



MHE-FTR-028

1259420477

REV: NOVEMBER 8, 2014

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Delta Air Lines, Inc.

ATLANTA, JUNE 17, 2014. A sea of Delta employees and their families swarmed between food trucks, amusement park booths, and entertainment venues that were scattered throughout what would normally be the large employee parking lot. The newly renovated Delta Flight Museum shone bright white in the Atlanta summer sun. The annual Delta block party had started. Roberto Ioriatti, Vice President of Delta's Atlantic & Pacific Pricing and Revenue Management unit, found himself staring at the museum with its hangar doors open wide to display prominently the "Spirit of Delta"—a Boeing 767 purchased by Delta employees in 1982. As he was admiring the sight of families circling the aircraft, Roberto was struck by the diversity of Delta's employees. It wasn't that he had never noticed before, but today was a special day for reflecting on how the company had grown. The block party also commemorated Delta's 85th anniversary, representing eighty-five years of growth and change.

In fact, the changing demographics at Delta were a microcosmic representation of shifts occurring in the U.S. population as a whole. The Millennial generation is gradually supplanting the Baby Boomers and other older generations, and with it the heterogeneity of the population is also increasing. Roberto recalled many articles that discussed the shape and change of the American demographic profile. A recent report from the Boston Consulting Group (BCG) described how Millennials were quickly becoming the core market in the U.S. travel industry.¹ Meanwhile, the U.S. Census Bureau projected that there would be no single majority ethnic group in the U.S. by 2043. *With this shift in demographics*, Roberto thought, *how would Delta's products and services have to change?*

Roberto Ioriatti remembered the Investor Day Presentation eight months earlier, in which Delta had promised to deliver "\$500–\$600 million in new product sales" by 2016.² With over \$2.3 billion in pre-tax income in 2013, Delta's financial position had given it a remarkable opportunity to grow in ways that its competitors simply couldn't match. It was Delta's current financial position that had Roberto considering ways to differentiate its services to reach more customers. Mr. Ioriatti was an eight-year veteran at Delta, and had joined the company from Alitalia. The breadth and depth of his corporate experience had taught him the intrinsic value of Delta's differentiation strategy as well as how crucial alliances and partnerships were to developing Delta's global products and services.

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History of Delta Air Lines, Inc.

From Crop-dusting to Mail and Passenger Services. Before Delta Air Lines existed, Huff-Daland Dusters was the world's first commercial agricultural flying company. They sprayed pesticides to control the boll weevil population in cotton fields over Macon, Georgia. In 1925, Huff-Daland Dusters moved its operations to Monroe, Louisiana. By then, they had created the world's largest privately owned fleet—18 aircraft—and provided aerial dusting service to Florida, Arkansas, California, and Mexico.

Mr. C.E. Woolman bought the Huff-Daland Dusters in 1928 and changed the name to Delta Air Service for the region it served, the Mississippi Delta.³ By the end of the 1920s, Delta had established passenger services to and from Jackson, Mississippi and Dallas, Texas. Flights were limited to one pilot and five passengers. Mr. Woolman insisted on strong customer service, a trait for which Delta is still recognized today. Delta started flying mail for the U.S. Postal Service in 1934, ferrying letters and packages from Fort Worth, Texas to Charleston, South Carolina for 24.8 cents per pound. It also resumed passenger service (which had been temporarily suspended in 1930), changing its name to Delta Air Lines.⁴ With the purchase of brand new Stinson Model A aircraft in 1935, Delta upgraded its flight capacity to carry seven passengers and two pilots. Delta acquired the new aircraft from American Airways (later American Airlines) for one-quarter of the price of a new plane—a tactic that continues to play out in Delta's fleet strategy today. Delta's history is summarized in **Exhibit 1**.

WWII. In the early 1940s, Delta relocated its headquarters to Atlanta and started utilizing even larger aircraft (Douglas DC-2 and DC-3). With the increase in airplane size, Delta added flight attendants to provide in-flight passenger services. From 1942 to 1944, Delta aided the war efforts by modifying over 1,000 aircraft for the military and training pilots and mechanics in the Army.⁵ Shortly after the war, Delta changed its official name to Delta Air Lines Inc. and named Mr. Woolman president and general manager.⁶ In 1945, the National Safety Council (NSC) recognized Delta for flying 300 million passenger miles over ten years of service without a single fatality. Soon thereafter, Delta started regular cargo service and also became the first airline to offer non-stop flights between Chicago and Miami. With a fleet capacity totaling 644 seats, Delta started its first coach service in 1949.⁷

Post-War Expansion. During the 1950s, Delta created the hub-and-spoke model in which passengers are routed through major hubs before connecting with flights to their final destinations. (Delta's modern hub-and-spoke model is visualized on the North American route map in **Exhibit 2**.) The company gained its first international flight with the acquisition of Chicago and Southern Air Lines in 1952. By the end of the decade, Delta became the first airline to utilize DC-8 jets in its fleet. The Delta widget—a red, white and blue triangle mimicking the swept wing of a jet—made its first appearance as part of Delta's aircraft livery as well.

Delta continued to expand its operations throughout the 1960s with non-stop routes and new destinations. Continued high growth in passenger volume made the company's manual reservation system increasingly difficult to handle. The advent of computing technology led to the development of the Semi-automated Business Research Environment reservation system (SABRE), which Delta adopted in 1962, greatly decreasing the costs and increasing the efficiency of the reservation process. Symbolic of Delta's changing focus, the company closed its crop-dusting operations in 1966, the same year that C.E. Woolman died and was succeeded by Charles Dolson as chief executive officer (CEO).⁸ By 1970, Delta's fleet consisted entirely of passenger airplanes, including the new Boeing 747. However, Delta diversified its offerings again one year later by adding Delta Dash, a small package cargo service. In 1975, the company added a high priority cargo service called Delta Air Express.⁹

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Industry Deregulation. President Jimmy Carter signed the Airline Deregulation Act in 1978, removing government control over commercial airlines' fares and routes and permitting the entry of new airlines into the market.¹ Up until this point, major airline carriers had been guaranteed to receive a 12 percent return on any flight filled at 55 percent capacity or higher. Access to routes was closely regulated, limiting service, and airlines had few incentives to offer discounts. The act was intended to increase competition and decrease ticket prices.¹⁰

Delta initiated its first frequent flyer program at the start of the 1980s, made possible by its computer reservation system (CRS). Unfortunately, the U.S. economy tanked in 1982, hitting all of the major airlines hard just as they were starting to adapt to their new regulatory environment. As a result, Delta reported its first financial loss ever. During the lull, Delta employees banded together and accepted \$30 million in payroll deductions to purchase the first Boeing 767, named the "The Spirit of Delta." This was the same aircraft that Mr. Ioriatti now gazed at thoughtfully, on display in the Delta Flight Museum at the Atlanta headquarters. As financial conditions improved, Delta resumed its expansion efforts, creating the Delta Connection program for its regional partner airlines, strengthening the spokes of its hub-and-spoke model, and opening its first routes to Asia in 1988.¹¹

Earnings dropped again at the start of the 1990s, but this did not deter Delta from expanding even further. The airline purchased several new gates, aircraft, and routes in 1991. Among those added to Delta's route portfolio were Canadian flights from Eastern Airlines, a New York-to-Boston flight run by Pan Am, and more European routes including a hub in Frankfurt, Germany. While the expansion made Delta a major international competitor, it was costly. Delta incurred such a severe loss that it had to prune multiple routes and 15,000 jobs between 1994 and 1997. Despite morale being at an all-time low, Delta had to continue its cost saving measures. Delta Express, a low-cost alternative with no in-flight meals or entertainment, was launched in 1996 and administered separately from mainline operations.

Partnerships proved to be a useful tool for competing in the post-deregulation era. Under a new CEO, Leo Mullin, Delta formed the first international cargo alliance with SwissCargo in 1997.¹² After Continental Airlines broke off takeover talks with Delta to join with Northwest Airlines, Delta retaliated by creating a joint frequent flyer program with United Airlines. In 2000, Delta, Air France, Aeromexico, and Korean Air founded the SkyTeam alliance in order to combat the other emerging global code-sharing groups, Oneworld and Star Alliance. **Exhibit 3** shows which carriers are currently in these three alliance networks.

Post 9/11. Terrorist attacks on September 11, 2001 led to the closing of U.S. airspace for two days and significantly affected air travel thereafter. Delta suffered its first financial loss since 1995¹³ and was forced to rationalize flights and reduce its workforce by 15 percent. Low-cost carriers (LCCs), however, thrived in the aftermath of 9/11. Delta fought back against the low-cost threat from companies like Southwest and JetBlue by launching its own budget service, called Song, in 2003, only to merge it back into its mainline operations three years later. At the same time, Delta continued to innovate by offering a new passenger check-in model, redesigning its lobbies, and expanding the number of kiosks.¹⁴ The federal government approved the largest code-sharing agreement between domestic carriers (Delta, Continental Airlines and Northwest Airlines) in 2003.^{15, 16}

Before the 1978 Deregulation Act, airline bankruptcy was unheard of for interstate carriers because of the regulatory protection provided by the Civil Aeronautics Board (CAB). In fact, the CAB often joined failing carriers with survivors in an effort to maintain routes and assets. However, since deregulation, the air travel industry has been highly competitive with many new entrants and very low

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margins on fares, leading to almost 200 airline Chapter 7 and 11¹ bankruptcy filings by 2013. **Exhibit 4** shows industry dynamics over time during periods of regulation, deregulation, and consolidation.

Not even some of the largest carriers could weather the combined effects of worldwide economic recessions, rising fuel costs, and the 9/11 terrorist attacks.¹⁷ Delta filed for Chapter 11 bankruptcy in September 2005.¹⁸ As a drastic measure, Delta sold Atlantic Southeast Airlines, which it had purchased in March 1999.¹⁹ Ultimately, a \$2 billion financing deal from its creditors helped Delta to emerge from bankruptcy and continue operations. The road back to profitability was a long journey, but Delta's pilots shortened the trip by agreeing to several changes in their benefits and compensation packages, saving the company \$280 million annually. Seeing Delta in a weakened state, US Airways made a bid to cover Delta's debt (about \$8 billion in cash and stocks) and to acquire the company; the offer was rejected by the Delta Board of Directors. A few months later, US Airways increased its offer to \$10 billion but was still unsuccessful in swaying the board. In April 2007, Delta re-emerged from bankruptcy with Richard Anderson, former CEO of Northwest Airlines, as the new CEO. In April 2008, Delta initiated its largest, most profitable acquisition to date, purchasing Northwest Airlines. Delta had to negotiate with unionized pilots and persuade antitrust regulators in order to complete the acquisition. Consolidation and integration of the two companies continued through 2010. In the end, Delta paid \$2.8 billion to become the airline with the highest traffic in the world.²⁰

Delta Air Lines Today

CUSTOMER EXPERIENCE

Since 2010, Delta has re-invested \$2 billion to upgrade its airport facilities and the aircraft within its mainline fleet. For example, by 2015, the Business Elite sections of all long-haul aircraft will be equipped with lie-flat seating. Overall, Delta boasts more first-class seating, in-flight entertainment options, access to power sources, and inflight Wi-Fi access than any of its domestic competitors. **Exhibit 5** shows Delta's recent key financial data.

STRUCTURE

Since its 2012 acquisition of the Trainer fuel refinery from ConocoPhillips for \$150 million, Delta has partitioned its operations into the airline and refinery businesses. The refinery unit is responsible for the supply of jet fuel and works with Delta's fuel partners, Phillips 66 and BP. The airline unit includes air transportation of passenger and cargo items as well as all maintenance, repair, and overhaul (MRO) activity. There are multiple strategic business units (SBUs) within the airline segment, including airport customer service, private jets, cargo, global services, technical operations, flight operations, inflight services, among others. More information is available on these different SBUs in **Exhibit 6**.²¹

MARKETS

Delta currently serves its passenger and cargo customers domestically and internationally through major hubs in Atlanta, Cincinnati, Detroit, Memphis, Minneapolis, New York, Salt Lake City, Amsterdam, Paris, and Tokyo. Delta's Atlanta hub alone boarded 13 million passengers per month during calendar year 2013.²² Regional connecting flights radiate from these central locations, filling in the spokes of Delta's hub-and-spoke network strategy.

