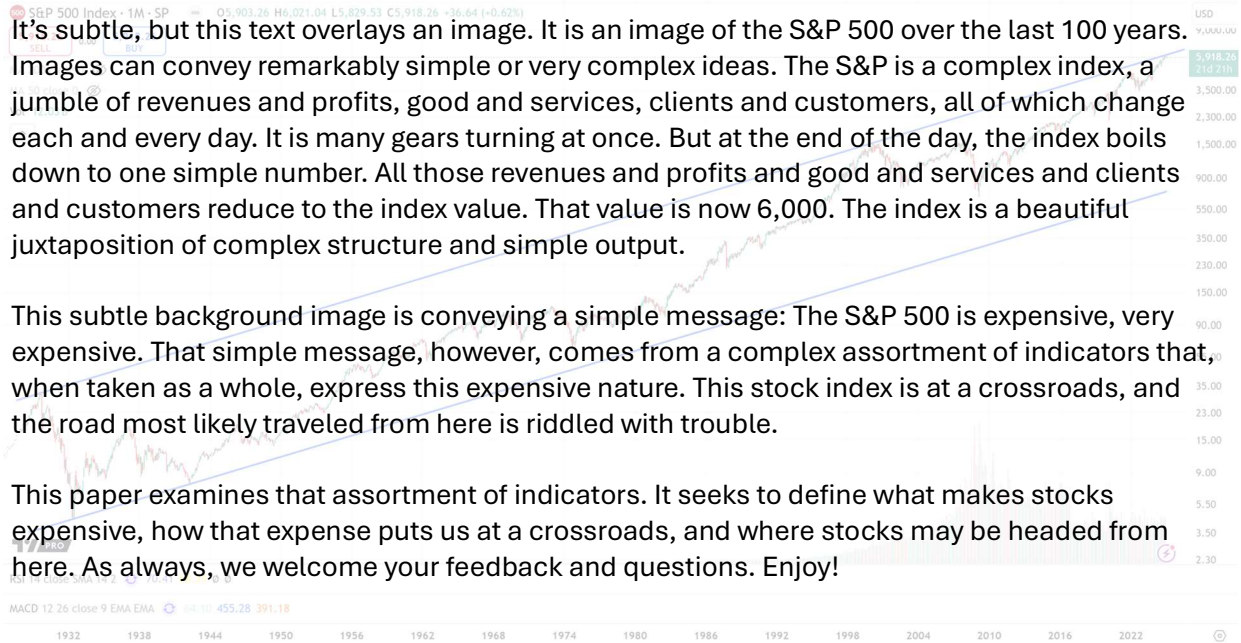


A Picture is Worth a Thousand Words



Risks in the Stock Market

Suppose you walk into your doctor's office for your annual wellness visit. It's a fair guess that a couple of things are going to happen:

- Your height and weight will be taken.
- Your blood pressure and pulse will be measured.
- A physical examination of your head, neck, chest, and abdomen will be done.
- A complete blood test will be taken, measuring dozens of blood levels like cholesterol, blood sugar, and sodium levels.

Your doctor will look at the multitude of data points on your body and give you an opinion: you are either healthy or unhealthy.

If you are unhealthy, your doctor will recommend some sort of intervention. Maybe you need to try a new diet. Maybe you need to exercise more often. Maybe you need a prescription medication. Maybe you need a combination of the three.



The same way these exams and tests measure your health to determine if you are healthy (or not), there are "tests" to measure the health of the stock market. We have spent countless pages of past commentaries highlighting many of these tests. These commentaries have shown, time and again, just how unhealthy the stock market has been and continue to be.

And the same way the doctor recommends an intervention if the tests conclude you are unhealthy, an advisor will recommend some intervention in your portfolio if the stock market tests come back unhealthy. Hence our consistency in maintaining a conservation investment allocation.

Since our last commentary in June 2024, these “tests” of the stock market have only gotten more negative. We want to focus on one simple graphic, Figure 1¹, today to drive home this point.



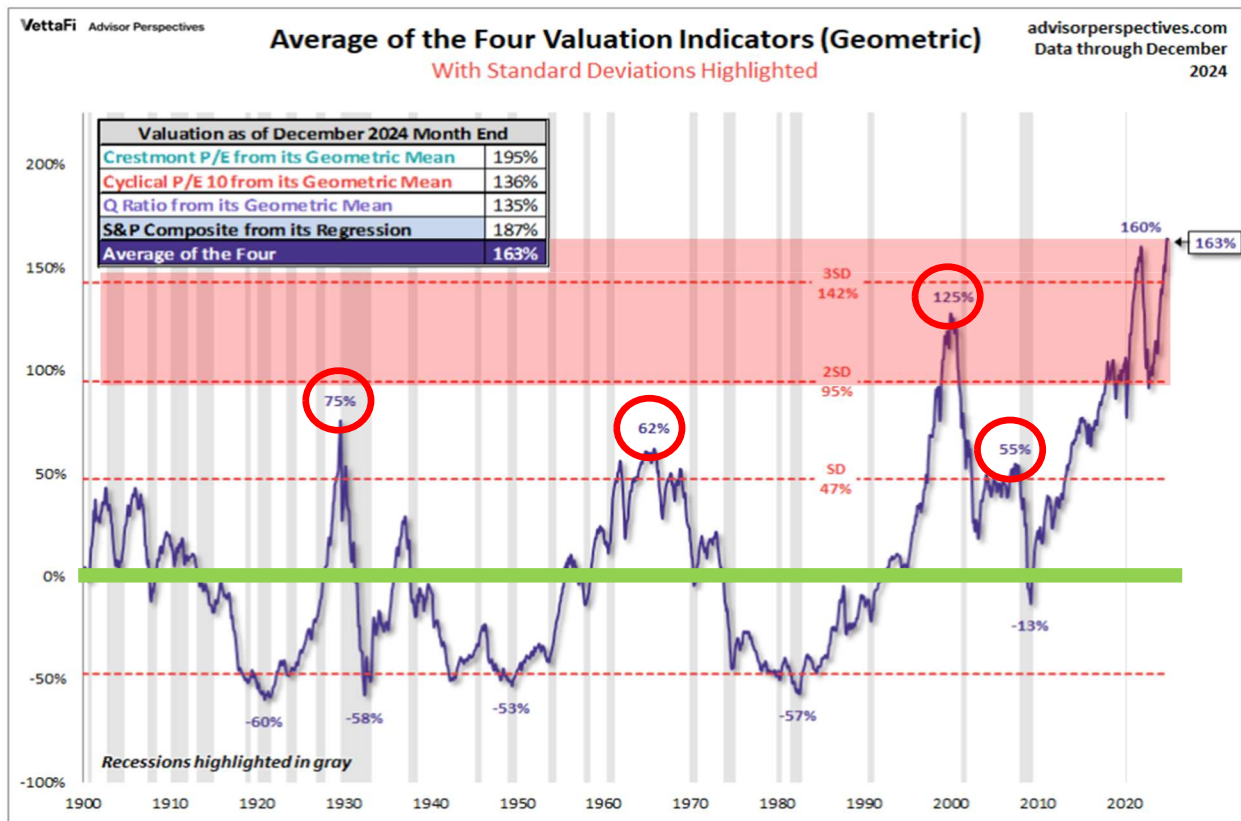
If we ask Chat-GPT² which four health tests are most predictive of bad health, it suggests these four data points:

- Blood pressure
- Body Mass Index (BMI)
- Smoking Status
- Blood Glucose

The equivalent of these four health tests in the stock market are the four factors noted in Figure 1. These stock market health factors are analogous to the actual health factors above. Simply, these stock market factors are highly predictive of the current health of the stock market.

- Crestmont P/E from Geometric Mean
- Cyclical P/E from Geometric Mean
- Q Ratio from Geometric Mean
- S&P Composite from Regression

Figure 1: Extreme Stock Market Valuations



¹ Source: <https://www.advisorperspectives.com/dshort/updates/2025/01/03/market-valuation-is-the-market-still-overvalued>

² The Chat-GPT prompt used was “What four data points are most predictive of bad health?”

Let's apply some context to this chart. The thick green line at 0% is normal. What does normal mean? Normal is walking into the doctor's office and having a blood pressure of 120/80 and a BMI of 23 and blood glucose of 50 mg/dL and no smoking history. These are all measurements consistent with someone in good health.

If our stock factors are near 0%, it means the stock market is in good health.

The farther the health factors move above 0%, the unhealthier the stock market is.

What if your blood pressure was 200/120? Your heart would be primed to explode from a heart attack.

What if your BMI was 40? Your obesity would make you a candidate for chronic issues like heart disease, breathing problems, and stroke.

What if your blood glucose was 250 mg/dL? You would be incredibly diabetic, suffering from chronic fatigue, frequent infections, and numbness or loss of feeling in your limbs.

What if you smoked three packs a day? Your lungs would look like deep-fried balloons, simply waiting for cancer or emphysema to develop.

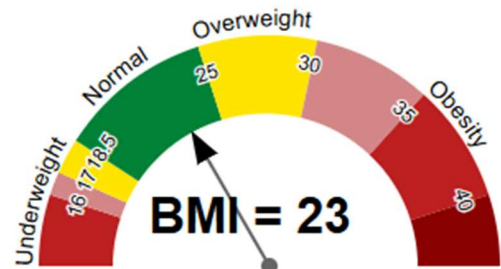
What if your blood pressure was 200/120 **and** your BMI was 40 **and** your glucose was 250 mg/dL **and** you smoked three packs a day? No bueno.


This is exactly the setup the stock market faces today. Remember, the father above 0%, the unhealthier that stock market is. Today, our four health factors are at 163%. **In the 124 years of data presented on this chart, the stock market has never been unhealthier.**


Now notice the thick red band between 100% and 163%. Since 2021, the stock market's health has hovered between these levels. For the better part of the last three years, the stock market has been massively unhealthy. An unprecedented level of unhealthy. When we say we have been consistently conservative in our past commentaries, this is way. Our four health factors – four factors which are highly predictive of market health – have been flashing warning signs for three straight years.

