

## COMMERCIAL BANKING, CORP

REQUEST FOR PROPOSAL RFP #: DM - F2.H2

TITLE: BANKING INSURANCE PRODUCT – REVISITED CLOSING DATE AND TIME: OCTOBER 18, 2024 @ 5:00 PM

# Banking Insurance Product – Revisited: DM – F2.H2

## Purpose

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

#### **Submission Details**

Responders to this RFP should supply:

- A business report up to 5 pages (not including cover page, table of contents, or any needed appendix), including any supporting plots and tables
- The commented code used to produce the results

The report should address all points described in the "Objective" section below and be submitted electronically (through Moodle).

## Background

The Commercial Banking Corporation (hereafter the "Bank") is seeking a continuation from RFP IP – F1.H3. The Bank is interested in developing a decision tree model to predict which customers are most likely to purchase a variable rate annuity product. You should use the training data set with original variables (not binned) to train the model.

## **Objectives**

The scope of services in this phase include:

- The creation and discussion of a decision tree model to predict the likelihood of purchasing a variable rate annuity.
- Comparison of accuracy measure of this model on the validation data set compared to the best Logistic model created.
- Visualization (if possible) of the final decision tree model.

#### Data Provided

Use the following two data sets (provided from Logistic regression class):

- 1. The training data set **insurance** t contains 8,495 observations and 48 variables.
- The validation data set insurance\_v contains 2,124 observations and 48 variables.

Be sure to keep missing information as missing and do NOT manually bin the variables.