

Plastic Materials Firm to Convert Non-bottling Business to Bottling

Case Type: improve profitability; private equity (PE), investment

Consulting Firm: Bain & Company first round full time job interview.

Industry Coverage: manufacturing; chemical industry.

Case Interview Question #00738: Your client Apollo Global Management (NYSE: APO) is an American private equity firm. The firm specializes in leveraged buyout transactions and purchases of distressed securities involving corporate restructuring, special situations, and industry consolidations. Apollo is headquartered in New York City, and also has offices in Purchase, New York, Los Angeles, Houston, London, Frankfurt, Luxemburg, Singapore, Hong Kong and Mumbai.

Apollo Global Management has purchased a U.S. plastic materials manufacturer that makes products such as plastic soda bottles. The client Apollo is looking to cash out of their investment within 5 years and are looking to you to help them improve the profitability of the plastic materials manufacturer. What would you recommend to the client?

Additional Information: (Provide the following information if requested by interviewee.)

1. Products

The plastic materials manufacturer's products can split into two lines: bottles and non-bottling goods.

- The bottles are delivered locally to their clients, large bottlers such as Coke or Pepsi.
- Non-bottling products (such as advertising displays for stores) are delivered directly to the establishments that will use them, such as gas stations. Bottles are made to spec whereas the non-bottling goods are not.

2. Manufacturing

The plastic materials company has two plants:

- one in the southeast U.S. that manufactures only bottles with capacity of 1.5 billion bottles
- one in Canada that produces bottles and non-bottling materials with a capacity of 500 million bottles

Assumptions:

- No downtime in manufacturing, both plants are fully utilized.
- Plants are using new, highly efficient machinery.

The Canadian plant can convert the non-bottling production to bottling to add 500 Million in capacity to bottle production. Cost of conversion is \$3 M.

Possible Answer:

1. Costs / Revenues Analysis

a. Revenues

- Bottles sell for \$0.05 each and utilization is currently at 100% for the two factories.
- Non-Bottling generates \$20M in revenues

b. Costs

- For each bottle: \$0.02 for plastic, \$0.01 for machinery, and \$0.005 for labor cost (The interviewer should be prompted to provide potential variable costs).
- Non-bottling has total variable costs of \$18M
- SG&A across the entire company is \$20 M

c. Margin calculation

- Bottles have 30% margin as they make \$0.015 per bottle: $(\text{Price} - \text{Variable Costs}) / \text{Price} = (\$0.05 - \$0.035) / \$0.05 = 0.3 = 30\%$
- Non-bottling generates 10% margins: $(\$20M - \$18M) / \$20M = 0.1 = 10\%$

2. After exploring costs, revenues, and margins, the interviewee should assess whether or not to convert the Canadian plant to bottles only. They should calculate additional profit after conversion to determine if it is worth the \$3 M conversion cost:

- Current profit from non-bottling in Canada: $\$20 M - \$18 M = \$2 M$
- Projected profit from additional bottling capacity in Canada: $500 M \text{ bottles} * \$0.015 \text{ margin per bottle} = \$7.5 M$
- Conversion adds $\$7.5 M - \$2 M = \$5.5 M$ in gross profit annually; breakeven in 1 year

Note:

- Assume no downtime for conversion.
- If asked about financing, the client Apollo Global Management has sufficient cash on hand to fund the conversion and the interviewee does not need to discount the cash flows.

3. Market / Sales Growth

- Bottling market is growing at 10% a year in North America; for purposes of the case assume that both plants can service the entire market.
- The plastic materials company's sales has been growing at 15% per year, and is projected a 15% growth for next year as well.
- The plastic materials company has 30% share of bottling market
- The plastic materials company has higher quality products and manufactures at lower costs due to more efficient machinery

The interviewee should then calculate total market size and projected market expansion next year given the 10% growth rate. He/she should use this with projected firm sales growth (15%) to assess feasibility of selling additional volume produced by expanding production capacity through Canadian plant conversion.

- Using market share and production levels, calculate total market size: $30\% * \text{market} = 2 \text{ Billion bottles}$, Total market = 6.67 Billion bottles
- Projected market growth = $6.67 B * 10\% = 0.67 B$
- Firm's projected sales = current sales + 15% growth = $2 B * (1 + 0.15) = 2.3 B$ bottles
- Firm's sales will be growing by 0.3 B bottles and market expanding by 0.67 B.

Note

- The interviewee should comment on feasibility
- The interviewee could support feasibility argument by looking at required market share to continue sales growth: $2.3 / 6.67 = 34\%$ or roughly 1/3 of market instead of the current 30%.

4. Recommendations

The plastic materials manufacturer should convert their non-bottling manufacturing in Canada to bottling as it offers better margins, assuming they can maintain sales growth. The additional capacity is needed to match next year's anticipated demand. The firm will still run out of capacity the year after, so one consideration would be adding another plant or expanding existing plants to extend production capacity to keep pace with the market growth. Expansion plans should fit within the PE firm's goal of exiting within 5 years. Other considerations:

- Negotiate with suppliers / customers
- Increase prices due to higher quality products