Blood Pressure	Systolic (Upper#)	Diastolic (Lower#)
Normal	Under 120	Under 80
Prehypertension	120-139	80-89
Hypertension (Stage 1)	140-159	90-99
Hypertension (Stage 2)	Above 160	Above 100
Hypertensive Crisis	Above 180	Above 110

BMI = 23 kg/m² (Normal)



Let's put more context around this. We have put  over prior bubbles in the stock market.

- First  = Great Depression
 - Total stock market loss = Over 80% loss
 - From 1929 to 1947 (18 years), bonds outperformed stocks
- Second  = Credit Crunch
 - Total stock market loss = Over 20% loss
 - From 1966 to 1985 (16 years), bonds outperformed stocks
- Third  = Dotcom Bubble
 - Total stock market loss = Over 50% loss
 - From 2000 to 2013 (13 years), bonds outperformed stocks
- Fourth  = Great Financial Crisis (Housing Bubble)
 - Total stock market loss = Over 50% loss
 - From 2008 to 2013 (5 years), bonds outperformed stocks

When the stock market get unhealthy, bad things happen. Never, in the last 124 years, has the stock market been as unhealthy as it is now.

One last crucial point about health: If blood pressure, BMI, glucose, and smoking are off-the-charts. You are a walking, ticking health bomb. But when that bomb blows up is unknown. Maybe you have a stroke tomorrow. Or a massive heart attack a year from now. Just because you have not had the stroke or heart attack yet does not mean it won't happen. It always happens when your health is this bad. It is just a matter of time.

The same logic applies to the stock market. Just because the market hasn't imploded yet does not mean it won't. In fact, as we have shown, it always implodes when the health gets this bad.

Before we move onto precious metals, we encourage you to review the [commentary from June 30, 2024](#). In that piece, we highlighted various other health factors for the stock market. Among these factors were:

- Price to Sales
- Buffet Indicator
- Yield Curve Inversion
- Discounted Cash Flows

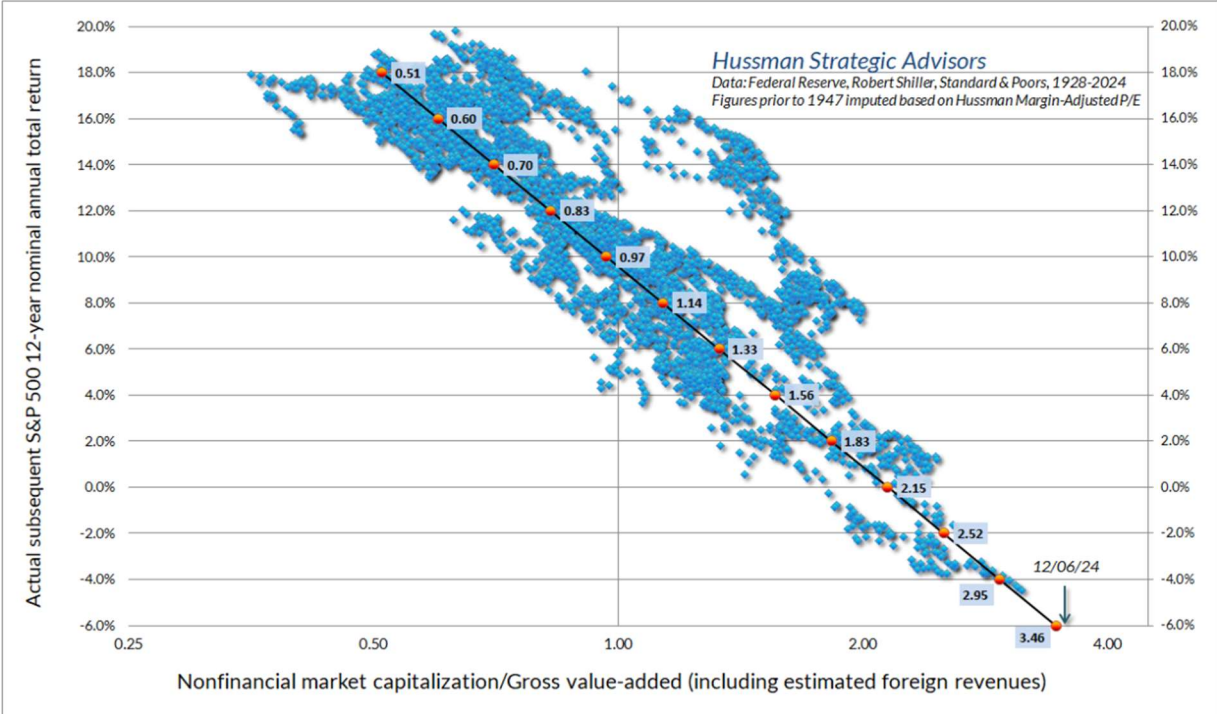
These factors help us understand how far the stock market may fall once the recession starts in earnest. Since we covered these factors in detail back in June, we will cut right to the chase now.

Price to Sales

The price-to-sales ratio continues to hover near all-time highs, per Figure 2³. This implies that stock returns over the next decade will be considerably lower than average. The current ratio implies a -46% stock market return over the next decade.

³ Source: <https://www.hussmanfunds.com/comment/mc241218/>

Figure 2: Price-to-Sales vs. Subsequent Returns



Buffet Indicator

Like the price-to-sales ratio, the Buffet Indicator is sitting near all-time highs, per Figure 3⁴. With a value of 208%, the Buffet Indicator implies a -45% stock market return over the next decade.

Figure 3: Buffet Indicator



⁴ Source: <https://currentmarketvaluation.com/models/buffett-indicator.php>

Yield Curve Inversions

In the second half of 2024, the 2y-10y Treasury yield curve finally un-inverted. The curve first inverted on June 27, 2022, after which time it stayed inverted until August 26, 2024. In total, the curve was inverted for 791 days.

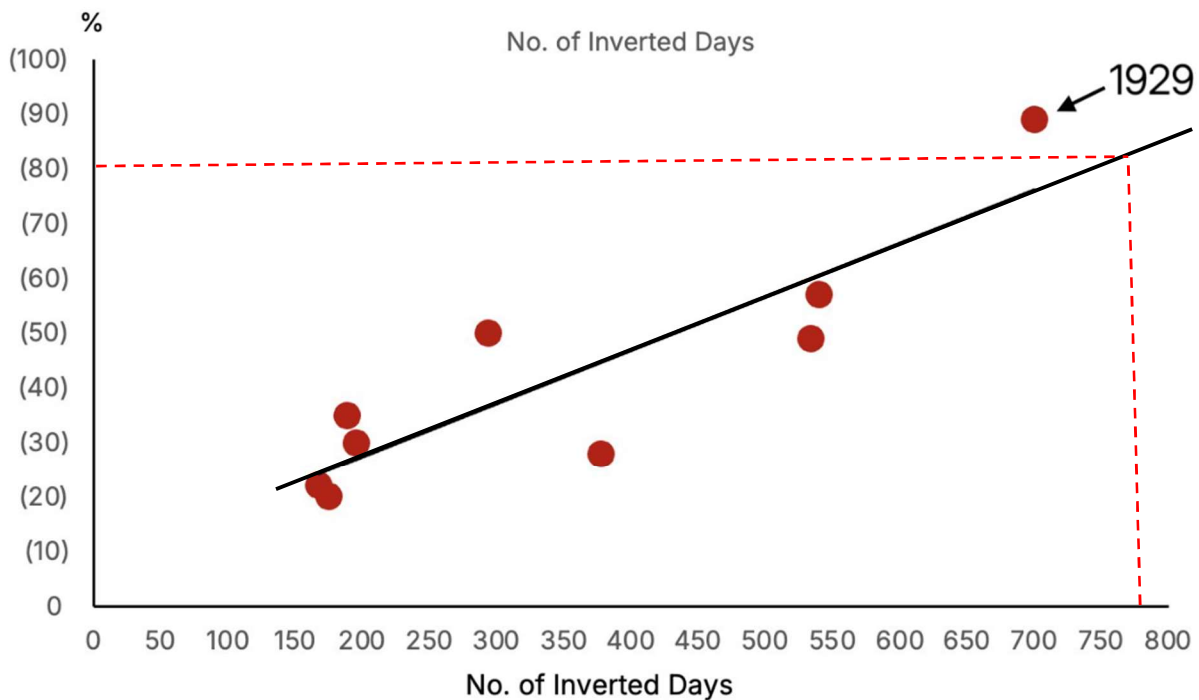
Given the strong correlation between the length of time of an inversion and the subsequent maximum loss in the stock market, as evidenced in Figure 4⁵, it is reasonable to conclude that the stock market may see a max decline of over 80% in the next recession.

Figure 4: Yield Curve Inversions & Max Drawdowns

Inversions and Drawdowns



No. of Inversion Days and Its Corresponding Market Drawdown



Dates: Through 18th August 2024.
Source: Tradingview, Bravos Research.

⁵ Source: <https://x.com/bravosresearch/status/1841455322575372519>

Discount Cash Flows

The discount cash flow model, or DCF for short, paints a similar picture to the yield curve inversion indicator. Based on the current dividends (e.g. cash flow) produced by the stock market, the fair value of the S&P 500 is 1,454. Compare this to the actual value of 5,882 as of December 31, 2024. This implies a max drawdown of -75% during the next recession. Figure 5 below shows this calculation⁶.

Figure 5: Discounted Cash Flow Method

	@ Dec 31, 2021	@ Dec 31, 2024
Dividend Amount	\$60.40	\$74.83
Dividend Growth Rate	4.9%	4.9%
S&P 500 Average Return	10.3%	10.3%
Estimated S&P 500 Fair Value	1,114	1,454
Actual S&P 500 Value	4,766	5,882
Implied Drawdown	-77%	-75%

Summary

On page 3, we mentioned that our health indicators have been flashing warning signs since 2021. The four valuation models we just reviewed – Price-to-Sales, Buffet Indicator, Yield Curve Inversions, and DCF – support this claim. Summarizing these metrics below, it is evident that all four metrics have also been flashing warning signs since 2021. Not just that, they suggest that stocks will have an extended period of subpar returns over the next decade.

