

## Guidelines

Welcome to the first step of the recruitment process at Bain & Company, Inc. You are about to get a firsthand experience on practical Bain casework. The test is based on modified Bain cases and is designed to assess your approach to problem solving using strategic thinking and deductive reasoning. At Bain, we are more interested in 'how you think' rather than 'what you've learnt'. We work on diverse complex situations spanning across multiple industries and sectors, but present only concise, relevant information to our clients. In order to do the same, we understand the data, interpret the insights, and finally present what we infer in an organized manner. This test is designed to simulate the same experience for you!

While attempting this paper:

- **Understand:** Read the case studies carefully and identify the underlying problem. Make sure you do not leave out any inputs or key data points
- **Interpret:** Focus on details in the text and charts. Pay attention to the period of analyses and units used
- **Structure your approach:** Manage your time by answering the questions smartly. For instance, some questions do not require calculations but only involve simple elimination of choices. Always do a quick check before answering

## Instructions

- This booklet consists of 25 questions with multiple choices. Each question has a single correct answer
- It is not necessary to answer all questions. You may attempt these questions according to your strengths and time. Read the question extremely well and attempt it only when you have fully understood what is to be done
- Use of any electronic devices (calculators, mobile phones, etc.) is strictly prohibited while answering the test

You have 60 minutes to complete the test. Keep your composure and best of luck!

### Case 1

Beverage Co is a local-MNC joint venture in the Indonesian non-alcoholic beverage market. Non-alcoholic beverages include liquid refreshment beverages (LRB) such as bottled water, value-added water, carbonated soft drinks, ready-to-drink coffee and tea, energy drinks and fruit based beverages.

Beverage Co is a distant follower in mainstream categories while a leader in niche categories. Its sales have been declining in the mainstream categories and its distribution reach has also shrunk in the past few years.

The company has been facing portfolio issues as it has a wide and fragmented portfolio of products with over 20+ SKUs (SKUs are distinct type of products/services on sale with each SKU having different attributes such as manufacturer, description, material, size, colour, etc.); however, its innovation track record has been fairly poor with only a few SKUs driving sales volume and margins. The company categorizes its products into 5 categories—Hero, Emerging hero, Core, Support and Delist—in the decreasing order of performance, i.e. ‘hero’ are the best performing while ‘delist’ are the worst performing SKUs.

To add to its woes, high distribution and manufacturing costs are hindering Beverage Co’s ability to expand. The CEO Ajeng Yin is worried and has approached Bain to devise a medium-term strategy to improve overall performance.

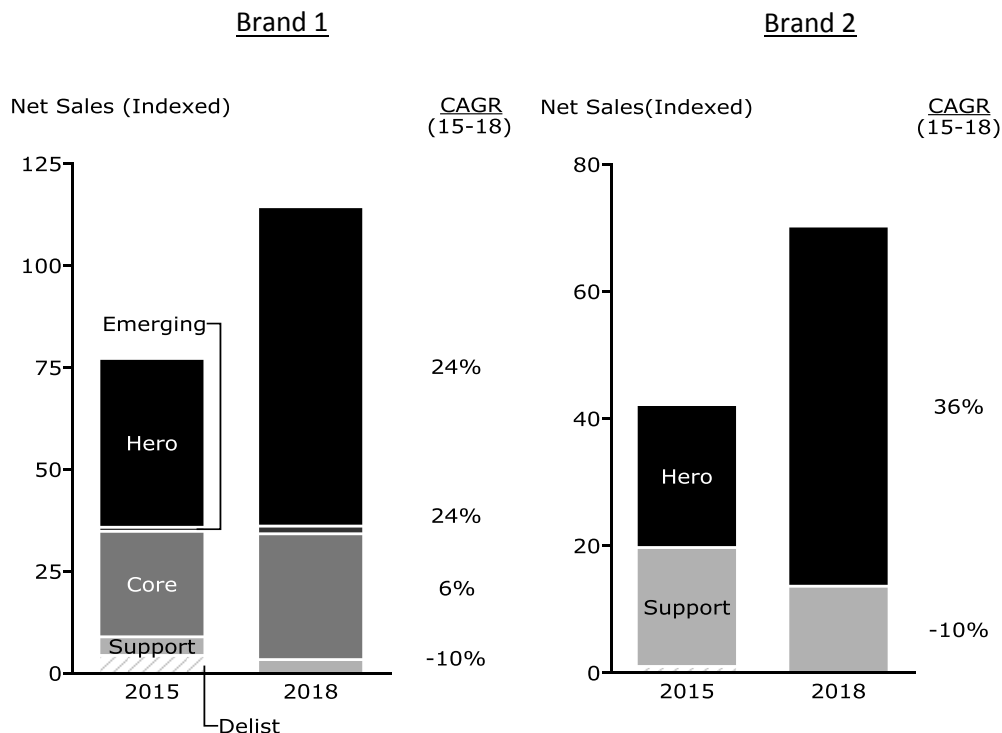
Q1. Which of the following most accurately describes why Beverage Co. has approached Bain?

- a. Expand client’s footprint in new growing product categories to drive sales
- b. Cut costs by optimizing distribution channels
- c. Exploring new geographies to increase sales avenues
- d. Optimize product portfolio to drive sustainable and profitable growth

Q2. Which of the following information will be least useful for Bain in addressing the client’s needs?

- a. Competitors’ cost structure
- b. Market overview
- c. Competitors’ geographical footprint
- d. Company’s sales figures for the past five years

Bain’s analysis leads to the following forecasts:



Q3. The above forecast is based on three sequential modules.

