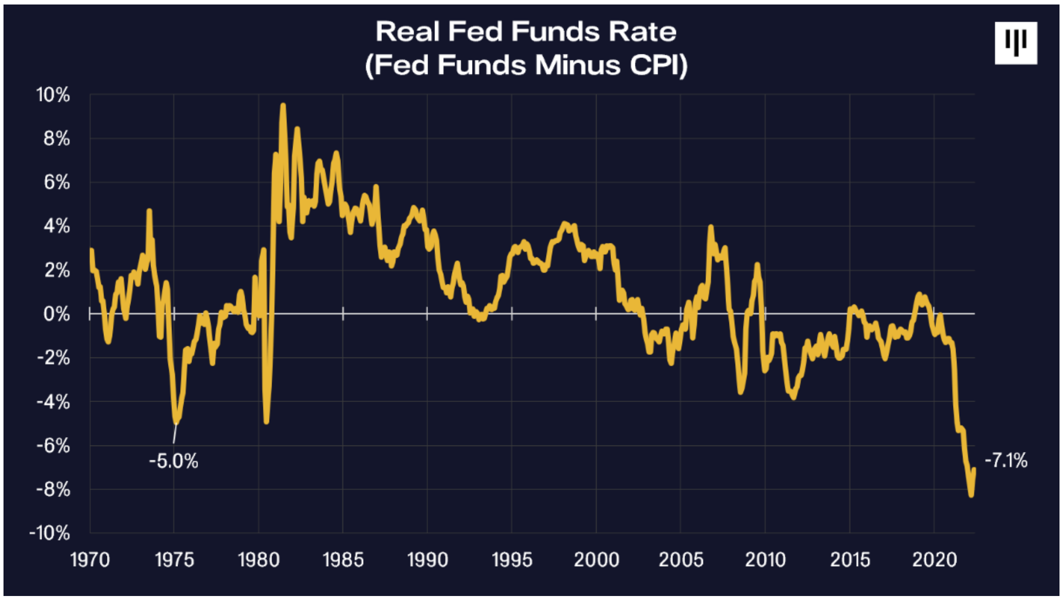
The simpler one is keeping overnight rates way too low, way too long. They are beginning to correct it, slowly.

However, the more destructive one is their massive manipulation of the bond market. For the first ninety-five years of their history, the Fed never touched interest rates past the overnight rate. They certainly didn't loan tens of millions of individuals and institutional investors almost free money with width to speculate on houses. They have created a bubble in housing that is even impacting the labor market. Two million Americans have left the workforce – mainly from the wealth effect of home prices going up 38% in the past two years.

This will be painful to unwind. Unfortunately, the Fed still doesn't seem to understand what they've done. They have yet to reduce their massive bond holdings in any meaningful way.

#1. ZERO FED FUNDS WITH DOUBLE-DIGIT INFLATION !??!?

Their first mistake is easily visible in this graph of the real policy rate. The difference between inflation (their mandate) and their policy tool (fed funds) is much larger than at any point in history – including the disastrous 1970s.



When things got really out of control in March 1975 – before Paul Volcker became chairman – the Fed allowed the overnight rate to hit five percentage points below year-over-year CPI. The modern Fed broke that record over a year ago.

The current Fed has the benefit of hindsight. Research easily shows they should have tightened. By May 2021 the real fed funds rate had already hit a record low. That was past time to begin the fight against inflation. That they waited another nine months of their forward guidance Kabuki theater is astounding.

They left rates at zero. Fed funds were 1.55% before the pandemic. They've just gotten overnight rates to back where they were before the pandemic policy eruption when inflation was only 2.30%.

They still need to tighten by three or four hundred basis points.

OWNERS' EQUIVALENT RENT

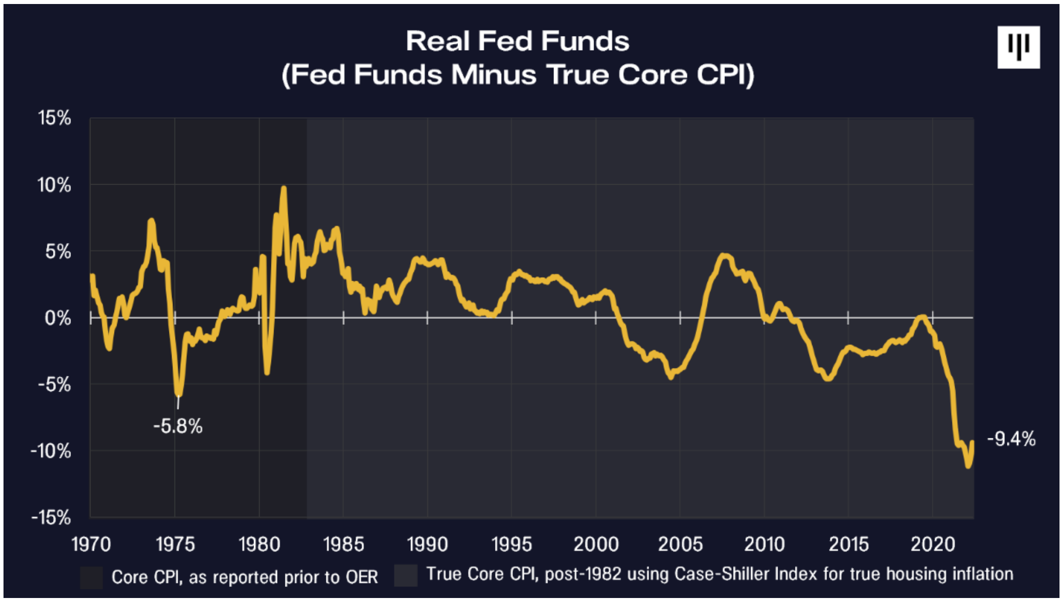
To compound this, the official CPI figures don't measure housing inflation in real time. We've been writing about this very important point since November. True CPI – even excluding food and energy – is in double digits.

In 1982 CPI was changed to measure housing inflation in a very slow-moving index called owners' equivalent rent – theoretically the amount a property owner would have to pay to be equivalent to the cost of ownership. The OER component of CPI is up only 5.1% YoY. Anybody trying to rent or buy a house or apartment knows that's not reflective of reality. The real inflation people experience is much higher.

The S&P CoreLogic Case-Shiller U.S. National Home Price Index reports 20.6% YoY. OER is 23.8% of CPI. If OER were reported at 20.6%, our adjusted measure we're calling True CPI would be 12.5%, 4 percentage points higher than reported.

The Fed prefers to look at core inflation (CPI less energy and food). Year-over-year core CPI was up 6.0% in May, the highest since October 1982. Using Case-Shiller in place of OER, True Core CPI would have been up 10.9%, 4.9 percentage points higher than core CPI. That's higher than any time since 1980.

Monetary policy looseness is measured in the real fed funds rate, i.e. the nominal fed funds rate minus inflation. Here we use the True Core CPI. This reading is at its most negative point in history – almost four full percentage points lower than the previous low in February 1975.

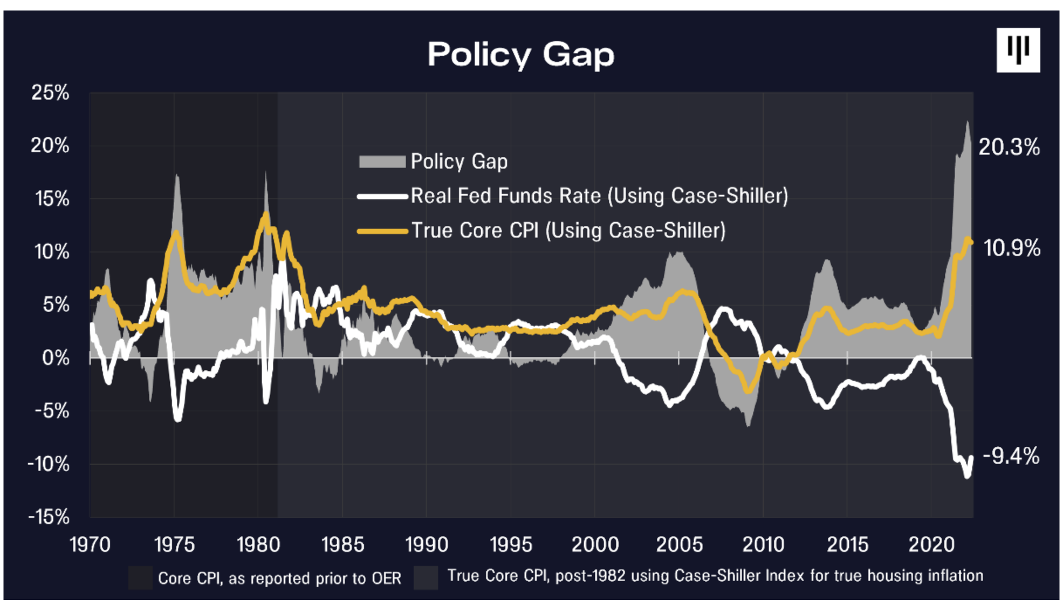


Eventually the OER component of CPI will catch up with reality. This will make it difficult for reported YoY CPI to fall very much over the next year.

POLICY GAP

Fed policy is as stimulatory as at any point in history – including the dark days of the 1970's. Real fed funds – the fed funds rate less True Core inflation – is as loose as ever (white line below). At the same time inflation (gold line) is higher than at most times in history.

Even in the 1970's there was never such a large gap between the real fed funds rate and the rate of inflation. The gray bars represent the so-called "policy gap". We're way past the 70's.



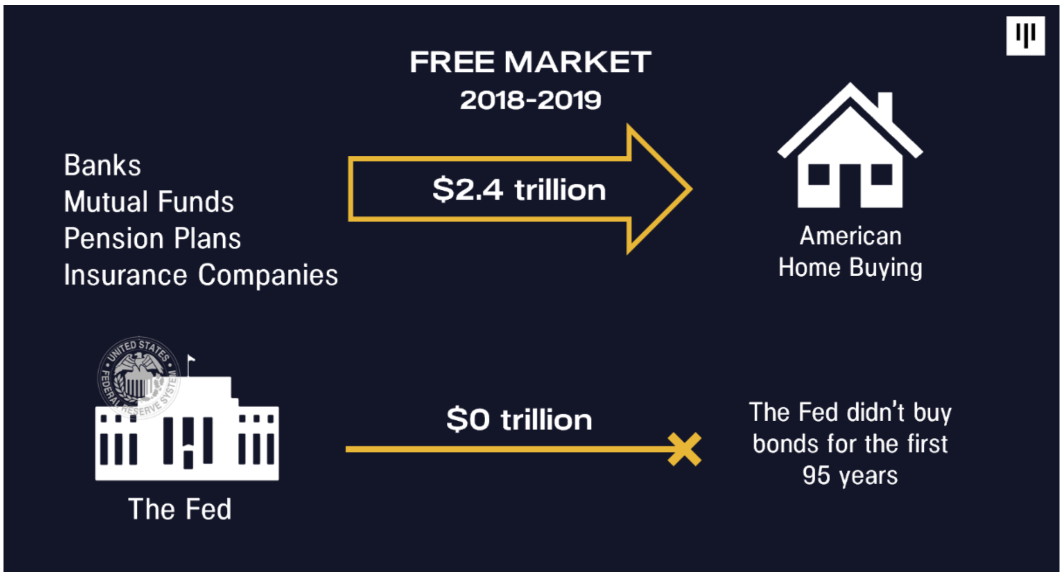
Not sure why all the debate about 25 vs. 50 vs. 75 basis points. They need to raise rates by hundreds. Fed funds are going to 4-5%.

#2. THE FED'S PONZI SCHEME

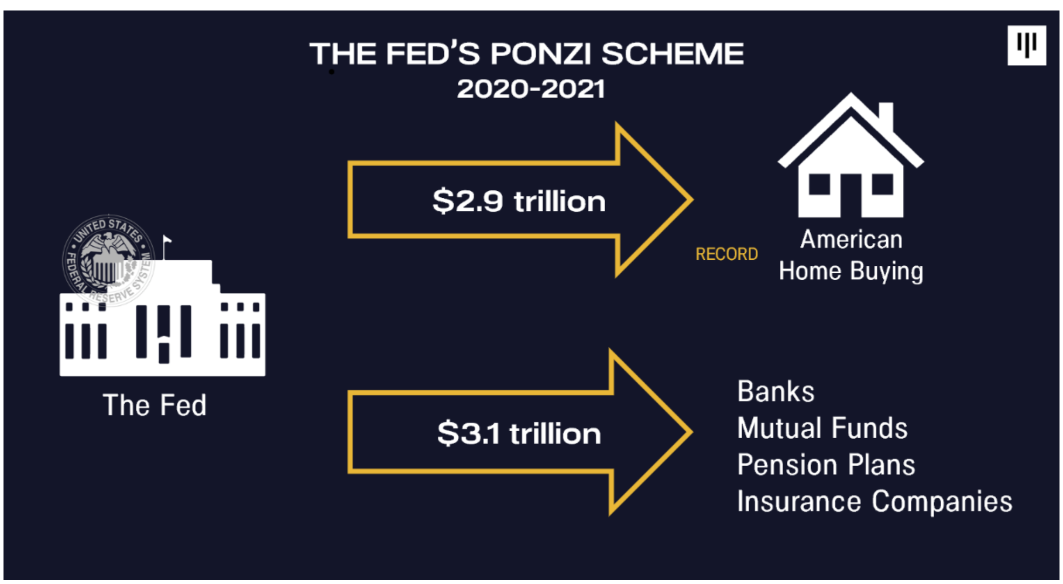
That issue is dwarfed by the biggest Ponzi scheme in history – the Fed's manipulation of the government and mortgage bond markets.

Back in the day, the Fed only controlled the overnight rate. They let free market actors allocate capital in the economy. Those free market actors – such as banks, mutual funds, pension plans, and insurance companies – lent money to enterprises, those seeking mortgages, and the Federal government at appropriate rates. The Fed did not manipulate the bond market.

The free market system worked well. For example, in the two years prior to the Fed's Ponzi scheme, those free market actors lent $2.4 trillion to Americans looking to buy homes. The Fed was not involved in the mortgage market. 30-year mortgage rates averaged 4.24%. A normal amount of Americans bought homes with mortgages. The price of housing was fairly stable.



But, boy, when the Fed got into the mortgage lending business, they really went for it. They completely crowded out ALL other lenders.



In 2020 the Fed decided that controlling the overnight rate was not enough – it wanted to control all rates, all the allocation of capital in the economy.

They forced 30-year mortgage rates to hit 2.68%, basically daring people not to buy a house (or two or three), which would obviously create a bubble in housing, which itself contributed to a labor shortage as two million Americans retired early or otherwise left the workforce.

Spurred on by the Fed's crazy low yields, Americans borrowed a record amount of money to buy leveraged homes – $2.9 trillion in 2020-21. But even that record appetite wasn't enough for the Fed. They pumped twice as much money – $6 trillion in total – into the mortgage and bond markets. That massive excess crowded out all types of private holders of bonds. In their voracious drive to acquire more than all newly-issued mortgages, they drove 10-year treasuries to 0.54% and 30-year mortgages to 2.68%.

When the Fed is offering to lend people money at 2.68% to buy houses which are going up 20% per year on leverage – they do! Not just homeowners, but investors.

For example, the most prolific real estate broker in Atlanta lives in Florida and hasn't visited Georgia in two years. He sells leveraged homes to institutional speculators over the internet with neither side even seeing the house.

"Atlanta's No. 1 Broker Bought Homes for Investors From 600 Miles Away"

> *"Atlanta's top-performing residential real-estate agent lives in Florida. He didn't set foot in Georgia for two years, and he sees no reason why he should.*
>
> *"A.J. Steigman runs his own real-estate brokerage firm from his house in Parkland, Florida. From 600 miles away, he bought or leased more than 300 homes at a total value of more than $86 million, according to the Atlanta Realtors Association. That was the most combined sales and leases in the Atlanta metro area for any broker last year, the group said.*
>
> *"While his competitors in Atlanta shuttle between home showings and plant 'For Sale' signs in front lawns, Mr. Steigman's client base consists entirely of institutional investors, he said. He has no employees but relies on a $20,000 laptop and proprietary software system to buy single-family homes on behalf of his clients, which lease them out to capitalize on soaring rents.*
>
> *"Redfin said investors bought one in every three homes sold.*
>
> *"Atlanta home prices have risen more than 49% over the last five years and 24% in the 12 months ended February 2022, housing data firm CoreLogic said.*
>
> *"He is also helping investors buy homes in Pennsylvania and Florida and said he has sold a total of $130 million worth of homes across Georgia and those two states.*
>
> *"Mr. Steigman declined to elaborate on his selling process, other than to say he relies on a system he built and calls 'Steignet,' a reference to Skynet, the menacing artificial intelligence network depicted in the 'Terminator' film series."*

– *Wall Street Journal*, May 17, 2022

Policy failure.

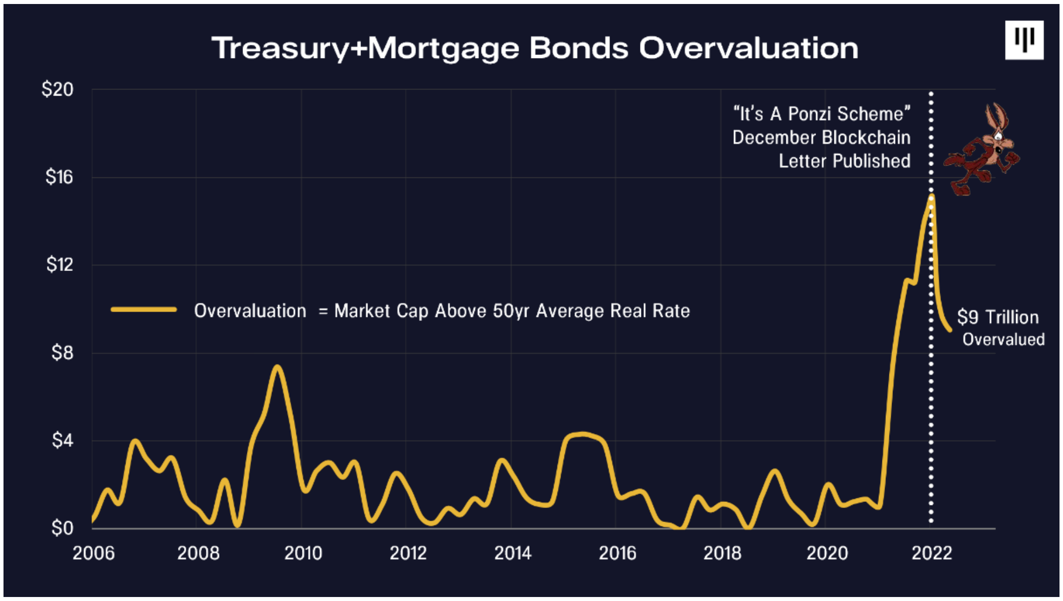
OVERVALUATION

Over the past two years the Fed bought government and mortgage bonds equivalent to over 200% of all mortgage lending in the U.S.

What happens when somebody buys more than the total supply of something? A short squeeze. You can corner a market for a while – like the Hunt brothers did in silver in 1979. Those colorful Texans drove the price from $6 an ounce to $49. Ultimately an outside force stops the reflexive cycle. They were bankrupted by margin calls.

The Fed was stopped out by the CPI print.

Before they were stopped out, the Fed's manipulation of the U.S. Treasury and mortgage bond market was so extreme that the markets became $15 *trillion* overvalued (relative to the 50-year average real rate).



Market participants are still not grasping the scale of this move. With the Fed finally stopping their manipulation of the U.S. bond market, bonds are experiencing a Wile E. Coyote moment. No free market buyer would even consider buying bonds yet. Prices are likely to free fall.

As bond prices fall interest rates rise. 10-year interest rates are likely to quadruple – from 1.34% to something like 5%.

The Fed is still buying mortgages to replace some that mature. They need to SELL.

"UNEXPECTED WAYS"?!?!

> *"Making appropriate monetary policy in this uncertain environment requires a recognition that the economy often evolves in unexpected ways. Inflation has obviously surprised to the upside over the past year, and further surprises could be in store."*
>
> – Fed Chair Powell, *News Conference*, May 4, 2022

I'm very concerned that the Fed doesn't seem to have any sense of what is causing inflation – their own manipulation of the mortgage market.

You offer to loan people money for thirty years at 2.68% when house prices are going up 20% a year, they're going to take it! If the house goes down 20%, they give the keys to the bank. If it goes up 20%, they win. A record number of Americans did that incredibly expected thing.

The Case-Shiller Index of home prices is up 38% since the Fed began buying mortgages. A huge win for those homebuyers and home speculators. A big hangover for the rest of us.

This won't be over until the Fed unwinds its manipulation in the bond market.

FED OFFERING MORTGAGES BELOW TREASURIES

This analysis by the Federal Reserve Bank of Dallas is truly mind-blowing. The Fed lent money to home buyers so aggressively that they actually pushed the option-adjusted mortgage yield *below* where the United States Treasury borrows. That's insane.

