Barksdale's Brewery Company – A Commercial Lending Case

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Background

On March 23, 2014 Sam Smith, VP of Commercial Lending at Riverboat Bancshares (RB), visited Patrick Barksdale, President & CEO of Barksdale's Brewing Company. The company currently banks with RB's chief competitor, Chemical Bank, but is not happy with them and is open to a move. He toured the brewery and went over the company's financials with Mr. Barksdale. The company is in need of a $900,000 first mortgage loan, a $200,000 term loan and $200,000 line of credit to open a new microbrewery in Columbia, Missouri.

The mortgage loan will cover 80% of the cost for the real estate including land and building improvements. The term loan will be used to cover initial costs of the brewery such as purchasing and installing machinery/equipment. The line of credit will be used to cover some of the inventory, working capital and start-up expenses that the brewery requires. Mr. Barksdale has sent out bid requests to key vendors for the procurement of equipment, inventory, building renovation and labor. These cost figures have been identified and figured into the business plan. A tentative contract has been written up for the purchase of real estate but not yet signed. This information is detailed in the report below.

Barksdale's

Barksdale's Brewing Company has been a staple of beer in the Midwest for nearly three decades. It is incorporated in the State of Missouri. The brewery has a Brewers License allowing the company to sell to wholesalers and distributors per Missouri Statute Chapter 311 Title 20.

Opened in 1984 by Cliff Barksdale (Patrick's father and 100 percent stockholder), Barksdale's Brewery has been an essential way of life for some loyal St. Louis beer drinkers. Mr. Barksdale's vision of bringing handcrafted beer back to St. Louis started with the opening of the company's first microbrewery in 1984 in South St. Louis. The company currently produces approximately 2,500 barrels of beer per year and employs a staff of 12 people, including two brewmasters and one Vice President of Marketing and Sales. Cliff Barksdale went into semi-retirement in May of 2010 due to minor health problems at the age of 65. However, he is still very active in both the running of the day-to-day activities of the brewery and in planning the future of the company. Although Patrick Barksdale is the CEO and President in name, it is understood throughout the company that major decisions are still in the hands of Cliff.

Barksdale's offers four different beers year round: Barksdale's Amber Ale, Barksdale's Pale Ale, Barksdale's Weizenbier and Barksdale's Pilsner. The brewery also offers at least four seasonal beers, available on draft at local St. Louis bars for a limited time. In addition, Patrick Barksdale is developing a new beer -- dubbed Barksdale's Indian Red -- to be released sometime in the near future. The company has spent a significant amount of resources on research and development and marketing on the new beer.

Barksdale's has seen sales increase by more than 60% over the past five years and would like to capitalize on the recent microbrewery boom by expanding into the college market. Patrick Barksdale feels Columbia is a prime location for his business because of its young demographic. He also explains that his younger brother Jimmy, a recent graduate from the University of Missouri - Columbia with an MBA in Finance, will oversee the Columbia operations.

Mr. Barksdale figures that since many of the students in Columbia come from the St. Louis area, they will already be familiar with the Barksdale brand name. In addition, a sales representative will be hired to promote the beer on campus. The marketing plan, he explains, will focus advertising on the University's local radio station, handing out flyers that detail the various beers, and special discounts during home football and basketball games.

A microbrewery is one of 4 sub-markets within the overall Craft Brewery Market, with the other three being brewpubs, regional craft breweries and contract brewing companies. Microbreweries are defined by The Brewers' Association as a brewery that produces less than 15,000 barrels of beer per year with 75% or more of its beer sold off site. Barksdale's will act as a wholesaler to retailers and consumers, rather than sell directly through carryout or a tap-room / restaurant. Its beers are available on tap at local taverns and in bottled form at supermarket chains, convenience stores, gas stations and liquor stores throughout the St. Louis metropolitan area.

Riverboat Bancshares

The history of Riverboat Bancshares, Inc. (RBI) dates back to 1915 when Seamus Maloney immigrated from Ireland to the United States and opened the bank's first office. Growing up in Dublin, both of Mr. Maloney's uncles had been bankers and so the industry had always interested him. As a child, Seamus grew up reading the London-based press including *Financial News* and *Financial Times*. Maloney graduated from Cambridge University in 1938, approximately 50 miles north of London, where he majored in Economics. He then worked as a commercial lender in London until saving up enough money to move to the United States. With $10,000 in his pocket, Maloney relocated to St. Louis and opened a bank.

Maloney moved into what was known as the "Kerry Patch" section in the city of St. Louis, where many other Irish immigrants lived. He quickly grew fond of the city, and having an entrepreneurial mind of his own, quickly built strong bonds with the other immigrant businessmen. Mr. Maloney's philosophy of focusing on local businesses is a staple of Riverboat Bank today.

RBI operates as the parent holding company for Riverboat Bank. Seamus Maloney's great grandson, Paul, who became President in 2007, currently runs the bank. The CFO is George Vandelay and John Henry heads the commercial loan department. The bank has 4 locations in St. Louis and employs 45 people. Total assets of the bank are just over $500 million.

Riverboat Bank is facing economic pressures that have altered the company's strategic plan in both the short and long term. During the recent recession of 2007 to 2010, hundreds of banks were forcibly taken over or closed by the government due to deterioration in capital from loan losses. This has led to a number of new, stricter lending regulations such as the Dodd–Frank Wall Street Reform and The Consumer Protection Act of 2010. These regulations have led to slower revenue and deposit growth due to tighter lending criteria. For these reasons the bank must be more meticulous when considering any type of loan request.

Industry

Historian John Arnold once wrote, "If (beer) is…the people's beverage…its history must of necessity go hand in hand, so to speak, with the history of that people, with the history of its entire civilization." The United States is becoming more diverse as different types of grains, hops, yeast and water have contributed to more than 140 beer styles recognized by The Brewers Association as of 2010. Today beer ranks as the third most popular beverage around the world, behind only water and tea. It has proven to be one of the few industries to be reasonably recession proof throughout history.

The beer industry in the U. S. began in the 1850's when German immigrant brewers introduced cold matured lagers. Between 1860 and 1880, a number of breakthroughs in technology allowed for the mass production of beer including: commercial refrigeration, automated bottling, pasteurization, the mastering of the fermenting process, and the expansion of the railroad system which became the dominant form of distribution.

In 1919, prohibition was instituted with the Eighteenth Amendment to the U. S. Constitution, prohibiting the manufacturing, sale or transportation of liquor. In 1933, Prohibition was repealed but by then many brewers had been forced out of business. The industry would continue to shrink as giants such as Anheuser Busch, Pabst and Miller dominated the market. By 1982 there were close to 50 breweries operating in the United States. Since that time the 'homebrewing' industry, or craft brewing as its called today, has become popular due to a sharing of ideas on the process of brewing between beer enthusiasts. Today over 95 percent of the more than 1,700 breweries in the U.S. are small and independent. Still, the beer industry is highly concentrated, with the ten top brewers commanding a 92.5% share of the market.

