



# MasterTheCase.com

TOP CONSULTING INTERVIEW PREP

# WHARTON CONSULTING CLUB CASEBOOK

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# Case: Mexico City Airport Taxi Services

McKinsey, Round: 1

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## Problem statement narrative

The authorities of the Mexico City airport have decided to issue 2,500 new taxi permits for \$1,000 each. These permits authorize a taxi to service arriving passengers. Your client has a taxi fleet in the city but does not service the airport. He has excess capacity (meaning he has cars and drivers available). He has asked you to determine if he should buy those new permits. If so, how many should he buy?

## Overview for interviewer

This is a profitability case, so the formula  $P = R - C$  should be brought up quickly in the discussion and inform any framework proposed by the candidate.

Use the discussion to guide the candidate towards determining the possible revenue to be made and to talk about costs to determine profitability.

After the candidate presents his/her framework, give candidate the handout containing information needed to solve the case. The challenge with the handout is that it contains a lot of information which the candidate will need to process quickly to be able to use through the case.

Case Type: Profitability / Operations  
Case Style: Command & Control

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

All the information is given to candidate on the handout. If candidate asks for data again, refer him/her to the handout.

- Airport handles 42 million passengers yearly.
- There are 5,500 taxis operating in the airport.
- On average a taxi takes 60 minutes to drive passenger and return to airport for next pick up.
- On average a passenger pays \$200 cab fare via regulated rates.
- On average 40% of domestic flights passengers and 80% of international flights passengers use taxis.
- 30% of daily demand occurs between 6:00 a.m. and 10:00 a.m., 40% occurs between 6:00 p.m. and 10:00 p.m.
- Assume each passenger uses one cab.
- On average each taxi requires \$8,000 yearly on maintenance.
- Taxi drivers keep 50% of the fare.

# Case: Mexico City Airport Taxi Services

## Potential Issue Tree & Approach to Solving the Case

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### Key elements of analysis to solve the case

#### Estimate daily demand for taxis

Estimate the number of passengers arriving each day

Estimate passengers that will require taxis

Is this demand being met?

#### Possible follow-up and guidance to interviewer

See following slide.

Assume that passenger volume is equally distributed through the year / week / day.

Assume that 50% of passengers are from domestic flights and 50% international flights.

#### Estimate possible revenue

Demand not being met daily:  
500 passengers in the morning  
+ 8,000 passengers in the evening  
= 8,500 passengers needing service  
x \$200 = \$1,700,000 daily revenue

Yearly Revenue = \$571,200,000

#### Possible follow-up and guidance to interviewer

#### Estimate possible profits

List possible costs: permits, car maintenance, drivers' salary, gas, car repairs, etc

$$P = R - C$$

Profit = Revenue – maintenance repairs – driver commissions – permit cost

$$P = 571,200,000 - (\$8,000 \times 2,000 \text{ taxis} - 285,600,000 - (\$1,000 \times 2,000 \text{ taxis}) = 267,600,000$$

#### Possible follow-up and guidance to interviewer

Tell candidate to consider only permits costs, car maintenance and drivers salaries (the numbers for these costs were given to candidate at the beginning of the case interview on the handout)

# Case: Mexico City Airport Taxi Services

## Question 1 – Math

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### Math Question

Estimate the daily demand for taxis. Is this demand being met? If not, how many more taxis are needed?

#### Overall approach, good shortcuts & solution

Estimate the number of passengers arriving each day:

- $42\text{million} / 12\text{ months} = 3.5\text{ million passengers monthly}$
- $3.5\text{ million passengers} / 4\text{ weeks} = 875,000\text{ passengers weekly}$
- $875,000\text{ passengers} / 7\text{ days} = 125,000\text{ passengers daily}$

Estimate passengers that will require taxis:

- $62,500\text{ domestic passengers} \times 40\% \text{ of domestic use taxis} = 25,000$
- $62,500\text{ international passengers} \times 80\% \text{ of international use taxis} = 50,000$
- $\text{Total passengers demanding taxis daily} = 75,000$
- $6\text{am} - 10\text{am} = 22,500\text{ passengers need a taxi} (= 75,000 \times 30\%)$
- $6\text{pm} - 10\text{pm} = 30,000\text{ passengers need a taxi} (= 75,000 \times 40\%)$
- $\text{Non-peak hours} = 22,500\text{ passengers need a taxi} (= 75,000 \times 30\%)$

Is this demand being met?

- From 6 to 10am, each taxi makes 4 trips (average trip takes 60min). If we have 5,500 taxis operating then capacity serves 22,000 passengers. Excess demand = 500 passengers.  $250\text{ domestic} \times 40\% = 100\text{ passengers} + 250\text{ international} \times 80\% = 200\text{ passengers}$  for a total of 300 passengers needing a taxi / 4 rides per hour = 125 taxis needed to meet excess demand.
- From 6 to 10pm, using the same logic capacity meets 22,000 passengers: 5,500 taxis operating thus excess demand = 8,000 passengers (need 2,000 taxis).
- During non-peak hours (16 hours) 22,500 passengers will need a taxi. With 5,500 taxis in operation there is capacity to serve 88,000 passengers during that time. In that time period there is excess capacity.

To service demand not being met in the morning and night periods **2,000 taxis are required.**

#### Information to provide up front

Information needed to solve case is given on the handout, which should have been given to candidate early in the case

#### Provide information if asked

Assume that passenger volume is equally distributed through the year.

Assume that 50% of passengers are from domestic flights and 50% international flights.

Assume all existing taxis can run during peak hours and that maintenance is a minimal time commitment.

# Case: Mexico City Airport Taxi Services

## Mexico City Airport Taxi Facts & Assumptions

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- ❑ Airport handles 42 million passengers yearly
- ❑ There are 5,500 taxis operating in the airport
- ❑ On average a taxi takes 60 minutes to drive passenger and return to airport for next pick up.
- ❑ On average a passenger pays \$200 cab fare via regulated rates
- ❑ On average 40% of domestic flights passengers and 80% of international flights passengers use taxis.
- ❑ 30% of daily demand occurs between 6:00 a.m. and 10:00 a.m., 40% occurs between 6:00 p.m. and 10:00 p.m.
- ❑ Assume each passenger uses one cab
- ❑ On average each taxi requires \$8,000 yearly on maintenance
- ❑ Taxi drivers keep 50% of the fare

# Case: Mexico City Airport Taxi Services

## Sample Recommendation

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Recommendation	Client should buy 2,000 permits based on the potential yearly profit of \$267,600,000 from excess demand at the airport.
Risks	Possible retaliation from other taxi companies, such as entering other markets where the client operates and stealing clients. There is no guarantee airport will not allow additional permits in the future which could increase the number of taxis at the airport.

### BONUS

There is no guarantee that all excess demand will be serviced by client cars, especially because if he is buying only 2,000 permits, another taxi company can buy the remaining 500 permits and compete for the excess demand that isn't being currently served.

An option would be to buy all 2,500 permits, and using only 2,000 taxis (blocking another taxi company from buying 500 permits) that would reduce profits to \$267,100,000 (just subtract from profits the cost of buying the additional 500 permits).



# Case: Franchising Gyms

## Bain, Round 2

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### Problem statement narrative

Your client is a gym franchisor. The client focuses on small gyms (approximately 3000 square feet) with standard fitness equipment, but no classes or lockers. The gyms are typically located in local strip malls. They are open 24 hours per day; members enter the gym via an access card. Staffing at the gym is minimal to none (depends on each individual franchisee).

This business is growing very rapidly. However, there is now a new competitor offering a similar franchising opportunity. To make our client's franchising opportunity more attractive, our client would like your input on how the profitability of its franchises can be improved.

### Overview for interviewer

This is a straight-forward case. An ideal walk-through (presented in the subsequent slides) would include the following:

- Breakeven analysis based on understanding of revenue and cost structures
- Brainstorming of new revenue opportunities
- Brainstorming of cost cutting opportunities
- Analysis of pros and cons of market segments
- Conclusion / Recommendation

Case Type: Various

### Information to be provided upon request

See following slides for further detail.

# Case: Franchising Gyms

## Potential Issue Tree & Approach to Solving the Case

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Candidate may propose analysis / action in:

Profit Structure (Rev and Cost)	Market Opportunity	Competitors
<ul style="list-style-type: none"><li>• Key revenue streams</li><li>• Key fixed and variable costs</li></ul>	<ul style="list-style-type: none"><li>• Size of the market</li><li>• Growth expectations</li><li>• Key customer segments and differentiating qualities</li></ul>	<ul style="list-style-type: none"><li>• Key competitors</li><li>• Amount of concentration or fragmentation</li><li>• By customer segments</li><li>• Key differentiating features</li></ul>
Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer
<ul style="list-style-type: none"><li>• Should lead to next slide (the math question)</li></ul>	<ul style="list-style-type: none"><li>• Overall market expected to grow slightly faster than GDP given healthier living trends</li><li>• \$10 billion in revenue last year</li><li>• Relevant segmentation (location):<ul style="list-style-type: none"><li>• Urban</li><li>• Suburban</li><li>• Rural</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Key competitors offer essentially the same franchising opportunity client does</li><li>• Not a key aspect of the case; deemphasize</li></ul>

# Case: Franchising Gyms

## Question 1 – Breakeven Analysis

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### Question

How many members must each gym location have to break even? This is a key metric for potential franchisees

### Overall approach, data required and solution

- Identify the revenue per member, fixed and variable costs for a gym
- Monthly Revenue
  - Membership dues: \$40 / month
  - Vending machines (net): \$5 / month
  - Personal training (net): \$15 / month
  - Total: \$60 / month
- Variable Costs: None (or too minimal to matter)
- Fixed Costs
  - Rent: \$24 / square feet / year (or \$6000 / month)
  - Equipment: \$144K initial cost, 3 year depreciation, \$0 salvage value (or \$4000 / month)
  - Labor: 40 hours / week @ \$20 / hour (or \$3200 / month)
  - Utilities: \$400 / month
  - Franchise fee: \$300 / month
  - Marketing: \$100 / month
  - Total: \$14000 / month
- Breakeven calculation
  - Contribution margin: \$60 / month
  - Fixed Costs: \$14000 / month
  - # of members to breakeven =  $\$14000 / \$60 = 233$

### Information to provide up front

- Guide candidate to the approach
- Walk through each category (revenue per member, fixed and variable costs), brainstorming each of the potential associated line items
- Do NOT automatically provide each piece of data (such as salvage value for depreciation)
- Potentially tricky parts:
  - Using consistent metric (monthly, yearly, etc.)
  - Revenue = contribution margin because there are no variable costs
  - Asking for equipment salvage value
- Takeaway: By any measure, breakeven of 233 members is very low

# Case: Franchising Gyms

## Question 2 – Revenue Growth Opportunities

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### Question

What are potential revenue growth opportunities the client can pursue?

### Potential response

- Price:
  - Increase current revenue stream pricing
  - Tiered membership based on accessibility (time, equipment, etc.)
  - Consider multi-period contracts with discounted pricing
- Quantity
  - Increase # of gyms franchised
  - Increase # of members per gym (assume we have not hit a utilization saturation point)
- Create new product / service offerings
  - Juice bar
  - Sell clothing, timers, lightweights
  - Lockers for rent
  - Partner with full-service gyms to offer discount for classes (like yoga, spinning)
- Other
  - Increase marketing efforts

# Case: Franchising Gyms

## Question 3 – Cost Cutting Opportunities

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### Question

What are potential cost cutting opportunities the client can pursue? What opportunities are more actionable?

