BIS CCA-001-2010
May 2010

Discussant comments on

A new look into credit procyclicality: International panel evidence

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Prepared for the BIS CCA Conference on

"Systemic risk, bank behaviour and regulation over the business cycle"

Buenos Aires, 18–19 March 2010

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* These comments reflect the views of the author and not necessarily those of the BIS or of central banks participating in the meeting.

A New Look into Credit Procyclicality

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Outline

1. What the paper does,
2. The empirical approach.
3. Specific comments on empirics and suggestions,
4. Comments on policy discussion.

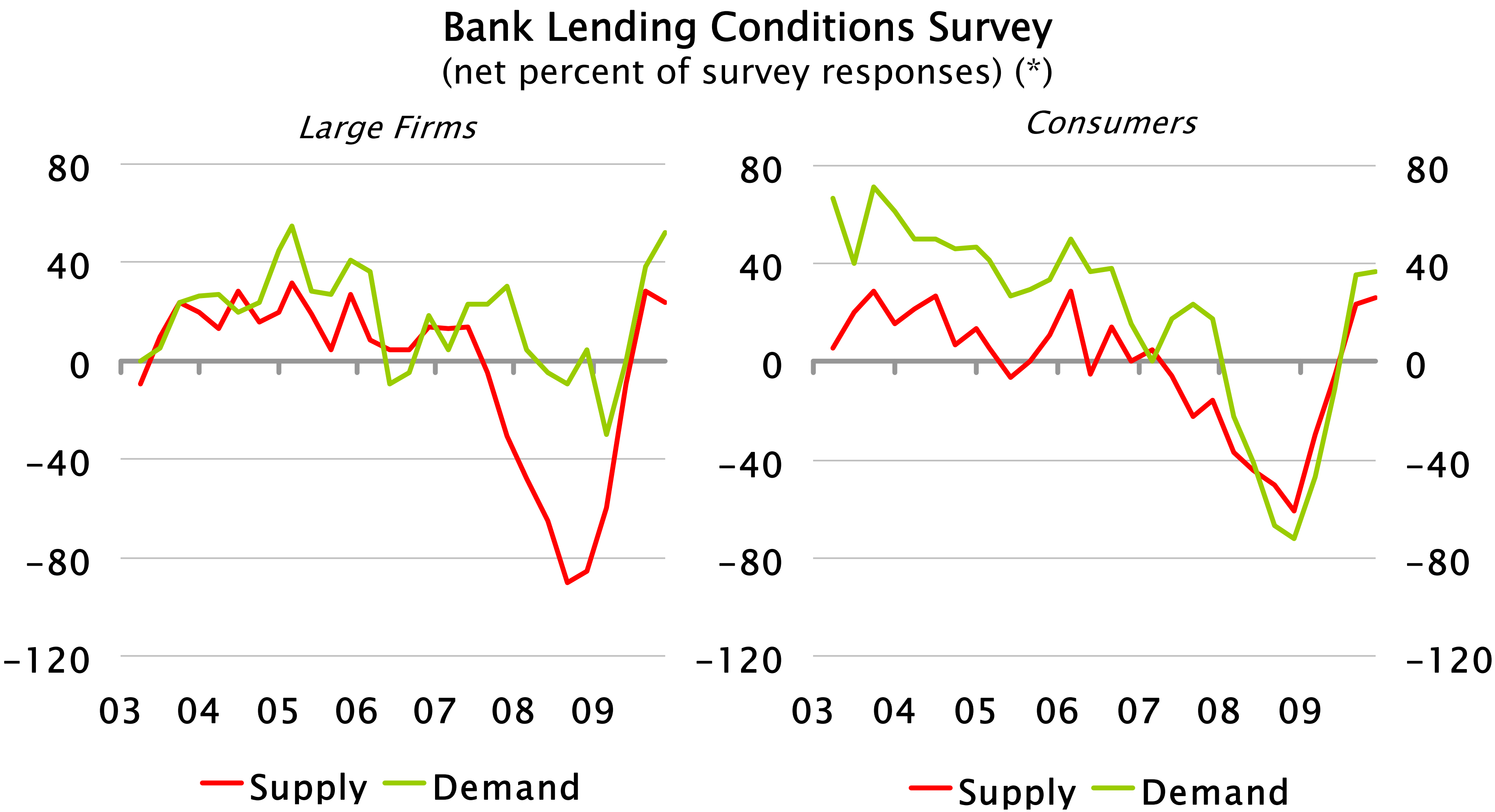
What the paper does…

1. Analyses correlations and granger causality between credit growth and output growth in a broad sample of countries…
2. Finds no correlation in OECD countries and a positive correlation in 45% of the total sample.
3. Output growth granger causes credit frequently (not so in the opposite direction).
4. In addition find no correlation between bank capital and GDP growth in OECD countries.

