



News sentiment and bank credit risk



Lee A. Smales*

School of Economics & Finance, Curtin University, Australia

ARTICLE INFO

Article history:

Received 19 July 2015
Received in revised form 3 May 2016
Accepted 4 May 2016
Available online 14 May 2016

JEL classification:

G1
G10
G14
G15
G21

Keywords:

Credit spreads
LIBOR
News sentiment
TRNA
Credit risk

ABSTRACT

This article seeks to consider the relationship between the sentiment of newswire messages for a set of major international banks and changes in two important credit measures; the *LIBOR-OIS spread* and the *CDS spread*. There is a significant and negative relationship between news sentiment and changes in *CDS spreads*, which is consistent with *ex-ante* expectations that credit risk will decrease (increase) with positive (negative) news. This relationship is asymmetric with negative news inducing a stronger effect than positive news. There is also an apparent strengthening in this news sentiment/credit risk relationship during the crisis period. This coincides with a period when the number of news articles is highest, and the availability of news has a significant influence on *CDS spreads*. There is some evidence that whilst market determined credit measures (*CDS spreads*) respond to news releases, bank determined measures (*LIBOR-OIS spreads*) do not. Such results add to the discussion on whether banks correctly incorporate news into their own evaluation of credit risk. Understanding the behaviour of credit risk measures aids market participants, regulators, and central bankers in determining appropriate policy choices.

© 2016 Elsevier B.V. All rights reserved.

1. Introduction

The assessment of credit risk is a fundamental feature of the pricing of and investing in financial assets. Two measures of credit risk help to underpin the interest rate and bond markets; the London Interbank Offer Rate (LIBOR) is a measure of bank borrowing costs that is used to index \$360 trillion of financial contracts, whilst the Credit Default Swap (CDS) market, which allows investors to hedge credit risk on specific bond issues, has a notional value of nearly \$26 trillion. Changes in these rates have a significant impact on the borrowing cost of governments and corporates, and ultimately on investment decisions and economic growth. There has been some discussion as to whether LIBOR accurately portrays bank funding costs, particularly during periods of stress such as the 2007–2009 financial crisis. Mackenzie and Tett (2008) note “the rate of borrowing in LIBOR has lagged behind other market-based measures of unsecured funding used by the vast majority of financial institutions”.

This article seeks to consider the relationship between the sentiment of newswire messages for a set of major international banks and changes in two important credit measures; the *LIBOR-OIS spread* and the *CDS spread*. Three key questions are asked. First, how are important credit measures influenced by the sentiment of non-scheduled news events? For instance, is the asymmetric response to negative news found in equity markets also evident in credit markets? Second, is this news–credit risk relationship affected by the crisis of 2007–2009? Third, is it possible to identify anomalies in the relationship? Understanding the behaviour of important measures of credit risk, including LIBOR (but also *CDS spreads*), and how they respond to the arrival of

* Building 402, Kent Street, Perth, WA 6845, Australia.
E-mail address: lee.smales@curtin.edu.au.

news aids market participants, regulators, and central bankers in determining appropriate investment, legal, and monetary policy choices.

The key findings may be summarised as follows. There is a significant and negative relationship between news sentiment and changes in *CDS spreads*; that is consistent with ex-ante expectations credit risk will decrease (increase) with positive (negative) news. Further, there is evidence that this relationship is asymmetric with negative news inducing a stronger effect than does positive news. There is an apparent strengthening in this news sentiment/credit risk relationship for *CDS spreads* during the crisis period of 2007–2009, demonstrated by the increased magnitude of coefficient estimates. During the crisis period there is an increase in the number of daily news articles for each bank, sentiment is more negative on average, and there is a statistically significant association between the availability of news items and *CDS spreads*. Together, the results are consistent with the notion of investor attention.

A brief investigation into the influence of news sentiment for one bank on the credit measure of others reveals a certain level of interconnectedness, with news for Deutsche Bank influencing *CDS spreads* for all banks, whilst news for Citigroup impacts *LIBOR-OIS spreads* in USD markets. There is some evidence that whilst market determined credit measures (*CDS spreads*) respond to news releases, bank determined measures (*LIBOR-OIS spreads*) do not. A multiple breakpoint test suggests that the news/*LIBOR-OIS spread* changes significantly upon the onset of the financial crisis, and again when the associated recession ends.

