

A Quant's View

ASSET MANAGEMENT DURING ECONOMIC UNCERTAINTY



HELIOS IS AN END-TO-END SERVICE, NOT JUST A MODEL PROVIDER

Create practice growth, scale, and consistency

Enhance your ability to demonstrate deeper client value and set expectations

Reduce business risk and employee turnover



HELIOS IS AN END-TO-END SERVICE, NOT JUST A MODEL PROVIDER

Create practice growth, scale, and consistency

Analyze and select ETFs, mutual funds, and stocks Enhance your ability to demonstrate deeper client value and set expectations

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HELIOS IS AN END-TO-END SERVICE, NOT JUST A MODEL PROVIDER

Create practice growth, scale, and consistency

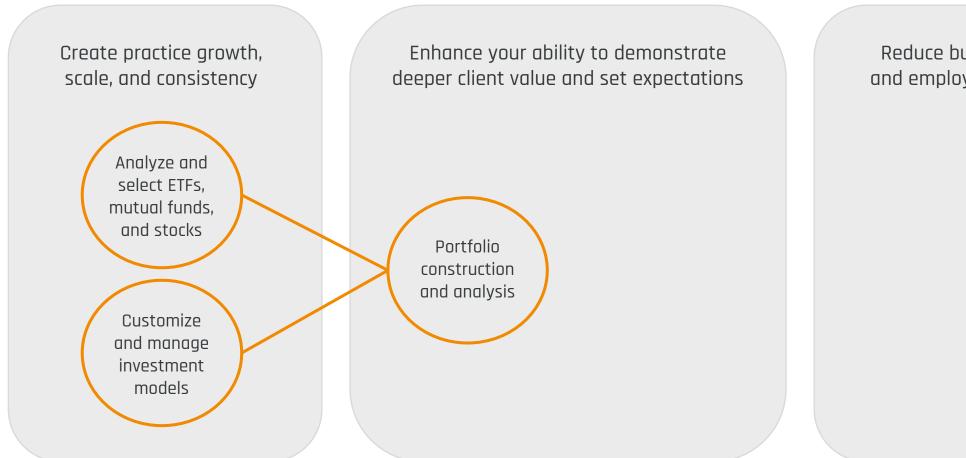
Analyze and select ETFs, mutual funds, and stocks

Customize and manage investment models Enhance your ability to demonstrate deeper client value and set expectations

Reduce business risk and employee turnover



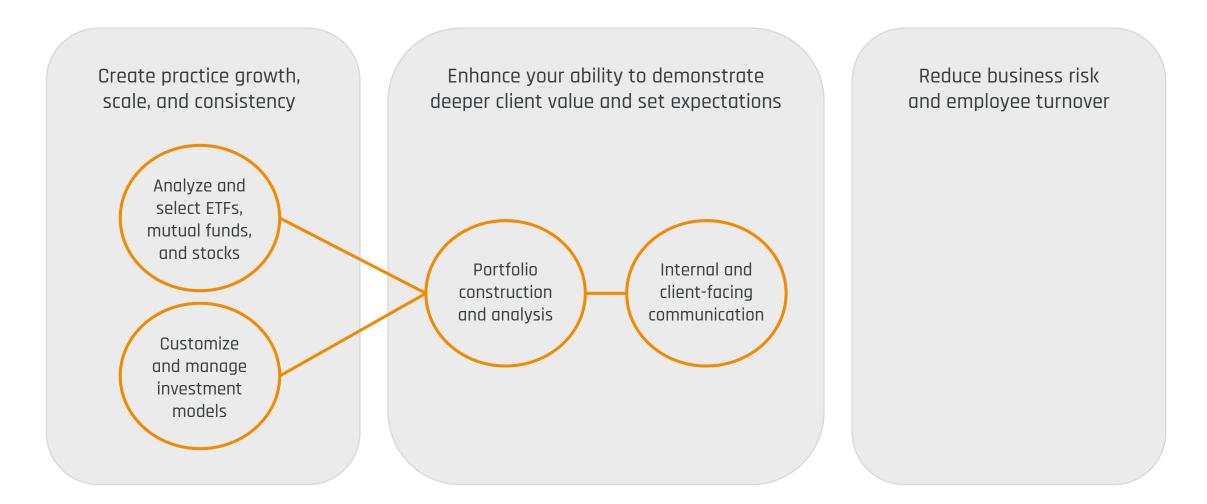
HELIOS IS AN END-TO-END SERVICE, NOT JUST A MODEL PROVIDER



Reduce business risk and employee turnover

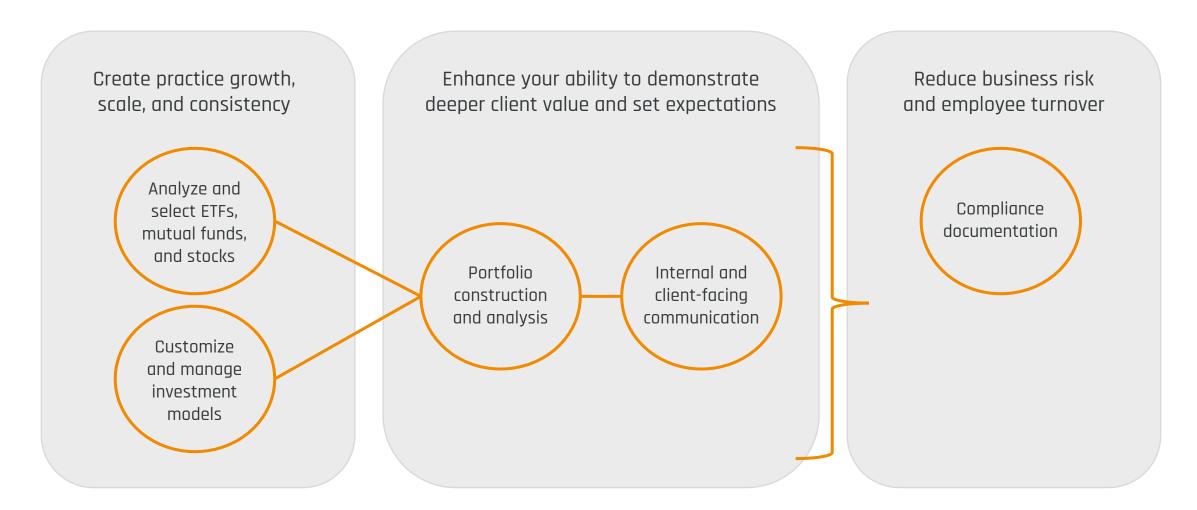


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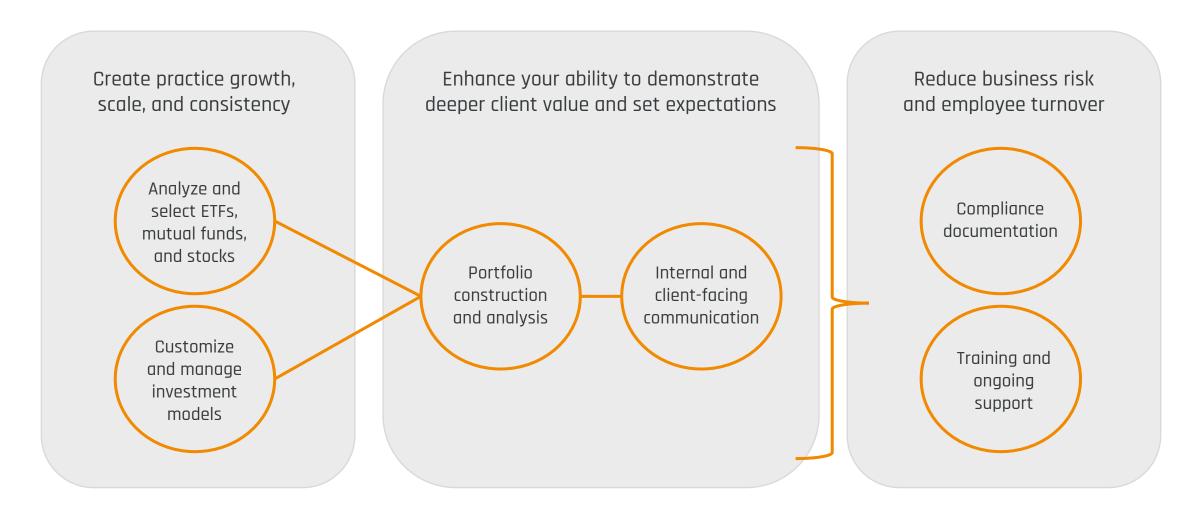


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Helios is the clear choice for insourcing asset management

In-house Models TAMP Models Model Marketplace "Free" Research **High Control** Low/No Control Practice Branded Not Branded Differentiated Story Low/No Differentiation Cost Effective Very Expensive Low Effort/Outsourced High Effort High Compliance Risk Reduced Compliance Risk **Basic Strategies** Powerful Strategies/Optics Low/Not Tech Focused Tech Focused

Helios is a world-class team



HELIOS IS LIKE HAVING AN ENTIRE INVESTMENT DEPARTMENT AT YOUR FINGERTIPS

























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Chris Shuba Founder/CEO



Joe Mallen
Chief Investment Officer



Jason Van Thiel

Director of Research



Are we in a recession?

