

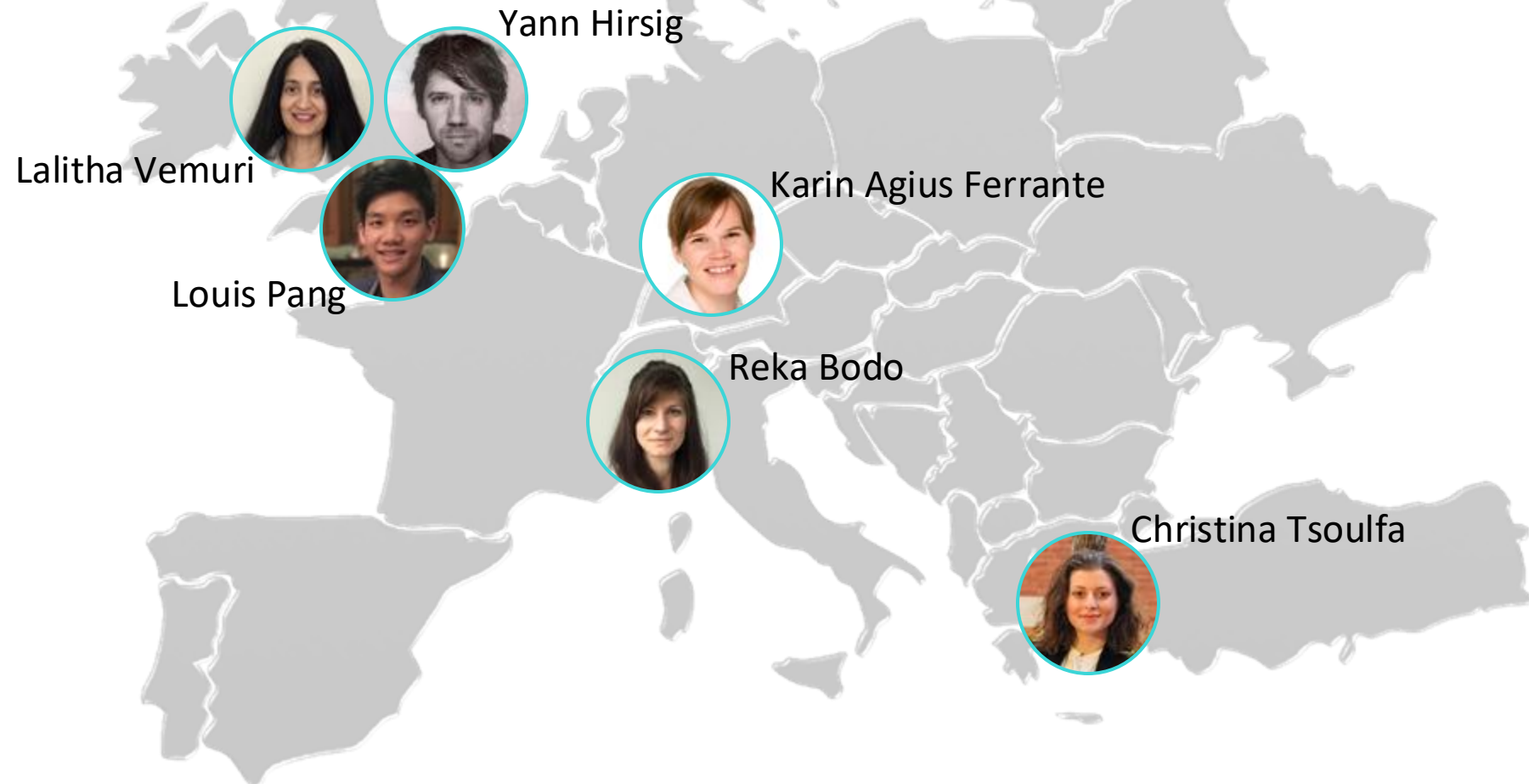


Bank of England

Speech Sentiment Analysis

May 28th, 2025

Team AnalytIQ





1. How do speeches and sentiment develop over time?
2. How does speech sentiment relate to economic events?
3. How is speech sentiment correlated with economic indicators?

Executive Summary



Key Insights

- BoE speeches are increasingly concise & frequent.
- Governor tone is more optimistic.
- Major events and MPC voting results drive shifts in speech sentiment.
- Weak standalone correlation of speech sentiment with economic indicators.
- Hybrid models offer stronger predictive insights.
- Most influential features are consumer confidence, credit growth and interest rates.

Recommendations

- Strengthen communication impact
- Strengthen modelling precision
- Strengthen policy accountability



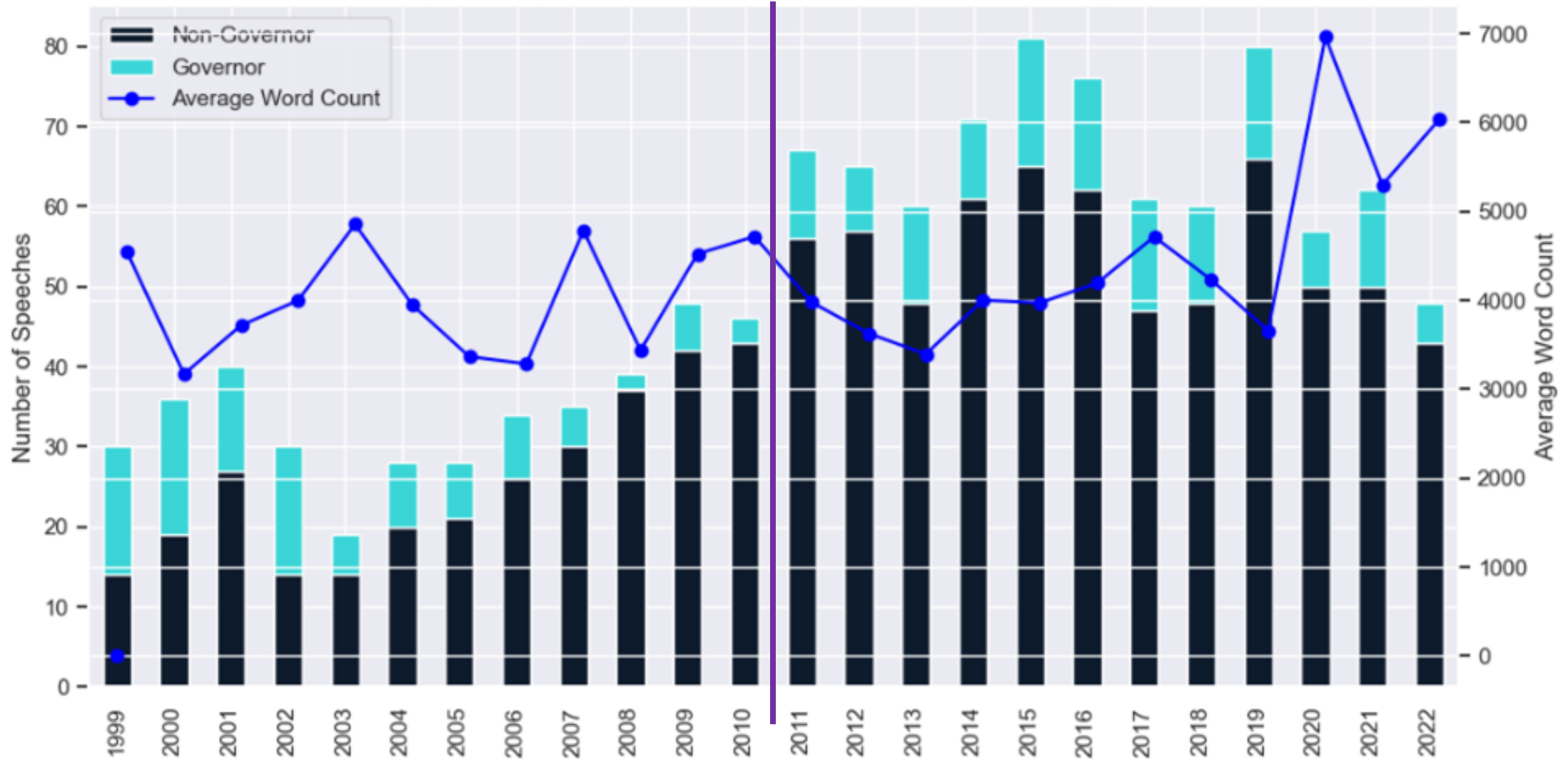
How do speeches and sentiment develop over time?



