

TDCAPITAL

MARKET INSIGHTS

February 2023



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VALUATIONS: SUMMARY

RATIO	OBSERVATION		
Crestmont P/E	Overvalued		
Shiller CAPE	Overvalued		
Tobin's Q Ratio	Overvalued		
S&P Regression	Overvalued		
Buffet Indicator	Overvalued		
U.S. Financial Assets	Overvalued		
Capitalized-Profits Model	Fair Value		
Forward P/E	Fair Value		

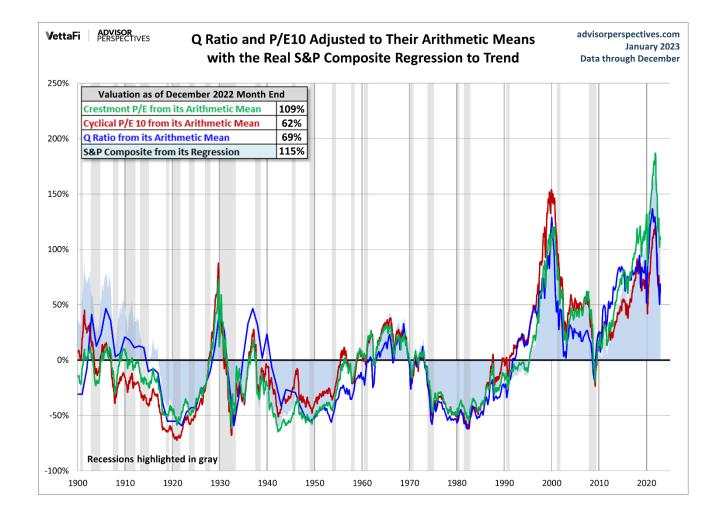
Valuation Indicator





VALUATIONS: HISTORICAL

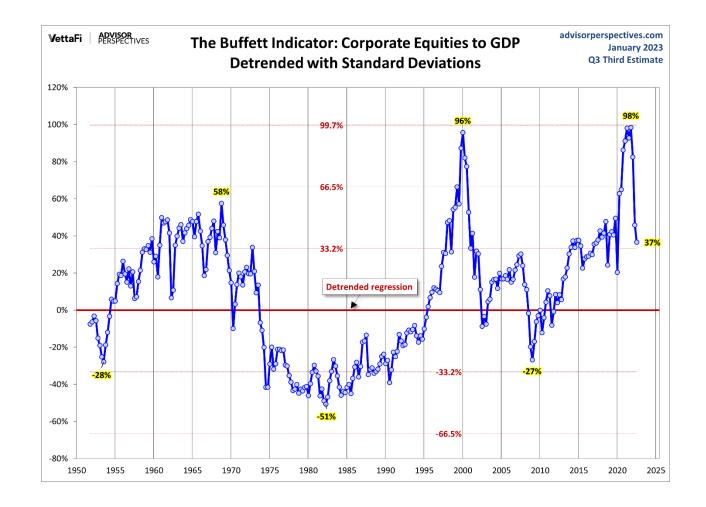
Long-term valuation indicators remain above historical averages.





VALUATIONS: HISTORICAL

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Long-term valuation indicators remain above historical averages.

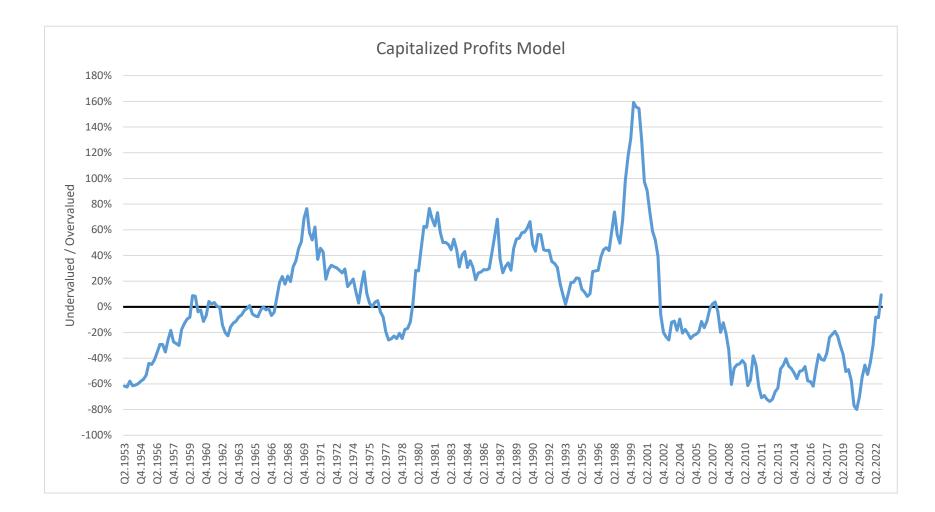
Forward 10-Year Returns (S&P500) Average Investor Equity Allocation (%) 54.00% 29.00% 27.00% 52.00% 50.00% 25.00% 23.00% 48.00% 21.00% 46.00% 44.00% 19.00% M 42.00% 17.00% 40.00% 15.00% 38.00% 13.00% 36.00% 11.00% 34.00% 9.00% 32.00% 7.00% 30.00% 5.00% 28.00% 3.00% 26.00% 1.00% 24.00% -1.00% 22.00% -3.00% 20.00% -5.00% 18.00% -7.00% 9/1/2020 2/1/1981 5/1/1987 6/1/1989 8/1/1993 1/1/19542/1/1956 3/1/1958 4/1/1960 6/1/1964 7/1/1966 8/1/1968 9/1/1970 10/1/1972 11/1/1974 12/1/1976 1/1/1979 3/1/1983 4/1/1985 7/1/1991 9/1/1995 11/1/1999 12/1/2001 1/1/2004 2/1/2006 3/1/2008 4/1/2010 5/1/2012 6/1/2014 7/1/2016 8/1/2018 12/1/1951 5/1/1962 10/1/1997