Is a recession coming?

Boes it matter?



Advisor > Investing

Is The U.S. He Economists are divided on the risk of a Another Rece U.S. recession. And the jobs data isn't

ECONOMY

Steve Hanke save we're going to have

BREAKING Gundlach says the Fed should slow down rate hikes because it is pushing the economy into a recession

MONEY

one wnopper of a recession in 2023

A recession is now likely in 2023. Here's what could trigger a sharp downturn in the economy

Is a Recession Coming in 2023?

Recession Definition



HOW THE NATIONAL BUREAU OF ECONOMIC RESEARCH (NBER) DECIDES

Many believe a recession is defined as two consecutive quarters of negative GDP

FROM THE NBER

Emphasis Ours

What defines a recession:

The committee's view is that while each of the three criteria—depth, diffusion, and duration—needs to be met individually to some degree, extreme conditions revealed by one criterion may partially offset weaker indications from another.

The indicators used:

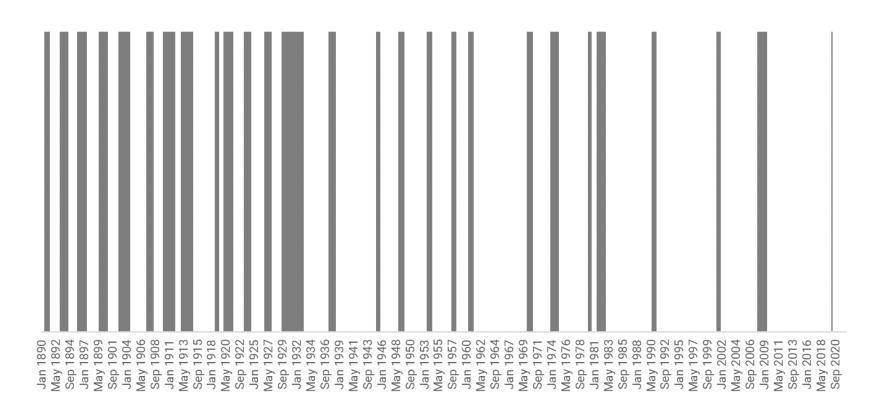
These include real personal income less transfers (PILT), nonfarm payroll employment, real personal consumption expenditures, wholesale-retail sales adjusted for price changes, employment as measured by the household survey, and industrial production. There is no fixed rule about what measures contribute information to the process or how they are weighted in our decisions.

Source: Helios Quantitative Research, NBER

History of US Recessions



THERE'S A REASON FOR THE CONVENTIONAL WISDOM...



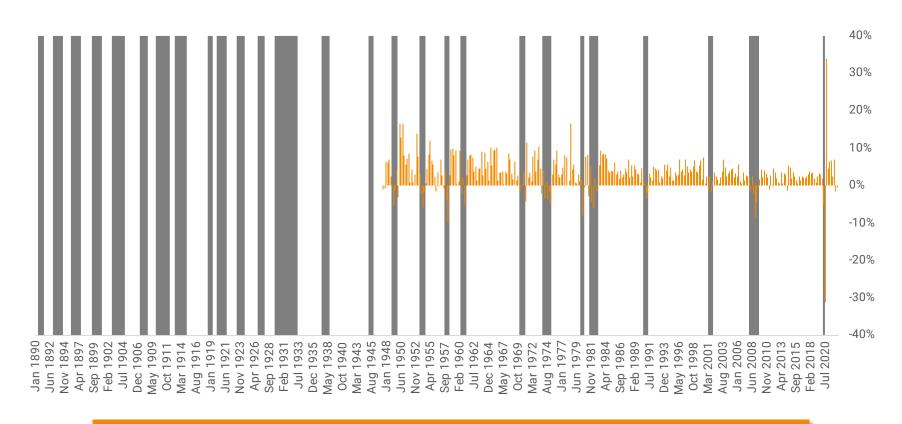
The US has had 27 recessions since the late 1890s

Source: Helios Quantitative Research, NBER

History of US Recessions



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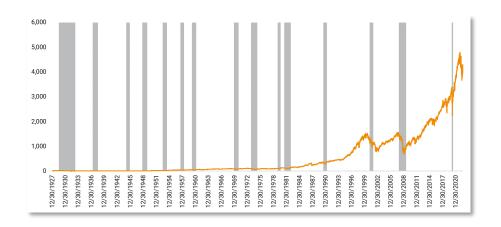
The US has had 27 recessions since the late 1890s

Source: Helios Quantitative Research, NBER

Investing During Recessions

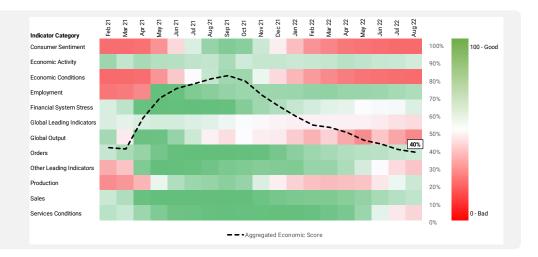


EVEN WITH PERFECT TIMING, MARKETS DON'T ALWAYS DECLINE IN RECESSIONS



Since the 1920s the S&P 500 has had a negative total return in slightly over half of recessions.

At Helios we prefer evaluating a broader set of economic data and adjust risk positioning around economic weakness rather than a recession.



Source: Helios Quantitative Research, NBER



The economy is not binary, but rather a complex system that has periods of varying strengths and weaknesses



Are we in a recession?



