Corporate Bond Yield Spreads: Cash-Flow Volatility vs. Internal Liquidity Risk Approach

Bachelor Thesis in Quantitative Finance
Swiss Banking Institute
University of Zurich

May 4, 2011

Prof. Dr. Markus Leippold

Irina Krumova

Executive Summary

Understanding and being able to quantify the major determinants of corporate bond yield spread has been the purpose of numerous studies published in recent decades. Under the ever-present uncertainty on financial markets there has been an unceasing effort to model corporate bond pricing. This reconfirms the undiminished importance of the fixed-income markets as a source of a more direct and immediate financing for companies of different segments and magnitude, and can be traced back to the seminal work of Merton (1974), which has become a starting point for most of the modern approaches on this topic.

The factors affecting the development of the corporate bond yield spread will be in the main focus of this research. Considering the specifics of the high-yield bonds sector the current research aims at establishing whether or not the commonly regarded input factors of corporate bond pricing preserve their explanatory power when applied to this higher-risk segment of the bond market.

Based on a representative sample of companies that have issued high-yield bonds in recent years with duration of over one year the current research adapts the techniques used in the structural form credit models inherent to modern option pricing theory to examine the major determinants influencing the yield spread.

In its core the thesis makes a comparison of the two approaches to modelling corporate bond yield spread - the internal liquidity risk and the cash-flow volatility approach. The preliminary results of the empirical study can reconfirm the standalone explanatory power of the cash-flow volatility as a significant factor influencing the yield spread and presents a model applicable to both main segments of corporate bonds market - the high-yield and the investment-grade bonds.