The Case Interview Guide

Getting a job in Management Consulting

oxford
SAID BUSINESS SCHOOL

Contents

Part I - Introduction

About this guide

Getting a job in management consulting requires commitment and the learning curve for case study interviews can be steep. The aim of this guide is to assist you, as a Saïd Business School student, to quickly ascend the learning curve and prepare yourself as fully as possible for the application process and the consulting interviews that will follow. As an SBS student, it goes without saying that you are a highly talented, well-educated individual – but that alone is not usually enough to land a top consulting job. Only the best-prepared students from the top schools are made offers from the most prestigious firms. This guide aims to put you in that bracket.

Remember, there is no magic formula for landing a consulting job and the ideas in this book are only designed to offer some guidance for the process. Ultimately, it is you who must convince the firms to hire you.

About the author

The author was a student in the SBS class of 2004-2005. Prior to SBS, he worked as a hospital doctor and undertook the MBA with the specific aim of changing career into management consulting. During the course of the MBA year, the author experienced numerous case study interviews with four top consulting firms: Bain & Company, Booz Allen Hamilton, Boston Consulting Group and McKinsey & Company. He elected to join McKinsey & Company.

The advice and opinions offered in this guide are based on the author's experience of the interview process.

The content of the Consulting interview

Each consulting firm has its own style and format for the interview. However, most of them follow a similar structure that has three main parts:

1. **The Personal Experience Interview (15-20 minutes)**. This section is used to explore your background, motivations for Consulting and for joining that particular firm. The questions are deceptively simple but you must consider your answers carefully, because the interviewers are reading into everything you say.

2. **The Case Study Interview (25-30 minutes).** In this section you are presented with a business case or a brainteaser and asked to work through it in real time in front of the interviewer. This section demonstrates your problem-solving ability and tests your ability to succeed as a Consultant. It is the area that requires the most preparation and usually holds the most fear for candidates.

3. **Closing questions (5 minutes)**. Usually at the end of the interview, this section allows you to ask questions of your interviewer about the firm, the industry or anything else that may be bothering you! It is important to think about your questions carefully because your questions say something about *you*.

What are the firms looking for?

In broad terms, the interviewer has three questions in mind at the start of the interview:

- Can you do the job?
- Will you make a good impression in front of the client?
- Will I enjoy working with you?

If you can tick all three boxes, you will progress to the next round or to a job offer. A weakness in any of these areas, particularly one that is noticed by more than one interviewer in the same round, will result in rejection. In most firms, evaluation of the candidate is quasi-scientific - the interviewers use a scorecard to rate your performance. The two or three interviewers who see you in each round will then get together for a decision meeting to decide whether you will progress.

Part II - The personal experience interview

The aim of this section of the interview is for the interviewer to gain an insight into what type of person you are, what you have achieved in your life to date and whether you would be a good cultural fit for their firm. There is a very long list of possible questions you could be asked and you should prepare answers for as many as you can. The challenge here is reciting a credible story or anecdote that casts you in a favourable light without sounding too formulaic or scripted. You should prepare several stories that you can call on to demonstrate your leadership, persistence, teamwork or whatever. It is very important to focus on <u>your</u> role in the story you tell. As you are telling the story, be ready for questions that focus on you: *'how did you feel when that happened?', 'what did you say then?', 'how did you manage that?'*

Here are some general rules that worked for me:

1. **Choose your examples carefully**. Try to avoid describing situations that may have negative connotations or reflect badly on you. Your examples should be a concise way to showcase your talents and abilities in the important areas.

2. **Use facts to support your answers**. If you achieved some breakthrough research in your time as a physics undergrad, tell the interviewer about the knighthood you were awarded for it!

3. **You are being interviewed all the time you are in the building**. A borderline candidate who has been rude to the receptionist will not proceed to the next round. Similarly, if your classmates are interviewing on the same day, do not be tempted to discuss any aspect of your interview – even in the bathroom. Your interview starts when you enter the building and finishes when you leave. Don't let your guard down.

Here are some typical questions that you may find at interview:

- Give me an example of when you led a team to achieve something exceptional
- Tell me about how you convinced someone to do something they did not want to do
- When have you displayed persistence?
- Tell me about a failure you have experienced? What did you learn from it?
- What is your main weakness?
- What is your key strength?

- Why did you choose to do [your previous career] before business school?
- Please comment on your academic grades at SBS
- What do you think consulting is?
- Why are you interested in management consulting?
- Why do you want to join this firm?
- What do you think the consulting lifestyle is? Do you think you will be able to manage this lifestyle?
- What do you expect to do on your first day at this firm?
- What in your background qualifies you to be a consultant?
- If I should remember one thing about you, what should it be?
- Why are you the best person for this job?
- How do you have fun?
- What do you value in a teammate?
- Tell me about an ethical dilemma you have faced
- Which other firms have you applied to?
- Are we your top choice company?
- Which elective courses did you take? Why?
- Tell me about a story you have been following in the press
- Tell me the market capitalisation of a company you are following
- Is there anything else you would like me to know about you?
- What do you think would be the worst thing about a career in consulting?
- What do you hope to do in the future?
- Is there anything you have learned about this firm that has made you question your desire to work here?

Part III - The case study interview

The case study is a very important part of the interview process. It tests whether you possess the skills that are required to make a good consultant – the ability to think on your feet, to structure problems and make good recommendations. Your task here is to work through a problem that the interviewer sets for you.

The key to success in your case interviews is to structure your thinking into a framework and then generate ideas around this framework. This is the Consulting mindset and an ability to answer questions in this way will foster an intellectual rapport between you and your interviewer, and make it easier for them to evaluate you in a positive way. Some basic rules exist that should guide your approach to the case interview:

1. **Keep your answers concise and full of high-value content**. There are no additional points for flowery language and you have a limited amount of time in which to impress your interviewer. Where possible, cut to the chase.

2. **Don't be afraid to ask powerful questions**. If you are asked to recommend how a Hedge fund can increase its revenues, it is perfectly valid to say: *'I don't have any experience in this industry. Could you please explain to me how a Hedge fund generates its revenues?'* The case interview is not a test of industry knowledge, but you must demonstrate an ability to quickly get to grips with the information you are given in response.

3. **Do not ask stupid questions**. This is very important. Asking for information you already have or do not need is not smart. Furthermore, framing your questions in such a way that they are ambiguous or difficult to answer will not please your interviewer. Finally, an unstructured monologue of thoughts with a blank look at the end of it does not count as a good question. You should only ask a question if you have a clear idea of the information you expect to receive from it and what you will do with it when you have it. Choose your words carefully.

4. **State your assumptions.** Sometimes you will be given data to use in your analysis, sometimes you will have to ask for it, and other times you will have to make reasonable assumptions. How many phone boxes are there in Manhattan? *'Well, if I assume that there is one on every street corner, and then assume that Manhattan is 20 blocks wide and 100 blocks long. I will also have to account for Central Park which I guess has no phone boxes but must be around 5 blocks wide and 15 blocks long. That makes……'* The absolute accuracy of your numbers is not important, but the way you structure your thinking is crucial - don't keep it secret from your interviewer.

5. **Break the problem down into manageable parts.** Large complex problems often cannot be solved as a whole, but usually can be if they are efficiently disaggregated into their constituent parts.

6. **Structure everything as fully as possible**. This is analogous to drawing a road map for your interviewer before you set off to answer the question and it demonstrates a logical approach to thinking. If the case demands that you look at three different areas (for example customers, competitors and product offerings) then number them and explore each in turn: '*First I'm going to look at our customers and see if we can segment them in a logical way. Second, I'll explore the competitive landscape and third I'll look at how our product offering compares. With this information, I hope to be able to make a recommendation.'* Now when you set off to start looking at the customers, the interviewer knows that this is just one of several areas that you intend to explore. This helps them to understand your thinking and follow your logic. Never forget to talk about all of the topics and don't be distracted from the big picture if the interviewer blows you off course into some details.

7. **Make your answers MECE**. This acronym is a McKinsey favourite and stands for Mutually Exclusive, Collectively Exhaustive. It boils down to breaking up the problem into manageable parts that cover all the issues but do not overlap with each other.

8. **Do not underestimate the interviewer's knowledge and experience.** The case questions you will get in an interview are typically based on the interviewer's real consulting experience and they will know the industry well. If you happen to be a specialist in the telecommunications field, don't bore your interviewer with the technical specifications of the latest wireless data protocol. The interviewer will probably know at least as much as you about the topic and probably won't care in the context of the interview anyway.

9. **Follow the interviewer's guidance**. You may find that the interviewer will steer you to explore an area that you had not thought of. Take the hint. It is likely that he has been through this case many times before with other candidates and will try to let you know when you are barking up the wrong tree. It can be a big mistake to rigidly stick to your initial structure if it is not working.

10. **The client comes first**. Answer case questions with the perspective of the client in mind. If you land a job in Consulting, it is the client who will ultimately pay your salary. Remember, for most questions, helping the client means increasing shareholder value.

11. **Think of the money**. Most businesses exist to make profits for their owners. Always have the economic consequences of the case at the forefront of your thinking.

12. **Focus on the high-value issues.** If you are asked to examine the sales of Nike and your professional background happens to be in the Internet sector, it might be tempting for you to spend a lot of time thinking about their online sales strategy. But remember that online sales probably account for a tiny proportion of Nike's overall revenue and time spent here may be time wasted in the interview. Similarly, if you are presented with a cost breakdown for the manufacture of a 747 and told the client wants to reduce the cost base, remember you will have the biggest impact by focusing on the high value part of the problem. For example, a 10% cost reduction in raw materials prices (30% of total cost) will have a bigger impact than a 20% reduction in the electricity bill (2% of total cost).

13. **Communicate your ideas creatively.** Your analysis of a price reduction for ice cream might require a sketch of a demand curve – so draw one! Structuring your analysis diagrammatically is also helpful – draw a tree of issues that helps you and your interviewer see where you are going.

14. **Synthesise your findings at the end of the case interview**. If possible, you should generate a recommendation for the 'client'. This should be a short, clear précis of the material you have covered and should demonstrate your ability to identify the key issues and make practical recommendations.

15. **Don't panic if you start to get out of your depth**. If the interview has gone well, the interviewer may push you to see how far you can go and eventually you will get past your comfort zone. Don't panic. Try to answer the questions as well as you can and remember that this is usually a good sign.

16. **Send a thank you note after the interview.** A simple, polite email to thank the interviewer for their time is always a good idea.

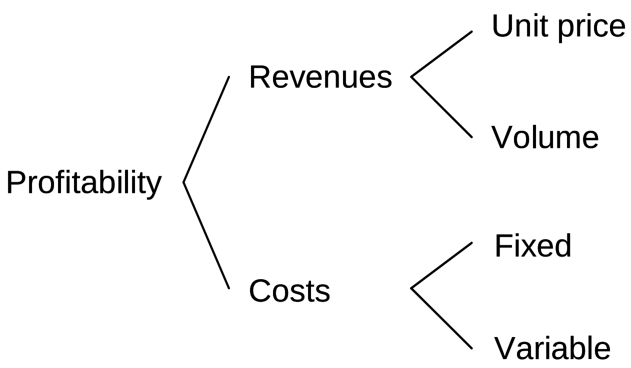
17. **Get feedback from all your interviewers.** You should not try to carry out a post mortem on your performance at the end of the interview, but whether you progress to the next round or not, you should always get feedback once you have learned of the decision. If you do not get the business card of your interviewers, call the recruitment manager at the firm and ask them to set up a short phone call for you. If you have not been successful, it will provide you with an idea of the areas you need to work on for the next firm. If you have been successful, the feedback should be positive and will give you confidence going forward. However, the most valuable part of this positive feedback will be if there are any areas of your performance that were not quite up to scratch. If your mental arithmetic was a bit ropey in round one, expect the round two interviewers to probe it and be ready! Lastly, if you get to the final interview and get made an offer, don't rush to ask for feedback – they have made a decision and you don't want them to change their minds!

Frameworks for case analysis

The world is a complex place. Frameworks are thinking tools that can help us to crystallize our thoughts in a logical way. Although rigid frameworks can sometimes be a hindrance in a case interview, having a few in mind can help you to structure your case analysis. Many frameworks exist – some famous, others less so – and I have outlined the ones I think are the most important below. You should select the ones you are comfortable with and make modifications to personalise them if you like. A personalised framework that clarifies your thinking can be just as valuable to you as anything Michael Porter can come up with. The golden rule here is never, never, never say to your interviewer 'I am going to apply Framework X to this case'. Just get on and do it!

<u>Profitability</u>

Profits are equal to revenues minus costs. Revenues are a function of the amount of stuff you sell (volume) and the price you achieve for each unit (unit price). Remember that a company which sells several different types of product will probably have different prices for each line. This is called the product mix and is often overlooked in the profitability analysis.



