Read me

1. Please keep the directory structure, as our simulation environment requires.
2. Code list:
    a. CWMR-Var and CWMR-Stdev: '\CWMR\Code\cwmr_*.m'
    b. Market: '\CWMR\Code\market*.m'
    c. Best-Stock: '\CWMR\Code\best*.m'
    d. BCRP: '\CWMR\Code\bcrp'
    e. Statistics Calculation: '\CWMR\Code\calStat.m'
3. Dataset list:
    a. NYSE (O): '\CWMR\Data\nyse_o.mat'
    b. NYSE (N): '\CWMR\Data\nyse_n.mat'
    c. TSE: '\CWMR\Data\tse.mat'
    d. MSCI: '\CWMR\Data\msci.mat'
    e. DJA: '\CWMR\Data\dja.mat'
    f. NDX: '\CWMR\Data\ndx.mat'
    g. W-NYSE (O): '\CWMR\Data\week_nyse_o.mat'
    h. W-NYSE (N): '\CWMR\Data\week_nyse_n.mat'
4. Log files are located in '\CWMR\Log\'.
5. Sample running logs are provided.
    a. Sample running logs are located in '\CWMR\Log\Log\'
    b. Sample .mat files are located in '\CWMR\Log\Mat\'

USAGE: (demo_manager.m)

1. To calculate the statistics over all datasets, one can run the demo (*demo_stats.m*). Or to get the statistics on one datasets, one can run the program (*calStat.m*).
   calStat(dataset_name, delta)

2. Our back tests are based on a unified test manager (demo_manager.m). It can load the datasets, call the algorithm, log and time the running procedure. Its usage is as follows and options controls the running environments (detail can be found in the head of demo_manager.m, or 'help demo_manager').
   demo_manager(strategy_name, dataset_name, parameters, options)

3. For each algorithm, *_start.m is the entry file, *_run.m is the core running file. For example, for CWMR-stdev algorithm, CWMR_stdev_start.m is the entry file; CWMR_stdev_run.m is the core running file.
4. All datasets file are read from '\CWMR\Data\'. All log files are stored in '\CWMR\Log\'.
5. Example:
   a. Calculate the statists on NYSE_O dataset with delta = 0.985:
      calStat('nyse_o', 0.985);

   b. Run CWMR-Stdev algorithm on NYSE_O dataset with parameter setting phi = 2, epsilon = 0.5 and transaction costs 0:
      demo_manager('cwmr_stdev_start', 'nyse_o', {2, 0.5, 0}, opts);

   c. Run CWMR-Var algorithm on NYSE_O dataset with parameter setting phi = 2, epsilon = 0.5 and transaction costs 0:
      demo_manager('CWMR_var_start', 'nyse_o', {2, 0.5, 0}, opts);

Sample Commands: (Matlab, in '\CWMR\Code\' folder)

1. Running all statistics calculation on all datasets

   Demo_stats; % Calculate the statistics on all datasets

2. Running all codes on one dataset (default is nyse_o. One can change it by setting dataset in demo_all.m)

   demo_all; % Run sample demo on nyse_o dataset

3. Running one algorithm on one dataset

   % Set simulation variables (Required)

   opts.quiet_mode = 0; % Display nothing. 0: display; 1: no display
   opts.display_interval = 500; % If display, the display interval
   opts.log_mode = 1; % Write .txt log file. 0: no log; 1: write log
   opts.mat_mode = 1; % Write .mat log file. 0: no mat; 1: write mat
   opts.analyze_mode = 1; % Analyse and display info. 0: no; 1: yes
   opts.his = 0; % Historical Mode. 0: no; 1: yes

   % Run CWMR-Stdev on NYSE (O) dataset with phi = 2, \epsilon = 0.5 and transaction costs = 0

   demo_manager('CWMR_stdev_start', 'nyse_o', {2, 0.5, 0}, opts);

   % Run Market on DJA dataset with transaction costs = 0

   Demo_manager('market_start', 'dja, {0}, opts);