



Analyzing 10-Ks to Predict Market Movements

The 10-K Problem:

They convey a company's financial stability, but...

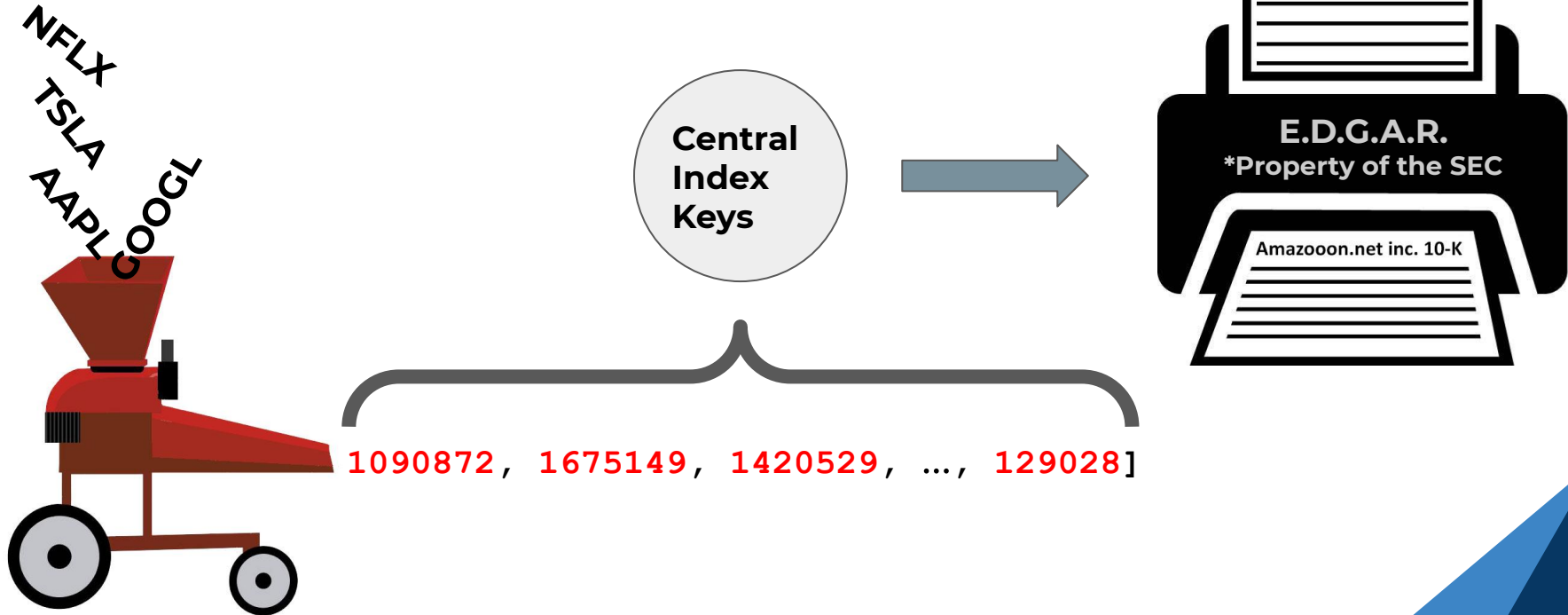
- There's lots of boilerplate language
- They are **dense**
- Companies purposely obfuscate their risks