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Delta has created joint ventures, alliances, and marketing agreements to fill in the remaining gaps in its geographical coverage. Delta's marketing alliance with Alaska Airlines extends its reach on the west coast of the U.S. The company also has plans to expand its presence in Seattle and use that location as a major gateway to the growing Asian market.²³ In a move to solidify its access to the lucrative New York to London route, Delta bought a 49 percent stake in Virgin Atlantic from Singapore Airlines in 2012. The joint venture deal meant access to 24 percent of the seats leaving Heathrow for the US.²⁴ Similarly, Delta's joint ventures with Air France-KLM and Alitalia provide entry into other transatlantic routes without needing to put physical assets in place. Alliances with Aeromexico and GOL, a Brazilian LCC, extend Delta's reach to southern markets. Overarching all of these agreements is Delta's membership in the vast SkyTeam alliance, which allows it to offer flights to over 900 destinations in over 170 countries in North America, Europe, India, Africa, the Middle East, and Latin America.²⁵

LEADERSHIP

Richard Anderson, the current CEO of Delta Air Lines, has more than twenty-five years of experience in the aviation industry. Mr. Anderson started at Continental Airlines in 1987 and then moved on to Northwest Airlines in 1990, spending fourteen years in various roles including three as CEO (2001–2004). Since joining Delta in 2007 (following a brief stint with United Health Group), he has focused on reducing corporate debt, strengthening revenues, and monitoring new cost control mechanisms. Under his leadership, Delta found itself at the top of Fortune's Most Admired airlines list in 2011 and 2013 because of its rankings in people management, quality management, innovation, long-term investment, social responsibility, quality of products and services, and global competitiveness. He has fostered several important international relationships, such as the Air France-KLM and Alitalia partnerships and the Virgin Atlantic Airways joint venture.²⁶

Edward Bastian is the president and also serves on the Board of Directors for Delta, Aeromexico, and GOL. He actively oversees the growth of Delta Cargo, TechOps, Delta Private Jets, and DGS (Delta Global Services); he was also heavily involved in the acquisition of Northwest Airlines and the Trainer refinery. All of these initiatives are part of the company's strategic focus on reducing debt and enhancing the Delta experience, as a means of decreasing Delta's vulnerability to economic cycles. Prior to assuming the duties of president, Mr. Bastian served as executive vice president, chief financial officer, and chief restructuring officer during the Chapter 11 bankruptcy.²⁷

Delta's executive vice president and chief operating officer, Steve Gorman, is responsible for the safety and reliability of Delta's operations around the world. Mr. Gorman is credited with making significant improvements in Delta's operational reliability, which has led to high rankings for on-time flights, baggage handling, flight completions, and low customer complaints. He has also had a significant impact on the growth and success of Delta TechOps MRO services. As chair of Delta's Diversity Council, Mr. Gorman works to develop talent and diversify leadership within the company. Before joining Delta in 2007, Mr. Gorman served as CEO of Greyhound Lines, Inc., president of Krispy Kreme, and executive vice president of flight operations and technical operations at Northwest Airlines.²⁸

PERFORMANCE

For the past five years, Delta has operated in the black with revenues exceeding \$1 billion in 2012, and reaching \$2.5 billion before an income tax benefit of \$8 billion in 2013. Additionally, firm operating revenue rose from \$36.7 billion in 2012 to \$37.8 billion in 2013.²⁹

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The Air Travel Industry

SHAREHOLDER VALUE DESTRUCTION

Historically, airlines have teetered between periods of profitability and bankruptcy—with the outcome highly dependent on the health of the economy. Major problems include the fierce, price-dominated rivalry among competitors, price sensitivity of customers with a diminishing need to travel, and clout of suppliers. The primary economics (perishable commodity product, volatile demand, and the slow nature of capacity changes) put pressure on prices such that airlines tend to match price with marginal cost and ramp up capacity to meet prospective demand.³⁰ It is only in recent years that airlines have begun to demonstrate consistent profitability.

BUSINESS MODELS: HUB-AND-SPOKE VERSUS POINT-TO-POINT

LCCs (Southwest, JetBlue, Virgin Atlantic, and Alaska Airlines) compete with traditional or “legacy” carriers (Delta, United, and American Airlines) for passengers and profits. The legacy carriers, which offer many more routes than LCCs, utilize a hub-and-spoke business model allowing them to efficiently service a vast selection of routes and destinations. Passengers are routed through major hubs before connecting with flights to their final destinations. For example, anyone flying from Seattle, Washington to Miami, Florida would be routed through Delta’s main hub in Atlanta, Georgia. In contrast, LCCs use a point-to-point network of heavily trafficked city-pairs that minimizes cost while sacrificing the variety of destinations served. Baggage transfers and coordination with other airlines is unnecessary with the point-to-point system, which helps keep costs down.

LCCs also save money by using a limited number of jetliner models. For instance, Southwest and JetBlue exclusively use 737s and A320s, respectively. As a result, they have lower expenses than legacy carriers for maintenance and training. JetBlue further reduces costs by carrying more passengers per flight over longer distances. **Exhibit 7** shows how strategic groups for traditional carriers and LCCs have formed according to prices charged and routes serviced. **Exhibit 8** shows detailed revenue, cost, and profit data for U.S. domestic airlines over time.

Traditional carriers have higher cost structures which leave them especially vulnerable during periods of recession and high fuel prices. Their main advantage lies in the international market where there are a limited number of competitors and profits are protected by governmental restrictions. For example, so-called cabotage rules prohibit foreign airlines from one country traveling into another country and picking up passengers and providing transportation between points within that foreign country.³¹

In addition, higher barriers to entry in the hub-and-spoke system reduce some of the competition for traditional carriers while LCCs face a higher threat of new entry from start-ups. Also, hub-and-spoke airlines face diminished buyer power by airline customers in the global market because of their protection from foreign competition. Point-to-point networks face a far greater threat of substitutes because of their regional nature and the availability of alternate modes of travel (car, train, or bus). Power exerted by suppliers on LCCs tends to be higher because of their small size and a resulting lack of bargaining power. Rivalry within the point-to-point strategic group is likely more intense than in the hub-and-spoke group.

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RE-CONSOLIDATION

The U.S. commercial airline industry started out under strict government regulation. During this era, airline profits were protected by legislation that controlled airfares and routes. The federal government also directed airlines that performed poorly to merge with airlines that did well. Government-led consolidation of the airlines focused control over the airways in the hands of a few major carriers.

Once Congress passed the Airlines Deregulation Act of 1978, new airlines rapidly entered the market. Competition increased sharply as a result of deregulation, causing a dramatic decrease in pricing power accompanied by a rapid rise in the number of airline bankruptcies. As time progressed, airlines started to re-consolidate in an effort to create larger networks and regain pricing power. In the last decade, North American carriers have seen a number of significant mergers including Delta and Northwest (2010), Southwest and AirTran (2011), United and Continental (2012), and American Airlines and US Airways (2013), as shown in **Exhibit 9**.

The wave of consolidation in the airline industry has enabled traditional carriers to manage their capacity and streamline their operations, resulting in a more cost efficient structure. Other peripheral effects have been significant improvements in arrival and departures delays (17 percent and 8 percent decrease, respectively), flight cancellations (26 percent decrease), and baggage mishandling (31 percent decrease).³² The number of mergers and acquisitions and bankruptcies during periods of regulation, deregulation, and consolidation, respectively, are plotted in **Exhibit 4**.

The most recent merger between American Airlines and US Airways was contested by the Department of Justice because of worries over anti-competition. American Airlines and US Airways were required to sell thirty-four slots at LaGuardia Airport and eighty-six at Reagan National for \$381 million.³³ By order of the Department of Justice, these slots could only be offered to Low Cost Carriers (LCCs), in order to keep the oligopoly of traditional carriers in check. LCC growth has outpaced that of traditional network carriers and now accounts for 30 percent of domestic traffic. Counting by domestic passengers boarded, Southwest is now the largest domestic carrier.

COST CONTROL

Meanwhile, a series of exogenous shocks including terrorist hijackings (9/11), increasing fuel prices, and a deep global recession have further challenged the air travel industry in recent years. Because of the resulting volatility in demand, airlines have focused on controlling their costs through various means such as changing their fleet make-up to include more fuel-efficient aircraft, rationalizing their network of routes, and decreasing overall operating expenses.

Fuels costs account for 30–40 percent of an airline's operating expenses. Because air carriers' profits are highly sensitive to the fluctuating prices of jet fuel, they invest in fuel hedging strategies. One approach utilizes financial instruments, such as call and put options, to mitigate the risk of fuel price volatility. For instance, if an airline buys a call option on fuel while the price of fuel increases, the airline offsets the market price of fuel with the return on the call. However, if a company buys a fuel swap and the price declines, it ends up paying greater than the market price. Air carriers collectively lost millions of dollars in fuel hedging due to the rapid drop in jet fuel prices associated with the global recession in 2008 and 2009.

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Taking a different approach, Delta backward integrated into fuel production and supply by purchasing the Trainer refinery in Pennsylvania from ConocoPhillips for \$150 million in 2012. The facility is expected to provide significant fuel hedging capabilities for Delta's operations. "According to Richard Anderson, Delta's CEO, "Acquiring the Trainer refinery is an innovative approach to managing our largest expense... This modest investment, the equivalent of the list price of a new widebody² aircraft, will allow Delta to reduce its fuel expense by \$300 million annually and ensure jet fuel availability in the Northeast.³⁴

REVENUE MANAGEMENT

Airlines have developed sophisticated quantitative pricing analytics and revenue management tools to increase revenues amidst harsh industry conditions. One approach is to draw upon vast customer information databases to derive dynamic price structures based on how early a purchase is made before the travel date and the type of seat being purchased. Another successful pricing strategy is the unbundling of services previously included as part of the ticket price. Customers must now pay extra to have access to such amenities as checked baggage, in-flight meals, preferred seating, priority boarding, special facilities in airports, and automatic upgrades. Delta realized a 40 percent growth in revenue (\$635 million) in 2013, in large part due to the income generated from these ancillary fees.³⁵ Meanwhile, the real, inflation-adjusted ticket price⁴ for air travel, shown in **Exhibit 10**, has actually decreased from approximately \$450 to \$250 since 1978. The nominal (or sticker) price has increased from approximately \$200 to \$350 over the same period. **Exhibit 11** shows the current cost breakdown of the average U.S. domestic flight.

Revenue management techniques rely partially on overbooking as a means to maximize revenue, by carefully balancing the expected cost of no-shows and flying empty seats with the expected cost of compensating overbooked passengers who are denied boarding. The more information that is available to these systems, the more robust are the resulting pricing segmentation and revenue maximization algorithms. For this reason, the collection of consumer information and prediction of behavior has become highly valuable to airlines.

PROJECTED GROWTH

The Federal Aviation Administration (FAA)³ forecasts that total passengers using air travel will grow at an average of 2.2 percent over the next 20 years. Overall global system capacity, measured in available seat-miles (ASMs), is expected to grow by 2.7 percent annually until 2034, while the domestic market is expected to grow at 2.1 percent over the same period. The FAA also projects that the overall size of domestic aircraft will increase as airlines continue to replace smaller regional jets with larger aircraft. Airlines are also expected to run longer routes as a means of decreasing operating costs.