Speech Frequency & Length



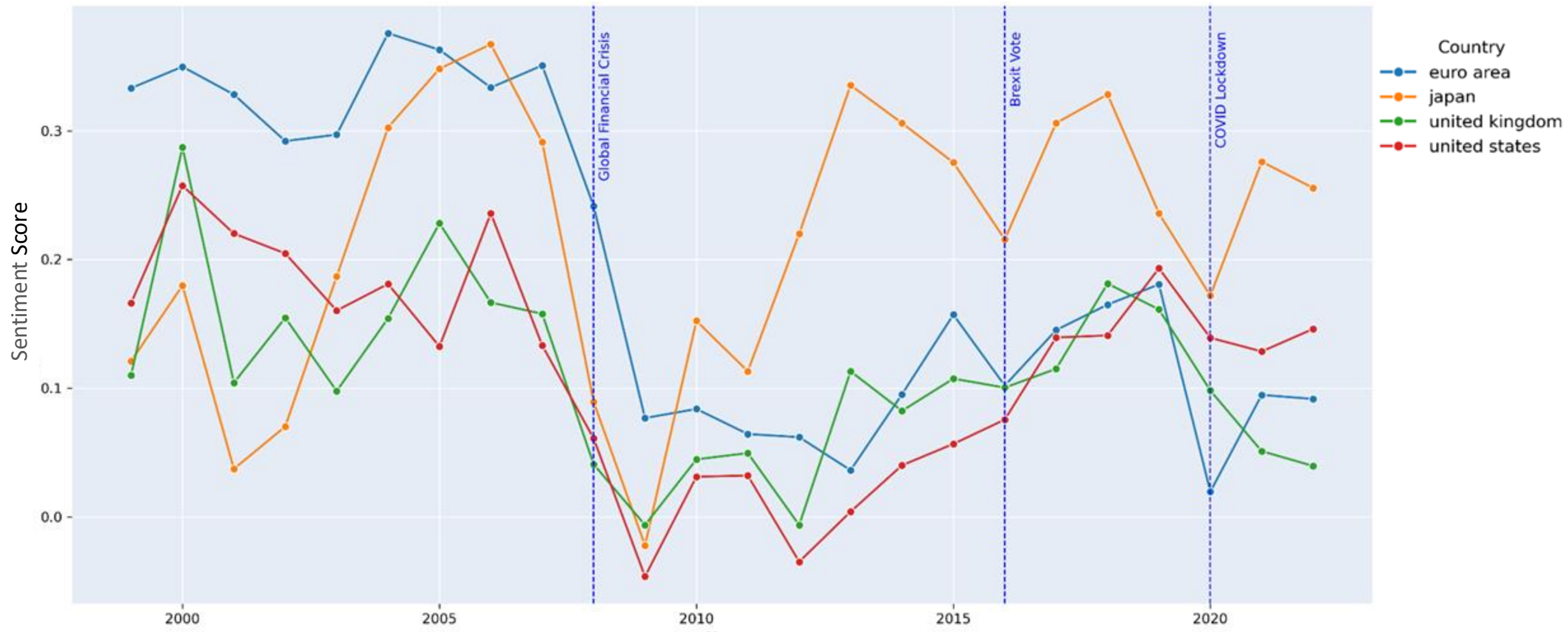
Number of Speeches by BoE Governor and other Staff per Year with Average Word Count



