3. Statistical Arbitrage

Applying Mathematics in Finance
WISM410

In this assignment you will trade two correlated stocks: `CBK_EUR` (Commerzbank) and `DBK_EUR` (Deutsche Bank).

Part A

Analyse the stocks with `AnalysisRobot`:

1. store the best bid and offer from the feed;
2. implement `Valuate` as a valuation function on the values from a single depth;
3. store your valuations of the depths from the feed;
4. create a function to plot the best bid and offer, and corresponding valuation for each share over time.

Part B

Modify the `Report` function such that it outputs the total cash spent or received and the position in each of the ISINs. This should look something like:

	Cash	**CBK**	**DBK**
Position	13.08	-5	14

Part C

Modify `TradingRobot` to create your own trading robot. You are not allowed to end up with a position at the end of the feed. To help you with this, your robot should contain a position unwinder (the `Unwind` function), which will be called at the end of the feed. Remember that you are only allowed to send `IMMEDIATE` orders. Make money!

Deliverable

Provide the final version of your trading robot together with a concise report describing your analysis of the market, and your robot's key mechanics, architecture, data structures, strengths, weaknesses and trading result. You are urged to submit any updates for testing well before the deadline. Your report at that stage can still be absent or rough.

We provided templates; feel free to modify these however you want, as long as it runs using the unchanged `RunExerciseCor.m` script. Hand in `AnalysisRobot.m`, `Valuate.m`, `TradingRobot.m`, `Report.m`, and your report.