



MARKETPSYCH ANALYTICS FROM REFINITIV

Rich sentiment data tracking news and social media in real time

Media sentiment analytics like no other

- **Take the market's pulse:** buzz and sentiment scores on thousands of news and social media sources
- **Easy to use:** time-series data with real-time updates, using stable entity identifiers
- **Granular:** transforms unstructured text into dozens of scores – delivered every 60 seconds, hourly and daily
- **Versatile use cases:** alternative data proven to drive profitable research and decision making

MarketPsych Analytics from Refinitiv

Broad content and cutting-edge NLP

Using a patented natural language processing engine, MarketPsych Analytics turns unstructured text from thousands of curated news and social media sources into structured scores.

The data provides highly dimensional analysis of high-quality news outlets, including the full Reuters real-time markets coverage. Data coverage spans a universe of social channels – including Reddit and Twitter®. Refined spam detection and deduplication filters based on years of hand-on experience increase score relevance and reliability.

Our feature-rich data stream tracks over a hundred sentiment scores for indices, stocks, commodities and currencies. Updated once a minute, the data can easily be used in dashboards and statistical tools for rapid investment-idea development.

By the numbers

- **Wide coverage:**
 - 252 countries
 - 30,000+ global companies, sectors and ETFs
 - 62 stock indexes and sovereign bonds
 - 44 currencies
 - 53 commodities
 - 300+ cryptocurrencies
- **Long history:** 1998 to the present
- **Multi-language:** 12 languages
- **AI-based:** machine learning NLP system
- **Highly granular:** 100+ scores
- **Real time:** 60 second, hourly and daily updates
- **Sources:** +4,000 news and social media outlets

Example scores by asset class

For each asset tracked, MarketPsych Analytics monitors **Mentions** (number of references) and **Sentiment** (positive or negative tones). The data also tracks a range of **emotional indicators** – including Optimism, Fear, Uncertainty – and **fundamental themes** – such as earnings forecast, fundamental sentiment and interest rates forecast – and many others.

For each asset class, our data includes **multiple scores**. Below are a few that our clients find useful.

Multidimensional sentiment and topics

Commodities	Companies	Countries	Country markets	Currencies	Cryptocurrencies
Acreage Cultivated	Accounting Sentiment	Agricultural Stress	Bond Buzz	Carry Trade	Adoption
Agricultural Disease	Analyst Rating	Consumer Sentiment	Bond Sentiment	Currency Peg Instability	Attack
Consumption Volume	Earnings Forecast	Economic Uncertainty	Bond Trust	Emotion vs Fact	Code Sentiment
New Exploration	Innovation	Government Corruption	Stock Index Sentiment	Future vs Past	Code Upgrade
Price Direction	Labour Dispute	Inflation Forecast	Stock Index Trust	Long Shot	Developer Sentiment
Price Forecast	Layoffs	Social Inequality	Stock Index Uncertainty	Long Shot Forecast	FOMO
Production Volume	Litigation	Social Unrest	Rates Buzz	Market Risk	HODL
Safety Accident	Management Sentiment	Terrorism	Interest Rate Forecast	Price Direction	Regulatory Crackdown
Supply vs Demand	Product Sentiment	Trade Balance	Monetary Policy Loose	Price Forecast	Scam
Weather Damage	Price Forecast	Unemployment	Real Estate Sentiment	Price Momentum	Transaction Speed

From data to outcomes – Examples

Find outperforming assets

Financial markets take time to fully digest news. This is true for both good news and bad – and presents a unique opportunity for those with a keen eye for sentiment analysis.

A practical example is shown in the figure to the right – depicting a study of 30,000 global companies over the 2006-2020 period. MarketPsych calculated each company's average sentiment over the previous month. Using this score, they grouped companies into deciles, and we averaged each group's subsequent 90-day stock price performance relative to the groups' average. Stocks with the most positive media sentiment over the prior month significantly outperformed the most negative over the following 90 days. The price spread is just one actionable opportunity among many – made possible by extracting signal from the noise in unstructured news data. Buy-side and research firms can develop their own sentiment-based signals using such insights.

