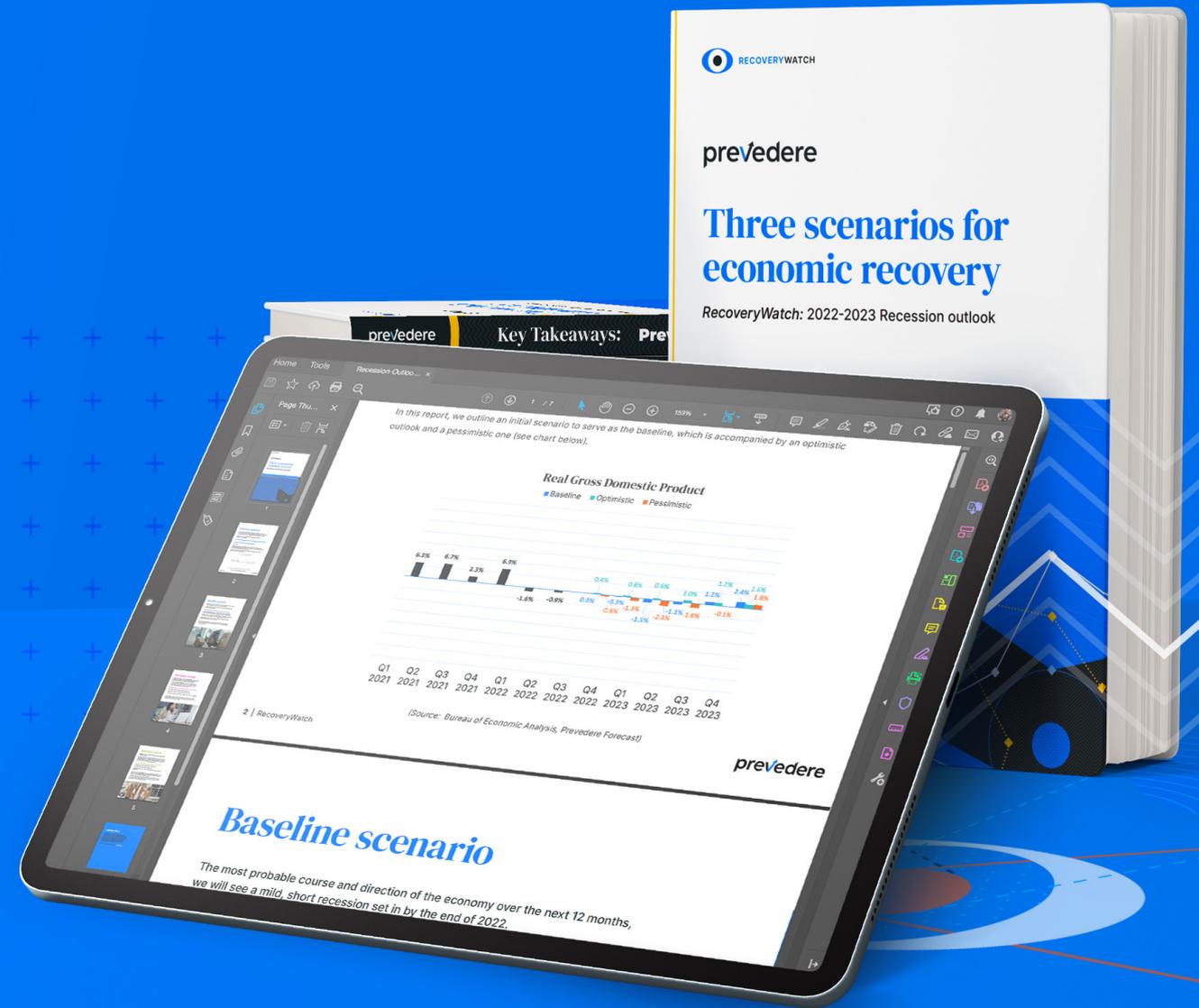




Leading Economic Indicators Dashboard

A monthly dashboard that tracks critical leading signals that provide early clues to coming changes in the economic business cycle.



Predictive Indicators for Economic Recovery

Last Update: 11-23-2022

■ Leading Indicators

The Prevedere Economist team handpicked this set of indicators considered critical leading signals to track economic business cycles.

This dashboard provides businesses with key “leading indicators” that typically turn early in the business cycle, and provide clues to coming changes in the economic environment.

Indicators are grouped into categories with each page of the dashboard representing a category

■ Indicator Selection Methodology

Three criteria were used to identify these most reliable leading indicators of economic business cycles:

Historical leading reliability: Each of these chosen factors have consistently signaled economic downturns and recoveries throughout past business cycles ahead of the actual turning points in overall economic output.

Lead Time: While there are many variables that are highly correlated to economic business cycles that can be tracked, the ones chosen on this dashboard have at least a three-month lead time to the historical peaks and valleys in GDP growth, providing businesses with at least a quarter lead time to implement change within their organization ahead of the next economic recovery or downturn.

Diversity: When selecting indicators for a well-rounded dashboard, it’s important to look at measures of the different sectors of the economy from sentiment and consumer spending to manufacturing, construction, and financial trends. The key to understanding overall cycles in GDP is to monitor when the majority of leading indicators for these different sectors are moving in the same direction.