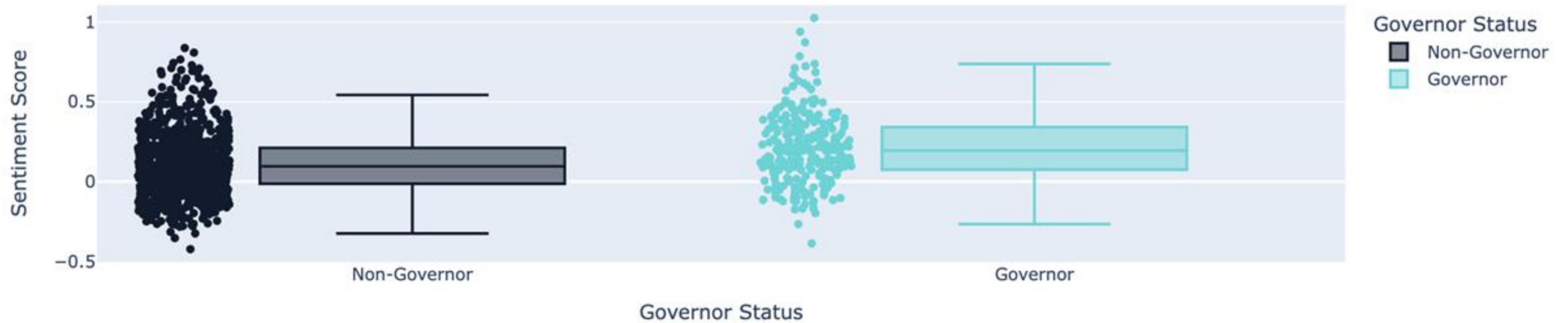
Speech Sentiment Country Comparison



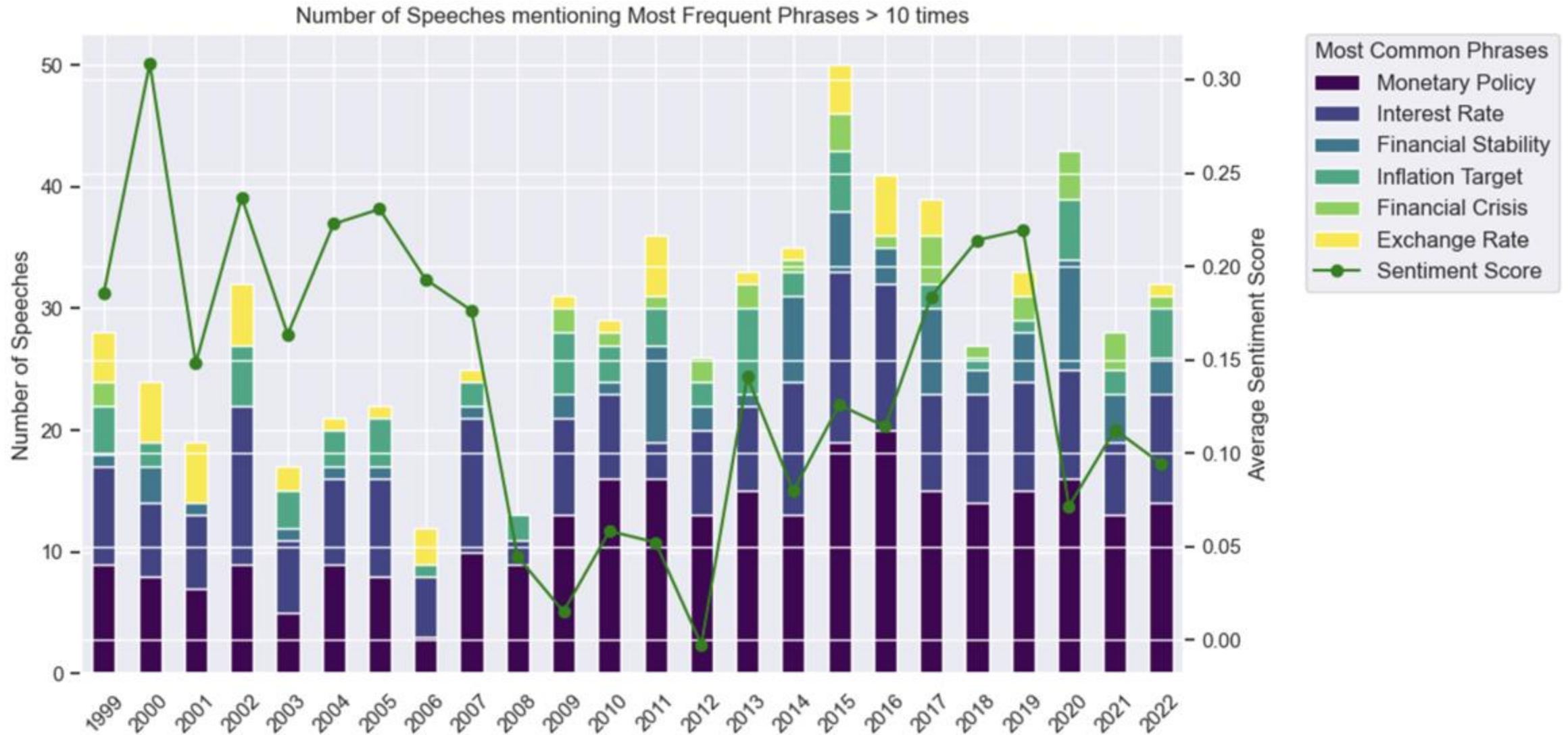
Sentiment Score by Country over Time



Speech Sentiment by Author



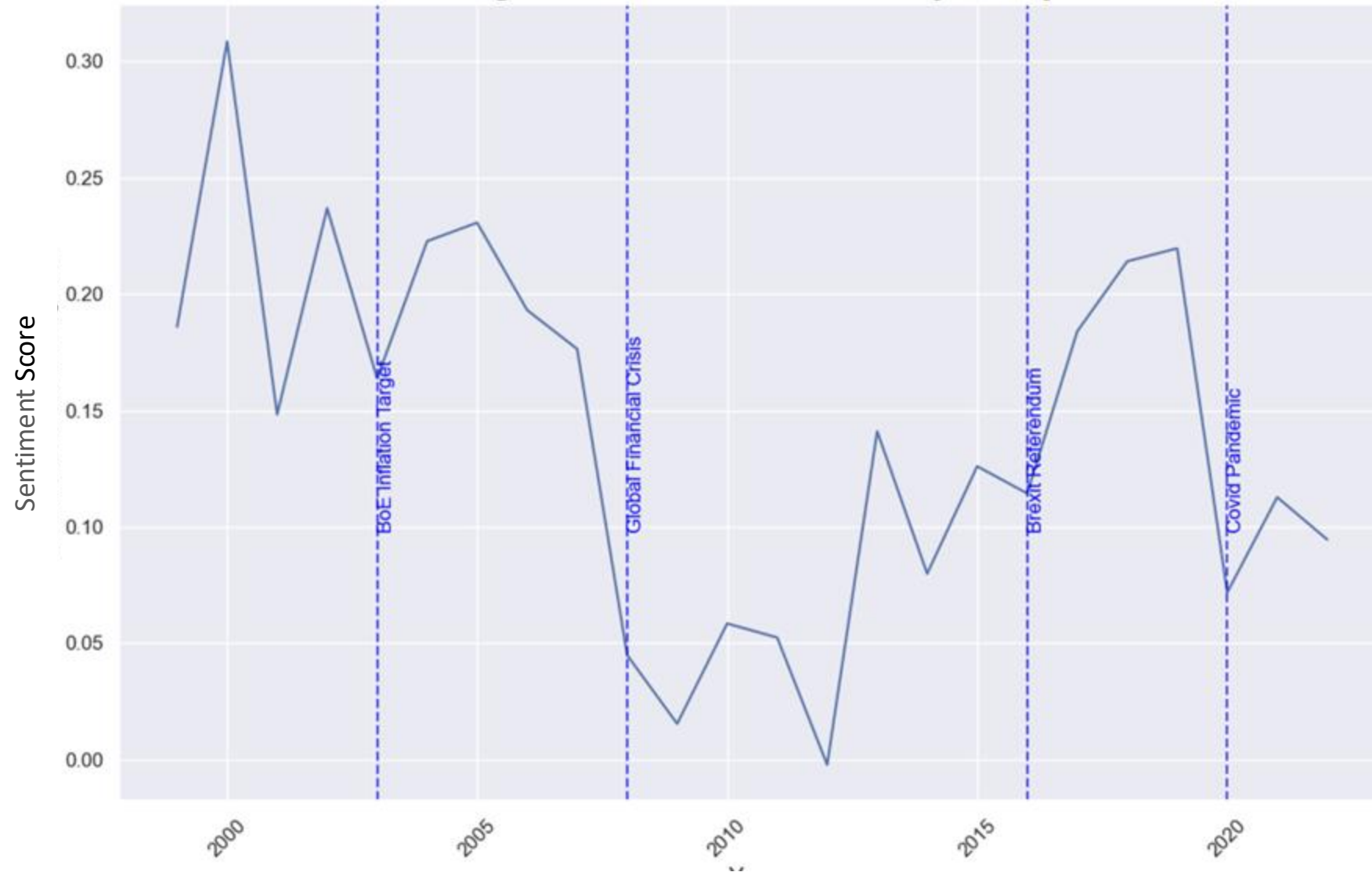
