Workshop on Stochastic Calculus and Applications
Institute of Mathematics, Academia Sinica, Taipei, Taiwan

Valuation of Constant Maturity Credit Default Swaps

Hidetoshi Nakagawa[1] and Meng-Lan Yueh [2]

April 15th - 17th, 2010

1. Graduate School of International Corporate Strategy, Hitotsubashi University,
Tokyo, 101-8439 Japan
E-mail:**hnakagawa@ics.hit-u.ac.jp**

2. Department of Finance, National Chengchi University,
Taipei, 23147, Taiwan
E-mail:**mlyueh@nccu.edu.tw**

Abstract

Aided by the innovation of sophisticated products, credit derivatives have provided new ways for investors to take risk exposures. Constant maturity credit default swap (CMCDS) is an extension of constant maturity swap (CMS) in the area of credit market. CMCDS allows investors to take a view on future credit spreads. The strategy of combining a CMCDS with an opposite position in a vanilla credit default swap (CDS) provides a means to unbundle spread risk from default risk. The valuation of a CMCDS involves computing the appropriate adjustment to the forward credit spreads. In this paper, we analyze the valuation problem of CMCDS and derive the adjustment term for forward credit spread and calculate the value of the participation rate.

References

[1] Benhamou E 2000 A Martingale Result for Convexity Adjustment in the Black Pricing Model *Working Paper, London School of Economics*

[2] Brigo D 2006 CMCDS Valuation with Market Models *Risk* **June** 78-83.

[3] Pelsser A 2003 Mathematical Foundation of Convexity Correction *Quantitative Finance* **3** 59-65.

[4] Pugachevsky D 2001 *Risk* **March** 125-128.