Products and Services

According to Delta's Investor Day presentation in 2013, "The customer experience has a different value for each customer and by tailoring our approach for different customers, we can improve overall satisfaction and increase our revenues."³⁶ This comment alludes to the unbundling of services in order

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to offer a cheaper base fare to compete with LCCs, while generating additional profit from fees for ancillary services. **Exhibit 12** reports Delta's \$5.2 billion in ancillary revenue broken down by baggage fees and service charges, SkyMiles, cargo, and other products and services.³⁷

BOOKING

Booking is the first opportunity airlines have to interact with their customers, whether it is through an online or traditional travel agency, mobile application, the airline's webpage, or at a kiosk in the airport. Differentiation in booking amongst the major carriers has been stunted because of online travel agencies (OTAs) and booking sites that eliminate information asymmetry. Since the advent of the Internet, travelers have many tools and a great deal of power to search for low-cost tickets. This trend also drives the unbundling of services because it has become critical to show an airline's base airfare at the top of the list when customers use price comparison search engines such as Expedia, Kayak, or Priceline.

CHECK-IN

Passenger check-in is the airline's next point of contact with travelers. Self check-in kiosks, mobile check-in, and self-drop baggage machines are all recent innovations used to differentiate a traveler's experience through additional convenience. Online check-in was first introduced by Alaska Airlines but was quickly adopted by other carriers; it also paved the way for mobile check-in as mobile smartphones became ubiquitous. Self check-in kiosks and self-drop baggage terminals are now standard at nearly all U.S. airports, eliminating the need to wait in line to talk with an airline representative. These services appeal to the frequent business traveler, who maintains a strict travel schedule and relies on a mobile device for productivity.

BAGGAGE FEES

Baggage fees were initially instituted by the airlines as a means to manage mishandled baggage rates and the costs associated with recovery. Now charged by nearly all airlines, baggage fees challenge customers' frivolous use of free checked bags by causing more price-conscious consumers to bring a carry-on only. Waiving of baggage fees has become a loyalty tool for airlines; for example, Delta offers additional free bags through their American Express credit card loyalty program. On the one hand, baggage fees tend to reduce total airplane loading weight, which enhances fuel efficiency. On the other hand, passengers now bring oversized carry-on bags on board to avoid fees, causing delays when all the overhead bin space is taken up and carry-on bags have to be gate checked.

MOBILE BAGGAGE TRACKING

With the proliferation of mobile devices, airlines have started to offer mobile baggage tracking as an additional service. Passengers of most airlines can now track the progress of their checked baggage from origination, to the aircraft, and across connections until it reaches the baggage carousel. For years, air travel passengers feared parting with their luggage because of the high mishandled baggage rate across the industry. With the mobile bag tracking applications, consumers can now monitor their luggage from the point of departure to their ultimate destination.

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AIRPORT FACILITIES

Delta and its major competitors have invested in special club lounges at many airports around the world. These restricted-access facilities are designed to give travelers a respite during layovers, and to provide a range of amenities including refreshments, full bars, entertainment, workstations, showers, and concierge-type services. Middle Eastern carriers have developed even more lavish services than their North American counterparts. For example, Emirates provides first- and business-class passengers access to cigar bars, a separate duty-free store, and direct boarding from the lounge to the upper deck business- and first-class cabins.³⁸

In addition, many carriers are working with TSA and airports to create an expedited security process for frequent fliers. The TSA Precheck process is one example of the effort to make travel more convenient. TSA Precheck allows passengers who voluntarily undergo a more thorough background check (at their own expense) to walk through an expedited security line. While the airlines are not directly involved in the precheck process, they realize the benefits to their business and support the efforts of the TSA accordingly.

BOARDING/DEPLANING

The mobile smartphone has created opportunities for differentiation in the boarding process. The emergence of electronic boarding passes, remote seat selection, mobile upgrade purchase options, and many other innovations have created a new level of convenience for passengers as well as additional avenues for incremental revenue. Many air carriers offer priority boarding as a perk to their frequent flyer programs and even allow customers to purchase priority upgrades on a per trip basis.

AIRCRAFT CABIN

Airlines and aircraft manufacturers have worked together over the years to design optimal cabin layouts to balance passenger comfort, airline marketing, and cost efficiency. One result of this process has been the extra legroom marketing by major carriers, such as Delta's Economy Comfort offering. Airbus, seeing a new opportunity with the pressure on airline profits and passenger willingness-to-pay, is trying to sell a new design to airlines. By shrinking the widths of its A320s window and middle seats by 2 inches, they can create wider (20 inch) aisle seats. Airbus claims that everyone wins; not only does the passenger in the wider seat experience greater comfort, but the middle-seat passenger is happier with the increased shoulder room, and the window-seat passenger doesn't mind because he or she ends up slumping against the wall. Airbus further pleads its case with Center for Disease Control statistics, which show that a third of Americans are obese and could benefit from an aircraft in which 33 percent of seats are wider.³⁹

Some airlines (Singapore Airlines' budget carrier Scoot, AirAsia X, and Malaysia Air System) have considered "child-free" zones as a point of differentiation. Frequent travelers know the unpleasantness of traveling trapped in a cabin with a fussy infant—or worse, with several fussy infants who cry in chorus. Etihad Airways, a Middle Eastern carrier, actually hires "flying nannies" to handle children during a flight. A British financial services comparison website survey found that its respondents would be willing to pay \$78 for a child-free experience.⁴⁰

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INFLIGHT SERVICES

Typical in-flight services include meals, beverages, and entertainment. However, other carriers have sought more innovative ways to differentiate themselves. For example, Emirates offers an open bar and lounge atmosphere for their first-class passengers who like to mingle. Virgin Atlantic has employed comedians to entertain guests during a flight. In addition, many carriers are remodeling their fleet to offer wireless Internet connectivity in the cabin, particularly for business travelers who wish to continue working during a flight.

FREQUENT FLYER REWARDS

The goal of frequent flyer programs is to retain and increase traveler loyalty through various incentives. For example, SkyMiles are awarded for travel using Delta or any other participating airline. These miles may be redeemed for free travel, upgrades, access to Sky Club lounges and other perks. Miles may also be accrued by using the Delta American Express card at participating companies in every-day shopping. The SkyMiles program saw over 271 billion miles accrued in 2013, with 11 million awards redeemed.⁴¹ A change to the SkyMiles program in early 2014 caused a buzz in the media. Rewards for frequent flights became based on amount paid for travel as opposed to the number of miles flown. This news was great for business travelers but unappealing to deal-seekers. The change in reward system brought Delta more in line with Southwest and JetBlue as well as with hotels and credit cards, which have rewarded based on expenditures for years.⁴²

DESTINATION OFFERINGS

Many airlines have teamed up to form alliances (shown in **Exhibit 3**) and other cooperative agreements in order to offer travelers more seamless global travel. The financial obligations between partnering airlines increase with the level of coordination they share. Interlining, the voluntary agreement between individual companies to handle passengers traveling on itineraries that require two or more airlines, represents the minimal level of cooperation. Airlines may also offer joint frequent flyer rewards or share lounge access and various other benefits. Codesharing is the practice of sharing route listings and marketing them to passengers under one's own airline designator and flight number. Even though airlines do not cooperate on the prices for these routes, there is downward pricing pressure because of the increased passenger volume flying codeshare routes.

Competition

The airline industry is characterized by a high degree of competition among the major carriers over the routes, fares, schedules, facilities, products, customer services, and frequent flyer programs. Ongoing investments in the customer experience are leading to increasing dimensions of differentiation and even fiercer levels of competition.⁴³ Beyond product offerings, airlines went through an era of international and domestic consolidation. Stronger financial resources, larger global networks, and new cost structures have resulted in new business models. Moreover, extensive investment in the customer experience means new dimensions of differentiation and fiercer levels of competition.⁴⁴ Newfound confidence in airline performance in light of these trends is reflected in the stock prices of traditional carriers as shown in **Exhibit 13**.

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AMERICAN AIRLINES (AMR CORPORATION)

American Airlines' \$11 billion merger with US Airways—announced in February 2013—was finalized on December 9, 2013, creating the largest airline in the world. Doug Parker, CEO of US Airways, assumed control of the new company. The combined airline has primary hubs in Charlotte, Chicago, Dallas/Fort Worth, Los Angeles, Miami, New York City, Philadelphia, Phoenix, and Washington, D.C., and will operate in 54 countries while servicing 339 destinations using 965 mainline jets.⁴⁵

Prior to this deal, American Airlines had been restructuring under Chapter 11 rules since declaring bankruptcy in November 2011. American Airlines' costs for labor, fuel, fleet, and facilities were much greater than the rest of the industry and had driven the company into financial duress. A year before the merger, American Airlines had eliminated the pilot union's contract and brokered concession from other unions; it had also charged \$2.2 billion to the reorganization process. By joining with US Airways, American Airlines hopes to create considerable cost savings and to expedite the restructuring process. One remaining obstacle will be figuring out how the unionized portions of US Airways will cooperate with the consolidated entity.

Going forward, American Airlines plans to grow its market share by 20 percent at major hubs in Chicago, Dallas/Fort Worth, Los Angeles, Miami, and New York. Operational improvements have come partially through a large fleet upgrade.⁴⁶

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With hubs in Chicago, Houston, Los Angeles, New York, San Francisco, and Washington D.C., United Airlines has a fleet of over 600 aircraft that deliver mainline passengers (69 percent of sales), regional passengers (18 percent), cargo (3 percent), and other items (10 percent). The parent company experienced generous growth through 2010 and 2011, but sales held steady at \$37 billion in 2012. In addition, United's cargo business dropped 13 percent in 2012 as a result of reduced demand and excess capacity across the air transport industry.

Much like American Airlines, United is upgrading the fuel efficiency of its fleet with the purchase of new aircraft from Airbus and Boeing. In fact, United was the first to incorporate the Boeing 787 Dreamliner in its fleet as a replacement for older, widebody aircraft.⁴⁷ However, the Dreamliner has been plagued by electrical and other problems, leading to a number of emergency landings and ongoing investigations by the FAA and National Transportation Safety Board (NTSB).⁴⁸

SOUTHWEST AIRLINES CO.

Southwest operates routes to ninety-six destinations in forty-one U.S. states, Puerto Rico, Mexico, Jamaica, The Bahamas, Aruba, and the Dominican Republic. The acquisition of AirTran in 2011 for \$3.2 billion was a key component of its growth strategy. As AirTran is merged with its core operations, Southwest will add new aircraft and facilities to its business. Additionally, Southwest was able to purchase access to twelve new gate slots at LaGuardia as a result of the merger between American Airlines and US Airways and the resulting anti-competition agreement with the U.S. Department of Justice.

Contributing to Southwest's success as an LCC are the short distances traveled, fast airplane turnaround times, the limited variety of aircraft (Boeing 737s) operated, and utilization of smaller airports

Delta Air Lines, Inc.

to avoid congestion and high gate fees. Even as Southwest modernizes its fleet for enhanced fuel efficiency, it is sticking with only Boeing 737s, particularly the 737-800 and newer 737 Max models.

In 2013, Southwest realized \$754 million in profits from \$17.7 billion in revenue. The three consecutive years between 2009 and 2011 saw significant growth from \$10.4 billion to \$15.7 billion in revenue.⁴⁹ Southwest has resisted the industry-wide practice of baggage fees, although they have instituted fixed service fees for bringing a small pet or putting an unaccompanied minor onto a flight. More recently, Southwest encountered some pressures to adjust some of its business model as the LCC is adding more international destinations.⁵⁰

THE BIG THREE PERSIAN GULF CARRIERS: EMIRATES, ETIHAD AIRWAYS, AND QATAR AIRWAYS

Besides traditional competitors domestically and globally, however, Delta also faces the threat of aggressive new entrants from the big three Persian gulf airlines: Emirates, Etihad Airways, and Qatar Airways.⁵¹ Emirates started in 1985 and has experienced 25 years of profitability. Qatar Airways and Etihad Airways entered the market in 1997 and 2003, respectively. The three big Gulf airlines are owned by well-endowed governments in Qatar and the United Arab Emirates (U.A.E.).

The Persian Gulf carriers are geographically located such that 60 percent of the world population lives within six hours of their main hubs, which makes the operation of a global network all the more cost efficient. This strategic location has helped to make Dubai--Emirates' and Etihad Airways' main hub--the premier transit hub connecting the U.S. and Asia, replacing more traditional European hubs such as Amsterdam or Frankfurt, and Asian hubs such as Singapore. Indeed, Dubai has the most international traffic of any airport, ahead of London's Heathrow airport. Moreover, Dubai and Doha (Qatar's hub) are hypermodern airports that are reminiscent of luxury hotels with a swimming pool above the concourse for laps during layovers, plush lounges, high-speed Wi-Fi, and many other amenities.

