# Discussion of "Banks' Business Model and Supply of Credit in Chile" by Miguel Biron, Felipe Córdova and Antonio Lemus

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### Major Issue

The authors show how changes in Chilean banks' business model affect credit and banks' reactions to monetary policy and global factors.

**Broad question.** Authors look at a wide range of bank characteristics: a) Asset-Capital structure/Bank lending channel (size of assets, capital and liquidity ratio), b) Risk profile (loss provisions), c) Revenue mix (fees, trading income, retail loans), d) Funding (short-term funding, foreign currency funding), e) Profitability (ROA). Time×Firm-borrower controls.

Perhaps article tries to achieve too many points, but delves little into each. Altunbas et al. (2012) study impact of similar characteristic on bank-risk only (cross-sectional analysis after 2007-09 crisis, not panel time-series). Gambacorta and Marques-Ibanez (2011) focus on monetary policy and Bank-Lending channel, although with some controls for Funding, Risk and Revenue. ECB (2016, FSR) focus only on Revenue Mix changes. Fernández (2005) focus on Bank-lending channel only.

## Many good points about this paper!

I believe this is the only work that has data on both Chilean banks and their loans to companies since 1990. All the other works I saw are limited to brief periods 1999-2002 or 2009 until now.

Authors should have 50,000 companies per year. It should be interesting to document what data they have on each company (industry?).

Authors to make a great contribution about the role of Chilean banks in the economy and their funding for different companies. However, the current article is mostly silent on how this role changed over time, during different recessions and for different industries and firm sizes.

#### **Economic Literature**

Article could mention a bit more of the economic literature (Fernández, 2005, Furche, Madeira, Marcel, Medel, 2018, have excellent summaries).

Monetary policy acts through its impact on price/wage rigidities and on credit supply. The effect on credit supply comes mainly through two channels that change the external finance premium: the balance-sheet or net-worth channel of firms, and the bank-lending channel. Recently, some authors also point out that Monetary Policy affects risk perceptions and uncertainty (Bekaert et al., 2013, Delis et al., 2017).

Most studies consider that price/wage rigidities (Romer and Romer, 1990) and the balance-sheet channel are the main mechanisms (Bernanke and Gertler, 1995), but the bank-lending channel can be relevant during financial crisis in which banks face a scarcity of funds (Woodford, 2010).

### How strong is the Chilean bank-lending channel?

The Bank-Lending Channel is more relevant in bank-dependent economies (the case of European countries, Japan and Chile - the large companies in the USA have stronger access to market funding). As the range of financial intermediaries enlarges (shadow-banking), then the importance of the balance-sheet channel should increase over time (Boivin et al., 2011).

This is a more focused question for the article. Measure the bank-lending channel in Chile. Compare it before and after the Asian crisis, before and after the 2007-09 Global Financial Crisis, and to other countries. Analysis could at first use less  $Firm \times Time$  fixed-effects: all your results are driven by firms with funds from more than one bank (few firms in Chile!).

Compare bank-lending channel across different companies (small versus big firms - Gertler and Gilchrist, 1994) and industries (use external finance index for each industry from Rajan and Zingales, 1998 - see also Beck, Demirguc-Kunt, Laeven and Levine, 2008) within Chile. Monetary policy effects will be heterogeneous for different banks, industries and firms!

### Other measures of "bank-shock"

Amiti and Weinstein (2018) propose a methodology to decompose credit growth into firm borrowing and bank loan shocks:

$$\frac{C_{f,b,t}}{C_{f,b,t-1}} = c_t + \alpha_{f,t} + \beta_{b,t} + \varepsilon_{f,b,t}$$

$$C_{b,t}^{B} = c_t + \beta_{b,t} + \sum_{f} \phi_{f,b,t-1} \alpha_{f,t}$$
, with  $\phi_{f,b,t-1} = \frac{C_{f,b,t-1}}{\sum_{f} C_{f,b,t-1}}$ 

$$C_{f,t}^{F} = c_t + \alpha_{f,t} + \sum_{b} \theta_{f,b,t-1} \beta_{b,t}$$
, with  $\theta_{f,b,t-1} = \frac{C_{f,b,t-1}}{\sum_{b} C_{f,b,t-1}}$ 

Bank — shock — firm
$$_{f,t} = \sum_b \theta_{f,b,t-1} \beta_{b,t}$$

Unfortunately, this analysis also depends only on firms with multiple banks!

### Other suggestions

After you delve deep into the big-story of the "Bank-Lending Channel in Chile", then you can explore other issues such as Revenue Mix, Risk Profile and Funding in a separate article. Authors will then sell two compelling, more informative articles.

My view is that this story is "secondary". If a bank has capital and liquidity, then it should not matter whether revenues come from fees or retail. Fees and Retail Loans can be interpreted as an effect from clients (the "demand side of the credit market" rather than supply).

Short-term and foreign funds only matter in the sense that these are related to Liquidity and Solvency. It is not a separate explanation from the Bank-Lending Channel, just a different measure of the same Liquidity tale.