In this report:

Snapshot of the U.S. Economy	3
Executive Summary	4
All Categories	5
Understand how these indicators are placing pressure on the economy	
Macroeconomic Leading Indicators	6
Leading indicators of overall GDP growth	
Business & Consumer Sentiment	7
Measures of sentiment among consumers and businesses	
Consumer Spending	8
Measures of consumer's intent and ability to spend	
Production/Construction	9
Measures of industrial, manufacturing and construction output	
Financial/Prices	10
Leading indicators from treasuries, bonds, and other financial conditions	
Anatomy of the Dashboard	11

Plan and forecast more accurately with Prevedere.

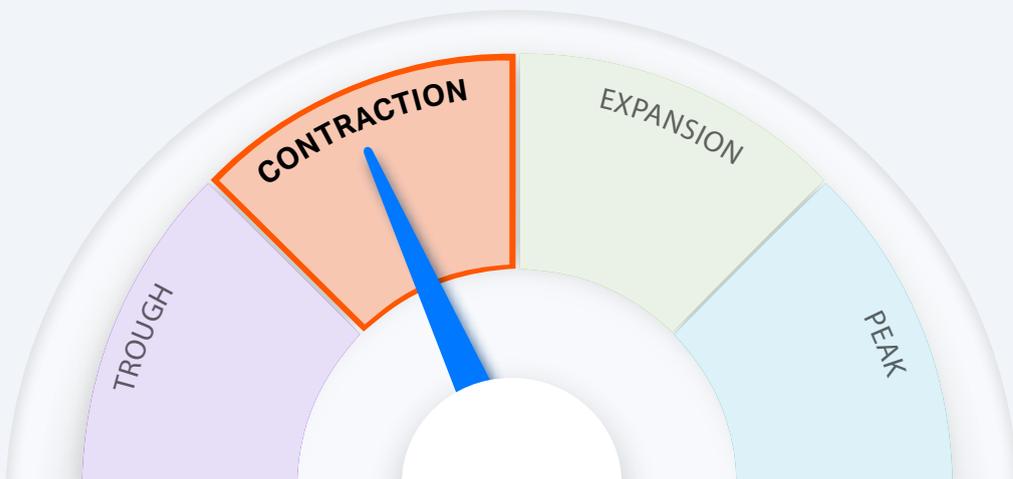
We help companies build fact-based forecasts with internal and external factors.

Our expert economists and the Prevedere Advanced Predictive Planning platform are the best solution to help executives plan during a global recession.



Snapshot of the U.S. Economy

6-Month Outlook in the U.S. Economy



“More than 80% of our leading economic indicators weakened further this past month. This suggests that a recession is a highly probable, beginning around Q2 2023.”



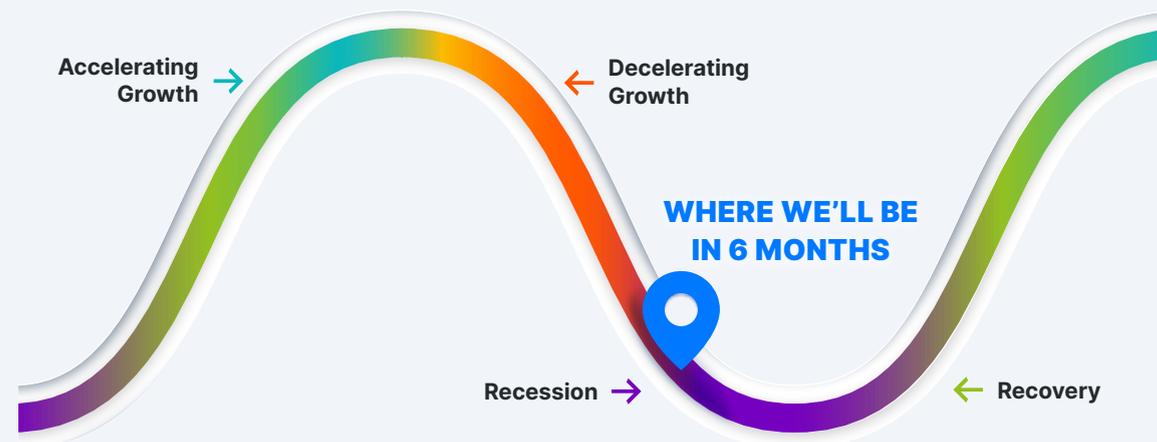
Danielle Marceau

Principal Economist & Director of Analytics

Where we currently stand in the U.S. Economy



6-Month Outlook in the U.S. Economy



■ Key Takeaway

Multiple key leading economic indicators turned negative in November 2022, projecting further weakness for the economy in 2023.

■ What is the current status of the leading economic indicators?

The results of this month's leading economic indicators have revealed that the tentative rising trends in many key indicators were false positives. Although there are signals for optimism in early Q4 2022, during this economic cycle, that is not necessarily a good thing with the number one need for the US economy right now being a significant slowdown in aggregate demand and as a result. Prevedere is projecting a greater potential for a significant recession that starts in Q2 2023.

During the last month, 14 out of 17 (82%) of the most reliable leading economic indicators were negative. This activity is particularly worrisome as it negated any positive momentum gained in the previous months. The three indicators that saw this negative trend reversal were: (1) Consumer Sentiment, (2) ISM Non-Manufacturing Composite Index, and (3) the Architectural Billings Index.

In the short term, the current strength of the US consumer suggests that the brunt of the economic downturn may be pushed out into later 2023, but the indicators are in agreement that the worst is yet to come for overall recessionary conditions. As a result, we anticipate that mild economic growth may continue through the first quarter of 2023, but will be followed by a deeper and longer recession that will last through the latter half of next year.