Business

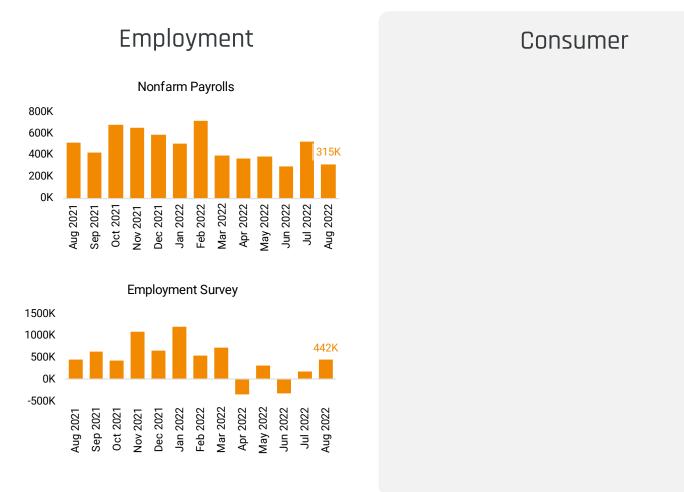
KEY DATA USED BY THE NBER

Employment Consumer

^{*} Latest data available is July 2022



KEY DATA USED BY THE NBER

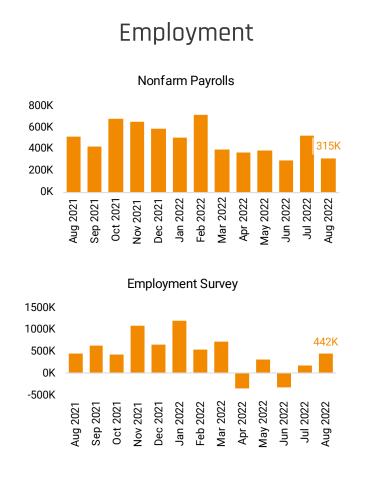


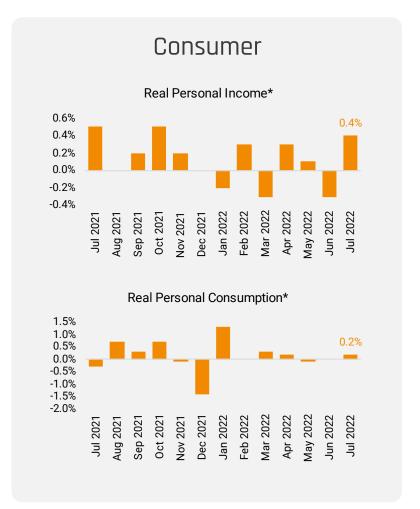
Business

^{*} Latest data available is July 2022



KEY DATA USED BY THE NBER



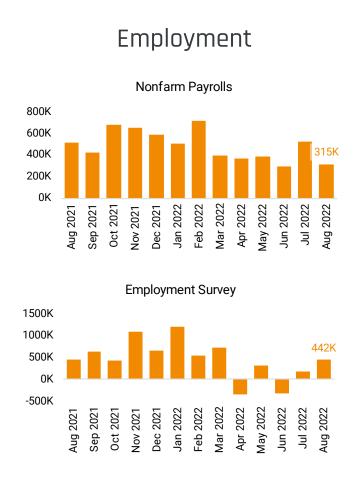


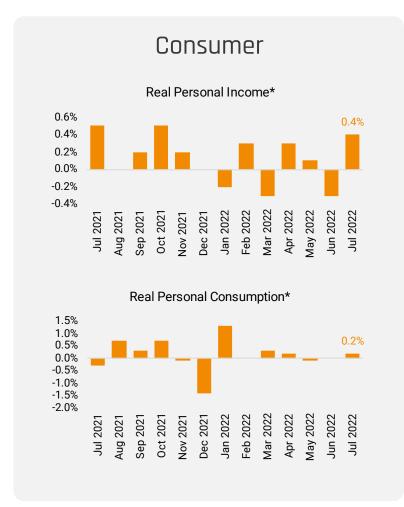
Business

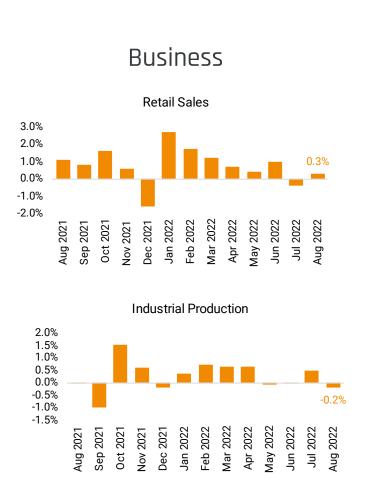
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KEY DATA USED BY THE NBER





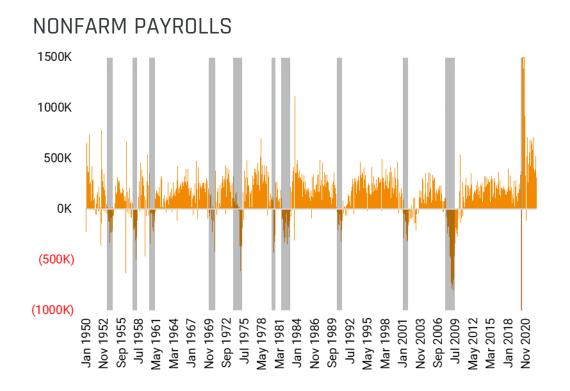


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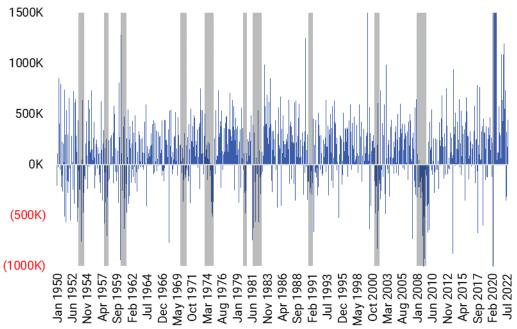
Digging into Employment



ZOOMING OUT TO 1950







The US has never had a recession without multiple months of job losses

Recessions shown as shaded area.

Source: Helios Quantitative Research, Bloomberg, Bureau of Labor Statistics

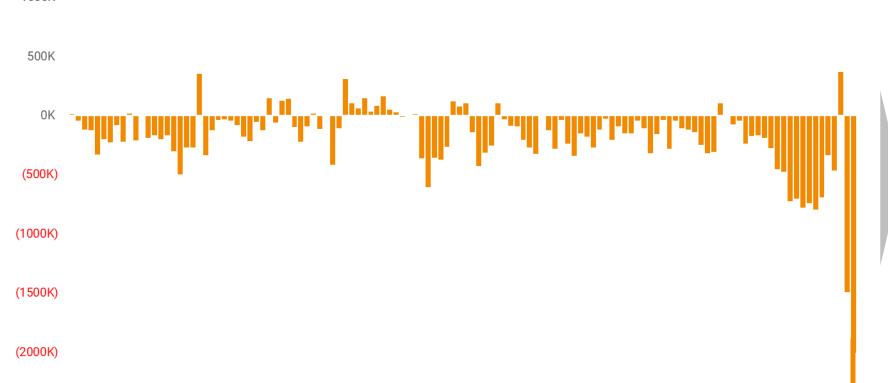
Job Gains are Rare in a Recession



GROUPING ALL RECESSIONS TOGETHER







335K

Average monthly job loss during a recession

Source: Helios Quantitative Research, Bloomberg, Bureau of Labor Statistics

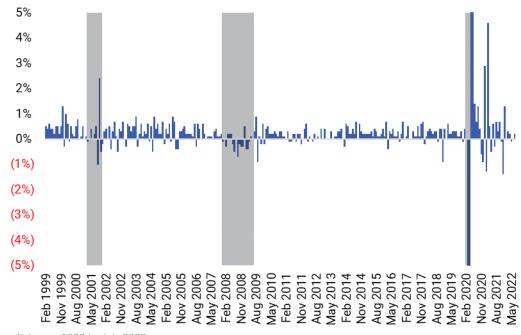
Digging into the Consumer



INCOME AND EXPENSES

Feb 1959 Jul 1961 Dec 1963 May 1966 Oct 1968 Mar 1971 Aug 1973 Apr 1983 Sep 1985 Jul 1990 Dec 1992 May 1995 Oct 1997 Mar 2000 Apr 2002 Jun 2007 Nov 2009 Apr 2012 Sep 2014 Feb 2017 Jul 2019 Dec 2021

REAL PERSONAL CONSUMPTION



February 1999 to July 2022

Inflation has certainly dented real consumption and income, though the consumer has been fairly resilient up to this point

Recessions shown as shaded area.

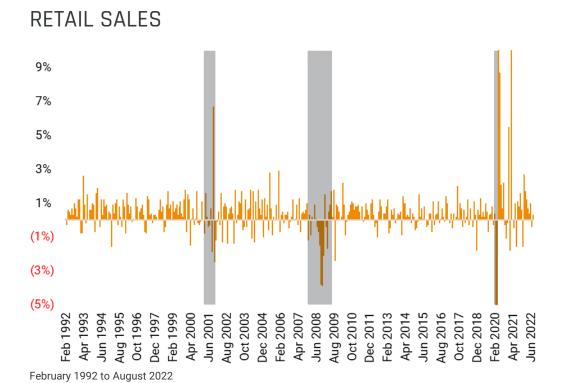
February 1959 to July 2022

Source: Helios Quantitative Research, Bloomberg, Bureau of Economic Analysis

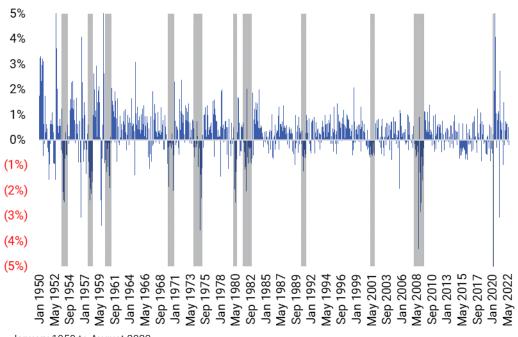
Digging into Businesses



RETAIL AND MANUFACTURING



INDUSTRIAL PRODUCTION



January 1950 to August 2022

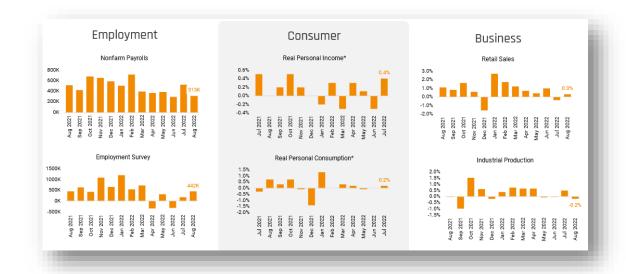
Retail sales have slowed, and industrial product has been tepid recently, there haven't been significant pullbacks in either data sets

Source: Helios Quantitative Research, Bloomberg, Census Bureau, Federal Reserve

What is our Takeaway?