By 2013, sales of beer in the U. S. totaled approximately $101 billion equaling 6.3 billion gallons of beer. Overall, beer sales were down an estimated 2.2% by volume in 2012 and another 1.0% in 2013. During 2013, the craft brewing industry grew 11% by volume and 12% by dollar value. Market share by craft brewers in the overall brewery market was 4.9% by volume and 7.6% by dollars. Small and independent brewers employ nearly 100,000 full and part time employees and generate more than $3 billion in wages and benefits. It is also important to note that the failure rate for microbreweries is 1 in 4 compared to other small businesses where it is 1 in 2.

Market Segmentation

For expansion, Mr. Barksdale has targeted Missouri as the main market for sales—including Boone and Howard County, anchored by the city of Columbia. As of the 2010 Census, the MSA (Columbia, Missouri Metropolitan Statistical Area) had a population of 173,083. The city of Columbia alone was the fifth largest in the state with 164,283 residents. Median income for all households in the MSA was $34,550 with median income for a family (two or more people related through blood, marriage or adoption) of $45,689.

Missouri is one of the states where public intoxication is not a criminal offense or illegal. In fact, there are few limitations on grocery stores, gas stations, etc. selling beer and liquor. In addition, there are no quantity limits for the shipment of alcohol by licensed Missouri alcohol retailers. There are also no specific state limitations on the places where alcohol may be sold, as long as it is not located within 100 feet of a school or church. Retail stores are limited, however, to selling alcohol between 6:00 AM through 1:30 AM Monday through Saturday, and between 9:00 AM and 12:00 AM on Sunday for an additional license fee.

Three institutions of higher learning are located in Columbia: the University of Missouri, Columbia College and Stephens College. The city is the headquarters of the University of Missouri System, which operates other campuses in St. Louis, Kansas City and Rolla. As a 'college town', the city generally supports progressive policies such as having an extensive recycling program, decriminalization of marijuana and wide-reaching health plans. Columbia is one of the most highly educated cities in America, with over 90% of the population having earned a high school diploma and over 50% with a Bachelor's degree or higher. In 2006, it was rated number 13 on Money Magazine's Top 25 Most Educated cities in the country.

Barksdale's will be targeting two general customer segments. The first is the beer connoisseur—those who have a passion for beer and are willing to spend more for quality. This segment is already familiar with Barksdale's, as it is already an established brand in parts of Missouri and thus should not be tough to attract. These customers are also a relatively small but very important segment for any microbrewery since the group loyalty is strong. The second segment is much larger— college students. This group will be tougher to attract because of a stronger emphasis on price. Bargain marketing will be aimed at this group.

Bank Funding Request

Barksdale's is requesting a $200,000 term loan to be paid over a seven-year period and a $200,000 revolving line of credit. The borrower wants a term loan with an interest rate of 4.5% for a 84-month period with annual principal payments of $28,571 (paid on December 31st each year) and monthly interest. Currently RBI's prime rate is 3.25%. Fixed assets including brewery equipment and machinery, real estate and fixtures would secure the term loan. It will help cover the costs of establishing the brewery including used purchasing machinery /equipment.

The $200,000 line of credit would have a 1 year term and be renewed annually (without a requirement of paying off the outstanding balance) if it continues to meet bank underwriting guidelines. The L/C would be backed by accounts receivable and inventory with a borrowing base of 80% of eligible receivables (30 days or less) and 50% of finished goods inventory. The rate would be based on the Prime Rate plus any premium the bank feels is reasonable.

The brewery is also requesting a $900,000 first mortgage loan, secured by the land and building, to be paid over a 30-year period. The mortgage loan will be amortized over 30 years with a fixed interest rate for 5 years after which it will be reset according to current U.S. Treasury rates. The Bank's current interest rate is 5% for the best commercial real estate mortgages. This would amount to monthly payments of $4,831 and yearly payments of $57,977. Loans will be cross-collateralized in case of default, and Mr. Barksdale has offered to personally guarantee the company debt.

If the new operations in Columbia are successful, the management would like to start paying a dividend of 40% of net income annually starting in 2014. Cliff Barksdale, the father, is in need of greater retirement income and the firm's CPA recommended this approach despite the company previously retaining all income for growth.

Facilities

Barksdale's is planning on purchasing an 11,000 square building located at 117 Elm Street in downtown Columbia. This site is a former textile factory that features concrete floors and a stone façade. The current owner is asking $975,000 for the real estate. Barksdale would like to take out 80% first mortgage with a local bank to finance the acquisition. The real estate appraisal estimated the value of the land to be $200,000 and the value of the building at $775,000. Current tax guidelines allow the building to be depreciated over a 39 year useful life. Assume Barksdale's has a policy of using the straightline depreciation method.

Land and building improvements to the real estate include permanent walls and offices. In addition, a new electrical system will be required for wiring of the pumps, solenoids, a temperature controller, a natural gas burner control device and a refrigeration unit. A natural gas line will need to be installed at a flow rate of 12 cubic feet per minute. Water will need to be brought into the brewhouse at a flow rate of 25 gallons per minute at a minimum of 30 PSI. Gas tanks and controls will need to be purchased to provide for the flow of oxygen and carbon dioxide. Finally, burner exhausts and steam vents must be vented to the outside through the roof. All of these improvements are estimated as a one-time build out cost of $150,000.

The planned location of the brewery is approximately a half-mile away from the University of Missouri-Columbia campus. Even though the brewery will not contain a restaurant or bar area, as some craft breweries do, being in such close proximity to the university will increase its visibility. To help promote its products, the company will conduct brewery tours Monday through Thursday from 2-7 p.m. There will be a fermenter room, a walk-in cold room, a malt storage room and a lab/office. The main floor room will be where the brewhouse is located, along with both a cold and hot liquor tank.

The brewery will be responsible for business insurance such as liability insurance (including State mandated liquor liability), workers' compensation, and hazard insurance. The policy will be through the Stringer & Bell Agency in Columbia at a yearly cost of $8,000.

Distribution

Thirty-five bars and restaurants in the Columbia Metro area (Boone and Howard County) have been contacted to sell Barksdale's beer on tap and in bottle form. Barksdale's will self-distribute its beer for the first year because, according to Mr. Barksdale, it conveys a personal, hands-on approach that gives the company a local appeal. Barksdale's has plans to lease a 2004 International 4300 SBA 4X2 Van Truck for $4,500 per year.

Costs

The term loan will be employed to acquire and install brewing equipment /machinery. The building will need to support a 2-vessel brewhouse with the capacity for 10,000-35,000 liters, designed for 2 brews daily. The brewhouse will include fermenting and conditioning uni-tanks, a mash / lauter tun, hot and ice water tanks, a steam generator, yeast dosing tank, a glycol (cooling) tank, disinfectant tank, a refrigerating unit, power cabinets, pumps, malt mill, piping and beer filters. The total cost for this used equipment/machinery, including installation, is estimated to be $250,000. The equipment will be depreciated using the straight-line method over a 15 year life.

A one month supply of starting inventory (raw materials) used to produce the beer will need to be purchased before the brewery opens. This includes: purified water (which makes up 85% of beer); malt (which contributes sugar, body, color and a range of different flavors); hops (which adds bitterness and a spicy/citrus flavor to the beers); and yeast (which produces fruity and spicy flavors). Other ingredients for beer include other grains, sugars, spices along with beer adjuncts and additives. Total cost for these ingredients is estimated at $65,000.

