An Analysis of a Strategic Transformation Plan: The Case of Alaska Airlines

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In 2003, amid the turmoil of the U.S. airline industry in the post-9/11 environment, the senior management of the Alaska Air Group announced a "strategic vision" entitled "Alaska 2010." The pronouncement articulated positions with regard to cost leadership, product differentiation, and growth. This study empirically assesses the efficacy of this decision with regard to the major network carrier of the air group, Alaska Airlines. The analysis focuses on the period beginning with the announcement and ending in 2010.

The implementation of such a strategic protocol is dynamic and inter-temporal in nature. Therefore, it is often difficult to assess the effectiveness of changes in strategies, particularly since such effectiveness is often a function of the confounding forces of organizational strategy and market conditions. Thus, this study utilizes the multi-period methodology of the strategic variance analysis of operating income.

This methodology decomposes operating income into three components: (1) growth, (2) price recovery, and (3) productivity. This is of particular interest from a strategic planning perspective, as the price component evaluates a company's product differentiation strategy while the productivity component evaluates whether an airline's low cost strategy was successful because of efficiency gains.

INTRODUCTION

In 2003, the U.S. airline industry was in turmoil. Airline traffic continued to be below 2001 levels, still reeling from the aftermath of the 9/11 terrorist attacks. A slow U.S. economy combined with rising fuel costs produced billions of dollars in losses for airlines. In addition, both US Airways and United Airlines filed for bankruptcy protection in 2002. In such a challenging business environment, it was clear that airlines had to change their operating strategies.

The management of Alaska Air Group, led by Chairman, President, and CEO William S. Ayer, did just that, announcing a "strategic vision" called "Alaska 2010." The plan was communicated to employees in June 2003, and elements of the plan were made public in the company's annual report to shareholders for the year ended December 31, 2003, as well as in subsequent years. Highlights of the plan included a goal of making permanent cost reductions to save the company $307 million per year, and to drive down the non-fuel unit cost to 7.25 cents per available seat mile (Ayer 2004). In the letter to shareholders, Ayer stated, "Our task is to make the critical changes necessary to transform ourselves into a thriving enterprise."

Alaska Air Group consists of two airlines: Alaska Airlines and Horizon Air Industries. As explained in the annual report to shareholders, the "business plans, competition, and economic risks differ substantially" (SEC 2004). The focus of this research is on the impact of the Alaska 2010 strategic plan on Alaska Airlines, since it is the major network carrier in the group.

From a research perspective, questions arose as to how Alaska Airlines was performing relative to other airlines. It was also asked if management was correct in perceiving a need to transform the company's operations. After all, by its own perception, the company was doing very well relative to the industry. In 2001, the company reported that "Alaska [Airlines] posted remarkable results following the 9/11 tragedy. For instance, industry traffic was down 19% in the fourth quarter, and

Alaska's was only down 5.6%. Likewise, yield per revenue passenger mile and unit revenues were down 17% and 20% respectively for the major carriers combined, while Alaska's were down only 7.3% and 5.5%." (Kelly 2002). Similarly, in 2002, the company stated that "Alaska [Airlines] had the best traffic, revenue, and yield performance of the majors." (Kelly 2003). Nonetheless, the company was losing money.

This paper assesses the Alaska 2010 strategic transformation using strategic variance analysis (SVA). SVA is used to analyze a company's profitability by breaking it down into strategic components, namely, cost leadership, product differentiation, and growth (Horngren et al. 2000, 2006, 2012). Sopariwala (2003) extended the analysis to include a fourth component, capacity underutilization. SVA has been used by Mudde and Sopariwala (2008) and Bailey et al. (2009) to analyze a given airline's profitability, and by Caster and Scheraga (2011) to analyze the performance of all U.S. network carriers.

THE ALASKA AIR GROUP LONG-TERM STRATEGIC PLAN

In discussing "Alaska 2010," the Alaska Air Group long-term strategic plan, Ayer noted that the company's goal for the future was "a combination of ideas that generate savings or increase revenue while enhancing our standing with customers" (Ayer 2004). Ayer stated that cost management was a significant challenge. He went on to explain why the plan was called "Alaska 2010." He said that "if we make the right moves now, 2010 will be the year we look back with great pride at how we transformed ourselves - - how we took control and willed ourselves to be one of the preeminent airlines in the United States" (Ayer 2004).

Additional details of the strategic plan emerged in the annual report to shareholders for calendar year 2004. In the letter to shareholders dated April 11, 2005, Ayer (2005) explained that permanent reductions in annual costs of $185 million had been achieved. This reduction was accomplished in part through a fuel hedging program, in addition to savings achieved through a "top-to-bottom review of our supply chain." Cost savings were also achieved by streamlining the fare structure, by improving the website for the purchase of fares online, and by improving turn times of aircraft between flights. Ayer acknowledged that competitors were improving their cost structures at an even faster pace than Alaska Air Group, and to that end, it was necessary to reduce the workforce, in part by outsourcing some of its maintenance operations. Ayer (2005) also reported that "a big part of our Alaska 2010 plan focuses on achieving competitive labor costs for all major work groups." The company estimated that wages and benefits were approximately $125 million above market, with most of that amount due to pilots.

Although some details of the strategic plan are disclosed in the annual reports, the information does not provide a complete picture. In fact, only those details that management chooses to disclose are available. Strategic variance analysis provides a better means for analysis of Alaska's performance. It provides an independent lens through which to view and analyze that performance. In addition, it allows for benchmarking with peer companies, in this case, the other network carriers. The following two sections provide a description of strategic variance analysis and the details on calculation and interpretation of the variances.

STRATEGIC VARIANCE ANALYSIS

SVA was introduced by Shank and Govindarajan (1993) as a management tool that combined the then rising field of business strategy to traditional profit variance analysis in cost accounting. SVA, as modified by Sopariwala (2003), takes a company's profit (or loss) and breaks it down into four components: growth, price-recovery, productivity, and capacity underutilization. Each component is discussed in greater detail in the following section of the paper. Variances are defined as the differences between actual results and expected results, and they are calculated for each component.

Sopariwala (2003) based his version of SVA on Horngren et al. (2000). Horngren et al. (2012, 478-485) illustrate how SVA can be used to analyze profitability "from one period to *any* future period." Their illustration shows how to calculate and interpret the growth component, the price-recovery component, and the productivity component. As discussed in Horngren et al. (2012), the price-recovery component is related to product differentiation and the productivity component is related to cost leadership.

Product differentiation and cost leadership are two of the three generic strategies developed by Porter (1980, 35) for "outperforming competitors in the industry." His third strategy is "focus," which involves specializing in a niche area of the market. Cost leadership means that a company is recognized throughout the industry as the low cost provider of goods or services. Porter states that it requires "a great deal of managerial attention to cost control." (Porter 1980, 35). According to Porter (1980, 37), product differentiation involves "creating something that is perceived *industrywide* as being unique. Having a unique product or service leads to brand loyalty, which allows a company to charge a higher price, thereby outperforming others in the industry without having low costs as a primary objective. Horngren et al. (2012) refer to this as price-recovery, because the company is able to recover its higher costs through higher revenues, thus earning a decent return.

Porter's third strategy is similar to the other two, in that a company chooses to follow a low cost strategy or a product differentiation strategy, but it does so in a narrow niche of the market. Therefore, the focus strategy is not an industry-wide strategy.

Porter then goes on to describe companies that are "stuck in the middle." It is possible that Alaska Air Group perceived itself in 2003 as a company that could be "stuck in the middle." A company that is stuck in the middle "lacks the market share, capital investment, and resolve to play the low-cost game, the industry-wide differentiation necessary to obviate the need for a low-cost position, or the focus to create differentiation or a low-cost position in a more limited sphere" (Porter 1980, 41).

SVA is an ideal technique for assessing the success or failure of a long-term strategic plan, such as Alaska 2010. Management of Alaska Airlines measures its success by looking at profitability, goals for reducing its cost structure, and customer satisfaction. But the acid test is how Alaska Airlines has performed relative to its peers. SVA provides easy comparisons between Alaska Airlines and the rest of the U.S. network carriers.

