Practice Case 16 (Regional Jet Corporation)

Initial Handout for Interviewee:

Regional Jet Corporation is a U.S. manufacturer of regional airplanes-airplanes with 100 seats or less. Its business consists of two types of aircraft: (1) jet engine, 80 to100-seat aircraft and (2) propeller, 20 to 30-seat aircraft. In fiscal year 1999, Regional Jet delivered 100 jet engine aircraft and 150 props. This represented a unit volume increase year-over-year of 10% and 5%, respectively, and revenues of $730 million and $225, million, respectively.

Although overall profitability for Regional Jet in 1999 was a competitive 5% economic profit margin, profitability varied significantly by business. The prop business generated a stellar 30% profit margin, while the jet engine business was unprofitable with a margin of 3%. Over the past several years, Regional Jet has experienced eroding profitability in its jet engine aircraft business. Its prop business, despite being profitable, has been flat in most recent years.

At a January 5th analyst conference (a meeting with the investor community) Regional Jet's senior management team announced that the company was committed to managing for value.

To this end, Regional Jet has hired you and a team of consultants to help the company develop and implement the value-maximizing strategies for its businesses.

For our case discussion today, please focus on the jet engine aircraft business:

- How would you go about further analyzing this business?
- What recommendations would you like to make to senior management?

Initial Handout for Interviewee (cont.)

Regional Jet Corporation
Profitability by Business (1999)

	Jet Engine Aircraft Business		**Propeller Aircraft Business**	
	Amount ($mm)	**% of Total**	**Amount ($mm)**	**% of Total**
Revenues	$730	100%	$225	100%
COGS	$(588)	(81)%	$(86)	(38)%
SG&A	$(84)	(12)%	$(16)	(7)%
Delivery & Other	$(42)	(6)%	$(8)	(4)%
Taxes (40%)	$(15)	(2)%	$(46)	(20)%
Net Income	$1	0%	$69	31%
Capital Charge (10%)	$(21)	(3)%	$(3)	(1)%
Economic Profit	**$(20)**	**(3)%**	**$66**	**30%**

Note: Assume debt-to-total capital of 70%

Case Summary (for Interviewers only)

Regional Jet Corporation is losing money in one of its two business units: jet engine aircraft. However, the market for jet engine aircraft is profitable. Although Regional Jet has a parity offering and operating position, it has a disadvantaged overall competitive position, driven by a pricing disadvantage in serving its large lessor customer segment. Lessors, in purchasing large volumes of aircraft, have been able to exert significant buying power over our client to achieve large price concessions.

Jet Engine Regional Aircraft Business

I. Market Economics

An "A " candidate should seek to understand market size, growth and profitability, as well as conduct an indirect structural assessment of the industry, e.g., suppliers, customers. Information to be provided to student if asked, although some may require prompting:

- Market Size: In 1999, the U.S. jet engine, 100 seat or less aircraft market was ~$5 billion.
- Competitors: There is no dominant competitor in the jet engine, 100 seat or less market. The market leader has 20% market share. There are 4 other competitors with market share from 12% to 18%. Regional Jet Corporation has ~16% share.
- Market Growth: The market has been growing ~5% (in units delivered) each year for the past 5 years and is expected to continue to grow 5% over the next decade. In 1999, a total of 625 jet engine regional aircraft were delivered to customers.
- Market Profitability: *Ask the student whether he/she thinks the market is profitable, and how he/she would go about assessing market profitability.* (Answer to be provided post discussion on structural forces below):
    - Supplier Power: The supplier base for regional aircraft parts is highly fragmented and Regional Jet uses approximately 50% proprietary parts in its jet engine aircraft. Hence, supplier power is **low**.
    - Intensity of Direct Competition: Fairly concentrated market with only 6 jet engine regional aircraft manufacturers. Hence, intensity of direct competition is **low-to-moderate**.

