MCQUEEN COMPANY – AN EXCEL BASED BUDGETING CASE

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ABSTRACT

The purpose of this paper and presentation will be to share an excel-based case study used in a cost accounting course. The case is intended to enhance student's thinking skills and technical competencies. The use of an excel-based budgeting case study is an excellent vehicle in support of these goals.

Keywords: Case study, account education, budgeting, cost accounting introduction

INTRODUCTION

Accounting curricula has changed significantly over the last twenty years. Rote technical memorization has been replaced by an expanded focus on broader business, communication, and analytical skills (Myers, 2005). Accounting educators are continually attempting to develop new and more effective ways to deliver subject matter. The challenge is to provide students with materials that have real world relevance and engage students actively in the learning process. The result is an expanded array of teaching pedagogies that support an active learning approach and help students develop skills set forth in the AICPA Core Competency Framework (Framework). The Framework details the skills needed for entry into the profession of accounting. Competencies are categorized as functional (technical competencies most closely aligned with the value contributed by accounting professionals), personal (individual attributes and values) and broad business perspective competencies (relating to understanding of internal and external business contexts) (AICPA, 2004).

In their surveys of accounting faculty and accounting practitioners, Albrecht and Sack found that analytical/critical thinking, technical competencies, and written communications are the skills important for success in the profession (p. 56). Accordingly as there is a movement in accounting education away from reliance on lectures and towards teaching approaches that focus on critical skills – there is a need for assignments that require development of analytical and communication skills as well as technical competencies.

For accounting educators, merely covering the appropriate course content is no longer sufficient (Williams, 2002). The challenge is to provide students with opportunities to enhance thinking, reasoning, problem solving skills and technical competencies. Materials should have real world relevance and engage students actively in the learning process. The task is daunting, and one unlikely to be achieved by merely covering the chapters in the textbook. Accordingly, many faculty are incorporating various tools or assignments into their courses in an effort to meet the above objectives.

The case method is a pedagogy that provides a process by which students are actively involved in the learning process; utilization of the case method also addresses the core competencies detailed in the Framework. There has been a good deal of research that supports the use of the case method in accounting instruction (Stout, 1996). The case method differs significantly from the traditional lecture-based content teaching approach; the emphasis shifts to the student with a focus on discussions (i.e. communication) and induction (i.e. critical thinking) (Webb, 2005). To be effective case studies must have real world relevance, provide a valuable experience, and be an integral part of the course (Gelinas, 2001).

The purpose of this paper will be to share an Excel based case study used in a cost accounting course. The case facts, assignment requirements, and questions for discussion are presented below. Case solutions will be discussed and available at the conference presentation. The conference presentation should generate discussion among faculty and facilitate the utilization and development of case study material.

Case Objectives

This case study is appropriate for a Cost Accounting course. This case is designed to accomplish a number of pedagogical objectives by actively involving students in the learning process, employing the use of an activity based on real world relevance, and enhancing the development of the critical thinking ability of students and other competencies outlined in the Framework. The objectives of this case are to build on the student's functional knowledge of the budgeting process and management's decision-making process through a computer assisted decision model. The assignment will require use of Excel for cost analysis and budgeting within a content that requires an ability to organize and analyze information critically. The goal is that the case assignment will develop critical thinking, analytical skills and technical competencies.

Background of the Case

Students are provided with the accounting information for a fictitious company called McQueen Corporation. The information includes prior year financial statements, product cost information, and sales, cost and expense data. Students are also provided guidance for construction of their Excel document, including sample spreadsheets. Students are asked to utilize the information to prepare a master budget. The students then are required to address management questions about impact of price and cost changes on budget projections. The focus is on the role of budgeting in the decision making process. The student will be expected to use Excel application in completing the number crunching part of the assignment. A portion of a class meeting should be devoted to discussion of the case assignment. This activity can be structured as a group activity or as general class discussion.

