

Social Listening:



ENODO Consumer Sentiment Index (ECSI)

August 2022



“I think that people are responding to the intense news coverage of inflation numbers and to global developments, including the war in Ukraine.”
Camelia Kuhnen

SOCIAL LISTENING

OVERVIEW

The University of Michigan's Consumer Sentiment Index (CSI) is widely accepted as the standard statistical measurement for public sentiment of the economy. It is a leading economic indicator for leading global financial institutions and the U.S. Department of Commerce who use CSI data to inform investment decisions and forecast market movements. However, the index is derived from a simple mathematical formula and an outdated baseline that relies on a telephone survey of fifty questions to produce monthly reports that do not provide an accurate representation of individuals' perceptions of the economy.

ENODO's Consumer Sentiment Index (ECSI) delivers a more precise representation of consumer sentiment of the economy. The ECSI identifies specific issues and events that impact individuals' beliefs through near real-time analysis that continually evolves with market changes. It provides unique insights on the economic conditions that shape consumers' expectations and forecasts their behavior. ECSI offers analysts and investors a competitive advantage in today's highly volatile markets that reveals the economic landscape through the eyes of consumers.



COMPARATIVE ANALYSIS

Analysts compared the University of Michigan's CSI with the ENODO Consumer Sentiment Index (ECSI) to illustrate the differences and highlight the advantages of ENODO's technical platform and analysis. Overall, ECSI outperformed CSI due to the platform's (1) near real-time data collection of large volumes of open-source information, (2) advanced data analytics that enables real-time analysis, (3) machine learning that identifies misinformation, anomalies, and sentiment lag, which impacts index accuracy, and (4) customized algorithms that accurately measure, track, and forecast consumer sentiment. ECSI is dynamic—it continually evolves with socio-economic changes, which enables queries and qualitative analysis of trending topics and significant events that impact sentiment.

CAPABILITY	ECSI	CSI
Technology	Advanced data analytics, machine learning, topic modeling, & proprietary algorithm	Simple mathematical equation and baseline from 1960s
Data Collection	Near real-time crowd-sourced data collection that continuously captures evolving topics and discussions (e.g., ~ 600,000 per month)	Static, pre-determined questionnaire (e.g., ~90 per month) 50 prompted questions
Analytics	Qualitative and Quantitative Analysis Sentiment Analysis, Topic Modeling	Simple Survey to determine sentiment
Data Source	Nuanced conversations from 22 social media platforms, RSS feeds, Blogs, Websites, Surveys, Polls, External datasets	50 pre-selected questions
Database	Interactive database that affords queries on topics or events related to the economy	Non-interactive data repository
Sentiment Analysis	Accuracy = 92% (English)	Not Applicable
Output	Query-able interface with user input to economic topics	Monthly reports



“A majority of Americans continue to expect inflation to rise over the next year, along with mortgage interest rates, their monthly expenses, and their taxes.”

ENODO's research team created the ECSI as an independent research tool to gain a deeper understanding of consumer sentiment of the economy. Analysts applied advanced data analytics, social listening tools, and machine learning to capture the sentiment polarities (i.e., positive, negative, and neutral) of individual data points related to the economy. An interactive database was populated with information and parsed into three categories (1) How consumers view their own financial situation, (2) How consumers view the economy in the near-term, and (3) How consumers view the economy over the long-term that were weighed by the volume of discussions. Analysts applied ENODO's proprietary algorithm to produce an index score ranging from -1 (extremely negative view) to +1 (extremely positive view) for each category. Individual category scores were combined to create the overall index score that was tracked and measured from May 2022 to August 2022. In addition to the quantitative analysis, analysts provided qualitative analysis based on topics of discussion and important events to deliver insights into individuals' attitudes about the economy and forecast future sentiment.

DATA COLLECTION

ENODO's technical platform collected data on topics related to the economy from over 22 social media platforms, RSS feeds, blogs, news commentary, consumer reports, economic analysis, and other information sources from May 1, 2022, to August 10, 2022. Analysts obtained approximately 4.2 million data points including 1.2 million Tweets, 956,212 Facebook posts, 417,382 Reddit posts, 296,321 news sites, 96,156 Blogs, 41,298 Instagram posts, 32,476 YouTube comments, 21,409 LinkedIn posts, 17,845 TikTok comments, 13,498 Snapchat comments, and 11,278 RSS feeds specific to the attitudes, beliefs, and expectation of the U.S. economy to create the ECSI and produce this report.



“I think what hurts with energy bills is that we're using less, but paying more. Make no doubt about it. Recession means a shrinking economy. Less jobs, availability, choice..... It's happening.”

MAY ECSI SCORE

The May 2022 ECSI score measured -0.2619 and established a baseline for future reports. Trending topics centered around the cost of living, recession, and inflation dominated discussions within each category and were the leading factors for negative sentiment.

