

Is There A Bank Lending Channel of Monetary Transmission in Belarus?

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Outline

- ▶ Motivation
- ▶ Theoretical background
- ▶ Method
- ▶ Results
- ▶ Issues and further work



Motivation

- ▶ Financial factors may amplify the business cycle by providing fuel to the booms and becoming a drag during recessions
- ▶ Changing approach to study bank lending channel: more attention to bank balance sheets strength
- ▶ Transition to inflation targeting in Belarus



Theoretical Background

- ▶ Traditional “money” view (Bernanke and Blinder, 1988):
 - ▶ Focus on money multiplier and passive side of bank balance sheets
 - ▶ Open market operations change the amount of bank reserves
 - ▶ Reserve requirements are binding
 - ▶ Availability of reserves limits speed and volumes of bank lending
- ▶ NEW view (Disyatat, 2011):
 - ▶ Focus on bank balance sheet strength
 - ▶ Central banks accommodate reserves to achieve interest rate target
 - ▶ Monetary policy shocks affect bank profitability and riskiness, ...
 - ▶ ... which leads to reduction in loan supply
- ▶ *Empirical findings:*
 - ▶ *Small, less capitalized and liquid banks react more strongly to monetary policy shocks (Kashyap, Stein, 1995, 2000; Kishan, Opiela, 2000, 2006)*
 - ▶ *Bank lending channel is significant for EA but not for the US (Ciccarelli et al., 2014)*
 - ▶ *Bank lending channel accounts for about 23% of the decrease in lending following a monetary policy tightening in Poland (Kapuściński, 2017)*
 - ▶ *Monetary policy tightening effect on lending is larger for less capitalized banks (Abakumova, Bokova, 2012)*

Method

▶ Step I. Traditional Empirical Strategy

- ▶ FE panel univariate regression with interactions

$$\begin{aligned} \Delta \log L_{it} = & \sum_{p=1}^n \beta \Delta \log L_{it-p} + \leftarrow \text{Lag} \\ & + \sum_{j=0}^m \delta_j \Delta MP_{t-j} + \leftarrow \text{Interest rate Impact} \\ & + \sum_{k=1}^l \gamma \Delta IBC_{t-k} + \leftarrow \text{Control for Loans Demand} \\ & + \chi X_{it-1} + \leftarrow \text{Control for Loans Supply} \\ & + \sum_{j=0}^m \phi_j \Delta MP_{t-j} X_{it-1} + \leftarrow \text{Individual Effects \& Error Term} \\ & + u_i + e_{it} \end{aligned}$$

- ▶ In X – model I: capital adequacy, provisions coverage
model II: capital adequacy, provisions coverage, liquidity, total assets
- ▶ All bank specific variables in X are normalized by sector median (mean)

Method (cont.)

▶ Step II. Panel VAR

- ▶ I. PVAR without control for bank characteristics

$$Y_{it} = A_{0i} + \sum_{j=1}^p A_j Y_{it-j} + e_{it}$$

- ▶ II. PVAR with bank characteristics as exogenous variables

$$Y_{it} = A_{0i} + \sum_{j=1}^p A_j Y_{it-j} + \sum_{k=0}^m B_k X_{it-k} + e_{it}$$

- ▶ III. Difference between CIRF of loans to interest rate shock from step II and I – importance of bank lending channel
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Data

- ▶ 22 banks
- ▶ Jan. 2013 – Sep. 2018 (69 observations)
- ▶ Loans: *Market newly issued real loans in rubles (seasonally adjusted)*
- ▶ Interest rate: *Overnight interest rate on interbank ruble loans*
- ▶ Demand factors: *Index of business climate (seasonally adjusted)*
- ▶ Bank characteristics: *Regulatory capital adequacy ratio, provision to risk-weighted assets ratio*
- ▶ *Robustness Check:*
 - ▶ *Not seasonally adjusted loans*
 - ▶ Demand factors: *Index of business climate gap, economic sentiment indicator, economic sentiment indicator gap, CPI inflation, USD/BYN*
 - ▶ Bank characteristics: *Immediate liquidity, total assets*