■ What's next?

It will be vital to closely monitor these indicators for true trend reversals in the positive direction. Prevedere typically looks for 2-3 consecutive months of positive trends before confirming a trend reversal in the indicators. We will need to see positive movement for more than half of the key economic indicators before it confirming a likely timeline for the economy to bottom and begin a growth trajectory. Based on these most recent results, that turning point will be more than six months away and business executives should anticipate continued softness for the U.S. economy into and and most likely throughout 2023.

■ Navigate uncertainty with Prevedere

Data outside your four walls is more important than ever. The Prevedere Advanced Predictive Planning platform brings external data to planning and forecasting in an automated, systematic, and repeatable solution. Our platform and our industry and economic experts are best solution to help executives plan during a global recession.

It's like having an army of economists at your fingertips.

To learn more, visit <https://www.Prevedere.com>

All Categories: Look at these indicators to understand how they are placing upward or downward pressure on the economy.

Last Refresh: 11-21-2022

Category	Indicator	Relationship	Next Update	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022
Macroeconomic Leading Indicators	Prevedere GDP Leading Indicator	Procyclic	12-18-2022	↓	↓	↓	↓	
	Weekly Economic Index	Procyclic	11-25-2022	↑	↓	↓	↓	↓
	OECD U.S. Composite Leading Indicator	Procyclic	12-13-2022	↓	↓	↓	↓	
Business & Consumer Sentiment	Consumer Sentiment	Procyclic	12-12-2022	↓	↑	↑	↑	↓
	Economic Policy Uncertainty Index	Countercyclic	12-03-2022	↑	↓	↓	↓	
	OECD Business Confidence Indicator	Procyclic	12-13-2022	↓	↓	↓	↓	
	Small Business Optimism Index	Procyclic	12-10-2022	↓	↓	↑	↑	
Consumer Spending	ISM Non-Manufacturing Composite Index	Procyclic	12-17-2022	↓	↑	↓	↓	
	Plans to Decrease Overall Spending - Adults 18+	Countercyclic	12-15-2022	↑	↑	↑	↑	↑
	U.S. Consumer Spending Expectations	Procyclic	12-15-2022	↓	↓	↑	↑	↑
Production / Construction	ISM Manufacturing PMI Composite	Procyclic	12-02-2022	↓	↓	↓	↓	
	Architectural Billings Index - National	Procyclic	12-17-2022	↓	↑	↑	↓	
	New Privately-Owned Housing Permits Authorized	Procyclic	12-19-2022	↓	↓	↓	↓	
Financial / Prices	10-Year Minus 2-Year Treasury Constant Maturity	Procyclic	11-22-2022	↓	↓	↓	↓	↓
	Junk Bond Spread	Countercyclic	12-03-2022	↓	↑	↓	↓	
	Real M2 Money Supply	Procyclic	11-26-2022	↓	↓	↓		
	Commodity Price Index Data: Raw Material	Procyclic	12-19-2022	↓	↓	↓	↓	

NOTES

Values represent changes in cyclical trend for each indicator. When trend goes from negative to positive for consecutive months, this is likely an indication of a cyclical turning point and early onset of recovery for this indicator.

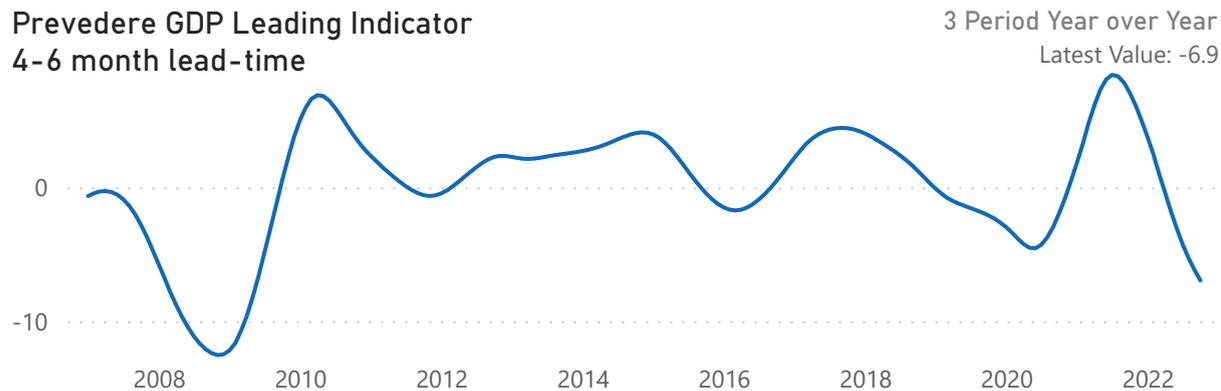
In November, 2 out of 5 indicators are signaling improvement in business cycle momentum from the prior month.

In October, 4 out of 16 indicators are signaling improvement in business cycle momentum from the prior month.

Upward pressure on economy
 Downward pressure on economy

Macroeconomic Leading Indicators: Leading indicators of overall GDP growth

Prevedere GDP Leading Indicator 4-6 month lead-time



A composite leading indicator created by Prevedere to gauge future GDP growth and cyclical turning points 3-6 months in advance.

