

Growth Airline Economic Analysis

Oliver Wyman – January 2010

Bob Hazel, Aaron Taylor, Andrew Watterson

Introduction

Among the changes affecting growth airlines since last year, three stand out:

- First, the CASM gap between value carriers and network carriers is the smallest we have seen over a six-year period. However, when adjusted for stage-length and aircraft type, value carriers still have a substantial cost advantage.
- Second, while nearly all carriers have reduced costs as a result of fuel cost declines, CASMs ex-fuel have increased for both network and value carriers from Q3 2008 to Q3 2009.
- Third, AirTran has solidified its cost leadership among value carriers, while United has made the greatest progress in reducing domestic costs among the network carriers.

In this report, we cover the following topics:

A) Domestic unit cost and revenue comparisons for value versus network carriers. Also, value and network carrier cost trends are shown over time, providing insight into whether network carriers are reducing their cost gap with value carriers, or whether the gap is widening.

B) Cost comparisons for similar aircraft operated by different carriers, including stage-length adjustments.

C) Latest developments in system-wide and spot fuel prices.

D) Cost comparisons between the smaller and larger narrowbodies operated by selected value carriers.

E) Ranking of regional aircraft in terms of unit cost.

F) Cost comparisons between selected international carriers showing differences between value and network carriers.

G) Ancillary revenue trends among network and value carriers

H) The changing composition of the U.S. market in terms of the type of carriers providing air service, the fleet types used, and the domestic versus international mix.

1. Carriers Included and Methodology

Five of the largest value carriers¹ are included in this analysis, as are the seven largest U.S. network carriers.

Our data sample—Value carriers (low-cost):

1. AirTran
2. Allegiant
3. JetBlue

¹ Frontier requested confidential treatment in its 3Q 2009 filing; therefore it is not included in this year's report which relies heavily on 3Q 2009 data.

4. Southwest
5. Spirit

Our data sample—Network carriers:

1. Alaska
2. American
3. Continental
4. Delta
5. Northwest
6. United
7. US Airways²

Most of the analysis is based on 3rd quarter 2009 data, which is the most recent US DOT (Form 41) data available. DOT data was used instead of SEC filings to permit comparisons of specific equipment types and ensure that non-airline-related costs did not dilute the specific focus on airline costs. Because unit costs are rapidly changing, we have used data from a single quarter, rather than a twelve-month period, supplemented with additional historical perspective. For carriers outside the U.S., we have used the most recent reporting period available on a comparative basis.

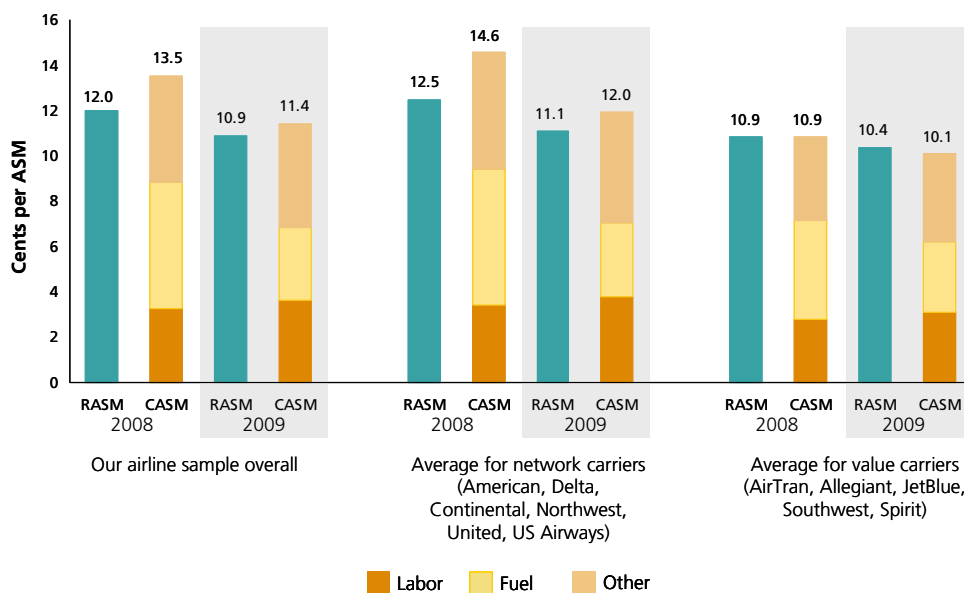
Unless indicated otherwise, the costs provided are for mainline domestic operations only. We have carefully removed the costs associated with the carriers' regional affiliates by correcting for their transport-related costs; although, it is impossible to do so with absolute precision.

2. Value versus Network Carrier RASM/CASM Comparison

Figure 1 shows the RASM and CASM comparison for network versus value carriers for the third quarters of 2008 and 2009.

² In making year-over-year comparisons for US Airways, the numbers presented for 2008 are based on the consolidated entity of US Airways and America West.

Figure 1. Comparison of RASM and CASM for Q3 2009/2008
(Excluding regional affiliates)



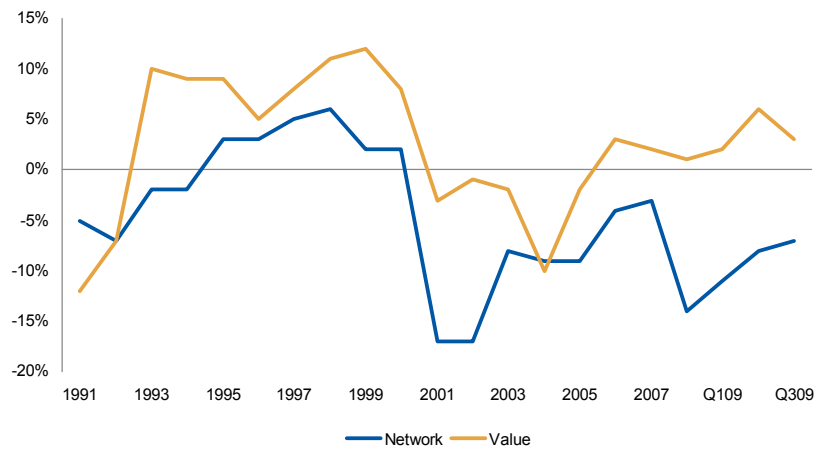
In the third quarter of 2009, the average CASM of our sample airlines was 11.4¢, which was nearly 16 percent better than the third quarter of 2008. For network carriers, the average CASM was 12.0¢, which was 19% better than the prior period. For value carriers, the average CASM was 10.1¢, which was 7% better. From Q3 2008 to Q3 2009, the network carrier CASM disadvantage to the value carriers declined from 35% to 19%.