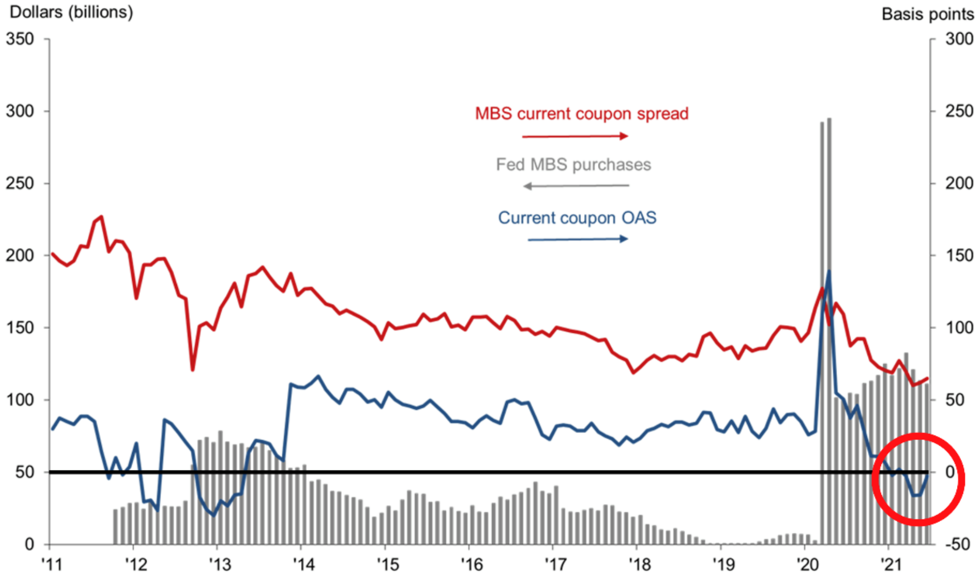
Obviously no free market actor would loan money to a house buyer at a lower yield than they would lend to the U.S. Treasury.

From the Federal Reserve of Dallas:

"Chart 1 also includes a metric known as the current coupon option-adjusted spread (OAS), which includes the likelihood of homeowners prepaying mortgages due to changes in interest rates. The OAS is a derived risk premium that equates model-based agency MBS values (using simulations of future interest rate paths) to prices observed in the market. By accounting for interest rate variability, OAS reflects the residual compensation earned by agency MBS holders arising from noninterest-rate factors, such as the characteristics of the underlying mortgages.

"While OAS is typically positive, the measure shown here–produced by Bloomberg for a hypothetical MBS priced at par has declined steadily since March 2020 and turned negative for the first time since 2013, the only other time in the series history that this has occurred."

Chart 1
Federal Reserve Agency MBS Purchases, MBS Current Coupon and Current Coupon OAS Spreads

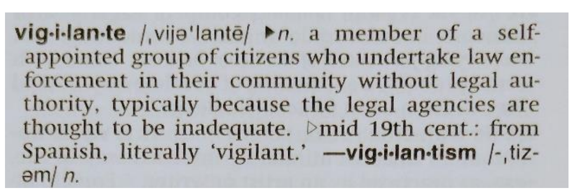


NOTES: MBS is mortgage-backed securities. Current coupon spread is relative to the average of the 10-year and five-year Treasury rates. OAS is option-adjusted spread that takes into account the probabilty of mortgage prepayment.
SOURCES: Federal Reserve Bank of New York; Bloomberg.
Federal Reserve Bank of Dallas

We have had a huge transfer of wealth from taxpayers and renters to those who bought houses with the Fed's borrowed money.

BOND VIGILANTES

Back in the day, the force that kept the government from doing banana republic things like this were the free markets. A colorful term was used, "bond vigilantes".



vig·i·lan·te /ˌvijəˈlantē/ ▸*n.* a member of a self-appointed group of citizens who undertake law enforcement in their community without legal authority, typically because the legal agencies are thought to be inadequate. ▹mid 19th cent.: from Spanish, literally 'vigilant.' —**vig·i·lan·tism** /-ˌtizəm/ *n.*

– The New Oxford American Dictionary

Vigilantes enforce rules when the government cannot or will not. This is a perfect term for our situation today. The President, Congress, the Fed have all abdicated any restraint.

At least the Secretary of the Treasury was honest enough to admit they love inflation:

"The burden of the debt in real terms has actually been negative in the last several years, so this is affordable."

– Janet Yellen, U.S. Secretary of the Treasury, March 18, 2022

The free markets have to provide this discipline.

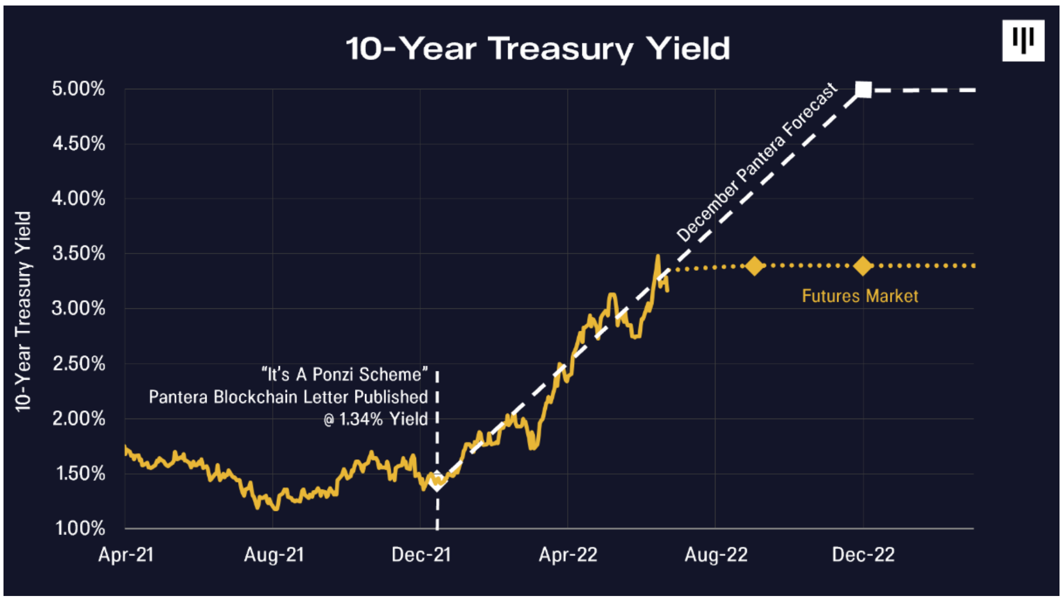
BOND BUBBLE

I believe that inflation is persistent – because the supply shortage is not a few container ships stuck off Long Beach harbor – it's coming from a labor shortage. Labor is the major cost input.

It's also coming from a booming housing market.

What I believe is that the Fed won't stop raising rates until at least two of these happen:

- Housing inflation goes negative
- Unemployment rate goes up 2 percentage points
- Core CPI gets near 2.5%. With owners' equivalent rent taking about two years to fully play out, that's probably at least a year away
- The Fed has unwound the majority of its mortgage manipulation



The 10-year Treasury yield is up +185bps. Without manipulation, I believe Treasury yields will likely go to 5.00%.

LARRY SUMMERS IS SPOT ON

> *"We used to have a Fed that reassured people that it would prevent inflation. Now we have a Fed that reassures people that it won't worry about inflation until it's staggeringly self-evident.*
>
> *"The Fed's idea used to be that it removed the punch bowl before the party got good.*
>
> *"Now the Fed's doctrine is that it will only remove the punch bowl after it sees some people staggering around drunk."*

– Larry Summers, *What You Hear vs. What You See? Bitcoin, the Federal Reserve and the 'Two Percent' Inflation Doctrine*, Consensus 2021, May 26, 2021

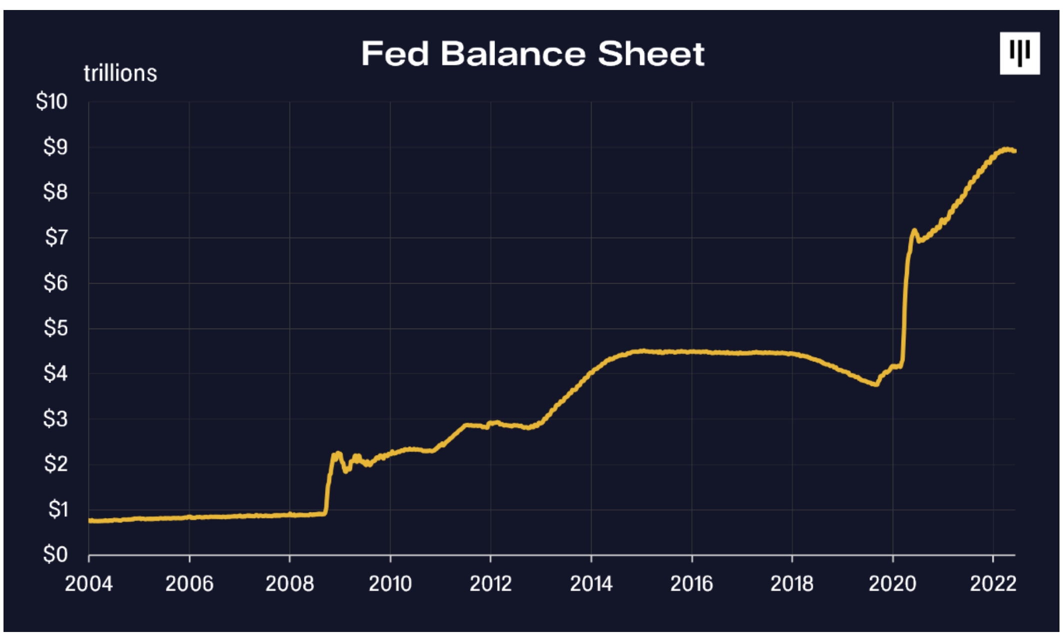
As we wrote in our November Blockchain Letter, all the arcane theories of central banking were best distilled into this classic line by an old school Fed Chairman – William McChesney Martin, Jr.:

> *"The Federal Reserve...is in the position of the chaperone who has ordered the punch bowl removed just when the party was really warming up."*

— Fed Chairman William McChesney Martin, Jr., October 1955, speech to the Investment Bankers Association of America

Instead of taking away the punchbowl when the cops are about to be called (inflation is already at a 40-year high, housing affordability is at the worst level in 16 years, and a policy-induced labor shortage has pushed wage inflation to a 40-year high) our modern Fed is doing this:

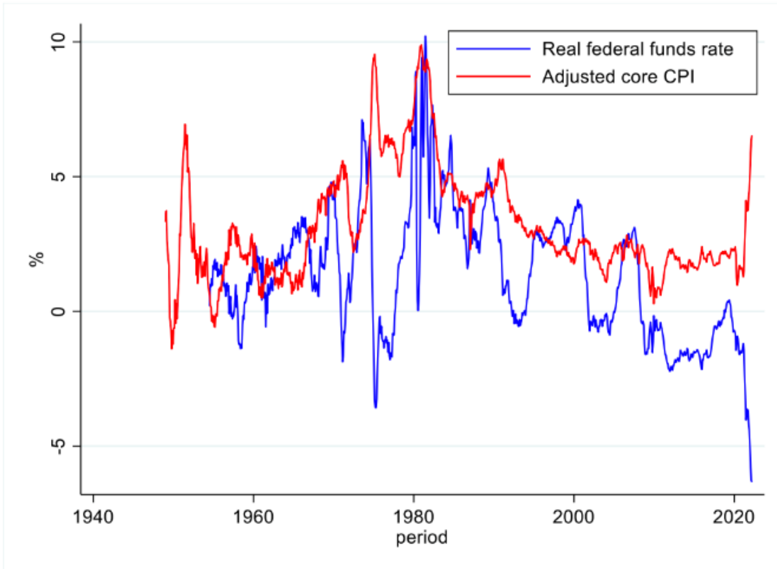
Presenting the champagne graphically:



LARRY SUMMERS ALSO SPOT ON ON OER

Larry Summers and colleagues wrote a fantastic analysis which is very similar to our True Core CPI. The only difference is they chose to take the modern OER concept back in time before 1982. We think Case-Shiller is a better measure of housing inflation than OER, so we adjusted the period after 1982.

Figure 7: Historical Policy Gap Using Estimates Adjusted for Treatment of OER



Sources: Bureau of Labor Statistics, Board of Governors of the Federal Reserve System, Authors' calculations
Notes: For adjusted core measure, homeownership costs are replaced with estimated OER pre-1983 and quantity weights are fixed at 2022 levels throughout. Real Federal Funds Rate is measured as the effective federal funds rate minus OER and weight-adjusted core inflation over the previous 12 months

> *"New estimates imply that the current policy gap is roughly equal to the peak gap of the Volcker-era.*
>
> *"The March 2022 gap stood at 12.7 percentage points and the estimated peak gap in April 1975 was 12.1 percentage points when adjusting for the treatment of OER.*
>
> *"There have been important methodological changes in the Consumer Price Index (CPI) over time. These distort comparisons of inflation from different periods, which have become more prevalent as inflation has risen to 40-year highs. To better contextualize the current run-up in inflation, this paper constructs new historical series for CPI headline and core inflation that are more consistent with current practices and expenditure shares for the post-war period. Using these series, we find that current inflation levels are much closer to past inflation peaks than the official series would suggest. In particular, the rate of core CPI disinflation caused by Volcker-era policies is significantly lower when measured using today's treatment of housing: only 5 percentage points of decline instead of 11 percentage points in the official CPI statistics. To return to 2 percent core CPI inflation today will thus require nearly the same amount of disinflation as achieved under Chairman Volcker."*

Marijn A. Bolhuis, Judd N. L. Cramer, Lawrence H. Summers, *Comparing Past and Present Inflation*, Abstract, June 2022:

https://www.nber.org/system/files/working_papers/w30116/w30116.pdf

BIZARRE KABUKI THEATER

When I was a kid, the Fed reacted in real-time to reality. Now they have this bizarre notion that – although they admit they have had no clue what's been happening during the past 18 months – they can see years into the future and must follow a pre-determined policy path.

> *"So, 75 basis point increase is not something the committee is actively considering. What we are doing is we raised 50 basis points today. And we said that, again, assuming that economic and financial conditions evolve in ways that are consistent with our expectations, there's a*

broad sense on the committee that additional 50 basis increases should be on, 50 basis points should be on the table for the next couple of meetings."

– Fed Chair Powell, *FOMC Press Conference*, May 4, 2022

Forward guidance is said to reduce volatility. It's quite the opposite.

"We therefore will need to be nimble in responding to incoming data and the evolving outlook. And we will strive to avoid adding uncertainty to what is already an extraordinarily challenging and uncertain time."

– Fed Chair Powell, *FOMC Press Conference*, May 4, 2022

Every month they continue this Kabuki theater, the cumulative damage becomes greater. They need to catch up to reality.

POLICY-INDUCED INFLATION

The Fed insisted that inflation was "transitory" for a period much longer than transitions take. Now they blame it on Putin, some container ships stuck off Long Beach Harbor, semiconductor shortages, and insist it's a global thing.

"I think I was wrong then about the path that inflation would take. As I mentioned, there have been unanticipated and large shocks to the economy that have boosted energy and food prices, and supply bottlenecks that have affected our economy badly that I didn't – at the time – didn't fully understand."

– Treasury Secretary Janet Yellen, CNN, May 31, 2022

"We're seeing high inflation in almost all developed countries around the world. And they have very different fiscal policies. So, it can't be the case that the bulk of the inflation that we're experiencing reflects the impact of the ARP (American Rescue Plan)."

– Treasury Secretary Janet Yellen, Senate Finance Committee, June 7, 2022

Unfortunately, it's a U.S. policy-induced problem that is specific to the U.S.

PEERS' INFLATION

It's always fun to blame problems on other things or outsiders.

Everybody eats food and even people who live in yurts use energy, so it's wrong to exclude them.

(California Governor Gavin Newsom wants to give everyone who has a gasoline-powered car $400 to buy more gasoline. How are we going to solve global warming that way?)

However, even if you exclude food and energy, core US inflation is double our peers. It's a U.S. policy thing.

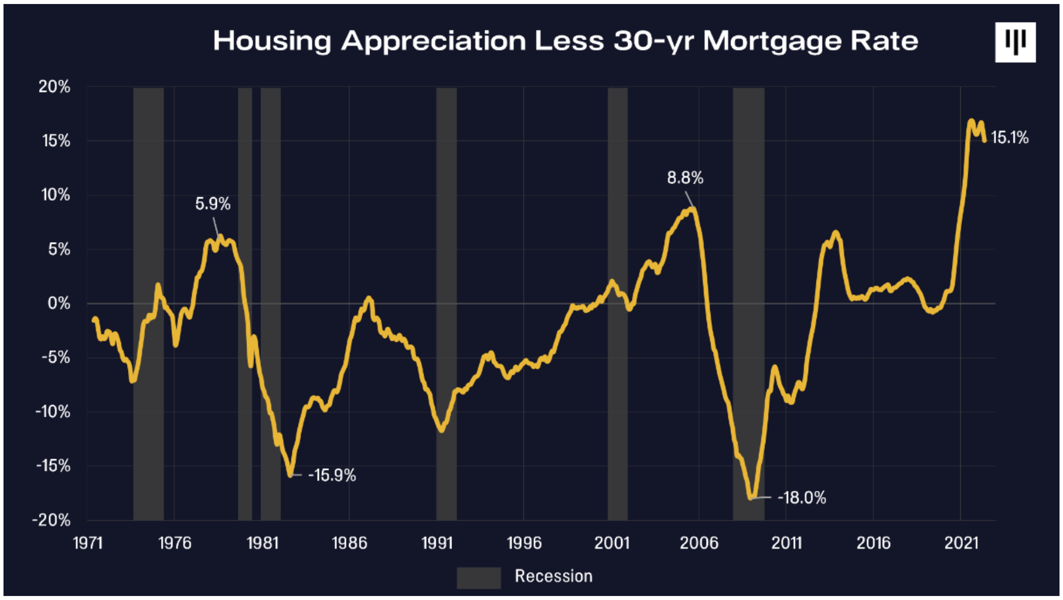
PEERS' INFLATION

	Japan	France	Canada	Germany	Average	United States
Core Inflation	0.8%	3.2%	5.7%	3.8%	3.4%	6.0%

HOUSING IMPACT

In the July letter we'll share thoughts on the odds of a recession. Here's a sneak peak of the road ahead:

- Never in history has the Fed allowed house price inflation to go so high above mortgage rates (In this case they literally controlled mortgage rates)
- And, the previous two bubbles – which were half as big – ended badly



May 3, 2022

PANDEMIC POLICY RESPONSE TWO YEARS ON

It's been two years since policymakers began attacking an invisible virus with printed money. Let's update how that's working.

The opening of our post-pandemic April 2020 letter:

> *"This is a really distressing, massively confusing time. I have no idea what's going to happen in 99% of things right now. However, I strongly believe it's close to inevitable that this will be very positive for cryptocurrency prices.*
>
> *"My kids used to count to 100, 'One, two, skip a few, a hundred.' It feels like we're doing that on Quantitative Easing. QE1, QE2, skip a few, a hundred.*

QE1, 2, 3,...,n

as n → ∞

> *"As Quantitative Easing approaches infinity, it simply has to have an impact on things whose quantity can't be eased.*
>
> *"When governments increase the quantity of paper money, it takes more pieces of paper money to buy things that have fixed quantities, like stocks and real estate. They settle above where they would absent an increase in the amount of money.*
>
> *". . . Like hydrostatic pressure, that flood of new money will float all boats – inflating the price of other fixed-quantity assets like gold, bitcoin, and other cryptocurrencies."*

Since that prediction, the tsunami of paper money has floated all boats, especially crypto. Here's a selection of fixed-quantity things since the paper money printing began:

Major Asset Classes, Performance Since March 2020 Letter	Return
Bitcoin	486%
Oil	411%
Commodities	150%
S&P 500	60%
Median Home Price	30%
Gold	20%

Other tokens have even out-performed bitcoin.

Pantera Fund Performance Since March 2020 Letter	Return
Early-Stage Token Fund	1,715%
Liquid Token Fund	1,438%
Bloomberg Galaxy Crypto Index	616%
Bitcoin	486%

THE COVID HANGOVER **IS** INFLATION

This paragraph in the newspaper raised my eyebrow:

> *"As they work to settle on a campaign strategy for November, Democrats said they need to better sell the public on what they see as Mr. Biden's wins, chiefly pandemic stimulus and infrastructure spending, while making clear they will work to bring prices down. 'We've done so much,' said Rep. Mark Pocan (D., Wis.). **'But the COVID hangover and inflation make it harder to talk about those really big things.'** "*
>
> – Wall Street Journal, *Democrats Search for Midterm Vote Strategy as Biden Poll Numbers Lag*, April 12, 2022

I'm worried that policymakers still don't get it that the COVID hangover and inflation are one and the same thing. There's too much printed stimulus money chasing too few goods, chasing too few people willing to work, chasing too few homes for sale, etc. Policies enacted ostensibly to fight an invisible virus are creating a short squeeze in homes, labor, everything. THAT is the big thing.

THE LITTLE DIGGER THAT COULD?