Source: Prevedere

Data as of 10-2022

Weekly Economic Index 3-5 month lead-time

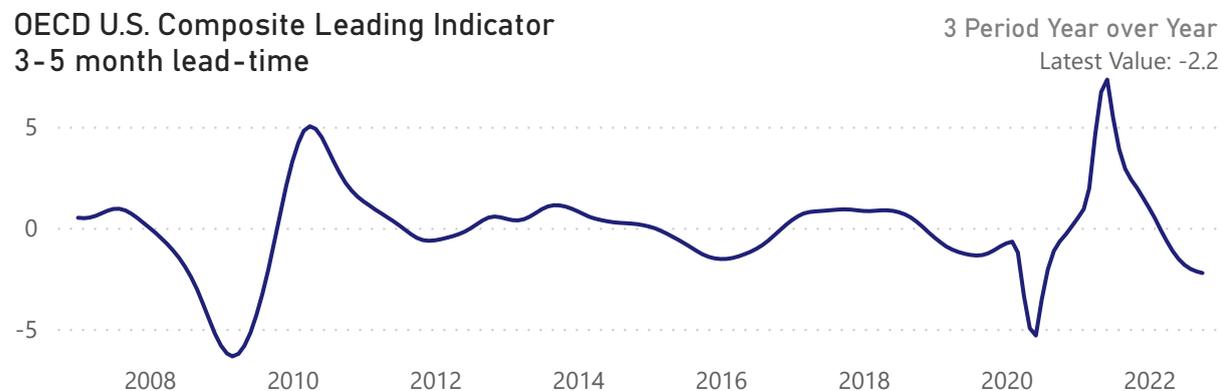


High frequency measure of overall economic activity comprised of 7 non-financial measures of real economic output.

Source: Stock, James H.

Data as of 11-12-2022

OECD U.S. Composite Leading Indicator 3-5 month lead-time



This composite leading indicator is designed to provide early signals of turning points in business cycles showing fluctuation of the economic activity around its long term potential level.

Source: Organization for Economic Co-operation and Development

Data as of 10-2022

MONTHLY TRENDS

How have these indicators changed up or down in the past 5 months.

Indicator	Relationship	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022
Prevedere GDP Leading Indicator	Procylic	↓	↓	↓	↓	
Weekly Economic Index	Procylic	↑	↓	↓	↓	↓
OECD U.S. Composite Leading Indicator	Procylic	↓	↓	↓	↓	

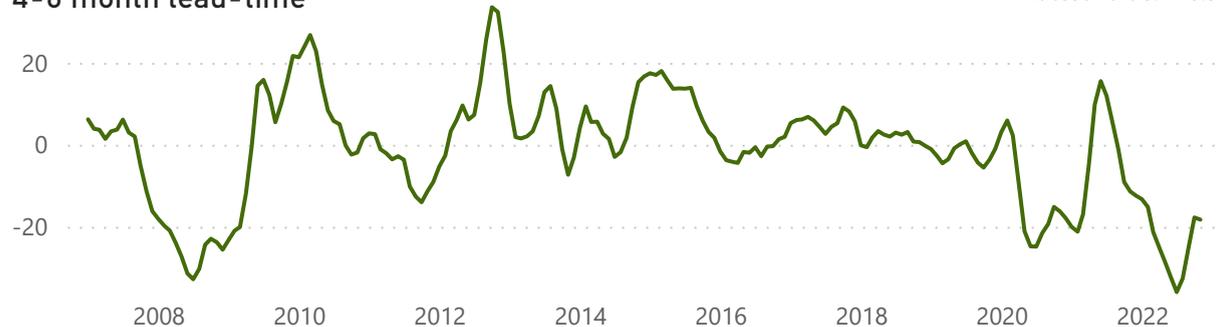
↑ Upward pressure on economy

↓ Downward pressure on economy

Business & Consumer Sentiment: Measures of sentiment among consumers and businesses.

Consumer Sentiment 4-6 month lead-time

3 Period Year over Year
Latest Value: -18.3



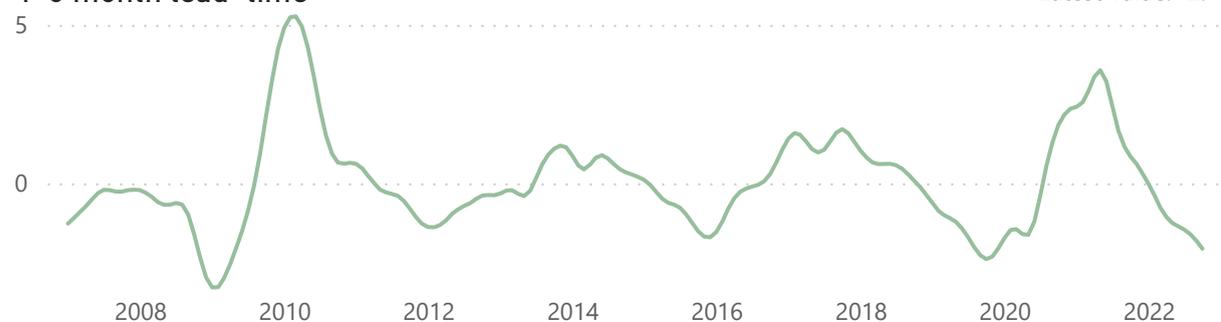
Measures confidence amongst consumers and is a leading indicator of consumer spending.

