

# MACRO PRESENTATION

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# Inflation: Higher for Longer

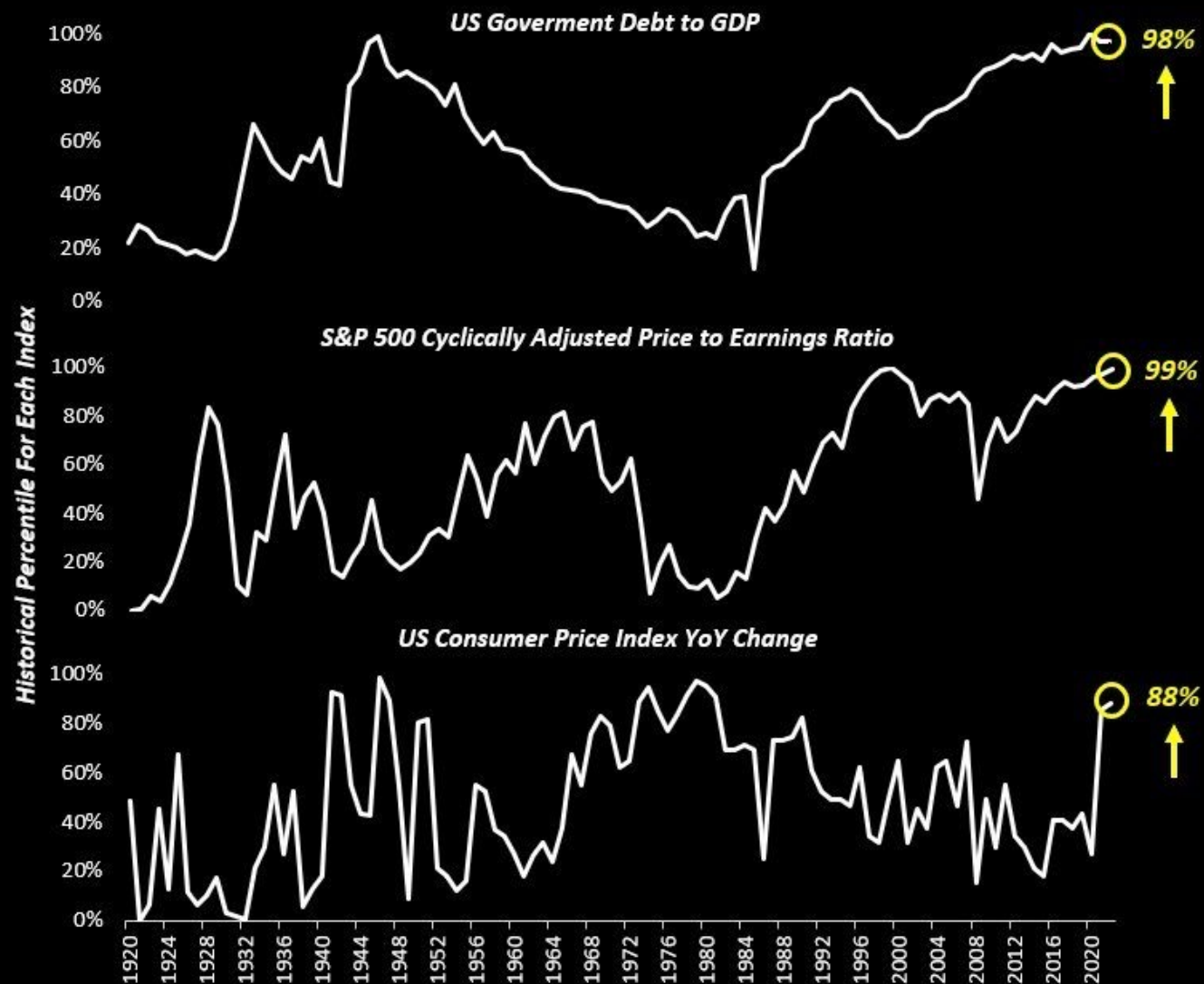
In our view, this is a structural problem caused by secular forces:

- Reckless fiscal spending
  - Deglobalization
- Commodity shortages
- Wage-price Spiral

We believe the global economy is experiencing the early stages of an inflationary decade that is likely to unleash key macro trends on the long and short sides.

This macro deck provides charts/data to substantiate our macro views.

# Debt, Valuation & Inflation



Source: Federal Reserve, Yale University, Robert J. Shiller

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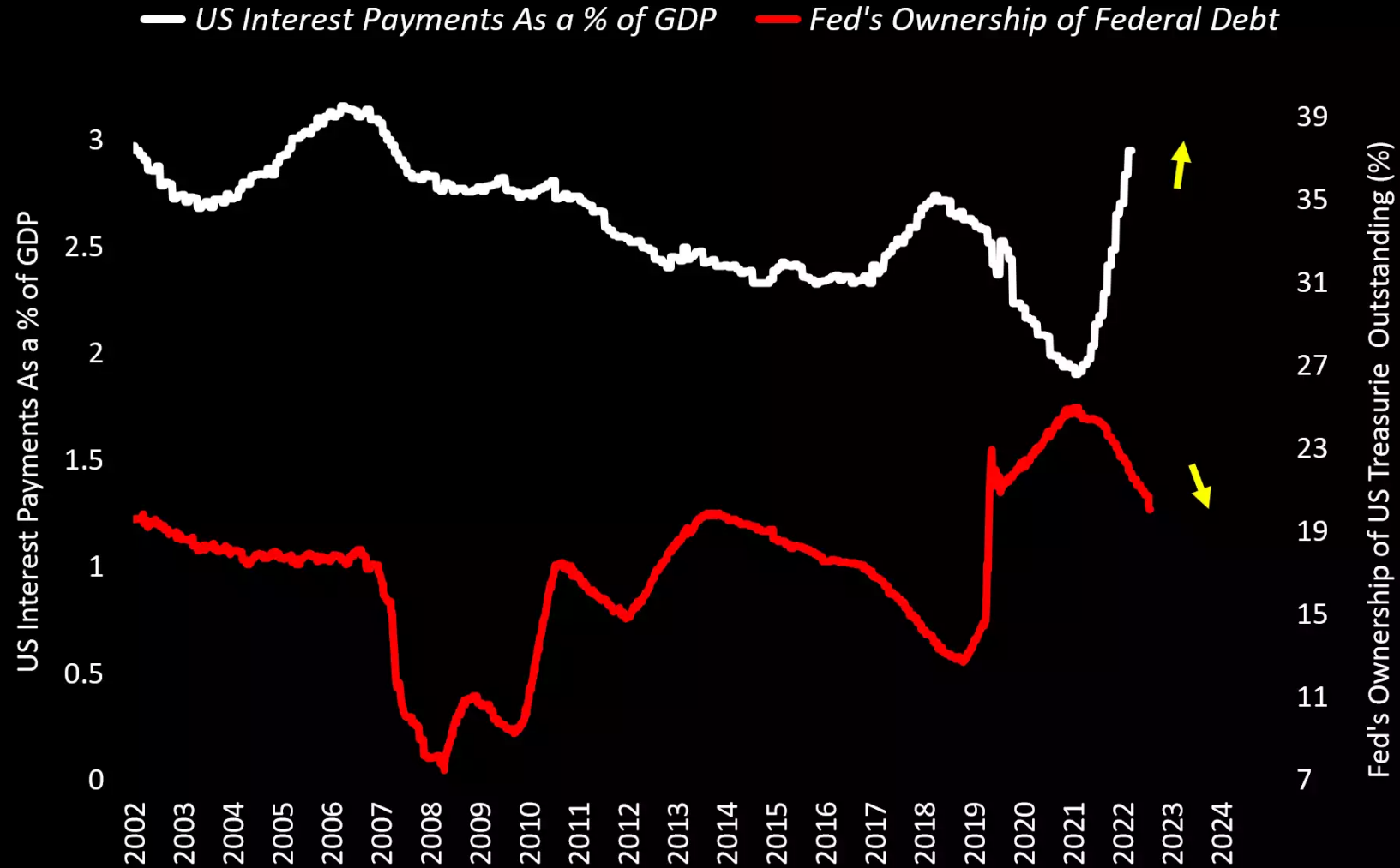


For the first time in history, the US is experiencing a confluence of three macro extremes all at once:

- High government debt to GDP like the post-war 1940s
- Excessive stock market valuation on par with 1929 & 2000 bubbles
- A resource-driven inflationary crisis environment comparable to the 1970s



# Rising Cost of Debt vs. Fed's QT



Source: Federal Reserve; Tavi Costa

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Monetary and fiscal authorities are currently running what we believe are unsustainably divergent policies.

# The Earnings Yield Cycle of 60/40 Portfolios

60% Weight of the S&P 500 Earnings Yield (Inverted CAPE Ratio) + 40% Weight of the US Treasury 10-Year Yield



Source: Tavi Costa; Yale University; Robert J. Shiller

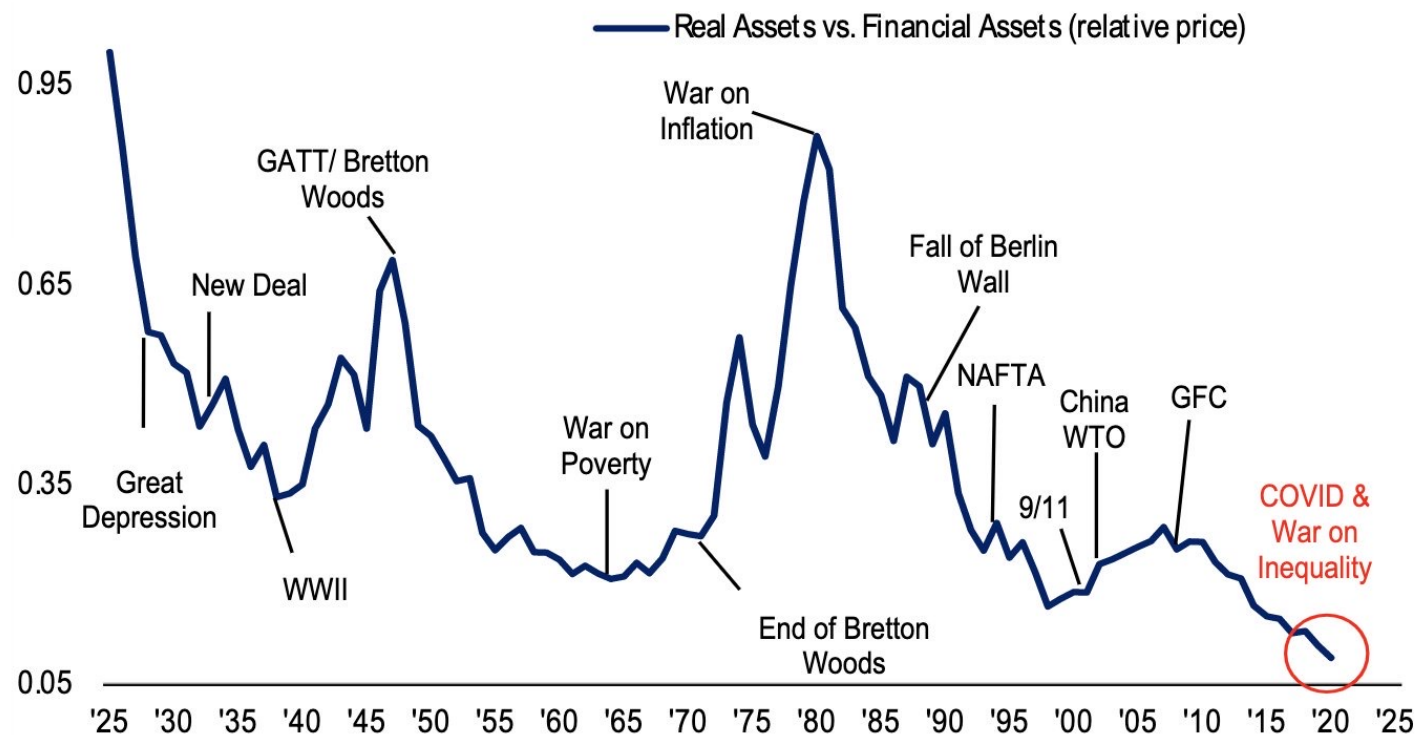
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The valuation history of 60/40 portfolios unfolds through extended cycles, and we are currently experiencing another critical juncture in this dynamic.

## Exhibit 1: All-time lows...real assets relative to financial assets since 1925

Real assets (Commodities, Real Estate, Collectibles) vs. Financial Assets (Large Cap Stocks, Long-term Govt Bonds) since 1925



**Source:** BofA Global Investment Strategy, Global Financial Data, Bloomberg, USDA, Savills, Shiller, ONS, Spaenjers, Historic Auto Group.

**Note:** Real Assets (Commodities, Real Estate, Collectibles) vs. Financial Assets (Large Cap Stocks, Long-term Govt. Bonds)

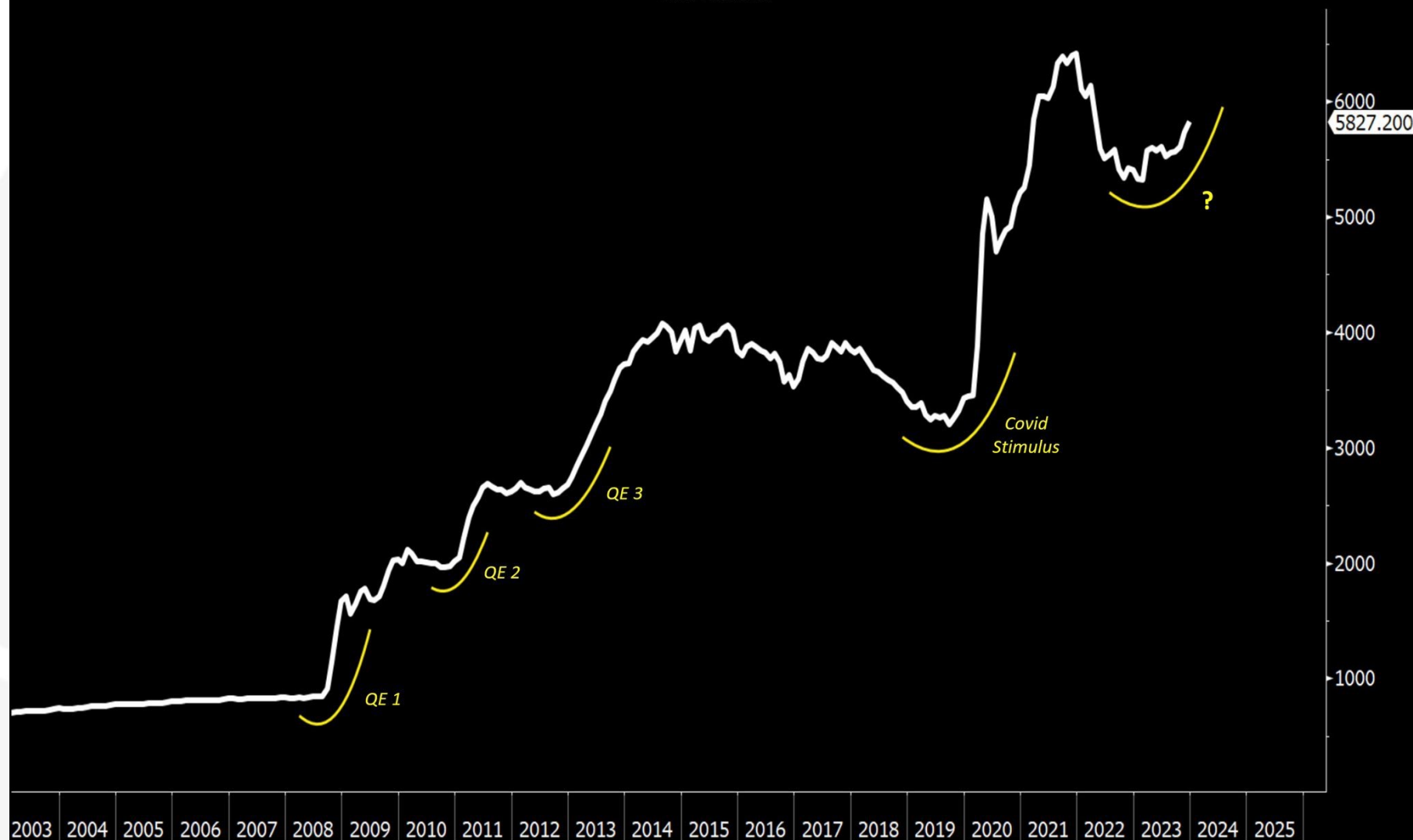
BofA GLOBAL RESEARCH



Real assets are currently at their most undervalued compared to financial assets in history.

# US Monetary Base

USD Billions



Source: Bloomberg; Tavi Costa

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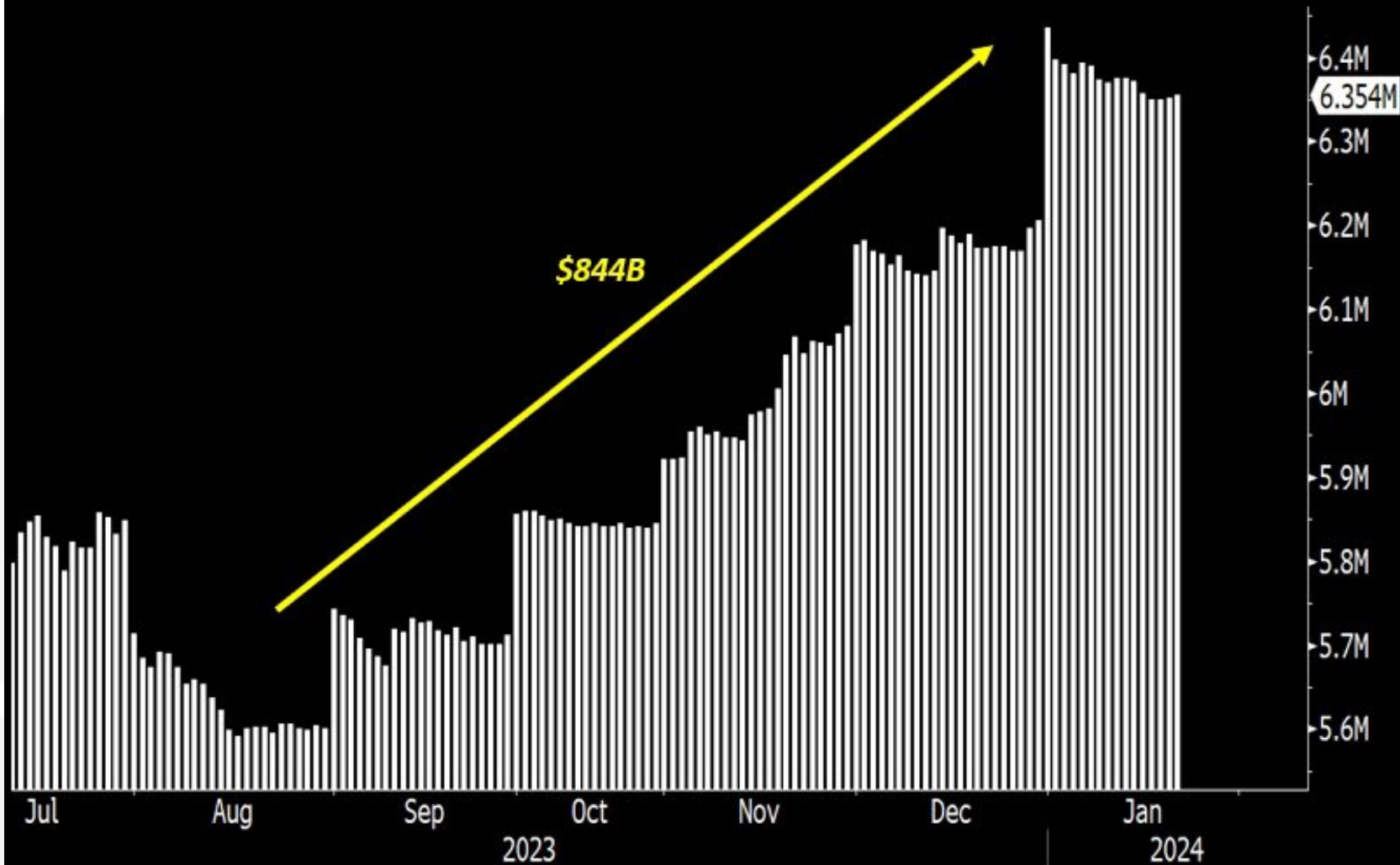
We are witnessing what might be described as the most undisciplined monetary and fiscal environment in history.

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# China: PBOC Balance Sheet Assets

USD Millions



Source: Bloomberg; Tavi Costa

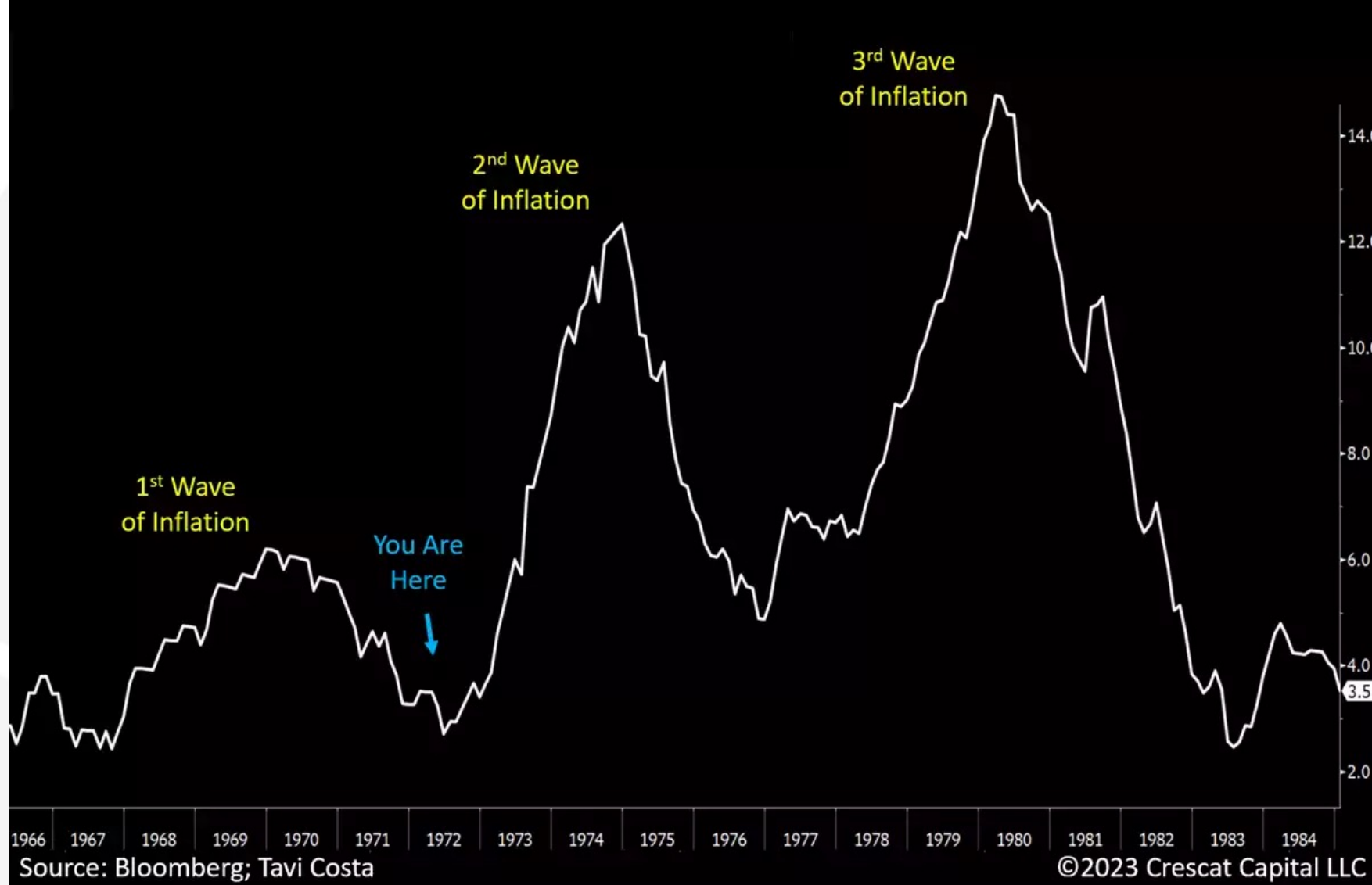
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Having observed this pattern consistently over the past few decades, it is evident that whenever economic issues arise, central banks inevitably resort to additional liquidity injections.

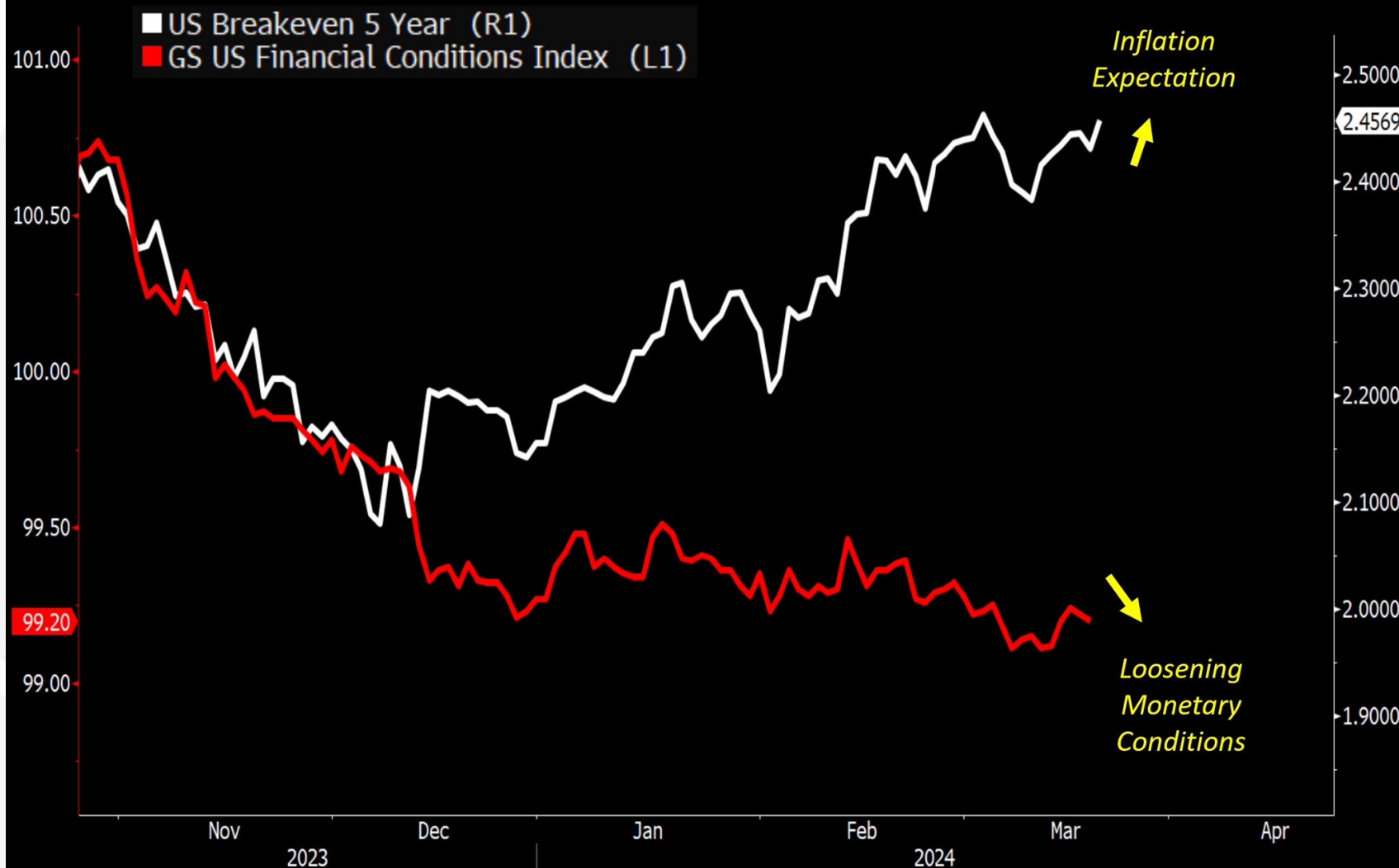


# The Three Inflationary Waves of the 1970s



Inflation develops through waves, and we are likely experiencing the early stages of a re-acceleration of growth in consumer prices.

# Inflation Expectation vs. Financial Conditions



Source: Bloomberg; Tavi Costa

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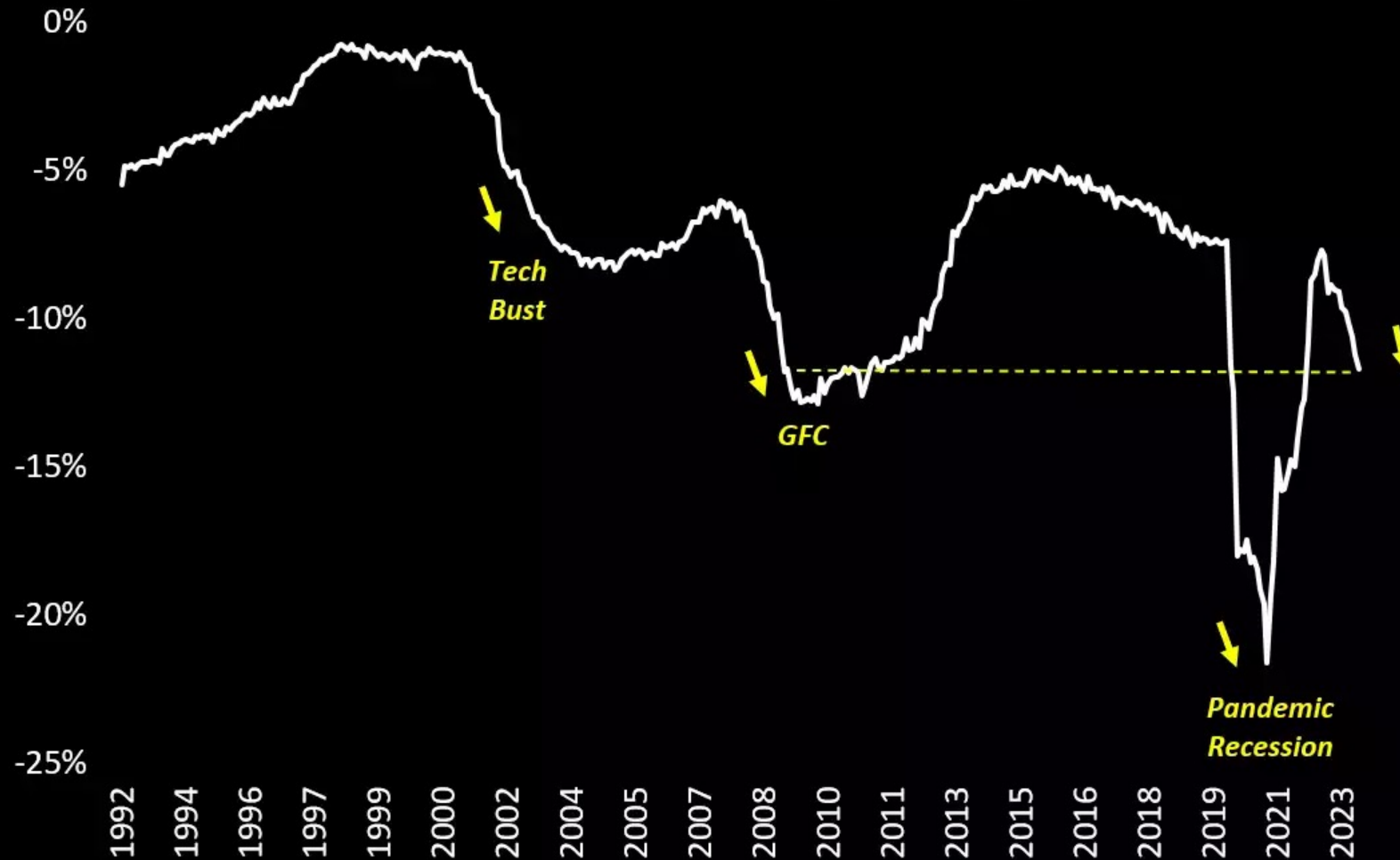


If easing monetary conditions with inflation re-accelerating is the next move, then this is probably the most compelling setup to own hard assets that we have seen.

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# US Twin Deficits to GDP

*Current Account + Fiscal Deficit As a % of GDP*



Source: Bloomberg; Tavi Costa

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The US is now running twin deficits that are as severe as those experienced during the worst parts of the Global Financial Crisis.

# US Fiscal Spending (Excl. Interest Payments) as % of GDP

YoY Change



Source: Bloomberg, Tavi Costa

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Even without factoring in the cost of servicing the debt, fiscal spending alone represents over 25% of GDP in the US.

