

Leverage Across Firms, Banks and Countries

Sebnem Kalemli-Ozcan

University of Houston, Koc University, NBER, and CEPR

Bent Sorensen

University of Houston and CEPR

Sevcan Yesiltas

Johns Hopkins University

August 2011

Leverage has been a buzz word since the start of “Great Recession.” Anybody who has been following the news since 2008 and/or watched documentaries such as “Inside Job” would be left with the impression that large banks took extreme risks by borrowing large amounts while holding very little equity; i.e., leveraging themselves excessively ultimately leading to the largest economic meltdown since the great depression. But what do we really know about leverage? Is it the case that every single financial—or non-financial, for that matter—corporation took excessive risks and leveraged itself to the sky? Or was it only the large well-known investment banks, such as Merrill Lynch and Lehman Brothers? Or was it only the big banks that society can’t allow to fail? Or was it mainly a case of Anglo-Saxon banks taking on risk? What about banks in emerging markets who were supposed to be in better shape after decades of financial folly? These are the questions we seek to answer in this research project which we briefly summarize below.

We make use of extensive internationally comparable micro level data from most developed or developing countries for the period 2000–2009 in order to uncover facts about leverage of financial institutions on both sides of the Atlantic. The main results are that there was very little buildup in leverage for the average non-financial firm or commercial bank before the crisis although increasing leverage was visible for large commercial banks in the United States and for investment banks worldwide. Off-balance sheet items constitute a big fraction of assets for large commercial banks in the United States and because these items often carry explicit or implicit guarantees from the sponsoring institution, they constitute a source of risk that is usually more lightly regulated. There

was no run-up in guarantees before the crisis, although there was a sharp contraction as the crisis evolved as banks were unwinding their off-balance sheet investment vehicles.

In addition to these dynamic patterns in leverage ratios over time, we find that leverage ratios are procyclical for investment banks and, for the United States, for large commercial banks. We interpret these results using a framework suggested by Adrian and Shin where these institutions actively manage their balance sheet to maintain a constant leverage ratio which implying that they increase their demand for assets when asset prices go up which creates feedback loops that may help create asset bubbles and busts.

Another interesting finding is that banks in emerging markets with tighter bank regulation and stronger investor protection experienced significantly less deleveraging during the crisis. Our interpretation of the finding is that these institutions took on less risk before the crisis. This result indicates that regulation, whatever its other benefits or drawbacks, may help making financial institutions less vulnerable to financial crises.

Overall our results show that excessive risk taking before the crisis was not easily detectable because the risk involved the quality rather than the amount of assets. This holds for financial institutions in the United States as well as Europe.