Costs can be broken up in several ways. One place to start is to divide them into fixed (those that do not change with output) and variable (those that vary with output). Another way to break up costs is to think about the cost lines on the income statement such as:

- Cost of goods sold
- Selling, General & Administrative costs
- Research & Development
- Etc.

The Three Cs

This analysis helps to paint the overview picture of what is going on and can be particularly helpful for new market entry cases. It is often a good place to start if you are stuck for ideas.

Client
- What are the capabilities of the company?
- What are the company's strengths and weaknesses?
- Where does the company add value in the value chain?

Competitors
- How many competitors are there?
- What is the intensity of competition in the industry?
- Is the competition based on price, features, location, service or something else?
- What are the relative cost positions of the competitors?
- Are there existing or potential substitute products?

Customers
- Who are they?
- How can they be segmented?
- How do we reach them?
- Are they price sensitive?
- Are they loyal?

Your analysis of each case will be different and this list of questions is obviously not exhaustive.

The four Ps

This framework is useful for product marketing.

Product
- What is it?
- How is it differentiated from the competition?
- What are the key benefits and drawbacks?
- Do substitutes exist?

Price
- What will the price be?
- How does the price point compare with the competition?
- What is the perceived value of the product?
- Is this product priced as a commodity?

Promotion
- How will the product be promoted?
- Which forms of advertising will be required?
- Does the customer need to be educated about this product?

Placement (Distribution)
- Which distribution channels will be used?
- What is the most effective way to distribute the product?

<u>Porter's five forces</u>

This framework is useful for analysing the attractiveness and structure of an industry. The five forces are:

Threat of substitutes – the threat posed by substitute goods. Often high when the substitutes are attractive options and switching costs are low

Threat of new entrants – the ease with which new competitors can enter the market and disrupt the position of the other firms

Buyer power - the strength of the power that the company's customers have. Often high when the buyer is large and represents a large proportion of the company's customers.

Supplier power - the strength of the power that the company's suppliers have. Often high when the supplier is large and is the only realistic supplier. The supplier can command a premium price for its products

Industry rivalry - the intensity of the battle among the major players in the industry

Be careful not to be too dependent on Porter in your interviews. It is a VERY famous framework and does not offer much opportunity for creative thinking.

<u>PESTLE analysis</u>

A useful tool for considering the drivers of different situations – PESTLE stands for Political, Economic, Social, Technological, Legal, and Environmental.

Approaching the case question

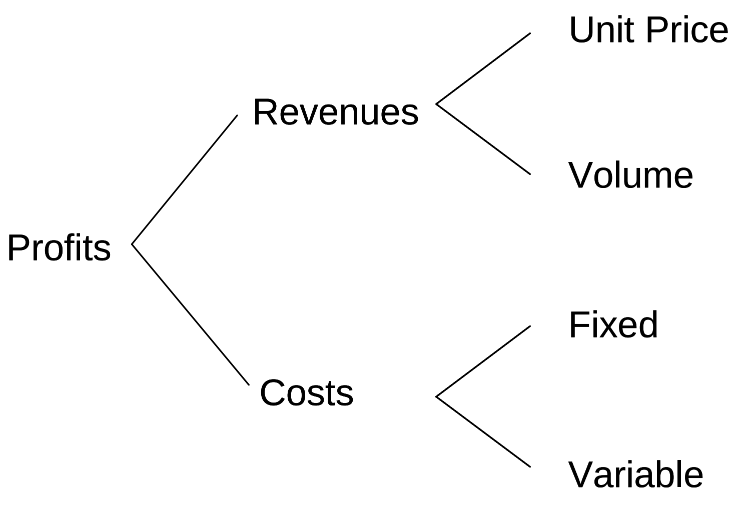
With these rules and frameworks in mind, you should approach every question in a similar way:

1. **Listen hard to the question**. Take notes on the key points of the question and look interested in the problem. Write on your paper in the landscape orientation, not portrait – now you look like a consultant!

2. **Paraphrase the question back to the interviewer.** To ensure you have a good understanding of your case, repeat it back to the interviewer: *'That sounds like a very interesting problem. Before I lay out a structure for solving it, let me be sure that I have fully understood the question. Our client is a Peruvian goat herder who is losing money. His flock of goats is 400-strong and he sells them at the local market. Two years ago he was making good profits and he has called us in to help him restore profitability.'* 'That's correct'.

3. **Establish the context of the case.** A couple of good questions can help build your understanding of the situation before you lay out a structure for solving it: *'Does the goat herder make money in any other ways or is it only through selling his goats at the market? Are the goats sold in an auction or for a fixed price?'*

4. **Lay out your structure for solving the case**. Do this verbally and at the same time draw it out on your (landscape) paper: *'OK, this is clearly a profitability issue and the way I'd like to structure it is to break it up into revenues and costs to try to determine why the client is losing money. We know that revenues are made up of unit price and volume, while costs can be broken up into fixed and variable'.* While you are saying this, you should be drawing out something that looks like this:



Drawing this structure serves two purposes. Firstly, it demonstrates a very logical approach to solving the problem and allows your interviewer to follow your thinking. Secondly, it helps you to stay on track and work through all of the issues in turn.

5. **Work through your structure to identify issues.** *'Does the client achieve a price for each goat that is similar to what he could get two years ago?'* 'No, he receives less – why do you think that may be?' *'Well my hypothesis would be that either there is more competition in the market in the form of more goats available, or there is less demand for goats now. I would test that by……'*. Work through all the branches of your issue tree in this way.

6. **Generate ideas to solve these issues**. *'Given what we have learnt, several options appear to be open to the client. He could try selling his goats through another channel such as a different marketplace; he could start milking his goats to produce cheese and sell that in the market instead, or he could move into a more profitable business that matches his capabilities such as rearing sheep or cattle.'*

7. **Synthesise and conclude.** *'In summary, the client is losing money because the price he can achieve for each goat has been falling while his costs have remained the same. It is unlikely that he will be able to increase his unit price because goats are a commodity good. He should focus instead on either reducing his costs, increasing his volume of production so he can spread his fixed costs over a wider base, or changing his business model completely, perhaps by exiting this industry.'*

Part IV - Interview sample questions

In every interview you take, you will learn something new about tackling case studies like these. The aim of this section is to impart as much of the knowledge that I picked up as possible using the examples of the actual cases that I was asked. I hope this will allow you to feel better prepared and more comfortable with the interview process when you begin.

For each question, I have mentioned the name of the consulting firm that asked it, but you should not read too deeply into that information. Every company asks similar questions and all of these questions are good examples of case questions that could have come from any firm. The text listed for each question is the opening statement from the interviewer. Some are very short and open-ended; others impart lots of information and a well-defined route that should be taken.

The comments listed here outline the approach that I took in the interview. This particular route may not be the very best way to structure the answer and you may think of something different but equally successful (or more so!).

Interview:
Boston Consulting Group

Question:
How many litres of paint would you need to paint a 747 jumbo jet?

Comments:
This is a deceptively simple question that tests your ability to make sensible assumptions and work well with numbers. My initial approach was to try to dive in to solve it immediately but the interviewer stopped me and pushed me to describe all the ways I could think of for solving it. I named about four ways that I thought would work. The one he guided me towards using was based on finding the volume of paint needed to cover one square metre, and calculating the surface area of the plane to derive the total paint required.

To calculate the volume, I made the simplifying assumption that the paint would be 1mm thick when applied. When you do the calculations, this conveniently results in 1 litre of paint for every square metre covered! Sounds like quite a lot of paint for a small area, but the interviewer didn't stop me so I just carried on.

To estimate the surface area of the plane, I treated the cabin as a cylinder and estimated its diameter at 10 metres. Using π x d you get a circumference of 31.4 metres. To estimate the length of the plane, I told the interviewer that a 747 has about 400 seats that are arranged in rows of 10. That makes 40 rows and each seat has around 1.5 metres of forward space (60m). Adding a bit for the cockpit and the tail, I estimated the total length of a 747 at 80 metres. The interviewer corrected me to 70m. I then made some assumptions about the wingspan and size of the wings, remembered to paint both sides of each wing and added it up to reach a total surface area of 2,300m^2. Using the assumption about the amount of paint required, I then needed 2,300 litres of paint.

At the end of the case, the interviewer showed me a press clipping that put the surface area of a 747 at 2,800m^2 – not too bad!

Lessons:
- It is not the absolute accuracy of your assumptions that is important. Rather the ability to choose sensible numbers and justify your choices.
- Where possible, choose simple numbers (such as multiples of 10) that facilitate easy multiplication or addition.
- Be open to correction from the interviewer and be prepared to change your approach to the problem if it is not working out well.

Interview:
McKinsey & Company

Question:
You are on an aeroplane on your way to a meeting with an entrepreneur who is thinking about purchasing an Australian ski manufacturer. He will meet you at the airport and requires an estimate of the size of the market for skis in Australia. You may assume that Australian skis are sold only in Australia. You have no access to any information except for the population of Australia, which is 20 million. Your plane lands in 20 minutes and your client needs an accurate answer.

Comments:
Several different approaches are valid but you are on an aeroplane with no access to information. The most logical thing to do is go with the information you have been given about the population and try to drill down to skiers and their requirements for new equipment. Here is one possible approach:

Australian population	20,000,000
Australians living near the ski fields (half of population)	↓ 10,000,000
Economic means to ski (top 20% of income)	↓ 2,000,000
Age bracket 15-55 (75% of group)	↓ 1,500,000
Physical fitness (80% of group)	↓ 1,200,000
Desire to ski (50% of group)	↓ 600,000

So with a skiing population of 600,000 and the assumption that the average skier goes for one week every two years, you have 300,000 ski-weeks per year. From here, you need to make assumptions about what proportion buy and rent skis (assume 50% for each) and how often the average pair of skis lasts before they are replaced (assume 10 years for bought skis and 2 years for rented skis). Take the length of the ski season as 10 weeks. You can then calculate the number of skis sold in Australia annually. Although it complicates things immensely, you should also note that the demand for rented skis will not be flat through the season but will peak and then tail off. Further complications arise when you consider the different sizes of skis that need to be stocked. Both of these factors will reduce the utilisation factors for the rented skis and increase the number of skis needed.

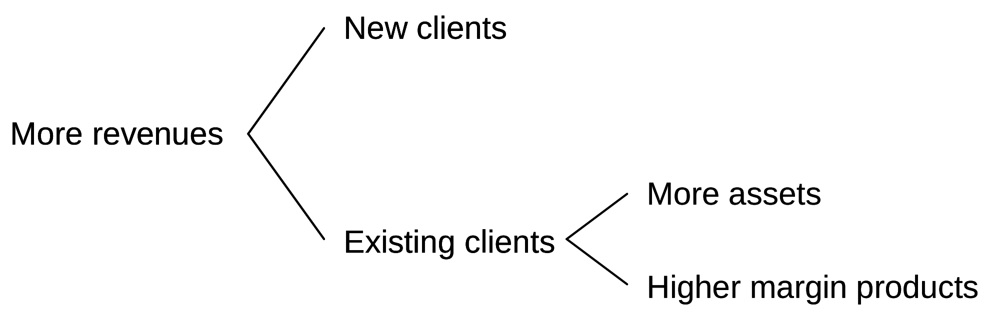
Interview:
Boston Consulting Group

Question:
Your client is a private bank that wants to grow its revenues. How would you advise them?

Comments:
This is a very open question that I found difficult to get traction on to begin with. The first thing I said was:

'That sounds like an interesting problem but I don't know much about the private banking industry. Could you describe to me how a private bank generates its revenues please?'

The interviewer told me that this private bank looks after the investments of several High Net Worth individuals and makes 100 basis points annually on the money they invest for their clients (he was impressed that I knew that 100 basis points meant 1%). I questioned him some more on the number of clients, their total worth and the proportion they had invested with the bank. I also thought about thought about how a private bank gets new customers and what kind of products they currently offer. From here, I structured it like this:



These were the main ways that I could think of to increase the revenues of the business. It was all about bringing more money in to manage, or making the same money work harder, or both. I tried to come up with practical ideas for how these things could be achieved such as advertising in the right places and introducing new products such as hedge funds which could justify a higher annual fee than the standard products.

Lessons:
- Case study interviews are not a test of industry knowledge. It is perfectly valid to ask your interviewer how the industry works.
- Even very open questions require a structured approach.

Interview:
Booz Allen Hamilton

Question:
The British government has decided to privatise some of Britain's motorways. Your client, a large UK private equity fund, wants to know how much it should bid for 50 miles of the M40 (a major 3-lane motorway connecting Oxford and London).