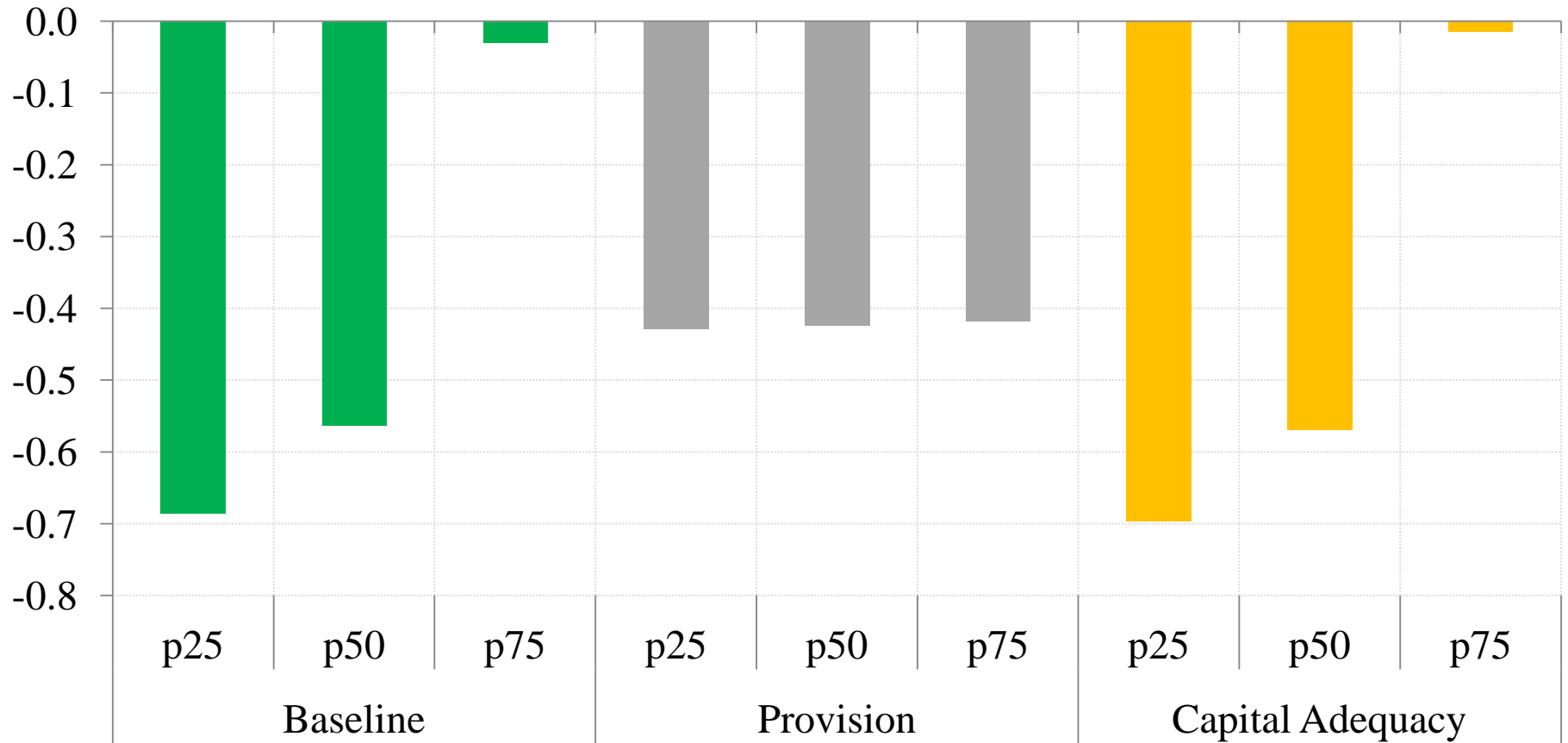


Results

Step I

Loans long-run multipliers by different groups of banks

(1 p.p. increase in interest rate)