DEVELOPMENT OF VARIANCES

The variances used for SVA are calculated based on Sopariwala (2003), using the four components of a company's performance as described in Mudde and Sopariwala (2008). Each component, and the variances associated with that component, is explained as follows:

Growth Component

The growth component measures the change in operating income due to a change in revenue passenger miles (RPMs). Four separate variances are calculated related to changes in RPMs. The revenue effect of growth captures the change in revenues due to a change in RPMs, holding air fares (revenue per RPM) constant. As explained in Mudde and Sopariwala (2008, 25), it would show "higher expected revenue due to higher RPMs."

The other three variances relate to costs and expenses, namely, fuel costs, flight-related costs, and passenger-related costs. Mudde and Sopariwala (2008) base the cost drivers on Banker and Johnston (2003), who suggested volume-based and non-volume-based cost drivers appropriate for the airline industry. The fuel cost effect of growth is calculated using available seat miles (ASMs) as the cost driver, while holding the price of fuel constant. The variance is calculated based on budgeted ASMs compared with actual ASMs. Thus, an airline would experience higher fuel costs

and a corresponding decline in operating profit if it experienced growth in the market that exceeded expectations, while holding the price per gallon of jet fuel constant to isolate the impact of growth. In a similar manner, expectations and variances are developed for the growth effect of flight-related and passenger-related costs, while holding all else equal.

Price-Recovery Component

The price-recovery component measures the change in operating income due to changes in the prices of inputs and outputs, holding all else equal. Four separate variances are calculated related to changing prices. The revenue effect of price-recovery captures the change in airfares, holding RPMs constant. The other three variances relate to the cost of inputs, namely, fuel costs, flight-related costs other than fuel, and passenger-related costs. For example, if the cost of jet fuel increases in the current period, operating profit would decline, holding gallons of fuel used and budgeted ASMs constant.

Productivity Component

The productivity component measures the change in operating income due to changes in the use of inputs, holding all else equal. Productivity is measured in terms of fuel usage efficiencies and passenger cost related efficiencies, as calculated by Mudde and Sopariwala (2008). Three variances are calculated, two of which are related to fuel usage. The first fuel usage efficiency variance measures fuel usage per gallon, holding the cost per gallon and budgeted ASMs constant. Gallons used per ASM in the previous period are the expectation for the current period, and the variance is then based on actual gallons used per ASM in the current period. The passenger load factor also has an impact on fuel usage, so a second fuel usage variance is calculated by holding the price per gallon constant and the gallons used per ASM constant, while comparing budgeted ASMs to actual ASMs in the current period. The third variance is calculated based on the difference between budgeted revenue passengers and actual revenue passengers served, while holding the cost per passenger constant. The variance is favorable, and thus operating profit would increase if an airline achieves the same RPMs while carrying fewer passengers, and hence the cost associated with that would decrease.

Capacity Underutilization Component

The capacity underutilization component measures the change in operating income due to changes in capacity, holding all else equal. Three variances are calculated, each of which involves the impact on flight-related costs (excluding fuel costs). The first variance is the cost of acquiring additional capacity that goes unused in the current period. The variance is calculated by subtracting actual RPMs in the current period from actual ASMs in the current period. The second variance is the cost of underutilization of available capacity. The variance is simply the change in actual ASMs over the period under study, holding the cost per ASM constant. The third variance measures the impact of a change in capacity actually used. The variance is simply the change in RPMs over the period under study, holding the cost per ASM constant.

THE DATA SET

Data were obtained from two sources: The International Civil Aviation Organization, *Financial Data: Commercial Air Carriers, Series F* and *Traffic: Commercial Air Carriers, Series T*, and from the U.S. Department of Transportation, Bureau of Transportation Statistics, *Transtats Aviation Database*. We chose three, three-year time periods for the analysis, 2001 to 2003, 2004 to 2006,

and 2007 to 2009. We also examine the one-year period from 2009 to 2010 to include the last year of Alaska's strategic plan. The three-year time frame is consistent with the work of Caster and Scheraga (2011).

Alaska Airlines is a U.S. network air carrier, as classified by the Department of Transportation, therefore, we collected data on the other network air carriers for benchmarking purposes. In the first two three-year time periods, we construct a composite based on the seven network carriers: Alaska, American, Continental, Delta, Northwest, United, and US Airways. In the last three-year time period, US Airways was dropped from the analysis due to its merger with America West, which would make the data non-comparable to the earlier periods.

RESULTS OF THE STRATEGIC VARIANCE ANALYSIS

Table 1 provides the financial data for Alaska Airlines. It is interesting to note, just from the raw data, that operating profit changed dramatically during the period. For the year ended December 31, 2000, Alaska Airlines reported a net operating loss of $12,375,000. The annual operating loss grew to $103,629,000 for the year ended December 31, 2006. But three years later, they reported an annual net operating profit of $208,421,000.

Table 1: Alaska Airlines – Financial Data ($)

	2000	2003	2006	2009
Operating revenues	1,759,867,000	2,027,376,000	2,692,507,000	3,005,999,000
Operating expenses	1,772,242,000	2,037,996,000	2,796,136,000	2,797,578,000
Flying operations	662,612,000	737,423,000	1,141,147,000	1,014,188,000
Maintenance	204,115,000	244,001,000	269,370,000	293,567,000
Depreciation and amortization	83,860,000	119,467,000	137,811,000	178,488,000
User charges	35,185,000	57,771,000	51,976,000	54,161,000
Station expenses	266,623,000	346,011,000	393,344,000	369,387,000
Aircraft and traffic servicing	301,808,000	403,782,000	445,320,000	423,548,000
Passenger services	155,622,000	200,381,000	207,062,000	211,298,000
Promotion and sales	248,499,000	218,672,000	209,078,000	176,864,000
General & Administrative	104,851,000	103,267,000	364,515,000	216,133,000
Transport related expenses	10,875,000	11,003,000	21,833,000	283,492,000
Operating profit	-12,375,000	-10,620,000	-103,629,000	208,421,000

Data Source: International Civil Aviation Organization, *Financial Data: Commercial Air Carriers, Series F*, Montreal, Quebec, Canada, 2000, 2003, 2006, and 2009

Table 2 provides the operating data and Table 3 provides the fuel data for Alaska Airlines needed to perform the strategic variance analysis. Table 4 reclassifies the operating data to show fuel costs, flight-related costs less fuel costs, and passenger-related costs, the three cost drivers used in prior studies (e.g., Caster and Scheraga 2011, Mudde and Sopariwala 2008). Table 5 uses the data from Tables 2, 3, and 4 to calculate the data needed for strategic variance analysis of Alaska Airlines.

Table 2: Alaska Airlines – Operational Data

	2000	2003	2006	2009
Revenue passengers	13,512,111	15,046,919	17,148,313	15,523,498
Revenue passenger miles	11,976,022,528	14,553,539,641	17,810,371,493	18,315,689,560
Available seat miles	17,291,684,686	20,803,557,288	23,257,684,435	23,070,335,242

Data Source: International Civil Aviation Organization, *Traffic: Commercial Air Carriers, Series T*, Montreal, Quebec, Canada, 2000, 2003, 2006, and 2009

Table 3: Alaska Airlines – Fuel Data

	2000	2003	2006	2009
Total gallons used	302,437,826	336,686,178	353,844,599	303,896,417
Total fuel costs	286,073,111	296,732,291	716,950,639	529,385,990
Average fuel cost per gallon ($)	0.95	0.88	2.03	1.74

Data Source: U. S. Department of Transportation, Research and Innovative Administration, Bureau of Transportation Statistics, *TranStats Database*, Washington, D.C., 2000, 2003, 2006, and 2009

Table 4: Alaska Airlines – Reclassified Financial Data ($)

	2000	2003	2006	2009
Total operating revenues	1,759,867,000	2,027,376,000	2,692,507,000	3,005,999,000
Less: Total operating expenses	1,772,242,000	2,037,996,000	2,796,136,000	2,797,578,000
Fuel costs	286,073,111	296,732,291	716,950,639	529,385,990
Flight-related costs	935,861,889	1,118,809,709	1,424,787,361	1,667,780,010
Passenger-related costs	550,307,000	622,454,000	654,398,000	600,412,000
Operating income/(loss)	-12,375,000	-10,620,000	-103,629,000	208,421,000