854 basis points of inflation and only 25 basis points of tightening? That's obviously not going to work.

Fed Chair Powell acts like he's really pulling out the big guns with, maybe, sometime in the future, increasing rates 50bps. Inflation is 17x higher. It should have been like 500bps six months ago to tame the housing bubble that the Fed directly created.

I met with an investor recently who said he wasn't doing anything in normal markets, all he was doing is trying to buy as many homes as possible – and take out 30-year mortgages against them. I replied:

> *"Yeah, with the nationwide housing market running at 19.8% and the Fed still manipulating the mortgage rate down to 5.0%...the Fed is basically daring you to not to buy a house."*

If the Fed held no mortgages – as it did for their first 95 years – the free-market mortgage rate would be much, much higher. The Fed is directly creating this housing bubble.

In the coming years, the Fed will have to deal with the boom/bust stagflation consequences it is still inflating.

GDP just printed its first negative reading. U.S. gross domestic product fell at a 1.4% annual rate in the first quarter, the Commerce Department said Thursday.

IT'S CALLED THE 70'S

What's wrong with this picture?

1970s vs. Today :: What's Wrong With This Picture?		
Index	1979	Today
CPI	13.3%	8.5%
Core CPI	11.3%	6.5%
True Core CPI (using Case-Shiller)	11.3%	11.2%
S&P/Case-Shiller U.S. Home Price Inflation	14.9%	19.8%
ECI Wage Inflation	7.8%	5.6%
Employment Participation Rate	63.8%	62.4%
Unemployment Rate	5.8%	3.6%
GDP Growth	5.5%	3.6%
Fed Buying Bonds & Mortgages?	No, Never In History	Yes, $9 Trillion
Fed Balance Sheet	4%	115%
10-Year Bond Yield	9.10%	2.98%
Real Rates (CPI-10yr Treasury Yield)	-0.80%	-5.60%
Fed Funds Rate	10.25%	0.25%
Events	1979	Today
War	Soviet Afghan Invasion	Russian Ukraine Invasion
Oil	1979 Oil Shock	Oil +411%

WHAT MOVIE IS THE FED WATCHING?

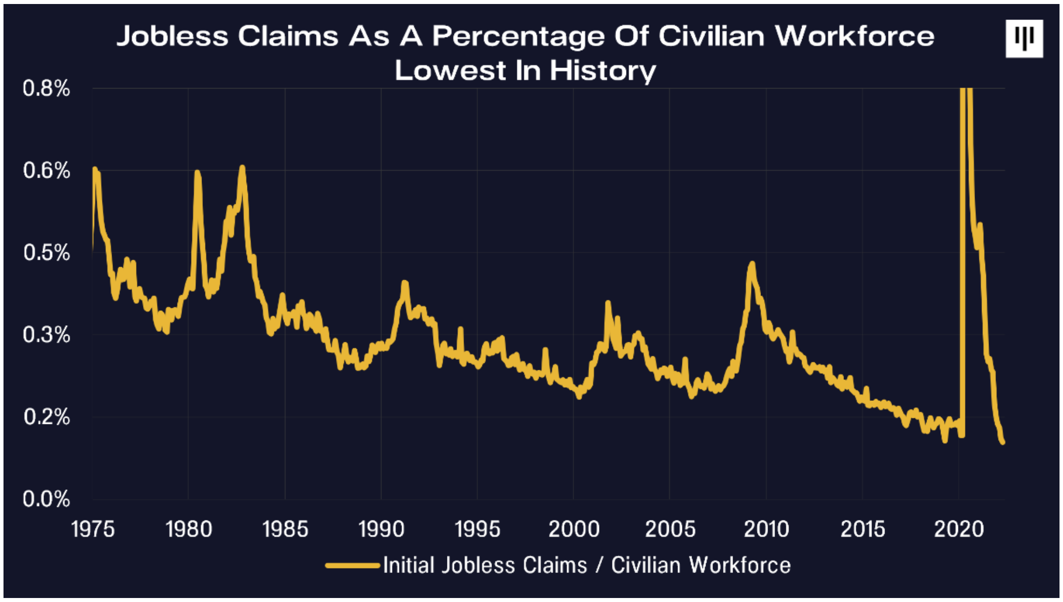
> *"I don't want to be too rigid in how I think about the appropriate course of policy over the remainder of this year and into next year. . . By moving expeditiously towards a more neutral posture, it provides the committee with optionality in either direction."*
>
> – Lael Brainard, Federal Reserve Vice Chair, April 12, 2022

It's really astonishing. Moving very slowly to neutral when everything is out of control?!?!?

The Fed's dual mandate is price stability and full employment.

Price stability to them means "only" debasing paper money by 2.0% per year. True core CPI (using more-realistic Case-Shiller housing prices) is in double-digits – five times the Fed's target inflation rate. So, that mandate is obviously blown.

On the flip side, we are now clearly well past any optimal level of employment. There are fewer jobless claims as a percentage of the civilian workforce than at any time in the history of our country.



Only one out of a thousand people lost their job. Roughly similar to the odds of being hit by a falling coconut.

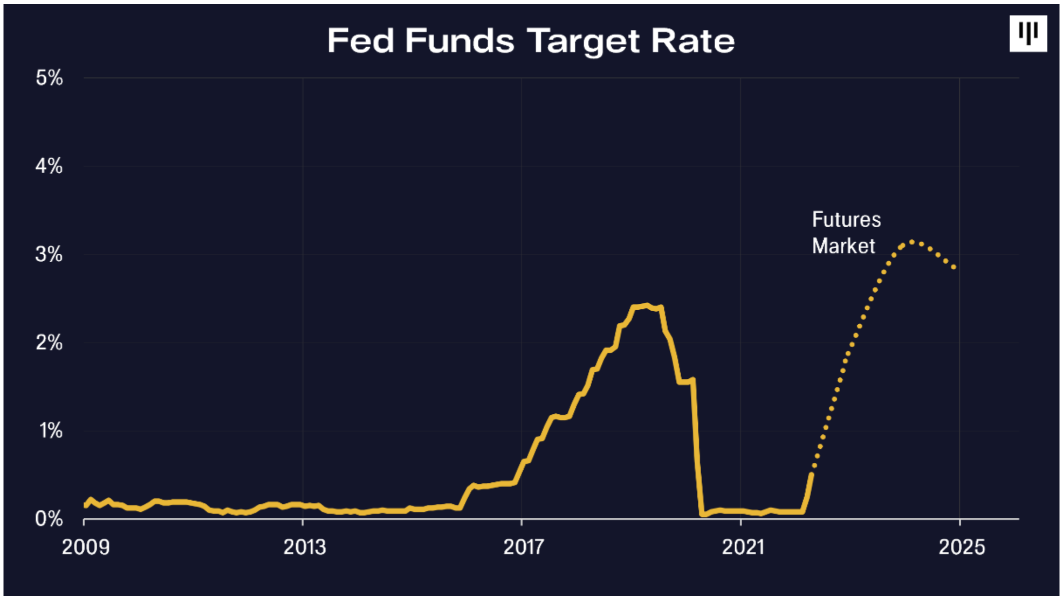
Even the Fed Chair admits that the labor short squeeze is unhealthy:

> *"If you take a look at today's labor market, what you have is 1.7-plus job openings for every unemployed person. So that's a very, very tight labor market, tight to an unhealthy level, I would say."*
>
> – Fed Chair Powell, FOMC Meeting, March 16, 2022

There are 1.8 opening for each unemployed person. That's never happened in history. The ratio is normally the other way around.

So, why this slow minuet to only neutral? Rates should be restrictive.

> *"The Fed is definitely behind the curve. Inflation is well above 2% both in PCE and CPI terms. The unemployment rate is at 4%, which is below the CBO's estimate of full employment. In such an environment, interest rates should be a little above neutral, which is likely somewhere above 2%. We're pretty far away from that point, so the Fed has a lot of room to catch up. If any mistake was made, it was not pivoting earlier."*
>
> – Eric Rosengren, former President of the Federal Reserve Bank of Boston, March 14, 2022



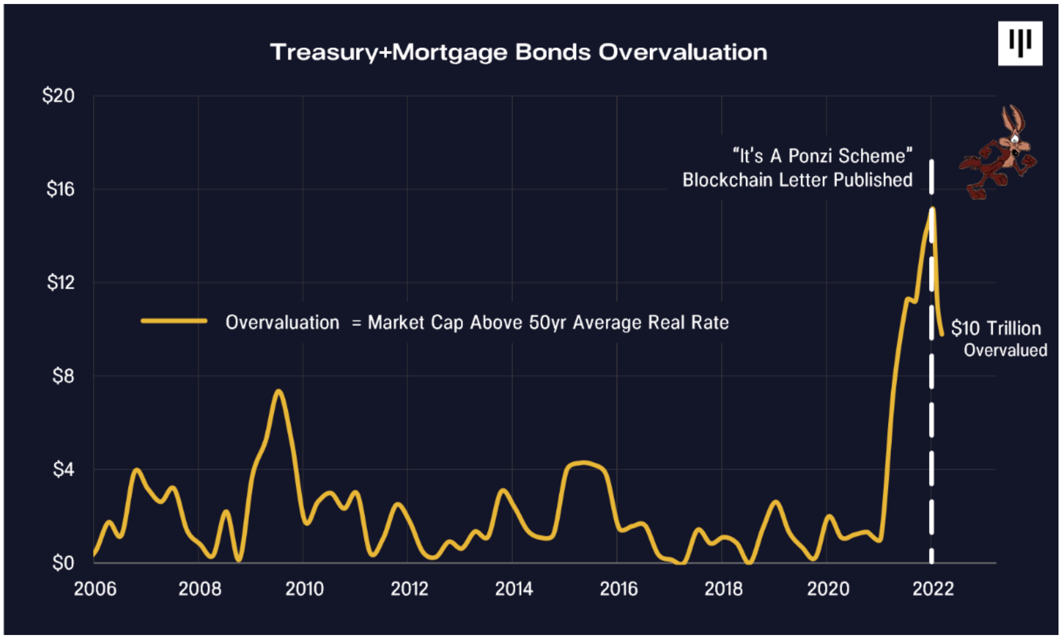
Fed rates have been way too low for way too long. They're going way higher than the futures market expects.

THE GREAT UNWIND

> *"Treasuries yielded 14% in October of 1981 when I got into this business. By 2020, rates got to the lowest in 5,000 years in all developed countries.*
>
> *"Bonds beat stocks for over 35 years, which is sort of crazy, but, you know, there was a reason for it. Now it looks like finally with inflation, with geopolitical uncertainty, that bull market is over. Bond yields are rising rapidly at the 10-year rate, and I would expect that would continue."*
>
> – Bill Miller, Founder of Miller Value Partners, Pantera Blockchain Summit, April 5, 2022

Since the 2008 Financial Crisis, the vast majority of sovereign debt has been purchased by price-insensitive government buyers. It is a combination of domestic central banks like the Fed monetizing their own debt and countries trying to keep current account surpluses offshore and thus hold down the value of their currencies by selling their currency and buying dollars (which need to be invested in treasuries).

QE created a rare investment world where both bonds and stocks rallied simultaneously. (In a free-market world, their prices are inversely correlated.)



Quantitative Tightening (QT) will have both bonds and stocks falling simultaneously.

It is also likely that adversarial regimes will reduce their USD currency reserves and liquidate US treasuries as a response to the recent seizure of Russia's US dollar reserves resulting from the sanctions on public and private entities.

THE STAGFLATION MEGA-TRADE

BANKLESS PODCAST HIGHLIGHTS

Ryan Sean Adams: ***"This is the highest inflation in 40 years, 8.5% CPI. Can you tell us what's going on?"***

> **Dan Morehead:** *"It's 35 years since I've been doing this, so I've seen a lot of cycles, and this is the craziest one ever.*
>
> *"The Federal Reserve pumped up a bubble in bonds that is just really off the charts. The bond market is what fuels the mortgage industry and a record number of Americans took out a*

mortgage last year and bought property. Not surprisingly, houses are up 19%. If you are a homeowner, that's a good thing, but 35% of Americans do not, so I think that's a terrible thing.

"The chairman of the Fed about a year ago said it was a transitory blip in inflation. This is not transitory, this is a massive, massive problem. Each month since Powell said it was transitory, it's printed a new record high. We really are back to the craziest bit of the '70s.

"The cost of Ubers has doubled and to me that's such a great indication of the tightness in the labor market. Used cars now are higher priced than when they were brand new. That's super crazy. It's never happened in history. Basically everything is on fire and more expensive."

David Hoffman: ***"How did we get a bubble in the bond market?"***

"First is Congress essentially approving $9 trillion worth of spending.

"The U.S.'s deficits in the last two years have literally been bigger than any year in World War II. World War II we were fighting fascism. It was a big thing. Here the amount of money that's been spent fighting this invisible virus is staggering and very inefficient. It's literally been 50 grand per family in the United States. I mean, that is just an enormous amount of money. Of course, there were some policies that needed to happen and there were some people that really needed help. But most of the people that got stimulus checks saved them. The savings rate went up in a recession, again, something that has never happened in history.

"So nine trillion new pieces of paper dollars were printed and sent around to everybody. Again, a minority of them really needed the help and probably needed more help. But most of the people didn't. So what'd they do with it? They bought stuff with it.

"They bought stocks. Stocks are at record highs. They bought gold, they bought bonds. So people invested all that free new printed money.

"If you print 9 trillion new pieces of paper money it takes more pieces of paper money to buy a 2021 car, or a median home in the United States, or a share of the S&P 500. It just really is that simple. The value of paper money is being debased.

"In 35 years of trading I've never seen something both so extreme and so massive. I've seen some weird trades in small little corners of the world, some emerging market where something weird is happening. But the Federal Reserve doing it nine trillion sized – I mean, this is the biggest bubble."

David: ***"Can you kind of walk us through what you think happens next with all of this?"***

"I think in about two months, the Fed is going to realize, 'Hey, this thing's really getting out of control.' Instead of just waiting around for these bonds to slowly mature (which is going to take a long time, because the majority of their bonds are like 20 year maturity), they're going to have to start selling bonds. When you go from the Fed buying billions and billions of bonds every month to now selling tens of billions, the bonds are going to get crushed.

"I said in our letter, it's the first non-blockchain trade I've done in eight years because it's so asymmetric. I think it's like a 90% chance rates go way up.

"The punchline is, you probably don't want to own a lot of treasuries.

"When I was growing up, there was the 60/40 normal asset allocation mix: 60% stocks, 40% bonds. I'm sure there are pension plans and insurance companies that have legacy portfolios that still have a decent amount of bonds, but if you're looking at all the facts that we can see today as a normal free market investor, it just is so hard to say, 'Hey, at 2.7% for the next 10 years, with inflation reported at 8.5% but really at like 10.7%, I'm going to buy a 2.7% 10-year note.' I really can't imagine how anyone would do that.

"I think the penny is dropping, but it's dropping very slowly. There is no working-age American that has invested in a rising rate environment. That is so important to keep in our heads – I'm 56 and it was already six years into the bull market when I got to Wall Street – the 10-year note was at 10%, so it could easily be 5% or 10% again. But most people your age have literally never even come close to seeing a 10% 10-year note.

"Everything has been going up for 40 years because rates just keep going down and down and down. In July of last year, 10-year rates hit 54 basis points. That's it. That was the end of the bull market. Rates certainly aren't going any lower than that.

"I think we're in a five-year bear market on bonds and we all have to get our head around that. I'm still trying to figure out what that means in our portfolios."

David: *"What do you make of how the crypto markets are digesting all of this macro news?"*

"Basically, there's almost nowhere to hide, right? That's why we called it the 'Great Unwind', everything except crypto, I think, is really going to be impacted.

"If we're even partly right, that bond yields are going to go to 5% or higher, that obviously crushes bond prices, but it also has to impact stocks and real estate and anything else that has a discounted cash flow.

"The reason I'm still convinced that blockchain can have a very low correlation with everything else is most people don't own any of it, right? Most institutional investors really don't own a material amount of cryptocurrency assets. Some of the biggest endowments maybe have one or two or 3% in blockchain. There's a lot that still owns zero. Most major insurance companies basically own zero. And so that's how they can stay uncorrelated, I think for the next, say, five years. If we're right, and blockchain is a really important thing, and in time it becomes an asset class, I think everyone will have like 8% of their portfolio in blockchain. In 10 years blockchain will be as correlated with the S&P as anything else, commodities or bonds or whatever. But for now, I really think it can be uncorrelated."

Ryan: *"How* would *you describe an easy button portfolio for blockchain exposure here?"*

"Unfortunately it's not as easy as it used to be, really it's the sad answer, if we wanted a quick answer.

"Obviously Bitcoin was everything for a long time and it was great. I used to tell people, 'Buy some Bitcoin.' And then for a long time, I was like, 'Hey, buy half Bitcoin, half Ethereum and you're going to be fine.' The world's way more complicated than that now.

"The kind of theoretical answer, and obviously not super pragmatic for all your listeners, is to be investing in a lot of different things. We probably are invested in 200 different things across all of our funds. The reality is there are going to be probably 10 or so really important layer one blockchains. All the others are actually just kind of companies basically built on top of other protocols.

"There is a great line that the chairman of the SEC said about five months ago that we don't need 5,000 new private monies. I think he and lots of people misunderstand it. There aren't 5,000 layer one blockchains, right? There just aren't. There are 10 or so that are important. Almost all the rest of those are just protocol applications built on somebody else's protocol. The

US has 4,500 public companies, so I have no problem with 4,500 tokens, right. We're not there yet. There aren't 4,500 real tokens yet, but in 10 years there will be.

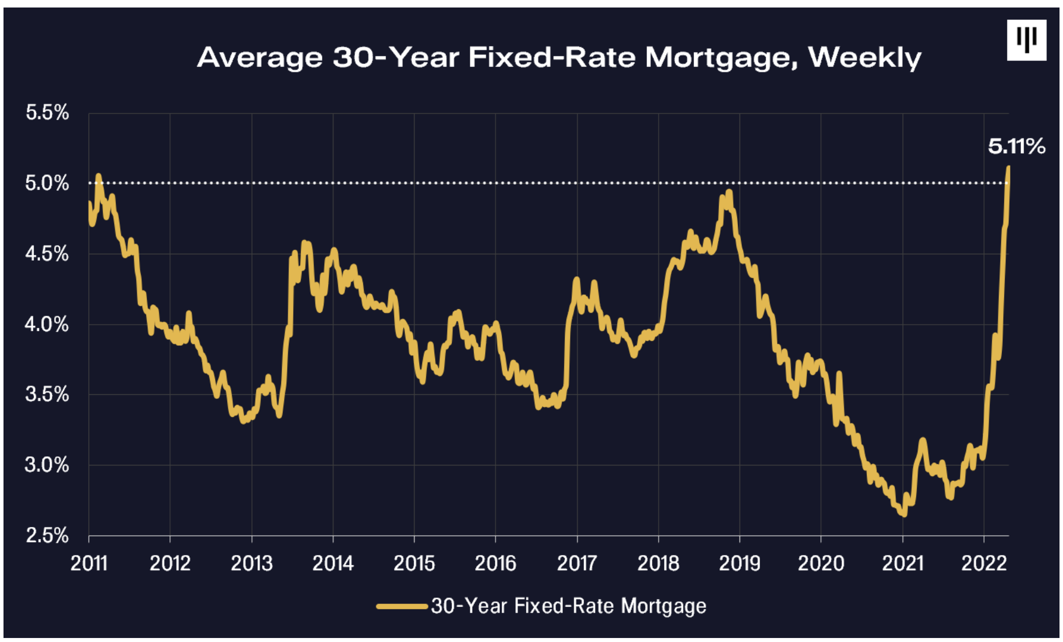
"The punchline of all that is a portfolio should be many things, more than just one or two things. The theoretical answer is to invest in a broad portfolio of things, because there are a lot of things going on. For example, last year, Bitcoin was up 70% and our Liquid Token Fund was up 325%. There are a lot of things going on, one of which is Bitcoin, but there are 30 other important things on the liquid side. There's 80 or so in the private token side of our portfolio. So, for those that can invest in a fund manager, like ourselves (there are a bunch of great managers in the space), is probably now better than the old days, when I'd say, 'Hey, just buy some Bitcoin and Ethereum, you're probably fine.' These days, I think you do need a broader exposure."

Check out the recording here.

MORTGAGE INFLATION – 38%

A year ago, the cost of paying the mortgage on the median U.S. home was $1,223 (the monthly payment after a 20% down payment), according to calculations by George Ratiu, an economist at Realtor.com.

Today, such a purchase would require a monthly payment of nearly $1,700 – a 38% increase.



April 4, 2022

THE GREAT UNWIND

No working-age person in America has invested in a rising rate environment. I'm 56 and rates were already six years into the bull market when I got to Wall St. 10-year yields were almost 10% when I started as a bond trader in 1987.

A secular bull market continuously lowered yields – which increased the value of everything – stocks, bonds, real estate, everything. Nobody is mentally ready for The Great Unwind. Rates began rising in July 2020. They will probably continue to rise for years. Our forecast in December was for 10-year rates to triple.

The median forecast for the peak in fed funds is 2.1%. That's below where they were just *before* the pandemic, even though the economy is massively overheated compared with two years ago.