Comments:
The private equity fund wants to know what the motorway is worth so that it can decide what to bid for it as an investment for its fund holders. The purchaser will be charging drivers to use the M40 and will obviously want to make a profit. The best way to think of this problem is to value the discounted stream of the motorway's future cash flows.

To calculate the cash flows, you need to make assumptions about traffic volume, acceptable access charges, reduction in traffic volume due to the introduction of charges, and the ongoing costs of running the operation. Let's say that all your calculations result in an expected cash flow of £40 million per year. This cash flow can then be discounted at the firm's cost of capital which we could assume is a nice round 10%. As this is an infinite stream of cash flows, the use of a perpetuity formula greatly simplifies the calculation:

$$\frac{£40{,}000{,}000}{0.10} = £400{,}000{,}000$$

Your valuation of £400 million is the value based on the expected cash flows, but of course the private equity fund would be wise to start bidding somewhere below that figure. How about £320 million?

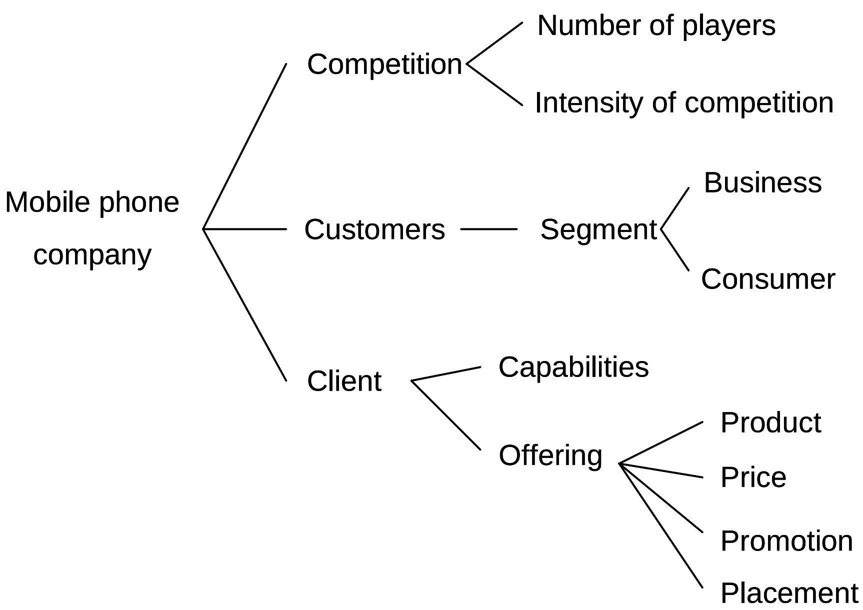
Interview:
McKinsey & Company

Question:
Your client is a mobile phone service operator similar to Vodafone. Two years ago, it had a 40% share of the Bolivian market. Since that time, it has increased its subscriber numbers in Bolivia by 25%. Over the same two year period, the total Bolivian market grew by 25% in the first year and 20% in the second year to reach its current size. What market share does the client have now?
How would you analyse why the market share has changed?

Comments:
The first part of the question is best solved by plugging some numbers in to elucidate what is happening to the client's market share:

Year	Market Growth	Total market size	Client Growth	Client subscribers	Client share
0	-	100	0	40	40%
1	25%	125	-	-	-
2	20%	150	25%	50	33%

We can see from this that the market share of the client is now 33% (50/150). Analysing how and why the market share has changed requires an investigation into several factors. Use the 3 C's to get an overview. Firstly, the competitive landscape may have changed. More competitors entering the market can reduce the share that each incumbent firm has. Secondly, the customer profile could have changed. You need to segment the customers somehow to help understand what is going on. Finally, the client's product offering may no longer be competitive for the new market. You need to analyse the 4 P's to see what is going on (product, price, promotion, and placement). Lay out your thoughts on paper:



Working through each of the branches of a tree like this will demonstrate your ability to approach a problem logically and should flush out the answer to why the firm is losing market share.

In this case, the loss of market share was due to the nature of the product offering. As the Bolivian market developed, the early adopters of mobile phone technology (business users) were joined by consumer users. But while the client was very well equipped to serve the business users of two years ago, their current product offering is less attractive to the consumer users of today. The interviewer told me that the voice call offering was strong, but the data offering (text messaging etc) was weak compared to the competitors.

For the recommendations, I used the intuition that text messaging was a service used predominantly by young people to suggest that the company should try to improve their offering for this market segment. It is then pretty straightforward to suggest pay-as-you-go packages, attractive price structures, funky advertising, and different sales channels as possible solutions.

Lessons:

- Practice your mental arithmetic before entering the case interviews. You should be able to juggle numbers quickly and easily to solve the problems.
- Use a tight structure to cover all the elements of the case.
- Draw on your life experiences to make practical, grounded recommendations where possible for the client.

Interview:
Boston Consulting Group

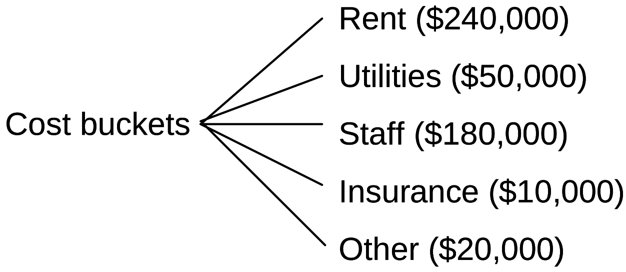
Question:
How many petrol stations are there in the USA?

Comments:
It is worth recognising that there are several different ways that this can be solved. Valid approaches include:

- Finding the number of vehicles in the USA via the total population of the USA (180 million) and estimating how often they fill up and the utilisation rates of the pumps
- Thinking about the roads in the USA and estimating how often there must be a petrol station for vehicles to keep moving
- Estimating the amount of fuel sold in the USA and the number of petrol stations needed to pump it
- Considering how many petrol stations can be supported economically by the total US population
- Estimating the number of petrol stations that serve a given population based on your own experience (e.g. my town has 50,000 inhabitants and there are six petrol stations)

A good way to impress the interviewer is to acknowledge that several methods exist and that if you have time, you would like to triangulate your answer by using more than one. For this case, the interviewer directed me towards considering this problem from an economic standpoint. Using the population, I estimated that there is one vehicle for every 2 people in the US (90 million vehicles). I guessed that each vehicle fills up once per week, which makes a total of around 4.5 billion fill-ups per year.

I was told that petrol stations break even on average and that we could ignore the effects of the shop attached to the petrol station. This then became a simple balancing act where the costs of running the petrol station must balance exactly with the profit made on retailing the petrol. I drew out what I thought would be the cost groups for running a petrol station and estimated the annual running costs:



Notice how the 'Other' bucket helps it add up to $500,000 for the year – nice and easy to work with! I then asked how much margin a petrol station makes on each fill up and was told that the average is $2 per fill up. The breakeven point therefore requires 250,000 fill-ups per year to cover the costs of running one petrol station.

Now, if we remember that we calculated 4.5 billion fill-ups per year in the USA, and divide this by the number handled by each station, we get the total number of stations:

$$\frac{4{,}500{,}000{,}000}{250{,}000} = 18{,}000 \text{ petrol stations}$$

I have no idea if this figure is correct but if you triangulate it with the population of the USA, you arrive at one petrol station for every 10,000 people. It seems reasonable.

Lessons:

- Use structure to solve complex problems
- Remember that you may need to break the problem up into manageable pieces to succeed

Interview:
Boston Consulting Group

Question:
You are the health minister for the UK. How would you go about estimating the size of the future health burden that the aging population will create for the state? What measures could you take to attack this problem?

Comments:
This is a very open question which does not have one right answer and can be tackled with several approaches. A good way to think about the drivers of the health burden in the future is to use the PESTLE analysis:

- Political
- Environmental
- Social
- Technological
- Legal
- Environmental

From here, you should be able to generate some creative ideas for managing the issues.

Interview:
McKinsey & Company

Question:
You have two urns. One is filled with red wine and the other is filled with white wine. You take a cup, fill it from the red wine urn, and tip it into the white wine urn. You allow the wines in the white wine urn to mix completely so they are fully diffused in the urn. You then take a cup of this mixture from the white wine urn and transfer it to the red wine urn. Is there now more red wine in the white wine urn or white wine in the red wine urn?
OK, now prove it mathematically.

Comments:
This is all about conceptual thinking and applying your brain to a situation you have never come across before – in real time with a partner of the firm watching you try to solve it!

The answer is that there is exactly the same amount of red wine in the white wine urn as white wine in the red wine urn. The key to unlocking this is to remember that some of the red wine makes two trips and ends up where it started. To prove it mathematically, you have to use fractions – decimals will not do! Assume each urn initially holds 10 units of wine and the transferring cup is 1 unit. When you make the first transfer, you are left with 9 units of red wine in the red wine urn and 10 units of white and 1 unit of red in the white wine urn. When you take a cup of the mixture, it is one unit of volume, comprised of $^{10}/_{11}$ white and $^{1}/_{11}$ red. This leaves 9 $^{1}/_{11}$ white and $^{10}/_{11}$ red in the white urn. When the mixture is transferred across, it is added to the 9 units of red that were left in the red wine urn and the total is now 9 $^{1}/_{11}$ red and $^{10}/_{11}$ white in the red urn. Notice how the proportions in each urn are exactly the same – you have proved it mathematically!

Another approach is to remember the law of the conservation of mass from your physics class. As both urns finish with 10 litres of wine, there must be the same proportion of one wine to the other in each one because no wine is lost or gained. Incidentally, the size of the cup relative to the urn is inconsequential for the final result, as long as the cup is smaller than the urn.

Lessons:
- Try to stay calm and methodical even when you don't have a clue what to do

Interview:
McKinsey & Company

Question:
This is a hypothetical situation. Let's imagine our firm has have been called by the owner of a biotechnology company who have discovered a gene therapy that can be used to treat criminals so that they never offend again. This is a unique treatment that can be given once and is completely safe and effective. He wants to begin selling this treatment and wants you to help him work out how much to charge for it and how much he can expect to make.

Comments:
Before you can structure a way to solve this 'blue sky' question, you need to develop a deeper understanding of the problem:

- *Who would the customer be for this product?* - Probably not the criminals themselves, but more likely to be the government acting on behalf of society.
- *How would the gene therapy be administered?* - A one-off injection which is completely safe and works instantly
- *What if the prisoners refused to take it?* - They have to stay in prison and complete their sentences
- *Are there any similar alternatives?* - No
- *How much does it cost to produce?* - Each therapy costs $100
- *Is it legal?* - Yes
- *Is it ethical?* - Who knows?

From a purely economic standpoint, the price should be more than your cost of production, but should not exceed the alternative that the government has (keeping all the prisoners locked up). The biotech firm wants to maximise its profits so a good way to tackle this case is to work out the magnitude of the total economic benefit realised by the customer when they buy the product.

Initially, consider the governments of the western world as potential customers. To estimate the size of the market, consider how many prisoners could be treated. Let's say there are 1 billion people in the western world and the average criminal population is half a percent of the total population. That makes a potential market of 5 million individuals. Then figure out what a prisoner costs a western government, accounting for prison costs, court costs, rehabilitation costs, police costs and the cost of criminal damage to society. With an estimate of these figures, you can say what the maximum is that the governments would be willing to consider.

The over-riding backdrop to this problem is the ethics of using the therapy. Just because it can be done and it makes sense economically, does not mean that the government or society as a whole will accept it. It is important to mention that in your recommendation.

Part V – Closing questions

Every interviewer will give you the opportunity to ask questions at the end of the interview. Remember that the questions you ask say something about you. For example, you will not make a good impression by asking the interviewer how many offices the firm has around the world when this information is plainly available on their website. Further bad form is to ask about your starting salary or benefits package (these will be attractive and should not be your primary motivation for the job). Finally, demonstrating ignorance through the questions you ask will not help your cause. You should know the names of each rank of consultant at the firm you are applying to and avoid asking about what a consulting firm actually does.

A better approach to this section is to ask questions that you have a genuine interest in, and which display you in a positive light. For example:

- 'When I met [Consultant X] at the recruitment presentation in Oxford, we discussed the online knowledge-sharing tool [Info 123] that your firm uses. How often do you use this tool and how do you find it works in practice?'

This is a good question to ask because:

1. you are asking about something that is not easily available in the public domain – you have obviously done your research
2. you have implied that you have a good grip of what consulting is and how the firm works, and are now able to ask deeper questions to push your understanding
3. it is an open-ended question that allows the interviewer to talk for a while and takes the heat off you – don't ask anything that can be answered yes/no
4. the question leaves the door open nicely for you to ask follow-on questions based on the information you receive
5. you have done some networking with someone the interviewer knows – this is almost as good as a personal referral
6. you are demonstrating a genuine interest in the way the firm works
7. you are demonstrating a personal interest in your interviewer
8. you are interviewing the firm just as much as the other way around - the answer to your question may affect your decision on whether to join this firm or another one

Try not to swamp the interviewer with questions or put them in any difficult situations. You should not push for confidential client information or ask question after question to demonstrate how keen you are. Find a balance.