Speech Content by Top Common Phrases



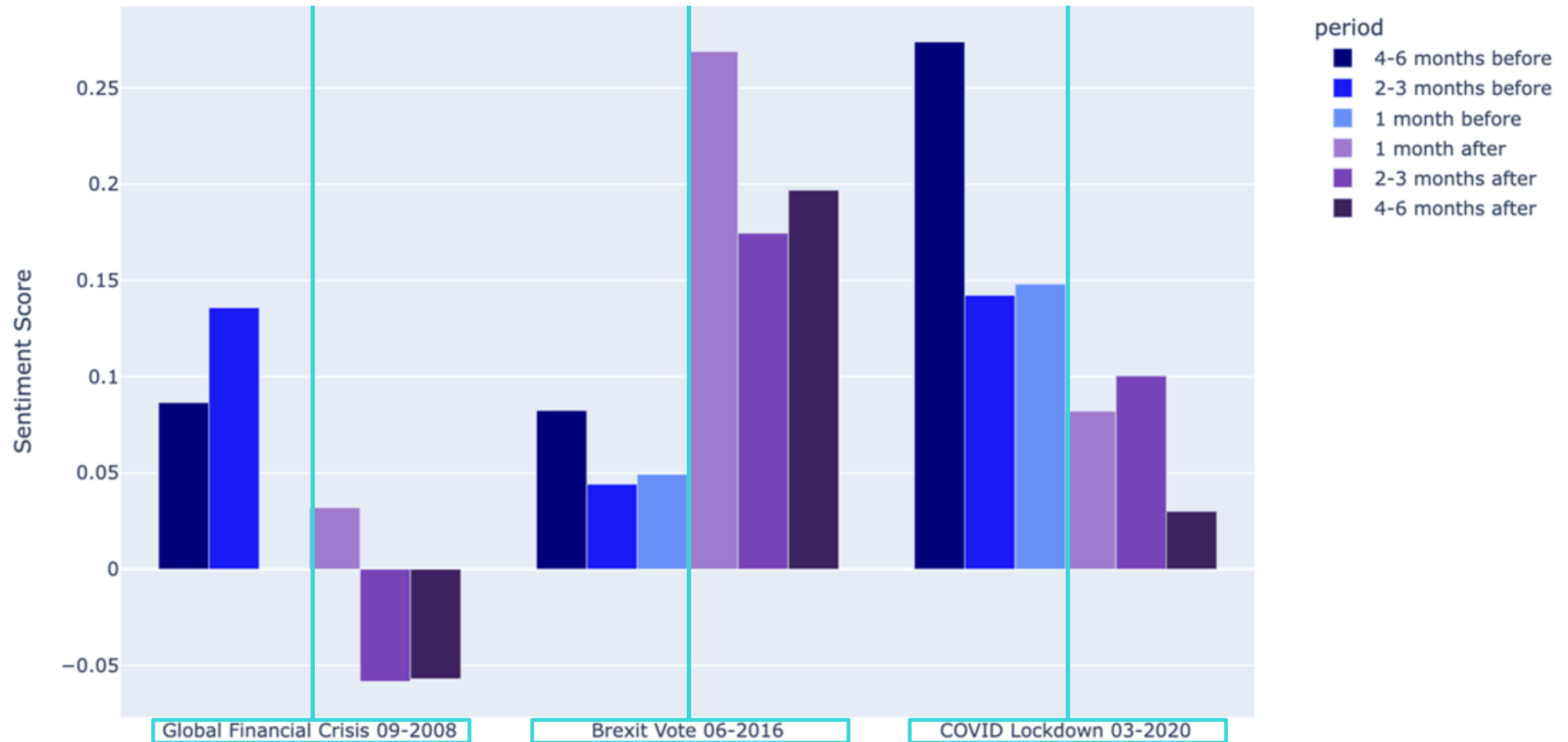


**How does speech
sentiment relate to
economic events?**

Sentiment Scores at Key Events



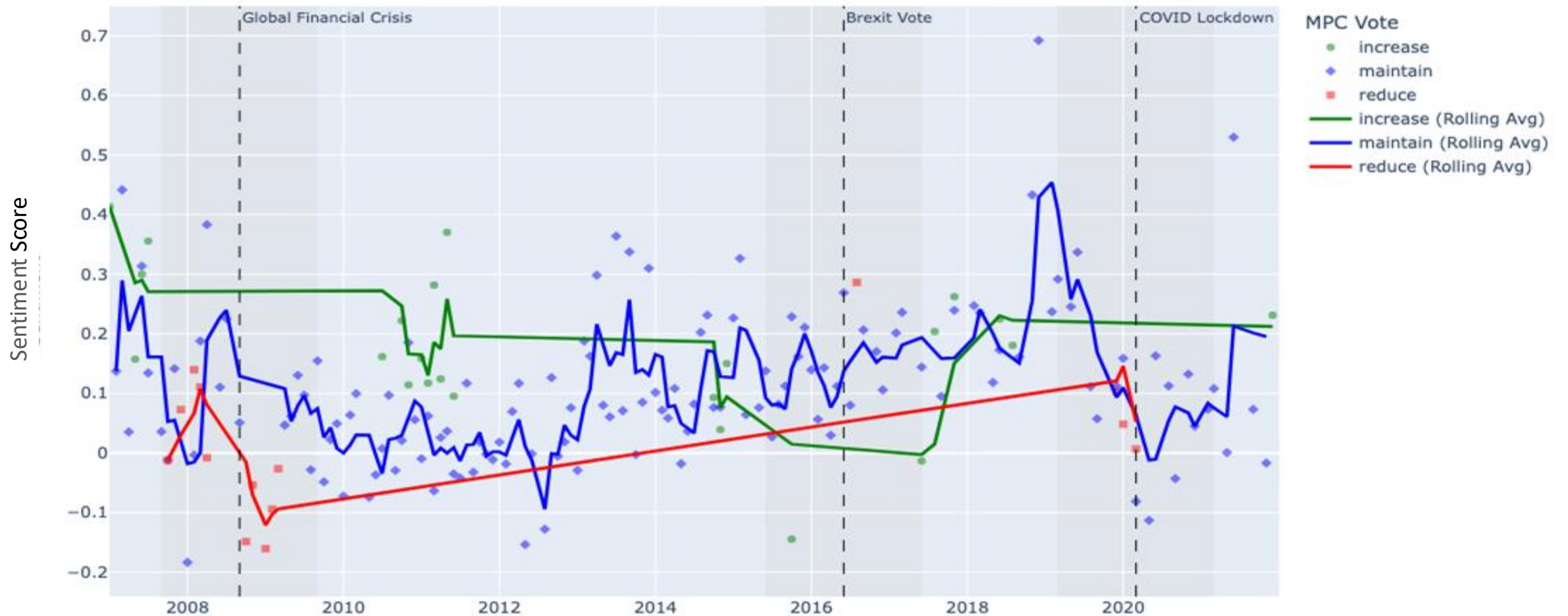
Sentiment Scores before & after Key Events