### Potential response

- Recognize that rent, equipment and labor are the largest expense categories, so start there
- Rent
  - Re-negotiate current contracts
  - Move to less optimal locations
  - Actionability: Low
- Equipment
  - Use the equipment longer (thus increasing the depreciation period)
  - Consider purchasing used equipment
  - Consider renting equipment
  - Consider consolidating equipment purchases to fewer vendors
  - Increase buyer power by making purchases across multiples gyms
  - Actionability: Moderate
- Labor (currently comes in 8 hours per day, M-F, to answer general questions)
  - Decrease the number of hours staffed
  - Utilize phone support
  - Post more FAQs on the walls
  - Actionability: Moderate

# Case: Franchising Gyms

## Question 4 – Segment Analysis

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Question

Which segment offers the greatest opportunity on a profitability basis? What are the key factors?

Potential response

	<b>Costs for Franchisee</b>	<b>Gym Space Location Availability</b>	<b>Convenience for Members</b>	<b>Segment Fitness Interest</b>	<b>Segment Spare Income</b>	<b>Competition</b>
Urban	High (☹)	Low (☹)	High (☺)	High (☺)	Medium	High (☹)
Suburban	Medium	Medium	Medium	Medium	Medium	Medium
Rural	Low (☺)	High (☺)	Low (☹)	Medium	Medium	Low (☺)

• Key Takeaway

- Rural segment is very attractive, because of the lower cost (rent, labor), high availability of gym space and low competition
- Competition is the surprise factor; very few gyms have placed locations in rural areas due to very high breakeven membership requirements for fully-loaded, traditional gyms

# Case: Franchising Gyms

## Sample Recommendation

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Recommendation	<ul style="list-style-type: none"><li>• Client business model allows for low breakeven membership point for franchisees</li><li>• To improve profitability, client should consider revenue growth opportunities (give best examples) and cost saving opportunities (give most actionable items)</li><li>• Client should also focus on the rural market segment, primarily due to a lack of significant competition</li></ul>
Risks	<ul style="list-style-type: none"><li>• Adding new services (i.e. revenue streams) will make client gym offerings less distinct from traditional gyms</li><li>• Cutting costs at a bare minimum gym may cause customer service issues</li></ul>
Next Steps	<ul style="list-style-type: none"><li>• Execute on recommendations</li><li>• Also consider M&amp;A opportunities, primarily to gain scale and improve cost structure</li></ul>

# Case: Greeting Card Manufacturer

BCG, Mock Interview

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## Problem statement narrative

A greeting card manufacturer has experienced decreased profit. The CEO has asked you to figure out why.

## Overview for interviewer

This case involves a discussion of both the revenue and cost drivers of profit. Greeting card companies operate with a unique revenue system, and this will also affect the cost side of the company.

Case Type: Profitability

## Information to be provided upon request

The greeting cards are stocked at grocery stores and pharmacies like CVS

Greeting cards are good for one season only – if a card does not sell by the end of the season, it will be shipped back to the manufacturer at their expense and discarded

The greeting card industry has experienced moderate growth over the years

Competitors have experienced steady or slightly increased profit



# Case: Greeting Card Manufacturer

## Potential Categories of Candidate's Framework

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### Notable comments / potential discussion points

#### Industry Analysis

- Greeting cards market: growing, shrinking, stable?
- Competitors: market share, growth rate
- Consumers: needs, brand perception, differentiation?

#### Profit drivers

- Revenue
  - Factors that affect sales volume
    - Card selection
    - Card supply
      - Is it better to overstock or stock just the right amount?
        - Overstock: customers like choices; it looks bad when there is only one card on the shelf – creates more goodwill when there are additional cards even if they will not all sell
        - Just the right amount: do not incur additional shipping costs to send unsold cards back to the manufacturer; do not incur variable costs for unsold cards; why make more than you can sell?
  - How does the greeting card manufacturer earn revenue? What are the revenue streams?
- Costs
  - What are the fixed costs?
  - What are the variable costs?
  - Is there anything special about greeting card costs?

The candidate must figure out how the greeting card manufacturer earns revenue as well as how costs are incurred.

# Case: Greeting Card Manufacturer

## Potential Issue Tree & Approach to Solving the Case

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### Key elements of analysis to solve the case

Industry Analysis	Revenues	Costs
<p>How is the greeting card industry doing?</p> <p>How are competitors performing compared to our company?</p> <p>Are there changing trends?</p>	<p>What factors affect sales volume?</p> <p>What are the repercussions if a customer walks into a retailer and the card shelves are empty?</p> <p>Is it better to overstock or stock just the right amount?</p> <p>What are the revenue streams?</p>	<p>What are the fixed costs?</p> <p>What are the variable costs?</p>
Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer
<ul style="list-style-type: none"> <li>• The greeting card industry has remained stagnant throughout the years due to threats such as e-cards</li> <li>• Competitors have experienced stable or moderate increases in profit</li> <li>• Our company's cards have continuously sold out in retailers as compared to competitors</li> </ul>	<ul style="list-style-type: none"> <li>• If shelves are empty, the following repercussions are possible: <ul style="list-style-type: none"> <li>• Lose the sale entirely, result in poor brand awareness; lose customers to competitors; create poor relationships with retailers</li> </ul> </li> <li>• Manufacturer receives payment only when cards are SOLD to consumers. Unsold cards are shipped back at the manufacturer's expense</li> </ul>	<p>COGS: \$1.50</p> <p>SG&amp;A: \$0.25</p> <p>Shipping: \$0.05 (only incurred if the card is unsold)</p> <p>Fixed Costs: \$200,000 (printing presses, plants, admin)</p>

# Case: Greeting Card Manufacturer

## Question 1 – Breakeven

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### Math Question

If greeting cards are sold at \$3.00 per card and fixed costs are \$200,000 per year, how many cards must the greeting card manufacturer sell to break even?

#### Overall approach, good shortcuts & solution

Break even = Fixed Costs / Unit Contribution

Fixed Costs = \$200,000

Unit Contribution = \$3.00 - \$1.50 - \$0.25 = \$1.25

Break even = \$200,000 / \$1.25 = 160,000 cards

#### Information to provide up front

N/A

#### Provide information if asked

COGS: \$1.50

SG&A: \$0.25

Shipping: \$0.05 (only incurred if the card is unsold)

Fixed Costs: \$200,000

# Case: Greeting Card Manufacturer

## Sample Recommendation

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Recommendation	The greeting card manufacturer should improve revenues by ensuring a wide selection and supply of cards at each retailer while also keeping in mind the number of unsold cards at the end of the selling season. The increase in goodwill and brand awareness among retailers and consumers outweighs the added variable costs from unsold cards.
Risks	Supplying extra cards may not be profitable if the quality of the cards are lacking compared to competitors'.
Next Steps	The manufacturer should perform additional research regarding how consumers choose greeting cards and determine if unsold cards may be re-used in any fashion (salvage value).

### BONUS

The number of cards sold during the year depends on the number of cards shipped to the retailer. If these are the expected sales numbers, which one should the manufacturer choose?

Shipment Quantity: 2,000, Sales Volume: 1,900

Shipment Quantity: 2,500, Sales Volume: 2,200

Shipment Quantity: 2,700, Sales Volume: 2,300

Profit =  $(\$1.25 * 2,200) - (\$1.8 * 300) = \mathbf{\$2,210}$

# Case: UK Asset Manager

Bain, Mock Interview

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## Problem statement narrative

Our client is a private equity firm that is looking at a potential acquisition target. The target is a UK asset management firm that has seen a 33% drop in AUM in the past 18 months. Outside of a valuation analysis of the target (assume this has been done by the client), we need to determine whether or not this is a good acquisition.

## Overview for interviewer

The client is a private equity fund that wants you to determine the acquisition prospects of an asset management firm based in the United Kingdom. The interviewer should allow the interviewee to develop 1) a thorough framework on how they would evaluate the problem, 2) an overall recommendation to the client regarding the acquisition, and 3) next steps that offer to either dig deeper in a particular area of analysis or offer ways in which the target company, once acquired, could be improved.

Case Type: Investment (Go/No-Go)

## Information to be provided upon request

Explain AUM as total assets under management within the asset manager's portfolio of three broad investment types: retail, institutional, and alternative funds (~75% in retail and institutional funds)

Specific investments within retail and institutional funds include mutual funds (comprised of equities, bonds, money market funds, and others); alternative funds include hedge funds and private equity investments (show Exhibit 1 here).

The fund operates predominantly in the UK with a much smaller presence in Germany and Spain.

# Case: UK Asset Manager

## Potential Issue Tree & Approach to Solving the Case

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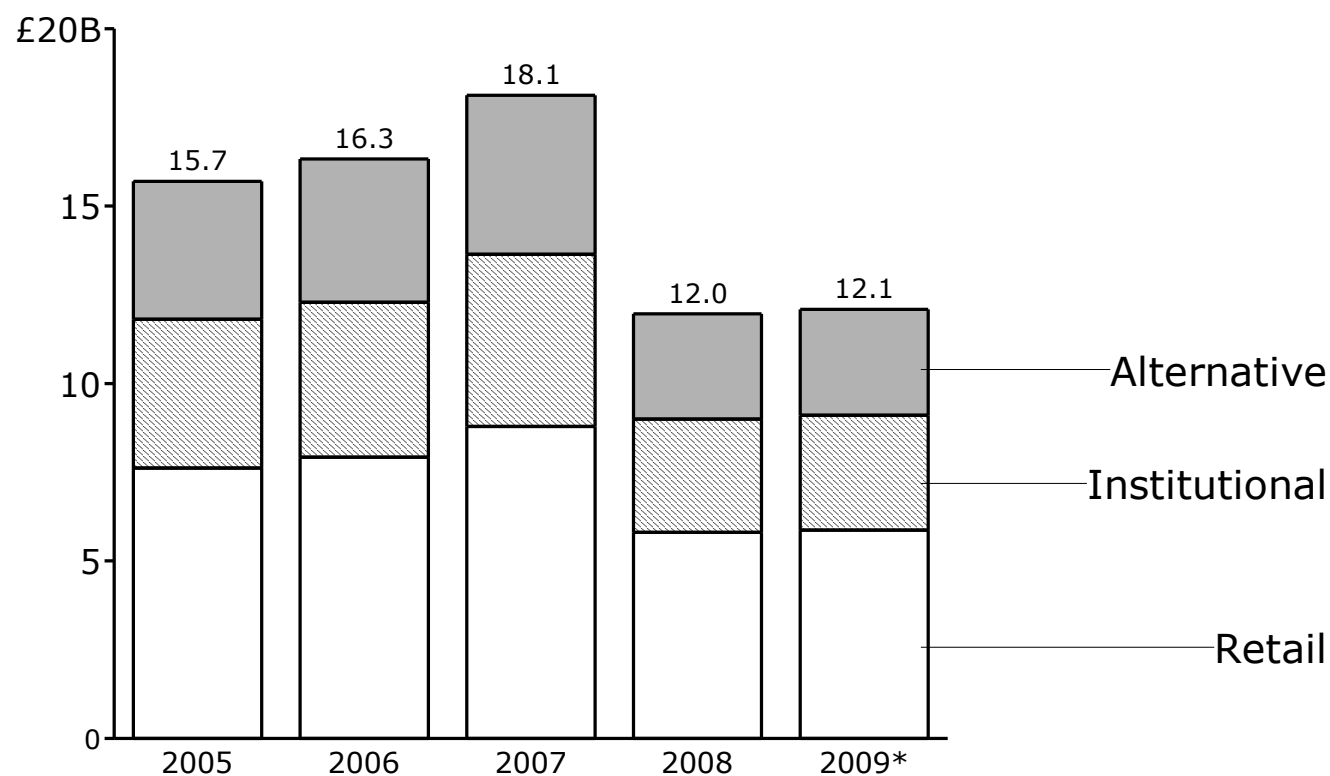
### One possible framework

