

## DISCUSSION

The impact of expected losses provisioning on credit growth:  
the case of Mexico

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## Summary and findings

- **The paper analyzed the effect of the introduction of a new provisioning rule in Mexico on credit supply**
  
- **This new policy rule changed the arrears-based loan loss provisioning to a scheme based on expected losses**
  - **The objective was double:**
    - *To improve the financial system's ability to cope with cyclical variations of credit risk*
    - *To improve the management of banks' capital*
  
  - **The introduction of this rule was gradual:**
    - *Credit cards: October 2009*
    - *Other consumption loans and mortgage loans: March 2011*
    - *General governments loans: October 2011*
    - *Commercial loans: December 2013*

## Summary and findings



- **What they find is that**
  - After the implementation of this new policy banks decreased credit supply
    - *The effect was higher in peso-denominated loans*
    - *Banks with internal models were less affected*

## Data and Methodology

- **Main Database: Credit Register from Mexico**
  - All commercial loans granted by commercial banks (45?) to firms
    - *Is there any threshold? For instance, in Spain only loans above 6 thousand euros are reported*
- **Period: 2009Q3 to 2015Q1**
  - More than 5 million firm-bank pairs
- **Other datasets used to introduce controls:**
  - Bank characteristics from the Mexican Supervisor
  - Macroeconomic factors from Banco de Mexico's databases
- **The paper uses four sub-sample based on the currency and on the size of the firm**

- Basically, the paper estimates the following panel equation

$$\Delta \text{LogCredit}_{ibt} = \eta_{ib} + \delta_{bt} + \text{Macro controls}_t + \text{Bank controls}_{bt} + \varepsilon_{ibt}$$

where  $i$  refers to the firm,  $b$  to the bank and  $t$  to the period of time

- $\Delta \text{LogCredit}_{ibt}$  is the (annual?) change of the logarithm of credit (only drawn?) by bank  $b$  to firm  $i$  at time  $t$
- The variable of interest is the coefficient associated to  $\delta_{bt}$ , a dummy variable that takes the value of one after the introduction of the new policy by bank  $b$  and zero otherwise (When? December 2013? This is not very clear)



- **Highly relevant paper for banking regulators and supervisors**
- **Some improvements and extensions would make the paper richer and more convincing**

## Comments

- **There is an important point regarding the time period in which policy is expected to have an effect in banks**

- The paper focuses the analysis on commercial loans to firms
- As I commented before the paper is not very clear about when  $\delta$  takes the value of one, but I think the date is December 2013, when the policy started to apply to commercial loans
- However, two years before the new provisioning system was introduced to mortgage loans and consumption loans
- Authors should test whether the results are the same when the policy is considered to apply since March 2011
- A figure showing the time evolution of  $\delta$  could be of great interest



- **My second comment refers to the variable of interest**
  - This variable tries to explain the impact of the new provisioning rule on credit supply BUT
    - *Only captures how the bank credit changed since December 2013*
    - *Available estimates do not ensure that we are finding a causal effect of the new policy in credit growth, because the change in credit supply can be explained by other factors not taken into account (which would bias the results)*
      - For instance, new Basel III requirements can also have an impact around that date
    - *The way to deal with this problem is to use a diff-in-diff methodology*



## Comments

■ In this setting authors have to exploit the fact that the new rule affects banks in a different way

■ This heterogeneity at the bank level can be captured using ex-ante measures of the impact of the new policy. For example, at the end of 2012, one year before the new provisioning entered into force (to avoid endogeneity problems), authors can estimate the amount of money banks should provision, assuming the new policy is active. The ratio of this amount over total assets, or the different between the new policy rule and the old one over total assets, can be interacted with  $\delta$  to estimate the effect of the treatment

■ We would expect that the banks more affected by the new policy were those who cut more the credit

■ Thus, the equation to be estimated could be similar to:

$$\Delta \text{LogCredit}_{ibt} = \eta_{ib} + \delta_{bt} + \alpha \text{Simulated Provisions}_{b2012} + \beta \delta_{bt} * \text{Simulated Provisions}_{b2012} + \text{Macro controls}_t + \text{Bank controls}_{bt} + \varepsilon_{ibt}$$