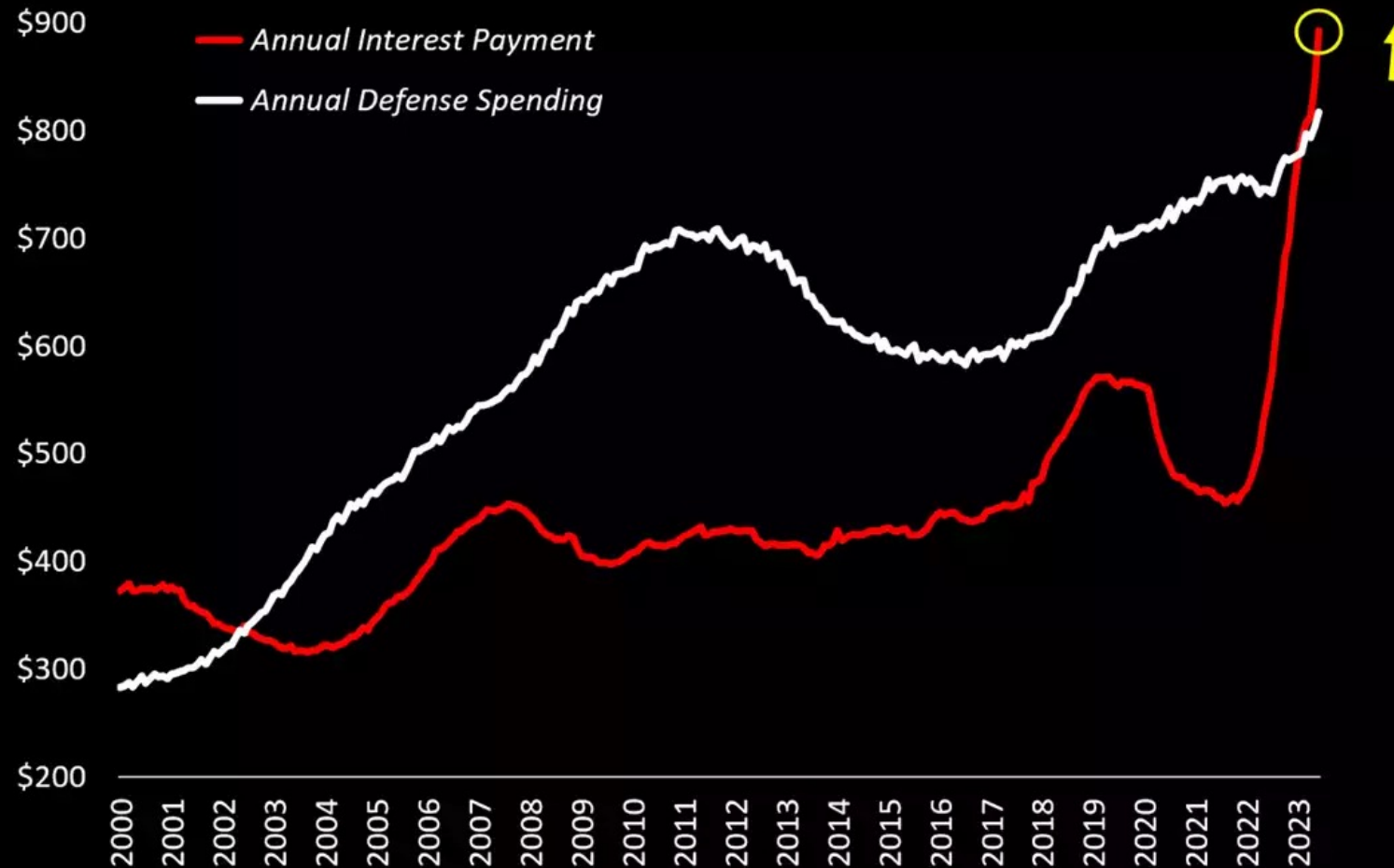
Today's government expenditure has already surpassed the levels seen after the Global Financial Crisis. The notable distinction is that we haven't experienced an economic downturn yet.

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# US Interest Payment on Federal Debt vs. Defense Spending

USD Billions



Source: Bloomberg; Tavi Costa

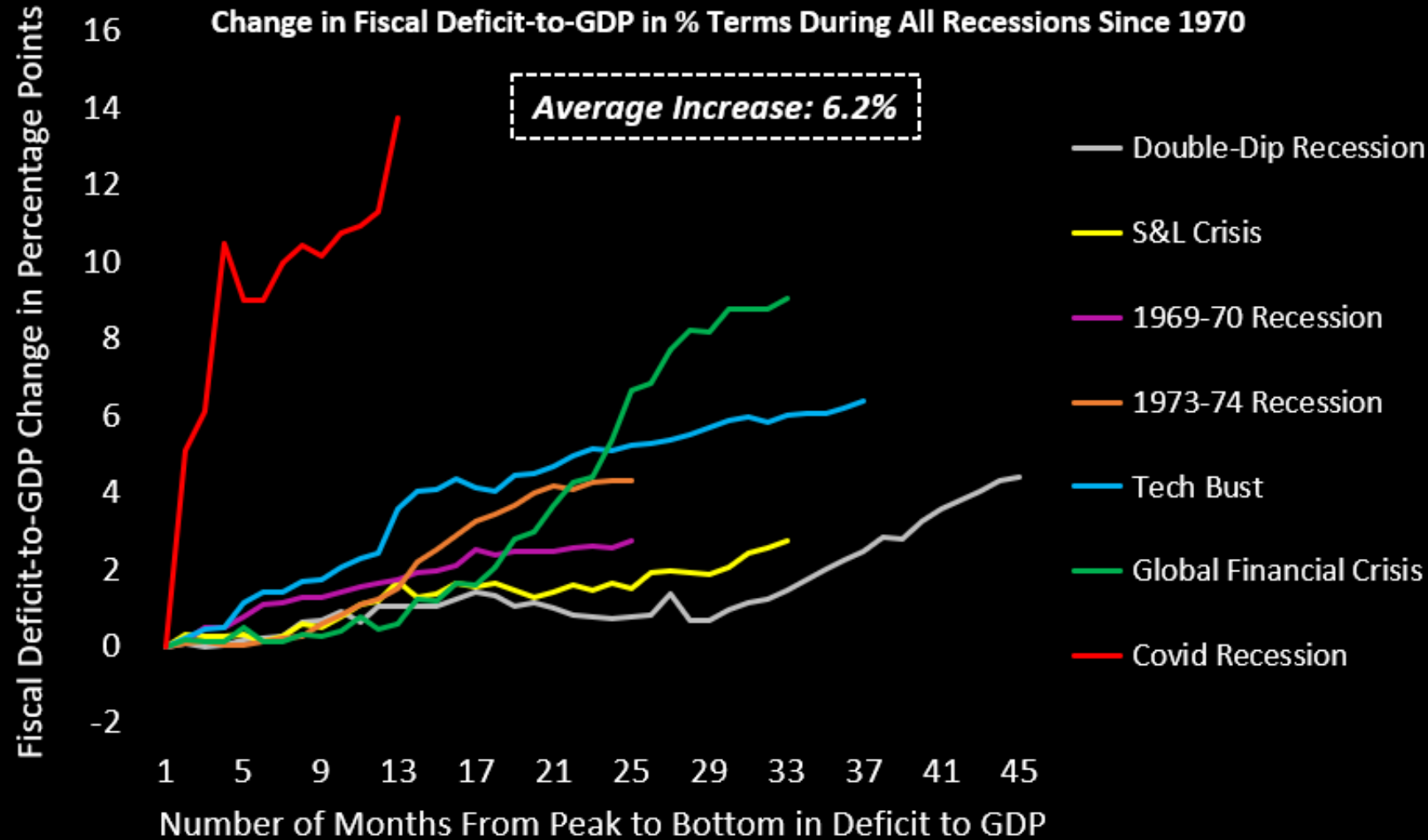
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This is likely the initial stages of a trend, and if no solutions are implemented, other components of the fiscal agenda may soon be constrained by the escalating cost of debt.



# Change in US Fiscal Deficit as a Result of Recessions



Source: Bloomberg

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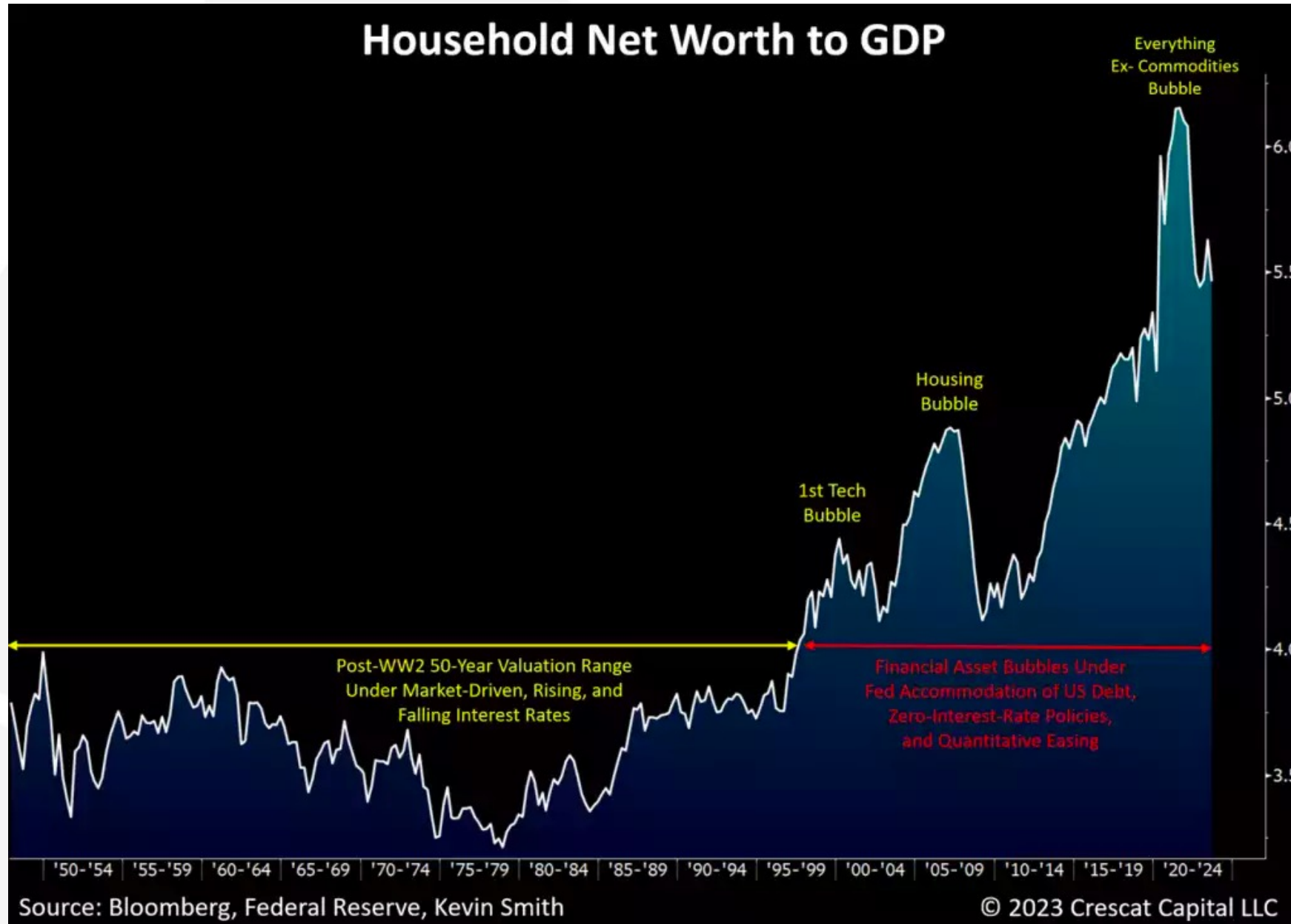


Looking at all recessions since 1970, fiscal deficit-to-GDP worsened by an average of 6.2%.

We think the next downturn will be no different.

However, government spending will likely be increasing with inflation rates already historically elevated so nominal GDP may also be rising.

# Household Net Worth to GDP

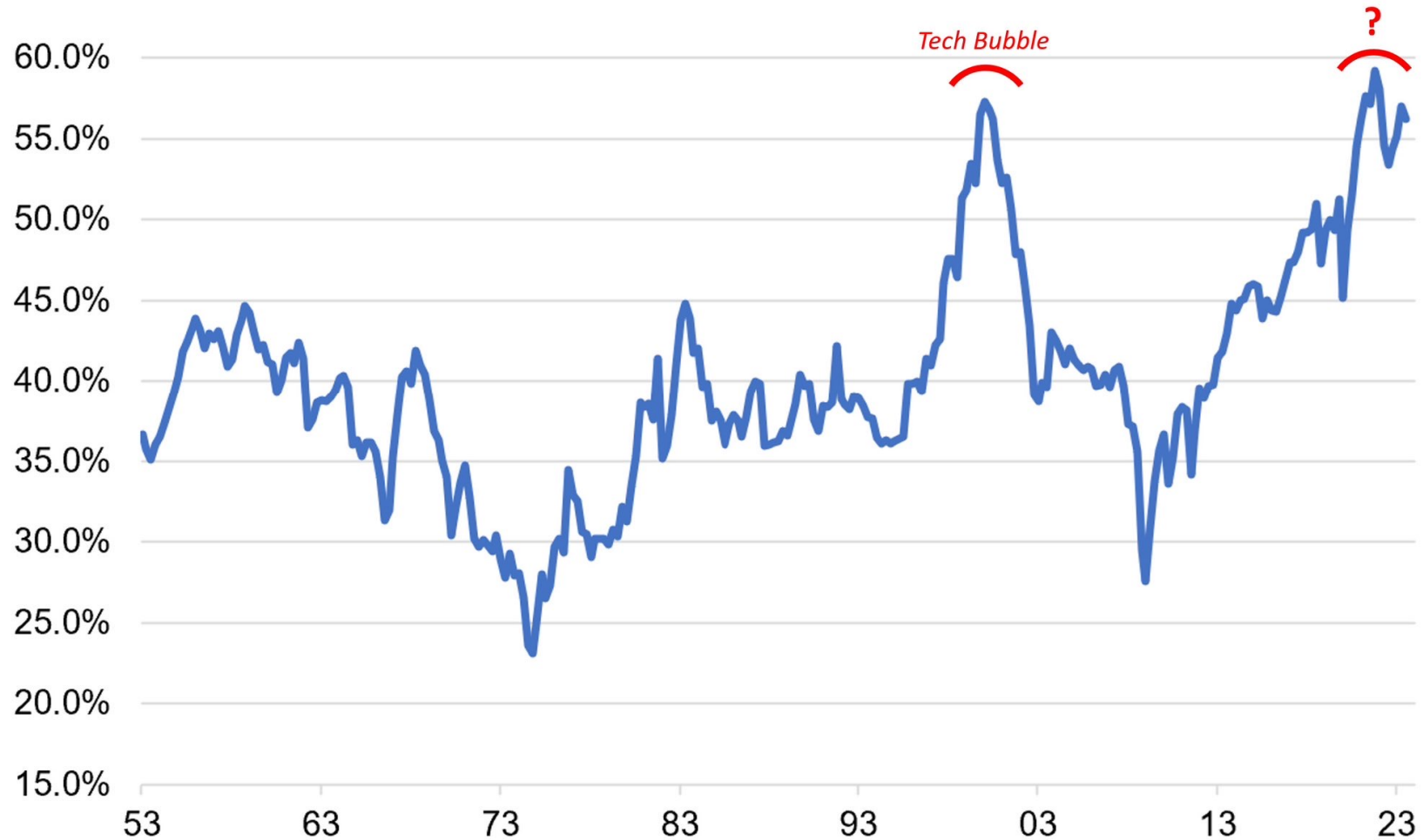


The Fed helped create many of these embedded inflation problems in the first place due to too many years of ultra-accommodative monetary policy which served primarily to create only bigger and bigger debt and financial asset bubbles. Now, we believe the Fed has little choice but to tolerate long-term rising consumer and wholesale prices as it attempts to manage the deflation of these bubbles.

# MISPRICED COST OF CAPITAL

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# Foreign Holdings: US Equities Allocation



Source: Topdown Charts, LSEG, Federal Reserve FoF data

topdowncharts.com



Foreign investors' allocation in US equities is currently as extreme as they were at the very peak of the tech bubble.

Similar to what we experienced back then, the gradual unwinding of crowded sectors like technology is set to unleash another major growth to value rotation in markets.





We believe that the recent front pages of Barron's and The Economist are particularly revealing, indicating a significant bullish sentiment among both market participants and the media.



# S&P 500 Nominal Earnings

12-Trailing Months EPS



Source: Bloomberg; Tavi Costa

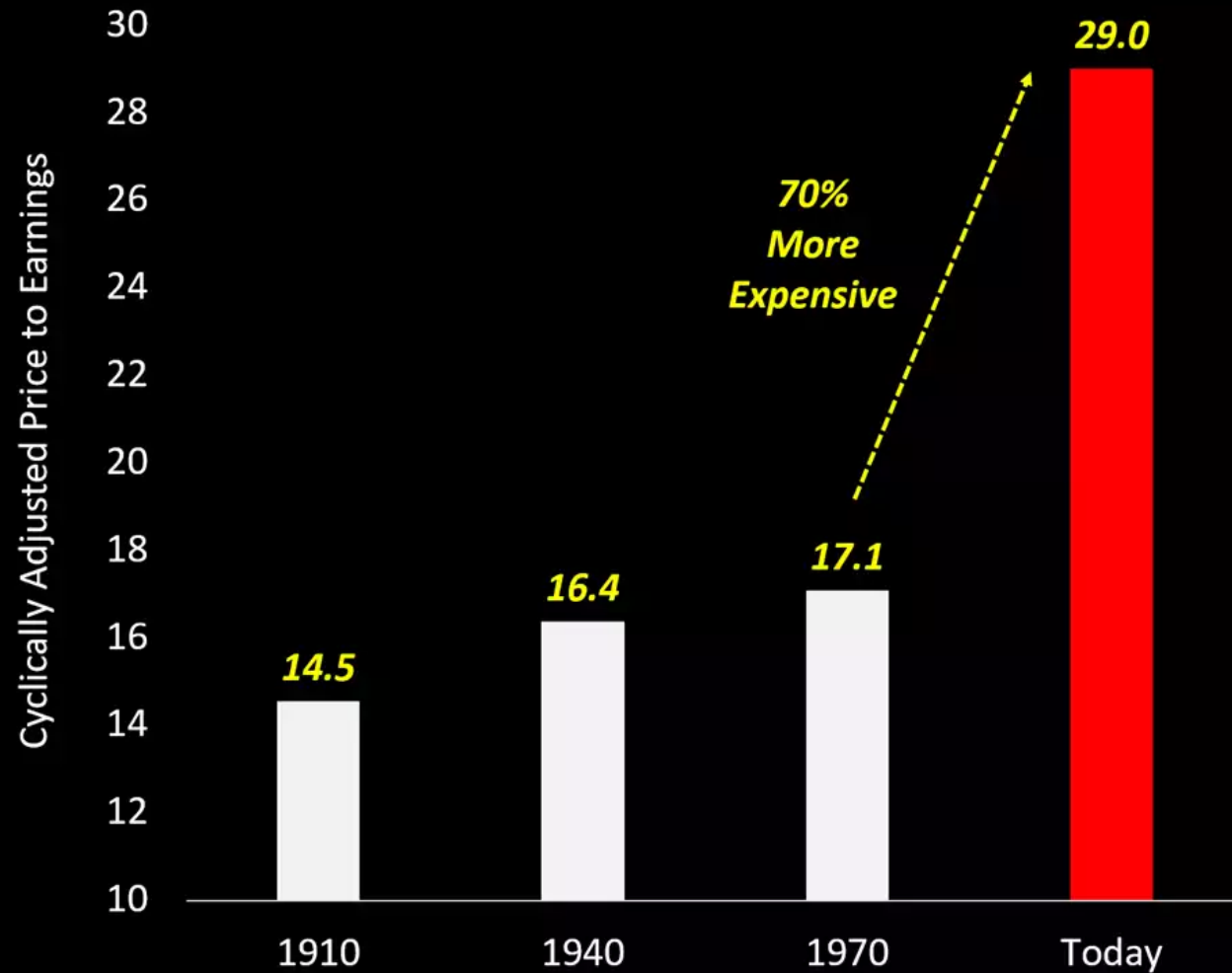
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Every time profits reached the upper band of this range, an earnings recession followed.

We are at a similar peak-level juncture again today while analysts continue to be overly optimistic.

## US Stocks' Valuation at the Beginning of Prior Inflationary Decades



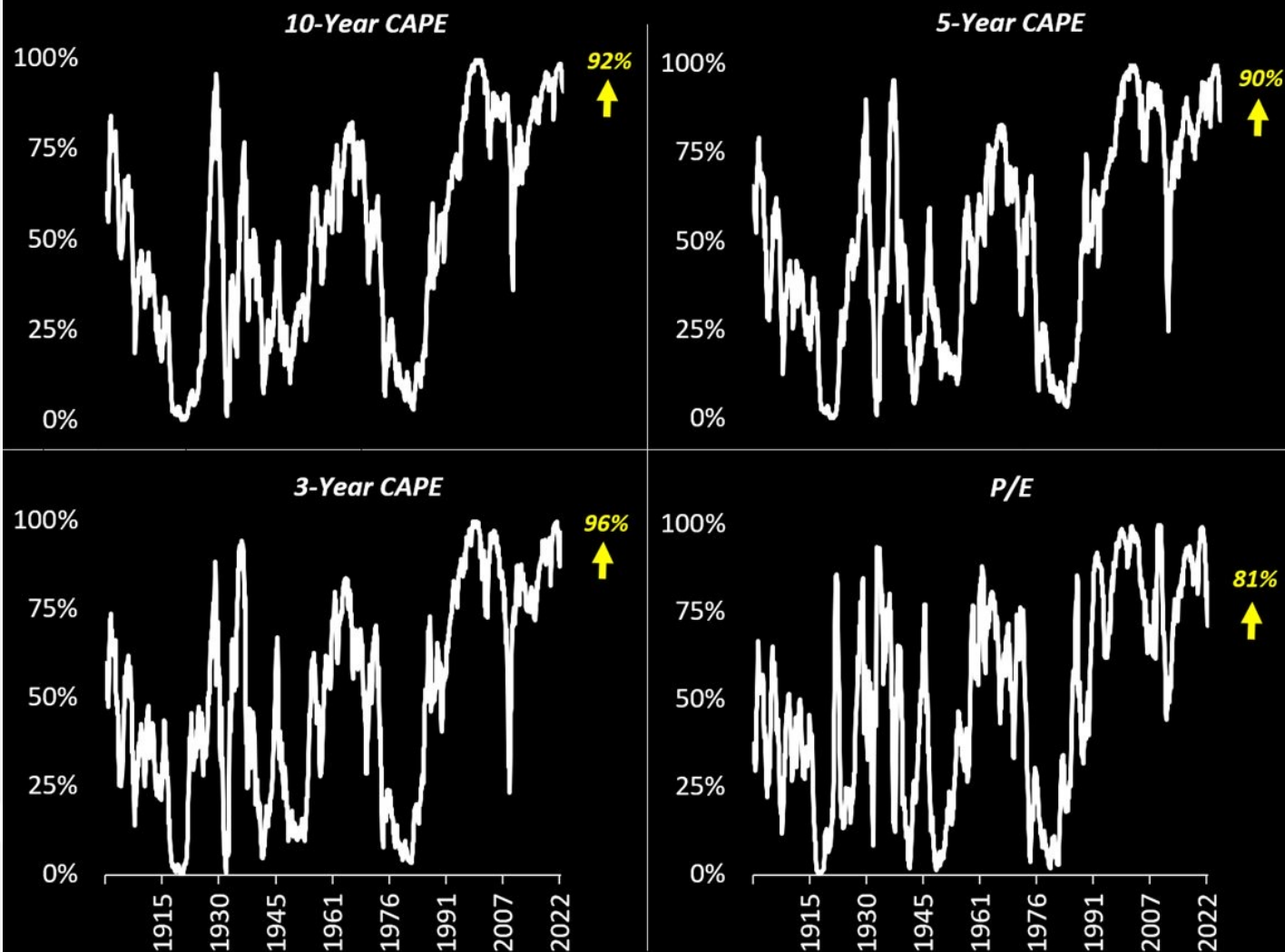
Source: Professor Robert J. Shiller; Yale University; Tavi Costa

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Today's valuations are over 70% more expensive than they were when each of those inflationary decades began.

## US Stocks Cyclically Adjusted P/E Ratio: Historical Percentile



Source: Professor Robert Shiller; Yale University; Tavi Costa

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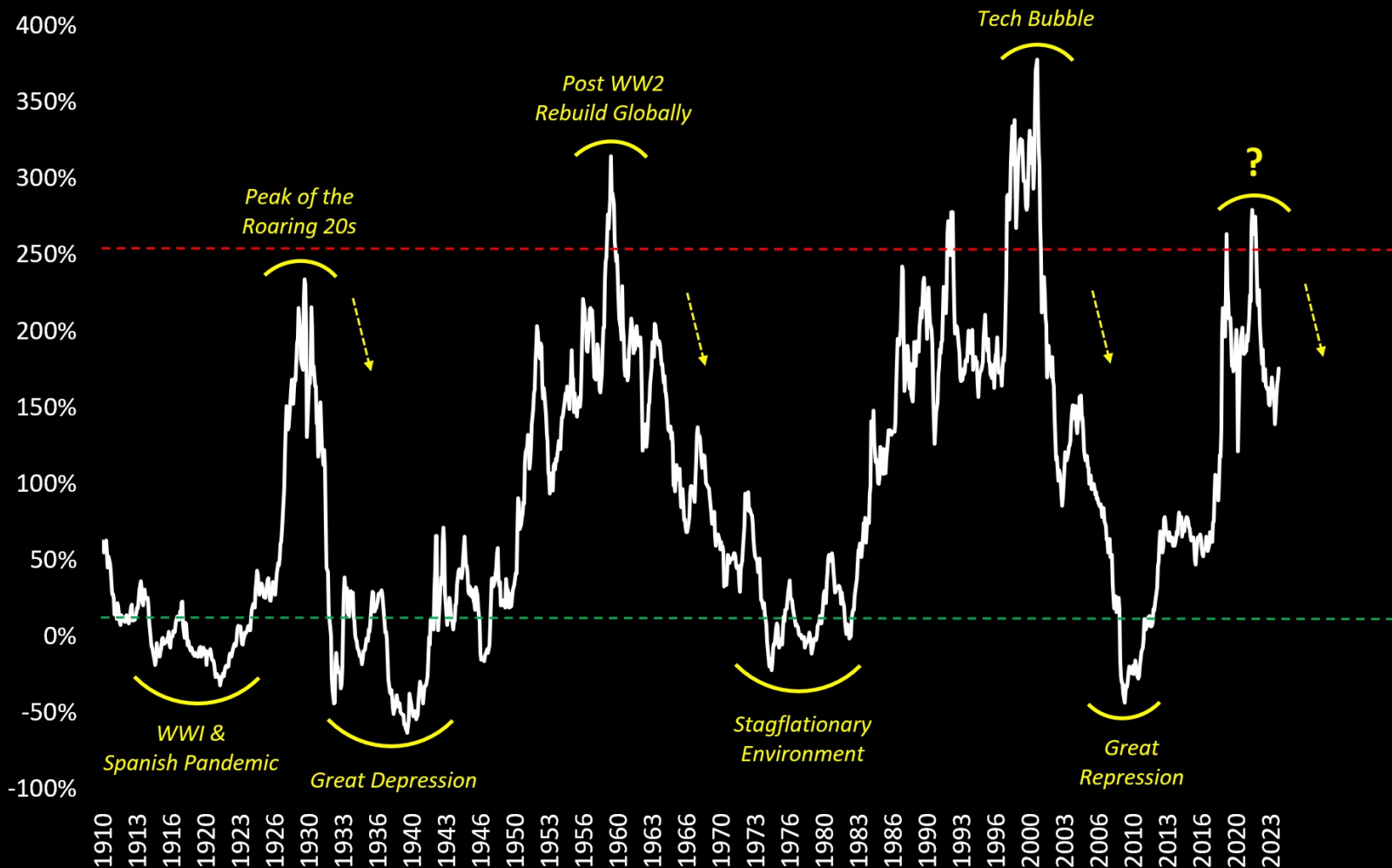


On a CAPE ratio basis, for instance, market prices are near record levels relative to 1, 3, 5, and 10-year cyclically adjusted earnings.

The only plausible way to justify the current multiples in equity markets would be if, for the first time in history, we were to experience a 50% increase in real earnings for back-to-back decades.

# The Secular Changes in US Equity Markets

*S&P 500 Index Rolling 10-Year Return*



Source: Yale University; Tavi Costa

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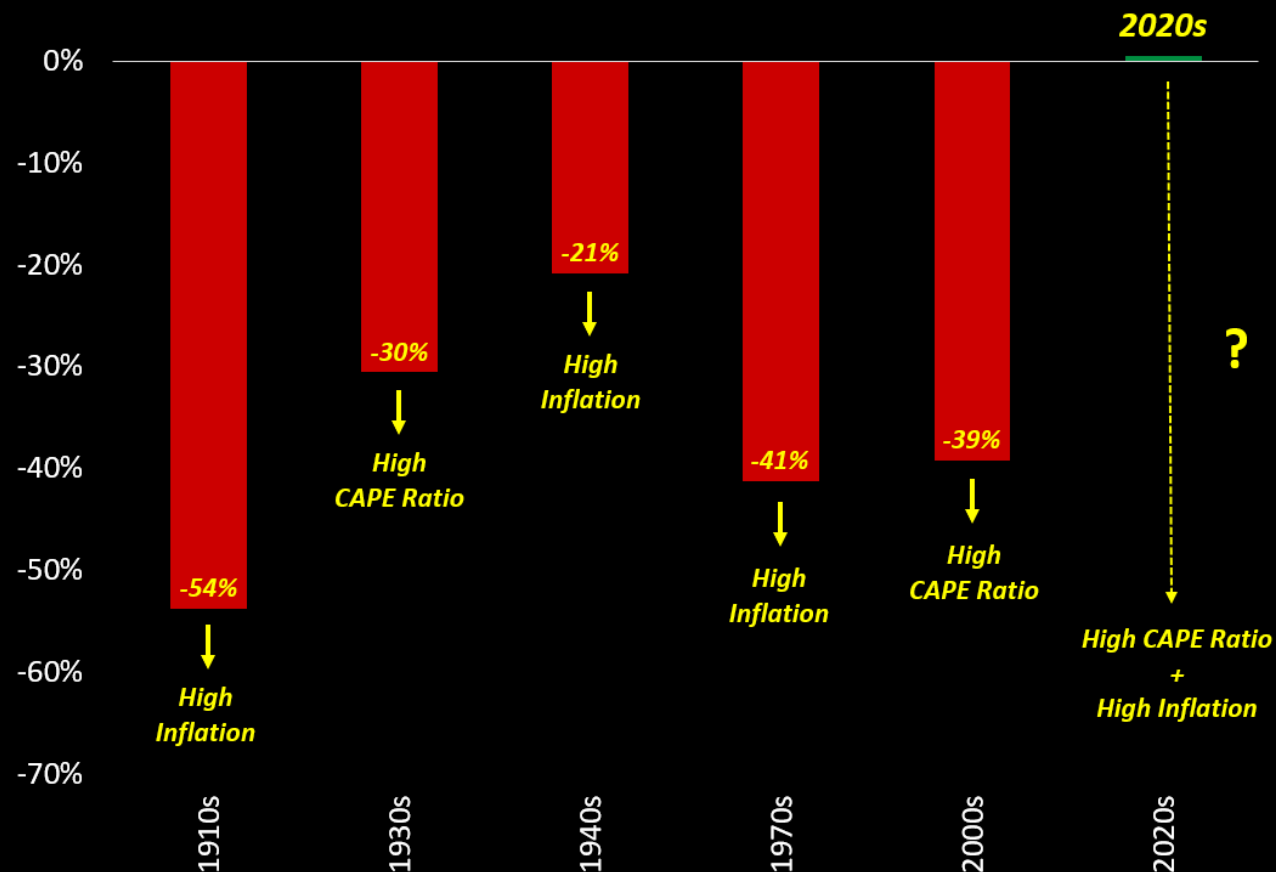


As the business cycle progresses, the long-term returns of US equity markets follow secular trends that experience pivotal turning points when valuations reach extremes.

From our perspective, the years of excessive performance in the overall US stock market are likely behind us.

