Research Projects: April 2017 – March 2018

A. Research Projects Completed

I. Finance

1. *Demystifying Yield Spread on Corporate Bond Trades in India*
– Dr Kedar nath Mukherjee

Purpose - This research project aims to study the market dynamics of corporate bond yield spread in India and tried to identify the possible factors affecting bonds' liquidity, credit quality and therefore their yield spreads.

Design/methodology/approach - A large sample of daily corporate bond trade data, classified into Issuers Segment-wise and Rating-wise, are analysed within basic statistical framework and Panel Regression Model.

Findings - The average traded yield spread, its daily average variation, both are found to be the least in case of bonds issued by Banks/PSUs/FIs, followed by NBFC and Corporates. Securities, mostly issued by Banks/PSU/FIs, and of 8-10 years of residual maturity and 1-1.5 years of age, with a higher level of creditworthiness, are found to be more liquid. Default risk is found to significantly affect the yield spread, for almost all possible types of securities. Even if the summary statistics and fixed effect panel regression results broadly support the relationship between bond liquidity and yield spread, use of better liquidity proxy measure may improve the said relationship. Movements in equity market also found to affect the corporate bond yield spread in India.

Research limitations/implications - Even if a significantly large sample is used, infrequent and irregular trades in most of the securities, leading to an unbalanced panel, may cause some of the major findings to be with insufficient explanatory power.

Practical implications - The research findings will help the concerned market players to understand the dynamics of a developing corporate bond market better, and also to gain insights towards the movement of the yield spread and its possible variation due to multiple factors. The study was completed in March, 2018.

2. *Market Risk Capital Charge: Various Basel Regimes and their Impact on Commercial Banks in India* – *Dr Kedar nath Mukherjee*

Banking business worldwide are highly susceptible to various risks of incurring financial losses, may be even of very large volume. The capital plays a very crucial role in preserving the safety and soundness in the banking system. Basel Committee on Banking Supervision (BCBS), founded in the year 1974, has released three major capital adequacy frameworks, known as Basel I, Basel II and Basel III Accords, to provide capital adequacy standards for banks under three major risk heads: Credit, Market and Operational Risk.

In this research project, an attempt is made to discuss the gradual developments in various Basel regimes, in the context of estimation of market risk and the required capital charge under various Basel and RBI norms. Growth and developments of Indian Scheduled Commercial Banks (SCBs) over the years, with special reference to historical movement in the financial market in India and worldwide, and the investments pattern of Indian SCBs in various financial market instruments/ assets are studied, especially to understand the level of market risk Indian SCBs are possibly exposed to over the years. Estimating the market risk and the required capital charge on a proxy trading portfolio hold by say a commercial bank in India, under various Basel regime and approaches, an effort is made to explore the current scope and challenges expected to be faced by Indian commercial banks to implement the new Basel and RBI market risk capital adequacy standards.

As of now, Indian SCBs are expected to be fairly compliant with the required capital adequacy norms, with an average capital adequacy of 12.28 % and 12.95 % (excluding for Foreign Banks in India, as per RBI Data), respectively under Basel II and Basel III standards as of March 31 2017. Infusion of fresh capital by the Government is expected to further improve the capital adequacy for public sector banks in India. As far as the impact of various Basel regimes and proposed approaches under various regimes on the estimation of market risk capital charge is concerned, Indian SCBs are expected to face a bigger challenge, especially under the new Basel market risk norms, known as FRTB, which Indian banks are expected to be compliant with on or before January 2022, a deadline given by BCBS. The challenges for the Indian SCBs is even manifold. Under FRTB guidelines, banks are no longer in a position to enjoy the Regulatory Arbitrage by adopting a market risk measuring method/approach that attracts lower capital. Accordingly, in order to estimate market risk capital charge, SCBs in India may have reasonable incentives to migrate towards the internal model approach which seems to be relatively less complicated and more market oriented. The study was completed in March, 2018.