

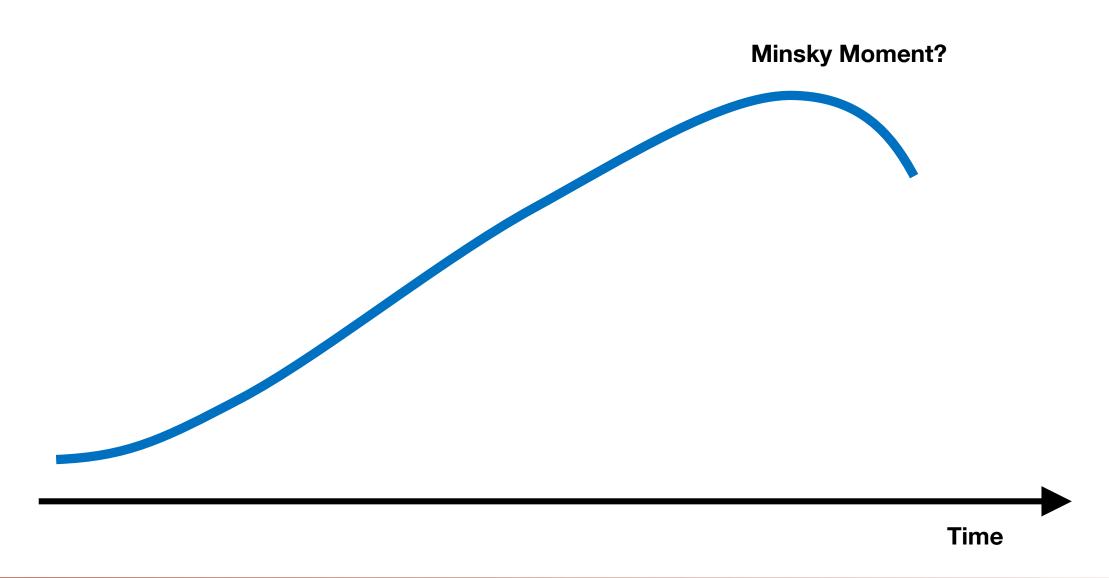
APPLICATION OF TEXT MINING TO THE ANALYSIS OF CLIMATE-RELATED DISCLOSURES.

Ángel Iván Moreno and Teresa Caminero García

Banco de España November 12, 2020





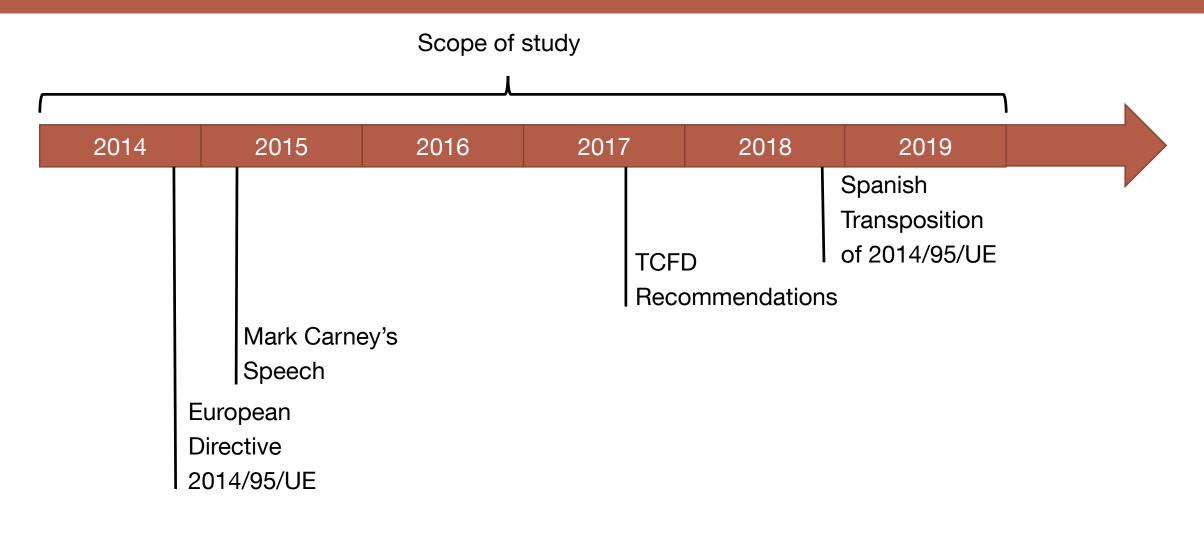




"Better information – about the costs, opportunities and risks created by climate change – can promote timely responses."

