Case 3 Personal Initial Public Offering (PIPO)

Background

We may be familiar with the concept of a company raising capital by an initial public offering (IPO). In an IPO, the issuer, or company raising capital, brings in an underwriting firm or investment bank, to help determine the best type of security to issue, offering price, number of shares and timeframe for the market offering. The investor who buys these stock shares will become the shareholder of the company and receive dividends when the company is profitable. PIPO takes this company capital-raising concept and applies it to individuals.

Assume we have a personal IPO market for people who want to raise money by offering their personal shares and people who want to invest in them, especially friends and family. The investors of PIPO will share the future income of people they invested through “dividend” payments. Issuers’ credit card usage amount will be treated as the source to determine their income and “dividend” payment. The more they spend, the more they pay back to their investors.

Chengdu 80 participants will design and develop a functional primary market exchange platform prototype that offers valuation and deal making for personal IPO investors.

Data

The following data will be provided. Participants can also make up data to cover different user scenarios when needed.

1. Issuers’ personal profile and financial status including:

issuer id, age, marital status, sex, number of kids, housing tenure, occupation, major, total annual income, education level

2. Issuers’ IPO details including:

issuer id, credit card charge percentage, number of shares offering, market lot, minimum order quantity

3. Semi-annual average credit card spending across various factors including:

Id, age, marital status, sex, number of kids, housing tenure, occupation, total annual income, education level, semi-annual average credit card spending

Requirements

When designing the platform, the minimum requirements that the prototype should meet include the following two parts

**1. Analytics**

• Share Pricing

In stock IPO, the underwriter will offer the price of shares to investors. In personal IPO, issuers need guidance in determining their value. Chengdu 80 participants will build a model based on each issuer’s profile to compute an indicative ask price for his/her shares. That price will help investors choose among different investments.

• Transaction Matching

After the platform offers the issuer’s shares at an indicative price, the investors will be able to place bids and quantities. As an exchange platform, participants must design and implement a mechanism to match bids and quantities with the issuer’s final preference. This trading mechanism should not only be favorable for both sellers and buyers, but also execute the order efficiently.

**2. User interface and functionality**

The prototype should have a user friendly and visually appealing interface that covers the functionality to

• Register investors and issuers

• Display pertinent individuals’ personal and IPO information

• Calculate indicative price of shares of issuers for investor reference

• Allow investors to place bids at desired prices and quantities

• Match and settle IPO transactions