U.S. FINANCIAL ASSETS



VALUATIONS: CURRENT

Slowing corporate profits and rising interest rates suggest the market may be priced slightly higher than fair value.





VALUATIONS: FUTURE

Forward P/E ratio has moved more in line with historical averages.



S&P 500 Index: Forward P/E ratio

Source: FactSet, FRB, Refinitiv Datastream, Robert Shiller, Standard & Poor's, ThomsonReuters, J.P. MorganAsset Management. Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since December 1997 and by FactSet since January 2022. Current next 12-months consensus earnings estimates are \$231. Average P/E and standard deviations are calculated using 25 years of history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure. "Pr/CF is a 20-year average due to cash flow availability. *Guide to the Markets – U.S.* Data are as of December 31, 2022.

J.P.Morgan

ASSET MANAGEMENT



TECHNICALS: SUMMARY

RATIO	OBSERVATION		
Momentum	Positive		
Implied Volatility	Low		
Small Cap / Large Cap	Small Cap		
Emerging Markets / S&P 500	Neutral		
High Yield / Treasury	High Yield		
Copper / Gold	Copper		
S&P 500 / VIX	S&P 500		
Cyclical / Defensive	Cyclical		
Short High Yield	Low		
Real Earnings Yield / Treasury	Earnings		

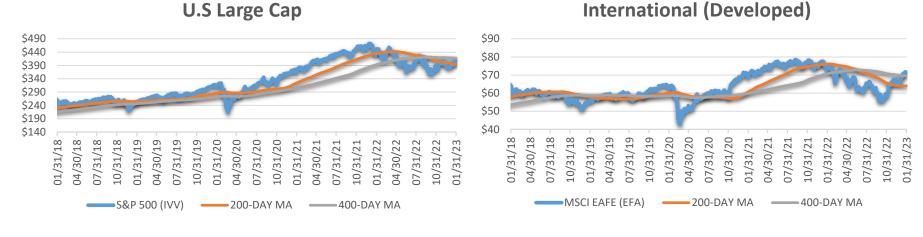
Risk Indicator



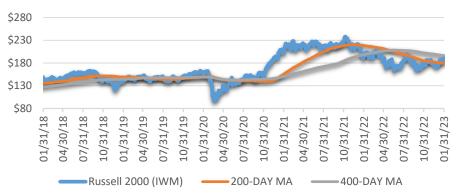


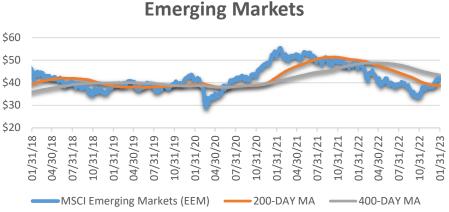
TECHNICALS: MOMENTUM

The 200-day simple moving average (SMA) is considered a key indicator by traders and market analysts for determining the overall long-term market trend. The price level in a market that coincides with the 200-day SMA is recognized as a major support level when price is above the 200-day SMA or resistance level when price is below the 200-day SMA level.





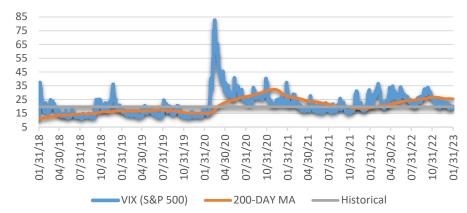






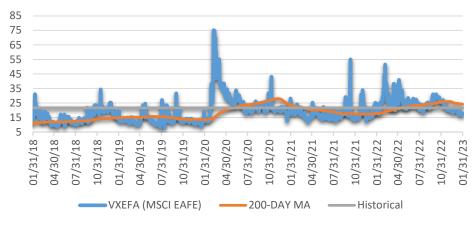
TECHNICALS: IMPLIED VOLATILITY

Implied volatility is a metric that captures the market's view of the likelihood of changes in a given security's price. Investors can use it to project future moves and supply and demand, and often employ it to price options contracts..