	Implied Loss over Next 10 Years	
	@ Dec 31, 2021	@ Dec 31, 2024
Price to Sales (Model 1)	-55%	-46%
Buffet Indicator (Model 4)	-41%	-45%

	Implied Max Drawdown over Next 10 Years	
	@ Dec 31, 2021	@ Dec 31, 2024
Yield Curve Inversion (Model 2)	n/a	-80%
Discount Cash Flow (Model 3)	-77%	-75%

⁶ Data derived from <http://www.econ.yale.edu/~shiller/data.htm> and Yahoo Finance.

Precious Metals

Both gold and silver are poised for robust growth in the years ahead.

Metals tend to move up quickly before consolidating over extended periods of time. Right now, it appears metals are in the “move up quickly” stage. Figure 6 represents the relative performance of the Dow Jones Industrial Average (DJIA) against gold⁷. In plain English:

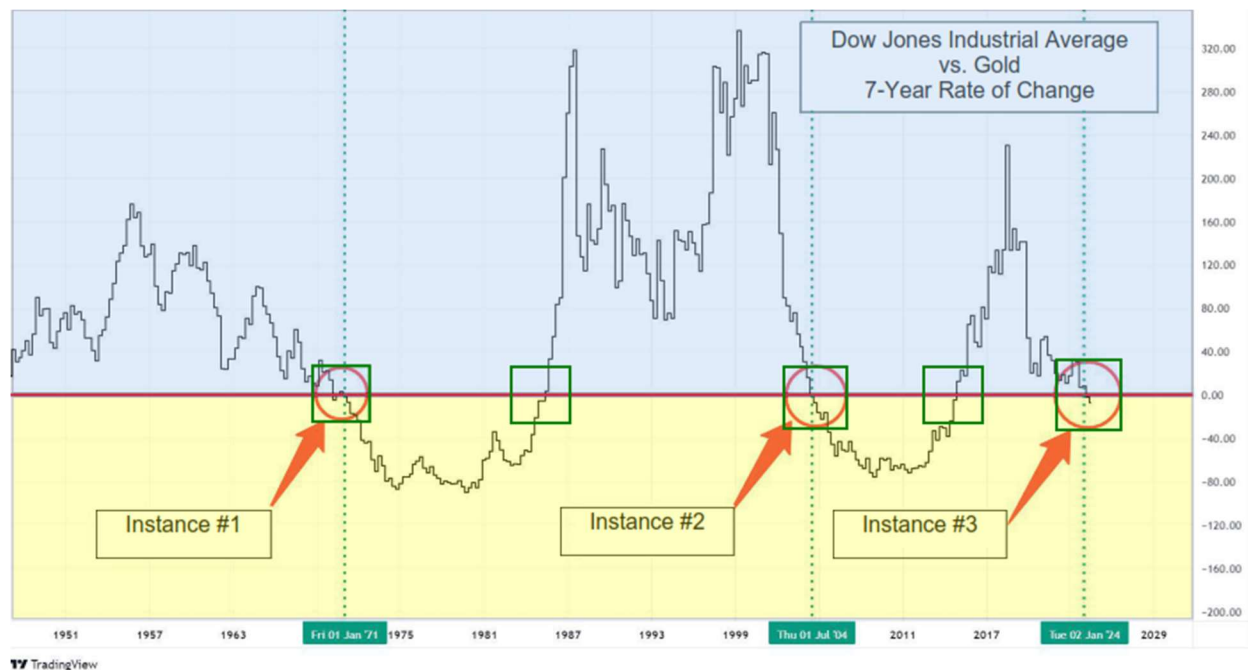
- If the black squiggly line is above the red bar, stocks (e.g. the DJIA) are doing better than gold.
- If the black squiggly line is below the red bar, gold is doing better than stocks.

The data in Figure 6 covers the 80 years in the post-WWII era. It is an extended period of time. In that time period, two things stand out:

1. First, it is rare to see a regime change (stocks doing better to metals doing better **or** metals doing better to stocks doing better). These regime changes are noted with .
2. Second, it is ever rarer to see a regime change directionally from stocks doing better to metals doing better. These changes are noted with .

In 80 years, there have only been *three* instances where the regime changed from stocks outperforming to metals outperforming. These are the instances. These are exceedingly rare occurrences.

Figure 6: Dow Jones vs. Gold



⁷ Source: <https://x.com/NorthstarCharts/status/1833933638515437893>

Figure 7⁸ below shows the year-by-year returns for both gold and silver during the first two instances.

Figure 7: Gold and Silver Returns During Instances #1 and #2

	Instance #1				Instance #2			
	From	To	Gold	Silver	From	To	Gold	Silver
Year 1	Jan. 1970	Jan. 1971	7%	-10%	Jul. 2004	Jul. 2005	7%	15%
Year 2	Jan. 1971	Jan. 1972	17%	-16%	Jul. 2005	Jul. 2006	46%	64%
Year 3	Jan. 1972	Jan. 1973	48%	47%	Jul. 2006	Jul. 2007	5%	11%
Year 4	Jan. 1973	Jan. 1974	79%	65%	Jul. 2007	Jul. 2008	44%	46%
Year 5	Jan. 1974	Jan. 1975	50%	28%	Jul. 2008	Jul. 2009	-2%	-27%
Year 6	Jan. 1975	Jan. 1976	-19%	-2%	Jul. 2009	Jul. 2010	30%	33%
Year 7	Jan. 1976	Jan. 1977	-4%	5%	Jul. 2010	Jul. 2011	24%	91%
Year 8	Jan. 1977	Jan. 1978	27%	12%	Jul. 2011	Jul. 2012	7%	-20%
Year 9	Jan. 1978	Jan. 1979	30%	22%	Jul. 2012	Jul. 2013	-22%	-29%
Year 10	Jan. 1979	Jan. 1980	153%	532%	Jul. 2013	Jul. 2014	7%	9%
	Total Gain		1569%	1989%	Total Gain		234%	254%

A few observations become apparent when looking at the annual returns as well as the charts for each instance on the next page:

1. First, while the general trend for each metal was up, there were periods of relatively flat performance or even outright declining performance (For example, Year 6 in Instance #1).
2. Second, both bull markets ended with strong, explosive, exponential moves up. Instance #1 ended with a 532% gain in 1979 alone (circled in green in Figure 8)! Instance #2 peaked after a 154% return over the two years from July 2009 to July 2011 (circled in green in Figure 9).

We note these observations because they provide some insights into what can be expected with Instance #3, the current bullish gold and silver regime we are now in. These expectations include:

- Instance #3 may likely be a multi-year period during which gold and silver appreciate in value.
- During this period, it is likely gold and silver will enter pockets of temporary weakness, and these pockets may last for a few months or even a year.
- The end of this period may be marked by a strong, exponential increase in silver.

[NOTE: We argue that the bull market in Instance #2 ended in July 2011. In Figure 7, we elected to show the full decade of gold and silver returns from July 2004 through July 2014 simply because we showed a full decade Instance #1. In reality, the bull market in Instance #2 ended after 7 years.]

⁸ Data derived from Tradingview.com.

To reinforce the second bullet point from our observations, as of December 2024, gold and silver have been correcting (losing value) through November and December 2024. This comes on the heels of gold and silver gaining roughly 35% and 45%, respectively, year-to-date through the end of October 2024. This is exactly the sort of “pocket of temporary weakness” described above. This is also the reason our portfolios had negative returns in Q4 2024.

Figure 8: Gold and Silver Returns During Instances #1

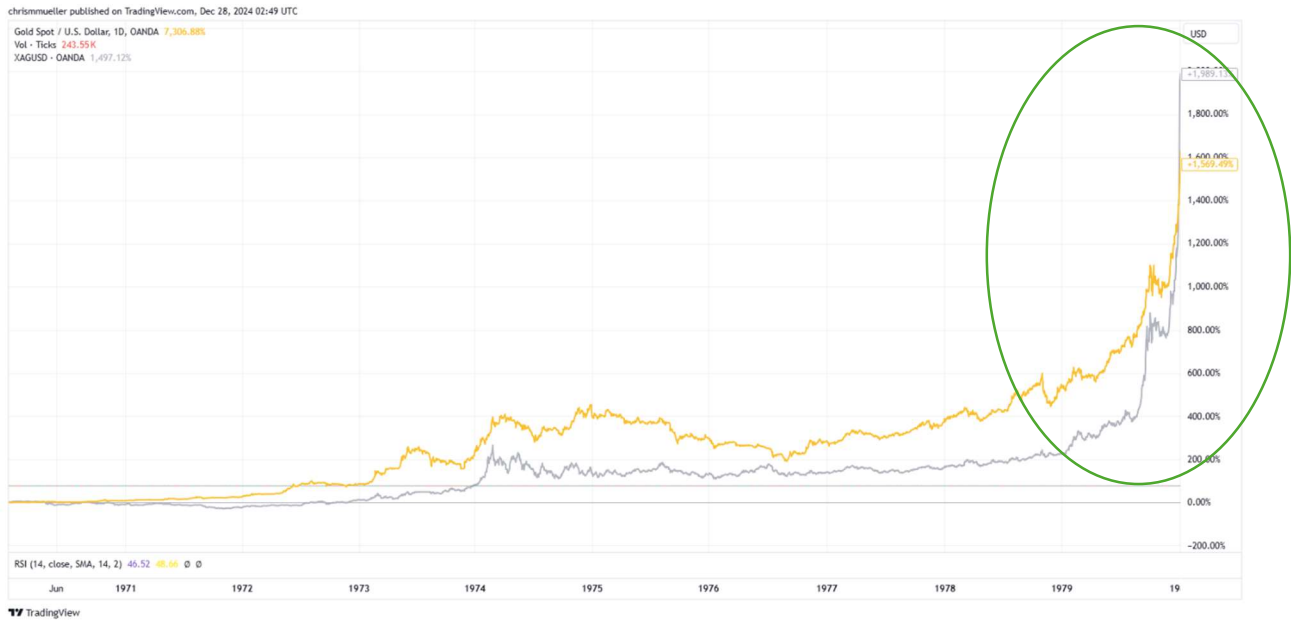


Figure 9: Gold and Silver Returns During Instances #2



One more reason we remain optimistic about gold and silver are the technical setups each is showing at the moment. In our June 30, 2024 edition, we discussed the massive cup-and-handle formations both gold and silver are creating.