Cost of Living: The cost of living rose by 9% in April and the price of food rose 1.1 percent in May from the previous month, the 17th consecutive monthly increase

Recession: Conversations included a general apprehension to purchase big ticket items like homes due to an expected increase in the Federal interest rate

Inflation: Higher inflation in April and May, as a result of the Ukraine / Russian War, rising cost of fuel and fertilizer, labor shortages and the prices at restaurants and grocery stores fueled negative sentiment

Categories	Topic 1 [%]	Topic 2 [%]	Topic 3 [%]	Other[%]	Positive Sentiment	Negative Sentiment	Neutral Sentiment	Volume of Discussions	ENODO Index
How consumers view their financial situation	Cost of Living [47%]	Recession [26%]	Debt [20%]	7%	32%	41%	27%	415,214	-0.1237
How consumers view the economy in the near-term (3-6 months)	Recession [38%]	Inflation [26%]	High Healthcare Costs [21%]	15%	24%	48%	28%	378,189	-0.3333
How consumers view the economy over the long-term (6-18 months)	Cost of Living [41%]	Interest Rate Hike [24%]	Impact of Russian War [22%]	13%	26%	52%	22%	267,934	-0.3287
Combined Index Score									-0.2619

“Optimism is word of the day with the #StockMarket, Grain market is showing optimism too.”



JUNE ECSI SCORE

The June 2022 ECSI score measured -0.3919, which illustrated a continued increase of negative sentiment toward the economy. Trending topics centered around the recession, cost of living, and slowing economic growth within each category.

Cost of Living: Negative sentiment was driven by an increase in gasoline prices, which were up nearly 60% from the previous year. Americans faced record-high gas prices during the month, with the national average topping \$5 per gallon

Recession: Discussions included Wall Street suffering the worst week since March 2020, with the S&P 500 entering a bear market and prospective home-owners witnessing an increase in the 30-year fixed-rate mortgage to 5.8%--the highest level since 2008

Inflation: Discussion were linked to the 40-year high in inflation to 9.1% and electricity and natural gas prices rising by 13% and 38% respectively for the 12-month period ending in June

Categories	Topic 1 [%]	Topic 2 [%]	Topic 3 [%]	Other [%]	Positive Sentiment	Negative Sentiment	Neutral Sentiment	Volume of Discussions	ENODO Index
How consumers view their financial situation	Recession [48%]	Gas Price [23%]	Cost of Living [21%]	8%	26%	44%	30%	487,793	-0.2571
How consumers view the economy in the near-term (3-6 months)	Cost of Living [46%]	Inflation [32%]	Student Loan [17%]	5%	18%	51%	29%	381,327	-0.4687
How consumers view the economy over the long-term (6-18 months)	Economic Growth [47%]	Recession [22%]	Government Role [19%]	12%	22%	58%	20%	215,328	-0.4500
Combined Index Score									-0.3919

“U.S. unemployment rate is also the lowest it's been in a long time which implies that a significant portion of those jobs are new.”



JULY ECSI SCORE

The July ECSI score measured -0.5020, which continued the downward trend over growing concerns with a potential recession, high inflation, and cost of living. Topics centered around job prospects, credit card debt and labor shortages began to emerge.

Recession: Discussions how middle-class households are falling behind on bills and their inability to make ends meet due to the economic slowdown

Inflation: Discussions involved the stock market volatility in June forcing individuals to delay their retirement plans, pause their saving/investing activities, and an increase in credit card debt

Cost of Living: Topics included concerns from individuals allocating a higher portion of their income toward necessities compared to June

Categories	Topic 1 [%]	Topic 2 [%]	Topic 3 [%]	Other [%]	Positive Sentiment	Negative Sentiment	Neutral Sentiment	Volume of Discussions	ENODO Index
How consumers view their financial situation	Recession [41%]	Cost of Living [32%]	Credit Card Debt [19%]	8%	22%	47%	31%	576,819	-0.3623
How consumers view the economy in the near-term (3-6 months)	Inflation [45%]	Cost of Living [27%]	Job prospects [24%]	4%	14%	62%	22%	394,278	-0.6189
How consumers view the economy over the long-term (6-18 months)	U.S. GDP [39%]	Recession Fears [27%]	Labor Shortage [23%]	11%	19%	62%	19%	223,891	-0.5250
Combined Index Score									-0.5020

“Yeah, so tell me inflation is 9% !! Went to store yesterday for half n half for coffee. 6 months ago it was \$1.62 now \$2.48!”



ECSI ANALYSIS

Monthly ECSI Scores were plotted over time to visualize the 3-month trend in consumer sentiment ending in July 2022. The gradual decline over a 90-day period is the result of growing negative sentiment and an increase in the volume of discussions with the economy.