The airline groups also experienced RASM declines during this period—although those declines were less than the declines in CASM. The average RASM of our sample airlines was 10.9¢ in Q3 2009, which was 9.5% worse than in Q3 2008. For network carriers, the average RASM was 11.1¢, which was 11% worse than the prior period. For value carriers, the average RASM was 10.4¢, which was 5% worse. From Q3 2008 to Q3 2009, the network carrier RASM premium over the value carriers declined from 15% to 7%.

Viewing the RASM and CASM changes together, we see that over the one-year period the network carriers performed significantly “less badly,” while the value carriers performed “somewhat better.” For network carriers, this meant that the negative margin between RASM and CASM narrowed from 14.5% to 7.3%. For value carriers, the RASM/CASM margin increased from breakeven to 2.7%.

Figure 2 shows the RASM/CASM margin for both groups over a nearly 20-year period. From the earlier discussion around Figure 1, we know that the RASM/CASM gap between network and value carriers narrowed significantly from Q3 2008 to Q3 2009. This narrowing, however, may not be a long-term phenomenon. Despite occasionally compressing near the peaks and valleys of the airline business cycle, the gap does not appear to be diminishing.

Figure 2. Historical RASM/CASM gap for all Network and Value carriers, 1991–Q3 2009
(Excluding regional affiliates)

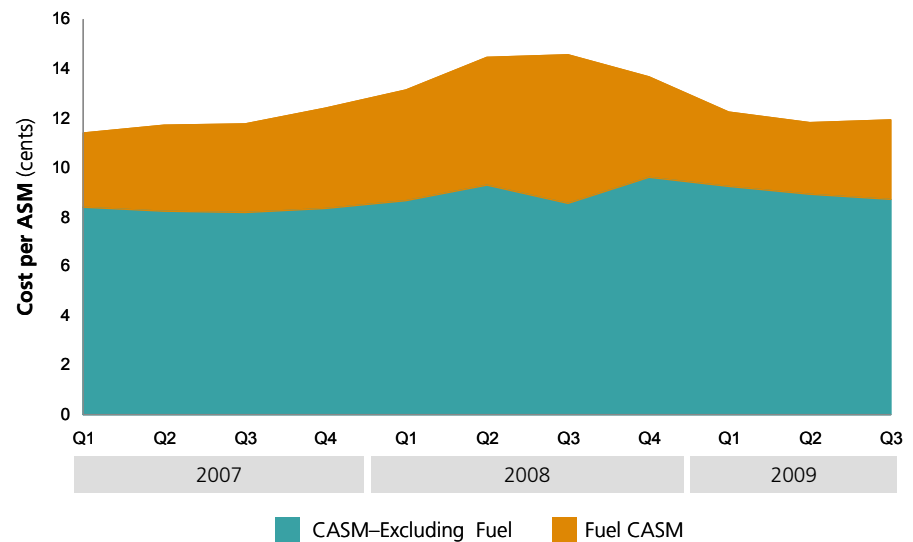


Note: Carrier set differs from the 12 carriers in our study—for each year of the series, it includes all value and network carriers reporting under DOT Form 41.

3. Value versus Network Carrier CASM Comparison, Excluding Fuel

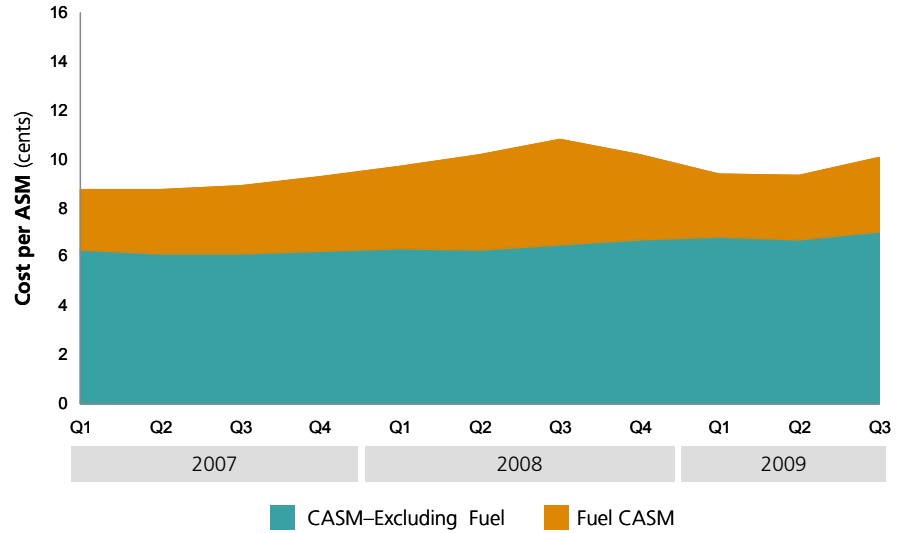
Given the volatility of fuel prices over the past several years, it is important to look more closely at CASM changes excluding fuel for the two carrier groups. Figure 3 shows network carrier CASM with and without fuel since Q1 2007. CASM ex-fuel for the network carriers increased 1.4% from Q3 2008 to Q3 2009 and has been declining since a slight peak in Q4 2008. For the longer period from Q1 2007 to Q3 2009, the average network carrier CASM ex-fuel increased by less than 4% from 8.4¢ to 8.7¢.

Figure 3. Quarterly CASM and fuel CASM growth—sample Network carriers
(Excluding regional affiliates)



For the value carriers, the corresponding CASM information is shown in Figure 4. CASM ex-fuel for the value carriers has increased by 7.8% from Q3 2008 to Q3 2009. This increase accounts for a portion of the RASM/CASM gap reduction between network and value carriers. For the longer period from Q1 2007 to Q3 2009, the average value carrier CASM ex-fuel increased by 12% from 6.3¢ to 7.0¢.

