# Implied Default Barrier in Credit Default Swap Premia

*Banco de España Research Paper*

47 Pages
Posted: 6 Feb 2007
Last revised: 30 Jul 2008

Francisco Alonso (https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=716755)
Banco de España

J. Manuel Marqués (https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=744332)
Banco de España

Santiago Forte (https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=477909)
ESADE Business School, Ramon Llull University

Date Written: July 1, 2008

## Abstract

This paper applies the methodology developed by Forte (2008) to extract the implied default point in the premium on credit default swaps (CDS). As well as considering a more extensive international sample of corporations (96 US, European and Japanese companies) and a longer time interval (2001-2004), we make two significant contributions to the original methodology. First, we calibrate bankruptcy costs, allowing for the adjustment of the mean recovery rate of each sector to its historical average. Second, and drawing on the sample of default point indicators for each company-year obtained, we propose an econometric model for these indicators that excludes any reference to the credit derivatives market. With this model it is thus possible to estimate the default barrier resorting solely to the equity market. Compared with other alternatives for setting the default point in the absence of CDS (such as the optimal default point for shareholders, the default point in the Moody's-KMV model or the face value of the debt), the out-of-sample use of the econometric model significantly improves the capacity of the structural model proposed by Forte (2008) to differentiate between companies with an investment grade rating (CDS less than 150 bp) and those with a non-investment grade rating.

**Keywords:** credit risk, structural model, credit default swap, implied default barrier

**JEL Classification:** G13, G33



Download This Paper (Delivery.cfm/SSRN_ID1182640_code477909.pdf?abstractid=961356&mirid=1)

Open PDF in Browser (Delivery.cfm/SSRN_ID1182640_code477909.pdf?abstractid=961356&mirid=1&type=2)