Initial reaction…

- Surprising…
- Stands in contrast with my priors, specially coming from one of the countries in which the authors dos find a positive correlation.
- Barajas et al (2006) look at quarterly correlations over the 86-05 period in Chile between the cyclical component of credit aggregates and the cyclical component of GDP:
  - Total credit: 0.8, lagged two quarters
  - Consumption credit: 0.8, lagged one quarter
  - Mortgage finance: 0.5, lagged six quarters
- Recent events tend to confirm this view…

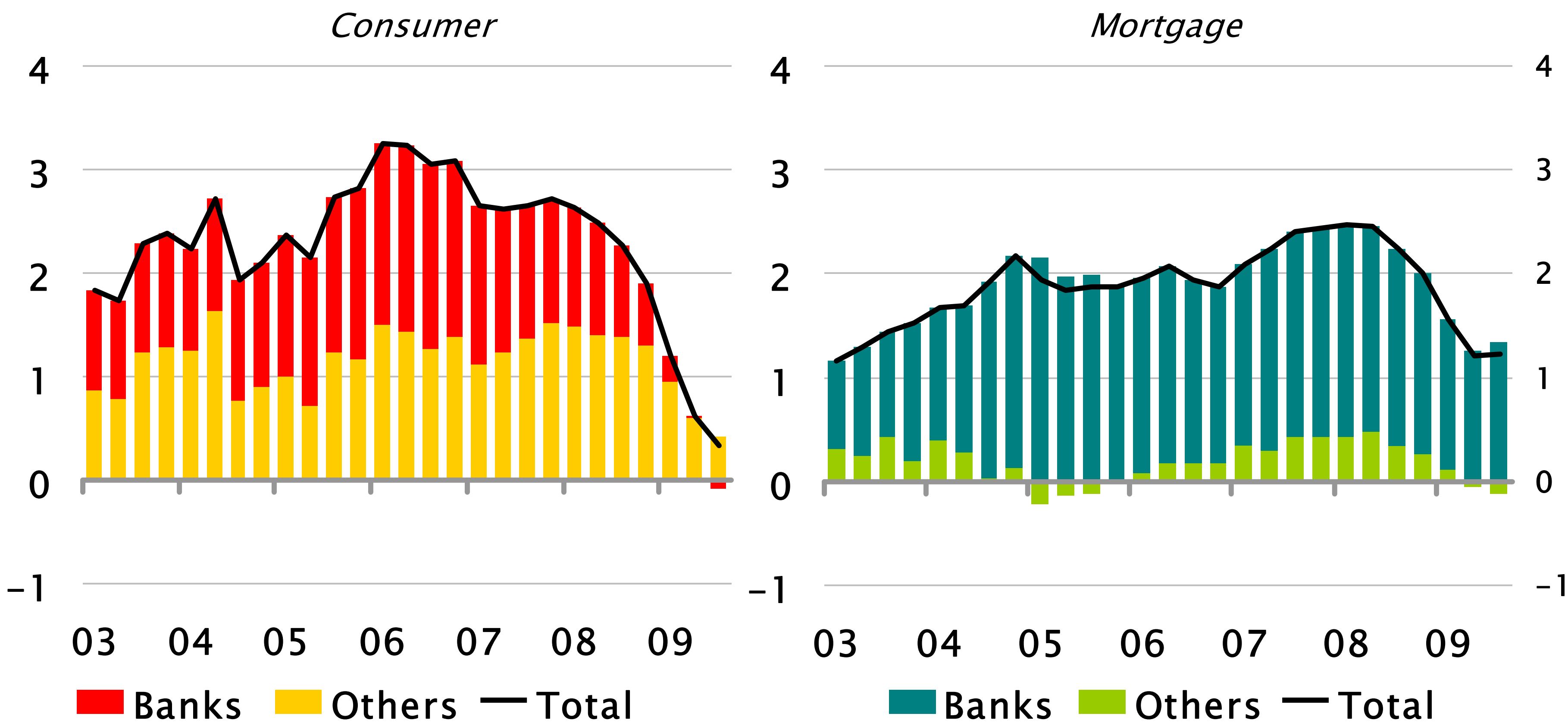
One of main developments in the Chilean banking system during 2008 was the tightening of credit conditions, slowly normalizing after June 2009



