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Estonian Air's Big Buy

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It was mid-March 2007, and Rait Kalda, vice president of AS Estonian Air Operations, was in his office looking out at the recently reconstructed Tallinn Airport runway. He checked the departure time table as he watched one of Estonian Air's Boeing 737-300s take off. The plane was bound for Dublin with ninety-three passengers aboard. He was pleased to note that the flight departed precisely on time.

Kalda's sense of satisfaction quickly faded, however, as he resumed working on the problem at hand. Jet fuel prices had increased, on average, about 32 percent over the last three years (**Exhibit 1**). Glancing at the latest industry report, he noted that fuel costs accounted for almost 26 percent of operating costs, representing an 18 percent increase from 2005 (**Exhibit 2**). On the bright side, internal market forecasts predicted a 10–15 percent increase in the demand for intra-European regional flights. He raised his eyebrows in thought. How would their competition react to these forecasted increases in demand? Should Estonian Air expand its fleet of planes? If they were to expand, an obvious decision was the Boeing 737. Estonian Air currently leased and operated four Boeing 737s. However, considering expected increases in fuel prices, Kalda wondered if it was time to look at the smaller but more fuel efficient turboprops, such as the Bombardier Q400.

The major benefit of using turboprops for short-leg flights, besides greater fuel efficiency, was increased seat utilization (about 90 percent for the Q400 versus 62 percent for 737s). Noting that at least 90 percent of Estonian Air's existing routes could be serviced by Q400 turboprops, Kalda also had to consider operational impacts of smaller planes.

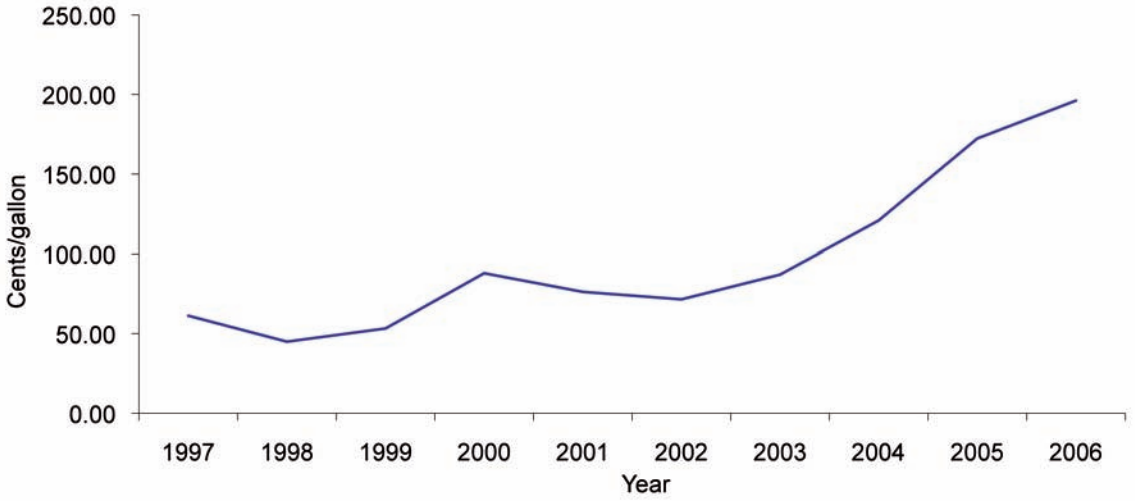
Expanding, whether with jets or turboprops, implied significant new lease payments for Estonian Air.[1] A much less costly alternative would be to accommodate anticipated future growth by leasing used aircraft in the secondary market. All of these choices, however, were predicated on the assumption of continued economic prosperity in Estonia and across Europe.

The case writers prepared this case as the basis for class discussion rather than to illustrate either the effective or ineffective handling of a managerial situation. The case is based on real persons, events, and organizations, though the dialogue and and commentary have been constructed by the authors to provide additional context for analysis. The authors appreciate the efforts of Tupper Cawsey, editor of the *Case Research Journal* and the anonymous reviewers that have helped to make this a more effective case.

Exhibit 1 Energy Information Administration: Jet Fuel Prices 1997–2007

Year	Cents/gal.	% Change*
1997	61.30	—
1998	45.00	–26.60
1999	53.30	16.60
2000	88.00	69.00
2001	76.30	–13.80
2002	71.60	–7.50
2003	87.10	22.10
2004	120.80	38.20
2005	172.30	43.90
2006	196.10	14.40

*Percentage change is stated as reported; rounding in effect



Source: http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/petroleum_marketing_monthly/historical/2009/2009_03/pdf/pmmall.pdf.

The next executive team meeting was scheduled for Friday afternoon, and the team expected a recommendation on how Kalda planned to address the expected increase in intra-European regional flight demand in light of both high fuel prices and last year's net loss (about $5 million in U.S. Dollars).[2] The executive team, reporting to the president, consisted of the vice presidents of operations, finance, and commercial. The vice presidents' responsibilities were as follows:

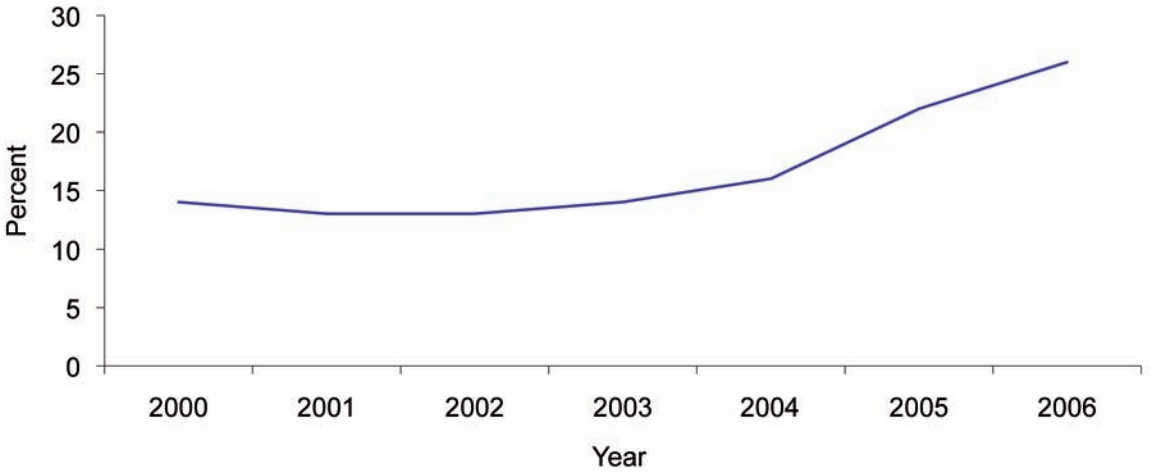
- Operations included flights, maintenance, quality, security, and crew handling.
- Finance included accounting, risk management, IT, purchasing, and control.
- Commercial covered sales, revenue management, marketing, and in-flight services.

Kalda knew that he would have to calculate and compare fuel efficiency and fuel costs for each alternative plane. He would also need an operational analysis that would evaluate utilization rates under maximum and current operating capacities.[3]

Rait Kalda had worked for Estonian Air since 1994. A transport engineer by training, he had also studied business administration. Kalda had been around airplanes all of his adult life, having previously worked as an airplane mechanic and then manager at

Exhibit 2 Jet Fuel Prices as a Percent of Operating Costs: Worldwide Airline Industry

Year	Fuel Prices as a % of Operating Costs
2000	14
2001	13
2002	13
2003	14
2004	16
2005	22
2006	26



Source: IATA Financial Forecast September 2007. Available at http://www.iata.org/whatwedo/economics/ffarchives.htm.

Exhibit 3 Coversion Factors

1 U.S. Gallon = 3.785 Liters	1 Liter = 0.264 U.S. Gallons
1 Foot = 0.304 Meters	1 Meter = 3.281 Feet
1 Mile = 1.609 Kilometers	1 Kilometer = 0.621 Miles
1 Mile = 0.869 Nautical Miles	1 Nautical Mile = 1.151 Miles

EEK to USD Currency Conversion Rates (Interbank rate)

The agerage daily EEK-USD currency conversion rate for

January 1, 2007: $0.0843

March 1, 2007: $0.0844

Source: http://www.oanda.com/convert/. Accessed July 1, 2009.

an aviation club. One of his first postings at Estonian Air had been as Operations Manager of the Air Maintenance group. Kalda rose rapidly at Estonian Air, completing a rotation in accounting, then serving as head of the Technical Maintenance Resources group, director of aviation engineering, and ultimately becoming vice president. Not surprisingly, Kalda proudly listed aviation as one of his many hobbies.

Kalda turned to his computer and reviewed his full inbox. He had recently received several e-mails from Andrus Aljas, Estonian Air's new vice president of finance and administration and

a member of the airline's board. In his e-mails to Kalda, Aljas outlined a number of additional financial parameters that he was planning to address at the executive meeting. In fact, Aljas had requested a brief meeting with Kalda to discuss the presentation and the entire acquisition question before Friday's executive team meeting.

The Airline Industry

The worldwide airline industry in 2007 was composed of three distinct competitive groups: legacy carriers, low cost carriers, and regional carriers. Legacy carriers represented the largest group in terms of passenger revenue, route coverage, and fleet size. These were generally the largest airlines, offering flights within their respective home countries, and between their home countries and overseas destinations. In the United States, this category included Delta, United, American, Continental, and US Airways. In Europe, legacy carriers included British Airways (UK), Lufthansa (Germany), Air France/KLM (France, Netherlands), SAS (Sweden), Iberia (Spain), Finnair (Finland), and Aer Lingus (Ireland). Most European legacy carriers had partial or full government ownership through most of their existence. Since the 1980s, most European governments gradually divested their interests in their "flag carriers," which became private corporations, with ownership spread among a wide range of investing institutions and individuals.

Legacy carriers in both the U.S. and Europe operated large fleets which included planes ranging from 100+ seats (e.g., Boeing 737, Airbus A19/320) to 500+ seats (e.g., Boeing 747, Airbus A380). Legacy carriers typically operated extensive networks of routes, organized around hub-and-spoke systems. Under hub-and-spoke, a carrier would concentrate its operations in a major hub (e.g., London Heathrow), with major international routes flying out of that hub on the carrier's largest planes. In this way, passengers in smaller markets could book a ticket to an international destination served by the carrier while still staying on that carrier's planes for the entire trip, generally flying one of the carrier's smaller planes to arrive at the hub.

Beginning in the late 1960s, a new type of competitor emerged in the U.S. The first and still dominant example of a low cost carrier (LCC) was Southwest Airlines. Southwest's strategy, subsequently emulated by start-ups around the world, was based on several specific decisions. These included:

- Offering direct, point-to-point service instead of routing passengers to a hub;
- Focusing on shorter (i.e., under 800 km) routes;
- Operating a fleet based on only one type of airplane to minimize training and maintenance costs;
- Providing only one class of seating while not offering many of the services typically offered by legacy carriers (e.g., meals) to maximize seating capacity;
- Employing a non-union work force to maximize employee flexibility, lowering labor costs;
- Shortening flight turnaround times to ensure maximum output per plane per day.

The real impetus to U.S. airline competition came in the late 1970s, with deregulation of domestic air routes. Over the next thirty years, a number of LCCs started but then disappeared. By 2007, the leading American LCCs were Southwest, AirTran, and Jet Blue Airlines.

The LCC business model arrived relatively later in Europe, taking root in the late 1980s with the launch of Ryanair. The Irish airline grew to become the leading LCC

carrier on the continent under the leadership of its charismatic and often controversial CEO, Michael O'Leary.