# US Stocks: Worst Returns by Decade

Total Real Return



Source: Professor Robert Shiller; Yale University; Tavi Costa

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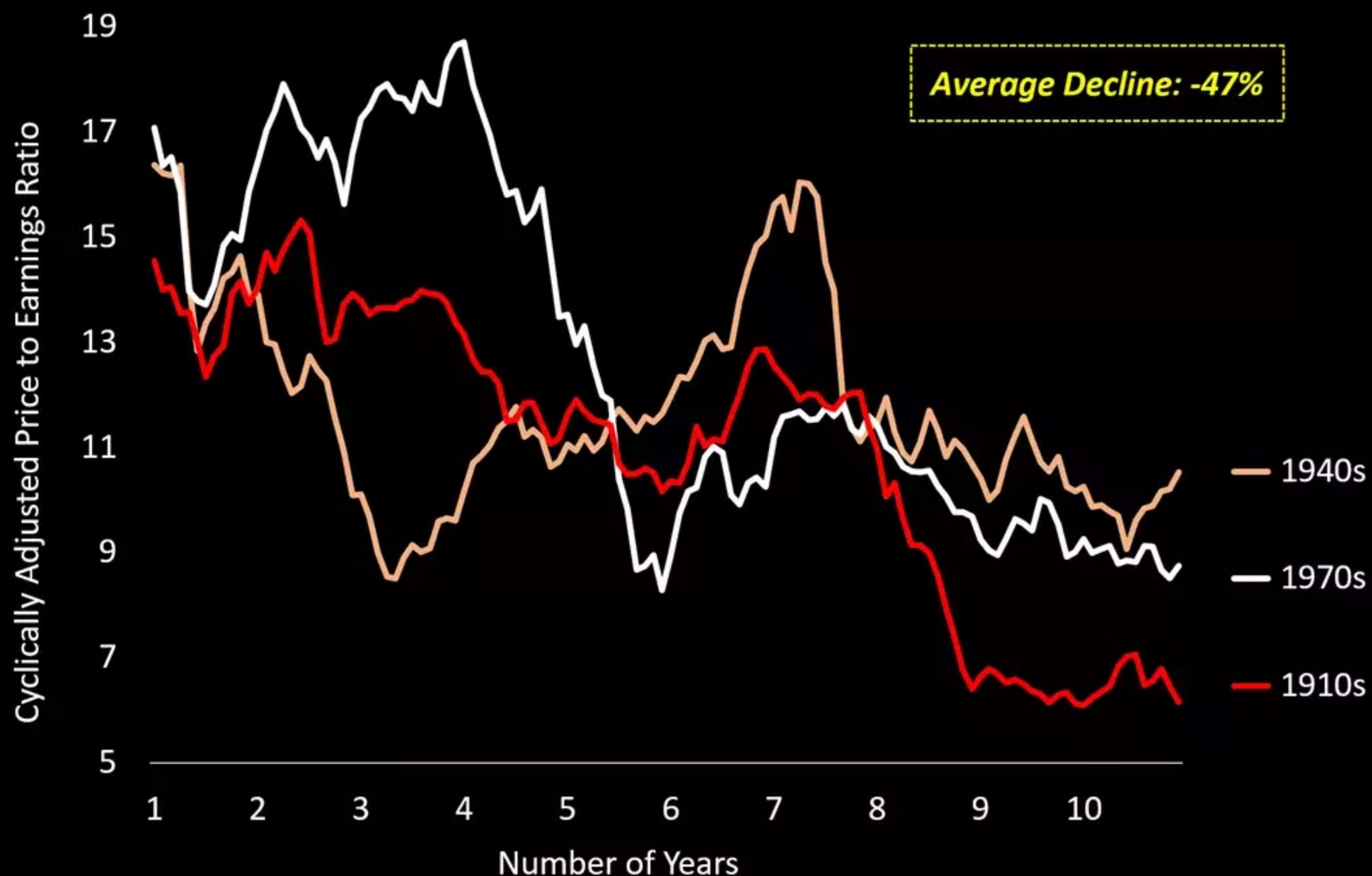


Since 1900, there have been only five decades that the total real return for US stocks was negative. In fact, they were all deeply negative. Three of these periods happened during inflationary eras. The other two occurred at a time when valuations of US equity markets were at historical levels. Today, we have both setups at the same time.

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## US Stocks: Multiple Compression During Inflationary Decades



Source: Bloomberg ; Tavi Costa

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The last time we had a long period of higher-than-average cost of capital was in the 1910s, 1940s, and 1970s.

While each had its own unique circumstances, fundamental multiples for stocks significantly contracted over all those decades.

The average decline was nearly 50%.

More importantly, note that CAPE ratios shrunk to single digits at the end of two periods and to just 10.5x in the 1940s.

# MEGACAP GROWTH CEILING

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# S&P 500 Performance by Sector

5-Year Normalized Return Starting at 100

Normalized As Of 01/14/2019

- Industrials
- Consumer Discretionary
- Utilities
- Financials
- Consumer Staples
- Health Care
- Information Technology
- Energy
- Materials
- REITS
- Communication Services



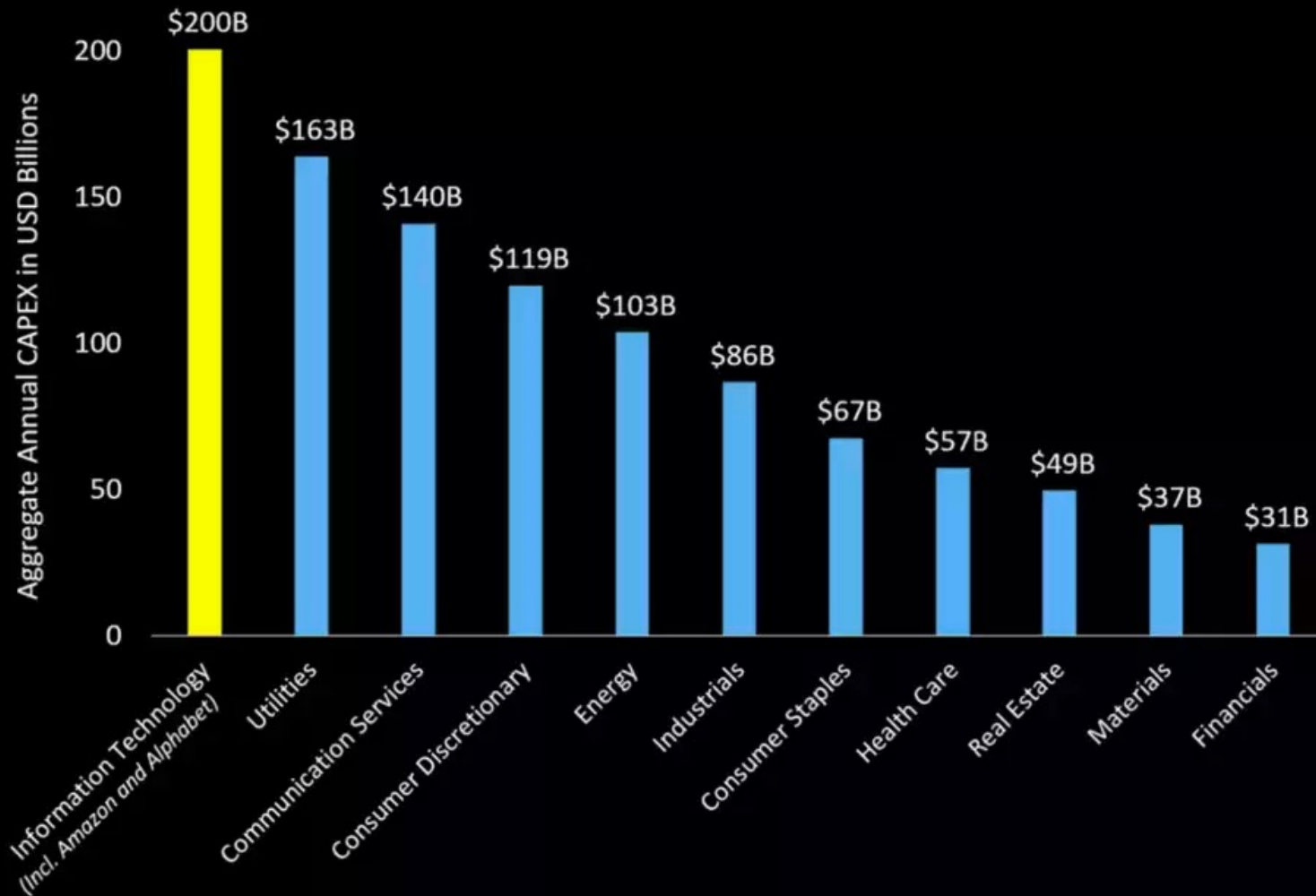
Source: Bloomberg; Tavi Costa

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The current market structure reminds us of the final stages of the tech bubble. During that period, the S&P 500 reached its peak on March 24, 2000, subsequently retesting the same level on September 1, ultimately forming a double top that only concluded after a 50% decline in the overall market. Notably, tech companies experienced an 83% plunge from peak to trough.

## S&P 500 Sectors: Annual CAPEX per Sector



Source: Bloomberg; Tavi Costa

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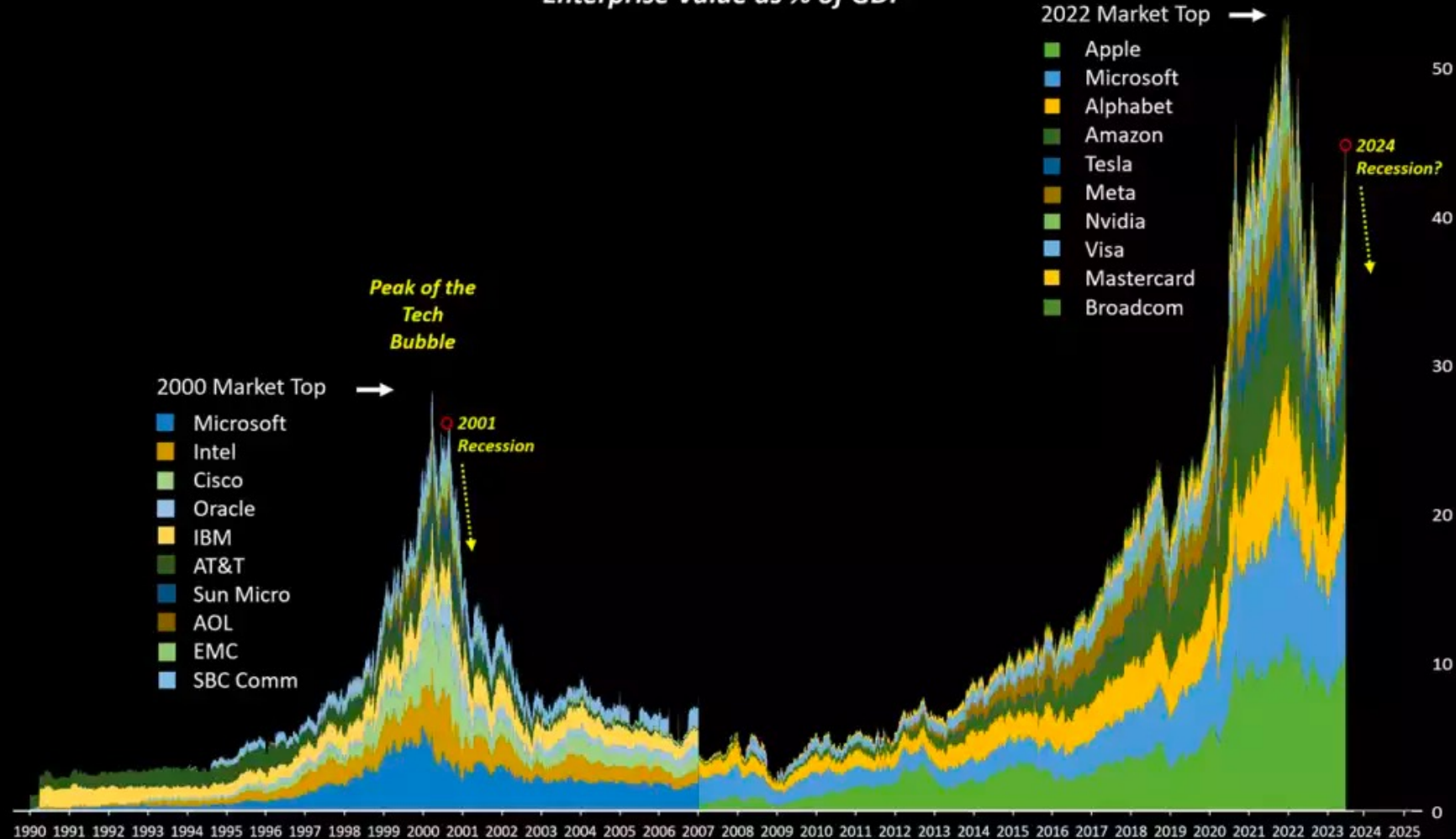
While it has been relatively unnoticed, US companies have recently engaged in one of the most extensive capital spending booms in history. Conventional wisdom would think that most of these corporate investments in the economy are currently being driven by highly capital-intensive businesses, but the truth is that technology businesses have been by far the biggest contributor to this investment expansion.

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# Top 10 Megacap Tech Stocks

Enterprise Value as % of GDP



Source: Bloomberg, Kevin Smith

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The Fed pivoted to help the banking sector, especially after giving recognition to likely broader credit losses in the system that have yet to be officially recognized.

# Prices vs. Fundamentals

Free-Cash-Flow Mean Estimate for Calendar Q1 2024 (USD Millions)

## Microsoft Corp.



Source: Bloomberg; Kevin Smith

## Apple Inc.

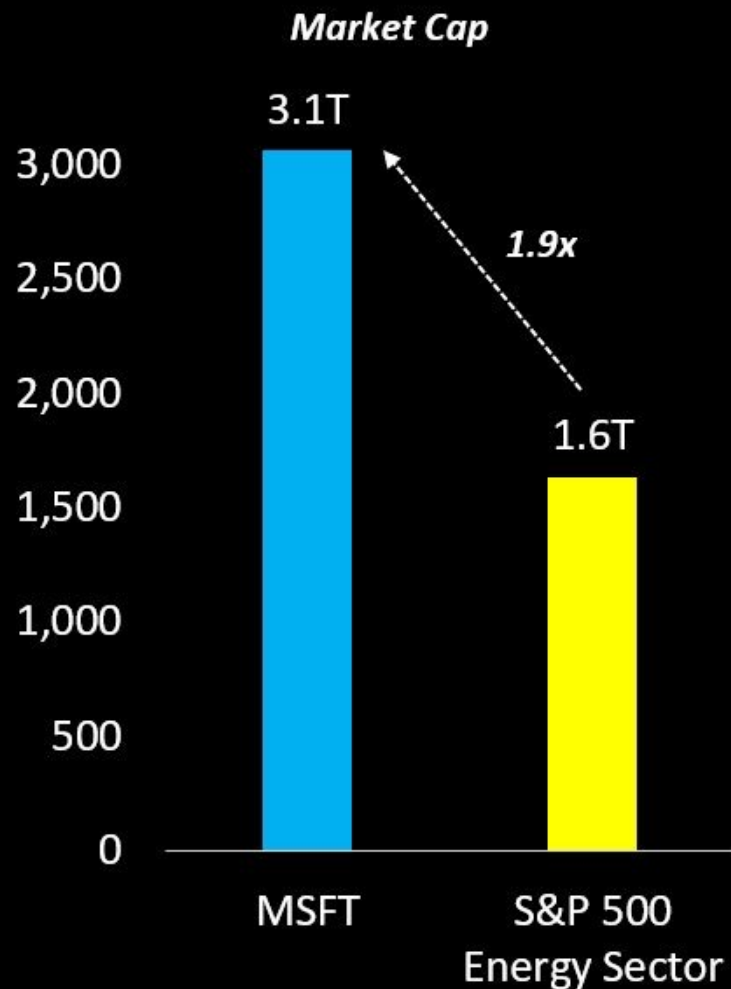


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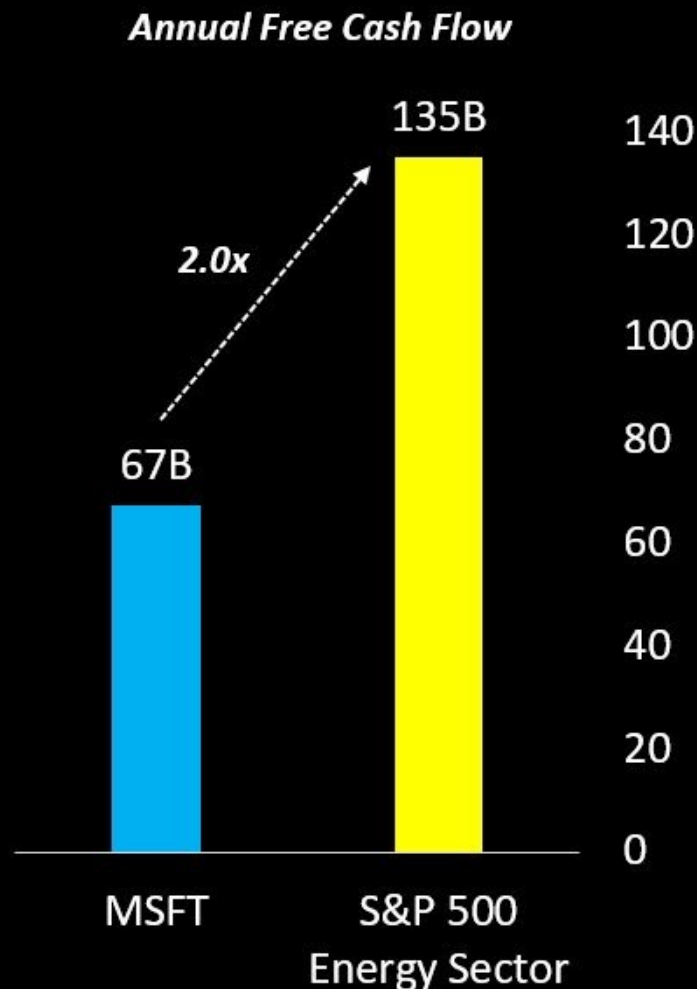


Artificial intelligence mania has caused stock prices to diverge from underlying fundamentals. Investors who have created much wealth in richly valued index funds and mega-cap tech stocks should consider preserving it now by significantly reducing that exposure.

# Microsoft vs. Energy Sector



Source: Bloomberg; Tavi Costa

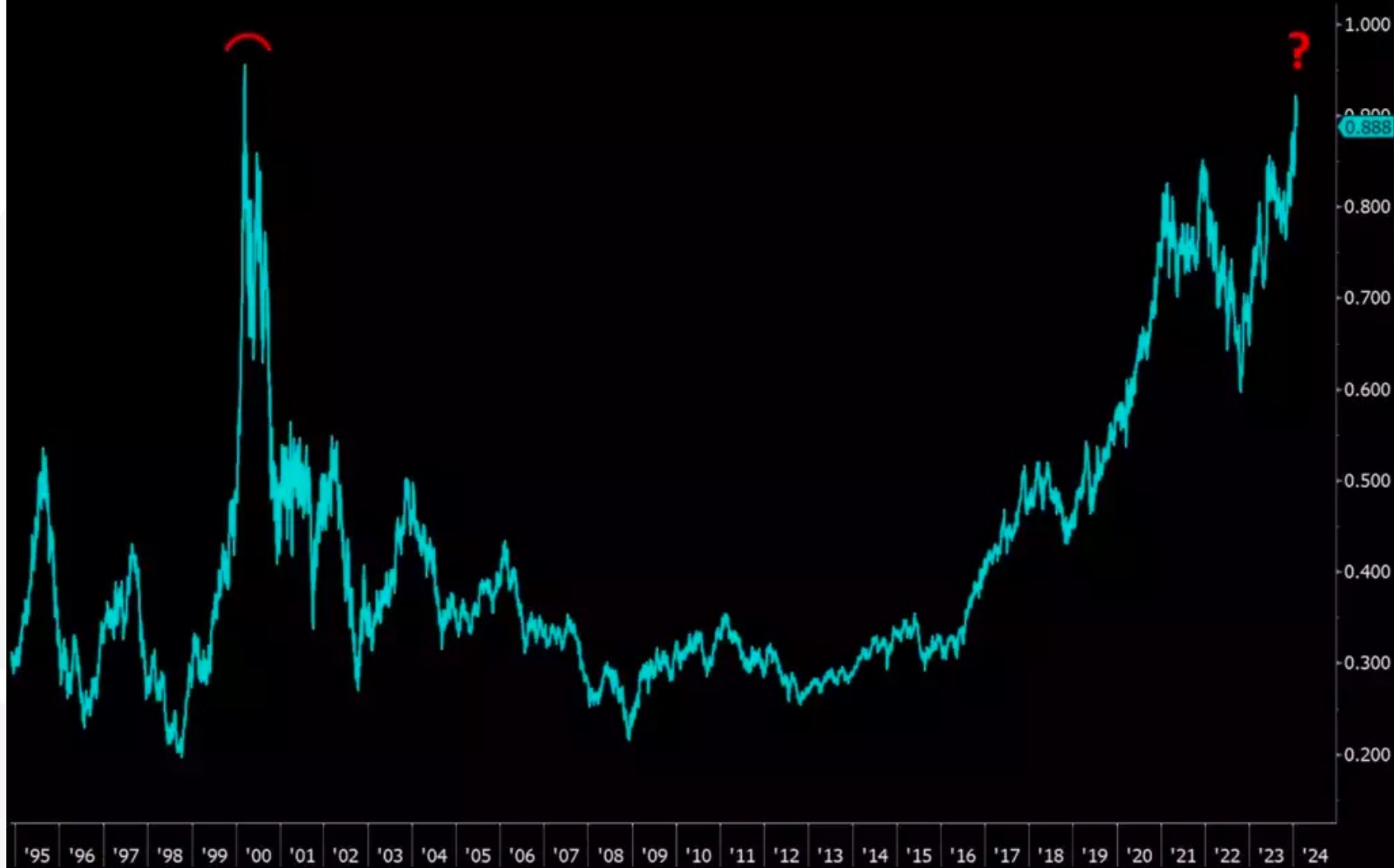


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With a \$3 trillion market cap, Microsoft is twice the size of the entire energy sector in the S&P 500, which generates double Microsoft's annual free cash flow.

## Philadelphia Semiconductor Index vs. S&P 500 Index



Source: Bloomberg, Kevin Smith

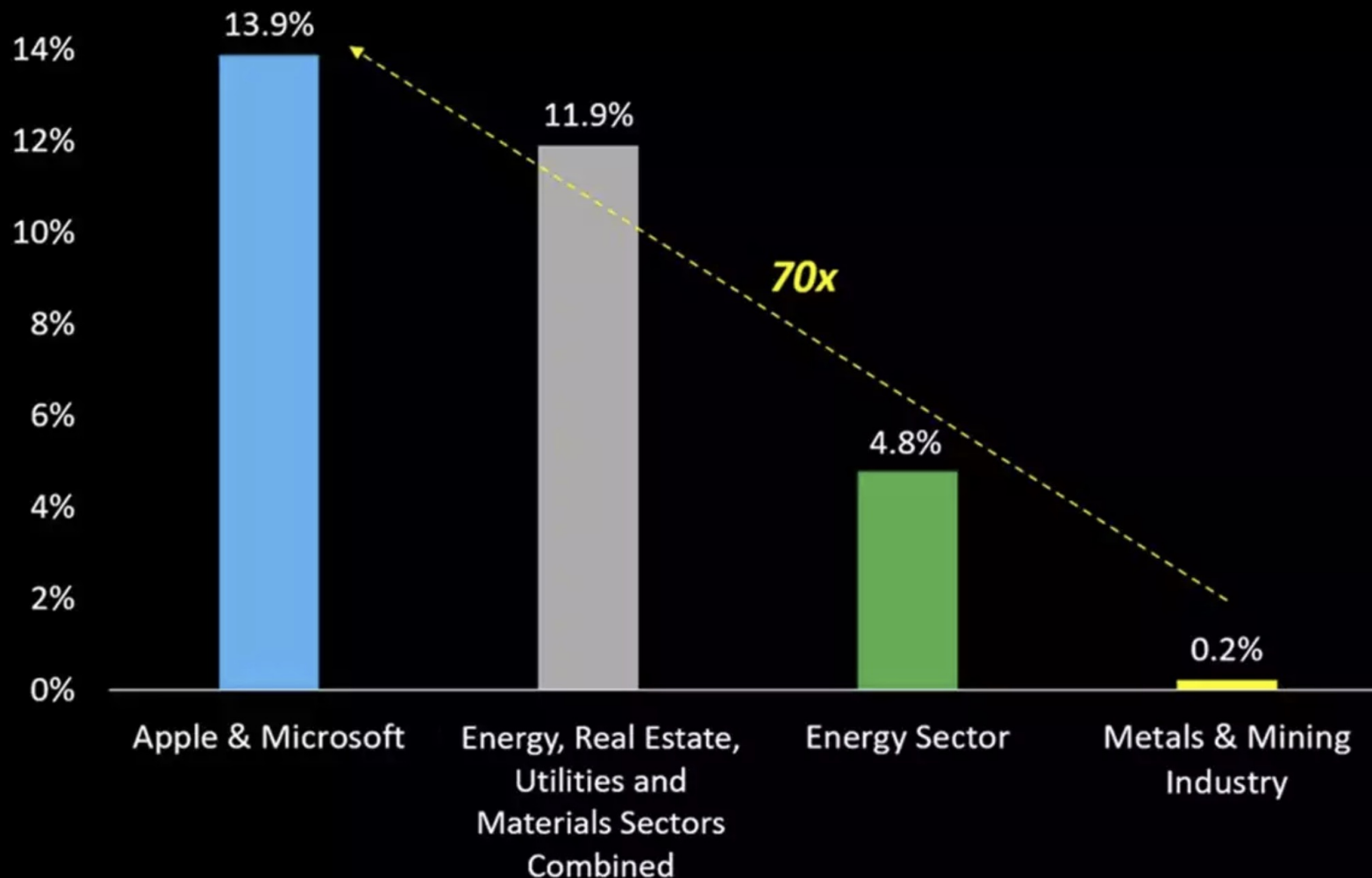
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The hype over AI is just like the Internet frenzy in 2000. The innovation was real then, just like it is now, but the faith placed in tech companies via inflated valuations to be able to capitalize on it was, and is once again, overblown.



## "The Magnificent 2" % Weight in the S&P 500 Index



Source: Tavi Costa; Bloomberg

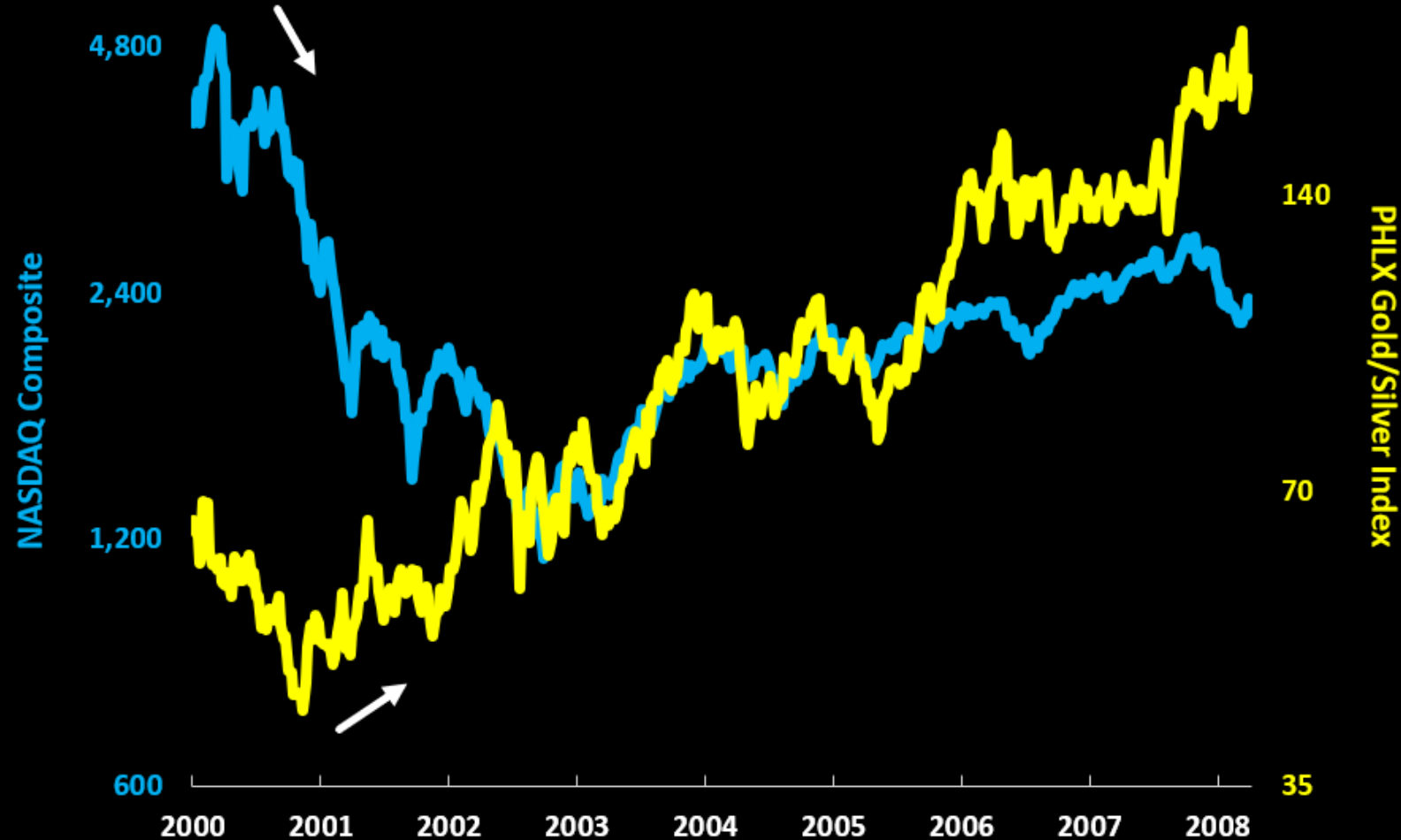
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It's mind-boggling that Apple and Microsoft's weight alone in the S&P 500 is larger than four sectors combined, and, more importantly, both companies are 70x larger than the entire metals and mining industry.

# Tech Bust

*Philadelphia Gold and Silver Index vs. Nasdaq Composite*



Source: Bloomberg

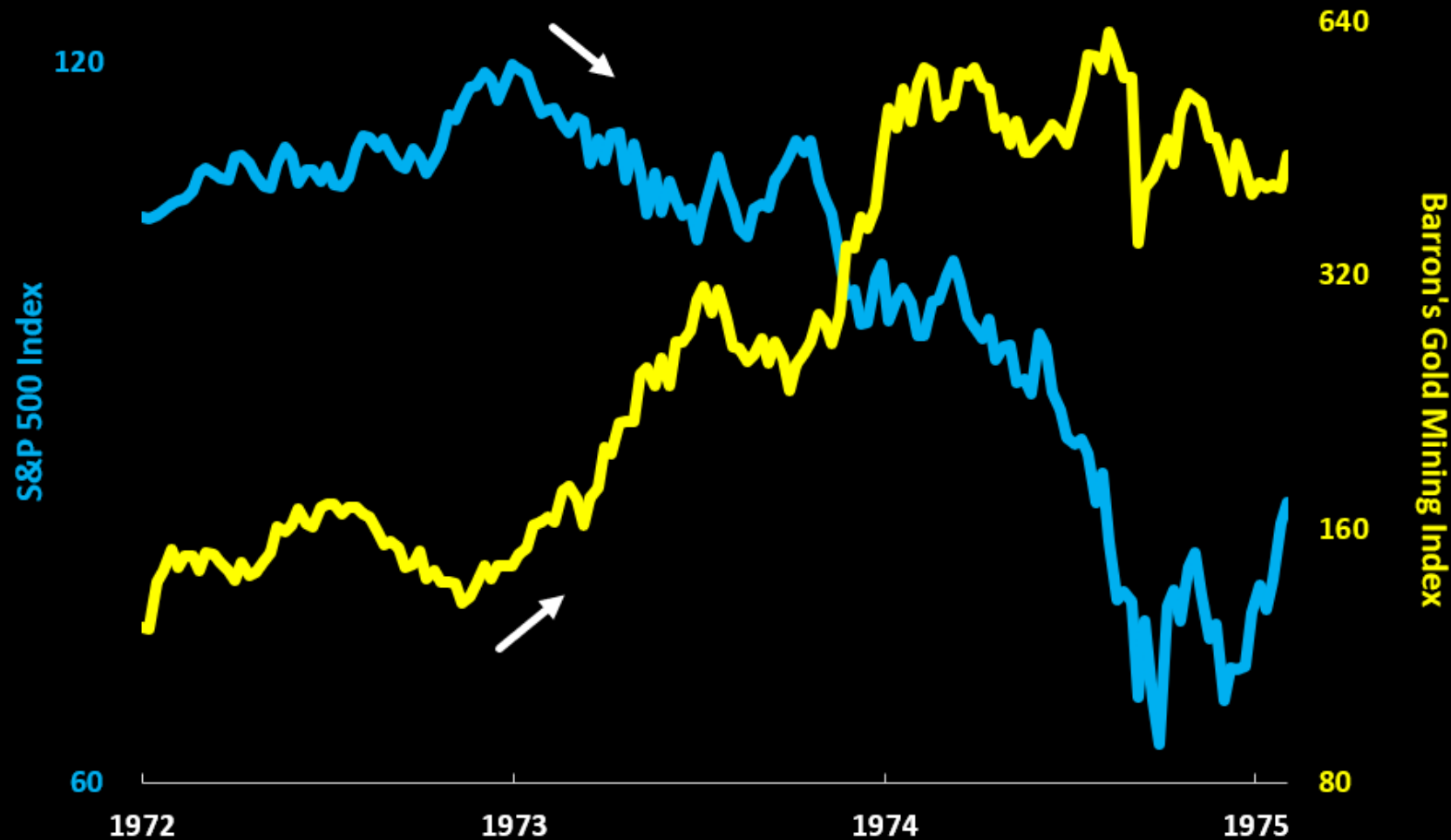
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In the early 2000's tech bust, NASDAQ continued to fall all the way to October 2002, but the great buying opportunity for precious metals mining stocks started at the end of 2000.