With their brand-new fleet of long-range and fuel-efficient Boeing and Airbus aircraft, Gulf airlines are able to offer nonstop flights to more than 80 percent of the world's population.⁵² Each of the three companies has over 200 Boeing and Airbus aircraft on order for its fleet. Emirates, Etihad Airways, and Qatar Airways combined have locked up the future supply of long-range, wide-body aircraft, while Delta's and other U.S. carriers' fleets are aging. The Gulf carriers even received a financing deal from the U.S. Government for the purchase of Boeing aircraft as a means to stimulate the U.S. economy and to provide developmental aid. Delta, as well as other U.S. carriers, did not receive this special treatment. In the same timeframe as the Middle Eastern carrier purchased each more 600 new aircraft combined, Delta has ordered merely 40 new aircraft.

The three big Persian Gulf carriers have been quite successful and are expanding rapidly. In the last year alone, the three Gulf carriers, Emirates, Etihad Airways, and Qatar Airways have grown their flights to the U.S. by almost 50 percent, and are now serving 11 U.S. cities, including Chicago, Houston, Dallas, Los Angeles, Miami, New York, Philadelphia, San Francisco, and Washington DC.⁵³ Exhibit 14 shows the recent growth of major airlines including the Persian Gulf carriers and Delta, among others.

To break into the profit sanctuary of U.S. carriers on international routes, the Gulf airlines combine higher quality, offered at lower cost. The Gulf airlines offer amenities such as higher quality food in a more sophisticated presentation, hot towels in economy, an open bar in business class, and showers in

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first class. Their ratio of flight attendants to passengers is also great, and they offer flying nannies to keep kids occupied, happy, and most important, not crying. For an economy seat, ticket prices are often several hundred dollars below those of U.S. competitors.⁵⁴

The Gulf carriers' advantage is compounded by the growth of business in Asian and Middle Eastern markets, and by the increasing demand for international travel. These airlines are also owned by governments; as such they receive government funds with additional tax advantages and other subsidies. Other benefits include low cost labor markets, the absence of night-flying rules, lower airport fees than international competitors, and lower prices for fuel. Operating a purely global point-to-point network, the Middle Eastern carriers decrease their costs by flying more fuel-efficient widebody aircraft on long routes without the overhead of maintaining connecting routes within countries. The Persian Gulf airlines are also lauded for a superior customer experience.⁵⁵

There are some complaints by U.S. carriers that the Persian Gulf Airlines receive unfair subsidies (which the Gulf states see as strategic investments creating future industries away from oil and gas). The U.S. airlines, however, have also enjoyed longtime regulated markets, use of bankruptcy filings, and so forth. The Gulf carriers are likely to discount to further increase market share. As a consequence, competition will further increase, especially on international routes, and consumers will benefit with lower ticket prices and improved service.

COMPETITIVE RATINGS

The U.S. Department of Transportation collects survey scores on customer satisfaction for each U.S. airline to provide consumers with information about the quality of services offered. This Air Travel Consumer Report has six sections covering flight delays, mishandled baggage, oversales, and consumer complaints. The flight delays section provides information about on-time performance, delays, and cancellations. According to the March 2014 report, Hawaiian Airlines scored the highest in this category (92.8 percent) while Delta Air Lines scored seventh out of twelve with 70.2 percent. The mishandled baggage section reports the number of lost, damaged, delayed, or pilfered bags. In the lead for mishandled baggage was Virgin America with 1.20 reports per 1,000 passengers. Delta again came in seventh place, with 4.69 bags per 1,000 passengers. Oversales is a collection of statistics on the number of passengers who held confirmed tickets but were denied boarding because the airline had oversold those seats. JetBlue led in this category with one involuntary denied boarding for 6,831,371 passengers. Delta Air Lines placed sixth with 0.52 involuntary denied boardings per 10,000 passengers. Finally, the consumer complaints section compiles and categorizes all complaints filed against airlines through the Department of Transportation. Alaska Airlines led the group with 0.72 complaints per 100,000 enplanements while Delta was sixth with a score of 1.31. The DOT scores are tabulated in Exhibits 15-18.

J.D. Power & Associates monitors and scores various industries for quality performance. In 2013, Delta placed second following Alaska Airlines in the traditional carrier category (see Exhibit 19). Performance is measured on a 1,000-point scale and indicates the overall satisfaction of North American travelers with respect to cost and fees, in-flight services, boarding/deplaning/baggage, flight crew, aircraft, check-in, and reservations. LCCs have outperformed traditional carriers for many years but traditional carriers have made the largest improvements. Overall improvements were seen in all scoring dimensions with the biggest gains in boarding, deplaning, baggage handling, check-in, and aircraft interior. J.D. Powers has found that some airlines are better at using social media to serve their customers, whereas others are better at marketing through social media. Delta falls into the latter category.⁵⁶

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The full report from J.D. Powers provides feedback to airlines regarding their performance. One of its findings was that even while baggage fees have the largest negative impact on satisfaction scores in the cost and fees category, passengers have grown to accept them, especially as carriers find new ways to unbundle the cost of the entire air travel package. Another finding was that more and more passengers are checking-in to their flight online and through mobile devices, and that this process is contributing positively to airlines' ratings. The effect is even more pronounced for carriers who offer check-in through a mobile application. The advent of self check-in kiosks has also contributed positively to the passenger experience—even as it is lowering costs for airlines. New technologies that allow passengers to connect to the Internet via wireless networks on the aircraft even while flying at 35,000 feet have a similarly positive impact on satisfaction for in-flight services. It is important to note that the growing use of self-service options has not led to a decline in the impact of a personal touch in the service industry. Flight crews were rated higher than in previous years across the industry. Smiles continue to matter, especially as the number of human interactions becomes fewer and fewer.

Demographic Changes

The U.S. Census Bureau projections show that the U.S. population will be considerably older and more racially and ethnically diverse by 2060. The changing demographics of the U.S. population have implications for airlines and the travel industry as a whole, as they shape how consumers respond to marketing practices, loyalty programs, distribution channels, and amenities. The BCG has divided airline travelers into five distinct segments: Sky-Warrior, Self-Employed Pathfinder, Average Joe/Jane Businessperson, Rising Global Go-Getter, and Cost-Cautious Planner (see **Exhibit 20**).

With respect to gender, businesswomen make up 42 percent of travelers but comprise only 33 percent of airline spending. On average, they spend 11 percent less on their tickets. Businesswomen make business trips an average of 4.3 times per year, but travel internationally less frequently compared to men.

GENERATIONAL (AGE) DEMOGRAPHICS

The BCG Perspectives report also breaks consumers into four age-related demographics (see **Exhibit 21**): Baby Boomers, Generation X, Millennials, and iGeneration (iGen). Millennials are expected to be the dominant traveling generation in the next five to ten years, with Baby Boomers' total spending on air travel declining. In about ten years, the air travel spending of iGen is expected to rise rapidly.⁵⁷

Baby Boomers. The Baby Boomer generation, born post-WWII between the years 1946 and 1964, has been the largest segment of Americans for the past decade. Eleven percent of this generation plans to delay retirement because of setbacks from the 2008 economic recession. Because of their maturity, Baby Boomers comprise a large portion of senior managers and executives and interact with the younger generations from a position of professional authority. As of 2013, there were 80 million Boomers (44 percent of the U.S. population) who accounted for 70 percent of disposable income in the U.S. Over a third had a child younger than 18 years old in their house. Eighty-two percent of this generation uses the Internet regularly to instant message, download media, conduct banking transactions, and play online games. They make up one-third of TV viewers, online users, and social media users. **Exhibit 22** shows the various channels through which Boomers receive media.⁵⁸

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Generation X. Gen Xers were born between 1965 and 1979 and have the most education of all the current generations. Roughly 50 percent of them have at least a two-year college degree while a tenth hold graduate degrees. A majority of Gen-X households have two working spouses. Work for this generation is secondary to personal life, leading to a willingness to give up salary for more personal freedom. This group reached its peak spending power during the Great Recession and has been burdened thereafter with flipped mortgages, student loans, and raising children. Generation X is not fashion forward, brand loyal, or technophilic, though it is the first generation to accept both traditional and digital media. There is also a very high penetration (95 percent) of mobile phones with 60 percent of those being smartphones. Generation X is much smaller in number than either the Baby Boomers or the Millennials.⁵⁹

Millennials. The Millennial generation was born between 1980 and 2000 and tends to have a broader world interest than Gen Xers. This may be partially due to the diversity of this group; Millennials comprise two times the number of Asian Americans and 60 percent more Hispanic Americans. This generation also has almost 50 percent more women in the workforce than prior cohorts. Millennials have not yet become the focal demographic for the travel industry, but as they enter their peak earning in the next 5 to 10 years they will become a lucrative market segment.

Currently, Millennials are traveling during the developmental stage of their career; thus, their travels tend to be to conferences, workshops, and recruiting events. This generation also has a strong tendency to use OTAs, especially through mobile devices. Despite traveling less frequently, Millennials have a much higher willingness to spend money on ancillary benefits such as extra legroom, in-flight entertainment, refundable tickets, and bonus frequent flier miles. They also tend to book closer to the departure date and make changes to their flights more frequently than non-Millennials. The Millennial business traveler is expected to account for more than 50 percent of total travel revenue by 2020.

Millennial leisure travelers tend not to fly alone. They bring their families, and many times their friends, or they travel as organized groups on vacation trips. Millennial women take more trips than male Millennials, accounting for 35 percent of travelers and 35 percent of travel spending. Millennial men, meanwhile, take more solitary leisure trips. Deal-seeking has become a game for members of this generation. Seventy-five percent of them have travel apps on their phones, compared to 47 percent for other generations. Also, nearly a quarter of Millennial travelers would pay more to fly on a "child-free" plane, whereas only 18 percent of their Gen-X counterparts would pay for "child-free" upgrades.

iGeneration. The iGeneration is the youngest and possibly the most heterogeneous generation in the U.S. There is still much to observe about this group as it matures into an economy-driving demographic. They have been named the iGeneration for their thirst for mobile technology, such as the iPhone, iPod, iTunes, etc. The iGeneration has grown up with the Internet and ubiquitous connectivity.⁶⁰

FOREIGN-BORN AMERICAN DEMOGRAPHIC TRENDS

U.S. Census information shows a diminishing white majority population which is being supplanted by growing Hispanic and African American populations. The non-Hispanic white population is expected to peak in 2024 at nearly 21 million before decreasing in subsequent years, whereas other racial and ethnic groups are not expected to decline. By 2043, there will be no single majority racial group in the U.S. By 2060, the U.S. population is expected to be 8.2 percent Asian, 15 percent African

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American, 31 percent Hispanic, and 43 percent white, with a total population count surpassing 420 million. Also, the Census Bureau projects the working population to grow by 42 million by 2060.⁶¹

The growing Latin American population in the U.S. consists largely of immigrants from Mexico. Collectively, El Salvador, the Dominican Republic, Guatemala, Jamaica, Colombia, and Haiti are the next most significant source of foreign-born Latinos. Each of these populations has a significant presence in major southern cities such as Los Angeles, Miami, Houston, and Dallas, as well as in the major international hubs such as Chicago, New York City, and Washington, D.C. Delta's total market share of flights from the U.S. to Latin America is only 14 percent, compared to 33 percent and 19 percent for American Airlines and United, respectively.

Asians are the next most significant source of growth when it comes to foreign-born individuals, as Asians tend to settle in Los Angeles, New York, San Francisco Bay Area, Seattle, Chicago, Atlanta, Boston, and Washington, D.C. They hail from places such as China, the Philippines, India, Vietnam, Korea, Taiwan, Japan, Hong Kong, and Thailand, with no one country significantly more represented than the others. Delta's market share in the nine primary Asian countries is 9 percent, United's share is 16 percent, and American Airlines holds 5 percent. SkyTeam trails behind the Star Alliance by 11 percent for service to the Asian market.

