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Subordinated debt as instrument of market discipline: Risk sensitivity of sub-debt yield spreads in UK banking

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ABSTRACT

This paper empirically examines whether yield spreads of subordinated debt issued by UK banks are sensitive to bank risks, with a dataset that includes spreads, ratings, accounting measures of bank risks and market condition indexes in the sample period between 1997 and 2009. The results show that Moody's and S&P traditional ratings have significant and negative impacts on spreads, and investors have exercised sensible discrimination between different risk profiles of UK financial institutions. However, accounting measures show an absence of the explanatory power of the spreads. Market condition indicators, particularly those related to European markets, also have significant influence on credit yield spreads. The findings indicate that, in the UK, sub-debt spreads do reflect the issuing banks' risk-taking, hence satisfying a critical precondition for sub-debts to be an instrument of market discipline in banking.

1. Introduction

The financial crisis has exposed underlying deficiencies of the current banking supervision. The growing size and complexity of banks makes it increasingly difficult for regulators to monitor and control banks' excessive risk-taking through traditional means. Policy designs such as the deposit insurance scheme and the too-big-to-fail problem as highlighted by government bailouts in recent

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years further compound the situation. This leads to rekindled interests in considering involving market discipline in reform of bank regulation (Evanoff, Jagtiani, & Nakata, 2011).

An essential element in the proposals for promoting market discipline in the banking industry is the mandatory issuance of subordinated debts (sub-debts) by large banks at regular intervals. Success of the sub-debt proposals however is crucially dependant on whether yields on sub-debts are correlated with banks' risk-taking (Evanoff & Wall, 2001; Goyal, 2005). Defined as the difference between the yields on sub-debt and the yields on a Treasury security issued in the same currency with similar maturity (Balasubramian & Cyree, 2011), the sub-debt spread could embed information about financial conditions of the bank if it is found to reflect a bank's risks. Then based on the spreads, market participants could evaluate investment in the banks concerned. Banking supervisors could also benefit from monitoring the spreads since the market information conveyed by the spreads have proved to be as good as or even better than the information extracted from the traditional off-site monitoring practice at predicting the riskiness of banks (Evanoff & Wall, 2001, 2002). It can therefore also facilitate early detection of stressed banks (Jagtiani & Lemieux, 2001), and better allocate regulatory resources.

While several studies show that sub-debt spreads reflect bank risks (Hancock & Kwast, 2001; Sironi, 2003), there are reports indicating that evidence of the existence of a risk-spread relationship is either weak or insignificant, casting doubts on the usefulness of sub-debts being deployed as a channel for market discipline. Evanoff et al. (2011) suggest that the quality of market signal is an evolving process; it may improve when the same country shifts to a new environment where the sub-debt market becomes deeper. This research contributes to the debate with evidence from a different country than the U.S.A. but also has a well-developed banking market and comparable sub-debt market.

We in this study examine the risk sensitivity of UK banks' sub-debt spreads. Previous research mainly concerns the US banks, and to a lesser extent European and Japanese banks. Our study complements the plethora of prior empirical studies by analysing the UK market. British banks have their particular attractions as a case for studying desirability and feasibility of subordinated debt as an instrument of market discipline.

In the global subordinated debt market, the British banks have been very active. According to the Basel Committee of Banking Supervision (2003), in terms of amounts issued, the British sub-debt market is no smaller than the US market. In terms of sub-debt issued through public placement, the UK market is even greater than all other European markets putting together. However, the existing literature is largely silent about this very important UK market. Moreover, most of the debt securities issued by the UK banks are publicly placed, hence the scope for and depth of the working of market discipline via sub-debts could be substantial in the UK banking industry, as compared to privately issued debt, as is the situations in Germany and Japan.

To investigate the risk-spread relationship in the UK, a dataset is constructed over the period of 1997–2009, which contains spreads, ratings, accounting measures of bank risks and market condition indicators. Our empirical evidence confirms that the UK banks' sub-debt spreads are related to risk measures assigned by traditional rating agencies. Particularly for Moody and S&P ratings, when ratings worsen, spreads rise. Furthermore, sub-debt investors seem to have rational discriminations between different risk profiles of UK credit institutions. Some accounting measures of bank risks show an absence of explanatory power of spreads, hence there is a lack of evidence that the spreads reflect the risk indicators in terms of accounting measures. Market conditions, especially European market indicators, have a significant impact on the yields. By revealing evidence on influences of different components of the risk-spread nexus, this research also provides a wider-ranging understanding of the role of the spread in the market discipline mechanism, hence advances the existing knowledge on the relevant factors that affect the risk-spread relationship and feasibility of sub-debt as an avenue for market discipline (e.g. Caldwell, 2007; Sironi, 2003).

The structure of this paper is organized as follows: Section 2 presents a review of prior studies. The econometrical formations of the model to be estimated and methodology used in this research are outlined in Section 3. In Section 4, the data sources are explained and sample characteristics are described. Interpretations of the empirical results are shown in Section 5, while Section 6 concludes the paper.