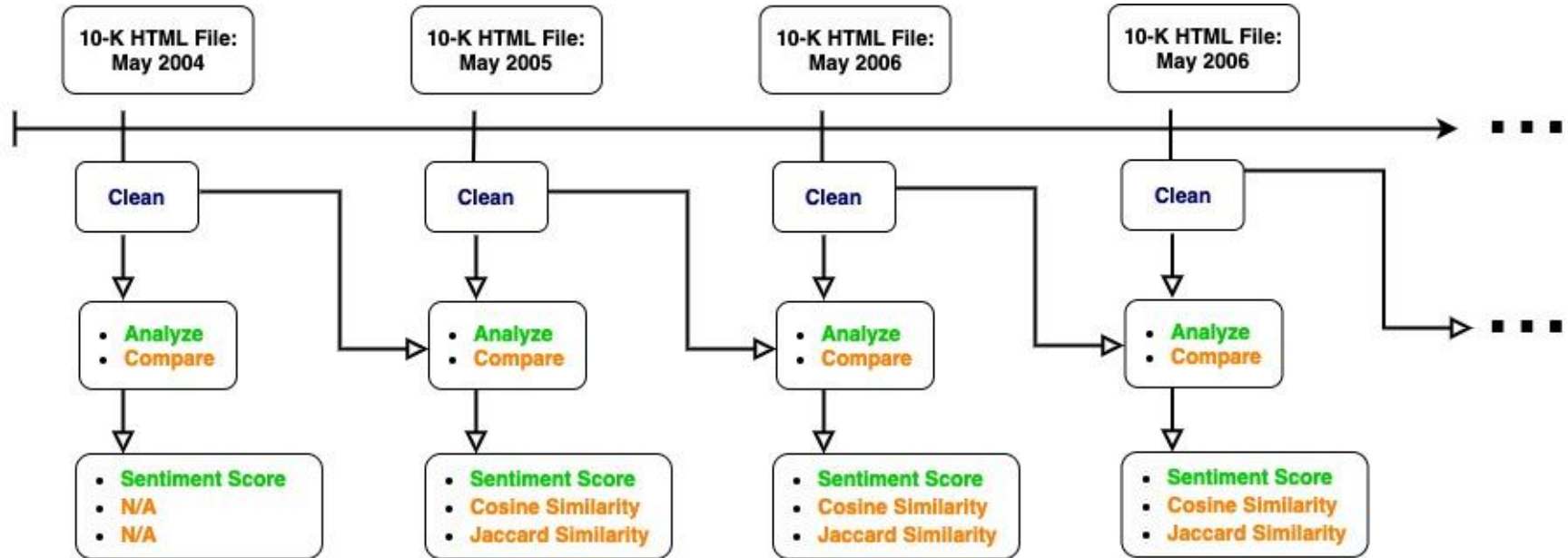
Companies generally do not make major changes to their 10-K and 10-Q filings. When they do, it is predictive of significant underperformance in the next quarter.”

