Chapter 7

ANALYSIS OF EUROPEAN SOVEREIGN CREDIT DEFAULT SWAP DURING THE SOVEREIGN DEBT CRISIS IN PERIPHERY COUNTRIES

Işıl MENGÜÇ

Introduction

In previous years, lenders to countries could not insure against sovereign default and also they had to trust creditors their debt obligation in good faith. On the other hand, our generation has created insurance product to protect against default. Basically, these insurance products are called credit default swaps which have passed two decades of extraordinary growth. Policy makers, market participants and regulators gradually look at sovereign credit default swap (CDS) spreads to adjust financial system (Augustin, 2012).

Sovereign credit ratings have helped as the most utilised proxy to measure the amount of credit risk associated with an economy; however criticism is being directed towards the rating agencies that identify credit ratings. The general idea is that the credit ratings are not good indicators of the amount of credit risk linked to an entity (Mora, 2006). This idea is related to the current sovereign debt crisis and also the subprime banking crisis 4 years ago. Credit rating agencies could not forecast this crisis. The most outstanding example of this was the collapse of the American investment bank Lehman Brothers. Even though this bank had a very high credit rating, it had defaulted (Flannery, 2010). Credit ratings have heightened the demand for a different and certain proxy of sovereign credit risk. Wang, Svec and Pec (2006) defined that the CDS premiums on periphery countries sovereign bonds began to extend, as well as they extended again following the downgrade Greece's (April 2010) and Ireland's (April 2011) debt to junk status which increases pressure on the solvency of these countries.

Moreover, the credit default swap spreads might be a substitute to utilise of credit ratings as the guiding indicator for sovereign risk. The premium that has to be paid in a sovereign CDS transforms the amount of credit risk regarding the entity fundamental the contract. Basically, a CDS contract can protect an investor versus the credit risk that he or she faces. Because CDS spreads market-assessed reflectors unlike credit ratings, they can manage more certain and also quicker to altering market conditions (Flannery, 2010). The CDS has become a very well-known instrument, as well as it is the most traded derivative and the market. This study is to define that sovereign CDS spreads can potentially be used as an underlying and accurate proxy for sovereign risk.

developed structural model to sovereign risk. He said that volatility index and equity market index are related to CDS spreads. We have proved this model in this study. Sovereign has been damaged world financial market badly. Besides, it was caused countries' credibility. Therefore, we also used CDS spreads to determine countries' credit risk. During the financial crisis, CDS spreads were increased dramatically. Basically, European sovereign debt crisis damaged world financial system and different countries. So, this study has proved that spill over effect was created by European sovereign debt crisis. For example, S&P 500 index is based United States' companies. Moreover, World Financial Index and S&P 500 index are statistically significant to determine CDS Spreads

This study was investigated a private to public transfer associated with countries' exposure to the financial system during the euro are financial crisis between 2008 and 2012. This development was led to important co-movement between the price of insurance versus default risk and the performance of the financial sector in Portugal, Ireland, Italy and Spain. Researchers found that aid packages were facilitated to several countries in Europe. This aid mechanism has damaged in sovereign CDS market prices, for instance, the European Financial Stability was created by the euro area member countries.

The effects of risk premiums on CDS spreads are associated with macroeconomic and financial market developments. Second part of this study, macroeconomic and financial markets developments have been investigated. Our result show that sovereign spreads has increased dramatically in Portugal, Italy, Ireland and Italy. This circumstance changed on investor's appetites for credit exposure at a global level rather than these specific sovereign economies (Pan& Singleton, 2008). This development has damaged macroeconomic factors, such as GDP, Growth rate and debt to GDP ratio.

References

Alexander, C. (2010) Quantitative Methods in Finance 3th editon London: John Wiley & Sons, Ltd

Alexander, C. & Kaeck, A. (2007) Regime dependent determinants of credit default swap spreads, Journal of Banking and Finance, Volume 32, part 6, p 1008-1021

Akdogu, S. (2012) CDS, bond spread and sovereign debt crisis in peripherial EU, Vol. ISBN 978-963-306-159-6, (2012): pp. 126-133. Szeged: University of Szeged

Atrissi, N. & Mezher, F. (2010) "Sovereign Debt Crisis and Credit Default Swaps: The Case of Greece and Other PIIGS". Maître de Conférences à la FGM, Written July 2010, Université Saint-Joseph, Beyrout

Alexopolou, L., Bunda, I., Ferrando, A. (2009) Determinant of Government Bond Spreads in New EU Countries. First edition: New York: European Central Bank

Alper E., Forni L., and Gerard M. (2012) Pricing of Sovereign Credit Risk. First edition, Washington: International Monetary Fund

Asteriou, D. & Hall S, (2009) Applied Econometrics. 2th edition Chine: Palgrave macmilan

Bomfim, A. (2005) Understanding Credit Derivatives and Related Insturments.1th edition, London: Elsevier Academic Press

Badaoui, S., Cathcart. L.& El-Jahel, L. (2012) Do Sovereign Credit Default Swaps Represent a Clean Measureof Sovereign Default Risk? A Factor Model Approach. London, Imperial College Business School

Breitenfellner, B. & Wagner N (2012), Explaining Aggregate Credit Default Swap Spreads, volume 22, p18-19.