Market	Competitors	Customers/Channels	Company
<ul style="list-style-type: none"> <li>•Market size and how this has changed over time by segment, geography, and product mix</li> <li>•Underlying drivers for AUM</li> <li>•How does this compare across the different business segments</li> </ul>	<ul style="list-style-type: none"> <li>•Target's major competitors</li> <li>•Competitor market share and how this has changed over time</li> <li>•Reputation, product offering, AUM size, customer mix, geographic focus, etc.</li> <li>•Distribution advantages/disadvantages</li> </ul>	<ul style="list-style-type: none"> <li>•Key segments and purchasing criteria</li> <li>•Major institutional customers</li> <li>•Major channel partners (e.g., banks, financial advisors)</li> <li>•Do customers invest in financial institution or individual investment manager?</li> <li>•Customer stickiness</li> </ul>	<ul style="list-style-type: none"> <li>•Profitability                             <ul style="list-style-type: none"> <li>-Fee structure (revenues)</li> <li>-Compensation structure (costs)</li> </ul> </li> <li>•Portion of AUM declines due to market declines vs. fund redemptions?</li> <li>•Asset managers/key personnel</li> <li>•Performance against benchmarks/competitors</li> </ul>
Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer
<ul style="list-style-type: none"> <li>• Total UK asset management market £3.4T</li> <li>• AUM driven by: market performance, GDP/wealth, and net capital flows</li> <li>• UK funds market: 75% institutional, 25% retail</li> </ul>	<ul style="list-style-type: none"> <li>•Major competitors include banks, insurance companies, and other fund managers</li> <li>•Target is 10<sup>th</sup> in both inst. and retail and both are highly fragmented markets</li> <li>• No notable differences in reputation, product offering, mix, or distribution</li> </ul>	<ul style="list-style-type: none"> <li>•Target lost the mandate from a large institutional investor in 2008, accounting for much of its capital/AUM outflows for that year</li> </ul>	<ul style="list-style-type: none"> <li>• Show Exhibit 2 that shows                             <ul style="list-style-type: none"> <li>-greater outflows than the market</li> <li>-about equal performance as the market</li> </ul> </li> </ul>

# Case: UK Asset Manager

## Exhibit 1: Target's Total AUM by Fund Type

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WCC Case - 2009 - UK Asset Manager

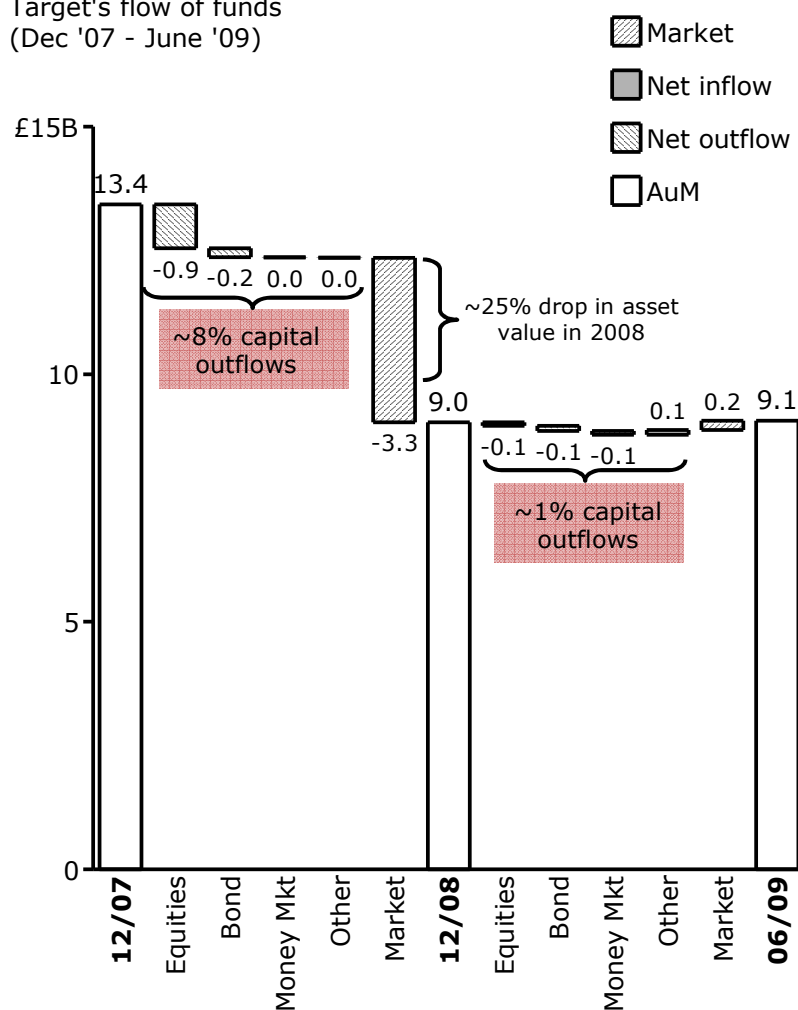
Note: Fiscal year ending December 31 except for 2009 data which is as of June 2009

# Case: UK Asset Manager

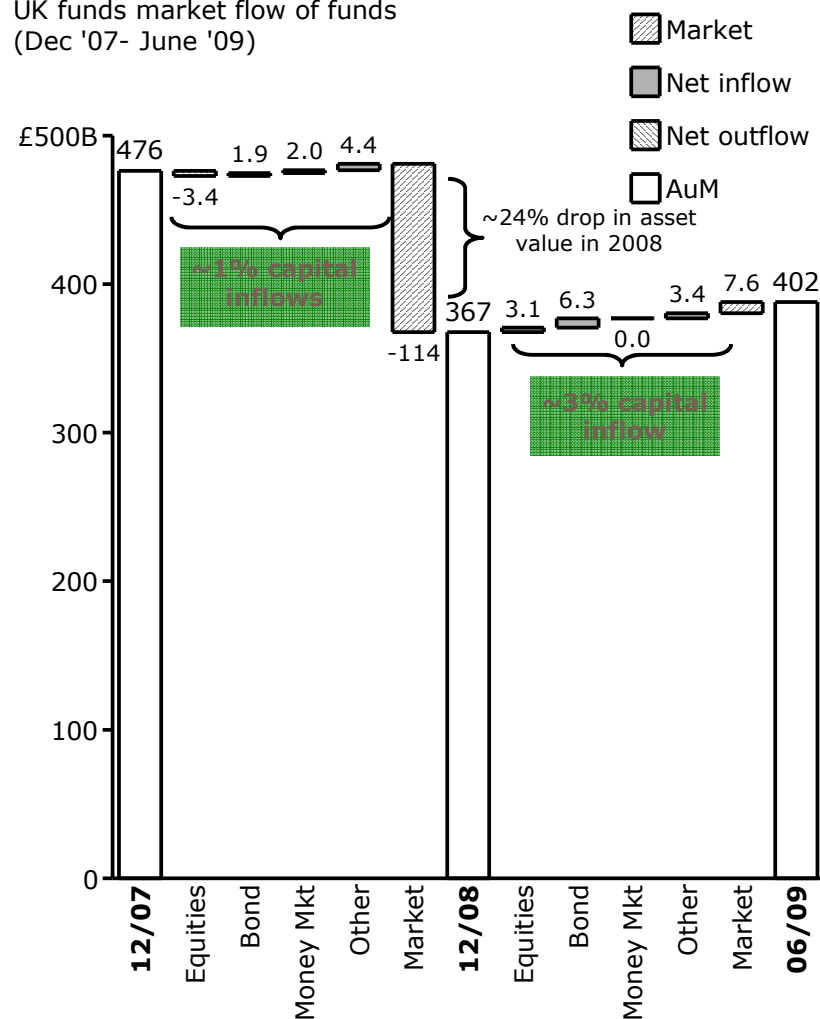
## Exhibit 2: AUM Summary

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Target's flow of funds  
(Dec '07 - June '09)



UK funds market flow of funds  
(Dec '07- June '09)



Note: Excludes alternative investments



# Case: UK Asset Manager

## Question 1 – Math

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### Math Question

Given that the target's funds under management are averaging 4.5% returns annually, how many years would it take for the funds to double?

#### Overall approach, good shortcuts & solution

The candidate would benefit from knowing the “rule of 72” (ie, ~72 divided by the rate of interest will give approximate period of time needed for initial amount to double)

OR

Should realize absolute amount is unimportant (strictly depends on rate)

-----

Solution:  $72/4.5 = \sim 16$  years

#### Information to provide up front

Annual returns of 4.5%

#### Provide information if asked

If asked, give current funds AUM of £9.1B

# Case: UK Asset Manager

## Sample Recommendation

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Recommendation	Assuming no issues with valuation, recommend against client acquiring the target. The target, on average, has similar financial performance to industry peers but its clients are withdrawing capital faster than the industry average. While the motivation is unclear, there could be uncovered problems with client service and/or client mix.
Risks	Should validate valuation. The valuation of target may be attractive despite being a poor performer compared to the market. The redemption problems, largely driven by one key client in 2008, could be behind them.
Next Steps	Analyze alternative investments as well as German and Spanish markets. Analyze performance of fund managers in order to determine which managers can be replaced (compare performance against benchmarks). See if overall portfolio's relative underweighting in institutional versus retail segments matters.

# Case: Mighty Mining Company

(inspired by) McKinsey, Round 2

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## Problem statement narrative

Your client is a global mining company with a location in South Africa. This particular location is performing below average financially. McKinsey has been hired to identify the problem and make recommendations to address it. What would you do first to approach this problem?

*(Note to interviewer: This leadoff question is meant to focus on actions one would take before diving into the framework – actions such as collecting data, visiting the location to observe operations, interviewing employees, etc)*

## Overview for interviewer

This question is intentionally vague, as many Partner level cases can be, to encourage the candidate to ask questions at this stage.

This is command and control, so start with the first question, then provide the detail to the right and ask for a full analysis (framework). After the framework is developed by the candidate, dive deeper into cost and operations and ask follow-up questions.

Case Type: Operations

Case Style: Command & Control

## Information to be provided after actions identified

The processing plant is located 160 miles inland and it uses a fleet of large trucks to transport minerals from the plant (which is located near the mineral source) to a port city. The minerals are then loaded onto barges and shipped to clients around the world. The plant needs to operate at maximum capacity to meet customer demand.

The minerals produced are commodities with low margins.

# Case: Mighty Mining Company

## Potential Issue Tree & Approach to Solving the Case

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### Key elements of analysis to solve the case

Revenues	Costs	Operations
<p><b>Revenue:</b> explore historical data, trends, product-specific data</p> <p>Benchmark against competitors and other corporate locations.</p>	<p><b>Costs:</b> explore fixed costs (PP&amp;E, overhead) and variable costs (material, labor)</p> <p><b>Transportation:</b> considering this product is a commodity, transportation makes up a large portion of the product cost and should be separated out.</p>	<p>Explore operational issues that might lead to poor performance such as interruptions in operations (is plant operating at full capacity, is it running 100% of the time or are there power outages or other disruptions, are there local protests, is theft or local unrest impacting plant), employee skill level, employee morale, etc</p>
Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer
<p>Although important to mention, the focus of this case is cost and operations so don't let the candidate spend too much time here.</p>	<p>If the candidate has not already done so, ask them to identify the key cost line items on the income statement and elaborate on the COGS for this industry.</p> <p><b>COGS:</b> Labor, Materials, Shipping/Logistics</p> <p><b>Operating Expenses</b> Administrative, Overhead, D&amp;A</p>	<p>If the interviewer gives a vague response such as "I would want to understand the local market conditions" then push for specific examples of operational issues that would impact a plant in the middle of South Africa.</p> <p>It is important that the candidate identify general operating issues and locally impacted issues.</p>

# Case: Mighty Mining Company

## Follow-up Questions

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### Follow-up question #1

In gathering data from the client, you find that transportation costs are significantly higher as a portion of COGS than any other African plant location. Why might this be? (If the 160 mile trip from plant to port has not been mentioned, inform interviewer of the transportation details here)

### Guidance for interviewer:

Response should cover a range of ideas as the interviewer is looking for out of the box thinking. Some ideas might be: the plant is sending trucks that are not full increasing trips needed, drivers are not going directly to the port (poor route planning, sleeping on the job, etc), trucks are hijacked along the route, drivers must pay bribes to get through certain road blocks.