MPC Voting



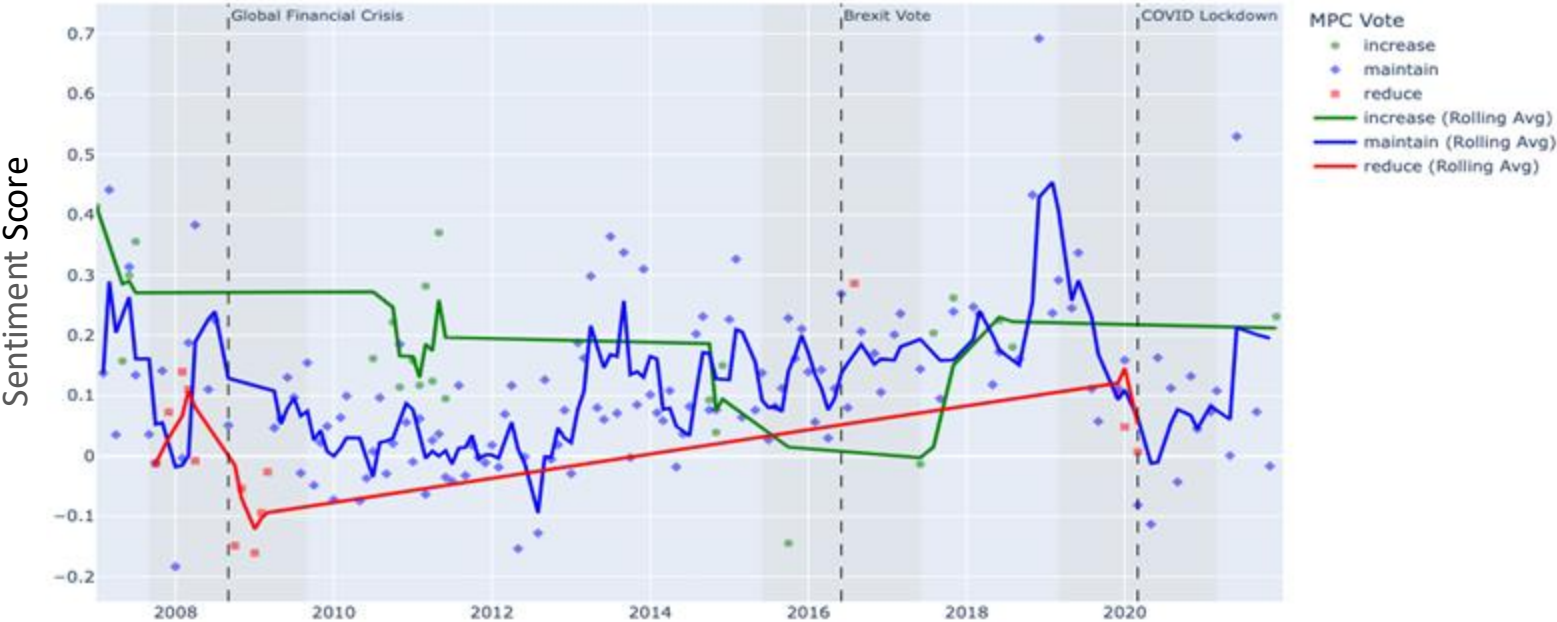
Bank of England Speech Sentiment by Vote Direction