- 1 A hot labor market has provided a floor to economic performance
- Inflation has stressed consumers, though strong jobs are acting as a pressure release valve
- Business performance is slowing, though not showing signs of consistent, or severe, contraction



Source: Helios Quantitative Research, Bloomberg



Based upon the NBER data, It's difficult to conclude we've already entered a recession

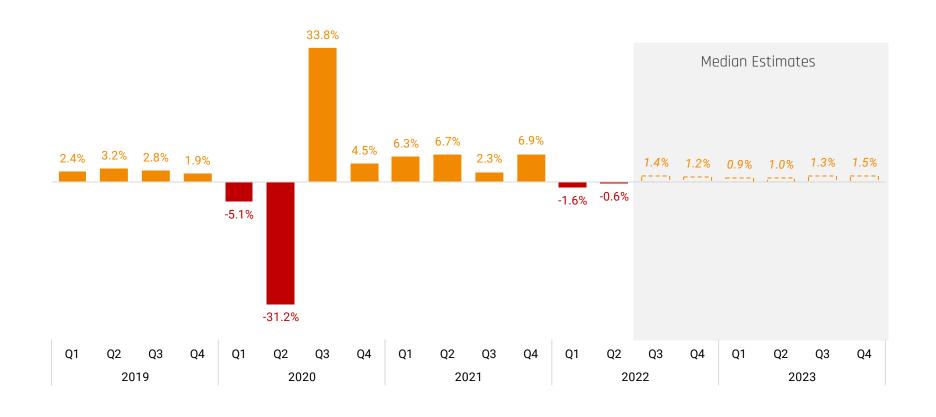


Is a recession coming?

What do Economists Expect?



ACTUAL GDP VS. FCONOMISTS SURVEYED BY BLOOMBERG

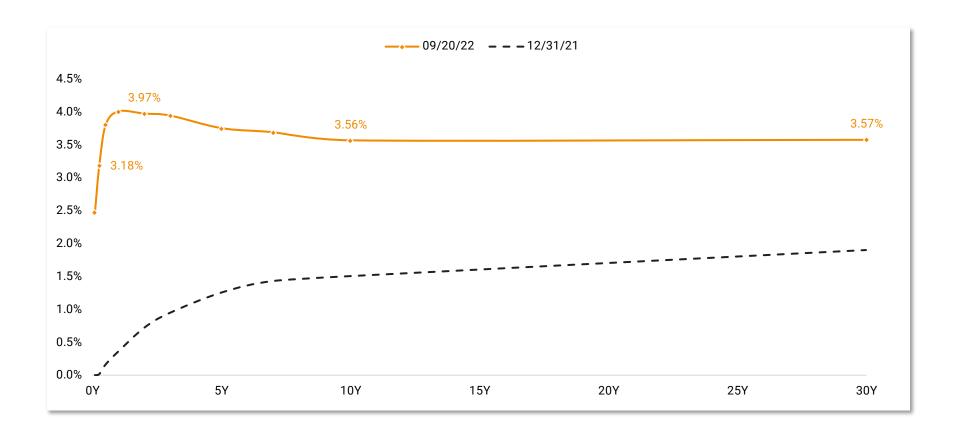


Latest values as of 09/16/22.

