

Natural Language  
Processing  
Procedure

European Central  
Bank Speeches

Wrangling Data  
into Corpus

Corpus  
Containing Id,  
Dates and  
Speeches

Corpus

Sentiment  
Analysis Approach

VADER

LM-SA-2020

Dataset

Merge Corpus  
with Economic  
Variables

Economic  
Variables

Cross Validation  
Approach

Train LASSO  
Models, and and  
obtain best  
parameters  $\alpha$   
and  $\lambda$

Train Set

Split Data Train  
into Validation  
and Train

80% Train Set  
20% Validation Set

Validation Set

Evaluate Models  
According to  
Validation set

No

Best Model?

Yes

Train Dataset

Split Dataset  
between training  
and testing

Models  
Estimations

80% Data Train  
20% Data Test

Estimate VAR  
Models

Test Dataset

Obtain Results  
and Estimations

Estimate  
LASSO Models