Barksdale's beer will be served on tap in the surrounding Columbia Metropolitan area, thus beer handles and kegs will be needed. Bottled beer will also be served at these bars, in addition to many of the area's convenience stores, gas stations, supermarkets and liquor stores. The preliminary list of retailers includes: Schnucks Supermarkets, Walgreens Pharmacies, Shop N'Save Supermarkets, Quik Trip Convenience Store, Dierberg's Supermarkets, and many others (Exhibit 10). Twelve ounce bottles, caps and packing will be needed for these outlets. Items procured through the local print company include posters, shelf markers, labels and packaging. The total cost for these raw materials is expected to be $120,000.

Expenses

Overhead expenses for the brewery include utilities, wages and marketing. Utilities necessary for the brewing operation (water, electricity, natural gas and sewer) are estimated to be $2,000 per month. Preliminary marketing plans for the brewery includes flyers and coupons passed out on the Universities' campuses and website promotions. Since the website has already been designed and developed for the St. Louis brewery, preliminary marketing expenses are anticipated to be only $200 per month.

Employee salary expenses are as follows. Jimmy Barksdale, who will be paid an annual salary of $70,000 (including benefits), will manage the microbrewery. Mr. Barksdale will be in charge of production planning, purchasing, inventory control, quality control and accounts payable for the brewery. A yet to be determined sales manager with experience in the brewing industry will be hired on at a salary of $50,000 per year. Management and the brewmaster will handle operations jointly.

The brewmaster will also be hired on in the near future at an annual salary of $40,000 (including benefits). Qualifications for the brewmaster include graduation from a brewing school and 3-5 years of experience in working under a master brewer. Due to the current weak economy, there are many more brewers looking for work than openings. Therefore, Barksdale's can be very selective in whom they hire. Finally, a bottling/shipping staff consisting of two people will be hired at a combined salary of $70,000 per year. Thus the total labor expense for Barksdale's new location is estimated at $230,000 a year.

Source of Repayment

Riverboat believes Barksdale's most likely way to repay the new debt is to refinance the loan at some point in the future once the company has executed on its growth strategy. This strategy may include expansion into new markets and/or the acquisition of smaller players within the industry. The company has sufficient cash flow from operations to pay interest, amortize the term and mortgage loan, and reduce the balance of the line of credit to zero by the end of the life of the loan. In a distressed situation, Mr. Smith believes Barksdale might become an attractive acquisition target for the Company's competitors. Barksdale's relationship with the community, regional presence and strong customer base would likely represent a desirable addition to a number of breweries.

Competitors

Financial statements for three competitors of Barksdale's Brewery are presented in this report. The first, Shamrock Brewery, is performing poorly financially (Exhibit 6). The company has been facing insolvency issues for the past few years due to losses reported from declining sales and high expenses. In 2012, the company changed their accounting policies resulting in the elimination of impaired long term assets and the recovery of income taxes. The company was forced to increase leverage resulting in a shrinking capital base.

Another competitor Bubble's Brewery, based in Ohio, is performing fairly well as indicated by its financial statements (Exhibit 7). The company's sales are increasing at a moderate pace and they recently opened a second brewery in western Illinois, making it a strong competitor of

Barksdale's. The company has seen significant improvement in gross margins resulting in expansion of their net worth.

The final competitor, Bey Brewery, is one of the leaders in the brewery industry among those with total assets of between $1 million to $5 million (Exhibit 8). The company has kept operating expenses low by using state of the art machinery and managing inventory efficiently. The company is financially conservative, not taking out large loans and maintaining high liquidity levels.

Financials

Barksdale's latest audited financial statements, dated December 31, 2013, were released today. The company received a full audit with an unqualified opinion from a local CPA firm. The firm has the reputation of being reputable and reliable.

In 2013 the company started to develop a new line of beers, called 'Indian Red', to be released in 2014. During the year, Barksdale's spent approximately $400,000 on research and development as well as advertising on the Indian Red project. This led to a sharp increase in operating expenses for 2013 (Exhibit 1). Patrick Barksdale notes that this is a onetime expense and believes these new products will more than pay for themselves in the coming years, although his father, Cliff, does not agree. As of year-end 2013, Barksdale's has $2.66 million in total assets, $1.01 million in total liabilities and $1.65 million in shareholder's equity (Exhibit 2).

Since 2009, total sales have increased by more than 60%, an average of 12% per year (Exhibit 1). Patrick feels that this trend will, at worst, continue at this pace but likely will improve due to a gradually improving economy, the development of his Indian Red line of beers, and the fact that microbreweries are a fast growing industry. In addition, the company was not forced to borrow during the recent economic recession and thus has no debt to pay off. According to Barksdale, "Not having debt is part of my business philosophy." This has helped the company hold up much better than some rivals during the recent economic downturn.

Analysis

Accounting information is required to analyze a company. Everything starts with a sales forecast. Common-sized financial statements along with ratio analysis are often used over multiple years to make the trends more understandable to the analyst and remove confusion caused by changing dollars of sales volume.

Sam Smith, of the commercial loan department at the Bank, has the job of presenting the credit request to the Loan Committee with his recommendation. Before he makes his decision, Mr. Smith has requested his assistant, a credit analyst, to perform a financial analysis on the financial statements of Barksdale paying special attention to the following areas:

> *Inventory Management -* The management of inventory concerns the size and placement of stocked goods to be supplied to local distributors. It includes all raw materials, work in process and finished goods inventory at Barksdale's. The Company uses a perpetual LIFO inventory method to track inventory. Due to the short shelf life of beer, finished goods are kept in the brewery. More than 60% of the inventory is made up of raw materials purchased in bulk at volume discounts. Inventory turnover is a key measurement of operating efficiency for a manufacturer such as Barksdale's.

Sales (Gross Revenue)- Sales trends should be compared with the industry's sales and growth or loss of market share. Steady verses erratic growth in sales should also be considered.

Cost of Goods Sold (COGS) – This is made up of the labor, overhead and materials used to directly produce goods. When expressed as a percentage of sales, this indicates the effectiveness of cost control. The key ingredients used to manufacture the company's 8 different beers include barley, hops, wheat and yeast. All of these products are traded in the commodity market. Thus, the demand for these products is directly proportional to the risk of prices going up.

Accounts Receivable- Accounts Receivable is the money owed to a company for goods or services sold. Average collection periods and AR turnover are useful measures of performance. In addition, to calculate the how good collection policies are, many analysts divide the provision for doubtful accounts by accounts receivable. All of these figures should be compared against others within the industry. Deviations from the norm are both a warning signal and a measurement of the effectiveness of a firm's credit department. See exhibit 10 for the Company's AR Aging, which provides a detailed look at how well a company is able to collect its receivables.

Operating expenses - Includes costs directly related to the running of the business but not including cost of goods sold or such things as income taxes or charitable donations, etc. Positive trends in operating expenses are a good indicator of management's ability to control overhead costs. Effective advertising should have a positive relationship with sales growth.