Source: Helios Quantitative Research, Bloomberg



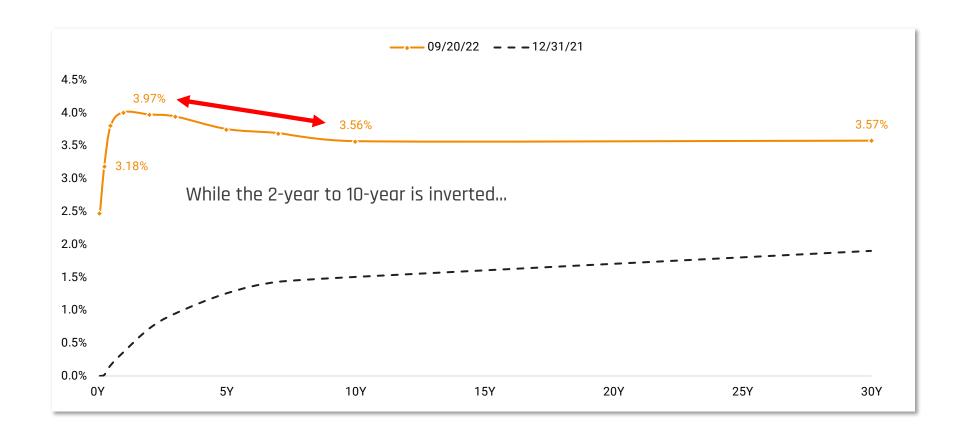
US GOVERNMENT YIFI D CURVE



Source: Helios Quantitative Research, Bloomberg



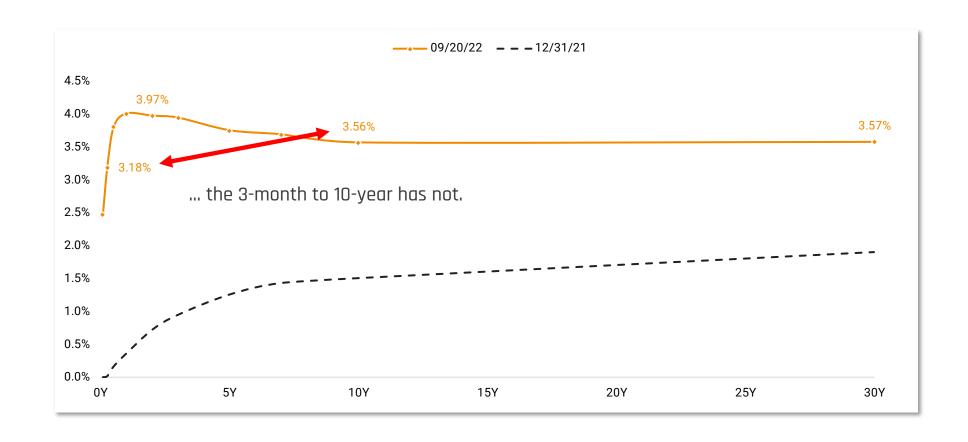
US GOVERNMENT YIELD CURVE



Source: Helios Quantitative Research, Bloomberg



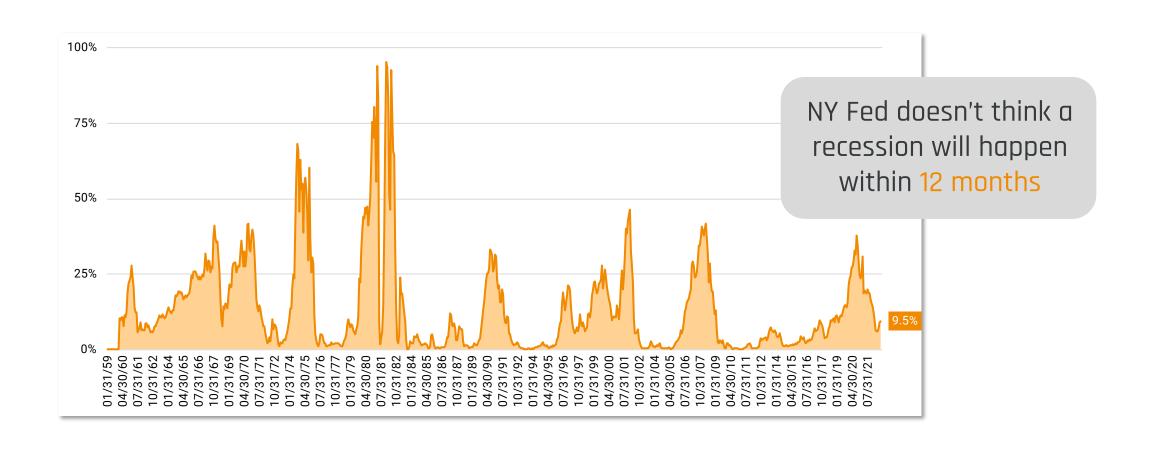
US GOVERNMENT YIFI D CURVE



Source: Helios Quantitative Research, Bloomberg



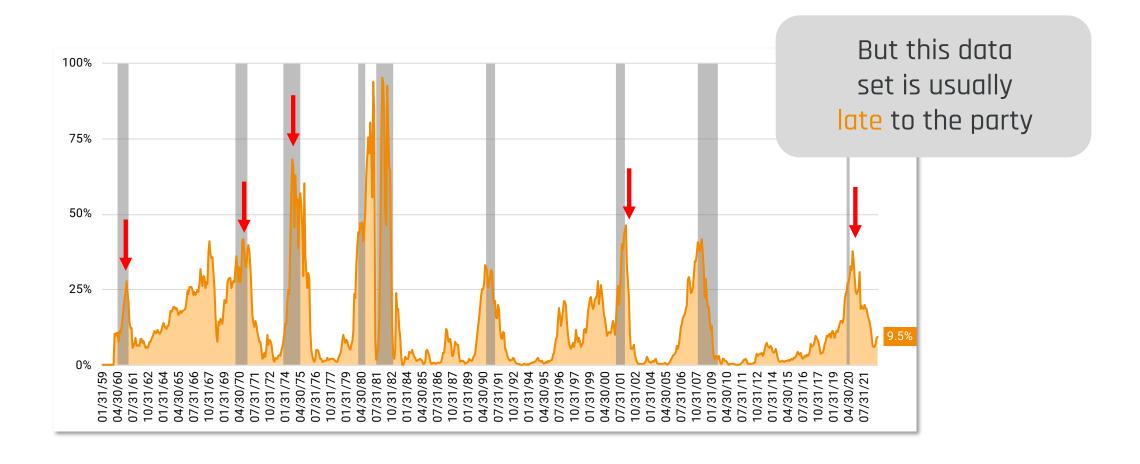
NY FED PROBABILITY OF RECESSION



Source: Helios Quantitative Research, Bloomberg



NY FED PROBABILITY OF RECESSION



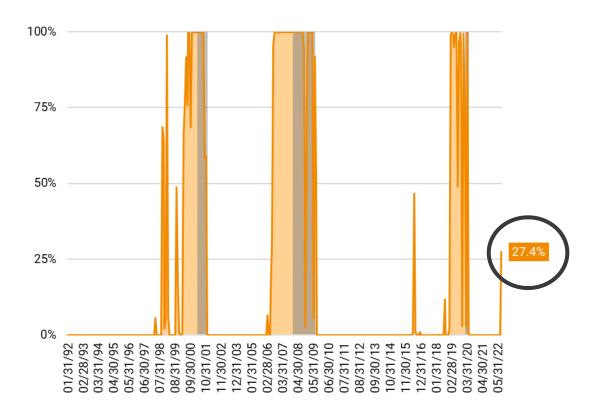
Source: Helios Quantitative Research, Bloomberg

Examining Some Forward-looking Data



BLOOMBERG ECONOMICS PROBABILITY OF US RECESSION

12 MONTHS

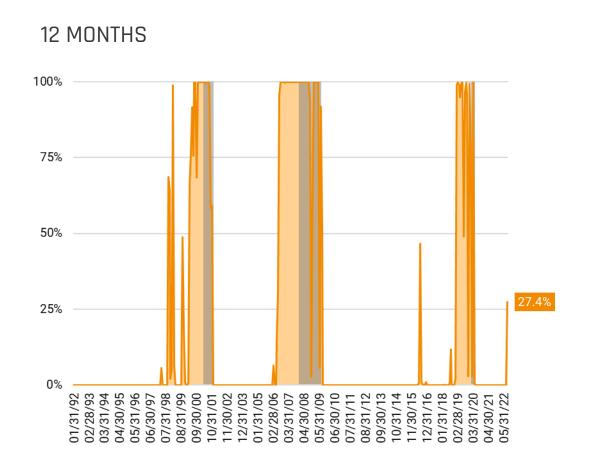


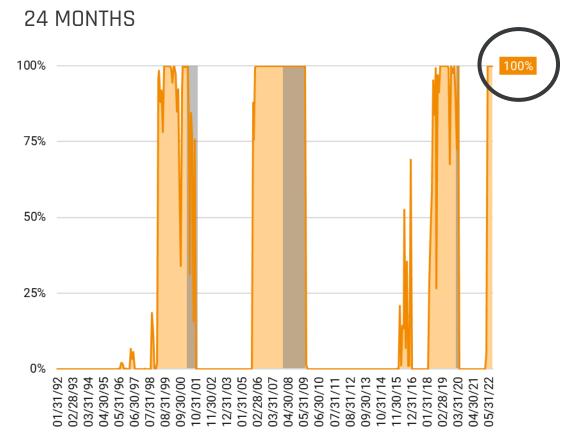
Source: Helios Quantitative Research, Bloomberg

Examining Some Forward-looking Data



BLOOMBERG ECONOMICS PROBABILITY OF US RECESSION





Source: Helios Quantitative Research, Bloomberg



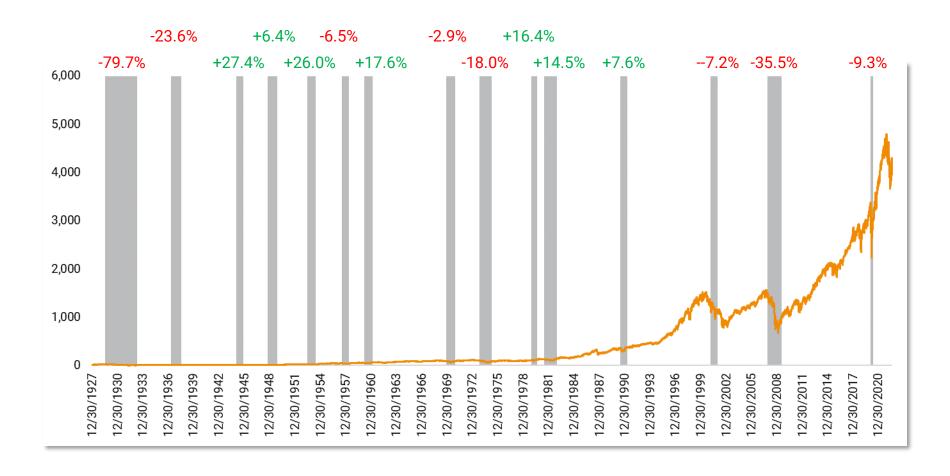
Forward-looking data is mixed, BUT if consumer data turns negative and GDP remains weak, the chances of a recession are high.



Does it matter?



S&P 500 PERFORMANCE



Source: Helios Quantitative Research, Bloomberg

Average Does Not Mean Typical



AVERAGE S&P 500 TOTAL RETURN

During Recession

-4.4%

Next 6 Months

+16.5%

Next 12 Months

+21.8%

Source: Helios Quantitative Research, Bloomberg

S&P 500 returns are cumulative total returns. Indices are unmanaged and cannot be invested into directly. The returns do not reflect fees, sales charges, or expenses and don't reflect any particular investment. Past performance is not indicative of future results.

Average Does Not Mean Typical



AVERAGE S&P 500 TOTAL RETURN

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What if we ignore the Great Depression?

Source: Helios Quantitative Research, Bloomberg

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Average Does Not Mean Typical



AVERAGE S&P 500 TOTAL RETURN



-4.4%

Next 6 Months

+16.5%

Next 12 Months

+21.8%

What if we ignore the Great Depression?