If you buy a 2% 10-year note, the most you can make is 20 points over the life of the note. I think they will go down more than 20 points this year.

IT'S CALLED THE 70'S

> *"Hindsight says we should have moved earlier. . . . But there really is no precedent for this."*
>
> – Fed Chair Powell, March 3, 2022

It's called the 70's. We've been talking about it for six months.

CORE CPI

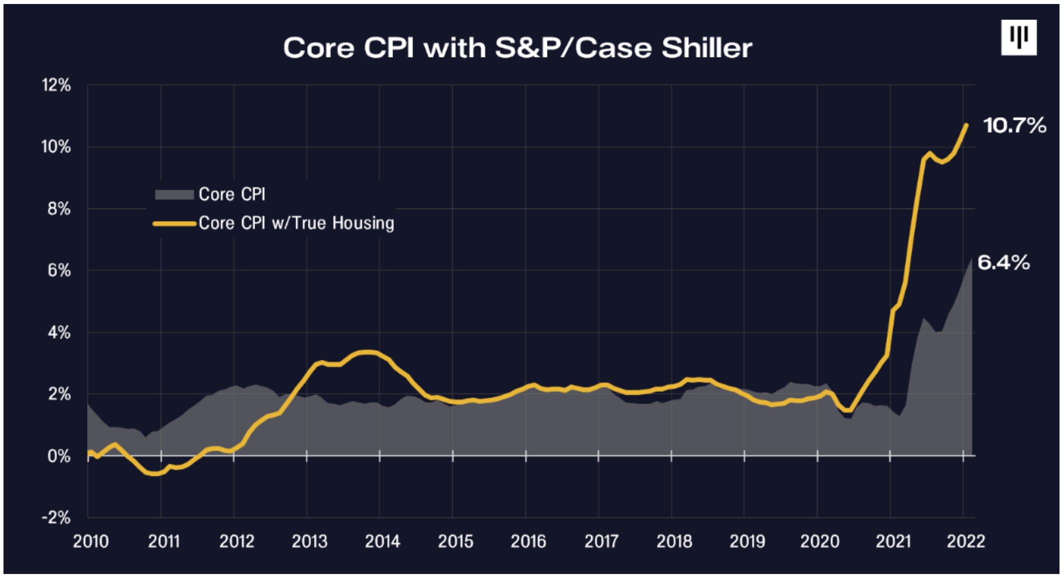
1970s vs. Today Fed Policy Failure

Index	Feb 1979	Last Reading	Record
CPI	11.3%	7.9%	40-Year High
Core CPI	11.3%	6.4%	40-Year High
True Core CPI (using Case-Schiller)	2.0%	10.7%	40-Year High
S&P/Case-Shiller U.S. Home Price Inflation	14.9%	19.2%	43-Year High
ECI Wage Inflation	7.8%	5.7%	40-Year High
Real Rates (CPI-10yr Treasury Yield)	-0.8%	-5.5%	42-Year Low
Employment Participation Rate	63.8%	62.4%	222bps from 50-yr Low
Unemployment Rate	5.8%	3.6%	10bps from 50-yr Low
GDP Growth	5.5%	5.5%	38-Year High
Fed Balance Sheet	3.6%	115%	All-Time High
Fed Funds Rate	10.0%	0.25%	All-Time Low
10-Year Bond Yield	9.1%	2.40%	178bps from All-Time Low

The Fed prefers to look at core inflation (CPI less energy and food). Year-over-year (YoY) core CPI was up 6.4% in February, the highest since August 1982. Even this is overly rosy.

Owners' equivalent rent (the amount a property owner would have to pay to be equivalent to the cost of ownership) was up 4.3% YoY in February and rent of primary residence was up 4.2%. However, S&P/Case Schiller housing prices were up 18.8% and, according to the Redfin real estate brokerage, rent was up 18% over the last two years.

Using Case Schiller for OER, February YoY core CPI would have been up 10.7%, 4.5 percentage points higher than core CPI.



BACK TO THE PAST EVERYWHERE

The European Union's statistics agency said consumer prices were 7.5% higher in March than a year earlier. It was the fifth straight record high in a data series that goes back to the start of 1997, two years before the euro was launched.

National figures for the time before the Euro suggest that the current rate of inflation is higher than any time since 1981 in Germany. Spain's was the highest since May 1985.

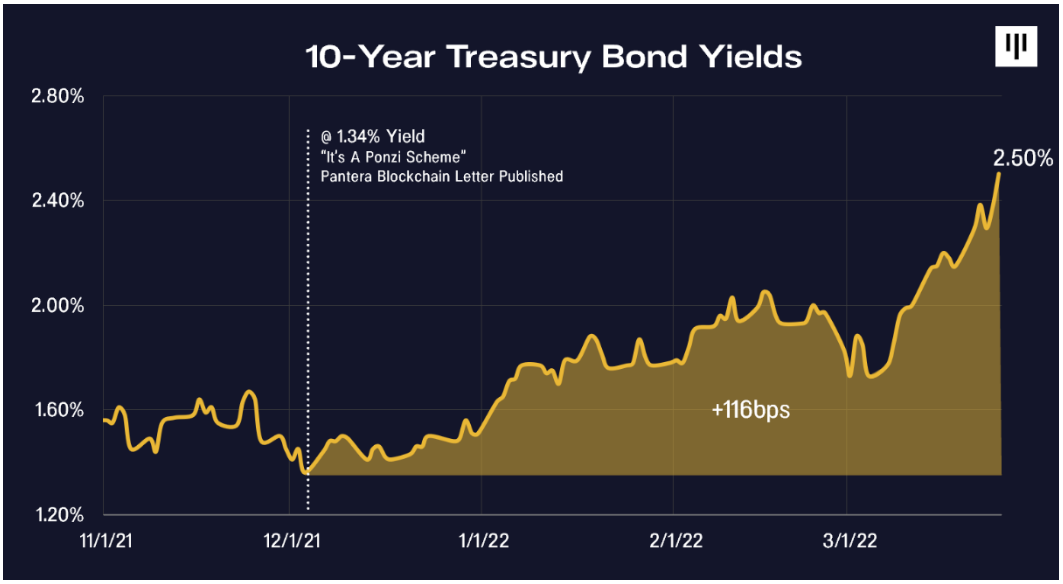
FIRST HUNDRED BASIS POINTS

Since calling the top of the bond bubble in early December, the 10-year Treasury yield is up +116bps. Two to three hundred basis points to go.

The Fed has **finally** stopped manipulating the U.S. bond market. Bonds are experiencing a Wyle E. Coyote moment. Without the non-economic bid from the Fed below them – there is nothing...nothing but air. They will fall 30 points before they find an economic buyer.

Without manipulation, I believe Treasury yields will triple to 5.00%.

Crypto will massively outperform stocks and bonds.



NEGATIVE REAL YIELDS

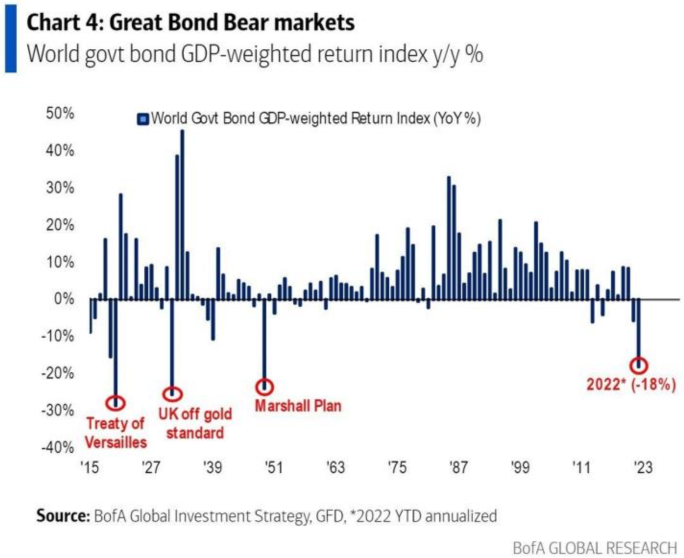
> *"The burden of the debt in real terms has actually been negative in the last several years, so this is affordable."*
>
> – Janet Yellen, U.S. Secretary of the Treasury, March 18, 2022

Gotta admit I admire her moxy, but why would anybody buy a bond from somebody who tells you straight out it's a negative return?

The answer is nobody – no rational economic actor would buy what the Fed has been manipulating. Rational economic actors will wait until yields are around 5%.

WORST BOND BEAR MARKET SINCE 1949

> *"The return on government bonds is on track for its worst year since 1949, the year after the Marshall Plan was enacted. . .*
>
> *"Deflation to inflation, globalization to isolationism, monetary to fiscal excess, capitalism to populism, inequality to inclusion, US dollar debasement."*
>
> – Michael Hartnett, Chief Investment Strategist at Bank of America, *Weekly Flow Show Report*, March 2022



March 7, 2022

MONEY PRINTING :: TWO YEARS ON

We're two years into the Federal Reserves' policy response to the virus. It's really wild to look at this table of statistics – and ask yourself:

Should Fed funds be LOWER?

*Should the Fed **still** be buying bonds – trying to manipulate mortgage yields LOWER?*

That they are is truly mindboggling.

Fed Policy Failure

Index	Pre-Pandemic	Last Reading	Record
CPI Inflation	2.3%	7.5%	40-Year High
ECI Wage Inflation	3.1%	5.7%	40-Year High
S&P/Case-Shiller U.S. Home Price Inflation	4.3%	18.8%	43-Year High
Real Rates (CPI-10yr Treasury Yield)	-0.8%	-5.5%	42-Year Low
Employment Participation Rate	63.4%	62.3%	221bps from 50-yr Low
Unemployment Rate	3.5%	3.8%	58bps from 50-yr Low
GDP Growth	1.9%	7.0%	38-Year High
Fed Balance Sheet	$4.1 Trillion	$8.9 Trillion	All-Time High
Fed Funds Rate	1.6%	0.0%	All-Time Low
10-Year Bond Yield	1.92%	1.74%	123bps from All-Time Low

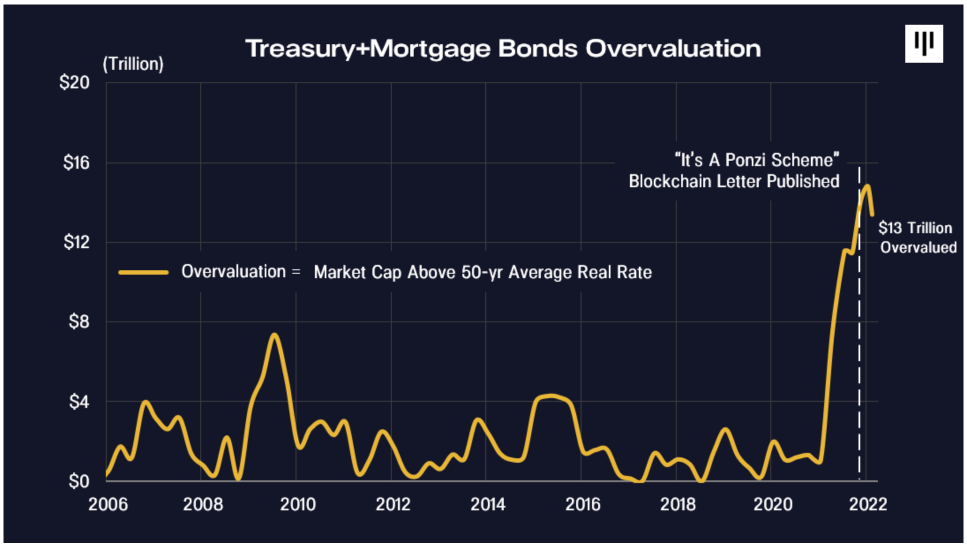
I've been doing this thirty-five years – have never seen anything like it. It's such an obvious policy failure. The runaway train seems to have nobody in control. The policy corrections are going to have large impacts.

What pivot? They're still keeping rates at zero and forcing bonds yields down.

BOND BUBBLE POPPING

The massive overvaluation of the U.S. Treasury and mortgage bond markets are beginning to correct. When the Fed does actually pivot…and actually raise rates…and actually sell bonds – that soufflé is going to deflate awfully fast.

If you still own any bonds, you should sell them to the Fed pronto.



February 16, 2022

THE NEXT MEGA-TRADE HAS BEGUN

Walter Bagehot, the legendary journalist and economist, set forth the following dictum[1] more than a century ago:

> *"[T]o avert panic, central banks should lend early and freely (i.e. without limit), to solvent firms, against good collateral, and at high rates."*

I'm not going to Monday-morning quarterback the Fed's decisions in an economic panic two years ago. But, what they are doing today is so clearly a mistake. They are still actively inflating a bubble in bonds, stocks, real estate, etc. that it will take a massive policy U-turn to stop it. The net result of this binge-purge is going to be a mess in the normal asset markets. Later I will make the argument that the best place to avoid the fallout of this policy failure is in blockchain assets.

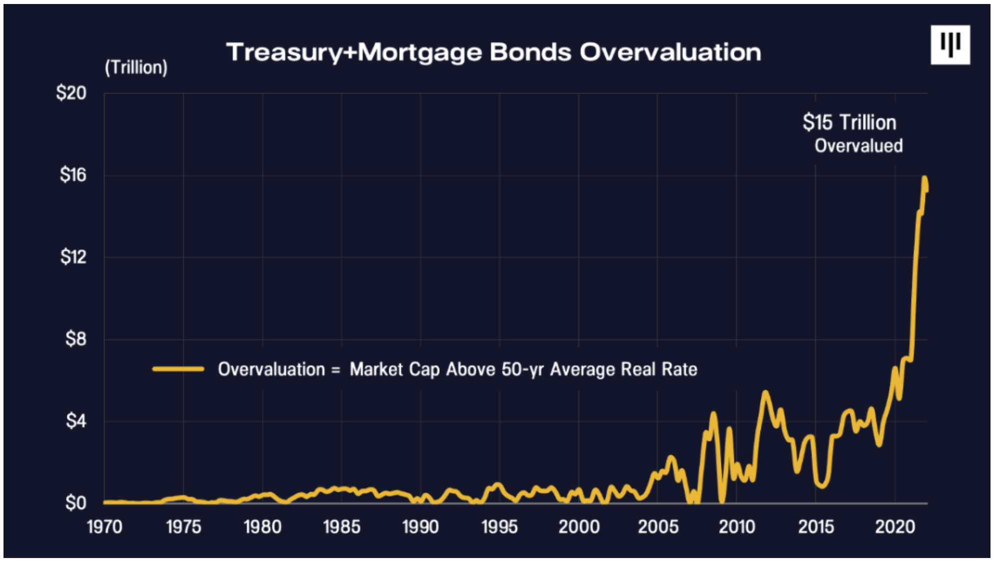
Critically, the Fed missed the bit about *"at high rates"*. Their manipulation of Treasuries and mortgage bonds – which still seems to be driven on in some kind of trance disconnected from reality – has driven rates to historic lows.

---

[1] Walter Bagehot (1897), *Lombard Street: A Description of the Money Market* (New York: Charles Scribner's Sons).

There has never been a time in history with YoY inflation at 7.5% and Fed funds at ZERO. (And, the 7.5% would be 8.6% excluding "owner's equivalent rent", which is notoriously slow to update.) That policy mix is clearly wrong. There's a ton of handwringing over whether to raise rates five weeks from now. They should have raised rates five months ago - or today. When I started as a bond trader, the Fed acted in real time. There was none of this "forward guidance" Kabuki theater.

Real rates - the interest rate one gets after inflation—are at negative 5.52%, a 50-year low. No economically-rational investor would buy something guaranteed to lose that much money every year.



The Fed's manipulation of the U.S. Treasury and mortgage bond market is so extreme that is it now $15 TRILLION overvalued (relative to the 50-year average real rate).

If you own any bonds and have yet to sell them to the Fed, you might want to do so quickly. When the Fed's bond buying operation is finally shut down, bond prices are going to experience a Wile E. Coyote moment.

We forecast the bursting of the bubble in our December 7th Blockchain Letter. Since then, 10-year notes are down 5 points—and rates up 70 basis points. The next mega-trade has begun.

Market participants are still not grasping the scale of this move. 10-year interest rates are going to triple – from 1.34% (when we predicted the burst) to something like 4-5%.

"By next month, the last buyer (and only buyer) of bonds will be gone."

I think all the "it's just a supply shock" dismissive notions that Fed Chair Powell and others have repeatedly said are very wrong. It's not about a few container ships waiting outside Long Beach Harbor. The supply shock is labor. Three million Americans left the labor force. There are 11 million job openings and only 4 million unemployed people. The massive imbalance is in the supply of labor. Stimulus checks, homeschooling, early retirements. That's why wage inflation is now so high. It will stay high for a long time.

CPI was changed in 1982 to "owners' equivalent rent" (OER) – which is now 4.1% YoY. The real inflation people experience is much higher–S&P/Case Schiller reports 16.8% YoY. OER is 24.2% of CPI. If YoY OER were reported at 16.8%, YoY CPI would be 10.5%, 3.0 percentage points *higher* than the 7.5% in the headlines. Eventually the OER component of CPI will catch up with reality. This will make it very difficult for reported YoY CPI to fall very much over the next year or two. Fed funds are going to 4-5%.

Since March 2013 I haven't invested in anything other than blockchain. The bond bubble is the first trade since then to present such a compelling asymmetry. Bond yields are likely to triple.

That interview was done in December. I have since entered what I think is an incredibly compelling trade: shorting 10-year notes and mortgage-backed securities and buying interest only mortgage strips. I/Os increase in value as rates rise.

The next mega-trade has begun.

FED POLICY FAILURE

The Fed's policy inertia is shocking. The data has been overwhelming since way before we started writing about it in November. Everything's at half-century extreme overheating – and the **Fed** is still, today, trying to drive bond yields down and has set Fed Funds rates at zero?!?!?

If you would have put this graphic to economists a few years ago and asked what the appropriate Fed Funds rate would be, literally nobody on Earth would have selected ZERO.

WHAT MOVIE IS THE FED WATCHING?

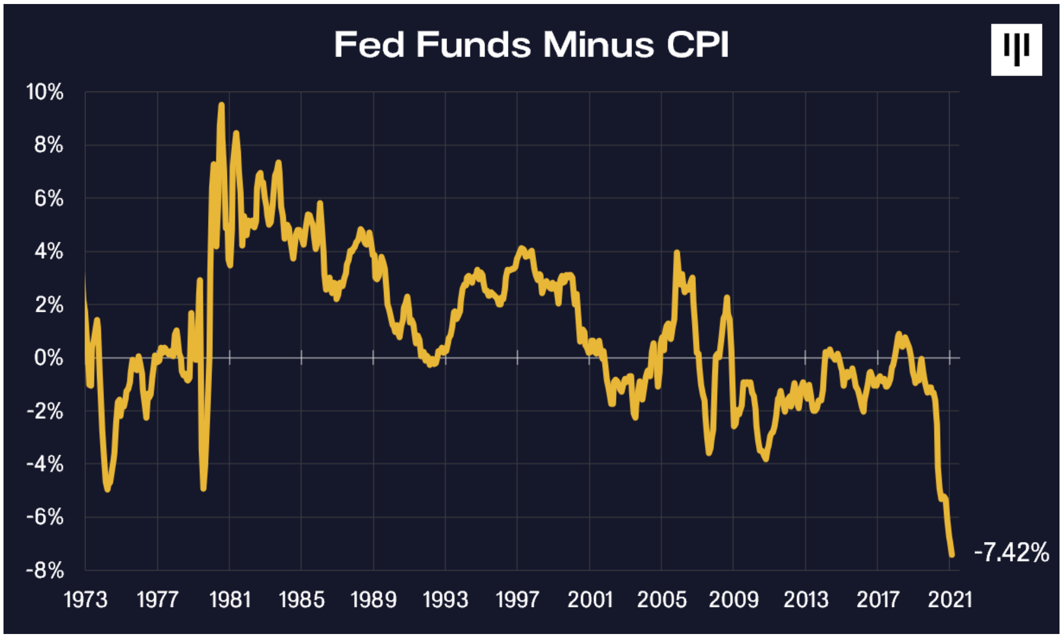
St. Louis Fed President James Bullard, in an interview on Monday with *The Wall Street Journal*, said he didn't think a larger rate increase was warranted. "We don't want to be disruptive or surprising markets," Mr. Bullard said. He said he would change his view "if the data went against us here."

What they will ultimately have to do to unwind their manipulation is going to be surprising and massively disruptive. When they're waiting for data to go against them and I look at the table above I literally cannot imagine what else they could be waiting for.

His colleague, Cleveland Fed President Loretta Mester, said Wednesday that she didn't at that point see "any compelling case to start" with the larger half-percentage-point increase.

(The appropriate rate is something like 5.00%....not 0.5%.)

REAL FED FUND RATES



Inflation is 7.42% higher than the fed funds rate (el zippo). For most of my career the Fed kept rates ABOVE inflation to put downward pressure on inflation. The average has been +0.99%. For whatever reason they are still pouring gasoline on a bonfire. We are at all-time lows.