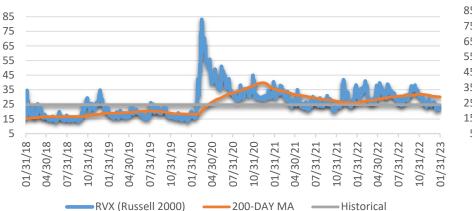


U.S Large Cap

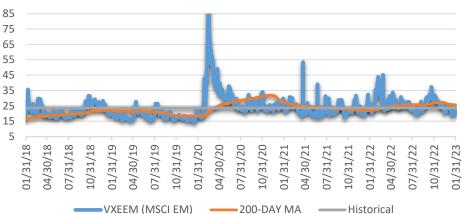
International (Developed)



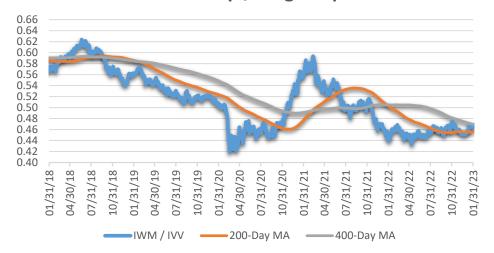
U.S. Small Cap









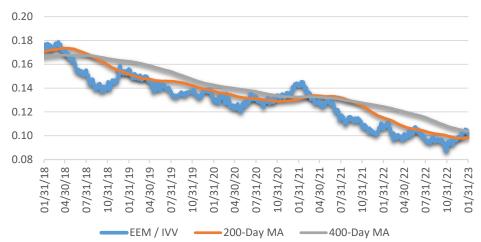


Small Cap / Large Cap

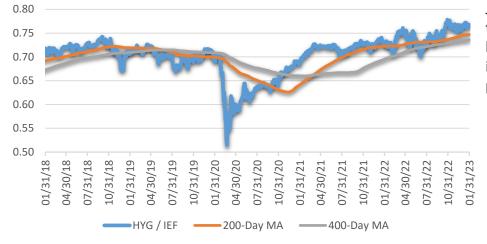
A healthy stock market usually sees strong participation by smaller stocks. A rising ratio also signifies that the market has a more aggressive attitude toward taking risks. A falling ratio could mean investors want to avoid risk and seek shelter in safer large companies.

When money flows overseas to developing markets, one can surmise that investors feel confident to take higher risks. A rising ratio means investors think there is greater potential in riskier markets and are willing to chase higher returns and the global mood gets more positive.

Emerging Markets / S&P 500





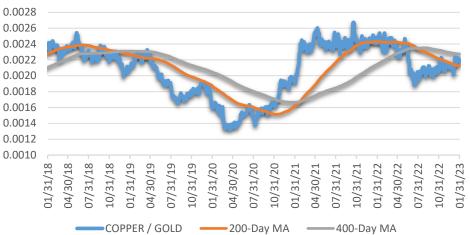


High Yield / Treasury

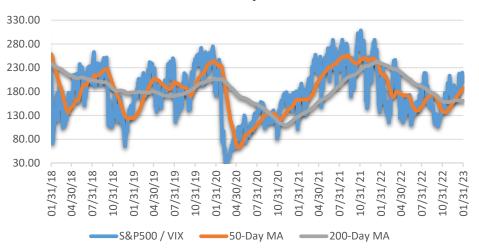
Junk bonds are the ultimate measure of how investors feel about taking risk. Therefore, when the ratio of junk bonds-to-Treasury bonds increases, investors are being aggressive. When the ratio falls, it suggests investors are less interested in taking risks and would prefer protection.

A rising copper-to-gold ratio suggests the economy demands more copper and is less concerned with hedging. A confident economy means there is business-and profits- to spread around to more companies. That, in turn, is good for stocks. The directional changes of this ratio also seem to be a leading indicator to the change in the 10-year Treasury rate.









S&P500 / VIX

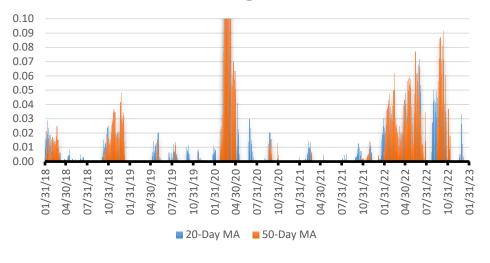
The VIX measures the market's expectation of future volatility. Investors can think of the S&P500/VIX ratio as a way to track confidence in earnings relative to confidence the market will be volatile.

Cyclical vs Defensive

6,500.00 6,000.00 5,500.00 5,000.00 4.500.00 4,000.00 3,500.00 3,000.00 2,500.00 2,000.00 1,500.00 1,000.00 01/31/20 07/31/20 01/31/21 04/30/21 01/31/23 01/31/18 04/30/18 07/31/18 10/31/18 01/31/19 04/30/19 07/31/19 10/31/19 04/30/20 10/31/20 10/31/21 01/31/22 10/31/22 07/31/21 04/30/22 07/31/22 MSCI USA Cyclical Sectors-USA Defensive Sectors 150/50 Return Spread Index 200-Day MA

A cyclical stock is a stock highly correlated to economic activity. When the economy is in a recession the profits of a cyclical company tend to drop and so does its share price. Conversely, when the economy is in good shape (expansion), the share price tends to goes up with profit growth.