During Recession

+0.9%

Next 6 Months

+13.0%

Next 12 Months

+17.6%

Source: Helios Quantitative Research, Bloomberg

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EXAMINING THE LAST RECESSIONS

| Start Date | End Date | S&P 500 Total Return | Next 6 Months | Next 12 Months |
|---------------|---------------|-------------------------|------------------|-------------------|
| August 1929 | March 1933 | -79.74% | 66.15% | 81.54% |
| May 1937 | June 1938 | -23.65% | 15.81% | -1.72% |
| February 1945 | October 1945 | 27.45% | 14.60% | -7.24% |
| November 1948 | October 1949 | 6.39% | 19.00% | 35.06% |
| July 1953 | May 1954 | 26.04% | 20.16% | 36.07% |
| August 1957 | April 1958 | -6.50% | 20.41% | 37.23% |
| April 1960 | February 1961 | 17.64% | 8.90% | 13.64% |
| December 1969 | November 1970 | -2.88% | 15.75% | 11.25% |

| Start Date | End Date | S&P 500 Performance | Next 6 Months | Next 12 Months |
|---------------|---------------|------------------------|------------------|-------------------|
| November 1973 | March 1975 | -18.03% | 2.73% | 28.33% |
| January 1980 | July 1980 | 16.39% | 9.08% | 13.00% |
| July 1981 | November 1982 | 14.47% | 19.92% | 25.57% |
| July 1990 | March 1991 | 7.59% | 5.08% | 11.00% |
| March 2001 | November 2001 | -7.18% | -5.68% | -16.51% |
| December 2007 | June 2009 | -35.46% | 22.58% | 14.42% |
| February 2020 | April 2020 | -9.26% | 13.29% | 45.96% |

Source: Helios Quantitative Research, Bloomberg

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EXAMINING THE LAST FIVE RECESSIONS

| | Length | Root Cause |
|---------------------------|---------------------------------------|--|
| 1 Energy Crisis | 16 months (Jul. 1981 to Nov. 1982) | Oil prices skyrocketed following the Iranian Revolution along with tight monetary policy to control inflation. |
| 2 Oil Price Shock | 8 months (Jul. 1990 to Mar. 1991) | Tightening monetary policy in the late 1980s weakened growth and the consumer creating a fragile environment for the 1990 oil shock. |
| 3 Dot Com Bubble | 8 months (Mar. 2001 to Nov. 2001) | The collapse of the dot com bubble curtailed business investment and business laid off employees, then exacerbated by the 9/11 attacks. |
| 4 Global Financial Crisis | 18 months (Dec. 2007 to Jun. 2009) | Explosive growth in subprime mortgages led to the bursting of the housing bubble, causing the collapse of large financial institutions and a litany of government interventions. |
| 5 COVID-19 Pandemic | 2 months (Feb. 2020 to Apr. 2020) | Oil prices skyrocketed following the Iranian Revolution along with tight monetary policy to control inflation. |

Source: Helios Quantitative Research, NBER

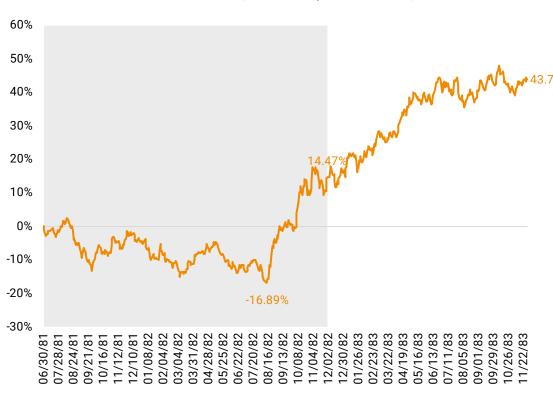
Energy Crisis



JULY 1981 TO NOVEMBER 1982

S&P 500 CUMULATIVE TOTAL RETURN

June 30, 1981 to November 30, 1983 (12 months post-recession)



Sharp initial drawdown

2 Market muddled through most of the recession

Sharp rally prior to the end of the recession that continued into the subsequent months

Source: Helios Quantitative Research, Bloomberg

Oil Price Shock



JULY 1990 TO MARCH 1991

S&P 500 CUMULATIVE TOTAL RETURN

June 30, 1990 to March 31, 1992 (12 months post-recession)





2 Sharp rally prior to the end of the recession

Rally lost steam in the months following the recession

Source: Helios Quantitative Research, Bloomberg

Dot Com Bubble

helios QUANTITATIVE

MARCH 2001 TO NOVEMBER 2001

S&P 500 CUMULATIVE TOTAL RETURN

February 28, 2001 to November 30, 2002 (12 months post-recession)



Multiple sharp drawdowns

2 Worst pullback happened well after the recession ended

Source: Helios Quantitative Research, Bloomberg

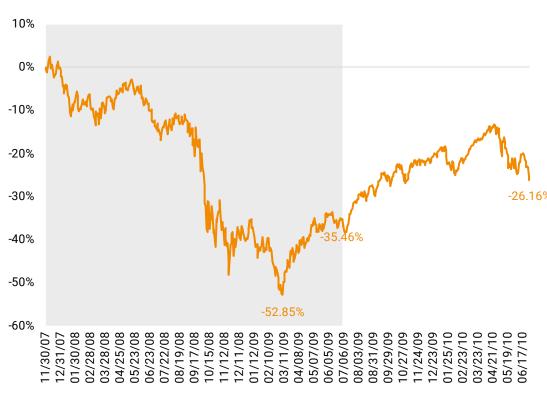
Global Financial Crisis



DECEMBER 2007 TO JUNE 2009

S&P 500 CUMULATIVE TOTAL RETURN

November 30, 2007 to June 30, 2010 (12 months post-recession)



- One of the worst recession-era drawdowns
- Major drawdown didn't occur until well into the recession

Market rallies were punctuated by sharp upward movements

Source: Helios Quantitative Research, Bloomberg

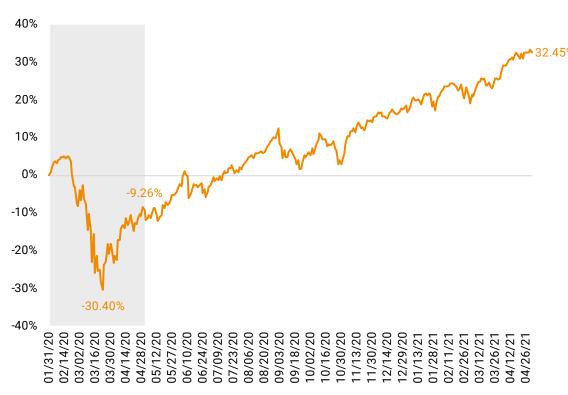
Just for Fun, let's Look at the Pandemic



FEBRUARY 2020 TO APRIL 2020

S&P 500 CUMULATIVE TOTAL RETURN

January 31, 2020 to April 30, 2021 (12 months post-recession)



One of the fastest drawdowns

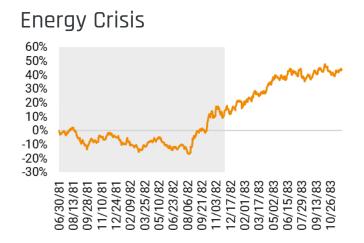
2 Significant and sustained rally from the bottom

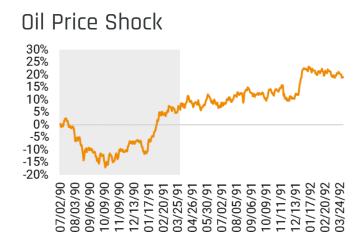
Source: Helios Quantitative Research, Bloomberg

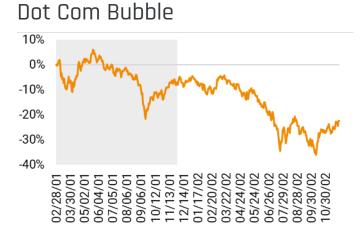
Does the Fed Fuel Recessionary Rallies?



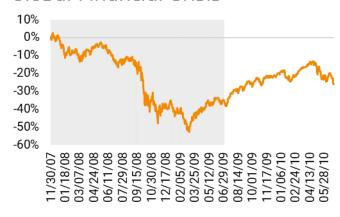
LET'S LOOK AT THE SAME CHARTS...