# Inflationary Recession of 1973-74

*Barron's Gold Mining Index vs. S&P 500*



Source: Gold Charts R Us

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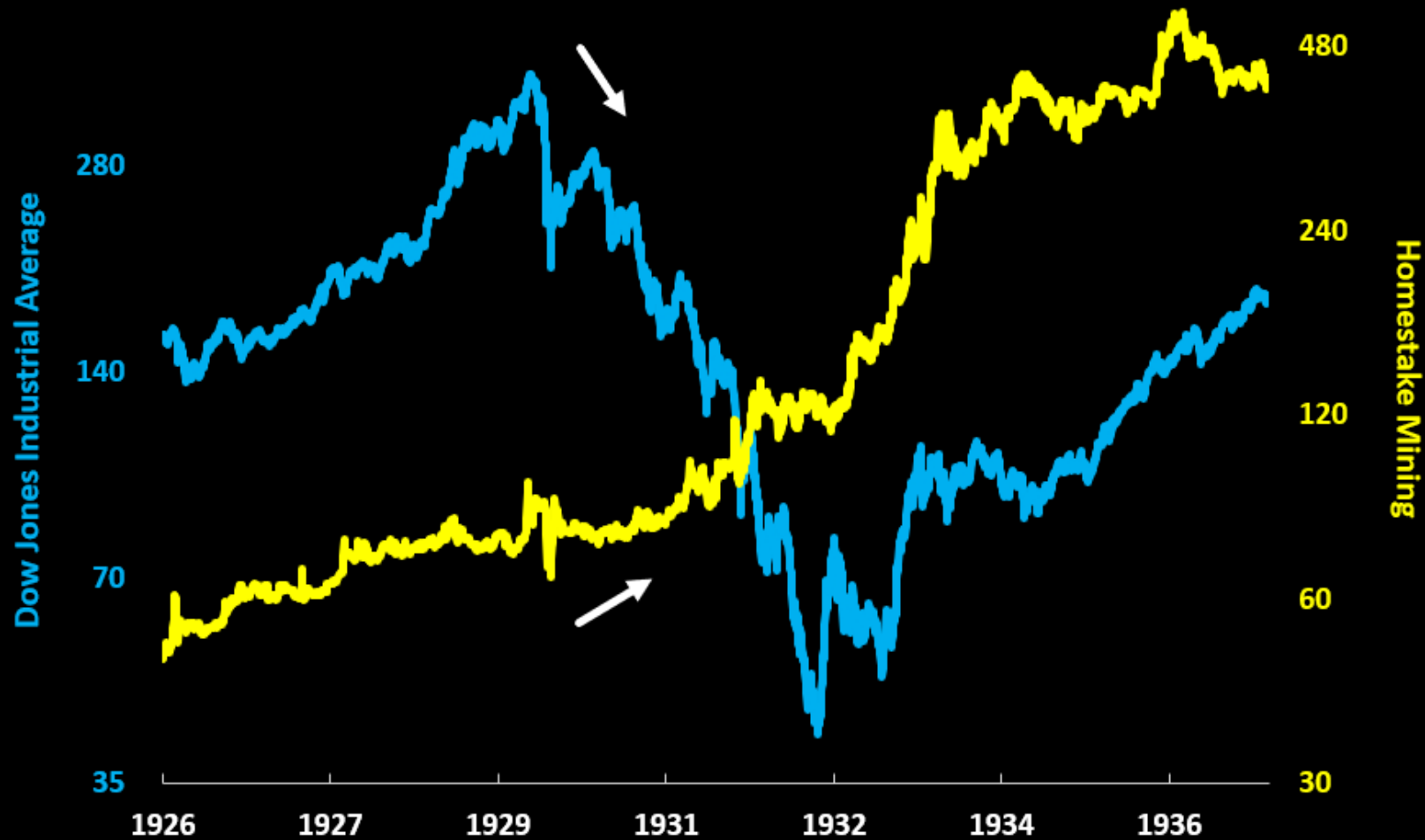
In 1973 to 1974, mining stocks went up 5-fold in just two years while the S&P 500 declined 50%

Large-cap growth stocks known as the Nifty Fifty at the time, the mega-caps of their day, went down substantially more.

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# Great Depression

*Homestake Mining vs. Dow Jones*



Source: CRSP

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Even in that deflationary era, the largest gold mining stock appreciated a whopping 7-fold in five years after the 1929 crash while the Dow Jones finished the same period lower.



# US Equities Valuations vs. Gold-to-S&P 500 Ratio

US Stocks Total Market Cap as a % of GDP

Everything  
Bubble

Peak of the  
Tech Bubble

Gold-to-S&P 500 Ratio

Commodities  
Cycle ?

'92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 '19 '20 '21 '22 '23 '24 '25 '26

Source: Bloomberg; Tavi Costa

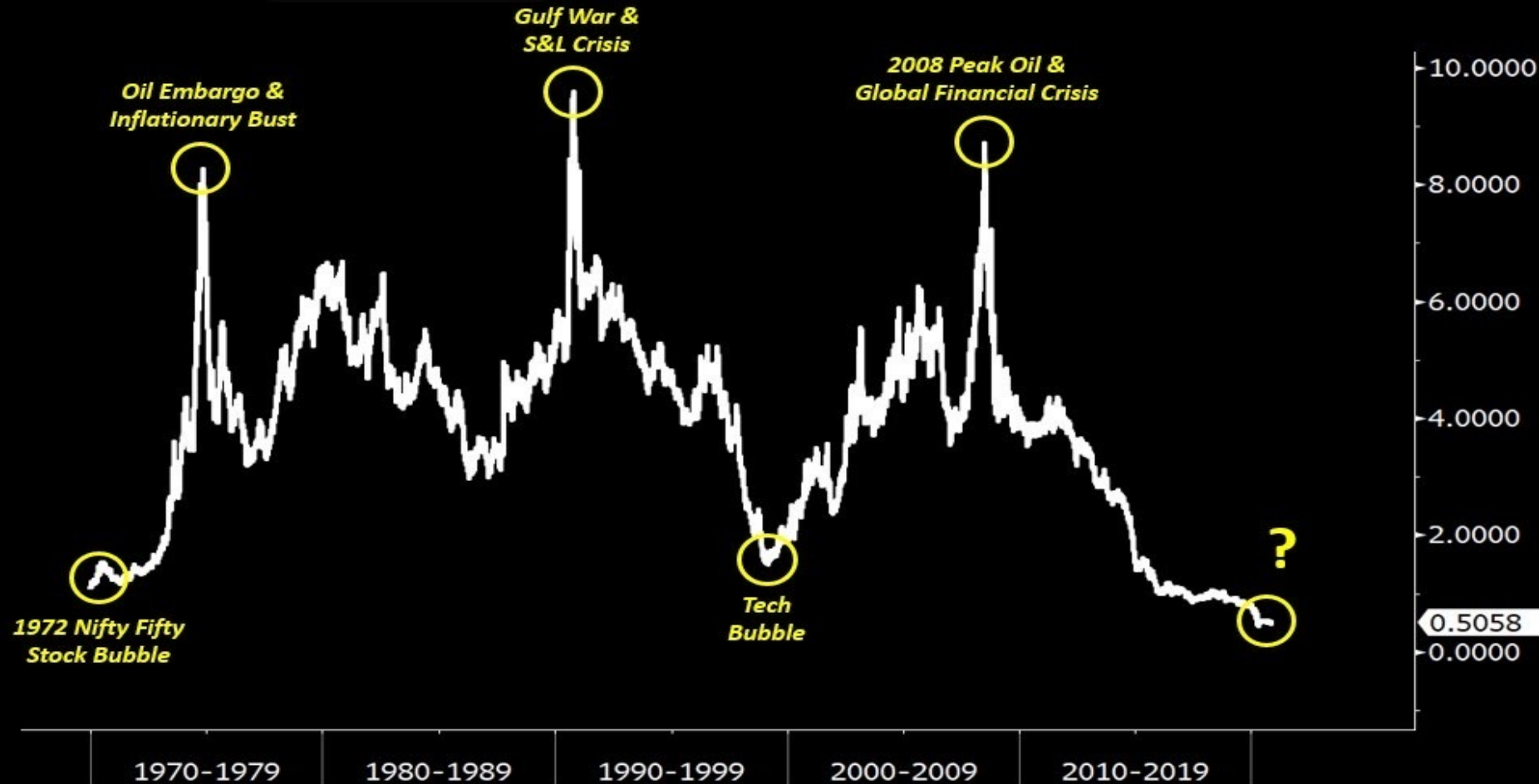
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Using one of the most traditional ways of assessing the state of the market, also Warren Buffet's favorite indicator, the total market cap of the overall stock market as a percentage of GDP is currently slightly above where it was at the peak of the Technology Bubble in 2000.

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# Commodities to Equities Ratio



Source: Incrementum AG

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It is still very early, in our analysis, in the rotation cycle out of overvalued growth equities and low-yielding fixed-income securities and into commodities. It is just like early 1973 and early 2001 in our view.

The commodities-to-equity ratio is at a 50-year low.



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THE VALUE OF GLOBAL MACRO INVESTING

# YIELD CURVE STEEPENER

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## US 2 vs. 10-Year Yield Spread



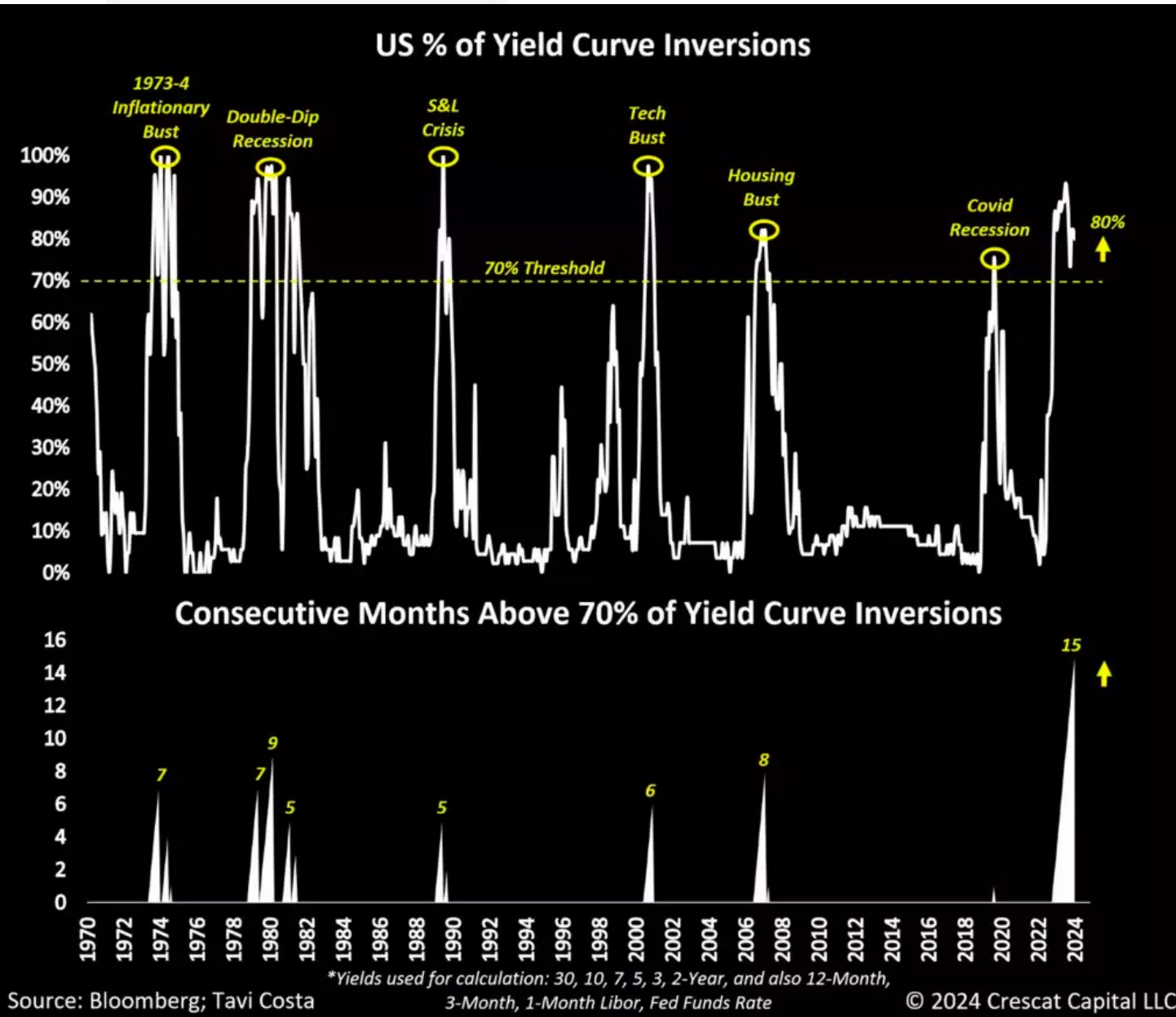
Source: Bloomberg; Tavi Costa

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After being deeply negative, the overall yield curve appears to be in the process of de-inverting. Using the 2 vs. 10-year yield spread as a proxy, past instances of yield curve steepening have witnessed abrupt changes exceeding 300 basis points from the bottom to the trough.

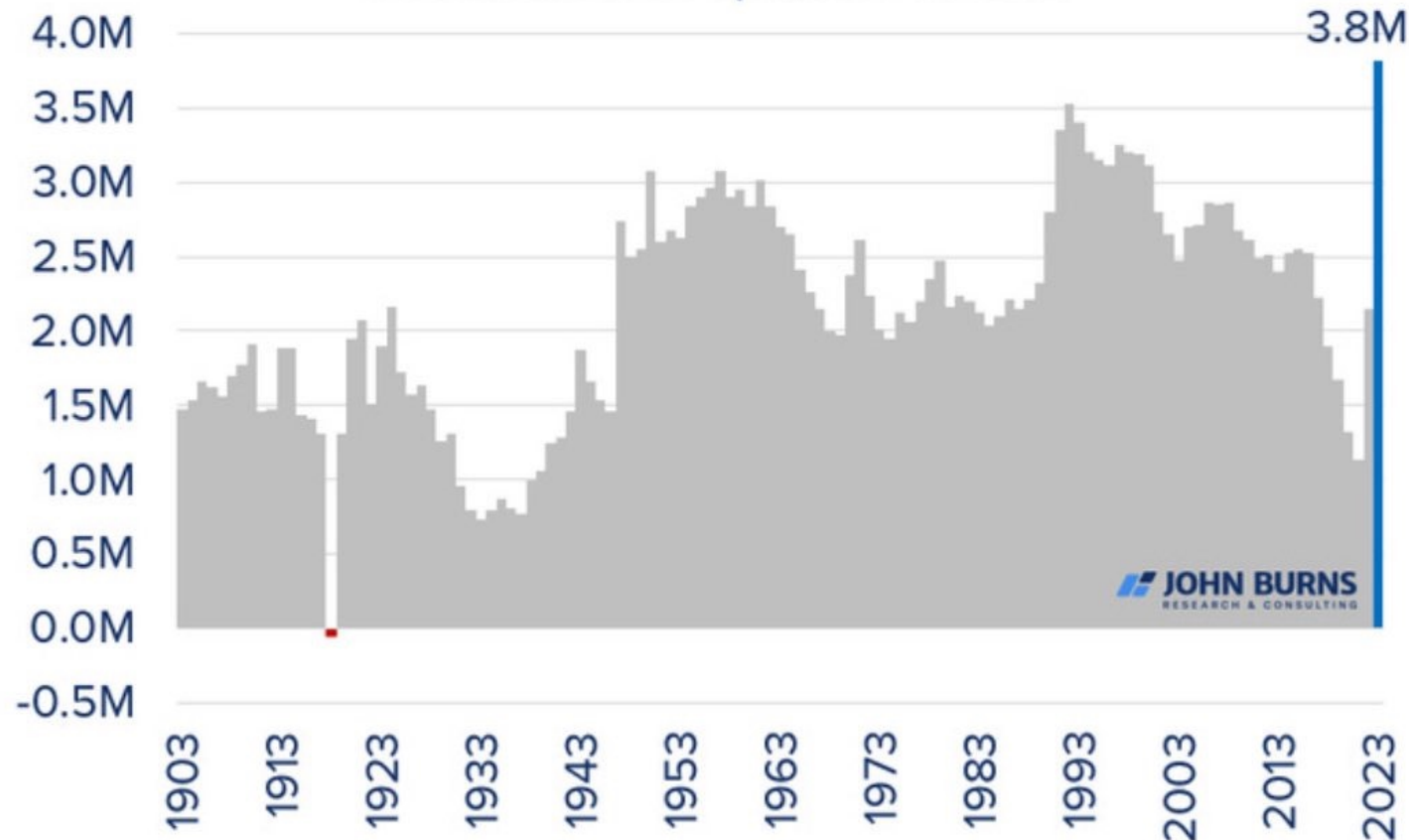




today, by far, is the longest period in history that the percentage of yield curve inversions in the US Treasury market has stayed above the recessionary threshold of 70% for 15 consecutive months based on our proprietary model

# Largest one-year population increase in US history

US Annual Net Population Growth



Sources: CBO, US Census, John Burns Research and Consulting, LLC (Data: Q23; Pub: Feb-24)

As seen in **Burns US Demographics Analysis and Forecast (coming soon in 1Q24)**

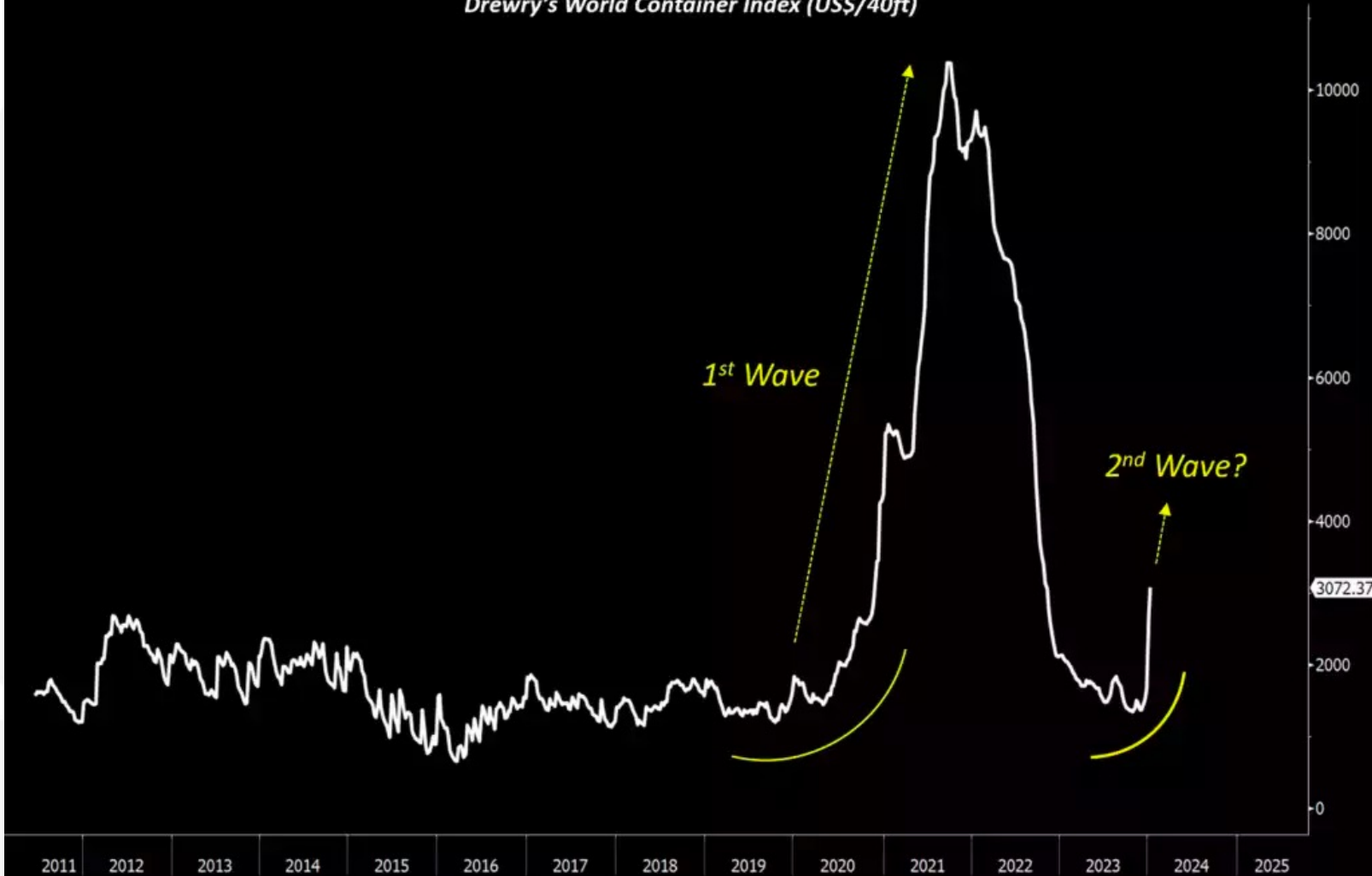


The recent uptick in the US population, largely driven by a surge in illegal immigration, is likely to become a new inflationary factor.

This is an important factor that is likely to exacerbate the already rising house and rent prices.

# World Container Index

Drewry's World Container Index (US\$/40ft)



Source: Bloomberg; Tavi Costa

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We've observed a substantial 61% surge in the global freight rate for containers over the past week.

The primary catalyst behind this increase is attributed to geopolitical conflicts in the Red Sea region.

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# Agricultural vs. Overall Commodities



Source: Bloomberg; Tavi Costa

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It's worth noting the strong link between agricultural commodities and the equal-weighted commodities index, indicating that other natural resource prices are likely to follow a similar upward trajectory.



# GLOBAL FIAT CURRENCY DEBASEMENT

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# The History of Gold Cycles



Source: Bloomberg; Tavi Costa

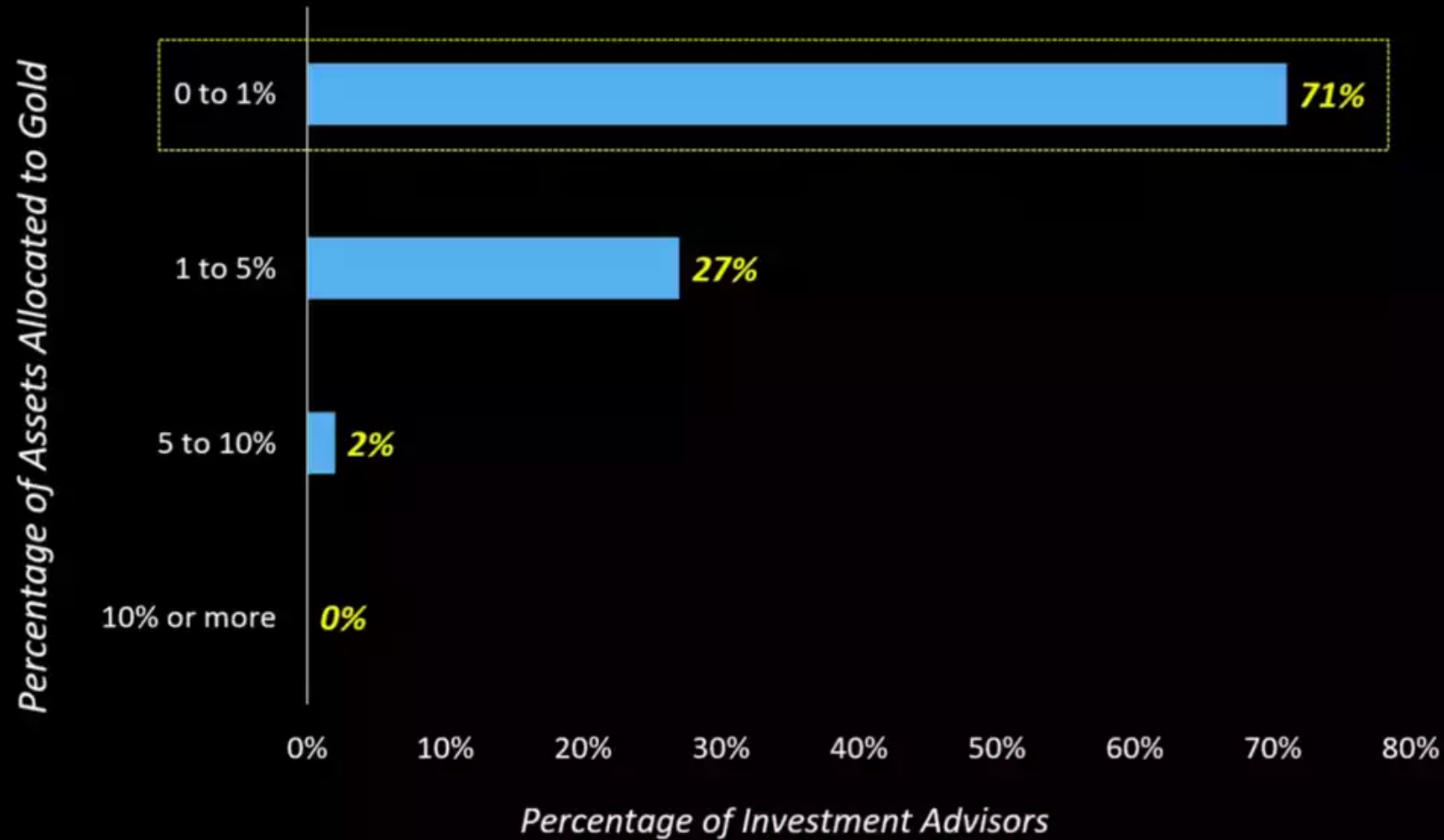
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The multitude of macro drivers supporting the onset of another gold cycle is truly remarkable.

Amplified by the prevailing skepticism surrounding the metal, we are arguably experiencing the most important time in gold's history.

## 71% of Advisors Have 0-1% Exposure to Gold



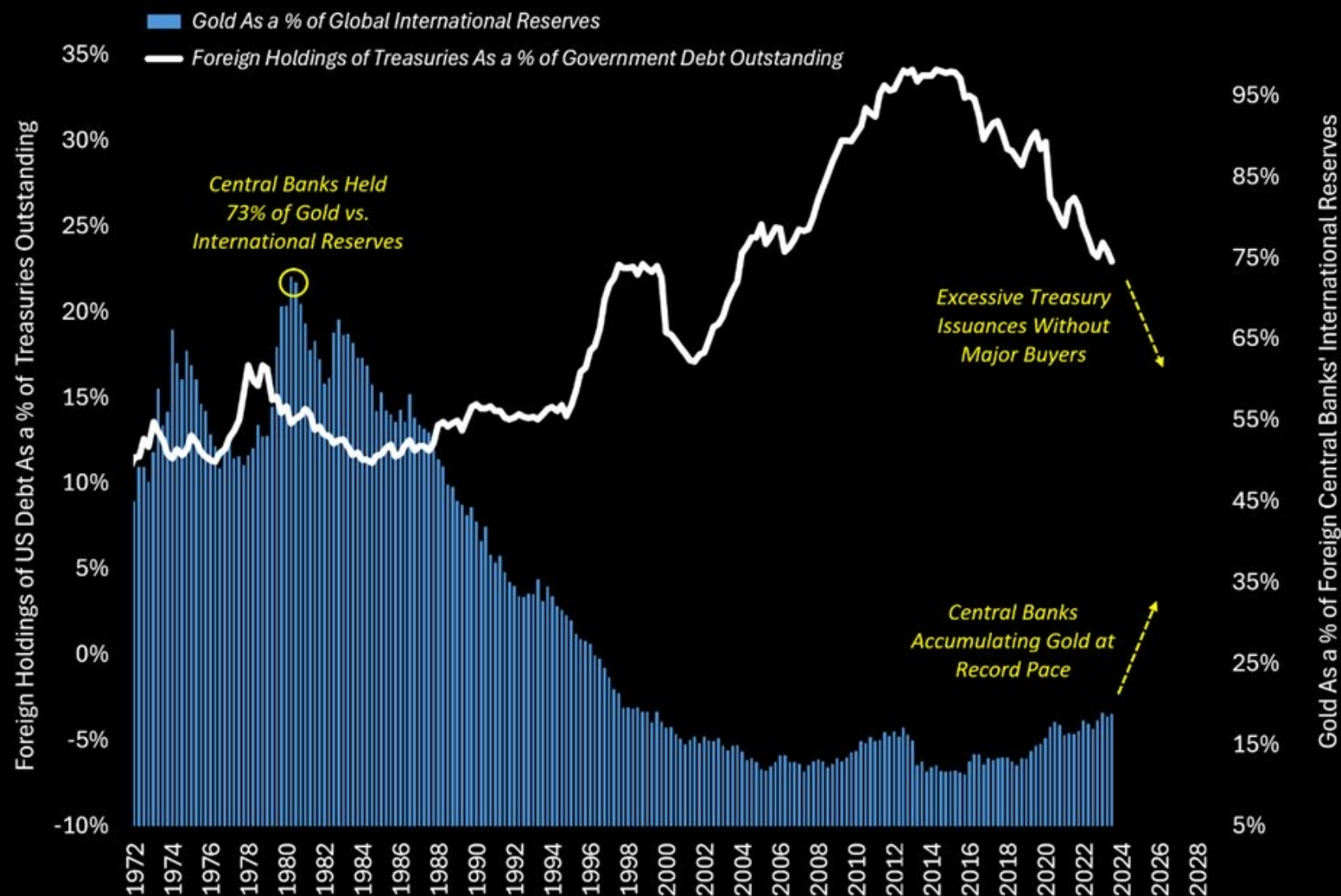
Source: BofA Global Research

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What stands out to us even more from the data below is the notable absence of any investors who own 10% or more of the metal—to say the least, a striking observation.

# Foreign Central Banks Transitioning Towards Gold



Gold's role as a neutral asset with millennia of history as money is experiencing a resurgence relative to US Treasuries for global central bank reserve accumulations.



# GLD ETF: Price vs. Assets Under Management



Source: Bloomberg; Tavi Costa

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The recent surge in gold prices, despite a lack of corresponding growth in assets managed by related ETFs, suggests that central banks' purchases have likely been the primary catalyst for the rally.

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# Gold-to-US Treasuries Ratio

Calculation: Gold / Bloomberg Treasury Total Return



Source: Bloomberg; Tavi Costa

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If the rationale for owning US Treasuries today is solely based on the premise that the system cannot endure substantially higher interest rates, then gold is a far superior choice. It's a neutral asset with no counterparty risk that also carries centuries of credible history as a haven and monetary alternative.