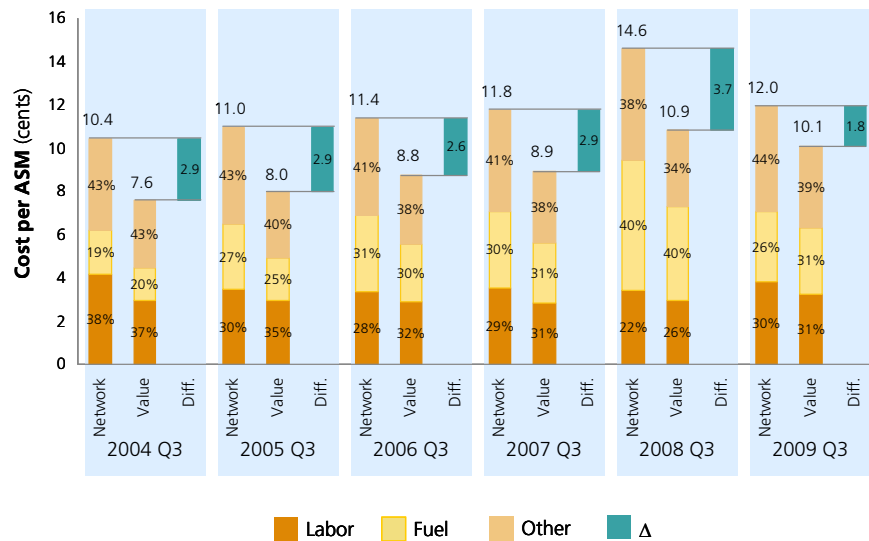
Figure 4. Quarterly CASM and fuel CASM growth—sample Value carriers
(Excluding regional affiliates)



4. Long-term CASM Trends

Figure 5 shows the CASM differential between network and value carriers broken into labor, fuel, and other for the 3rd quarter of each year from 2003 through 2009.

Figure 5. Comparison of CASM between Network and Value carriers over time



*Frontier not included in 2008 and 2009 results; Allegiant and Spirit not included in results prior to 2008. Neither omission materially changes results.

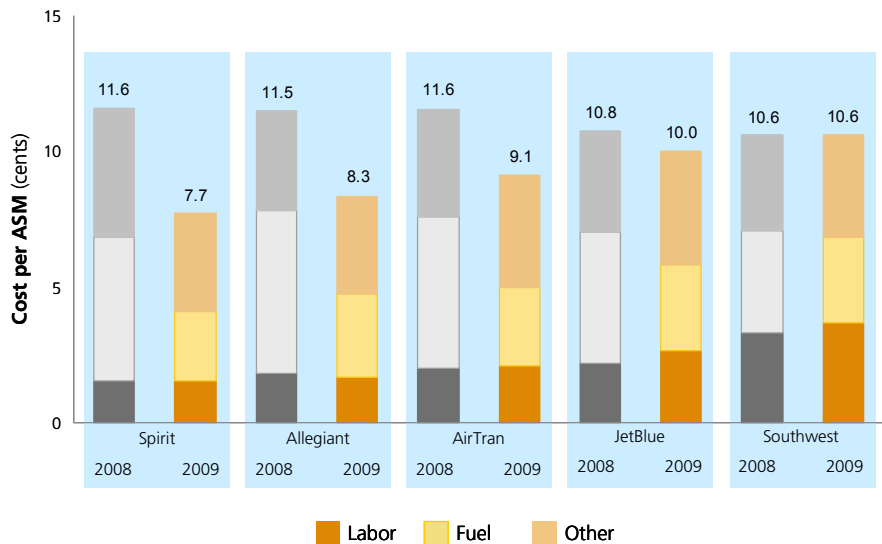
Over the six-year period, the value carrier CASM has averaged approximately 24% lower than that of the network carriers. As a percentage, the cost gap has remained within a range of 22-27% during five of the six measurement periods (Q3 of each year), except for the most recent year when the cost gap declined to 16%. In other words, the network/value cost gap narrowed considerably over the period Q3 2008/2009.

5. Individual Carrier CASMs and Recent Changes

Individual carrier results show significant CASM differences between carriers, especially within the value carrier group. *Figure 6* shows the CASM for each value carrier in our sample for Q3 2009 compared with Q3 2008. Of particular interest is the lack of change in Southwest's CASM over the period due in large part to the loss of its fuel hedge benefit. Southwest's large size means that its results unfavorably impact the average value carrier result. At the other extreme, Spirit's CASM declined fully by one-third over the period.

As measured by Q3 2009 CASM, Spirit ranks first with a CASM of 7.7¢, followed by Allegiant with a CASM of 8.3¢, AirTran with a CASM of 9.1¢, JetBlue with a CASM of 10.0¢, and Southwest with a CASM of 10.6¢. Note that Southwest's position in the value carrier rankings in Q3 2009 is the reverse of its position in Q2 2008, when it had the lowest CASM. However, these are not stage-length adjusted CASMs, and that adjustment will change the rankings.

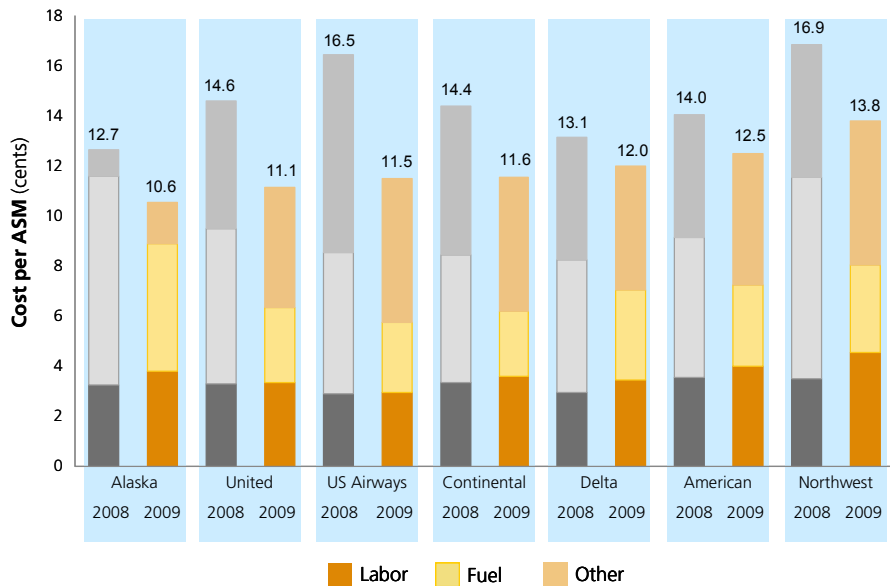
Figure 6. Q3 2009/2008 CASM breakdown by airline—Value carriers
(Excluding regional affiliates)



Note: Allegiant 2008 Form 41 Data not available. Cost data derived from SEC 10Q report.

