“When Credit Dries Up: Job Losses in the Great Recession” by S. Bentolila, M. Jansen and G. Jiménez

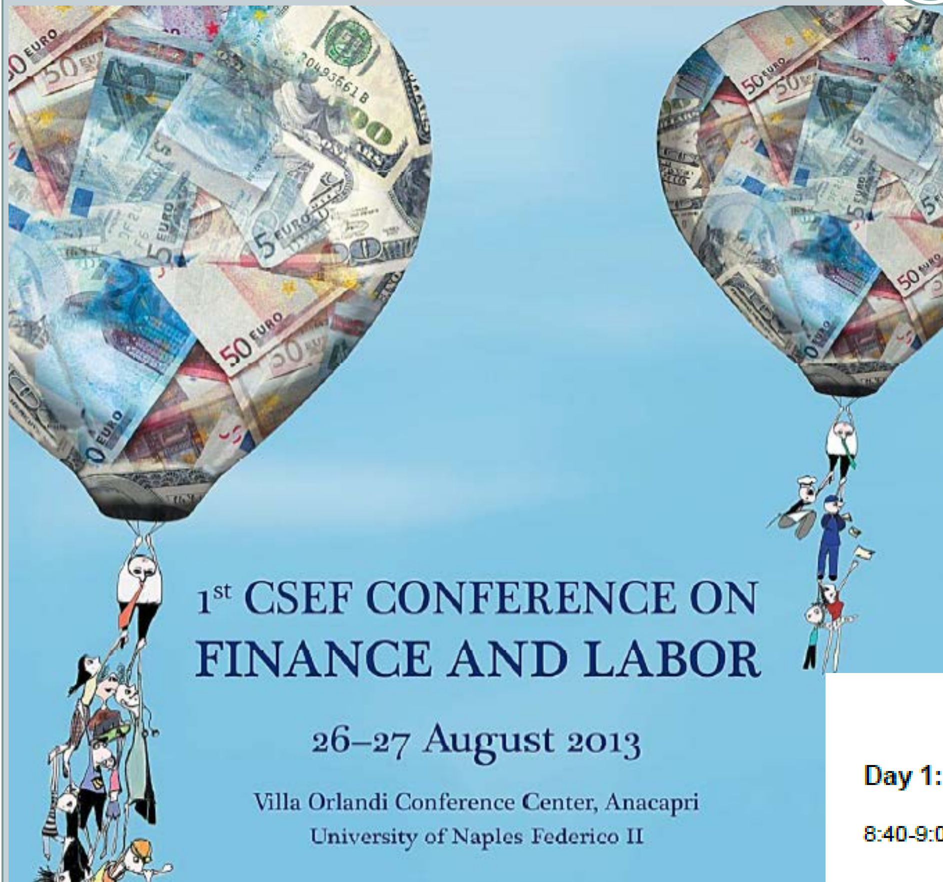
Discussion by
Marco Pagano

University of Naples Federico II,
CSEF and EIEF

Fifth BIS Research Network meeting

26 September 2016

Already saw this paper in its infancy…



Program

Day 1: Monday, 26 August

8:40-9:00: Welcome and registration

Morning session: Credit, employment and inequality

9:00: Samuel Bentolila (CEMFI), "When Credit Dries Up: Job Losses in the Great Recession" (with M. Jansen, G. Jiménez and S. Ruano)
Discussant: Tullio Jappelli (University of Naples Federico II and CSEF)

Promising then – excellent now!

- Important research question:
  - Does a shock to credit supply affect labor demand, and how much?
  - Several other papers have looked at this issue, but this one has…
- Exceptional data:
  - Balance sheet data for over 300,000 firms: close to universe!
  - 150,000 after merge with loan register, bank and bankruptcy data
- Extremely careful, state-of-the-art econometric analysis:
  - Authors thought of all the possible selection biases
  - Very creative in addressing them, and data allowed them to do so
- Result: best piece of work around on this issue!
  - Sample is representative enough to gauge macro effects of credit supply shock in a very bank-dependent country (contrast with US)
  - Several "gold nuggets" in auxiliary results!