Finally, most firms keep a record of what you spoke about in each interview you attended. Even if you think you have perfected the killer question, don't ask the same thing to several interviewers in the same firm. A good consultant retains information and should not have to ask twice!

These example questions may provide a basis for you to generate your own:

- What is the training and professional development program?
- How would my performance evaluations work?
- How does your mentor programme work?
- What is the industry and functional structure of your firm – what areas would I be working on and who determines that?
- What has the highlight and low-point been for you so far with this firm?
- At what stage would I begin to specialise into an industry or function?
- How much choice do people have as to what projects they work on or who they work with?
- Can you give me some representative example of recent projects that are typical of what I can expect to be staffed on?
- What is the expected career development for someone in my position?
- What have your working hours been recently (what do you consider a late night, or how many weekends have been worked)? Is this typical?
- What is the professional turnover rate – or the expected length of stay for an MBA?
- What is the typical length of a client project?
- How much time should I expect to spend at the client / in the office?
- How much of your client business is repeat business?
- Who do you consider your direct competition?
- What is the associate to partner ratio?

Part VI – Case interview practice questions

This section offers 40 example questions for you to practice with. These questions are best utilised by role-playing with a partner. Don't forget to offer feedback to each other on your performances.

Good luck!

Practice question 1 – Telephone Company

Question

Your client is a telephone company trying to reduce costs and improve performance in the repair service operation. How do you approach the problem? How would you go about implementing your solution?

Suggested Frameworks

Begin with the three C's to flush out information about your client and the nature of the competition in the industry. Ultimately you can go through a profitability analysis to try and drill down to the root cause of the high costs in repair service. Do not forget to outline a process to follow to implement your solution.

Additional Information

The company has five regional centres in five different cities and a corporate headquarters. You have been brought in through a process improvement initiative currently underway at the headquarters. The regional centres are not aware that their repair service is being examined.

Interviewer Notes

- This is a regulated industry with a unionised labour force that will play a large role in your analysis.
- Generally, utilities have faced very little competition for local service and have thus had almost no need to institute and track performance measures with its management control systems. You will almost certainly have to develop new baselines for measuring performance in the repair service department within the company. Some possible measures could be: time to repair, time to dispatch, or customer satisfaction expressed through call-back, etc.
- If these baselines are new to the company, your team will need time for these baselines to generate information that can be compared with other "best-of-class" companies in this industry.
- The profitability analysis should touch upon recent capital expenditures, deteriorating infrastructure, high wages, escalating repair materials costs, low productivity in the department; anything that might contribute to high costs in repair service.
- Do not forget the implementation part of this question. Basic ideas here include developing a pilot program to test your solution and selecting a pilot site, getting buy-in and cooperation at the regional level, establishing objective measurements to gauge the success of the pilot, and finally, developing and presenting a corporate-wide rollout of the changes.
- Changing the culture of the regional centres is going to be a huge barrier to success in this project. Issues here might be union wage pressures, job security, changing the demands on the workforce, gaining commitment from informal leaders that can champion your solution.

Practice question 2 – Accounting firm

You have been called in by a Big 4 accounting firm that is experiencing declining profitability in its auditing operation. How would you tackle this problem?

Suggested Frameworks

Whenever you hear 'declining profitability', start with basic profitability analysis. Determine whether this is a revenue problem, cost problem, or both.

Additional Information

The entire industry is in a slump. Competition is intense as firms try to fight to survive.

Interviewer Notes

- To improve profitability, the firm should either increase revenues or reduce costs.
- Increasing revenues would imply increasing volume or price. The only way our client can raise prices is by differentiating itself or using promotional incentives. However, it has to consider competitor reactions, which will be strong and prompt, since all the firms are fighting for survival. To increase volume, our client probably has to drop prices. The only way it can do this is by cutting costs.
- To reduce costs, one must look at the cost structure of the firm. Fixed costs are offices, equipment, and personnel. Variable costs are general consumables, travel, etc. As with most service organizations, the single largest component of cost is personnel.
- Reducing personnel cost would imply cutting salaries, cutting staff, or raising staff productivity. The best course of action is probably to increase productivity and resort to other alternatives later.
- To increase staff productivity, you could ask staff to work longer hours or you could utilize them more efficiently by asking partners (who cost more) to spend less time on projects while using associates (who cost less) to do most of the work. This way, you will utilize the partners better and will bill the customer less (since you incur lower costs for a project) thereby reducing your price. This is referred to as 'leverage'.
- Alternatively, you could reduce the number of partners or reduce the amount of profit per partner. Both these ideas would be very difficult to implement since partners share ownership in the firm and are not likely to follow any advice that reduces their profits.

Practice question 3 – Parcel carrier

The client is the largest package delivery service in Canada. Over the past 30 years, the firm has built a network that allows it to deliver parcels to 'every address in Canada'. Until last year, competition was non-existent and profits were very strong. Starting about 15 months ago, a new company began parcel pickup and delivery to three (and only three) Canadian cities—Montreal, Toronto and Vancouver. Although overall parcel traffic has declined by only 10% for our client, profits have declined by almost 30% from last year. Outline your hypothesis for the profitability decline. Explain what analytical measures you would use to diagnose the problem and what data you would gather to perform your analysis. What approach would you offer to our client for the restoration of reasonable profits and what strategy would you employ to prevent further deterioration of profits?

Suggested Frameworks

Start with a profitability analysis to pinpoint where the problem lies. Then, use the three C's to see what about the market is causing the problem. Finally, look at the costs of this industry: does one of these firms have an inherent advantage? Are certain customers better off than others? This is a complex case, so take your time and keep digging.

Additional Information

The new entrant has a fleet of older semi-trailer trucks that run between the three cities. Our client has a very new fleet (more efficient) that services all of Canada. The client's fleet mix has been optimized such that efficiency and capacity utilization are high considering the network of locations covered. The new entrant charges approximately 50% less than our client for delivery between the three cities that they cover. Both our client and the new entrant charge by the kilogram-mile. One kilogram carried one mile is a kilogram-mile

Interviewer Notes

- The new entrant has initiated service in the three markets where economies of scale are present. Because of the volume of packages between these three cities, larger trucks and efficient distribution centres make such limited service very profitable.
- An important facet of this case is how the interviewee reaches this conclusion. He/she should use a cost measure like $/kilogram-mile to explain that the major city routes have always subsidized delivery to smaller locales.
- Realise also that our delivery to all addresses in Canada is a tremendous advantage to our client. Businesses that ship to customers outside of the major cities cannot afford to lose our service.
- Employ a new pricing strategy that will increase charges for rural delivery. Note that this may invite the new entrant to begin rural delivery.
- Develop long-term contracts with major business clients who use our rural delivery capability. Offer a flat delivery rate only when the business agrees to use our client for rural and city delivery.
- Search for synergies with other companies that also deliver to rural areas (this client actually paired with several grocery/beverage/snack delivery companies in the most rural areas).

Practice question 4 – Security systems

Your client installs and services security systems for both residential and commercial customers. It is the market leader, with a 10% market share and sales of £200m. The company's customer service rating has recently started to decline. What should the client do?

Suggested Frameworks

Begin with a 3 C's analysis and then perform a SWOT. Identify potential reasons for the company's decline in customer service. You should question the implications of 'market leader' status. Pinpoint what has recently changed in the industry (e.g. recent bankruptcies or acquisitions, etc.)

Interviewer Notes

- The company currently has 1 million customers. This number is expected to double over the next 10 years.
- Customers have to call a different phone number for each type of question or problem. Call wait times are often long.
- The company is considering the creation of a free phone number with an 'emergency' option and voice mail.
- Customers often wait a long time to receive service.
- The company is considering a workforce restructuring (e.g., add more repair personnel or add more technically knowledgeable staff to the help desk), as well as a job tracking system that would allow the staffer to send a repairperson familiar with that customer or type of system.

Practice question 5 – Road haulage

Your client is in the road haulage industry in the USA. Their profits are declining, and they have already determined that their cost structure is comparable to competitors. What is the problem?

Suggested Frameworks

This is a profitability question. Since we can assume that the problem is not costs, you should focus immediately on the revenue side. After diagnosing the problem, proceed with a three C's analysis to understand the client's positioning in the marketplace. Finally, end with a four P's analysis to suggest possible solutions.

Interviewer Notes

- The company operates within North Carolina and hauls commodity items and specialty items.
- The company has a 5% market share.
- The company competes on service quality rather than on price.
- The trucking industry is highly fragmented and has undergone some recent consolidation.
- Think about segmenting the market. Margins are different for hauling furniture versus hauling small commodity items.
- The company has experienced decreased business due to bigger companies who are more price-competitive in the commodity item business. Therefore, the company has lost business on the back-haul in which trucks transport goods back to the original distribution point.
- The company probably cannot compete effectively in both market segments and should probably focus on hauling specialty items.

Practice question 6 – Airline revenues

You have an airline client who is concerned about volatile revenue streams. How would you approach this problem?

Suggested Frameworks

You could first think of this problem as a profitability question, focusing mainly on why volatile revenues create problems for an airline. Then you could think of the competitive dynamics in the industry and creative ways for airlines to smooth their revenues.

Interviewer Notes

- Airlines have huge fixed costs (large operating leverage).
- The airline industry growth has been zero for the last few years.
- The airline industry has excess capacity.
- The product is a commodity.
- The only way to gain market share is to compete on price.

Practice question 7 – The book company

Our client is a book publishing and distribution company. Three years ago they started a new division to sell customized textbooks to colleges. The customized textbooks use on-line information that has been digitized to provide information tailored to any course. The company uses a direct sales force to sell both their standard textbooks and the new customized textbooks. The new division last year had revenues of £3M and a net loss of £5M. How should the division get its profits to at least break even and what should they do to realize the full potential of the business?

Suggested Frameworks

Profitability analysis is the best place to start – find out where the majority of the costs are. A quick customer analysis (one of the 3 C's and 4 P's) should be next.

Interviewer Notes

- The cost side of the profitability analysis shows that the cost per customized book is double that of a traditional book. The added costs are due to the extra cost of paying for the special copyright fees for using the most current information from a number of different sources. In effect, the division is paying royalty fees to many different authors.
- On the revenue side, the price per book charged is a premium. It is important to understand who is ordering the books (professors) and who is buying the books (students). It is unlikely that the price can be raised any further.
- To look at the full potential of the business, look at how the direct sales force is selling. It takes 2 to 3 times as long to sell a customized book compared to a standard textbook. The direct sales force is paid a commission based on sales. It is taking too long to sell the customized books and the sales force is not making enough money on them.
- The quantity of books being sold is also less than was first expected and the order quantities are for very small lots.
- The low order lot sizes add to the cost and reduce potential profits. Paying the sales force a higher commission on customized books might get them to spend more time trying to sell them, but the product will most likely not be profitable with current demand and costs
- In the absence of scale economies, you must reduce the cost burden by over 40% - is this reasonable? If not, close it down!

Practice question 8 – Fast Food Company

A regional fast food chain, serving a menu of mainstream products such as hamburgers and fries is experiencing wildly variable profits among its many locations. What factors should the chain consider?

Suggested Frameworks

Begin with a basic profitability analysis to determine whether revenues or cost fluctuations are driving the variations in profitability. Then, a very thorough three C's analysis should yield a whole host of relevant issues. Alternatively, starting with a basic industry analysis (Porter's 5 forces) could set up a good understanding of the dynamics unique to this market.

Interviewer Notes

- Urban vs. rural differences exist, including taste preferences, attractiveness of substitutes, and types of competitors.
- The two key driving forces are quality of location and strength of restaurant management.
- It is best to sell restaurants that are in poor locations. Poor management can be replaced. Do not compete head on with the big players like McDonald's—find a different niche. Offer product bundling (value meals) and/or strategic relationships (e.g., with Toys R Us) to create excitement.

Practice question 9 – Kidney dialysis expenditure

You have been appointed as the Minister for Health in the UK. Your junior aides tell you that kidney dialysis creates a very large burden on your limited finances. What analytical techniques could you use to determine the size of the problem and whether this cost can be reduced?

Suggested Frameworks

You can start this case by looking at the cost half of profitability analysis (Costs = Fixed + Variable). Since this is a procedure, it is mostly a variable cost, the sum of which is measured by cost per unit x # of units. Thus, one could look at this problem by analyzing (1) how much it costs per kidney dialysis and (2) how many kidney dialyses occur in the UK. You then need to get creative with your solutions to reduce the total bill.