### Follow-up question #2

You collect historical data on the average time it takes a truck to make the 200 mile trip from the plant to the port, what should you expect the graph to look like?

**Interviewer:** (The graph should be a normal distribution) You expected the graph to be normally distributed but your data reveals the following graph. What can you draw from this data?

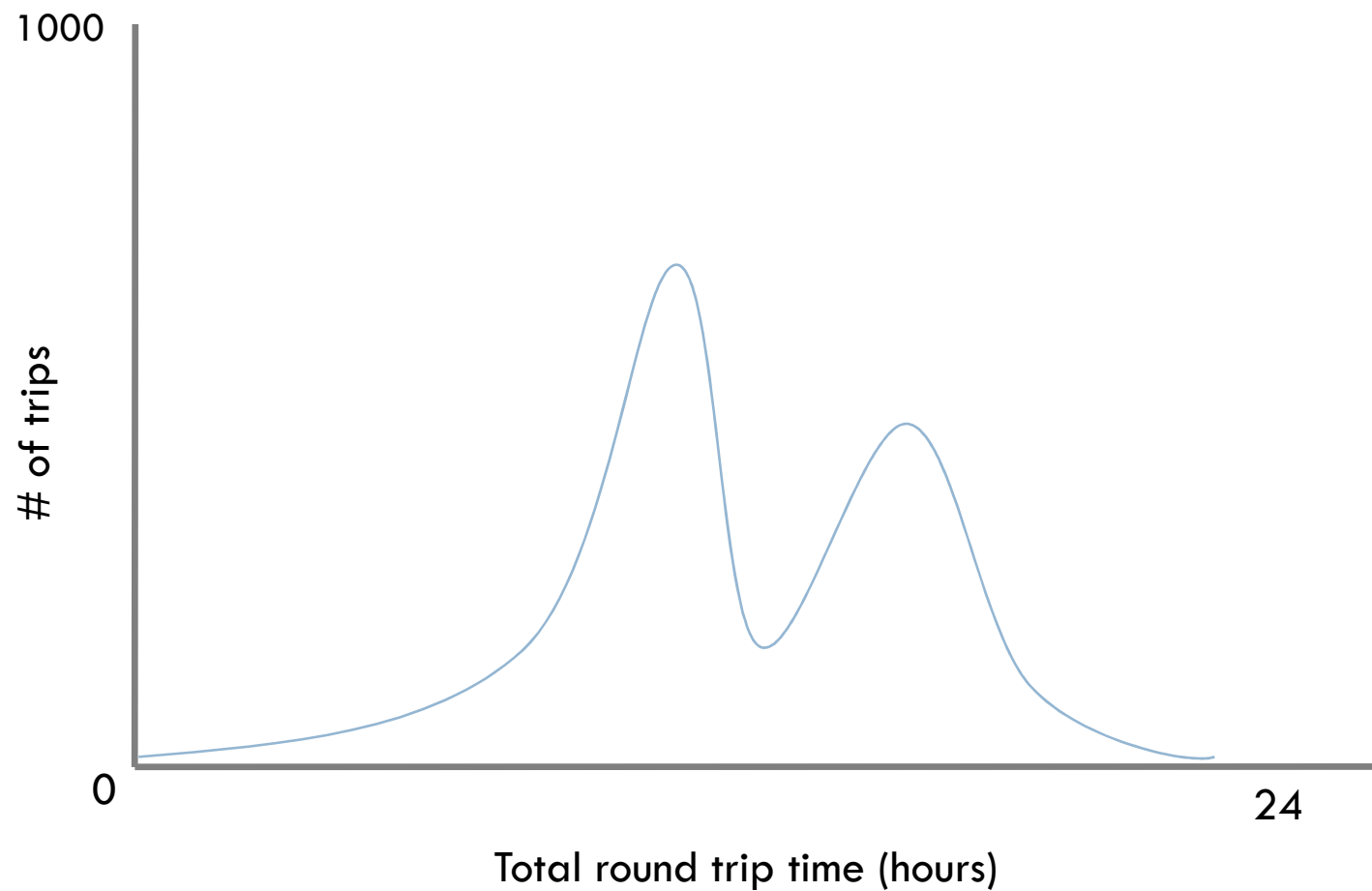
### Guidance for interviewer:

The candidate should identify that the first peak is expected (per the normal distribution) but the second peak needs to be analyzed. Ask for ideas of what might cause the second peak. These could include certain drivers taking too many breaks, traffic patterns, etc.

# Case: Mighty Mining Company

## Mighty Mining Trip Time Distribution

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# Case: Mighty Mining Company

## Final Question and Sample Recommendation

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### Follow-up question

You discover that the port closes at 10pm and any truck that does not arrive by 10pm must wait until the port opens again at 4am to drop off its load and return to the plant. The minimum roundtrip travel time is 7 hours and the plant owns 20 trucks; however, a barge needs 30 truckloads to reach capacity and ship out. What would you recommend Mighty Mining to do about this situation? Remember: the plant must operate at max capacity to meet customer demand

#### Sample Recommendation

Rather than crunch numbers around optimization, it is sufficient that the candidate identify that there are several bottlenecks in the supply chain (travel time, port hours of operations, capacity of trucks versus barge) and recommend potential solutions that may be considered:

- In the short term, the company needs to identify the latest a truck can leave and still arrive by 10pm. They could use employee incentives to encourage drivers to reduce rest stops along route to make the 10pm cut-off. Driver shifts should be rearranged to optimize material delivered to the port.
- In the long term, see if they lobby that 24 hour port operations is more profitable for all parties.
- Evaluate the costs of setting up a storage facility by the port for night deliveries against purchasing more trucks.
- Analyze costs of upgrading fleet to larger size trucks.
- Consider leasing trucks vs. purchasing.

#### Risks

Since location already is poor performing, must analyze cost of capital to ensure that investing in capital improvements is highest NPV alternative (ship from other better plants?). Changes in customer demand could lead to an investment that is not needed long term.

#### Next Step

I would analyze these options and present a final recommendation for the client including justification for any investment needed by the company to mitigate the risk of senior management not wanting to invest.

# Case: The Reel Deal

## Bain, Round 1

80

### Problem statement narrative

A movie studio client has an extensive library of hit movies from prior years. As part of your effort to find new sources of profit for the company, you are to assess the viability of digitizing the movie reels and making them available online for a fee.

### Overview for interviewer

This case is intended to test the candidates ability to react to a broadly worded scenario, determine the key data needed to make a decision and navigate several basic but potentially tricky math questions. The interviewer should begin by asking the candidate what information they will need to analyze the problem and make a recommendation. A brief discussion on industry analysis (including consumer trends and competition) as well as company position (including market share and firm specialization) is appropriate, BUT this is a math case focused on profitability (other data is irrelevant). The interviewer should quickly get to the data and ultimately offer any information (see right panel) that is not asked for.

Case Type: Profitability / Market Entry

### Information to be provided upon request

Expected revenues: \$200/clip

100 clips per movie

50/50 revenue split per clip (50% goes to royalties for other parties)

Studio estimates there would be a 25% yearly utilization rate



# Case: The Reel Deal

## Case Questions

81

### Key elements of analysis to solve the case

#### Calculate expected revenue

What would be the revenue per movie per year?

#### Possible follow-up and guidance to interviewer

$(\$200 \times .5) \times 100 \times .25 = \$2500$  per movie per year

#### Breakeven analysis, part 1

Say the studio only had fixed costs (once the movie was digitized, any revenue is pure profit). It costs \$30M to complete. The studio would like to see a positive return on any investment within 2 years.

#### Possible follow-up and guidance to interviewer

Give demand when asked: another studio with similar offerings is seeing demand of 8,000/ year  
 $\dots \$30M / \$2500 = 12,000$  customers to break even. Assuming we can get close to the competitor's demand of 8,000/yr, we can break even within 2 years.

#### Breakeven analysis, part 2

The studio realizes upkeep of the digital files and service for the online business would have additional variable costs of \$18 per utilized clip. Will they be able to break even in 2 years?

#### Possible follow-up and guidance to interviewer

$\$100 - \$18 = \$82$  CM per year per clip  
 $(\$200 \times .5) \times 82 \times .25 = \$2050$  per movie per year

$\$30M / \$2050 = 14,634$  customers to break even ...still achievable within 2 years based on 8,000/yr forecast.

# Case: The Reel Deal

## Sample Recommendation

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Recommendation	Based on the data provided, all scenarios suggest the digitization move is a prudent endeavor.
Risks	General competitive threats; new technology making this strategy obsolete; assumptions do not hold true; some movies are more popular than others; partners may demand higher royalty payments.
Next Steps	Although not central to the case recommendation, potential next steps could include: deeper competitive analysis, determination of a specific technology platform, any necessary legal agreements

### BONUS

Disregarding any ancillary information provided earlier, what risks exist in making this decision based on demand seen by a competitor?

Some potential answers:

- Competitor has large market share, making entry difficult
- One year of demand data does not allow trend analysis
- Data may not be accurate

# Case: Publishing Company

Lenovo, Round 2

83

## Problem statement narrative

Your client is Putter, a company that publishes romance novels that they sell to bookstores. Typically, Putter reimburses its customers at the end of the year for any unsold inventory. Now, one of Putter's customers, a retail bookstore, has come to it with an offer for a deal. In return for a 10% discount on wholesale prices, the bookstore will no longer send back any books at the end of the year. Should Putter do the deal?

## Overview for interviewer

This is primarily a calculations, margin case. Make the candidate explore the calculus in the case first and foremost; discussion of business and strategic alternatives can come later.

Case Type: Operations / Profitability  
Case Style: Command & Control

## Information to be provided upon request

Putter's clients have to sell at a price we dictate, no cheaper.

# Case: Publishing Company

## Potential Issue Tree & Approach to Solving the Case

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### Key elements of analysis to solve the case

Math	Opportunities	Threats
Margin calculations	<ul style="list-style-type: none"><li>• Reduction in operational complexity</li><li>• Good will meeting customer/channel request</li><li>• Open up new business model – may lead to additional distribution channels?</li></ul>	<ul style="list-style-type: none"><li>• Cash Flow (with new model, get lesser cash flow upfront- problem in this economy)</li><li>• Market Share (assuming fewer units sold)</li><li>• May affect other clients' choices as well (ie first of many, not isolated case)</li><li>• Relationship with client (supply them with less, they view you as less important)</li></ul>
Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer
<ul style="list-style-type: none"><li>• Don't forget salvage value</li><li>• Explore rationale for # of books ordered (directionally up, down or flat), more in next page</li></ul>		<ul style="list-style-type: none"><li>• When mentioning cash flow, have candidate do the calculations. Previously get \$100,000 upfront, now only get \$67,000.</li></ul>

# Case: Publishing Company

## Question 1 – Good Deal?

85

### Math Question

Does this make sense on a profit basis?

#### Overall approach, good shortcuts & solution

Don't forget salvage value.

Calculations:

Pre-change: profit =  $8,000 * (10-5) - 2000 * 5 = \$30,000$

Post-change: profit =  $7,500 * (9-5) = \$30,000$

Pre-change: cash-flow:  $10,000 * \$10 = \$100,000$  upfront

Post-change: cash-flow:  $7,500 * \$9 = \$67,500$  upfront

Pre-change: market share at 8,000 books

Post-change: market share at 7,500 books

**Solution:** The expected profit is the same, but initial cash flow is lower and market share is lower. There does not seem to be a direct financial incentive to take the deal.