Time trends with sentiment

Media sentiment sometimes leads prices at major turning points. Sentiment moving averages can help identify tops and bottoms, improving asset allocation and risk-on/risk-off timing.

For example, the graph to the right shows the performance of the S&P 500 (orange daily bars) versus media sentiment during 2020. The smooth lines show two moving averages of media sentiment (30 and 90 days).

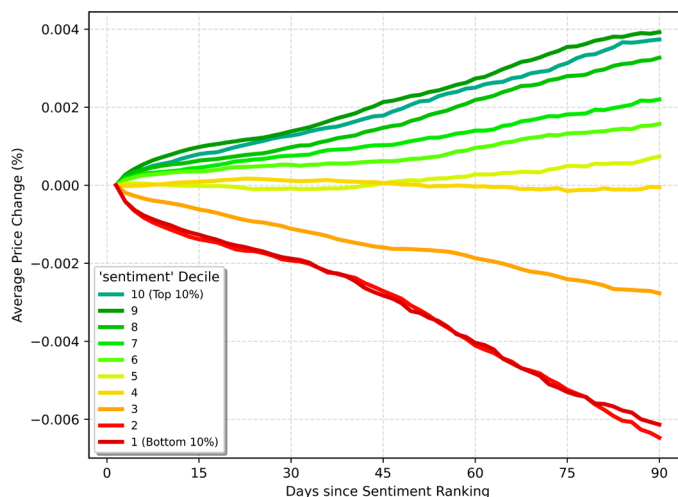
Green shading appears between the averages when the 30-day average is above the 90-day (meaning that recent sentiment is rising), and red shading appears when below (recent sentiment is falling). Note that media sentiment generated a risk-off signal, declining steeply before the S&P 500 stock market's sell-off in response to Covid-19's spread.

Screen for opportunities

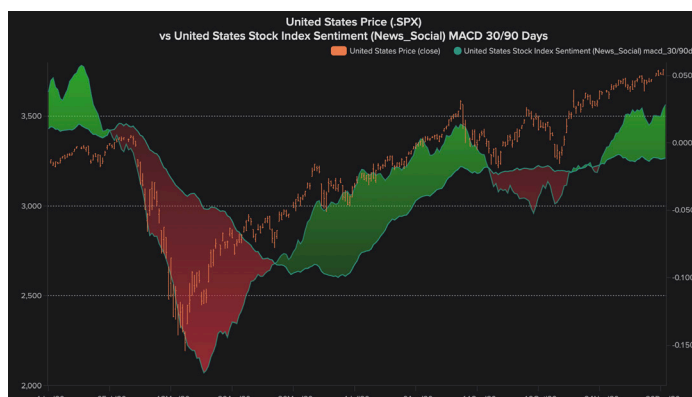
Visualisation tools and screeners help investors unearth opportunities and risks. For example, the Trust indicator heat map to the right shows the percentage of all language conveying trust in U.S. companies during Q1 2021. Firms whose media coverage scores highly on trust are shown in bright green, while those with lower trust scores appear in brighter red. The map was produced during the Covid-19 pandemic and the U.S. presidential transition. Note that vaccine makers and biotech firms ranked highly on trust, while information platforms including Twitter and Facebook ranked low. Data analysts can monitor dozens of business and supply chain risks in real-time using such visualization tools and screeners.