Gold formed a 13-year cup-and-handle and successfully broke through the resistance line at \$2,000/oz, as shown in Figure 10. This breakout has been confirmed with strong bullish momentum throughout 2024. This is quite a positive indication that gold has further room to run higher.

Figure 10: Gold 13-Year Cup-and-Handle Formation with Breakout



Silver is 44 years into the creation of a massive cup-and-handle formation, as shown in Figure 11⁹. Unlike gold, the formation is not yet complete since the handle is not fully formed. Silver, which is currently trading near \$30/oz, needs to hit \$50/oz before the handle is complete. The \$50 barrier will act as strong resistance much the same way \$2,000 acted as strong resistance for gold. But, if and when silver cracks through \$50, it is off to the races. Predicting the timing of when it will get to \$50 and potentially breaking through is difficult. However, for the same reason we observed in our June edition, there is a strong indication this will happen:

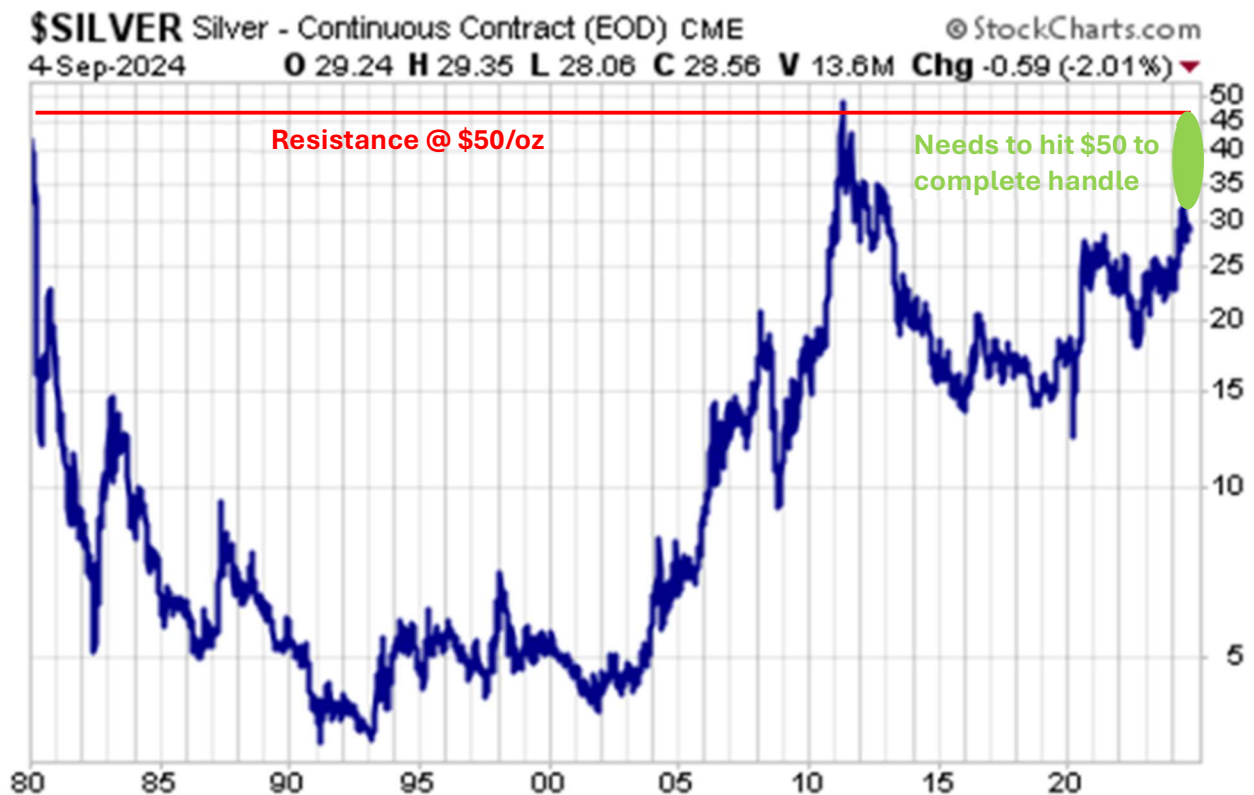
- Gold and silver tend to move in tandem. They are correlated. When the price of gold rises, silver also tends to rise. And vice versa. Thus, a breakout in gold should help silver.
- Over the last 100+ years, the gold-to-silver ratio averaged 45:1. The ratio currently stands at 89:1. This implies that either (1) the price of gold must come down or (2) the price of silver must climb faster than the price of gold. We established that gold looks to be heading higher, so it stands to reason that silver should not only head higher, but that silver should outperform gold moving forward.
- Silver demand continues to exceed silver supply.

One final note about the cup-and-handle patterns: Generally, the longer the pattern takes to form, the stronger the signal sent once the asset breaks resistance. Thus, gold breaking through a 13-year

⁹ Source: <https://www.fxstreet.com/analysis/a-silver-tea-cup-this-epic-45-year-silver-pattern-should-have-traders-drooling-202409061732>

level of resistance is a strong signal of strength. If silver breaks through a 44+ year level of resistance at \$50, that will be a massively powerful signal of strength.

Figure 11: Silver 44-Year Cup-and-Handle Formation



Interest Rates and Inflation

Over the last few commentaries, we have extensively argued that economic conditions are not as strong as meets the eye in the U.S. Given that backdrop, we have been long-term constructive on bonds as a safe-haven asset.

Bonds investors want interest rates to decrease. Recall, bonds and rates work inversely: As rates rise, bond prices decrease. As rates fall, bond prices increase.

Lately, we have seen two arguments suggesting the rates will continue to rise:

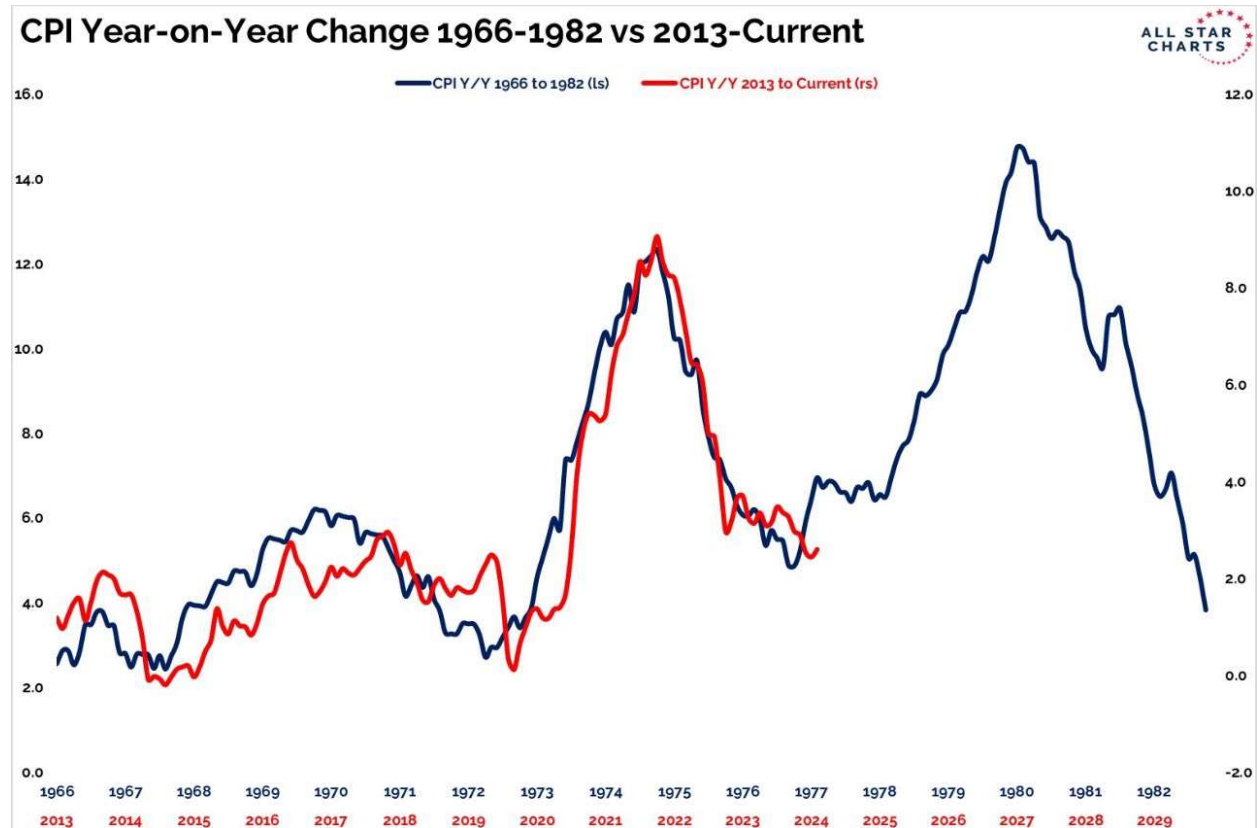
1. The double-peak inflation cycle of the 1970s will repeat itself again in the 2020s. Indeed, the correlation of inflation in the 1970s to inflation in the 2020s is eerily similar.
2. Given the massive annual fiscal deficits the U.S. government is running, it will need to issue a lot more debt. In order to entice investors to buy that debt, interest rates will need to go up.

We would like to address these two arguments head-on. We contend that neither argument holds up against empirical evidence.

Comparison of 1970s Inflation vs. 2020s Inflation

Figure 12¹⁰ shows an overlay of inflation in both decades. This chart has been making the rounds through investing circles in the past year or so.

Figure 12: Inflation in 1970s vs. 2020s



It is no wonder folks think we are due for another bout of inflation in the second half of this decade. The path of current inflation almost exactly tracks the path from the 1970s. However, this is where the correlation ends.

Inflation is, simply stated, a change to supply and/or demand. We will pick on COVID to help illustrate this point.

In a normal market, consumers (demand) buy more products as prices decrease; if something is cheaper, we can buy more of it. Conversely, producers (suppliers) make more products as price increases; if something costs more, the company makes more money by selling more of it. At some point, normal demand balances with normal supply, and you get the market price. Here, the normal market price is ● in Figure 13.

