

# WHARTON CONSULTING CLUB CASEBOOK December 2010, © Wharton Consulting Club

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#### Introduction

#### **Problem Statement Narrative**

Our client has been in business for close to 90 years. The original founder started in the whiskey business and over time expanded the product line so that today it is a multi-million dollar business with less than 5% of sales coming from whiskey.

The whiskey market in the US (our relevant market) has been declining at 2% over the last 20 years and our client's brand has been declining at the same rate.

While the company has great passion for the whiskey brand, in recent years they have been paying limited attention to it. Last year however, events happened that caused our client to pay attention to their whiskey brand. While sales of the market declined at 2% our client's brand declined by 15%, despite selling 10m bottles.

Our client has come to us to understand what has happened and how to grow the brand back without lowering the profits they were making on it.

#### Overview for Interviewer

To help understand why our client's whiskey brand has declined it helps to use an internal vs. external framework. Possible internal reasons:

- Reduction in marketing spend
- Decline in quality of marketing or product quality
- Product availability (production/supply chain)

Some possible external reasons:

- Negative PR
- New competitor launch
- Increase in competitor marketing
- Pricing effects

#### Information to be Provided Up Front

The information provided in the statement is all the candidate receives at this point. Once the candidate reaches the point of talking about competitors and their products the hand out (next page) should be given.

## **Provided Data**

#### **Competitor Analysis**

Interviews with advertising experts and an examination of competitors' ad pages have shown that while marketing spend hasn't changed significantly, there has been significant changes in prices within the industry.

Brand	Place of sale	Cost to produce	2007 price	2008 price	2009 price
Client	Grocery, Specialty	\$8.00	\$14.75	\$14.75	\$15.00
	stores				
Competitor A –	Specialty stores	\$8.25	\$15.00	\$1 <i>7</i> .00	\$19.00
Premium					
Competitor A – Own	Grocery	\$6.50	Not launched	Not launched	\$9.00
brand					
Competitor B –	Specialty stores	\$8.25	\$16.00	\$17.75	\$19.75
Premium					
Competitor B – Own	Grocery	\$6.50	Not launched	Not launched	\$9.75
brand					

#### Questions to Answer

How could we determine if there has been change in relative marketing spend against our major competitors?

First we need to gather information on our own marketing spend to have a basis for comparison.

Secondly, we need to determine our competitors' marketing spend, which we could do through several sources:

- Internal interviews
- External benchmarking through competitor company reports
- Analyze number of pages in various publications
- Interviews with experts within the advertising and marketing industry After discussions about the industry and the competitors the handout should be given to the candidate and they should be given a couple of minutes to take in the data.

What are the options our client has assuming they want to stay in the whiskey business and how should they price their whiskey brand?

It is important for the candidate to realize that our client's product is a premium product and that is based on the cost to produce. Given this information it would seem that our client needs to try and increase prices in order to be perceived as a premium product comparable to the competitor premium brands.

It would be reasonable to suggest a price of \$19.00-\$20.00 for our client's brand. The candidate should be asked to justify any answer provided.

#### What conclusions can we draw from the table?

We have 2 main competitors, each with two different brands (premium and own brand).

Competitors have been steadily raising prices in their premium category, aiming at a segment of consumers who are willing to pay more. These consumers it seems prefer to buy at specialty stores. It is likely that our competitors have succeeded to capture a lucrative share of the market.

Additionally both competitors have launched this past year "own brands" and selling them through grocery stores. These own brands are significantly cheaper than the premium brands and have a lower cost to produce.

It seems that competitors have been capturing the lucrative top end of the market while also launching new own brands that have captured the price sensitive consumers, effectively squeezing our clients brand out of the market.

#### Math

Once the options have been discussed the following information should be provided:

Based on market research our client believes that if they increase their price to \$20.00 they will be able to sell 8m bottles. The costs of producing whiskey are 75% variable and 25% fixed.

The candidate should now calculate the total profit of the two options to see which one is better. Notice that they all ready know the price today (\$15.00) and the quantity today 10m and this information should not be given again.

#### Today:

$$TR = 10m \times \$15 = \$150m$$
  
 $FC = 25\% \times \$8 \times 10m = \$20m$   
 $VC = 75\% \times \$8 \times 10m = \$60m$   
 $Profit = \$150 - \$20 - \$60 = \$70m$ 

#### **New Pricing Option:**

$$TR = 8m \times \$20 = \$160m$$
  
 $FC = \$20m$   
 $VC = 75\% \times \$8 \times 8m = \$48m$   
 $Profit = \$160 - \$20 - \$48 = \$92m$ 

(The fixed costs do not change!)

Examining the two options it seems that an increase of price to \$20.00 would increase total profits by \$22m an increase of ~30%.

## Final Questions and Conclusions

It would appear that the higher pricing option is very favorable to our client. What complication might arise from such a price increase?

In the short term, we need to be aware of how our competitors react to this move in pricing, branding and advertising. Our move could provoke additional price increases from our competitors leaving us in the same position we were before. We should also be aware of possible difficulties in marketing our brand in the premium category as the third mover.

Further complications could arise given that our changes in our whiskey brand may impact negatively our wider liquor portfolio, if customers who stop purchasing our whiskey brand will also stop purchasing other liquor brands that our client owns.

Lastly we should be careful with the number of 8m bottles as given to us by the client. If this number is too optimistic the results could be significant.

#### Conclusions

#### Recommendation:

Our client should increase its price to \$20.00 per bottle. This increase will generate an additional \$22m in profits, an increase of 30%!

Some potential risks of this move include: competitor response, optimistic data from client and consumer perception of our brand. Some next steps include: Validating data, creating marketing and advertising plan, preparing the market for significant price increase.

#### Introduction

#### Problem statement narrative

Our client in this case is Excavator Mining Co, a large diversified mining company. Excavator is considering developing a mine site to produce copper ore. Excavator has two options for developing the site. Develop alone, or enter a JV with a competitor — Drillhammer Mining Co. In addition, Drillhammer owns a nearby mining site which it could develop to produce copper ore, supplying the same market. Should Excavator develop the mine alone, with Drillhammer, or not at all? What arrangements should be made with Drillhammer, if any?

#### Overview for interviewer

This case has two main components. First, evaluate the financial attractiveness of each option for both Excavator and Drillhammer. Some cost and pricing information will be provided to do this. After this analysis, it should be evident that the JV is the preferred option as it creates the highest overall value for the industry. The second question is how should the value be split between the players under a JV arrangement.

After the candidate presents his/her framework, give candidate the handout containing an overview of the situation. The candidate can then be given cost and pricing as requested.

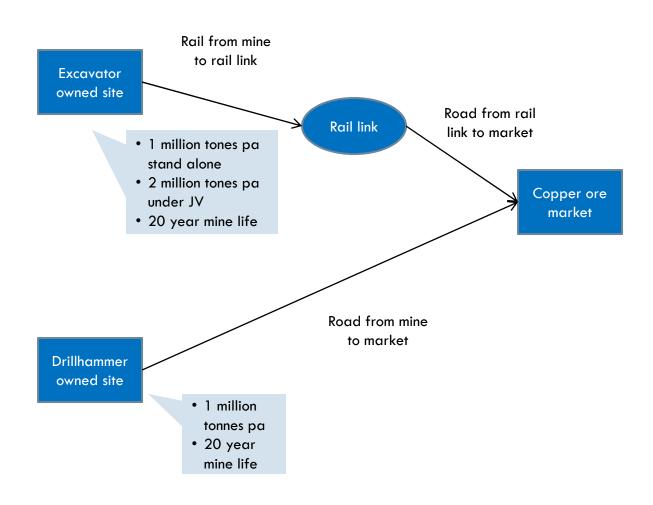
Case Type: Investment decision/JV negotiation

Case Style: Command & Control

## Information to be provided upfront (hand candidate attached exhibit)

The information on the following page is to be given immediately. And provides an overview of the situation. The page that follows shows the calculation that the candidate should be working towards — estimated the value for each player under the different scenarios.

## Financial Analysis of Investment Options



## Financial Analysis of Investment Options

MINE FINANCIAL ASSESSMEN	T			
		Excavator alone	Drillhammer alone	JV at Excavator site
Capacity	Tonnes pa	1,000,000	1,000,000	2,000,000
Mine life	Years	20	20	
Copper ore price	\$ per tonne	50	50	
Operating Costs				
Mining costs	\$ per tonne	20.0	28.0	15.0
Rail transport costs	\$ per tonne	10.0		10.0
Road transport costs	\$ per tonne	5.0	25.0	5.0
Total operating costs	\$ per tonne	35.0	53.0	30.0
Operating profit	\$ per tonne	15.0	(3.0)	20.0
Total profit over mine life	\$ Millions	300.0	(60.0)	800.0
Capital investment	\$ Millions	(180.0)	(140.0)	(340.0)
Total Value	\$ Millions	120.0	(200.0)	460.0

#### **Discussion Points**

#### Key discussion points

#### Industry overview

The overall industry is not particularly relevant here, so steer the candidate away from any five forces analysis or similar

#### Financial calculations

- Provide information as requested by candidate
- Ignore time values of money
- A relevant question is why the mine production at Excavator's site is larger under the JV this can be attributed to capital requirements for Excavator alone, or regulation

#### JV discussion

- Once the value of each option has been calculated, it is clear that the JV is the highest value option
- The next question is what JV arrangement would be acceptable to both parties? Is a straight 50/50 split (\$230M) fair?
- A discussion should follow around how each player would view the JV and what their next best alternatives are (we assume neither has copper ore mining options beyond those here).
- Without the JV, Drillhammer will not invest in its site (loss-making) and so the value it receives is 0. Excavator will invest alone, and will receive \$120M of value. The total value for both players is \$120M.
- With the JV, the total value for both players is \$460M. So the JV adds \$460M 120M = 340M for the industry. This \$340M should be split evenly between the two parties vs their next best alternative. Drillhammer receives 170M + 0 = 170M. Excavator receives 170M + 120M = 290M. This is the most likely outcome of a negotiation between the two parties.
- Other broader discussion points:
  - History of JVs between the two parties?
  - Alternative use for the mine site could it be sold for more than JV value?
  - Potential for infrastructure sharing between the two sites?