1. Focus the sales force on select SKUs
2. Determine product mix that fits shoppers' needs
3. Analyse the improvement in margins through greater volume sales

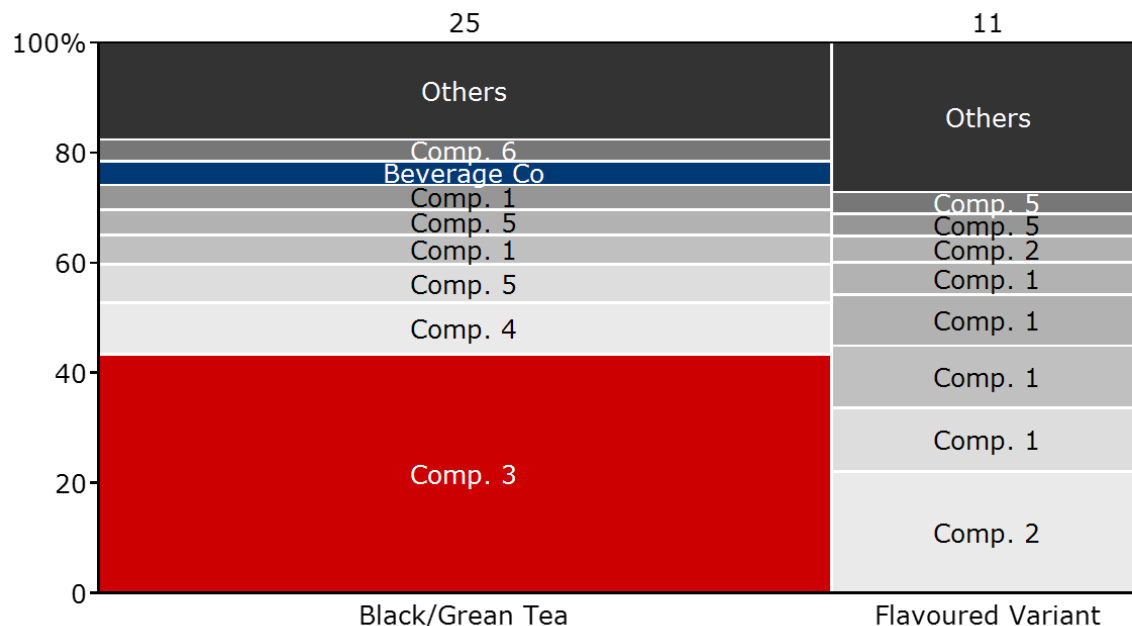
What according to you was the most likely sequence that Bain followed to crack Beverage Co's issues?

- a. 1 → 2 → 3
- b. 3 → 2 → 1
- c. 3 → 1 → 2
- d. 2 → 1 → 3

The non-alcoholic beverage market in Indonesia is dominated by Ready-to-drink (RTD) Tea PET variants. The market has high number of competitors in black/green tea owing to high margins in this segment (compared to extremely low margins in flavoured variant segment). Bain analyzed the market and found that most consumers prefer 'original' Black/Green Tea. The chart shows the market segmentation on the basis of players and RTD tea PET categories.

Indonesia RTD Tea PET market (2015 MAT, (in \$M))

Total = 36



Note: Comp. stands for competitor. The RTD (PET) market can be divided into only the above mentioned segments.

Q4. If Indonesian RTD Tea PET market is expected to grow annually by 5% and Beverage Co.'s share is expected to grow by 10% in the black/green tea segment by 2018 then what will happen to the market share of Beverage Co. in the black/green tea segment in 2018 (relative to 2015)?

- a. Decrease
- b. Increase
- c. Data insufficient
- d. Remain Constant

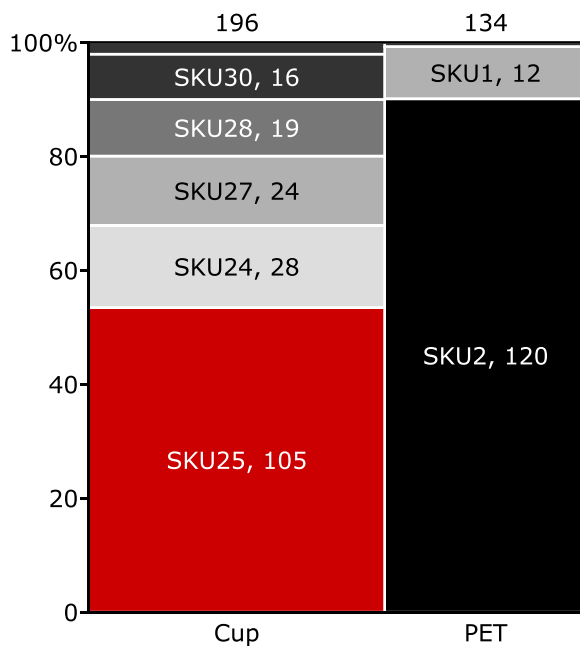
Q5. If it is known that competitor 3 is the market leader in black/green tea and offers 10 different SKUs in the same segment, which of the following will most likely not be the potential course of action for Beverage co?

