Advantages to Size in Banking: The Price and Management of Reserves

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Discussion

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Summary (1): Research Question, Data

- **Central question:** What do banks pay for the funds „they are required to hold with the central bank“?
- **Analysis** of the **behaviour** and **characteristics** of banks participating in the **weekly repo auctions** of the **ECB**
- **Period**: June 2000 – Dec. 2001 = **78 auctions**
- About **2500** German banks, thereof **1/3 = bidders**

Summary (2): Model Structure – Heckit Model

- **Equation 1**: probability of participating in the auction

- **Equation 2**: explanation of
  - premium (bid),
  - premium (paid),
  - award ratio,
  - demand to required reserves-ratio

- Same **explanatory variables** in both equations:

  Size, fulfillment of reserves, net excess reserves,
  type of the bank (dummy var.), auction number (= time trend)

Summary (3): „Advantage to Size in Banking“

- **Probability of participation**:
  - **Size (+),** fulfillment (-)
  - Savings banks (+), cooperative and foreign banks (-)

- **Premium (bid, paid):**
  - **Size (-)**
  - Savings banks (-), cooperative and foreign banks (+)

- **Demand to required reserves:**
  - **Size (-) [all banks],** normalised excess reserves (-)
  - Savings and cooperative banks (-)

- **Economic interpretation regarding „premium“ = ?**

Remarks and Questions (1)

- As **both equations** consist of **(almost) the same variables**:
  - **Direct interpretation** of the **magnitude** of the coefficients is **not possible**
    → calculation of **marginal effects** (and significance levels)
  - **Identification** of coefficients relies on **non-linearity** of inverse Mills ratio {λ = normal dens. ($w'\gamma$) / normal cdf ($w'\gamma$)}

    but function is **in some parts almost linear**!

    (see e.g. Puhani (2000), The Heckman Correction for Sample Selection and Its Critique – A Short Survey, Journal of Economic Surveys vol. 14)

Remarks and Questions (2)

- This may lead to **collinearity** between x and λ (→ Test of coll.)
- As a consequence estimation of $\beta-$ and $\gamma-$coefficients **might be very sensitive to** the **specification**

  → extended **sensitivity analysis** might be appropriate!
- **Additional variables** that are included **only in one** of the equations may be helpful for identification and stable results
- Is **normal distribution** really applicable?