The LCC model in Europe was given a tremendous boost by the signing of the Maastricht agreement in 1992 and the passage of the Single European Act, creating the structure for the European Union. This reduced trade barriers between member European countries and had a dramatic impact on airlines on the continent.

The process of European economic integration opened new strategic possibilities for legacy carriers, but it also facilitated a number of European airline start-ups directly based on the Southwest LCC model. By 2007, in addition to Ryanair, the continent's LCC carriers included EasyJet (based in the UK), AirBerlin and Germanwings (both based in Germany), and SkyEurope (based in Slovakia). LCCs generally operated jet fleets based either on small single aisle jets from the large plane manufacturers (i.e., either the Boeing 737 or the Airbus A320) or regional jets (seating 90 or less) offered by firms such as Bombardier, Embraer, BAE, or Fokker.

The third strategic group was regional carriers. These were airlines which specialized in short-haul flights to limited geographic areas, but not at the ultra-low fares offered by LCCs. Regional carriers usually served small cities, connecting them with national or regional capitals. They relied on fleets composed of a mix of small regional jets and turboprop planes.

In the U.S., leading regional carriers included firms such as Midwest Airlines, Skywest Airlines, and Frontier. It was common for many of the short-haul regional routes to be served by legacy carriers, who contracted the business to independent firms such as Republic and Colgan Air, flying planes under the legacy carrier's insignia.

In Europe, there were a larger number of regional carriers. Typical of this type of airline were firms such as Air Nostrum, connecting cities in Spain; SATA Air Açores, connecting the Azores and Canary Islands with mainland Portugal; Luxair, flying between Luxembourg and destinations in Germany, France, and Belgium; and Aero Airlines, connecting Tallinn, Estonia, with cities in Finland. Increasingly, LCCs were making inroads into the regional carriers' market space, offering passengers a combination of lower prices and connections to other destinations in the LCC network. One senior executive of a leading regional aircraft manufacturer went so far as to say that European regional carriers had no choice but ". . . to drive down costs or die."[4]

Regional Aircraft

Regional aircraft, also known as "short-haul aircraft," are built for flights that are typically 800 kilometers or less one way. Starting in the late 1990s, airlines shifted their demand for regional aircraft from turboprops to jets which seated ninety or fewer passengers. Within the last few years, increasing fuel prices and the general decrease in aircraft demand following the 9/11 attacks on the U.S. lead to a switch back to turboprops. Innovations in turboprop technology included increased fuel capacity and improved fuel efficiency, burning 30–40 percent less fuel than a regional jet. New model turboprops also offered in-flight comfort comparable to jets. They had advanced noise and vibration suppression systems and flew at higher cruising altitudes than their forerunners. By 2006, airlines ranging from legacy carriers, such as Continental, to leading regional carriers, like Horizon Air, were actively considering using new turboprops for regional flights and abandoning the "jets-first" strategy adopted in the late 1990s.[5]

In 2005, orders for turboprops from aircraft manufacturers such as Bombardier and Avions de Transport Régional (ATR) grew more than 240 percent to 151 aircraft, while

similar sized regional jets built by Bombardier and Embraer slumped to just twenty-five orders. Analysts forecasted that between 2007 and 2016, nearly 1,500 new regional aircraft would be needed in order to keep up with projected demand.[6]

Globalization also has had a tremendous impact on the demand for regional aircraft. Aircraft manufacturers have been supplying more regional aircraft to buyers outside of the U.S. Since 2000, Bombardier has predicted that countries such as China and India would become significant purchasers of both new and used turboprops. Indian carriers Air Deccan and Kingfisher already had ordered increasing numbers of turboprops from both Bombardier and ATR. These developments could mean longer order backlogs for Bombardier and correspondingly, higher list prices for buyers such as Estonian Air.

One key operating cost of all airlines was fuel, which was a function of oil prices on world markets, changes to jet and aircraft fuel prices (which depended on refining capacity and decisions made by refiners), the type of fleet an airline operated (older planes were generally less fuel efficient than newer models), and the nature of an airline's route structure (generally shorter, more frequent routes involving frequent takeoffs and landings consumed more fuel than longer routes involving fewer takeoffs and landings). Given their relatively high number of shorter flights and more frequent takeoffs and landings, fuel efficiency was often a greater priority for regional carriers than for legacy airlines. In 2003, fuel prices rose sharply both in absolute terms (Exhibit 1) and as a percentage of total worldwide airline costs (Exhibit 2). The industry consensus in 2007 was that fuel prices would continue to rise by at least 5 percent per year for the foreseeable future.

THE ECONOMY OF ESTONIA

The Republic of Estonia, population 1.3 million, is a small country, about twice the size of New Hampshire, located in the Baltic region of Northern Europe (**Exhibit 4**). Tallinn, Estonia's capital, is the country's most populated city. With the collapse of the Soviet Union in the early 1990s, the Estonian economy grew rapidly as the country adopted a free-market model aimed at attracting foreign investment.

Estonia revamped and simplified its tax structure, with the corporate tax rate on distributed profits lowered until it reached 25 percent.[7] In 2004, Estonia entered both the European Union and NATO. This made the country eligible for billions of dollars worth of "cohesion funds" (i.e., economic development subsidies) from the European Union. The country's economic growth was also bolstered by a rise in the information technology sector and a boom in real estate. By 2007, annual GDP was approximately equivalent to $14 billion. However, there were potential storm clouds emerging on the economic horizon. The country's red-hot real estate market seemed to be dependent on access to relatively cheap credit, mainly from European banks.

The country's national currency was the Estonian Kroon (sign: KR, code: EEK). The average daily USD-EEK currency conversion rate as of March 1, 2007 was $1 U.S. = 11.8449 EEK (or 1 EEK = $0.0844 U.S.) (**Exhibit 3**). Estonia was a heavy importer and any decline in the value of the Kroon could have a serious impact on the prices paid for imported goods.