■ The expected sign of  $\beta$  is negative

## Comments

- **Demand factors are only capture through firm\*bank dummies**
  - This is nice although can be improved
  - The composition of demand may change over time, and it would be necessary to control also for firm heterogeneity including time-varying observable firm characteristics in the regressions
  - At the same time, to have information about the length or the strength of the firm-bank relationship is also desirable
  - Firm credit history (past defaults with the bank or in the system) are also important controls
  
- **The strategy presented before would enable a better control for demand through the introduction of firm\*time fixed effects, which is always desirable in this kind of analysis where the bias of the results depends on how the researchers are able to isolate supply factors from demand factors**

## Comments

- **Moreover, the paper should also analyze the aggregate impact of the policy rule**

- The previous equation estimates the local effect, in the sense that analyzes whether the new provisioning caused a reduction of credit for most affected banks. However, nothing is said about the global impact at firm level
- Firms could be able to switch banks, getting funded by less affected banks if they suffered a reduction of credit as a result of the new policy
- Thus, the equation to estimate the aggregate level could be similar to:

$$\Delta \text{LogCredit}_{it} = \delta_t + \alpha \text{Simulated Provisions}_{i2012} + \beta \delta_t * \text{Simulated Provisions}_{i2012} + \text{Macro controls}_t + \text{Bank controls}_{it} + \text{Firm controls}_i + \varepsilon_{it}$$

where all bank characteristics at firm-bank level are now computed at firm level through a weighted average

## Comments

- **I think that it would be interesting to test whether the policy shock had a differential impact among banks and among firms**
  - Are more capitalized/larger banks those less affected by the new policy?
  - Are there any compositional effect in credit supply?
    - *Are the most affected banks less reluctant to take on more risk to compensate for the higher cost?*

## Minor Comments



- **The paper has to be more clear about the date of the introduction of the policy. It is explained in a footnote and has to be comment in the main body of the text**
- **What is the definition of a small firm? We only know that is based on the number of employees and firm revenue**
- **Summary statistics has to display more statistics: Min, Q25, Q50, Q75 and Max**
- **Why the number of observations from Table 3 differs from Table 5?**
- **The document indicates that not all banks in Mexico are subject to the new provisioning system, noting that there are banks that follow internal models. To improve the interpretation and understanding of the results would be useful to have a brief description of the main differences between their internal models and the banks subject to the new regulation**
- **In Table 6, the number of observations of companies with foreign currency in specifications (1) and (4) does not match Table 7, Table 9 and Table 10**

## Advertising time

- **Let's take a look to a very related paper to this one that has just been accepted for publication in the JPE**
- **I am talking about the work entitled Macroprudential Policy, Countercyclical Bank Capital Buffers and Credit Supply: Evidence from the Spanish Dynamic Provisioning Experiments (Gabriel Jiménez, José-Luis Peydró, Steven Ongena and Jesús Saurina)**
- **In this paper we analyze the impact of a time-varying macroprudential policy tool on the supply credit and the associated spillovers on real activity in both good and bad times**
- **This macropru tool was the Spanish dynamic provisioning**
- **In that sense this paper is quite related to the one I am discussing**

## Advertising time

### ■ Our empirical results show that:

- Dynamic provisions did little to stop the credit boom, because although more affected banks cut more the credit, firms were able to find new financiers among less affected banks
- However, buffers build in good times helped to mitigate the credit crunch in bad times
  - *This had an impact on real variables (asset growth, employment and firm survival)*
- We also show that building up capital buffers before the crisis is superior in terms of maintaining real activity and avoiding risk-shifting than changing requirements (for lowly capitalized banks) during the crisis

### ■ Conclusions:

- All in all, dynamic provisions/countercyclical tools support bank lending in bad times
- The crisis has shown they are very useful...but not a silver bullet



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