Most of the network carriers have substantially reduced their CASM since Q3 2008. According to the Form 41 data, for example, United, which reduced its CASM by 24 percent by lowering its aircraft ownership and fuel costs, now has the second lowest CASM for its domestic operation among the network carriers. CASM reductions by the other network carriers range from 8% for Delta (not combined with Northwest) to 30% for US Airways. Figure 7 shows the CASM for each network airline in our sample for the third quarter of 2009 compared with the third quarter of 2008.

Figure 7. Q3 2009/2008 CASM breakdown by airline—Network carriers
(Excluding regional affiliates)

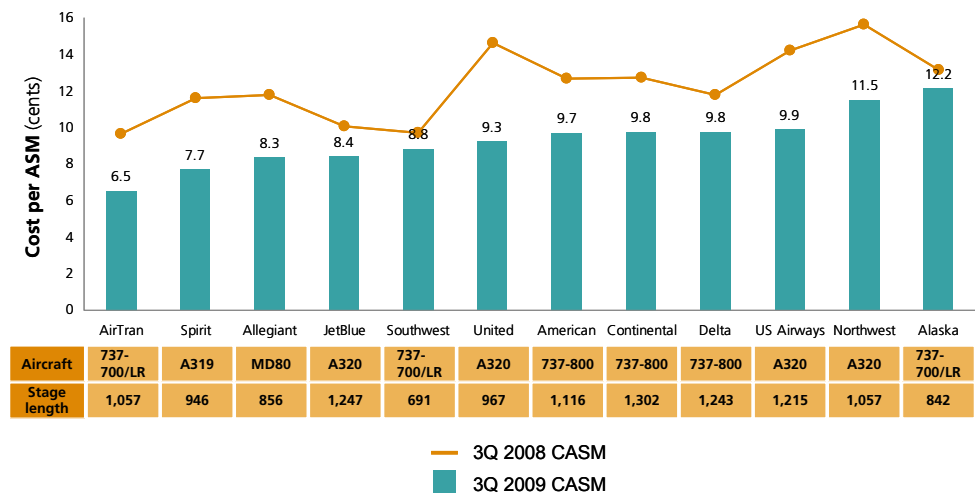


6. Comparing CASM for Similar Aircraft Operated by Different Airlines

As the focus of this report is value carriers, we selected an aircraft roughly comparable to Southwest’s most efficient aircraft, the 737-700, for CASM analysis among different carriers. For carriers that operate several aircraft types similar to the 737-700, we chose the one closest in capacity to, but larger than, Southwest’s. For example, United brackets Southwest’s 137-seat 737-700s with 120-seat A319s and 147-seat A320s. We chose the A320.

In Figure 8, we set out the average stage-length for each of our airline/aircraft combinations and their CASM at that stage-length. Remember, these are costs for specific aircraft types and not for the carriers’ total operations. A glance at the table shows that AirTran’s 737-700 has the lowest unit costs, 23% lower than JetBlue’s A320 despite JetBlue’s longer stage-length. The chart also highlights the decline in CASM since Q3 2008 for many carriers, with United having declined the most and Southwest and JetBlue the least.

Figure 8. CASM per airlines for selected aircraft type at actual average stage-length Q3 2009 and Q3 2008
(Excluding regional affiliates)



7. Adjusting for Stage-length

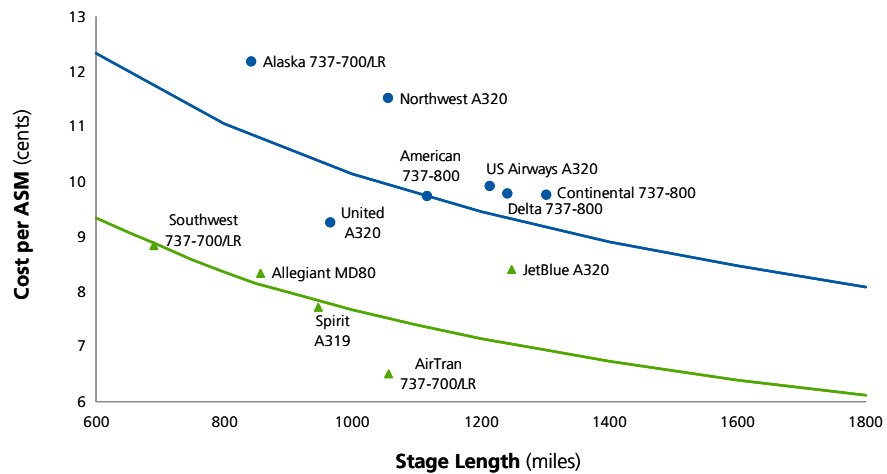
Since length of flight strongly affects unit costs—the longer the flight, the lower the unit costs—it makes little sense to compare unit costs without relating them to average stage-length.

As shown in Figure 9, Southwest has the highest CASM among value carriers operating comparable aircraft, but it also has a significantly shorter average stage-length (691 miles) than any of the other carriers. AirTran’s average 737-700 stage-length is 53% longer than Southwest’s, while JetBlue’s is 80% longer.

