

# Estimating the Preferences of Central Bankers: an Analysis of four Voting Records.

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New Challenges in Central Banking: Monetary Policy Governance and Macprudential 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



# 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

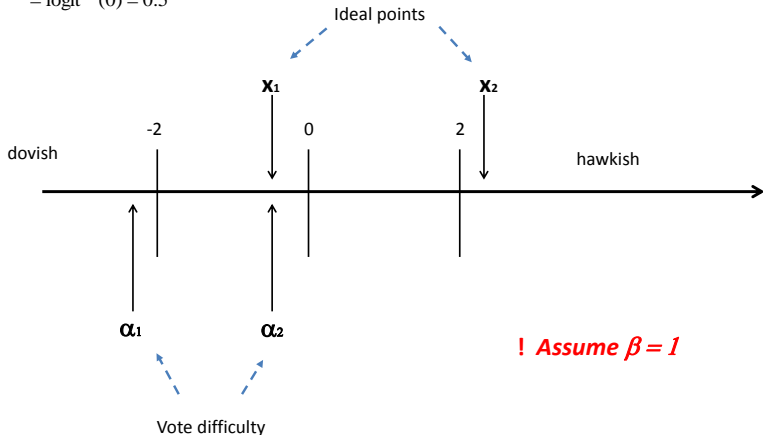
$x_n$ : **ideal points**

In the paper we explore hierarchical extensions:

→ read new version of the paper

If  $x_1 = \alpha_2$ ,  
then  $\text{logit}^{-1}(x_1 - \alpha_2)$   
 $= \text{logit}^{-1}(0) = 0.5$

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





# 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

- Board decisions (votes) regarding main policy rate from CNB website
- Data cleaning: we can only use meetings with disagreement  
→ no disagreement  $\Rightarrow$  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)

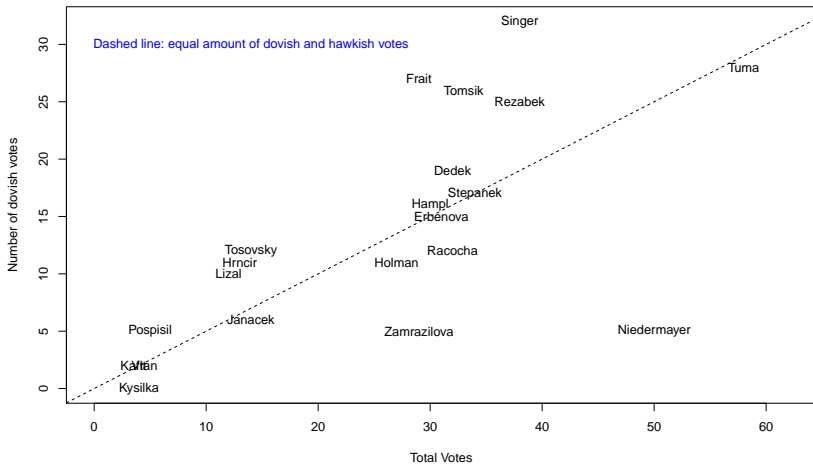
Sample: February 1998 - May 2017

→ since Nov 2012 at the zero lower bound and no disagreement in votes since

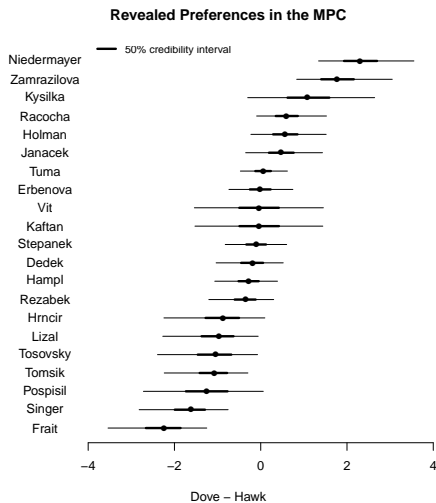
⇒ Effective sample runs until Nov 2012

21 Board members and 82 vote decisions

### Visualization of voting record



# Historical Ranking



## 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 ...

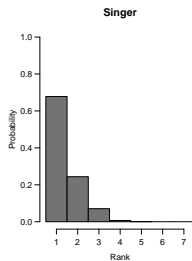
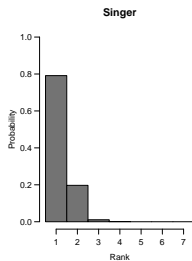
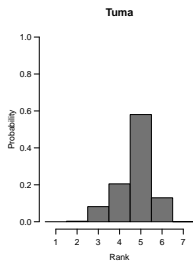
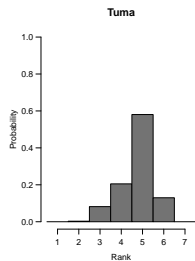
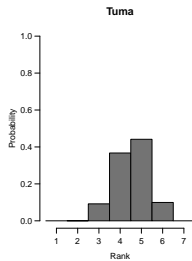
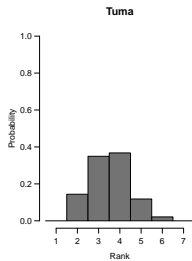
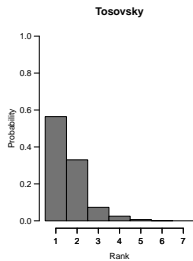
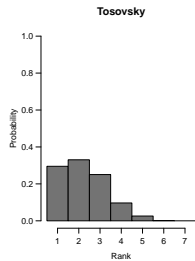
→ very cautious with any conclusion

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



## 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.