URBANIZATION

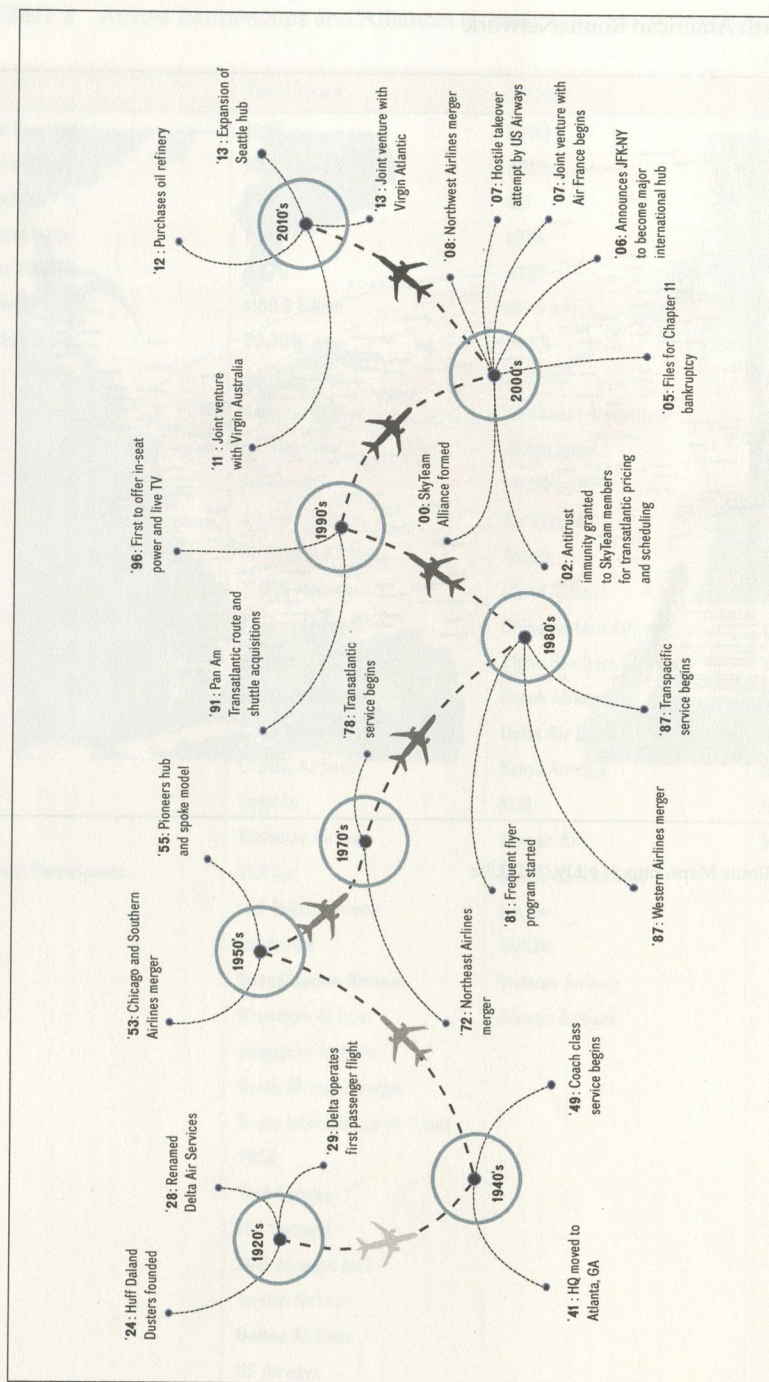
Within the U.S., a reverse migration from the rural and suburban areas to the cities has begun. Census Bureau data indicate that several major metropolitan statistical areas⁴ are growing rapidly. The highest growth between 2010 and 2012 was in Austin, Texas, growing at a rate of 7 percent. Other major metropolitan areas such as Charleston, Raleigh, San Antonio, Houston, Savannah, and Dallas grew by more than 4 percent over the same period.

Decision Time

Roberto could see the writing on the wall. The country's demographic profile was due for a major shake-up and Delta's strategy had to evolve to meet the needs of these new consumer groups. More important, he saw the looming demographic shift as an opportunity to offer new products and services to create a new source of competitive advantage within the domestic market. He had only a few short weeks to prepare a presentation that would be delivered to Richard Anderson and other Delta executives, in which he had to propose exactly which new products and services Delta should offer. Was there also a way for him to position Delta to meet the emerging global carrier threat head on? Roberto went to work that evening after the Delta block party had died down.

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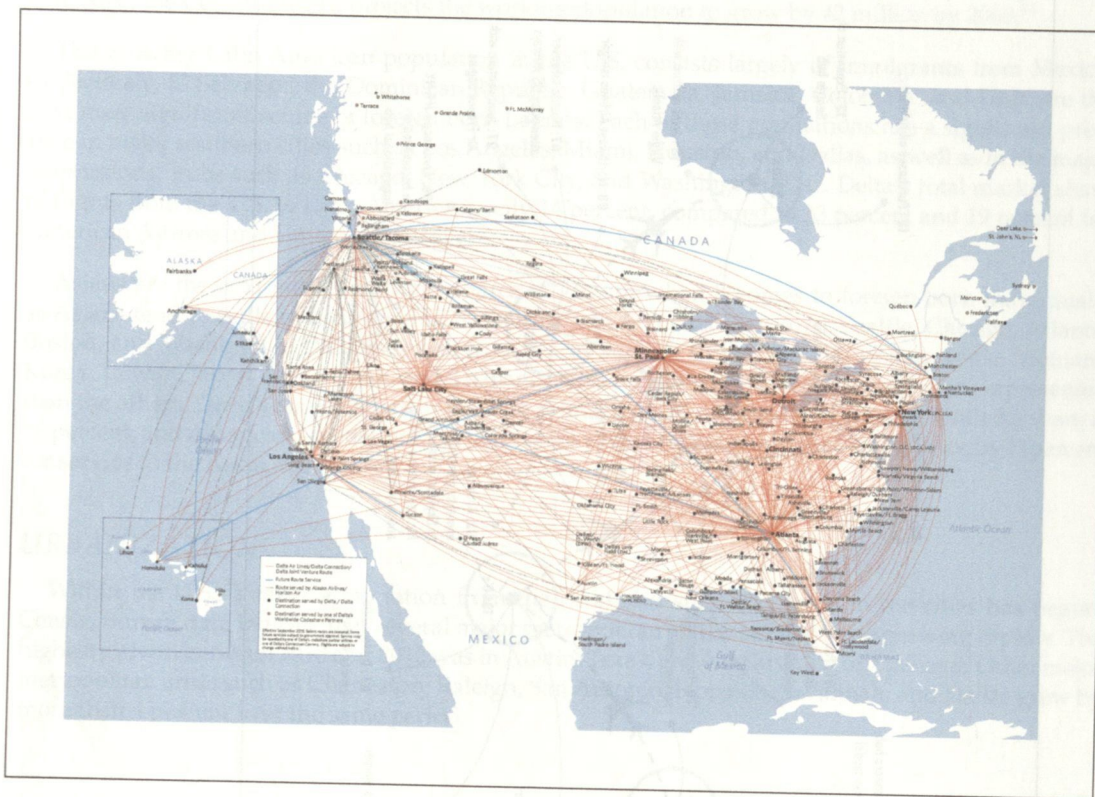
EXHIBIT 1 Delta Air Lines Timeline of Major Events



Source: Authors' depiction of publicly available information.

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EXHIBIT 2 Delta's North American Route Network



Source: Delta Downloadable Route Maps. <http://bit.ly/1gIKUbe>

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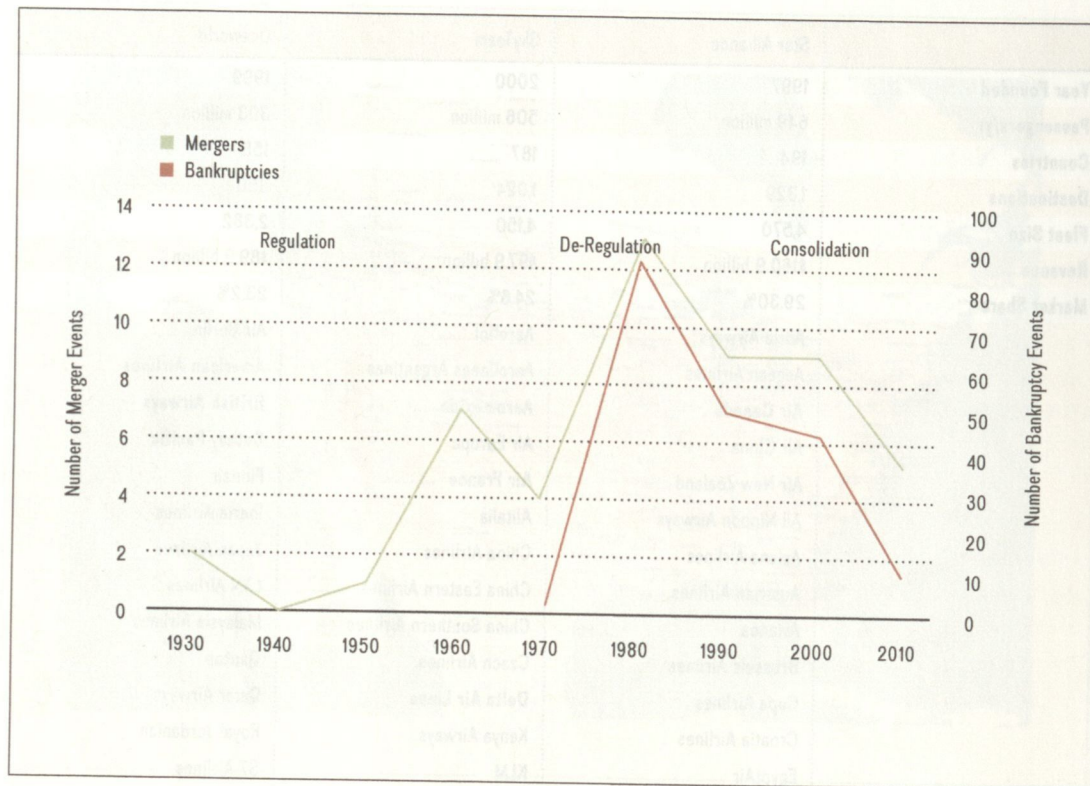
EXHIBIT 3 Airline Partnerships and Alliances (founding members are in bold)

	Star Alliance	SkyTeam	Oneworld
Year Founded	1997	2000	1999
Passengers/yr	649 million	506 million	303 million
Countries	194	187	155
Destinations	1,329	1,024	850
Fleet Size	4,570	4,150	2,382
Revenue	\$160.9 billion	\$97.9 billion	\$89.9 billion
Market Share	29.30%	24.6%	23.2%
Current Participants	Adria Airways	Aeroflot	Air Berlin
	Aegean Airlines	Aerolíneas Argentinas	American Airlines
	Air Canada	Aeroméxico	British Airways
	Air China	Air Europa	Cathay Pacific
	Air New Zealand	Air France	Finnair
	All Nippon Airways	Alitalia	Iberia Airlines
	Asiana Airlines	China Airlines	Japan Airlines
	Austrian Airlines	China Eastern Airlines	LAN Airlines
	Avianca	China Southern Airlines	Malaysia Airlines
	Brussels Airlines	Czech Airlines	Qantas
	Copa Airlines	Delta Air Lines	Qatar Airways
	Croatia Airlines	Kenya Airways	Royal Jordanian
	EgyptAir	KLM	S7 Airlines
	Ethiopian Airlines	Korean Air	Mexicana
	EVA Air	Middle East Airlines	
	LOT Polish Airlines	Saudia	
	Lufthansa	TAROM	
	Scandinavian Airlines	Vietnam Airlines	
	Shenzhen Airlines	Xiamen Airlines	
	Singapore Airlines		
	South African Airways		
	Swiss International Air Lines		
	TACA		
	TAM Airlines		
	TAP Portugal		
	Thai Airways Int'l		
	Turkish Airlines		
	United Airlines		
	US Airways		