Estonian Air

The Estonian government, SAS Group (formerly Scandinavian Airlines System), and Cresco, an Estonian investment bank, founded Estonian Air, the national air carrier of Estonia, in 1991. Estonian Air's hub was Tallinn Airport, the largest in Estonia, located

Exhibit 4 The Country of Estonia

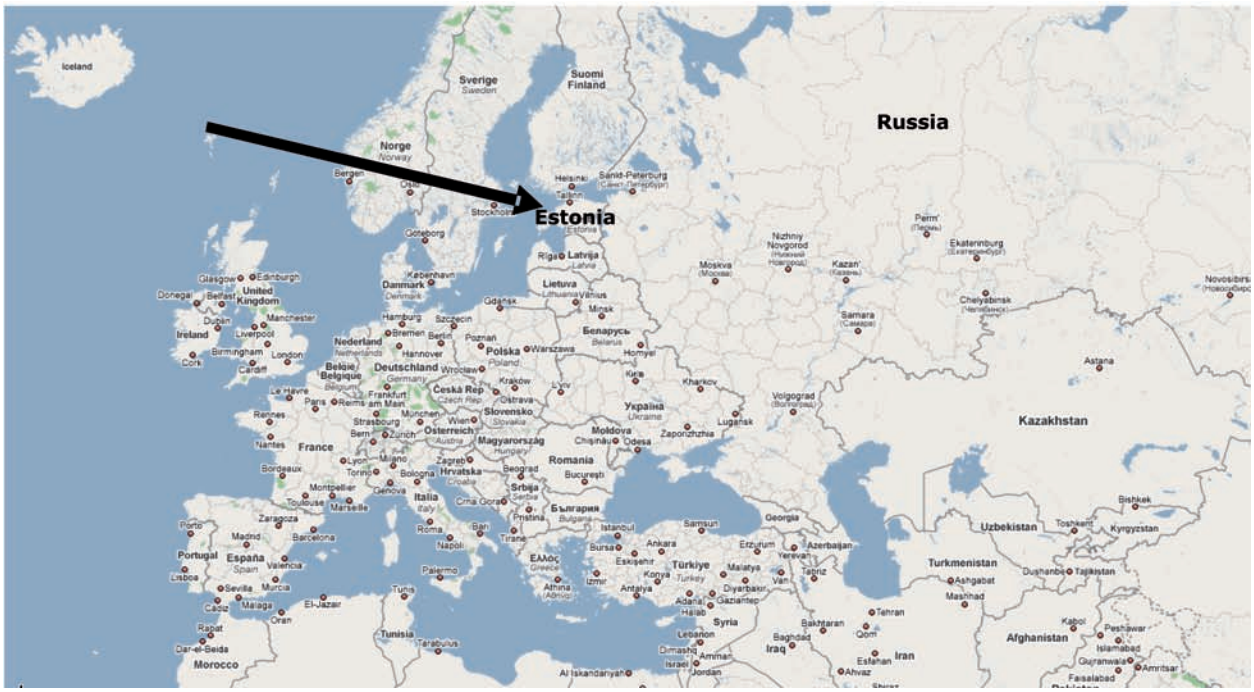


Exhibit 5 Estonian Air Destinations: Current and Planned

Country	Existing Destinations	Distance from Tallinn (km)
Belgium	Brussels	1,600
Croatia	Dubrovnik	1,900
Denmark	Copenhagen	830
France	Paris	1,900
Germany	Berlin	1,000
	Frankfurt	1,000
	Hamburg	1,100
Ireland	Dublin	2,000
Italy	Milan	1,900
Norway	Oslo	790
Russia	Moscow	900
Spain	Barcelona	2,500
Sweden	Stockholm	375
UK	London	1,800
Ukraine	Kiev	1,100
	Simferopol	1,700
Average Distance (km)		**1,400**

Country	Planned Destinations	Distance from Tallinn (km)
Austria	Vienna	1,350
Finland	Helsinki	85
Lithuania	Vilnius	530

approximately four kilometers from the capital city's downtown. By 2005, Tallinn Airport had surpassed the "million passengers" per year mark.

Estonian Air's key strategic goal, as stated in the firm's annual report,[8] was to ensure sustainable and profitable growth through target markets, customer satisfaction, fleet renewal, and employee development. At the end of 2006, Estonian Air provided regularly scheduled regional and long-haul passenger flights to sixteen destinations in Europe (**Exhibit 5**), as well as charter flights and cargo transport. Its fleet consisted of four leased jets: one Boeing 737-300 and three Boeing 737-500s.[9]

In 2006, Estonian Air carried 689,747 passengers over 9,070 flights, resulting in a load factor (LF)[10] of about 62 percent. The company saw its available seat per kilometer (ASK)[11] increase by slightly over 11 percent over the previous year. For 2007, the company expected to see a 1 percent increase in the total flights, about an 8 percent increase in total passengers (of which 86 percent were regular passengers and 14 percent charter passengers), and a 5 percent increase in ASK. Average flight length and average aircraft block hours per day[12] were not expected to change. Estonian Air met industry standards for short-range carriers and could operate up to eight flights per day on each of its planes; although operationally, they had been averaging about seven flights per day.[13]

Estonian Air had an enviable on-time record, as measured by its percentage of on-time flights and fifteen-minute punctuality. In 2006, 99.1 percent of Estonian Air's flights were rated as "regular" and the carrier's fifteen-minute punctuality rating was 84.5 percent; both measures were slightly down from 2005. **Exhibit 6** compares the 2004, 2005, 2006, and expected 2007 key operations indicators.