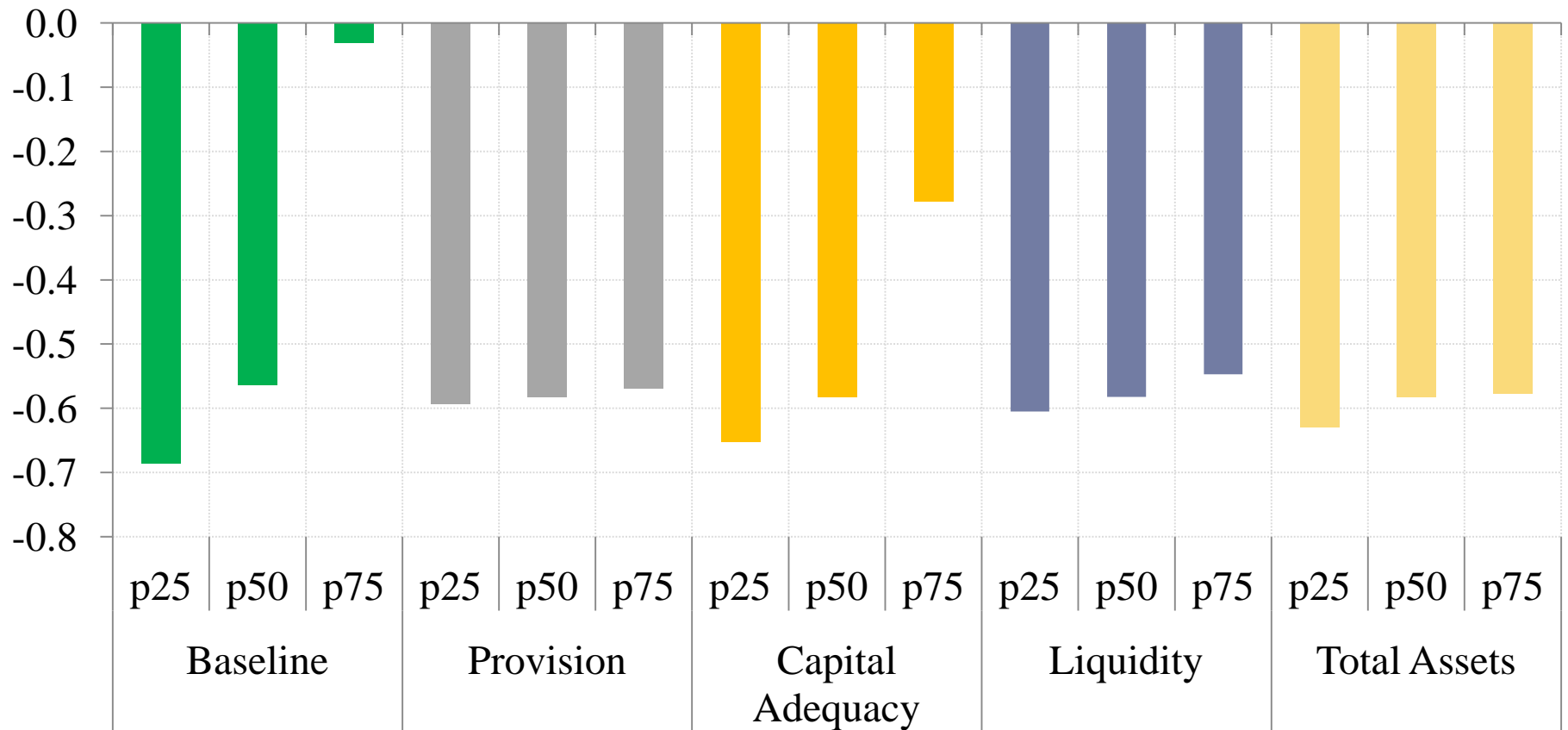


Results

Step I. Robustness Check

Loans long-run multipliers by different groups of banks

(1 p.p. increase in interest rate)