#### **Discussion Points**

Sample Recommendation Excavator should pursue the JV and settle for not less than \$290M worth of value from the site.

#### BONUS

Sensitivity to pricing assumption:

• Forecasting the Copper ore price over the next 20 years is a difficult exercise - how would a higher or lower copper price affect the decision? What if prices were high enough for Drillhammer's site to be profitable?

## Case 3: Telecom Service Provider

#### Introduction

Our client is a telecommunications service provider. They have been experiencing customer retention problems. What do you think can be drivers of such a problem?

#### **Drivers of Retention Problems**

- Voluntary
  - Deliberate
    - •Technology (Handsets, Features, New Technology)
    - •Economics (Per minute, Activation, Subscription fee)
    - Quality (Coverage, Call quality, Customer Service, Billing)
    - Social (Image, Family and friends)
    - Convenience (Internet, Retail Channels)
  - •Incidental
    - Finances
    - Location
    - Major life changes
- •Involuntary:
  - Fraud
  - Non payment

#### Information to be Provided If Asked

Information to be provided if asked:

There are 3 major players in the market

Our client has the higher coverage on average

Its voice services are more expensive than other providers.

## Case 3: Telecom Service Provider

#### Question 2

#### Question 2

A recessionary environment is expected next year and churn rate is expected to increase in favor of cheaper service providers. To maintain the current number of subscribers, how many customers should the firm steal from its competitors?

#### Information to be Provided If Asked

Market size: 100M Market growth rate:1%

Market shares for the companies:

Our client: 50% Firm A 30% Firm B 20%

Current churn rate 3%

Recession increases churn rate by 50%

#### Calculations

- •Number of current subscribers: 50% of 100M= 50M
- •Assuming that our client gets 50% of new subscribers as well: 0.5 M new customers
- •Churn rate this year is 3%\*1.5=4.5%
- $\bullet$ 50M(1-4.5%)+0.5M+ Customers to be stolen from competitors=50M
- •47.75+0.5 + Customers to be stolen from competitors =50M
- •Customers to be stolen from competitors=1.75M

## What can our client do to decrease the churn rate?

#### Recommendations:

- •New price plans. Customized price plans for each customer/segment
- •Predict defection. Create an offer for the possible defectors
- •Sell them other products. Create switching barrier
- •Thank and survey existing customers
- •Send customized product and service offerings
- •Customize the response and communication to customers
- •Review usage real time
- •Set up referral programs
- •Develop a loyalty program
- •Watch the seasonal churn
- •Improve coverage: Number one reason for churn

## Case 4: Major Magazine Publisher

#### Introduction

#### Problem Statement Narrative

Your client is a Major Magazine Publisher. Currently, they own a Women's magazine (similar to Cosmopolitan) and a Personal Finance magazine (similar to Fortune). They are considering launching a new magazine about Fine Living, targeted to Wealthy Males (similar to GQ). What is the market size, and should they do it?

#### Overview for interviewer

This is a straightforward case, covering Profitability, Go/No Go Investments and Market Sizing. Information will likely be given at the beginning of the case, and then more throughout the case, as calculations are made.

#### Information to be given with handout

Is there a goal that the company is trying to reach with the launch of the new magazine?

Yes, the company would like to hit \$10M in annual revenue.

Does the company have the resources to launch a new magazine?

Yes.

Is the new magazine offered only in print, or online as well?

It will be offered only in print.

In what ways can the magazine be purchased?

It is offered as a yearly subscription - 12 issues per year.

It can also be bought retail - one issue at a time.

What is the target geography for the magazine?

It will be offered in the U.S. only.

What are the costs of the magazine?

Costs can be ignored in this analysis.

## Case 4: Major Magazine Publisher

#### Market Size

#### Potential approach to solving the case

#### Q1. Market Size

- Q2. Profitability
- Q3. Recommendation (Risks and Other Considerations)

#### Q1: What is the market size (in people)?

#### Information to be given if asked:

300M people in the U.S.

50% Male  $\rightarrow$  150M males in the U.S.

Age demos split evenly (Age 0-20, 21-40, 41-60, 61-80)

Market research shows that 10% of Age 21-40 demographic is Wealthy, that 10% of Age 41-60 is Wealthy and that 5% of Age 61-80 is Wealthy

People under 20 are too young for the magazine

#### Calculations:

Can be split evenly by age group:

Age 0-20:  $25\% \rightarrow 150M(25\%) = 37.5M$ Age 21-40:  $25\% \rightarrow 150M(25\%) = 37.5M$ Age 41-60:  $25\% \rightarrow 150M(25\%) = 37.5M$ Age 61-80:  $25\% \rightarrow 150M(25\%) = 37.5M$ 

Can be broken down further by target demographic

Age 21-40: Assume that 10% are Wealthy  $\rightarrow 37.5M(10\%) = 3.75M$ Age 41-60: Assume that 10% are Wealthy  $\rightarrow 37.5M(10\%) = 3.75M$ Age 61-80: Assume that 5% are Wealthy  $\rightarrow 37.5M(5\%) = 1.875M$ 

Total market size = 3.75M + 3.75M + 1.875M = 9.375M people, or rounded to 9.4M people

# Case 4: Major Magazine Publisher Profitability

#### Potential approach to solving the case

Q1. Market Size

Q2. Profitability

Q3. Recommendation (Risks and Other Considerations)

#### Q2: What is the market size (in \$)?

#### Information to be given if asked:

There are two ways that the magazine can be purchased.

Subscription: 12 issues per year, \$3 revenue/issue

Retail: Assume 4 issues per year, \$5 revenue/issue

Assume that the market is split 50/50 subscription and retail.

#### **Calculations:**

9.4M(50%) = 4.7M subscribers, 4.7 retail customers

Subscription revenue = 4.7M(12 issues)(\$3) = \$169.2M

Retail revenue = 4.7M(4 issues)(\$5) = \$94M

Total market size = \$169.2M + \$94M = \$263.2M

## Case 4: Major Magazine Publisher

### Recommendation

#### Potential approach to solving the case

- Q1. Market Size
- Q2. Profitability
- Q3. Recommendation (Risks and Other Considerations)

#### Q3: Should they do it?

#### Information to be given if asked:

Market is not growing

Competition is made up of:

GQ: 60% of the market

Other magazines/fragmented: 40%

Survey data shows that we can capture 5% of the market

#### Calculations:

Potential revenue for client = 5%(\$262.2M) = \$13.16M

## Case 4: Major Magazine Publisher

## Recommendation

Recommendation	The client should move forward with the launch of the new magazine. We expect to get \$13.6M in revenue per year, which is higher than the stated goal of \$10M per year.
Risks	Costs need to be less than \$3.6M. Costs can include fixed cost for a new manufacturing plant, R&D for new topic, etc  Need to consider cannibalization of Finance magazine revenues - may be targeting the same audience/have content overlap.  Cost synergies for client may be able to be achieved by adding another magazine to the portfolio. Synergies may include manufacturing, marketing and distribution.

#### Introduction

#### **Problem Statement Narrative**

Our client a major hotel chain. They are considering acquiring an existing hotel in Tulsa, OK for \$20M and expect an ROI of 20% over three years. Should they make the investment?

#### Overview for interviewer

This is a profitability case. Discussion should quickly turn to P=R-C and the various drivers of costs and revenues.

On the revenue side, price and volume (hotel occupancy) should be considered, with some discussion about different price and occupancy scenarios — is this a business hotel or a vacation location? Do occupancy rates/prices vary throughout the week? Seasonally? The interviewee should also include other sources of revenue, such as a restaurant in the hotel, events, etc.

On the cost side, fixed and variable costs should be discussed, such as hotel upkeep, utilities, labor, insurance, booking system etc.

#### Additional factors:

Changes in the economy and hotel industry that might affect number of guests or guest WTP

Competitor response and potential for new entrants into the market Specifics about our client such as synergies with other hotels in the chain, name recognition, hotel management expertise

Risks such as lower than expected demand, entry of new competitors, etc..

#### Information to be given with

Once the interviewee has explained their framework, give them the following page. Also tell them the following:

Assume single occupancy (only one guest per room).

If several rooms are reserved at once (for a group traveling together) a discounted group rate is given to each group member.

Assume 50 weeks/year or 350 days/year in your calculations. Round yearly profits to the nearest million.

Assume no seasonality in demand. Assume no growth. Ignore time value of money.