Assumptions:

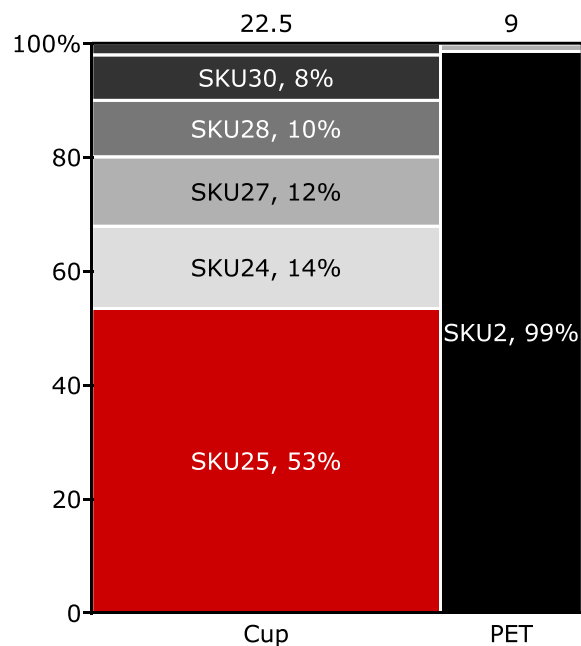
- 1) Beverage co has SKUs across all the top 3 performing categories (hero, emerging hero, core) in Black/ Green tea segment
- 2) Beverage co has presence throughout Indonesia whereas competitor 3 is present only in highly populated areas of Indonesia
- 3) Black/green tea shoppers are increasingly getting price sensitive
  - a. Focus on producing new 'hero' SKUs or upgrading 'non-hero' SKUs to 'hero' in the black/green tea segment
  - b. Divert resources to flavored variants segment to develop market leadership there
  - c. Follow price leadership strategy for 'hero' SKUs to gain market share
  - d. Both a and c

The charts below show the sales and profits of Beverage Co. in the Ready-to-drink (RTD) tea market.

Beverage Co RTD Tea Sales by SKU  
(YTD 2015) (in \$M)



Beverage Co RTD Tea Profits by SKU  
(YTD 2015) (in \$M)



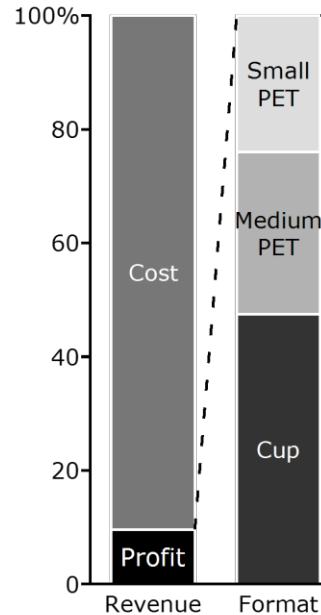
*Note: The co. defines hero SKUs as the ones which yield more than 10% gross margins.*

Q6. How many Hero SKUs does the co. have across the RTD market?

- a. 3
- b. 4
- c. 2
- d. 5

*\*Margin=profit/sales*

The Bain team diagnosed the profit mix of Beverage Co and made this graph below:



*Note: The figures are for the Yr. 2015. Also, bar totals are in \$M.*

Q7. Which of the following year could see the Small PET format outperform Cup in terms of profit share, given that the company's profit margin remains constant and the revenue increases by 10% per annum and the Small PET profit share increases by 10, 3, 7, 5 percentage points per annum and Cup profit share falls by 5, 10, 3, 7 percentage points per annum over the next few years?

- a. 2016
- b. 2017
- c. 2018
- d. 2019

Based on Bain recommendations, the co. deprioritized its non-hero SKUs and started focusing on possible operational improvements across the existing hero SKU's.

Q8. On the basis of the above statement which one of the following is least likely to be recommended by Bain?

- a. Drive down the unit cost of manufacturing for Hero SKUs
- b. Source quality talent to support Hero SKUs
- c. Increase investment in R&D to create potentially new 'hero' SKUs
- d. Increase shelf-space of best-selling Ready-To-Drink (RTD) SKU's

## Case 2

Chemical Co. is a global specialty chemicals company operating in 16+ distinct businesses. Its profit and market value doubled during 2005-10, though the revenues remained flat. Chemical Co. aspires to double its revenue over the next five years by 2015.

To achieve this target, the CEO of Chemical Co. approached Bain. As a Bain AC your job is to clearly understand the businesses that Chemical Co. operates in, define the core business that accounts for majority of Chemical Co.'s profit, identify a strategy for its core business to take it to its full potential and identify opportunities in near adjacencies.

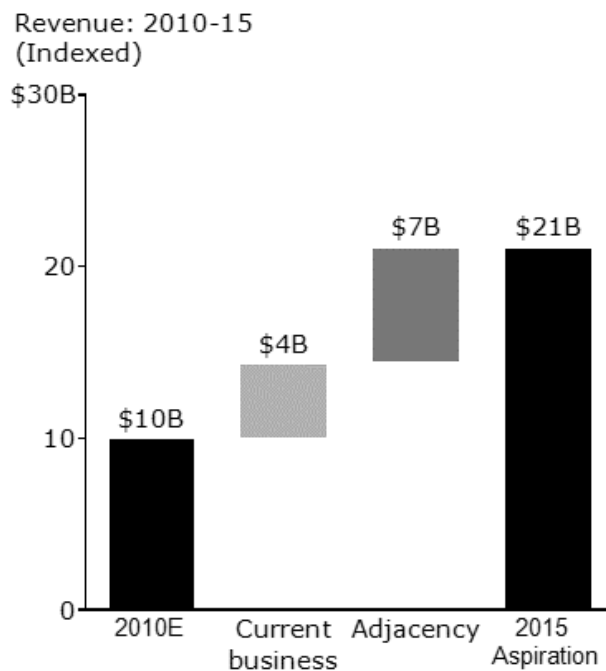
Q1. Based on the information given in the paragraph, which of the following statements aptly describe one of Bain and Co.'s objectives?

- a) To analyze the specialty chemicals market and look for acquisitions
- b) To understand the scope for development of underperforming businesses
- c) For a radical restructuring of their businesses
- d) To identify growth opportunities in core business and adjacencies

Q2. Which of the following information will be least useful for Bain in addressing the client's needs?