Source: University of Michigan

Data as of 11-2022

OECD Business Confidence Indicator 4-6 month lead-time

3 Period Year over Year
Latest Value: -2.1



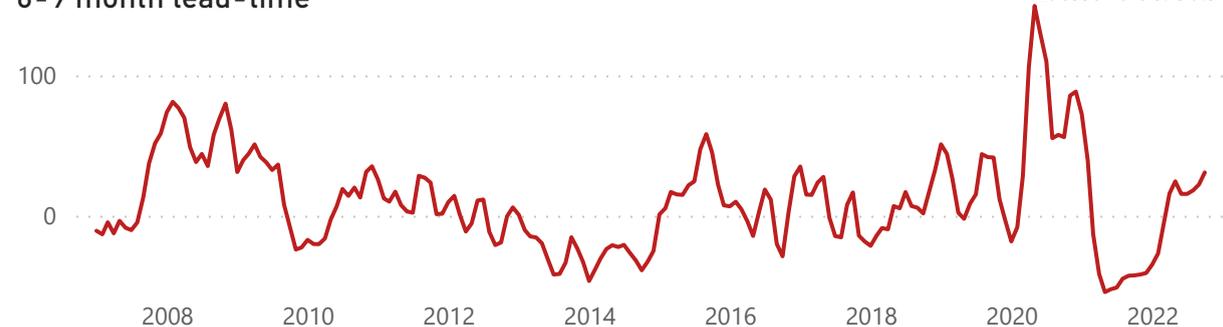
Measures confidence amongst business leaders and is a leading indicator of business investment.

Source: Organization for Economic Co-operation and Development

Data as of 10-2022

Economic Policy Uncertainty Index 6-9 month lead-time

3 Period Year over Year
Latest Value: 30.9



Daily news based composite. Can signal supply chain disruptions and upcoming slack or tightening demand.

Source: Federal Reserve Bank of St. Louis

Data as of 10-2022

Small Business Optimism Index 3-5 month lead-time

3 Period Year over Year
Latest Value: -7.5



Indicator of sentiment among small businesses who can be quicker to react to economic conditions than big firms.

Source: National Federation of Independent Business

Data as of 10-2022

MONTHLY TRENDS

How have these indicators changed up or down in the past 5 months.

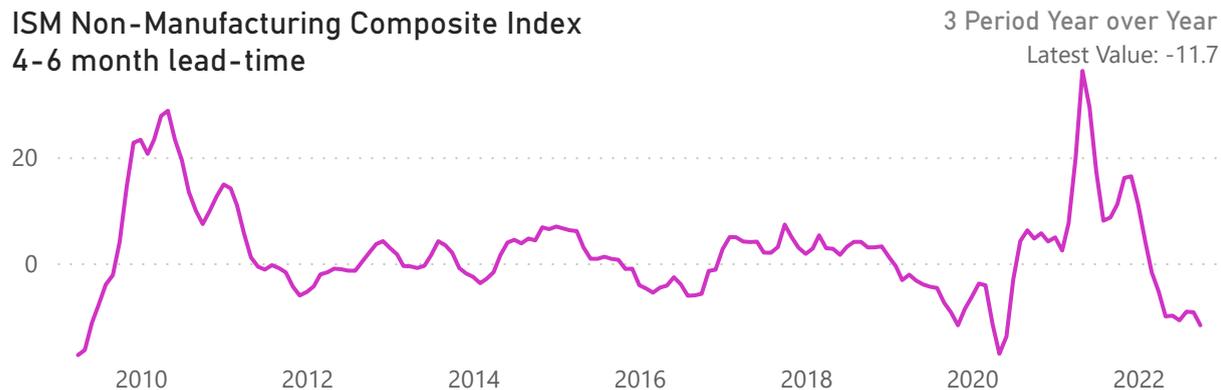
Indicator	Relationship	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022
Consumer Sentiment	Procylic	↓	↑	↑	↑	↓
Economic Policy Uncertainty Index	Countercyclic	↑	↓	↓	↓	
OECD Business Confidence Indicator	Procylic	↓	↓	↓	↓	
Small Business Optimism Index	Procylic	↓	↓	↑	↑	

↑ Upward pressure on economy

↓ Downward pressure on economy

Consumer Spending: Measures of consumer's intent and ability to spend.

ISM Non-Manufacturing Composite Index 4-6 month lead-time

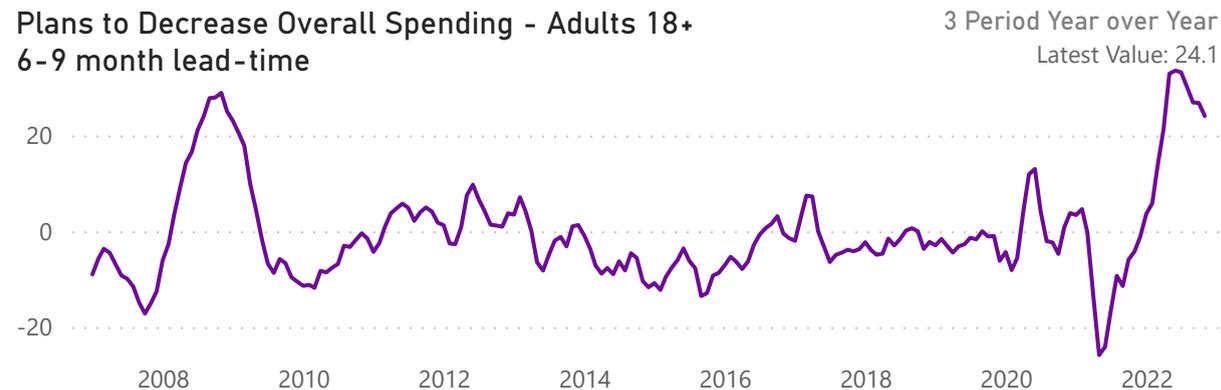


Diffusion index from a survey of business managers in the non-manufacturing industry covering topics such as business activity, new orders, employment, inventory, and prices.