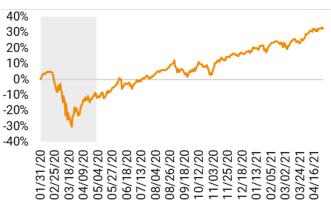










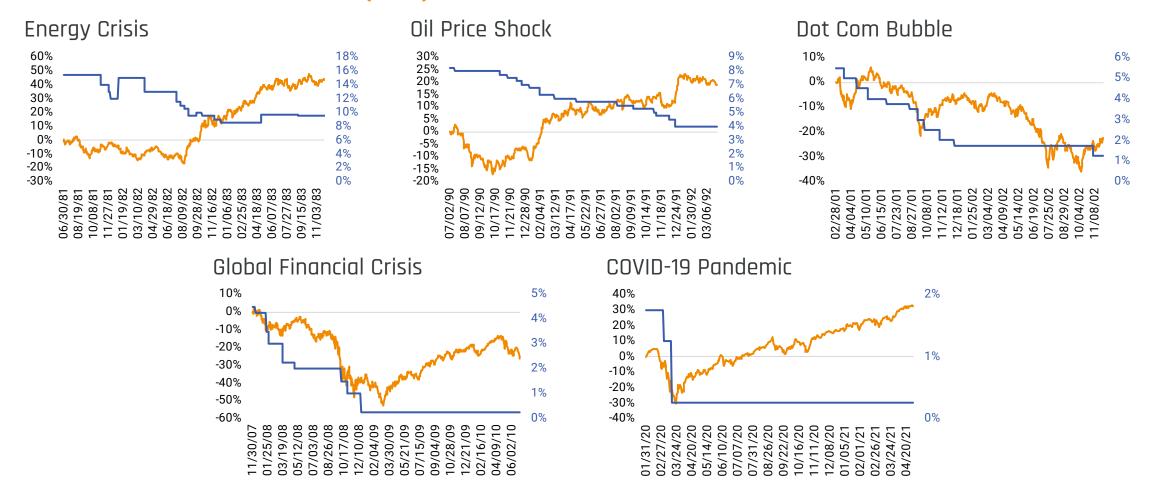


Source: Helios Quantitative Research, Bloomberg

Does the Fed Fuel Recessionary Rallies?



...BUT OVERLAY FED POLICY RATES (BLUE)



Source: Helios Quantitative Research, Bloomberg



How can we turn this data into an asset for us?

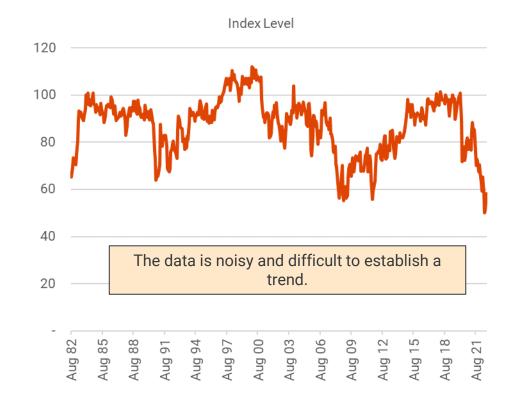
Concerning Data



UNIVERSITY OF MICHIGAN CONSUMER SENTIMENT INDEX

Indicator Description

Surveys of Consumers collects data on consumer attitudes and expectations summarized in the Consumer Sentiment, in order to determine the changes in consumers' willingness to buy and to predict their subsequent discretionary expenditures. This Index is comprised of measures of attitudes toward personal finances, general business conditions, and market conditions or prices.

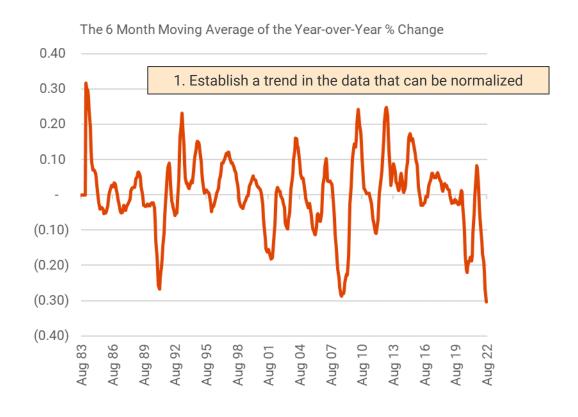


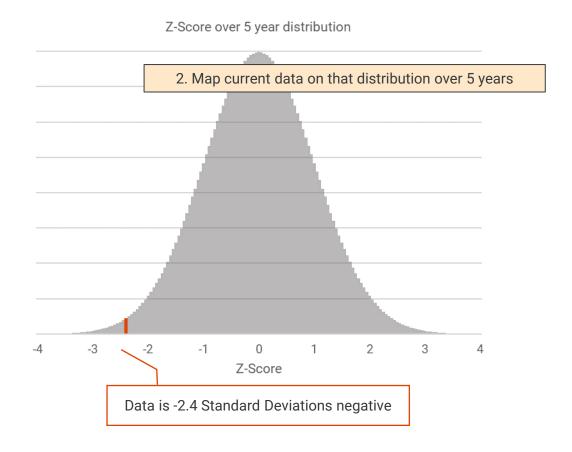
Source: Helios Quantitative Research, Bloomberg

Concerning Data





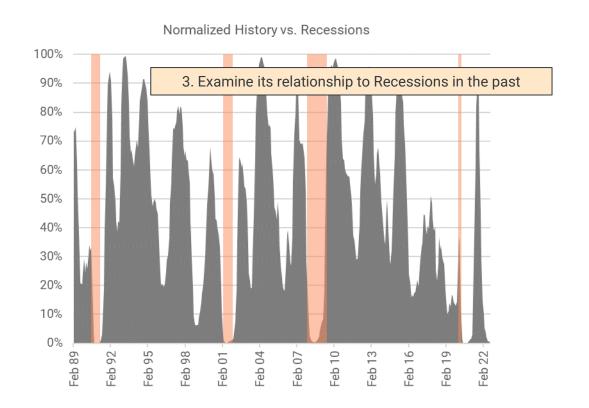




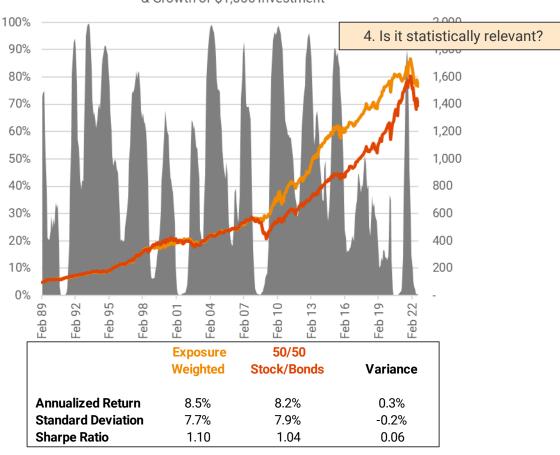
Source: Helios Quantitative Research, Bloomberg

Concerning Data

UNIVERSITY OF MICHIGAN CONSUMER SENTIMENT INDEX



Hypothetical Weighted Expsoure Relative to 50/50 Benchmark & Growth of \$1,000 Investment



^{*} Exposure Weighted weights the Normalized exposure value in the S&P 500 Total Return Index. 50/50 Stock/Bonds is a 50% S&P 500 Total Return Index and 50% Bloomberg Barclays US Aggregate Bond Index. Source: Helios Quantitative Research, Bloomberg

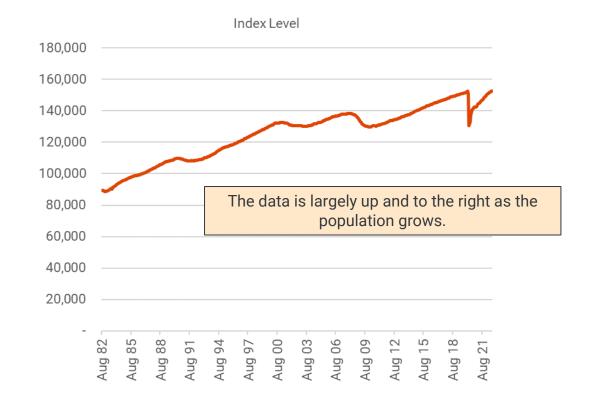
Positive Data



US EMPLOYEES ON NONFARM PAYROLLS TOTAL SEASONALLY ADJUSTED

Indicator Description

This indicator measures the number of employees on business payrolls. It is also sometimes referred to as establishment survey employment to distinguish it from the household survey measure of employment.