	2000	2003	2006	2009
Flying operations	662,612,000	737,423,000	1,141,147,000	1,014,188,000
Less: Fuel Cost	286,073,111	296,732,291	716,950,639	529,385,990
Flying operations (excluding fuel cost)	376,538,889	440,690,709	424,196,361	484,802,010
Maintenance	204,115,000	244,001,000	269,370,000	293,567,000
Passenger service	155,622,000	200,381,000	207,062,000	211,298,000
General and administrative	104,851,000	103,267,000	364,515,000	216,133,000
Depreciation and amortization	83,860,000	119,467,000	137,811,000	178,488,000
Transport related	10,875,000	11,003,000	21,833,000	283,492,000
Total flight-related costs	935,861,889	1,118,809,709	1,424,787,361	1,667,780,010

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Promotion and sales	248,499,000	218,672,000	209,078,000	176,864,000
Total passenger-related costs	550,307,000	622,454,000	654,398,000	600,412,000

Data Sources: 1) Data Source: International Civil Aviation Organization, *Financial Data: Commercial Air Carriers, Series F*, Montreal, Quebec, Canada, 2003, 2006, and 2009 and 2) U. S. Department of Transportation, Research and Innovative Administration, Bureau of Transportation Statistics, *TranStats Database*, Washington, D. C., 2003, 2006, and 2009

Table 5: Alaska Airlines – Data Used in Strategic Variance Analysis[1]

	2000	2003	2006	2009
Total operating revenues ($)	1,759,867,000	2,027,376,000	2,692,507,000	3,005,999,000
Revenue passenger miles (RPMs)	11,986,220,472	14,553,539,641	17,822,404,781	18,361,670,904
Average revenue per RPM	0.147	0.139	0.151	0.164
Revenue passenger miles (RPMs)	11,986,220,472	14,553,539,641	17,822,404,781	18,361,670,904
Available seat miles (ASMs)	17,314,311,918	20,803,557,288	23,275,770,873	23,144,012,157
Passenger load factor (%)	69.23%	69.96%	76.57%	79.34%
Hence, budgeted available seat miles		21,022,850,818	25,476,236,573	23,980,043,662
Revenue passenger miles (RPMs)	11,986,220,472	14,553,539,641	17,822,404,781	18,361,670,904
Revenue passenger enplanements	13,524,685	15,046,919	17,164,501	15,561,087
Average revenue passenger miles per passenger ($)	886.25	967.21	1038.33	1179.97
Hence, budgeted revenue passenger enplanements		16,421,527	18,426,602	17,683,860
Number of gallons used	302,437,826	336,686,178	353,844,599	303,896,417
Available seat miles (ASMs)	17,314,311,918	20,803,557,288	23,275,770,873	23,144,012,157
Average number of gallons per ASM	0.0174675	0.0161841	0.0152023	0.0131307
Total flight-related costs ($)	935,861,889	1,118,809,709	1,424,787,361	1,667,780,010
Available seat miles (ASMs)	17,314,311,918	20,803,557,288	23,275,770,873	23,144,012,157
Average flight-related cost per ASM ($)	0.054	0.054	0.061	0.072
Total passenger-related costs ($)	550,307,000	622,454,000	654,398,000	600,412,000
Revenue passenger enplanements	13,524,685	15,046,919	17,164,501	15,561,087
Average cost per revenue passenger ($)	40.69	41.37	38.13	38.58
Revenue passenger (RPMs)	11,986,220,472	14,553,539,641	17,822,404,781	18,361,670,904
Available seat miles (ASMs)	17,314,311,918	20,803,557,288	23,275,770,873	23,144,012,157
Idle or unused capacity (ASMs)	5,328,091,446	6,250,017,647	5,453,366,092	4,782,341,252
Hence, budgeted idle capacity (ASMs)		6,469,311,177	7,653,831,792	5,618,372,758

Data Sources: 1) International Civil Aviation Organization, *Financial Data: Commercial Air Carriers, Series F*, Montreal, Quebec, Canada, 2000, 2003, 2006, and 2009, 2) International Civil Aviation Organization, *Traffic: Commercial Air Carriers, Series T*, Montreal, Quebec, Canada, 2000, 2003, 2006, and 2009, and 3) U. S. Department of Transportation, Research and Innovative Administration, Bureau of Transportation Statistics, *TranStats Database*, Washington, D. C., 2000, 2003, 2006, and 2009

[1]Budgeted Available Seat Miles from year x to year y = Revenue Passenger Miles (year y) / Passenger Load Factor (year x), Budgeted Revenue Passengers Enplanements from year x to year y = Revenue Passenger Miles (year y) / Average Revenue Passenger Miles per Passenger (year x), and Budgeted Idle Capacity in year y = Budgeted Available Seat Miles (year y) – Revenue Passenger Miles (year y). [See Mudde and Sopariwala (2008).]

Table 6a provides the strategic variance analysis for Alaska Airlines and six other network carriers for the three-year time frame ending December 31, 2003. The first column shows the results for Alaska Airlines, and the last column is a composite of all of network carriers in the sample. The annual net operating loss in 2003 was $10.6 million, an improvement of approximately $1.8 million compared with 2000 (Table 1). Strategic variance analysis provides a breakdown of the change in annual operating profitability. Alaska Airlines achieved productivity gains of nearly $84 million. More than half of the gain is from passenger-related costs, i.e., lower costs due to flying more miles per passenger. The growth component contributed approximately $59 million to increased profitability. All of that increase is due to the revenue effect of growth, meaning that Alaska Airlines had higher RPMs in 2003 than in 2000. In contrast, the price-recovery component showed a large decrease of approximately $93 million. Nearly all of that decrease is due to the revenue effects, meaning that Alaska Airlines charged lower airfares in 2003 than in 2000. The capacity underutilization component shows a decrease of more than $48 million. A large increase in ASMs led to a $190 million decrease in operating profits due to underutilization of available capacity. However, by increasing its RPMs in the period, Alaska enjoyed a $139.5 million increase in operating profits due to the capacity it actually used.

Table 6b provides the strategic variance analysis for Alaska Airlines and six other network carriers for the three-year time frame ending December 31, 2006. The net operating loss increased by approximately $93 million compared with December 31, 2003 (Table 1). The strategic variance analysis reveals results very similar to the prior period. Alaska Airlines' operating profits improved by almost $73 million due to the growth component, with all of that improvement attributable to the revenue effect of growth. Productivity gains were achieved from all three measures, amounting to an improvement of $166.2 million in annual operating profits. Capacity underutilization was not material in this period, although the pattern was similar to the prior period in terms of unused ASMs and RPMs actually flown. However, the decrease in profitability due to the price-recovery component of more than $334 million in the period overwhelmed the increases in the other three components. Although Alaska Airlines raised its fares in this time period, the revenue effect of fare increases was not sufficient to recover increased costs of fuel, primarily, and also other flight-related costs.

Table 6c provides the strategic variance analysis for Alaska Airlines and five other network carriers for the three-year time frame ending December 31, 2009. Alaska Airlines experienced dramatic improvement in its annual operating profits, going from a loss of $103.6 million to a profit of $208.4 million (Table 1). The first three components of the strategic variance analysis show positive impacts on annual operating profits. The growth component was much less of a factor than in the previous two periods, contributing just $6.5 million to increased profitability. Productivity gains were quite significant, contributing $186.2 million to increased profitability. Alaska Airlines was able to significantly reduce the amount of jet fuel used, resulting in a savings of approximately $85 million. It also had a savings of $81.7 million in passenger-related costs by flying more miles per passenger than in the earlier period. Perhaps most interesting is the $129.4 million increase in annual operating profits due to the price-recovery component. The revenue effect of price-recovery shows that Alaska Airlines was able to charge higher fares, which helped to recover higher flight-related costs. They also achieved some cost savings in fuel costs during the period. Capacity underutilization was relatively insignificant during the period, with a decrease in operating profitability of approximately $10 million. The fact that management was able to increase profitability through higher airfares and through further gains in productivity shows that a blended strategy, as discussed in Caster and Scheraga (2011) was in use during this three-year period.