- a) List of businesses wherein Chemical Co. operates
- b) New technologies that Chemical Co. would need to develop to serve new markets
- c) Attractive markets where Chemical Co. could serve their current customers
- d) Profit contribution from various business units

Following chart depicts revenue contribution from Chemical Co.'s existing business and the potential contribution from adjacency.

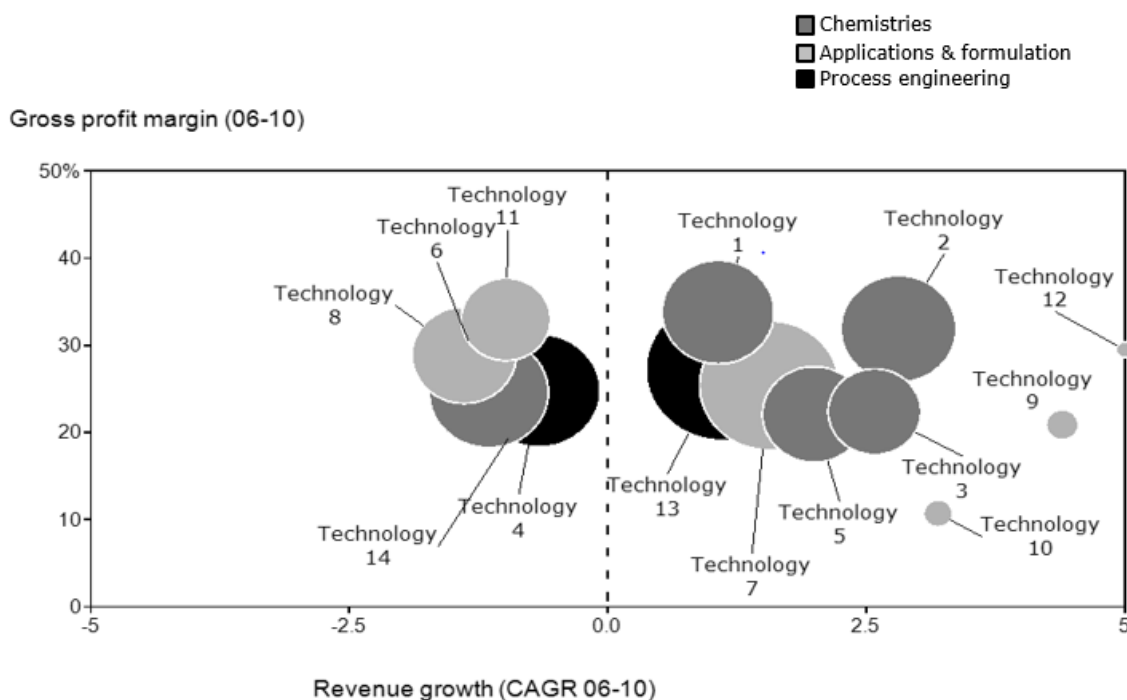


Q3. Based on the above chart, calculate the 1<sup>st</sup> year revenue from adjacencies if the adjacency business is to grow at a CAGR = 25%.

$$\text{CAGR} = \left\{ \frac{\text{Ending Value}}{\text{Beginning Value}} \right\}^{\left\{ \frac{1}{\text{Number of Years}} \right\}} - 1$$

- a) \$ 1.6B
- b) \$ 2.9B
- c) \$ 3.2B
- d) \$ 4.8B

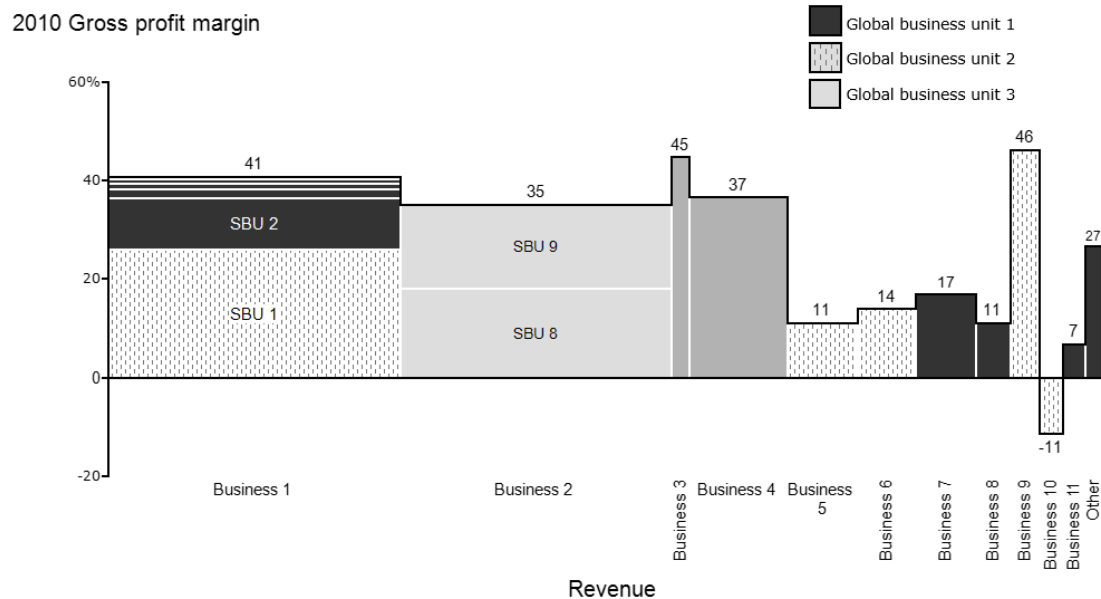
Following is a bubble graph showing the percent Gross Profit Margin vs. Revenue Growth Rate for the year 2006-10 for the different Technologies of Chemical Co. (bubble size indicates market size of that particular technology)



Q4. With respect to the case, what insights can be derived from the above chart?