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# US Treasuries Are Now More Volatile Than Gold

7-Year Rolling Monthly Downside Volatility Differential: (Long-Term Treasuries Total Return - Gold Return)

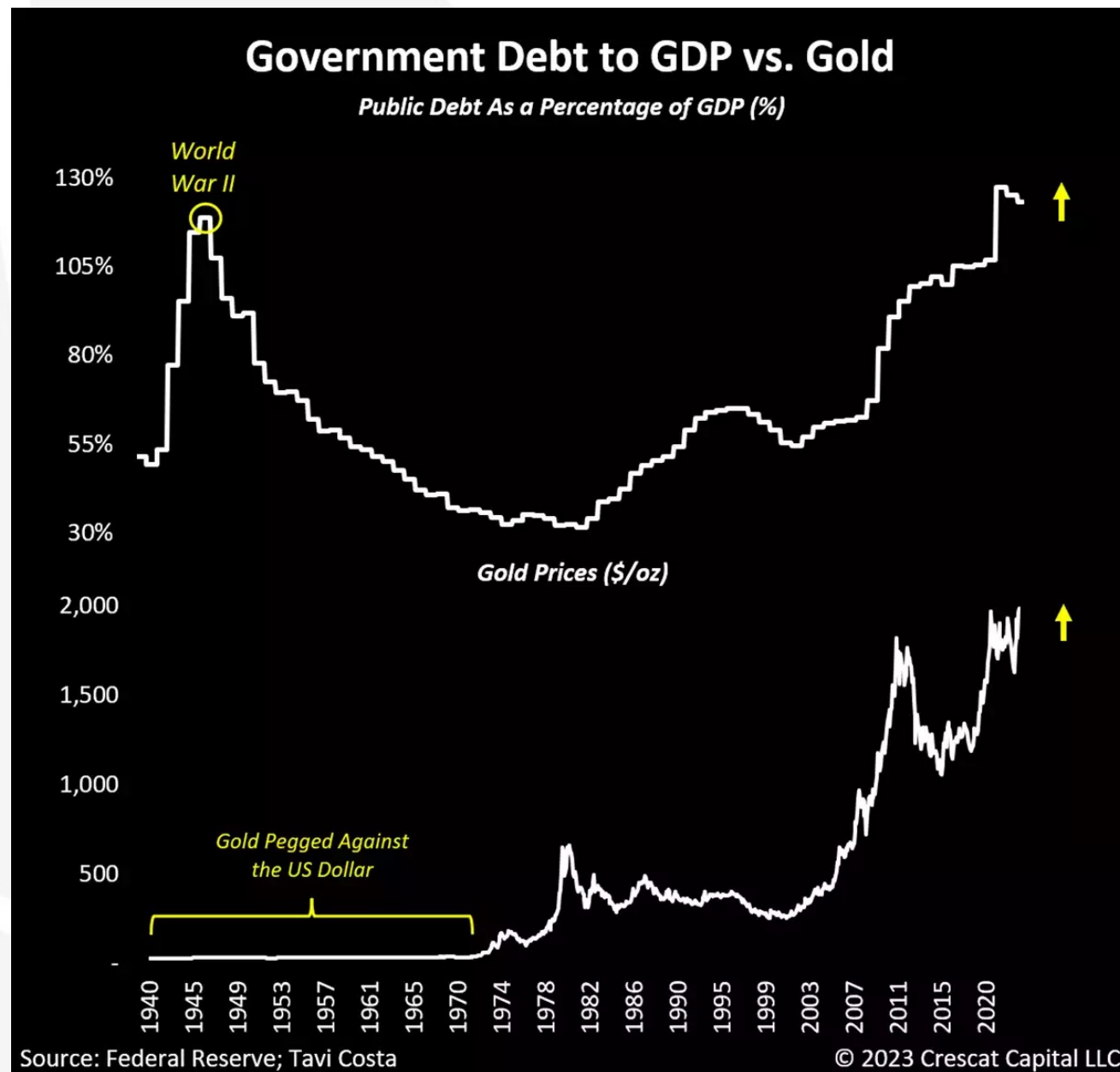


Source: Bloomberg; Tavi Costa

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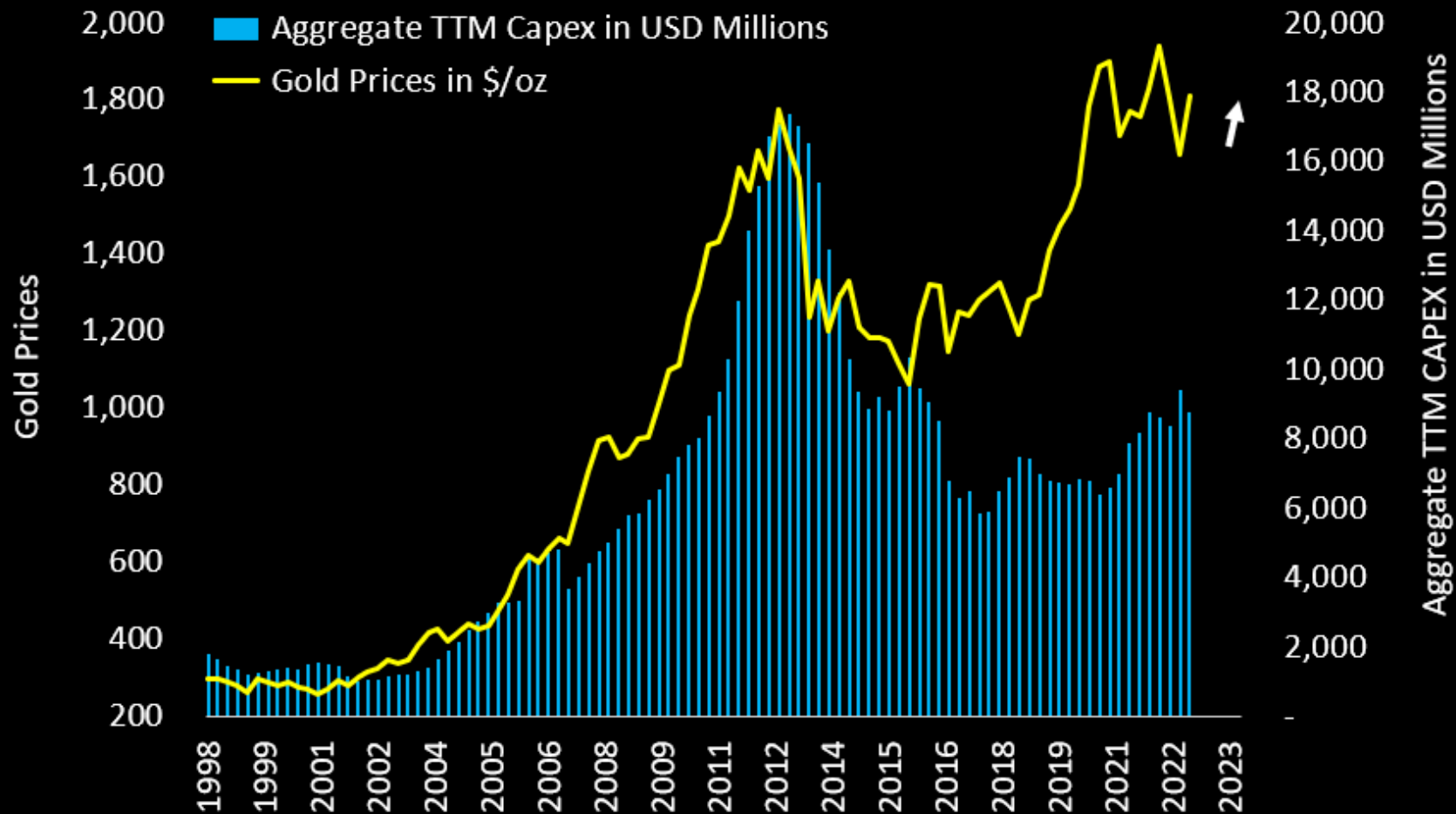
It is undeniably crucial to understand that Treasuries are no longer the safest alternative. In fact, for the first time in 45 years, US Treasuries now have higher downside volatility than gold.



While the 1940s serve as an important historical parallel due to the seriousness of the current debt issue, there is a significant distinction: during that period, gold was effectively tied to the US dollar, rendering it an impractical investment alternative.



## Precious Metals Miners: Capex vs. Gold Prices



*Top 10 Miners by Market Cap in the Canadian & US Stock Exchanges*

Source: Bloomberg; Tavi Costa

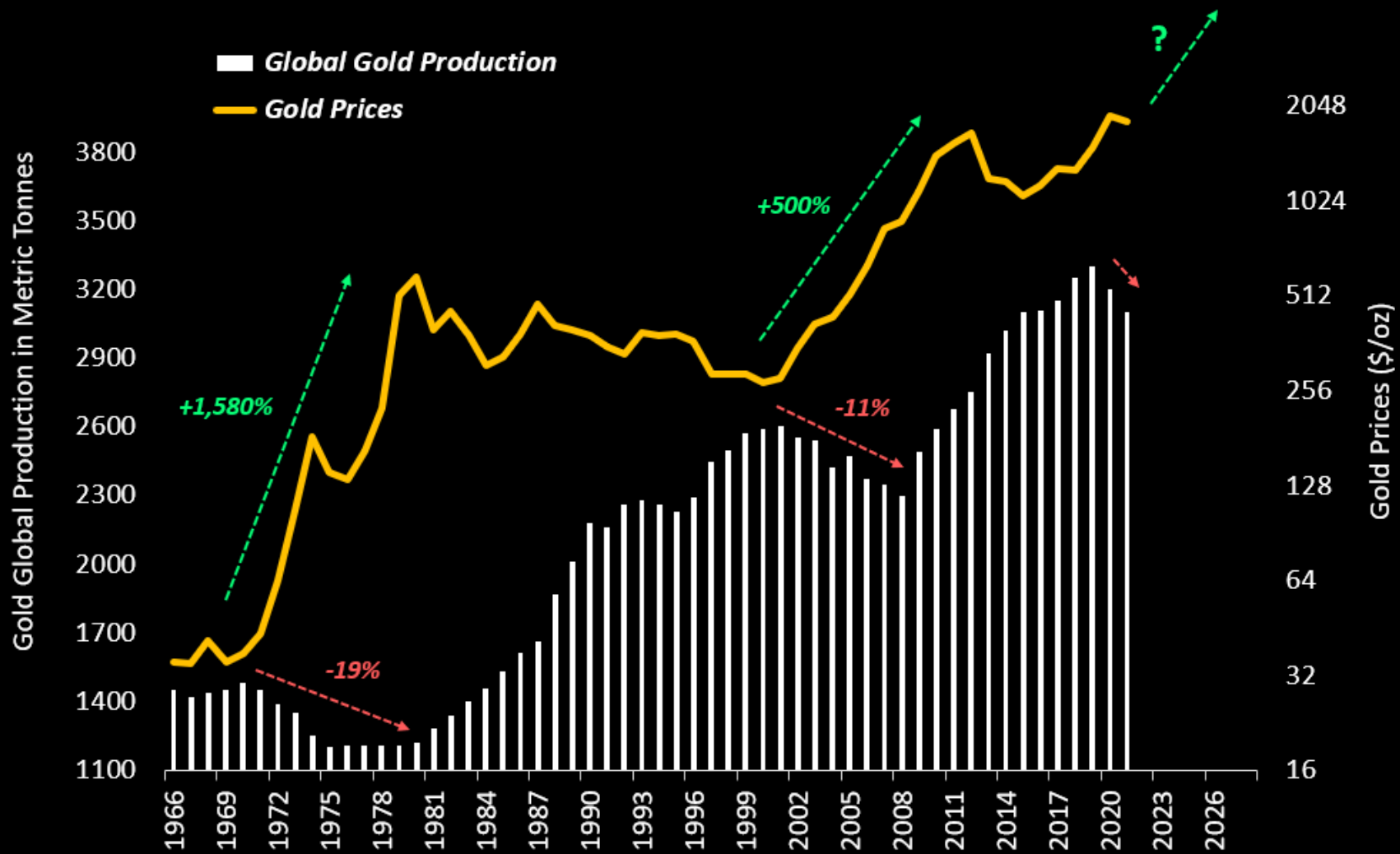
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Today, while gold is currently near its 2011 highs, aggregate capital spending for the miners remains at historically depressed levels.

This goes to show again how management teams are excessively conservative despite a firming gold market.

# Global Gold Production vs. Gold Prices



Source: USGS

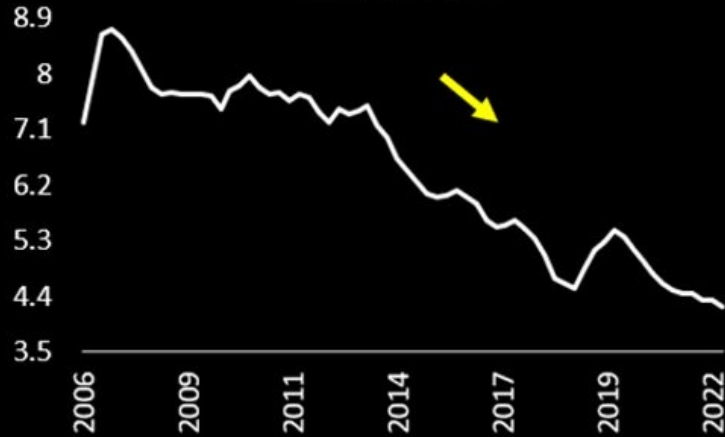
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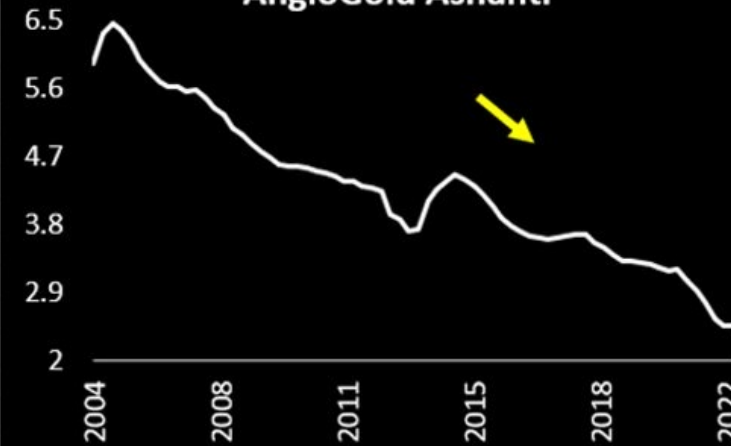
The scarce metal is supplanting US Treasuries as the preferred allocation among global central banks looking to improve the quality of their international reserves.

# Gold Production: TTM in Millions of Ounces

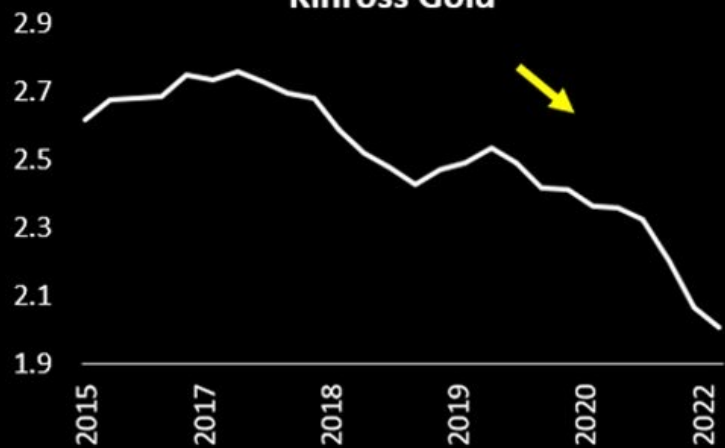
**Barrick Gold**



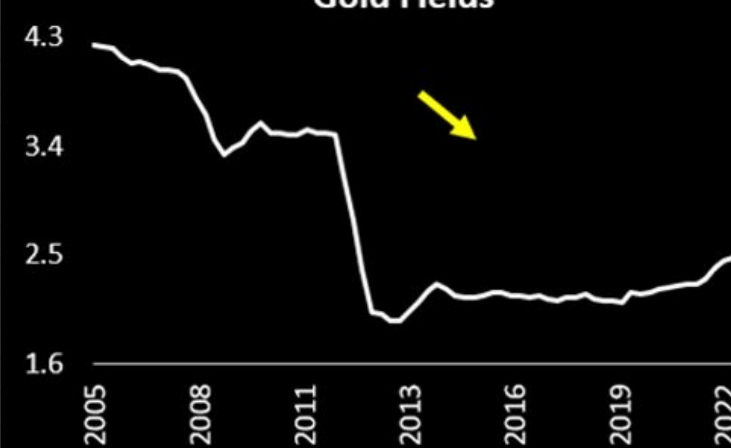
**AngloGold Ashanti**



**Kinross Gold**



**Gold Fields**



Source: Bloomberg, Tavi Costa

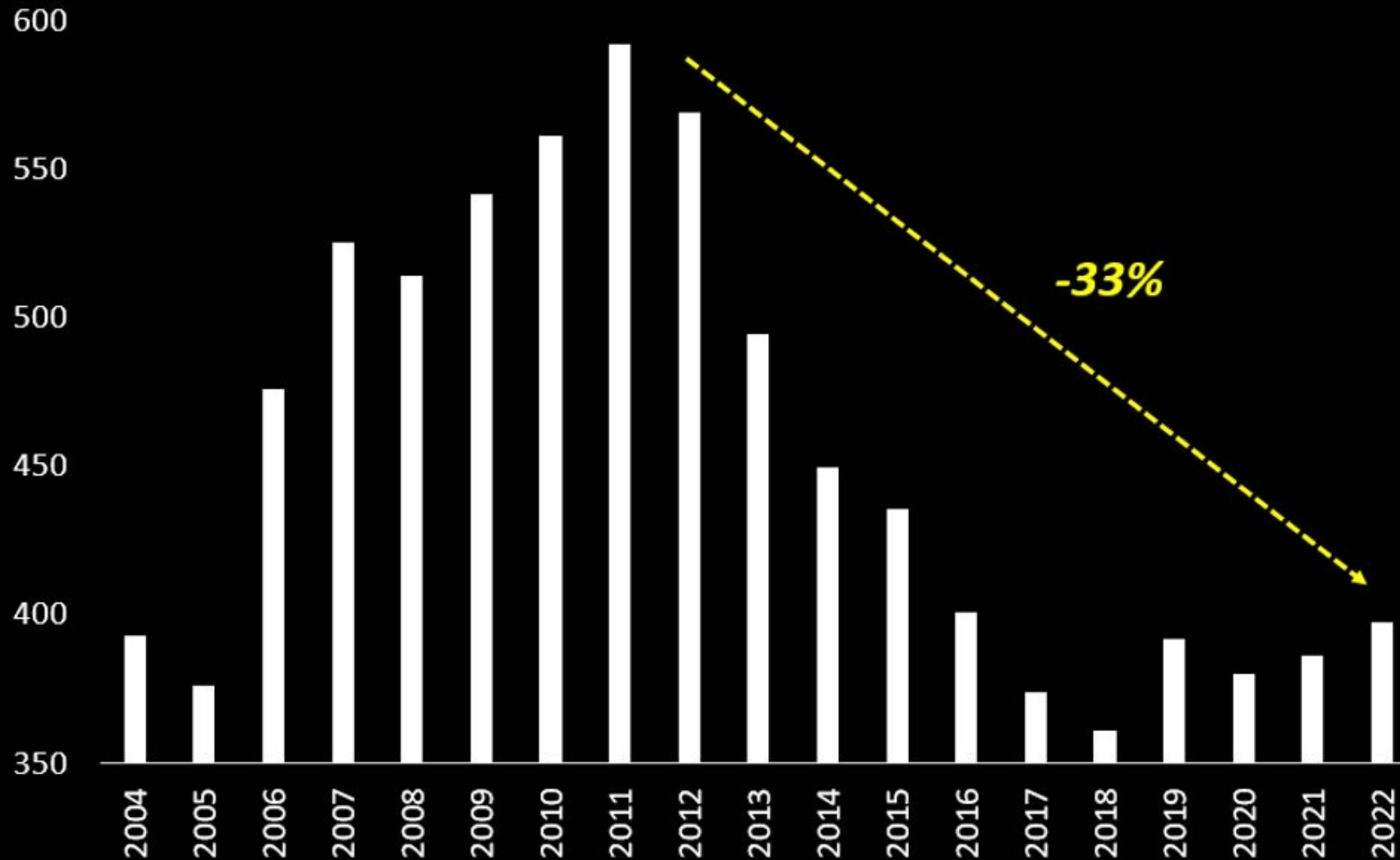
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Many traditionally gold-focused miners have significantly shrunk their production while increasing investment in other metals.

# Gold Reserves by the Top 10 Miners

*Millions of Ounces*



Source: Bloomberg; Tavi Costa

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It is becoming increasingly challenging to find precious metals. As a result, the reserves of the top 10 mining companies are down 33% over the last 15 years.

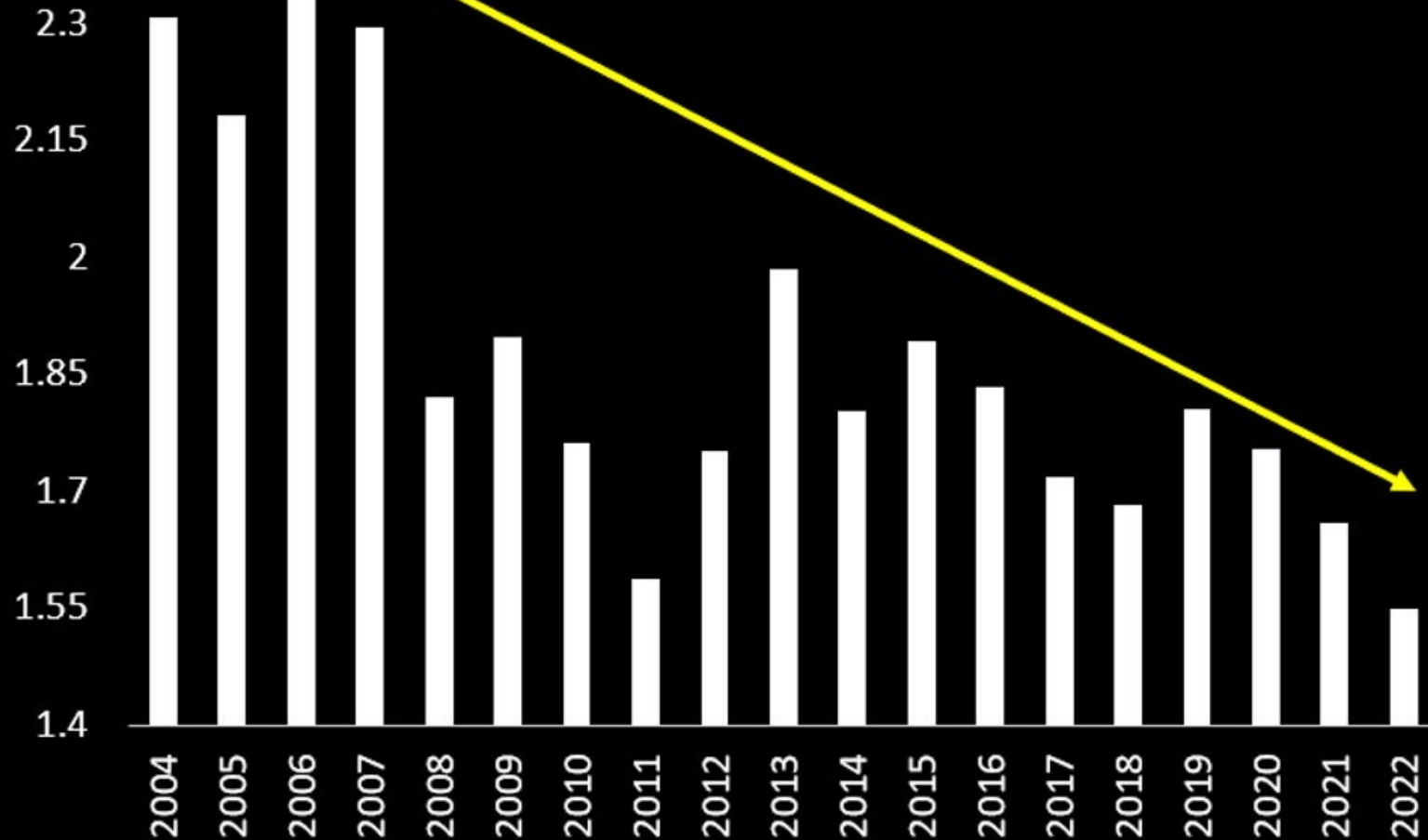
We have not seen a new precious metals project become a significant producing mine in a very long time.

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## Top 10 Gold Miners: Average Grade for Existing Gold Reserves

*Gold Equivalent g/t*



Source: Bloomberg

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Not only do mining companies continue to deplete their existing reserves, but the quality of their remaining assets is drastically deteriorating.

The average grade for gold reserves by the top 10 miners in the world has been in a secular decline.

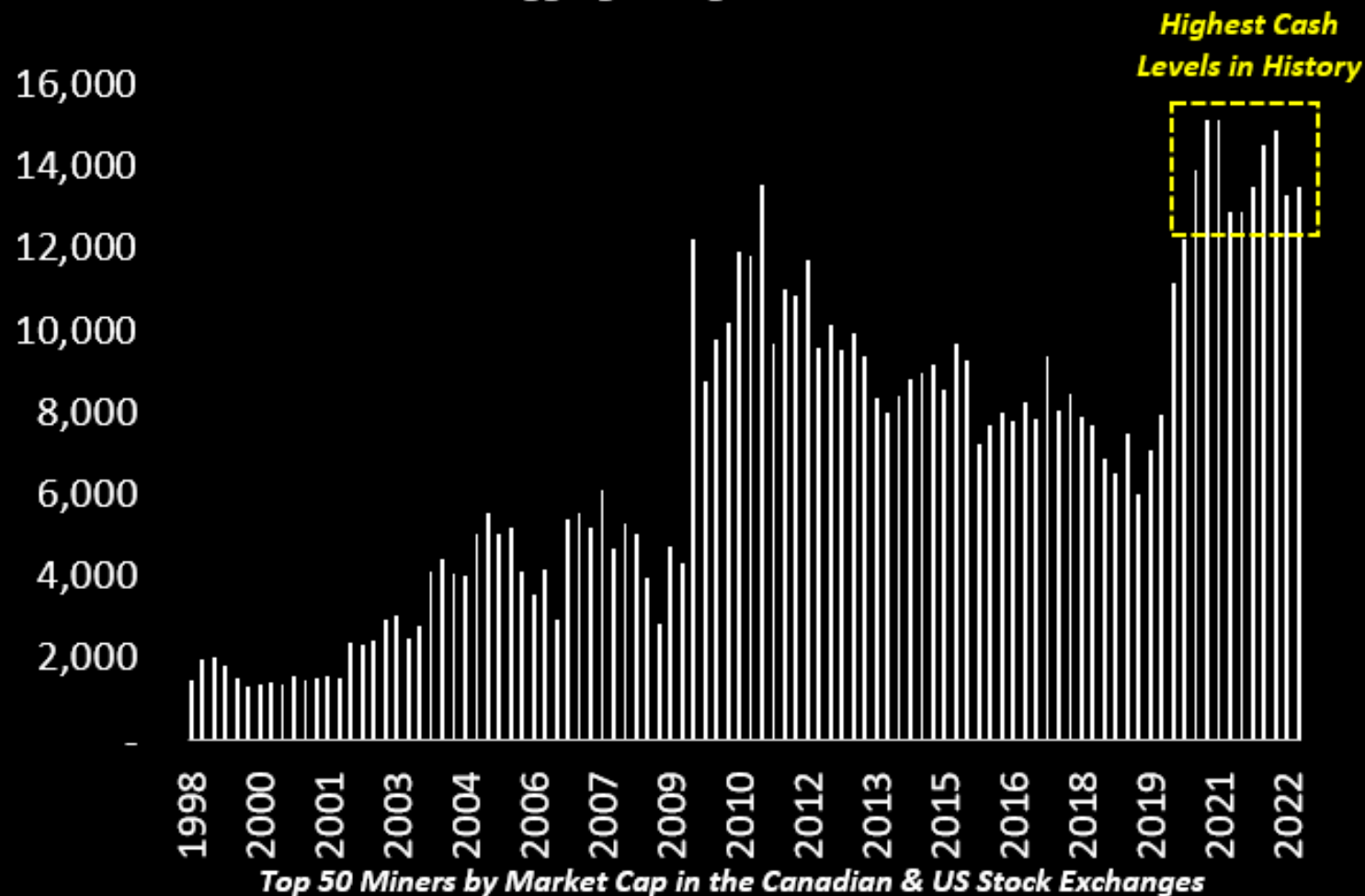
## Gold Prices vs. Mining Revenues



The large and mid-tier mining companies have underinvested in exploration as well as M&A, so both the quantity and quality of their reserves have deteriorated over the last decade.

# Gold & Silver Miners: Cash Levels

*TTM Aggregate Figures in USD Millions*



Source: Bloomberg

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The strength of the balance sheets of mining companies is an important factor that tends to precede healthy M&A cycles. As shown in the chart below, the largest gold and silver companies have the highest cash levels that we have seen in decades.

## Gold vs. Miners



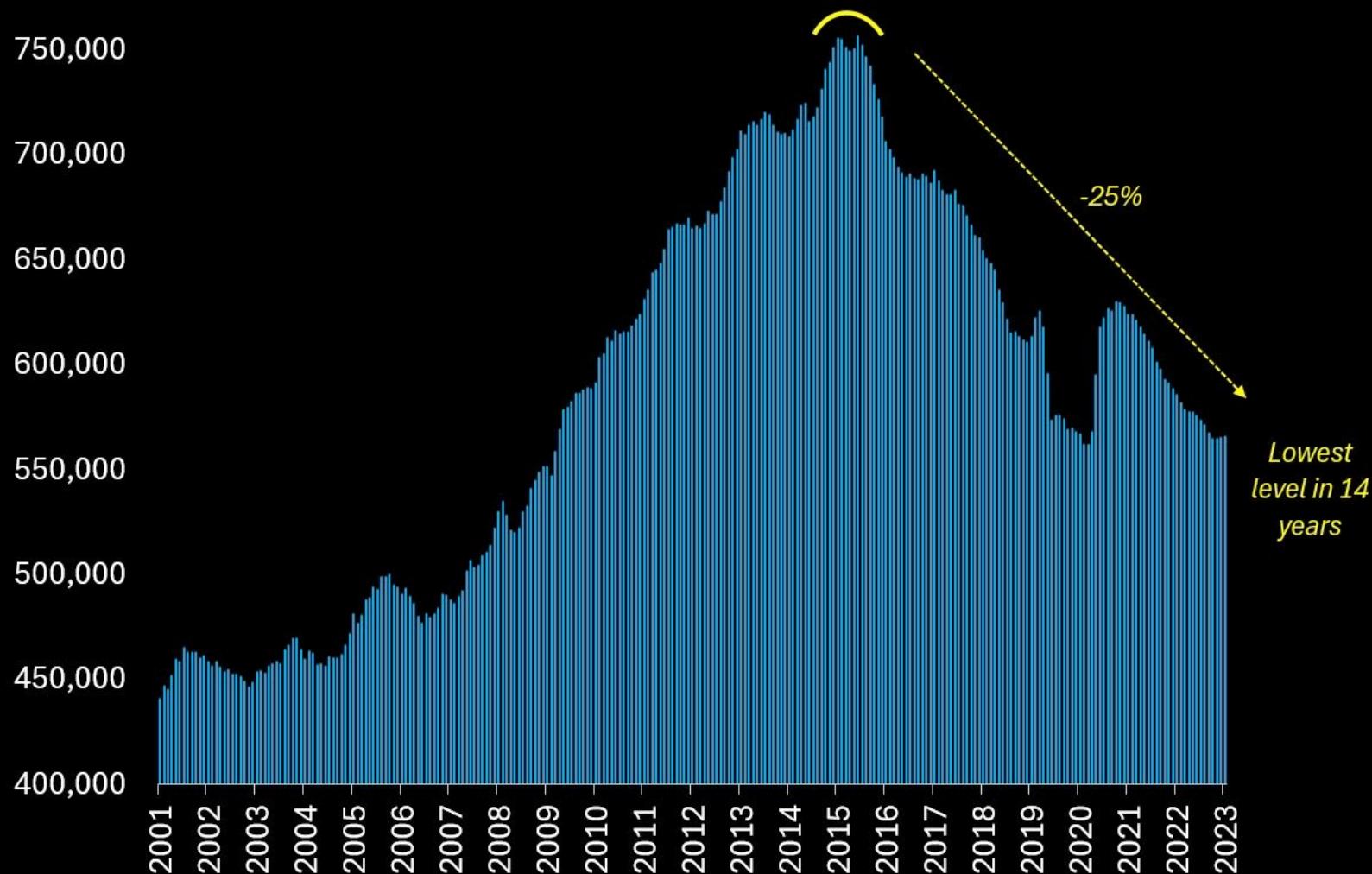
Precious metals mining is one of the most fundamentally attractive industry groups in the market today. Interestingly, the gold price is almost back to its 2011 monthly highs.

If that is the playbook for the miners, there is 85% upside from here.