To help visualize the cost and stage-length differences among the carriers, in Figure 9 we have plotted unit costs (Y axis) on a chart against average stage-length (X axis) for our group of carrier/aircraft combinations. To facilitate comparisons, we show a distance-related cost curve for Southwest, and another one for American. By visualizing additional curves drawn above and below the Southwest and American curves, it is apparent that Southwest’s CASM turns out to be very much in line with Allegiant’s and Spirit’s. AirTran has lower costs, while JetBlue and the network carriers have much higher costs. It is also apparent

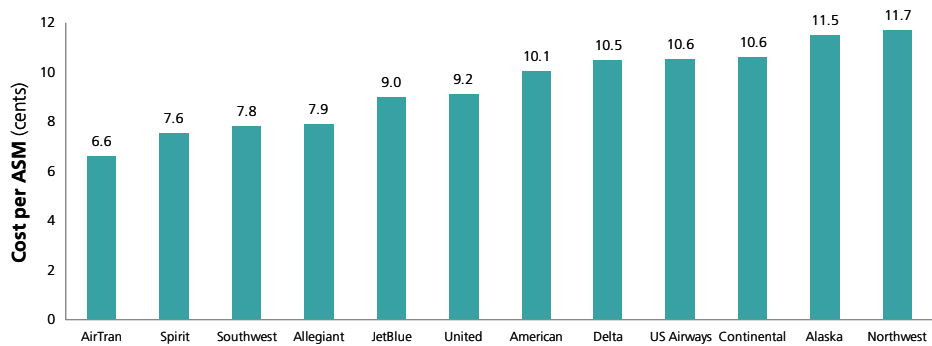
that the value carriers, with the exception of JetBlue, generally operate these narrowbody aircraft at shorter average stage-lengths than the network carriers. Turning to the network carriers, all have higher CASM than the value airlines when adjusted for stage-length, except United which falls below the other network carriers and on the same cost curve as JetBlue.

Figure 9. CASM per airlines for selected aircraft type plotted against average stage-length
Q3 2009



Using an accepted stage-length adjustment method, we recomputed the 2009 Q3 CASM for each carrier operating the comparable aircraft based on a standardized stage-length of 1,000 miles. Figure 10 shows the results, which are useful in understanding which carrier runs a more efficient operation.

Figure 10. Q3 2009 CASM at 1,000-mile stage-length for selected aircraft



As you can see in *Figure 10*, AirTran (6.6¢/ASM) is the low-cost leader at stage-lengths of 1,000 miles. Spirit (7.6¢) is in second place, closely followed by Southwest (7.8¢) and Allegiant (7.9¢). JetBlue (9.0¢) has the highest CASM of the value carriers, 36% higher than AirTran and only 2 percent below United. The carrier with the highest CASM is Northwest at 11.7¢, which is 77% higher than AirTran. Other network carriers American, Delta, US Airways, and Continental are in line with each other and have CASM differentials of no more than 5%.

Although the full cost benefits of the Delta/Northwest merger will not be realized for quite some time, we can check on progress based on Q3 2009 data. For that period, Delta's stage-length adjusted CASM of 10.5¢ is 35% higher than Southwest (and also 59% higher than AirTran). Therefore, even assuming that the combined carrier is able to reduce the separately reported Northwest A320 CASM of 11.7¢ (50% higher than Southwest), a large cost gap remains between Delta's CASM and Southwest when the two carriers are viewed on an apples-to-apples basis.

8. Fuel Prices and Costs

Since the peak in July 2008 of approximately \$3.80 per gallon, fuel prices have fallen dramatically. Figure 11 shows the decline in average fuel prices for our carrier/aircraft combinations between Q3 2008 and Q3 2009. The declines range from 47-59% for most carriers except for: Southwest, which experienced the smallest decline in fuel prices of 17%; Delta, which experienced a 33% decline; and JetBlue, which experienced a 40% decline.

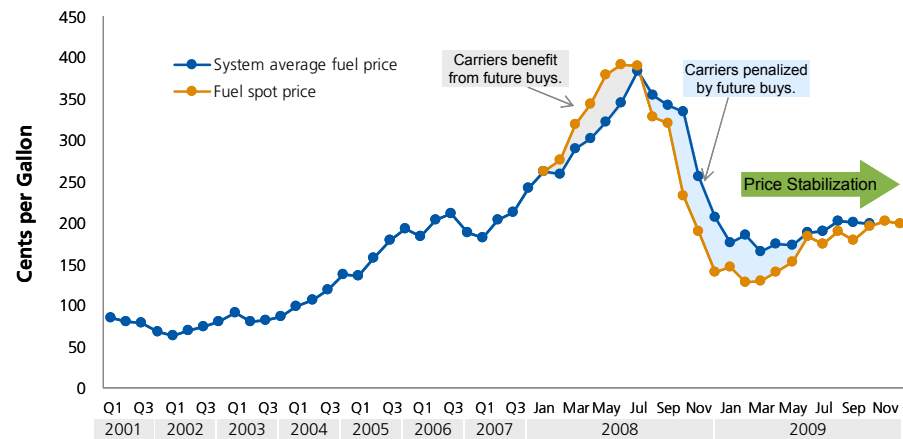
Last year, we observed that it was unlikely that Southwest, or any other carrier, could sustain a substantial advantage in fuel cost over the long term. The table shows that the year-over-year fuel price decline for each of our carriers. Southwest's fuel cost declined by only 17 percent, the least of any carrier listed. As a result, Southwest's historic fuel cost advantage has been completely eliminated. In Q3 2008, for example, Southwest enjoyed a fuel cost advantage of \$1.04 per gallon over AirTran, while in Q3 2009, AirTran has a fuel cost advantage of \$.21 over Southwest.

Figure 11. Average fuel price per gallon
Q3 2009 vs. Q3 2008 & Q3 2007

Airline	Aircraft	Q3 2007	Q3 2008	Q3 2009	Increase 2009 over 2008
Delta	737-800	\$2.26	\$3.50	\$2.34	-33%
Southwest	737-700/LR	\$1.70	\$2.61	\$2.16	-17%
JetBlue	A320	\$2.13	\$3.42	\$2.07	-40%
United	A320	\$2.19	\$4.19	\$2.03	-51%
Spirit	A319	\$2.19	\$4.02	\$1.98	-51%
AirTran	737-700/LR	\$2.14	\$3.65	\$1.95	-47%
Northwest	A320	\$2.10	\$4.69	\$1.94	-59%
Continental	737-800	\$2.13	\$3.67	\$1.89	-49%
Alaska	737-800	\$2.20	\$3.71	\$1.88	-49%
Allegiant	MD80	\$2.32	\$3.44	\$1.87	-46%
US Airways	A320	\$2.17	\$3.63	\$1.80	-51%
American	737-800	\$2.12	\$3.46	\$1.79	-48%

Apart from the dramatic decline in fuel prices, one other important change from last year is the drop in fuel price volatility. As depicted in the following figure, the system average fuel price has been reasonably flat for the past seven months, and as a result, the spot price is now tracking the system average price.

