

## Capstone Case: Sunrise Bakery Expansion

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The Sunrise Bakery Corporation was originally founded in Houston, TX in 1991 by Griffin Harris, who currently serves as the company's Chief Executive Officer. About four years ago, Griffin's daughter, Erica, moved into the company to serve as Chief Financial Officer. Erica had graduated from college a few years ago and had worked for a few years in retail. However, for the past two years, she had been working quite successfully on an online accounting degree, but she still felt a little uncomfortable in her new role as CFO of the family business.

Sunrise produces and markets a variety of bakery products throughout southeast Texas and Louisiana. They operate mostly through warehouse delivery and produce fresh breads, buns, rolls, and snack cakes under a few of their own regional brands but also including some licensed "big name" national brands. In total, they operate **five bakeries with one very large facility and four smaller production sites**. For the past **three years, sales have averaged about \$15 Million**, generating about **\$650 Thousand in Net Income per year**. However, sales have been roughly flat for the past six years as growth has slowed and production capacity has reached nearly 100%. In order to grow sales, Sunrise Bakery needs to invest in further production capacity.

Griffin Harris has been looking to purchase more space, build additional bakeries, or even perhaps acquire one of their smaller competitors, but nothing specific has worked out yet. Erica has an alternative short-term plan to modernize the production process at their main plant. Her idea involves the purchase of a new, significantly faster, integrated commercial oven that she recently saw displayed at a trade show. Few other bakeries in the region have invested in this modern equipment, and she expects it may cut costs and improve output efficiency. **Her sales representative suggests the new oven could raise incremental sales at their large bakery by 15%.**

Installation of the oven could be mostly executed over the upcoming Labor-day long weekend and shouldn't disrupt sales or production too much. However, the new oven requires an **expenditure of \$350,000**, which would be a large capital expenditure for Sunrise. To reflect the wear and tear on the oven, **tax law allows for a 10% annual reduction in the value of the oven as a depreciation expense**. That is, Erica's financial forecast includes a non-cash expense of \$35,000 for each of the next six years. **After six years, Erica's sales representative expects the oven to be worth about \$140,000**, which is just equal to the accounting book value of the oven after six years of accumulated depreciation ( $\$140,000 = \$350,000 - 6 * 10\% * \$350,000$ ).

**Operation of the oven also requires a small initial investment in an inventory of spare parts of \$15,000**. The inventory should be fully recoverable for \$15,000 if the machine is sold. **The investment in inventory represents an increase in other current assets (inventory) that should be included as a change in working capital requirements for Sunrise Bakery.** Sunrise estimates **receivables at 1.5% of revenues** and **payables at 2% of revenues each year**. At the end of the project, Erica expects to recover all of the working capital invested in the project. In other words, she expects a cash flow equal to the amount of Non-Cash Current Assets less Current Liabilities in the last year of the project.

Erica's financial forecast for the new oven does not require any significant change in financing. Sunrise started with one small bakery entirely paid for with cash from Griffin Harris and a mortgage on the bakery property. Currently, **Sunrise maintains a rough capital structure of about 25% debt and 75%**

equity. In Erica's forecast, she expects to purchase the new oven with available cash and retained earnings (Sunrise's own money) and without any additional drawdown on their bank line of credit (no new debt). Sunrise currently pays about 4.5% on their debt, and that rate is not expected to change with the additional purchase of the oven. No additional external financing should be needed, and after discussions with her loan office, Erica expects the bank will approve the purchase of the oven without any effect on their line of credit. Overall, the cash purchase of the oven is not expected to change the capital structure of the Sunrise Corporation. However, since the oven will become part of the assets of Sunrise, the bank could seize the oven should Sunrise fail to make payments on their current debt.

Erica remembered from her online classes that she needs to assess the risk of her business when making important financial decisions. In researching similar large public bakery and other food manufacturers, she found that firms in her industry with about the same level of risk mostly had stock market betas around 0.80 on average. She also noted that many analysts used a ballpark equity risk premium of 5.5% and a current yield on U.S. treasury bonds (risk-free rate) of about 3%. Sunrise has a corporate tax rate of 30%.

To help understand the costs and benefits of the decision, Erica worked closely with her director of operations, plant manager, marketing team, and her father to produce some realistic sales, costs, and financial forecasts. Her team felt uncomfortable forecasting more than 5 or 6 years into the future. Her focus was on how the new oven might improve incremental revenue generation at their large plant. The case exhibits below contain Erica's financial projections for the project.

In discussing her plan to purchase the new oven, Erica's father seems more than a little worried that the new machinery is not worth the cost and that Erica's motivations may not be based on sound financial decision making. As Erica looked over the financial forecasts, market data, line of credit agreement, and the intimidating \$350,000 invoice that would soon follow, she wondered how she could convince her father, and herself, that purchasing the new oven would be a sound financial decision.

## Sunrise Bakery Capstone Case questions

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In this case analysis, our objective is to will bring together all the tools we picked up throughout the four modules incorporating discounted cash flows, estimating free cash flow forecasts, analyzing the cost of capital and computing various capital budgeting tools. The open-ended platform of a case study is to put the tools and concepts we have developed into a more real-world and practical setting.

Using this information given in the case, your job is to figure out whether or not to make the investment by computing all of the capital budgeting tools that we covered in week 2. This involves calculation of the free cash flows following the process we outlined in week 3 and computing the discount rate we covered in week 4. Exhibit 2 below provides a worksheet for calculating the free cash flows using the financial statement forecast given in Exhibit 1.

In addition to the worksheet provided in Exhibit 2, a spreadsheet template has also been uploaded. Please feel free to use this template to complete the case using the spreadsheet tools we covered in weeks one and two.

1. What is the cost of debt for Sunrise Bakery?  
4.5%
2. What is their cost of equity?  
 $Re = 3\% + 0.8 (5.5\%) = 0.074 = 7.4\%$
3. What is the WACC?  
 $WACC = 6.34\%$
4. Which cost of capital should be used to evaluate the feasibility of the oven purchase?  
 $WACC = 6.34\%$
5. Calculate the annual depreciation expense for sunrise capital.  
 $\$350,000 * 10\% = \$35,000$
6. What is the after-tax net income in each of the six years?  
 $Yr1 = \$56,000, Yr2 = \$61,600, Yr3 = \$67,200, Yr4 = \$72,800, Yr5 = \$72,800, Yr6 = \$72,800$
7. Calculate the change in working capital each year from the projected financial statements.  
 $Yr0 = \$15,000, Yr1 = \$(675.00), Yr2 = \$(50.00), Yr3 = \$(50.00), Yr4 = \$(50.00), Yr5 = 0, Yr6 = \$(14,175)$
8. What is the terminal value of the project at the end of year 6?  
\$140,000
9. Compute the free cash flows for each year.  
 $Yr0 = (\$365,000), Yr1 = \$91,675, Yr2 = \$96,650, Yr3 = \$102,250, Yr4 = \$107,850, Yr5 = \$107,800, Yr6 = \$261,975$
10. What is the IRR?  
21.94%
11. Calculate the NPV.  
 $NPV = \$236,491$
12. Using Payback Analysis, how many years until the project pays off the investment?  
Year 4 is when this project starts to payback.
13. What is the return on invested capital?  
 $ROIC = 27.4\%$
14. Should Sunrise Bakery purchase the new oven?  
 $NPV > 0, IRR \& ROIC > WACC$ , all signs leading to making this purchase a great investment choice.