Case 30: Zoo Co.

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CASE COMPETITION
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Case Question

- Our client is a zoo that is thinking about acquiring a famous zebra from an African preserve.
- It's a huge investment, but they believe the new zebra would be a great contribution to their animal community. You have been engaged to help decide whether this is a good idea. What would you consider when trying to help your client make this decision?

7
Quants.

5
Structure

Invest.
B/E
Basic NPV

Case tracker

- **Industry:** Financial Services
- **Level of Difficulty:** Medium
- **Case Format:** M&A
- **Concepts Tested:**
  - Investments
  - Break-even Analysis
  - Basic NPV

Fit Questions

Spend first 15 min on fit

- Describe a recent unpopular decision you made. What was the result?
- Tell me about a successful business relationship you built with a client, boss, or peer in your previous job.

Guide to interviewer

- Even though the client is a Zoo, we're undertaking a similar process to what is done when underwriting an insurance policy. The case evaluates basic concepts, but involves many calculations and use of financial and assessment techniques.
- Key case objectives:
  1. Investment Valuation – Walk through the valuation process for an asset
  2. Breakeven Analysis – Determine the revenue increase needed for a positive NPV
  3. Risk Assessment – Should the zoo should use an insurance contract to hedge downside risk?
- Rounding numbers is generally okay but should not be done to the extreme as it will alter the results

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Zoo Co: Clarifying answers and case guide

Clarifying answers to provide

Data to provide when asked

- 300K people visit the zoo yearly
- Admission is $15
- Benefits from acquisition could lead to increased attendance. Another zoo that acquired a similar zebra had an 8% increase

Costs from zebra acquisition

- Immediate costs: acquisition fees, transportation costs, and new facilities.
- Food, health costs and additional trainers are part of annual maintenance costs
- Acquisition cost: $235K
- New facilities: $850K
- Transportation: $110K
- Annual maintenance: $90K
- Discount rate = 20% Assume that immediate cost are paid today, and annual costs and benefits are realized beginning next year and sustained into perpetuity, even thought the Zebra will not live on to perpetuity

Guide to case / Guide to handouts

- The interviewee should think about performing a break even and a sensibility analysis. Afterwards, they need to think about performing a risk assessment (*only when you reach this point you should deliver exhibit 1*)
- They should start by asking about the benefits and costs associated with zebra acquisition (Left)– Share with interviewee after probing questions are received
- Using the data on the left to calculate benefit to zoo from acquisition – Determine whether or not this zebra purchase makes financial sense for the zoo, using the NPV value
- Using the cost and benefit data provided, the interviewee should calculate the NPV of the acquisition
- *Assume that attendance benefits are realized immediately and maintained thereafter*
  - Annual benefits = (300K)*($15)*(0.08) = $360K
  - Upfront costs = $235K + $850K + $110K = $1.195M
  - Annual costs = $90K
  - NPV = -$1,195K+(($360K - $90K)/0.20) = $155K
- Continue by asking questions in next page

Zoo Co: Key elements to analyze

Break-even analysis

- Zoo Co. is concerned about using the other zoo's attendance benefits as a proxy. They think that attendance could increase by less than 8%. What analysis could you perform to address their concerns? What is the breakeven attendance increase required?

Risk assessment

- Since the zoo is very risk-averse, they're interested in hedging some of their downside risk. An insurance company has offered to provide the Zoo with a constant revenue to increase revenue to $250,000 per year if attendance increases are less than or equal to 5% (if revenue is $135K, the insurance will give the Zoo, $115K. In exchange, the insurance company wants the zoo to pay 0.1% of the zoo's total annual revenues as a premium. What might you do to determine if this was a good deal?

Notes to interviewer

- The interviewee should determine that a sensitivity / breakeven analysis of the NPV calculation with lower attendance increases will help confirm that the project still makes sense
- See calculations page

Notes to interviewer

- The interviewee should recognize that additional information is needed, and that a market research study could aid in this process
- Hand out Exhibit 1 after the interviewee identifies this notion
- The interviewee should use the market research to determine the probable attendance increase

Zoo Co: Calculations

Math questions

1. What is the breakeven attendance increase required?
2. Do you think the insurance company is providing a good deal to the zoo?

Calculations

1. Break-even: = -$1,195,000+((revenue-$90,000)/0.20)

($1,195,000)x .20 = revenue-$90,000

revenue = $239,000 + $90,000 = $329,000 (*required additional revenue to break even)

$329,000 = (300,000) x (15) x (% increase)

% increase = ($329,000 / $4.5M) = 7.3%

After handing over exhibit 1

2. Annual cost to zoo: 0.1% of total zoo revenues = (0.001)*($4,752,000) = $47,520

Annual expected benefit to zoo = ($250,000 - $225,000)*(0.20) + ($250,000 – 135,000)*(0.40) = $33,000

*Costs > Benefits, so this is **not** a good deal*

Zoo Co: Solution and recommendations

Solution & Recommendations

- It is unlikely that the zebra acquisition is a good idea for the zoo to undertake given the information provided. At other zoos, attendance has gone up substantially due to a new zebra; however, based upon our market research, it seems less likely that we can breakeven on the investment through increased attendance. We have received an insurance contract to help mitigate some of the downside risk; however, it is too expensive to create value.
- In order to make the investment more palatable, we may consider negotiating with the insurance company to either increase the revenue benefits provided or decrease the premium cost.

Bonus/Guide to an Excellent Case

Excellent cases will:

- Identify that we can use another zoo's attendance increases as a proxy for estimating our own attendance increases
- Notice in Exhibit 1 that it is unlikely that attendance will increase sufficiently enough for the zoo to break even
- Notice that the insurance company's premiums and benefits are both impacted by attendance increases; so if attendance increases are always greater than 5%, the zoo will be paying even more but getting no benefit
- Notice that the insurance company's contract is essentially an option; so a different structure to the contract may be more suitable for the zoo

Exhibit 1: Market research findings

Exhibit 1: Market Research Findings

Possible Attendance Increases	Annual Revenue	Probability
3% Increase	$135,000	20%
5% Increase	$225,000	40%
7% Increase	$315,000	30%
9% Increase	$405,000	10%
Expected Additional Annual Revenue	**$252,000**	
Plus: Current Annual Revenue	$4,500,000	
Expected Total Annual Revenue	**$4,752,000**	