Table 6a: Strategic Variance Analysis 2001-2003

	Alaska	American	Continental	Delta	Northwest	United	US Airways	Composite
GROWTH COMPONENT 2001-2003								
Revenue effect	378,764,093	542,547,377	-795,290,979	-2,647,808,299	-1,474,097,506	-3,507,658,420	-1,784,221,315	-9,232,678,935
Fuel cost effect	-61,569,552	-65,736,738	112,306,023	305,811,129	235,419,092	419,454,747	217,716,581	1,181,317,908
Flight-related cost effect	-139,500,579	-202,026,324	298,061,677	1,002,067,784	513,324,575	1,418,489,068	750,982,716	3,547,436,803
Passenger-related effect	-118,438,798	-160,584,629	231,453,819	722,530,896	478,923,290	992,810,816	508,832,697	2,688,384,420
TOTAL	**59,255,164**	**114,199,686**	**-153,469,460**	**-617,398,489**	**-246,430,549**	**-676,903,789**	**-306,689,321**	**-1,815,539,804**
PRICE-RECOVERY COMPONENT 2001-2003								
Revenue effect	-111,255,093	-1,256,347,377	-1,000,592,021	1,529,988,299	-298,727,494	-2,425,892,580	-635,371,685	-4,253,284,065
Fuel cost effect	23,727,216	-296,749,205	-8,277,005	-320,690,710	43,972,399	-320,743,696	62,554,603	-818,195,494
Flight-related cost effect	4,982,349	-1,564,386,963	3,961,889	-2,743,783,895	-471,616,518	-506,749,111	-291,009,423	-5,452,683,518
Passenger-related effect	-10,518,693	762,694,658	124,377,854	-309,539,166	-32,658,773	300,230,296	-8,588,462	636,226,823
TOTAL	**-93,064,220**	**-2,354,788,887**	**-880,529,282**	**-1,844,025,473**	**-759,030,386**	**-2,953,155,090**	**-872,414,966**	**-9,887,936,254**
PRODUCTIVITY COMPONENT 2001-2003								
Fuel cost effect	24,192,121	140,261,783	112,548,760	167,280,637	56,584,736	176,437,081	87,011,745	750,166,834
Fuel (ASM) cost effect	2,991,035	13,822,849	20,359,221	23,041,256	13,371,442	109,350,508	29,419,071	210,577,880
Passenger-related effect	56,810,491	5,311,971	160,670,327	142,734,270	-63,957,517	188,402,887	303,736,764	950,623,757
TOTAL	**83,993,646**	**159,396,602**	**293,578,308**	**333,056,163**	**5,998,661**	**474,190,476**	**420,167,580**	**1,911,368,472**
CAPACITY UNDERUTILIZATION COMPONENT 2001-2003								
Unused capacities	2,139,670	-583,709,853	1,259,403	-946,583,580	-138,564,355	-156,183,386	-106,042,848	-1,841,908,757
Available capacities	-190,069,839	-224,132,872	480,053,707	1,460,497,163	711,275,204	2,435,963,858	1,238,996,270	5,710,889,146
Used capacities	139,500,579	202,026,324	-298,061,677	-1,002,067,784	-513,324,575	-1,418,489,068	-750,982,716	-3,547,436,803
TOTAL	**-48,429,590**	**-605,816,401**	**183,251,434**	**-488,154,201**	**59,386,273**	**861,291,403**	**381,970,707**	**321,543,586**

Table 6b: Strategic Variance Analysis 2004-2006

	Alaska	American	Continental	Delta	Northwest	United	US Airways	Composite
GROWTH COMPONENT	**2004-2006**							
Revenue effect	453,691,878	2,811,775,915	2,496,491,053	1,531,735,627	553,888,048	1,727,294,826	-66,291,108	9,855,630,117
Fuel cost effect	-66,403,583	-388,327,209	-358,212,552	-171,911,836	-84,464,216	-248,461,285	7,094,394	-1,317,325,858
Flight-related cost effect	-175,151,540	-1,375,345,063	-1,061,955,929	-813,147,817	-227,598,043	-890,324,602	33,377,004	-4,780,185,949
Passenger-related effect	-139,294,499	-768,232,901	-728,649,836	-390,941,719	-191,634,632	-514,421,314	17,788,048	-2,820,943,581
TOTAL	**72,842,256**	**279,870,742**	**347,672,736**	**155,734,255**	**50,191,158**	**74,087,625**	**-8,031,663**	**937,174,729**
PRICE-RECOVERY COMPONENT 2004-2006								
Revenue effect	211,439,122	2,278,247,085	3,180,486,947	1,604,370,373	2,817,239,952	4,208,835,174	1,380,200,108	15,333,774,883
Fuel cost effect	-471,710,024	-3,828,438,185	-1,853,965,777	-2,920,895,535	-2,246,447,729	-2,841,063,847	-1,007,233,236	-15,222,020,603
Flight-related cost effect	-133,242,925	865,320,879	-1,671,102,977	503,537,331	-700,464,092	-1,029,314,359	-158,519,829	-2,032,146,563
Passenger-related effect	59,044,396	436,067,853	25,400,970	-160,708,624	353,833,643	687,418,915	217,983,665	1,493,693,325
TOTAL	**-334,469,432**	**-248,802,368**	**-319,180,837**	**-973,696,455**	**224,161,774**	**1,025,875,882**	**432,430,708**	**-426,698,958**
PRODUCTIVITY COMPONENT 2004-2006								
Fuel cost effect	50,035,532	481,709,093	204,174,231	365,698,506	194,445,736	87,427,468	56,814,411	1,508,342,435
Fuel (ASM) cost effect	67,859,727	560,049,736	212,520,098	251,902,660	313,814,762	340,760,327	105,158,016	1,842,933,707
Passenger-related effect	48,306,103	246,734,048	268,723,866	879,725,343	8,554,989	269,628,399	168,608,287	2,121,185,256
TOTAL	**166,201,363**	**1,288,492,877**	**685,418,195**	**1,497,326,509**	**516,815,487**	**697,816,193**	**330,580,715**	**5,472,461,399**
CAPACITY UNDERUTILIZATION COMPONENT 2004-2006								
Unused capacities	-40,752,430	214,467,764	-378,268,935	134,235,787	-125,392,998	-224,154,281	-44,119,994	-481,362,397
Available capacities	-131,982,297	-649,794,077	-1,016,842,088	-438,742,912	164,855,537	-459,679,021	335,692,238	-2,470,754,722
Used capacities	175,151,540	1,375,345,063	1,061,955,929	813,147,817	227,598,043	890,324,602	-33,377,004	4,780,185,949
TOTAL	**2,416,813**	**940,018,750**	**-333,155,094**	**508,640,691**	**267,060,581**	**206,491,299**	**258,195,240**	**1,828,068,830**

Table 6c: Strategic Variance Analysis 2007-2009

	Alaska	American	Continental	Delta	Northwest	United	Composite
GROWTH COMPONENT	**2007-2009**						
Revenue effect	76,392,142	-2,746,117,173	247,721,124	322,069,175	-1,788,986,906	-2,792,013,981	-6,782,251,227
Fuel cost effect	-20,341,412	681,059,676	-54,221,482	-75,585,266	459,271,131	662,631,241	1,631,023,084
Flight-related cost effect	-30,956,254	1,101,536,116	-111,433,874	-145,802,625	669,969,292	1,274,484,766	2,898,030,959
Passenger-related effect	-18,566,661	590,939,477	-49,027,225	-61,239,564	428,428,256	512,292,668	1,390,268,958
TOTAL	**6,527,814**	**-372,581,904**	**33,038,544**	**39,441,720**	**-231,318,227**	**-342,605,306**	**-862,928,226**
PRICE-RECOVERY COMPONENT 2007-2009							
Revenue effect	237,099,858	151,015,173	-896,725,124	385,372,825	97,349,906	-182,607,019	-107,178,773
Fuel cost effect	103,408,138	5,602,930	114,270,960	-600,032,058	595,433,020	522,238,504	669,748,078
Flight-related cost effect	-202,025,261	-1,440,766,152	-39,062,189	-719,963,590	-868,515,032	-363,159,189	-3,749,230,763
Passenger-related effect	-9,109,301	-377,711,018	-272,718,665	-405,034,217	-373,895,922	-227,871,310	-1,598,991,366
TOTAL	**129,373,433**	**-1,661,859,067**	**-1,094,235,018**	**-1,339,657,040**	**-549,628,027**	**-251,399,014**	**-4,785,652,825**
PRODUCTIVITY COMPONENT 2007-2009							
Fuel cost effect	85,057,117	8,308,068	141,677,759	-118,679,257	227,211,753	50,184,026	544,457,269
Fuel (ASM) cost effect	19,440,806	31,884,475	28,810,763	200,305,717	-24,843,792	-9,110,740	188,753,647
Passenger-related effect	81,661,963	23,640,541	223,950,890	359,075,781	386,617,666	178,274,642	1,198,430,408
TOTAL	**186,159,886**	**63,833,084**	**394,439,412**	**440,702,242**	**588,985,628**	**219,347,928**	**1,931,641,323**
CAPACITY UNDERUTILIZATION COMPONENT 2007-2009							
Unused capacities	-52,444,574	-345,352,446	-8,320,470	-154,375,462	-168,581,670	-80,286,845	-828,939,806
Available capacities	11,477,186	1,439,083,450	-57,020,340	232,399,916	729,066,589	1,527,048,003	4,017,372,492
Used capacities	30,956,254	-1,101,536,116	111,433,874	145,802,625	-669,969,292	-1,274,484,766	-2,898,030,959
TOTAL	**-10,011,134**	**-7,805,112**	**46,093,063**	**223,827,079**	**-109,484,373**	**172,276,392**	**290,401,727**

Table 9 provides the strategic variance analysis for Alaska Airlines for the last year of the long-term strategic plan. Other network carriers are not included because the group changed yet again with the merger of Northwest Airlines into Delta. The analysis shows that Alaska experienced continued and significant growth in profitability due to growth in the market. In 2007, Alaska began adding service to Hawaii, and by 2010, that market represented 15% of its total network (Ayer 2011).

