



Contents lists available at ScienceDirect

Research in International Business and Finance

journal homepage: www.elsevier.com/locate/ribaf



Full length Article

Is Thailand's credit default swap market linked to bond and stock markets? Evidence from the term structure of credit spreads



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ARTICLE INFO

JEL classification code:

G01
G12
G14
G18

Keywords:

Term structure
Credit spreads
Bond spreads
Credit default swap
Basis

ABSTRACT

When the term structure of credit spreads is used in a panel vector autoregression model, Granger causality tests provide strong evidence of bi-directional relationships among CDS, bond and stock markets. This study argues that extant research using only a 5-year credit spread tends to understate intermarket linkages since in practice investors are able to trade credit risk over the entire term structure of credit spreads. Interestingly, this study produces new empirical evidence that the term structure of CDS-bond basis displays a monotonically increasing trajectory. As the maturity lengthens, the arbitrage opportunity of companies with negative (positive) CDS-bond basis decreases (increases).

1. Introduction

A single-name credit default swap (CDS) is analogous to insurance contract that requires the buyer to make periodic payments during the contract's life or until the occurrence of a credit event in exchange for protection against credit risk of the reference entity. If a credit event occurs, the seller pays compensation equivalent to the difference between the par value of the bond and its market value after credit events. The CDS markets provide investors a convenient alternative way to trade credit risk especially when the secondary bond markets are illiquid and costly (Choudhry, 2006). In doing so, investors can take short (long) positions in credit risk of the reference company by purchasing (selling) credit protection using CDS. Duffie (1999) and Hull and White (2000) theoretically demonstrate that under the no-arbitrage conditions CDS spreads are approximately equal to bond spreads because both CDS and bond spreads measure the credit risk of the reference entity. However, many studies find that CDS and bond spreads often diverge due to several factors such as bond identity, delivery option, counter party risk, market's expectations of debt buyback and liquidity premium (e.g., Adler and Song, 2010; Bai and Collin-Dufresne, 2013; Mayordomo and Pena, 2014). The difference between CDS and bond spreads, the so-called CDS-bond basis, is therefore a key indicator of mispricing of credit-risky assets in CDS and bond markets.

For a given company, CDS spreads are not only correlated with bond spreads but also stock prices. The interrelation between CDS spreads and stock prices can be explained in the context of Merton (1974) model. Based on option pricing theory, Merton proves that equity is analogous to a call option when the company is also financed by debt. Unless the company's assets are worth more than its debt, equity is worthless and the call option is out-of-the-money. As a result, the negative movement in the corporate value is reflected in both declining stock prices and increasing bond yields (decreasing bond prices). With reference to Merton (1974), Duffie (1999) and Hull and White (2000), it can be inferred that CDS spreads and stock prices are negatively correlated. In this respect, buying (selling) CDS enables bearish (bullish) investors to take synthetic short (long) positions on stocks of the reference entity.

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<https://doi.org/10.1016/j.ribaf.2018.04.006>

Received 25 October 2017; Received in revised form 30 March 2018; Accepted 18 April 2018

Available online 22 April 2018

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