Risk Analysis for JHF's Residential Mortgage Loan Portfolios

Kanagawa University,Faculty of Business Administration

Associate Professor, Ph.D.

Masayasu KANNO

Abstract

We analyze credit and prepayment risk for Japan Housing Finance Agency's residential mortgage loan portfolios. These portfolios are composed of two types; "Direct Finance by GHLC" and "FLAT 35" for supporting commercial residential mortgage loans. Unlike popular corporate loans or personal loans, residential mortgage loans have special properties such as very long duration and prepayment. And sub-prime mortgage loans crisis and the subsequent global financial crisis had a major impact on Japanese economy, so it seems that it is important to verify the effect on Japanese public mortgage risk management. We firstly analyze the change of risk parameters such as PD, LGD, EAD and Prepayment rate. We secondly calculate Expected Loss and Unexpected Loss related to credit risk. And finally by Multinomial Logistic Regression Analysis, we estimate risk factors, which explain default risk and prepayment risk.