¹⁰ Source: <https://www.allstarcharts.com/>

Sometimes, demand increases and supply stays static. For example, companies give year-end bonuses, and employees have more cash than normal. Demand goes up (people have more money to spend), and supply stays the same. When this happens, prices increase. This is the right ● in Figure 13.

Sometimes, the opposite happens: supply decreases and demand stays the same. For example, Napa Valley has a bad climate year, and grape production decreases. Wine supply goes down, but demand stays the same. When this happens, prices increase (and we're all grumpy!). This is the left ● in Figure 13.

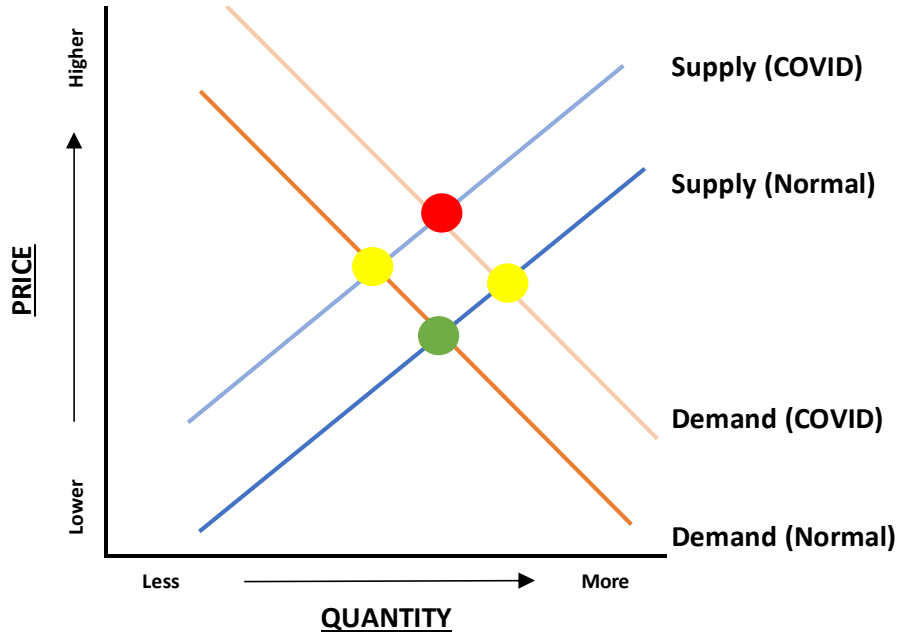
And sometimes the stars align where both demand increases and supply decreases. For example, the three COVID stimulus payments increased demand (by putting money directly into consumers' pockets) while many businesses reduced or stopped production, thus curtailing supply. When this happens, demand increases while supply simultaneously decreases, thus causing a surge in prices. This is indicated by the ● in Figure 13.

The ● and ● represent inflation. They are simply increases in price. Sometime the increases come from demand changes; sometimes the increases come from supply changes; and sometimes the increases come from both supply and demand changes.

Let's tie this back into the 1970s' inflation. We're going to break 1970s inflation into two "humps" to help with the explanation. The first hump occurred from 1973 to 1976 and the second from 1978 to 1982. These humps are visually evident in Figure 26.

The first hump from 1973 to 1977 was a direct consequence of the oil embargo that started in 1973. The embargo was manufactured by the Arab members of OPEC in response to the United States' support of Israel in the Yom Kippur war. The oil embargo was a supply shock, causing oil prices to rise substantially. Figure 14¹¹ shows the price of West Texas Intermediate (WTI) oil increasing from roughly \$4.25/barrel in 1973 to \$11.25/barrel by 1975). That's a whopping 265% increase. In the mid-1970s, Henry Kissinger negotiated an agreement with the Israelis to pull out of the Golan Heights, and the Arabs lifted the embargo. Oil prices stabilized and inflation subsided. This was quite clearly a supply-side shock leading to a spike in inflation¹².

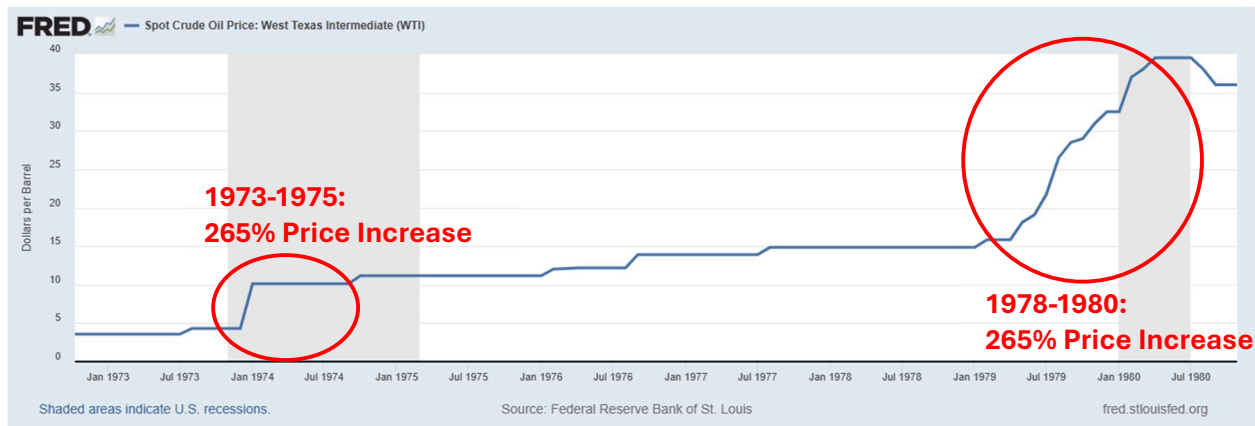
Figure 13: Example of Inflation via Demand and Supply Changes



¹¹ Source: <https://fred.stlouisfed.org/series/WTISPLC#>

¹² Source: https://en.wikipedia.org/wiki/1970s_energy_crisis

Figure 14: West Texas Intermediate (WTI) Prices from 1973 to 1980



The second hump from 1977 to 1982 was agitated by the Iranian revolution. When Ayatollah Khomeini usurped control from the Shah, Iranian oil production was (temporarily) cut. The Ayatollah sought to resume regular production, but such production was sporadic and less voluminous than before. Again, this caused a massive increase in oil prices, with WTI oil increasing from \$14.85/barrel in 1978 to \$39.50/barrel by 1980 (see Figure 14). Coincidentally, that was another 265% increase in price. Once again, this was a supply-side shock resulting in inflation.

The historical context is important because it illustrates the crucial point about inflation: a change in supply (as was the case with the oil embargo of 1973 and the Iranian Revolution of 1979) or a change in demand is necessary for prices to increase. The economy needs a demand- or supply-shock to stoke inflation.

As mentioned on the previous page, COVID was such a shock.

For the economy to experience a second wave of inflation now, as pundits pointing to Figure 12 contend, the economy needs another exogenous shock.

Sure, another pandemic would do the trick. Perhaps a war would suffice. But absent that exogenous shock, simply expecting prices to rise faster than normal may be putting the cart before the horse.

Fiscal Deficits and Inflation

A second popular opinion about inflation is that interest rates will need to rise as the U.S. issues more debt. The argument is quite simple: Suppose the government wants to issue debt at a 4% interest rate but it gets no buyers. In order to entice buyers, the government may have to raise the interest rate to 5%.

We will seek to show two real world examples where this logic falls apart. Then we will offer a solution for this problem, pretending this false logic actually applies.

Japan

From the late 1980s into the early 1990s, the Japanese economy experienced a massive stock and real estate property bubble. This bubble popped in 1992. For the next few decades, Japan experience a prolonged economic slump that dragged down stock prices, property prices, and bond yields. [As an aside, the introductory paragraph of the Wikipedia describing the conditions leading to the Japanese stock bubble sounds quite similar to the current condition in the United States.^{13]}

At the time the bubble burst, Japan had a public-debt-to-GDP-ratio¹⁴ of 89%. This figure is noted in yellow framing in Table 2 of Figure 15¹⁵. For reference, 89% simply means that if Japan's economy was worth \$100, it had \$89 of bonds outstanding. That is a fairly large ratio.

Figure 15: Government Debt-to-GDP Ratios

Table 2. Global Public Debt, 1950–2022
(Percent of GDP, weighted averages)

	1950s	1960s	1968	1970s	1980s	1986	1990s	2000s	2004	2010s	2019	2020	2021	2022
World	56.2	39.8	36.3	33.1	47.6	54.3	62.0	66.5	69.8	81.0	84.9	100.4	96.0	92.4
Advanced Economies	64.0	44.3	39.5	36.1	50.7	57.5	66.4	75.3	76.8	104.6	105.4	124.4	118.7	113.5
Euro Area	32.5	24.7	25.0	27.7	47.0	52.1	67.0	69.9	69.7	90.9	85.9	99.2	97.3	93.2
Japan	13.1	10.1	11.8	23.4	64.3	74.0	89.0	166.6	169.5	227.5	236.4	258.7	255.4	261.3
United Kingdom	134.0	81.5	70.9	57.5	40.3	41.0	38.1	42.6	39.8	84.7	85.5	105.6	105.9	101.4
United States	69.7	54.4	48.7	43.6	51.6	57.7	66.3	64.1	66.1	104.1	108.7	133.5	126.4	121.4
Emerging Market Economies	15.5	18.8	20.6	21.4	35.6	40.2	41.5	40.9	44.1	44.3	55.7	65.8	64.8	65.2
China 1/							21.2	26.9	26.4	44.3	60.4	70.1	71.8	77.1
Others	15.5	18.8	20.6	21.4	38.6	45.8	46.3	44.7	49.0	44.0	52.0	61.9	58.4	55.3
Low-Income Developing Countries				15.6	36.2	43.2	64.8	45.8	51.2	34.8	42.9	48.5	48.5	48.4

Flash forward to 2022 (the latest date for which the data series is available). That debt-to-debt ratio now sits at 261.3%! The ratio went from fairly large to downright monstrous.

How did this happen? The Japanese government has been spending more money than it makes. This, of course, is called a **deficit**. It has been doing this since 1993. If you spend more than you make, you must borrow money to plug the difference. Thus, Japan has been borrowing lots and lots of money over the last few decades. Figure 16¹⁶ shows these deficits. Japan's government deficit has ranged from 2.5% of GDP to 8.8% of GDP since 1993. In other words, Japan has been borrowing money every year since 1993, and the amount it is borrowing is huge.