Mark Carney







- Technique?
- English
- Mainly Annual Reports and ESG Reports

Our approach

8

- Spanish
- Banks
 - Sector-specific (Pillar 3)
 - Country-specific (Report on Remuneration of Directors)
- Flexible and interpretable method

BANCO DE **ESPAÑA**

Preprocessing

Corporate reports



Word formatted reports



Text excerpts



DataStore python



Tokenization and



GUI Search tool





expert

Conversion through Kofax Power PDF

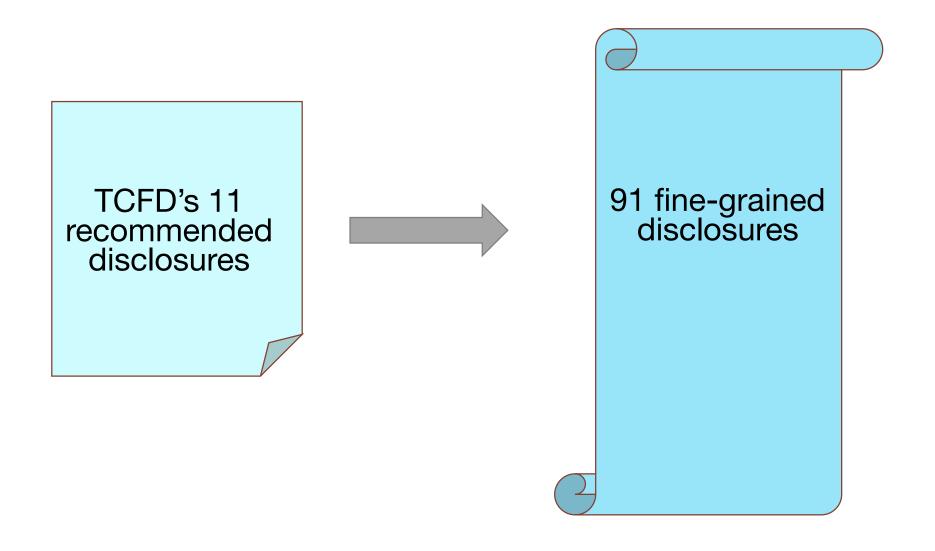
Extraction of textual content in excerpts

python

indexing

Domain





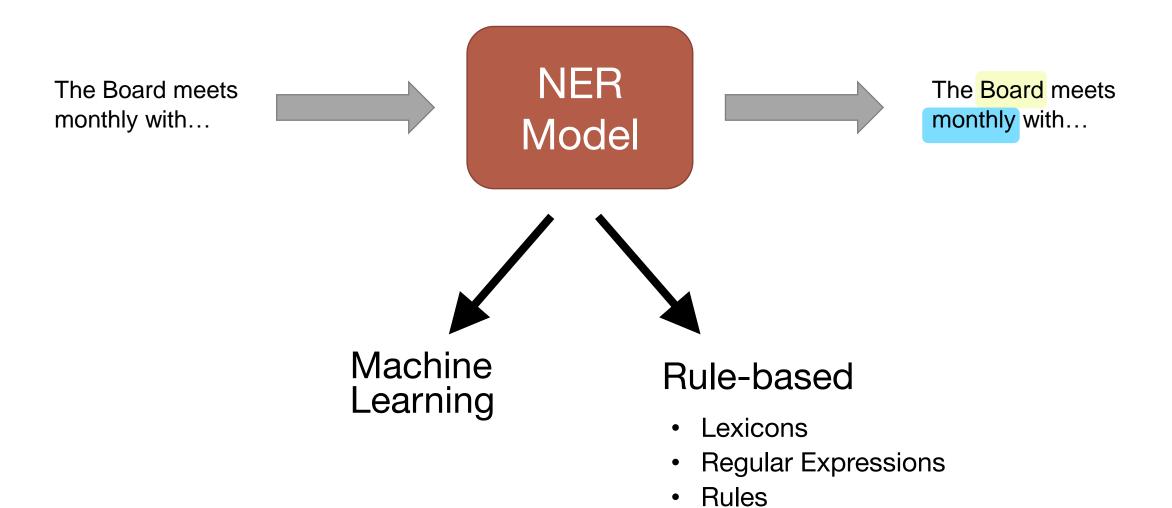
Governance

a) Describe the board's oversight on climate-related risks and opportunities



Describe the **frequency** of the **board**'s meetings with a sustainability committee

