

## Smithfield Fixtures, Inc.<sup>1</sup>

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### ABSTRACT

This short case is designed for use in an undergraduate finance course to help students understand a firm's cash flow needs, working capital, and bank lines of credit.

Keywords: Working Capital Analysis, Ratio Analysis, Dupont Analysis, Operating Cycle Analysis, Cash Flow Analysis, Bank Covenants.



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<sup>1</sup> Smithfield Fixtures, Inc. Teaching Note and two Excel files (a template for students and a solution to accompany the teaching note) are available from the authors: Brad Stevenson ([bstevenson@bellarmine.edu](mailto:bstevenson@bellarmine.edu)) and David Collins ([dcollins@bellarmine.edu](mailto:dcollins@bellarmine.edu)).

## INTRODUCTION

It was July of 2015 and Tim Stivers, CFO, was headed to a meeting with Brandon Smithfield, owner and president of Smithfield Fixtures, Inc. Tim and Brandon were old friends but Tim was worried today's meeting would not be a friendly chat. Although Smithfield was a profitable and growing firm, they had been increasingly reliant on their bank line of credit to maintain a healthy cash balance. The bank was threatening not to extend the line of credit unless Smithfield could show a plan to rectify the situation and bring their borrowing under control.

## COMPANY BACKGROUND

Smithfield Fixtures was founded in 1963 in Escanaba, Michigan by Brandon Smithfield's grandfather, John, and had been owned and operated by family members ever since. The original product line had focused on faucets and showerheads and the firm had expanded its product line over time to include a wide range of plumbing and home improvement products such as mirrors, toilets, cabinetry, etc. While the firm's sales are year-round, they tend to peak during the warm spring and summer months and decline during the colder fall and winter months.

Tim Stivers began his career at Smithfield as an accountant and had moved his way up to CFO. Being a relatively small firm, officers and managers of the firm worked closely together and their families often socialized with each other outside of the office. Considering himself a family friend made the recent development with Smithfield's bank even more stressful for Tim.

## ANALYSIS

While Tim was confident the situation could be rectified, he need to convince the bank and, even more importantly, Brandon that he could identify the problem and propose a solution that would: 1) reduce the need for external financing and 2) ensure continued profitability. To prepare, Tim and his staff gathered forecasted data for the upcoming 2016 fiscal year as well as data from 2014 and 2015 (Tables 1 – 3).

In regards to Smithfield's cash balances, it has been company policy to keep a minimum balance of \$200,000 on hand for emergencies. All product sales to customers and purchases from suppliers were on credit. Also, at Tim's request, the COO, Fred Smoltz, prepared a forecasted production schedule for 2016 aligning production to sales to compare to the forecasted 2016 constant production schedule, which is how production has been scheduled.

The first item on Tim's agenda is to produce an analysis of the 2014, 2015 and 2016 data to determine the cause of the problem the firm currently faces. He knows that certain policies present trade-offs in terms of liquidity and profitability so step two of his agenda is to propose different solutions to Brandon for 2016 which he can then take to the bank.

## QUESTIONS

- 1) Calculate the ratios listed for Smithfield in Table 1. What do they tell Tim about Smithfield's financial health? Include a DuPont analysis in your response.
- 2) Using the components of Smithfield's operating cycle for all three years discuss what these measures indicate about the sources of Smithfield's illiquidity. Make sure to discuss

Smithfield’s operating and cash conversion cycles. What can they do to address any issues you find? What may be positive or negative consequences of these actions?

- 3) Does Smithfield appear to be following an aggressive or conservative working capital policy? Explain.
- 4) Using Tables 5 & 6, complete the cash flow analyses for Smithfield. What do these tell you about Smithfield’s financing needs relative to year end results from the statements? Does the floating production schedule alter their financing needs? If so, what are positive and or negative outcomes of this policy?
- 5) Given your analysis of Smithfield’s ratios, operating cycle, and cash budgets, what solutions could and/or should Tim propose? Consider both changes in the operating cycle and financing. Explain how these proposals affect Smithfield’s ratios and operating cycle components in 2016.
- 6) If you were Smithfield, Inc.’s bank, what requirements, covenants or other stipulations might you require on a potential loan to Smithfield? Why?

