



**THE UNIVERSITY OF THE WEST INDIES  
FIVE ISLANDS CAMPUS**

Semester II

**Examinations of APRIL/MAY 2023**

<b>Course Code:</b>	<b>MGMT3090</b>
<b>Course Title:</b>	<b>Entrepreneurial Finance</b>
<b>Date of Assessment:</b>	<b>April 24, 2023</b>
<b>Time:</b>	<b>9:00 am</b>
<b>Duration:</b>	<b>Two (2) Hours</b>

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**INSTRUCTIONS TO CANDIDATES:**

This paper has 8 pages and 4 questions.

**YOU ARE REQUIRED TO ANSWER ALL FOUR QUESTIONS.**

**THIS ASSESSMENT IS WORTH 60 % OF YOUR FINAL GRADE.**

**ASSESSMENT DETAILS FROM INSTRUCTOR(S):**

**Please READ the case data labelled 'The Finances of Starting, Operating and Growing a Business' and Answer all FOUR questions.**



## **The Finances of Starting, Operating and Growing a Business**

### **Introduction**

Bill and Fiona Russell have always enjoyed craft beer, and in recent years have started making small batches at home. As they have experimented, they mastered several niche recipes including a key lime pie pilsner, peanut butter porter, mint chocolate stout, and a banana bread lager, among other traditional IPAs and ales. They amassed some equipment, but only enough for personal use. Over the years, a groundswell of support came from friends and family urging the pair to take their talents into a full-blown business. Bill and Fiona began entering local and regional homebrew contests, bringing home gold and silver medals in almost every category. At first, these acknowledgments were simply for fun, but over time the two started discussing the idea of starting a business.

### **Key Players**

Bill Russell has a bachelor's degree in management from a local public university. For the last 6 years he has worked as a sales manager for a local payroll and benefits firm, overseeing a sales staff of eight individuals. Prior to that, Bill worked as a sales manager for a regional distribution company for 8 years. Bill has some exposure to small business and substantial experience in management. However, his overall knowledge of finance, especially as it relates to owning a business, is lacking.

Fiona Russell has a master's degree in education, and she has taught second grade at the same elementary school since finishing graduate school. Growing up, her family owned a restaurant specializing in Irish fare, so she has some experience working in and around small businesses.

### **Development Stage**

Bill and Fiona began looking at local commercial properties available for rent or purchase. They also began pricing out the necessary operating equipment and envisioning the ideal venture. Assuming that they could obtain financing, they ultimately settled on developing a microbrewery with enough capacity to manufacture and distribute their beer to local bars/restaurants and retail stores in the forms of kegs and cans, respectively.

Family and friends have continued to be extremely supportive of the venture and have offered to provide



some financing. Bill and Fiona have found a location available for rent that would suit all of their manufacturing and restaurant needs. In negotiating terms with the commercial property owner, the couple has agreed to a long-term lease deal at a reasonable rent that will also allow them to make necessary leasehold improvements to the facility.

The couple has met with their friend Madeline, a local business attorney, to discuss entity formation options. These options include a sole proprietorship, C Corporation, S Corporation, limited liability company (LLC), and others. After discussing the possibilities at length, they ultimately settled on an LLC with 50/50 ownership under the legal name Rusty Bucket Brewing Co. LLC. They chose the LLC entity structure based upon the limited liability protection for owners, avoidance of double taxation, and ownership and management flexibility.

Throughout the development stage, Bill and Fiona have done extensive research to estimate their costs. Many of their estimates resulted from their real-estate search while others came from a meeting with another local brewery owner. They have also spoken with a number of retail outlets to negotiate pricing and shelf space for product distribution.

### **Startup Stage**

Now that Rusty Bucket Brewing Co. LLC is established, the couple hopes to obtain initial commercial lending from a mid-size regional bank. The bank has requested projected income statements, balance sheets, and cash flow statements for the first six months of operations. To provide these projections, the couple must first prepare sales, purchase, and wage payment schedules, as well as a complete cash budget.

**Table 1. Forecasted Sales for the First Seven Months for Rusty Bucket Brewing Co. LLC**

Month	Sales (USD)
May	97,500
June	105,000
July	116,500
August	117,500
September	115,000
October	119,750
November	112,000

As they develop these schedules, Bill and Fiona have made several assumptions. First, they have decided to open the brewery on May 1. Next, they forecasted sales for the first seven months, as given in Table 1.

They expect most of the sales to come from distribution to local grocery and convenience stores, as well as local restaurants and bars. The brewery will also have its own bar for patrons to buy and consume beverages on-site or take some home in glass bottles called growlers. As such, the LLC estimates that 90% of each month's sales will be credit sales from distribution and 10% cash sales from their on-site bar. The company expects to collect 100% of credit sales in the following month.



**Table 2. Monthly Wage Forecast for Rusty Bucket Brewing Co. LLC**

Month	USD
May	18,000
June	20,000
July	21,000
August	21,500
September	20,500
October	21,500

For purchases, the couple has decided that target ending inventory for a given month should equal 75% of next month's sales. Additionally, based on industry benchmarks, cost of goods sold is approximately 40% of the current month's sales. Since payment terms with suppliers average 15 days, the company expects cash disbursements to result in 50% of the current month's purchases being paid in the current month, with the remaining 50% to be paid in the following month. Additionally, the company has forecasted monthly wages as shown in [Table 2](#).

Payroll taxes and benefits are estimated to equal 18% of salaries and wages. Based on the company's payroll schedule, they expect to pay 75% of the salaries earned in any given month, with the remaining 25% paid in the following month as an accrued liability.