The price-recovery component for 2010 shows a contribution to net operating profits of $49.5 million, achieved primarily through higher airfares. Productivity gains contributed $68 million, primarily due to fuel cost savings and passenger-related savings. In addition, Alaska Airlines made much better use of capacity, achieving a gain in profitability of $69.3 million. According to Ayer (2010), Alaska reduced its capacity on routes with low demand while increasing capacity on routes with higher demand, particularly the routes to Hawaii.

On the surface, it would appear as if the Alaska 2010 strategic plan was a huge success. However, it is not sufficient to look at the performance of Alaska Airlines in a vacuum. Benchmarking against the other network air carriers is necessary to determine just how successful the plan has been. Tables 7a, 7b, and 7c provide rankings for the network carriers, after normalizing the data for size differences by dividing by RPMs. Alaska Airlines ranked first in the growth component in the earliest period, second in the middle period, and third in the last three-year period. This analysis shows that for most of the time, Alaska Airlines was among the leaders in increased market share as air travel recovered and grew after the tragedy of 9/11.

The price-recovery component directly corresponds to Porter's (1980) product differentiation strategy. It is interesting to note that Alaska Airlines ranked first during the three years ending December 31, 2003, and December 31, 2009. But for the three years ending December 31, 2006, it ranked last. The productivity component directly corresponds to Porter's (1980) cost leadership strategy. Alaska ranked second in the first two, three-year periods, and improved to a first place ranking in the third, three-year period. Its consistently high ranking on this component suggests that Alaska 2010 was focused primarily on cutting costs and becoming the low-cost leader in the industry. However, it is also evident that management is using a blended strategy, since it ranked first in price-recovery for two of the three periods.

Alaska Airlines ranked fifth and sixth over the nine years in terms of capacity underutilization. This suggests that managing capacity was not a major focus of the Alaska 2010 strategic plan, or, if it was, then the competition continues to do a better job than Alaska at managing capacity. Going forward, this also suggests that management may be able to increase future profitability by improving its use of capacity.

As shown in Tables 6a, 6b, and 6c, Alaska Airlines experienced increases in annual operating profits due to growth in the market. The growth component, however, is impacted by exogenous factors as well as endogenous factors. Horngren et al. (2012) provide an adjustment to the growth component to estimate how much of the growth component is due to management's strategic decisions (endogenous factors). The estimate is based on the overall growth in the market, in this case, the composite figures for the network carriers. For example, if the market grew by 50%, then 50% growth is assumed for Alaska Airlines. Any growth above and beyond 50% is assumed to be endogenous.

Table 8a shows that nearly 150% of Alaska's growth is attributable to endogenous factors. Overall, the market actually decreased by more than 10% for the period, yet Alaska grew its market share by 21.42%. Similarly, management's initiatives contributed 39.3% to Alaska's growth in 2006, as shown in Table 8b, and 352% in 2009, as shown in Table 8c. In 2009, the overall market decreased by 7.64%, yet Alaska grew its market by 3%. Thus, in all three periods, management's strategic decisions had a positive impact on growth in the market. This result is consistent with Alaska's high ranking on productivity, as companies that follow a low cost strategy tend to exhibit growth in market share.

Table 7a: Normalized Strategic Variance Analysis 2001-2003

	Alaska	American	Continental	Delta	Northwest	United	US Airways	Composite
GROWTH COMPONENT 2001-2003	1	2	3	6	4	5	7	
Revenue effect	26,025,565	4,522,050	-13,983,430	-29,705,485	-21,537,181	-33,781,010	-47,303,405	-18,821,496
Fuel cost effect	-4,230,555	-547,906	1,974,653	3,430,863	3,439,571	4,039,619	5,772,118	2,408,204
Flight-related cost effect	-9,585,337	-1,683,859	5,240,754	11,242,094	7,499,887	13,660,963	19,910,108	7,231,711
Passenger-related effect	-8,138,144	-1,338,449	4,069,603	8,105,999	6,997,270	9,561,408	13,490,209	5,480,470
TOTAL	**4,071,529**	**951,837**	**-2,698,421**	**-6,926,529**	**-3,600,453**	**-6,519,019**	**-8,130,970**	**-3,701,112**
PRICE-RECOVERY COMPONENT 2001-2003	1	4	3	5	2	7	6	
Revenue effect	-7,644,538	-10,471,465	-17,593,194	17,164,779	-4,364,534	-23,362,908	-16,845,020	-8,670,633
Fuel cost effect	1,630,340	-2,473,360	-145,533	-3,597,796	642,455	-3,088,968	1,658,452	-1,667,952
Flight-related cost effect	342,346	-13,038,928	69,661	-30,782,225	-6,890,515	-4,880,320	-7,715,263	-11,115,697
Passenger-related effect	-722,758	6,356,944	2,186,909	-3,472,688	-477,158	2,891,411	-227,698	1,296,995
TOTAL	**-6,394,611**	**-19,626,808**	**-15,482,157**	**-20,687,929**	**-11,089,751**	**-28,440,786**	**-23,129,529**	**-20,157,286**
PRODUCTIVITY COMPONENT 2001-2003	2	6	3	5	7	4	1	
Fuel cost effect	1,662,284	1,169,061	1,978,921	1,876,704	826,727	1,699,203	2,306,862	1,529,270
Fuel (ASM) cost effect	205,519	115,211	357,972	258,497	195,362	1,053,116	779,961	429,279
Passenger-related effect	3,903,551	44,274	2,825,032	1,601,321	-934,446	1,814,441	8,052,691	1,937,917
TOTAL	**5,771,355**	**1,328,546**	**5,161,924**	**3,736,522**	**87,643**	**4,566,760**	**11,139,513**	**3,896,465**
CAPACITY UNDERUTILIZATION COMPONENT 2001-2003	5	6	3	7	4	2	1	
Unused capacities	147,021	-4,865,133	22,144	-10,619,622	-2,024,483	-1,504,147	-2,811,416	-3,754,867
Available capacities	-13,060,042	-1,868,113	8,440,681	16,385,165	10,392,028	23,459,901	32,848,359	11,642,068
Used capacities	9,585,337	1,683,859	-5,240,754	-11,242,094	-7,499,887	-13,660,963	-19,910,108	-7,231,711
TOTAL	**-3,327,685**	**-5,049,388**	**3,222,071**	**-5,476,551**	**867,658**	**8,294,791**	**10,126,835**	**655,490**

Note: Numbers in shaded areas are rankings, from 1 to 7, of the effect of a component on operating income.