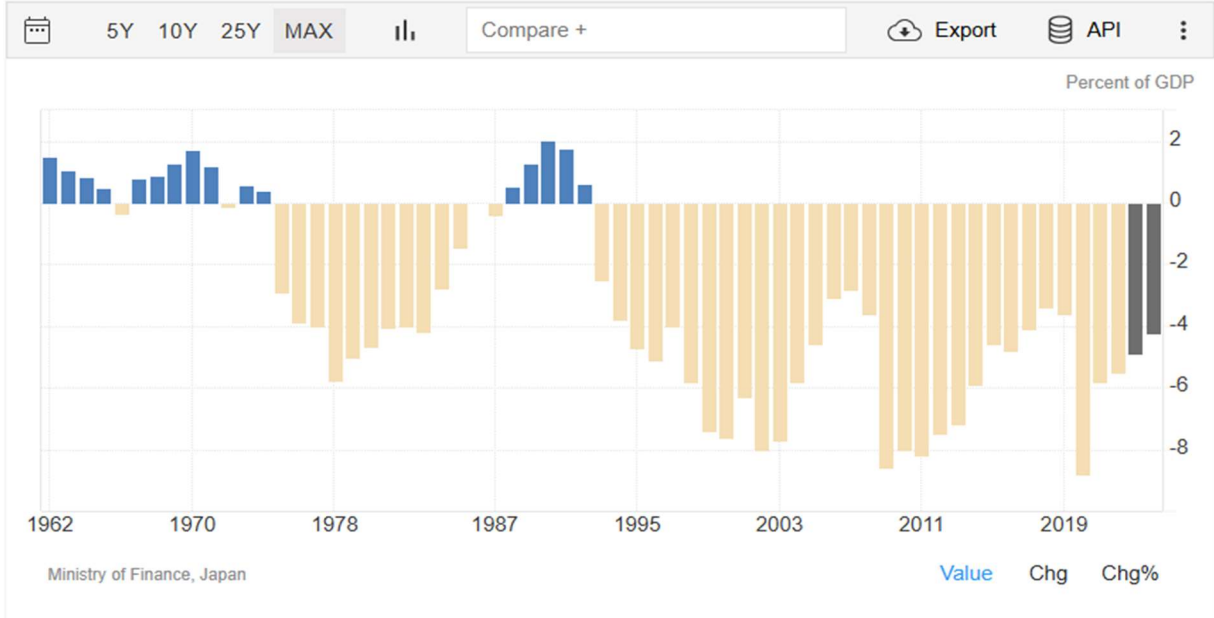
¹³ Source: https://en.wikipedia.org/wiki/Japanese_asset_price_bubble

¹⁴ Public debt is bond issued by the federal government. GDP is the size of the economy. So debt-to-GDP measure the amount of debt relative to the size of an economy. It is a measurement that allows us to compare debt burdens between different countries.

¹⁵ Source: <https://www.imf.org/-/media/Files/Conferences/2023/2023-09-2023-global-debt-monitor.ashx>

¹⁶ Source: <https://tradingeconomics.com/japan/government-budget>

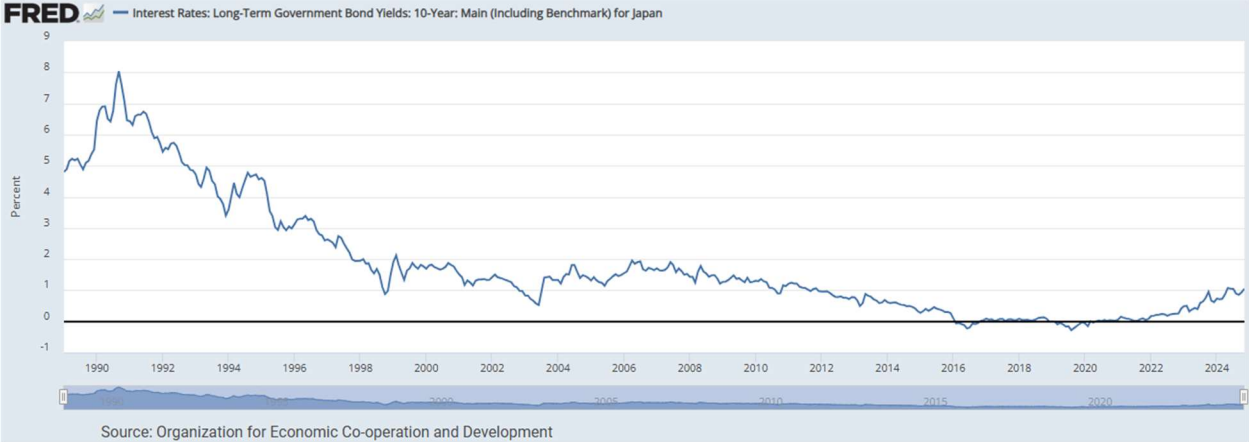
Figure 16: Japanese Fiscal Deficits as % of GDP



Let’s now connect the dots. Japan’s debt-to-DGP ratio increased from 89% in 1990s to 261.3% today. It did this because Japan has been running large deficits each year since 1993. To plug its deficits, Japan issued lots of bonds (e.g. it borrowed money), and its debt-to-GDP ratio climbed.

What impact did all this borrowing have on Japanese bond yields and inflation? Bond yields actually fell from 4.72% in January 1993 to 1.05% in November 2024. More importantly, yields stayed low throughout this entire time period. See Figure 17¹⁷ for Japanese bond yields.

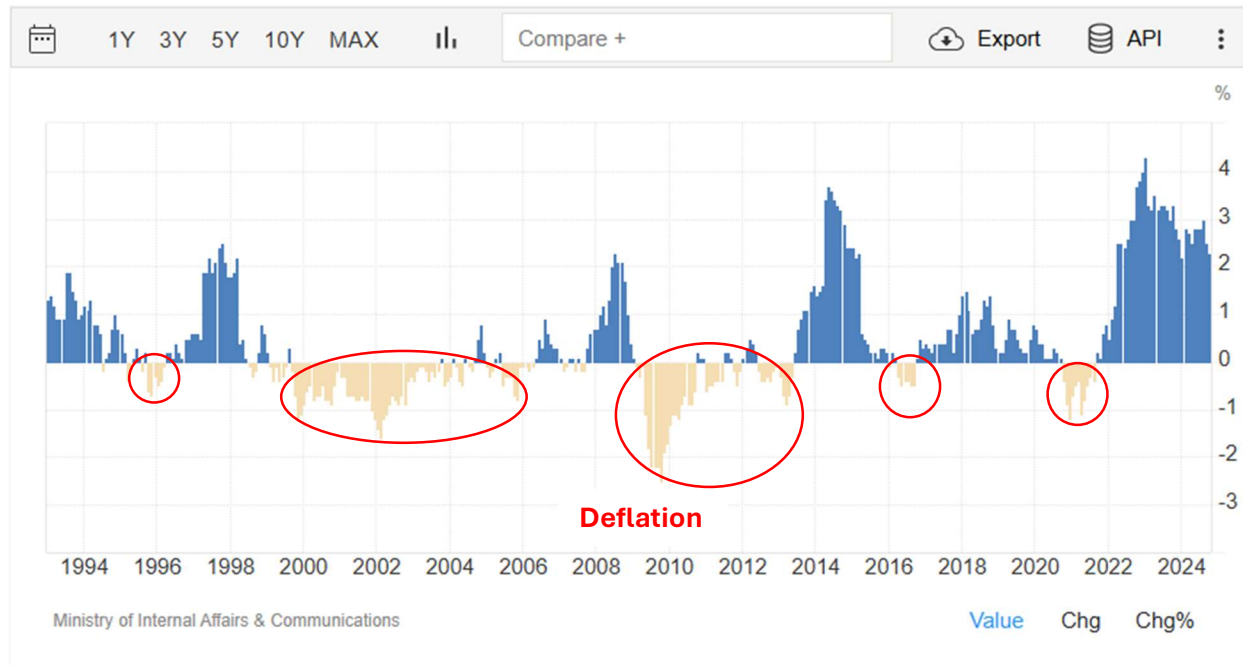
Figure 17: Japanese Bond Yields



¹⁷ Source: <https://fred.stlouisfed.org/graph/?g=2j45>

And what about Japanese inflation? It has oscillated between -2.5% and 4.3% since 1993. In aggregate over this time period, prices have increased 16% since 1993, or just 0.47% per year since 1993¹⁸. Figure 18 shows Japan's inflation rates since January 1993¹⁹.

Figure 18: Japanese YoY Inflation Rate



If we put all the pieces together, we observe that:

- After Japan's asset bubble burst in 1992, Japan started stimulating its economy by running massive deficits, borrowing large amount of money every year since
- Despite all this borrowing, Japan's bond yields and inflation rates have remained relatively low.

At least in the case of Japan, the issuance of massive amounts of debt has not let to skyrocketing bond yields and high inflation. Why? There are a multitude of answers and theories to this question, but we would argue that one factor has played the primary role in keeping yields low: central bank buying of bonds. As of June 2024, the Bank of Japan (Japan's version of the Federal Reserve) held 53.2% of all Japanese debt, as shown in Figure 19²⁰.