Key variable: weak bank attachment

- Determines split between treated and control groups:
  - Weak banks (WB) taken to be those that were eventually bailed out: considered to be better than measures of weakness based on NPLs because of forbearance
- Real estate lending exposure used as alternative somewhere:
  - Appears to give similar but weaker results
  - Might have considered both real estate and sovereign exposures
- To address selection issues in credit regressions:
  - Khwaja-Mian: banks lending to same firm, plus fixed firm effects
  - In sample with single-bank firms, include lots of firm controls
- To address selection issues in employment regressions:
  - Panel approach with fixed effects, matching technique
  - IV approach based on pre-branching reform WB attachment

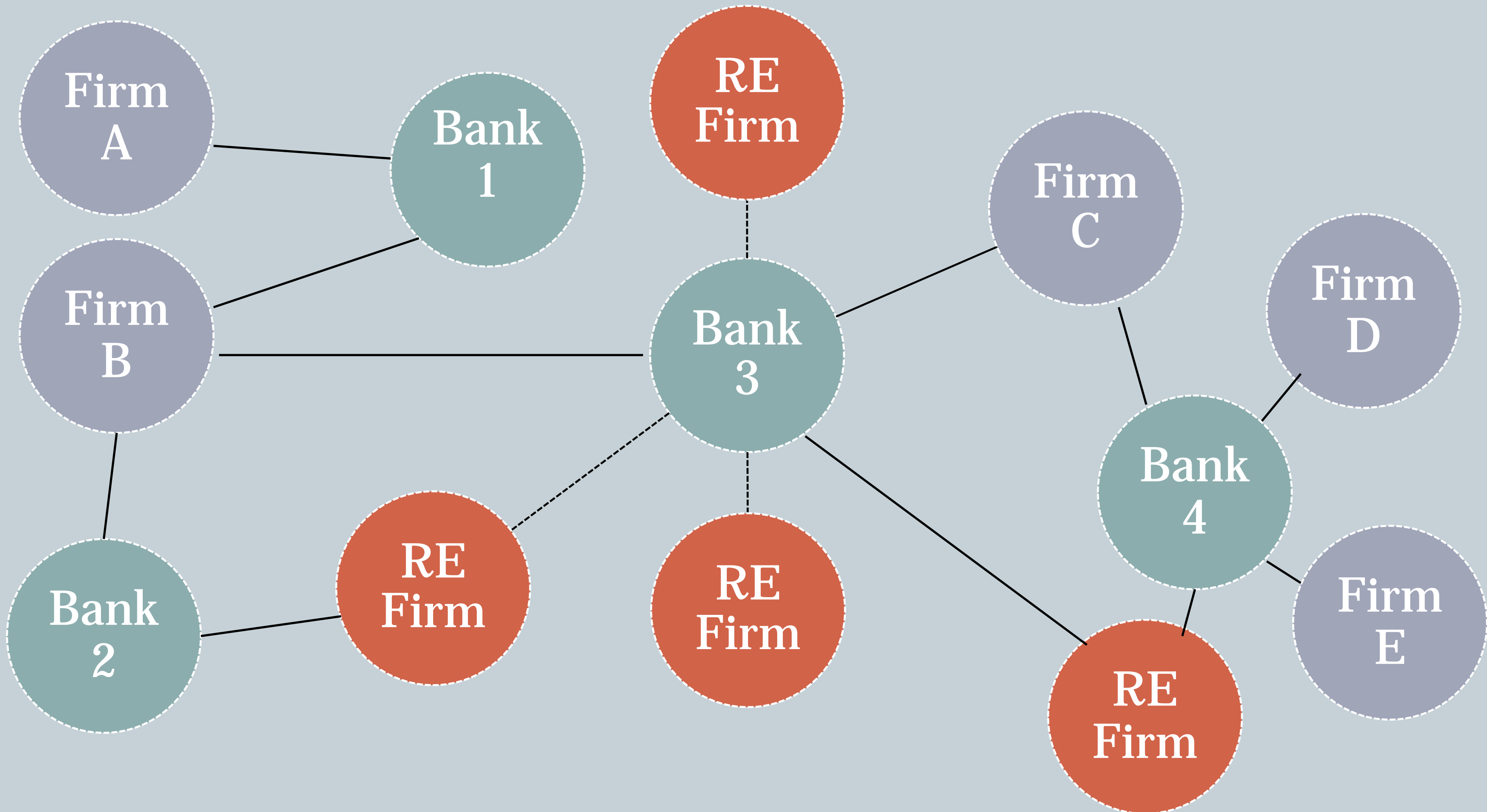
Gold nuggets

- Multiple bank relationships as diversification device:
  - Effect on credit for entire sample is –5.3 pp, for multi-bank firms is –3.1 pp: Detragiache, Garella and Guiso (JF 2000)
- Impact of negative credit shock on maturity structure:
  - "Weak banks reduced credit to firms with credit lines by 7.8 pp, and increased it to firms with credit above 1 year by 9.4 pp relative to healthy banks" (p. 21): a symptom of forbearance vis-à-vis clients with which bank has little bargaining power left?
- Job losses due to bankruptcies:
  - Weak-bank exposure explains 54% of job losses at surviving firms, only 34% of those due to closures: credit crunch not key for exits?
- Tremendous impact on temporary employment:
  - ¼ of pre-crisis employment, 56% of employment cut in treated firms

Weak banks: reverse causality?

- Firms' insolvency may make banks weak (or weak*er*) $\Rightarrow$ this may drive or feed back on their credit supply:
  - Authors are aware of this danger: to avoid it, they exclude firms in the real-estate industry (REI) or in industries selling at least 20% of their VA to the REI in 2000 (p. 13)
- But is it "enough"? The feedback may go well beyond that…