# Silver Production: Mexico & Peru Combined

12-Month Moving Average Production in Kilograms



Source: Bloomberg; Tavi Costa

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Silver production from Mexico and Peru, the world's two largest producers, is at its lowest point in 14 years. The combined output is now down 25% from its 2016 peak levels

## Undergraduate Geoscience Enrollment

# GLOBAL TRENDS

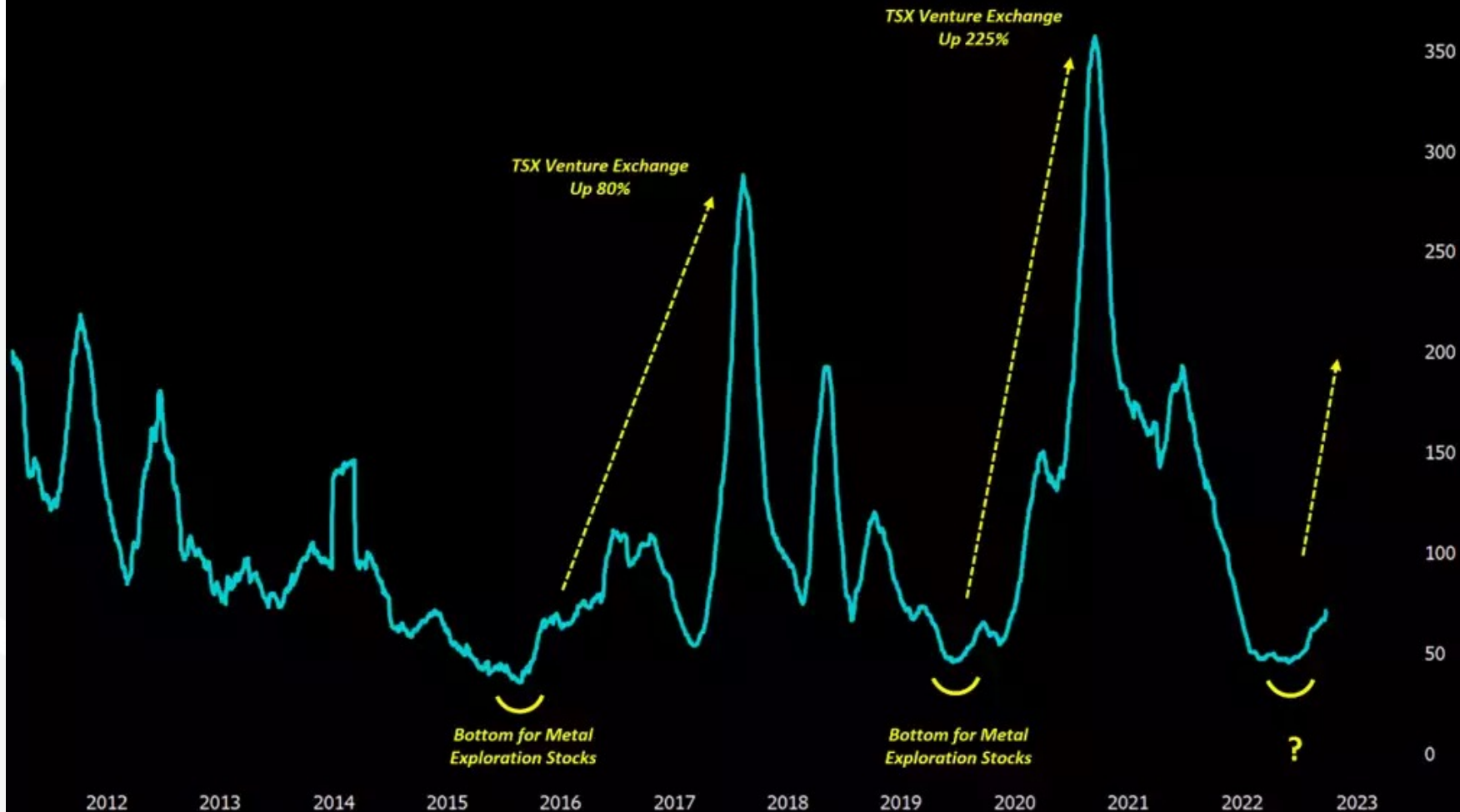


While demand continues to increase for the raw materials produced by these industries, companies are having difficulty filling jobs with qualified management and technical professionals to produce them efficiently.

A decade of declining college enrollment in geosciences worldwide is one of the long-term structural imbalances affecting the oil and gas and mining industries.

# TSX Venture Exchange Dollar Trading Volume

50-Day Average Value Traded in CAD Millions



Source: Bloomberg, Kevin Smith

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When big money flows into this tiny segment of the market comprised of small and micro market cap stocks, note how it tends to correspond with outsized price appreciation. We are confident that there is an enormous value-oriented and macro growth window that is wide open now.

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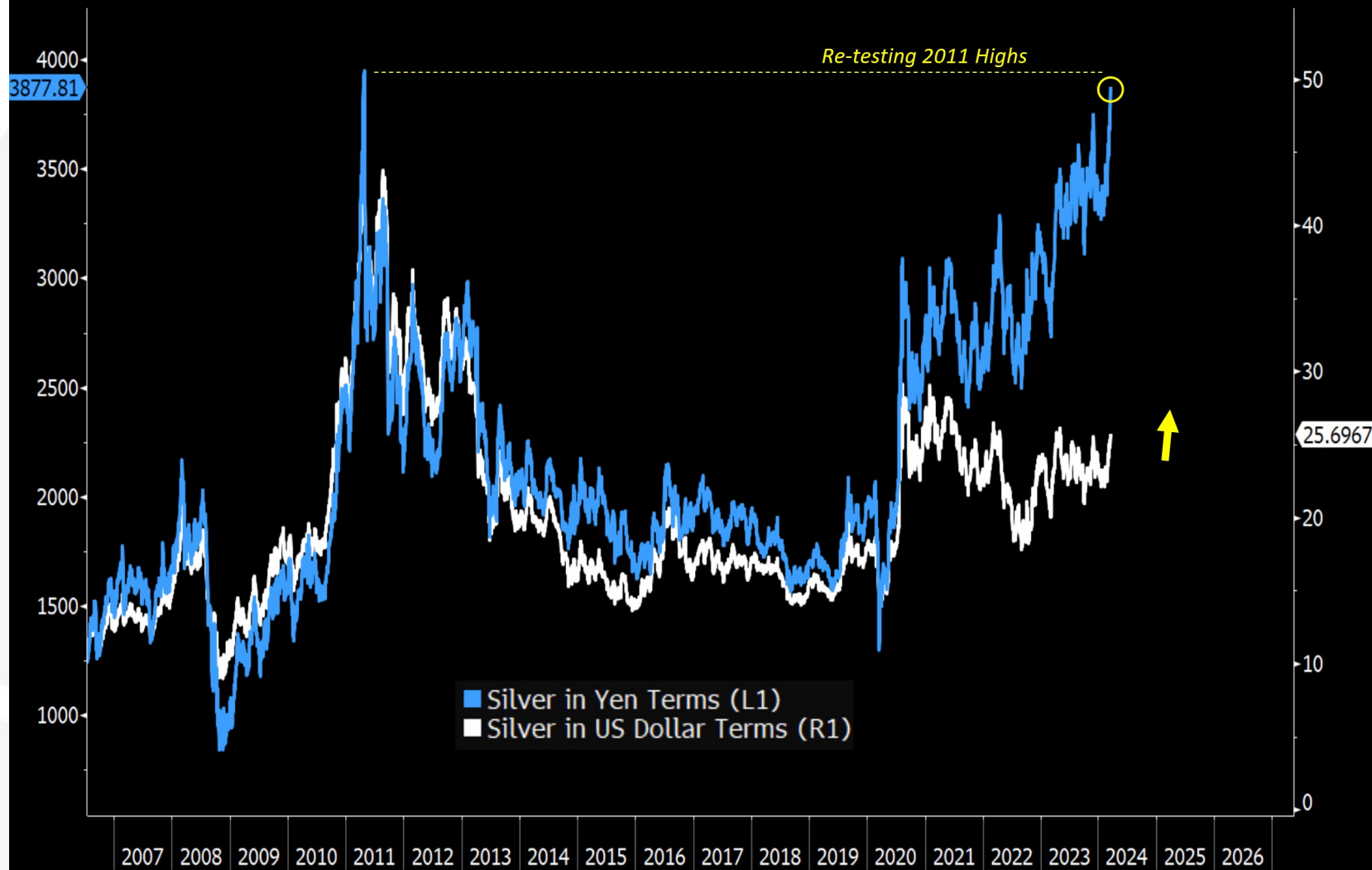


It's hard to find a better-looking chart than this one.

Time to get aggressive with gold, silver, and the miners.



## Silver in Yen vs. USD Terms



Source: Bloomberg; Tavi Costa

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Japan provides a valuable roadmap for where silver prices are likely headed.

# Silver to Money Supply Ratio

Calculation:  $\text{Silver} / \text{M2 Money Supply}$



Source: Bloomberg

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When looking at the silver relative to M2 money supply, it may have recently just reached a historic double-bottom after re-testing the early 2000s levels, which preceded a major upward move in silver prices.

# Miners-to-Gold Ratio

Philadelphia Stock Exchange Gold and Silver Index / Gold



Source: Bloomberg; Tavi Costa

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It's remarkable how mining stocks continue to be highly resilient despite the weakness in gold prices today. The valuations for these companies couldn't be more distressed, and we are likely near a major bottom.



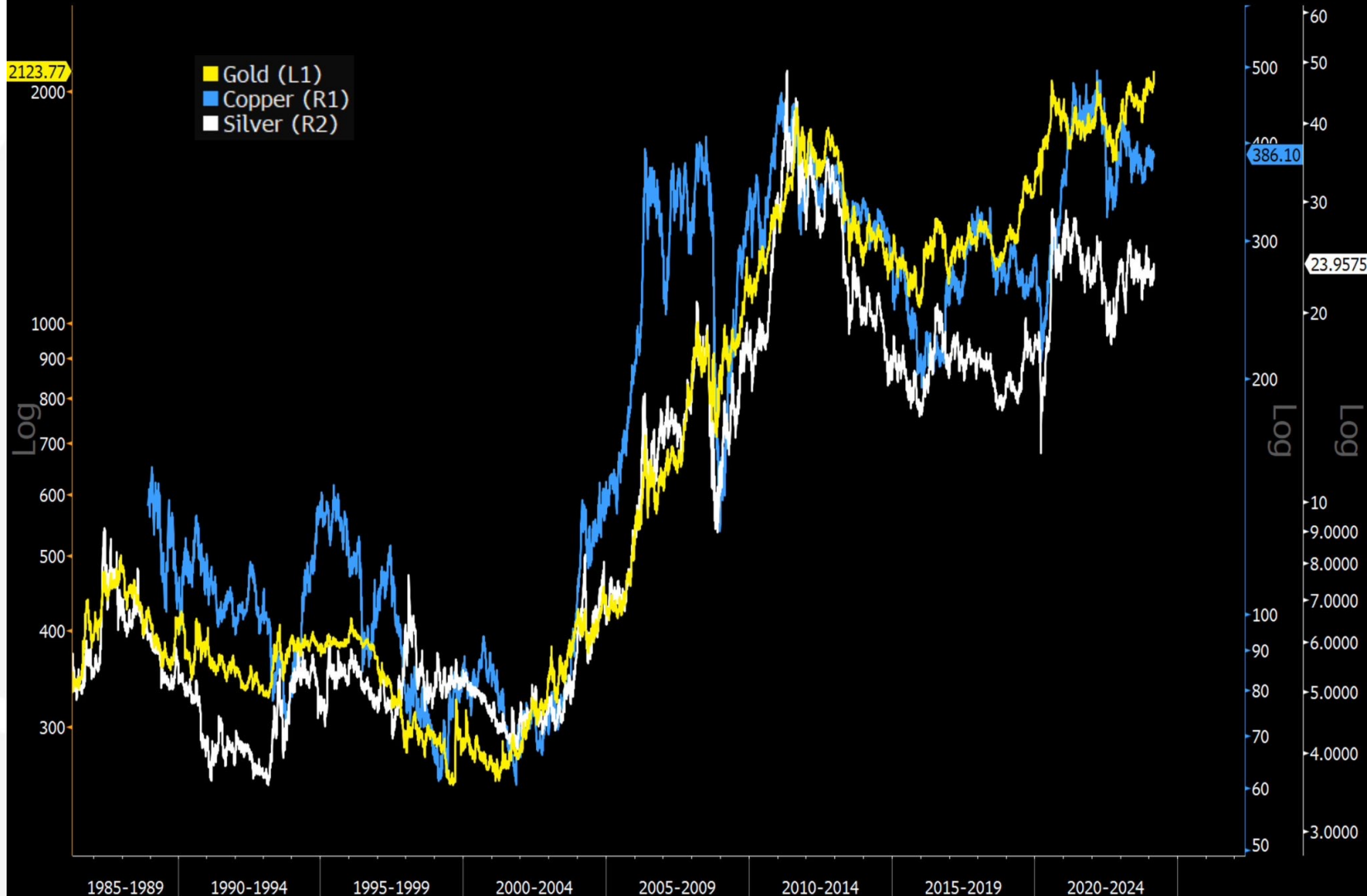
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# ELECTRIFICATION METALS

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# Gold, Silver & Copper



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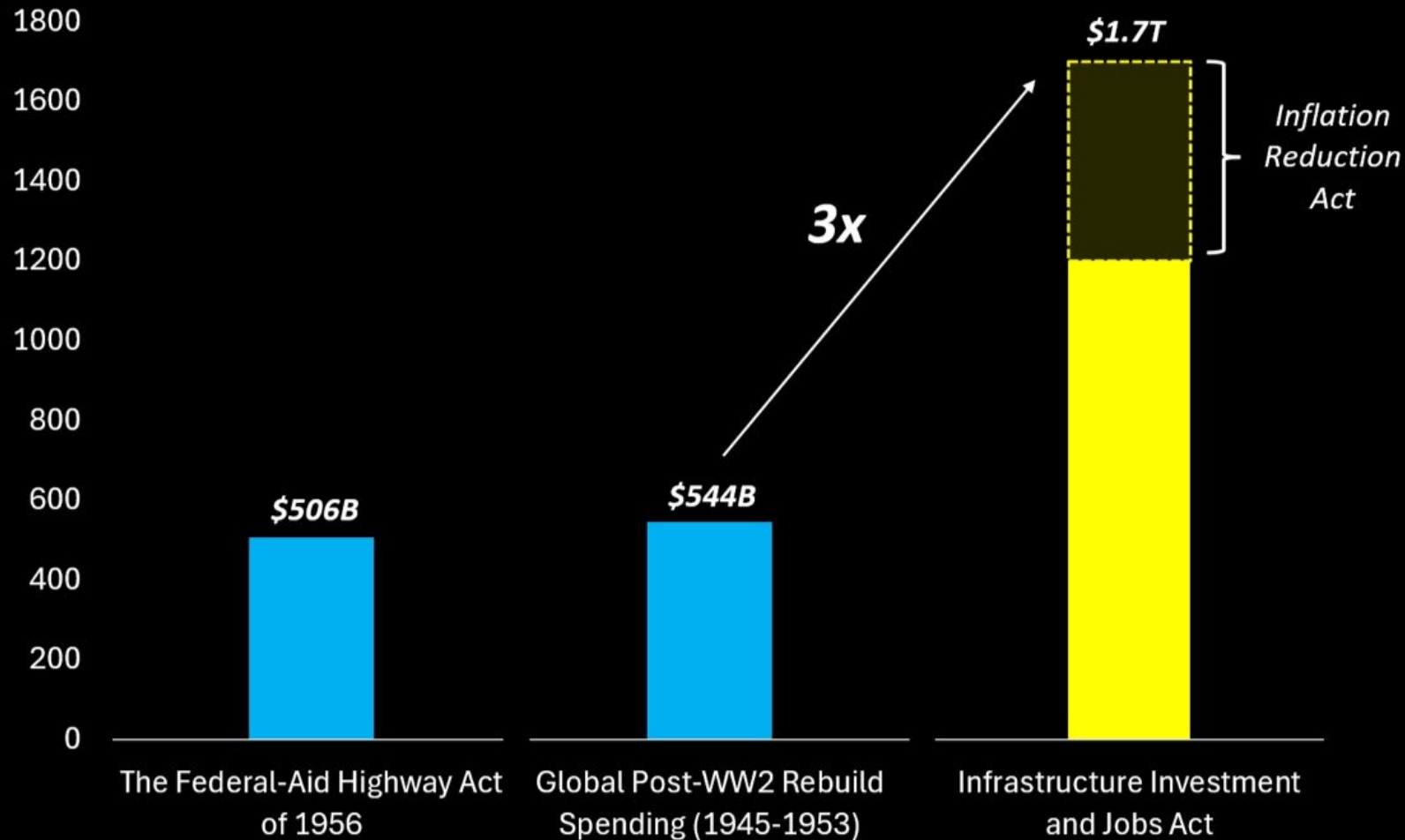


When gold enters a cycle, it lifts all boats among other metals. Despite the volatility inherent in each commodity, the macro-opportunity is remarkably similar.

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# Infrastructure Spending Today vs. History

*Numbers Adjusted for Today's US Dollars*



Source: IMF (WW2 Data), Congress.gov (1956), Tavi Costa

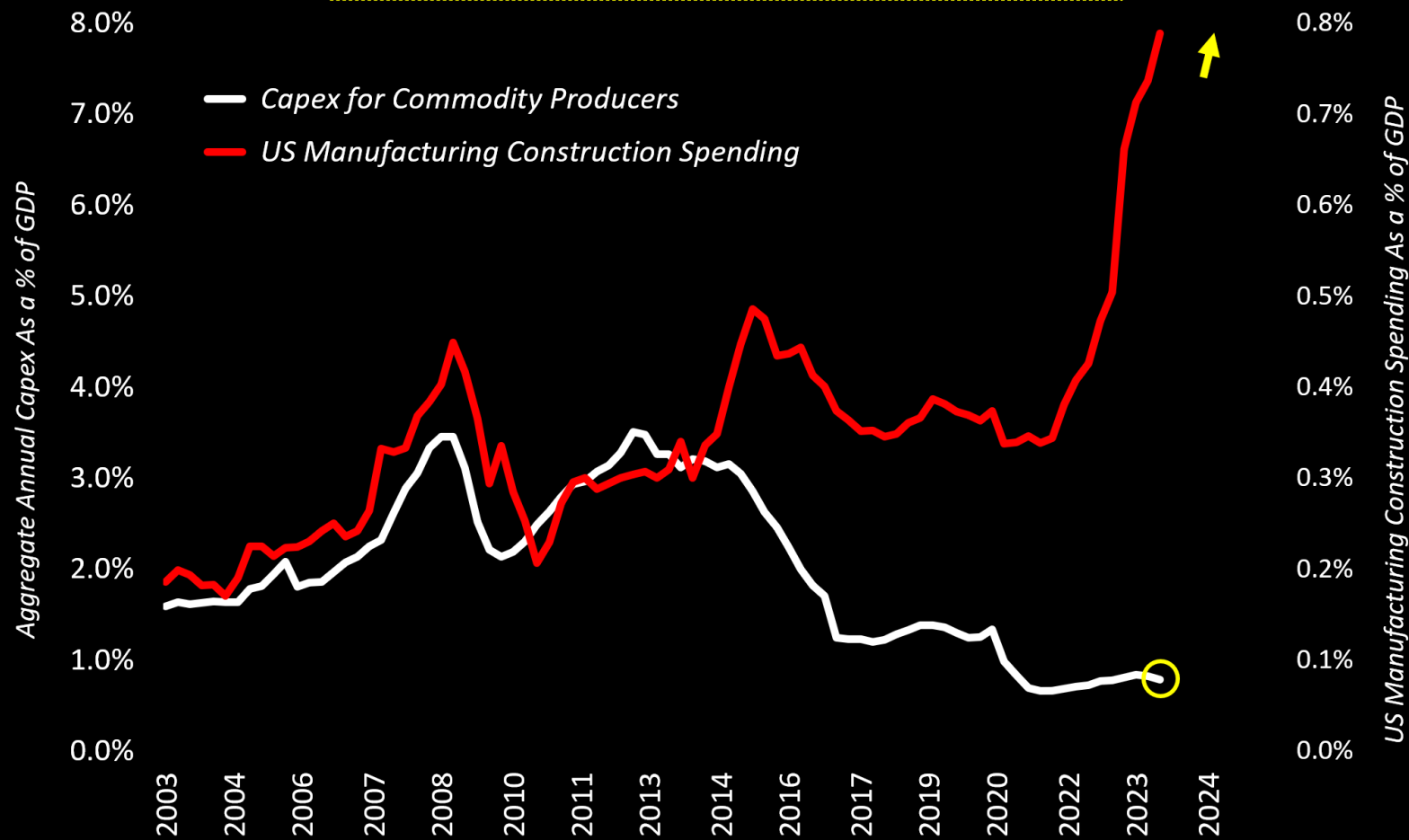
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Today's infrastructure spending is likely to dwarf what we experienced during the rebuild period post-WWII by the US and the rest of the world.

# Construction Surge vs. Resource Producers' Capex Plunge

*Prolonged Supply Constraints in Natural Resources Likely Ahead*



*Commodity Producers With Market Cap Above \$1B in the Canadian & US Stock Exchanges*

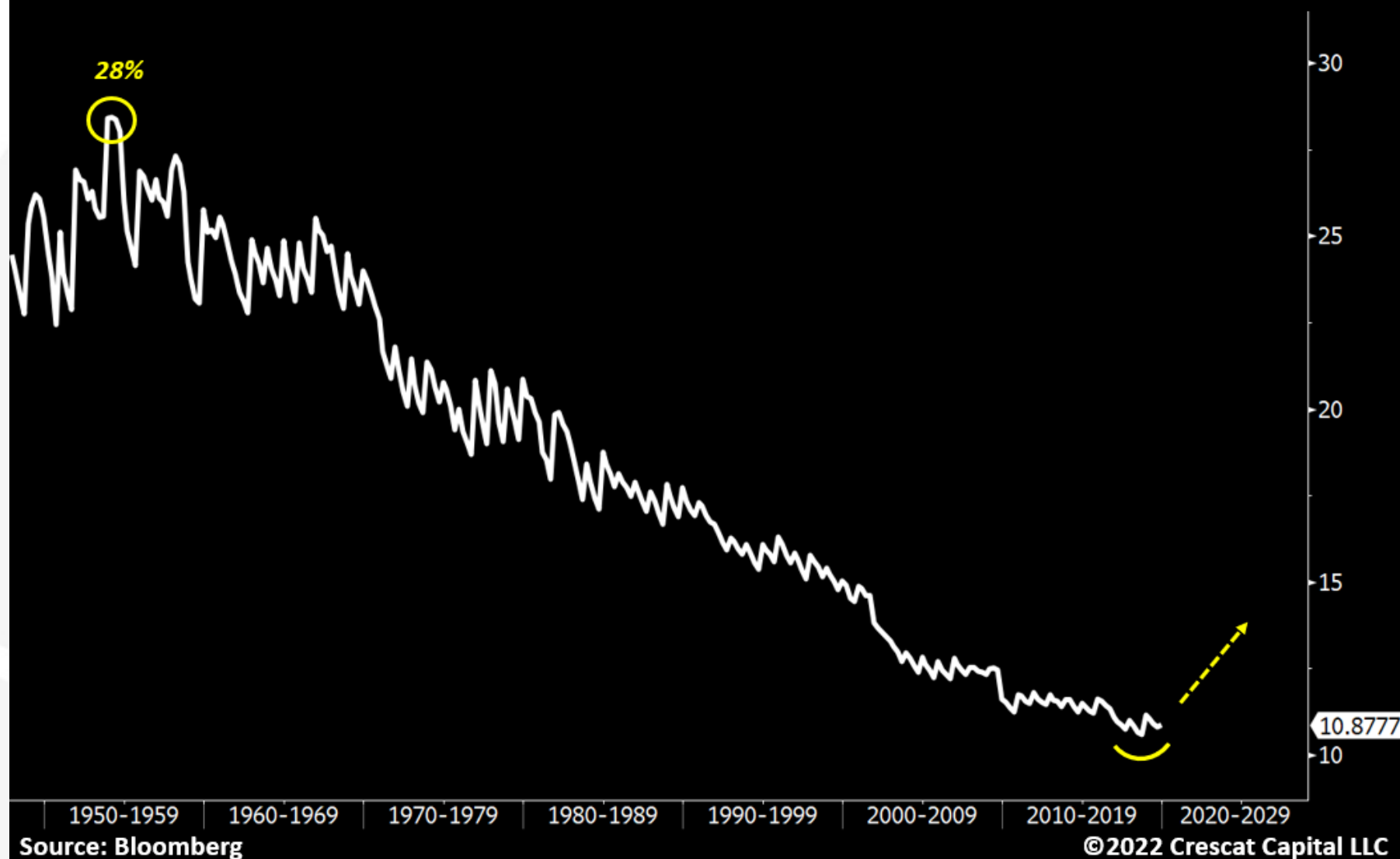
Source: Bloomberg; U.S. Census Bureau; Tavi Costa

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Today's predicament lies in the fact that despite the recent upsurge in construction spending, especially for manufacturing, commodity producers have evidently fallen short of matching this trend.

# US Manufacturing Relative to GDP (%)



This white line is very likely headed higher and should be one of the main investment cases for the long-term commodities bull market that we have just entered.



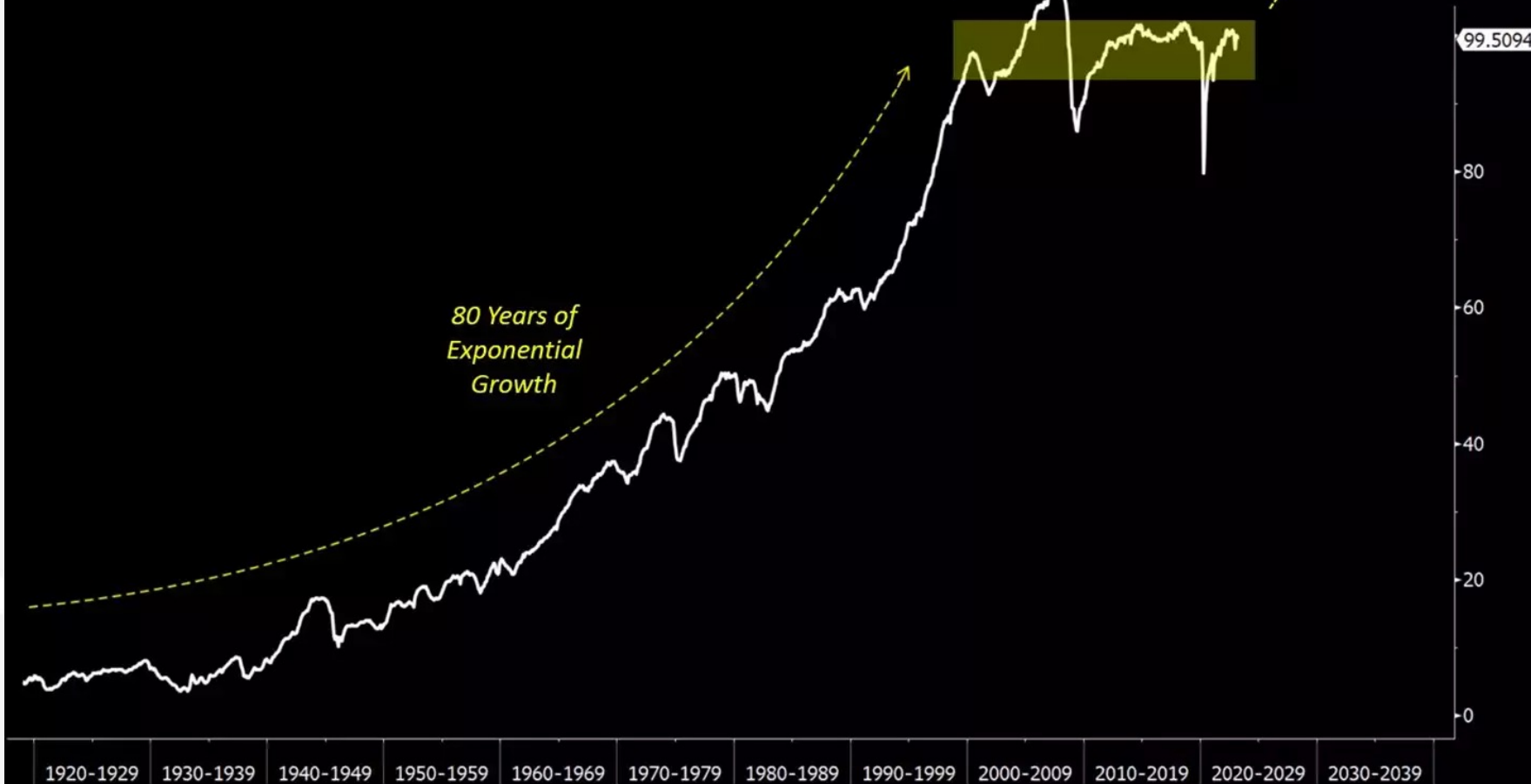
# US Industrial Production

*Manufacturing Group*

*Stagnant Period*

*US Manufacturing  
Revitalization Era*

*80 Years of  
Exponential  
Growth*



Source: Bloomberg; Tavi Costa

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The current situation presents a unique opportunity for natural resource industries to perform exceptionally well, particularly at a time when these companies remain a fraction of the overall global equity market.

## Metals & Mining Industry As a % of the S&P 500 Index



Source: Bloomberg

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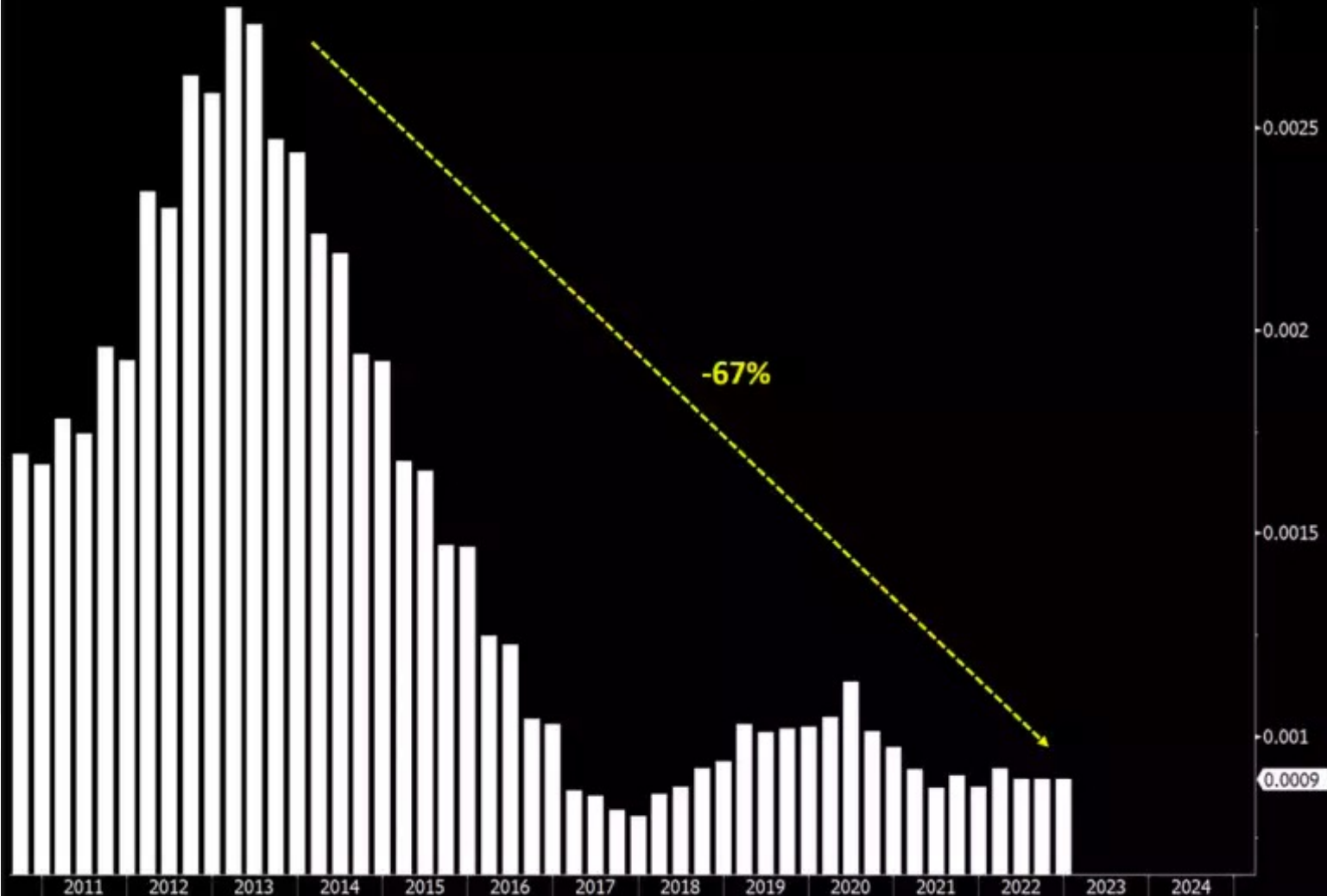


The metals and mining industry as part of the overall stock market is almost a rounding error.

We believe this chart will look completely different by the end of this decade.