MONEY PRINTING

Total public debt outstanding was $30.01 trillion as of January 31, according to Treasury Department data released Tuesday. That was a nearly $7 trillion increase from late January 2020, just before the pandemic hit the U.S. economy.

That makes the math easy. There are a little over 300 million Americans. $30 trillion is a hundred grand per man, woman, and child in the country. The average family's share of the national debt is $243,902.44.

I think it will be seen as a massive policy failure to be printing that debt to lower mortgage rates–and thus push up home prices–to the point homes are unaffordable to so many citizens. And, the Fed is **still** buying mortgages today with printed money.

There's going to be so many PhD theses written on whether that money printing was a wise investment in our future.

LABOR INFLATION

The labor force participation rate is still near a 50-year low. The lowest percentage of Americans in two generations are either working or looking for work.

The unemployment rate is very low because so many people don't want to work – not because there are so many jobs being filled. It's wild – we lost 2.4 million jobs and the unemployment rate went down.

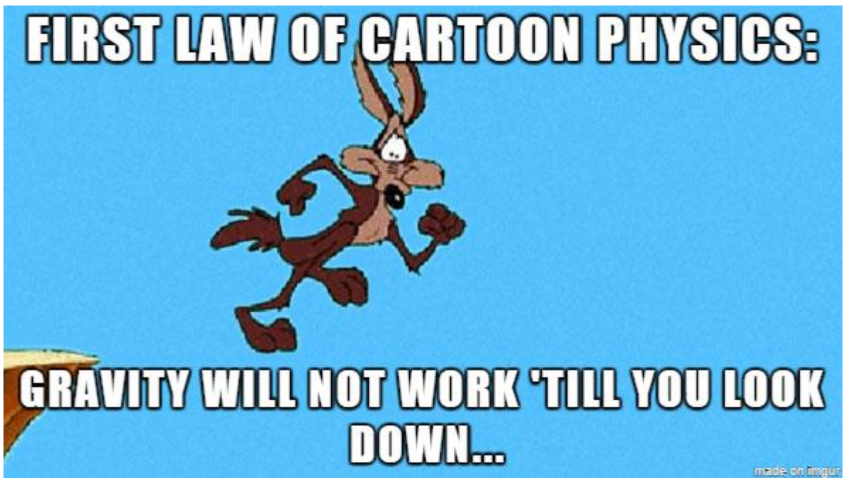
In October, there were about 3.6 million more job openings than unemployed workers, the Labor Department said. That has prompted employers to look for ways to compete for new workers.

January 18, 2022

BOND BUBBLE POP

Our last two investor letters forecast a pop in the U.S government and mortgage bond bubble. The next mega-trade has just started.

Ponzi schemes keep going until the perpetrator is stopped from the outside. They never stop by of their own volition. Bernie Madoff kept going until federal agents arrested him. Senator Manchin and 7.0% CPI growth are what stopped this one. The Fed is so far out on their Wile E. Coyote moment.



Financial gravity just locked on.

If you have not yet sold your bonds to the Fed, you might want to. By March they'll be out of the bond manipulation business. They won't do it again in my lifetime. If you are thinking of refinancing your mortgage, do it quickly. With the Fed shut down, mortgage rates will revert to the free-market rate. We will likely never see these rates again.

We'll take a deep dive into the massive gap between the Fed and reality later in the letter. First, Joey, Paul, and I want to review the incredible dynamics in the crypto markets.

GROUND CONTROL TO FED, CAN YOU HEAR ME?

"Ground Control to Major Tom
Your circuit's dead, there's something wrong
Can you hear me, Major Tom?
Can you hear me, Major Tom?
Can you hear me, Major Tom?
Can you "Here am I floating 'round my tin can
Far above the moon
Planet Earth is blue
And there's nothing I can do"

– David Bowie, *Space Oddity*, 1969

When I was a kid, the Fed reacted in real-time to reality.

They now have this bizarre notion that they have committed to some complicated minuet that cannot be altered. They have to continue the dance even though the music stopped like six months ago. Also, they believe they can see years into the future. Not seeing the 40-year record inflation that is happening right now proves they aren't omniscient.

> *"There's a real risk now, I believe, that inflation may be more persistent and. . . the risk of higher inflation becoming entrenched has increased," said Mr. Powell at a news conference Wednesday afternoon.*
>
> *"That's part of the reason behind our move today, is to put ourselves in a position to be able to deal with that risk." Fed officials in early November agreed to reduce their then-$120 billion a month in bond purchases by $15 billion a month, to $90 billion this month.*
>
> *"On Wednesday, officials said they would accelerate that wind-down beginning next month, reducing purchases by $30 billion a month. As a result, they will purchase $60 billion in Treasury and mortgage securities in January, putting the program on track to end by March. "If they could wave a wand, I think they would want to stop it altogether, because it's not needed in the economy at this point," said Kenneth Rosen, housing economist at the University of California, Berkeley. "There's so much money flowing through every single asset class."*
>
> – Fed Chair Jerome Powell, News Conference, December 15, 2021

Whaa? What is going on? They are still manipulating the mortgage market $90 billion a month?!?!? If anything they should be going the other way – selling mortgages to cool off the obviously over-heated housing market.

MAGIC WAND

What is this bizarre notion that they don't have a magic wand? They are the problem – their manipulation in the mortgage market is the problem causing record housing inflation. They **can** waive a magic wand. Just stopping is the magic wand. Not "taper" – the appropriate policy is called "cold turkey".

"We could raise interest rates in fifteen minutes if we have to," stated then-Chairman Ben Bernanke in a 2010 "60 Minutes" interview. "So, there really is no problem with raising rates, tightening monetary policy, slowing the economy, reducing inflation, at the appropriate time."

The next step in their complicated minuet – after "taper" comes "run off". That's not going to get it done either. The Fed's holdings make it impossible to fight inflation by waiting for higher interest rates based on runoff. More than 97% of the $2.6 trillion in mortgage-backed securities owned by the Fed won't mature for at least ten years. Only 20% of the Fed's $5.6 trillion in Treasury securities will come due in the next year. 42% have maturity dates longer than five years out.

WHAT MOVIE IS THE FED WATCHING?

> *"The Federal Reserve is committed to using its full range of tools to support the U.S. economy in this challenging time, thereby promoting its maximum employment and price stability goals.*
>
> *"The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. With inflation having run persistently below this longer-run goal, the Committee will aim to achieve inflation moderately above 2 percent for some time so that inflation averages 2 percent over time and longer-term inflation expectations remain well anchored at 2 percent. The Committee expects to maintain an accommodative stance of monetary policy until these outcomes are achieved."*
>
> – Federal Reserve FOMC Statement, November 3, 2021

"Inflation persistently below its goal"? This is embarrassingly behind the curve. Measured inflation is at 7.0%. That includes the spurious owners' equivalent rent of only 3.1%. If real housing inflation were included it would be double-digits – all 1970's style. (The lagged effect of true housing inflation will show up in CPI over the next two years.)

The Fed forecasts that it can ever-so-slowly raise the Fed funds rate to 2.1% in a few years. It takes more than 2.1% fed funds and 2.5% 10-year rates to stop 7% CPI and 19.1% housing inflation. Fed funds will go to at least 4-5% and mortgage rates will likely double.

A former Secretary of the Treasury and a former Fed President are starting to agree:

> *"My own view is that the Fed and the markets are still not recognizing what's likely to be necessary.*
>
> *"The market judgment and Fed's judgment is that you can somehow contain this inflation without rates ever rising above 2.5% in terms of the fed funds rate.*
>
> *"What we're going to find out is what the vulnerability of the economy is to rate increases. It may be, as some argue, that because of greater levels of debt, because asset prices are substantially inflated, the economy is more vulnerable than usual to rate increases or to quantitative tightening."*
>
> — Larry Summers, 71st US Secretary of the Treasury (1999-2001), *Bloomberg*, January 7, 2022

> *"It can't remain in the fantasyland of its dovish forecasts indefinitely.*
>
> *"I have news for those who think the U.S. Federal Reserve has turned more hawkish on inflation: It has only just begun.*
>
> *"True, the minutes from the Fed's December policy-making meeting display growing concern. Officials are acknowledging that the labor market is already very tight, and that factors such as wage growth probably won't be entirely transitory. They seem to be losing hope that more people will come off the sidelines to satisfy demand for workers. They're looking increasingly likely to raise interest rates immediately after the Fed's asset-purchase program ends in March – though there's still the wildcard of how a resurgent pandemic will affect the economy.*
>
> *"Yet Fed officials remain incongruously dovish over the longer term. Consider their latest set of projections, released following the December meeting: In an economy with above-trend growth pushing unemployment below the level consistent with stable prices, the median forecast has inflation melting away, falling to 2.6% in 2022, 2.3% in 2023 and 2.1% in 2024. This could be justified if they expected to tighten monetary policy sharply, but they don't. Their median projection for the federal funds rate at the end of 2024 is just 2.1%, well below the level they deem to be neutral.*
>
> *"This is a remarkable, even surreal forecast: Inflation won't be a problem, even if the Fed does little to rein it in.*
>
> *"I see only a couple ways for this Alice-in-Wonderland fantasy to come true. First, today's inflation could prove transitory, allowing the Fed to keep interest rates low – but this is inconsistent with the Fed's own near-term analysis and hardly plausible when the ratio of unfilled jobs to unemployed persons is at an all-time high and wage growth is picking up markedly. Second, the neutral federal funds rate could be much lower than officials' 2.5% median estimate, making the 2.1% rate projected for the end of 2024 much tighter - but there's no evidence to support such a hypothesis, and indeed no Fed officials changed their estimate of the long-term neutral rate in December.*
>
> *"More likely, the Fed will have to leave the enchanted forest. This means becoming a lot more hawkish, both in the near term and over the next few years. As the economic recovery pushes unemployment unsustainably low – something that may already have happened – wage growth will spill into consumer price inflation. The Fed will have to respond by taking interest rates above neutral well before the end of 2024.*
>
> *"How high might rates go? If inflation is running above the Fed's 2% target, they must adjust both to compensate for higher inflation and to achieve tight monetary policy. So if inflation subsides to 2.5% to 3% as supply chain issues dissipate, then a federal funds rate peak in the 3%-to-4% range seems reasonable.*

"This is a much steeper path and higher peak than financial markets currently anticipate – roughly double what Eurodollar futures imply. Markets are starting to catch on, but only very slowly. At some point, the reckoning is likely to become disruptive, triggering a sharp rise in interest rates and a large drop in bond prices. The "taper tantrum" may have been merely delayed, not avoided."

— Bill Dudley, Former President of Federal Reserve Bank of New York (2009-2018), *Bloomberg*, January 10, 2022

FED PRESIDENTS

I worked with Bill Dudley - great guy. New age Fed Presidents are day-trading stock and mortgage bond funds - on the job, during a pandemic.

Fed officials should put their assets in blind trust. However, they are allowed to buy things as long as they hold them more than a month. A Fed President sold his stocks when he heard how severe the pandemic would be. Two days later he spoke with the Fed Chair who presumably shared that in a few hours the Fed would slash rates, and he bought the same stock fund back. That's total banana republic stuff.

As we quoted two months ago:

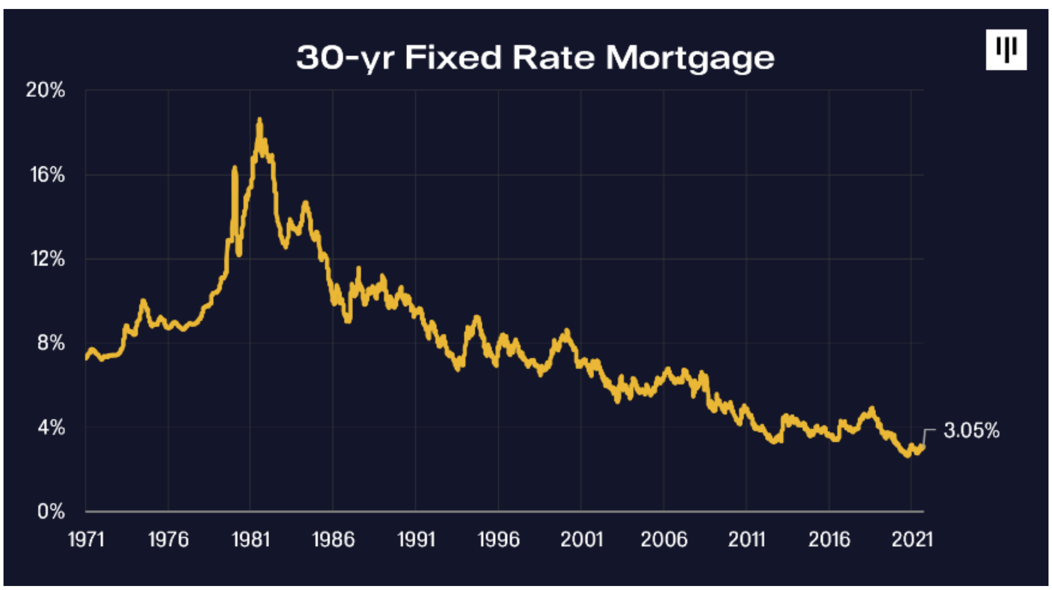
"You don't need a Presidential task force to figure out why state-less money is appealing to millions of people."

– Brett Messing, SkyBridge President & Co-CIO

#BuyBitcoin

HOUSING INFLATION

The Fed's policy is negative for the majority of Americans. 35% of Americans do not own a home. The majority have no direct stock ownership. The majority have yet to buy cryptocurrencies. Artificially driving mortgage rates to record lows is bad for the majority of Americans. It's creating the inflation which has driven after-inflation average hourly earnings negative.



"Ask renters, who tend to be middle and lower-income earners. The costs of rents and owner's equivalent rents (or OER), by far the largest share of the CPI, have risen only 3.5% and 3% in the past year, a fraction of the 14.3% rise in Zillow's Observed Rent Index and the 19.5% increase in the Case-Shiller Home Price Index. Because of how they are calculated, OER and rents are notorious laggards and will pick up sharply at least through the end of 2023."

– Mickey D. Levy, *High Inflation Needs a Policy Solution, WSJ*, December 19, 2021

"The median existing home price rose 13.9% in November from a year earlier, NAR said, to $353,900.

"The share of first-time buyers in the market fell to 26%, the lowest level since January 2014 and down from 32% a year earlier.

"On a seasonally adjusted basis, the number of homes for sale in November fell to a record low, according to real-estate brokerage Redfin Corp."

– Nicole Friedman, *Homes Sold in November at Fastest Pace in 10 Months, WSJ*, December 22, 2021

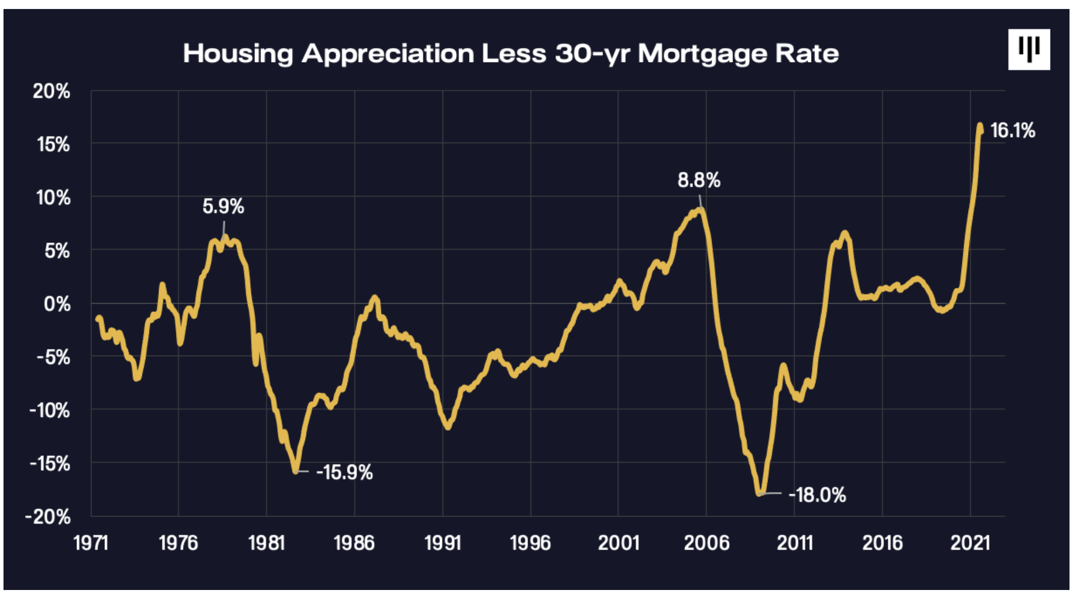
"Home prices rose 19.1% in the year that ended in October. Sales of existing homes in 2021 were expected to reach their highest level since 2006.

"Mortgages are less affordable relative to income than at any time since 2008, according to the Federal Reserve Bank of Atlanta. In early 2021, Americans needed about 29% of their income to cover a mortgage payment on a median-priced home, the Atlanta Fed estimated. That rose to 33% by October."

– Orla McCaffrey, *Red-Hot Housing Market Fuels Mortgage Borrowing Record, WSJ*, January 1, 2022

The Fed is basically daring people not to buy a house. They have driven mortgage rates to a record 16.3 percentage points below the rate of house price inflation. It's entirely rational to borrow as much money as you can from the Fed (indirectly) and buy a house.

The corollary to this is there is no chance to stop this runaway train with just 2.1% rates. Mortgage rates will double before this ends.



"Widespread inflation always comes from people wanting to buy more of everything than the economy can supply. Where did all that demand come from? In its response to the pandemic, the U.S. government created about 2.5 trillion new dollars, and sent checks to people and businesses. It borrowed another $2.5 trillion, and sent more checks to people and businesses. Relative to a $22 trillion economy, and $17 trillion of existing (2020) federal debt, that's a lot of money.

"People are now spending this money, the economy can't keep up, and prices are rising. Milton Friedman once joked that the government could easily create inflation by dropping money from helicopters. That's pretty much what our government did.

"The Federal Reserve failed at its most basic job: to figure out how much the economy can produce, and to bring demand up to, but not beyond, that supply. To that end, the Fed controls interest rates. If people get a higher interest rate on money in the bank, they will leave it there rather than spend it. But the Fed failed to see inflation coming, and kept interest rates at zero, where they remain. The Fed says it is keeping interest rates low to improve 'labor market conditions,' despite the widespread worker shortages and the eruption of inflation."

– Nick Timiraos & Gwynn Guilford, *How Do You Feel About Inflation? The Answer Will Help Determine Its Longevity*, *WSJ*, December 12, 2021

THE SUPPLY SHORTAGE IS THE POLICY-INDUCED LABOR SHORTAGE

As my Econ 101 teacher said:

"The old aphorism that inflation arises from 'too much money chasing too few goods' is close, but 'too much demand chasing too little supply' is spot on."

– Alan Blinder (Professor of Economics & Public Affairs at Princeton; Vice Chairman of the Federal Reserve, 1994-96), December 29, 2021

The supply shortage is a policy-induced supply of labor.

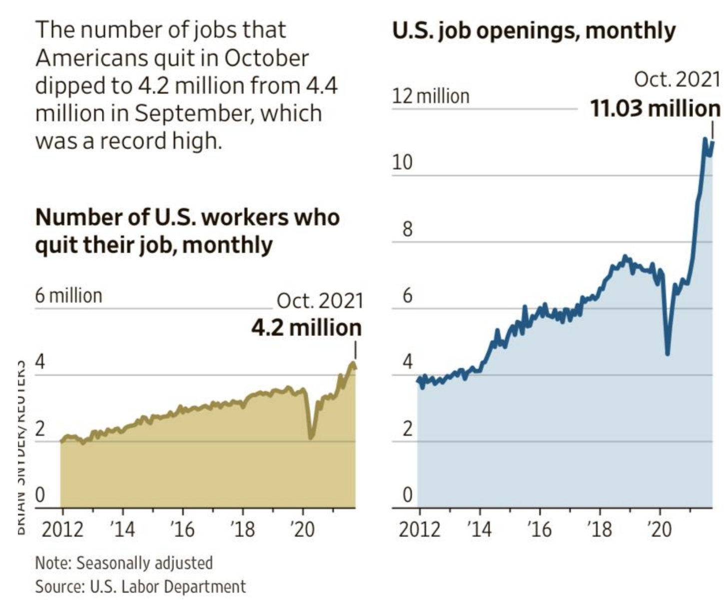
Chair Powell said, "We're making rapid progress toward maximum employment."

I don't see it that way. There are three million people who were working in March 2020 who are no longer working or looking for work.

That's what's causing wage inflation, which is causing CPI growth.

According to the Labor Department, there are 11 million job openings and only seven million people looking for work. This is the lowest ratio of unemployed people to job openings in history.

A record number of people are quitting their jobs – four million in one month alone.



c

The share of the working-age population that is either employed or seeking employment, known as the labor force participation rate, is near a 50-year low: 61.8%.

REAL WAGES

First-time claims for unemployment benefits, a proxy for layoffs, fell to 184,000 in the week ended December 4, the lowest level since September 1969. (The labor force is also much much larger now than it was in 1969.)