Credit analysts employ a number of techniques in evaluating the financial condition and performance of borrowers. Ratio analysis often focuses on some of the following items:

Liquidity- Liquidity measures the ability of a company to convert assets to cash and meet short-term obligations as they become due (generally measured as one accounting year). It also reflects the operating cycle. Inability to maintain liquidity can result in the nonpayment of creditors, operation disruptions and damaged reputation. The degree of liquidity for a company depends on the nature of the business, scale of operations and other factors. Measures of liquidity include: Current ratio (CA/CL) and the acid or quick asset ratio (CA-Inv/CL).

Net Working Capital- Analysts refer to the net working capital position because it represents the excess of assets readily convertible into cash with which to pay current money owed. Net working capital is calculated by subtracting current liabilities from current assets.

Net Worth- An important measure of the valuation of a company. It is the total of all assets minus all liabilities, also referred to as book value.

Gross Profit Margin- Gross margins reflect the ability of a company to control COGS and price its products properly. Companies with high gross margins may still not be profitable because other expenses may still be too high. Calculated by dividing gross profit by total revenue.

Return on Equity (ROE)- is a key measure of company performance. Provides the owner's return on investment. To find, divide net income by owners' equity or net worth.

Return on Assets (ROA)- is a second key measure of company performance. Provides an indication how well the company is investing and managing its assets. Divide net income by total assets.

Asset Turnover- Expresses the frequency with which the average level of inventories, for example, are replaced during the year. Various measures includes inventory turnover (sales / inventory), accounts receivable turnover (sales / AR), average collection period (AR / (sales/365), etc.

Financial Leverage Ratios- Provides an indication of the long-term solvency of the firm by measuring the extent to which the firm is using long-term debt to finance the business. Includes the debt ratio (TL/TA), debt-to-equity ratio (TL/Equity) and interest coverage (EBIT/ Interest Expense).

Profitability. Measures the success of the firm in generating profits. Includes the net profit margin (NI / Sales) and ROE and ROA above.

Key Risks

The following key risks are associated with Barksdale's Brewery:

- Commodities. Commodity prices are critical determinants of the outflow of cash from Barksdale's. The prices of commodities such as wheat, yeast, barley, and hops are a large portion of expenses for the company. Thus these markets should be continuously tracked and forecasted. When prices are low, the company should consider buying more inventories to lock in a low price. Hedging prices in the commodities markets is another possibility but not currently used due to the company's small size.
- The recent recession officially lasted from December 2007 through July 2009 in the United States. However there is still great economic hardship in the country. Since Barksdale's beer can be classified as a luxury item, it is dependent on the income of current and potential customers.
- Cliff Barksdale has battled an autoimmune disease for the past ten years. Recently he was hospitalized with pneumonia. Although he survived and is in better health today, the disease has forced him to semi-retire from the business. However, he is still active in long-term decision making for the brewery in an executive advisory role. Many around the company feel that his son, Patrick, is not yet ready to take the reins from his father.
- Customer concentration. Schnuck's (a large, regional supermarket chain) represents the company's largest customer with a significant portion of the company's gross sales. Should this customer default on paying its bills in a timely manner or end its relationship with Barksdale's, the company may have cash flow problems. See exhibit 9 and 10 for more detailed information on the company's accounts receivable and customer concentration.

Industry Forecast

Fast Facts:

-In 2013, the craft brewing industry grew 11% by volume and 12% by dollars.

-In 2012, the craft brewing industry grew 7.2% by volume and 10.3% by dollars.

-Barksdale's sales (in $) grew by 12% in 2013 and have increased by 60% over the last five years.

-The prime rate, as of December 31, 2013, was 3.25%.

Exhibits (see attached):

Exhibit 1: Income Statement. A one-year summary of company's financial position (revenues and expenses).

Exhibit 2: Balance Sheet. A snapshot of company's financial position (assets, liabilities and equity) at a given point of time.

Exhibit 3: Key Ratios. Important and helpful metrics used to determine the financial soundness of a prospective borrower.

Exhibit 4: RMA Industry Averages. Averages of breweries in the same industry of the same size in terms of total assets.

Exhibit 5: Graphs. Summary of the balance sheet and the liquidity position of Barksdale's.

Exhibits 6, 7, 8: Bottom, Middle and Top of Industry. Examples of breweries performing at the bottom, middle and top of the industry (for breweries within $1 to 5 million in total assets).

Exhibit 9: Top 10 Customers. Summary of the largest customers of Barksdale's between 2009-2013.

Exhibit 10: Accounts Receivable Aging. Detail of outstanding receivables owed to Barksdales as of 12/31/13.

Exhibit 11: Sources and Uses of Funds.

Exhibit 12: Borrowing Base Certificate - Provides the calculation to get to a company's availability on a multi-draw loan, in this case the line of credit. Fill out to figure out how much Barksdale can draw on.

Your Recommendation

This case is intended to give students a "hands-on" experience in financial forecasting and credit analysis with a very realistic case. You are to take the role of Sam Smith, the Commercial Loan Officer for Riverboat Bank. What decision would you recommend RBI make? If you do recommend the bank make the loans, why? What would be the terms of the loans? If you recommend rejection of the credit request, provide justification for the decision?

Support your conclusion using credit analysis tools including making a 3 year forecast (2014, 2015 and 2016) of the company's income statement, cash flows and balance sheet. Use the percentage of sales method to make your predictions (see the attached "Primer on Financial Forecasting"). Make any assumptions you feel would be appropriate and reasonable. Is it likely Barksdale Brewery will be able to repay the loans as requested? What is the source of repayment? Prepare a table showing how much cash it would take to service the 3 new loans (principal and interest) each year at the terms you recommend. Also create a depreciation schedule for the new building and equipment to be used in forecasting the income statement and balance sheet for 2014, 2015, and 2016.

In doing your forecasting, it is recommended you keep track of certain key variables separately. In other words, forecast old sales separately from the new sales generated by the new facility. Do the same for new loans, depreciation of old assets and new assets. Feel free to add new lines or delete lines to the Excel spreadsheet you were given to use as a guide.

Note: You have been supplied with sufficient information in the case to do your analysis. Thus there is no need to collect any additional external data on the industry. Assume the data provided in the case are accurate and have been verified.

