Seeing the Forest for the Tree: Using hLDA Models to Evaluate Communication in Banco Central do Brasil
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Discussion

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* The views expressed in this paper are those of the author and do not necessarily represent those of the Federal Reserve Board or the Federal Reserve System.
This paper’s contribution

Estimate an hLDA model to explore communication by the Banco Central do Brasil

- **Main motivation is dual:**
  - From the policy perspective, communication by central banks is a powerful tool.
  - From the methodology perspective, text analysis/computational linguistic techniques, including LDA, are limited.

- **Main contributions:**
  - Use hLDA to filter the topic structure of Copom’s minutes;
  - Calculate sentiment (and uncertainty) indexes for each topic;
  - Compare indexes with financial cycle variables;
  - Evaluate coherence between minutes and statements
Very interesting topic; nice application of the methodology; and well-written paper.

Many interesting findings but some more structure is needed

My comments:

⇒ Big picture: What is the main goal of the paper and how does it contribute to the literature?

⇒ Methodology 1: Effect of structural breaks

⇒ Methodology 2: Timing of release, coherence, and informational content

⇒ Methodology 3: Topic-specific dictionaries
Main goal of the paper
Is it to show that hLDA is better than other techniques?

- The authors provide intuition for why hLDA is better than LDA, and I am convinced topic selection is more useful.
- If this is the main goal, authors could provide more empirical evidence for comparisons across techniques (fairly; for instance, by assuming the same number of topics in LDA and hLDA; 4?).
- Why not a more naive index calculated using sentences with "inflation" and "inflation expectations" (if inflation expectations are the main topic)?
- What is the price to pay for going from LDA to hLDA? Topics still need a title (to be relatable), you probably need more texts for hLDA, etc.
Main goal of the paper

Is it to provide useful policy tools?

- How useful are topic indexes?
- Indexes need to be rigorously validated (beyond correlations with financial cycle indicators)
- Timing: what information do we obtain first, the text or the economic variable?
- Show lead-lag relations between indexes and economic variables
- Is the information in indexes additional to that of other lead indicators (for instance, market-based measures)?
Main goal of the paper
Is it to investigate central bank’s communication strategies?

- Authors should explain better why exploring coherence between minutes and statements is interesting.
- Explore why sentiment or uncertainty in text deviates from economic indicators (see my paper on governance with Ricardo Correa and Stijn Claessens).
- Investigate changes in the structure of texts or in the dynamics of the index as changes in communication strategies.
A side effect of a somewhat unstructured punchline is a contribution that is hard to understand.

The structure of the current literature review is just a summary of existing papers in several related branches of the literature.

What is the story? How are these branches connected among them and with your contribution?
Methodology
Effect of structural breaks

- Changes in the structure of statements and minutes during the sample pose significant challenges
- If we were to assume that communication strategies have changed, should we:
  - use the full sample to obtain topics and compare topic indexes before and after the structural break, or
  - estimate the topics using text before and after the structural break?

- Are there other ways to investigate if communication strategies have (intentionally) changed (time fixed effects, chair fixed effects)?
I am a bit confused for why minutes are released a week after (the FED has its own considerations).

Are the minutes modified before release? Is it to prevent large market swings (even when markets are closed at the time of release)?

Current setting for coherence is as follows:

\[ \text{Minutes}_t = \alpha_0 + \alpha_1 \text{Statements}_t + \ldots \]

\[ \text{Statements}_t = \alpha_0 + \alpha_1 \text{Minutes}_{t-1} + \ldots \]

They are released on different dates but occur on the same day. Why the lag on the second equation?

Overall, why should minutes and statements provide different information?

Has the difference in informational content between minutes and statements changed with the structural change?
Methodology
Timing of release, coherence, and informational content

- Why not a lead-lag analysis
- Why not a VAR, as in Baker, Bloom, and Davis’ papers and other uncertainty papers?
- EPU and uncertainty index are different. Which one is more informative (missed opportunity to validate your methodology)?
Methodology

Topic-specific dictionaries

- I understand the intuition for why each topic would need a different dictionary (add this to the literature review, including my paper with Ricardo Correa)
- How are these dictionaries defined?
- Are they validated?