Table 7b: Normalized Strategic Variance Analysis 2004-2006

	Alaska	American	Continental	Delta	Northwest	United	US Airways	Composite
GROWTH COMPONENT 2004-2006	2	3	1	4	5	6	7	
Revenue effect	25,473,465	20,175,983	32,747,227	15,511,530	7,632,226	14,735,230	-1,774,916	17,621,381
Fuel cost effect	-3,728,366	-2,786,454	-4,698,782	-1,740,911	-1,163,863	-2,119,577	189,949	-2,355,314
Flight-related cost effect	-9,834,244	-9,868,830	-13,929,997	-8,234,559	-3,136,157	-7,595,193	893,655	-8,546,737
Passenger-related effect	-7,820,977	-5,512,478	-9,557,920	-3,958,976	-2,640,604	-4,388,432	476,267	-5,043,708
TOTAL	**4,089,879**	**2,008,221**	**4,560,528**	**1,577,085**	**691,602**	**632,028**	**-215,044**	**1,675,622**
PRICE-RECOVERY COMPONENT 2004-2006	7	4	5	6	3	2	1	
Revenue effect	11,871,685	16,347,631	41,719,408	16,247,086	38,819,781	35,904,788	36,954,265	27,416,033
Fuel cost effect	-26,485,131	-27,471,074	-24,319,029	-29,579,230	-30,954,626	-24,236,586	-26,968,237	-27,216,222
Flight-related cost effect	-7,481,199	6,209,136	-21,920,362	5,099,205	-9,651,951	-8,780,889	-4,244,300	-3,633,378
Passenger-related effect	3,315,169	3,129,018	333,192	-1,627,459	4,875,603	5,864,243	5,836,419	2,670,650
TOTAL	**-18,779,475**	**-1,785,289**	**-4,186,791**	**-9,860,398**	**3,088,807**	**8,751,556**	**11,578,146**	**-762,917**
PRODUCTIVITY COMPONENT 2004-2006	2	3	4	1	6	7	5	
Fuel cost effect	2,809,348	3,456,518	2,678,215	3,703,344	2,679,339	745,827	1,521,181	2,696,842
Fuel (ASM) cost effect	3,810,124	4,018,654	2,787,690	2,550,960	4,324,169	2,906,963	2,815,561	3,295,075
Passenger-related effect	2,712,246	1,770,448	3,524,932	8,908,774	117,882	2,300,150	4,514,414	3,792,575
TOTAL	**9,331,718**	**9,245,620**	**8,990,837**	**15,163,077**	**7,121,390**	**5,952,940**	**8,851,157**	**9,784,491**
CAPACITY UNDERUTILIZATION COMPONENT 2004-2006	6	2	7	3	4	5	1	
Unused capacities	-2,288,129	1,538,920	-4,961,868	1,359,375	-1,727,836	-1,912,218	-1,181,294	-860,652
Available capacities	-7,410,418	-4,662,617	-13,338,225	-4,443,047	2,271,605	-3,921,436	8,988,015	-4,417,588
Used capacities	9,834,244	9,868,830	13,929,997	8,234,559	3,136,157	7,595,193	-893,655	8,546,737
TOTAL	**135,697**	**6,745,133**	**-4,370,096**	**5,150,886**	**3,679,926**	**1,761,539**	**6,913,067**	**3,268,497**

Note: Numbers in shaded areas are rankings, from 1 to 7, of the effect of a component on operating income.

Table 7c: Normalized Strategic Variance Analysis 2007-2009

	Alaska	American	Continental	Delta	Northwest	United	Composite
GROWTH COMPONENT 2007-2009	3	4	1	2	6	5	
Revenue effect	4,170,858	-22,445,070	3,188,719	3,202,043	-28,747,399	-27,838,296	-14,086,888
Fuel cost effect	-1,110,600	5,566,562	-697,950	-751,476	7,380,071	6,606,888	3,387,672
Flight-related cost effect	-1,690,150	9,003,278	-1,434,400	-1,449,584	10,765,800	12,707,488	6,019,276
Passenger-related effect	-1,013,703	4,829,975	-631,089	-608,850	6,884,454	5,107,909	2,887,620
TOTAL	**356,406**	**-3,045,255**	**425,279**	**392,133**	**-3,717,074**	**-3,416,010**	**-1,792,321**
PRICE-RECOVERY COMPONENT 2007-2009	1	5	6	4	3	2	
Revenue effect	12,945,178	1,234,305	-11,542,836	3,831,414	1,564,325	-1,820,717	-222,613
Fuel cost effect	5,645,877	45,795	1,470,920	-5,965,576	9,568,069	5,207,076	1,391,082
Flight-related cost effect	-11,030,175	-11,775,935	-502,817	-7,157,947	-13,956,250	-3,620,946	-7,787,237
Passenger-related effect	-497,350	-3,087,177	-3,510,492	-4,026,889	-6,008,169	-2,272,033	-3,321,141
TOTAL	**7,063,531**	**-13,583,012**	**-14,085,225**	**-13,318,999**	**-8,832,025**	**-2,506,621**	**-9,939,909**
PRODUCTIVITY COMPONENT 2007-2009	1	6	3	4	2	5	
Fuel cost effect	4,643,948	67,905	1,823,706	-1,179,921	3,651,087	500,369	1,130,850
Fuel (ASM) cost effect	1,061,429	260,604	370,858	1,991,459	-399,217	-90,840	392,046
Passenger-related effect	4,458,580	193,223	2,882,743	3,569,966	6,212,596	1,777,521	2,489,167
TOTAL	**10,163,957**	**521,732**	**5,077,308**	**4,381,504**	**9,464,466**	**2,187,049**	**4,012,063**
CAPACITY UNDERUTILIZATION COMPONENT 2007-2009	5	4	3	1	6	2	
Unused capacities	-2,863,369	-2,822,698	-107,103	-1,534,816	-2,708,955	-800,515	-1,721,727
Available capacities	626,631	11,762,182	-733,978	2,310,542	11,715,440	15,225,717	8,344,173
Used capacities	1,690,150	-9,003,278	1,434,400	1,449,584	-10,765,800	-12,707,488	-6,019,276
TOTAL	**-546,588**	**-63,794**	**593,320**	**2,225,310**	**-1,759,315**	**1,717,714**	**603,171**

Note: Numbers in shaded areas are rankings, from 1 to 6, of the effect of a component on operating income.

Table 8a: Impact of Endogenous Strategies - Growth Component
2001 (12/31/00) – 2003 (12/31/03)

	RPMs 2001	RPMs 2003	%Δ2001-2003	ENDOGENOUS
Alaska	11,986,220,472.44	14,553,539,641.00	21.42	149.86%
American	116,546,866,300.80	120,299,948,301.92	3.22	431.68%
Continental	62,344,035,830.75	57,577,384,884.77	-7.65	39.61%
Delta	107,817,843,792.25	89,412,207,706.99	-17.07	-37.43%
Northwest	79,204,321,760.92	68,746,644,595.56	-13.20	-19.09%
United	126,906,366,817.78	104,371,719,160.11	-17.76	-39.86%
US Airways	46,870,108,565.97	37,774,319,225.72	-19.41	-44.98%
Composite	551,675,763,540.92	492,735,763,516.07	-10.68	

Endogenous Effect = $[\%\Delta RPMs(2001\text{-}2003)_{Airline\ i} - \%\Delta RPMs(2001\text{-}2003)_{Market}] / |\%\Delta RPMs(2001\text{-}2003)_{Airline\ i}|$

Table 8b: Impact of Endogenous Strategies - Growth Component
2004 (12/31/03) – 2006 (12/31/06)

	RPMs 2004	RPMs 2006	%Δ2004-2006	ENDOGENOUS
Alaska	14,553,539,641	17,822,404,781	22.46	39.31%
American	120,299,948,302	139,420,782,629	15.89	14.22%
Continental	57,577,384,885	76,302,518,293	32.52	58.09%
Delta	89,412,207,707	98,887,497,017	10.60	-28.58%
Northwest	68,746,644,596	72,674,331,902	5.71	-138.70%
United	104,371,719,160	117,445,990,416	12.53	-8.78%
US Airways	37,774,319,226	37,357,913,286	-1.10	-1339.09%
Composite	492,735,763,516	559,911,438,325	13.63	

Endogenous Effect = $[\%\Delta RPMs(2004\text{-}2006)_{Airline\ i} - \%\Delta RPMs(2004\text{-}2006)_{Market}] / |\%\Delta RPMs(2004\text{-}2006)_{Airline\ i}|$

Table 8c: Impact of Endogenous Strategies - Growth Component
2006 (12/31/06) – 2009 (12/31/09)

	RPMs 2006	RPMs 2009	%Δ2006-2009	ENDOGENOUS
Alaska	17,822,404,781	18,361,670,904	3.03	352.15%
American	139,420,782,629	122,391,483,735	-12.21	-37.43%
Continental	76,302,518,293	77,768,332,936	1.92	497.92%
Delta	98,887,497,017	100,711,842,838	1.84	515.22%
Northwest	72,674,331,902	62,941,173,546	-13.39	-42.94%
United	117,445,990,416	100,453,973,793	-14.47	-47.23%
Composite	522,553,525,039	482,628,477,752	-7.64	