Fine-grained disclosures



Corporate reports



formatted reports

Word



python

Extraction of textual content in excerpts

Text excerpts



Lexicon

and rules

DataStore



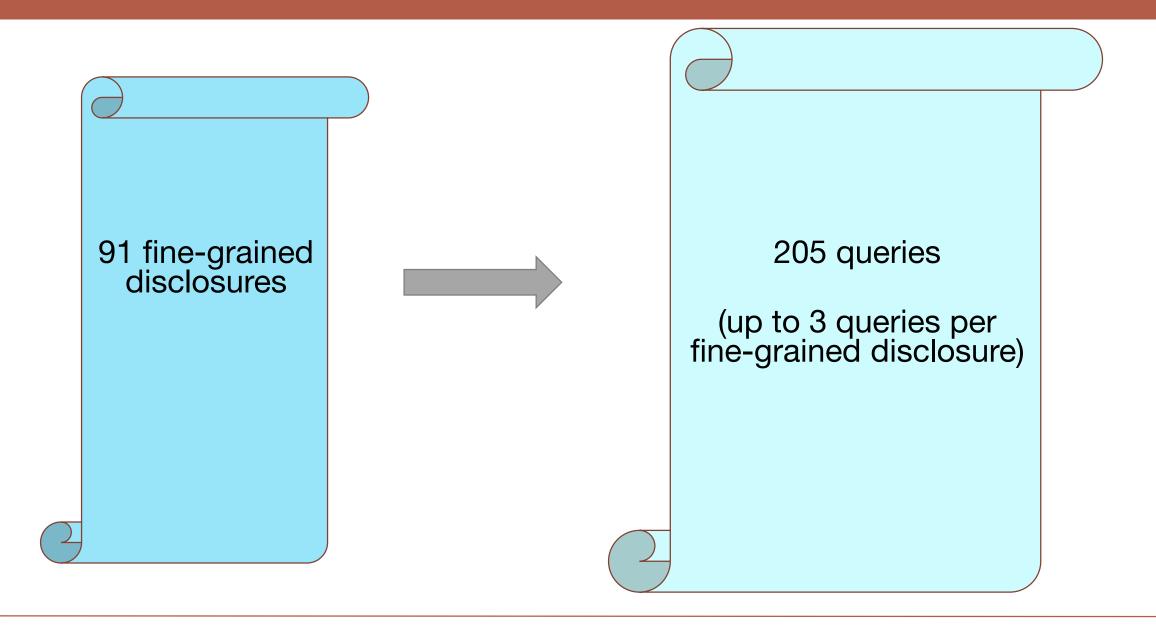