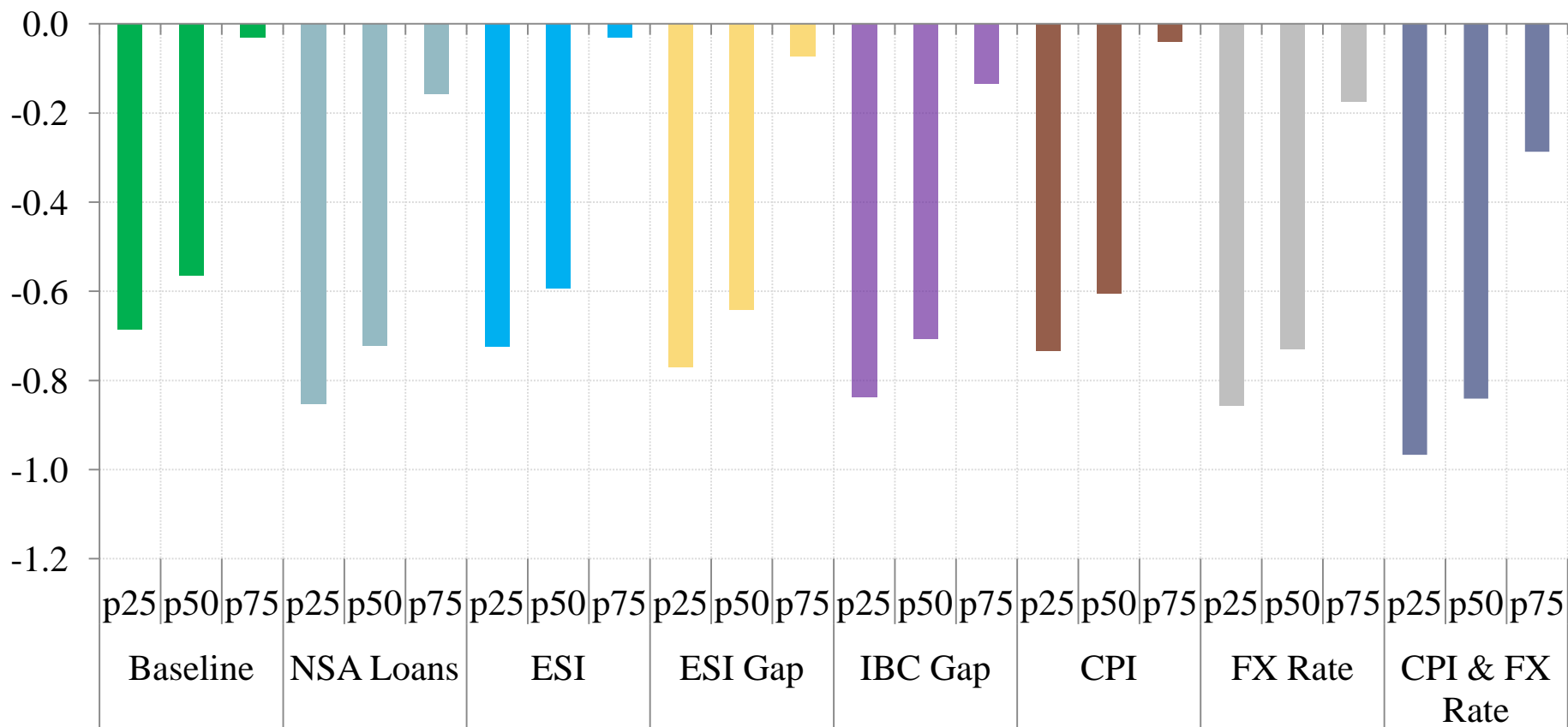


Results

Step I. Robustness Check (cont.)