This sounds great, but it's not. Although wages are rising, policy-induced inflation is outstripping any gains. After-inflation average hourly earnings are now negative. The average over the last thirty years is real wage gains of 0.40% per year. Workers are now going backwards, -1.19% per year.

Workers would be much better off without current Fed policies.

WAGE-PRICE SPIRAL

Before the pandemic, it was very difficult to raise prices – domestic companies had to meet the "China price". Now Asia is having a problem delivering goods. For the first time in decades, labor has bargaining power, and even nonunionized companies are raising pay. We risk a leapfrog – raise pay to get labor, raise prices because demand exceeds supply, raise pay because of higher prices, etc.

Mohamed Aly El-Erian is President of Queens' College, Cambridge and chief economic adviser at Allianz, the corporate parent of PIMCO, where he was CEO and co-chief investment officer (2007–2014). He was chair of President Obama's Global Development Council (2012–17) and is a columnist for Bloomberg View and a contributing editor to the *Financial Times*.

> *"The underlying cause of the current surge in inflation is deficient aggregate supply relative to aggregate demand, part of which will likely prove more persistent than many, including the Fed, expect, and could change behavior in ways that risk triggering an inflationary spiral; this risk isn't well reflected in market-based measures of inflation expectations given that fixed income markets are heavily distorted by the Fed's massive bond buying program; the Fed has already fallen behind inflationary pressures on the ground by not easing off the monetary stimulus accelerator months ago; this has increased the probability that the Fed will have to slam on the brakes by raising rates very quickly after tapering and at a more aggressive pace, which would result in an undue blow to growth, and maybe even in a recession."*

– Mohamed A. El-Erian, President of Queens' College, Cambridge University, and Chief Economic Advisor at Allianz

> *"US worker shortages reflect a perfect storm of factors that have significantly reduced the supply of workers who are currently looking for jobs at the same time that labor demand has surged to all-time highs; we expect labor shortages will ease considerably in the near term as the impact of fiscal transfers and other pandemic-related disruptions diminish; however, we expect longer-term drags on labor supply, combined with still-solid labor demand, to keep the labor market tight in the coming cycle; this suggests that wage growth will likely remain relatively strong in coming years."*

– Joseph Briggs, Goldman Sachs US Economics Research, *Unpacking US Worker Shortages*

December 7, 2021

IT'S A PONZI SCHEME

I've heard that line for eight years.

Regulators are talking about bubbles and manipulation constantly.

The markets have it right – there is a massive Ponzi scheme going on. Let's investigate.

MANIPULATED MARKET

> *"The Commission concludes the requirements of Exchange Act Section . . . be 'designed to prevent . . . manipulative acts and practices' and 'to protect investors and the public interest.'*
>
> *"A pyramid scheme that is heavily rigged and from which the only way to profit is to sell to a 'greater fool' who comes later at a higher price.*
>
> *"The Commission has raised in previous orders, which have included. . . persons with a dominant position in bitcoin . . . trading based on material, non-public information"*

– *SEC Order Disapproving a Proposed Rule Change to List and Trade Shares of the VanEck Bitcoin Trust*, November 12, 2021

The bitcoin market is way too big to be manipulated. Bitcoin trades on hundreds of exchanges in dozens of countries. Bitcoin's daily volume is 1,000x as much as GameStop, which trades on just one market in just one country.

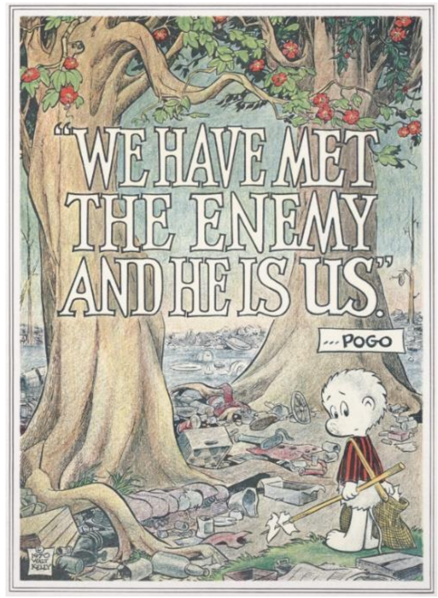
[SEC Commissioner Hester Peirce makes a very cogent argument that the bitcoin market is, in fact, adequately self-regulated here.]

BUBBLE

> *"Bitcoin (and most other Crypto-assets) as an investment asset is difficult to rationalize, which would suggest that we see a buildup of a historic bubble.*
>
> *"However, legislators have encouraged fresh speculative inflows into crypto-assets through laws such as the German Fondstandortgesetz risk to fuel the bubble and increase the eventual societal problem."*

– Ulrich Bindseil, Director General of the ECB's Directorate General Market Operations, November 19, 2021

All this extreme positioning on bitcoin doesn't make any sense. How can you have a bubble almost nobody owns? Something like 90% of institutional investors have no exposure to bitcoin or other blockchain tokens. It's definitely not a bubble.



"To know thyself is the beginning of wisdom."

– Socrates

BOND BUBBLE

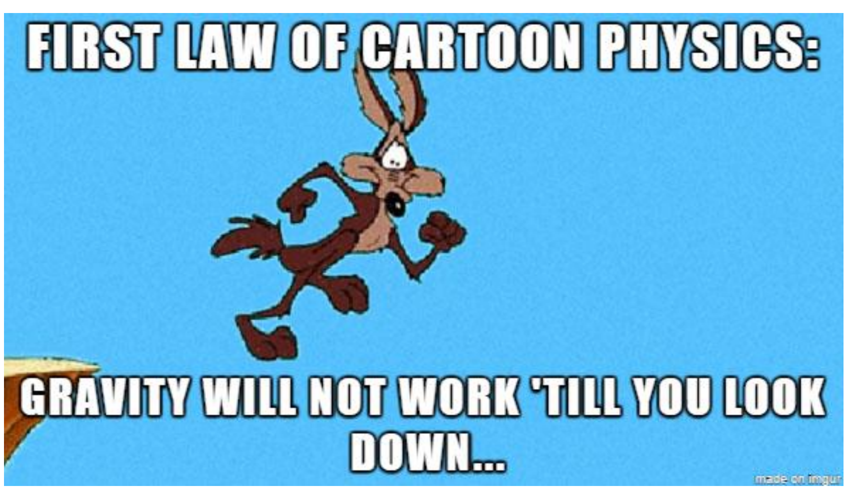
Governments should stop obsessing about bitcoin and look inward. The biggest Ponzi scheme in history is the U.S. government and mortgage bond market – 33 trillion-with-a-T dollars – all being driven by one non-economic actor with a dominant position who is trading based on material, non-public information.

All this handwringing from the Fed about "the Taper" in future years. What?!?! The Fed's strategy should be "Cold Turkey" – right now.

"Basta!"

Somebody should file a Federal Whistleblower Protection Act claim against the Fed under the statute's clause against "gross waste of funds". It's clearly a huge waste of funds to print $50,000 per family in America to push up the price of the mortgage bond REITs that Fed presidents own and the assets of other wealthy people while destroying the purchasing power of the average American, making homes unaffordable for the 35% who don't own a home, and saddling our children with more debt that it took to win World War II.

Bonds will experience a Wyle E. Coyote moment. Not sure if it's next week or down the line. After the mid-terms? But it is certain.



HEDGING INSTITUTIONAL BOND HOLDINGS WITH BITCOIN

Someday financial gravity will resume functioning.

If you're an institutional investor with any bonds, but especially if you're more like the classic 60/40 stock/bond portfolio, you might want to hedge the bond bubble with bitcoin/crypto assets.

ASYMMETRIC TRADES

I've spent my career looking for asymmetric trades – trades where the upside is many times the downside. Obviously, bitcoin/blockchain is the most asymmetric trade in a generation.

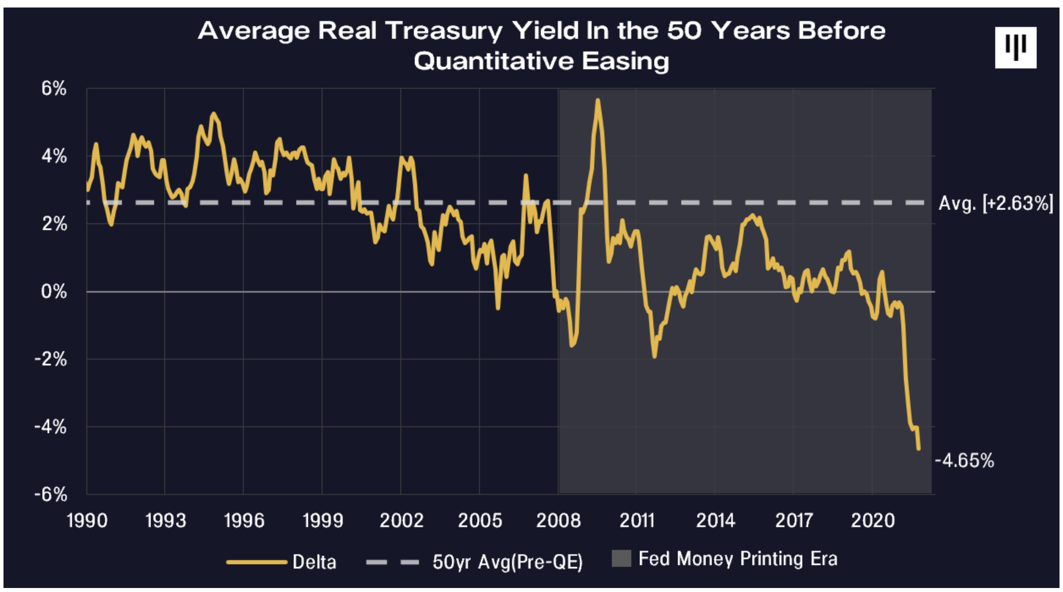
Bonds are the polar opposite. The potential upside is only a tiny fraction of the very real downside.

The U.S. 10-year note yields 1.34%. Even if the Fed drives the rate to zero – which is unlikely, but probably the furthest conceivable level – the price of the bond would only increase 13 percentage points. Now let's look at the downside . . .

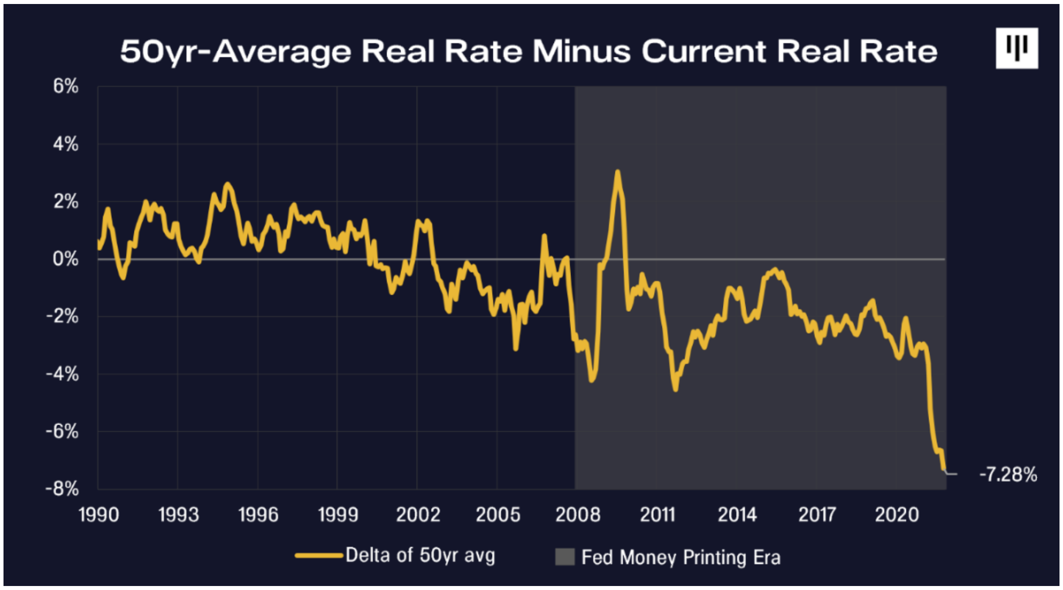
REAL RATES MASSIVELY NEGATIVE

The real rate of return is the yield a bond investor gets after inflation. For U.S. 10-year notes, the average real rate over the fifty years before money printing started (1957-2007) is 2.63%.

The Fed's decision to print half of our country's GDP and use it to push up the price of bonds has forced the real rate to negative 4.65%. (This obviously begs the question: Why would any economic actor want to buy something guaranteed to lose money?)



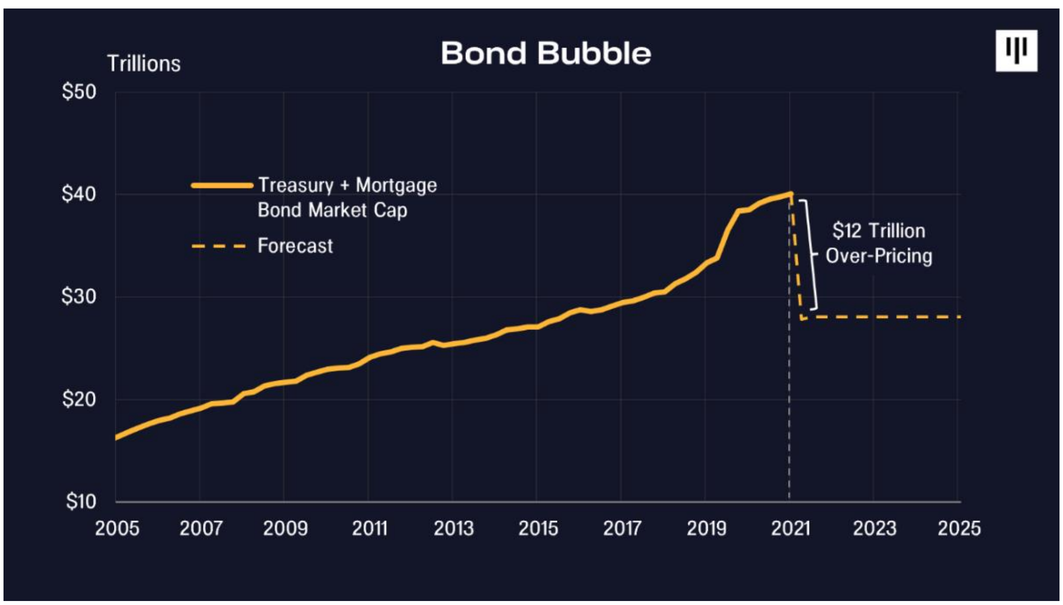
The best way to visualize just how extreme this manipulation has been is to graph the deviation of real rates from their 50-year average. The gray area is our brave new world of unlimited bond purchases. We are now an incredible 7.28 percentage points below average.



BOND BUBBLE BURST

Bonds investors are going to get absolutely destroyed when the Fed stops manipulating the bond market.

Here is the market cap of U.S. government and mortgage bonds. The huge short squeeze the Fed enacted is clear. It sent the value of bonds up $10 TRILLION. When the Fed is forced to stop, bonds will fall.

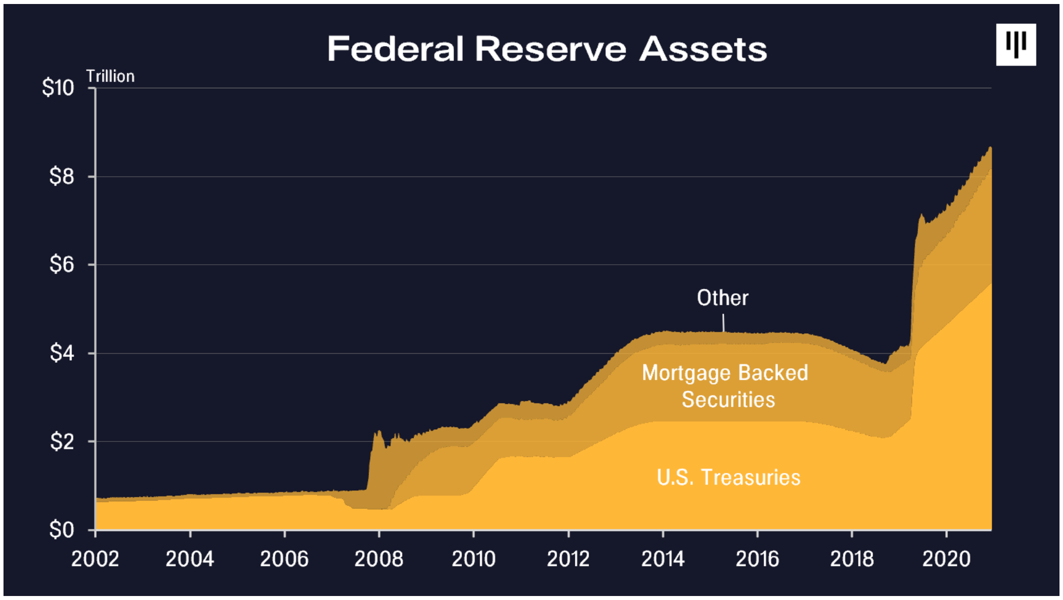


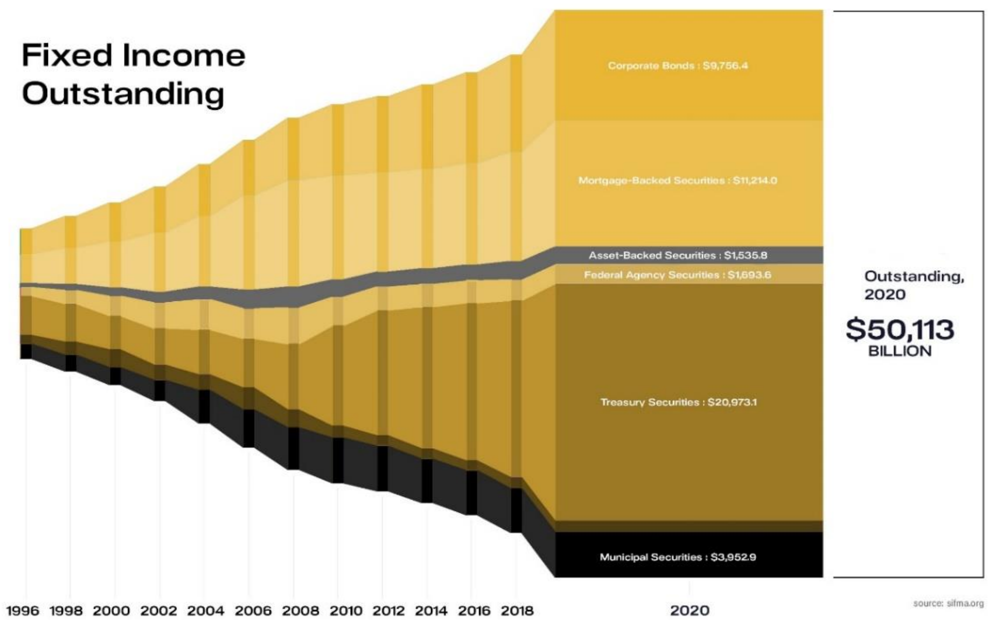
The dotted line in the above is what would happen if the real rates were no longer manipulated and they returned to the 50-year average. Bond market prices would fall 30 percentage points. This is against the maximum possible upside of 13. What if they only go halfway back to normal? $6 trillion of market cap evaporating!

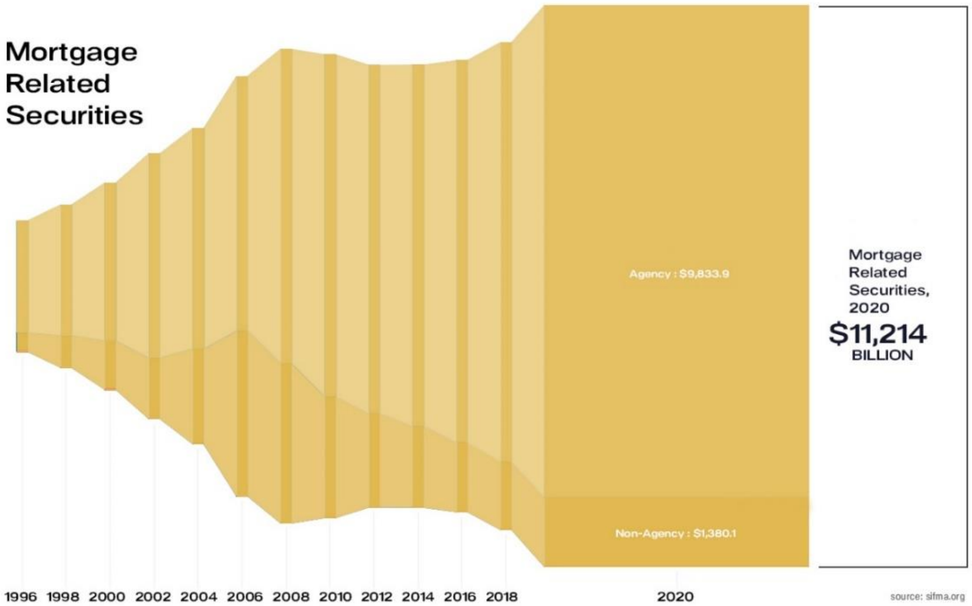
Buying crypto with only $3 trillion market cap seems like a fantastic hedge.