GUI Search tool



Domain expert

Conversion through Kofax Power PDF

FINANCIAL INNOVATION DIVISION

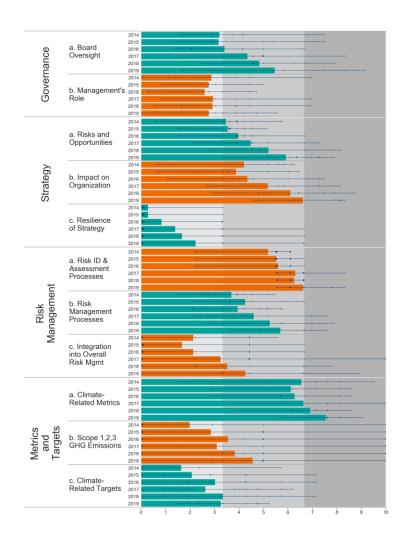


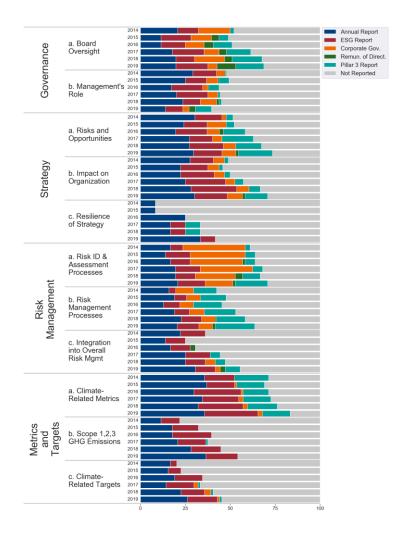