(*) Negative values indicate a weaker perception of demand and less flexible supply conditions.
Source: Central Bank of Chile

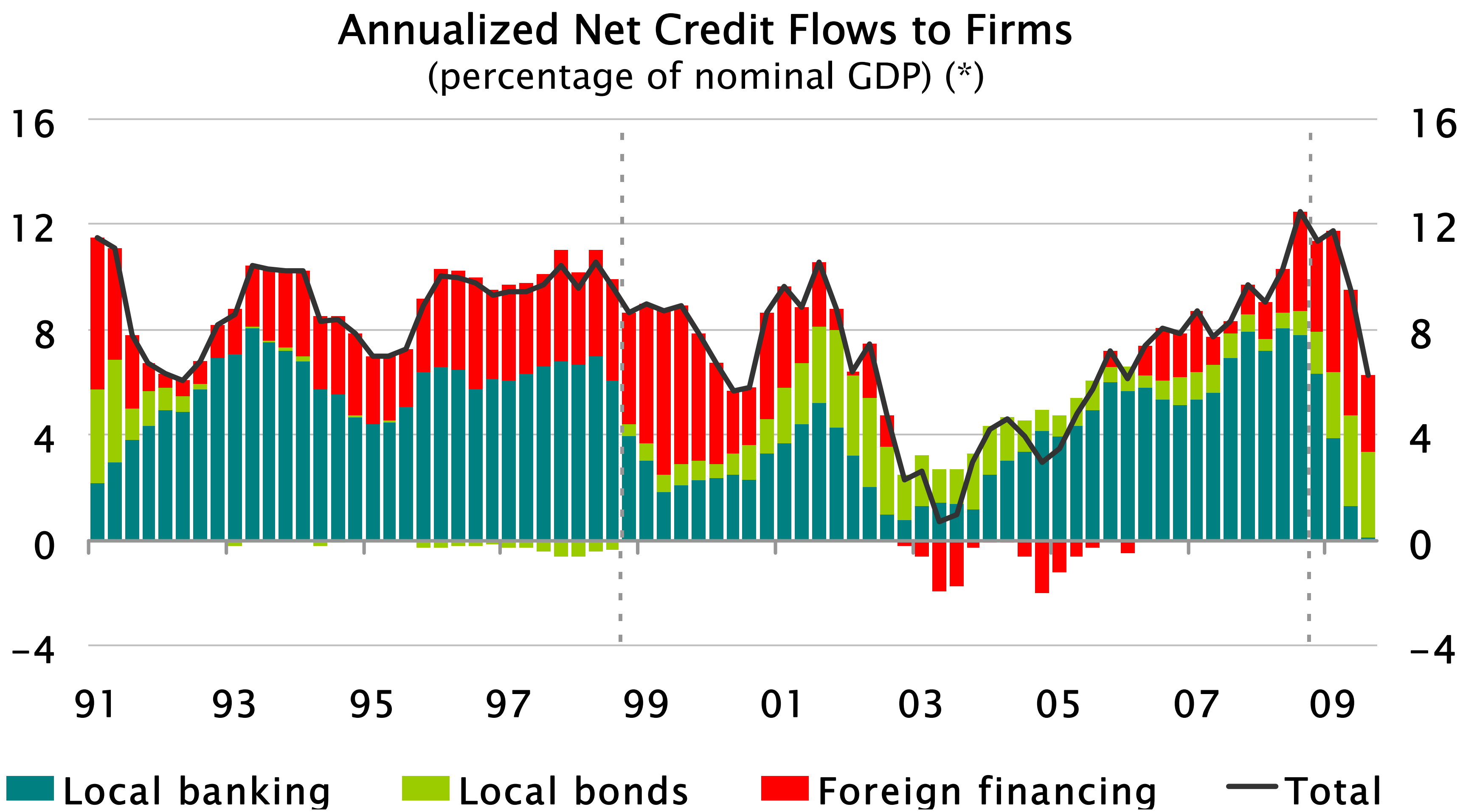
Some combination of tightening credit conditions, and falling demand led to a very significant contraction in net credit flows to households