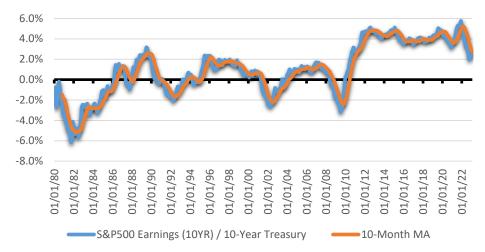


Short High Yield

High-yield bonds are inherently riskier corporates. As such, tracking the underlying high yield (inverse) index can be a leading indicator for a turn in stocks. Bonds are more sensitive to changing economic conditions and therefore can be of great value in spotting trends and sentiment shifts. As the index shoots higher, the S&P 500 performed negatively and as the indicator drops toward 0.0 it could be an indication of traders willing to take on risk again.

Inverting Shiller's CAPE and comparing the yield relative to the 10year Treasury rate is a highly correlated long-term risk indicator that compares the long-term potential of stocks to that of bonds. If the ratio is positive, the reward is worth the risk.

Real Earnings Yield / Treasury



ECONOMY: SUMMARY

FINANCIAL	OBSERVATION		
Yield Curve	Inverted		
Credit Spreads	Average		
Money Supply	Negative		
Financial Conditions	Below Average		
Financial Stress	Below Average		

CONSUMER	OBSERVATION		
Initial Jobless Claims	Low		
Labor Market Conditions	Mixed		
Unemployment Gap	Below Average		
Consumer Sentiment	Low		
Retail Sales	Negative		
Housing	Decreasing		

INFLATION	OBSERVATION		
Wage Growth	Elevated		
Commodities	Neutral		
Exchange Rates	Dollar Falling		

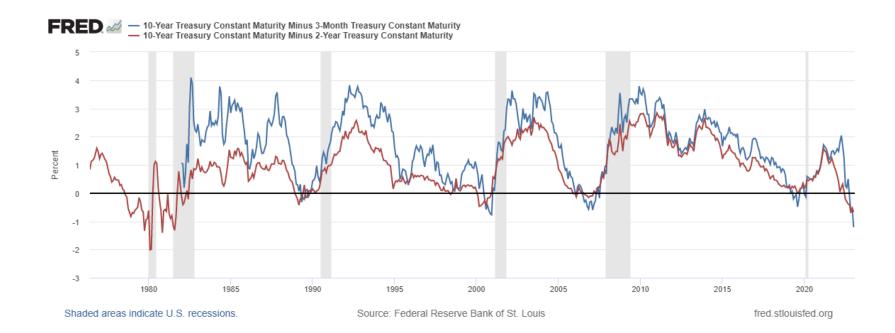
BUSINESS	OBSERVATION		
ISM New Orders	Contracting		
Profits	Increasing Slower		
Truck Shipments	Decreasing		
Industrial Production	Decreasing		
Small Business Optimism	Decreasing		
GDP Output Gap	Expanding		
Conference Board LEI	Negative		

Economic Indicator



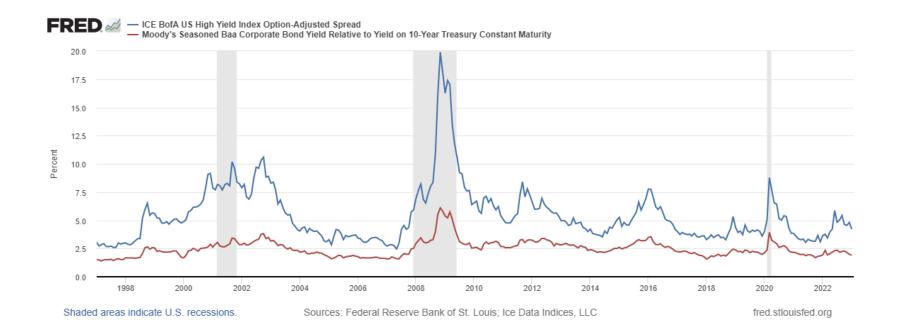


Research beginning in the late 1980s documents the empirical regularity that the slope of the yield curve is a reliable predictor of future real economic activity. The 10 Year – 3 Month Yield Curve is significantly inverted.



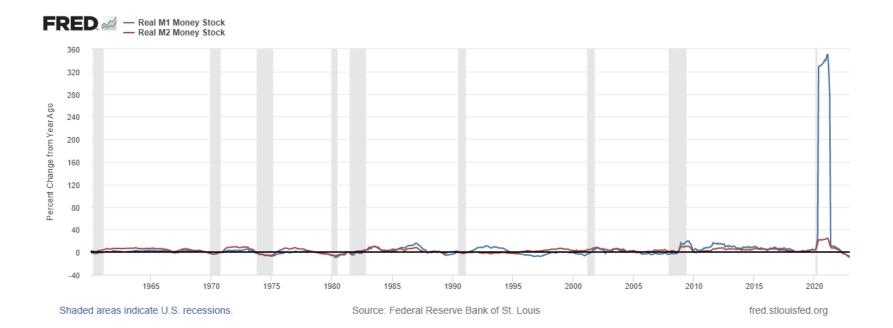


Analysts say credit spreads for corporate bonds issued by firms with a credit rating below investment-grade can serve as reliable economic signals. While a rapidly widening spread is viewed as a potential indicator of recession danger, a narrowing spread indicates investors are upbeat about the outlook. Before each of the past three recessions, the high-yield credit spread started to widen. Spreads above 5%-6% can be concerning.



