Journal of Banking & Finance 40 (2014) 460–475

Contents lists available at ScienceDirect

Journal of Banking & Finance

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

The impact of CDS trading on the bond market: Evidence from Asia

Ilhyock Shim [a,*], Haibin Zhu [b]

[a] Monetary and Economic Department, Bank for International Settlements, Hong Kong Special Administrative Region
[b] Economic Research, JPMorgan Chase Bank, NA, Hong Kong Special Administrative Region

ARTICLE INFO

Article history:
Received 4 September 2011
Accepted 5 July 2013
Available online 16 July 2013

JEL classification:
G12
G32

Keywords:
Credit default swaps
Bond spreads
Bond liquidity
CDS index
Asia

ABSTRACT

This paper investigates the impact of CDS trading on the development of the bond market in Asia. In general, CDS trading has lowered the cost of issuing bonds and enhanced the liquidity in the bond market. The positive impact is stronger for smaller firms, non-financial firms and those firms with higher liquidity in the CDS market. These empirical findings support the diversification and information hypotheses in the literature. Nevertheless, CDS trading has also introduced a new source of risk. There is strong evidence that, at the peak of the recent global financial crisis, those firms included in CDS indices faced higher bond yield spreads than those not included.

1. Introduction

The rise and fall of the credit derivatives market have been considered as the single most important development in the global credit market in the past decade. Before the onset of the global financial turmoil that started in mid-2007, the use of credit default swaps (CDSs) as an instrument to trade credit risk had increased exponentially. Since 2008, however, activity in the CDS market has shrunk substantially. In particular, Fig. 1 shows that the CDS notional amount outstanding dropped from roughly $60 trillion at the end of 2007 to about $33 trillion at the end of 2009, reflecting severely strained credit markets and the increased multilateral netting of offsetting positions by market participants.[1]

In Asia, the CDS market has also grown rapidly in the past decade, despite the fact that it is relatively small and illiquid compared to its counterparts in Europe and the United States. Table 1 shows the gross notional amount outstanding and the number of contracts of major CDS indices covering reference entities in North America, Europe and Asia as of April 2011. CDS contracts written on Asian reference entities started to be traded in the late 1990s (Remolona and Shim, 2008). In July 2004, the first CDS indices focusing on the region, iTraxx Japan and iTraxx Asia ex-Japan, started to be traded in the market. The trading was relatively limited in the first few years, and then picked up strongly after these indices were reconstituted to reflect a surge in bond issuance by new large borrowers in the region starting in the fourth quarter of 2006. The gained liquidity in the index market spilled over into single-name CDS contracts. As a result, the CDS market in Asia began to emerge as a potentially serious market in its own right.

Compared to Europe and the United States, the CDS market in Asia was introduced against the backdrop of a corporate bond market still in its infancy. Fig. 2 shows the amount outstanding of debt securities issued by financial and non-financial corporate issuers residing in the United States, Europe and Asia from 1993 to 2011. In most Asian economies, the size of the bond market was quite small, the trading was not liquid, and the issuance of new bonds was largely driven by quasi-government issuers or issuers with some form of credit guarantees. Since the mid-2000s, however, the depth and breadth of the Asian bond market have improved greatly, due partly to the priority focus of Asian policymakers to develop local currency bond markets and partly to the positive spillover between the bond market and the derivatives market (Gyntelberg et al., 2005; Filardo et al., 2010).

For policymakers, an issue of interest is the impact of the development of the CDS market on the corporate bond market. There are

* Corresponding author. Tel.: +852 2878 7147; fax: +852 2878 7123.
E-mail addresses: ilhyock.shim@bis.org (I. Shim), haibin.zhu@jpmorgan.com (H. Zhu).

[1] Duffie (2009) documents that compression trades, in which several dealers that hold redundant circles of CDS positions choose to legally cancel their offsetting obligations to each other, are responsible for the termination of approximately $30 trillion in notional amounts of CDS positions in 2008 alone.

0378-4266/$ - see front matter
http://dx.doi.org/10.1016/j.jbankfin.2013.07.001

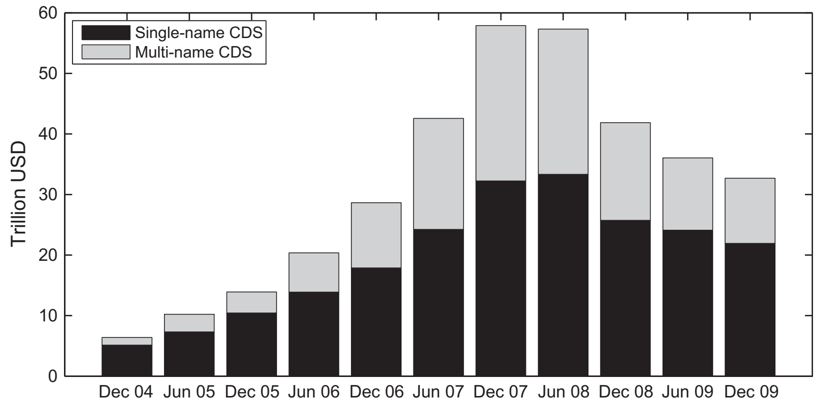

Fig. 1. Global CDS markets: Notional amounts outstanding. *Source*: Bank for International Settlements.