Loans long-run multipliers by different groups of banks

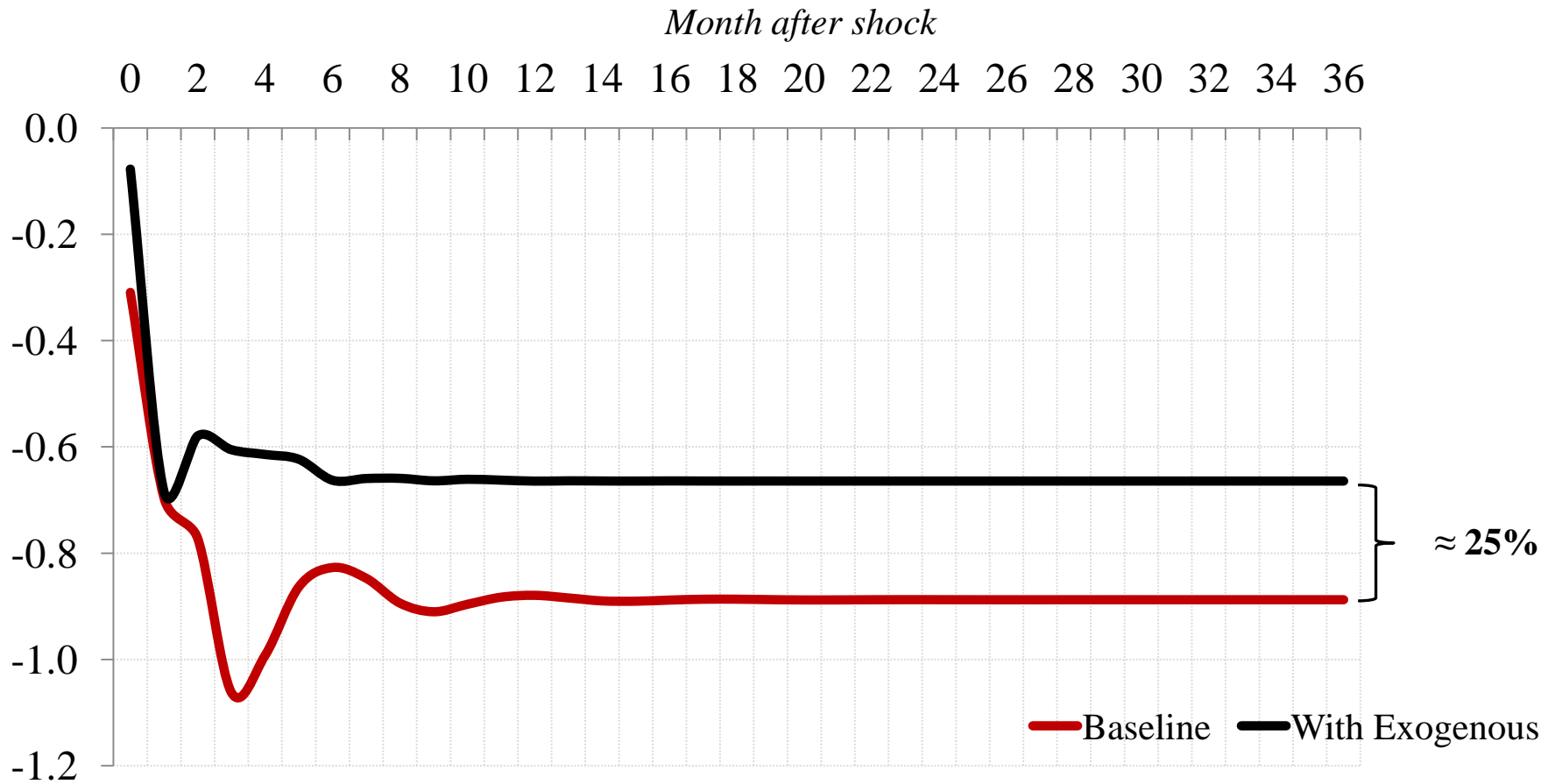
(1 p.p. increase in interest rate)



Results

Step II

Cumulative response of loans to interest rate shock (1 p.p.)



Conclusion

- ▶ The effects of monetary policy in Belarus are amplified by its impact on bank balance sheet strength
- ▶ Less capitalized banks are more responsive to monetary policy shocks
- ▶ About 25% decrease in lending after monetary policy tightening is due to functioning of bank lending channel



Issues & Further Work

- ▶ Micro identification cannot analyze the total effect of a monetary policy shock on lending through supply factors, but only difference-in-difference effect
- ▶ It's difficult to distinguish firm and households balance sheet channel from bank lending channel
- ▶ Analysis uses actual credit granted and thus is forced to make restrictive assumptions on credit demand
- ▶ Using bank characteristics in PVAR as exogenous means that we account for all changes in such variables, not only caused by monetary policy
- ▶ Possible solution: Use of Bank Lending Survey data