BARKSDALE'S BREWERY COMPANY

EXHIBIT 1

CONSOLIDATED STATEMENTS OF INCOME
Time Frame: Annual

Period Ended	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013
REVENUES:					
Gross Revenue	$2,854,300	$3,416,500	$3,984,000	$4,150,600	$4,638,000
Cost of revenue	$1,211,600	$1,522,900	$2,145,100	$2,012,400	$2,074,700
Gross Profit	$1,642,700	$1,893,600	$1,838,900	$2,138,200	$2,563,300
EXPENSES:					
Advertising Expenses	$151,600	$182,000	$254,100	$270,700	$287,600
Selling, General and Administrative Expenses	$1,136,600	$1,244,600	$1,329,000	$1,215,600	$1,357,400
Depreciation Expense	$75,000	$63,700	$95,800	$98,700	$103,500
Contract labor	$0	$34,400	$19,400	$10,500	$3,000
Other Operating Expenses	$0	$0	$0	$0	$195,300
Total Operating Expenses	$1,363,200	$1,524,700	$1,698,300	$1,595,500	$1,946,800
Operating Income	$279,500	$368,900	$140,600	$542,700	$616,500
Interest Income - Non-Operating	$31,400	$42,500	$16,000	$1,100	$800
Other Non-Operating Income	$6,700	$5,100	$1,700	($200)	($1,500)
Net Income Before Taxes	$317,600	$416,500	$158,300	$543,600	$615,800
Provision for Income Taxes	$135,700	$191,500	$77,500	$232,500	$309,700
Net Income After Taxes	$181,900	$225,000	$80,800	$311,100	$306,100

BARKSDALE'S BREWERY COMPANY
EXHIBIT 2

BALANCE SHEET
Time Frame: Annual

Period Ended:	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013
ASSETS:					
Cash and Cash equivalents	$631,500	$792,900	$90,700	$554,800	$572,500
Short Term Investments	$192,200	$162,000	$0	$0	$0
Cash and Short Term Investments	$823,700	$954,900	$90,700	$554,800	$572,500
Accounts Receivables	$179,900	$182,200	$183,100	$180,600	$201,400
Provision for Doubtful accounts	($2,200)	($2,500)	($2,600)	($2,000)	($1,200)
Net Accounts receivables	$177,700	$179,700	$180,500	$178,600	$200,200
Other Receivables	$0	$21,000	$130,400	$47,000	$82,200
Total Receivables	$177,700	$200,700	$310,900	$225,600	$282,400
Inventories - Finished Goods	$17,800	$27,500	$32,200	$39,000	$55,800
Inventories - Work in Progress	$34,800	$41,200	$45,200	$48,800	$50,500
Inventories - Raw Materials	$117,700	$112,300	$149,700	$167,800	$159,900
Total Inventory	$170,300	$181,000	$227,100	$255,600	$266,200
Prepaid Expenses	$27,200	$19,900	$17,700	$32,100	$33,000
Deferred Income Tax	$6,700	$20,900	$27,300	$44,300	$36,500
Other Current Assets	$0	$1,600	$14,800	$18,100	$12,400
Total Current Assets	$1,205,600	$1,379,000	$688,500	$1,130,500	$1,203,000
Buildings	$90,200	$88,700	$232,100	$255,000	$265,400
Land	$13,200	$74,200	$251,500	$251,800	$252,600
Machinery / Equipment	$686,400	$845,600	$1,638,000	$1,771,200	$1,822,100
Property/Plant/Equipment Total	$789,800	$1,008,500	$2,121,600	$2,278,000	$2,340,100
Accumulated Depreciation Total	($482,800)	($546,500)	($642,300)	($807,700)	($911,200)
Property/Plant/Equipment Total - Net	$307,000	$462,000	$1,479,300	$1,470,300	$1,428,900
Goodwill	$13,800	$13,800	$13,800	$13,800	$13,800
Other Long Term Assets	$18,400	$124,900	$16,100	$15,100	$22,600
Total Assets	$1,544,800	$1,979,700	$2,197,700	$2,629,700	$2,668,300
LIABILITIES AND EQUITY:					
Accounts Payable	$179,400	$177,100	$202,000	$252,600	$277,000
Accrued Expenses	$196,300	$204,400	$235,300	$213,900	$241,300
Notes Payable	$0	$0	$0	$0	$0
Customer Advances	$0	$4,000	$24,700	$7,400	$7,200
Income Taxes Payable	$33,000	$98,300	$76,000	$110,700	$107,900
Other Current Liabilities	$0	$117,900	$132,500	$153,400	$171,300
Total Current Liabilities	$408,700	$601,700	$670,500	$738,000	$804,700
Total Long Term Debt	$0	$0	$0	$0	$0
Deferred Income Tax	$14,900	$12,200	$96,200	$134,400	$170,900
Other Long Term Liabilities	$35,200	$30,000	$30,600	$25,600	$36,600
Total Liabilities	$458,800	$643,900	$797,300	$898,000	$1,012,200
Common Stock	$1,500	$1,300	$1,600	$1,600	$1,500
Additional Paid in Capital	$801,600	$887,500	$1,026,500	$1,116,700	$1,220,200
Retained Earnings	$284,900	$449,000	$376,600	$617,000	$438,800
Treasury Stock	($2,000)	($2,000)	($4,300)	($3,600)	($4,400)
Total Equity	$1,086,000	$1,335,800	$1,400,400	$1,731,700	$1,656,100
Total Liabilities and Stockholders' Equity	$1,544,800	$1,979,700	$2,197,700	$2,629,700	$2,668,300

Note: Undisclosed dividends are paid every year based on company performance and the owners' desire for cash.

BARKSDALE'S BREWERY COMPANY

EXHIBIT 3

KEY RATIOS

Time Frame: Annual

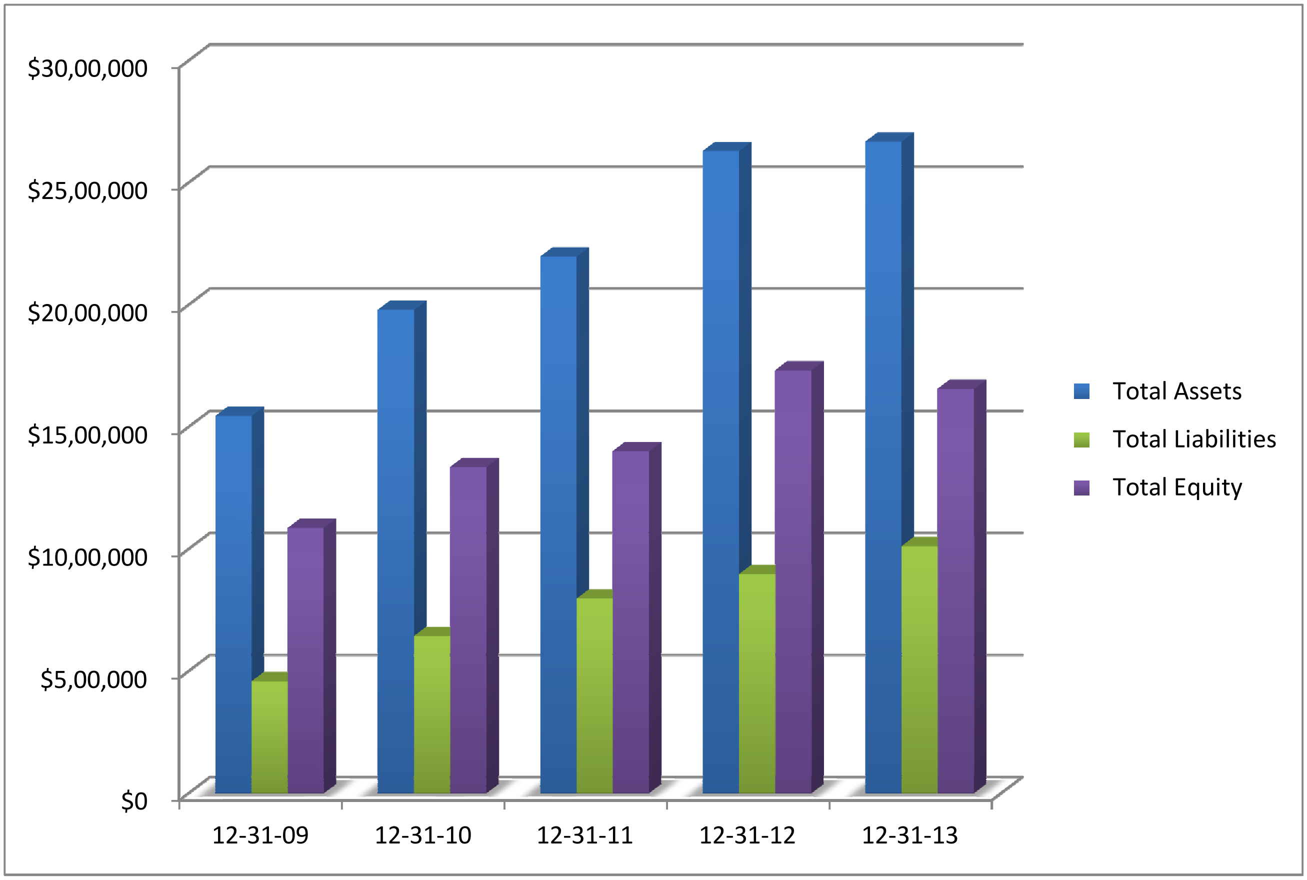
Period Ended:	**12/31/2013**
Quick Ratio (Current Assets - Inventories/Current Liabilities)	1.20
Current Ratio (Current Assets/Current Liabilities)	1.49
Net Sales to Working Capital (Net Sales/Current Assets - Current Liabilities)	11.64
Total Asset Turnover (Sales/Total Assets)	1.74
Inventory Turnover (Sales/Inventory)	17.42
Receivables Turnover (Net Sales/Average Accounts Receivable)	24.49
Total Liabilities to Net Worth (Total Liabilities/Net Worth)	0.61
Return on Assets (Net Income/Total Assets)	11.47%
Return on Stockholder's Equity (Net Income/Total Equity)	18.48%
Equity to Total Assets (Equity/Total Assets)	0.62
Return on Sales (Net Income/Sales)	6.60%