- a) Total revenue growth has been positive owing to a larger number of Technologies/Formulas growing positively in revenue during 2006-10
- b) No single technology has driven differential profit or growth
- c) Technology 12 caters to a niche market which is dominated mainly by Chemical Co.
- d) Chemical Co. should focus on Technology 9 because it caters to the largest market among niche markets

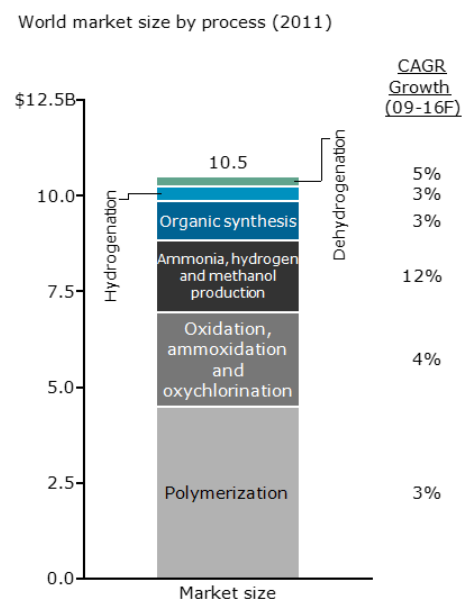
The following chart was made by Bain to understand the percent gross profit margin of each of Chemical Co's businesses (width of the bars is indicative of revenue contribution of each business to total revenue).



Q5. From the chart above, which business nets maximum profit per dollar of revenue?

- a) Business 3
- b) Business 1
- c) Business 9
- d) Business 4

The following gives the world market size of different processes in year 2011 with their forecasted CAGR:

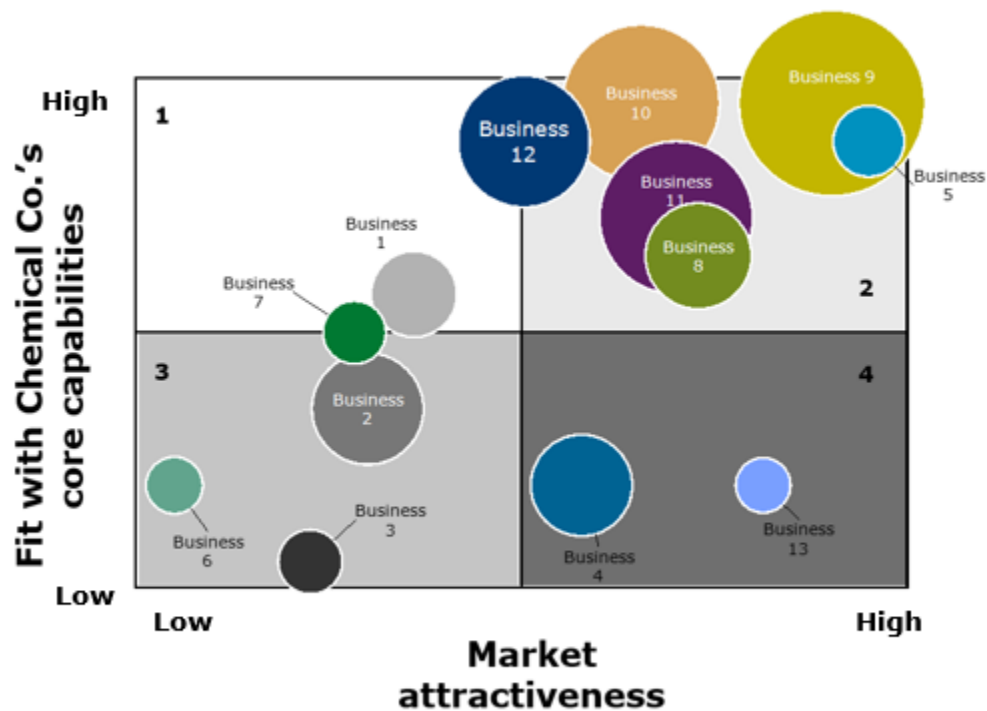




Q6. Based on chart above, in what year will the 'Ammonia, Hydrogen and Methanol' production worldwide market size overtake the 'Oxidation, ammosidation and oxychlorination' worldwide market size?

- a) 2013
- b) 2020
- c) 2015
- d) 2022

Following chart shows businesses of Chemical Co. classified into one of the 4 quadrants based on "Fit with Chemical Co.'s Core Capabilities" and "Market Attractiveness".



Q7. Choose the option which best matches the given action statements with the quadrant number:

- A. Access new profit pools, change company dynamics or limit to attractive segments
- B. Game-changing strategic moves or minimize investment
- C. Actively defend & strengthen position
- D. Consider partnerships, niche offerings or IP rich acquisitions to improve "fit"

- a) A→II, B→III, C→I, D→IV
- b) A→I, B→III, C→II, D→IV
- c) A→III, B→I, C→II, D→IV
- d) A→IV, B→I, C→II, D→III

Q8. What questions are likely to be focused on by a Bain consultant while devising a strategy for adjacency opportunities? (Choose the best option)

1. What adjacencies should Chemical Co. invest in?
  2. When to ramp up the investment and when to reduce/eliminate support?
  3. If distantly related industries such as Paints be a good option for Chemical Co. to get into?
  4. If capability in terms of teams and leaders available with Chemical Co to manage the adjacencies?
- 
- a) 1, 2 and 3
  - b) 1, 2 and 4
  - c) 1, 2, 3 and 4
  - d) 1 and 4

### Case 3

HealthMax operates in the healthcare insurance industry in Brazil and has a considerable market share in the Brazilian market with a number of products across most of market segments. Four years ago it created a new product to enter the low end segment, but results were far from expected so it had to exit the market.