Interviewer Notes

- The majority of the Health care in the UK is publicly funded from the government coffers.
- Compare the incidence of kidney disorder in this country with other countries. Is ours higher? If so, can public policy or efforts to increase awareness help reduce it?
- If incidence is indeed higher for the UK, build a model (regression perhaps) that will somehow determine the factors that are most related to kidney treatment. Is there room for any type of preventative programme?
- If the cost of the procedure seems high in comparison with similar medical procedures, it could be due to professional fees, consumables, or capital equipment costs. Employing new technologies could cut consumables and equipment costs.

Practice question 10 – Medical products

Your client is a medical products division of a large health care company. The division, formerly the market leader with near-monopoly power, has seen its profits and market share shrink dramatically as new entrants proliferate. You are charged with stemming market share loss while providing shareholder value in the division. What do you do?

Suggested Frameworks

A number of frameworks are applicable here. A quick Porter's five Forces might give you a better idea of the nature of the medical products industry. The 3 C's will help you ask more questions to understand your company's structure and the nature of its product offerings. The 4 P's will narrow your focus to the key product(s) that have been victimized by increased competition and allow you to brainstorm ways to improve them. This is a wide open marketing case, so do not get bogged down running any one framework. Instead, use this opportunity to impress your interviewer by approaching this case with a range of frameworks.

Additional Information

The medical products division produces a range of surgical supplies and equipment. Their products usually compete in the high-price, high-quality niche in the marketplace. This division uses a separate dedicated sales force and distribution channel.

Interviewer Notes

- Increased competition in this industry has probably eroded margins in a division with a 'near-monopoly' mentality. They have never had to be cost conscious and do not quite know how to compete on margins.
- Try to understand why we are losing to the competition. Are competing products of higher quality? Lower cost? Are these products becoming commodities? Are the competition's distribution channels more efficient?
- Who are our customers? Is heavy consolidation among hospitals affecting our relationships with our customers? Quite possibly, we are still targeting surgeons, but the procurement departments are becoming increasingly price/performance sensitive as their order volumes grow. If so, we will need to change our customer's perceptions from premium product to best value for the money.
- What about manufacturing costs? Are our overheads and raw materials in line with our competition? Is our manufacturing strategy (high quality and reliable delivery) in line with our marketing strategy (commodity products, best value for money)? If not, do we know what to do to align them?
- In an effort to cut costs, are we capturing all the value from synergies with other divisions in the company? We could move to a shared workforce and distribution channels if it makes sense to do so.
- And finally, in an effort to preserve shareholder value, should we concede the market and work on an exit strategy—possibly packaging ourselves up to be an acquisition target? Or, should we acquire a smaller competitor and gain their market share?

Practice question 11 – Electronics firm

Your client is an electronics firm considering moving to a catalogue distribution system. What are the issues?

Suggested Frameworks

Start with the 3C's to flush out some basic information on the client. Then, think of possible issues within the context of this client. Be creative!

Additional Information

The client is a small to medium-size company—revenues in the £300-£500 million range. The company has a reputation for high quality products at a premium price. Products manufactured by the client include electronics component parts (75%) as well as some finished goods (25%) such as CB radios, clock radios, wireless transceivers, etc. The client has a small 8-10 person sales force. Your client is in trouble financially. Sales are on the decline for the third year in a row. There has been consolidation in the industry among your client's customers, which include retail electronics stores as well as electronics component manufacturers (like TV/VCR producers).

Interviewer Notes

- First, try to understand why the client has decided on a catalogue distribution system at all. What is going on with the existing sales channels? How committed is he to this idea?
- If the client is losing money, maybe he is grasping at straws to stem losses. Use a quick profitability analysis to understand where the losses are coming from. If your client's cost structure has not changed, then it could be that his losses come from lower volumes. Maybe, as the consolidation among his customers takes place, they are moving to increasingly larger firms as sole suppliers, cutting your client out of the loop. Your client has two options:
    1. Borrow money for expansion so that you can compete with the big players for those consolidated contracts.
    2. Realize that you are too small and are unlikely to recover from the sales slump, work on packaging your company for sale to a competitor. What might you do to make your company an attractive takeover prospect?
- Both types of your customers require a degree of handholding that is simply not present in a catalogue distribution system. So, are you targeting an entirely new market? Maybe home buyers, electronics hobbyists? What does this industry look like (quick Porter's 5)? Most likely you will find this market to be intensely competitive with a number of big competitors like Belden, Thomas Register, JBL, etc. Do you really think your client can win, or even play in this market? Why or why not?
- Finally, what about an electronic catalogue distribution system? Internet-based? Easy to set up—low fixed and variable costs, no advertising required. This might be attractive to your existing customer base, especially if you can offer on-line ordering and invoicing (EDI). Is your client ready to take this step?

Practice question 12 – Real estate returns

A Canadian company that owns a large real estate portfolio has asked you what they should do about their portfolio of farmland. The farmland, which is located in remote rural locations in Alberta, is worth about C$200 million and was acquired from the Canadian government a few decades ago as an exchange for services provided. The farmland is not a strategic asset and the client is not sure why it has held it for so long or why it should own it at all. In fact, it has chosen, for no particular strategic reason, to sell $10 million of farmland each year. What should they do to maximize the potential return from this land?

Suggested Frameworks

This case asks for an analysis of the benefits of owning the land versus divesting the portfolio. Note that the company does not know whether it is making money or not from the land. Understand the revenues, the costs, and use a basic profitability analysis to see if it is worth keeping. If it is not, then think about how one can value farmland and sell for maximum profit.

Interviewer Notes

- Note that the $10 million per year sell off may be the worst possible way to sell this land. When prices are high, you sell less acreage, and when prices are low, you sell more acreage. It is kind of a "reverse dollar cost averaging" strategy.
- A suggested way to analyze the viability of keeping the land is to examine the rates of return:

  + 5% per year price appreciation
  + 4% rental income *per year*
  - 1% taxes, expenses
  Overall: 8% return on investment
- BUT the cost of capital is 11%, so they are not making an economic profit.
- The farmland should be sold and the proceeds invested elsewhere.
- Farmland prices are closely linked to grain prices, so predicting grain prices gives an index for land values. When grain prices are up, sell more land and when they are down, hold the land. Be careful not to sell too much in one area, though you can have a "slippage" of 3% and still justify a sell off versus holding the land.
- Another way to approach this case would be to think in terms of what you would need to do an NPV analysis. Essentially, there are 3 ways you can make money on this property (or any property):

  1. Rental income from tenants—you could lease this land to farmers, but do you want to be in the landlord business? Would your costs go up for things like lawyers fees and land management fees?
  2. Tax benefits from holding the land—this land may provide you some sort of tax shelter under Canadian tax law. E.g. in Texas, two rows of trees on your land allows you to classify your land as a tree farm that is subject to certain tax benefits.
  3. One time sale of the land to an interested party.

Since this land was essentially free to you, any income stream you could show is most likely going to generate a positive NPV for you.

Practice question 13 – Insurance Company
An insurance company has two annuity products: a fixed annuity product and a variable annuity product. These products have a target ROI of 15% but are only earning 5% right now. The fixed annuity product pays the clients a fixed income stream at fixed interest rates. The variable product has returns that vary with the market. The market is currently very strong and the company is wondering how to improve their returns on these products. How would you go about thinking about this problem? What are some potential areas for improvement?

Suggested Frameworks
Start with the three Cs to understand the company's risk profile, the nature of its competition, and the customers that buy these instruments. Then move to a profitability analysis to identify where this company is losing money. If you are not familiar with annuity products, ask questions to ensure you understand how the products make money for the insurance company.

Additional Information
The company sells 20% of the fixed product and 80% of the variable product. On the fixed product, the company makes money based on the spread between the fixed income stream they are paying out and the money they are earning on the investment in the market. On the variable product, the company earns money through charging fees.

Interviewer Notes

- The obvious answer seems to be that they need to get into higher paying investments to achieve higher market returns. However, keep in mind that they have fixed annuity product they are committed to paying.
- The company could calculate the duration of their liabilities (the fixed stream of cash outflows) to ensure they have enough assets to support them.
- The company could also focus on cutting costs to raise their returns. They have marketing (ads, pamphlets, phone personnel), broker fees, sales personnel, and transaction fees. The company does all of this in-house. They could probably outsource and have these services performed more cheaply.
- The fees the company charges for the variable rate product could be compared to the competition. If they are too high, the company may want to lower fees to get a higher volume of customers. If they are too low, they may want to raise rates to be more competitive. Chances are the existing customers with an annuity probably will not withdraw their funds.
- The mix of products could also be considered. The company only earns a flat fee on the variable product. The amount of return made on the fixed product can vary widely, but has the potential to make a very good return with smart investing. The company should shift marketing and sales efforts to the fixed product.
- Since more and more people are investing in 401K plans and other retirement plans, this could be a potentially large target market for a secure fixed annuity product.

Practice question 14 – Internet Service Provider

The year is 1999. NetTech, an ISP (Internet Service Provider) offering services in the United States is thinking about entering the European market for ISPs. Thus far, they have successfully captured the dominant position and sustained profitability domestically while charging an annual access fee for access and by receiving a percentage of all e-commerce transactions that their subscribers undertake. NetTech has already performed some due diligence on the ISP market in Europe and has learned that until the last year the market was very fragmented. Recently, however, a new entrant has captured a high degree of market share by offering consumers free Internet access. You are in a meeting with the CEO of NetTech and have been asked to perform some quick "back of the envelope calculations" on what the implications of providing free Internet Access would be.

Interview Notes

- NetTech hopes to capture a customer base of 8 million subscribers
- Currently NetTech subscribers in the US pay $25 per month for access
- The average NetTech subscriber purchases $900 annually on the net of these purchases; NetTech receives a 3 % commission.
- Fixed Costs are $1.3 billion and variable costs amount to $800 million annually
- The CEO asks you the following questions:

  1. Please determine net income (before taxes) given the current revenue model

  2. Given the above, what is the current profit margin for NetTech?

  3. Will NetTech sustain profitability if the monthly subscription charge is reduced to zero?

  4. If not, how much would the average NetTech consumer need to increase spending by to make up for the loss in subscription fees?

Suggested Answer

1. To determine Net Income you must calculate annual revenues and expenses:
Total Subscription Revenue: 8 million subscribers X $25 / month X 12 months = $2,400,000,000
Total Revenue from Commissions: $ 900 X 3 % X 8 MM Subscribers = $216,000,000
Total Expenses: $ 1,300,000,000 + $ 800,000,000 = $ 2,100,000,000
Thus, Net Income before taxes is $ 300,000,000.
2. To determine the current profit margin:
Net Income/Total Revenues: $ 300,000,000 / $ 2,600,000,000 = 11.5 %
3. To determine if they will sustain profitability, deduct subscription revenues from the income statement above, they will not be profitable.
4. To determine by how much NetTech consumers would need to increase spending by to make up for the loss in advertising revenues:
The lost revenue per subscriber is $300 per year. Thus, total revenue from sales would need to be $300 + the $27 we already make from the purchases they currently make on-line. Thus, the total is $327. Assuming the sales commission charge remains the same customers will need to spend
___ X 3 % = 327 or 327/.03 = $ 10,900. Thus if consumers currently spend $900 annually, they will need to spend an additional $10,000 annually to compensate for the loss in subscription fees.

Practice question 15 – Mexican-theme retailing

A major retailer is thinking about expanding a new retail concept in the United States. Two years ago, this client noticed that in Mexico, shopping was a family affair. Entire families - mother, father, and children – would travel to the stores together. The stores catered to these customers by providing music and activities for children and making the experience similar to that of an entertainment centre. So our client copied the concept and invested in a major clothing store/entertainment centre in Southern Texas targeted at the Mexican-American population. "Extras" such as hot Mexican food are sold and live music is provided. The resulting sales from this "pilot" store are at acceptable levels. However, few Mexican-Americans shop there and when they do, they buy only highly discounted items. In fact, many Mexican-Americans in the area still prefer to buy clothes in local discount stores. The client wants to expand the stores across the entire South-western US, but wants guidance on how to undertake this.

Suggested Frameworks

This is a marketing problem, so the three C's may be the best place to start. Be sure to understand that you have more than one customer segment and understand their differences.