Annualized Net Credit Flows to Households
(percentage of nominal GDP) (*)



(*) Net flows are the annual change in the stock of debt, net of CPI adjustments in the case of housing loans, over annual nominal GDP.
Source: Central Bank of Chile.

And credit to firms…



(*) For domestic debt net flows are the annual change in the stock of debt, net of CPI adjustments in the case of bonds, over annual nominal GDP. For foreign debt net, flows are cumulative annual flows from Balance of Payment Statistics converted to local currency at market exchange rates, over annual nominal GDP.
Source: Central Bank of Chile.

The theory..

- Large (and growing) literature on the wedge p between the cost of external funding and the return on saving, because of information asymmetries:

1. Balance sheet channel: CSV models, collateral constraint models,
2. Bank channel: lending channel, capital channel (intermediary channel)

- In both channels p varies over time, either due to factors affecting the borrower (profits, value of collateral) or the lender (bank profits, bank capital…).
- The bank channel relies on imperfect substitution between bank credit and other sources of external funds (role for banks and other intermediaries)
- Note that p could be negative, leading to projects being undertaken with NPV<0 (excess lending) due to distortions arising from deposit insurance and LLR facilities, or from lenders not internalizing the full social cost of their actions.
- Of particular concern is the impact of macroeconomic variables on p (gdp, interest rates, exchange rate). Linked to potential feedback effects.

The empirical approach

- The papers´ ultimate objective is to evaluate the impact of gdp on p, and in turn the impact of p on gdp => test for the existence of a financial accelerator.
- They do this by estimating the correlation of credit growth and gdp growth, and by carrying out granger causality tests.
- The paper reports an average correlation of 0.3, with 45% of countries having >0…
- However, I have difficulty mapping the reported results to the underlying question. Does a zero correlation imply that financial accelerator mechanisms are not prevalent in the sample?

Interpreting the results

- Full information model of consumption and investment:
  - Household credit demand responds “anti-cyclically” to transitory shocks to income (Flavin 1981)
  - Firm debt responds “anti-cyclically” to transitory output (liquidity) shocks and “pro-cyclically” to permanent productivity shocks.
- So…in a country dominated by transitory shocks, would expect a significant negative correlation (close to one actually for consumption debt)…so that zero correlation would actually be indicative of a financial accelerator.
- What is the relevant benchmark?
- Put differently: there are plausible mechanisms for a negative correlation of loan demand growth with gdp growth…