The company believes that low-end segment is expected to grow faster than other segments in the coming years as there has been a growth of 57% from 2009 to 2015 in the number of people that use some kind of private health care services. The company now wants to reenter the low end market and aspires to gain greater market share against its competitors.

Meanwhile, the leading health insurance companies that play in the intermediate and premium market segments have strengthened their positions through acquisitions over the last 5 years and the market is getting more and more concentrated. Moreover, a significant decline in profitability is also projected for the traditional intermediate and premium segments due to future reductions in financial revenue as a result of interest rate reductions, adding pressure on the business to find alternative revenue streams for growth. In light of this Ana Luiza, CEO, has asked Bain to help them grow and achieve their medium term goals.

Q1. Based on the information given in the paragraph, which of the following statements most aptly describes overall Bain and Co.'s objective?

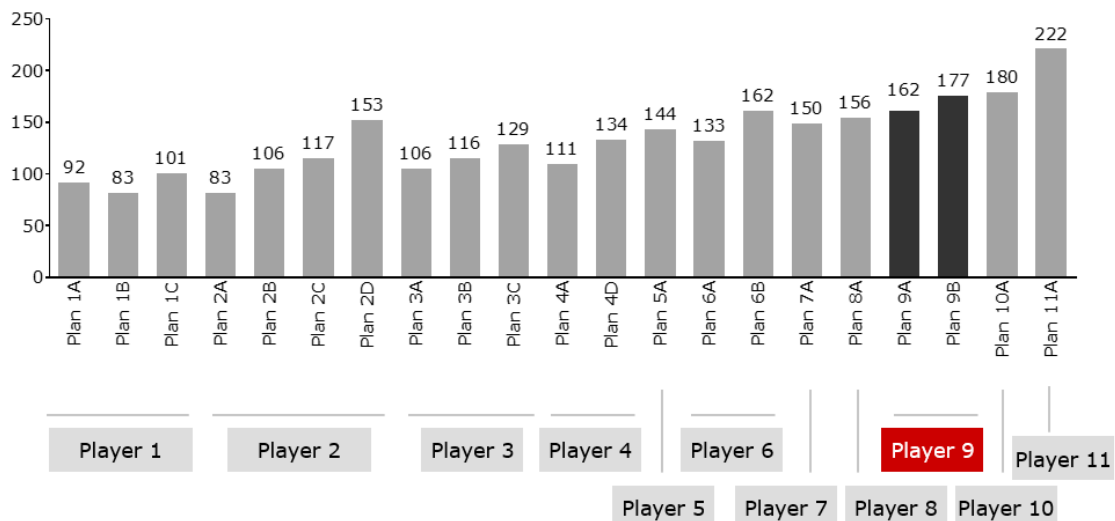
- a. Devise new product for the company by innovating the older product
- b. Create market leadership strategy in the health insurance industry
- c. Develop market entry and positioning strategy in the target market segment
- d. Plan attractive market segments in healthcare industry for creating a new offering

Q2. Which of the following information will be least useful for Bain in addressing the client's needs?

- a. Low end market growth drivers
- b. Factors limiting low end market growth
- c. Margins from HealthMax's different products
- d. Competitors' product portfolio in low end market

The chart below shows the Average Price offered by players in the industry for their different healthcare plans. Player 9 is Bain's client HealthMax offering two plans 9A and 9B.

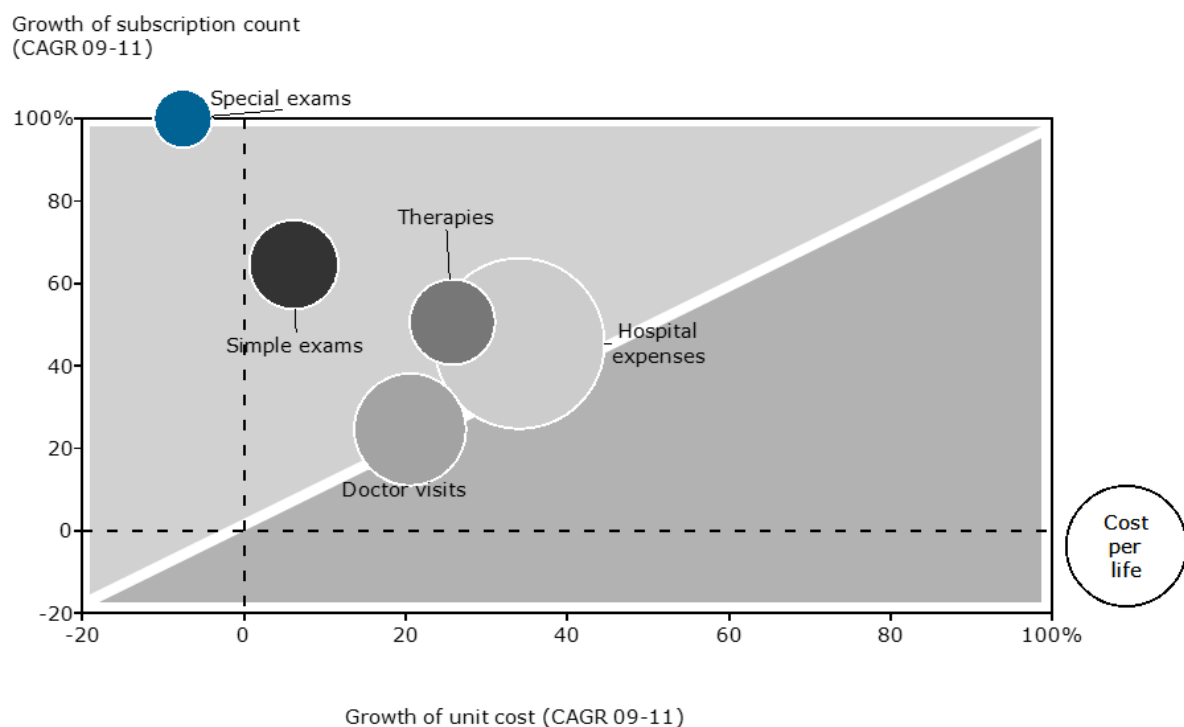
Average price SME (R\$)