BARKSDALE'S BREWERY COMPANY
EXHIBIT 4

BREWERY INDUSTRY AVERAGES

Total Assets	$1 million to $5 million
Period	7/2012 through 6/2013
Ratios:	
Current Ratio (Current Assets/Current Liabilities)	1.4
Quick Ratio (Current Assets - Inventories/Current Liabilities)	0.8
Coverage Ratio (EBIT/Interest Expense)	4.4
Total Asset Turnover (Revenue/Total Assets)	1.4
Inventory Turnover (Total Sales/Total Inventory)	8.9
Receivables Turnover (Net Sales/Average Accounts Receivable)	16.4
Total Liabilities to Net Worth (Total Liabilities/Net Worth)	1.4
Total Receipts to Cash Flow	8
Cost of Goods to Cash Flow	4.8
Cash Flow to Total Debt (Operating Cash Flow/Total Debt)	0.3

BARKSDALE'S BREWERY COMPANY
EXHIBIT 5



BARKSDALE'S BREWERY COMPANY
EXHIBIT 6

BOTTOM OF INDUSTRY
SHAMROCK BREWERY
BALANCE SHEET
Time Frame: Annual

Period Ended	12/31/2012	12/31/2013
ASSETS		
Cash	$89,342	$97,836
Accounts receivable	$238,424	$235,706
Inventories	$430,947	$425,171
Total Current Assets	$758,713	$758,713
Property, plant and equipment - net	$1,452,272	$1,510,112
Intangible assets	$540,131	$573,196
Goodwill	$15,806	$18,887
Future income taxes	$62,610	$103,400
Total Fixed Assets	$2,070,819	$2,205,595
Total Assets	$2,829,532	$2,964,308
LIABILITIES AND EQUITY		
Accounts payable and accrued liabilities	$384,618	$418,791
Current portion of long-term debt	$153,931	$111,610
Current portion of obligations under capital lease	$41,929	$63,882
Deferred grants	$27,075	$0
Total Current Liabilities	$607,553	$594,283
Long-term debt	$206,790	$216,237
Total Liabilities	$814,343	$810,520
Common Stock	$3,110,098	$3,440,175
Retained Earnings	($1,094,909)	($1,286,387)
Total Shareholders' Equity	$2,015,189	$2,153,788
Total Liabilities and Shareholder's Equity	$2,829,532	$2,964,308

CONSOLIDATED STATEMENTS OF INCOME
Time Frame: Annual

Period Ended	12/31/2012	12/31/2013
Net Revenue	$2,990,554	$2,991,641
Cost of sales	$2,522,306	$2,273,243
Gross Profit	$468,248	$718,398
EXPENSES		
General Selling & Administrative	$452,762	$604,162
Other expenses	$234,615	$305,714
Net Income (loss)	($219,129)	($191,478)

BARKSDALE'S BREWERY COMPANY		
EXHIBIT 7		
MIDDLE OF INDUSTRY		
BUBBLES BREWERY		
BALANCE SHEET		
Time Frame: Annual		
Period Ended	**12/31/2012**	**12/31/2013**
ASSETS		
Cash and Cash equivalents	$54,950	$188,804
Net Receivables	$216,810	$316,400
Inventory	$171,900	$347,110
Other Current Assets	$1,460	$1,990
Total Current Assets	$445,120	$854,304
Property Plant and Equipment -net	$676,690	$1,571,090
Intangible Assets	$0	$121,190
Total Assets	$1,121,810	$2,546,584
LIABILITIES AND EQUITY		
Accounts Payable	$155,930	$376,920
Short/Current Long term Debt	$209,760	$298,657
Total Current Liabilities	$365,690	$675,577
Long-term debt	$0	$457,063
Total Liabilities	$365,690	$1,132,640
Common Stock	$150,000	$250,000
Retained Earnings	$363,060	$628,074
Capital Surplus	$182,880	$433,570
Other Stockholder Equity	$60,180	$102,300
Total Stockholders' Equity	$756,120	$1,413,944
Total Liabilities and Stockholders' Equity	$1,121,810	$2,546,584
CONSOLIDATED STATEMENTS OF INCOME		
Time Frame: Annual		
Period Ended	**12/31/2012**	**12/31/2013**
REVENUES:		
Total Revenue	$1,553,380	$2,350,910
Cost of Revenue	$989,200	$1,545,380
Gross Profit	$564,180	$805,530
EXPENSES:		
General Selling & Administrative	$233,030	$369,380
Operating Income	$331,150	$436,150
Other Income (Expenses)	$9,600	$590
Earnings Before Interest and Taxes	$340,750	$436,740
Interest Expense	$10,488	$37,786
Income Tax Expense	$82,410	$133,940
Net Income	$247,852	$265,014

