



REQUEST FOR PROPOSAL

RFP #: OPT – S1.F

TITLE: PORTFOLIO OPTIMIZATION

CLOSING DATE AND TIME: **FEBRUARY 13, 2023 @ 5:00 PM**

# Portfolio Optimization: OPT – S1.H1

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## Background and Purpose

By responding to this Request for Proposal (RFP), the Proposer agrees that s/he has read and understood all documents within this RFP package.

## Submission Details

Responders to this RFP should supply:

- A business report up to 5 pages, including any supporting plots and tables.
- A separate file with code.

The report should address **all points described in the “Objective” section** below.

The report, along with the code, should be uploaded into Moodle.

## Objective

The Commercial Banking Corporation (hereafter the “Bank”), acting by and through its department of *Portfolio Pricing* is seeking proposals for banking services. The scope of services includes the following:

- Recommendation of a portfolio with the following 5 stocks, using the **percent daily** returns of the closing prices from January 20, 2022 through January 18, 2023.
  - Ross Stores (RST)
  - Pinduoduo (PDD)
  - Target Hospitality (TH)
  - Ardmore Shipping Corp (ASC)
  - Glencore Plc (GLNCY)
- Using the historical volatility and mean percent **daily** return rate, optimize the **daily** stock strategy to minimize the risk for a return of at least 0.5% (assume  $\sum p_i = 1$ ). For this you can assume no transaction costs to buy or sell stocks, so you just need to recommend what *percent* of a portfolio should be allocated to each stock.
- Create the efficient frontier and provide the graph, along with some strategy on portfolio **options for different levels of risk**.

## Data Provided

No data is provided to the consulting team for this analysis. The team itself through any means it desires must gather all data.