Q3. From the above chart, calculate if the average price of plans offered by Bain's client is higher or lower as compared to the competitors' average price and also tell by how much percent is it higher or lower?

- a) Higher by 30%
- b) Higher by 100%
- c) Lower by 10%
- d) Lower by 50%

Following chart displays the growth rate of different medical/health services over the years 2009-11 along with the growth rate (2009-11) subscription count of the services on the y-axis.

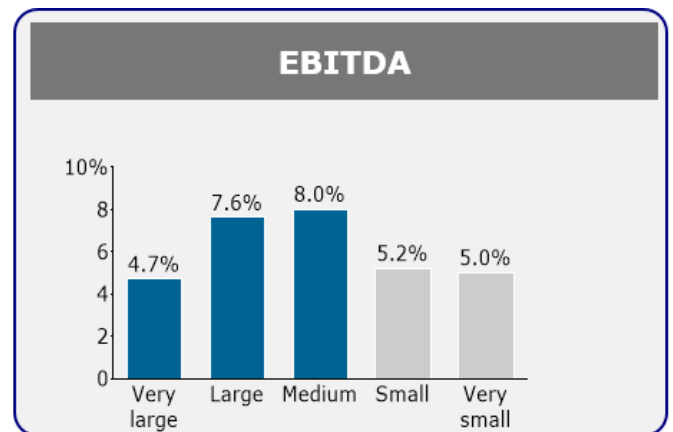
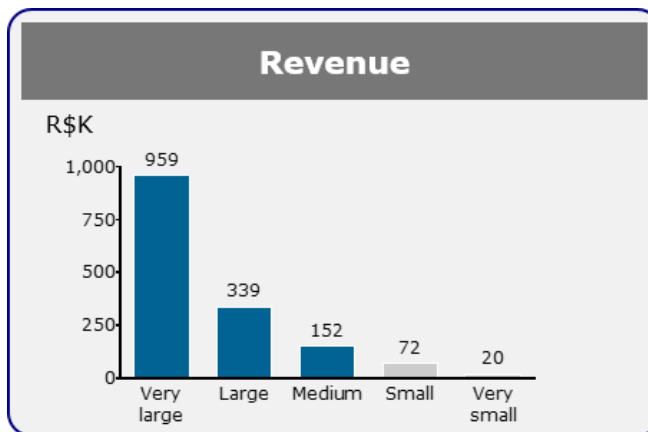


Q4. From the above chart match the following:

Service	Insight
1. Hospital Expenses	A. Growth in unit cost and growth in subscription count highly uncorrelated
2. Simple Exams	B. While people have subscribed to the service a greater number of instances, the unit cost of the service has increased proportionately
3. Special Exams	C. Growth in unit cost and growth in subscription count of the health service somewhat correlated

- a) 1→A, 2→B, 3→C
- b) 1→C, 2→B, 3→A
- c) 1→B, 2→C, 3→A
- d) 1→B, 2→A, 3→C

Healthcare insurance companies have different levels of performance depending on the size. Their Revenues and EBITDA margins (EBITDA as a percent of revenue) are shown below



Following gives the assets breakdown of a Very large insurance company:

Assets	726,763
Cash and deposits	8,469
Accounts receivable and accrued revenue	24,911
Investments and accounts with affiliates	91,248
Portfolio investments	287,665
Loans	47,281
Mortgage	39,489
Non-mortgage	7,792
Allowance for losses on investments and loans	-61
Bank customers' liabilities under acceptances	0
Net capital assets	12,983
Other assets	254,267

Following gives the equity breakdown of a medium sized insurance company:

Equity	133,878
Share capital	59,953
Contributed surplus and other	6,004
Accumulated other comprehensive income	2,816
Retained earnings	65,105

Q5. From the data given above, you are required to calculate the Return on Asset for the Very large insurance company and Return on Equity for the Medium sized insurance company:

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}}$$

$$ROE = \frac{\text{Net Income}}{\text{Equity}}$$

\*Assume EBITDA as a proxy for Net Income.

- a) ROA = 6.2%, ROE = 9.1%
- b) ROA = 8.5%, ROE = 11%
- c) ROA = 10%, ROE = 10%
- d) ROA = 12%, ROE = 8.2%

Q6. Bain pursued the case by developing a four phase approach.

1. Create appropriate operations model for new offering
2. Market analysis and point of view (POV) about low end segment
3. Business analysis of profitability and current offerings in all segments
4. Construct a 5-year growth plan

From the information above, what was the course of action according to you?