BARKSDALE'S BREWERY COMPANY
EXHIBIT 8

TOP OF INDUSTRY
BEY BREWERY
BALANCE SHEET
Time Frame: Annual

Period Ended	12/31/2012	12/31/2013
ASSETS		
Cash and Cash Equivalents	$330,126	$440,865
Short Term Investments	$110,764	$208,247
Net Receivables	$819,241	$893,865
Inventory	$654,035	$765,846
Other Current Assets	$132,586	$170,872
Total Current Assets	$2,046,752	$2,479,695
Property Plant and Equipment - net	$1,793,250	$2,125,574
Total Assets	$3,840,002	$4,605,269
LIABILITIES AND EQUITY		
Accounts Payable	$679,545	$643,952
Short/Current Long Term Debt	$468,451	$679,446
Other Current Liabilities	$510,432	$366,756
Total Current Liabilities	$1,658,428	$1,690,154
Long Term Debt	$251,248	$229,453
Total Liabilities	$1,909,676	$1,919,607
Common Stock	$370,000	$370,000
Retained Earnings	$1,330,326	$2,085,662
Treasury Stock	$230,000	$230,000
Total Stockholders' Equity	$1,930,326	$2,685,662
Total Liabilities and Shareholders' Equity	$3,840,002	$4,605,269

CONSOLIDATED STATEMENTS OF INCOME
Time Frame: Annual

Period Ended	12/31/2012	12/31/2013
REVENUES:		
Total Revenue	$3,750,532	$4,829,567
Cost of Revenue	$2,160,874	$2,794,587
Gross Profit	$1,589,658	$2,034,980
EXPENSES:		
General Selling & Administrative	$853,876	$1,005,173
Operating Income	$735,782	$1,029,807
Interest Expense	$35,985	$45,445
Income Tax Expense	$197,463	$229,026
Net Income	$502,334	$755,336

BARKSDALE'S BREWERY COMPANY

EXHIBIT 9

Sales to Top 10 Clients Based on Revenue

		2009	2010	2011	2012	2013	% of 2013 Revenue
1. Schnucks Supermarkets	$ 776,946	$ 817,838	$ 860,882	$ 906,191	$1,132,739	24.4%	
2. Dierberg's Supermarkets	$ 495,819	$ 521,914	$ 549,383	$ 578,298	$ 722,873	15.6%	
3. Shop N' Save Supermarkets	$ 407,014	$ 428,436	$ 450,986	$ 474,722	$ 593,402	12.8%	
4. Quik Trip Convenience Store	$ 371,405	$ 390,952	$ 411,529	$ 433,188	$ 541,485	11.7%	
5. Walgreens Pharmacy	$ 357,611	$ 376,433	$ 396,245	$ 417,100	$ 521,375	11.2%	
Top 5 Total		**$2,408,794**	**$2,535,573**	**$2,669,024**	**$2,809,499**	**$3,511,874**	**76%**
Other clients		$ 445,506	$ 880,927	$1,314,976	$1,341,101	$1,126,126	**24%**
Gross Revenue		**$2,854,300**	**$3,416,500**	**$3,984,000**	**$4,150,600**	**$4,638,000**	100%

As of 12/31/2013		BARKSDALE'S BREWERY COMPANY Past Due Accounts				
	Current	1 - 30 days	31 - 60 days	61 - 90 days	> 90 days	TOTAL
JJ Twig's	0.00	37.10	0.00	0.00	0.00	37.10
Iggy's	0.00	0.00	0.00	0.00	131.48	131.48
Corner Bar	0.00	321.00	0.00	0.00	0.00	321.00
Harpo's	0.00	0.00	0.00	953.25	0.00	953.25
Humphrey's	4,123.69	-45.00	0.00	0.00	0.00	4,078.69
Buffalo Wild Wings	5,432.00	42.40	42.40	42.40	-0.10	5,559.10
7-Eleven	321.00	3,127.00	0.00	0.00	0.00	3,448.00
Dave's Bar and Grill	2,689.22	0.00	0.00	0.00	0.00	2,689.22
Shamrock's	851.26	0.00	465.42	465.42	0.00	1,782.10
Dierberg's	407.51	-42.40	0.00	0.00	0.00	365.11
Dierberg's	2,831.47	0.00	0.00	0.00	0.00	2,831.47
Walgreens	4,543.00	0.00	0.00	0.00	-5.00	4,538.00
Walgreens	321.00	432.00	0.00	0.00	0.00	753.00
Schnucks	62,349.00	27,291.60	4,859.00	2,903.03	354.00	97,756.63
Schnucks	2,637.00	2,365.00	432.00	613.57	476.00	6,523.57
Schnucks	3,587.00	4,403.00	356.00	453.00	765.00	9,564.00
Trainwreck Saloon	5,340.00	3,101.80	322.00	543.00	845.00	10,151.80
Lodging Hospitality Mgmt	3,206.50	0.00	0.00	0.00	0.00	3,206.50
Buffalo Wild Wings	1,166.00	0.00	1,166.00	1,166.00	0.00	3,498.00
Bravo	2,120.00	0.00	0.00	0.00	0.00	2,120.00
Hilton Hotel	484.24	0.00	241.50	241.50	0.00	967.24
Quik Trip	2,954.43	0.00	0.00	0.00	0.00	2,954.43
P.J.'s	687.76	0.00	0.00	0.00	0.00	687.76
Frank's Bar and Grill	2,655.96	0.00	0.00	0.00	0.00	2,655.96
Aldi's	-2,687.65	0.00	0.00	0.00	0.00	-2,687.65
Tony's	9,267.79	0.00	-192.02	0.00	0.00	9,075.77
The Pasta House Company	0.00	2,836.61	1,136.61	0.00	0.00	3,973.22
7-11	3,321.00	1,146.66	1,533.45	0.00	0.00	6,001.11
7-11	322.00	123.85	0.00	0.00	0.00	454.00
7-11	0.00	-14.89	0.00	0.00	0.00	-14.89
Mike Duffy's	1,870.16	0.00	0.00	0.00	0.00	1,870.16
Cusamano's	1,204.99	0.00	-1.00	0.00	0.00	463.00
Morton's Steakhouse	975.20	0.00	0.00	0.00	0.00	975.20
Bar Louie	239.00	0.00	0.00	0.00	0.00	239.00
Lester's	0.00	229.23	0.00	0.00	0.00	229.23
Mobile on the Run	366.00	237.17	0.00	0.00	0.00	432.00
Mobile on the Run	1,587.11	0.00	0.00	0.00	0.00	1,587.11
Wasabi	10,983.43	0.00	-0.01	0.00	245.91	11,229.33
	$136,157.07	**$45,592.13**	**$10,361.35**	**$7,381.17**	**$2,812.29**	**$201,400.00**

BARKSDALE'S BREWERY COMPANY
EXHIBIT 11

Sources		%	**Uses**		%
Mortgage Loan	$900,000	69.2%	Land and Building	$750,000	57.7%
			Improvements	$150,000	11.5%
Term Loan	$200,000	15.4%	Machinery and Equipment	$200,000	15.4%
Line of Credit	$200,000	15.4%	Working Capital	$200,000	15.4%
Total Sources	$1,300,000	100%	Total Uses	$1,300,000	100%

Barksdale's Brewery Company
Revolving Line of Credit
BORROWING BASE CERTIFICATE
Exhibit 12

Borrower: Barksdale's Brewery Company
Date of Report: 12/31/13

Please provide the following information as of the most recent quarterly accounts receivable aging and inventory reports. *