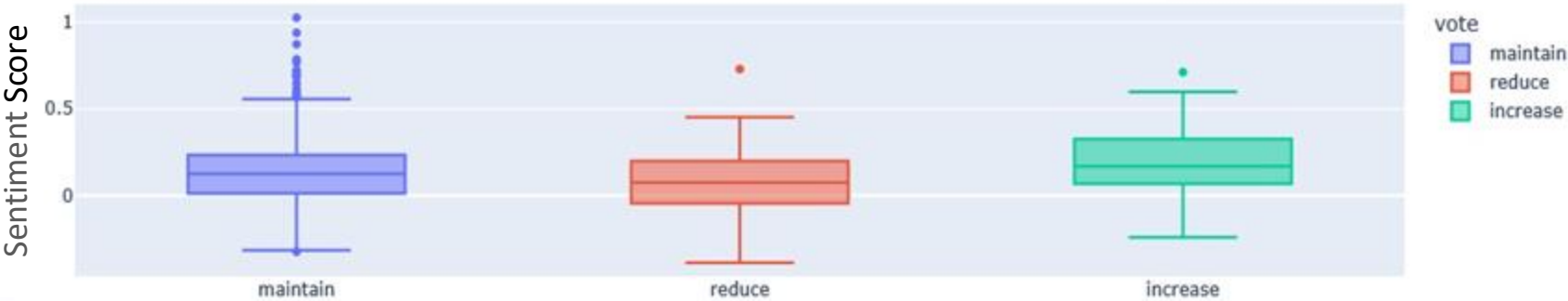
MPC Voting



Bank of England Speech Sentiment by Vote Direction



Speech Tone by Vote Decision



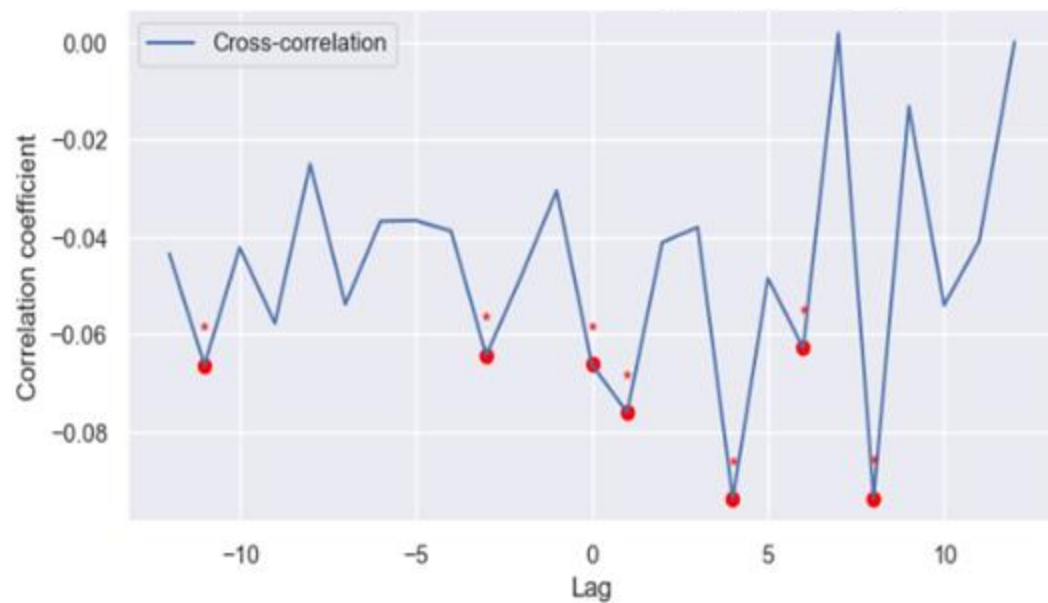


**How is speech sentiment
correlated with economic
indicators?**

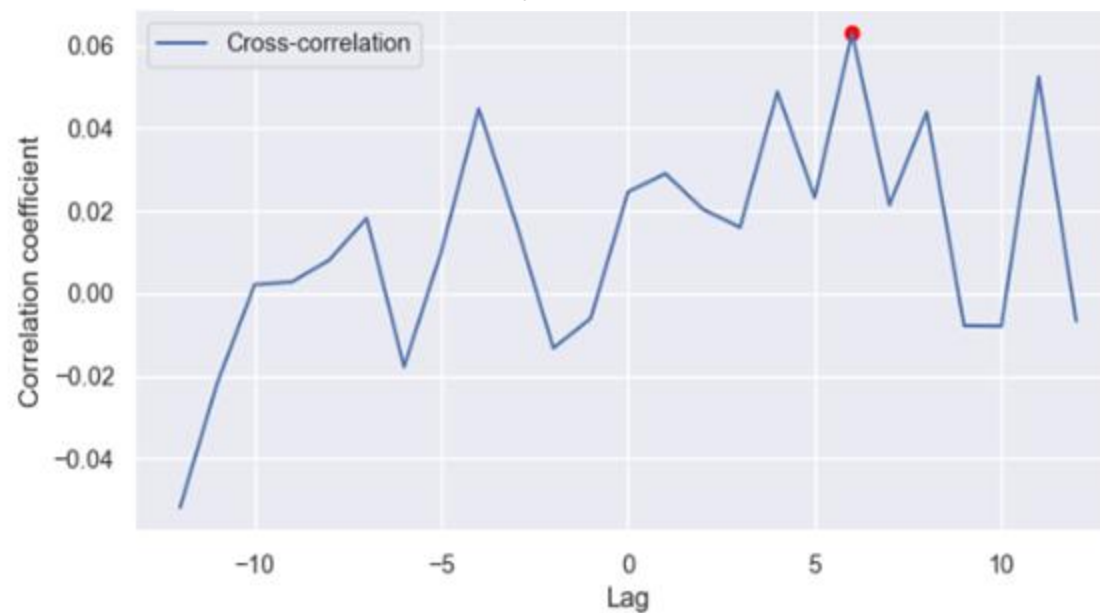
Cross Correlation – Examples



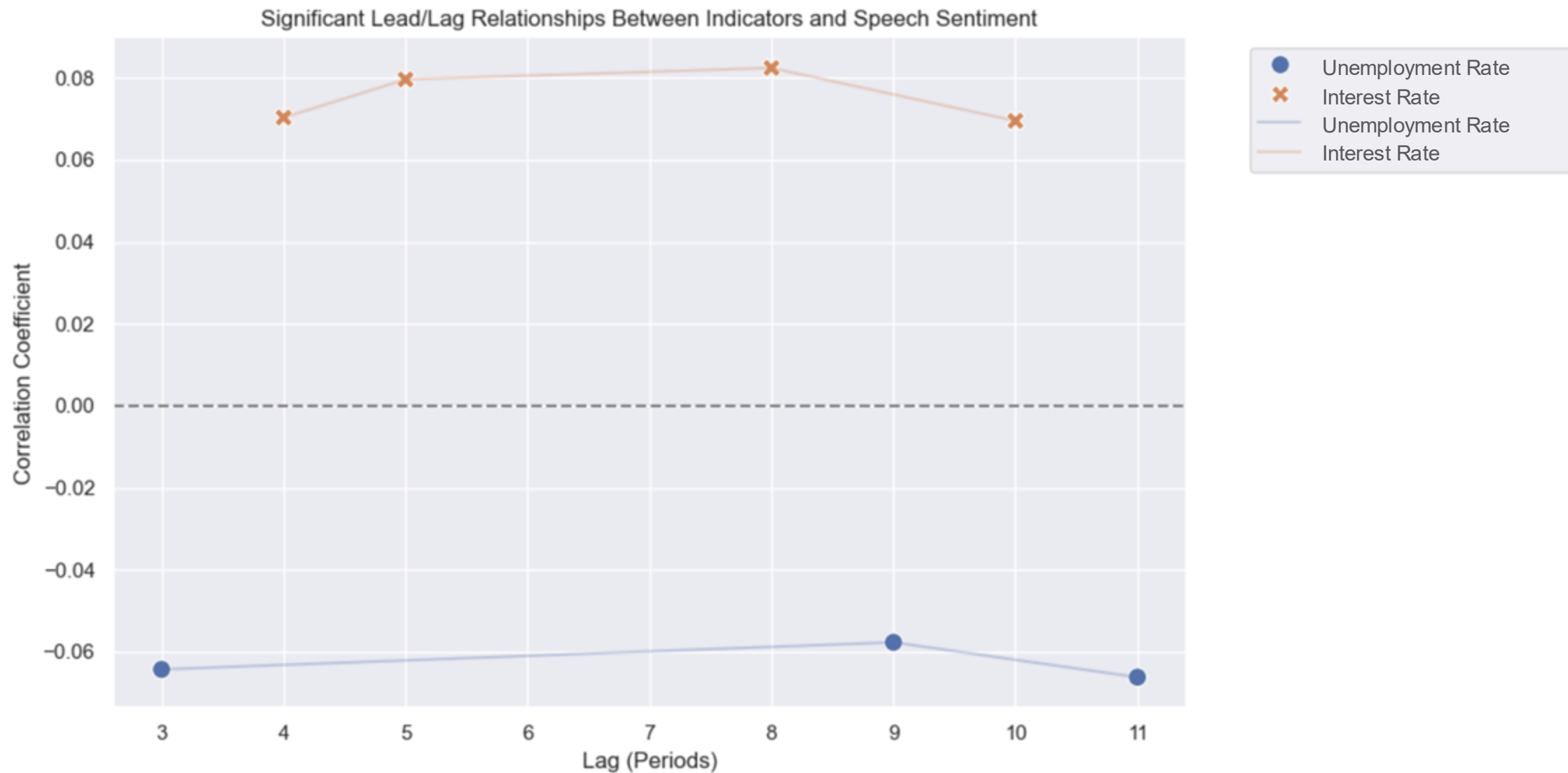
Cross Correlation of Speech Sentiment and Unemployment