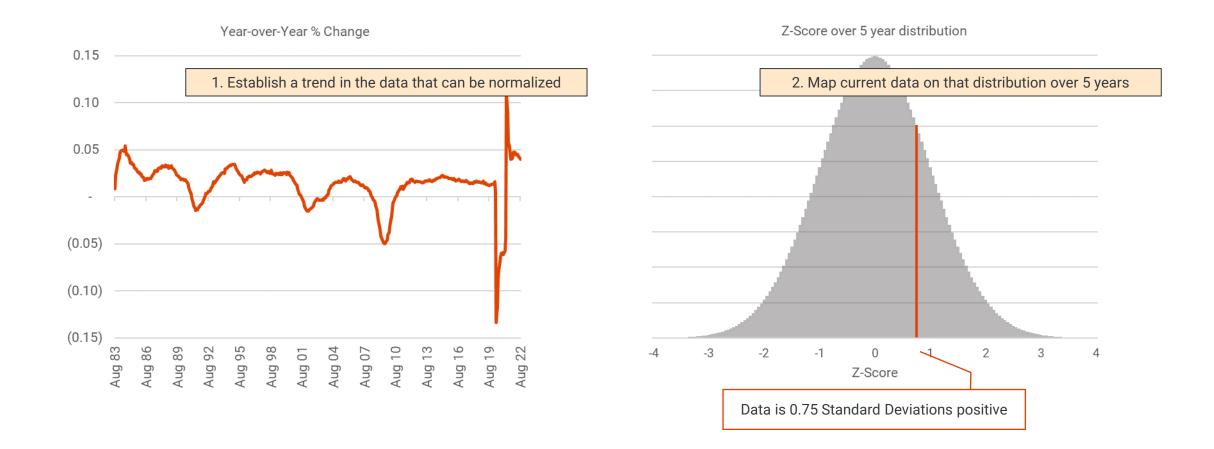


Source: Helios Quantitative Research, Bloomberg

Positive Data



US EMPLOYEES ON NONFARM PAYROLLS TOTAL SEASONALLY ADJUSTED

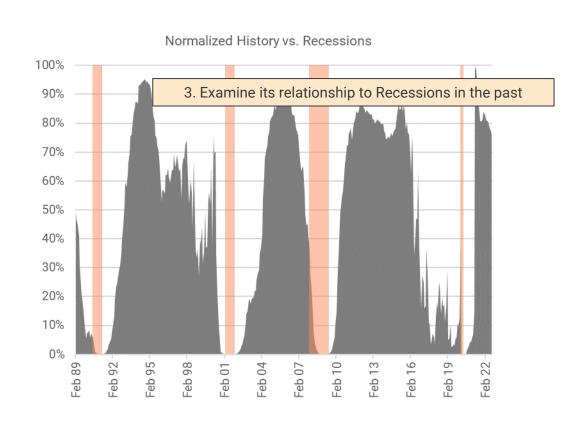


Source: Helios Quantitative Research, Bloomberg

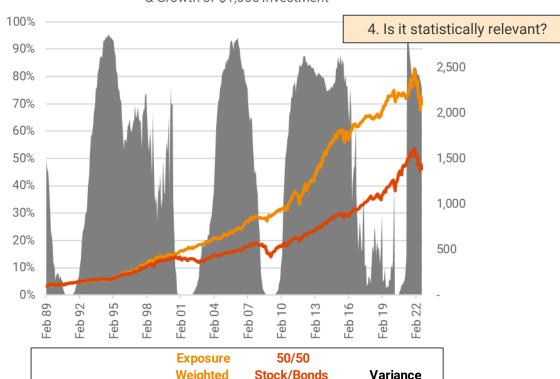
Positive Data



US EMPLOYEES ON NONFARM PAYROLLS TOTAL SEASONALLY ADJUSTED



Hypothetical Weighted Expsoure Relative to 50/50 Benchmark & Growth of \$1,000 Investment



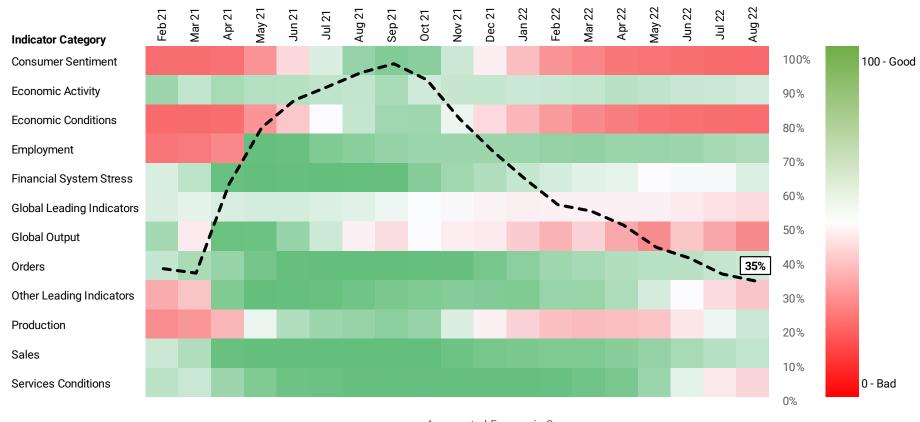
| | Exposure Weighted | 50/50 Stock/Bonds | Variance |
|--------------------|----------------------|----------------------|----------|
| Annualized Return | 9.5% | 8.2% | 1.3% |
| Standard Deviation | 7.3% | 7.9% | -0.5% |
| Sharpe Ratio | 1.30 | 1.04 | 0.26 |

^{*} Exposure Weighted weights the Normalized exposure value in the S&P 500 Total Return Index. 50/50 Stock/Bonds is a 50% S&P 500 Total Return Index and 50% Bloomberg Barclays US Aggregate Bond Index. Source: Helios Quantitative Research, Bloomberg

The Big Picture



HELIOS USES 12 AGGREGATED DATA POINTS

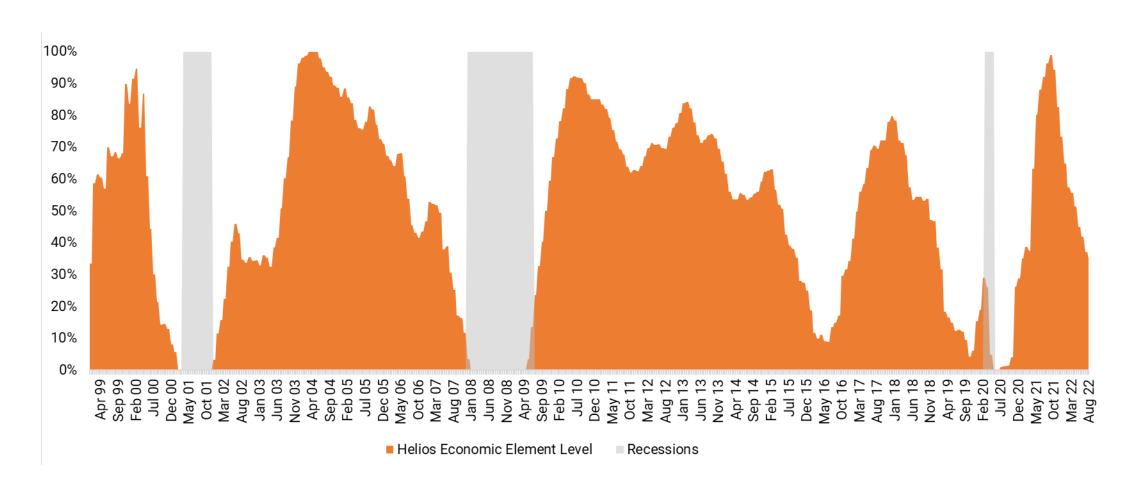


→ ◆Aggregated Economic Score

Source: Helios Quantitative Research, Bloomberg

The Big Picture HELIOS ECONOMIC ELEMENT HISTORY





Source: Helios Quantitative Research, Bloomberg

Key Takeaways



- Inflation is wearing on the economy, but a hot labor market is keeping demand up.
- Attempting to time the next recession is a near impossible task
- Utilizing economic data can help navigate uncertain times to smooth investor experiences



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