Source: staralliance.com, skyteam.com, oneworld.com

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EXHIBIT 4 Airline Industry Dynamics over Time, 1930–2010



Source: Authors' depiction of data from Airline for America (A4A), <http://bit.ly/1pQsvNm>

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EXHIBIT 5 Delta Air Lines' Financial Data (in \$ millions, except EPS data)

Fiscal Year	2009	2010	2011	2012	2013
Cash and short-term investments	5,101	4,019	3,920	3,749	3,925
Receivables (total)	1,360	1,456	1,563	1,693	1,609
Inventories (total)	327	318	367	1,023	1,063
Property, plant, and equipment	20,433	20,307	20,223	20,713	21,854
Depreciation and amortization	2,924	4,164	5,472	6,656	7,792
Assets (total)	43,539	43,188	43,499	44,550	52,252
Accounts payable (trade)	1,249	1,713	1,600	2,293	2,300
Long-term debt	15,665	13,179	11,847	11,082	9,795
Liabilities (total)	43,294	42,291	44,895	46,681	40,609
Stockholders' equity (total)	245	897	(1,396)	(2,131)	11,643
Sales (net)	28,063	31,755	35,115	36,670	37,773
Cost of goods sold	23,481	24,422	28,065	29,296	29,190
Selling, general, and administrative expense	2,963	3,145	3,310	3,182	3,123
Income taxes	(344)	15	(85)	16	(8,013)
Income before extraordinary items	(1,237)	593	854	1,009	10,540
Net income (loss)	(1,237)	593	854	1,009	10,540
Earnings per share (basic) excluding extraordinary items	(1.50)	0.71	1.02	1.20	12.41
Earnings per share (diluted) excluding extraordinary items	(1.50)	0.70	1.01	1.19	12.29

Source: S&P Capital IQ Compustat.

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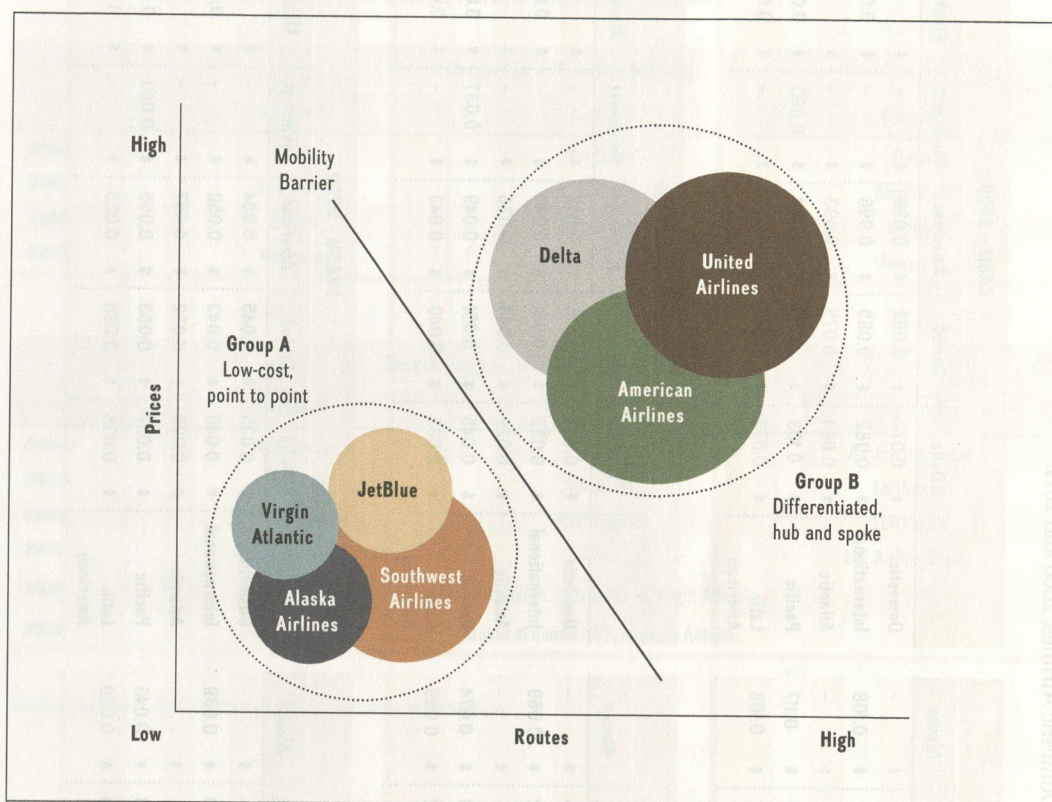
EXHIBIT 6 Delta's Business Functions

Function	Description
Airport Customer Service	Ensures seamless service during the check-in, boarding, lounge and airport connection experience at airports
Private Jets	An on-demand private jet charter service wholly owned and operated by Delta
Cargo	Accepts and ships air freight daily
Delta Connection	Delta's regional air carrier network that fills in service gaps for mainline service routes
DAL Global Services	Provides services such as aircraft ground handling, cargo handling and many other aviation-related services
TechOps (Delta Technical Operations)	Provide maintenance, repair and overhaul for Delta and many other air carriers
Flight Operations	Supports daily hub operations including mainline departures, pilot training, pilot standards, technical support, pilot staffing and scheduling and quality assurance/compliance functions
Inflight Services	Coordinates flight attendants who are responsible for safety and service onboard the aircraft
Information Technology	Develops, maintains and operates the information systems responsible for aircraft dispatching, crew scheduling, check-in kiosks and delta.com
MLT Vacations	Provides wholesale vacation packages
Operations Control	Responsible for the daily dispatch of aircraft and all related aspects of flight operations, including flight dispatch, operations management, maintenance control, load control, equipment routing, reservations control, crew tracking, revenue management and meteorology
Regional Elite Airline Services	Provides airport ticket counter, gate, tower coordination and ramp handling services for regional airline flights operated by Delta as well as competitors
Reservations	A call center network that supports customer questions

Source: "Operations". news.delta.com. <http://bit.ly/1sPqjtu>

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EXHIBIT 7 Strategic Grouping of Airlines in U.S. Domestic Market

Source: Rothaermel, F.T. (2017), *Strategic Management*, 3e. Burr-Ridge, IL: McGraw-Hill, Chapter 3.

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EXHIBIT 8 Revenue, Cost, and Profit Data for U.S. Domestic Airlines, 2000 and 2012

RASM - 2012					
	Delta	United	American	Southwest	Alaska
Domestic	\$ 0.116	\$ 0.117	\$ 0.112	\$ -	\$ -
International	\$ 0.115	\$ 0.134	\$ 0.139	\$ 0.072	\$ 0.108
Atlantic	\$ 0.122	\$ 0.130	\$ 0.103	\$ -	\$ -
Pacific	\$ 0.125	\$ 0.114	\$ 0.122	\$ 0.121	\$ 0.117
Latin American	\$ 0.118	\$ 0.125	\$ 0.124	\$ 0.072	\$ 0.108

RASM - 2000					
	Delta	United	American	Southwest	Alaska
Domestic	\$ 0.073	\$ 0.082	\$ 0.096	\$ -	\$ -
International	\$ 0.082	\$ 0.085	\$ 0.096	\$ -	\$ 0.076
Atlantic	\$ 0.064	\$ 0.075	\$ 0.093	\$ -	\$ -
Pacific	\$ 0.103	\$ 0.104	\$ 0.104	\$ 0.090	\$ 0.093
Latin American	\$ 0.073	\$ 0.079	\$ 0.096	\$ -	\$ 0.076

CASM - 2012					
	Delta	United	American	Southwest	Alaska
Domestic	\$ 0.077	\$ 0.088	\$ 0.083	\$ -	\$ -
International	\$ 0.082	\$ 0.082	\$ 0.084	\$ 0.052	\$ 0.069
Atlantic	\$ 0.077	\$ 0.076	\$ 0.096	\$ -	\$ -
Pacific	\$ 0.086	\$ 0.080	\$ 0.083	\$ 0.083	\$ 0.074
Latin American	\$ 0.077	\$ 0.083	\$ 0.085	\$ 0.052	\$ 0.069

CASM - 2000					
	Delta	United	American	Southwest	Alaska
Domestic	\$ 0.038	\$ 0.036	\$ 0.042	\$ -	\$ -
International	\$ 0.035	\$ 0.041	\$ 0.046	\$ -	\$ 0.049
Atlantic	\$ 0.039	\$ 0.043	\$ 0.036	\$ -	\$ -
Pacific	\$ 0.045	\$ 0.051	\$ 0.049	\$ 0.037	\$ 0.054
Latin American	\$ 0.038	\$ 0.040	\$ 0.043	\$ -	\$ 0.049

PRASM - 2012					
	Delta	United	American	Southwest	Alaska
Domestic	\$ 0.039	\$ 0.029	\$ 0.029	\$ -	\$ -
International	\$ 0.033	\$ 0.052	\$ 0.055	\$ 0.020	\$ 0.039
Atlantic	\$ 0.046	\$ 0.054	\$ 0.007	\$ -	\$ -
Pacific	\$ 0.039	\$ 0.035	\$ 0.039	\$ 0.038	\$ 0.043
Latin American	\$ 0.040	\$ 0.042	\$ 0.039	\$ 0.020	\$ 0.039

PRASM - 2000					
	Delta	United	American	Southwest	Alaska
Domestic	\$ 0.035	\$ 0.045	\$ 0.054	\$ -	\$ -
International	\$ 0.046	\$ 0.043	\$ 0.050	\$ -	\$ 0.027
Atlantic	\$ 0.025	\$ 0.032	\$ 0.057	\$ -	\$ -
Pacific	\$ 0.057	\$ 0.053	\$ 0.055	\$ 0.053	\$ 0.039
Latin American	\$ 0.036	\$ 0.038	\$ 0.053	\$ -	\$ 0.027

Source: MIT Airline Data Project, <http://bit.ly/1lv40VF>

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EXHIBIT 9 Industry Consolidation Through Mergers and Acquisitions in the U.S. Airline (top) and Global Airline Industry (bottom)

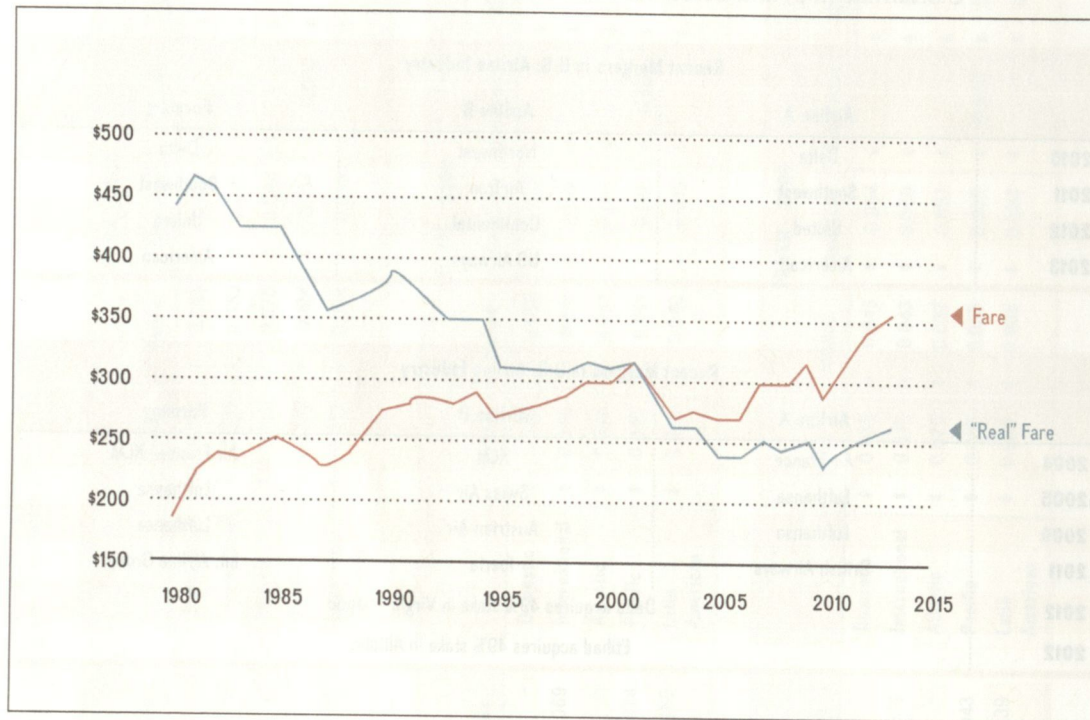
Recent Mergers in U.S. Airline Industry			
	Airline A	Airline B	Forming
2010	Delta	Northwest	Delta
2011	Southwest	AirTran	Southwest
2012	United	Continental	United
2013	American	US Airways	American

Recent Mergers in U.S. Airline Industry			
	Airline A	Airline B	Forming
2004	Air France	KLM	Air France - KLM
2005	Lufthansa	Swiss Air	Lufthansa
2009	Lufthansa	Austrian Air	Lufthansa
2011	British Airways	Iberia	Int. Airline Group
2012	Delta acquires 49% stake in Virgin Atlantic		
2012	Etihad acquires 49% stake in Alitalia		

Source: Authors' depiction of publicly available information.

