

UNIST
School of Business Administration

FIN552 : High Frequency Financial Data Analysis

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Assignment 3
Due Date : **Tuesday, June 13, 2017**

1. [**Merging Trade and Quote Data**] The excel file **sp500_20150826.xlsx** contains a list of stocks consisting of S&P 500 index on **AUG 26, 2015**. The excel file contains cusip information and listed stock exchange (N: NYSE, Q: NASDAQ). Choose 10 stocks randomly. Using the information in TAQ master file (i.e., mastm 20150826), download trade file, quote file, and nbbo file for selected 10 stocks on the date. Based on your files, create merged files (for e.g. OfficialCompleteNBBO, TradesandCorrespondingNBBO, BuySellIndicators, or etc.) to compute the following liquidity variables.
 - (a) Report the effective spreads of selected stocks.
 - (b) Report the quoted spreads of selected stocks.
 - (c) Report the realized spreads of selected stocks. (We didn't cover SAS codes of this part in the class. But, using the file (SpreadsCompute) on the blackboard, you can compute this measure)
2. [**Time-Series Analysis**] Using the files created in the question 1, do the following analysis. From your trade file, construct return series.
 - (a) For each return series, test the null hypothesis that the first 12 lags of autocorrelations are zero at 5% level.
 - (b) Choose the appropriate lags for building ARIMA model based on the SCAN(Smallest Canonical Correlation) and the ESACF(Extended Sample ACF) methods.
 - (c) Build an ARIMA model for the series.