—Lucy Wu, Quantopian

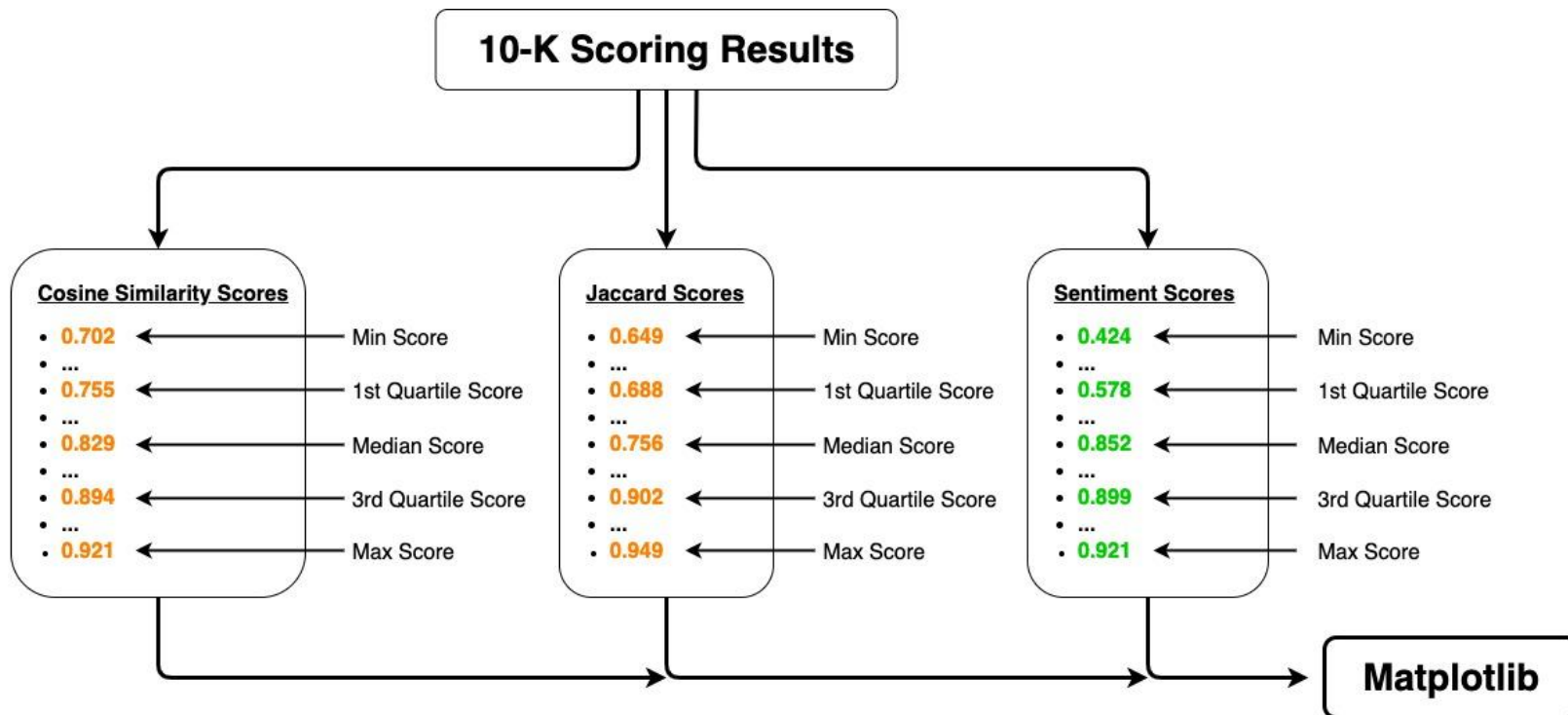
Gathering the Data



Processing the Documents



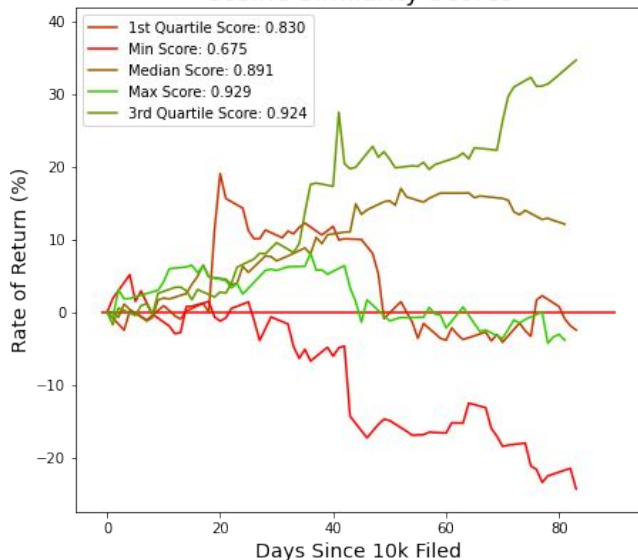
Filtering the Scores



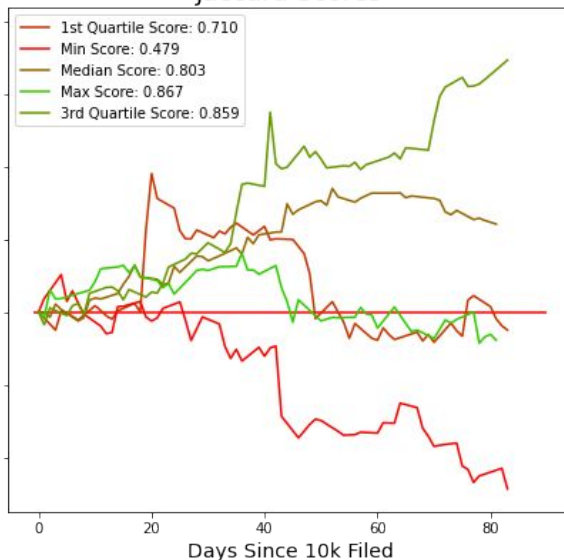
Analyzing the Results

AZO: Price Movement Since 10k Filing

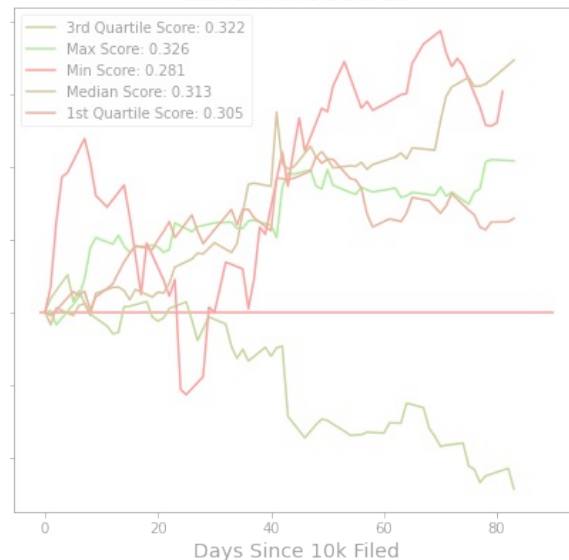
Cosine Similarity Scores



Jaccard Scores



Sentiment Scores



Analyzing the Results

AZO: Price Movement Since 10k Filing

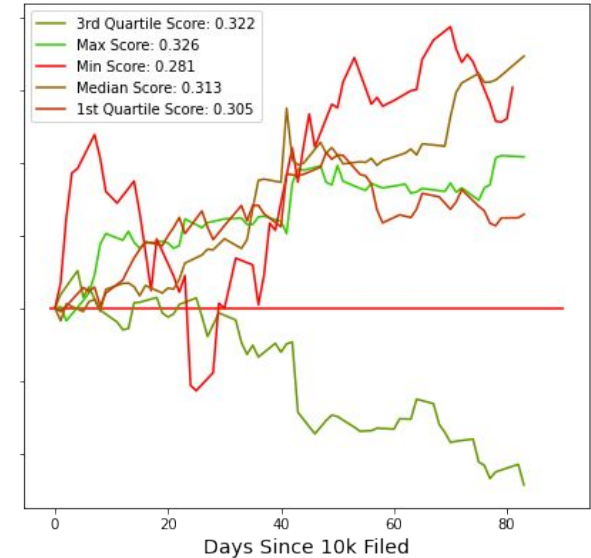
Cosine Similarity Scores