Some general suggestions…

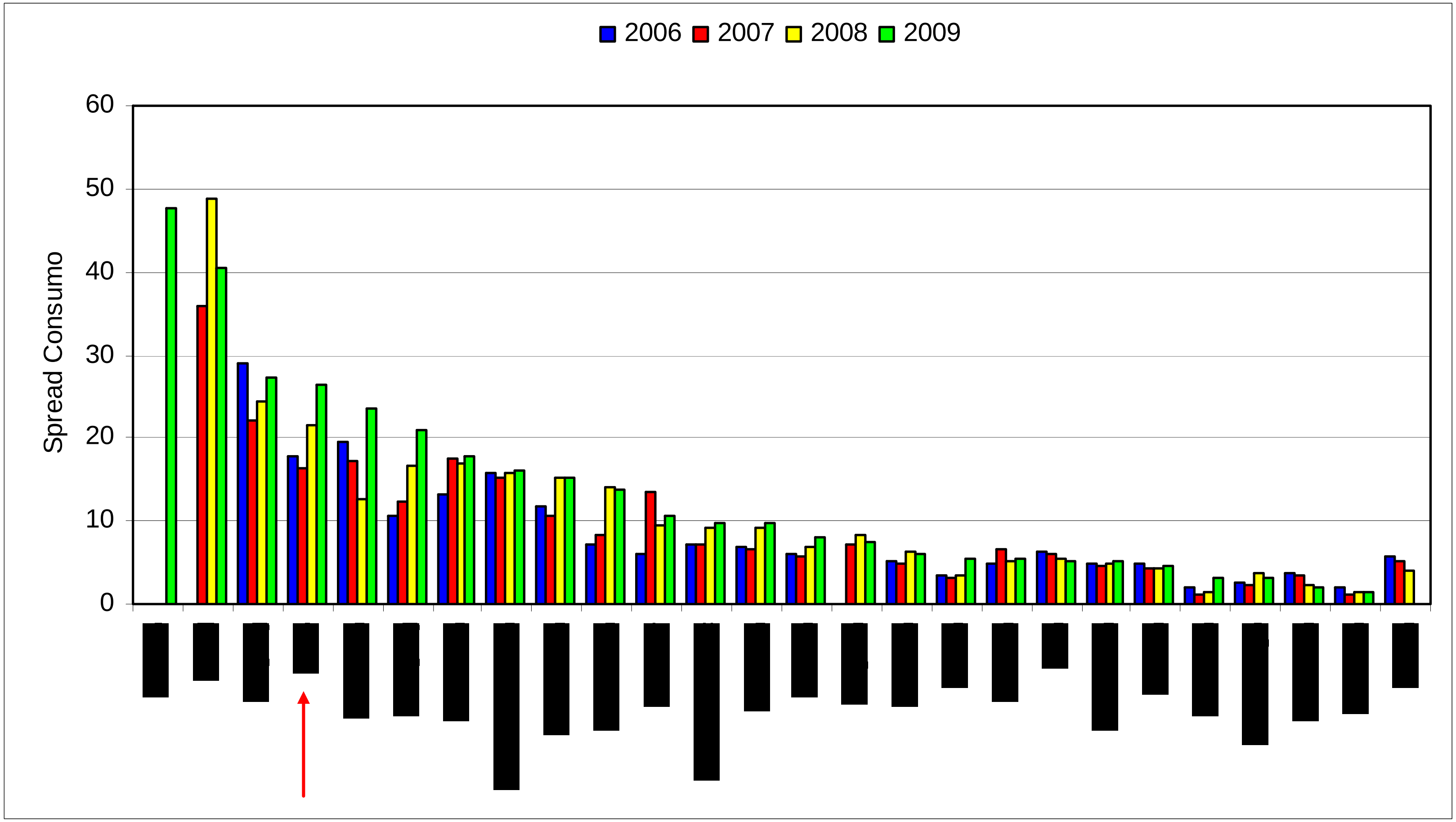
- An alternative approach is to focus not on the average correlation, but to split the sample and exploit differences across countries:

1. Across countries: Is it higher in countries with shallower financial markets? Dominance of bank credit?
2. Concentrating on tails of distribution (are crisis episodes different?)
3. Separating downswings from upswings

