

To provide a quick overview of our approach ,The methodology involved tokenizing the text of the statements, identifying the frequency of specific economic terms from our constructed and predefined lexicons, and quantifying the overall sentiment based on these frequencies

The primary data source for this study consists of 30 text files containing transcripts of Federal Reserve Chairman Jerome Powell's statements. The extracted documents represented the complete collection of Jerome Powell's speeches delivered between the periods of November 2019_ to January 2024, and were sourced from official Federal Reserve websites and archives.

Consequently, the extracted speeches underwent a sequential process of preprocessing involving text cleaning for stopwords and special characters, and tokenization. We defined a Lexicon of 200 words distinguishing contractionary and expansionary language , and the relative presence of the two within each speech was quantified through the computation of a normalized sentiment score ranging from negative one to positive one, corresponding to the fully expansionary and fully contractionary language. As the final step in the process, we implemented regression analysis to test for the association between sentiment scores and changes in the VIX indices throughout our specified time frame.

Different approaches:

1. where each of the 10 words mentioned before and after each economic term are associated with positive or negative sentiment