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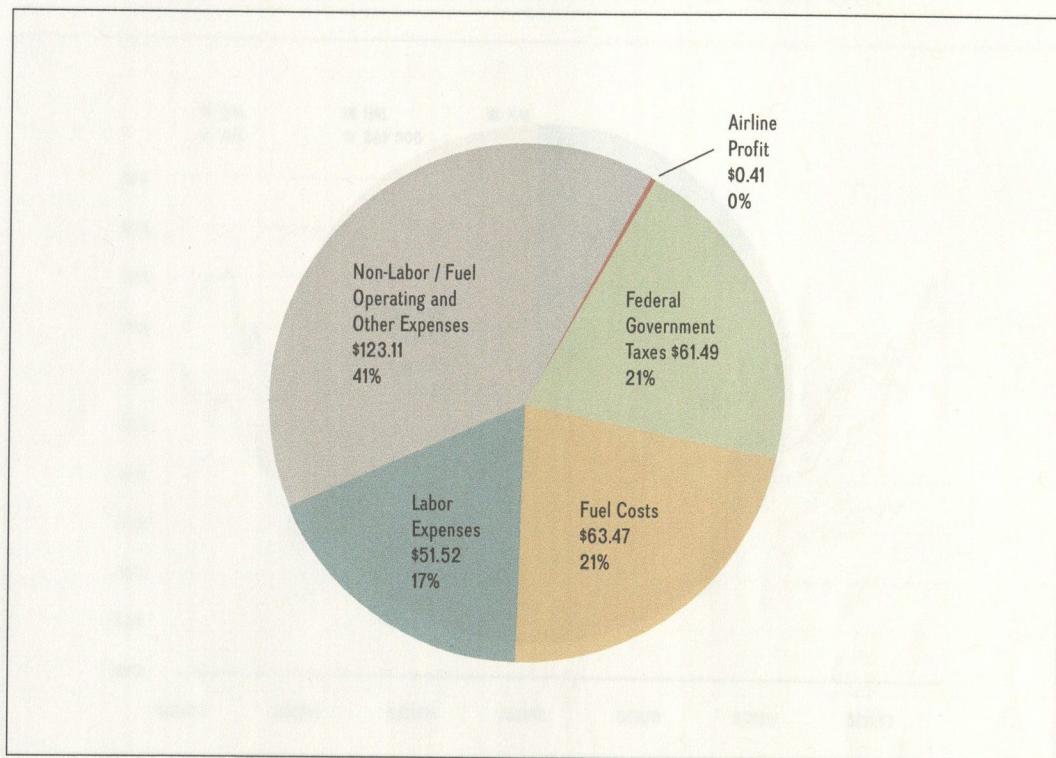
EXHIBIT 10 Comparison of the Actual and Inflation-adjusted Air Fare, 1979–2012



Source: Airlines for America, <http://bit.ly/1iBK5iM>. Inflation-adjusted dollars are for CY2000.

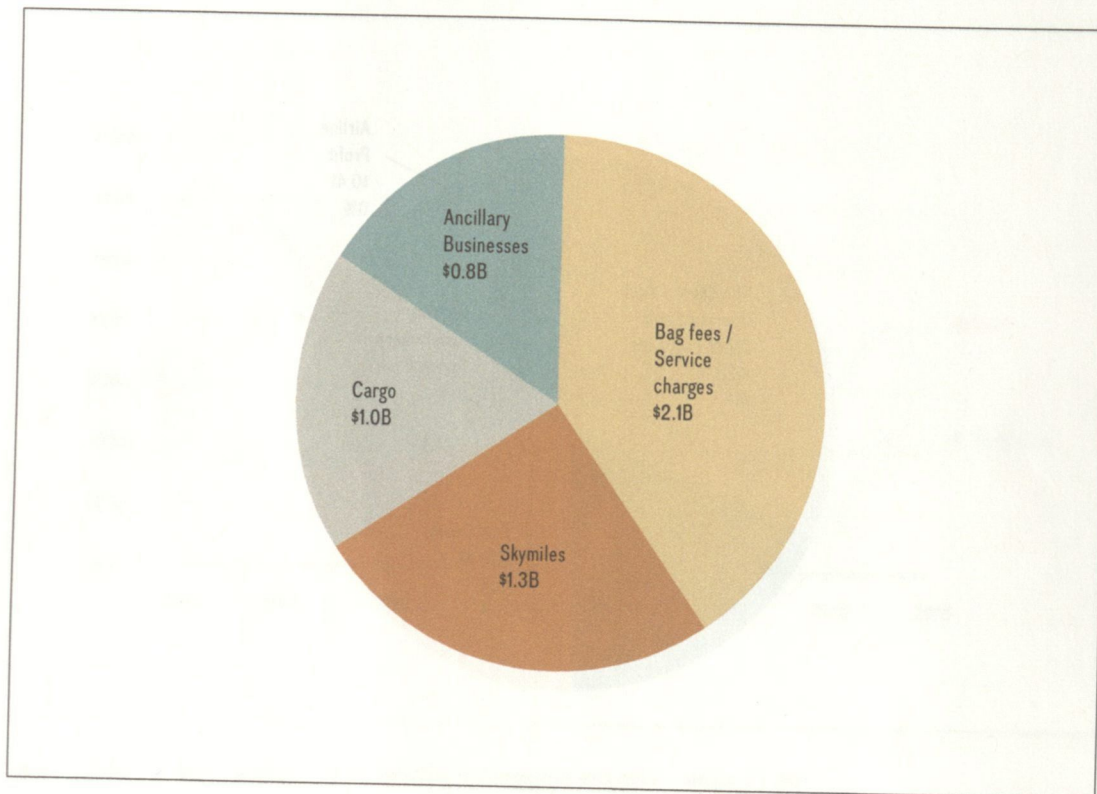
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EXHIBIT 11 Cost Breakdown of a \$300 U.S. Domestic Flight

Source: Airlines for America. <http://bit.ly/1e7X4K3>

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EXHIBIT 12 Estimated Ancillary Revenue for FY2014 (\$5.2 billion)



Source: Authors' depiction of information presented in "Investor Day Presentation (2013)," Delta Air Lines, Inc. November 2013.
<http://bit.ly/1hJBNcr>

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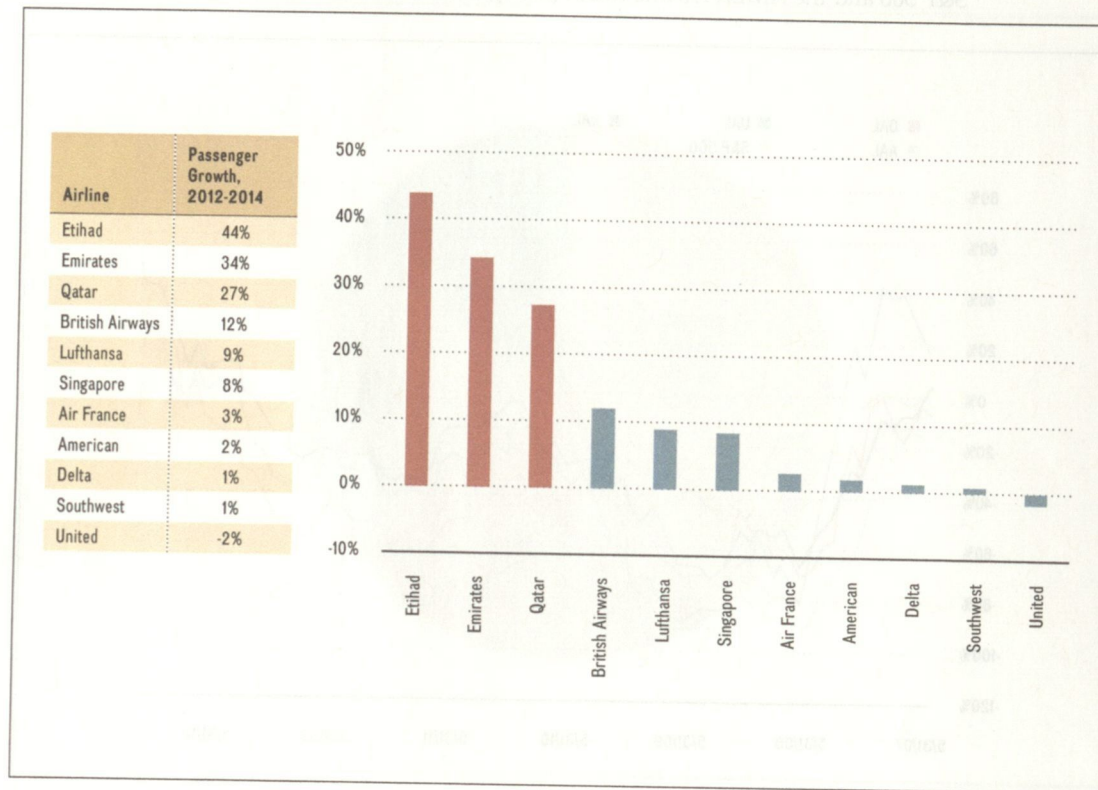
EXHIBIT 13 Stock Performance for Delta, American, and United Airlines Benchmarked to the S&P 500 and the AMEX Airline Index (XAL), 05/31/07 – 05/31/13



Source: Authors' depiction of data drawn from Yahoo Finance.

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EXHIBIT 14 Passenger Growth by Airlines, 2012-2014



Source: Authors' depiction of data in "Emirates, Etihad and Qatar Make Their Move on the U.S." *The Wall Street Journal*, November 6, 2014.

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EXHIBIT 15 On-time Performance

Carrier	Number of Airport Reported	Percent of Arrivals On Time
Hawaiian Airlines	17	92.8%
Alaska Airlines	54	87.8%
Virgin America	19	84.3%
American Airlines	103	76.5%
American Airlines	84	75.6%
US Airways	81	77.6%
Skywest Airlines	159	72.3%
United Airlines	81	71.1%
Delta Air Lines	134	70.2%
Southwest Airlines	89	63.3%
Southwest Airlines	89	63.0%
AirTran Airways	40	65.9%
Frontier Airlines	59	61.8%
American Eagle Airlines	134	59.1%
JetBlue Airways	55	56.9%
ExpressJet Airlines	165	56.0%

Source: "Air Travel Consumer Report". United States Department of Transportation. March 2014.