#### Information to provide up front

- In 2008, Putter sold 10,000 books to this bookstore
- It costs Putter \$5 on average to make a single book
- Putter previously sold books to the bookstore at \$10
- Note to interviewer: MSRP not relevant

#### Provide information if asked

- Putter's Salvage Value for unsold books = 0
- Romance novel sales have been flat for a decade, expected to remain so in the coming years
- In 2008, the retail bookstore sent back 20% of its books
- Have interviewee explain how he/she will guess at a figure of how many books the bookstore will order, then give the projected number of 7500

# Case: Publishing Company

## Sample Recommendation

86

Recommendation	The deal does not seem attractive on a financial or strategic basis. The expected profitability is the same but cash flow and market share will decline. Such problems are complicated by the fact that others in the industry may follow the lead of the first bookstore. Recommendation is not to accept the deal.
Risks	By not accepting the request of your client, you risk alienating the bookstore if other publishers shift business models.
Next Steps	Consider the differences in “blockbuster” books vs. lower-volume books. Perhaps new business model (at different pricing) may make sense for some titles.

# Case: Retirement Apartment Complexes

BCG, Round 1

87

## Problem statement narrative

The client owns and operates 25 retirement apartment complexes for the 55-75 year old demographic in the south-east and south-west states of FL, CA, NM and AZ. By and large the apartment complexes have a similar design and amenities. Should the client company's CEO consider expanding to other Northern cities or continue to focus on the South?

## Overview for interviewer

Even though this case starts out with a market entry problem question, the candidate should eventually realize (with or without guidance) that the case is about profitability, specifically costs as there is clearly an unmet market in the North and hence revenues wouldn't be an issue.

Ultimately, the candidate should use some math to determine that the financial justification for expanding in the North vs. South is roughly equivalent, so strategic benefits and risks should guide the client's focus.

Case Type: Profitability/ Market Entry

## Information to be provided upon request

candidate should probe deeper to understand the market in the North and why the client wants to consider expanding.

- Any specific financial goals? – maximizing profitability through new apartment existing properties.
- What makes the client think that there is demand in the North? – Survey conducted 2-3 years ago in states such as NY, NJ, MA and IL revealed that the pre-retirees /retirees want similar facilities in those underserved (hence no competition exists) markets so that they can stay closer to their families and friends.
- A pilot apartment complex was erected in downtown Chicago 2 years ago with more amenities than its sister properties in the south.

# Case: Retirement Apartment Complexes

## Potential Categories of Candidate's Framework

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### Notable comments / potential discussion points

Most candidates will tend to examine revenues and costs once they realize this case is about maximizing profitability. While this is the eventual course of action it is important for the candidate to understand the current markets that the client operates in and glean key learnings. Remember – if the candidate had asked the financial goal question, the client wants to maximize profitability through new or EXISTING properties.

Potential points include, but are not limited to:

#### Industry analysis

- firm position / market share
- trends
- competition

#### Profit drivers

- revenue
- costs



# Case: Retirement Apartment Complexes

## Potential Issue Tree & Approach to Solving the Case

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### Key elements of analysis to solve the case

Market Size	Revenue	Cost
<p>When dealing with apartment complexes, examine the following:</p> <ul style="list-style-type: none"> <li>• Number of properties</li> <li>• Number of units per property</li> <li>• Occupancy Rates</li> </ul>	<p>Identify sources of revenue from apartment complexes:</p> <ul style="list-style-type: none"> <li>• Rent</li> <li>• Utilities, if managed by building co.</li> <li>• Premium for amenities, if any</li> <li>• Retail revenue, if any</li> <li>• Maintenance or other fees</li> </ul>	<p>Identify cost buckets and distinguish fixed from variable components</p> <ul style="list-style-type: none"> <li>• Maintenance</li> <li>• Amenities</li> <li>• Leasing/Marketing</li> <li>• Utilities</li> <li>• Property Taxes</li> </ul>
Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer
<p>If the candidate has not yet asked for the current apartment complexes in the Southern states, give her/him details:</p> <ul style="list-style-type: none"> <li>• Competition is strong in the south; easy to build new apartments.</li> <li>• Occupancy rates typically start out at 90%+ but eventually settle at 80% as new complexes are built.</li> <li>• 3-5% growth every year fed by new people who migrate to the south</li> </ul>		<p>Recall that the Chicago property pilot provides residents with additional amenities compared to properties in the south. The candidate should examine this aspect to accurately compare costs.</p>

# Case: Retirement Apartment Complexes

## Question 1 – Math

90

### Math Question: Which is more profitable – north or south?

1. First compute occupancy levels and revenue. For this discussion all apartments in a given region can be considered equivalent.

**South: 800 units/bldg \* 0.8 occupancy rate \* \$500 rent/mo = \$320,000 per mo** (let candidate know that rent includes maintenance, amenities, utilities; each property generates identical revenue so leave calculations on an individual property basis)

**North: 400 units \* 0.9 occupancy rate \* \$1,000 rent/mo = \$360,000 per mo**

Rent includes amenities charges for a 24 hr. on-site medical facility that residents benefit from in a huge way

2. Next compare costs (per month)

Cost Item	North	South
Maintenance	400 units * \$200 = \$80,000	800 units * \$125 = \$100,000
Amenities	\$54,000	\$48,000
Utilities	\$45,000	\$38,000
SG&A	\$60,000	\$80,000
Medical Facility	\$60,000	\$0

Total Cost per mo	\$299,000	\$266,000
Total Revenue per mo	\$360,000	\$320,000
<b>Profit per mo per bldg</b>	<b>\$61,000</b>	<b>\$54,000</b>

# Case: Retirement Apartment Complexes

## Question 1 – Math, cont'd

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### Math Question cont'd...

3. Next calculate profitability for both locations by using the formula

**Profit per mo per building**

÷

**Total Revenue per mo**

4. Turns out that the south and north are equally profitable at 16.8% approx.

### Overall approach, good shortcuts & solution

The key to this question is not to stop at calculating profit and jump to a conclusion then. A good candidate will take the next step to calculate profitability and realize that the South and the North are **equally profitable relative to revenue generated**.

Now the candidate should consider the **profitability relative to the cost** to implement various initiatives. Is it more expensive to open in the North or South? What is the incremental cost of constructing medical facilities in the south (relative to increased earnings)? What is the cost of enhancing some amenities in the South to generate higher rent? Higher NPV is the goal.

We will not explore the capital cost in this case, but a return on cost analysis should be part of next steps.

### Information to provide up front

N/A

### Provide information if asked

At this point the candidate may ask about the market size in the North or the cost to open new facilities in the North (or the cost to renovate / alter facilities in the South). There is no additional data available, but for the purposes of this discussion we can assume that the return relative to cost is also comparable in North vs. South.

# Case: Retirement Apartment Complexes

## Sample Recommendation

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Recommendation	<p>To improve shareholder return and maximize profitability, the CEO of the Retirement Homes should consider expanding in the north to capture unmet demand and be the first mover in this area. To increase profitability in the South the following could be considered:</p> <ol style="list-style-type: none"><li>1. Increase revenues by opening medical centers in all apartment complexes and increase the rent. We have seen that people will pay for the convenience of such an amenity.</li><li>2. Decrease costs using best practices with the Chicago site, re-negotiate contracts, etc.</li></ol> <p>The key here is that the candidate should make a strategic argument for the recommendations he makes. Given that the financial measures are roughly equivalent here (profit margin per region, profit relative to capital investment (NPV) per region, strategic intuition will drive the client's decision.</p>
Risks	<p>candidate should mention risks such as cost of expansion in the North, the commercial real estate issues facing the industry however, pulling this business insight from the information provided during the case interview will distinguish a good response from an insightful one - 90% occupancy is not sustainable in the long run given what happens in the South.</p>
Next Steps	<p>Evaluate cost to open new buildings in the North and cost to renovate in the South.</p> <p>Size demand in major Northern cities and, cost of expansion notwithstanding, consider expanding rapidly to secure demand.</p> <p>Examine how best practices can be applied to existing properties North to South and vice versa.</p>

# Case: Big Yellow Bus

## Bain, Round 1

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### Problem statement narrative

Your client is a private equity fund considering the acquisition of Big Yellow Bus Co, one of the leading manufacturers of school buses in the US. The client has engaged Bain to help determine whether or not to proceed with the investment.

### Overview for interviewer

This is a classic go/no-go investment case which should use a command & control format if the candidate does not hit the right path quickly. The candidate should first develop a framework, which will ideally include assessing the market, the company, and the transaction. As part of the market discussion the case tests the candidate's math with a market sizing question. After this point the case should move on to the competitive landscape, which will test the candidate's business intuition. Exhibit 1 should be provided to the candidate when the case moves to this juncture.

Case Type: Investment (Go/No-Go)

### Information to be provided upon request

- BYB is the #1 player in the market by revenue, #2 by volume.
- There are only 3 competitors in the market with relatively equal share but BYB was the clear leader 5 years ago.
- BYB's prices are 20% higher than its competitors
- The market has a fairly steady long-term 3% growth rate driven by GDP / population growth.
- Market growth has been 6% over the last two years as local towns rush to buy buses prior to new emissions regulations coming into place.
- The customers are almost exclusively local cities and towns in the US.

# Case: Big Yellow Bus

## Potential Issue Tree & Approach to Solving the Case

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### Key elements of analysis to solve the case

Market	Company	Transaction
<ul style="list-style-type: none"> <li>• How sizable is the market for school busses?</li> <li>• What is the growth potential?</li> <li>• What does the competitive landscape look like?</li> </ul>	<ul style="list-style-type: none"> <li>• How does BYB stack up relative to peers?</li> <li>• How is the financial performance?</li> <li>• How do BYB's trends look relative to peers?</li> <li>• Is the company well-positioned?</li> <li>• How effective is management?</li> </ul>	<ul style="list-style-type: none"> <li>• What is the likely pricing? Will it meet our client's return hurdles?</li> <li>• Can the transaction be financed?</li> <li>• Why are we the right buyer?</li> </ul>
Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer	Possible follow-up and guidance to interviewer
<ul style="list-style-type: none"> <li>• Have the candidate size the market (see next slide).</li> <li>• After sizing the market talk about growth potential (hopefully candidate addresses it directly). Talk through the recent growth acceleration and whether it is likely to persist.</li> </ul>	<ul style="list-style-type: none"> <li>• As part of competitive landscape discussion reveal the Market Financial Summary and wait for the candidate's reactions.</li> <li>• If necessary direct the discussion to reveal that:               <ul style="list-style-type: none"> <li>• BYB is the high-price option</li> <li>• Competitors have considerable procurement advantage given ownership</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Case will not focus here, although consider whether the private equity fund owns similar businesses that might have overlapping needs (such as other heavy equipment / auto manufacturing companies in the portfolio).</li> <li>• Assume pricing can be attained at reasonable levels – focus on strategic strengths / weaknesses.</li> </ul>

# Case: Big Yellow Bus

## Question 1 – Market Sizing

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### Math Question

How large is the market for school busses in the US?      Follow-up: Is the market attractive?

#### Overall approach, good shortcuts & solution

US Population	~320M people
Life Expectancy	~80 years
People per Decade	~40M people
School Age Commuters (~15 years)	~60M children
% Taking Buses	33%
School-Age Children Taking Buses	~20M children
Children per Bus	~50
Buses Required	400K buses
Average Life of Bus	10 years
Buses Sold per Year	40K buses

#### Information to provide up front

If candidate begins down the wrong path, redirect to population proxy. This is meant to test basic math skills.

#### Provide information if asked

Candidate can make his own assumptions or ask for inputs.