Exhibit 6 Estonian Air Key Operations Indicators

Key Operations Indicators	**E[2007](a)**	**2006(b)**	**2005(b)**	**2007(c)**
Flights operated	9,161	9,070	9,051	8,285
Number of seats produced (capacity)*	1,190,232	1,112,366	1,053,395	935,500
Total passengers	744,927	689,747	642,821	546,600
Load factor (passengers/seats)*	62%	62%	61%	58%
Available seat kilometers (ASK)*	1,498,393,000	1,427,041,000	1,284,472,000	1,020,000,000
Average flight distance, km	1,400	1,400	1,220	1,091
Average aircraft block hours per day, hrs*	10.5	10.5	10.2	9.12
Average flight length, hrs	1.5	1.5	1.5	1.5
Operations Quality Measurements:				
Percent on time flights	N/A	99.1%	99.5%	N/A
Fifteen-minute punctuality	N/A	84.5%	87.4%	N/A
Expected Increases:				
Fuel price increase	5%			
Ticket price increase	5%			
Passengers	8%			
Crew salaries	2%			

(a) Case page 8.
(b) 2006 Annual Report, pages 5 and 7.
(c) 2005 Annual Report, page 4.
*See glossary for airline specific terms, Exhibit 9.

Even though Estonian Air was not known as a low-wage employer, it could not and did not try to match the salary scales of the large international carriers. Average crew member salaries, based on the last few years' financial statements, increased about 2 percent each year, resulting in an average salary of 362,100 EEK (about $33,000) expected for 2008.

Selected company financial data are presented in **Exhibit 7**. The net loss for 2006 was troubling. There were several contributing factors including escalating fuel prices. The most notable factor, however, was the extraordinary costs (73.4m EEK) due to unplanned technical problems leading to unscheduled downtime. The company responded to this by relying on temporary and very high cost capacity leased from other carriers. Even if Estonian Air's technical issues were resolved, planes required extensive

Exhibit 7 Selected Estonian Air Financial Data

	2006(a) EEK '000	2005(a) EEK '000	2004(b) EEK '000
Assets			
Non-current assets			
Property, plant, and equipment	72,691	78,200	86,010
Intangible assets	2,019	745	492
Investments in joint ventures	14,826	12,698	10,434
Other financial assets	25,401	25,694	22,394
Total non-current assets	*114,937*	*117,337*	*119,330*
Current assets			
Derivative financial assets	—	—	947
Inventories	4,033	4,213	4,363
Trade receivables and prepayments made	166,029	140,124	116,771
Securities	—	—	117
Cash and bank balances	161,990	242,180	208,051
Total current assets	*332,052*	*386,517*	*330,249*
Total assets	**446,989**	**503,854**	**449,579**
Equity and liabilities			
Equity			
Share capital (nominal value)	49,503	49,503	49,503
Share premium	149,997	149,997	149,997
Statutory legal reserves	4,950	4,950	4,950
Retained earnings/(accumulated loss)	46,299	(19,583)	(46,880)
Net profit/(loss) for financial year	(58,937)	65,882	27,297
Total equity	*191,812*	*250,749*	*184,867*
Provisions			
Provisions	24,921	51,518	62,462
Total provisions	*24,921*	*51,518*	*62,462*
Non-current liabilities			
Borrowings	18,034	22,075	29,643
Total non-current liabilities	*18,034*	*22,075*	*29,643*
Current liabilities			
Trade payables and prepayments collected	204,034	165,330	165,044
Borrowings	8,188	7,567	7,563
Derivative financial instruments	—	6,615	—
Total current liabilities	*212,222*	*179,512*	*172,607*
Total liabilities	*255,177*	*253,105*	*264,712*
Total equity and liabilities	**446,989**	**503,854**	**449,579**

Source: Estonian Air Annual Reports, www.estonian-air.ee/estonian_air_annual_reports.
(a) 2006 Annual Report, page 14
(b) 2005 Annual Report, page 7

Exhibit 7 (continued) Selected Estonian Air Financial Data

	2006(a) EEK '000	2005(a) EEK '000 (restated)	2004(b) EEK '000 (restated)
Revenue			
Passenger revenue	962,758	867,085	805,631
Charter	214,740	141,207	73,768
Mail and freight	20,725	23,580	20,774
Other traffic revenue	49,683	73,943	18,369
Other operating revenue			
Ground handling	16,644	16,178	10,942
Other services	26,866	29,685	20,392
Total revenue	**1,291,416**	**1,151,678**	**949,876**
Total cost of sales	**1,190,320**	**961,081**	**820,569**
Gross Profit	**101,096**	**190,597**	**129,307**
Other operating income	2,791	20,036	63,049
Marketing expenses	(88,268)	(82,527)	(80,158)
Administrative expenses	(74,946)	(65,880)	(60,313)
Other operating expenses	(12,189)	(4,510)	(26,670)
Operating profit/(loss)	**(71,516)**	**57,716**	**25,215**
Share of profits of joint ventures	5,035	4,670	2,790
Interest income	4,305	6,058	3,423
Interest expense	(1,479)	(1,534)	(1,909)
Net foreign exchange gains/(losses)	(1,753)	6,661	(3,391)
Other financial gains/(losses)	6,471	(7,689)	1,169
Net financial income	**12,579**	**8,166**	**2,082**
Profit/(loss) for the year	**(58,937)**	**65,882**	**27,297**

Source: Estonian Air Annual Reports, www.estonian-air.ee/estonian_air_annual_reports.
(a) 2006 Annual Report, pages 12 and 21.
(b) 2005 Annual Report, pages 8 and 21.

maintenance. This was especially true for planes operated by short haul carriers, with multiple takeoffs and landings each day. Estonian Air estimated that under optimal conditions it could only count on a typical plane operating for 325 days per year.

AS Estonian Air's Competitors

In early 2007, commercial passengers could fly into or out of Tallinn on routes within Estonia; to regional capitals in the Baltics; and directly to major European centers, including Amsterdam, Barcelona, Berlin, Copenhagen, Dublin, Helsinki, London, Moscow, Paris, Rome, and Vienna.[14] Estonian Air's major competitors into and out of Tallinn included A/S Air Baltic, EasyJet, and Aero Airlines.

