Lesson 10: Exercises Using the Training Model

Exercise No. 1: Alternative Financing Options

Since concessional funds are scarce, and the government has many competing commitments in other sectors, it is offering the utility several financing options:

**Option 1:** The Government can provide 50% (FM 3,750) of the funding requirement as a Grant to the utility, and the rest (FM 3,750) it should fund from its local bank. The local Bank can make a 5-year loan at 8.5%.

**Option 2:** The Government can make available donor financing for 85% or FM 6,375 MM of the investment but would reduce the total grant allocation to only 10% or FM 750MM. The remaining 5% of the total investment would have to be covered by the utility. Donor financing terms are for 15 years, 3 years grace period on principal repayment and at 4% per annum.

## Question: Which is the better financing option for an investment of approximately FM 7,500MM?

## Exercise No. 2: Expanding Customer Connections

The utility is feeling added pressure to increase connections from the incumbent leader. A decision is taken to increase 300 connections annually from 2015-2019 (5 years) – a target acceptable by the relevant government ministry. To accomplish this, the cost is estimated at FM 3MM per connection; However, consumers are charged FM .6MM per connection.

**Questions:** What are the revenue and cost implications to this action? What are some of the problems in implementing this action?

## Exercise No. 3: Reducing Unaccounted for Water

There are number of solutions a utility can incorporate to counter water shortages. Unaccounted for Water (UFW) is relatively high (47%). The average cost incurred by such a program is estimated to be FM 500MM per 1% reduction. Based on this information, you’ve decided to reduce leakages to 32% in 3 years. In other words, UFW will be reduced by 5% each year for next 3 years.

**Question:** By reducing the leakages, how will the situation improve?

## Exercise No. 4: Expanding Treatment Capacity

The cost for increasing treatment capacity is estimated at FM 3500MM per 50,000 m3 of water. Since the utility is experiencing shortages starting 2019, you’ve decided to invest starting that year. However, no additional donor or grant funding is available for this project; hence the utility will rely solely on commercial loan to raise the funds for their funding gap.

**Question:** By increasing the water production capacity by 50,000 m3, has the situation been fully remedied? How much of a loan will it need in 2019? Is there a more efficient way to resolve the water shortage problem?

## Exercise No. 5: Increasing Consumer Tariffs

Tariffs have a direct inverse relationship with consumption. As tariffs increase, consumption tends to decrease. To resolve the water shortage issue, you are considering increasing tariffs by 1% from FM 7,500MM per m3 to FM 7575MM per m3 of water. In this case, 1% increase in tariffs results in .9% decrease in consumption.

**Question:** By increasing the tariffs, was the utility able to satisfy its future financial obligations? What did the regulators take into consideration when approving the tariff increases?

## Exercise No. 6: Improving Collections

To tackle the collection issue, several programs can be initiated. In this case, you decide to aggressively improve collections by recruiting a collecting agency at the cost of FM 50MM annually. You estimate this will lower your bad debt expense from 20% to 10%. In addition to increasing collection, you’ve also decided to start disconnecting households which are not paying their monthly water bill. Estimated cost per disconnect is FM 5MM per consumer and you can disconnect only 50 consumers annually based on government regulations at the cost of FM 250MM each year. This will reflect positively on Accounts Receivable which is currently set to 5 months and improve it to 4 months in 2016 and to 3 months in 2017 and onwards. ***Note:*** *In this exercise, the funding raised via grant.*

**Question:** By implementing the Collections Program to reduce Accounts Receivables and bad debt expense, is the utility financially sustainable?

**Question:** What else can you say about this projection by reviewing the financial indicators.