Figure 12. System average fuel price (U.S. carriers) and fuel spot price
January 2001 through December 2009



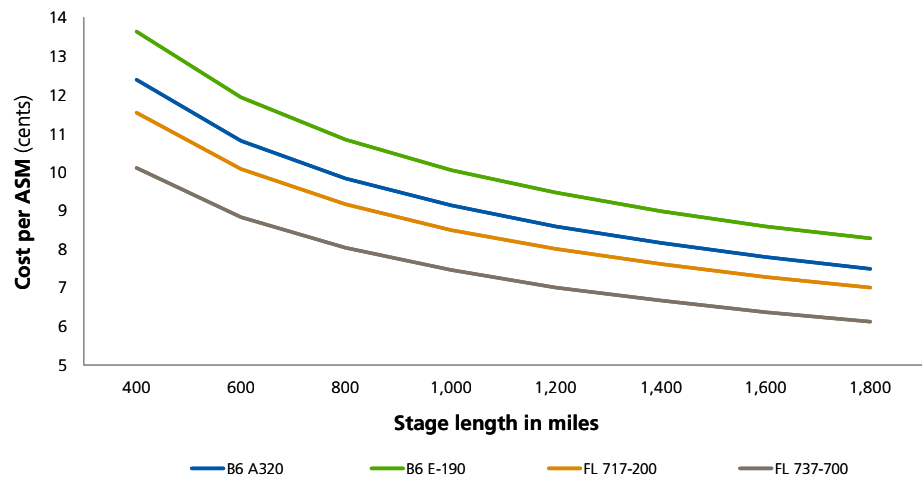
Source: Air Transport Association.

9. CASMs for Smaller Aircraft

In our airline sample, numerous carriers operate smaller aircraft. Two value carriers in our sample, AirTran and JetBlue, buck the conventional wisdom for value carriers and operate two different narrowbody aircraft. Figure 13 illustrates how the smaller aircraft compare in efficiency with the larger aircraft.

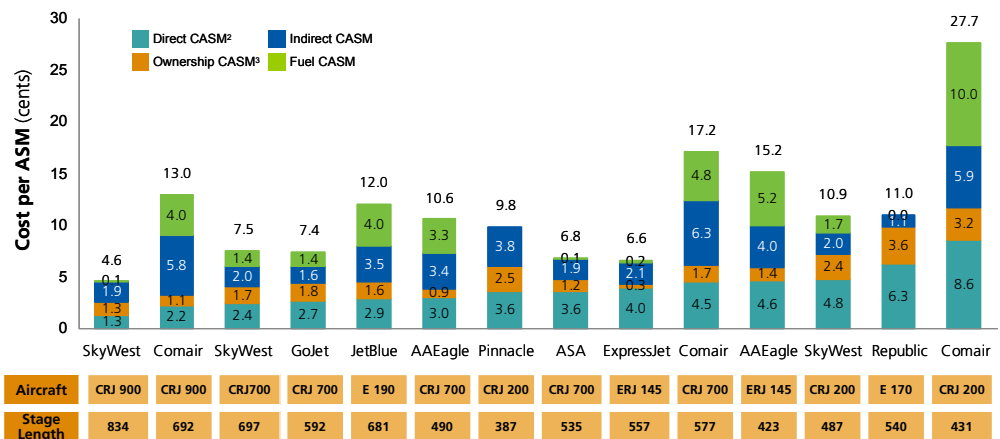
AirTran’s 737-700 is the champion of our overall study and of this comparison with the lowest unit costs; its smaller 717 has the second lowest costs. JetBlue’s much larger 150-seat A320 ranks third on a unit basis. Last year, JetBlue’s A320 costs just about matched AirTran’s 117-seat 717, but a gap has developed between the two. Not surprisingly, JetBlue’s E 190 has higher costs than the A320, given its smaller seat count.

Figure 13. CASM plotted against average stage-length by aircraft type, actual fuel prices Q3 2009



The smaller jets operated by the regional carriers, ranging in size from ERJ 135s to E 190s, sometimes complement and sometimes compete with other aircraft operated by network and value airlines. How do those aircraft compare in terms of unit costs? Figure 14 depicts the CASMs for specific aircraft operated by specific airlines.

Figure 14. Regional Carrier CASM plotted against average stage-length using actual fuel prices Q3 2009



¹ Fuel cost allocation may differ significantly between individual airlines based on contractual setup with parent company/network carrier

² Includes direct costs except Aircraft Ownership and Fuel & Oil costs

³ Includes Rent and Aircraft Depreciation & Amortization

Because regional carriers have different expense payment arrangements in their Capacity Purchase Agreements with their mainline partners, a more nuanced view of CASM is needed to compare performance. In *Figure 14* we have grouped the costs into four buckets: Indirect costs, Fuel, Aircraft Ownership, and Direct Costs (ex Fuel and Aircraft Ownership). The last bucket includes cost items which are universally paid by the regional airline and therefore represent the best measure of comparison. Using that measure, the low-cost champion is the Skywest CRJ 900 with a Direct CASM of 1.3¢ per ASM, while its competitor Comair reported a Direct CASM of 2.2¢ for the same aircraft (but shorter stage-length). JetBlue's slightly larger capacity E 190 has a Direct CASM of 2.9¢, 30% higher than the Comair aircraft. Notice also the range of Direct CASMs for the four operators of the CRJ700: Skywest 2.4¢, GoJet 2.7¢, AA Eagle 3.0¢, ASA 3.6¢ and Comair 4.5¢. Republic's similarly sized E 170 has a Direct CASM of 6.3¢, 40% higher than the highest-cost CRJ 700. For the smaller RJs (ERJ 145 and CRJ 200) the efficiency of the Embraer or Bombardier model depends on the operator. For the large RJs, the more spacious Embraer models have universally higher operating costs.