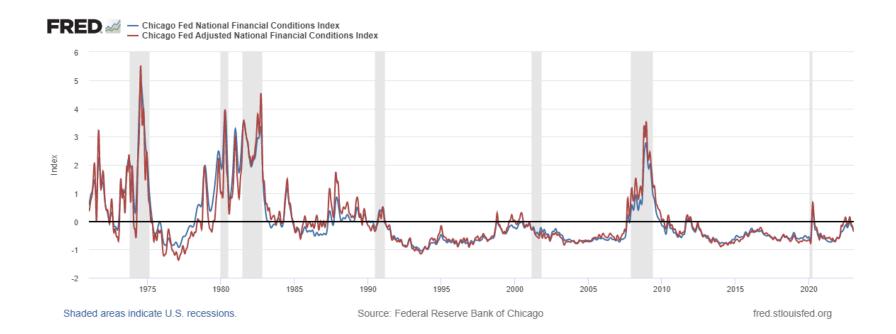


As overall liquidity declines, the financial system and economy are less able to weather stresses or shocks, elevating the risk of a recession and/or market crash. Importantly, many financial stress indicators such as money supply tend to roll over ahead of market peaks and recessions, making them particularly useful to investors. the most liquid definition of money supply — a subset commonly referred to as M1 — has proven particularly useful in anticipating economic downturns.



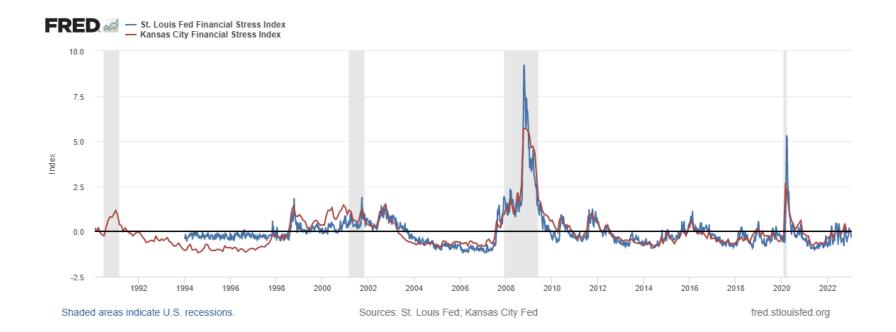


The Chicago Fed's National Financial Conditions Index (NFCI) provides a comprehensive weekly update on U.S. financial conditions in money markets, debt and equity markets and the traditional and "shadow" banking systems. Positive values of the NFCI indicate financial conditions that are tighter than average, while negative values indicate financial conditions that are looser than average.



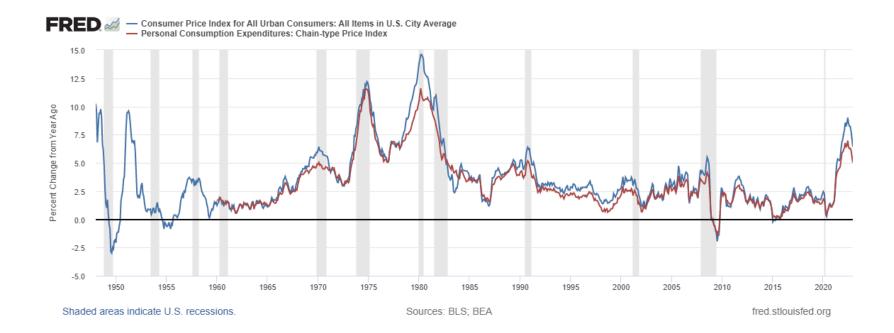


The average value of the indices is designed to be zero. Thus, zero is viewed as representing normal financial market conditions. Values below zero suggest below-average financial market stress, while values above zero suggest above-average financial market stress.



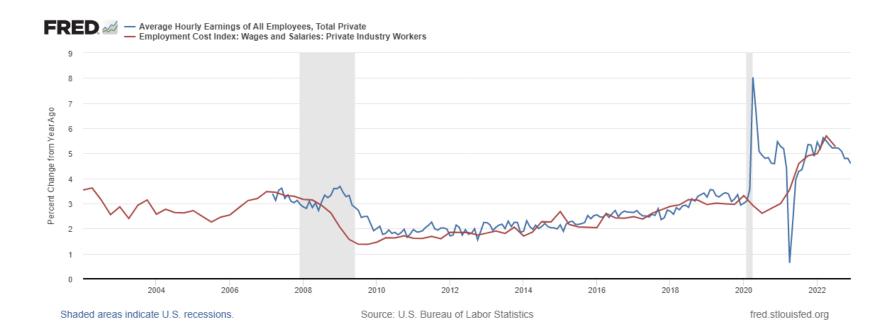


The CPI and PCE are both important indicators of U.S. inflation. While CPI is more important from the perspective of an individual, PCE is more important from the perspective of monetary policy. The broader scope of PCE makes it better suited to indicate long-term inflationary trends according to the Fed.