## Metals & Mining Industries: Aggregate CAPEX Adjusted by GDP

*Universe: MSCI World Metals & Mining Index*



Source: Bloomberg; Tavi Costa

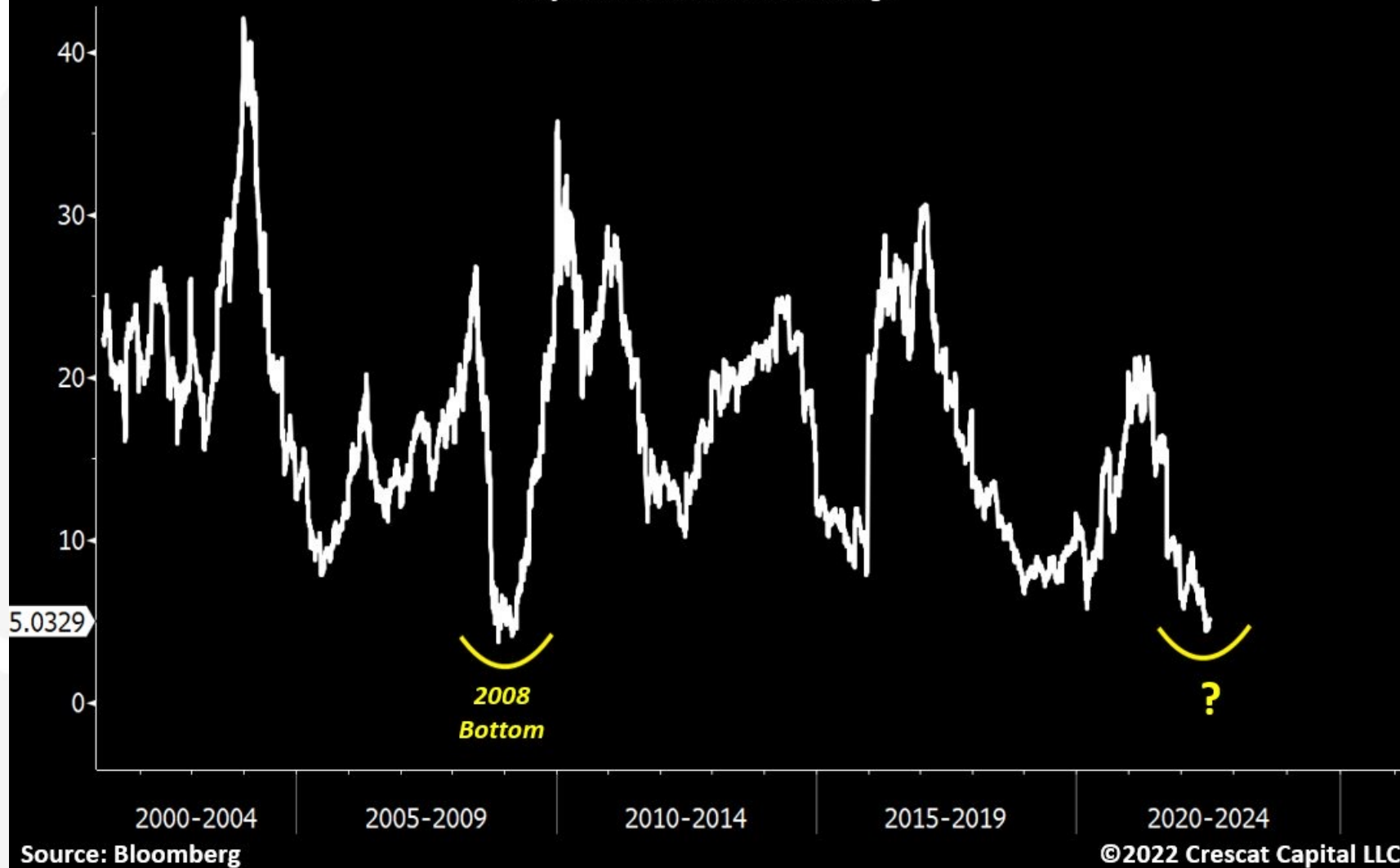
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This worldwide index of metals and mining companies also shows a nearly 70% decline in capital spending from 2013 levels.

# S&P 500 Metals & Mining Index

*Adjusted Positive Price/Earnings*



The case for owning mining companies has never been more compelling.

While we have seen general fundamental improvements across the industry, today's profitable mining companies are also trading at their lowest-ever P/E ratio, one that is currently matching their 2008 bottom.



# Copper-to-S&P 500 Ratio



Source: Bloomberg; Tavi Costa

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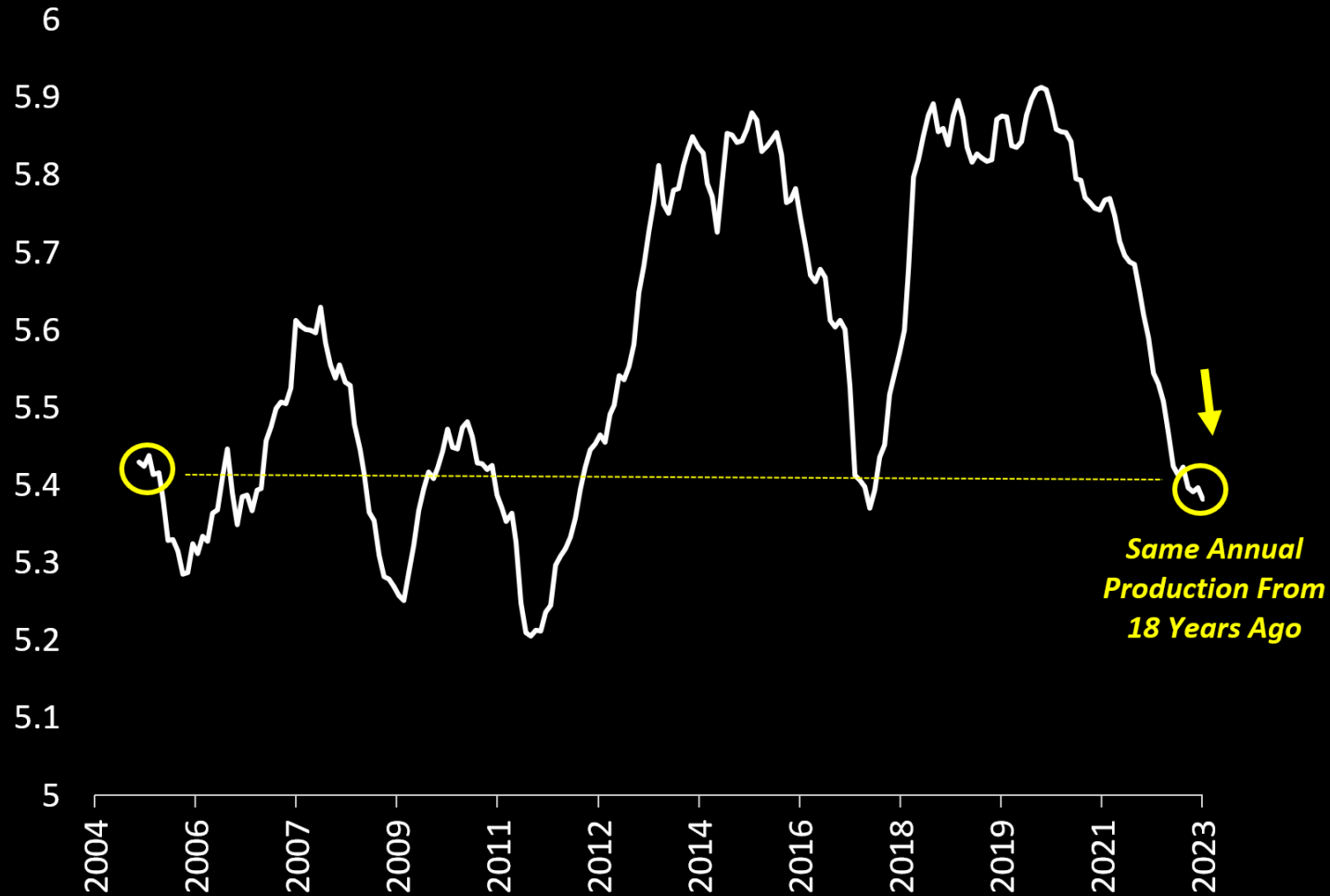


The copper-to-S&P 500 ratio undeniably stands out as one of the most intriguing potential double bottoms in markets today.

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# Chile Copper Production

*Annual Figures in Million Tonnes*



Source: Instituto Nacional de Estadística; Tavi Costa

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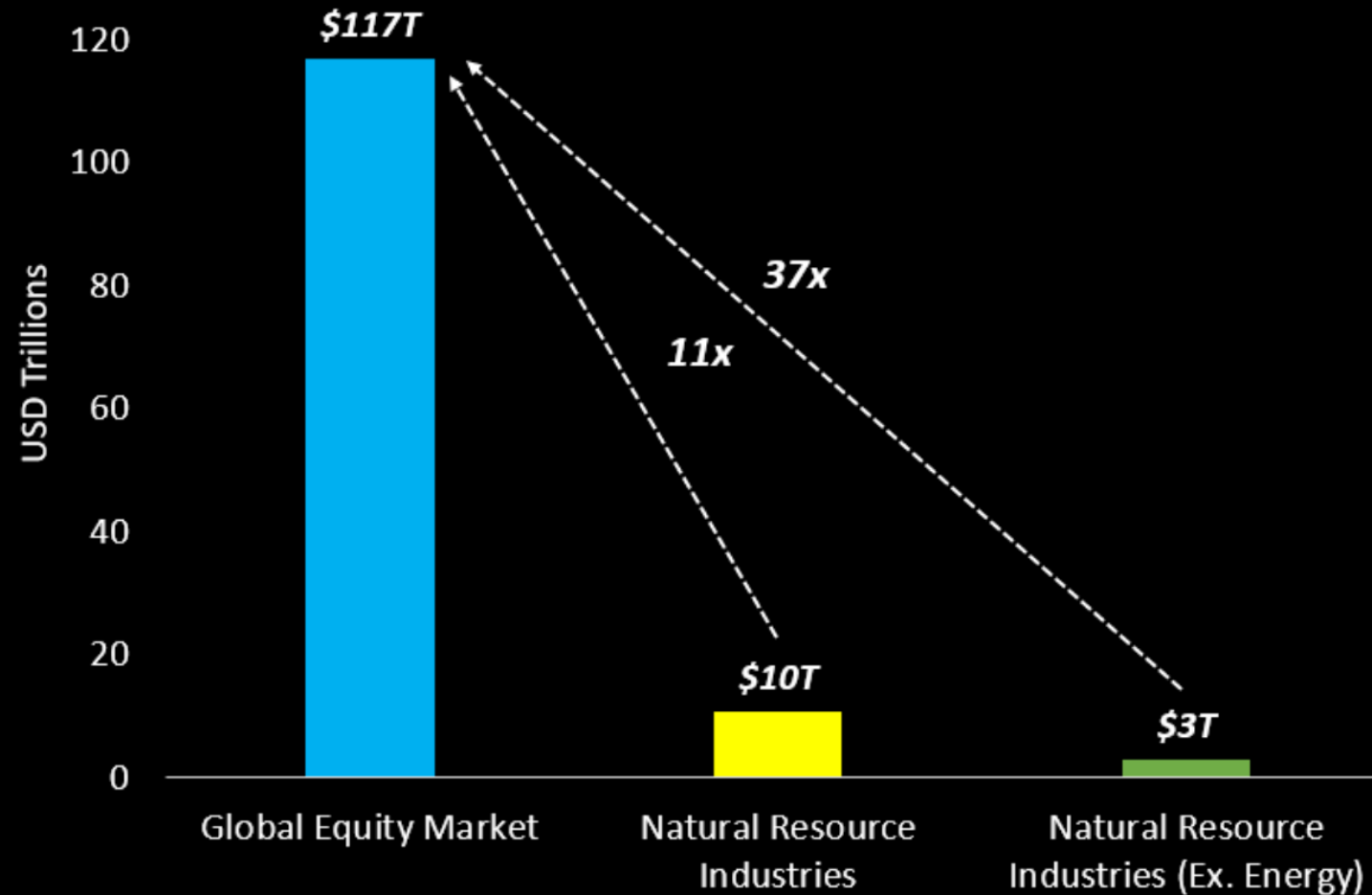
Chile's overall copper production is currently as low as it was 18 years ago, nearly down 10% from its recent peak.

# RESOURCE UNDERINVESTMENT

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# Natural Resource Industries vs. Global Equity Markets

*Public Companies Aggregate Market Cap Worldwide*



Source: Bloomberg

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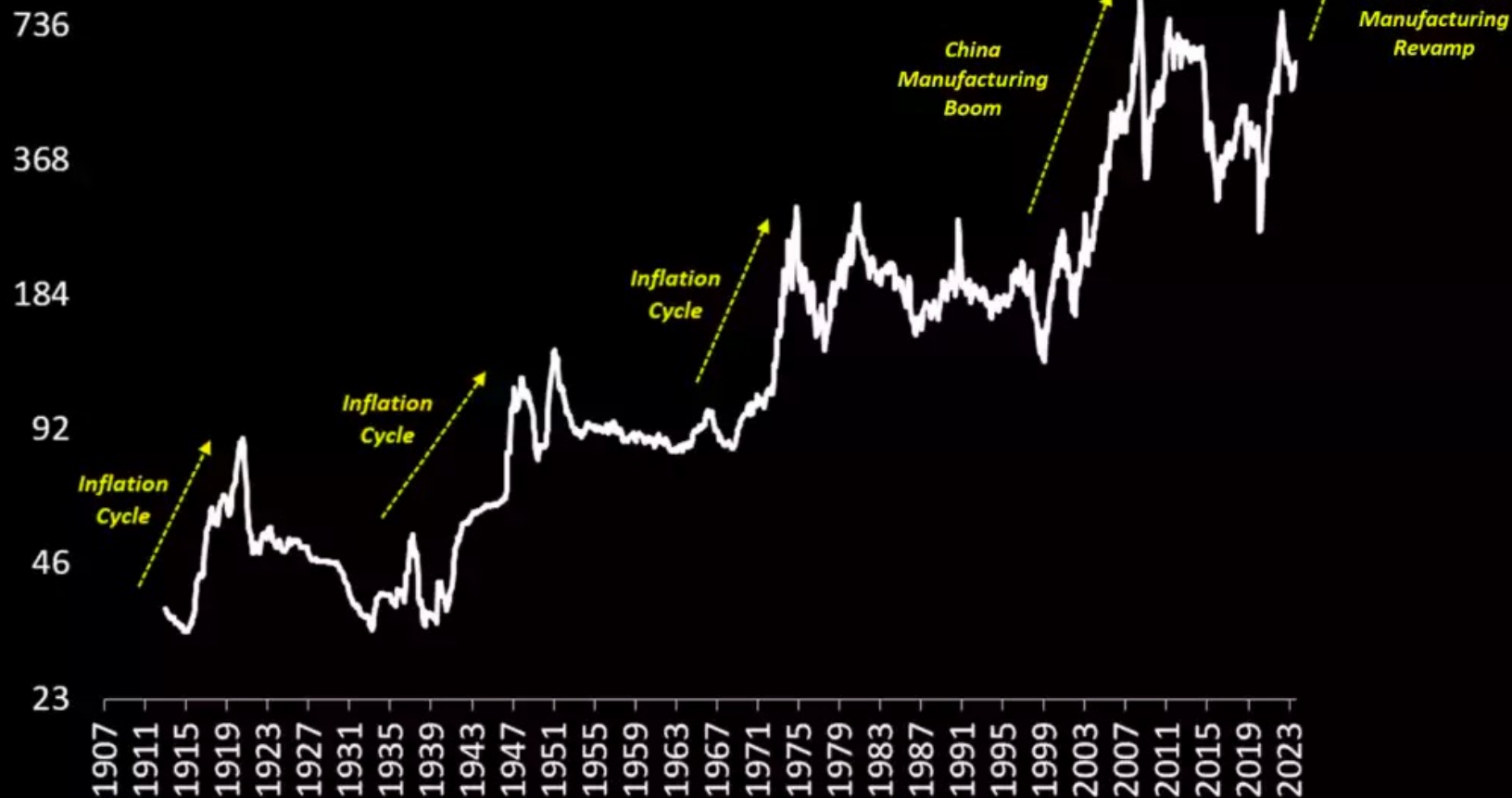
The aggregate market cap for global equity markets is 11x larger than the current size of natural resource industries.

If we exclude the energy sector, it is close to 37x.



# The History of Commodity Prices

1913-1934 US PPI Industrial Commodities; 1935-1949 Spot Price 28 Commodities;  
1950-1969 Spot Price 22 Commodities; Since 1970 S&P GSCI



Source: Incrementum AG

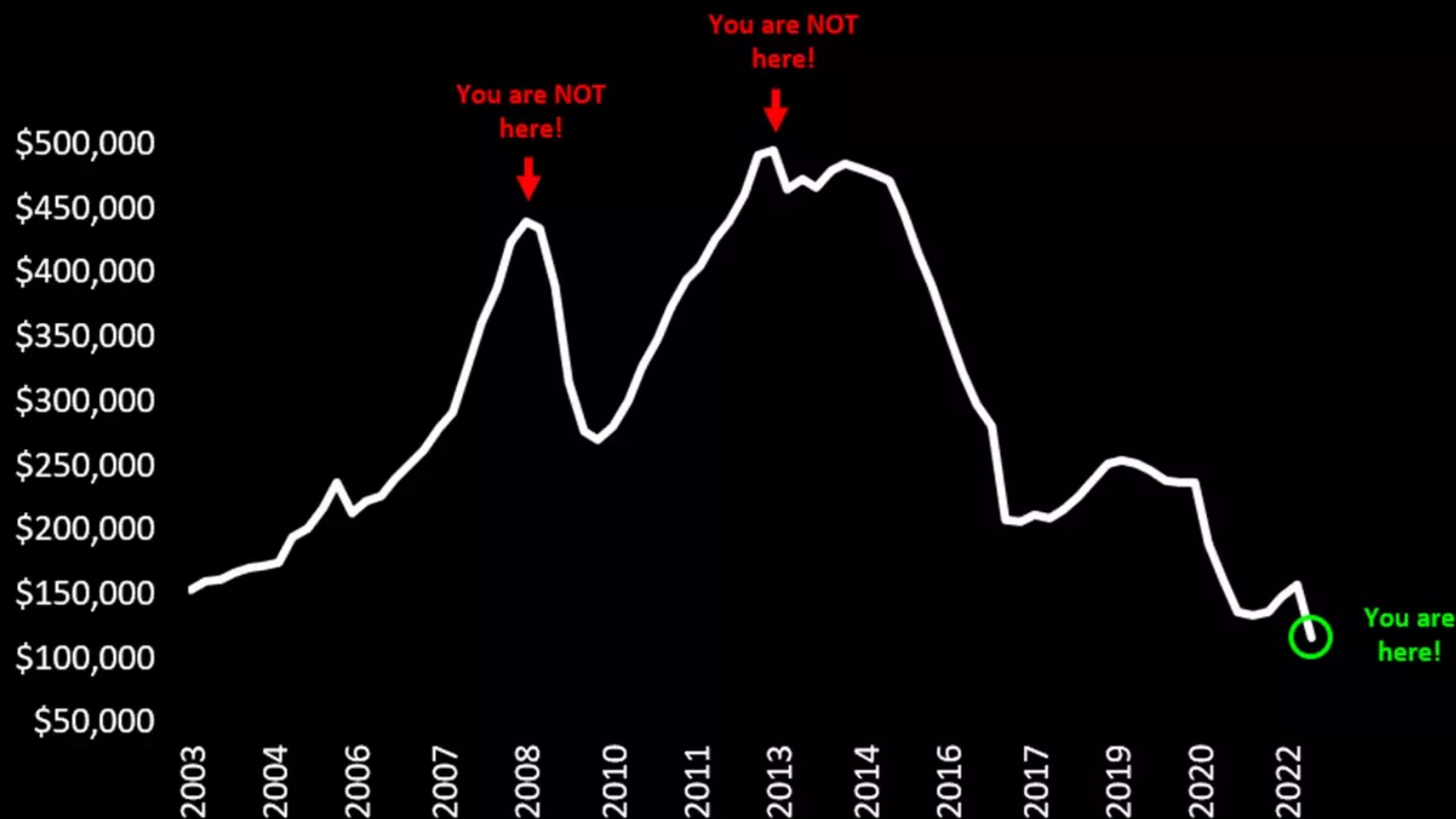
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Since the 1900s, we have had four notable commodity cycles. Three of them occurred during inflationary periods: the 1910s, 1940s, and 1970s. The fourth cycle took place in the early 2000s, coinciding with China's entry into the World Trade Organization and its emergence as the manufacturing hub of the global economy, leading to one of the most extensive construction booms in history.

# Commodity Producers: Capex Cycle Adjusted For GDP

Aggregate Trailing 12-Months of Capex in USD Millions



Commodity Producers With Market Cap Above \$1B in the Canadian & US Stock Exchanges

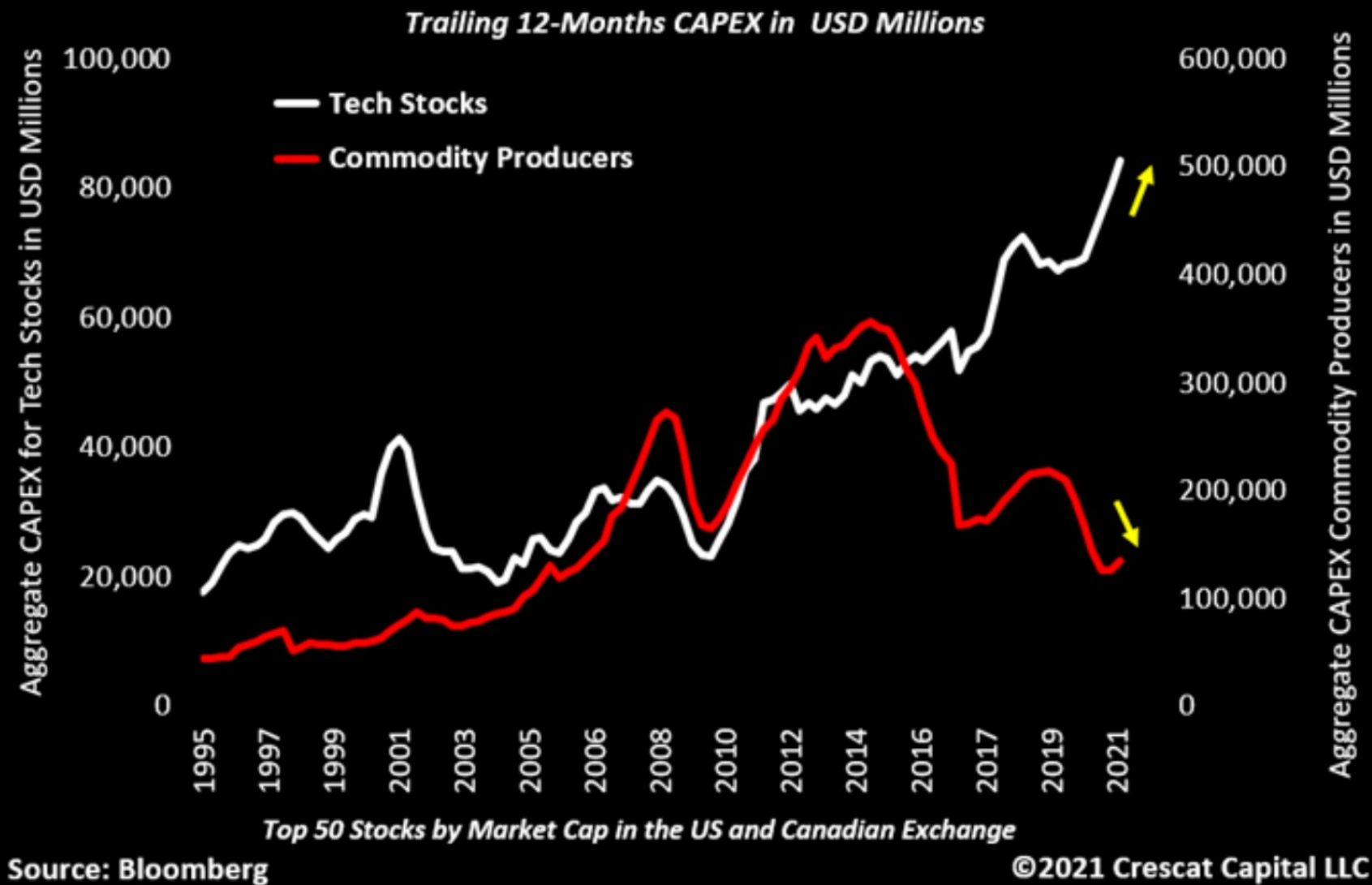
Source: Bloomberg

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It's important to consider the cross-asset correlations during the stagflationary crisis of 1973-4. Back then, tangible assets and resource businesses rallied drastically despite the collapse in stocks and bonds.

# CAPEX Cycle: Tech Stocks vs. Commodity Producers



There has been a major divergence between the long-term capex of technology companies versus commodity producers.

This disconnection began in 2015, long before the Covid Recession.

# ENERGY TRANSITION

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## Aggregate CAPEX for Energy Companies Adjusted for GDP

Universe: S&P 500 Energy Sector



Source: Bloomberg; Tavi Costa

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Aggregate CAPEX for energy companies adjusted for GDP levels is still below every other depressed level in the last 30-plus years.

Current levels are over 75% lower than the prior peak.

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# Energy Stocks: Free-Cash-Flow Yield

*S&P 500 Energy Sector: Aggregate Free-Cash-Flow Yield*



Source: Bloomberg; Tavi Costa

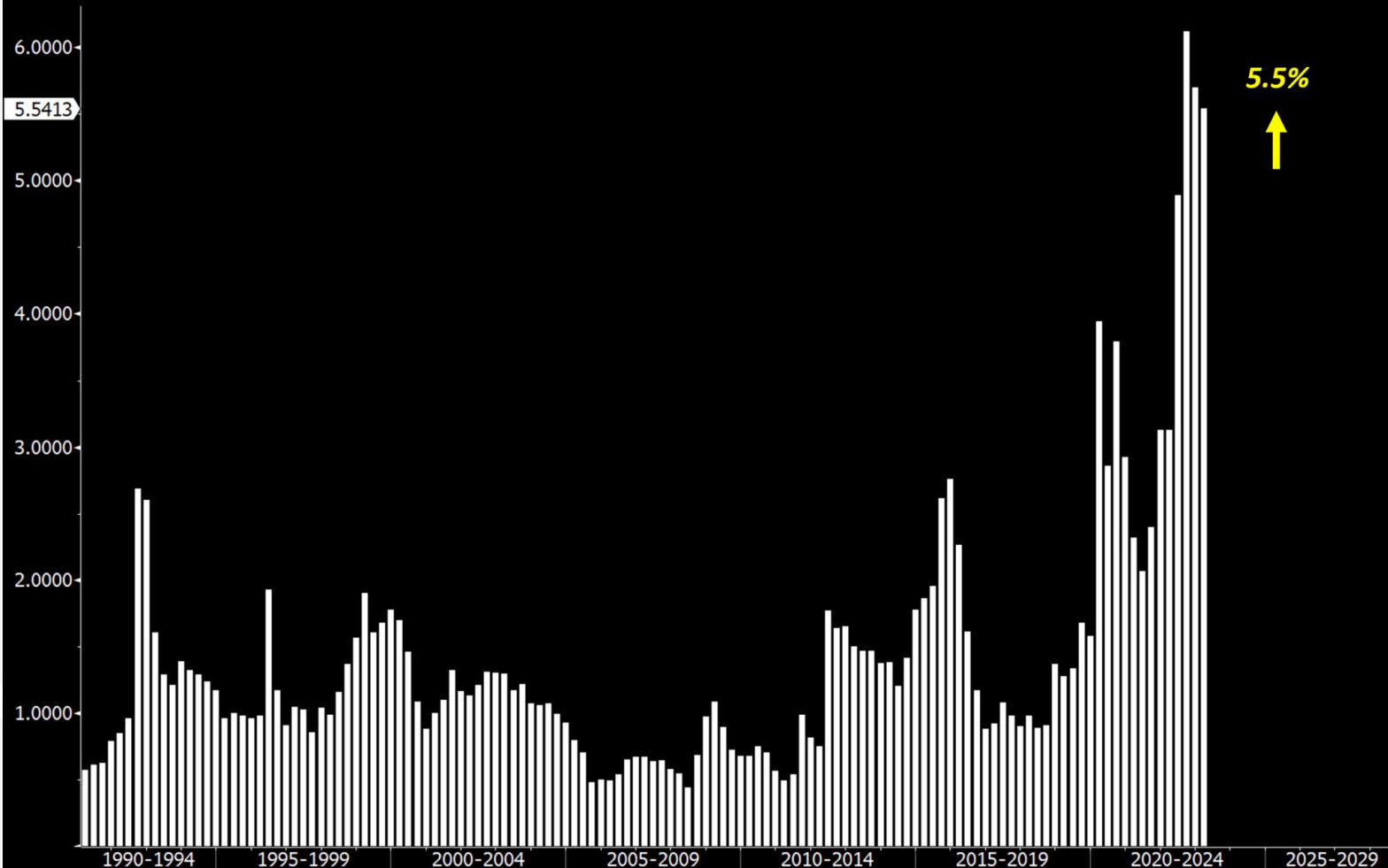
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If energy prices strengthen, as we envision due to structural shortages and ongoing demand, these companies are even more of a bargain.

## Energy Exploration & Production Stocks: Dividend Yield

*S&P 500 Oil and Gas Exploration and Production Index: Aggregate Dividend Yield (%)*



Source: Bloomberg; Tavi Costa

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Oil and gas exploration & production companies are by far paying their highest dividend yield in history of the data.

# The History of Pullbacks in Oil Prices



Source: Bloomberg; Tavi Costa

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In the current environment, we believe there are strong similarities to the early 2000s period, particularly in terms of historically depressed capital spending. Despite the risk of a demand shock, which is already largely reflected in the current prices, in our view, oil supply remains incredibly tight with production still below pre-pandemic levels.

# WTI Oil Prices

Quarterly Candles



Source: Bloomberg; Tavi Costa

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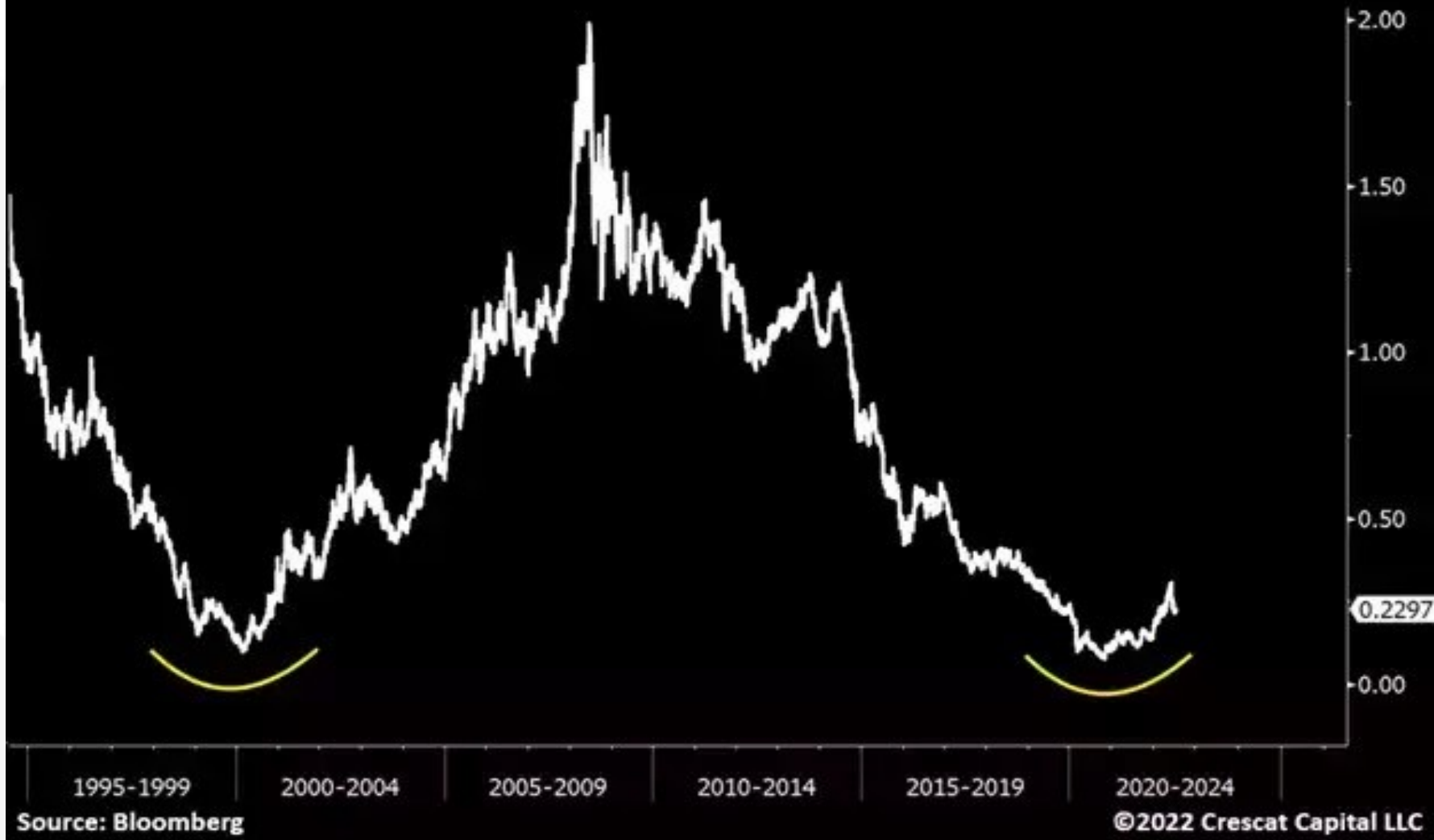


What if oil has another big move, inflation re-accelerates, and interest rates need to stay higher for longer? Equity markets would not appreciate this.