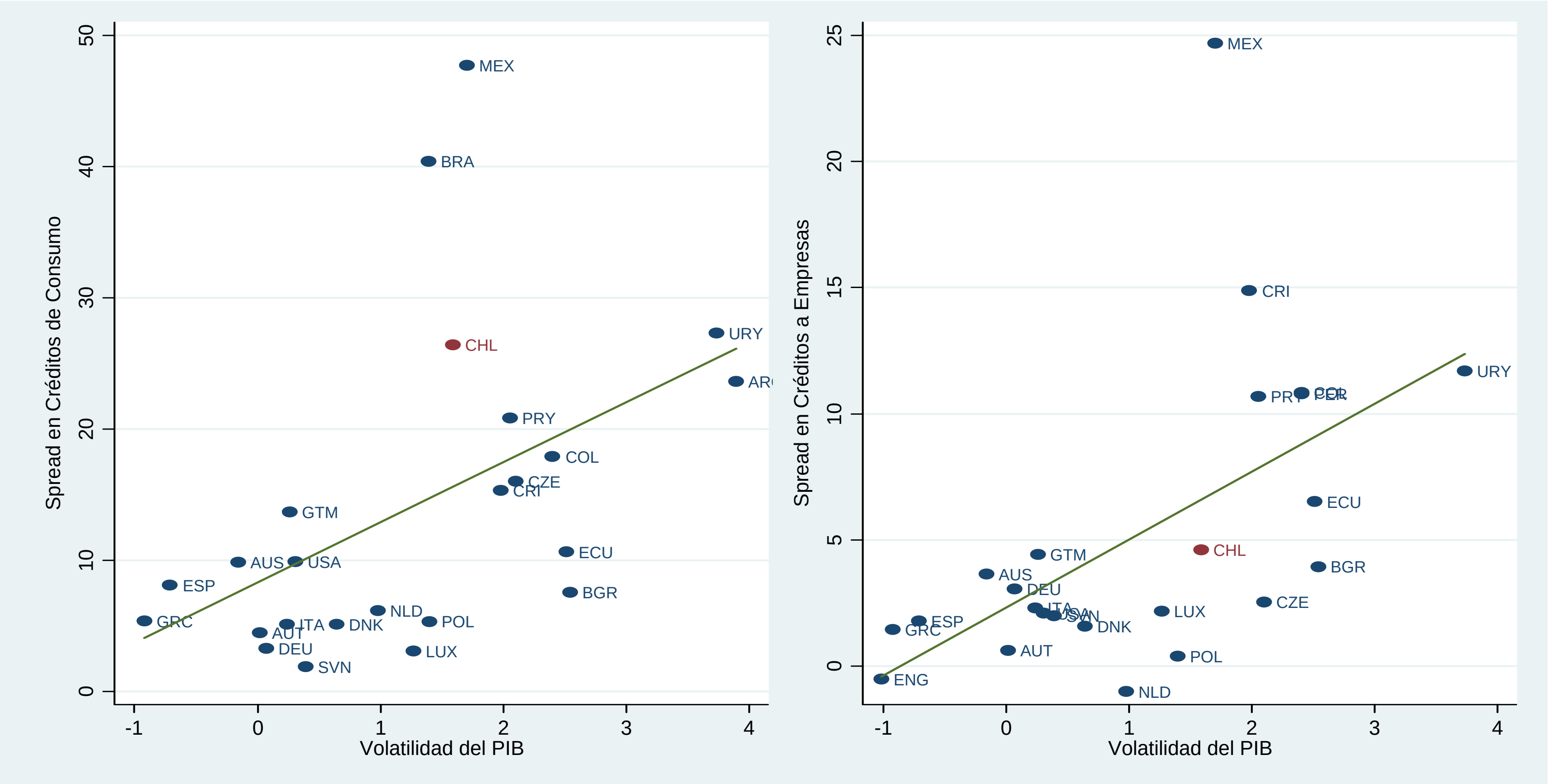
- Note however that the process generating the permanent and transitory income shocks may vary across countries, in some cases leading to positive correlations even in the full information case, and making the benchmark country specific (Aguiar and Gopinath 2007).

- Price data in the cycle would be very interesting:
  - Borrowing costs vis-à-vis risk free rates
  - Lending and borrowing spreads (significant cyclical variation, considerable heterogeneity across countries)

Lending spread on bank consumption loans



Spreads are correlated with GDP volatility



More specific comments on the empirical specification…

- The paper uses data for 1990 to 2007 at annual frequency. That represents a maximum of 17 observations per country. A time-series Granger test may have too few degrees of freedom. A panel methology exploits more information, but it reports the average result for the sample of countries.
- Growth in loan stocks, while readily available could confuse different effects. Consider that Lt-L(t-1) = net new loans – write offs. Hence, a postive covariance of the change in the stock of debt could be due to a procyclical behaviour of net new loans, or of write offs. The causes for this, and hence the regulatory implications are different.

On the policy discussion…

"The role of Basel II in exacerbating credit pro-cyclicality should be revisited"…

- I am not convinced that the paper is evidence for a lack of a financial accelerator.
- Moreover, there are several previous empirical results that identify a causal link between bank capital and the supply of credit (starting with Peek and Rosengren 1995 and followed by Minetti 1998, Woo 1999) so the results should be discussed with caution.
- This being said…there is indeed a lot of policy discussion that fails to carefully analyze the empirical evidence.

Questions whether "**the chief transmission channel from banking crisis to the real economy runs through credit contraction**"

- Again…seems important to move forward in identifying the causal role of bank credit...

A provoking paper, addressing a key question: the interaction of lending decisions by financial intermediaries and macro-variables.

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