- ~33% of schoolchildren take buses to school
- ~50 students ride each bus
- Ancillary busing needs (sporting events, field trips, etc) are absorbed almost entirely by the normal fleet

#### Attractive market?

- Market growth is traditionally GDP/population-driven at 3% per year; last 2 years have seen 6% growth
  - Pull-through demand ahead of changing emissions regulation

# Case: Big Yellow Bus

## Exhibit 1 – Competitive Landscape in US Bus Market

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	Big Yellow Bus Co	Competitor A	Competitor B
<u>Market Share Analysis</u>			
Market Share (\$)	38%	34%	28%
Market Share (units)	34%	36%	30%
<u>Margin Analysis</u>			
Revenue	100%	100%	100%
Gross Margin	25%	35%	36%
Operating Margin	15%	25%	26%



# Case: Big Yellow Bus

## Question 2 - Competitive Landscape

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### What does the Competitive Landscape Data imply?

There are two major takeaways:

- 1) BYB's share of revenue is higher than its share of volume
  - Why? Its prices are higher than peers by 20%
  - Does this matter? – YES
  - Commodity product and highly price-sensitive customer (local cities & towns)
  - 5 years ago BYB's market share was 60%
    - Low-cost competitors are gaining share...
- 2) BYB's cost structure is high relative to peers
  - Why?
    - Gross margin is the big differentiator
      - Candidate should address COGS for bus company
        - Materials, labor are largest (not just commodity metals – specialty machinery components)
        - BYB has significant materials procurement disadvantage
        - Competitor A & B are not stand-alone firms – they are owned by large industrial trucking firms with some chassis and engine overlap

# Case: Big Yellow Bus

## Sample Recommendation

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Recommendation	We do not recommend proceeding with the investment of BYB. Even if pricing of transaction is attractive BYB is in a difficult competitive position. BYB is losing share to two lower-cost competitors with significant built-in cost advantages given their ownership structures. Further, cost is the biggest driver in the market as buses become increasingly commoditized and local cities & towns become more price sensitive in the face of budget deficits. Overall, not an attractive investment.
Risks	Economic decline / immigration patterns could actually accelerate demand beyond 3% growth going forward, but even in this case BYB is still at a cost disadvantage.
Next Steps	Make sure PE fund does not own related portfolio companies that might allow for procurement synergies with BYB along the lines of what is achieved by competition. Assuming there are none, move on.

# Case: Car Company

A.T. Kearney, Round 2

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## Problem statement narrative

Frank is 65 years old, and for his entire working career, has owned a manufacturing company which manufactures unibody car frames. He has always had one contract with one vehicle OEM, however this year that OEM has decided not to renew its contract. What should Frank do?

## Overview for interviewer

This is a high-level strategy case. The interviewer should guide candidate into exploring Frank's various options and ultimately weighing each option to determine which he should take. Various frameworks could be used to explore Frank's options in the industry, including, but not limited to a Value Chain Analysis or Five C's.

Case Type: Market Strategy

## Information to be provided upon request

The reason Frank's longtime customer has decided to end their contract with Frank is because a new type of welding technology is being used to make unibody frames, and Frank's plant does not support this technology.

This new welding technology will soon be mandated for cars by governing regulatory body.

Frank's company is privately owned, 100% by him, with an annual contract revenue of \$5M.

Frank has won numerous production efficiency and supplier quality awards.

His supply chain is almost fully optimized, however he could source some materials elsewhere and save \$100K / year.

# Case: Car Company

## Potential Categories of Candidate's Framework

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### Notable comments / potential discussion points

However the candidate chooses to address Frank's options, he should recognize that Frank's revenue has been eliminated in its entirety so his focus must be responding / repositioning in order to survive:

Value Chain Analysis (where can Frank gain advantages to lower his cost base or better meet customer demands?)

- Design / R&D
- Supply Chain Management
- Production
- Distribution
- Customer Management

Profit Drivers

- **Revenue** (Can Frank provide his product to other customers, can Frank adapt his plant to manufacture products for other customers, Can Frank lease out his facilities to others?)
- **Costs** (What will it cost Frank to upgrade his facility? What will it cost Frank to manufacture other products? What will Frank have to invest to gain new customers?)

5 Cs:

- **Customers** (Frank currently has one customer, can he expand that?)
- **Costs** (Where can Frank cut costs What will it take for him to upgrade his facility and adapt the new technology)
- **Competition** (Where is Frank's competition positioned? Are there others in his position? Are there markets where Frank can explore that are more profitable?)
- **Company** (What are Frank's companies strengths? Can that be adapted to another market/customer?)
- **Context** ( What is causing the change in customer behavior? Can Frank do anything to shape the regulatory environment or get ahead of future changes?)

# Case: Car Company

## Potential Issue Tree & Approach to Solving the Case

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### Key elements of analysis to solve the case

#### Value Chain (Profitability)

- Design & R&D
  - Supply Chain Management
  - Production
  - Distribution
  - Customer Management
- (Basic Math should be done to determine Frank will not be profitable if he upgrades since Frank wants to see a return on any investment within 2 years)

#### Possible follow-up and guidance to interviewer

For Frank to invest and upgrade his facilities he will have to invest \$10M. His current (soon to be expiring contract is \$5M and all-in costs are \$4.5M). If Frank were to relocate, his upgrade costs would remain the same (patented technology would still have to be purchased.) Frank can make a few cuts in his supply chain and save \$100K. Frank cannot save in distribution and end customer costs as the OEM he serves is right next door. Frank has won numerous production awards for being a lean plant.

#### 5 C's

While cost is covered in value chain discussion, the other "C's" can help determine potential alternatives:

- Customer
- Company
- Competition
- Context

#### Possible follow-up and guidance to interviewer

**Customer:** It will be difficult for Frank to find new customers for his current technology since that technology is being replaced per regulations. If he were to upgrade his plant, potential new OEM customers have signed long-term contracts with Frank's competition.

**Company:** The strengths of Frank's company lies in the R&D and design of the unibody frame technology. Frank's company does not sell anything else, nor does it have high brand recognition other expertise.

#### 5 C's (Continued)

While cost is covered in value chain discussion, the other "C's" can help determine potential alternatives:

- Customer
- Company
- Competition
- Context

#### Possible follow-up and guidance to interviewer

**Competition:** Frank's competitors have signed contracts with other OEMs and some have diversified portfolios. All have adapted the new technology.

**Context:** Frank is 65 years old and would like to spend more time with his grandkids. He could consider lobbying the regulatory body for a freeze on the changes, but this would require a longer-term, dedicated effort.

# Case: Car Company

## Sample Recommendation

102

Recommendation	Based on analyzing Frank's value chain/profit drivers, the strengths/weaknesses of his company, the market, Frank should exit the current market as he is currently the sole proprietor and quickly aging. The costs of implementing the new regulatory technology are high, and it does not appear that Frank would be able to recoup them in his required 2-year turnaround. Therefore Frank should begin to develop an exit strategy, which may include a sale to a strategic buyer that can make use of his existing assets and/or has more patience to make longer-term investments.
Risks	If Frank were to close his company, he would need to consider closure costs, including any long-term supplier contracts, outstanding debt, warranties, union fees, potential ill will in the community.
Next Steps	Frank should further explore if any of his current equipment, technologies can be adapted to make new products and the costs/revenues, although initial signs (his company's strengths are not in new technology) indicate this may be difficult. Frank should explore salvaging current assets and/or selling the business outright.

### BONUS

Who may be potential buyers for Frank's business?

- Strategic buyers / competitors: Frank's underlying technology may still be attractive in some ways.
- Financial buyers: probably not given difficult growth story, but perhaps as part of an industrial roll-up strategy of similar businesses.

# Case: Blood Bank

## Bain, Round 2

103

### Problem statement narrative

Our client is a blood bank that has operations spanning four states. They operate many sites from which their staff go out to different locations (e.g., schools and offices) in order to collect blood samples. Next, the blood is transported to centralized processing centers for testing, treatment, etc. (there is one processing center per state). Finally, the blood is transported from the testing centers to the hospitals that ultimately use the blood. The blood bank faces competition from other blood collection organizations. Only 80% of hospital demand for blood is currently being met. As a result, hospitals often have to share blood by transporting it between different hospitals, which is costly. There are no substitutes for human blood (synthetic substances or animal blood).

Their profitability has been slowly declining for some time and they are worried because new regulations are coming out that will require them to invest in an expensive new technology. The CEO wants to investigate potential areas to review in order to improve profitability and wants to know how to prioritize among them.

### Overview for interviewer

This is a basic profitability case but has a twist in that the candidate is asked to prioritize among the different possible mechanisms by which to improve profitability. This means that they will have to use their business judgment to assess the feasibility of different options.

Case Type: Profitability

### Information to be provided upon request

See following slides for further detail.

# Case: Blood Bank

## Sample Issue Tree & Qualitative Analysis

104

Candidate may propose analysis / action in:

### Internal Operations

- Revenues –opportunities to grow our top line?
  - Price – is there any flexibility in terms of the price we're currently charging hospitals?
  - Quantity – We know that there is unmet demand so how can we increase the volume of units of blood we sell to hospitals?
- Costs – opportunities to cut costs?
  - Variable costs – opportunities to improve procurement/labor?
  - Fixed Costs – opportunities to cut overhead/gain efficiency?

### Possible follow-up and guidance to interviewer

Price – Given what we know about the market, what is your hypothesis in terms of our ability to raise our prices? Candidate should realize that unmet demand gives client pricing power.

Quantity – Candidate should quickly recognize that there is unmet demand they can easily fill if they increase the size of their donations.

Costs – Candidate should probe in this area and give ideas for cutting costs, but interviewer should tell candidate that the client has already been doing these and has cut costs as much as possible.

### External Market Forces

- Customers (hospitals) – what's their elasticity of demand? What criteria do they use when purchasing blood?
- Suppliers (donors) – How can we increase the volume of donations? Increase # of donors or frequency of donations?
- Competitors – are our competitors profitable? Are they doing something we're not?

### Possible follow-up and guidance to interviewer

Customers – A typical operation costs the hospital \$40K and requires an average of 2.5 units of blood. Blood costs \$100/unit. Candidate should realize blood is relatively low cost for hospitals. Interviewer can share that blood is seen as a commodity by hospitals.

Suppliers – Candidate should explore possibilities for increasing blood supplies to meet unmet demand. A good candidate will come up with multiple ways to increase supply. In actuality, most have been tried in real life and have not worked. Supply is essentially fixed.

Competitors – No additional info is known.



# Case: Blood Bank

## Question 1 – Math

105

### Math Question

How can we tell if we are breaking even?

Follow-up after answer: If we're losing money, what price do we need in order to break even?

Follow-up after answer: Do you think this price is achievable?

### Overall approach, good shortcuts & solution

Fixed Costs = \$15M

Contribution Margin = \$100 (Price) - \$80 (variable costs) = \$20

Break Even Volume = \$15M/\$20 = 750K units

The blood bank is not reaching their break even point (400,000 units).

To solve the second question, hold volume and fixed costs constant and solve for contribution margin:

$\$15\text{M}/400\text{K units} = \$37.50$  They need to raise prices by \$17.50 per unit. This is an increase of nearly 100%.

To solve third question, evaluate the price impact on the hospitals:

An operation costs \$40K, blood costs are currently  $2.5 \times \$100 = \$250$ . Blood costs are approximately 0.625% of total costs ( $\$250/\$40\text{K}$ ). There should be ample room to increase these costs.