#### Information sheet

- $\,\square\,$  On weekends Tulsa has 600 visitors/day and 50% stay in our hotel
  - (The rest stay with friends/family, or at small bed and breakfasts)
- Group room rate is \$120/night
- Individual room rate is \$150/night
- On weekends 75% of guests are individuals (i.e. not groups)
- On weekdays 40% of guests are individuals
- Weekend hotel occupancy rate is 60%
- Weekday hotel occupancy rate is 75%
- □ It costs the hotel \$30/room/night for each occupied room
- Fixed costs for the hotel are \$5750/night
- Assume no growth, ignore time value of money

#### Question 1

#### **Profitability Question**

Should our client make the investment? (Do not remind interviewee that the client plans to invest \$20M, or that they expect an ROI of 20% over three years, this information was given up front and should be remembered)

#### Solution Method 1

#### Weekend days:

600 town visitors \* 50% stay at our hotel = 300weekend guests Average weekend rate=0.75\*\$150+0.25\*\$120=\$112.5+\$30=\$142.5

Average weekend day profit /guest= \$142.5-\$30 = \$112.50 **Weekdays:** 

Hotel is 60% occupied on weekends with 300 guests = 500 rooms in hotel

On weekdays, hotel is 75% occupied = 500\*75% = 375 guests Average weekday rate=0.4\*\$150 + 0.6\*\$120 = \$60+\$72 = \$132

Average weekday profit / guest = \$132-\$30 = \$102

#### **Total profits:**

 $\pi/\text{week} = (300*\$112.5*2) + (375*\$102*5) - (5750*7) = \$218,500$ 

 $\pi/\text{year} = 50 \text{weeks*}\$218,500 = \$10,925,000, \text{ round to }\$11M$  $\pi$  over 3 years (assuming no growth/TVM) = 33M 20% ROL on 20M is 4M, so require \$12M  $\pi$  over 3 years to mee

20% ROI on 20M is 4M, so require \$12M  $\pi$  over 3 years to meet goal.

\$33M>\$12M, so invest!

#### Solution Method 2

#### Weekend days:

600 town visitors \* 50% stay at our hotel = 300weekend guests

Revenues from individuals: 300guests\*75%\*\$150/room = \$33,750

Revenues from groups: 300guests\*25%\*\$120/room = \$9,000

Variable costs: 300 guests\*\$30/occupied room/day = \$9,000

Fixed costs=\$5750/day

Profit/weekend day = (\$33750 + \$9,000) - \$9,000 - \$5750= \$28,000

#### Weekdays:

Hotel is 60% occupied on weekends with 300 guests = 500 rooms in hotel

On weekdays, hotel is 75% occupied = 500\*75% = 375 guests

Revenues from individuals: 375guests\*40%\*\$150/room = \$22,500

Revenues from groups: 375 guests\*60%\*\$120/room = \$27,000

Variable costs: 375 guests\* \$30/occupied room/day = \$11,250

Fixed costs = \$5750/day

Profit/weekday = (\$22,500 + \$27,000) - \$11,250 - \$5750 = \$32,500

#### **Total profits:**

 $\pi/\text{week} = 2(\$28,000) + 5(\$32,500) = \$218,500$ 

 $\pi/\text{year} = 50 \text{weeks*} \$218,500 = \$10,925,000, \text{ round to } \$11M$ 

 $\pi$  over 3 years (assuming no growth/TVM) = 33M

20% ROI on 20M is 4M , so require \$12M  $\pi$  over 3 years to meet goal.

\$33M>\$12M, so invest!

#### Question 2

#### **Average Rate Question**

Now instruct the interviewee to disregard the numbers given in question 1 and use only the information given in the following question: Suppose that on each weekend day, 100 rooms are occupied at a group rate of \$100, and 300 individual rooms are occupied at a rate of \$150. On each weekday, 200 rooms are occupied at the group rate, and 200 at the individual rate. There are 500 rooms in the hotel. It costs the hotel \$30/room/night for each occupied room.

What is the average revenue per customer per day for any day of the week? Round your answer to the nearest 10 dollars (e.g., if the room rate is \$147, round your answer to \$150)

#### Suggested Solution

Average weekend day: (100\*\$100 + 300\*\$150)/(100+300) = (\$10,000+\$45,000)/400 = \$55,000/400 = \$137.50Average weekday: (200\*\$100) + (200\*\$150)/(200+200) = (\$20,000 + \$30,000)/400 = \$50,000/400 = \$125.00Overall average rate: (2\*\$137.5 + 5\*\$125)/7 = (\$275+\$625)/7 = \$900/7 = \$128.57 = \$130 revenue/room/night

#### Question 3

#### **Strategy Question**

Now suppose that our client would like to increase revenues at the hotel. What would be some ways that they could accomplish this? Assume that costs are held constant.

#### Suggested responses

The goal is to brainstorm ideas to increase revenues. Push interviewee to provide as many ideas as possible. Answers might include:

Increasing room price, perhaps positioning hotel as a luxury destination

Partnering with a local convention center to attract large groups of guests, or building their own conference center

Accommodating wedding receptions or other large social gatherings

Conducting an advertising campaign- with a travel agency, online, on TV, etc.

Expanding the hotel to accommodate more guests

Opening a restaurant in the hotel, or adding additional dining options if interviewee assumed there was already a restaurant

#### **Breakeven Question**

In order to increase profits, your client is considering launching a three year advertising campaign. The campaign will cost \$1.5M. Use information from question 2 in your calculations. Do not use any information from question1. Ignore fixed costs.

How many additional guests will need to stay at the hotel for our client to break even?

Should they launch the campaign?

#### **Breakeven Question**

1.5M over 3 years = 500,000 per year spent on the campaign From question 2a, the average revenue/room/night = 130. Variable cost/room/night = 30

variable cost/room/night — \$3

Profit/room/night = \$100

500,000/100 = 5,000 additional guests/year

5,000/350 = about 15 additional guests per night

Since the hotel occupancy is 400 on both weekends and weekdays, and the hotel has 500 rooms, this increase seems reasonable

#### Recommendation

#### Recommendation

Our client should acquire the hotel because its projected profits exceed the expected ROI by \$21 M.

However, if the \$20M investment could be used for another project with an even higher ROI, the other project should be prioritized ahead of this one. (Bonus answer!)

Our client should also launch the advertising campaign because the required additional 15 guests per night to breakeven seems reasonable. Some other options to increase revenues might include partnering with a conference center or contracting with a travel agent to attract additional guests.

#### Risks

Some potential risks include:

National or global economic downturn could reduce business travel and tourism in general A new unfavorable local economic environment in Tulsa could lead to businesses leaving the area and reducing business/visitor traffic (e.g. higher local taxes on businesses)

A competitor could build a large hotel in Tulsa

Government could impose new taxes on hotel profits, reducing projected ROI

#### Introduction

#### Problem statement narrative

The CEO of a major client has requested a short-term study examining a small part of the client's product portfolio. The company has a small division that manufactures automatic drip coffeemakers for the US and Canadian market. The division has been steadily producing coffeemakers for 20 years, and has made few changes to the business over its history. The client has always enjoyed healthy margins for the coffeemaker division, and annual volumes have been steady. Recently, however, the coffeemaker division's profits have been declining. The CEO wants to understand what is going on. What **broader insights** would you want to explore first to answer the CEO's question?

#### Overview for the interviewer

Although this looks and feels like a profitability case (which it ultimately is), the point here is to push the interviewee to develop a framework beyond the standard profitability setup.

Additionally, the case is meant to train the interviewee to listen to the question being poised: the interviewer is asking for "broader" insights, not basic profitability analysis.

If the interviewee tries to go down the typical profit = price x volume – fixed + variable costs, push him or her a little harder to think bigger picture. This case was done at the partner level, and thus involves a little more ambiguity.

#### Information to be provided (if asked)

Regarding changes in fixed or variable costs: the production lines and facilities are mature, the business has been steady, overall production is rather efficient given the advantages of a long-term steady state. No major changes to fixed or variable cost inputs have occurred recently.

*Production:* All production occurs at a facility in Michigan. The plant is operating at about 90-95% capacity.

Volume: Relatively constant.

*Product Mix:* The division produces 4-cup, 10-cup, and 12-cup coffeemakers. The overall mix between these categories has been fairly consistent.

#### **Potential Frameworks**

#### Candidate may propose action in:

#### Market

How are competitors performing? Have new competitors entered? Have new substitutes emerged? Are we missing new technological developments?

Where are our prices relative to our competitors?

#### Customer

Are customer preferences changing?
Has product mix changed?
Are customers more or less price sensitive than before?
Have customers become more concentrated?

Are customers shopping in new channels?

#### Channel

How do we reach our customers?
Has distribution changed?
Are retail outlets changing?
How are sales prices established?
Are channels consolidating?

#### Market

There have been some new entrants, primarily for very low priced coffeemakers. The client's coffeemakers are mid-price range and there are several other competitors at this price point. New technology and substitutes are minimal. Try to not let the candidate go too far down this area, the real issues are in distribution.

#### Customer

Volumes by coffeemaker size have been relatively steady, indicating that customer preferences have not undergone dramatic changes. Again, try not to let the candidate go too far down this path.

#### Channel

Channel is the real issue. When the candidate reaches this area, present them with exhibit 1.