FED BUBBLE BURST

These growth rates are unsustainable.


Federal Reserve Assets
Trillion
$10
$8
$6
$4
$2
$0
Other
Mortgage Backed Securities
U.S. Treasuries
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020

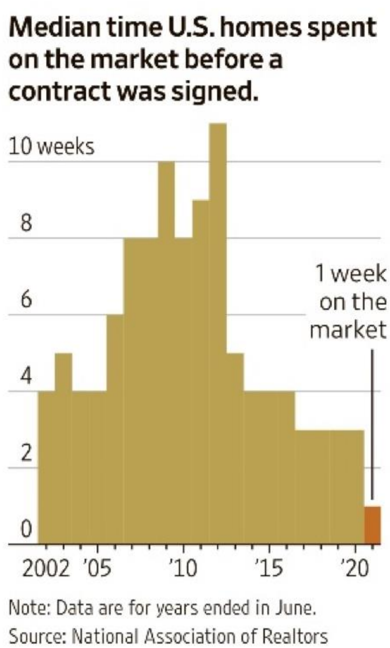

Fixed Income Outstanding
Corporate Bonds : $9,756.4
Mortgage-Backed Securities : $11,214.0
Asset-Backed Securities : $1,535.8
Federal Agency Securities : $1,693.6
Treasury Securities : $20,973.1
Municipal Securities : $3,952.9
Outstanding, 2020
$50,113
BILLION
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
source: sifma.org



HOME PRICE INFLATION

The Fed's manipulation of the mortgage market is causing unprecedented problems.

In the 12 months ending in June 2021, the median time U.S. homes spent on the market before going under contract was only one week, according to a survey released by the National Association of Realtors. That marks a record low in data going back to 1989.



That's insane. Why is the Fed **still** buying mortgage bonds? Trying to make that go negative?

FINANCIAL GRAVITY

If your institution hasn't already sold your bonds to the Fed, take the deal.

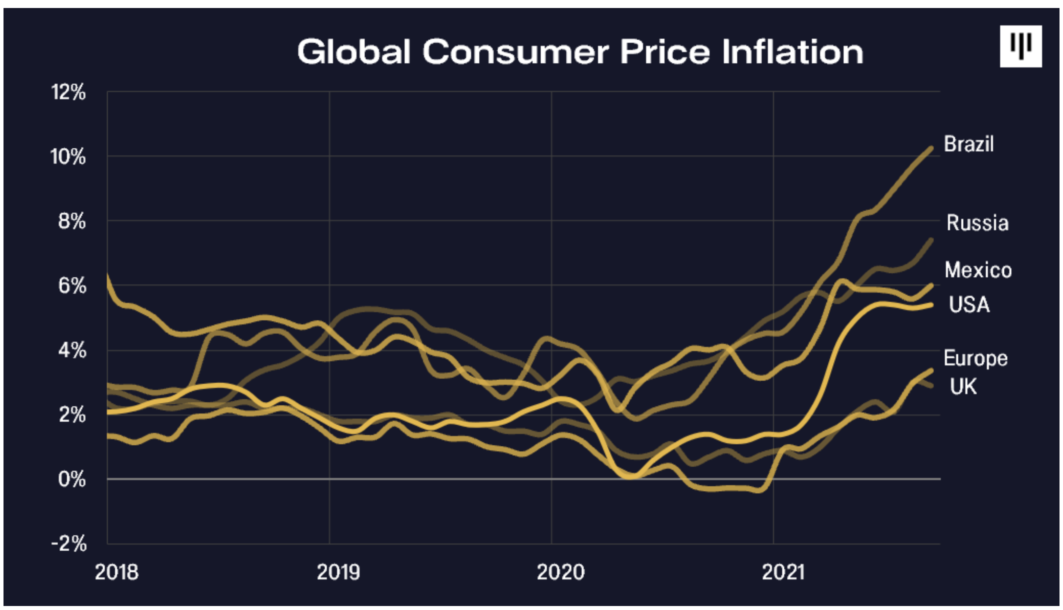
The Fed is not going to be able to overpay for your bonds forever. Take the gift.

Financial gravity will work the moment the Fed stops manipulating the market.

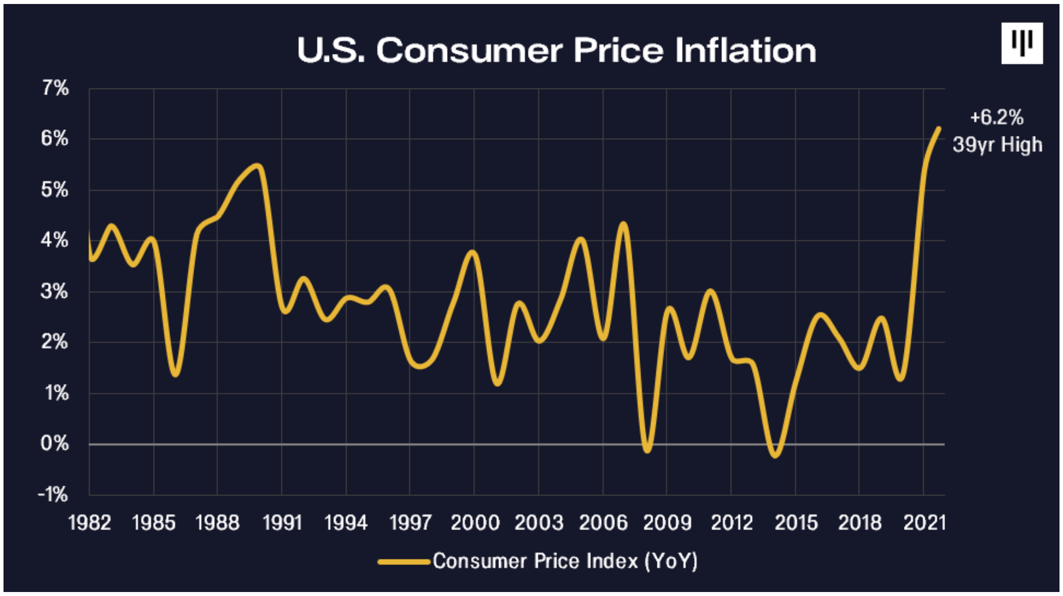
The bond bubble reminds me of a classic country song by Hank Williams, Jr. *It's All Over But The Crying.*

INFLATION IS EVERYWHERE

Here's a survey of global inflation since last month. Eurozone inflation hit a 13-year high.



U.S. year-over-year CPI hit another high – a 39-year record. You have to go back to 1982 to have seen inflation this high.



OLD SCHOOL INFLATION

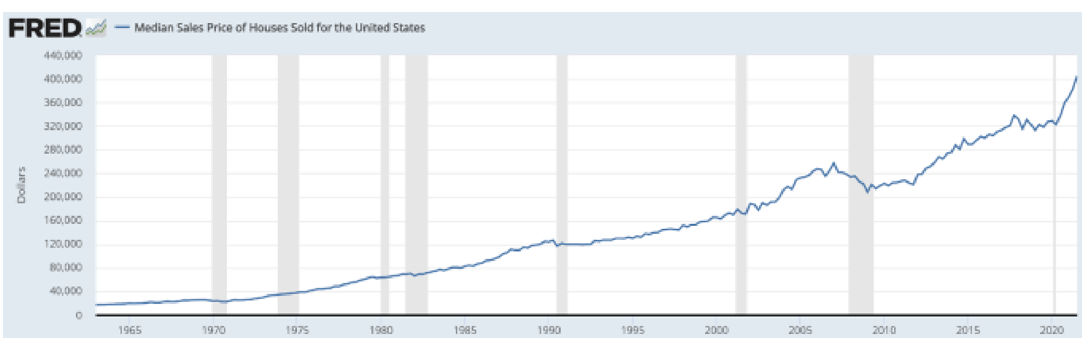
> *"Federal Reserve Chairman Jerome Powell's inflation record is much worse than official statistics show. As reported, consumer price inflation is the highest in 30 years. Based on actual prices, it is one of the highest inflation rates of the postwar period, matching the double-digit increases of the 1970s and early '80s.*
>
> *"In the 1970s, the change in house prices counted as inflation, whereas today it's what people can hypothetically be charged for rent that counts. The 6% increase in inflation in the past year would be 10%-plus using 1970s methods, since house prices are up nearly 20%, while owner rents are up 3%."*

– Joseph Carson, former chief economist at AllianceBernstein, *Wall Street Journal*, November 25, 2021

This is true. The Owners' Equivalent Rent component of CPI is up only 3.1% year-on-year. Anybody trying to rent or buy a house/condo knows that's not reflective of reality.

Sometimes zooming out helps. Owners' Equivalent Rent was invented in 1982. The index is now at 3.47359. I'm sure we'd all be happy to buy a home for only 3x what it cost in 1982.

The reality of home price inflation is this. Mortgage bond manipulation is driving up the cost of housing at a record rate.



TSUNAMI OF PAPER MONEY

The tsunami of printed money is not just pushing housing, it's floating all boats. All real, non-quantitatively-easible assets are surging up – relative to the value of paper money.

As America grapples with 3.6 million people out of work vs. pre-pandemic non-farm payrolls, the equity market keeps hitting new highs. That's clearly the result of policy excess.

Pundits talk about how overpriced stocks are. By historical metrics, they may sound overpriced. However, they are inexpensive relative to the bubble that is the bond market.

Goldman Sachs Research did a great job putting it in perspective. While stocks may seem expensive, they are cheap relative to the manipulated bond market.

> *"The Fed responded to the pandemic by flooding financial markets with liquidity and pushing the funds rate to zero. [Editor's note: The main impact has been from directly manipulating the long-term bond market.] Since the March 2020 trough, the S&P 500 index has more than doubled in a nearly uninterrupted upward trajectory to reach its current all-time high . . . .*
>
> *"At 21.6x, the P/E multiple would rank in the 93rd percentile vs. history in absolute terms. However, relative equity valuations vs. US Treasury yields would still register as attractive compared with historical averages (46th percentile) . . . .*
>
> *"The yield gap between the S&P 500 earnings yield (4.6%) and the ten-year Treasury note yield (1.6%) currently equals 301 bp, ranking in the 40th percentile vs. history."*
>
> – *Goldman Sachs Macro Outlook 2022: The Long Road to Higher Rates,* November 8, 2021

November 9, 2021

INFLATION

OK, so let's look at the government's propensity to meddle with paper currencies.

Back in the day, the Federal Reserve fought to protect the U.S. currency – specifically to avoid debasing it and eroding its purchasing power.

All the arcane theories of central banking were best distilled into this classic line by an old school Fed Chairman – William McChesney Martin, Jr.:

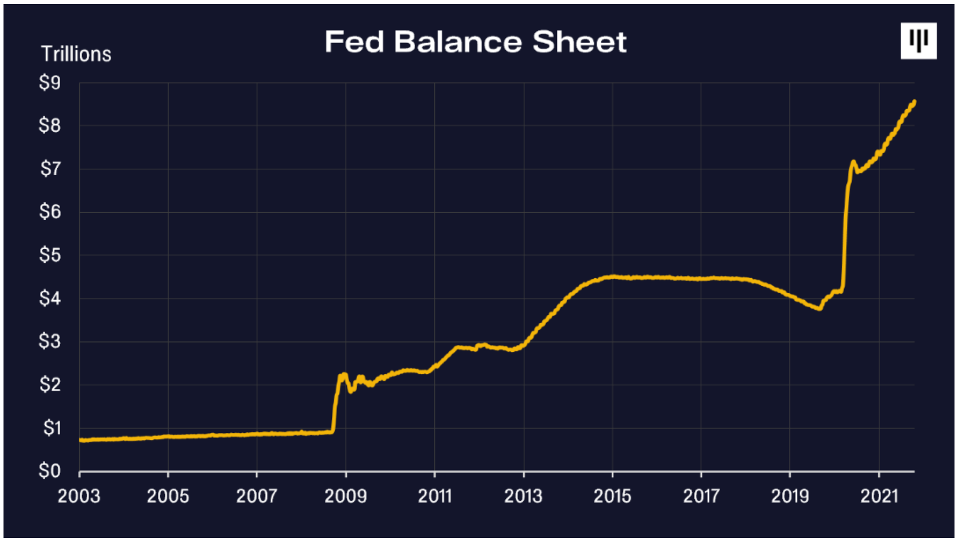
> *"The Federal Reserve...is in the position of the chaperone who has ordered the punch bowl removed just when the party was really warming up."*
>
> — Fed Chairman William McChesney Martin, Jr., October 1955, speech to the Investment Bankers Association of America

I want to state upfront I'm not one of those *"Hyperinflation is nigh!!!"* nuts who has been droning on about inflation for decades. I made my career predicting the secular decline in inflation and government bond yields around the world.

This is new, very real, and very dangerous.

Instead of taking away the punchbowl when the party is getting out of control – inflation is already at a 30-year high, housing affordability is at the worst level in 16 years, and a policy-induced labor shortage has pushed wage inflation to a 30-year high – our modern Fed is doing this:

Presenting the champagne graphically:



I'm definitely not here to Monday morning quarterback decisions made in the uncertain first days of the pandemic almost two years ago. But, we're sitting here a year after five COVID-19 vaccines were produced and the Fed is still buying $120 billion of mortgage and government debt per month. That is now clearly counter-productive to the old objective of preserving the purchasing power of paper money.

DON'T FIGHT THE FED

There's an old saying on Wall Street "*Don't fight the Fed.*" I agree. Pantera's core post-pandemic macro theme has been:

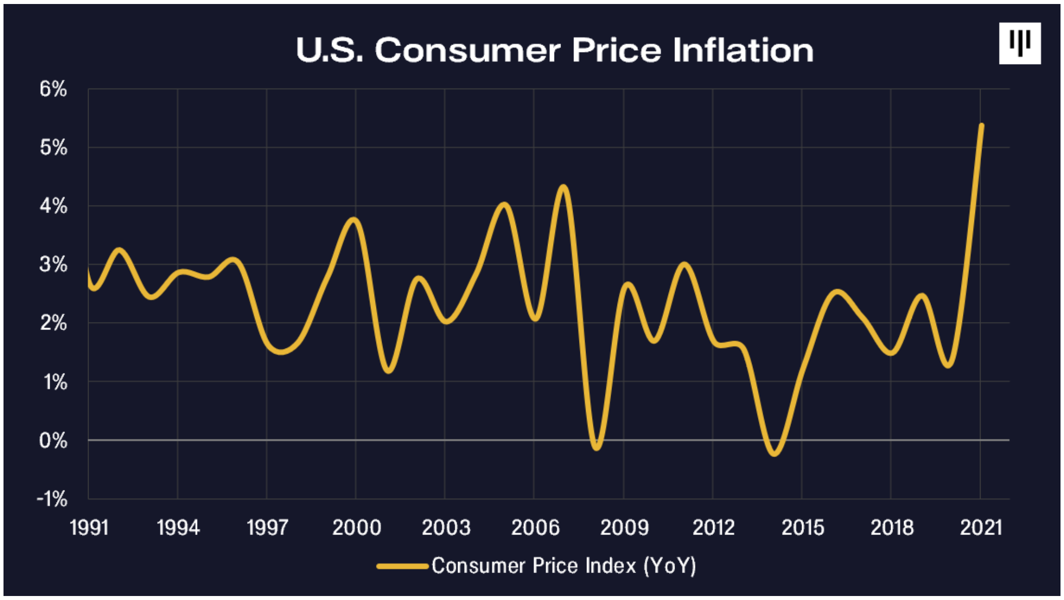
> **The unlimited printing of money will push up the price of things whose quantity cannot be eased.**

Jay Powell, the current Chair of the Federal Reserve, announced a major policy shift in 2020 aimed at bolstering the labor market – by explicitly increasing inflation. The Fed promised to keep printing money until they have more than doubled the rate of inflation.

> *"In conducting monetary policy, we will remain highly focused on fostering as strong a labor market as possible for the benefit of all Americans…*
>
> *"Following periods when inflation has been running persistently below two percent, appropriate monetary policy will likely aim to achieve inflation moderately above two percent for some time."*

It's a brave new world – when central bankers are promising to **increase** inflation. I'm old enough to remember when they used to fight it.

Over the decades, not all central banks have been successful in fighting inflation. It's complicated – takes commitment. However, **every** central bank that has tried to create it has succeeded. Venezuela is the current title belt holder, followed by Zimbabwe. What these countries have shown is that when you increase the quantity of paper money, it takes more pieces of paper to buy things of real value.



The Fed promised to keep printing money until they have more than doubled the rate of inflation. It's now at a 30-year high.

As my kids say, *"Nailed it!"*.

#BuyBitcoin

FED PRESIDENTS

The Congressional Budget Office projects the deficit for the fiscal years 2020 and 2021 to be $6.0 trillion – or $50,000 per American family.

Who decided that printing fifty grand per family in the United States was the most efficient policy response to an invisible virus?

Nobody asked me to vote.

(Cryptocurrencies let people vote with their wallets. I voted crypto.)

You know who they asked to vote? Twelve Fed Presidents and Governors.

Unfortunately, here is another bit of nostalgia or, as Ludwig Von Mises said, *"the non-observance of old customs":*

The old custom of sober Fed Presidents seems to be over. We now have Fed Presidents doing multi-million dollar stock/REIT trading while on the job – trading in the stocks of real-estate investment trusts that buy and sell the same types of mortgage bonds that the Fed was buying in large quantities.

Whaa? That's total banana republic stuff.

> *"The Federal Reserve on Monday released a rare public statement revealing an independent review by the Office of Inspector General for the Federal Reserve Board, over whether trading activity by top Fed officials 'was in compliance with both the relevant ethics rules and the law.' . . . the latest statement reflected a more concerted focus on the legality of the trades themselves.*
>
> *"During testimony on Capitol Hill last week, Powell said the trading activity of two regional bank presidents, Eric Rosengren and Robert Kaplan, appeared to comply with the current guidelines, even if* ***'the appearance is just obviously unacceptable.'***
>
> *"Those remarks came before Bloomberg News reported on the financial activities of Fed Vice Chair Richard Clarida, who moved between $1 million and $5 million out of a broad-based bond fund to broad-based stock funds on February 27, 2020, according to his disclosure forms. . .*

"The revelations have raised questions about trading rules for Fed officials – and specifically what regulators at the Fed knew about the markets and financial system as the central bank turbocharged its pandemic-era policy response. Some Fed critics have alleged that such trades also erode public trust in the central bank and, at the very least, distract from its heady responsibility of navigating the economy through a slowing recovery.

"On Friday, Bloomberg News also reported on February 2020 trades made by Clarida that came the day before the Fed issued a rare statement saying it would 'act as appropriate to support the economy' as the pandemic tightened its grip on public health and the economy."

— Washington Post, October 4, 2021

As my friend Brett Messing said:

"You don't need a Presidential task force to figure out why state-less money is appealing to millions of people."

— Brett Messing, SkyBridge President & Co-CIO

One of my favorite O.G.s, Jeremy Allaire, a co-creator of the USDC stablecoin, said it well:

"The Bitcoin thesis is that we are going to see continued growth in non-sovereign money. People around the world are going to see the value of a censorship-resistant, highly-secure digital asset such as bitcoin."

— Jeremy Allaire, Circle CEO, *CNBC*, June 24, 2019

U.S. DOLLAR :: NEW ALL-TIME LOW

"The dollar may be our currency, but it's your problem."

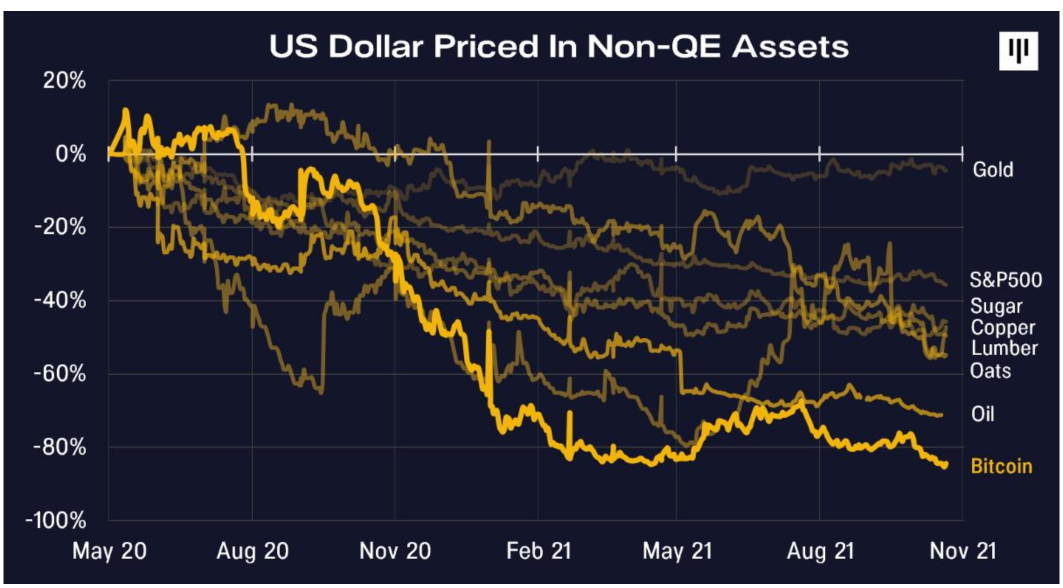
— U.S. Treasury Secretary John Connally's infamous remark, 1971

It seems like the price of everything is surging up. At first blush, this seems odd during a worldwide financial crisis. A better perspective is that the value of most things is relatively stable – it's just the value of paper money that is being debased at a rapid rate.