### Information to provide up front

None

### Provide information if asked

- Overall fixed costs are \$15M a year
- Variable costs are \$80 per unit
- Sales price is \$100
- Current volume is 400K units
- Typical operation costs hospital \$40K (also provided earlier)
- Typical operation requires average of 2.5 units of blood (also provided earlier)

# Case: Blood Bank

## Sample Recommendation

106

Recommendation	<p>First and foremost, raise prices to improve margins. There is unmet demand and blood represents a small portion of costs.</p> <p>Second, continue to look for ways to increase quantity in order to fill unmet demand.</p> <p>Finally, continue the efforts to keep costs minimal.</p>
Risks	<p>Risks are low, since blood is essential, has no substitutes and there is unmet demand.</p>
Next Steps	<p>Immediately implement price increases</p> <p>Invest new profits in order to try to increase donation levels</p>

# Case: EasyNav

## McKinsey, Mock Interview

107

### Problem statement narrative

EasyNAV is a multi-national third-party fund accounting company based in New York. Asset managers, such as Fidelity or other smaller investment shops, often outsource the calculation of their daily fund prices to third-parties such as EasyNAV. These fund prices, called Net Asset Values, or “NAV,” represent the per-share price of the fund, which then becomes published to the general public, e.g., in the Wall Street Journal. Given the high financial stakes, asset managers require EasyNAV to be both highly accurate and timely in their NAV calculations. This is still a highly manual process due to the number of data sources required to collect this information and inconsistency in data formats delivered to EasyNAV. Although business growth has been strong over the last five years, EasyNAV has seen its costs rising more quickly than its revenues. At the current trajectory, costs will exceed revenues within the next decade, and something must be done. *What are the causes of EasyNAV’s rising costs, and what can be done to reduce them?*

### Overview for interviewer

The initial problem statement specifically asks the candidate to explore EasyNav’s rising costs. Therefore, the candidate should ignore typical Profitability frameworks that explore Revenues in addition to Costs.

After the candidate develops a framework the interviewer should move on to the subsequent questions.

Case Type: Profitability / Operations

Case Style: Command & Control

### Information to be provided upon request

Steps EasyNav uses to calculate NAVs:

1. Verify the number of shares of each security that is held within the fund
2. Verify the number of outstanding shares of the fund itself
3. Receive and confirm the market-close prices of each security in the fund (must wait) for the equity markets to close; 4pm EST)
4. Use all available data to calculate NAV and send to requisite publishers – Wall Street Journal, Financial Times, etc. (must submit by 6pm EST)

# Case: EasyNav

## Potential Issue Tree & Approach to Solving the Case

108

### Key elements of analysis to solve the case

Company	Customer	Industry
<p>How does EasyNAV operate?</p> <ul style="list-style-type: none"><li>• Workflow process</li><li>• Balance of labor</li></ul>	<p>Who are they?</p> <ul style="list-style-type: none"><li>• Influx of small asset managers</li><li>• Shift in customer mix</li></ul>	<p>What are the industry trends &amp; norms?</p> <ul style="list-style-type: none"><li>• Shift to wider range (and complex) investment products</li><li>• Technology adoption rates</li></ul>
<p>Possible follow-up and guidance to interviewer</p> <ul style="list-style-type: none"><li>• Bottleneck of waiting for market-close prices will cause EasyNAV to have to staff to this peak period of capacity demand, leaving periods of time earlier in the day that are left with slack capacity.</li><li>• Dedicated fund accountants who process each account from start to finish are more costly than functionalizing roles along the value chain.</li></ul>	<p>Possible follow-up and guidance to interviewer</p> <ul style="list-style-type: none"><li>• Smaller asset managers have simpler systems leading to ad hoc/manual methods of delivering data to EasyNAV, which increases labor &amp; cost</li><li>• Greater business from new customers vs existing customers requires greater expense in initial account setup.</li></ul>	<p>Possible follow-up and guidance to interviewer</p> <ul style="list-style-type: none"><li>• Shift from typical mutual funds to derivatives add to complexity and are more difficult to price.</li><li>• Few third-party fund accounting companies relying on technology to calculate NAVs resulting in high labor costs.</li></ul>

# Case: EasyNav

## Question 1 – Cost Reduction

109

### Question

EasyNAV has 125 fund accountants today (the FTEs who calculate NAVs) who typically are assigned 3-6 funds each, which they work with from morning until end of business. These fund accountants tend to be very busy during the end of the day in order to meet submission deadlines. Separately, EasyNAV also has a staff of 25 fund administrators who deal mainly with the publishing of quarterly and annual prospectuses (i.e. a report of fund performance). In addition to its operations in upstate New York, EasyNAV has fund accounting operations in Melbourne, Australia, which handles some internationally domiciled funds. What are some possible ways for EasyNAV to improve their workflow and reduce costs?

### Information to provide up front

None

### Provide information if asked

None

### Overall approach, good shortcuts & solution

Possible solutions:

- Functionalize pieces of the value chain to properly align resources with work load. For example, instead of one fund accountant following a fund from beginning to end, break up the steps to calculating a NAV.
- Rebalance funds across different fund accountants to ensure that the most complex funds are handled by the best fund accountants (load balancing).
- Utilize the fund administrators group to help process funds during the peak end-of-day period. Since their work output is on a quarterly basis, they may have capacity to assist the fund accountants during crunch time.
- Utilize all locations (U.S., London, India) to better load balance work through time zone arbitrage. For example, end-of-day activities for London would take place during quieter morning/noon times for the U.S., so excess capacity in the U.S. could be used to help London during peak times.
- Utilize potential low-cost regions of the globe for additional offshoring.
- Increase use of technology to reduce manual processes

# Case: EasyNav

## Question 2 – Productivity Loss

110

### Math Question

Due to market changes, the team believes that productivity per FTE has dropped over the past five years. Because more complex funds take more manpower to process, EasyNAV normalizes the difficulty of each fund by assigning funds a “complexity point score,” which allows a fair fund-to-fund comparison (e.g., a fund with complexity score 15 takes three times as long to process as a fund with complexity score 5). The team needs to determine the level of severity of this productivity drop. To do this, data in Exhibit 1 has been collected. Using this data and any other data you might deem necessary, what is the percentage drop in productivity over the past five years, where “productivity” can be expressed as complexity points per FTE?

#### Information to provide up front

Exhibit 1 should be provided after problem statement is read.

#### Provide information if asked

- Large funds have an average of 10 complexity points each
- Small funds have an average of 20 complexity points each
- Number of large funds has grown 25% over the last five years
- Number of small funds has grown 120% over the last five years
- Number of fund accountant FTEs has grown 150% the past five year

#### Overall approach, good shortcuts & solution

##### Solution: 20% drop in productivity

	5 years ago	Today
# large funds	100	125 [=100*(1+25%)]
# small funds	200	440 [=200*(1+120%)]
# FTEs	50	125 [=50*(1+150%)]
# complexity points for large funds	1,000 [=100*10]	1,250 [=125*10]
# complexity points for small funds	4,000 [=200*20]	8,800 [=440*20]
Total complexity points	5,000 [1,000+4,000]	10,050 [=1,250+8,800]
Complexity points / FTE	100 [=5,000/50]	80.4 [=10,050/125]

# Case: EasyNav

## Question 3 – Resource Allocation

111

### Math Question

After meeting with EasyNAV management, the team is asked to explore potential savings by utilizing fund accountant downtime in one geography to assist another geography during their peak time between 4-6pm. Specifically, they would like us to examine how the Melbourne location could assist the New York location. Additional information uncovered:

- Melbourne is 16 hours ahead of New York
- FTEs are paid an equivalent of USD \$50,000 per year
- New York has 100 FTEs staffed throughout the day, Melbourne has 60 FTEs
- Utilization of FTEs varies throughout the day based on the amount of work required at that time of day. Avg utilization in Exhibit 2.

- Due to natural variances in workload per day, a location's average utilization cannot exceed 80% of the total available FTEs. That is, an average safety cushion of 20% FTEs is required all times of the day to allow for very busy days. Both location's full-staffing levels reflect the necessary staffing to meet this requirement (e.g. 100 employees in New York to meet the average need of 80 employees in peak hours).

If all available slack capacity in Australia could be diverted to help work on New York-processed funds during their peak activity period of 4-6pm, how much could be saved in labor expense by reducing the New York staffing requirement?

### Information to provide up front

Exhibit 2 should be provided after problem statement is read.

### Provide information if asked

Utilization is a measure of how much of a location's total available FTE resources are being used (demanded) at any given time, e.g., if a location has 5 FTEs on hand, and the utilization is 60% at noon, then the demand for work is 3 FTEs at that time.

### Overall approach, good shortcuts & solution

See following slide.

# Case: EasyNav

## Question 3 – Solution

112

### Math Solution

**Solution: EasyNAV will save \$750,000/yr, or about 15% of total New York FTE spend**

- Time zone conversion: 4-6pm peak period in NY is 8-10am in Melbourne
- Available resources in Melbourne:
  - From the exhibit, average utilization in Melbourne from 8-10am is 60%, therefore there is 20% capacity before reaching the 80% threshold (average utilization cannot exceed 80% during any period of the day)
  - Therefore,  $20\% \times 60 \text{ FTE} = 12 \text{ FTEs}$  available to assist NY
- New resource requirement in NY by utilizing Melbourne:
  - During the peak time of 4-6pm, NY has an average of 80% FTE utilization, meaning that  $80\% \times 100 \text{ FTEs} = 80 \text{ FTEs}$  needed/working during this time
  - By utilizing Melbourne, EasyNAV can reduce the 80 FTE demand by 12:  $80 - 12 = 68 \text{ FTEs}$  required in New York
- Savings due to reduction of FTE requirements in NY:
  - EasyNAV can reduce staff in NY so that the 68 FTEs required during the peak time represent 80% staffing requirements
  - Therefore,  $68 \text{ FTEs} / 80\% = 85 \text{ FTEs}$
  - FTE savings of  $100 - 85 = 15 \text{ FTEs}$
  - Dollar savings of  $15 \text{ FTEs} \times \$50,000 = \$750,000$



# Case: EasyNav

## EasyNAV Exhibit 1

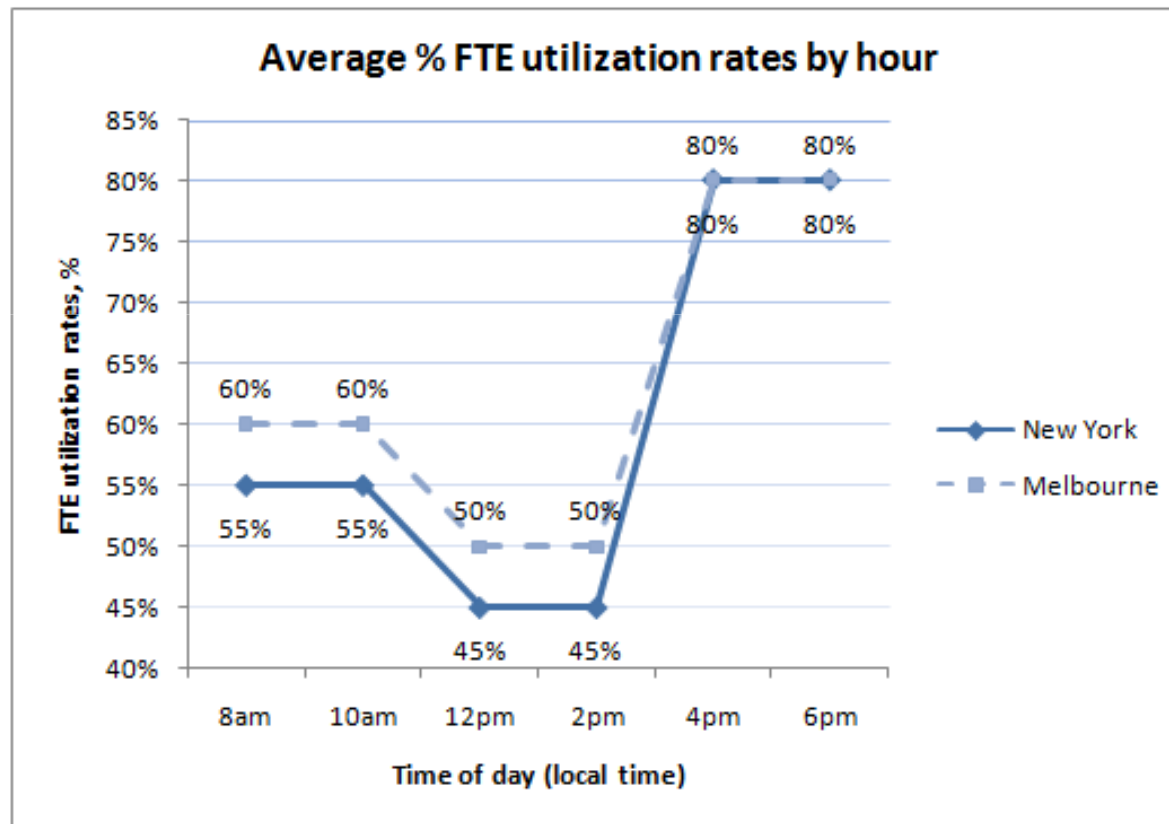
113

	5 years ago	Today
# large funds	100	
# small funds	200	
# FTEs	50	
Complexity points / FTE		

# Case: EasyNav

## EasyNAV Exhibit 2

114



# Case: EasyNav

## Sample Recommendation

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Recommendation	EasyNav's primary cost driver is the mismatch between FTE resources and demand. The client can reduce these costs by utilizing slack capacities between New York and Melbourne. Such an arrangement will allow EasyNAV to reduce its labor by 6 FTE, a savings of \$300,000/year.
Risks	Trade-offs to maximum efficiency (e.g. potential loss of quality or less-skilled labor in offshore agreements, loss of ownership, etc)
Next Steps	EasyNAV may benefit from greater automation of manual processes and, in addition, can work with its clients to mandate standardized data submissions to streamline NAV calculations.