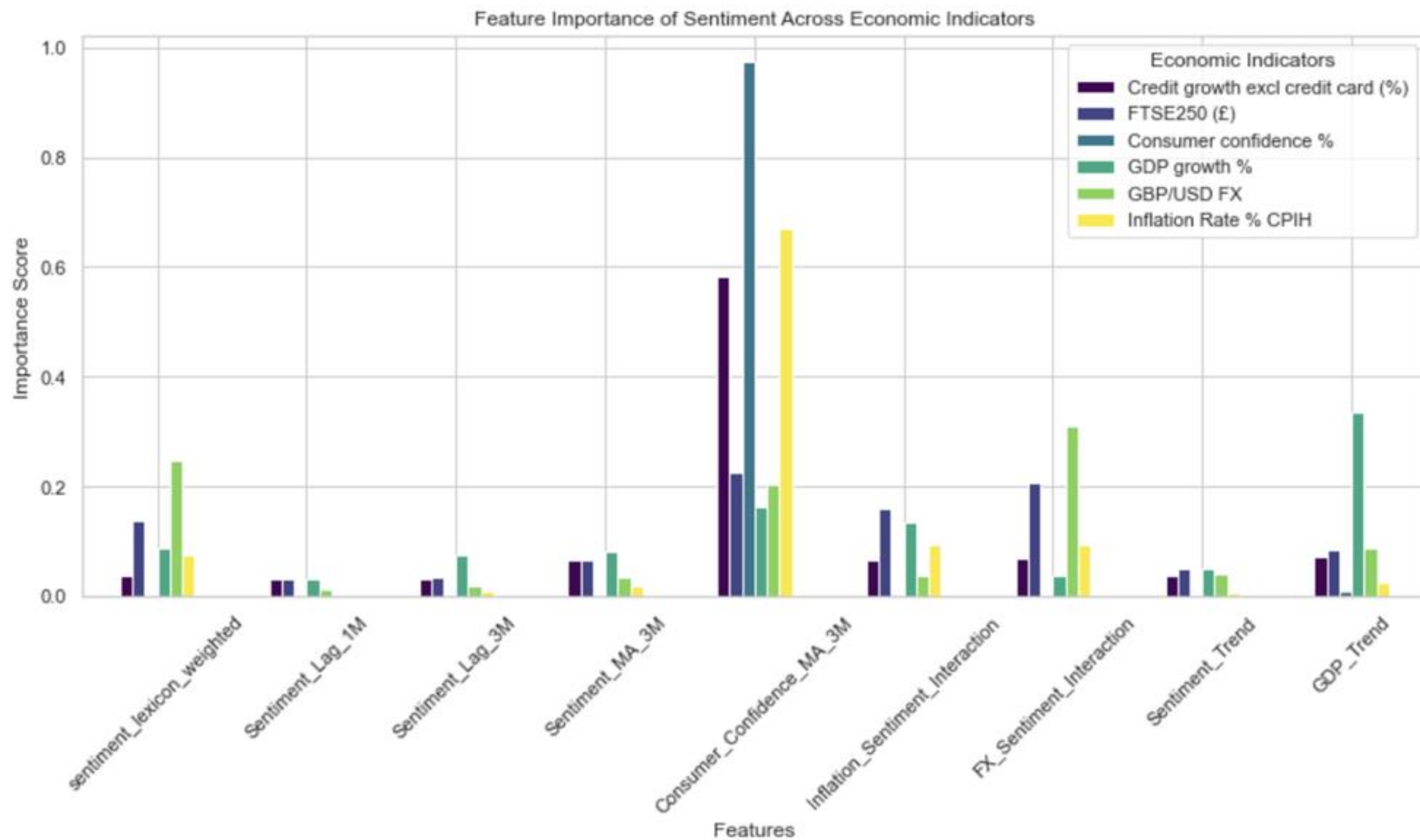
Cross Correlation of Speech Sentiment and FTSE 250



