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New Challenges in Central Banking: Monetary Policy Governance and Macroprudential Issues
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• Talk is based on the paper: *Estimating the Preferences of Central Bankers: an Analysis of four Voting Records*, (2013)

→ New and updated version is due for this summer.

→ In this talk already some previews of the results.

→ Paper discusses several central banks, here focus on Czech National Bank

• Part of ongoing research agenda: Eijffinger et al. (2017), EJPE, on Bank of England; Eijffinger et al. (2015) on the FOMC (new version in the fall)
What is it about?

- Increasing attention to design/composition of central bank committees
  - → effective policy
  - → accountability and governance
  - → biases in decisions
  - Internals/externals Besley, Meads, Surico (2008)
  - Appointment (how and by whom) Chappell, Havrilesky, McGregor (1993)
  - Gender Masciandaro, Profeta, Romelli (2016)
  - Regional representation Meade, Sheets (2002)
  - ...
How do we do it?

1. Use method to estimate preferences of individual members of a committee
2. Study systematic patterns in these preferences and differences

→ **Important:** Each central bank is a case study!

→ Study more and different central banks to build up knowledge and confidence in external validity.

Context always matters in this line of research (regardless of the method used).
How do we do it?

- Estimate preferences of central bankers and rank them on a Dove-Hawk scale
→ Answer the question: "Assume policy makers only differ in their dovishness-hawkishness, how should we rank them to explain the observed votes?"
→ Central Bankers generally not too fond of this labelling

BUT

1. a useful summary/shortcut
2. a more sophisticated meaning in our framework (see methodology)
3. used by observers and the labeling is here to stay
Some results: Example

Look! Up in the sky! It's a hawk. It's a dove. It's Janet Yellen.
Spatial voting model

Basic model:

\[ P(y_{nt} = 1) = \text{logit}^{-1}(\beta_t x_n - \alpha_t), \]

with non-informative priors on \( \alpha_t, x_n, \beta_t \).

→ logit model with everything unobserved:

\( y_{nt} \): observed vote of committee member \( n \) at time \( t \)

\( \alpha_t \): vote-difficulty parameters or meeting specific intercepts (capture all factors relevant to vote decision)

\( \beta_t \): discrimination parameters: makes model flexible → positive and large:

\( x_n \) matter

\( x_n \): ideal points

In the paper we explore hierarchical extensions:

→ read new version of the paper
If $x_1 = \alpha_2$, 
then $\logit^{-1}(x_1 - \alpha_2)$
$= \logit^{-1}(0) = 0.5$

If $x_1 > \alpha_1$,
then $\logit^{-1}(x_1 - \alpha_1) > 0.5$

Assume $\beta = 1$
Strength vs. weaknesses of approach

• Strength:
  1. Flexible (we can make hierarchical extensions)
  2. Joint probability distribution over parameters
     1. Take uncertainty seriously: problem with competing approaches
     2. Create any test of derived quantity of interest
  3. ”a lets look at the data without pre-conceptions”-approach
     (cfr. comment by former central banker)

• Weakness:
  1. static preferences (data restriction)
  2. not enough link with theory (?)
  3. reduces complex decision making process to points on a single dimension
Data

- Board decisions (votes) regarding main policy rate from CNB website
- Data cleaning: we can only use meetings with disagreement
  → no disagreement ⇒ no information regarding individual differences
- Votes are coded as zero (lower policy rate) or one (higher policy rate)
- Eight cases of three policy rates in a meeting: code as two pairwise choices
  → does not impact results
  → we are working on a more general procedure (but won’t affect results)
Data

Sample: February 1998 - May 2017
⇒ since Nov 2012 at the zero lower bound and no disagreement in votes since
⇒ Effective sample runs until Nov 2012

21 Board members and 82 vote decisions
Visualization of voting record

Dashed line: equal amount of dovish and hawkish votes

Number of dovish votes vs Total Votes

- Kysilka
- Vit
- Kaftan
- Pospisil
- Lizal
- Hrncir
- Janacek
- Tosovsky
- Tomsik
- Frait
- Rezabek
- Dedek
- Stepanek
- Hampel
- Erbenova
- Holman
- Racocha
- Tomovsky
- Hampl
- Frait
- Holman
- Zamrazilova
- Niedermayer
- Tuma
- Singh
- Rezabek
- Niedermayer
- Tuma
Historical Ranking

Revealed Preferences in the MPC

Dove − Hawk

50% credibility interval

Niedermayer
Zamrazilova
Kysilka
Racocha
Holman
Janacek
Tuma
Erbenova
Vit
Kaftan
Stepanek
Dedek
Hamil
Rezabek
Hrncir
Lizal
Tosovsky
Tomsik
Pospisil
Singer
Frait

−4 −2 0 2 4

Dove − Hawk
Quantities of interest

We can try to look at quantities of interest.

Gender: Do Women differ in their latent preferences from men?
→ only two women (Zamrazilova and Erbenova) in our sample . . .
→ very cautious with any conclusion

Zamrazilova: Most hawkish in any board combination she attended.
Erbenova: Middle position with slight hawkish tilt in boards she attended.

→ Masciandaro, Profeta and Romelli (2016): *The presence of women in central bank boards seems to be associated with a more hawkish approach to monetary policy.*
Position of the governors

Tosovsky

Tuma

Singer

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Position of the governors

Position of the governor is an interesting feature in itself: We find either a middle position (natural position) or very much dovish.

We also study other central banks such as Hungary:
⇒ there we find the governor to be the arch-hawk
→ related to politization of the mpc in Hungary

Jarai referred to his tenure at the Monetary Council: as 1 year of work and 5 years of fighting
press conference in February 2007
Conclusion

• Ideal point models allow for estimating latent preferences
  → rank MPC members on a latent scale
  → study patterns of preferences

• Studying individual central banks is similar to case studies
  → complement cross-country studies of central banks
  → learn about best practices

  → approach allows one to fully take uncertainty into account

• new and thoroughly updated version of paper studying Czech Republic, Hungary and Poland is due for the summer
  → study not only FOMC and BoE but also other countries.