Table 1
CDS index market by region. *Source*: DTCC.

	Dealer		Non-dealer/customer		Total	
	Notional	Contracts	Notional	Contracts	Notional	Contracts
North America	2797	32,429	1084	10,268	3881	42,697
Europe	3834	39,820	1070	11,972	4904	51,792
Asia	169	9642	18	1213	187	10,855

"Notional" is the gross notional amount outstanding of major CDS indices in billion US dollars as of the week ending on 1 April, 2011, and "Contracts" is the number of CDS index contracts outstanding as of the same period. CDS indices for North America include CDX.NA.HY.15 index (on-the-run), CDX.NA.IG.16 index (on-the-run), CDX.NA.HY index (off-the-run) and CDX.NA.IG index (off-the-run). CDS indices for Europe include ITRAXX EUROPE CROSSOVER SERIES 15 (on-the-run), ITRAXX EUROPE SERIES 15 (on-the-run), ITRAXX EUROPE (off-the-run) and ITRAXX EUROPE CROSSOVER (off-the-run). CDS indices for Asia include ITRAXX ASIA EX-JAPAN IG SERIES 15 (on-the-run), ITRAXX JAPAN SERIES 14 (on-the-run), ITRAXX ASIA EX-JAPAN (off-the-run), ITRAXX ASIA EX-JAPAN HY (off-the-run), ITRAXX ASIA EX-JAPAN IG (off-the-run) and ITRAXX JAPAN (off-the-run). The categorisation of "Dealer" and "Non-dealer/customer" is by type of sellers of protection.

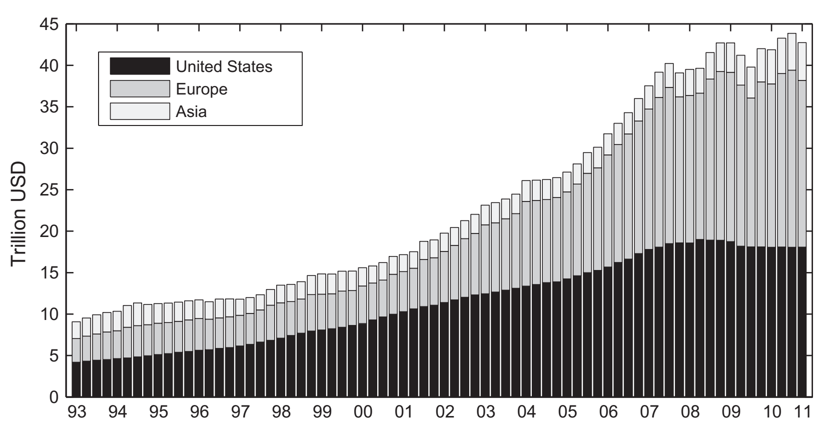

Fig. 2. Corporate debt securities outstanding by residence of issuers. The outstanding amount of domestic and international bonds and notes issued by financial firms and non-financial firms located in each region. The data is quarterly, starting from Q4 1993 and ending in Q3 2011. *Source*: Bank for International Settlements.

two approaches in the literature. One is to examine both the bond and CDS markets and draw comparisons about their roles in price discovery. The general results suggest that CDSs play a leading role in price discovery (Baba and Inada, 2009; BIS, 2003; Blanco et al., 2005; Hull et al., 2004; Zhu, 2006), although there is a no-arbitrage relationship between the two markets in the long run.[2] The other approach focuses on the bond market and examines whether bond market development, e.g., the cost of issuing and trading bonds, is affected by the introduction of CDS markets (Ashcraft and Santos, 2009). In this paper, we adopt the second approach and leave the first issue untouched.

The limited number of studies on the impact of CDS trading on the bond market have so far focused on the US market. However, their findings do not necessarily apply to the Asian market. One reason for this is the different stages of development between the Asian and US bond markets when CDSs were introduced. Given that the bond markets in many Asian economies were underdeveloped from the beginning, it is more likely that CDS trading will have a jump-start effect on bond market development. Moreover, investors in Asian bond markets, especially in local currency bond markets, are predominantly domestic investors, while those in Asian CDS markets are mostly foreign investors. Baba and Inada

[2] There are a number of reasons for the leading role of CDSs in price discovery, such as funding and short-sale restrictions that exist in the bond market.