FRONT-RUNNING THE FED

USING NLP TO PREDICT FX VOLATILITY FROM FOMC STATEMENTS

BEN ROUNDS
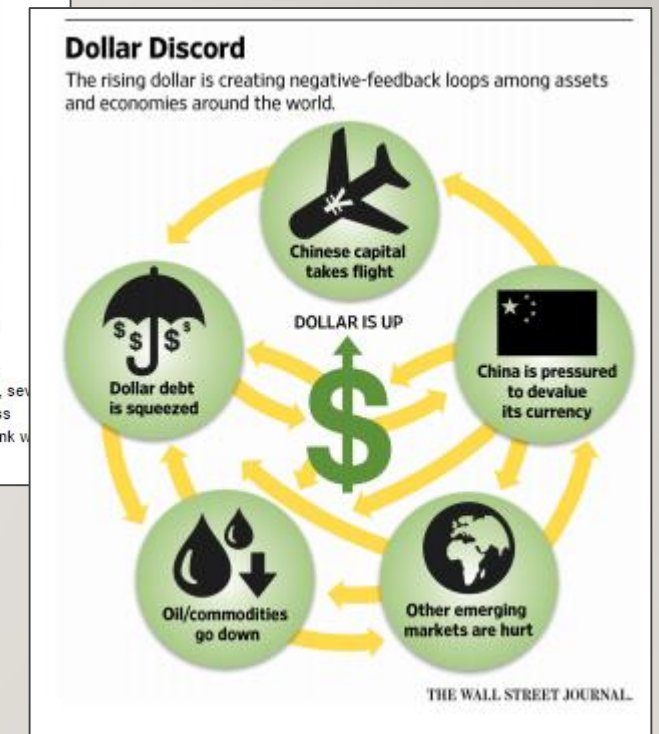
"BUY THE RUMOR, SELL THE NEWS"

THE QUESTION

- Can natural language processing on Fed policy statements reveal insights

Process

- Seek to distill individual statements (8/year) into sentiment indicators

- Assess returns to US dollar versus other currencies

THE DATA

Two data sets – both public:

- Federal Open Market Committee (FOMC) press releases

- USD currency pairs for non-pegged currencies

Cleaning?

- Intend to use spacy to clean text data

- Currency exchange rates clean with the exception of a single data point

Cumulative Levels

THE DATA EXPLORATION

Completed

- Preliminary exploration and cleaning for outliers and dirty data

- Currency moves appear to follow meaningful trends

Further Exploration

- While analysis hopes to use FOMC statements to assess sentiment and tests converse reaction, analysis could be expanded by incorporating Twitter data

THE MODEL

Plans

- Clean and vectorize text data using spacy

- Utilize public financial NLP library to assess sentiment of individual statements

- Assess volatility and returns of currencies against the dollar following announcement

Potential Expansion/Questions:

- Use Twitter data to test sentiment leading up to announcement data

- Suggestions…