# Case 6: The Coffee Grind Exhibit 1

#### Number of coffeemakers Sold (in thousands of units) by Retailer Category

	2010			
National Chains	4-cup	10-cup	<b>12-cup</b>	Total
Best Buy	10	12	12	34
Target	29	38	17	85
Walgreens	1	1	1	4
Sears	1	6	7	14
Office Max	-	6	10	15
Kohl's	1	3	2	6
Bed, Bath, & Beyond	8	8	7	24
Costco	15	16	19	50
BJ's	12	14	47	73
Walmart	41	76	71	188
Total National	119	179	194	492
Memo: Percent of Sales	15%	23%	25%	63%
Non-National Retailers	4-cup	<u>10-cup</u>	12-cup	Total
Grocery	19	25	36	80
Medium Retailers	36	24	25	85
Smaller Retailers	38	21	15	74
Other	10	20	21	51
Total Other	103	90	97	290
Memo: Percent of Sales	13%	12%	12%	37%
Total Sales	222	269	291	782
Memo: Percent of Sales	28%	34%	37%	100%

2009						
	4-cup 10-cup 12-cup Total					
	33	12	12	9		
	83	17	38	28		
ļ	4	2	2	1		
ļ	14	7	6	1		
,	16	10	6	-		
,	6	2	3	1		
,	25	8	9	9		
	52	19	16	17		
,	66	42	13	11		
•	167	68	65	34		
,	466	187	168	111		
6	61%	25%	22%	15%		
_	Total	12-cup	<u>10-cup</u>	4-cup		
)	90	37	30	23		
)	90	20	25	45		
,	53	19	24	10		
	61	25	24	12		
	293	101	103	89		
6	39%	13%	14%	12%		
)	760	288	272	200		
6	100%	38%	36%	26%		

4-cup	ın 10 aun	40	
	ib To-cabl	12-cup	Total
9	9 12	12	33
28	28 38	17	84
1	1 2	2	5
1	1 6	7	14
-	6	10	16
1	1 3	2	7
10	10 9	8	27
17	17	21	56
10	10 12	38	60
28	28 54	60	142
107	7 158	178	443
14%	1% 20%	23%	57%
4-cup	<u>10-cup</u>	12-cup	Total
26	26 32	39	97
45	15 31	33	108
16	16 25	20	61
12	12 29	29	70
99	9 117	120	336
13%	3% 15%	15%	43%
206	6 275	298	779
	5% 35%	38%	100%
1	158 20% 0-cup 32 31 25 29 117	178 23% 12-cup 39 33 20 29 120	443 57% Total 97 108 61 70 336

2007	2006	2005	2004	2003
Total	Total	Total	Total	Total
33	32	32	31	30
84	82	80	78	79
5	5	5	5	5
15	15	16	18	36
17	17	18	19	20
7	7	7	7	8
29	30	32	33	34
59	62	67	69	25
57	52	48	44	20
125	110	93	83	99
429	414	398	388	357
52%	52%	50%	46%	46%
Total	Total	Total	Total	Total
116	109	110	120	104
101	109	120	114	102
100	91	95	112	106
76	70	75	104	101
393	379	400	450	413
48%	48%	50%	54%	54%
822	793	798	838	770
100%	100%	100%	100%	100%

#### Questions for Exhibit 1

#### Questions for Exhibit 1

Opening: We were able to get some quick shelf data on coffeemaker sales by channel.

#### Question 1: What conclusions can you make from this data?

- The candidate should identify that National chains increasingly make up a greater share of the client's sales
- Bonus points if they note that one retailer, Wal-Mart, buys 25% of their coffeemakers

#### Question 2: What are implications for this shift towards National retailers?

- Larger chains have more bargaining power, and are putting more pressure on the division to provide discounts on its products based on volume, which is squeezing the company's margins.

#### Math Test

#### What percent of the market do you think the client has?

- The candidate needs to start by estimating the number of coffeemakers sold in the US and Canada annually:
  - Any logical approach is acceptable. A recommended approach is to start with the population of households in the US and Canada (there are approximately 100k households in the US, 10k in Canada), estimate the percent that have electric coffeemakers (it's about 65%), and that coffeemakers are replaced about every 5-10 years (can use 7 as an average). Give bonus points if candidate considers other places with coffeemakers (offices, hotels, etc..).
  - In the end, the candidate should have an estimate in the range of 10 15 million coffeemakers sold annually in the US and Canada.
  - Therefore, the client has about a 5-8% market share, and is a relatively small player, so the company has little bargaining leverage with retailers.

## Follow-up Questions

#### Follow-up Questions

**Question:** During a brief meeting with the CEO, you share your early insight that national retailers are squeezing the company's margins. He states that the dishwashers and cooking appliances division recently launched a website to sell its products. He wants to know if a website would also work for coffeemakers. Do you think it will work?

Answer: Any answer here is acceptable if the candidate can create a logically structured argument to support his or her answer, although the candidate should at a minimum identify a couple of risks. Additionally, the candidate should want to know more about the possible profitability of a website.

#### Possible reasons for a website (sample):

Profitability: allows client to capture the margin that presently goes to the retailer

Channel: reduces client's dependency on national retailers, could add additional volume

Company: the company already has an existing website for dishwashers and cooking appliances, so capabilities may exist

#### Possible reasons against a website (sample):

Profitability: need to understand economics (how expensive are the fixed costs?)

**Customer:** coffeemakers are more of an immediate purchase decision than dishwashers or ovens, customers may not want to wait for shipping times for online purchases

Competition: may face increased competition online from websites such as Amazon.com

**Channel:** customers may already be purchasing our coffeemakers from our retailers on their websites, risk of retailers retaliating by pulling our products from their shelves

Company: the coffeemaker division may not have the expertise or skills needed for online marketing, sales, shipping, etc..

#### Math Question #2

#### Math Question #2

**Question:** Given the following information we've collected, what percent of the company's sales would the client need to achieve for the website to break-even?

The interviewer should tell the candidate the following:

- Annual website costs: \$500k
- Additional marketing costs: \$300k
- Average retail price of coffee maker: \$60
- An additional \$4 per coffee maker will be required for handling sales through the website
- The customer pays for the cost of the shipping

The interviewer should only provide the following when asked:

- The margin on the coffee makers is 40%

#### **Answer**

With a margin of 40%, the cost of producing the coffee maker is \$36 ( 40% = (\$60 - COGS)/\$60)

Therefore the profit per coffee maker is \$24 before the \$4 extra handling cost, and \$20 after the extra cost is included.

The total cost of the website is \$800k

Break-even volume = \$800,000/\$20 = 40,000 coffee makers

The client sells approximately 800k coffee makers annually, so about 5% of the clients volume

## Conclusion and Wrap-up

#### Conclusion

**Question:** The CEO really appreciates all the work you've done so far on identifying the issue with national retailers squeezing margins and the breakeven analysis on the website. He would also like your insight on other possible ideas. What other solutions might you suggest?

#### Answer:

Anything here is acceptable as long as its reasonable; the idea is to push the candidate's creativity. After the candidate has provided a few options, continue to ask "what else" until the candidate cannot produce any more ideas (McKinsey often uses this type of questioning during its first and second round interviews).

#### Sample answers:

- Investigate selling the division to another coffeemaker
- Move production overseas to increase margins
- Investigate purchasing other coffeemaker manufacturers to gain leverage with retailers
- Consider exclusive retailing rights to one distributor
- Increase marketing efforts to create a pull-strategy from customers to increase leverage with suppliers
- Seek other channels (Starbucks, hotel chains, etc..)
- Consider international expansion
- Increase focus and attention on small to medium retailers
- Consider raising prices to offset margin loss (but with a further investigation of customer price sensitivity)

Final question: Ask the candidate to wrap up the case.

Recommendation: The candidate should either recommend the website or another solution identified above.

**Risks:** In his or her conclusion, the candidate should mention risks such as competition from other websites, retaliation by retailers, risk of moving production overseas, etc..

## Case 7: FoodCo

#### Introduction

#### Problem statement narrative

Our client is a private equity firm which has invested in FoodCo, a family-owned \$19M branded frozen ethnic foods manufacturer operating out of the Northeast. They would like our help to determine how FoodCo can triple their profitability over the next 2 years.

#### Overview for interviewer

The interviewee may ask some clarifying upfront questions related to the goal of tripling profitability, and then they should develop a framework of potential areas to explore. This will likely be divided into areas such as the external Market, Revenues, and Costs.

#### Additional information related to the client's goal

This information may be provided upon request:

- The \$19M figure is revenues
- Profit is currently 3M (so the target is 3M \* 3 = 9M)

## Case 7: FoodCo

## Profitability enhancement

#### Brainstorming ideas for increasing Profitability

The candidate should present a framework to tackle the problem.

Market: Assume that there are no major changes.

#### **Revenues**

- Price: we don't have any flexibility; benchmarking has determined that the ideal price is being charged to customers.
- Revenue Streams: For the purposes of this case assume that we produce ethnic food sold in "cups" e.g. a cup of noodles. This is the sole revenue generating stream.
- Quantity
  - Increasing this and expanding is an option, but what are the implications?
  - We can't build more operations centers. "We know that there is a lot of unmet demand but we are extremely capital constrained and can't look to increase production by opening a new plant."
- Other ideas
  - Expanding nationally through retail and food service channels
  - Expanding into new products, customers, and channels organically or through acquisitions

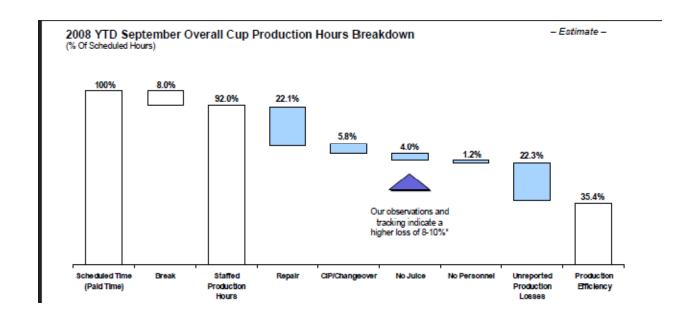
Point the interviewee towards efficiency gains through cutting costs

#### Costs

- Have the interviewee brainstorm a list. These could include food materials, storage (including refrigeration), logistics, labor, and packing materials
- Once the candidate comes up with a preliminary list of costs, say that our team found that a majority of costs could be categorized into four areas: Labor (50%), Equipment (25%), Administrative (20%) and Other (5%)
  - Ask them which area they would target to find savings. This should point to labor as is this more controllable and an unusually large cost driver for this type of business. Show the following chart.

