

The Time Series Behaviour of Credit Spreads Between Yen Denominated Eurobonds

Jonathan Batten
Craig Ellis
Warren Hogan

Straight fixed rate Yen denominated Eurobonds represent the largest market segment after US denominated issues. The objective of this paper is to investigate the difference in yields, called the credit spread, between different risk and maturity classes of yen denominated Eurobonds. These spreads also underpin the pricing of credit derivatives, a new group of financial product which either synthetically replicate the credit features of a loan agreement, or emulate the behaviour of a put option on credit sensitive assets. We investigate the time series properties of daily credit spreads, from June 1993 to October 1998, between AAA and AA Yen denominated Eurobonds with maturities of 2, 3, 5, 7, 10 and 20 years and the equivalent government bond. The credit spread return series are stationary and possess some short-term negative autocorrelation, though they are well described as ARMA processes. The type of process differs between the various series. The implications of these results for the trading of credit spread derivatives are discussed.

Keywords: Credit derivatives, Credit spreads, Yen Eurobonds, ARMA process

Correspondence:

Nanyang Technological University Singapore

Fax: 65-791 3697

Email: ajabatten@ntu.edu.sg

or

University of Technology, Sydney

Fax: 61-2-9281 0364

Email: Craig.Ellis@uts.edu.au