Additional monthly expenses for cash budgeting purposes are as follows:

- Rent: USD 16,500, paid monthly on the first of every month.
- Real-estate taxes: USD 20,000 paid in two separate payments of USD 10,000 due and paid in October and USD 10,000 due and paid in January.
- Professional fees: USD 5,000 paid in each of the first three months (May, June, and July) for services rendered for various startup costs.
- Utilities: USD 1,500 paid monthly on the 15th of every month
- Insurance: USD 4,800 paid May 1 for a six-month policy beginning May 1, 2018 and ending October 31, 2018.
- Maintenance: USD 625 monthly.
- Supplies: USD 750 monthly.
- Licenses: USD 250 monthly.
- Advertising: USD 1,650 monthly.

The couple has estimated the total cost of opening the brewery at USD 1,000,000. Of this total, USD 150,000 will be used for opening-day working capital or beginning cash balance, with the remaining USD 850,000 used for leasehold improvements, machinery, equipment, and other capital expenditures. Including certain state incentives, Rusty Bucket Brewing Co. LLC believes they will be able to obtain an SBA-guaranteed loan from the bank for USD 750,000. The estimated terms of the note indicate that the monthly payment will be approximately USD 7,300 each month, split between principal payments and interest expense at approximately USD 5,000 and USD 2,300 each month, respectively. In addition, Bill and Fiona have gathered USD 250,000 of their own money from savings, friends, and family, which will be contributed to the business as their beginning owners' equity.

In meeting with local bankers to discuss a possible loan of USD 750,000 for initial business operations, each bank has requested short-term projected financial statements. The banks require monthly projected income statements, balance sheets, and cash flow statements for the first six months of operations beginning May 1, 2018. For the purposes of these projections, assume that monthly depreciation expense is USD 8,645.

### **Rapid-Growth Stage**

Fourteen months later, Rusty Bucket Brewery Co. LLC has not only amassed a good customer base and greater than expected market share, but it is starting to experience a production crunch due to high growth. That's not to say that everything has been great. Bill and Fiona experienced some unforeseen production problems that resulted in significant unexpected expenses and bottlenecks due to waste. The



company has experienced increased raw material costs, as well as increases for labor and other operational issues. This is not uncommon during the rapid-growth stage for any business. During this stage, demand often exceeds production capabilities, causing the company to expand or outsource production. Rusty Bucket Brewery Co. LLC had decided to outsource some production to other local breweries with capacity, which has led to substandard production (waste) and increased costs of production overall. Bill and Fiona are at a crossroads, trying to decide if they can continue to grow organically using internally generated funds or if they need to seek debt or equity from external sources to purchase additional production equipment to meet all forecasted production demands in-house.

The complete 2019 financial statements for Rusty Bucket Brewery Co. LLC shows strong sales. However, even with supplier discounts for volume purchasing, the gross margin rate has slipped slightly due to waste and outsourcing costs. Cash from operations was extremely strong during the period, providing cash of USD 113,195. However, cash used by financing activities was almost equivalent at USD 103,223, representing cash paid for principal and interest on already-existing debt. In addition, the balance sheet was still very strong, providing a current ratio of 2.4 at December 31, 2019. The beginning equity in 2019 was USD 217,500, and no distributions (dividends) have been paid or will be paid soon.

With the injection of additional capital to meet production needs, Bill and Fiona believe the company could grow at a much faster rate than it has been currently. When looking at projected outcomes and forecasts, and based upon previous growth, the couple believes that there is a 40% probability of a 25% increase in sales, a 40% probability of a 15% increase in sales, and a 20% probability of a 5% increase in sales over the next year. Rusty Bucket Brewery Co. LLC. Also needs to determine the amount of additional funds needed to meet their current growth forecast, assuming that spontaneously generated funds increase by USD 7,814.

Now that Bill and Fiona understand just how much additional equity the company will need to grow, they must determine whether to raise this money by selling debt or equity.

In meeting with the bank, lenders are only willing to provide additional financing of USD 50,000 with three-year repayment terms at an interest rate of prime (currently 4.75) + 3, or 7.75%. Next, the couple



will meet with the angel investor that provided the company with the short-term line of credit necessary to overcome working capital shortfalls in year 1. The potential angel investor is not interested in financing the company on a long-term basis but has expressed interest in listening to a pitch to become an investor and part-owner in Rusty Bucket Brewery Co. LLC.

Before the meeting, Bill and Fiona need to understand how to value the equity in their business. This calculation will be an important starting point in negotiating how much money they seek as an investment, and how much ownership they may need to give up to obtain this additional capital. Rusty Bucket Brewery Co. LLC forecasted cash flows for the next four years are USD 45,000 this year, USD 55,000 next year, USD 68,000 in the third year, and USD 85,000 in the fourth year. In the fifth year, the company expects cash flow of USD 100,000. This USD 100,000 is expected to grow at a constant rate of 7% per year after year 5. The expected return for investors from a mature firm is 15%, but angel investors will most likely require a return of approximately 40%. Additional research has also indicated that the comparable industry enterprise value/EBITDA multiple is 7.0 times.

### **QUESTIONS: ANSWER ALL QUESTIONS**

1. Explain three important ways that Entrepreneurial Finance is different from Corporate Finance. **(10 Marks)**
2. Prepare an Income Statement for Rusty Bucket Brewing Co. for May through October 2018. **(15 Marks)**
3. Using the information provided in the case, calculate the equity value of Rusty Bucket Brewing Co. using the discounted cashflow method. **(20 marks)**
4. Outline the main differences between Debt and Equity Financing and create a financing strategy for Bill and Fiona to grow the Rusty Bucket Brewing Co. **(15 Marks)**

**END OF QUESTION PAPER**