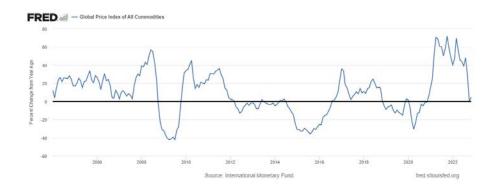




In order for a true inflationary process to become entrenched in the economy, wage growth needs to participate. The ECI is vital as an indication of whether employment cost changes are rising or falling and so it measures inflation of wages, and employer-paid benefits. Concern of inflation is generally triggered at a 3.5% - 4.25% pace.

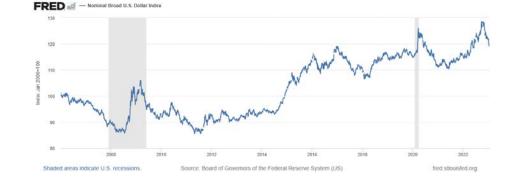






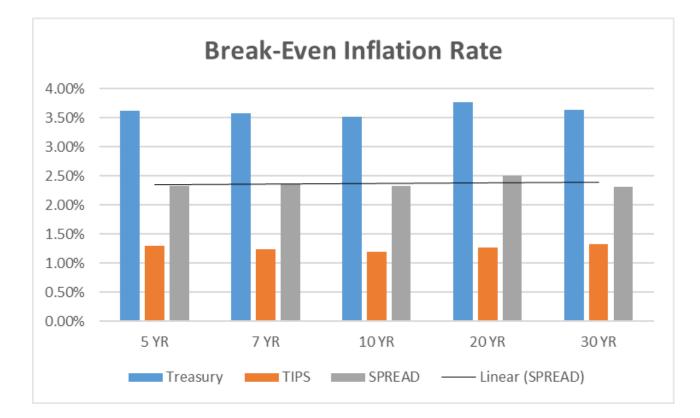
Commodities are typically seen as leading indicators for global growth as they are used for everything from homebuilding to powering cities. Rising commodity prices tend to correlate with rising CPI. Current values are at 4.8%, significantly lower than increases experienced 1/2021-9/2022.

A weaker dollar buys less in foreign goods and services. This increases the price of imports, contributing to inflation. As the dollar weakens, investors in the benchmark 10-year Treasury and other bonds sell their dollar-denominated holdings. Oil and other foreign contracts are denominated in dollars. A weaker dollar will drive up their prices because the exporting countries need to maintain their profit margins.





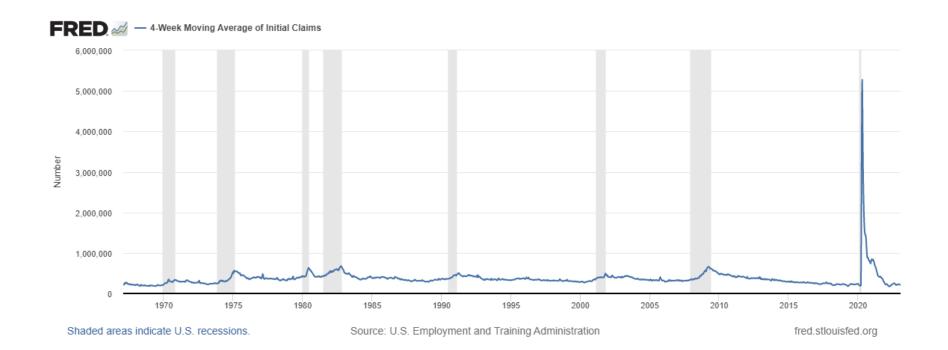
The breakeven inflation rate represents a measure of expected inflation derived from regular U.S. Treasuries and TIPS. The 5 year breakeven (in particular) shows little sign of long-term pressure currently - anything below 3% is good.





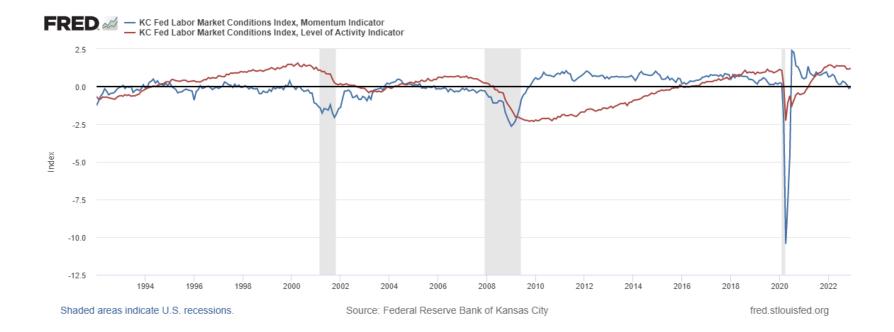


Weekly unemployment claims are at 196,000; remaining under the 300,000 threshold.





The Kansas City Fed Labor Market Conditions Indicators (LMCI) are two monthly measures of labor market conditions based on 24 labor market variables. One indicator measures the level of activity in labor markets and the other indicator measures momentum in labor markets. A positive value indicates that labor market conditions are above their long-run average, while a negative value signifies that labor market conditions are above their long-run average, while a negative value signifies that labor market conditions are above their long-run average.