Jaccard Scores



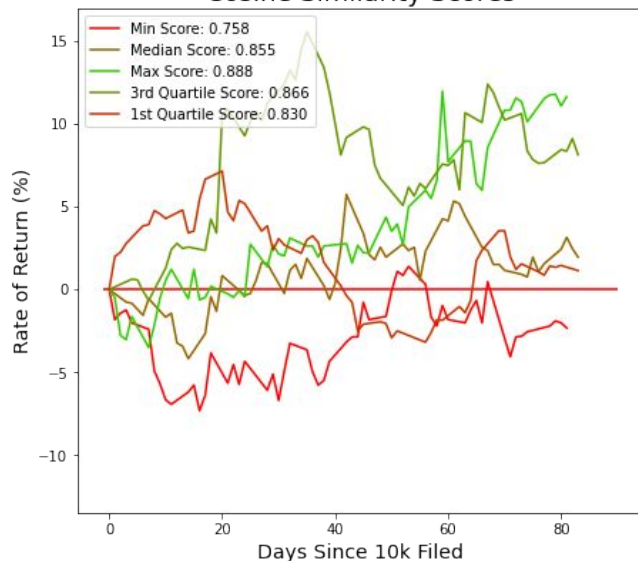
Sentiment Scores



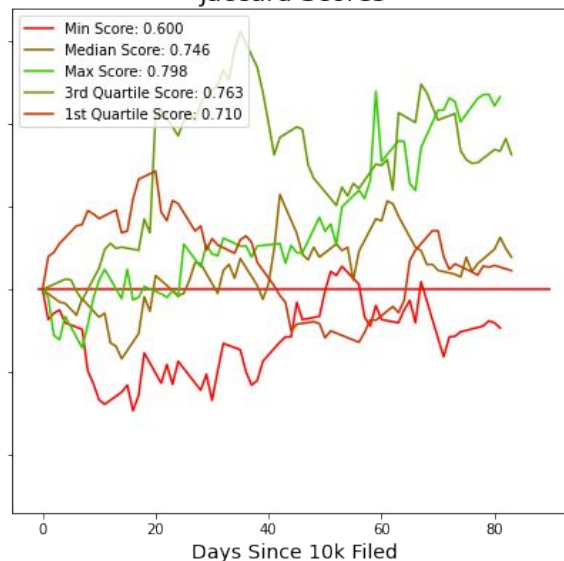
Analyzing the Results

BMJ: Price Movement Since 10k Filing

Cosine Similarity Scores



Jaccard Scores



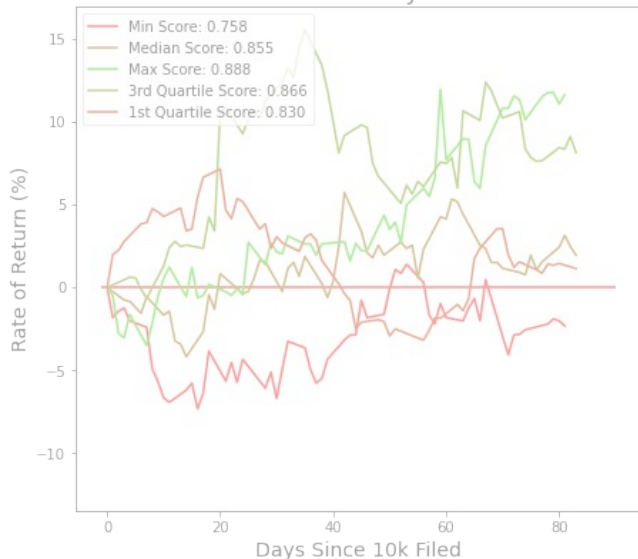
Sentiment Scores



Analyzing the Results

BMJ: Price Movement Since 10k Filing

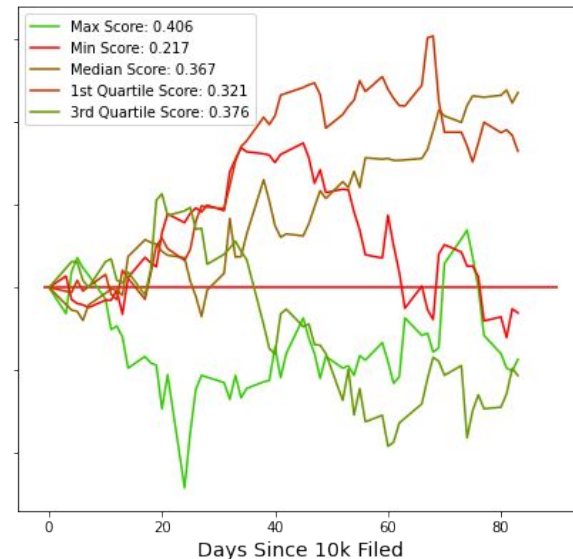
Cosine Similarity Scores



Jaccard Scores




Sentiment Scores




What Does This all Mean?

The metrics generated from 10-Ks could be used in several ways:

- **Suited for medium term investments (30+ days)**
 - Apply to traditional algos
 - Warning flag
- 


What Does This all Mean?

The metrics generated from 10-Ks could be used in several ways:

- Suited for medium term investments (30+ days)
 - **Apply to traditional algos**
 - Warning flag
- 

What Does This all Mean?

The metrics generated from 10-Ks could be used in several ways:

- Suited for medium term investments (30+ days)
 - Apply to traditional algos
 - **Warning flag**
- 

Questions?

—