- a. 3→2→4→1
- b. 2→3→1→4
- c. 3→4→2→1
- d. 3→2→1→4

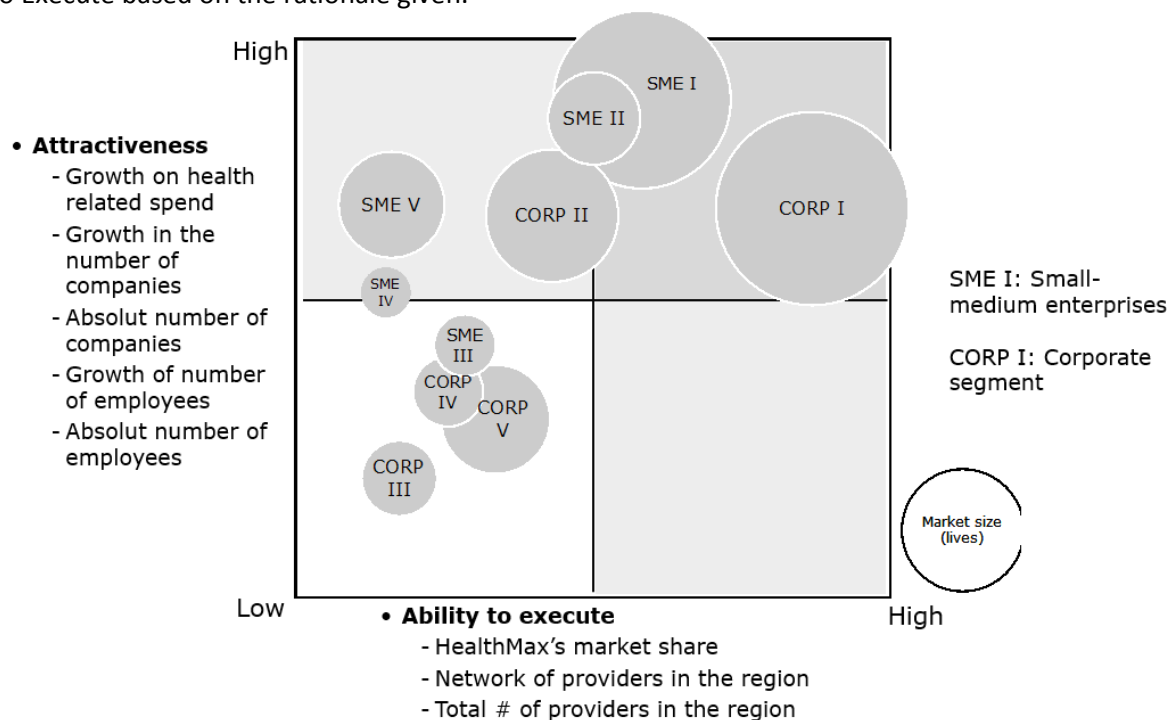
Q7. Bain further performed market analysis and recommended that HealthMax should enter the low end segment. On analysis of which of the following factors would Bain have made its recommendation? (Select the most appropriate option)

1. Low end market growth rate
2. Existing providers operating model in low end market
3. Cost efficiencies in the segment
4. Synergies in sales channel
5. Brazilian population expansion and demand for overall healthcare services

Choose the most appropriate option

- a. 1,4 and 5
- b. 1,2,3 and 5
- c. 1,2, 4 and 5
- d. 1,2 and 4

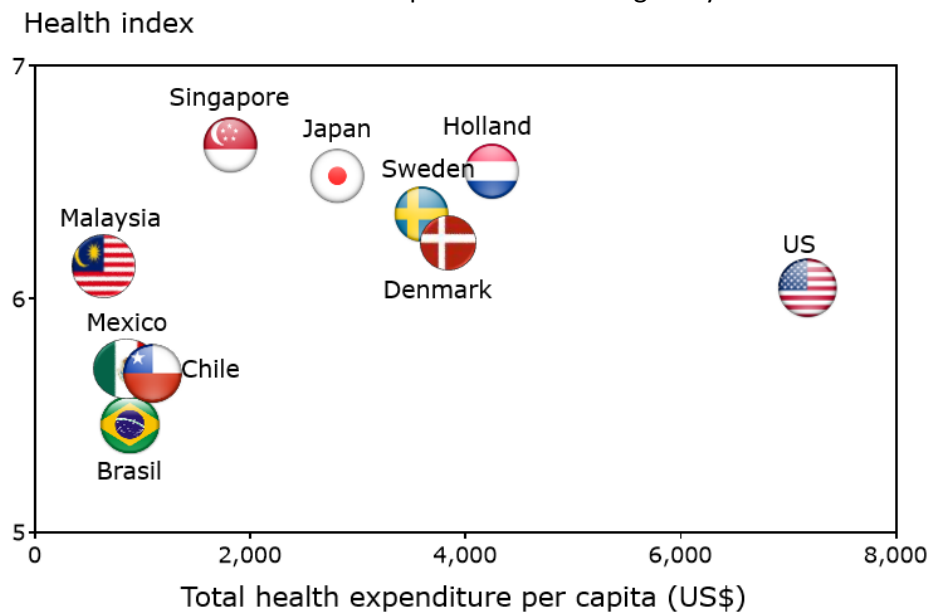
The following slide gives the different health insurance companies distributed in bubbles according to the segment they cater to. The Y-axis gives the Market Attractiveness and X-axis gives the Ability to Execute based on the rationale given.



Q8. From the above slide identify the most logical target segments in both SME and CORP.

- a) SME IV and V; CORP III
- b) SME III; CORP III, IV and V
- c) SME I and II; CORP I and II
- d) SME II; CORP II

To support its recommendations, Bain benchmarked Brazil with other leading economies on a health expenditure vs. Health index scale and came up with the following analysis:



Q9. What do you infer from the above analysis in the overall context of the case?

- a. US has the most efficient healthcare system
- b. Brazil health insurance players should bet more on high-end insurance products
- c. Mexico, Chile and Brazil have most inefficient healthcare system
- d. None of the above