A/S Air Baltic Corporation, the national airline of Latvia, a joint venture between the government of Latvia and the Scandinavian airline group SAS, specialized in serving cities within the Baltic region with some flights to major European centers. It had a mixed jet/turboprop fleet composed of fourteen aircraft (Boeing 737 jets and Fokker 50 turboprops).

The second main competitor of Estonian Air, British discount carrier EasyJet, had grown from a small carrier operating two leased jets for flights within the UK in 1995, to one of Europe's largest discount short-haul carriers with over 180 planes and almost 400 routes across the continent. EasyJet scrupulously followed the business model set

by other successful LCCs: point-to-point service, internet ticket booking, and a single model fleet (the single-aisle Airbus A320, a direct competitor to the Boeing 737). Though EasyJet only offered five flights per week out of Tallinn, all to the carrier's hub near London, it was a formidable competitor given its reputation for affordable air travel and its extensive European connections.

Aero Airlines, the third competitor, was first established in Helsinki, Finland, in 1923, and for the next seventeen years specialized in flying freight and passengers throughout the Baltics and Scandinavia. With the annexation of the Baltic States by the Soviet Union in 1940, Aero ceased to exist. However, Finnair retained the Aero brand and restarted the airline as a joint venture with another firm in 2000. The then newly-incarnated Aero specialized in connecting Tallinn with three cities in Finland, using two ATR 72-200 turboprops leased from Finnair.

AS Estonian Air's Growth Strategy

Estonian Air's internal analysis assumed that the air transport market in Estonia would continue to grow at a healthy 10–15 percent per year over the next several years. These growth expectations were based on a positive economic outlook for the Estonian economy, market forecasts for intra-European regional flights, and the increasing popularity of Estonia as a tourist destination. Unfortunately, the trend of competing carriers entering the Estonian air transport market was expected to continue.

The growing market on the one hand and the toughening competition on the other hand raised challenges for Estonian Air. Key success factors for Estonian Air's future included increasing efficiency, ensuring high productivity of flight operations, and maintaining a competitive cost base. In its 2006 Annual Report, Estonian Air clearly expressed its readiness for "implementing a growth strategy and for investing in the development of its fleet." Management projected that, if it increased the fleet, it could:

- increase the frequency of flights to existing destinations and add new routes (Exhibit 5),
- increase general reliability as well as limit the carrier's vulnerability to unplanned technical problems.

A preliminary review of the available aircraft options had shown the Boeing 737 jet (either the 300 or 500 model) and the Bombardier Q400 turboprop to be the most attractive for Estonian Air's purposes. Additionally, within the secondary market, Estonian Air considered one or more Saab 340A turboprops to be on the short list. The turboprops were smaller than the 737 in terms of seating capacity. The Q400, despite smaller capacity, did not necessarily limit Estonian Air's reach, as it could reach about 90 percent of Estonian Air's current destinations. Due to its smaller size, the Saab would be considered for about 50 percent of Estonian Air's current destinations (Exhibit 5). Airplanes were generally considered to have a twenty-five year useful life. Though many airlines pushed their planes beyond this point, the consensus in the industry was that added maintenance costs made this increasingly uneconomic, especially for short-haul carriers. Kalda observed that the used Saab had ten years remaining in its useful life.

All of these factors would be discussed and evaluated at Friday's team meeting. Kalda knew that some of the decision factors—such as the extent to which traffic would actually grow and the issues involved in scheduling if smaller planes with shorter ranges were added to the fleet—might not lend themselves easily to a quantitative analysis. Other factors—notably plane-specific performance and productivity data—would be more

amenable to a quantitative analysis that could be quickly reviewed at the meeting before arriving at a final decision.

Estonian Air's Aircraft Options

The Boeing 737 Jet

In the late 1960s, in the face of a severe downturn in the airline industry, Boeing launched the 737, a 110 seat, twin engine short range carrier. The 737 became the best selling model in the history of commercial aviation, with over 5,000 planes delivered by 2007. The 737 series, which began with the 737-100 in 1968, included multiple variants up to the newest, the 737-900, and reflected Boeing's design philosophy, introduced by then CEO, T. A. Wilson. Wilson insisted that each Boeing model be designed to generate new versions of itself as airline customers' needs evolved. Though some felt this philosophy added cost to the design process, Wilson claimed that his "family" strategy was a recipe for long-term competitive success: "A new version of an old product line is hard to beat with an entirely new aircraft. You have to have a 20 percent improvement [in the new model]. The cost of engineering and tooling is more on the new plane, and meanwhile the old version is being improved too."[15] In 2007, the list price for a 737-300 was approximately $40 million, while the larger 737-500 listed for approximately $50 million.

The 737 series offered airlines an increased range of capacities (from 108 passenger seats to 215 passenger seats) and ranges (from 4,204 km to 10,200 km), and had proven to be the workhorse of the global discount and short-range airline industry. Its popularity with such well-known discount carriers as Southwest and Ryanair was due to two key attributes: low cost of operation and flexibility.

Boeing's Web site claimed that the newest model 737s ". . . have the lowest operating costs in their class. In fact, on a typical route the 737s cash operating costs are nearly 4 percent less than its closest competitor, the Airbus A320 series, in part due to its superior structural efficiency."[16] According to Boeing, the 737s lower weight than its direct competitor, the Airbus A320, not only meant less fuel expense but also lower engine maintenance costs, navigation and landing fees for airlines. In order to reduce maintenance costs even further, the 737 was designed with a low stance, meaning that most equipment could be serviced from the ground without costly lifts. The fact that baggage could also be loaded from the ground made the plane even more appealing to discount and short-range operators, as they could make last-minute baggage additions quickly, reducing costly turnaround time between flights. The plane was redesigned over the years with the aim of reducing the number of parts, further cutting maintenance costs.