Endogenous Effect = $[\%\Delta RPMs(2006\text{-}2009)_{Airline\ i} - \%\Delta RPMs(2006\text{-}2009)_{Market}] / |\%\Delta RPMs(2006\text{-}2009)_{Airline\ i}|$

Table 9: Strategic Variance Analysis Alaska Airlines 2009-2010

	Alaska	Normalized Alaska
GROWTH COMPONENT 2009-2010		
Revenue effect	326,586,654	16,083,578
Fuel cost effect	-57,515,122	-2,832,476
Flight-related cost effect	-143,852,606	-7,084,382
Passenger-related effect	-65,231,740	-3,212,500
TOTAL	**59,987,186**	**2,954,219**
PRICE-RECOVERY COMPONENT 2009-2010		
Revenue effect	94,039,346	4,631,203
Fuel cost effect	-163,054,470	-8,030,026
Flight-related cost effect	96,567,740	4,755,720
Passenger-related effect	21,979,726	1,082,447
TOTAL	**49,532,341**	**2,439,344**
PRODUCTIVITY COMPONENT 2009-2010		
Fuel cost effect	5,392,354	265,560
Fuel (ASM) cost effect	35,155,480	1,731,320
Passenger-related effect	27,478,015	1,353,224
TOTAL	**68,025,849**	**3,350,103**
CAPACITY UNDERUTILIZATION COMPONENT 2009-2010		
Unused capacities	19,325,217	951,719
Available capacities	-93,894,199	-4,624,055
Used capacities	143,852,606	7,084,382
TOTAL	**69,283,624**	**3,412,046**

Table 10a: ASM and RPKm by Aircraft Type - 2003
(A Prefix = Alaska, H Prefix = Horizon, T Prefix = Total (A + H), ST Prefix = Summary Total)

Airline	Aircraft Type	%AASM	%ARPM	%HASM	%HRPM	%TASM	%TRPM	%STASM	%STRPM
Alaska	Boeing 737-700/700LR	19.46%	20.21%			17.33%	18.16%		
Alaska	Boeing 737-400	38.55%	37.44%			34.33%	33.65%		
Alaska	Boeing 737-200C	2.91%	2.16%			2.59%	1.94%		
Alaska	Boeing 737-900	12.42%	12.97%			11.06%	11.66%		
Alaska	McDonnell Douglas DC9 Super 80/MD81/82/83/88	26.66%	27.22%			23.74%	24.46%	89.05%	89.87%
Horizon	De Havilland DHC8-400 Dash-8			32.64%	31.57%	3.57%	3.20%		
Horizon	De Havilland DHC8-200Q Dash-8			20.96%	20.81%	2.29%	2.11%		
Horizon	Fokker F28-4000/6000 Fellowship			0.34%	0.38%	0.04%	0.04%		
Horizon	Canadair RJ-700			46.06%	47.23%	5.04%	4.78%	10.94%	10.13%

Data Source: U. S. Department of Transportation, Research and Innovative Administration, Bureau of Transportation Statistics, *TranStats Database*, Washington, D. C., 2003

Table 10b: ASM and RPKm by Aircraft Type - 2006
(A Prefix = Alaska, H Prefix = Horizon, T Prefix = Total (A + H), ST Prefix = Summary Total)

Airline	Aircraft Type	%AASM	%ARPM	%HASM	%HRPM	%TASM	%TRPM	%STASM	%STRPM
Alaska	Boeing 737-700/700LR	19.93%	20.22%			17.24%	17.57%		
Alaska	Boeing 737-800	11.24%	12.20%			9.72%	10.60%		
Alaska	Boeing 737-400	32.04%	30.35%			27.71%	26.37%		
Alaska	Boeing 737-200C	1.13%	1.04%			0.98%	0.91%		
Alaska	Boeing 737-900	15.30%	15.73%			13.23%	13.66%		
Alaska	McDonnell Douglas DC9 Super 80/MD81/82/83/88	20.37%	20.46%			17.62%	17.77%	86.50%	86.88%
Horizon	De Havilland DHC8-400 Dash-8			36.01%	35.78%	4.86%	4.70%		
Horizon	De Havilland DHC8-200Q Dash-8			14.67%	14.62%	1.98%	1.92%		
Horizon	Canadair RJ-700			49.32%	49.60%	6.66%	6.51%	13.50%	13.13%

Data Source: U. S. Department of Transportation, Research and Innovative Administration, Bureau of Transportation Statistics, *TranStats Database*, Washington, D. C., 2006

Table 10c: ASM and RPKm by Aircraft Type - 2009
(A Prefix = Alaska, H Prefix = Horizon, T Prefix = Total (A + H), ST, Prefix = Summary Total)

Airline	Aircraft Type	%AASM	%ARPM	%HASM	%HRPM	%TASM	%TRPM	%STASM	%STRPM
Alaska	Boeing 737-700/700LR	11.70%	11.48%			10.24%	10.15%		
Alaska	Boeing 737-800	55.90%	57.51%			48.93%	50.84%		
Alaska	Boeing 737-400	19.21%	17.49%			16.82%	15.46%		
Alaska	Boeing 737-900	13.19%	13.52%			11.55%	11.95%	87.54%	88.40%
Horizon	De Havilland DHC8-400 Dash-8			59.76%	57.39%	7.44%	6.65%		
Horizon	De Havilland DHC8-200Q Dash-8			0.01%	0.01%	0.0013%	0.0013%		
Horizon	Canadair RJ-700			40.23%	42.60%	5.01%	4.94%	12.45%	11.59%

Data Source: U. S. Department of Transportation, Research and Innovative Administration, Bureau of Transportation Statistics, *TranStats Database*, Washington, D. C., 2009

THE INTERACTION BETWEEM ALASKA AND HORIZON AIR INDUSTRIES AND THE IMPACT ON SVA RESULTS

Although the focus of this research is Alaska Airlines, the Alaska 2010 initiative impacted both airlines in the group, Alaska Airlines and Horizon Air Industries. During the period of this study, it is possible that Alaska Airlines shifted routes, frequencies of flights, and aircraft to its regional affiliate, Horizon Air Industries. If this occurred to a significant degree, then there might be an important impact in terms of the underlying drivers of the results of the strategic variance analysis.

ASMs and RPMs by aircraft type for both carriers were examined to try and detect route interactions between the two airlines. Conceptually, if such an interaction were of significant magnitude, then one would see a larger share of ASMs and RPMs being flown by the aircraft types of the regional affiliate airline. Table 10 shows virtually no change in ASMs and RPMs by aircraft types flown by Alaska Airlines versus those flown by Horizon Air Industries for the years ending in 2003, 2006, and 2009 (the end points of each of the periods used in the SVA analysis). Instead, Alaska Airlines phased out its usage of McDonnell Douglas aircraft in favor of more efficient ones from the single Boeing 737 family. Horizon Air Industries phased out its Fokker and De Havilland DHC8-200Q Dash-8 airplanes in favor of the more efficient De Havilland DHC8-400 Dash-8 aircraft.

In addition, the annual reports of the Alaska Air Group were examined for each year in the study. Typically, in the letter to shareholders, the CEO discusses progress made in the strategic plan for the preceding year. In only one year, 2007, was there any mention of a shift in service between the two airlines. In that year, Alaska Airlines contracted with Horizon Air Industries for the use of some 70-seat Canadair RJ-700 aircraft for certain routes for which Alaska's Boeing 737 jets were too large to be profitable. Thus, it appears that for the entire period of the study, any interaction effects were minimal.

SUMMARY AND CONCLUSIONS

In 2003, Alaska Air Group embarked on a long-term strategic plan to transform the company. Management referred to the plan in annual reports to stockholders in 2003 and in subsequent years, marking their successes and further needs for improvement. In fact, the plan appeared to be highly successful based on the 2010 annual report to stockholders. Strategic variance analysis provides a means to assess the plan and to categorize management's efforts in terms of Porter's (1980) long-term strategies for business success. This paper examines Alaska Airlines' performance in three-year time windows from 2001 to 2003, 2004 to 2006, and 2007 to 2009. In addition, we examine 2010, the last year of the strategic plan.

Strategic variance analysis shows that Alaska Airlines focused primarily on growing its share of the market and on productivity gains by cutting costs. In later years, they also followed a product differentiation strategy, raising air fares sufficiently to cover increased costs for such a strategy. Finally, they made changes in their routes to achieve greater profitability through better use of capacity.

