Estimating liquidity premium of corporate bonds using the spread information in on- and off-the-run Treasury securities

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China Finance Review International

ISSN: 2044-1398 (International Standard Serial Number.)

Article publication date: 15 May 2017

Abstract

Purpose

The purpose of this paper is to estimate the effects of liquidity on corporate bond spreads.

Design/methodology/approach

Using a systematic liquidity factor extracted from the yield spreads between on- and off-the-run Treasury issues as a state variable, the authors jointly estimate the default and liquidity spreads from corporate bond prices.

Findings

The authors find that the liquidity factor is strongly related to conventional liquidity measures such as bid-ask spread, volume, order imbalance, and depth. Empirical evidence shows that the liquidity component of corporate bond yield spreads is sizable and increases with maturity and credit risk. On average the liquidity spread accounts for about 25 percent of the spread for investment-grade bonds and one-third of the spread for speculative-grade bonds.

Research limitations/implications

The results show that a significant part of corporate bond spreads are due to liquidity, which implies that it is not necessary for credit risk to explain the entire corporate bond spread.

Practical implications

Originality/value

It is a novel approach to extract a liquidity factor from on- and off-the-run Treasury issues and use it to disentangle liquidity and credit spreads for corporate bonds.

Keywords

Liquidity premium
Kalman filter
Equivalent martingale measure
On- and off-the-run spreads
Reduced-form model
G01
G1

Citation
Li, H., Wu, C. and Shi, J. (2017), "Estimating liquidity premium of corporate bonds using the spread information in on- and off-the-run Treasury securities", China Finance Review International, Vol. 7 No. 2, pp. 134-162. https://doi.org/10.1108/CFRI-11-2016-0125

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Publisher: Emerald Publishing Limited