# Oil and Gas E&Ps-to-Tech Stocks Ratio

*S&P 500 Oil & Gas Exploration and Production / S&P 500 Information Technology Sector*



The energy-to-tech stock's ratio is as low as it was at the peak of the tech bubble.

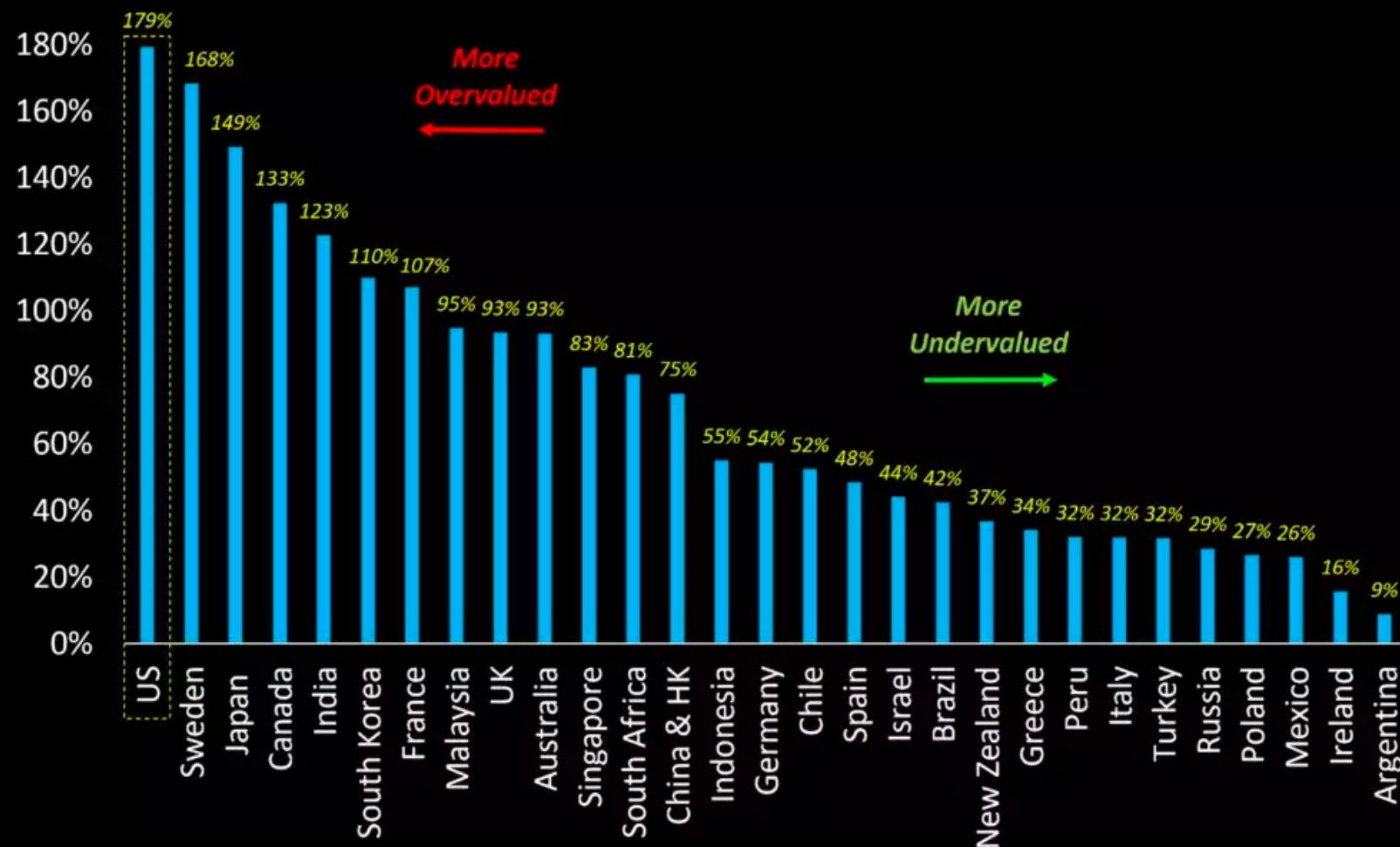


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# BRAZIL LIFTOFF

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# Market Cap to GDP by Country



Source: Bloomberg; Tavi Costa

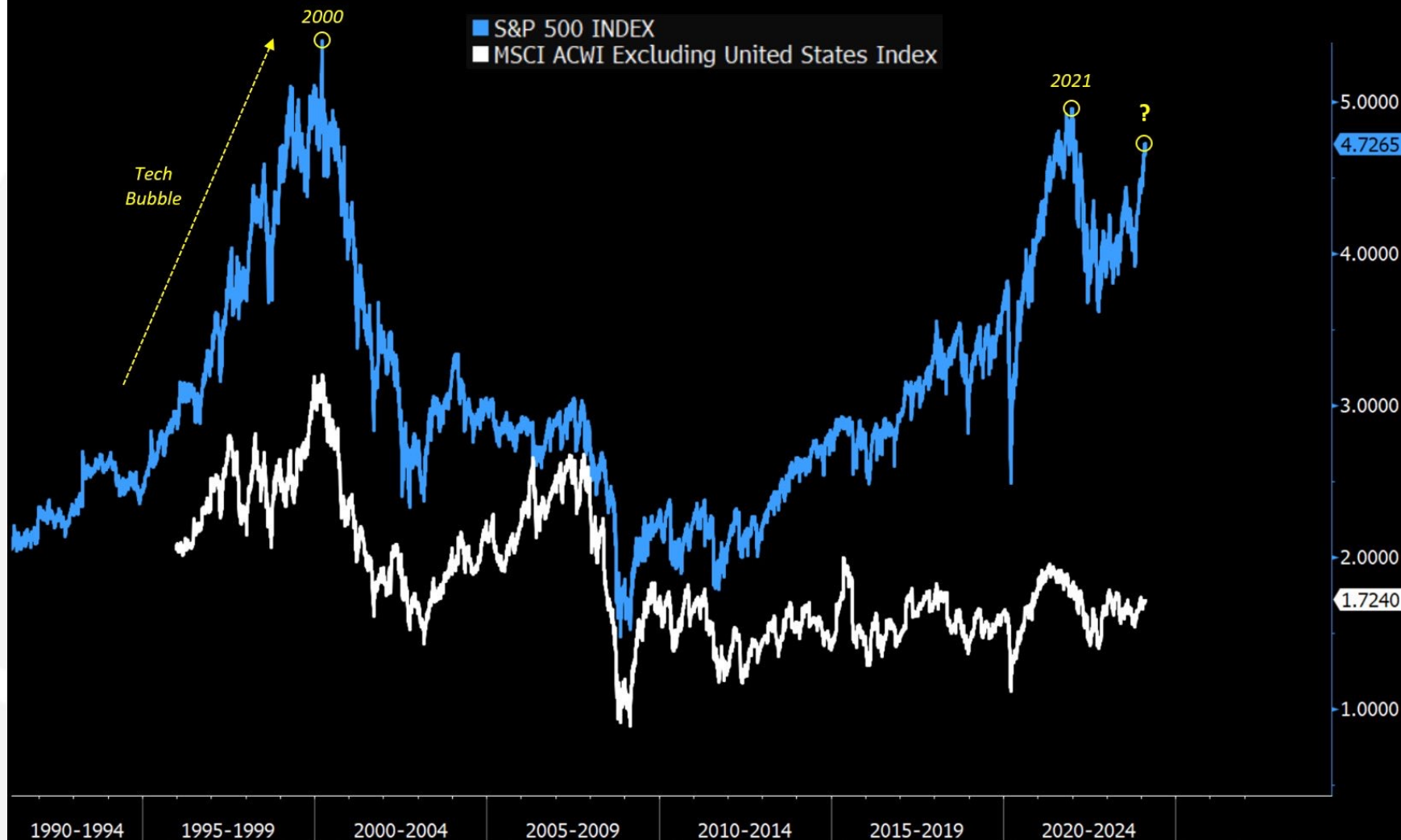
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We would much rather own growing businesses at low single-digit P/E multiples than hyped-up US mega-cap technology stocks, such as the Magnificent 7, which at the mean are trading at an exuberant 48 times annual trailing profits with questionable potential to sustain their past growth rates.

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# Price-to-Book: US vs. Rest of the World



Source: Bloomberg; Tavi Costa

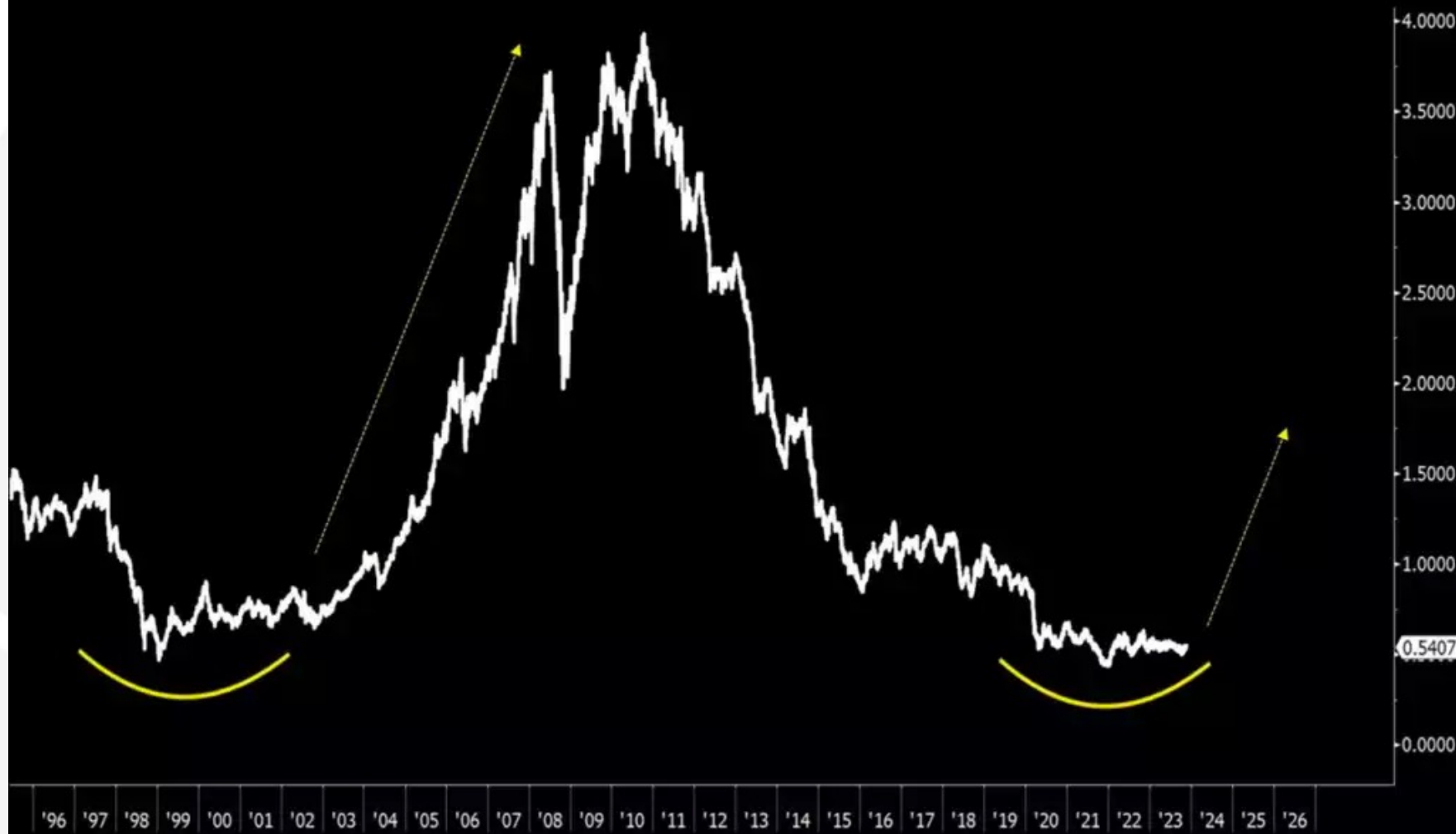
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This chart vividly shows the pronounced overvaluation of US equities versus the rest of the world.

## Latin American Stocks vs. S&P 500 Index

Calculation: MSCI EM Latin American Index / S&P 500 Index



Source: Bloomberg; Tavi Costa

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The recent advancements in artificial intelligence could paradoxically have highly positive implications for emerging markets that have long grappled with a low-quality labor force.

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# Brazilian-to-US Equities Ratio

*Total Return: Ibovespa Index / S&P 500 Index*



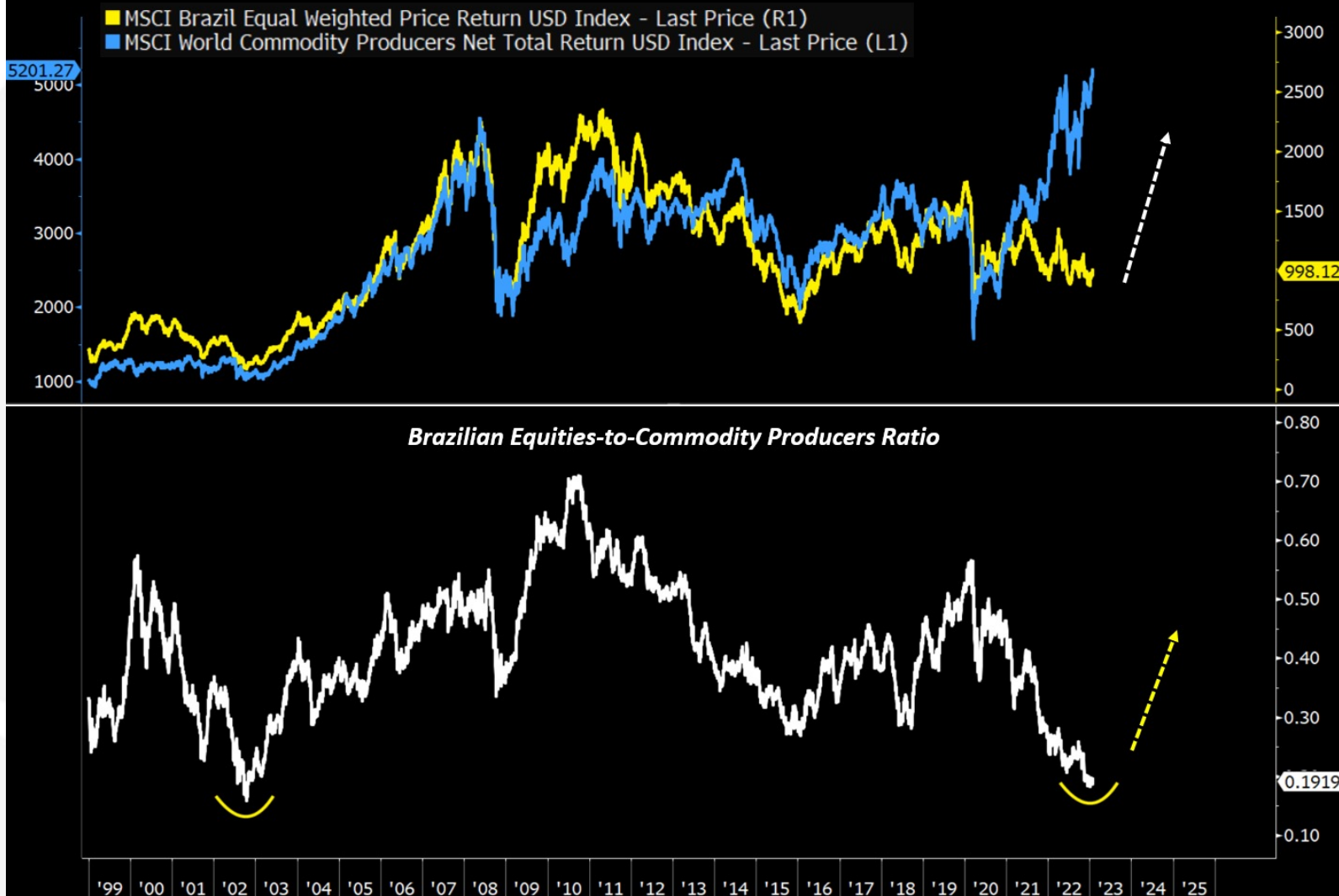
Source: Bloomberg; Tavi Costa

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Brazilian equities are also historically undervalued relative to US stocks.

# Brazilian Equities vs. Commodity Producers



Source: Bloomberg; Tavi Costa

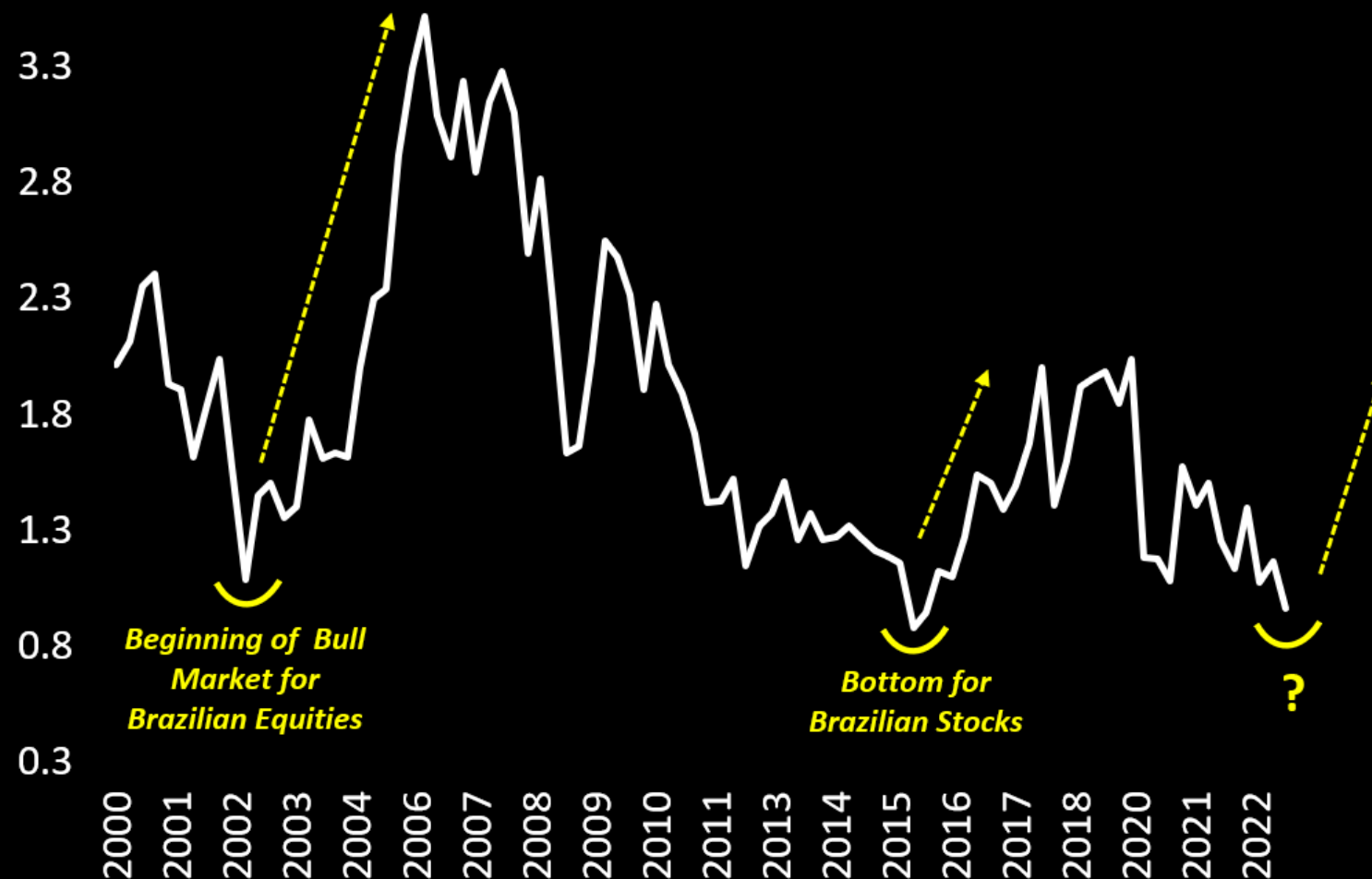
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Brazilian equities are historically cheap even relative to global commodity producers.

The last time we saw such undervalued prices was in the early 2000s, when Brazilian stocks entered a bull market.

## Top 4 Brazilian Banks: Median Price to Book



Source: Bloomberg; Tavi Costa

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Brazilian banks are currently trading at one of lowest price-to-book levels in history.

Prior times when this industry was trading at such cheap multiples also marked great buying opportunities.

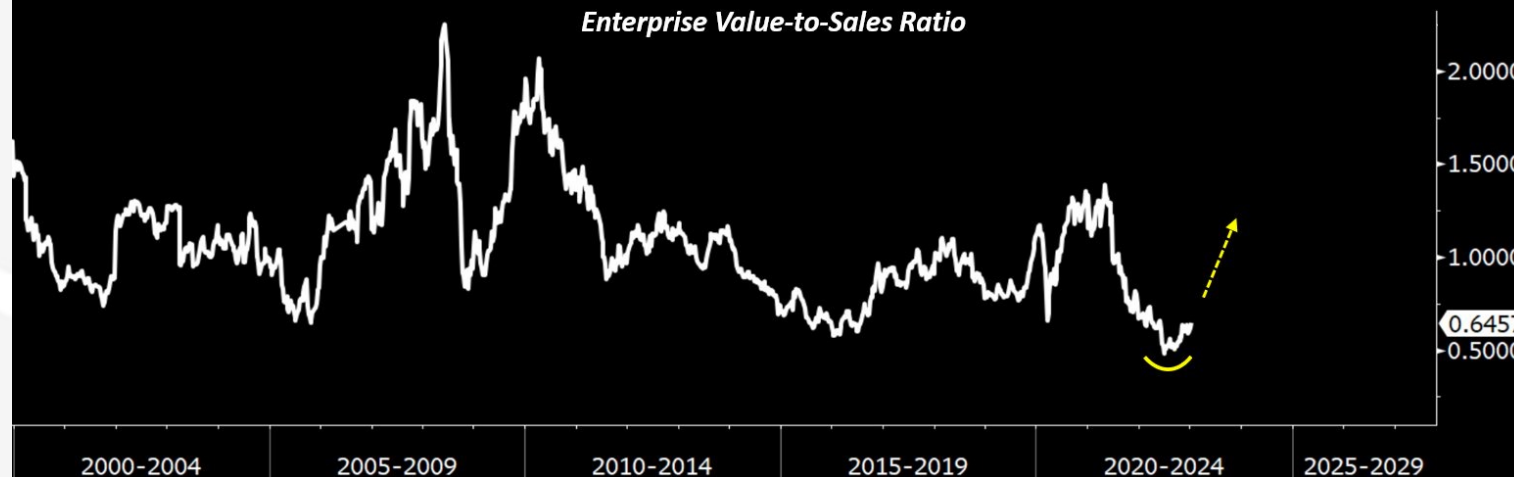
# Gerda SA

\$GGB

Historically Undervalued:  
4x P/E Ratio  
24% Free-Cash Flow Yield  
30% Dividend Payout



## Enterprise Value-to-Sales Ratio



Brazilian equities are  
insanely cheap.  
Here is one of the  
largest steel producers  
now on the brink of a  
major breakout.  
The stock is currently  
trading at less than 4x  
earnings with a 24% FCF  
yield.  
Not to mention, its  
dividend policy is at a  
30% payout.

Source: Bloomberg; Tavi Costa

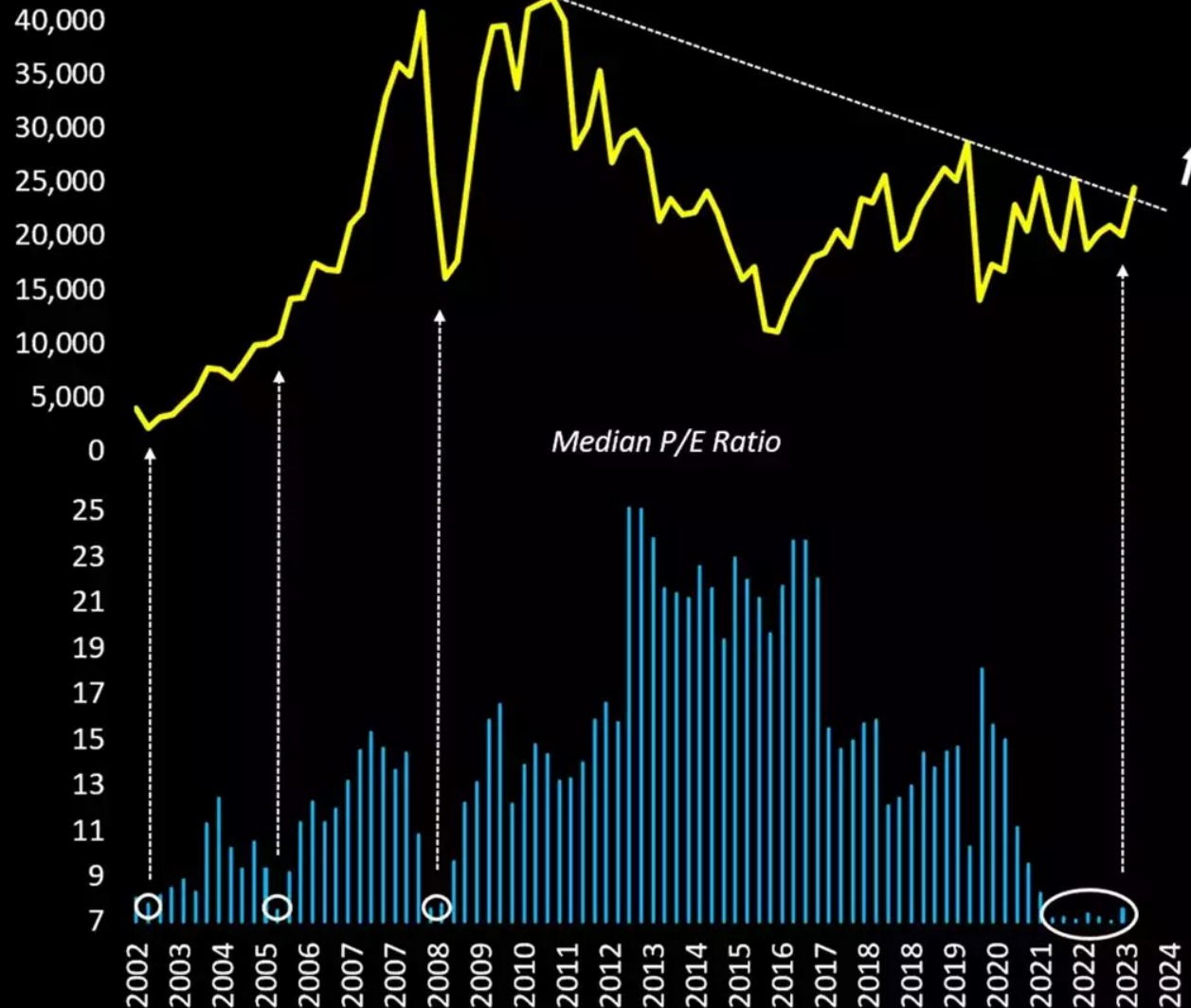
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## Brazilian Equities: Top 15 Largest Stocks

*Ibovespa in USD Terms*



Source: Bloomberg; Tavi Costa

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Rarely in history have  
Brazilian stocks been as  
cheap as they are today.

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# Brazilian vs. US Stocks Since the GFC



Note how Brazilian equities have massively underperformed US stocks since the Global Financial Crisis.

## Brazilian vs. US Stocks: From the Tech Bust to the Peak of the Housing Bubble

Normalized As Of 10/01/2002  
■ Ibovespa Index in USD 1855.92  
■ S&P 500 Index 183.41



Source: Bloomberg

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Note how Brazilian equities have massively underperformed US stocks since the Global Financial Crisis.

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# Brazilian Real vs. Chinese Yuan



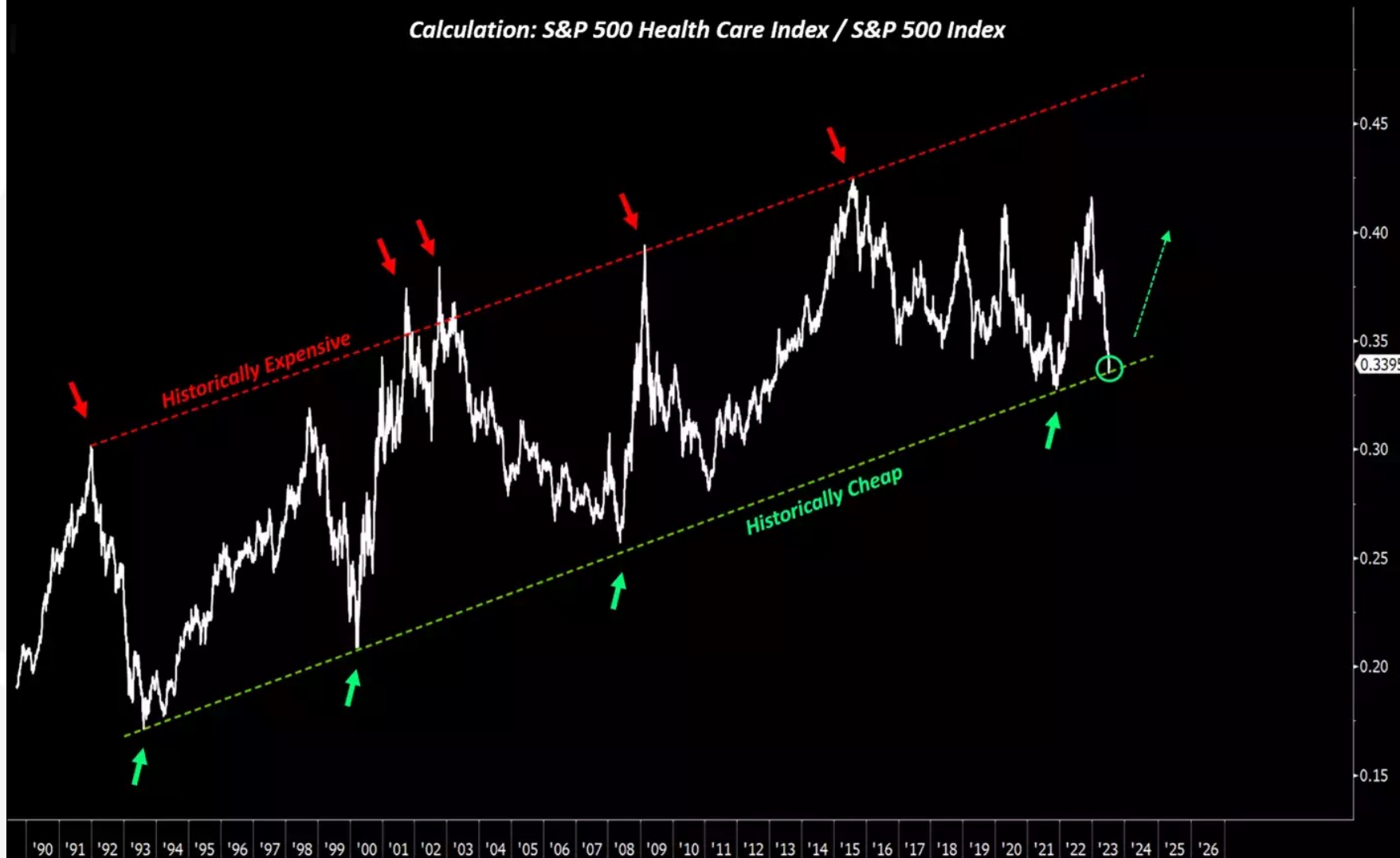
While we rather be long the Brazilian equities that offer even further asymmetry, the simplistic part of the thesis is to be buyers of natural resource-rich economies and sellers of net importers of commodities.

# GEONOMIC REVOLUTION

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# Health Care Sector vs. S&P 500 Index

Calculation: S&P 500 Health Care Index / S&P 500 Index



Source: Bloomberg; Tavi Costa

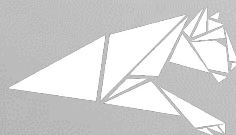
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The healthcare sector is one area of the market outside of natural resource industries where we have become highly constructive on the long side given the recent price dislocation and valuation proposition, particularly biotechnology businesses.

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