Cross Correlation – Examples



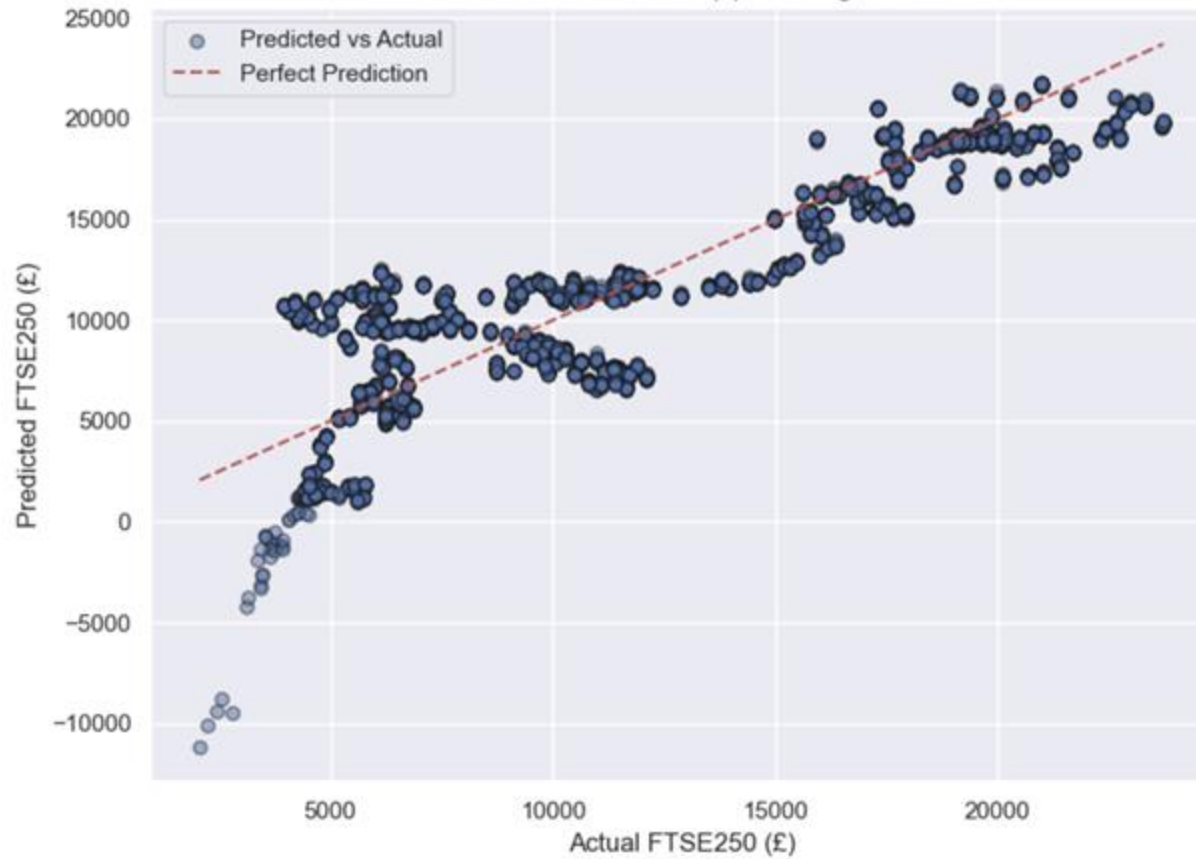
Feature Importance by Indicator



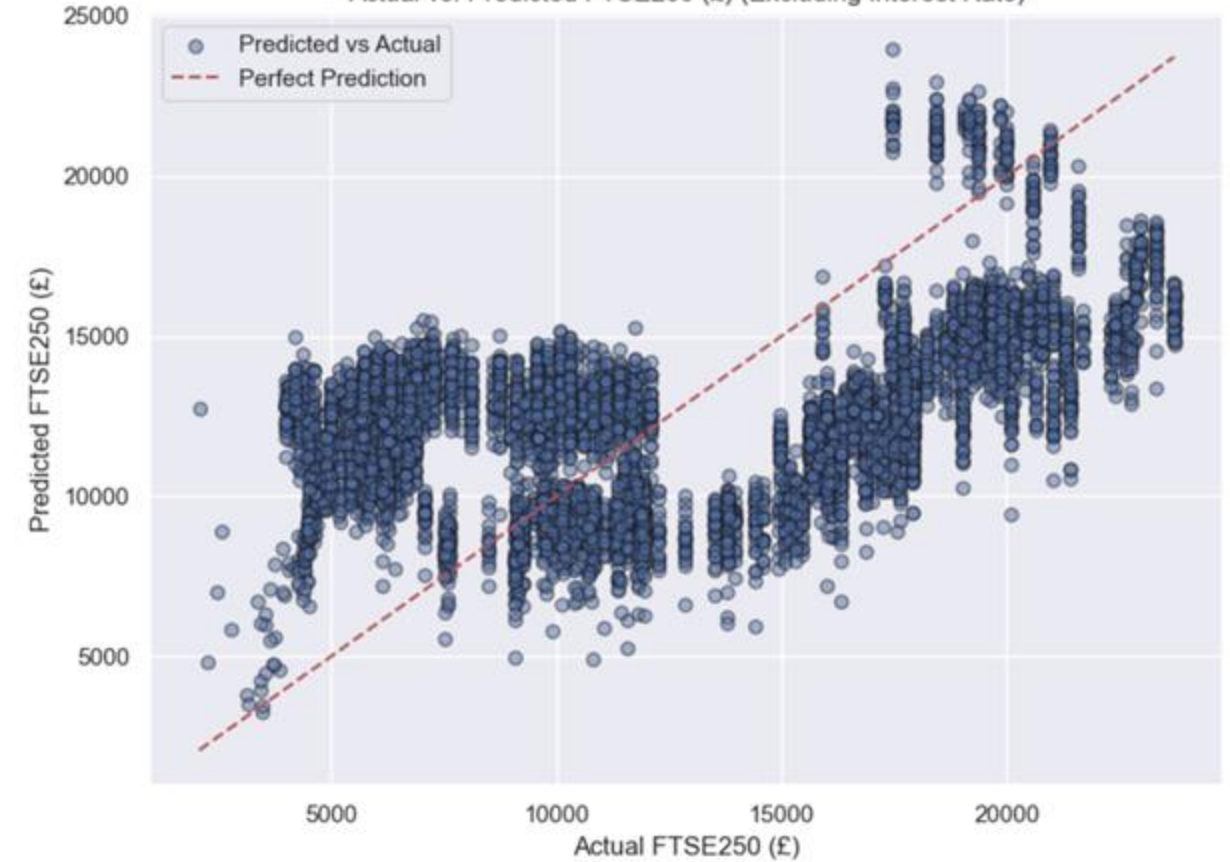
Deep Dive: FTSE 250



Actual vs. Predicted FTSE250 (£) Including Interest Rate



Actual vs. Predicted FTSE250 (£) (Excluding Interest Rate)



Deep Dive: FTSE 250





Recommendations & Future Opportunities

Key Insights

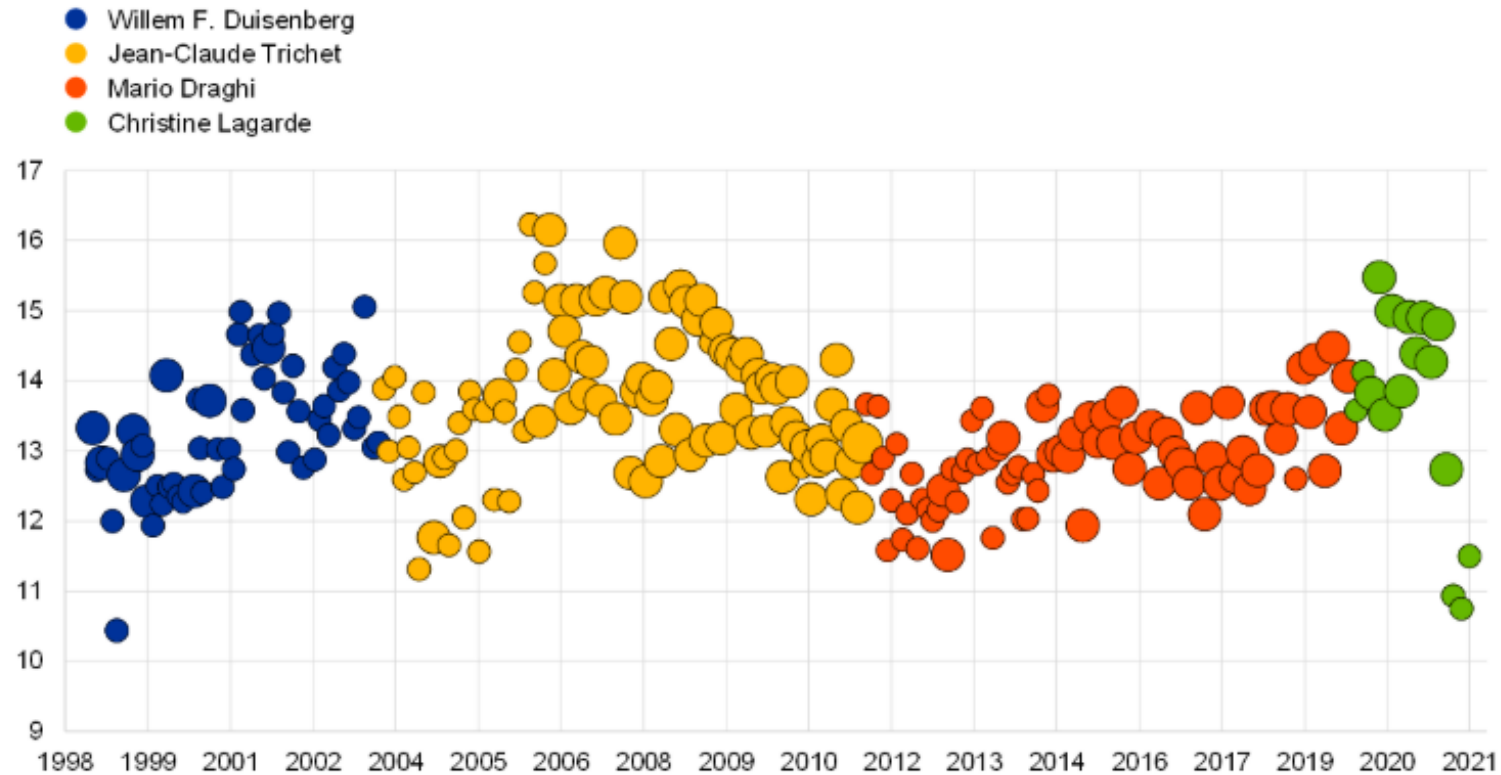


- Bank of England speeches are increasingly concise & frequent.
- Governor tone is more optimistic.
- Major events and MPC voting results drive shifts in speech sentiment.
- Weak correlation of speech sentiment with economic indicators.
- Hybrid models offer stronger predictive insights.
- Most influential features are consumer confidence, interest rates, credit growth and unemployment.

Communication Analysis



Complexity of ECB monetary policy statements



Source: Updated data (October 2021) from analysis in Coenen et al. (2017).

Source: Marius Gardt, Siria Angino, Simon Mee, Gabriel Glöckler, ECB communication with the wider public



Strengthen communication impact

- Expand sentiment dictionary
- Monitor language complexity
- Leverage sentiment in policy communication



Strengthen modelling precision

- Hybrid model simulations of complex scenarios
- Broader inclusion of economic indicators
- Enhanced analysis of key economic events



Strengthen policy accountability

- Visualise tone shifts with a Policy Risk Radar Dashboard
- Deliver concise, data-driven sentiment briefings to executives

Opportunities



- Integrate broader economic data & event analysis
- Enhance thematic analysis
- Analyse engagement with the wider public

Goal: leverage speech sentiment to unlock predictive power & strengthen consumer confidence



Bank of England