

# Guide for Understanding and Using the Financial Models

*The purpose of this document is to help you understand the financial analysis that QBC has done on the Housing Authority and SGPS Cafe. This will give you a quick overview on all of the tables you can find within the attached excel sheets. Some of these models are dynamic – you can input certain variables which will affect the results you see in projected revenues, costs, and profits. Within this guide, there are three headings. The numbers will outline each of the individual tabs on the excel sheet. The letters will outline the tables within each of those tabs. Finally, the bullet point will give you a summary of what the table is analyzing.*

## 1. FINANCIAL ANALYSIS – SGPS CAFE

*Note: Because of disclosure requirements for some of the financial data we received, the majority of the cafe financial model is protected. The only cells that can be seen and changed are the yellow boxes in the “user input” tab. These inputs will change the forecasted profits and financial metrics that you see in the other tabs. This gives you a flexible and dynamic model to work with.*

1. Common Ground
  - a. Income Statement for Common Ground(Condensed)
    - This is a condensed version of the provided income statements for Common Ground over the past five years. Financials are also provided as a percentage of revenue and as weighted averages.
  - b. Income Statement for Common Ground (Detailed)
    - This is an extended version of the provided income statements for Common Ground over the past five years. Revenue and cost categories are broken further down into sub-categories.
2. Labour Analysis
  - a. Current Shift Schedule for Cafe X
    - This is the current shift schedule for an on-campus student-run cafe.
  - b. Proposed Shift Schedule for Cafe X
    - This is a proposed shift schedule for that cafe based on hiring full-time employees as opposed to part-time student employees. This will reduce the number of required staff on payroll.
  - c. Potential Labour Cost Savings
    - This is an analysis to determine the potential savings (as a %) in labour costs for SGPS cafe if they chose to hire full-time employees instead of part-time employees. While this will likely mean that SGPS cafe does not hire students for the non-management employees, this will drastically reduce labour costs.
3. User Input
  - a. Scenarios as a % of Revenue
    - Projected profits for SGPS cafe have been done based on five hypothetical scenarios. These scenarios differ in total sales revenue. These scenarios can be changed to reflect different pessimistic/optimistic totals of sales revenue by changing the percentage of expected revenue for that scenario.
  - b. Weighting of Importance By Year on Future Profits

- Some projected costs for SGPS cafe are done as a weighting of costs for other on-campus student-run cafes. This input section will reflect the weighted importance that each year over the past five years will have on the projected cost numbers. This should reflect the importance you think past years will have on future years.
  - c. Revenue Forecast
    - There are two options for projecting revenues. The first option is to put a weighting on Common Ground and another similar, on-campus, student-run cafe that is 1/3 the size of Common Ground. This weighting should reflect how similar you think SGPS cafe revenues will be to either cafe. The second option is to simply enter a dollar value of expected revenues. In order for this to work, if one option is used, you MUST enter zero for all other options.
  - d. Changes In Revenues and Costs
    - This section allows you to input how revenues and costs will change from Year 1 to Year 2 to Year 3. This will change the profits you see in subsequent years.
  - e. Cash Flow Statement
    - This section will affect the projected cash flows that SGPS can expect to see after the first year.
- 4. Forecast (Expected)
  - a. Expected Net Income for SGPS Cafe
    - This is the expected revenues, costs, and profits for SGPS Cafe for the first three business years. Most of the numbers in this analysis are estimates based on a number of assumptions (Please refer to the assumptions in Exhibit AK in the report). Furthermore, projected labour savings and new net income (after these labour savings) are provided if SGPS decided to use full-time employees instead of part-time student employees.
- 5. Forecast (Scenarios)
  - a. Expected Net Income for SGPS Cafe under five different scenarios and break-even profit
    - These are the expected revenues, costs, and profits for SGPS Cafe for the first three business years under the five different scenarios. Furthermore, break-even levels of revenues are calculated in order for SGPS to break-even on net income for each of the three years.
- 6. Further Analysis
  - a. Variance in Expected Profit for different cafes
    - This analysis includes past fluctuations in operating income for current on-campus student-run cafes and projected fluctuations in net income for SGPS cafe.
  - b. Expected Start-Up Costs
    - These are the expected start-up costs for SGPS Cafe prior to launch.
  - c. Break-Even Analysis (Years)
    - This is the expected number of years it will take for SGPS Cafe to break-even on cumulative net income.
  - d. Return on Investment (ROI) and New ROI (After Labour Savings)
    - This ROI analysis will give SGPS an idea of how long it will take for them to recoup the initial capital investment (the start-up costs). This analysis provides the number of years it will take to recoup the entire investment (with and without labour cost savings) and the nominal 25-year return on investment.
  - e. Year 1 Cash Flow Statement

- This is the projected cash flow statement after the first year of business. This reflects the actual cash on hand that SGPS will have.
- f. Compound Annual Growth Rate of Revenue for Other Cafes
  - This analysis is used to assess the growth potential of SGPS Cafe. The provided calculations are the compound annual growth rates in revenue for the on-campus cafes we analyzed.