CASE FACTS

Background

McQueen Corporation is preparing the budgeted financial statements for the year 2012. The actual balance sheet as of 12/31/11 follows:

McQueen Corporation
Balance Sheet
Year end 12/31/2011

Assets			**Liabilities & Shareholders Equity**		
Current assets			Current liabilities		
Cash and equivalents	$22,105,000		Accounts payable	$19,892,000	
Short term investments	$47,246,000		Warranties	$2,548,000	
Net receivables	$11,456,000		Accrued expenses	$2,210,000	
Inventories	$6,525,000		Revolving line of credit	$0	
Other current assets	$6,243,000		Other current liabilities	$748,000	
Total current		$93,575,000	Total current		$25,398,000
			Non-current liabilities		
Non-current assets			Long term debt	$52,093,500	
Long term investments	$105,077,000		Total non-current		$52,093,500
Property plant and equipment	$46,124,000		Total liabilities		$77,491,500
Other assets	$7,985,000				
Total non-current		$159,186,000			
Total assets		$252,761,000	Shareholders equity		
			Common stock	$7,791,000	
			Capital surplus	$9,967,000	
			Treasury stock	-$15,219,000	
			Retained earnings	$172,730,500	
			Total shareholders equity		$175,269,500
			Total liabilities & shareholders equity		$252,761,000

McQueen Corporation sells three models of a luxury automobile built for speed. The Falcon is the largest version which boasts seating for four but still has the ability to reach top speeds in seconds. The Swift is the top seller with its sleek design, modern technologies, and seating for two. The Gazelle is the smallest model very similar to the Swift but slightly faster. McQueen's automobiles are highly specialized and they are only sold in Dallas, Texas. People travel from all over the world to see and purchase McQueen's automobiles but the President is unhappy with the current profit margins.

McQueen Corporation is exploring new branding and marketing ideas in an effort to increase business. In doing so, the President has asked the Chief Financial Officer, the Chief Development Officer, the Chief Marketing Officer, and you, the Internal Auditor for input and ideas on how to increase profit margins.

If the company does nothing different for 2012, the President expects the following sales:

Model	Sales Price	Units Sold	Total
Falcon	$1,275,000	30	$38,250,000
Swift	$975,000	50	$48,750,000
Gazelle	$787,500	40	$31,500,000

Based upon historical data, 85% of sales revenue is collected in the year of the sale with 10% collected in the year following the sale. 5% of sales is the estimated bad debt amount. In following GAAP, McQueen makes this estimate at year end and records the expense in the year of sale. The net receivables balance on 12/31/2011 consists of the 10% uncollected balance of 2011 sales.

On January 1, 2012, beginning inventory is 2 Falcons, 5 Swifts, and 3 Gazelles. Desired ending inventory for 2012 is 5 units of each model. McQueen outsources the manufacturing of their automobiles and purchases the finished product. The Falcon cost is $850,000, the Swift cost is $650,000, and the Gazelle cost is $525,000. These costs apply to both 2011 and 2012. The current sales prices are based on cost plus a 50% markup. Based upon historical data, 75% of inventory is paid for in the year of purchase with the remaining 25% paid for in the year following the purchase. The accounts payable account is used specifically for inventory purchases.

The accounts payable balance on 12/31/11 consists of the 25% unpaid balance of 2011 inventory purchases.

Budgeted fixed administrative expenses for 2012 follow:

Utilities, maintenance, and facilities	$375,000
Executive and administrative salaries	$5,772,000
Depreciation	$2,612,000

Budgeted variable administrative expenses for 2012 follow:

Marketing and promotions	10% of Sales
Bad debt expense	5% of Sales
Sales commission	5% of Sales
Warranties	2% of Sales
Shipping and handling costs	1% of Sales
Insurance	3% of Purchases

Of the above payable fixed and variable expenses everything except warranties will be paid in cash during 2012. Remember, the depreciation and bad debt expense are non-cash expenses. Based upon historical data, 95% of warranty claims are paid in the year following the sale with 5% paid in the second year following the sale. McQueen recorded warranty liability expense of $2,000,000 on 12/31/2010, of which 5% remains unpaid. The additional warranty liability on the 12/31/2011 balance sheet is the estimate for 2011.