Source: Institute for Supply Management

Data as of 10-2022

Plans to Decrease Overall Spending - Adults 18+ 6-9 month lead-time



Survey question asking consumers financial steps they plan on taking during the next 3 months. As the response for decrease overall spending moves higher, this is a negative sign for overall consumer spending.

Source: Consumer Sentiment Data

Data as of 11-2022

U.S. Consumer Spending Expectations 3-5 month lead-time



The consumer spending forecast represents consumers' intended level of retail spending over the next 90 days.

Source: Consumer Sentiment Data

Data as of 11-2022

MONTHLY TRENDS

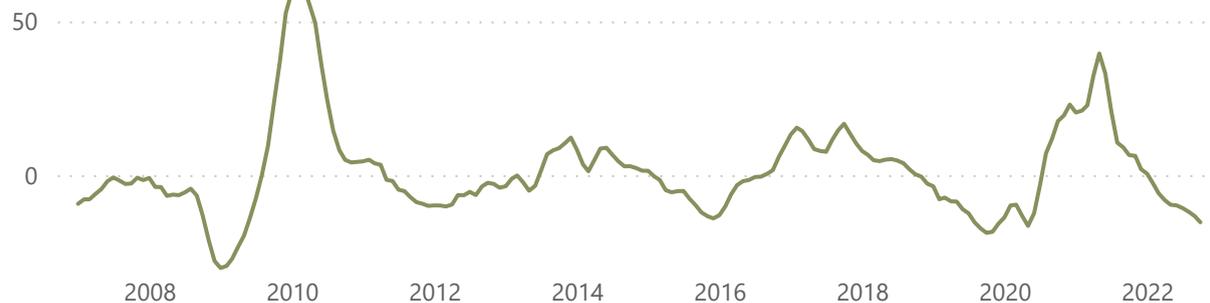
How have these indicators changed up or down in the past 5 months.

Indicator	Relationship	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	
ISM Non-Manufacturing Composite Index	Procylic	↓	↑	↓	↓		↑ Upward pressure on economy ↓ Downward pressure on economy
Plans to Decrease Overall Spending - Adults 18+	Countercyclic	↑	↑	↑	↑	↑	
U.S. Consumer Spending Expectations	Procylic	↓	↓	↑	↑	↑	

Production/Construction: Measures of industrial, manufacturing and construction output.

ISM Manufacturing PMI Composite
4-6 month lead-time

3 Period Year over Year
Latest Value: -15.3



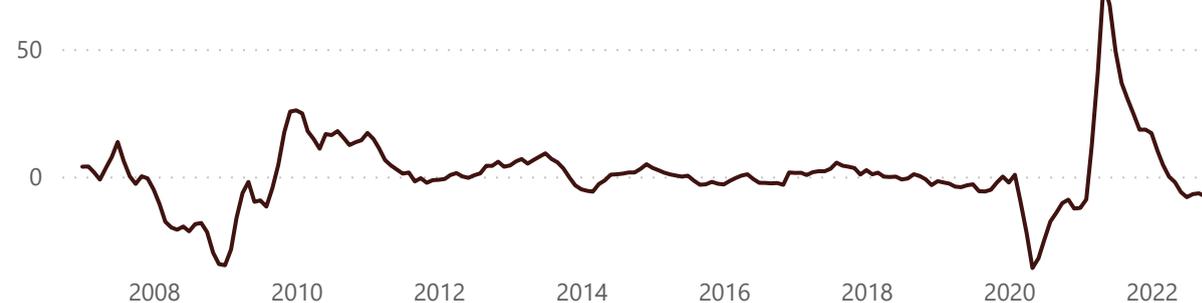
Diffusion index from a survey of business managers in the manufacturing industry covering topics such as business activity, new orders, employment, inventory, and prices.

Source: Institute for Supply Management

Data as of 10-2022

Architectural Billings Index - National
4-6 month lead-time

3 Period Year over Year
Latest Value: -7.7



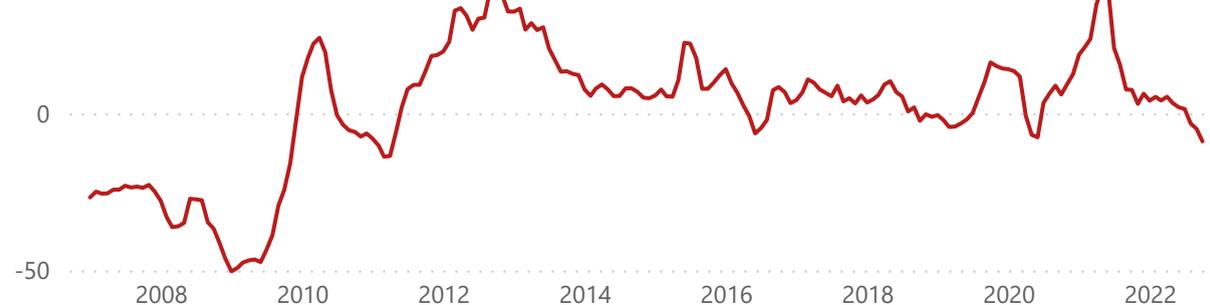
Survey based dataset that gathers information around shifts in billings from major architectural firm leaders.

