

The Implied Bail-in Probability from the Contingent Convertible Securities Market

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Banco de Mexico, 27/9/2017

Summary

Implied bail-in probability of CoCo's

- Bail-in: in case of financial distress of a bank its investors “contribute” first – to avoid using tax payer’s money for bail-out.
- CoCo’s: Contingent Convertible bonds. Bond that is obligatory converted into shares (or written down) when capital drops below pre-established level → bond with a knock-in put option.
- Since 2009 increasing number of banks and issues from more countries. Attractive for banks (and regulators), and for investors. Research on pricing CoCo’s is ample, but on implied bail-in probability not.
- Issued by (large) financial institutions, mainly from Europe, and recently Asia and South America. Not (yet) used by US banks.
- To determine the implied probability of bail-in the authors use the derivatives approach, based on option valuation techniques (Black and Scholes).

Strengths

Topic of CoCo's is relatively new and relevant – for regulators, banks and investors.

Provides a good overview of the current state of the CoCo's.

This study contributes in application to a wider number of banks and years than previous studies.

Important findings:

- Implied bail-in probability increases more when credit events occur than the implied default probability from CDSs.
- Market implied probability of default after bail-in tends to decrease* as the issuance of CoCos increases.

* Or: does not increase with the increase of leverage

Comments

Challenges are large: no observations of conversion of CoCo's, short history, not sufficient bonds with different maturities.

Assumptions:

- Hazard rate is assumed constant over time
- The trigger price (market price of the share at the moment of bail-in) is unobservable, and deduced from CDS data
- Using Black and Scholes model

Six G-SIB's from Northern Europe: Can the results be generalized? (selection bias?)

Evidence that bail-in probability is more sensitive than implied default probability from CDS markets = based on graphs.

- In general the first seems more volatile than the latter – not only in credit events → Make evidence stronger.
- The bail-in probability as an Early Warning signal: how *early* is Early?
- Doesn't it say more about contagion than bail-in probability?

Comments – cont.

Conditional probability of a default after bail-in of CoCo:

- Very relevant for policy makers
- Evidence from graph is not overwhelming
- Suggestion that market perceives this as consequence of CoCo is not supported by additional evidence (is this the only possible explanation?)

Other:

- Permanent Write Down and Temporary Write Down: could be in a different paper.
- PC analysis: expand this section – now only a graph. Europe is taken as one, but could be separated in two or three groups. Deepen analysis on explanations for the differences.