- Customer Power: In 1999, there were 225 customers. Types of customers include airlines, aircraft lessors, local and national governments, businesses and private individuals. Hence, customer power **varies by segment**.
    - *Only if the student asks about customer power, share with him/her the following facts:* Aircraft lessors (i.e., Regional Jet's aircraft customers who lease jets to airlines, governments, businesses and individuals) make large purchases (often 20 or more aircraft) during a buying cycle and hence exploit their negotiating leverage over manufacturers, such as Regional Jet. Hence, aircraft lessors have **high** customer power. All other customers have **low-to-moderate** buying power, depending on their credit worthiness.
- Intensity of Indirect Competition: Larger commercial jets (100 seats or greater) with longer range manufactured by large commercial aerospace and aircraft manufacturers can be used on regional routes. However, these larger aircraft are expensive for customers to operate solely on a regional basis. Hence, intensity of indirect competition is **low**.
- Barriers to Entry: Jet engine, regional aircraft manufacturing requires significant capital investment in production facilities and equipment, as well as strong relationships with various labor unions. Hence, barriers to entry are **high**.
- *Based on the information provided thus far, ask the student if he/she thinks the market is profitable or unprofitable.* The market is profitable with the average competitor generating 4% economic profit margins over the past 5 years.

II. Competitive Position

An "A" candidate should seek to understand competitors and Regional Jet's offering, pricing and operating position..

Information to be provided to student if asked, although some may require prompting:

- Offering position: Overall, the company's offering position is at **parity**.
    - *Commonality:* The company's jet engine aircraft has a cockpit that is similar to the industry standard and results in low switching costs for new customers (pilots and flight crew do not need extensive re-training).
    - *Performance:* The company's aircraft offers a range of 500 miles, which is similar to the market average.
    - *Maintenance and Asset Life:* The majority of the fragmented jet engine aircraft maintenance companies have the capabilities and parts to service Regional Jet's aircraft. For the aircraft customer, maintenance costs over the life of the asset is in line with regional jets of the company's competitors. On average, the life of the aircraft is 20 years.

- Pricing Position: *Question for the student: Based on the discussion thus far, what does he/she think that the company's pricing position is relative to competitors?* Answer: Regional Jet is pricing below the market average, since it is gaining market share (unit volume is growing at 10% vs. market growth of 5%) with a parity offering. Hence, Regional Jet is pricing for share, i.e., in 1999 it had a **disadvantaged** pricing position.
- Operating Position: Regional Jet's operating cost per aircraft is at **parity** with the industry. Every jet engine aircraft the company delivered in 1999 cost approximately the same to produce. *The student should recognize that achieving scale is critical to the spreading of fixed costs, and hence, the lowering of per unit costs.*

III. Regional Jets Customers

- Customer Segments: Regional Jet serves 3 types of jet engine aircraft customers:
  - Customers who purchase only 1 aircraft in a buying cycle (approximately every 5 to 15 years, depending on the customer)
  - Customers who purchase 3 aircraft, and
  - Customers who purchase 20 aircraft
- *At this juncture, the student should inquire about customer segment profitability. Provide the student with the handout: "Jet Engine Regional Aircraft Business - Profitability by Customer*
- *Description of Segments:*
  - *Customers who buy only 1 aircraft during a buying cycle are comprised mostly of small aircraft customers with moderate-to-high credit risk.*
  - *Customers who buy 3 aircraft are comprised mostly of medium aircraft customers with moderate credit risk.*
  - *Customers who buy 20 aircraft are comprised of creditworthy aircraft lessors.*
- *Key Driver of Segment Profitability:* If the student has not discussed it already, at this point in the case, he/she should recognize that the 3 aircraft lessors (i.e., Regional Jet's aircraft customers who lease jets to airlines, governments, businesses and individuals) in making large purchases (often 20 or more aircraft) during a buying cycle exploit their negotiating leverage over Regional Jet. The data to support this can be quickly calculated by the student by referencing the "Profitability by Customer Segment" handout: *$408M/60 aircraft = $6.8M average sales dollars per aircraft from aircraft lessors, compared to $8.4M to small aircraft customers and $8.0M from medium aircraft customers.* [Ask the student to compute average price by customer segment, if he/she has not done so without being prompted.] Of course, the student should be able to conclude that the main driver of profitability between segments is solely price without doing any math, since operating cost per aircraft produced and delivered is the same regardless of the intended customer.