The three other current liabilities (accounts payable, accrued expenses, and other current liabilities) on the 12/31/2011 balance sheet will be paid with cash during 2012. 5% of the 2011 beginning long-term debt balance will be paid with cash during 2012. At year end, interest is accrued at an annual rate of 6% but is not paid until the following year.

McQueen has a $20,000,000 minimum cash balance policy. If the year-end cash balance falls below $20,000,000 McQueen will utilize their revolving line of credit with the bank and borrow the amount necessary to meet the $20,000,000 cash requirement.

McQueen budgets an annual 4% return on short-term investments and an annual 6% return on long-term investments. McQueen receives these returns in cash at year-end.

McQueen plans to pay out a dividend of 10% of net income on 12/31/2012.

McQueen's pretax income is budgeted to be taxed at a rate of 15% and will be paid in cash during 2012.

Requirements:

Using the data above, prepare a master budget for McQueen Corporation including the following:

a. Data sheet
b. Revenue budget for the year ending 12/31/2012
c. Purchases budget for the year ending 12/31/2012
d. Fixed administrative expense budget
e. Variable administrative expense budget
f. Interest expense budget
g. Schedule of cash collections on sales
h. Schedule of cash collections on investments
i. Schedule of cash payments for inventory
j. Schedule of cash payments for warranties
k. Cash budget for the year ending 12/31/2012
l. Budgeted income statement for 12/31/2012
m. Budgeted cost of goods sold schedule for the year ending 12/31/2012
n. Budgeted statement of retained earnings for the year ending 12/31/2012
o. Budgeted balance sheet for the year ending 12/31/2012

Input all of the above estimates proposed by the President if the company does nothing to change.

2. The Chief Financial Officer (CFO) suggests that the long-term debt be paid down by an additional $10,000,000 by liquidating some of the company's interest bearing short-term investments. The CFO also suggests that $20,000,000 of the short-term investments be moved to long-term investments to earn a higher interest since the company's current assets are quite high. This should improve the profit margin and allow the Company the flexibility needed to explore new branding and marketing ideas. Consider the changes proposed by the CFO and analyze the results.

3. The Chief Development Officer (CDO) suggests that the company expand its market to Houston by July 2012. It is only a 3-4 hour drive and the expansion will be a complement to the Dallas location. This would require renting a facility in Houston for approximately $150,000 for the remaining 6 months of 2012. The new location would increase the number of cars sold in each category by 10%. There would be an increase in administrative salaries of 35% since new personnel will need to be hired. Shipping and handling costs in Houston are higher so average shipping and handling on all sales will increase to 3%. Since the short-term investments are only earning 4% and the long-term debt is at 6%, the entire balance of the interest bearing short-term investments should be liquidated at the beginning of 2012 and used to pay down the long-term debt in addition to the 5% amount. Consider the changes proposed by the CDO and analyze the results.

4. The Chief Marketing Office (CMO) suggests a decrease in the markup to 42% of cost on the cars and an increase in sales commissions to 6%. In addition, hire an internationally recognized advertising firm. The CMO estimates that these actions will increase the number of cars sold in each category by 20%. Although an advertising firm will be hired, the marketing and promotion costs are estimated to be 3% below the original estimate of 10% because of the projected increase in sales. Consider the changes proposed by the CMO and analyze the results.

5. Discuss each of the options (2-4 above) and tell me what the best option is. Why is that option better than the others? Why are the other options not as appealing? Also, compute the following ratios in your analysis: gross margin percentage, operating income percentage, debt to equity, debt to assets, current ratio, inventory turnover, and asset turnover.

6. After you have compared the four options above, prepare your proposal to the President as the Internal Auditor. What do you propose to the President? As part of your proposal include a brief discussion of the above ratio results.

Conclusion

There is a need to provide students with assignments that will enhance their analytical, critical and reflective thinking, and build their communications skills and technical competencies. The use of an Excel based budgeting case study is an excellent vehicle in support of those goals. Additionally there is a need to develop and share resources that will help faculty shift from reliance on lecture toward adopting assignments that support a focus on the critical skills as espoused by the AICPA in its Core Competency Framework. The presentation will provide examples and hopefully, a rich discussion of ideas and processes.

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