Blanco, B., Brennan, S., and Marsh, W., I (2008) An Empirical Analysis of the Dynamic Relationbetween Investment-Grade Bonds and Credit Default Swaps. Journal of Finance. VOL. LX, NO. 5, p2-27

Bilal M. & Singh M. (2012) CDS Spreads in European Periphery. First edition, Washington: International Monetary Fund

Contessi, S.(2012) An Application of Conventional Sovereign Debt Sustainability Analysis to the Current Debt Crises. St Louis, Federal Reserve Bank of St. Louis

Calice, G. Chen, J., Willams, J. (2011) Liquidity Spillovers in Sovereign Bond and CDS Markets, London

Criado, S. (2012) Report on Sovereign CDS: Magdalena, Markt

Dieckmann, S. and Plank, T. (2011). Default risk of advanced economies: An empirical analysis ofcredit default swaps during the financial crisis, Review of Finance

Ericson, J., Jacobs, K. & Ovieado, T. (2005) The determinants of Credit Default Swap Premia, Article provided by Cambridge University Press in its journal Journal of Financial and Quantitative Analysis. Volume 44, Part 2, p 109-132

Fontana, A. &Scheicher, M. (2010) An analysis of Euro Area Sovereign CDS and their Relation With Government Bonds, European Central Bank. No 1271, p6-15.

Galtung, J. (2006) A Structural Theory of Imperialism. Journal of Peace Research. Vol.8, No. 2, p82-117

Gerlach, S., Schulz, A., and Wolf, B., G (2010) Banking and Sovereign Risk in the Euro Area. Frankfurt: Deutsche Bank

Granger, J., W., C. (2007) Investigating Causal Relations by Econometric Models and Cross-spectral Methods. J STOR. Vol. 37, No. 3. pp. 424-438

Hull, J., Predescu, M. &White, A. (2004) The relationship Between Credit Default Swap Spreads, Bond Yields, And Credit Rating Announcement. Second edition, Toronto: Rotman Business School

Hull, J. C. and White, A. (2000a). Valuing credit default swaps i: No counterparty default risk,SSRN eLibrary .

Holland, D., Kirby S., and Orazgani S. (2011) Modelling The Sovereign Debt Crisis in Europe. National Institute Economic Review. Vol. 217, No. 37, p5-6-7-8

Jarrow, A., R. & Turnbull, M., S. (1995) Pricing Derivatives on Financial Securities Subject to Credit Risk. The Journal of Finance. Vol.1, No. 1

Kiff, J., Elliot, J., Kazarian, E.,Scarlata, J., and Spacman C. (2009) Credit Derivative SystematicRisk and Policy Options. First Edition, Washington: International Monetary Fund

Klieber, S., D. (2012) Credit Default |Swaps Weapon of Mass Destruction or Reliable Indicator, England: Oxford

Longstaf. F. A., Pan, J., Pedersen, L. H. and Singleton, K. J. (2010). How sovereign is sovereigncredit risk?, American Economic Journal: Macroeconomics (13658).

Mody A. & Sandri D (2011) The Eurozone Crisis: How Banks and Sovereigns Came to be Joined at the Hip. Washington: International Monetary Fund

Masters, B., Herring, J. & Ikeda M. (2005) The J.P Morgan Guide to Credit Derivatives, New York, JP, Morgan

O'Kane D. & Turnbull S. (2003) Valuation of Credit Swap, Fixed Quantitative Credit Research. Volume 2003, p3-4-5-6-7-8-9-10-11.

Pan J. & Singleton J. K, (2008) Default Recovery Implicit in the Term Structure of Sovereign CDS spreads. THE JOURNAL OF FINANCE • VOL. LXIII, NO. 5 • OCTOBER 2008

Sorensen K. & Winckelmann A. D. (2011) Analysis of European Sovereign CDS spreads Before and after the financial crisis, First edition, Denmark: Aarhus School of Business

Ozveren, N., A. (2009) Credit Default Swap: An Assessment and Pricing Issues. Ankara: Middle East Technical University

Plank, J., T. (2010) Essay in Sovereign Credit Risk. Pennysylvania, University of Pennsylvania Scholarly Commons.

Pu, X. & Zhang, J. (2012) Sovereign CDS Spreads, Volatility, and Liquidity: Evidence From 2010 German Short Sale Ban. The Financial Review 47 (2012) 171–197

Reinhart C. & Rogoff K. (2011) This Time is Different Eight Centuries of Financial Folly. 1th edition, New York: Princeton

Reinhart C. & Rogoff K.(2011) From Financial Crisis to Debt Crisis, American Economic Review. Volume 101, No. , p1676-1706

Santis, A., R. (2010) The Euro Area Sovereign Debt` Crisis Safe Haven, Credit Rating Agencies and The Spread of The Fever from Greece Ireland Portugal. First Edition. Germany: European Central Bank

Vorst, T. & Houweling, P. (2005) Pricing Default Swaps: Empirical Evidence. Elsevier, vol. 24, pages 1200-1225

Watsham T. (1998) Futures and Options in Risk Management.2th edition, London: Thomson Business Press

White, A. & Hull J.(2003) Valuing Credit Default Swaps. First edition, Toronto: Rotman School of Management