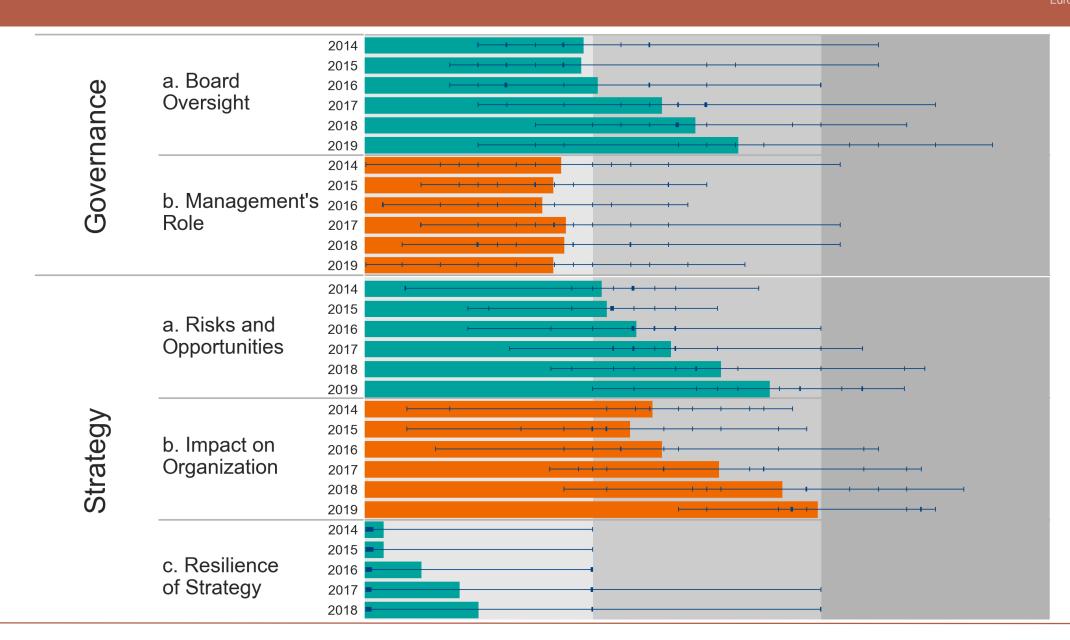
climate-change

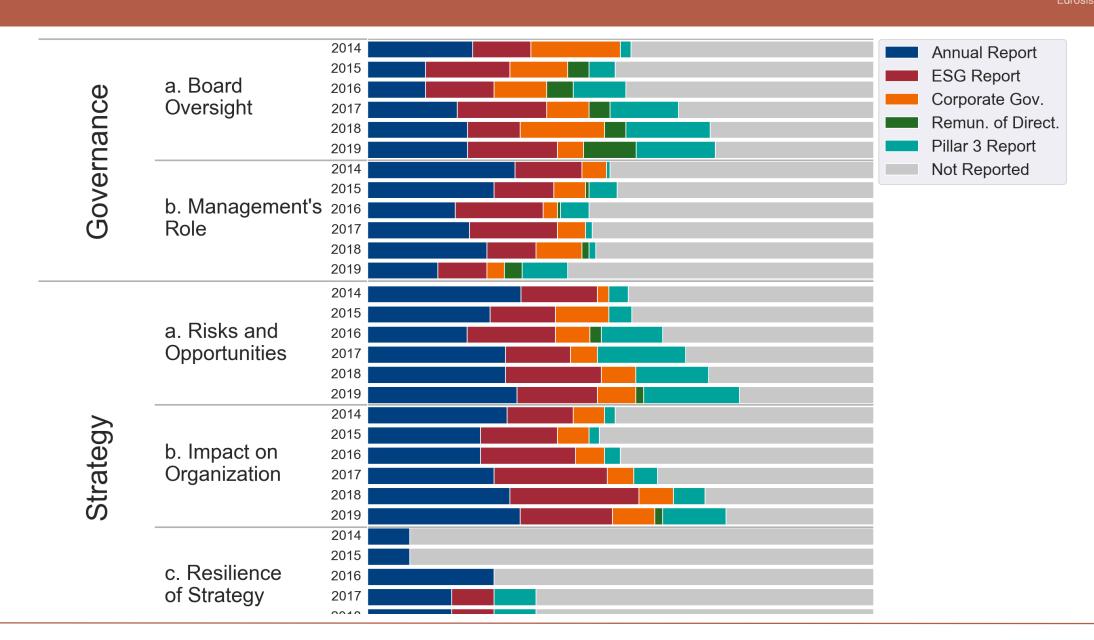
sustainability



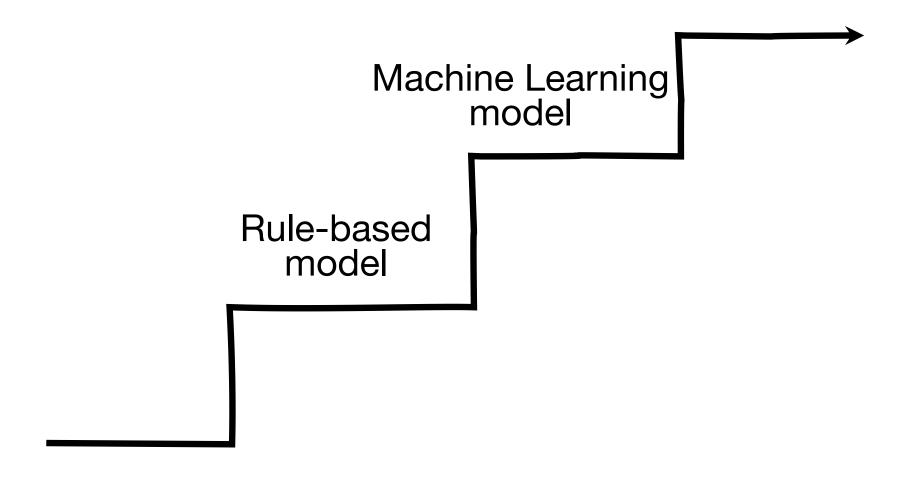


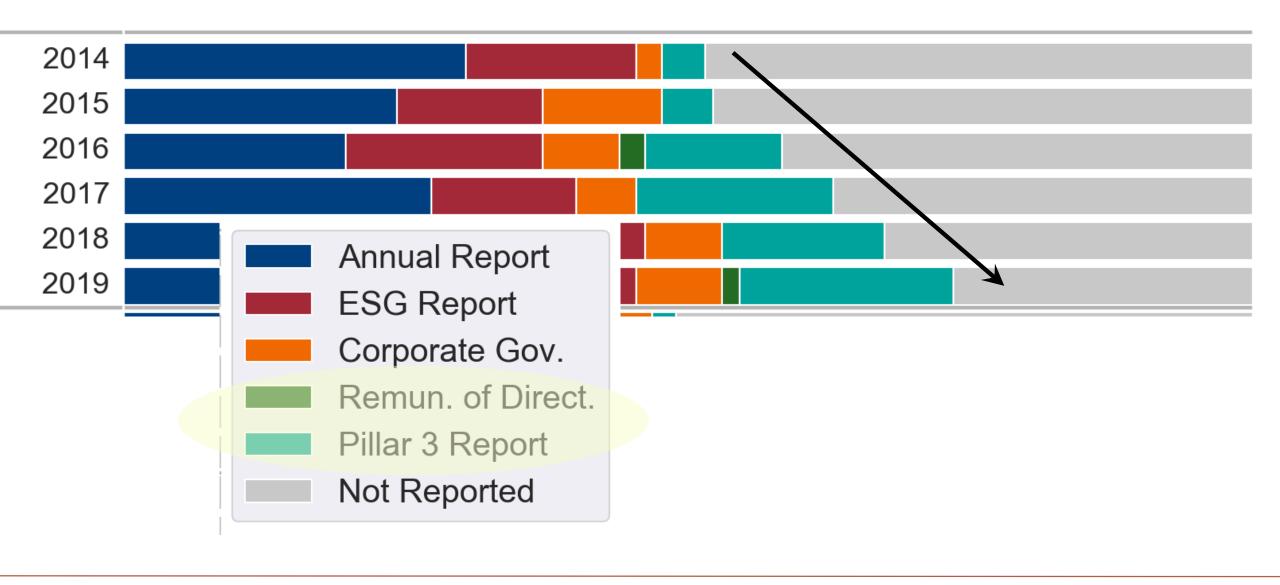














THANK YOU