Current Revolving Facility Loan Balance:		$ -
I. Accounts Receivable Aging Summary		
Gross Accounts Receivable (See Exhibit 10)		$201,400
Less Accounts with any balance over 90 days (See Exhibit 10)		$ 2,812
Eligible Accounts Receivable		$198,588
II. Inventory Summary		
Gross Inventory: (See Exhibit 2)		$266,200
Less Work in Process: (See Exhibit 2)		$ 50,500
Eligible Inventory		$215,700
III. Availability Calculation		
Availability on Eligible Accounts Receivable:	80%	$158,870
Availability on Eligible Inventory:	50%	$107,850
Total (Not to exceed Revolving Facility Cap of $200,000):		$266,720
Current Line of credit balance		$0
Net Availability		$200,000
Remaining Availability on Collateral		$200,000

Barksdale's Brewery Corporation

By:
Name: Patrick Barksdale
Title: CFO
Notes: * if line of credit is made, it will be carefully monitored using end-of-month accounts receivable aging and inventory balances.

Authors
Patrick Terry, Credit Analyst for a local bank, St. Louis, Missouri, USA
Edward C. Lawrence*, Ph.D, Professor of Finance, University of Missouri – St. Louis, USA

*Corresponding Author

A Primer on Financial Forecasting

Edward C. Lawrence

University of Missouri – St. Louis

Financial forecasting can be accomplished using a number of different methodologies. This brief summary demonstrates the steps in one commonly used procedure. It is sometimes called the "percentage of sales method" for reasons you will quickly see. Remember, it is the job of the analyst to make reasonable assumptions when data is missing or incomplete, which is not an unusual circumstance.

Step 1: Obtain 3 to 5 years of financial statements (balance sheet and income statements) to analyze.

Step 2: Begin the analysis by transforming the raw data into something more meaningful. (Use the Excel spreadsheet given to you by your professor as part of the case.) In banking, this is called "spreading the financial statements". For each year, restate all items on the income statement as a % of Gross Sales. Do the same for the balance sheet but divide by all assets and liabilities by Total Assets. Look for trends in the data. What items have gone up or down? Is this a good or bad trend? What might account for this change?

The decision to make a commercial loan will depend on the borrower's ability to repay the loan. This requires the lender and / or borrower to make projections of what the financial statements will look like in the next 3 future years. These forecasts are called "pro forma" financial statements.

Step 3: Before starting the financial statement forecasts, it is a good idea to prepare a couple of key statements first. One is the debt service schedule. This schedule assumes the requested loans are made at current interest rates for the level of risk. Thus we should be able to compute how much new interest will be paid by the borrower each year and how much the loan principal will be paid down annually. Make any assumptions with regard to interest rates and loan terms you feel are reasonable.

Second, many loans are for the purchase of equipment and real estate. These are depreciable assets that will impact both the income statement and the balance sheet. So you should prepare a depreciation schedule for each asset showing its cost, annual depreciation expenses, accumulated depreciation, and basis (i.e. book value) at the end of each forecasted year. Many analysts will start out assuming straightline depreciation to keep the calculations simple. Remember to aggregate the depreciation expense of all equipment and real estate for each year since you will need this information on the pro forma income statement. Do the same aggregation for the accumulated depreciation and the basis of the asset for the balance sheet.

Step 4: Next using an Excel spreadsheet, forecast sales growth for the next 3 years. Make reasonable assumptions as to growth based on historical growth from the income statement over the last 3-5 years. Also consider changes in the economy and new company plans. How might these affect future growth? Most analysts will forecast old sales separately from new product sales since these might very well grow at different rates. Use the expected growth in sales to compute aggregate sales in dollars for each year.

Employ the percentage of sales method to compute other expense items to fill in the income statements for the next 3 years. This is done by multiplying the % of each expense of historical sales (found in step 2 above) and multiplying it by each year's new sale forecast. If there is a reason to believe the historical relationship might change for any item in the future, feel free to use a different percentage. For example, if operating expenses have historically averaged 22% of sales, but there is evidence of the company becoming more efficient and cutting costs, the analyst might want to use 21% or 20% of projected sales. This should allow you to completely fill in the income statements for 3 years. For each year, also compute cash flows by adding depreciation expense to net income each year.

Step 5: Having completed the pro forma income statement, the analyst is now ready to prepare pro form balance sheets. It is best to start by predicting Total Assets, the largest number on the balance sheet. Start by taking total assets divided by sales for the most recent year of actual data. This number will give the analyst an idea of how much each dollar invested in assets will generate in sales. For example, a company may historically require $1 in TA to produce $2 in sales (or a percentage of 50%). So this tells us if our company is expecting $4 million in sales next year, we would expect them to have $2 in total assets (i.e. $4 M X .50 = $2 M).

Having predicted TA for 3 years, most analysts will assume other assets and liabilities will automatically change in the same proportion as they represented in past years. Use the common size balance sheet (found in step 2 above) where each asset or liability is divided by TA to get a %. Then use this % multiplied by the new projected TA for each year to fill in the other numbers on the balance sheet. For example, accounts receivable, inventory, accounts payable, accrued expenses, etc. would naturally expand to support higher sales.

If the company is already operating at full capacity, then one would expect fixed assets to also expand proportionately to any expansion in sales. However, if the firm is only operating at 75% of capacity, then sales could expand 25% from existing levels before new equipment and facilities are needed. It should also be noted that decision variables like bank debt, common stock, etc. do not automatically expand unless management makes the decision to do so. Thus, these are often held constant until later in the analysis when it is determined if additional sources of capital are required, then an adjustment is made.

When the first pass to fill in the numbers on the pro forma balance sheet is complete, the right hand and left hand side of the balance sheet will not balance (since these are all forecasted numbers). Most analysts will simply use a "plug" number for cash to force the totals to balance.

Step 6: The last step is to carefully examine the pro forma statements for realism. If anything seems out of line or unreasonable, make further adjustments to make the numbers as realistic as possible. Write down any assumptions you have made so others know what you did and why. **You need to be able to defend your forecasted numbers and assumptions.**

Step 7: One should recognize there are an infinite number of possible projections the analyst could made depending on assumptions. Therefore doing some sensitivity analysis where the analyst changes key variables (e.g. growth rates in sales) in order to see how the results change and what variables are driving the outcome. These "drivers" should be refined and carefully considered in making the loan. For instance, if you assume a sales growth of 10% per year, what if sales only rise by 5%? Does that make the company unprofitable and unable to repay the loan as requested?

Step 8: Most bankers will also compute some key financial ratios using both the historical financial statements and on the pro forma statements to spot trends, evaluate management performance, determine adequacy of returns, etc. These numbers should not be evaluated in a vacuum but compared to others in the industry numbers. You should do this too! Benchmark numbers from industry averages (e.g. RMA database) or from individual companies in the industry are the best way to compare your company's performance with that of others.

Finally remember that financial forecasting is as much of an "art" as it is a science. It is fairly easy to teach the mechanics of financial forecasting but there is a lot of judgment that comes into play. With experience, everyone will get better at this. You just need to work hard on the case and practice!