The estimated natural rate of unemployment is higher than the current unemployment rate, meaning the U.S. economy is likely growing faster than its maximum sustainable rate.



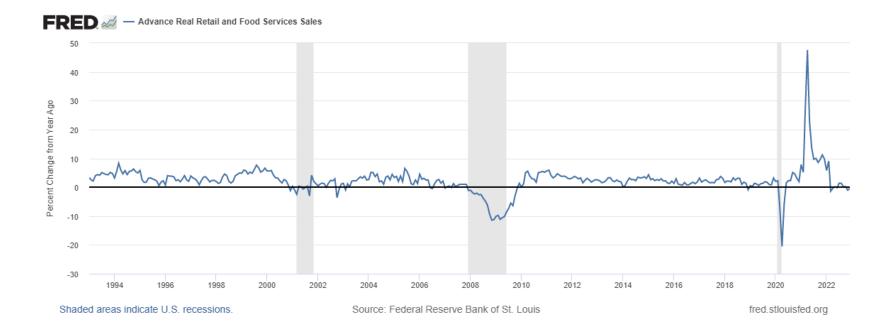


The Michigan Consumer Sentiment Index is another key indicator designed to illustrate the average U.S. consumer's confidence level. This indicator is important to retailers, economists and investors, and its rise and fall has historically helped predict economic expansions and contractions. Consumer sentiment is below 2020 lows, with the December 2022 reading of 59.7.





The Retail Sales Report, released monthly by the U.S. Census Bureau, is very closely watched by both economists and investors. The Census Bureau has been releasing the report since 1951 and they adjust the sample of retail outlets used every five years to stay current. This indicator tracks the dollar value of merchandise sold within the retail trade by taking a sampling of companies engaged in the business of selling end products to consumers. Both fixed point-of-sale businesses and non-store retailers (such as online sellers) are used in the data sample. Companies of all sizes are used in the survey, from Wal-Mart to independent, small-town businesses.



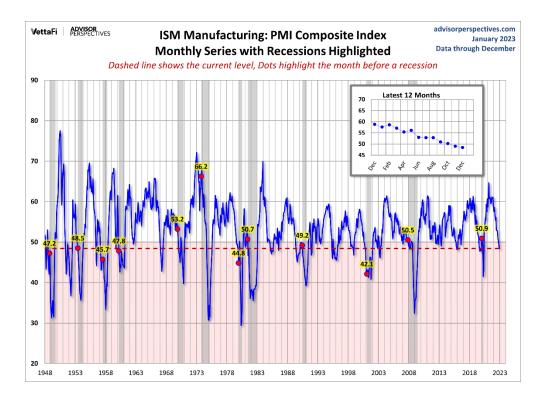


Along with housing starts, building permits are also a leading indicator of the health of the US housing market. Building permit activity provides an insight into housing and overall economic activity in the upcoming months. If more building permits are issued, this indicates that more investment will likely be allocated to the housing market. According to the Census Bureau, it may take three months to establish an underlying trend for building permit authorizations because month-to-month changes in seasonally adjusted statistics often show movements that may be irregular. So investors need to closely look at the developing pattern over a few months rather than focusing on monthly data in isolation.





- A headline number above 50 is consistent with both manufacturing and economic expansion. An index below 43 for an extended period is consistent with an economy in recession.
- Changes in new orders are good leading indicators for future production. Also, declines in the customer inventories index typically foreshadow future increases in new orders. Readings in the low 40s are concerning.



MANUFACTURING AT A GLANCE December 2022

Index	Series Index Dec	Series Index Nov	Percentage Point Change	Direction	Rate of Change	Trend* (Months)
Manufacturing PMI [®]	48.4	49.0	-0.6	Contracting	Faster	2
New Orders	45.2	47.2	-2.0	Contracting	Faster	4
Production	48.5	51.5	-3.0	Contracting	From Growing	1
Employment	51.4	48.4	+3.0	Growing	From Contracting	1
Supplier Deliveries	45.1	47.2	-2.1	Faster	Faster	3
Inventories	51.8	50.9	+0.9	Growing	Faster	17
Customers' Inventories	48.2	48.7	-0.5	Too Low	Faster	75
Prices	39.4	43.0	-3.6	Decreasing	Faster	3
Backlog of Orders	41.4	40.0	+1.4	Contracting	Slower	3
New Export Orders	46.2	48.4	-2.2	Contracting	Faster	5
Imports	45.1	46.6	-1.5	Contracting	Faster	2
OVERALL ECONOMY			Contracting	From Growing	1	
Manufacturing Sector			Contracting	Faster	2	

Manufacturing ISM[®] Report On Business[®] data is seasonally adjusted for the New Orders, Production, Employment and Inventories indexes. *Number of months moving in current direction.