Interviewer Notes

- This case centres on the target customer and customer buying behaviour.
- It is important to understand why the concept is successful in Mexico.
- Mexicans place a very high value on families and will appreciate any activity that allows the whole family to be together. The retail stores provide "extras," such as hot food and games, free-of-charge, since it is considered a cost of doing business. This "family" value may not be transferable to a different culture that the Mexican-Americans are part of.
- Next, the customers of the "pilot" store must be examined. Ethnic retail items are increasingly popular in the US. As it turns out, this store is attracting customers with large disposable incomes who are generally middle class or upper-middle class. They are interested in buying Mexican souvenir items and enjoy the fun atmosphere and music.
- The "pilot" store is charging customers extra money for the Mexican food and the rides and activities for children.
- Mexican-Americans living near the store only shop there if there is some special item that is highly discounted and not available in the other local discount stores. They usually do not bring their families and they do not pay for the family activities, games, and food. These customers are generally from the lower-to-middle income bracket and have little disposable income.
- The key point in this case is that the store/entertainment centre idea is a good concept that could succeed in the US, but it will succeed for very different reasons than the client anticipated. The stores should not be positioned only as family stores for Mexican-Americans, but should also cater to the US-wide surge of interest in Mexican culture.
- The client should consider placing future stores in major urban areas near target customers with large disposable incomes. Now that we know that the target customer is no longer only Mexican-Americans, it is possible that the concept will be suitable anyplace in the US.

Practice question 16 – Satellite television

Hughes aircraft is planning to spend $1 billion to launch a 250-channel TV satellite. Your client, a large US cable TV company, is wondering if this action is a serious threat to their business. How would you go about analyzing this situation and providing your client with an answer?

Suggested Frameworks

This case calls for an assessment of the profitability for Hughes. Then, compare that number with the $1 billion initial investment. If the return looks good, your client should be worried.

Additional Information

To access the satellite, a homeowner would purchase a small receiver that is placed near a window. The receiver costs $700 but Hughes is considering leasing options. The satellite will not be launched for 2-3 years.

Interviewer Notes

- The biggest potential threat is in rural areas where cable has not penetrated, but this may not be as big of an issue because so little (<30%) of the US population lives in these areas. Besides, there is not much you can do to keep these customers from signing up with Hughes since that is their only option for service at this time. You should be more concerned with your urban area customers switching over the satellite systems.
- To assess the potential for income for Hughes, assume about 70 million households in the US, 10% market penetration, and about $360 per year in leasing and in fees for each customer. This equates to about $2.5 billion each year in revenue with little variable cost. Yes, it looks like Hughes may be a threat.
- What can your client do? There are a few options:
  1. Lower cable rates to make entry less attractive.
  2. Develop exclusive contracts with channels to block-out the satellite.
  3. Lobby the government for relief.

Practice question 17 – Lumber Company

A turnaround specialist has retained your services to help him evaluate a medium-sized lumber company as a potential acquisition. How would you determine whether the acquisition is worthwhile?

Suggested Frameworks

Use an industry attractiveness framework, such as Porter's Five Forces, to determine whether this is a business you want to be in, or at least to determine what kind of returns you can expect to achieve. Then, use the value chain to look at the lumber company's processes to determine where you could add value. Also, be sure to consider external factors such as government regulations (the Spotted Owl?), competitor response (always should be considered with industry entry), and technology.

Interviewer Notes

- Because most of the company's products are sold to the construction industry, it faces cyclical demand.
- Most of the company's production facilities are fully depreciated and somewhat antiquated.
- Some reduction in workforce will be necessary to achieve levels of efficiency on par with the best in the industry.
- The company has extensive holdings of forests. The historical ROI for these assets has been 16%. This is actually less than the company's cost of capital of 18%. If the company were acquired, some of the acreage of forests could be sold. This would (1) provide cash to fund capital improvements, and (2) improve ROA.
- The potential exists to placate environmentalists and improve operating efficiency by 1) increasing selectivity in tree cutting, and 2) upgrading process machinery to peel trees more efficiently.
- Ultimately, the decision of whether to acquire the company should be based on a conservative assessment of 1) market potential, 2) the potential to improve the company's operations, and 3) predicted competitive reaction.
- Because of the cyclicality of the industry, it is particularly important to look at downside and upside scenarios. Sales below projections will be a problem, but sales growth higher than expected may also be a problem if the company ends up starved for working capital.

Practice question 18 – Biotech Company
A small biotech firm has discovered a compound that could cure a potentially fatal disease. At what price should the firm sell the drug?

Suggested Frameworks
Begin with a brainstorm of all possible costs that have gone into the drug so far. Then consider what additional costs the firm would incur if it continued to develop further the drug. A three C's will highlight several key issues.

Interviewer Notes

- NPV is king in this case. Push the interviewee to consider also the opportunity cost of giving up the revenue stream by not taking the drug through to distribution.
- The selling price should equal the NPV of the cash flows that the firm would have received over the life cycle of the drug less all of the costs that the buyer will have to incur (e.g., development, and marketing). Factors affecting future expected cash flows: Does this firm have other products already in the market that make it a recognized name? Can it thus expect a price premium? Are its competitors also creating a similar drug? How many customers does this disease affect?

-OR-

- This firm is not a distributor and typically sells out to larger drug companies with established distribution and marketing infrastructure.
- The price should not necessarily be cost dependent, but should be based on the expected value it holds for any purchaser.

Practice question 19 – American Airline – Japanese routes

A major American airline is considering establishing new routes from Tokyo to several sites in the United States. Would you recommend that they take this action?

Suggested Frameworks

Because the company is already in the industry, industry attractiveness is not the key issue. To begin, try a three C's analysis that will give you an idea of the market environment. Once you understand the revenue potential for these routes, and then look at costs. Try the profitability analysis framework as a basic structure.

Interviewer Notes

- This case requires a complete examination of the customers and competition.
- Customers consist of both business and leisure travellers. While business travel from Japan to the US has been declining at about 25% over the last year, leisure travel has increased at a faster rate. It is expected that leisure travellers will continue to grow at a faster rate than business travellers.
- Currently, 50% of all Japanese travellers to the US are leisure travellers.
- Business travellers provide much more attractive margins than leisure.
- It is extremely expensive to buy gates at Tokyo's crowded airport.
- As it turns out, competition will come not only from other airlines at Tokyo, but also from a new airport that's being built in Osaka.
- Furthermore, Osaka is expected to attract a very high percentage of the leisure travellers. It is very inconvenient for leisure travellers to fly out of Tokyo, where there's heavy congestion and where prices tend to be higher due to high gate prices. It is estimated that the leisure travellers at Tokyo airport could decrease by 25-30%.
- If our client continues with their plans for buying gates in Tokyo, they will find it difficult to attract the growing percentage of leisure travellers needed for their new routes to the US. It probably makes much more economic sense to buy gates in Osaka instead.
- Another insight is the recognition that Osaka will increase the total number of airport gates in Japan. The intense demand for gates at Tokyo will decrease considerably with the greater supply of gates at Osaka. This fact most likely doesn't change the benefits of buying gates in Osaka. However, there may also be a new opportunity for our client to buy gates cheaply in Tokyo to establish new business traveller routes to the US.

Practice question 20 – Coffee business

You are a successful entrepreneur who started a coffee business several years ago in 1985 (before coffee became so cool). You sell your gourmet coffee to New England grocery stores, where customers can buy the beans whole or ground them in a machine situated in the same aisle. Your coffee is extremely popular and the brand is well known, however the market is pretty saturated and growth is slowing. In order to continue your growth, you are considering expanding your grocery store sales into other regions of the country. Another option you are considering is to open coffeehouses under your brand name in New England. Which option is likely to be more profitable?

Suggested Frameworks

· You should start with the 3Cs to get an understanding of how the company is so successful now. You may then want to move into a five forces framework to understand which business is more likely to bring success.

Interviewer Notes

- This case definitely doesn't have a 'right' answer, but the path the interviewee takes to their answer is crucial.
- Why has the company enjoyed so much success? How important is its brand name? How important is brand name for purchasers of coffee? Is the product superior or has some other aspect of the business, such as sales or advertising, been the reason for success? Who are the customers? Why has this company been more successful than its competitors?
- What potential do the two options have? How much can brand name be leveraged for coffeehouses? In a new region? What capabilities does the company have to support the two types of expansion? Which is more costly? More risky? What is the competition like in these product areas?
- In ending with the 'answer', the interviewee should summarize the points that led him/her to this decision and should describe any concerns that he/she has about this decision.

Practice question 21 – Telecommunications diversification

A US telecommunications company is interested in diversifying into other areas besides telecommunications. They are considering entering the market for electronic home security systems. Would you recommend that they do so?

Suggested Frameworks

Use an industry attractiveness framework, such as Porter's Five Forces, to determine whether this is a business you want to be in, or at least to determine what kind of returns you can expect to achieve. Then, use the value chain to look at where value is added in the home security business. Another possibility is a basic three C's to analyze the market potential. Finally, once you feel you understand the market, determine if the core competencies of the company are likely to match the demands of the home security market.

Interviewer Notes

- The company is a holding company. They have previously made unsuccessful forays into software and into real estate.
- The home security industry is highly fragmented. The top five players in the industry generate less than 4% of the total industry revenues. This implies that the industry largely consists of small, regional companies.
- 10% of all residences currently own an electronic security system.
- This is in some sense a razor and razor blade sort of business. The economics are:

  Item Retail Price Cost/Margin
- Equipment & Installation $500-$1500 0-10% margin
- Monthly service $20/month $5/month
- What strengths/competencies of the company are useful in this market?
  · Installation expertise
  · Operator services
  · Transmission system (phone lines)
  · It turns out that the "expensive home" segment of this market is saturated.
- Growth has been slow in recent years.
- Price sensitivity is unknown in "moderate-priced home" segment.
- The conclusion is that this business is a reasonably good fit for the company, but that more market research needs to be done to assess the growth and profit potential of each segment of the market.

Practice question 22 – Ceramic components for the automotive industry

A specialty ceramic materials firm has decided to enter the automotive parts supply business. They have developed new ceramic engine components that when used in a standard internal combustion engine will increase fuel mileage by 20%, decrease pollution by 30%, and improve longevity by 20%. Your client wants to know how to proceed.

Suggested Frameworks

The first place to start is with an industry analysis, perhaps using Porter's 5-Forces to get an understanding of the automotive parts business. From there, look at the new venture's profitability and finally a marketing plan.

Interviewer Notes

- There is quite a bit of internal rivalry in the automotive parts business. This has driven profit margins down to a minimum level.
- Buyer power is quite concentrated with the big three automakers coming first, then the large engine manufacturers, and then possibly the large automotive supply centres. There are very few supply issues as the components for ceramics are easily found. New entrants should not be an issue because the formulation for our product is a mix of patented materials and processes. Substitutes are the traditional steel components.
- Profitability analysis shows that our components cost £500 per engine set, while the traditional steel components costs $50 per engine set.
- The best place to determine cost benefit is on miles per gallon savings. For example, for a 30-mpg car, the new components will get 36 mpg. The average person drives 12,000 miles per year, which is 400 gallons with the old components and 333 gallons with the ceramics. At £1.25 per gallon, this is an £83 dollar a year savings. It will take the average driver over 5 years to save the extra £450.
- However, the average semi-truck will drive over 100,000 miles per year. At 10 mpg to 12 mpg the annual savings are over £2,000.
- The next step is how to go to market. This company lacks any automotive distribution network or sales force. The company should form a joint venture for distribution with a current automotive parts supply company.

Practice question 23 – Glass Company

A European producer of glass containers is considering making a €1 million investment to upgrade some process equipment. Would you recommend that they do so?

Suggested Frameworks

Start with a simple cost/benefit analysis. Look at the potential benefits from upgrading the equipment and compare that to the €1 million cost. To look at the benefits, consider the Porter Five Forces framework to look at likely returns from the industry. Remember that future cash flows from this investment must be discounted at the company's cost of capital.

Interviewer Notes

- This company has only one, large facility in France. There are quite a few other glass producers in Europe.
- Margins and profits of the entire industry have been eroding for several years.
- There has been and continues to be some cannibalization by plastic and metals. However, glass remains the material of choice for many applications, especially food products.
- The main input material, sand, is inexpensive and plentiful.
- Some of this company's competitors have already made a similar upgrade to their own process equipment.
- The key insight in this case is to recognize the high competitive intensity in this industry. The profit potential, at least in the short term, appears poor.
- Given the fact that there are too many players and too little profit, some consolidation and/or exit of some companies from the industry appears inevitable. This company must decide whether it is worth it to try to ride out this shakeout.
- At least in the short term, the return on the €1 million investment will likely not be adequate to justify making it. However, one interesting possible justification for making the investment might be to "dress up" the company in order to sell it.

Practice question 24 – New Bank Branch

How would you determine whether a location in New York City holds enough banking demand to warrant opening a branch?