IV. Overall Competitive Position

Question for the student: Does he/she think that the company's overall competitive position is advantaged, disadvantaged or at parity?

Answer: Regional Jet is competitively disadvantaged overall with negative profits (compared to a profitable market) driven by a disadvantaged pricing position, particularly to the large lessor customer segment.

V. Alternative Generation

Key Question: What are some strategy alternatives that Regional Jet can pursue in order to improve its jet engine aircraft profitability?

- *Potential alternative #l: Aggressively pursue new small and medium, non-aircraft lessor customers and do not increase sales to existing aircraft lessor customers.*
  - Ask the student what key questions he/she would seek to answer in the evaluation of this alternative. *Key risks may include a slow road to profitability and unlikely to result in the doubling of the jet engine aircraft business' value.* Ask the student to compute how long it would take for Regional Jet to double the economic profit of the business given the company acquires new small and medium, non aircraft lessor customers at the market growth rate of 5%.
- *Potential alternative #2: Aggressively pursue new small and medium, non-aircraft lessor customers and do not serve any aircraft lessors.*
  - Ask the student what key questions he/she would seek to answer in the evaluation of this alternative. *Key risk may include the inability to achieve scale (currently at 100 units, with 60% of units purchased by aircraft lessors), and hence, profitability in any customer segment.*
- *Potential alternative #3: Regional Jet to increase its negotiating leverage vis-a-vis aircraft lessors by entering the aircraft leasing market.*
  - Ask the student what key questions he/she would seek to answer in the evaluation of this alternative. [See discussion below]
- *Others?*

Potential Alternative #3: Enter the Aircraft Leasing Market

Some facts to share with the student:

- *The jet engine, regional aircraft leasing market is large and growing*
    - *In 1999, the new aircraft leasing market represented almost 50% of all new aircraft delivered (with operating leases comprising half) and is expected to grow 5% per year.*
- *The aircraft leasing market is profitable with the average competitor generating ROEs of ~15% (cost of equity ~10%).*
- *Three aircraft lessors (also Regional Jet's customers) dominate the market wish a combined share of 65%.*
- *The key driver of profitability is cost of funds.*
- *Regional Jet currently provides vendor- or manufacturer-financing on a very limited basis in the form of leases.*
- *Regional Jet would be at parity in terms of cost of funds.*
- *Regional Jet has marketing relationships with all aircraft end-users who are leasing their aircraft from the company's aircraft lessor customers. Regional Jet works with these end-users to help them configure the plane during the front end of the sales process.*

Additional Handout for Interviewee
Jet Engine Regional Aircraft Business Per Aircraft Economics and Profitability by Customer Segment (1999) Per Aircraft Economics (1999)

(thousands)	**Per Aircraft Cost**
COGS	$(5,880)
SG&A	$(840)
Delivery & Other	$(420)
Taxes	$(504)
Capital Charge	$(214)
Total Economic Cost	**$(7,858)**

Profitability by Customer Segment

(millions)	**Customers Who Buy 1 Aircraft**	**Customers Who Buy 3 Aircraft**	**Customers Who Buy 20 Aircraft**
# of Customers	5	11	3
Revenues	$42	$280	$408
COGS	$(29)	$(206)	$(353)
SG&A	$(4)	$(29)	$(50)
Delivery & Other	$(2)	$(15)	$(25)
Taxes	$(3)	$(12)	0
Net Income	$4	$18	$(20)
Capital Charge	$(l)	$(7)	$(13)
Economic Profit	$3	$11	$(33)
# of Aircraft Delivered	5	35	60
Share by Segment	2%	33%	50%