## Case 7: FoodCo

## Profitability enhancement



#### Prompt: What are some ideas to improve efficiency?

The key should be to reduce repair time, which is controllable. Ask for further ideas of how to do this.

Indicate that through training and reconfiguration of equipment we can reduce repair time to 5% if we invest \$500,000. Should we do this?

#### Answer:

Labor Cost Base is \$19 - \$3 = \$16. \$16 \* 50% = \$8M

Savings from reduction = 22% - 5% = 17%. 17% \* \$8M = \$1.36M

So yes, we should invest.

# Case 7: FoodCo

## Follow up question

#### Bonus

You may want to push the candidate here if they don't realize this -- efficiency savings translate into higher production volumes. Ask them to calculate what this increase would be and how it translates to revenues. For simplicity assume that all savings (in percentage terms) translate directly to the same % increase in volume (e.g. 17%).

Revenue Growth = \$19M \* 1.17 = \$22.23M

#### Wrap-up

Ask for the overall recommendation. Sample:

By reducing repair time through training and equipment reconfiguration, we can both reduce costs and grow revenues by 17%. After the \$500K investment, this means a total of roughly \$7M profitability. This is not enough to reach the two year target, so we would have to look at other sources/options for growth and expansion.

## Introduction

#### **Problem Statement Narrative**

Your client is a candy manufacturing company that has been facing declining profit margins. The CEO has reached out to us to figure out why and what they should do about it.

#### Overview for interviewer

This is a relatively straight-forward case, which includes the following: discussing profitability drivers, calculating profitability of the client versus competitors, discussing opportunities to increase revenues and decrease costs, and a conclusion. If they ask as a follow-up to the question to the problem statement whether declining profitability is an industry specific issue or a company-specific issue, highlight that the company has been facing issues.

## Potential Issue Tree and Approach to Solving the Case

#### Solution

#### Industry drivers of profitability:

- Market size and growth,
- Customer trends
- Competitors

#### •Profitability of the company:

- Revenues (price and volume),
- Costs (fixed and variable),
- Think of revenue and cost by customer segment or product type

#### •Profitability of competitors:

- Revenues (price and volume)
- Costs (fixed and variable)
- Think of revenue and cost by customer segment or product type

## Follow-up and Guidance to the Interviewer

#### Industry drivers of profitability

# Q: What do you think are the general trends in the industry?

Answer guidelines:

- •General brainstorming to test business intuition of the interviewer, i.e., candy manufacturer probably steadily growing at inflation, if anything probably declining due to more health conscious players;
- •There are a lot of big players like Hershey in this space so it is likely a highly competitive market
- •At the end of the discussion (if they haven't asked already), clarify that the industry itself has sustained higher profit margins than our client.

#### Profitability of the company

# Q: What do you think are the main drivers of revenues in this industry?

Answer guidelines: Again test for general brainstorming skills and business intuition
•Provide details about our clients' revenues:

- Pricing has been relatively steady and so has been sales
- Our client plays in a more niche part of the candy segment that they have not been impacted by the rise in the more health-conscious consumer as it is particularly liked by children
- Our client actually commands a price premium, most of our competitors have prices that our 10% lower than our client.

Q: (When the interviewee moves onto the cost side, ask:) What do you think are the main drivers of cost?

Answer guidelines: Again test for general brainstorming skills and business intuition. Keep in mind amount of time left and transition to next question appropriately.

#### Profitability of competitors

Q: We will look into costs in a moment. However, we have an interim meeting with the client and he has asked us a very specific question. Our client's profit margins are 10%. He believes the competitors' profit margins are higher and wants us to calculate the difference in profit margins. How would you go about doing that? (Transition to the competitor profitability section)

#### Answer guidelines:

- •On the revenues side you have already mentioned that our client commands a price premium, as competitors' prices are 10% lower. If the interviewee asks again, give it to them.
- •Costs side: Competitors' costs are 20% lower
- •Calculate the profit margins of competitors relative to our client

## Basic calculation

#### Overall approach, good shortcuts & solution

Question 1: Compare profit margins of client versus competition

Profitability of our client:

- •Assume our client's price is \$1.00.
- •Hence, our client's profitability is: \$1.00 times 0.10 (10%) = \$0.10.
- •This means that our client's cost is: \$0.90

Profitability of our competitor:

- •Competitor's price is 10% lower than our client: \$1.00 \* 0.90 = \$0.90.
- •Competitors cost is 20% lower than our client: \$0.90 \* 0.80 = \$0.72
- •Competitors profit is: \$0.90 \$0.72= \$0.18
- •Competitors profit margin: \$0.18/\$0.90= 20%

#### Instructions for interviewer:

If your interviewee is struggling, propose the trick to assume the price is \$1.00. This will make the math simpler. The answer should be: the competitor's profit margin is 20%, 2X higher than our client

# Case 8: Candy Manufacturing Identifying issue

#### Overall approach, good shortcuts & solution

Question 2: What do you think the main reason is that competitors are more profitable?

It is a difference in costs as their revenues are lower.

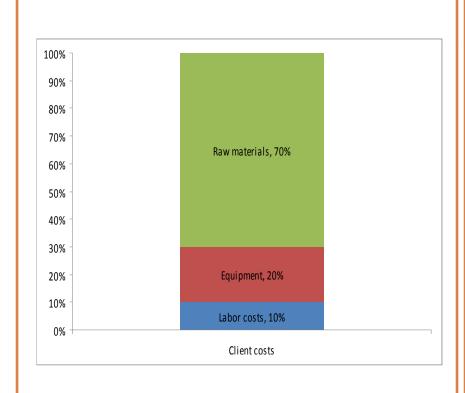
Follow up question: interviewer should move towards understanding the major cost drivers that could be driving the difference.

#### Instructions for interviewer:

- •First ask the interviewee, what they think the main reason is?
  - It is a difference in costs as their revenues are lower.
  - However, guide them to this if they do not initially say this.
- •Follow-up question to interviewee: What would you want to know to understand the difference between competition and our client's costs?
  - Guide the conversation to say they would want to understand the major cost drivers that could be driving the difference.
  - Once the conversation comes to the point show them the Exhibit on the next page and ask them: What do you see based on this graph:

# Case 8: Candy Manufacturing Exhibit

#### Breakdown of costs for the client:



#### Instructions for interviewer:

Key things the interviewer should notice from the graph:

- •Raw materials are the highest percent of costs; this could be primarily what is driving the difference between the client and its competitors; also, this would be where there is most leverage for our client to reduce costs.
- •Equipment is the next highest; unless there are significant differences between the client and its competitors' equipment this won't drive down our client's costs.
- •Labor costs are the smallest part of our client's cost; even if the client could reduce it impact would be limited
- •Hence, raw materials would be where the client has the biggest opportunity to reduce costs and increase profit margins vis-à-vis competition (Make sure the interview reaches to this point either by themselves or by guiding them)

## Analyzing cause

#### Overall approach, good shortcuts & solution

Question: What could be the reasons why raw material costs could be higher for our client than its competition?

#### Instructions for interviewer:

Pose this as a general brainstorming question. Continue the discussion until these key points are addressed:

- •Supplier bargaining power: Function of supplier concentration relevant to number of customers
- •Volume purchased per given supplier: Function of total costs and the number of aggregate suppliers client uses for a particular product

Interviewee should dive further into these points to extract the information on the right hand side. Interviewer ask for interviewee's perspective based on the additional information

#### Provide information if asked

- •Competitors are slightly larger than our client
- •There are a lot of supplier options for a given raw material
- •Given our client is the result of a lot of mergers, they have a lot of local suppliers for the same raw materials

## Bonus question: Financial analysis

#### Overall approach, good shortcuts & solution

Question: By approximately what percentage would raw materials cost have to be decreased to match our clients' competitors' profit margins?

Our competitors' profit margins are 20%. For our clients' sales price of \$1.00, that means that the new profits needs to be \$0.20 and hence, costs \$0.80. Current costs are \$0.90. So we need to reduce costs by \$0.10.

Raw materials cost is 70% of total current costs. 0.90 \* 0.70 = 0.63. So, we need to reduce this by 0.10 so that would be a 0.10/0.63 = 16% decrease.

A stand-out candidate should say: They would need to reduce raw materials costs by 16%, which seems a reasonable target.

#### Introduction

#### Problem Statement narrative

The last period financial figures just came out, and Chickflix.com's gross profit margin has decreased for two years in a row. The CEO has hired you to recommend a solution.