Suggested Frameworks

Because this is a demand-oriented question, once should consider a marketing framework, such as the 3 C's. To bring your case to a conclusion, consider the 4P's as a framework

Interviewer Notes

- The client must examine if the new branch would complement their existing competence and strategy (retail or commercial; high growth or high profitability, etc.) and what purpose it would serve. If the need focuses on deposits and withdrawals only, maybe a cash machine would suffice!
- The demographics of the area surrounding the prospective branch should be examined. Population, business concentration, income levels, etc. should be compared with those of historically successful branches. Location of competitors should also be considered.
- Competitor reactions could easily make this venture unprofitable, so it is essential to anticipate them. These will depend on the importance of the area to competitors (in terms of profits, share, etc.).
- The client will have to match competitors' incentives to customers and should estimate the cost of these.
- Why would customers want to come to this bank over others? Strong brand name/reputation? Already use bank in other location? Better rates? Lower fees? What is this bank's competitive advantage in other locations and what would it be in this location?

Practice question 25 – Travel agency

An Israeli travel agent has been extremely successful. His primary source of revenue is customers who fly to and from the US. He manages to fill up over two planeloads on a daily basis. Given his success, he is considering buying an aircraft and flying the US-Tel Aviv route himself. What advice would you give him?

Suggested Frameworks

This question could be structured by either a marketing framework, to see if the demand is really there, or by looking at industry attractiveness with a framework such as the Five Forces. Try both, or a hybrid of the two, to structure your answer. Do not forget to consider external issues such as competitor response and government action (airlines are strictly regulated in most countries).

Interviewer Notes

- The client is attracting customers due to his own promotion and reputation. He will probably continue to do so if he were to buy his own aircraft. Also, access to hubs, etc., would not be a problem.
- If the route is extremely busy, it is probably very lucrative for other airlines too. Therefore, competitor pressure may be fierce. The dominant operator on this route is El Al (a large airline with deep pockets) that finds this route extremely attractive.
- If our client were to enter the industry, he might trigger a price war initiated by El Al since, if it were not do so, other small operators would want to follow our client's lead and soon El Al might lose this important source of profits.
- The only way our client could fight this price war is by differentiating itself from El Al and other airlines and charging a price higher than El Al's. However, El Al will try to match any such move towards differentiation, and our client will be forced to go out of business.
- The client should also consider barriers other than competition that might exist in this market. Besides the cost of buying the plane and contracting all related support personnel, your client must meet regulatory standards for international travel. Further, the client must consider if two planeloads generates enough revenue to cover fixed and operating costs.
- It is therefore best to maintain status quo.

Practice question 26 – Airlines vs Baby food
How would you compare the airline industry with the baby food industry?
In which would you invest your own money?

Suggested Frameworks
This is a classic industry attractiveness question. Use Porter's Five Forces, or even better, create your own framework for analyzing the suitability of an industry for investment.

Interviewer Notes

- It turns out that competition in the airline industry is intense. Fixed costs are high and competitors keep cutting prices till they shave margins to the very bone. Customers are very price sensitive. Brand equity is virtually non-existent.
- Using a microeconomics argument, you see that airlines will keep cutting prices to the point where marginal revenue equals marginal cost. Since fixed costs are high and probably financed with debt, these companies can end up defaulting on interest payments.
- On the other hand, the baby food industry is less competitive. There are two or three large players who do not indulge in cutthroat pricing. Products are well differentiated. Customers are quality conscious: they will pay a premium for quality.
- To invest your own money, baby food is better than airlines due to higher profit potential.

Practice question 27 – Medical equipment manufacturer

A medical equipment manufacturer in the south-eastern US has called you in because it feels its working capital requirements are much higher than those of its competitors. How will you help it solve its problem?

Suggested Frameworks

This problem calls for a recollection of financial accounting. Remember that working capital consists of cash + inventory + accounts receivable (current assets) less accounts payable + short term debts (current liabilities). Look at each one to determine where the problem lies.

Interviewer Notes

- Going through the list of items that increase working capital (i.e., current assets) reveals that the client's inventory levels are inordinately high.
- The client organization is made up of three divisions. The inventory problem can be traced to a division that was acquired by the client about two years ago. This division manufactures equipment for arthroscopic surgery, namely capital equipment and disposables (something like razors and razor blades, only much more expensive).
- It turns out that the technology for this equipment has been changing rapidly and the rate of obsolescence of inventory is extremely high. As earlier sales forecasts had been overly optimistic, the client now finds itself loaded with obsolete finished goods inventory.
- As a corrective action, decide on the appropriate level of inventory by adjusting forecasts, getting an idea of manufacturing lead times, and determining customer expectations of order lead times.
- After appropriate levels of inventory are determined, it turns out that the client has 2.5 years of capital equipment inventory while none needs to be carried since these items can be manufactured after receiving the order. To help take the finished goods inventory off the books, finished goods could be dismantled and sold. Also, idled manufacturing capacity could be adapted to make other goods if the facilities are flexible enough.

Practice question 28 – Cutting tool manufacturer

A large US cutting tool manufacturer, with a dominant market share in the US but minimal presence abroad, is considering entering the German market. They believe Germany is attractive because of its industrial base.

Suggested Frameworks

This case is adaptable to a few frameworks; you could try using Five Forces, but do not get locked into running through all five. Another approach is to use a mix of the 3 C's and 4 P's.

Interviewer Notes

- The cutting tools that this company manufactures are many different types of drill bits that go onto machine tools, and are used in metal working applications - from machine shops to auto manufacturers, and many other industrial applications.
- The business is divided between standard parts, and custom-designed parts for specific applications. Standard pieces are sold through distributors and direct through a sales force, while custom-designed pieces are sold through a direct sales force. Custom-designed pieces are much more profitable than the standard pieces, and our client is interested in this market.
- (At the time of this case) Germany is a growing market for cutting tools, due to a strong industrial base, especially in heavy industries where there is the possibility to sell custom-designed pieces in large volumes to customers.
- Germany appears attractive because it could provide a foothold to enter the rest of Europe, where again our client has a negligible presence. France and Italy also appear to be attractive markets, and the experience gained in Germany could help to establish a European name for the company.
- There are about ten competitors in this market, all German, none of which has more than a twenty-percent market share. There is little movement among competitors in terms of stealing share from each other. They are all basically growing along with the growth of the market in general.
- Some competitors are stronger in custom designed tools while others are strong in standard tools. All competitors have direct and indirect sales forces. Each of the competitors has a very strong relationship with their customers. Customer loyalty is so strong that cutting tool firms send salespeople to customers of competitors every day for years before winning the account. Once a supplier has established a relationship with the customer, the supplier is almost assured of a cash stream over a period of years. This makes the cost of acquisition of new customers extremely high.
- As the direct sales force is the key to winning customers, and the strategic focus of our client, our client could not enter through distributors. On the other hand, they could not hope to enter with their own direct sales force because of the expensive and long customer acquisition process.
- They established a joint venture with a company that had a strong customer base, but did not have superior engineering capabilities to custom design pieces.

Practice question 29 – Greeting Card Company

A major greeting card company is considering a proposal from Yahoo to advertise its e-commerce product, a greeting card that is sent to the recipient as an e-mail attachment. Your client will get an exclusive position on the website's front page that will help drive traffic to its greeting card site. The Yahoo exclusivity costs $2 million per year for the next two years. Is it a good deal? Should your client do it? Will they make money?

Suggested Frameworks

This is a classic revenue/cost problem. To begin, determine the traffic and customer base that will be attracted from the Yahoo portal and the resulting revenue. Then compare this to the proposal cost as well as internal costs to deliver the electronic greeting card product. There are also some peripheral considerations for the Yahoo deal.

Interviewer Notes

- Customer Base from Yahoo:
- 50 billion visits to Yahoo's site (per year)
- Click through rate to greeting card site – 1:1000
- 5% sell rate
- Result: 2.5 million sales via Yahoo (interviewee calculation)
- Cannibalization:

25% of traditional greeting card business = 625,000 (interviewee calculation)
Incremental increase in card sales (delivered electronically) = 1,875,000
Revenue: *$20 million in revenue from all cards (traditional paper and electronic)*
S10 million in electronic card revenue
Production costs = $0
Design costs = margin = 50%
Card cost to customer = $2- 6 per card (average is $4 per card)
Profit = $2 per card (interviewee calculation)
Net Profit:
Incremental revenue from electronic greeting cards
= 1,875,000 x $2 = $3,750,000 (per year) (interviewee calculation)
Less $2 million exclusivity cost for Yahoo
$1.75 million in profit per year
So, yes they should do the Yahoo deal

Other Considerations:

- Repeat business
- Competitive Landscape. Other greeting card companies could jump into the business and cannibalize your client's traditional business regardless of whether they do this. Also, other players already offer free electronic cards

Practice question 30 – Telephone network investment
Two high net-worth individuals want to invest in the local Boston telephone network. More specifically, they would like to acquire a CLEC (Competitive Local Exchange Carrier). As the consultant to these clients, you need to identify the key success factors they should seek when analyzing the CLEC's.

Suggested Frameworks
This is a classic case for the three C's framework. After delving into company, competitors and customers, the interviewee should be able to create a basic list of success factors. To begin, the interviewee should really tap into the competitive environment and the industry itself, especially if he/she does not know anything about the telecom industry.

Note: this is a funny case since you are essentially 'shopping' for a company and therefore looking at a number of companies. There are no facts the interviewer can give to the interviewee about a particular company – just industry facts. The interviewee simply has to determine what would be the important issues to examine.

Interviewer Notes

- The US telephone industry was deregulated in 1996—this case takes place in late 1997/ early 1998.
- Because of deregulation, CLEC's are now able to lease telephone lines from the big Bell companies. The idea is that the CLEC's lease the lines for a limited time (7 years). During that time, they will build their own networks so that at the end of seven years they can operate lines independently.
- CLEC's sell phone service packages to commercial customers (not end consumers)
- There are twenty to thirty CLEC's in the Boston area. All CLEC's currently in the Boston area are unprofitable. This is due to the high start-up costs and the lack of current revenues. Most will turn around in the next few years
- Both investors have no telephone expertise, but both have experience in the cable TV industry. Investors are looking to hold the company for three to four years before selling

<u>The 3 C's</u>

<u>Company.</u> The interviewee might want to explore these areas:

- **Financials.** Today, all the companies in the industry are unprofitable. This means that the issue here is potential worth, not necessarily current worth.
- **Product.** Ask about the package price to the commercial customers. Most of the CLEC's compete on price for their services. Service with most of these CLEC's therefore is probably seen as a commodity service.

- **Management.** Does the management team work well together? Will they work well with the investors? Do they have experience in the industry?
- **Infrastructure.** Will the company be able to build its own network of lines so that it can run independently at the end of 7 years?
- **Service.** Does the company have the capacity to service its customers in day to day activities, emergencies, etc? If the CLEC's cannot compete on price, they may be able to compete on service.

Competitors

- **Fragmentation.** With so many CLEC's in the market (20-30), the industry is pretty fragmented. There is a potential, therefore, for a CLEC to differentiate itself on service and geography.
- **Ma Bell.** Bell Atlantic is still a major player in the market, despite all of the small local companies. Commercial business can still opt for Bell for their local service. This is a huge competitor with lots of marketing power.
- **Other entrants.** Without going necessarily into the 5 Forces model, the interviewee can ask about the possibility of other entrants (cable companies offering phone service for example) coming into the marketplace.

Customer

It is here that the interviewee can spend some time segmenting the market.

1. The CLEC's serve commercial businesses. As a result, the investors would want to acquire a CLEC in a desirable geographic location (the financial district in Boston may be more desirable for example than a more residential neighbourhood such as the South End)

2. You may want to look at the types of commercial customers that the CLEC targets: large businesses, medium-sized, small…high tech requiring lots of phone lines vs. more traditional types of businesses, etc.

3. Customer service is probably the key in this industry since most of the CLEC's compete on price. Service can be a distinguishing factor.

In the end the interviewee should sum of some of the key "success factors" to look for in an acquisition target. Among them may be:

- Right customer base (based on segmentation above)
- Appropriate infrastructure for short term and long term growth
- Good management team
- Opportunities to partner perhaps with other companies for further expansion (cable TV companies, Internet service providers, etc.)

Practice question 31 – Aluminium Can manufacturer

An aluminium can manufacturer has discovered a way of improving its manufacturing process. As a result, its manufacturing cost has reduced from $0.89 to $0.79 cents. How can the manufacturer best exploit this cost advantage?

Suggested Frameworks

The firm can either use a penetration or skimming pricing strategy. Consider the impact of either strategy on the company and its competitors. Also, do not forget to think about any substitutes for aluminium cans.