As noted, at the end of 2006 Estonian Air's fleet consisted exclusively of Boeing 737s: one Boeing 737-300 and three Boeing 737-500s. Performance data for the Boeing 737-300 and the Boeing 737-500 are given in **Exhibit 8**.

Bombardier Q400 Turboprop

Bombardier, based in Montreal, Canada, was a leader in both the turboprop and regional jet markets. Its Q400, launched in 1995, had many advantages for regional carriers, such as greater fuel efficiency compared to similar sized jets, decreased cabin noise (the "Q" stands for "quiet"), increased cabin space, and the ability to travel almost as fast as regional jets over short-haul distances.[17] The Q400s ability to burn 30–40 percent less

Exhibit 8 Aircraft Specifications

Specification	Boeing 737-300	Boeing 737-500	Q400 Turboprop	Saab 340A
Cockpit crew	2	2	2	2
Flight attendants	3	3	2 or 3	1
Seating capacity	128–149	108–149	68–78	30–36
Max fuel (gallons)	6,130	6,296	1,724	849
Max fuel (liters)	23,204	23,832	6,526	3,214
Range (km)	4,204	4,444	2,522	1,505
Range (miles)	2,612	2,761	1,567	935
Max altitude (feet)	37,000	37,000	25,000	25,000
Max altitude (meters)	11,278	11,278	7,620	7,600
List price (millions)	$40	$50	$28–30	$1.5–2.5
Average load factor	62%	62%	90%	95%
Landing weight (lbs.)	115,500	115,500	64,500	29,000
Landing fees ($ per 10,000 lbs.)	$2	$2	$2	$2
Estonian Air Operations				
Acutal flights per day	7	7	7	5
Maximum flights per day	8	8	8	5
Operating days per year	325	325	325	325
Useful life	25	25	25	10

fuel than a comparably priced regional jet appealed to airlines, especially as fuel prices increased. The plane also offered environmental benefits, as it emitted only half of the carbon dioxide of a seventy-seater jet. The Q400 had the ability to use shorter runways and fly at lower altitudes, helping to reduce air traffic congestion and alleviate runway delays.[18] Performance data for the Q400 are given in Exhibit 8. As of 2007, the Q400 list price was between $28 and $30 million.

Saab 340A—Secondary Market

Estonian Air could also consider leasing smaller used aircraft. The used market consisted of several internationally-recognized brokers, who had extensive Web sites where potential buyers could search for models that met their needs and desired price points. Aircraft leasing companies were regular re-sellers of aircraft that had been returned after the expiration of their lease contracts, as well.

Though there were a number of possible planes Estonian Air could consider in the used market, Kalda felt that the best candidate for acquisition was the Saab 340A, a thirty to thirty-six seat twin-engine turboprop. It was introduced in 1983 by a joint venture between Saab of Sweden and Fairchild Aircraft of the U.S. After a couple of years, Fairchild withdrew from the project, and Saab took over exclusive responsibility for the plane. Saab sold almost 160 of the initial "A" version. Then, in 1989, the company introduced a second generation version, the 340B, with enhanced power and more sophisticated noise controls. The final version, the 340B Plus, was launched in 1994. Saab had some success with these two versions, selling 200 340Bs, and 100 340B Plus models to commuter airlines around the world. The plane never met Saab's expectations, and the company decided to discontinue the entire line in 1998. Among the 340s' users were commuter airlines from countries around Estonia, including Finland, Germany, Lithuania, and Poland.

Used models of the Saab 340 were available through various brokers for prices ranging from $1.5 to $2.5 million. While leasing one or more used Saab 340s would considerably

reduce Estonian Air's up-front investment, it raised other issues for Kalda. Most notably, the 340 was a small plane, having half the capacity and range of the Q400 turboprop and about one-fifth to one-third of the capacity and range of the Boeing 737. This would necessitate an entirely different type of scheduling for Estonian Air, as it probably would have to assign a greater number of flights to any given route to serve a given demand level. The Saab was expected to be operational for 325 days per year. However, the expected number of flights per day for the Saab would be five, versus the seven which Estonian Air typically achieved with jets (and could achieve with the Q400), due to its lower range and corresponding need for refueling stops. Another potential operational concern for Kalda was the availability of spare parts. Since the Saab would have been out of production for almost ten years by the time it was acquired by Estonian Air, Kalda would have to be assured that spare parts could be acquired quickly and affordably, something that might be increasingly problematic in the years going forward.

The Meeting with the Vice President of Finance

For several weeks, Andrus Aljas had been e-mailing Kalda, outlining various issues he wanted to review for Friday's executive team meeting. In his latest e-mail, he requested a short meeting to discuss some of his concerns. Aljas, new to Estonian Air, joined the airline in 2006 as deputy vice president for finance and member of the board. A graduate of Tallinn University of Technology in production management and the Estonain Business School EMBA program, Aljas had been a financial specialist at Viisnurk, a large wood-processing firm. Kalda felt that it was important to meet with Aljas as soon as possible to gain additional insights into potential questions the board might ultimately raise.

The meeting was held in Aljas's rather sparse office at Estonian Air's headquarters. He began the meeting by thanking Kalda for taking the time to meet with him. Then he surprised Kalda by saying that he had just returned from a one-week trip in Western Europe, where he had had the chance to fly on EasyJet.

"I must say," Aljas quipped, "it wasn't too bad . . . we arrived on time, and for the money it was a good deal. I could see why people like them."

Aljas added a cautionary note: "Listen, Rait, it's easy for people to laugh at Michael O'Leary, half of what he says is for show. But the other half isn't. These LCCs are going to be very aggressive over the next few years, and I don't think there's a destination in Europe they won't look to expand into if they can."

Then Aljas unveiled the gist for the meeting. "I must confess I am getting a bit anxious about this. How confident are we about the growth projections? What if they are too conservative? Could we end up outgrowing a smaller plane quite quickly?"

Before Kalda could even respond, Aljas continued. "On the other hand, what if we're being too optimistic in the growth projections?"