Such results add to the discussion on whether banks were correctly incorporating news events into their own evaluation of credit risk during the financial crisis. The results will be important to market participants looking to either extend credit to banks or take positions in CDS contracts. Additionally, the results may be of some interest to regulators as they seek to monitor changes in bank credit measures going forward and understand prior LIBOR submissions.

The remainder of this paper is organised as follows: Section 2 outlines the current literature in the field and develops three hypotheses which form the basis for empirical testing. Section 3 discusses the nature of the data used in this paper, with a particular focus on the LIBOR-OIS and CDS credit measures along with the measure for news sentiment. Section 4 presents empirical evidence on the relationship between news sentiment and changes in measures of credit risk. Section 5 concludes the paper.

2. Literature review and hypothesis development

The London Interbank Offer Rate (LIBOR) is an important underpinning of the global financial system. It is used as a measure of short-term bank borrowing costs and acts as the reference rate in \$360 trillion of notional financial contracts.¹ It is common to remove market expectations of future central bank policy rates by subtracting the overnight index swap (OIS) from the LIBOR rate, and focusing on the *LIBOR-OIS spread* when considering bank credit risk.

There has been some debate on whether the *LIBOR-OIS spread* is a measure of credit risk, liquidity risk, or both. Imakubo et al. (2008) and Kwan (2009) utilise data from the CDS market to suggest that liquidity risk is the key determinant in changes in the *LIBOR-OIS spread*. Gefang et al. (2011) finds that whilst surges in the short-term *LIBOR-OIS spreads* during the financial crisis were largely driven by liquidity risk, credit risk had a greater role in longer term spreads. Alternatively, Taylor and Williams (2009), and Taylor (2009), support the notion that the spread is measuring credit risk, since increasing bank risk explains much of the behaviour of the rate. Importantly, Brunnermeier (2009) suggests that credit risk is the key element of the spread since, by construction, a secured lending cost (OIS) is subtracted from an unsecured cost (LIBOR). Following a similar theme, Thornton (2009) states that there is no doubt that movements in the spread reflect credit risk rather than liquidity risk, and quotes former Federal Reserve Chair Alan Greenspan “LIBOR-OIS remains a barometer of fears of bank insolvency”.

Credit Default Swaps (CDS), a relatively new financial innovation,² are swap arrangements that allows for the seller of the CDS to compensate the buyer in the event of a loan default or other credit event. Having reached a peak of \$62.2 trillion outstanding contracts in 2007, the CDS market had a gross notional amount of \$25.9 trillion of outstanding contracts as of December 2011.³ Using structural models, the relationship between *CDS spreads* and bond credit spreads (Zhu, 2006) and credit ratings (Norden and Weber, 2004) is found to be informationally efficient. Galil et al. (2014) suggest that market variables are able to explain movements in *CDS spreads* after controlling for such structural model variables. Tang and Yan (2010) determine that market level investor sentiment is the most important determinant of credit spreads, and macroeconomic variables are directly responsible for a lesser proportion.

More recently, newspaper articles have argued that LIBOR quotes (and hence the *LIBOR-OIS spread*) have been artificially manipulated to fall below the true cost of interbank funding. Mollenkamp and Whitehouse (2008), writing in the Wall Street Journal, claim that 3-month USD LIBOR was understated by 20–30 basis points in the period after the collapse of Bear Sterns. Subsequent academic work on the veracity of the claims has produced mixed results. Abrantes-Metz et al. (2012) find some anomalous individual quotes but no systematic evidence of LIBOR manipulation in the US 1-month LIBOR⁴ rate when compared to matched CDS

¹ Source: British Bankers Association (BBA). For more information see www.bba.org.uk.

² The Financial Times (Tett, 2006) reports that the market was established by JP Morgan in 1994.

³ Source: ISDA CDS Marketplace. For more information see www.isdacdsmarketplace.com.

⁴ Wheatley (2012) notes that the USD 1-month LIBOR makes up 5.6% of the referenced market as opposed to the 52.8% constituted by USD 3-month LIBOR, suggesting less financial incentive to manipulate the 1-month rate.

Download English Version:

<https://daneshyari.com/en/article/958623>

Download Persian Version:

<https://daneshyari.com/article/958623>

[Daneshyari.com](https://daneshyari.com)