

Frequently Asked Questions

S&P 500[®] Twitter Sentiment Index Series

- 1. What is the [S&P 500 Twitter Sentiment Index Series](#)?** The S&P 500 Twitter Sentiment Index Series screens the S&P 500 through the use of sentiment scores derived from Tweets containing \$cashtags that reference the equity symbols of S&P 500 index constituents. These Tweets are screened and scored via machine learning and natural language processing (NLP) to calculate a daily score for each stock in the S&P 500 and select the top constituents to include in each of the S&P 500 Twitter Sentiment Indices at monthly rebalance. For more information about the S&P 500 Twitter Sentiment Indices, please see the index methodology: <https://www.spglobal.com/spdji/en/documents/methodologies/methodology-sp-twitter-sentiment-indices.pdf>.
- 2. Why was the S&P 500 Twitter Sentiment Index Series created?** The S&P 500 Twitter Sentiment Index Series was created to reflect the performance of the names with the most positive sentiment within the S&P 500 over a given period of time.
- 3. What specific indices are included in the S&P 500 Twitter Sentiment Index Series?** As of Nov. 18, 2021, the index series consists of the following indices:

[S&P 500 Twitter Sentiment Index](#): This index is designed to track the performance of the 200 constituents with the most positive sentiment from the S&P 500, which are weighted on a float-adjusted market capitalization (FMC) basis, with a 10% cap at rebalance.

[S&P 500 Twitter Sentiment Select Equal Weight Index](#): This index is designed to track the performance of a selection of the 50 constituents with the most positive sentiment from the S&P 500, which have been equally weighted at rebalance.

Note that in order to be considered for either index, each company must have a sufficient number of Tweets containing \$cashtags that reference the equity symbol of the company over the last month (after filtering for spam has been applied) for that sentiment score to be considered robust enough for inclusion. The number of companies without sufficient Tweet volume may vary from month to month depending on market conditions. Both indices have a decay factor applied to their daily scores at rebalance in order to ensure the most recent information is given higher importance.

- 4. What is Twitter's role in the S&P 500 Twitter Sentiment Indices?** S&P DJI teamed up Twitter to create this index. In addition to co-branding, Twitter supplies the data necessary to score the S&P 500 members' sentiment on a daily basis.
- 5. How does the scoring of the S&P 500 constituents work?** At each rebalancing, the index selects constituents from the S&P 500 universe that have the most positive sentiment over a fixed time period and have sufficient Tweet volume to be scored. Sentiment scores are derived from an analysis of a daily feed of Tweets containing \$cashtags that reference the equity

symbol of a company. Each stock is scored daily, and these stocks' scores are aggregated on a monthly basis, with more recent activity receiving higher weights, given that recent sentiment often has a greater impact. All of these final monthly scores are ranked in order to create the index reconstitution for the next monthly time period.

6. How are Tweets filtered and scored? How do those scores translate to stock scoring?

The sentiment scoring model scores each Tweet based on the probability that its content expresses a positive or negative sentiment, with Tweets more likely to be positive receiving higher scores and Tweets more likely to be negative receiving lower scores. Each company is scored based on an average of all the corresponding Tweet scores that pass the screening process described below.

After gathering the relevant Tweets containing \$cashtags, several pre-filters are applied. For example, considerations are included for minimum account age, number of followers, and other criteria, which may change from time to time based on the judgment of the Index Committee. Additionally, a natural language processing (NLP) model is applied to the candidate Tweets for further filtering to determine if it is likely to be a spam Tweet. The remaining Tweets are then scored as described above.

After 4:00 p.m. EST each calendar day (including holidays and weekends), a daily average sentiment score is calculated for each constituent in the index universe (i.e., S&P 500 index constituents) based on the derived sentiment of Tweets.

S&P Dow Jones Indices would like to acknowledge the assistance of Pluribus Labs in building the models supporting the creation of the sentiment scores used in the S&P Twitter Sentiment Indices.

7. How are additions and deletions dealt with in the S&P 500 Twitter Sentiment Indices?

Except for spin-offs, no stocks are added to the indices between rebalancing events. A spin-off company remains a constituent of the respective S&P 500 Twitter Sentiment Index until the subsequent rebalancing, when the spin-off is evaluated for continued index inclusion.

If a stock is dropped from an underlying index, it is removed from the respective S&P 500 Twitter Sentiment Index simultaneously. Between rebalancings, a stock can be deleted from an index due to corporate events such as mergers, takeovers, de-listings, suspensions, spin-offs, demergers, or bankruptcies.

8. How often are the S&P 500 Twitter Sentiment Indices rebalanced? These Indices are rebalanced on a monthly basis, effective after market close on the fourth business day of the month.

9. How are the data delivered and how can I get access? S&P DJI delivers index data files via SFTP through its proprietary delivery platform Enterprise Data eXchange (EDX). A detailed EDX instruction manual and user friendly FAQs are available on our [Client Resource Center](#). Index data may also be available via major market data vendors.

10. Where can I learn more information about the S&P 500 Twitter Sentiment Index Series?

To learn more about the S&P 500 Twitter Sentiment Index Series, please contact index_services@spglobal.com or check out our website.

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