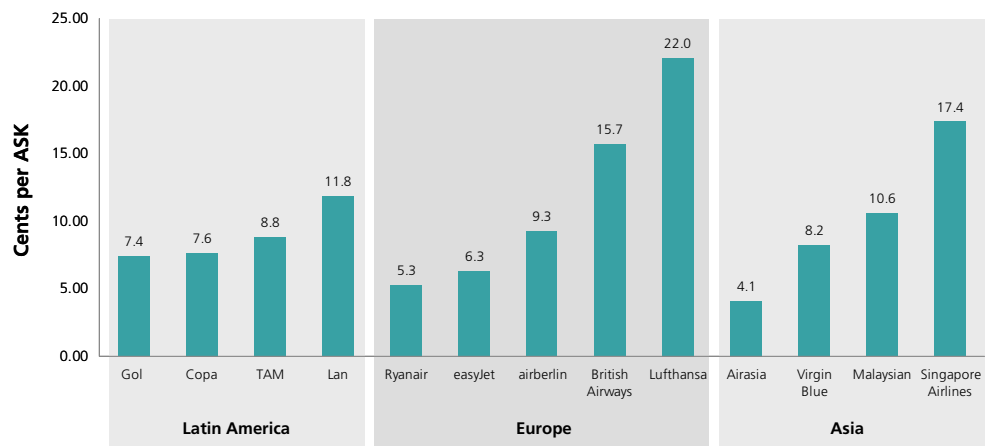
10. Europe, Asia, and South America Value Versus Network Carrier CASK Comparison

In *Figure 15*, CASKs (kilometers instead of miles) are provided on a stage-length adjusted basis for selected European, Asian, and South American carriers. Because of differences in time period (e.g., fiscal years that end on different months) and other factors, this CASK information is not directly comparable to that provided for U.S. carriers. The cost comparison (expressed in U.S. Dollars), however, is useful in showing the relative differences in CASK between the carriers, especially since the results have been stage-length adjusted. Full fiscal year 2008 data is used for all but two of the carriers listed because of data issues with other-than annual cost reports. The two exceptions are Ryanair and easyJet,

where we have used cost data for the six-month period ending March 31, 2009 to make the comparison as close to “apples-to-apples” as possible for these two competitors.

Despite the data limitations, we can see that the phenomenon of value carriers having lower unit costs than their network carrier rivals is global. CASM gap differences across regions reflect the same variability that we see with U.S. carriers.

Figure 15. International carriers stage-length adjusted cost per ASK FY 2007
Cents per ASK, stage-length adjusted to 1,069 km (1,000 miles)



Note: RyanAir and easyJet figures are from 10/1/2008 through 3/31/2009. Average exchange rates for this period: 1.31347 USD / Euro, 1.54958 USD / GBP.

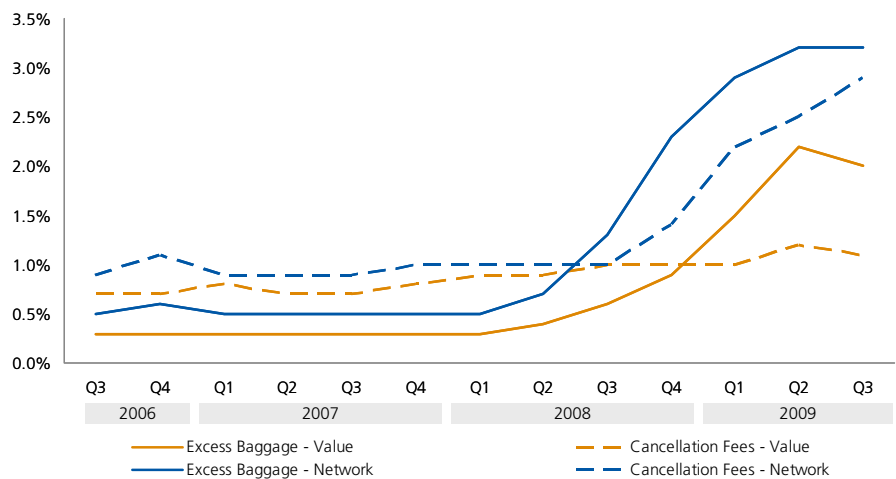
11. Baggage and Cancellation Fees

Over the past several years, airlines have captured increasing amounts of revenue for non-ticket charges such as baggage, buy-on-board meals, in-flight entertainment, reservations, and change fees; some of which are not included in DOT-reported average airfares or passenger RASM. Figure 16 focuses on two of these categories—baggage fees and cancellation fees—to show the dramatic growth in both categories as well as the basic differences in approach by the two carrier groups. Since Q3 2006, the much publicized increase in baggage fees by the network

carriers is evident. Value carriers waited longer to apply those fees, however, and with Southwest and JetBlue still not charging for the first checked bag, they are collecting less revenue on average.³

With regard to cancellation fees, the chart tells a different story as the network carriers have continued to increase this revenue source, while the value carriers have shunned it, viewing it as a key product differentiator. As both network and value carriers are putting more emphasis on creating and expanding their ancillary offerings, the non-ticket revenue category is likely to continue to grow.

Figure 16. Baggage and cancellation fees as a percentage of total operating revenue—Sample value and network carriers
(Excluding regional affiliates)



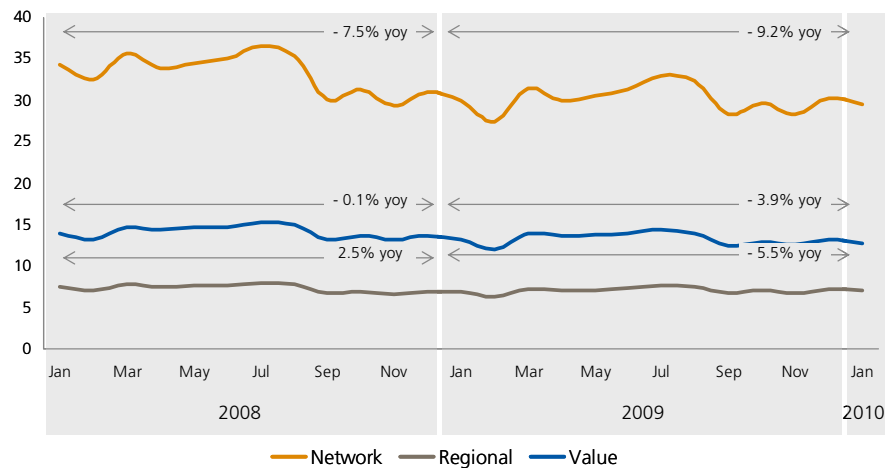
12. Changing Composition of the U.S. Market

During much of this decade, value carriers and regional carriers experienced strong growth. Even as network carriers reduced their mainline operations, regional carriers filled in. In last year’s report we noted that network carriers had reduced domestic capacity in 2008, while value and regional carriers kept their capacity flat or had a slight increase.