Passenger volume forecasts were not the only thing Aljas was nervous about. "I know I'm throwing a lot at you, but since we're talking along these lines, there's another thing some board members have been talking about—exchange rates."

Kalda sensed unease, but probed him anyway: "In what sense?" he asked. "Does the board know something I don't? I thought the EEK was doing quite well over the past few years. I've used twelve EEK to the U.S. dollar as a conservative estimate."

"It has," replied Aljas, "but don't forget, this is a large deal for us, in U.S. dollars no less. What happens if, for whatever reason, the Kroon dropped significantly from its

present level? Even a one Kroon drop against the dollar would have an impact on our bottom line; wouldn't that affect whatever choice we were looking at?"

As if to reassure Kalda, Aljas added "I recognize we've been doing well. Look, our borrowing costs have come down in the past couple of years—I think the financial institutions are more comfortable with us. We've been using a 11.5 percent hurdle rate for acquisitions and investments, and that's down even from when I started here."

Kalda sensed that Aljas was speaking for other board members, so he immediately asked him, "How conservatively is the board looking to our future growth? I've assumed that our ticket prices would increase in line with fuel prices. But our future purchasing power depends on the marketplace."

Aljas paused for a moment and, in a very guarded tone, slowly answered Kalda's question. "I think the board is somewhat split. Some of us are optimistic, and think our load factors are bound to go up. In fact some board members want to consider adding new, longer routes. After all, the Estonian economy has been doing well, and we hear of more and more Estonians wanting to travel to new places. And, why not? They can afford it now!" Kalda interjected with a quick "Yes, times have been good over the past few years."

Aljas picked up on that and added, "Just look at how well we've been doing on charters over the past few years. Who can blame someone from the Baltics wanting to get a few days of sunshine in Spain or North Africa, for example?"

Then Aljas countered himself, saying "However, I have to tell you, some board members are very edgy. It's not just the competition. It's the unknown. After all, this run of prosperity we've had is unheard of for us. What happens if the party ends? Maybe we should sit on our money and see how things play out."

Kalda tried to answer, saying "But if we wait, don't we run the risk that the competition will pick up traffic we could have captured?" Aljas chimed in, "Look, I'm not saying the sky is falling, I'm just saying we have to consider all the angles here. We have to think broadly."

"Anyway," Aljas sighed, "I just don't want the board to feel hemmed in on any particular decision. A spreadsheet model will help us look at the bottom line impact on each of the different aircraft options as well as all of these different scenarios. I know that this is the first time that we have analyzed the total cost of ownership from this perspective. At the meeting we will be able to plug in different values and see how the options play out."

Kalda left the meeting feeling he had a lot of work to do, but he was also excited about this new direction of Estonian Air's strategic planning. He was confident his operational analysis would tie in well with Aljas's financial model.

Exhibit 9 Glossary

Available Seat Kilometers (ASK)—Measures an airline flight's passenger carrying capacity. It is equal to the number of seats onboard an aircraft multiplied by the distance flown. ASK is a standard industry metric.

Block Hour—The time from the moment the aircraft door closes at departure until the moment the aircraft door opens at the arrival gate following its landing. Block hours are a standard industry metric.

Capacity—Number of available seats on each aircraft multiplied by the number of flights.

Flights per Day Average—(Total flights/Working days/Fleet size).

Load Factor—The proportion of sold seats to available seats.

NOTES

1. Estonian Air's lease rate was 4.40 percent. Estonian Air operated leases on a period of six years.
2. Currency with a $ refers to U.S. Dollars. Estonia currency is referred to as EEK, explained later in the case.
3. Exhibit 3 contains conversion factors (e.g., gallons to liters) and EEK-USD currency conversion rates that may be useful when preparing this case.
4. "Budget Carriers New Driving Force in Regional Business," *Flight Global* June 13, 2005. http://www.flightglobal.com/articles/2005/06/13/199133/budget-carriers-new-driving-force-in-regional-business.html.
5. C. Masters, "Giving Props to the New Turbos," *Time* August 23, 2007. Accessed April 17, 2008. http://www.time.com/time/printout/0,8816,1655707,00.html.
6. M. Kingsley-Jones, "Turboprops Bounce Back," *Flight International* February 3, 2006. Accessed October 4, 2008. http://www.flightglobal.com/articles/2006/02/03/204430/turboprops-bounce-back.html.
7. Corporate taxes in Estonia are on distributed profits only. For planning purposes, assume zero profit distributions (i.e., no taxes).
8. AS Estonian Air 2006 Annual Report. Accessed July 1, 2009. http://www.estonian-air.ee/public/Annual_Report_2006_English_final. pdf.
9. AS Estonian Air 2006 Annual Report, page 4.
10. See glossary for airline specific terms, Exhibit 9.
11. See glossary for airline specific terms, Exhibit 9.
12. See glossary for airline specific terms, Exhibit 9.
13. See glossary for airline specific terms, Exhibit 9.
14. http://www.wego.com/airports/estonia/tallinn/tallinn-tll.
15. W. Guzzardi, "The U.S. Business Hall of Fame," *Fortune* 119(6): 130. Accessed June 11, 2009, from Academic OneFile: http://find.galegroup.com.library.smcvt.edu/itx/start.do?prodId=AONE.
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17. Q400 Media Guide. http://www.q400.com/q400/pdf/q400_MediaGuide_2008.pdf
18. C. Kjelgaard, "Continental Expects New Q400s to Reduce Newark Flight Delays," *Aviation* February 1, 2008. Accessed April 17, 2008. http://www.aviation.com/travel/080201-continental-connection-q400s-colgan.html.
19. See glossary for airline specific terms, Exhibit 9.
20. See glossary for airline specific terms, Exhibit 9.
21. See glossary for airline specific terms, Exhibit 9.
22. See glossary for airline specific terms, Exhibit 9.