Recall the premise of this section:

“A second popular opinion about inflation is that interest rates will need to rise as the U.S. issues more debt. The argument is quite simple: Suppose the government wants to issue

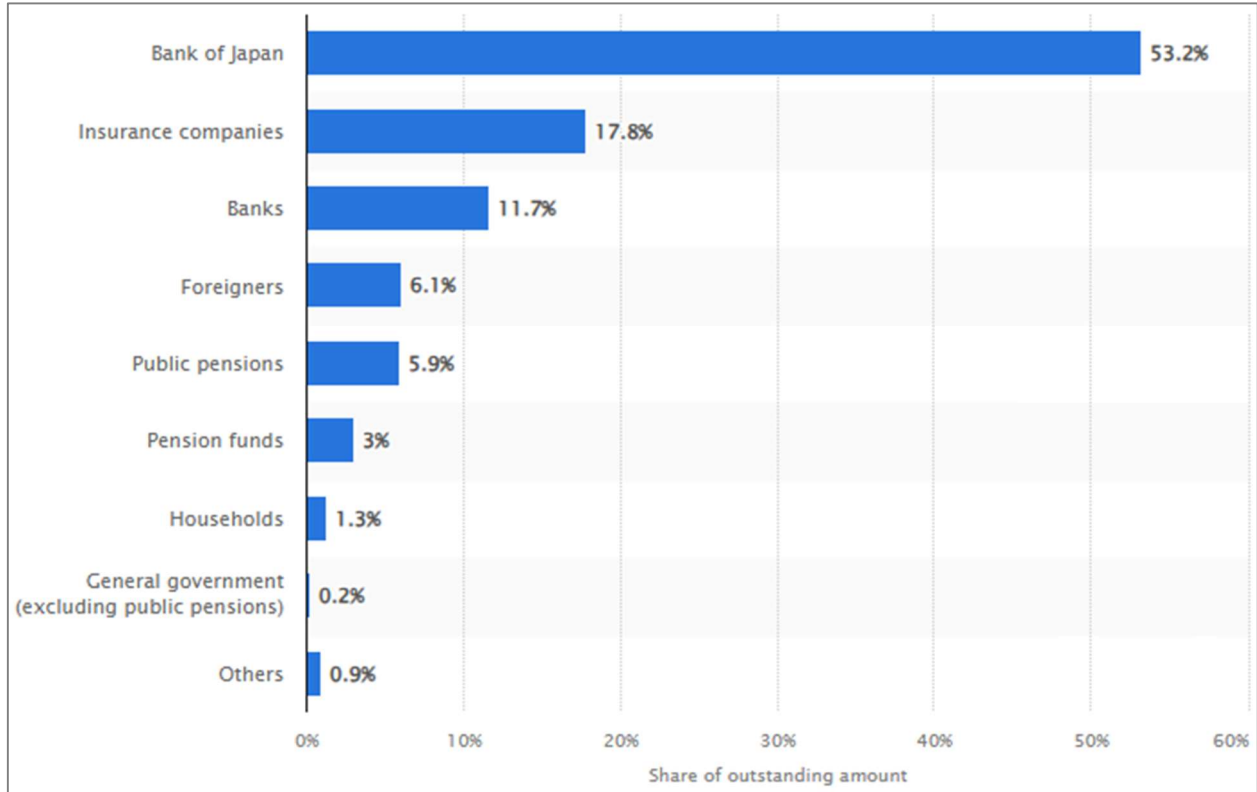
¹⁸ Per <https://tradingeconomics.com/japan/consumer-price-index-cpi>, Japan's CPI value was 94.4 in January 1993 and 109.5 in October 2024. The represents a 16% increase over that 31 year, 9 month time period. This translates into 0.47% per year inflation.

¹⁹ Source: <https://tradingeconomics.com/japan/inflation-cpi>

²⁰ Source: <https://www.statista.com/statistics/756192/japanese-government-bonds-by-type-of-holders/>

debt at 4% interest but it gets no buyers. In order to entice buyers, the government may have to raise the interest to 5%.”

Figure 19: Owners of Japanese Government Bonds



What if the Federal Reserve stepped in and bought all the bonds no one else wanted? Yields would not have to rise to entice external buyers. In the Federal Reserve, the government has a built-in buyer-of-last resort that has (theoretically) endless deep pockets to keep buying bonds. And such buying could help keep a lid on yields.

China

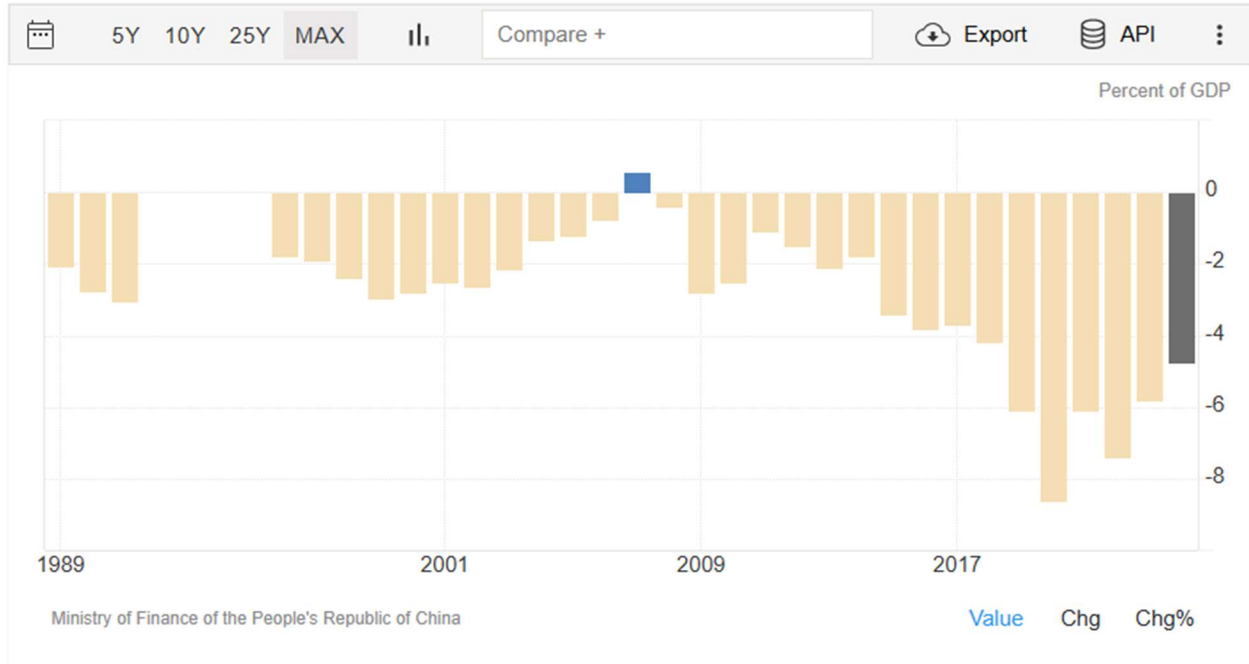
China today, like Japan in 1992, is undergoing the collapse of an epic property value bubble. The genesis of this collapse occurred in 2020 when China passed legislation to curb the growth in real estate assets²¹.

Much like Japan, China is running massive fiscal deficits. If you reference back to Figure 15 on page 16, China's debt-to-GDP is currently 77.1%, substantially more than its ratio of 21.2% in the 1990s. Again, much like Japan, this ratio has increased because of massive fiscal deficits over the past few decades, including historically large deficits since the property bubble started to burst in 2020.

²¹ Source: [https://en.wikipedia.org/wiki/Chinese_property_sector_crisis_\(2020%E2%80%93present\)](https://en.wikipedia.org/wiki/Chinese_property_sector_crisis_(2020%E2%80%93present))

Figure 20²² shows the annual deficits for China. The deficits have been running near 6% of GDP or more since 2020.

Figure 20: Chinese Fiscal Deficits as % of GDP



The parallels to Japan do not stop there. The yields on Chinese government bonds have been moving steadily lower since 2020. In fact the yields are really falling off a cliff recently. Figure 21²³ shows Chinese government bond yields.

Figure 21: Chinese Bond Yields

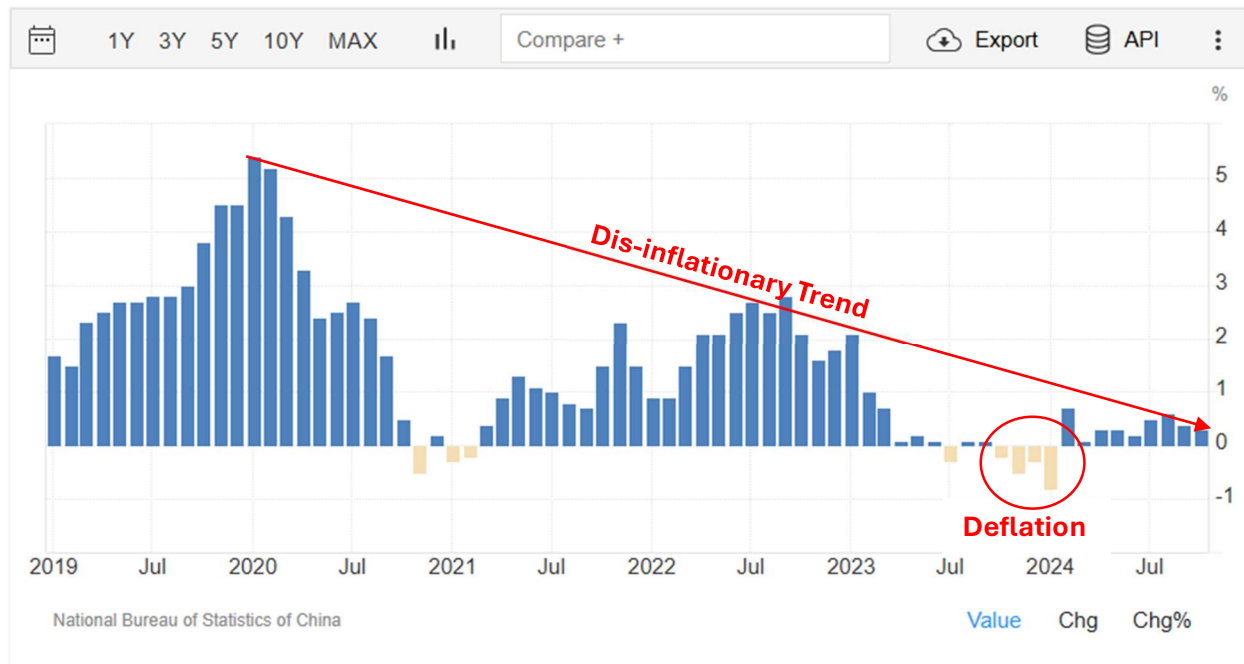


²² Source: <https://tradingeconomics.com/china/government-budget>

²³ Source: <https://tradingeconomics.com/china/government-bond-yield>

Finally, Figure 22²⁴ shows the year-over-year (YoY) inflation rate in China since 2019. Note that inflation has remained muted during this time.