³ The increase in excess baggage fees from the value carriers is the result of a DOT directive issued in 1Q 2009 clarifying the categorization of fee revenue.

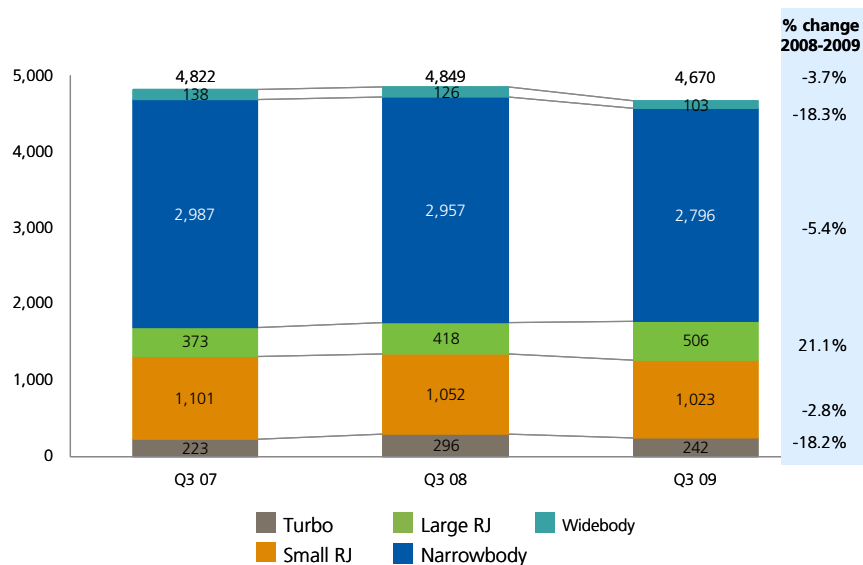
What has happened more recently? As shown in *Figure 17*, since January 2008 network carriers have continued to shrink domestic capacity, while regional airlines and value carriers have experienced more modest reductions. During 2009, domestic network mainline ASMs declined by 9.2 percent, regional ASMs by 5.5 percent, and value airline ASMs by 3.9 percent. Because value airlines reduced capacity less than the mainline carriers, they continued to gain capacity share even during these difficult times.

Figure 17. Change in scheduled domestic U.S. ASMs
Billions of seat miles



Another perspective on the changing composition of the U.S. market is provided by the changing size and mix of the active commercial airline fleet. *Figure 18* shows that the number of active aircraft used in domestic service shrank by 3.7 percent. The only aircraft category which grew between Q3 2008 and Q3 2009 is the large regional jet, with a 21.1% increase in units during the period. Looking back to Q3 2007, it is still the only category to show unit growth except for the turboprop category. The number of widebodies, narrowbodies, and small regional jets used in domestic service all declined.

Figure 18. Distribution of U.S. carriers' domestic aircraft service 2007–2009
Aircraft operated during period

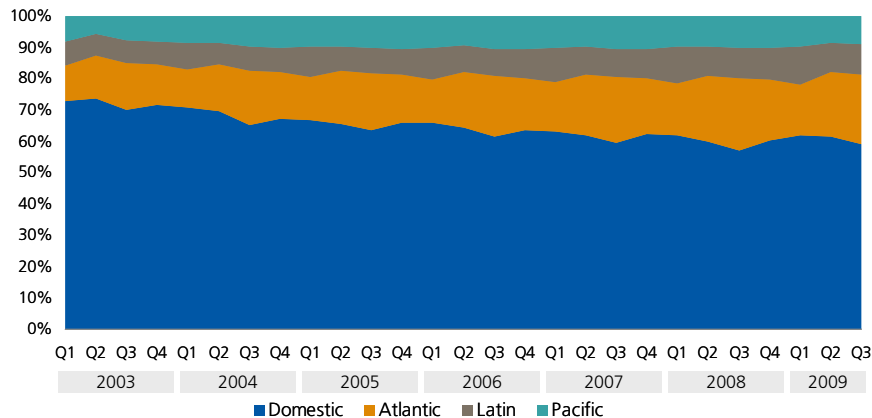


While Figure 17 shows a decline of 5.5% year-over-year in domestic ASM’s flown by regional jets, Figure 18 shows no decline in the overall number of regional jets, but a change in mix to a larger average gauge. This shows the changing needs of network carriers and hints at the stress being placed on regional carriers as they fly fewer seat miles per aircraft, thereby reducing utilization, which is an important profit driver in Capacity Purchase Agreements.

13. International versus Domestic Portion of U.S. Market

U.S. mainline carriers have continued to look overseas for revenue opportunities, with their domestic operations contributing less and less to their system revenue. As shown in Figure 19, the long-term network carrier shift towards international service is clear as the share of system revenue contributed by domestic operations dropped by 13 points, from 72% to 59% between 2003 and 2009. At this rate, U.S. network carriers will be generating more than half their revenue from international markets in less than 5 years.

Figure 19. Source of all network carrier revenue operating revenue, mainline only



With overseas markets, especially the Atlantic suffering from overcapacity and declining yields, network carriers have rediscovered the benefits of the domestic markets in the short term. But there is little reason to believe that this represents a real break from the longer-term trend in which network carriers continue to cede an increasing portion of the domestic market to the value airlines.

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For more information on this report, please contact:

Robert Hazel
Bob.hazel@oliverwyman.com
+1 703 773 3105

Aaron Taylor
aaron.taylor@oliverwyman.com
+1 631 745 6875

Andrew Watterson
andrew.watterson@oliverwyman.com
+1 214 758 1874

www.oliverwyman.com

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