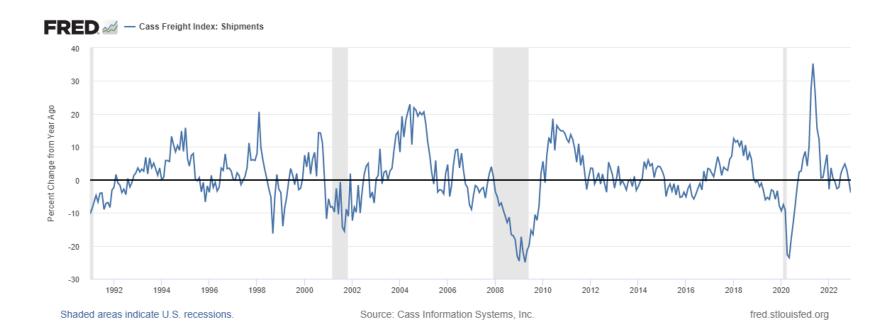
Profits are a good leading indicator of the stock market 4 to 8 quarters into the future. As profits decline, businesses often cut costs and defer investments contributing to a slower economy. Stock valuations often rise or stock markets fall.

A feature of corporate profits is that, because they are a long leading indicator and stock prices are a short leading indicator, turns in corporate profits generally precede turns in the stock market.



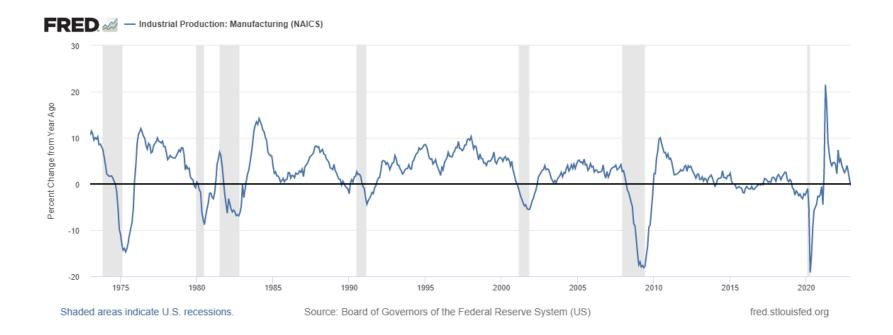


Cass Freight Index is a measurement of the monthly aggregate deliveries of U.S. freight. This index is a meaningful indicator of U.S. shipping activity. It encompasses over 1,200 divisions of more than 400 unique companies and manufacturers. Drops below 5% are concerning.



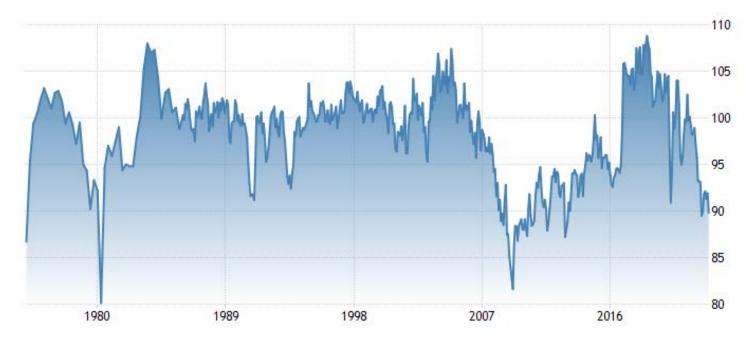


Industrial production can reveal a lot about the current state and future direction of the economy. Strong or weak production generally signifies more/less economic growth and better/worse corporate profits.





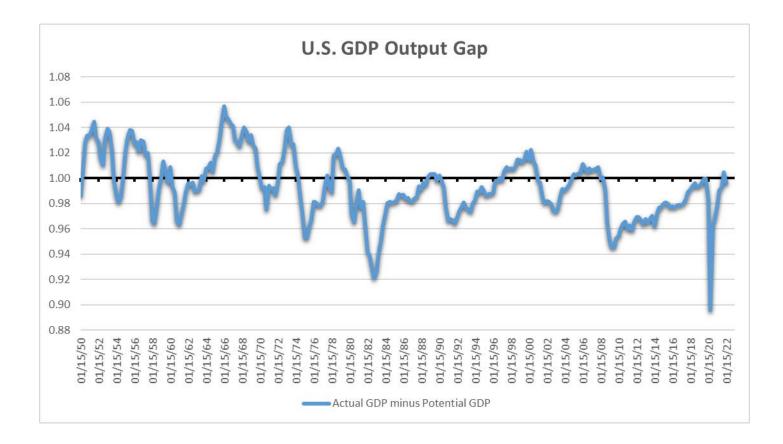
The National Federation of Independent Business (NFIB) Small Business Optimism Index is a composite of ten seasonally adjusted components. It provides a indication of the health of small businesses in the U.S., which account of roughly 50% of the nation's private workforce. Values under 100 are typically viewed as negative.



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Actual GDP is less than potential GDP, which suggests the economy is still expanding.





ECONOMY: LEI

The Composite Index of Leading Indicators, otherwise known as the Leading Economic Index (LEI), is an index published monthly by The Conference Board. It is used to predict the direction of global economic movements in future months. The index is composed of 10 economic components whose changes tend to precede changes in the overall economy. The Conference Board, founded in 1916, is an independent research association that provides its member organizations with economic and financial information.

