Wake Up and Smell the CoCo

Nikhil Atreya, NHH

Abstract:

I create a structural credit model to price a contingent convertible bond (CoCo) issued by a bank. The difference between my model and others that price CoCos is that I model the bank's assets as loans instead of using a geometric Brownian motion (GBM). A GBM cannot accurately represent the capped upside of a loan security, which is a flaw when pricing any claim with an equity component, such as a CoCo, on a bank's assets. I find that the capped upside of loan securities is an additional source of risk in the CoCo's price that cannot be captured by a GBM.