#### Overview for interviewer

The unique feature about Chickflix is that its variable cost are not a function of sales volume, but of other drivers (such as average number of movies returned per month)

Interviewee should show understanding of the revenue and cost structure, identify the increase in cost and recommend a course of action

Case type: profitability

#### Information to be provided upon request

Chickflix.com is a online website similar to Netflix. What's unique about Chickflix is that it targets only women and carries a majority of titles that could be described as 'chick flicks'

Clients sign up online, order online, receive the movie and mail it back

More specifically, Chickflix.com offers 3 subscription models (1, 2 or 3 movies at a time)

# Potential Issue Tree & Approach

#### Why has gross profit margin decreased? How can this be reversed?

#### Is it a revenue issue, cost issue or both?

#### Chickflix Revenues

- Changes in key revenue drivers:
  - Price
- Subscription mix
- Number of customers

#### Follow-up and guidance

- 1 movie at a time subscription model introduced 1.5 yrs ago
- Growing # of customers and revenues
- Unchanged prices

#### Chickflix Cost

- Key cost drivers:
  - Fixed costs
    - Administrative
- Variable costs:
  - Distribution
  - DVD amortization

#### Follow-up and guidance

- Insignificant fixed costs
- DVD amortization considered variable
- Distribution cost flat on a per unit basis

#### What caused it? Systemic / Chickflix specific?

#### Market

- Changes in demand?
- Market size
- Demographics
- Technology / new substitutes

#### Follow-up and guidance

- No changes in overall demand or in demand from target audience (women)
- No changes in customer preferences

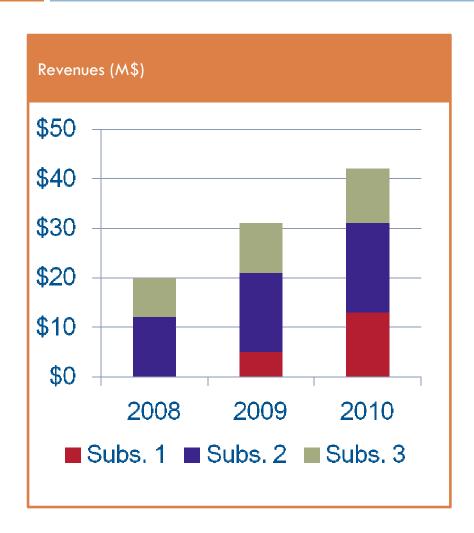
#### Competition

- Changes in supply?
- New competition
- More rivalry
- Less movies sold by studios

#### Follow-up and guidance

- No other competitor in Chickflix' niche
- Margins for competitors like Netflix are not decreasing
- Studios keep selling

## Exhibit A – Revenue growth and mix



#### Subscription models

- Subscription 1:
  - 1 movie at a time
  - \$9.99 / month
- Subscription 2:
  - 2 movies at a time
  - \$14.99 / month
- Subscription 3:
  - 3 movies at a time
  - \$19.99 / month

## Exhibit B – Variable cost per unit



#### Components of variable cost

- Distribution:
  - Primarily Mailing cost
- Content amortization
  - Straight line amortization of movies (30 rentals = useful life)
  - Considered variable because DVD library is a function of rental volume
- Allowances
  - Allowance for movies lost in mail
- Other
  - DVD cases repair, etc..

## Interviewer guide

# Interviewee should identify takeaways from Exhibits A & B

- Revenues are growing for all subscriptions
- Variable costs are not a function of subscription volume, but of number of movies returned per month
- Therefore, the 2 key gross profit drivers are:
  - Subscription mix
  - Average rentals per month

#### Interviewer should then request analysis

- Evaluate gross profit margin for each Subscription type
- Calculate price required for subscription 1 and 2 to provide a gross profit margin equal to Subscription 3's
- Data for interviewee:
  - Provide Exhibit C

## Exhibit C – Revenue and rentals data

Revenues				
	<b>\$1</b>	<b>\$2</b>	<b>S</b> 3	Total
2008	-	\$12M	\$8M	\$20M
2009	\$5M	\$16M	\$10M	\$31M
2010	\$13M	\$18M	\$11M	\$42M

# Customers				
	<b>S</b> 1	<b>S2</b>	<b>S</b> 3	Total
2008	-	67K	33K	100K
2009	42K	89K	42K	172K
2010	108K	100K	46K	254K

# Average rentals per customer per month \$1 \$2 \$3 2008 7.5 8.2 2009 5.6 7.3 8.1 2010 6.0 7.5 8.0

## Interviewer guide - Calculating price

# Q2: Calculate gross profit margin for Subscription 3 (using 2010)

- Revenue per month per customer
  - = \$20
- Average rentals per month
  - = 8 movies
- Revenue per rental
  - = \$20/8=\$2.5
- Cost per rental
  - = \$1.85
- Gross Profit margin

$$= (\$2.5 - \$1.85) / \$2.5 = 30\%$$

# Q3: Calculate required profit margin for S1 & S2 / Identify S1 is at a loss

- Subscription 1:
  - Average rentals per month6 movies
  - Required subscription price:  $(P-1.85*6)/P = 30\% \rightarrow P=\$15$  or: P = \$2.5\*6 = \$15
- Subscription 2:
  - Required subscription price:P = \$2.5\*7.5 = \$18.75
- Bonus: identify that Chickflix is selling \$1 at a loss:
  - Gross profit margin: = (\$10-\$1.85\*6)/\$10 = -5%

## Interviewer guide

# Interviewee should identify takeaways from price calculation

- Subscription 3 is more profitable than the other models
- Subscription 2 is still profitable, but <u>Subscription 1 is not</u>
- But, increasing prices may lead to a drop in customers

#### Interviewer should then request analysis

- Challenge interviewee to critically evaluate the client's financial performance
  - Revenues have grown but:
  - Subscription 2 is less profitable than 3, and
  - Subscription 1 is selling at a loss
  - → Chickflix is subsidizing its own growth (selling at a loss)
- What recommendation would you give the client to improve?

## Brainstorming solutions

#### Healthy Revenue Growth

- Re-evaluate the subscription models
  - add maximum monthly returns
  - Restructure S1 into a profitable model
- Test customers price elasticity between \$1, \$2 and \$3. Use findings to price each subscription correctly
- Targeted advertising to increase customer base
- Expand into other niches: men & children movies

#### Cost Rationalization

- Negotiate volume discounts to decrease distribution cost
- Encourage S2 & S3 customers to mail more than one movie together
- Promote rentals of older movies (with a lower content amortization cost)
- Negotiate with movie studios to reduce DVD cost

#### Final recommendation

#### Recommendation

- Chickflix has grown revenues by adding customers in S1 & S2. It has subsidized S1 with proceeds from S2 & S3 as S1 earning negative margins.
- Chickflix needs to restructure \$1 to return it to profitability.
- Adjusting price is an alternative. Chickflix should also rationalize cost and start by focusing on the 2 main cost components: distribution cost and content amortization.
- Moving forward, Chickflix should evaluate entering other market niches.

#### Risks

- Adjusting prices could lead to cannibalization with customers from S3 switching to S2 and those from S2 to the newly restructured S1.
- Chickflix needs to identify the premium offering that S2 and S3 have.
- Chickflix should be cautious when restructuring S1, so that customers are not lost

#### Next Steps

- Analyze customers' price elasticity for different subscription types
- Renegotiate contracts with distributors and movie studios

## Introduction

#### 100

#### **Problem Statement Narrative**

Skedasky Farms is involved in the process of making, selling, and distributing white wines. As of late, industry growth has stagnated. The CEO wants to increase revenue, and has enlisted you to help. To start off, come up with ideas to help the CEO with his goal.

#### Overview for interviewer

This case is fairly open-ended, and will involve a lot of brainstorming on the part of the interviewee.

Keep the interviewer focused on ways to increase <u>revenue</u>. Costs are irrelevant for now (although good to keep in mind). Additionally, don't let the interviewer get hung up on one idea. For example, if they suggest expanding to include red wines, that's good, and they may mention a concern or two, but then have them move on to other ideas for increasing revenue.

Eventually, push them towards the next part of the case.

#### Information to be provided upon request

The interviewer can choose to provide some of this information upfront, or can wait for the interviewee to ask. This information is not crucial to brainstorming, but could be useful in coming up with creative recommendations.

- Skedasky grows all of their raw inputs (grapes)
- Their farms are in California, with some processing facilities on-site, and another large facility located nearby.
- Skedasky sells to wine distributors, and also sells directly to some stores in the state
- They sell a variety of grades of wine, from cheaper boxed wine to premium bottles
- The industry is very fragmented (the interviewee should be able to guess this), and Skedasky has a comparable domestic market share to the other major winemakers in its area

# Ideas for increasing revenue

#### Solution

A good interviewee will structure their ideas and briefly mention pros/cons of each idea. A sample structure with ideas is show below

- □Current revenue streams
  - Increase price
    - Examine price elasticity of demand
      - For each grade (boxed vs premium)
      - For each type buyer
      - For each type of wine (Cabernet vs Merlot)
  - Increase volume
    - Increase share of shelf space
    - Seek new distributors or stores
    - Increase international exposure
    - Rebrand the wine
- ■New revenue streams
  - Wine tours, private tours and tastings for wealthy buyers
  - Release new brands or varieties of top selling wines
  - Expansion into new products
    - Red and sparkling wines
    - Spirits
    - Beer

## Diversifying into beer

#### **New Product**

Skedasky thinks they have a good case for begin making and selling beer.

#### Question 2a

#### What are some possible reasons this could be a good idea for Skedasky?

There are many potential synergies, such as:

- •Leverage the brand name and distribution channels
- •Economies of scale in SG&A and other expenses
- •Perhaps some of the equipment could be used for both products

Of course, there are many concerns/reasons this could be a bad idea.

#### Question 2b

#### How may they want to enter the Beer market and what are some associated concerns?

- Organically
  - - More control, no integration problems
  - Cons
    - Will take time to begin
    - If they lack expertise in beer-making, could be a lengthy trial-and-error process
- Acquisition
  - Pros
    - Facilities/resources will be ready to go
    - Leverage brand name of target
  - Cons
    - Integration issues (e.g., culture clash)
    - Potentially expensive
- Joint venture / Alliance

#### Are there any concerns related to financing?

This depends on how much Skedasky is currently levered, and whether they have free cash to invest in this new project.

## How about changing the price?

#### Price effect on revenue

Suppose that for some more immediate impact on revenue, our client is considering changing the price of their mid-upper level bottles of wine. Currently, the 10,000 bottles are sold per year for \$20/each. Studies have determined that a 10% increase in the price will result in a 10% decrease in volume, and a 10% decrease in price will result in a 5% increase in volume. Which course should the company take? ("Let me know if you need any additional information")

#### Solution

Key to answering this is that the interviewee must ask for the profit margin. Margins are currently 50% (of \$20). The calculations should result in the numbers below, suggesting that a 10% price increase would be most favorable.

