

“[The too-big-to-fail problem] is a real problem and needs to be addressed if at all possible....I don’t think too-big-to-fail is solved now....Too-big-to-fail was a major part of the source of the crisis. And we will not have successfully responded to the crisis if we don’t address that problem successfully.”

---Ben S. Bernanke, Chairman, Federal Reserve Board, March 20,2013

The recent global financial crisis has once again brought the too-big-to-fail (TBTF) issue into the limelight. The market expectation that the government will lend support to troubled financial firms that are deemed to be of systemic importance lowers the funding cost of those firms because their creditors do not bear the full cost of failure. As a result, this implicit public support/guarantee encourages leverage and risk-taking, contributing to systemic risk and financial fragility. In response, regulators and policymakers worldwide have proposed and launched large-scale financial sector reforms, including imposing higher capital buffers and more stringent supervision of systemically important financial institutions (SIFIs), limiting certain bank activities, imposing bank levies, improving resolution regimes for SIFIs. The first and critical step towards addressing the TBTF issue with financial regulation is to identify the evolution of TBTF subsidies.

In this paper, I propose a novel approach to measure the implicit support obtained at no cost by financial institutions, using market data. More specifically, I exploit the price differential of Credit Default Swap (CDS) contracts written on debts with different levels of seniority.¹ Assuming that subordinated debt gets wiped out in the event of default, subordinated CDS spreads take into account only the probability of bank distress. In contrast, senior debt is more likely to obtain government support in case of distress and as a result, senior CDS spreads reflect both the probability of bank distress and also the likelihood of the government bailouts. For each financial firm, my approach compares its senior (subsidized) CDS spreads with its subordinated (fair-value) CDS spreads and the difference between them provides a measure of the magnitude of the implicit guarantee granted to the firm.

The approach is applied to the largest 46 financial firms in Europe, including 11 insurance companies and 35 banks.² My analysis shows that the overall implicit guarantee in the 46 European financial institutions increases substantially in the aftermath of the subprime crisis, peaking at 89 basis points in September 2011 during the sovereign debt crisis, which corresponds to an annual subsidy of approximately €175 billion. Over the 2005-2013 period, the largest financial institutions in Europe obtain an implicit public subsidy of approximately 18 basis points per year on average, which increases dramatically from only approximately 1 basis point before the crisis to 25 basis points during the crisis. Individually, a few financial institutions consistently

¹ A CDS contract is similar to an insurance contract in the sense that it protects the buyer from losses arising from a default by the reference entity.

² Countries included in the sample are the following: Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

attract a large proportion of the total implicit guarantees given by governments. The policy implication is that to manage implicit guarantee issues, regulators could focus on a (possibly dynamic) list of a few of the most important firms.

Looking at different types of financial institutions, I find that banks enjoy higher implicit guarantee than insurance companies, especially during the recent financial crises. The analysis suggests that banks are perceived to be more systemically important than insurers and thus more likely to be bailed out (or to obtain larger amount of bailouts) by the government during difficult times. My analysis also shows that Eurozone financial firms benefit more from implicit public support than do their non-Eurozone counterparts within Europe. Interestingly, the announcement of Basel III, a major international regulatory response to the recent financial crisis, does not seem to solve the TBTF problem.

Finally, I examine the feedback relationship between implicit guarantee and sovereign default risk. I find that higher implicit guarantee leads to higher sovereign default risk because of bailouts' substantial potential impact on public finances. With respect to the impact on implicit guarantee from sovereign risk, my analysis indicates two offsetting effects. On the one hand, when a country's credit condition deteriorates, it is more difficult for the government to provide support for distressed financial institutions and thus, perceived guarantee decreases. On the other hand, higher sovereign risk results in higher default risk in the banking system because financial firms hold sovereign debt on their balance sheets and thus, sovereign credit risk increases implicit guarantee.