Independent Course Proposal

Under Supervision of Professor Sanjiv Das

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I. Course Outline

1. Topic and Research Questions

- The course is designed for exploring US Commercial Banks' Off-balance sheet items (OBS) and employing Python programming language for data analysis and statistical models.
- With respect to impacts of banks' off-balance sheet items, there are many different prospects. While some state that off-balance sheet activities are beneficial for bank risk management including credit risk and liquidity risk, some argue that regulatory capital arbitrage and performance improvement are more vital motives. Furthermore, some contend that derivatives help transfer credit risk to another party who is willing to take risk, which consequently reduces credit risk exposure for bank purchasing such derivatives. However, others have an opposite view. They claim that it is credit risk transfer which makes banks become more willing to take risk – moral hazard and loose screening/monitoring processes – adverse selection. As a result, it is intriguing to find out which views and to which extent are supported by US Commercial Banks data obtained from WRDS database by answering the following questions. Each question will also consider bank size (big/small), bank function (guarantor/beneficiary) and OBS categories (loan commitments/credit derivatives/derivatives):
    - What is the relationship between OBS and credit risk?
    - What is the relationship between OBS and liquidity risk?
    - What is the relationship between OBS and bank profitability?

2. Learning Objectives
    - To understand US Commercial Banks' Off-balance sheet items and develop existing related literatures.
    - To expand knowledge of econometrics for the preparation of future classes.
    - To review and enhance Python skillsets by manipulating, visualizing panel data set and building regression models to answer research questions.
3. Output (Date of submission will be decided by Prof.Das)
    - A 50-page research paper
    - A 10~15-page blog post on GitHub
    - A small manual for using GitHub
4. Paper outline
    i. Introduction
    ii. US Commercial banking system and OBS activities trend over time
    iii. Literature review
    iv. Methodology and data
    v. Empirical results and analysis

vi. Conclusions and research limitations

II. Reading lists

1. Jorge, A. & Li, L. (2006). The Credit Risk Transfer Market and Stability Implications for U.K. Financial Institutions. *IMF Working Paper.*
2. Wagner, W. & Marsh, I. (2005). Credit risk transfer and financial sector stability. *Journal of Financial Stability.*
3. Mikati, N. (2013). Bank Risk Exposure, Bank Failure and Off Balance Sheet Activities: an Empirical Analysis for U.S. Commercial Banks.
4. Hassan, M. & Khasawneh, A. (2010). The Determinants of Derivatives Activities in U.S. Commercial Banks. *Networks Financial Institute Working Paper 2009-WP-10.*
5. Instefjord, N. (2003). Risk and hedging: Do credit derivatives increase bank risk?. *Journal of Banking & Finance 29(2005) 333-345.*
6. Schipper, K. & Yohn, T.L. (2007. Standard‐Setting Issues and Academic Research Related to the Accounting for Financial Asset Transfers. *Accounting Horizons: March 2007, Vol. 21, No. 1, pp. 59-80.*
7. Chaudhry, M. Commercial Bank's Off-Balance Sheet Activities and Their Relationship with Market-Based Risk Measures.
8. Partnoy, F. & Skeel Jr., D.A. (2007). The Promise and Perils of Credit Derivatives.
9. Hirtle, B. (2008). Credit Derivatives and Bank Credit Supply. *Federal Reserve Bank of New York Staff Reports.*
10. More materials to be recommended by Prof. Das regarding
    a. Research Topic
    b. Econometric Modellings
    c. Python packages to support data analysis

III. Schedule of meetings

I would like to meet with Prof. Das every Tuesday. The exact time will be decided by Professor.