- The ECSI trend reflects the overall sentiment of individuals' perceptions of the economy
 - ▷ ECSI decreased by 0.2387 points
 - ▷ 6% increase in negative sentiment
 - ▷ 21% increase in overall volume of discussions
- Negative sentiment by category
 - ▷ Personal financial situation
 - ECSI score increased from -0.1237 to -0.3623
 - ▷ Near-term outlook
 - ECSI score increased from -0.3333 to -0.6189
 - ▷ Long-term outlook
 - ECSI score increased from -0.3287 to -0.5250

	May 2022	June 2022	July 2022
ENODO Consumer Sentiment Index (ECSI)	-0.2633	-0.3919	-0.5020



“Retirees are going back to work cause inflation has eaten their social security, pensions, savings, etc”

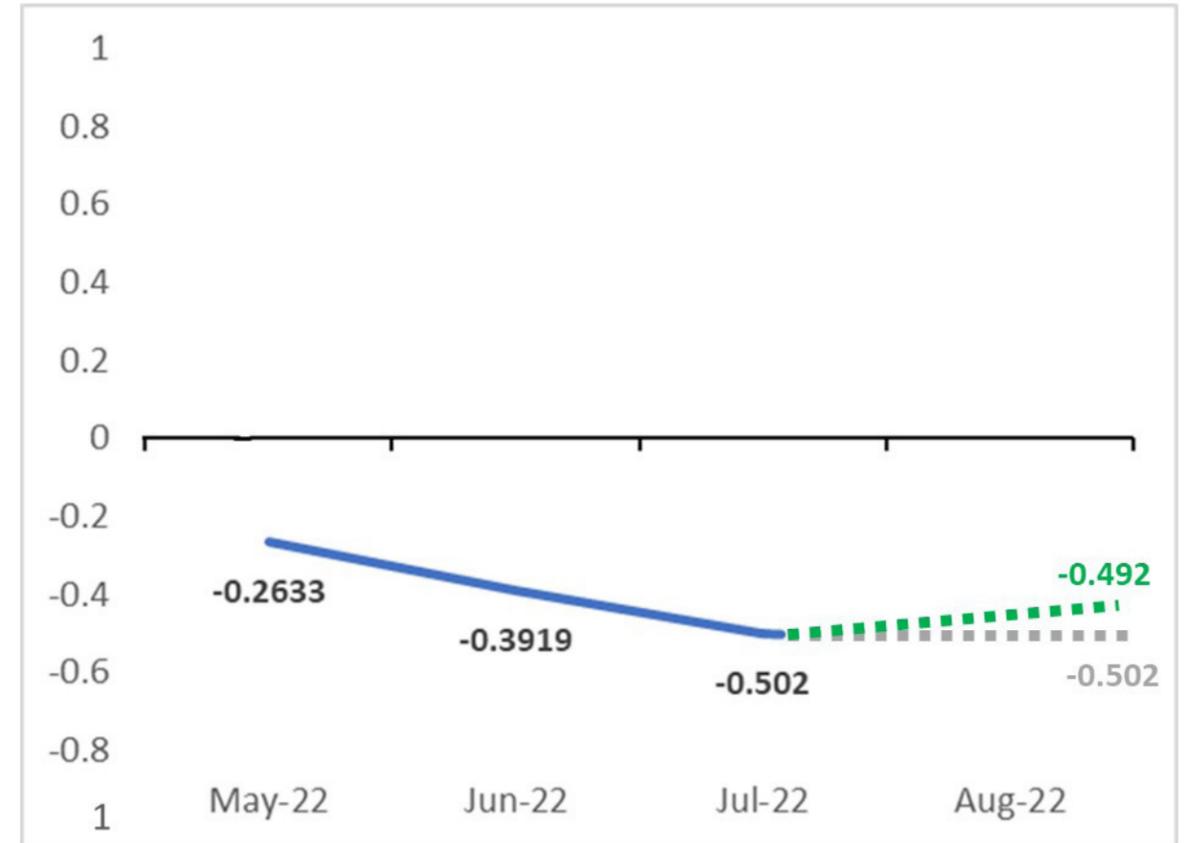
ECSI FORECAST

Analysts conducted a qualitative analysis of online information and measured the ECSI index score to forecast August's consumer sentiment ahead of the CSI. Topics related to the cost of living and recession continue to be major concerns, however, recent economic data (e.g., jobs report and inflation numbers), lower gas prices, and diminishing concern over the war in Ukraine offset existing negative sentiment, increase positive sentiment, and shape consumer confidence. Barring any major geopolitical events or market movements, analysts expect an index score of -0.492 for August, which represents a significant shift in consumer sentiment.

- Negative sentiment in August is projected to decrease due to:
 - Lower gas prices
 - Lower inflation numbers
 - Decrease in number of "recession" discussions
- ▷ Factors that continue to shape negative sentiment include:
 - High commodity prices
 - Residual sentiment from July (e.g., sentiment lag)
 - Market volatility (e.g. Q2 earnings)



AUGUST FORECAST



“Not appreciated how different the economic conditions are in the Eurozone/UK vs US. Even though inflation is high in both, the US medium-term outlook is significantly less dire.”



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