Additional Information

It turns out that our client is the leader in its market with a 40% share and supplies directly to major beverage manufacturers. The number two player in the market has about 30% of the market and the rest is shared by many small competitors. Aluminium cans have a lower priced substitute, steel cans, which have inferior printing and stamping characteristics. Customers who do not want to pay the premium for aluminium cans use steel cans.

Interviewer Notes

- Clearly, our client should either drop price (market penetration) or reap additional profits (market skimming).
- If our client drops prices, other competitors will have to follow since this is a commodity market and not following would mean a quick demise. The lowering of prices might increase our client's market share marginally, but some smaller competitors will have to start exiting the industry and larger competitors will have to start investing in discovering our client's cost advantage.
- At the same time, steel can users will start switching to aluminium cans thus hurting manufacturers in that market. The resulting growth in the aluminium can market will attract steel can manufacturers to enter it. Since some steel can manufacturers have deep pockets and a strong backing, these new entrants could pose a future threat to our client.
- In conclusion, it is best to retain prices and generate extra profits for now. Dropping prices could start a price war that might erode profitability and attract new and powerful entrants into the industry. The cost advantage may help another day during a price war.

Practice question 32 – Database Company

Your client is a service provider that maintains databases for directory publishers (telephone companies etc.). The company, which is wholly owned by a large corporation, is 40 years old and holds a 50% market share. 65% of its sales are to 10 customers (its customer base is highly concentrated). It recently lost a major customer that represented $4 million of its $45 million in annual sales. It has been a cash-producing business for the parent company and the parent is wondering if the database company will be viable in the future.

Suggested Frameworks

Using basic profitability analysis, the problem seems to be a revenue shortage from reduced unit sales. Unit sales can fall because:

1. Customers are simply not buying the product/service,

2. They are buying it from someone else, or

3. They are doing the service themselves (this is a risk often unique to services).

Look at their core competency to see how valuable it really is to the customer.

Interviewer Notes

- The company has not been keeping technology up to date and its customers, given the growth of PC technology, are doing their database marketing and formatting on their own.
- Unless the company can find new ways to use their core competencies, it may not be viable for much longer. What are their likely competencies and how may they extend to other industries or businesses?

Practice question 33 – Pharmaceutical companies' merger

The year is 2000. The major British pharmaceutical firms Glaxo-Wellcome and Smith-Kline Beecham have announced their intention to merge. Why would these two firms merge and what issues might arise?

Suggested Frameworks

This is a straight value chain case focused on cost reduction and leveraging of existing resources. You should look within each area at profitability (both revenues and cost.)

- **Research:** Some overlap in development, but most improvement comes in increased leverage of common fundamental research. Not a main driver because limited economies of scale in research, but some gravy.
- **Potential savings:** Facilities, decrease basic research spending, more communication/knowledge sharing.
- **Manufacturing:** Some consolidation of plants as excess capacity can be used and can achieve greater economies of scale. Also should get better prices with vendors because of economies of scale.
- **Potential savings:** Facilities, increased economies of scale, better power over suppliers.
- **Sales:** Major driver as each company can expand scope using other firm's sales force into new geographies. One is strong in Europe; other is strong in South America. They are both strong in US though, so also substantial cost savings though reductions in US sales forces.
- **Potential savings:** Decrease size of sales force; decrease advertising with one combined company.
- **Distribution:** Can shutdown many warehouses in US to lower costs.
- **Risks:**
  · Brand risks if an approved drug is found to be harmful
  · Culture clashes
  · Management succession

Interviewer Notes

- Both are pharmaceutical firms, but they have little overlap in terms of products or markets.
- Increasing pressure from providers and recipients for lower costs have put a lot of pressure on Smith Kline and Glaxo.
- Expected annual savings of £1B
- They have different product lines

Practice question 34 – Railroad car manufacturer

I am a manufacturer of railroad cars in a declining market. My firm is losing market share and money but I think the industry may rebound in the near future. What should I do?

Suggested Frameworks

This is an industry analysis question. You could first start off with a Five Forces analysis. Then you could think about a value chain analysis. Finally, you could analyze the company's core competencies to determine other options. Another potential way to think about this case is to use a new product/market matrix as a point of discussion around the company's options for future growth.

Interviewer Notes

- The railroad industry has undergone massive consolidation due to excess capacity. As a result, railroad companies will probably require fewer railroad cars in the future.
- The client does have excess capacity and should consider leveraging its manufacturing abilities to enter new industries.

Practice question 35 – Manufacturing firm inefficiency

You have been working on an engagement for the president of a medium-sized manufacturing company that has been suffering drops in profit margins. The president's staff includes the VP of Operations, VP of Marketing, and VP of Finance. Although equal in title, the VP of Operations has the most influence on the president, and has been worried about losing some of that power to the other two VP's. The results of your work indicate the Operations organization is the trouble spot: it is overstaffed by approximately 40%, and has seen rising costs and falling productivity. You know that in order to implement your suggestions for improvement, the President as well as his staff need to "buy into" your solution. How do you tell everyone?

Suggested Frameworks

There is no framework for this case. It takes some thought and maybe a little common sense. Do not be surprised by cases that do not use standard frameworks to work through.

Interviewer Notes

- The president believes in the VP of Operations. If the VP doesn't buy in, neither will the president.
- The VP of Operations will be worried about losing face by having run a poor organization. You need to worry about his ego and how he will respond.
- The best approach may be to gather the three VP's for a meeting. Do not tell the group what the results are, but lead them through a discussion of case facts that lead to the answers. In this way, the three VP's will feel as though they have arrived at the solution themselves. Most importantly, it will allow the VP of Operations to appreciate fully the state of affairs.

Practice question 36 – Electricity Company

Your client is a large US electric company. Consolidation has been widespread in the utilities industry and your client wants to know if they should be jumping on board this trend. What advice would you give them?

Suggested Frameworks

First of all, if you do not know anything about the changing regulatory environment, do not be afraid to ask (unless of course you worked in the industry, in which case you should be very afraid!). A good way to start your analysis might be to look at an industry value chain to try and determine in which links there could be cost savings associated with increased size.

Another useful tact might be to draw analogies between utilities and other recently deregulated industries such as telecoms and airlines to form hypotheses for the future.

Interviewer Notes

- The industry has been deregulating.
- Individual states have control over exactly how and when the utilities located in their states will be de-regulated. Some states are proceeding more quickly than others are.
- It is quite probable that soon individual customers will have a choice as to their power suppliers. Many large industrial customers already do.
- There is quite a bit of over capacity in the industry. However, much of this capacity is necessary for the infrequent surges in demand due to exceptionally warm/cold weather. Many utilities located in dense population areas have relatively high production costs. Existing transmission capabilities are sufficient to carry power from rural to urban areas. This transmission comes at a small cost, but can be less than the rural-urban price differential.

Practice question 37 – Real estate developer

You client is a large real estate development company considering buying a piece of real estate in Colorado. How do you analyze the investment?

Suggested Frameworks

You need to determine the highest and best use for the land in order to assess its value. To do this, you should start with the 3Cs:

<u>Competitors.</u>

Analyse other similar plots of land that have been developed with like characteristics – Utah, Montana, even the east like New Hampshire. What other commercial developments exist in the area? Is there an abundance of any one type? Horseback-riding stables? Fly-fishing camps? Is there enough demand to handle another competitor, or do you need t branch out?

<u>Customers.</u>

Consider existing activities that many people do within the area as this may show what people are interested in doing with the land. Segment the potential market: residents, vacationers (summer and winter). Which groups are the largest and which are growing? Analyse the unmet needs of each group; can you fulfil them in some way? Do you want to try attracting a new group that does not already vacation or reside in the area?

<u>Company.</u>

What specific skills do you have to improve or manage this land? What specific characteristics does the land have that might differentiate it for better or for worse?

Then you need to analyze:

- How the investment fits in portfolio, geographic or product diversification;
- Liquidity risk of the investment;
- Investment time horizon;
- Whether improvements can have multiple uses if the original idea fails;
- If you have the skills to manage the property, and how you intend to ward off potential competitors by creating a unique value proposition.

Interviewer Notes

- The property has 5,000 acres of open land. The land is currently undeveloped, has several small hills and sits next to a mountain. There are seven horse-riding stables in the area.
- The property is 45 minutes from Telluride, a skiing area, and home of a large summer film festival and a 5 star resort and spa.
- Company currently owns hotels, strip malls, and office buildings nationwide.

Practice question 38 – White goods manufacturer

Your client is a premium manufacturer of washers and dryers. It sells its products through small specialty shops. Recently its market share in the overall industry has been decreasing. What should the client do?

Suggested Frameworks

The key element to this case is the fact that the traditional distribution channel for washers and dryers is diminishing. In order to survive, your client must negotiate with department stores. It is important to identify the critical issues when attempting to do this.

Department stores will want your product because:

1. It will pull people into the store and allow them to cross-sell;
2. It will enhance their brand equity by selling a premium product.
3. Margins are normally greater on premium priced products.

Department stores may be wary because:

1. Your products may cannibalize their proprietary product line.
2. They may feel like they are giving too much power to one supplier.

There will probably be backlash from the small specialty shops. This will have to be dealt with diplomatically. Channel conflict is inevitable. A mutually beneficial opportunity exists between the department stores and your client. This will have to be negotiated. The important fact is identifying all of the key issues involved.

Interviewer Notes

- The image of your clients company is premium. They are perceived to have the best products on the market.
- There are two distinct segments of the market. The normal-low end segment and the premium segment.
- Your client has maintained market share in the premium segment.
- The percentage of washers and dryers that has been sold through major department stores has increased from 20% to 60% in the past 20 years.
- Small businessmen own the small specialty shops. They stock all brands and types of washers and dryers.

Practice question 39 – Retail bank

Over the past few years, our client, a retail bank, has gone from one bank in one state to eight banks in eight states. Although some of the banks are profitable, the company as a whole is losing money. Specifically, four individual banks are losing money. How would you analyze this problem?

Suggested Frameworks

This is a profitability question. After pinpointing the problem, you could do a three C's analysis then a four P's analysis. The key question to answer in this case is, "Is bigger better?"

Interviewer Notes

- All of the eight banks are operated autonomously.
- Through expansion, the bank has increased its customer base almost tenfold, but its costs per customer have also increased substantially. Remember that under current banking regulations, you have to operate banks in different states as autonomous units.
- On the costs side you should look at scale issues. Economies of scale are important, especially in the BackOffice and in advertising product lines.
- The increased costs of having a corporate headquarters in addition to individual state/bank top management must be recovered in cost savings through scale economies for this to be a good venture on the cost side.
- On the revenue side, you should look at product lines and margins. Given new competition from investment managers, mortgage banks and credit card banks, it is important that the bank have a wide range of products available for its customers. Size could potentially increase brand equity and trust, which could then be leveraged over a wide product line.

Practice question 40 – Hotel in Puerto Rico
You are the manager of a hotel in Puerto Rico. Over the last two years, the profitability has deteriorated and you need to find a solution. How would you approach this problem?

Suggested frameworks
To learn about the market you will need the three C's first. Once you understand the market and the position of this hotel in it then look at the profitability tree. Once you have identified the cause for the declining profitability, use the 4 P's to improve profitability.

Interviewer notes

- **Three C's**. As the profitability has decreased over the last two years, the interviewee should look for parameters that have changed in this timeframe.
- Company. The middle market hotel is located on one of Puerto Rico's beaches. The hotel does not have its own restaurant as many restaurants are nearby and does not have a pool as the sea is a 400-metre walk away.
- Competition. No new hotels have been built recently, nor have the existing ones change their positioning. It is a normal beach with a normal mix of lower, middle, and upper-class hotels.
- Customer. Customers are mainly people from the US; some are from Canada, almost none from Europe. Average age about 40 to 50. If you want to help the interviewee a lot, you can tell him/her that the customer base has changed from individual tourists to tourists that buy package trips.

- **Profitability Tree.** The focus should be to find out parameters that have changed in the income statement.
- Revenues. Prices are the same, sold room mix is the same (this is often the solution in other cases), the number of rooms sold is the same, people stay the same length of time, and exchange rates are no issue. However, as the new package tours are sold through travel agencies, heavy discounts have to be granted. Revenues in total decreased.
- Expenses. It will be important to hear that the interviewee develops a complete picture of the costs. However, the interviewee should be guided not to loose too much time here. Depending on how the case goes, seasonality (fixed costs) can be made an issue or not.

- **4 P's.** Once the cause of the decreasing profitability has been identified (discounts due to package tours), creativity is necessary to develop solutions:
    - Change distribution channel (e.g. Internet)
    - Pricing strategies
    - Attract new clientele (e.g. seminars, sportspeople etc.)
    - Is it plausible that seminars come here when there is no restaurant? How would you do an investment calculation for a restaurant (lost bedrooms vs. additional income)