Average subsequent price drift of stocks ranked by 30-day sentiment (news_social) average

Rankings are grouped into deciles: Prices centred at day of ranking:
Period 2006 to 2020

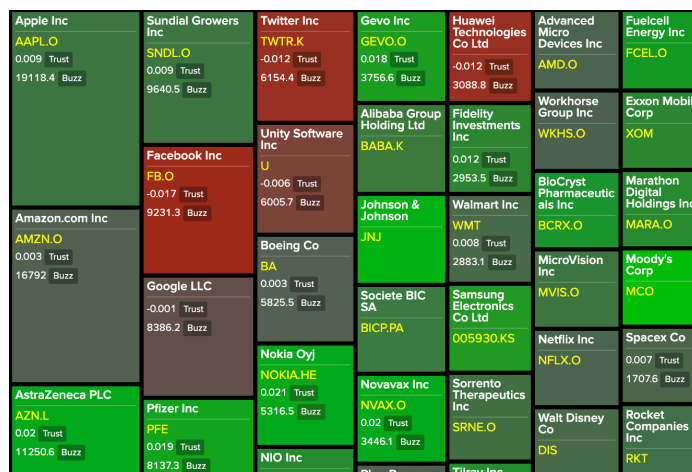


United States price (.SPX) vs United States stock index sentiment (news_social) 30/90 days



Global company media-based trust, Q1 2021

Bright green denotes high trust, while bright red denotes low trust



Achieve more with data

Why MarketPsych Analytics

MarketPsych produces innovative data feeds by performing high-speed AI-based natural language processing on millions of daily news and social media messages. Data customers hail from 25+ countries.

Our data, which extracts meaningful measures from the global information flow, underlies bespoke alpha-generation models, risk-management tools and insightful research.

New financial insights derived from the data have featured in 60+ academic papers and are available in our book "Trading on Sentiment" (Wiley Finance, 2016), also available in Chinese and Japanese.

Why Refinitiv

Refinitiv, now part of London Stock Exchange Group, is one of the world's largest providers of financial markets data and infrastructure. With \$6.25 billion in revenue, over 40,000 customers and 400,000 end users across 190 countries, we provide information, insights and technology that enable customers to execute critical investing, trading and risk decisions with confidence.

We draw on cleaner, richer, more readily accessible data to support the use of AI and machine learning – helping our customers gain greater insight, boost performance and fuel more rapid innovation.

Popular client use cases

Sample client profiles

- **Global macro hedge funds**
Understand market cycles based on the psychological perceptions in each country, market and asset class. Make superior global asset allocation decisions.
- **Forex and currency**
Identify news and social media flow that impacts investment theses. Find arbitrage opportunities by monitoring macroeconomic imbalances and attitudes towards countries and currencies.
- **Commodity and energy firms**
Track global information flow about agricultural and energy products, including supply and demand issues, industrial accidents and weather damage, better-time trend emergence, exhaustion and reversals.
- **Cryptocurrency investors and exchanges**
Deploy artificial intelligence and machine learning strategies to anticipate swings in sentiment. Hedge as investor enthusiasm wanes. Identify trending coins and innovative technologies.

Data experts using our products

- **Quant traders/investors**
Better identify changing market cycles, augment alpha generation strategies and improve risk models. Refine momentum, mean reversion and volatility strategies.
- **Research analysts**
Find insights in the crowd and see what is being missed. Monitor market-moving events. Identify the specific price drivers of an asset.
- **Risk managers**
Identify the emergence of new risk and dangerous events. Monitor speculative and crowding risk across assets in which your firm is positioned.
- **Economists**
Monitor risk perceptions across global economies, sovereign bonds, and currencies. Identify changes in key macroeconomic themes such as global interest rate forecasts and unemployment. Update leading economic indicators with news and information as it happens (nowcasting).

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Refinitiv, an LSEG (London Stock Exchange Group) business, is one of the world's largest providers of financial markets data and infrastructure. With \$6.25 billion in revenue, over 40,000 customers and 400,000 end users across 190 countries, Refinitiv is powering participants across the global financial marketplace. We provide information, insights and technology that enable customers to execute critical investing, trading and risk decisions with confidence. By combining a unique open platform with best-in-class data and expertise, we connect people to choice and opportunity – driving performance, innovation and growth for our customers and partners.