# Case: Manny's Manufacturing

Inspired by A.T. Kearney, Round 2

116

## Problem statement narrative

Manny's Manufacturing is a U.S. based company that produces a consumer packaged good. It currently has manufacturing facilities in the U.S. and an idle plant in South America. The executive team at Manny's Manufacturing is trying to determine the health of its business and whether to use the South American plant.

## Overview for interviewer

The candidate should first determine the profitability of the North American plant by looking at revenue and costs. He/she will most likely do a market size analysis to assist with this. He/she will then evaluate potential profitability of the South American plant and finally explore some of the qualitative issues that come with operating internationally (additional taxes, environmental concerns, proximity of distributors, product quality, lack of technological advancement etc). The candidate may decide to use the S.A. plant, sell the S.A. plant, or maintain status quo. Depending on the candidate's assumptions, different answers may apply. Be sure that the logic is sound.

Case Type: Profitability, Market Size, Strategic Analysis

## Information to be provided upon request

Products are sold only in the United States

North America profitability analysis:

1. Market Size analysis
  1. U.S. Population: 300M
  2. % of population demanding the product: 10%
  3. # of products demanded per person: 20
  4. Price of product: \$ 0.50
  5. Manny's Market Share: 5%
  6. Market is mature and not expected to grow significantly. Competitive market, but difficult to steal market share
2. Costs with N.A. plant (see Question 2)
3. Costs with the S.A. plant (see Question 2)
4. Capacity: N.A. plant can make 50M goods; S.A. can make 20M goods
5. The same product with the same quality can be produced in S.A. or N.A.

# Case: Manny's Manufacturing

## Question 1 – Market Sizing/ Revenue Analysis

117

### What is Manny's Revenue?

#### Information to provide up front

- No information is to be given up front. Simply ask how the candidate would do market share analysis

#### Provide information if asked

- Market Population = U.S.: 300M  
 - % of population demanding the product: 10%  
 - # of products demanded / person: 20  
 - Price: \$0.50  
 - Manny's Market Share: 5%

	United States
United States Population (given)	300,000,000
Percentage of the population demanding the product (given)	10%
Total People demanding the product (300M * 10%)	30,000,000
# of products demanded by person on average (given)	20
Total Market Size (# of products) (20*30M)	600,000,000
Price per product (given)	\$0.50
Total Market Size (\$) (\$0.50*600M)	\$ 300,000,000
Manny's Market Share (given)	5%
Manny's Products Demand (5% * 600M units)	30,000,000
Manny's Total Potential Revenue (\$0.50 * 30M)	\$ 15,000,000

# Case: Manny's Manufacturing

## Question 2 – Cost Structure

118

### What are Manny's costs to operate each plant?

#### Costs for N.A. Plant

Fixed Costs	\$	5,000,000
Variable Costs		
Raw Materials (\$0.10 per product)	\$	3,000,000
Transportation (\$0.05 per product)	\$	1,500,000
Other VC	\$	4,000,000
Total Costs	\$	13,500,000

#### Costs for S.A. Plant - assuming operating at 100% (20M goods which is not enough to satisfy 100% of demand)

Fixed Costs	\$	4,500,000
Variable Costs		
Raw Materials (\$0.05 per product)	\$	1,000,000
Transportation (\$0.20 per product)	\$	4,000,000
Other VC	\$	4,500,000
Total Costs	\$	14,000,000

### Information to provide up front

- No information is given up front. The candidate should ask for each of the numbers.
- If the candidate asks for "Variable Costs," ask him/her to give examples of V.C.
- Ask them to explore what could be in the Other V.C. bucket (labor, variable overhead, etc)

### Provide information if asked

- Fixed Costs for N.A. are \$5M
- Raw Material Costs for N.A. are \$0.10 per product
- Transportation Costs for N.A. are \$0.05 per product
- Other V.C. in N.A. are \$4M
- Fixed Costs for S.A. are \$4M
- Raw Material Costs for S.A. are \$0.05 per product
- Transportation Costs for S.A. are \$0.20 per product
- Other V.C. for S.A. are \$4M
- Manny's capacity in N.A. is 50M
- Manny's capacity in S.A. is 20M

# Case: Manny's Manufacturing

## Issue Tree: Qualitative Factors

119

In addition to the previous quantitative slides, candidate can explore various buckets

### Environmental Concerns

- Is there a larger environmental impact associated with transportation from S.A.?
- Do the same environmental regulations apply to the S.A. plant as the N.A. plant?

### Possible follow-up and guidance to interviewer

- Carbon footprint is something the company has been extremely concerned with and would like to keep emissions as low as possible. Shipping from S.A. would drastically increase the carbon footprint
- Environmental regulations are not as strict in S.A., particularly with waste disposal and factory cleanliness. This could tarnish the company's image

### Legal Concerns

- Are there stricter/looser laws in S.A. or N.A.?

### Possible follow-up and guidance to interviewer

- While laws are stricter in the U.S., Manny's is not willing to use any of the loopholes in S.A. to gain a competitive advantage for fear of damaging its image.

### International Expansion

- Is it possible to expand to other markets?
- What are the tax implications of international expansion?

### Possible follow-up and guidance to interviewer

- Have the candidate explore the option by asking follow up questions
  - How much capacity is available?
  - Which markets should Manny expand to and why?
  - Where would Manny produce the goods to expand?
- There will be import/export taxes, but for ease, assume they fall within other V.C.

# Case: Manny's Manufacturing

## Sample Recommendation

120

Recommendation	Manny's Manufacturing should continue to produce in the United States and sell the South American plant if an attractive opportunity arises. The reasons to continue producing in the U.S. and not in S.A. are 1) Manny's would actually lose money on sales to the U.S. from S.A. (\$10M revenue - \$14M cost at full capacity utilization in S.A.); 2) It is cheaper to produce in the U.S. mainly due to transportation costs; 3) The environmental impact of producing in the U.S. is significantly lower; and 4) S.A. does not have the capacity alone to meet demand in the U.S. and therefore the N.A. and S.A. plants would both need to be running meaning Manny would incur the fixed costs at both locations.
Risks	<ul style="list-style-type: none"><li>-Manny's may not find a buyer for the plant or may miss opportunities to expand in S.A.</li><li>-Manny's may eventually reach capacity in the U.S.</li></ul>
Next Steps	<ul style="list-style-type: none"><li>-Try to increase demand in N.A. to get the N.A. plant fully utilized</li><li>- Explore international expansion</li><li>- Find potential buyer for S.A. plant</li></ul>

### BONUS

What would it take to make the S.A. plant more appealing?

- Increased capacity
- Lower transportation costs
- Increased demand (the N.A. factory is not running at 100% utilization currently)



# Case: Zenith Hotel

Bain, Round 1

121

## Problem statement narrative

Zenith Hotel is a global hotel chain with 50 hotels in 20 countries. The company is evaluating the construction of a new hotel in the Bahamas. Zenith has come to us asking whether it should and can move forward with the project.

## Overview for interviewer

This case is extremely straightforward and open ended. The interviewer read the problem statement and waited for the candidate to drive the rest of the case. No exhibits were introduced.

This was primarily a case about feasibility, so the discussion should focus on an internal / external analysis of the company's plans with two math problems to solve.

Case Type: Market Entry

## Information to be provided upon request

The hotel will have 400 rooms

# Case: Zenith Hotel

## Potential Issue Tree & Approach to Solving the Case

122

### Key elements of analysis to solve the case

Internal	External	Feasibility
<ul style="list-style-type: none"><li>• Capabilities</li><li>• Start-up costs</li><li>• Expected profits, driven by revenues (volume * price) and costs (broken down by fixed and variable)</li></ul>	<ul style="list-style-type: none"><li>• Competition</li><li>• Consumer demand</li><li>• Regulatory/other issues</li></ul>	<p>See mathematical detail on following pages</p>
<p>Possible follow-up and guidance to interviewer</p>	<p>Possible follow-up and guidance to interviewer</p>	<p>Possible follow-up and guidance to interviewer</p>
<ul style="list-style-type: none"><li>• Ask the candidate to walk through the costs that the hotel would occur on an on-going basis</li><li>• Make sure that insurance and marketing costs are included</li></ul>	<ul style="list-style-type: none"><li>• Regulatory/country-specific issues are not a concern</li></ul>	<p>See mathematical detail on following pages</p>

# Case: Zenith Hotel

## Question 1 – Breakeven

123

### Math Question

How much would Zenith need to charge on average per room to break even?

#### Overall approach, good shortcuts & solution

- Costs over 5 years =  $\$500M + 10 \times \$20M = \$700M$
- $400 \text{ rooms} \times 350 \text{ days/year} \times 10 \text{ years} = 1.4M \text{ room days}$
- $\$700M / 1.4M = \$500 \text{ per night}$

#### Information to provide up front

- Start-up costs are  $\$500M$
- The hotel would cost  $\$20M$  a year to operate
- Assume that we are evaluating a ten year horizon

#### Provide information if asked

- Assume 350 days in a year at constant rates

# Case: Zenith Hotel

## Question 2 – Market Share

124

### Math Question

What is Zenith's implied market share?

#### Overall approach, good shortcuts & solution

- $400 \text{ rooms} * 75\% \text{ occupancy} = 300 \text{ rooms}$
- $300 \text{ rooms} * 3 \text{ people} = 900 \text{ people at any given time}$
- $900 \text{ people per week} * 4 \text{ weeks/month} = 3,600 \text{ people/month}$
- $3,600 \text{ people per month} / 50,000 \text{ people per month} = 7.2\% \text{ market share}$

#### Information to provide up front

- Average occupancy is 75%
- Bahamas receives 50,000 visitors per month

#### Provide information if asked

- Assume 3 people per room
- Assume 7 day average stay

# Case: Zenith Hotel

## Sample Recommendation

125

Recommendation	Zenith should proceed with the construction of the hotel. As a global hotel chain, gaining a 7% market share in the Bahamas seems like a reasonable goal.
Risks	It seems overly aggressive to assume that hotel rooms will be occupied 350 days a year for the breakeven calculation.
Next Steps	Examine consumers' willingness to pay \$500/night for a Zenith hotel room in the Bahamas.



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