To help visualize what money printing is doing to the price of the U.S .dollar, we've plotted the value of the dollar in terms of things that cannot be quantitatively eased:

Sheets of copper	Board feet of lumber	Grams of sugar
Ounces of gold	Bushels of oats	Per bitcoin
Barrels of oil	Shares of the S&P 500	

Paper money has hit an all-time low against most hard assets.



To some, the surprising one is gold. It's the least-good performer. Gold is losing market share to digital gold.

Bitcoin hit a new all-time high on October 20th, reaching $66,930.

The last time bitcoin retook its all-time high after falling over 50%, it went 3.2x above that shortly thereafter. The average increase of the past three instances of making a new all-time high – 8.8x over a 166-day period.

Bitcoin Returns After Retaking All-Time High

	1-month	3-month	6-month	12-month	Since ATH
November 2013	417%	274%	103%	52%	29,374%
January 2017	-7%	3%	134%	1,303%	5,597%
December 2020	80%	183%	91%		215%
October 2021					

Ethereum also set a new all-time high this month, surpassing $4,362 previously set in May.

We've entered a new price era. Buckle in.

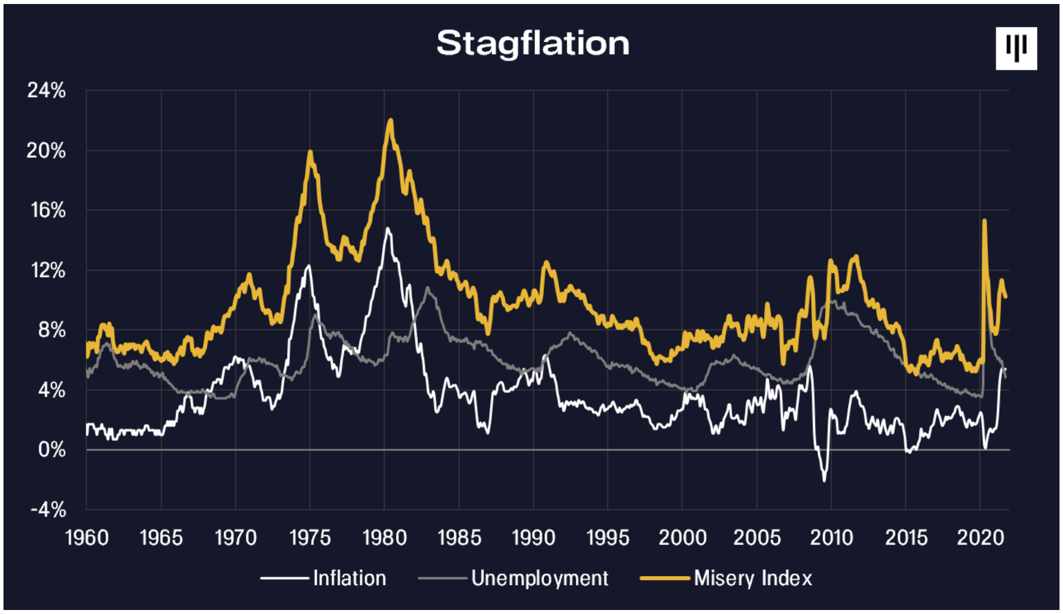
STAGFLATION

The Fed's goal statement:

> ***"The goals of maximum employment and stable prices are often referred to as the Fed's 'dual mandate'."***

Unfortunately, policies have gotten it backward: 50-year low employment participation and 30-year high inflation.

The 1970s gave us stagflation – immortalized in the popularization of the "misery index" – the sum of the unemployment and inflation rates. It has doubled in the past two years – a feat last performed in the mid-1970s.



The consensus forecast is for inflation to hit 6.1% by December.

Wage inflation will cause persistent goods inflation.

Ultimately stagflation is bad for asset prices. The Dow Jones Industrial Average was at the same level in 1979 as it had been in 1965.

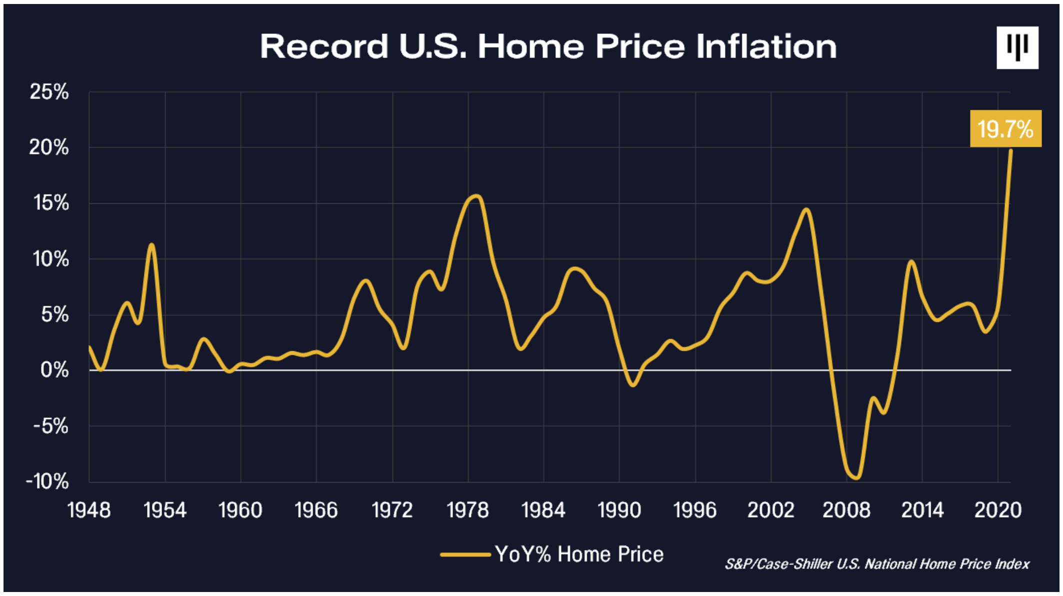
INFLATION IS EVERYWHERE

> *"Inflation is always and everywhere a monetary phenomenon in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output."*
>
> — Milton Friedman, 1970, *The Counter-Revolution in Monetary Theory*

And, it is **everywhere**. A quick survey of various inflation readings. . .

HOME PRICE INFLATION

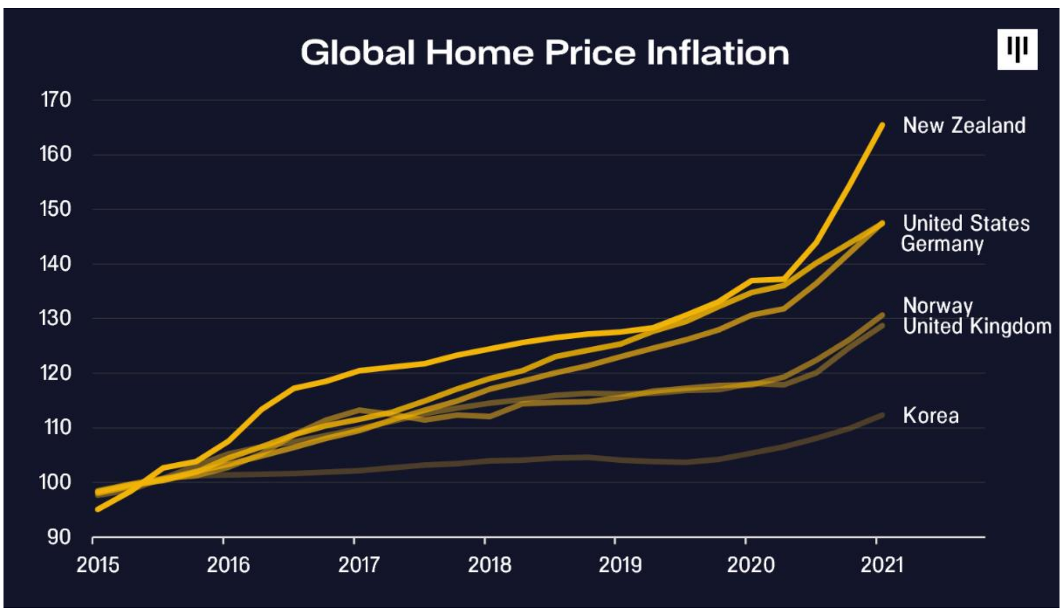
With so many Americans out of work, how can we have the highest rate of home price inflation and the highest median home price in history? This can only result from excessive money printing.



"The S&P CoreLogic Case-Shiller National Home Price Index, which measures average home prices in major metropolitan areas across the nation. . . marked the highest annual rate of price growth since the index began in 1987."

— Wall Street Journal, *U.S. Home-Price Growth Rose to Record in June*, August 31, 2021

It's a global phenomenon.

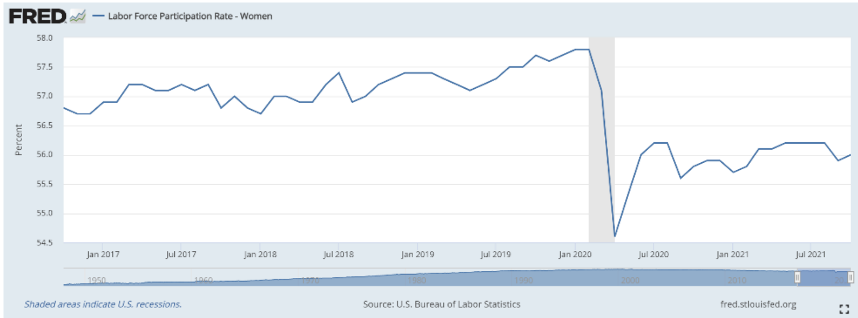


WAGE INFLATION

The unemployment rate doesn't reflect the fact that millions have left the workforce.

4.7 million fewer Americans are working than before the pandemic. Population growth has added more than a million who would have otherwise have been employed on trend.

Fueling the labor-market imbalance is the fact that many workers, particularly women, find it difficult to work outside the home. This is particularly true of women with school-age children. Extended school closings have driven the workforce participation rate for women to hit a 33-year low.



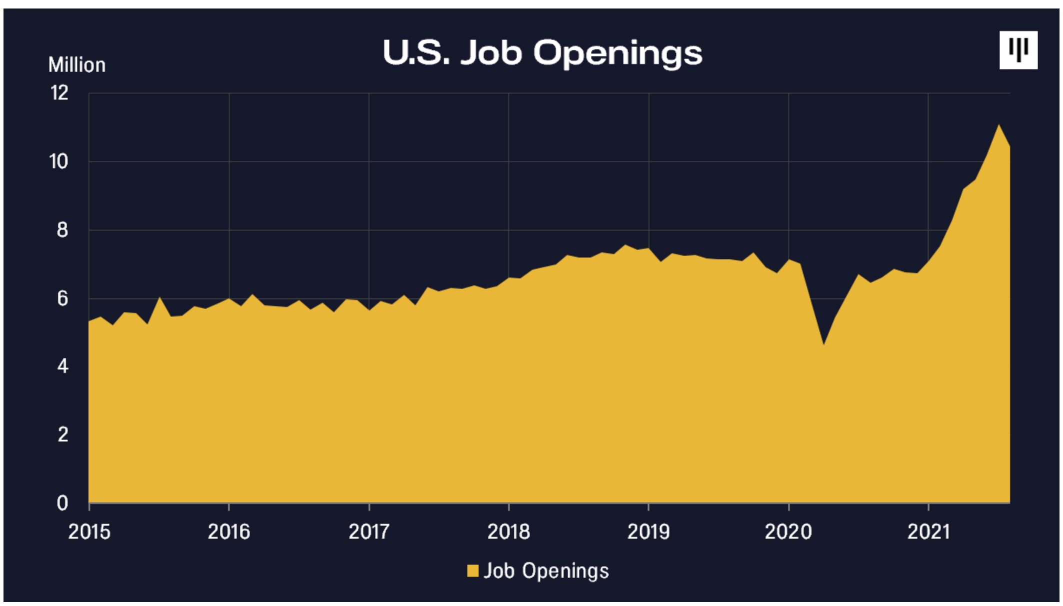
We'll feature another group – gig economy workers who have also left the labor force – below.

The labor force participation rate is the lowest in 50 years. At 61.6%, it's the lowest level since June 1976. Maybe it's not a coincidence that the last time the Fed experimented with massive printed money all the same things happened. This starting to look the like 70's again.

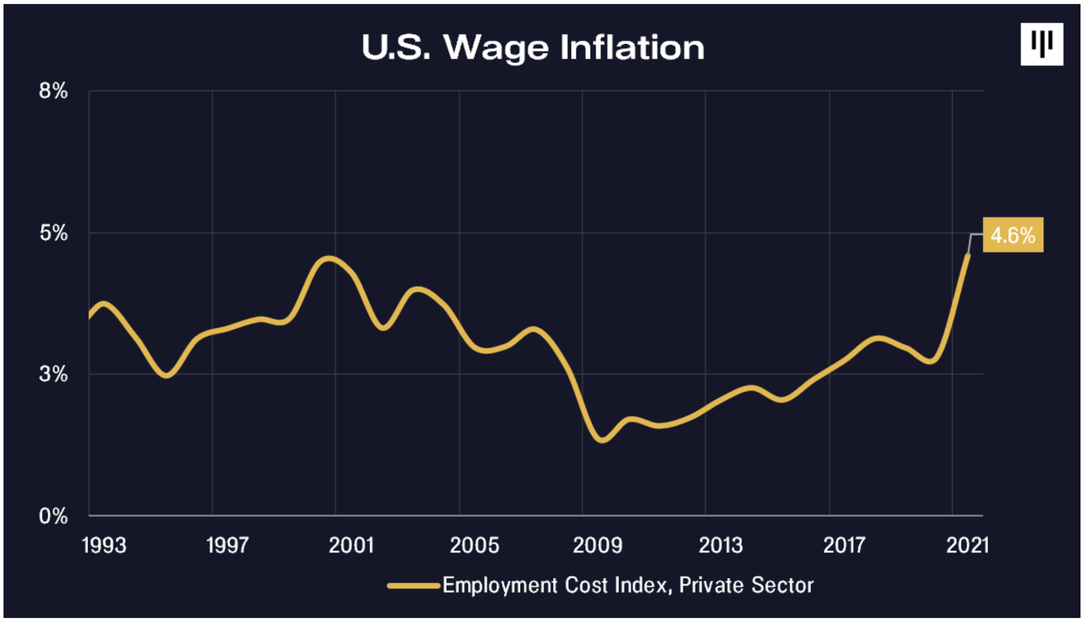
I'm just glad this time we have crypto to protect our purchasing power.

Without all those talented people in the workforce companies are facing a labor shortage. Job openings reached a record 10.1 million in June as unfilled jobs continue to outpace unemployed workers actively seeking employment.

With all these people who have left the labor force we have the paradox of a labor shortage while at the same time low employment. Job openings surged to a record high. Companies are actively trying to hire 10 million workers.



The labor supply shock is causing a surge in wage inflation. The U.S. Employment Cost Index for private sector workers has already hit a 30-year high.



The wage-price spiral has started.

UBER INFLATION

One of my favorite real-time indicators of the labor market is Uber inflation. It has the clearest wage-price transmission proof.

Gig economy workers are the flex load balancers in the system. Changes in the labor market are immediately reflected in the price of Uber rides.

Gig workers and the self-employed have not paid into unemployment insurance and thus were not previously eligible for such payments. Under relief bills passed by Congress, former gig workers get jobless benefits. Those receiving benefits get an additional $300 a week on top of regular state benefits, which average $318 a week. This has enabled many to leave the workforce.

> *"The cost of a ride from a ride-sharing app like Uber or Lyft increased 92% between January 2018 and July 2021, according to Rakuten Intelligence.*
>
> *"In early July 2021, Uber and Lyft drivers were about 40% below capacity. The companies have taken notice, and are investing millions worth of bonuses and base rates to convince drivers to return."*
>
> — CNBC, *Why Many Uber And Lyft Drivers Aren't Coming Back*, July 4, 2021
>
> *"An economic report Uber commissioned earlier this year found this disparity was particularly pronounced in the US, where the number of active drivers was still down more than 50 percent at the end of 2020 compared to 2019. But just a few months later, in March 2021, Uber's bookings reached an all-time high, according to Insider."*
>
> — Popular Science, *Why Your Uber And Lyft Rides Keep Getting More Expensive*, August 31, 2021

UNINTENDED CONSEQUENCES

Home Affordability Hits Lowest Point in Years

By Orla McCaffrey

House prices are rising at a record pace, but incomes aren't keeping up—which is making home ownership less and less affordable.

The median American household would need 32.1% of its income to cover mortgage payments on a median-priced home, according to the Federal Reserve Bank of Atlanta. That is the most since November 2008, when the same outlays would eat up 34.2% of income.

Supercharged home prices in markets across the country are canceling out the impact of modestly higher incomes and historically low interest rates, two factors that typically make owning a home more affordable. Prices rose at a record pace for the fourth consecutive month in July, driven by a shortage of houses for sale. Higher prices require buyers to take out larger loans, essentially signing them up to make larger mortgage payments each month for years.

The Atlanta Fed calculates affordability using a three-month average of median home prices from **CoreLogic** Inc. and median household incomes based on census data. In July, the latest month in the Atlanta Fed's calculations, median home prices were $342,350, up 23% from the year before. Median incomes were $67,031, up 3%.

Declining affordability will have the biggest impact on buyers shopping for their first homes, who will have to sign up for larger monthly payments, buy less desirable homes or step back from the market altogether, economists said.

"It's a lot more difficult for people to get their foot in the door of the housing market," said Ralph McLaughlin, chief economist at Haus, a home-finance startup. "The question is whether it is an insurmountable hurdle or is it just that these households have to spend more of their monthly income on the mortgage."

The dynamics were different in 2008, even if the effect—disarray in the housing market—was the same. Home prices were falling, and many Americans owed more on their homes than the homes were worth. What's more, widespread job losses weighed on household income for years.

Median home prices of $342,350 in July were up 23% from the year before.

Christopher Ferreris and his wife, Danielle Ferreris, have been hoping to purchase a home in the Tampa, Fla., area for close to two years. They can afford about $1,600 in monthly payments, but every house they have seen requires monthly payments about 25% bigger than that. "It's almost like we've gotten into a holding pattern because of how difficult it is," Mr. Ferreris said.

The typical value of a home in Tampa was $331,000 in August, up from $265,000 at the same time last year, according to Zillow.

The Ferrerises are doing everything they can think of to save money, and Mr. Ferreris started a side business last year buying and selling sports cards. He now counts on it for about $500 each month.

During the early months of the pandemic, homes became more affordable, according to the Atlanta Fed. Interest rates fell. And home prices, while still rising, weren't accelerating at such a fast pace.

But then many families, after sitting on the sidelines for a few months, raced to buy homes, eager for more space or to move out of crowded cities. The fierce competition sent home prices soaring. Affordability began to decline.

At the start of 2021, Americans needed about 29% of their income to cover a mortgage, the Atlanta Fed estimated. That rose to about 32% by July. The Atlanta Fed includes principal, interest, taxes, insurance and related costs in mortgage payments.

"Any affordability that mortgage rates lended has pretty much been erased at this point," said Daryl Fairweather, chief economist at real-estate brokerage Redfin.

Home buyers have noticed. About 63% of consumers surveyed in August believed it was a bad time to buy a house, according to Fannie Mae. That was up from 35% at the same time last year.

> *"In conducting monetary policy, we will remain highly focused on fostering as strong a labor market as possible for the benefit of all Americans.*

Money printing is not a precision instrument. Unlimited money printing isn't benefitting all Americans. These policies are fostering a massive surge in income inequality.

35%[2] of Americans don't own a home. These policies are unambiguously bad for those who don't own a home, own stocks, and for those of us who don't own mortgage bond REITs.

> *"Consumer prices have been rising faster than average wages – meaning that, on average, workers are seeing the purchasing power of their paycheck fall. People looking to buy a car or build a house or obtain a wide variety of other products are finding it hard to do so.*
>
> *"Wages and salaries in the private sector were up 3.6 percent in the second quarter from a year earlier, according to Employment Cost Index data, the strongest since 2002. But the Consumer Price Index was up 4.8 percent in that same span, meaning workers lost ground.*
>
> *"Jason Furman, a Harvard economist and former chairman of the White House Council of Economic Advisers: 'There is such a thing as too much stimulus, which becomes counterproductive, either because inflation eats away wage gains or the supply side of the economy can't keep up.' "*
>
> — Neil Irwin, *Biden and the Fed Wanted a Hot Economy. There's Risk of Getting Burned*, August 23, 2021

---

[2] https://policyadvice.net/insurance/insights/home-ownership-statistics/