The success of the plan may also be measured by comparison with the other network carriers. That analysis revealed that by 2009, Alaska ranked first in both productivity and price-recovery, as well as third in growth in market share. In sum, it appears that management delivered on its forecast in the 2003 annual report that 2010 would be a year where they could "look back with great pride at how we transformed ourselves" (Ayer 2004).

APPENDIX
Calculation of Strategic Variances from Year i to Year j

The Growth Component

1. Airline Revenues

[*Revenue effect of the Growth Component (i.e., lower expected revenue due to lower RPM)*]

Variance = {Year i revenue/RPM} * {Year j RPMs – Year i RPMs}

2. Fuel Costs

[*Fuel cost effect of the Growth Component (i.e., lower expected fuel costs due to lower RPMs)*]

Variance = {Year i fuel cost/gallon} * {Year i gallons used per ASM} * {Year i actual ASMs – Year j budgeted ASMs}

3. Flight-related Costs

[*Flight-related cost effect of the Growth Component (i.e., lower expected flight-related costs due to lower RPMs)*]

Variance = {Year i cost/ASM} * {Year i passenger load factor} * {Year i actual ASMs – Year j budgeted ASMs}

4. Passenger-related Costs

[*Passenger-related cost effect of the Growth Component (i.e., lower expected passenger-related costs due to lower RPMs)*]

Variance = {Year i cost/passenger} * {Year i revenue passengers – Year j budgeted revenue passengers}

The Price-Recovery Component

1. Airline Revenues

[*Revenue effect of the Price-Recovery Component (i.e., higher revenue due to higher airfares)*]

Variance = {Year j RPMs} * {Year j revenue/RPM – Year i revenue/RPM}

2. Fuel Costs

[*Fuel cost effect of the Price-Recovery Component (i.e., higher costs due to higher fuel prices)*]

Variance = {Year j budgeted ASMs} * {Year i gallons used/ASM} * {Year i fuel cost/gallon – Year j fuel cost/gallon}

3. Flight-related Costs

[*Flight-related cost effect of the Price-Recovery Component (i.e., higher costs due to higher flight-related costs per ASM)*]

Variance = {Year j passenger load factor} * {Year j actual ASMs} * {Year i cost/ASM – Year j cost/ASM}

4. Passenger-related Costs

[*Passenger-related cost effect of the Price-Recovery Component (i.e., higher costs due to higher costs per passenger)*]

Variance = {Year j budgeted revenue passengers} * {Year i cost/passenger – Year j cost/passenger}

The Productivity Component

1. Fuel Costs (a)

[*Fuel cost effect of the Productivity Component (i.e., lower costs due to lower fuel usage per gallon)*]

Variance = {Year j fuel cost/gallon} * {Year j budgeted ASMs} * {Year i gallons used /ASM – Year j gallons used/ASM}

2. Fuel Costs (b)

[*Fuel (ASM) cost effect of the Productivity Component (i.e., lower costs due to higher passenger load factor)*]

Variance = {Year j fuel cost/gallon} * {Year j gallons used/ASM} * {Year j budgeted ASMs – Year j actual ASMs}

3. Passenger-related costs

[*Passenger-related cost effect of the Productivity Component (i.e., lower costs due to higher miles per passenger)*]

Variance = {Year j cost/passenger} * {Year j budgeted revenue passengers – Year j revenue passengers}

The Capacity Underutilization Component

1. Flight-related costs (a)

[*Changes in flight-related costs relating to unused capacities (i.e., higher unit costs to acquire capacity that is unused)*]

Variance = {Year j actual ASMs – Year j RPMs} * {Year i cost/ASM – Year j cost/ASM}

2. Flight-related costs (b)

[*Changes in flight-related costs of available capacities (i.e., lower underutilization due to decrease in available capacity)*]

Variance = {Year i cost/ASM} * {Year i actual ASMs – Year j actual ASMs}

3. Flight-related costs (c)

[*Changes in flight-related costs of used capacities (i.e., higher underutilization due to decrease in capacity used)*]

Variance = {Year i cost/ASM} * {Year j RPMs – Year i RPMs}

References

Ayer, William S. "Letter to Shareholders and Employees." *Alaska Air Group Annual Report 2003* March 10, 2004. http://library.corporate-ir.net/library/10/109/109361/Items/106136/EFF3A3BA-C9DC-4587-94FB-0CFD45A49302_2003%20Annual%20Report.pdf (Accessed May 16, 2012).

Ayer, William S. "Letter to Shareholders and Employees." *Alaska Air Group Annual Report 2004* April 11, 2005. http://library.corporate-ir.net/library/10/109/109361/Items/153592/17EF7CF4-7113-4391-AD01-5661E21368FB_AR2004.pdf (Accessed May 16, 2012).

Ayer, William S. "Letter to our Shareholders." *Alaska Air Group Annual Report 2009* April 1, 2010. http://phx.corporate-ir.net/phoenix.zhtml?c=109361&p=irol-reportsannual (Accessed May 16, 2012).

Ayer, William S. "Letter to our Shareholders." *Alaska Air Group Annual Report 2010* April 4, 2011. http://phx.corporate-ir.net/phoenix.zhtml?c=109361&p=irol-reportsannual (Accessed May 16, 2012).

Bailey, C., A.B. Collins, D.L. Collins, and K.R. Lambert. "An Analysis of Southwest Airlines: Applying the Horngren, Datar, and Foster (2006) Strategic Profitability Analysis Approach." *Issues in Accounting Education* 24, no. 4 (2009): 539-551.

Banker, R.D. and H.H. Johnston. "Strategic Management Accounting and Control." A. Wagenhofer ed. *Handwörterbuch Unternehmensrechnung und Controlling*. Stuttgart: Schaeffer Poeschel Publisher, 2002.

Caster, P., and C.A. Scheraga. "A Strategic Variance Analysis of the Profitability of U.S. Network Air Carriers." *Journal of the Transportation Research Forum* 50, no. 3 (2011): 113-136.

Horngren, C.T., G. Foster, and S.M. Datar. *Cost Accounting: A Managerial Emphasis (10th ed.)*. Upper Saddle River, NJ: Pearson/Prentice Hall, 2000.

Horngren, C.T., S.M. Datar, and G. Foster. *Cost Accounting: A Managerial Emphasis (12th ed.)*. Upper Saddle River, NJ: Pearson/Prentice Hall, 2006.

Horngren, C.T., S.M. Datar, and M. Rajan. *Cost Accounting: A Managerial Emphasis (12th ed.)*. Upper Saddle River, NJ: Pearson/Prentice Hall, 2012.

International Civil Aviation Organization. *Financial Data: Commercial Air Carriers, Series F*. Montreal, Quebec, Canada, 2003, 2006, and 2009 .

International Civil Aviation Organization. *Traffic: Commercial Air Carriers, Series T*. Montreal, Quebec, Canada, 2003, 2006, and 2009.

Kelly, John F. "Letter to Employees and Shareholders." *Alaska Air Group Annual Report 2001* March 11, 2002. http://phx.corporate-ir.net/phoenix.zhtml?c=109361&p=irol-reportsannual (accessed May 16, 2012).

Kelly, John F. "Letter to Employees and Shareholders." *Alaska Air Group Annual Report 2002* April 2003. http://phx.corporate-ir.net/phoenix.zhtml?c=109361&p=irol-reportsannual (Accessed May 16, 2012).

Mudde, P.A. and P.R. Sopariwala. "Examining Southwest Airlines' Strategic Execution: A Strategic Variance Analysis." *Management Accounting Quarterly* 9, no.4 (2008): 20-32.

Porter, M. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York, NY: The Free Press, 1980.

Securities and Exchange Commission (SEC). *Alaska Air Group Form 10-K Annual Report*, 2004. http://www.sec.gov/Archives/edgar/data/766421/000095012405001049/v05863e10vk.htm.

Shank, J.K, and V. Govindarajan. *Strategic Cost Management: The New Tool for Competitive Advantage*. New York, NY: The Free Press, 1993.

Sopariwala, P.R. "Strategic Analysis of Operating Income: An Extension of Horngren, Foster, and Datar." *Journal of Accounting Education* 21, no. 1 (2003): 25-42.

U.S. Department of Transportation, Research and Innovative Administration, Bureau of Transportation Statistics. *TranStats Database*. Washington, D.C., 2003, 2006, and 2009.

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