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EXHIBIT 16 Mishandled Baggage

	Airline	January 2014			January 2013		
		Total Baggage Reports	Emplaned Passengers	Reports per 1,000 Passengers	Total Baggage Reports	Emplaned Passengers	Reports per 1,000 Passengers
1	Virgin America	574	479,932	1.20	358	412,036	0.87
2	Hawaiian Airlines	1,845	766,998	2.41	1,898	739,289	2.57
3	Frontier Airlines	2,019	768,554	2.63	1,879	741,294	2.53
4	Alaska Airlines	4,534	1,417,036	3.20	4,531	1,365,613	3.32
5	JetBlue Airways	7,014	1,985,900	3.53	4,252	2,109,332	2.02
6	American Airlines	42,442	9,712,821	4.37			
	American Airlines	17,907	4,265,536	4.20	10,634	4,007,069	2.65
	US Airways	24,535	5,447,285	4.50	18,645	5,399,458	3.45
7	Delta Air Lines	34,008	7,258,323	4.69	15,298	7,130,243	2.15
8	United Airlines	26,695	5,012,633	5.33	20,283	5,203,806	3.90
9	Southwest Airlines	65,788	9,515,235	6.91			
	Southwest Airlines	60,523	8,774,099	6.90	29,011	8,296,804	3.50
	AirTran Airways	5,265	741,136	7.10	2,367	1,335,065	1.77
10	Skywest Airlines	14,526	1,995,711	7.28	13,020	2,053,989	6.34
11	ExpressJet Airlines	21,195	2,055,213	10.31	12,717	2,233,617	5.69
12	American Eagle Airlines	12,698	1,165,617	10.89	9,332	1,320,245	7.07

Source: "Air Travel Consumer Report". United States Department of Transportation. March 2014.

EXHIBIT 17 Passengers Denied Boarding

Rank	Airline	October - December 2013					October - December 2012				
		Denied Boardings (DB's) - Voluntary	DB's - Involuntary	Enplaned Passengers	Involuntary DB's per 10,000 psgrs		DB's - Voluntary	DB's - Involuntary	Enplaned Passengers	Involuntary DB's per 10,000 psgrs	
1	JetBlue Airways	145	1	6,831,371	0.00		54	13	6,573,215	0.02	
2	Virgin America	104	1	1,555,207	0.01		30	18	1,499,063	0.12	
3	Hawaiian Airlines	167	44	2,405,889	0.18		219	41	2,410,581	0.17	
4	Alaska Airlines	754	127	4,436,523	0.29		1,162	297	4,218,458	0.70	
5	American Airlines	12,864	677	18,664,581	0.36		14,442	1,389	18,536,509	0.75	
6	Delta Air Lines	1,924	1,359	26,365,699	0.52		31,031	2,021	25,496,756	0.79	
7	US Airways	6,045	784	14,228,483	0.55		6,398	719	13,577,101	0.53	
8	Southwest Airlines	14,512	1,948	29,378,897	0.66		13,851	2,095	27,876,734	0.75	
9	Endeavor Air	4,958	249	3,036,170	0.82						
10	Frontier Airlines	924	319	2,665,493	1.20		426	105	2,537,924	0.41	
11	AirTran Airways	3,507	502	3,822,884	1.31		7,000	662	4,906,630	1.35	
12	American Eagle Airlines	5,018	548	4,098,294	1.34		4,265	412	4,433,663	0.93	
13	United Airlines	17,074	2,601	18,969,272	1.37		13,198	2,846	18,696,707	1.52	
14	Mesa Airlines	1,915	518	2,111,954	2.45		1,510	512	1,899,862	2.69	
15	ExpressJet Airlines	13,427	1,908	7,769,435	2.46		13,374	1,677	7,729,179	2.17	
16	Skywest Airlines	10,214	2,161	6,395,843	3.38		11,119	1,811	6,419,001	2.82	

Source: "Air Travel Consumer Report". United States Department of Transportation. March 2014.

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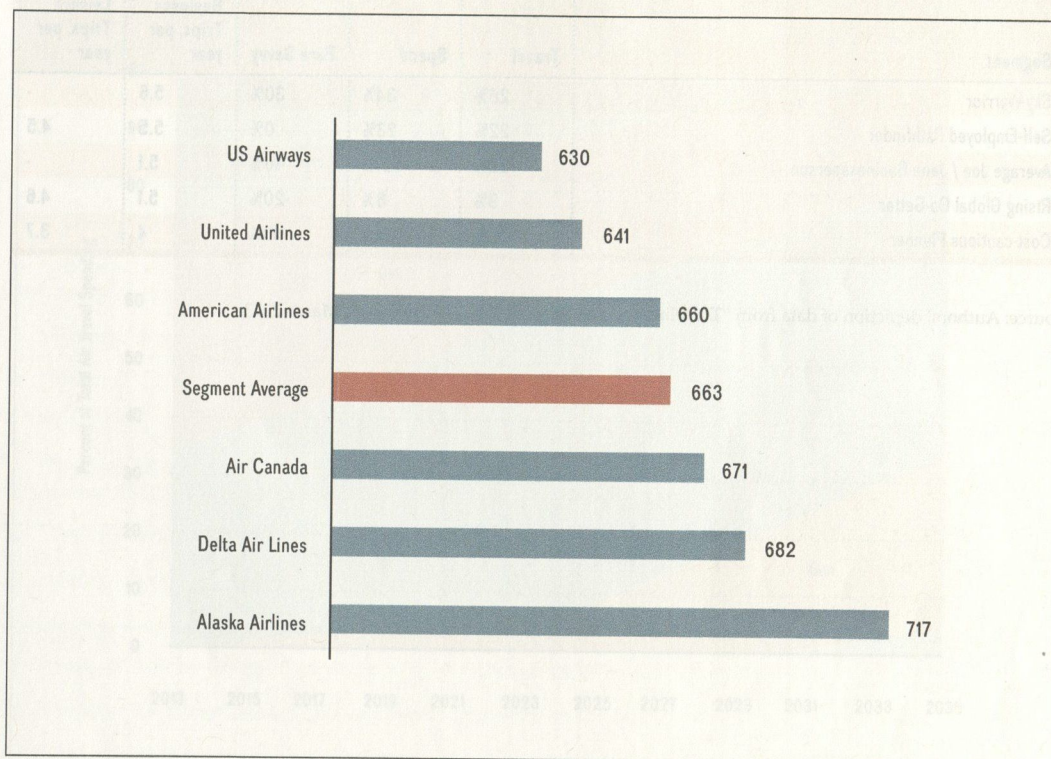
EXHIBIT 18 Consumer Complaints

	Airline	January 2014			January 2013		
		Complaints	Systemwide Enplanements	Complaints per 100,000 Enplanements	Complaints	Systemwide Enplanements	Complaints per 100,000 Enplanements
1	Alaska Airlines	11	1,537,266	0.72	5	1,477,536	0.34
2	Virgin America	4	491,084	0.81	2	425,683	0.47
3	Hawaiian Airlines	8	824,824	0.97	15	792,009	1.89
4	Southwest Airlines	100	9,479,302	1.05			
	Southwest Airlines	85	8,579,344	0.99	25	8,055,604	0.31
	AirTran Airways	15	899,958	1.67	12	1,382,633	0.87
5	Skywest Airlines	23	2,049,342	1.12	21	2,090,263	1.00
6	Delta Air Lines	116	8,878,880	1.31	63	8,542,755	0.74
7	ExpressJet Airlines	35	2,231,428	1.57	35	2,397,809	1.46
8	American Airlines	305	11,716,627	2.60			
	American Airlines	200	7,104,491	2.82	177	6,977,540	2.54
	US Airways	105	4,612,136	2.28	58	4,375,671	1.33
9	JetBlue Airways	73	2,341,217	3.12	16	2,382,300	0.67
10	American Eagle Airlines	48	1,226,781	3.91	34	1,396,956	2.43
11	Frontier Airlines	32	759,946	4.21	62	805,042	7.70
12	United Airlines	311	6,763,036	4.60	182	6,923,388	2.63

Source: "Air Travel Consumer Report". United States Department of Transportation. March 2014.

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EXHIBIT 19 J.D. Power & Associates North America Airline Satisfaction Study for Traditional Carriers (2013)



Source: "2013 North America Airline Satisfaction Study." J.D. Powers & Associates. May 15, 2013 (scores are J.D. Powers Index Points, max = 1,000) <http://bit.ly/1gcXm4Q>

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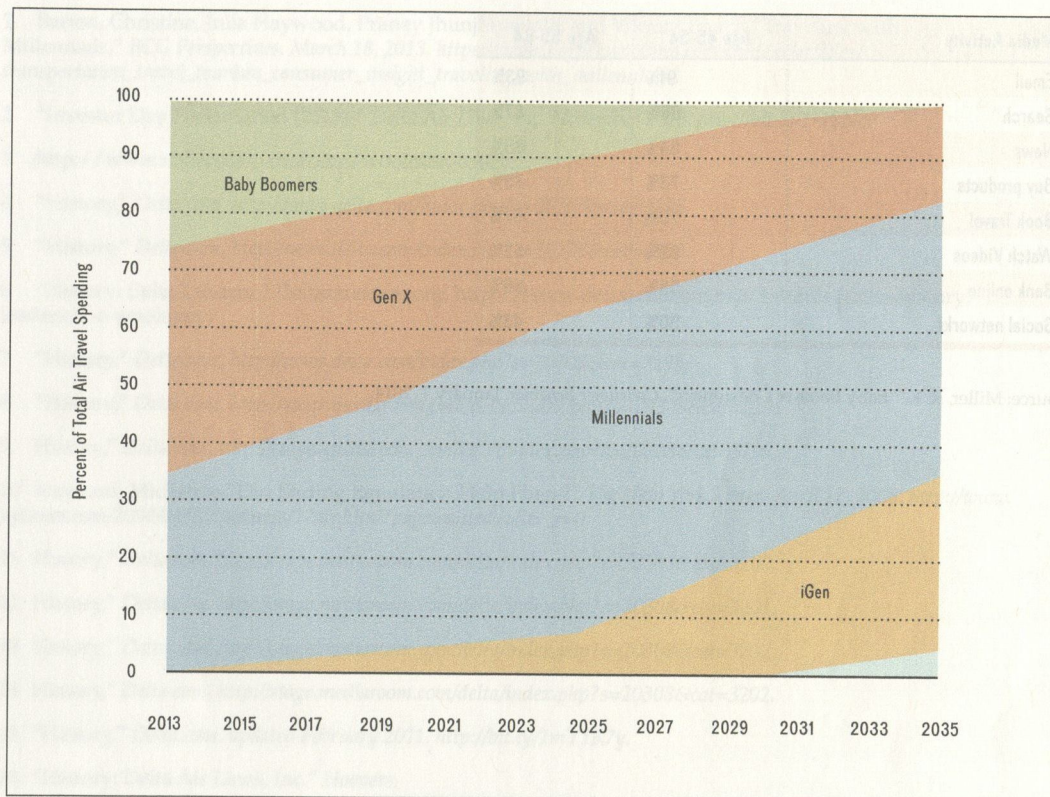
EXHIBIT 20 Traveler Segments

Segment	Travel	Spend	Fare Savvy	Business Trips, per year	Leisure Trips, per year
Sky-Warrior	26%	34%	30%	5.6	-
Self-Employed Pathfinder	22%	23%	0%	5.5	4.5
Average Joe / Jane Businessperson	22%	21%	-10%	5.1	-
Rising Global Go-Getter	9%	8%	-20%	5.1	4.6
Cost-cautious Planner	22%	14%	-10%	4	3.7

Source: Authors' depiction of data from "Traveling with Millennials." BCG Perspectives. March 2013.

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EXHIBIT 21 U.S. shifting demographics



Source: Authors' depiction of data in "Traveling with Millennials." BCG Perspectives. March 2013.

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EXHIBIT 22 Baby Boomer Media Activity

Media Activity	Age 45-54	Age 55-64
Email	91%	93%
Search	86%	87%
News	84%	85%
Buy products	73%	75%
Book Travel	70%	67%
Watch Videos	62%	55%
Bank online	58%	56%
Social networks	50%	43%

Source: Miller, R. K. "Baby Boomer Consumers". *Consumer Behavior*. January 1, 2014.

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