  - It may also affect the supply of credit of some of the 206 "healthy" banks (only 33 weak banks in Spain in 2006-10?)
  - If so, WB-based identification may be a lower bound of actual effect
- Thought experiment: one could have written a paper to explain "bank weakening" due to firms' defaults…
  - Create "weak-firm dummy" based on firms' eventual default or exit
  - Estimate regression to estimate banks' credit reduction or exit

Mutual “contagion”: bank-firm network



Contagion as multiplier of RE stress

- You have the right data to measure it: another paper!
  - Consider RE firms as source of stress
  - Compute direct *and indirect* bank-firm links as – say – of 2006 (intensity of link determined by lending as a fraction of total assets) $\Rightarrow$ obtain overall effect of RE stress on each firm *and* bank
  - Use overall effect as of 2006 instead of WB to gauge both effect on lending and employment, and on eventual exit by firms *and* banks
- Can re-do this using 2007, 2008, etc. as "base year" to see how contagion evolved over time $\Rightarrow$ multiplier larger?
- "Hydraulic approach" to get stress multiplier due to knock-on effects from firms to banks, and from banks to firms
  - Same spirit as Greenwood, Landier & Thesmar (2015) on "vulnerable banks", where fire sales propagate shocks across bank balance sheets

Explore other aspects of contagion

- Can test whether multiple-bank relationships have a GE dark side as vehicle for systemic contagion
  - Flipside of firm-level diversification benefit, as in Wagner (2010)
  - Dark side likely to dominate bright side for undercapitalized banks
- Can allow for other sources of stress, esp. sovereign stress
  - Much evidence that sovereign stress hits bank solvency more for banks with larger sovereign holdings
  - Can measure – say – sovereign exposures of banks as of 2006, and try to gauge the contagion-based multiplier of sovereign stress
  - Interesting to see whether and how RE and sovereign repricing interacted: Altavilla, Pagano and Simonelli (2015) show that publicly controlled banks like Cajas bought more domestic sovereign debt