Table 1: Smithfield Financial Ratios		2014	2015	2016
ROA =				
ROE =				
Gross Profit Margin =				
Net Profit Margin =				
NWC =				
Current Ratio =				
Acid Test/Quick Ratio =				
AR Conversion Period =				
Payables Deferral Period =				
Inventory Conversion Period =				
Total Asset Turnover =				
Debt Ratio =				
Equity Multiplier =				
Times Interest Earned =				
AR/Sales =				
(Inv. + AR)/Sales =				

Unit Sales Growth =	7%	Real Price Increase =	0%
Inflation =	3%	Total Change in Revenue =	10%
		<u>2011</u>	<u>2012</u>
Market Share =		10%	10%
	<u>% Sales</u>	<u>2015</u>	<u>2016</u>
January	5%	\$150,000	\$165,000
February	5%	\$150,000	\$165,000
March	5%	\$150,000	\$165,000
April	6%	\$180,000	\$198,000
May	10%	\$300,000	\$330,000
June	11%	\$330,000	\$363,000
July	11%	\$330,000	\$363,000
August	11%	\$330,000	\$363,000
September	11%	\$330,000	\$363,000
October	11%	\$330,000	\$363,000
November	9%	\$270,000	\$297,000
December	5%	\$150,000	\$165,000
	100%	\$3,000,000	\$3,300,000

	2014	2015	2016
Cash	\$240,000	\$359,000	\$0,000
Accounts Receivable	\$330,000	\$295,000	\$0,000
Inventory	\$337,000	\$500,000	\$750,000
<b>Total Current Assets</b>	<b>\$907,000</b>	<b>\$1,154,000</b>	<b>\$750,000</b>
Property, Plant & Equipment, Net	\$2,180,000	\$2,170,000	\$2,303,000
<b>Total Assets</b>	<b>\$3,087,000</b>	<b>\$3,324,000</b>	<b>\$3,053,000</b>
Notes Payable, Bank	\$413,000	\$466,000	\$0,000
Accounts Payable	\$150,000	\$163,000	\$0,000
Long-Term Debt: Current Portion	\$100,000	\$100,000	\$100,000
<b>Total Current Liabilities</b>	<b>\$663,000</b>	<b>\$729,000</b>	<b>\$100,000</b>
Term Loan	\$1,320,000	\$1,220,000	\$1,120,000
<b>Total Liabilities</b>	<b>\$1,983,000</b>	<b>\$1,949,000</b>	<b>\$1,220,000</b>
Stockholders' Equity	\$1,104,000	\$1,375,000	\$1,592,000
<b>Total Liabilities and Stockholders' Equity</b>	<b>\$3,087,000</b>	<b>\$3,324,000</b>	<b>\$2,812,000</b>

	2014	2015	2016
Net Sales	\$2,600,000	\$3,000,000	\$3,300,000
Cost of Goods Sold			
Beginning Inventory	\$210,000	\$337,000	\$500,000
Purchases	\$1,870,000	\$2,275,000	\$2,640,000
Goods Available for Sale	\$2,080,000	\$2,612,000	\$3,140,000
Ending Inventory	\$337,000	\$500,000	\$750,000
Total Cost of Goods Sold	\$1,743,000	\$2,112,000	\$2,390,000
Gross Profit	\$857,000	\$888,000	\$910,000
SG&A Expense	\$317,000	\$417,000	\$480,000
Depreciation Expense	\$105,000	\$100,000	\$101,000
Earnings Before Interest & Taxes (EBIT)	\$435,000	\$371,000	\$329,000
Interest Expense	\$14,000	\$13,000	\$12,000
Earnings Before Taxes (EBT)	\$421,000	\$358,000	\$317,000
Taxes	\$110,000	\$87,000	\$100,000
Net Income	\$311,000	\$271,000	\$217,000

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Credit Sales	\$165	\$165	\$165	\$198	\$330	\$363	\$363	\$363	\$363	\$363	\$297	\$165
Cash Sales	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
AR Collections	\$270	\$150	\$165	\$165	\$165	\$198	\$330	\$363	\$363	\$363	\$363	\$363
Total Cash Collections	\$270	\$150	\$165	\$165	\$165	\$198	\$330	\$363	\$363	\$363	\$363	\$363
COGS	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220
AP Payments	\$163	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220	\$220
SG&A Expense	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40
Interest Expense	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
Principal Repayment						\$100						
PP&E		\$234										
Taxes			\$25			\$25			\$25			\$25
Total Cash Outflows	\$204	\$495	\$286	\$261	\$261	\$386	\$261	\$261	\$286	\$261	\$261	\$286

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Sales	\$165	\$165	\$165	\$198	\$330	\$363	\$363	\$363	\$363	\$363	\$297	\$165
Cash Sales	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
AR Collections	\$270	\$150	\$165	\$165	\$165	\$198	\$330	\$363	\$363	\$363	\$363	\$363
Total Cash Collections	\$270	\$150	\$165	\$165	\$165	\$198	\$330	\$363	\$363	\$363	\$363	\$363
COGS	\$132	\$132	\$132	\$158	\$264	\$290	\$290	\$290	\$290	\$290	\$238	\$132
AP Payments	\$163	\$132	\$132	\$132	\$158	\$264	\$290	\$290	\$290	\$290	\$290	\$238
SG&A Expense	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$40
Interest	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
Principal Repayment						\$100						
PP&E		\$234										
Taxes			\$25			\$25			\$25			\$25
Total Cash Outflows	\$204	\$407	\$198	\$173	\$199	\$430	\$331	\$331	\$356	\$331	\$331	\$304