## 2. FINANCIAL ANALYSIS – HOUSING AUTHORITY

1. Mortgage Calculator
  - a. Mortgage Calculator Inputs
    - This will allow you to input various numbers that you find when looking on the market for a property. Enter the inputs into the yellow cells to get the desired outputs in following tables. The interest rate is the Annual Percentage Rate (APR). It is the stated rate, not the effective rate. The compounding frequency refers to how many times per year the interest is compounded. Most mortgages are compounded semi-annually. Finally, 'Year X' is used to calculate the financial balance after x years. Enter x as any desired year.
  - b. Mortgage Calculator Outputs
    - Please refer to item #3 at the end of this guide for further details.
  - c. Formulas and Equations
    - This table is for equations and calculation purposes only. Please disregard this table and leave it untouched.
2. Current Market Financials
  - a. Operating Income Using Current Market
    - This table shows the basic cash flows from operations on an annual and one-time basis for actual properties that are listed for sale in the Kingston Student Housing market. These cash flows do not include changes in the loan principal.
3. Operating Income
  - a. Operating Income Using Hypothetical Scenarios
    - This table is very similar to table 2A. The only difference is that this table is based on three hypothetical scenarios whereas table 2A is based on real properties listed on the market. Most of the numbers in this table are estimates based on a number of assumptions (Please refer to the assumptions in Exhibit AL in the report). These numbers can be changed to evaluate potential properties, and the changes will be reflected in all the consequent tables.
4. Income Statement
  - a. Projected Income Statement
    - This table demonstrates projected income statements for the first five years of operations. All the results in this table are based on the expected scenario and will be adjusted accordingly as changes are made to the expected scenario in Table 3-A.
5. Cash Flow Statement
  - a. Projected Cash Flow Statement
    - This table demonstrates projected cash flow statements for the first five years of operations. This table is just like the income statement in the sense that it is

completely dependent on the numbers in the expected scenario in Table 3-A, and the results will be adjusted accordingly.

#### 6. Further Analysis

##### a. Start-Up Costs and Income Growth

- This table is used to project required start-up costs and the growth rate in net income. The only number that should be adjusted in this table is the yellow cell, which accounts for the annual growth rate of operating income. The annual growth rate of operating income is the projected rate at which the annual net cash position is expected to increase. This number should be zero under most circumstances, unless the SGPS feels that the annual net cash position is expected to grow for reasons such as efficiency gains and rent increases.

##### b. Projected Return on Investment

- The majority of this table is for calculation purposes. The outputs are the green cells in the table that indicate the nominal ROI over 25 years and the number of years it will take for the start-up costs to be completely recovered by SGPS. This is a visual observation, and is determined by comparing the total start-up cost in cell B5 of Table 6-A with the cumulative net income in column C of Table 6-B. Under QBC's expected scenario, this is expected to occur in the earlier part of Year 17.

### 3. MORTGAGE CALCULATOR OUTPUTS

- This table produces all the relevant results according to the inputs in Table 1-A.
- Monthly payment: This is the mortgage payment that must be made every month. This includes both principle and interest payments.
- Amount borrowed: This is the total loan received from the financial institution and is the difference between the price of the property and the down payment on that property.
- Total principal Paid: This refers to the cumulative amount of the loan principal that has been paid after x years. To calculate how much principle has been paid in a particular year, subtract the output provided at year x-1 from year x. For example, to find out how much principle is paid in year 5, input 5 into year x, and note the output produced in this cell. Then input 4 into year x, and subtract this output from the one obtained from year 5. This will give you the total amount of the loan's principle that was paid in year 5.
- Total Principle Remaining: This measures how much of the loan's principle is remaining to be paid.
- Total Interest Paid: This is very similar to total principle paid; only it measures the interest portion of the mortgage payments. To calculate how much interest is paid in a particular year, follow the same steps that were outlined in total principle paid.
- Total payments: The first column indicates the total annual mortgage payments and the second column shows the total payments made at year x.
- Closing Balance: This is the same as total principle remaining and shows the closing balance of how much principle is remaining on the loan at the end of year x.