	Currently	10% Price Increase	10% Price Decrease
Price	20	22	18
Cost	10	10	10
Margin	10	12	8
Volume	10000	9000	10500
Profit	100000	108000	84000

An 8% increase in profit looks very attractive.

# Sample Recommendation

#### **Prompt**

You run into Mr. Skedasky in the elevator, and he wants to know where you are with your work.

#### Recommendation

We looked at several ideas to increase revenue, such as your suggestion to enter the beer market. I believe that you can take advantage of a number of synergies with this move, and an acquisition looks like the best way to enter, so more research must be done on potential targets. However, many risks present themselves with this move, such as – will the brand name carry over? Do management capabilities carry over to the beer industry? Therefore, further analysis must be done.

For an immediate increase in revenues and profits, you should increase the price of the mid-upper range wines. Research shows that you can expect a profit increase of roughly 8% in that category. Similar studies should be conducted across other product lines.

## Introduction

#### Problem Statement Narrative/Question 1

Your client is a real estate development corporation. It is looking to build an apartment complex on a vacant lot near a leading university in Philadelphia. What are some areas that should be examined to decide, whether this is a good idea?

#### Overview for interviewer

This is a profitability case. Discussion should quickly turn to P=R-C and the various drivers of costs and revenues.

On the REVENUE side, price and volume (number of units built, % rented) should be considered, with some discussion about different price and purchase scenarios – i.e. how long would it take to sell all units, is there seasonality of occupancy?

On the COST side, fixed and variable costs should be discussed, such as land purchase, apartment construction, utilities, labor, insurance, etc.

#### Additional factors:

What is the current MARKET for land and apartments, including zoning for the vacant lot? How do the future tenants' WTP (willingness to pay) depend on the quality of apartment units built? RISKS such as lower than expected demand for units, drop in real estate value

## Question 2

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#### **Breakeven Question**

Assuming an average apartment size, how much must our client charge in rent per apartment per month to break even within three years? See following information sheet.

#### Solution

#### Costs:

Land: (200\*200)\*100=4M

Construction: .80\*40,000=32,000\*3\*50=4.8M

Utilities: 5,000\*12=60,000\*3=180,000 Insurance: 2,500\*12=30,000\*3=90,000 Labor: 3\*40,000=120,000\*3=360,000

Total Costs: 4M+4.8M+180,000+90,000+360,000=9.43M

#### **Revenues:**

Total apartment Sq. Ft.:

.80\*(200\*200)=32,000\*3=96,000\*.80=76,800 Total apartment units: 128,000/512=150 units

Total units occupied: 150\*.80=120 units

#### Breakeven:

9.43M/(120\*3)=26,194/12=\$1310 per unit per month

#### Provide information if asked

Detailed explanations on following page:

#### Land:

- •40,000 sq ft. (200\*200)
- \$100 per sq ft.

#### Construction

- •Building takes up 80% of land space
- •Construction cost is \$50 per sq. ft. per month
- •Building is 3 stories high
- •Labor is \$40,000 per year; 3 staff required

#### Operating costs:

- •Insurance is \$2,500 per month per floor
- •Utilities is 5,000 per month per floor

#### Total apartment Sq. Ft.:

- •80% of land space is building
- •5 stories
- •20% is common space
- •512 sq ft. per unit
- Vacancy rate is 20%

## Information Sheet

- The vacant lot is square, measuring 200 ft. on one side and costs \$100 per sq. ft.
- Building regulations specify that no more than 80% of the lot can be covered with buildings, given the need for grass, sidewalks, etc.., and construction costs are \$50 per sq. ft.
- The vacant lot is zoned for buildings up to 3 stories tall; no apartments are allowed in the basement.
- Utilities cost \$5,000 per month, insurance costs \$2,500 per month, and labor costs \$40,000 per full-time employee per year.
- The highest paying customers prefer apartment buildings that have at least 20% of the apartment building dedicated to amenities, i.e. non-apartment unit use.
- Preliminary market research estimates indicate a 80% occupancy rate per year during the first 3 years; additionally, apartments that are 512 sq. ft. in size would provide the most profit.
- Full-time employees include 1 custodian, 1 rental office staff, 1 grounds staff.

## Question 3

#### **Strategy Question**

Considering that our client can only build on 80% of the lot and can build apartments on 80% of the building itself, what are some other ways that they can earn revenue on the site or otherwise increase tenants' willingness to pay?

#### Suggested Solution

#### Earn extra revenue:

Store

Restaurant

Dry cleaners

Other small businesses

#### **Increase customers' WTP:**

Gym

Garage

Laundry

Pet zone

Guest services (concierge, etc..)

#### Introduction

#### Background

Our client is Vidi-Games, a manufacturer and retailer of video games. They are planning to enter the Brazilian market. One of the factors that has prevented them from entering that market is that there is a tariff for importing products that can be produced in the country of 50% of production costs. However, the government is planning to lower it down to 15% in the next years, decreasing it 5% every year (from 50% to 45%, and so on).

#### Questions

What variables should they consider? What is the market size? Should they enter the market? And if so, should they export the product from China to Brazil or produce it in Brazil?

#### Interviewer guide

First, structure the problem. It is a profitability problem. Some things that should be mentioned, on top of industry analysis and profitability stuff, are repatriation costs, regulations, currency, inflation, culture issues, etc..

#### Market Size Calculation

#### Information that the candidate needs:

The interviewee should try to estimate these numbers, but no real prior knowledge is required. Because it is a market very different from the US, these numbers should be provided after the person tries to estimate them.

Brazil population = 200M

Younger population – under 35 = 50% - It can be assumed that these are the only ones interested in video-games

Poor population = 60% (hence, affluent people who can afford this, 40%)

Average number of people per household = 4

Penetration of video games within the affluent and young segment in Brazil = 75%

Games per year per average household = 3

#### Market Size Calculations

Total number of video-games that can be expected to be sold per year

- = (total number of households that will purchase video games)
- x (number of video games per year per average household)
  - = [(total population x % of young people (that use video-games) x % of affluent people) ÷ (average people per household)] x (number of video games per year per average household)

Total number of video-games that can be expected to be sold per year =  $((200 \text{M x } 50\% \text{ x } 40\%) \div 4) \text{ x } 3 = 22.5 \text{M}$  of video games

## Profitability

#### Information that the candidate needs:

Usual retail price = \$50

Volume calculated in market size = 22.5M video-games per year.

Production in China	\$14
Production in Brazil	\$21
Distribution	\$6
Labor	\$8
Overhead	\$6
Other costs	\$10.4

#### Interim Conclusion

Under the current situation it is not a profitable business, and therefore the company should not go.

#### Information that the candidate needs:

Profit = Revenue - Costs

Total revenue = Volume x Price = 22.5M video games x \$50 per video game = \$1.125B

For costs, two scenarios have to be considered: producing in Brazil or in China.

Total costs of producing in Brazil = \$21 + \$6 + \$8 + \$6 + \$10.4 = 51.4

Because of 50% tariff, the production cost of producing in Brazil or in China is the same.

Total cost of producing in China =  $(\$14 \times (1.5)) + \$6 + \$8 + \$6 + \$10.4 = 51.4$ 



Because of 50% tariff, the production cost of producing in Brazil or in China is the same.

Per unit profit = \$50 - \$51.4 = \$-1.4

## Lower Tariff

#### BUT the tariff is going to decrease, is it going to make sense for them to enter? (Ignore inflation and other factors).

Break-even point -> Revenues = Costs

Costs that do not depend on tariff

Tariff % at which the company breaks-even

$$$50 = $30.4 + ($14 \times (1 + X)) -> X = 0.35 = 35\%$$

Costs that do not depend on tariff

Tariff % at which the company breaks-even

Since the government will lower the tariff 5% every year, in 2 years the company would break even, in the following period they can enter the market (3 years from now).

Profit (per unit) = \$50 - (\$18.9 + 30.4) = \$0.7 per video-game.

Total profit = \$0.7 per video-game \* 22.5M video-games per year = \$15.75M

#### Additional Calculation

#### Yearly profit once the tariff reaches the minimum (15%)

Profit when the tariff reaches its lowest (and from then on) = \$50 - (\$16.1 + \$30.4) = \$3.5 per video-game.

Total profit = \$3.5 per video-game \* 22.5M video-games per year = \$78.75M

#### If the investment of going into Brazil is \$100M, when will they recoup their investment?

First year (3 years from now) = \$15.75M

Second year = \$31.5M

Third year = \$47.25M

Total of first three years = \$94.5M

Very soon, beginning the fourth year, the investment would be recovered (3+ years is a good answer).

Exact number (assuming you sell the same number of video games every day of the year, 360 days) =3 years and 31.43 days.

Calculations to get the exact number:

\$100M-\$94.5M=\$5.5M

If we sell the same amount of video games every day, then we sell  $22.5M \div 360 = 62,500$  video-games per day. And because this is the fourth year of our investment, the tariff is 20%, therefore, the profit per unit is \$2.8.

Hence, we make 62,500 video-games per day x \$2.8 per video game = \$175,000 per day.

5.5M still to break-even  $\div$  175,000 per day = 31.43 days.

## Brainstorm and Conclusion

What could Vidi-Games do if they needed to enter now? (Brainstorming part, these are just some ideas)

#### Revenue side:

- •Analyze how viable is an increase in price.
- •(Because the profit per unit is negative, increasing volume does not solve the problem)
- •Cost side:
- •Negotiating cheaper labor.
- •Moving manufacturing sites to lower cost areas.
- •Optimizing distribution network.
- •To produce in Brazil: See possibility of reducing production costs.