Source: The American Institute of Architects

Data as of 10-2022

New Privately-Owned Housing Permits Authorized
4-6 month lead-time

3 Period Year over Year
Latest Value: -8.9



Total number of new privately owned residential permits authorized in the United States.

Source: United States Census Bureau

Data as of 10-2022

MONTHLY TRENDS

How have these indicators changed up or down in the past 5 months.

Indicator	Relationship	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022
ISM Manufacturing PMI Composite	Procylic	↓	↓	↓	↓	
Architectural Billings Index - National	Procylic	↓	↑	↑	↓	
New Privately-Owned Housing Permits Authorized	Procylic	↓	↓	↓	↓	

↑ Upward pressure on economy

↓ Downward pressure on economy

Financial/Prices: Leading indicators from treasuries, bonds, and other financial conditions.

10-Year Minus 2-Year Treasury Constant Maturity 18+ month lead-time

Raw
Latest Value: -0.7



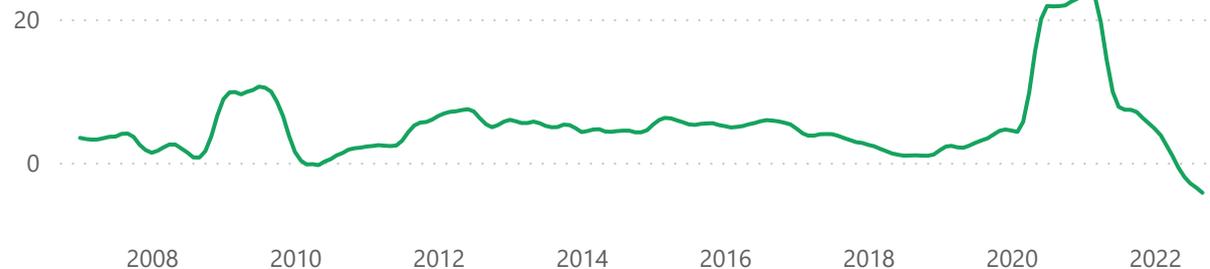
The spread between a 10 year treasury bond yield & 2 year treasury bond yield. When the spread becomes negative, meaning that the short-term maturity rate exceeds the long-term maturity rate it is indicative of recession.

Source: Federal Reserve Bank of St. Louis

Data as of 11-18-2022

Real M2 Money Supply 9-12 month lead-time

3 Period Year over Year
Latest Value: -4.2



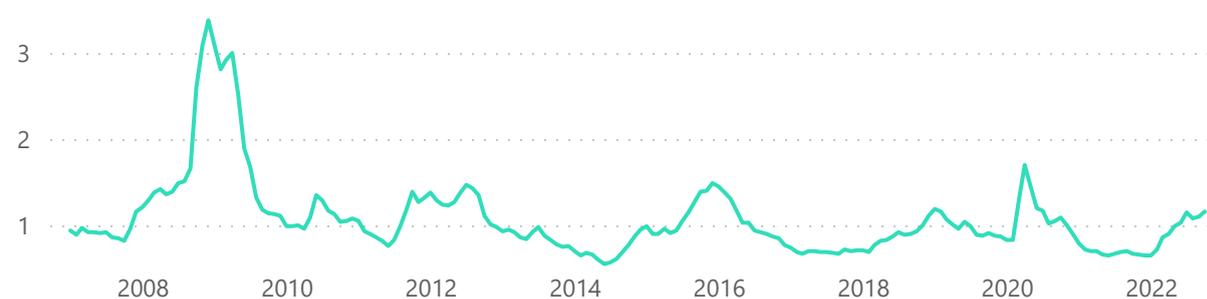
Inflation adjusted measure of money supply where contraction can be indicative of recession.

Source: Federal Reserve Bank of St. Louis

Data as of 09-2022

Junk Bond Spread 3-5 month lead-time

Raw
Latest Value: 1.2



The spread between BAA rated corporate bonds and AAA rated corporate bonds. An increasing spread is indicative of recession as investors move toward more guaranteed returns on AAA bonds.

Source: Prevedere

Data as of 10-2022

Commodity Price Index Data: Raw Material 9-12 month lead-time

3 Period Year over Year
Latest Value: -11.1



Index measuring raw material commodity prices with extreme contraction being indicative of recession.

Source: The World Bank

Data as of 10-2022

MONTHLY TRENDS

How have these indicators changed up or down in the past 5 months.

Indicator	Relationship	Jul 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022
10-Year Minus 2-Year Treasury Constant Maturity	Procylic	↓	↓	↓	↓	↓
Junk Bond Spread	Countercyclic	↓	↑	↓	↓	
Real M2 Money Supply	Procylic	↓	↓	↓		
Commodity Price Index Data: Raw Material	Procylic	↓	↓	↓	↓	

↑ Upward pressure on economy

↓ Downward pressure on economy

Anatomy of the Dashboard

Data grouped by logical categories

We have organized our leading indicators into four. These categories are meant to be a logical grouping that an economist would look for when studying an industry or an entire economy.