Figure 22: Chinese YoY Inflation Rate



Clearly, the same narrative that described Japan also describes China: the existence of massive debt and the accumulation of even more debt does not necessarily mean that yields will rise and inflation will increase. Quite the opposite has happened in both Japan and China.

In Japan, we cited large central bank buying as one reason yields have gone down.

For China, we'd like to propose another reason: recessions are naturally dis-inflationary. Sometimes, recessions are even deflationary. Put another way, recessions tend to reduce inflation. It is important to make a semantic distinction here:

- Inflation is an increase in the price of goods and services.
- Dis-inflation is a slowing of the pace of increases in the prices of goods and services.
- Deflation is a decrease in the price of goods and services.

A simple example will help to illustrate the differences. Suppose the following:

- An item costs \$1,000 today.
- In the next year, inflation runs at 4.0%.
- In the second year, inflation runs at 2.5%.
- In the third year, inflation runs at -1.5%.

²⁴ Source: <https://tradingeconomics.com/china/inflation-cpi>

Here is a tabular representation of the price over time:

	Inflation	Price	Notes
Today		1,000	
Year 1	4.0%	1,040	
Year 2	2.5%	1,066	Disinflationary year. Prices rose, but the rate of inflation fell. The inflation rate was still positive.
Year 3	-1.5%	1,050	Deflationary year. Prices fell. The inflation rate was negative.

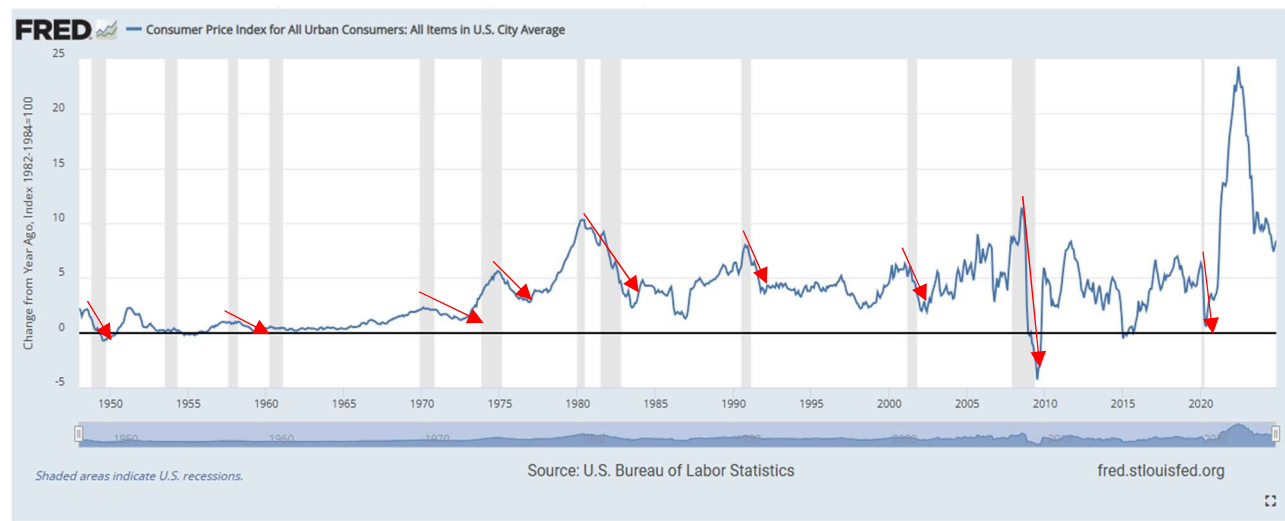
As China entered a recession, its rate of inflation declined from above 5% in 2020 to just above 0% in 2024 (e.g. disinflation). In fact, in the last half of 2023, China even had negative inflation (e.g. deflation). Both these trends are evident in Figure 22.

Now look at Japan’s inflation rate after its bubble burst in 1992. Figure 18 on page 18 shows Japan had disinflation or deflation from 1992 through 1996 as well as pockets of deflation thereafter.

And here is a look at annual inflation rates in the United States going back to 1950. In Figure 23²⁵, the gray shaded areas represent recessions. Notice that during recessions, the inflation rate falls (e.g. disinflation). Every single recession since 1950 has been disinflationary. And if CPI data were available before 1950, we would conjecture that recessions in that time period would also show disinflation.

We inserted red arrows at each recession to highlight the dis-inflationary pressures the recessions create. As an aside, notice how inflation also tends to increase going into a recession. This is one reason why current inflationary pressure may subside: If we hit recession, that may reverse the inflationary trend.

Figure 23c: Change in U.S. Inflation Rates



²⁵ Source: https://fred.stlouisfed.org/graph/?graph_id=955455&rn=396

Bringing It All Together

We began this section by noting the prevailing attitude in the marketplace that bond yields will continue to rise because:

1. The double-peak inflation cycle of the 1970s will repeat itself again in the 2020s. Indeed, the correlation of inflation in the 1970s to inflation in the 2020s is eerily similar.
2. Given the massive annual fiscal deficits the U.S. government is running, it will need to issue a lot more debt. In order to entice investors to buy that debt, interest rates will need to go up.

With respect to the first point, we noted that exogenous shocks are needed for inflation to take hold. Without such a shock, we are skeptical that the double peak inflation cycle of the 1970s will repeat during the 2020s.

Addressing the second point, we showed that both Japan and China have issued massive amounts of debt while simultaneously experiencing decreasing bond yields. The issuance of debt does not, in and of itself, create a condition for yields to rise. In fact, yields may stay steady (or fall) for two reasons:

1. Central banks, like the Federal Reserve in the United States, can intervene as buyers of government debt, therefore effectively keeping a ceiling on rates.
2. Recession tend to be disinflationary (or even deflationary). This also helps to keep yields in check. Given that we spent the first part of this paper arguing that the U.S. may be heading for recession, it follows that yields may fall.

A Quick Note on Tariffs

Suppose a tariff of 10% is imposed on imported goods. If it costs Apple \$1,000 to manufacture an iPhone and if that iPhone is imported from China (where it's made) under a 10% tariff, Apple needs to pay \$100 is tariff. This makes Apple's cost \$1,100. Apple is not going to absorb that cost. Apple is going to pass on that cost to the end buyer: you and me. Thus, we all pay more when tariffs are enacted.

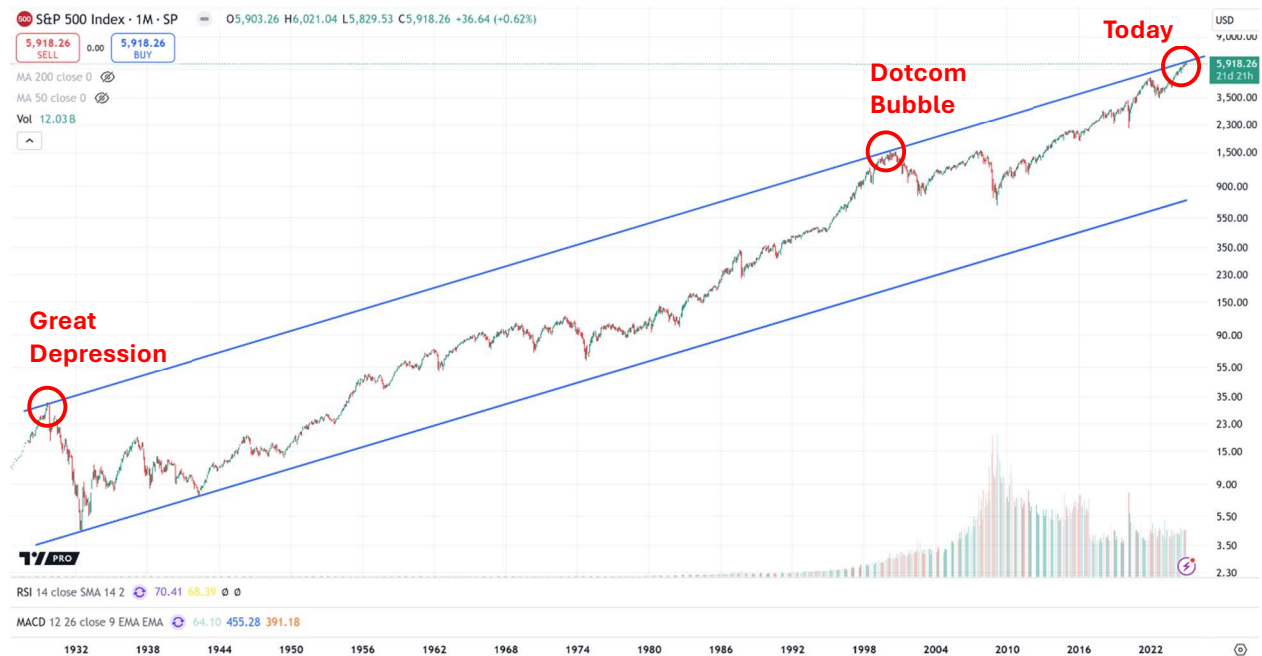
Do tariffs have a place in political policy? Perhaps. Might they be used as a negotiating tactic with our trade partners? Perhaps. But history admonishes us to tread carefully.

For reference, read the Wikipedia article about the Smoot-Hawley Tariffs in 1930 (https://en.wikipedia.org/wiki/Smoot%E2%80%93Hawley_Tariff_Act) . Some historians surmise that these tariffs exacerbated the Great Depression. The current stock market has valuations akin to those before the Great Depression. If tariffs are enacted now, will they be a toxic mix if combined with a volatile, weakening stock market?

The Crossroads

We opened this paper with the proposition that the stock market is at a crossroads. The text and graphics in this paper argue for caution in the face of many risks facing the market. We stand firmly by those arguments.

Let's distill all the complex arguments into something simple. Here's the same image from the opening paragraphs, albeit with better contrast and no overlaid text. The S&P 500 has been within the same channel for 100 years. It's currently at the very top of that channel. At the same time, factor after factor is screaming that stocks are incredibly expensive. This picture is worth a thousand words. Are we about to define a new era outside the confines of 100 years of history? Or will the bad health of the market send stocks tumbling?



Enough with the serious stuff. It's never a bad idea to end with a little levity. Here are some of our favorite memes from the past six months...