#### Other ideas:

- •Entering in partnership with a Brazilian partner.
- •Acquiring a competitor in Brazil.
- •Selling video-games to retailers there (hence saving in distribution, labor, overhead, etc.., but selling at a reduced wholesale price).

What do you think of the current scenario? I have to call Vidi-Games in a couple of minutes, what is your recommendation?

#### Introduction

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#### Problem statement narrative

You have been approached by a private equity firm trying to decide whether or not to acquire Big School Bus Company. Big School Bus Company manufacturers, owns, and operates school buses across the United States. The private equity firm wants you to help them estimate the size of the market for school buses and to identify ways in which you might able to extract more value from Big School Bus Company, if acquired.

#### Overview for the interviewer

Let the candidate begin by performing a market size estimate. Candidates should define the target market, determine how large the market currently is (volume), and identify what portion of the market Big School Bus Company could be reasonably expected to capture, based on present (and future expected) market share.

Things candidates should consider:

- Segmenting school children into those who: a) walk; b) are driven to school by parents; and c) take the school bus
- How many children take school buses every day
- How many school buses would be needed to transport all these children
- That school buses can make multiple trips every morning and afternoon
- That only a fraction of school buses are replaced every year (candidate should make a reasonable assumption for school bus lifetime 10-15 years; thus 1/10 to 1/15 of the total school bus market is "addressable")

FYI: every school day, about 500,000 school buses transport  $\sim$ 26 million school children to and from school. Use this information to help steer the candidate back on track if they are orders of magnitude off.

NOTE: Technically there are other uses for school buses beyond simply transporting children to and from school. Depending on how time goes, you may want to ignore this aspect and have the candidate focus on a more limited definition of the market to be sized.

# Market sizing

#### Information to be provided (if asked)

- The school bus manufacturing industry is dominated by two players. Big School Bus Company is the larger of the two with about 45% market share (by volume).
- 40% of school buses are owned and operated by independent companies, such as Big School Bus Company. These independent companies often contract their services out to school districts. The rest are owned and operated by school districts themselves.
- IF the candidate identifies him or herself as not having been part of the US public school system and specifically asks for clarification, you can tell the candidate that around 60% of US schoolchildren take school buses to school every day.
- Average school bus capacity is 20 passengers for smaller school buses and 70 passengers for larger school buses.
- 80% of schools buses are larger school buses. 20% are smaller school buses.

## Extracting more value

#### Overview for the interviewer

How would the firm extract more value (additional profits) from Big School Bus Company?

Candidates should then setup a framework that allows them to explore both sides of the profit tree (revenue and costs).

Before the candidate gets too involved with their framework and analysis, the interviewer should ask the candidate whether their intuition tells them that more value can be extracted from the manufacturing or the operations/services side of the industry. Candidates should realize that the school bus industry is in a relatively mature phase, and most of the market has already been saturated. Thus, operations and services are likely to be more attractive, in general.

There are many possibilities that candidates can address in operations/services, and this is a chance for the candidate to be creative. Several different areas may be explored, and sample ideas follow on the next slide.

## Question 2: Extracting more value

#### Sample ideas

#### Revenue - explore different business models

- Customers could be the school districts themselves.
- Customers could be businesses looking for mass transport services (but unwilling to pay for coach buses); this could potentially generate a lot more revenue for Big School Bus Company during hours when school buses might otherwise be sitting idle
- Customers could also be wealthy parents willing to pay for private "mass" transportation services (perhaps where public school buses are lacking, bus stops are too far from homes, or where public school buses are of less than suitable quality to these parents).
- School children tend to take school buses just before their parents head off to work and before their parents get home from work.

  Thus, Big School Bus Company may be able to allocate buses to transporting employees to work (think the Google shuttle concept).
- Service differentiation. For example, provide WiFi so that students can complete their homework while riding the school bus and perhaps be less rowdy if distracted by internet-based entertainment.
- From a **price** perspective, Big School Bus Company could contract out services for a flat fee per year. Or they could charge per passenger. Candidates would ideally discuss the issues of willingness-to-pay versus cost-plus (and other) pricing methods, as well as which business models would better support a "fee-per-person" pricing model.

#### Costs

When it comes to school districts sourcing buses (and sometimes bus services), school districts may choose to put out contracts to competitive bids. Oftentimes the decision point will be who has the lowest bid that still meets the quality metrics and requirements specified by the school district.

• In order to submit a low bid, Big School Bus Company should also examine its cost structure. Candidates may delve into the fixed and variable cost components of different proposed options for creating value. For instance, fixed costs could include the buses themselves, the internet connectivity hardware and contracts with internet service providers, the corporate headquarters/dispatch center, etc.. Variable costs would include fuel and hourly wages for (potentially unionized) bus drivers.

## Conclusion

#### Conclusion

Candidates should recognize that while the problem narrative focuses mostly on the questions of market sizing and extracting value, the real substantive issue is whether or not to recommend an acquisition of Big School Bus Company. Top candidates will make such a recommendation at the end, without prompting.

If a candidate does not make such a recommendation without prompting, ask them at the end of the case what they would recommend and why (the "Our client's managing director is coming; what do you say to him/her?" executive summary).

#### Introduction

#### Problem statement narrative

American beauty company is, as the name suggests, a high quality beauty products company. They have done very well both in US and globally and enjoy great brand recognition. One of their major products is hair color. ABC manufactures high quality 'use at home' hair color products. They sell through retail and drugstores, will all manufacturing in-house. They have an 800 number for customer support. Recently they have been experiencing declining revenues and market shares. The retailers have complained about their products as the competition Bell International takes over. The firm has been called in to advise ABC on what to do.

#### Question 1:

#### How would you start thinking about this problem?

Its an open ended question. There can be number of ways to approach this problem. Crucial here is to look at the big picture and come up with three or four major areas that you would like to explore given this specific product, industry and the situation. Do not get caught in the profitability trap due to mention of declining revenues.

A good answer would include following:

Product

Attributes

Ease of use

Value proposition

Price

Benchmark against competition

& your value proposition

Market share and trends

Customer

Target market segment(s)

Brand loyalty

Price sensitivity

Important attributes

Typical customer behavior. What they like / dislike about

our product

Buying habits

Distribution channel

Distribution network

Shelf space & positioning relative to competitors

Share of distribution network compared to competitors

## Question 2 and 3

Question 2: One of their biggest market segments is 18 - 55 yrs old women. But their share has been declining recently. Why do you think this might be happening? How would you approach this issue?

There might be a number of issues here. You could suggest doing a market research to break down the issue into brand awareness, trial % and re-trial and acceptance %, access (distribution) to figure out which one of these may be critical for ABC. You can also suggest benchmarking against competitor products.

#### Question 3: Using the data below, what sales are required for ABC to have 50% of the women's market in 2 years?

Segment	Size (\$ Mn)	Growth rate
Women	800	5 %
Men	200	20%
Teens	100	10%

It will be good to point out that based on this data looks like their biggest segment, women, is maturing fast. Total Women's Mkt in 2 yrs =  $800 * (1.05)^2 = 882$  50% mkt share = 441

## Question 4

#### Question 4: What is the dollar market share for ABC currently? What will the mkt share be in 2 yrs?

You will need to ask for the current and future mkt share data. Current mkt share is as below. Assume they keep the same mkt share in 2 yrs.

Segment	Size (\$ Mn)	Growth rate	Current Mkt share
Women	800	5 %	50%
Men	200	20%	10%
Teens	100	10%	30%

It will be good to notice that ABC has quite low penetration rates in men's segment.

ABC's current \$ mkt share = .5 \* 800 + 0.1 \* 200 + 0.3 \* 100 = 400 + 20 + 30 = 450

Total mkt in 2 yrs =  $800 * (1.05^2) + 200 * (1.2^2) + 100 * (1.1^2) = 882 + 288 + 121 = 1291$ 

ABC's mkt share in 2 yrs = 441 + 28.8 + 36.3 = 506.1

Mkt share % = 506.1 / 1291 = 39.2%

## Question 5

Question 5: The team also did a customer brand awareness and perception survey in the 18-55 yrs women segment for ABC benchmarking its products against the competitor Bell. The results of the survey are in the table below. What do you notice and what do you suggest ABC can do about it?

Survey 1: Brand awareness, 18 – 55 yrs, Women

Bell users	80% know about ABC
Non users	40% know about ABC, 60% know about Bell
ABC users	95% know about Bell

Survey 2: Perception of quality, 18 – 55 yrs, Women

Segment	ABC is higher quality	Bell is higher quality
ABC users	95%	85%
Bell Users	70%	95%
Non users	55%	85%

You can see from the results of both the surveys that despite its high quality and brand recognition, the competitor Bell fares better amongst customers in both dimensions whether users or non users.

ABC should focus on improving its brand awareness and perception of quality. For brand awareness, they have to focus on advertising. To improve its perception of quality, they should invest in promotions, joint marketing efforts with retailers to push their product and trials.

## Recommendation

A good recommendation will include the following major points:

Based on the analysis so far, it seems like the main reason for declining revenues and market shares is that the competitor Bell has achieved better brand awareness and perception of quality in the market compared to ABC. Hence ABC should focus on improving these through advertising and aggressive promotions and marketing.

Recommendation

Going forward, it seems like ABC has very low penetration in the men's segment. They should target these segments for future growth opportunities since the women's segment seems to be maturing.

Also, the total market size of teens seems really low. There might be opportunities there to expand the total market size through innovative products, increased usage and acceptance of hair color products.