See the data how our economists see it

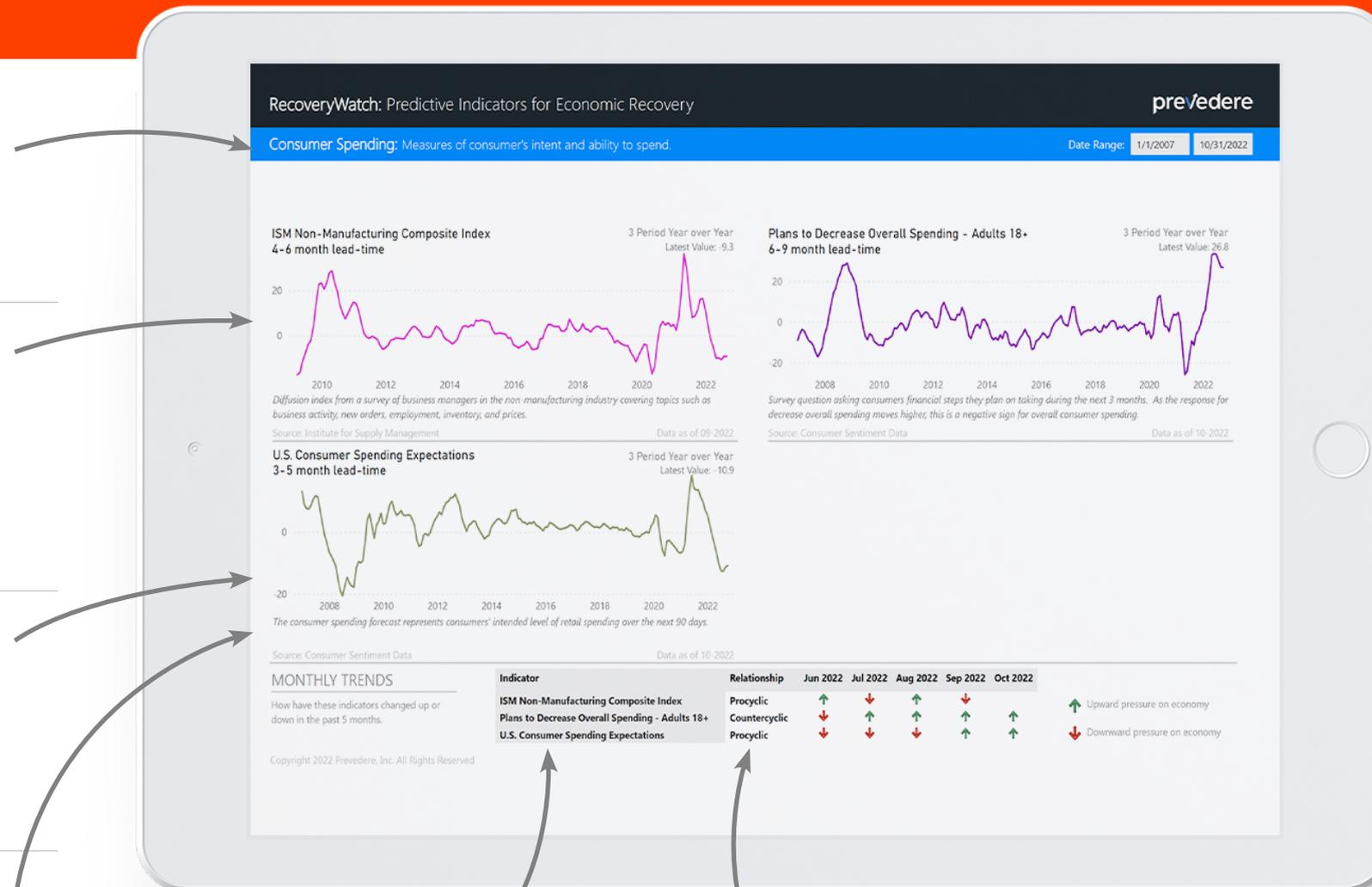
Our economists have determined for the reader what the best frequency and calculation the data should be viewed at if you are looking for real signals of economic change. If you look at data too granularly (such as by the hour, or day) the signal can get lost in the volatility. So we utilize moving averages and growth rates to help isolate sustained trends.

Historical Context

We want to show enough data history, when available, to compare to the “Global Financial Crisis” in 2008-10. This should help a reader visually compare the recent negative movements to prior cases where the indicator showed recessionary or weaker conditions.

Reason for the Indicator

Under each indicator there is a description of why that indicator was chosen by the Economist team as a top indicator to watch.



Simple Signal Summary

To simplify the interpretation of the indicators, a table is provided that highlights the data compared to the previous month. If the indicator is signaling improvement from the previous month, then it gets a green arrow.

The Cycle

The Economists know that some indicators may rise, and that signals negative pressure on the economy or industry. We call that a countercyclic relationship and account for it appropriately in the summary table.

Do you have a scenario planning platform to navigate a volatile market in 2023?

By working with Prevedere's global data, Advanced Predictive Planning platform, and expert in-house economists—your organization can realize both tactical and strategic advantages, including:

- **Forecast accuracy**, where a 1% improvement results in millions of dollars of cost savings or revenue growth.
- A new layer of understanding, with data driven predictions, to help drive **supply chain decisions**.
- Ability to attain insights and discover impactful **consumer-level drivers**.
- Ability to attain **CAGRs, market size projections, and other financial metrics** that were previously difficult to produce.
- No more surprises or market blind spots, with a new confidence and ability to **plan for future opportunity and risk**.

Visit <https://prevedere.com/schedule-demo> to learn more.

